# FULTON 11 AND CHELSEA ELLIOTT

**MANHATTAN, NEW YORK**

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# Site Investigation Report

**DEP Project Number CEQR# 23CHA001M**

**Prepared for:**

Elliott Fulton LLC

c/o Essence Development

30 Hudson Yards

New York, NY 10001

**Prepared by:**

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February 2024

# SITE INVESTIGATION REPORT

# TABLE OF CONTENTS

# FIGURES

# TABLES

# APPENDICES

Appendix A - Phase 1 Reports

Appendix B – Geophysical Reports

Appendix C – Soil Boring Logs

Appendix D – Analytical Laboratory Reports

# LIST OF ACRONYMS

| Acronym | Definition |
|---|---|
| AOC | Area of Concern |
| CAMP | Community Air Monitoring Plan |
| COC | Contaminant of Concern |
| CPP | Citizen Participation Plan |
| CSM | Conceptual Site Model |
| DER-10 | New York State Department of Environmental Conservation Technical Guide 10 |
| FID | Flame Ionization Detector |
| GPS | Global Positioning System |
| HASP | Health and Safety Plan |
| HAZWOPER | Hazardous Waste Operations and Emergency Response |
| IRM | Interim Remedial Measure |
| NAPL | Non-aqueous Phase Liquid |
| NYC VCP | New York City Voluntary Cleanup Program |
| NYC DOHMH | New York City Department of Health and Mental Hygiene |
| NYC DEP | New York City Department of Environmental Protection |
| NYS DOH ELAP | New York State Department of Health Environmental Laboratory Accreditation Program |
| OSHA | Occupational Safety and Health Administration |
| PID | Photoionization Detector |
| QEP | Qualified Environmental Professional |
| SI | Site Investigation |
| SIR | Site Investigation Report |
| SCO | Soil Cleanup Objective |
| SPEED | Searchable Property Environmental Electronic Database |

# CERTIFICATION

I, Ryan K. Powell, am a Qualified Environmental Professional, as defined in RCNY § 43-1402(ar). I have primary direct responsibility for implementation of the Site Investigation for the Fulton 11 & Chelsea Elliott, Manhattan, New York, CEQR number 23CHA001M. I am responsible for the content of this Site Investigation Report (SIR), have reviewed its contents and certify that this SIR is accurate to the best of my knowledge and contains all available environmental information and data regarding the property.

| Ryan K. Powell | 2/15/2024 |  |
|---|---|---|
| Qualified Environmental Professional | Date | Signature |

# EXECUTIVE SUMMARY

This Site Investigation Report (SIR) provides sufficient information for establishment of remedial action objectives, evaluation of remedial action alternatives, and selection of a remedy. The site investigation (SI) described in this document is consistent with applicable guidance.

**Site Location and Current Usage**

The project site consists of two proposed buildings that will be constructed during the first stage of redevelopment:

Fulton 11, a 7-story, 47,656-gross-square-foot (gsf) apartment building (36 dwelling units) with approximately 10-foot deep basement, located at 401-419 W. 19th Street (Block 717, Lot 19), adjacent to the northwest corner of the W. 19th Street and 9th Avenue intersection.

Chelsea Elliot Addition, a 14-story, 65,136-gsf apartment building (96 dwelling units), 436 W. 27th Drive and the adjoining 2-story John Lovejoy Elliott Center (an approximately 42,225-gsf neighborhood center operated by Hudson Guild), with approximately 10-foot deep basements, located at 441 W. 26th Street (Block 724, Lot 10), on W. 27th Drive east of 10th Avenue. The Elliott Center is set back from W. 26th Street and entered via a footpath from W. 26th Street though its northern wall faces W. 27th Drive.

**Summary of Proposed Redevelopment Plan**

The development project demolition of these buildings and new construction that includes the following components:

In place of Fulton 11 and adjacent areas, a new 11-story (approximately 108.5-foot tall to roof) mixed use apartment building would be developed. It would include approximately 186 dwelling units, 6,591 gsf of retail space, and 15,000 gsf of community facility space, with a total building area of approximately 196,191 gsf. It would have an approximately 10-foot deep basement. Proposed landscaping at the Site will consist of 2 feet of excavation to remove existing soil and replace with two feet of approved clean soil. Refer to the site plan which shows the location of the proposed building footprint relative to the footprint of Fulton 11.

In place of Chelsea Elliott Addition, the adjoining Elliott Center and adjacent areas, a new 38-story (approximately 396.5-foot tall) mixed use apartment building would be developed. It would include approximately 449 dwelling units and 28,229 gsf of community facility space, with a total

building area of approximately 469,578 gsf. It would have an approximately 10-foot deep basement. Proposed landscaping at the Site will consist of 2 feet of excavation to remove existing soil and replace with two feet of approved clean soil. A proposed landscaped areas will be excavated two feet below grade. Refer to the site plan which shows the location of the proposed building footprint relative to the footprint of Chelsea Addition/Elliott Center.

**Summary of Past Uses of Site and Areas of Concern**

**Past Uses and Ownership**

**Fulton 11**

Hillmann Consulting, LLC completed a Phase I Environmental Site Assessment (ESA) dated April 21, 2022 for the Fulton locations. The recognized environmental conditions (RECs) from the ESA are listed in bullet form. The Phase I ESA is included in Attachment A.

Multiple historic uses of potential environmental concern occurred at the Property prior to the 1963-1965 construction of the present Property buildings, per review of Sanborn Fire Insurance Maps, as follows:

- Vinegar Factory at 424-426 West 17th Street (off the east side of the present Property Building 4) in 1895;
- "Chinese Laundry" at 101 and 119 9th Avenue (near present Property Buildings 2 and 7) in 1904;
- 165-car garage with auto-repair operations in the basement and a 1,500-gallon gasoline buried tank (in the vicinity of the present asphalt surface parking south of Building 2) and a 15-car private garage with a buried gasoline tank (capacity indecipherable) at 409 West 17th Avenue (off the west side of the present Property Building 7), and iron works 434-436 West 17th Avenue and 414 19th Avenue in 1921;
- Filling station (gas station), taxi garage and auto repair with multiple gasoline tanks depicted along ninth avenue between West 16th and West 17th Avenue and along West 16th and West 17th Avenue and an additional auto filling/service station with multiple gasoline tanks depicted at the northwest corner of 9th Avenue and West 17th Street (near the southern edge of the present Building 7) and auto painting (431-433 West 17th) and repair (443-445 West 17th), a motor freight terminal (410-412 West 19th) in 1950.

The aforementioned historic uses including a factory, laundry, iron works, motor freight station, auto filling/service stations with multiple gasoline tanks found at Fulton 11 was considered a REC.

**Chelsea Elliott**

Hillmann Consulting, LLC completed a Phase I Environmental Site Assessment (ESA) dated May 6, 2022 for the Chelsea-Elliot locations. The recognized environmental conditions (RECs) from the ESA are listed in bullet form.

Multiple historic uses of potential environmental concern, based on a review of Sanborn Fire Insurance Maps, occurred at the Property prior to the construction of the present Property buildings in the 1940's-1960's, as follows:

- N.Y. Edison Co. Sub Station/transformer station (452 West 27th Street – 1911-1930);
- Machine Shop (429 West 26th Street 1911);
- Manufacturing (not specified) use (418-420 West 27th Street, 447-455 West 26th Street, 425-427 West 25th Street; 1911-1930);

Both Phase 1 report are presented in Appendix A.

**Summary of the Work Performed under the Site Investigation**

Fulton Elliott LLC performed the following scope of work at Chelsea Elliott and Fulton 11:

**Fulton 11**

1. Conducted a Site inspection and geophysical survey at the Fulton 11 site to identify AOC, physical obstructions (i.e. structures, buildings, etc.);
2. Installed nine (9) soil borings across the Fulton 11 Site and collected fifteen (15) soil samples for chemical analysis from the soil borings to evaluate soil quality;
3. Installed four (4) groundwater monitoring wells throughout the Site to establish groundwater flow and collected four (4) groundwater samples for chemical analysis to evaluate groundwater quality;
4. Installed six (6) soil vapor probes around Site perimeter and collected six samples for chemical analysis.

**Chelsea Elliott**

1. Conducted a Site inspection and geophysical survey at the Chelsea Elliott site to identify AOC, physical obstructions (i.e. structures, buildings, etc.);
2. Installed eleven (11) soil borings across the Chelsea Elliott Site and collected eighteen (18) soil samples for chemical analysis from the soil borings to evaluate soil quality;
3. Installed five (5) groundwater monitoring wells throughout the Site to establish groundwater flow and collected five (5) groundwater samples for chemical analysis to evaluate groundwater quality;
4. Installed seven (7) soil vapor probes around Site perimeter and collected seven samples for chemical analysis.

**Summary of Environmental Findings**

Refer to section 5.0 of this site investigation report that shows analytical data for both Fulton 11 and the Chelsea Elliott Sites.

# SITE INVESTIGATION REPORT

## 1.0 SITE BACKGROUND

This Phase II/Site Investigation Report (SIR) has been prepared by HK Engineering & Geology, D.P.C., on behalf of Elliott Fulton LLC for these subject Sites; Fulton 11 and Chelsea Elliott. This SIR documents the investigation activities and summarizes the nature and extent of contamination and provides sufficient information for establishment of remedial action objectives, evaluation of remedial action alternatives, and selection of a remedy that is protective of human health and the environment consistent with the use of the property.

### 1.1 Site Location and Current Usage

The project site consists of two proposed buildings that will be constructed during the first stage of redevelopment:

Fulton 11, a 7-story, 47,656-gross-square-foot (gsf) apartment building (36 dwelling units) with approximately 10-foot deep basement, located at 401-419 W. 19th Street (Block 717, Lot 19), adjacent to the northwest corner of the W. 19th Street and 9th Avenue intersection.

Chelsea Elliot Addition, a 14-story, 65,136-gsf apartment building (96 dwelling units), 436 W. 27th Drive and the adjoining 2-story John Lovejoy Elliott Center (an approximately 42,225-gsf neighborhood center operated by Hudson Guild), with approximately 10-foot deep basements, located at 441 W. 26th Street (Block 724, Lot 10), on W. 27th Drive east of 10th Avenue. The Elliott Center is set back from W. 26th Street and entered via a footpath from W. 26th Street though its northern wall faces W. 27th Drive.

### 1.2 Proposed Redevelopment Plan

The development project demolition of these buildings and new construction that includes the following components:

In place of Fulton 11 and adjacent areas, a new 11-story (approximately 108.5-foot tall to roof) mixed use apartment building would be developed. It would include approximately 186 dwelling units, 6,591 gsf of retail space, and 15,000 gsf of community facility space, with a total building area of approximately 196,191 gsf. It would have an approximately 10-foot deep basement. Proposed landscaping at the Site will consist of 2 feet of excavation to remove existing soil and

replace with two feet of approved clean soil. Refer to the site plan which shows the location of the proposed building footprint relative to the footprint of Fulton 11.

In place of Chelsea Elliott Addition, the adjoining Elliott Center and adjacent areas, a new 38-story (approximately 396.5-foot tall) mixed use apartment building would be developed. It would include approximately 449 dwelling units and 28,229 gsf of community facility space, with a total building area of approximately 469,578 gsf. It would have an approximately 10-foot deep basement. Proposed landscaping at the Site will consist of 2 feet of excavation to remove existing soil and replace with two feet of approved clean soil. A proposed landscaped areas will be excavated two feet below grade. Refer to the site plan which shows the location of the proposed building footprint relative to the footprint of Chelsea Addition/Elliott Center.

### 1.3 Description of Surrounding Property

The areas are urban and both within the Chelsea section of Manhattan, New York. Surrounding adjoining properties include a mix of residential and commercial properties to the North, East, West, and South.

# 2.0 SITE HISTORY

## 2.1 Past Uses and Ownership

**Fulton 11**

Hillmann Consulting, LLC completed a Phase I Environmental Site Assessment (ESA) dated April 21, 2022 for the Fulton locations. The recognized environmental conditions (RECs) from the ESA are listed in bullet form. The Phase I ESA is included in Attachment A.

Multiple historic uses of potential environmental concern occurred at the Property prior to the 1963-1965 construction of the present Property buildings, per review of Sanborn Fire Insurance Maps, as follows:

- Vinegar Factory at 424-426 West 17th Street (off the east side of the present Property Building 4) in 1895;
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- 165-car garage with auto-repair operations in the basement and a 1,500-gallon gasoline buried tank (in the vicinity of the present asphalt surface parking south of Building 2) and a 15-car private garage with a buried gasoline tank (capacity indecipherable) at 409 West 17th Avenue (off the west side of the present Property Building 7), and iron works 434-436 West 17th Avenue and 414 19th Avenue in 1921;
- Filling station (gas station), taxi garage and auto repair with multiple gasoline tanks depicted along ninth avenue between West 16th and West 17th Avenue and along West 16th and West 17th Avenue and an additional auto filling/service station with multiple gasoline tanks depicted at the northwest corner of 9th Avenue and West 17th Street (near the southern edge of the present Building 7) and auto painting (431-433 West 17th) and repair (443-445 West 17th), a motor freight terminal (410-412 West 19th) in 1950.

The aforementioned historic uses including a factory, laundry, iron works, motor freight station, auto filling/service stations with multiple gasoline tanks found at Fulton 11 was considered a REC.

**Chelsea Elliott**

Hillmann Consulting, LLC completed a Phase I Environmental Site Assessment (ESA) dated May 6, 2022 for the Chelsea-Elliot locations. The recognized environmental conditions (RECs) from the ESA are listed in bullet form.

Multiple historic uses of potential environmental concern, based on a review of Sanborn Fire Insurance Maps, occurred at the Property prior to the construction of the present Property buildings in the 1940's-1960's, as follows:

- N.Y. Edison Co. Sub Station/transformer station (452 West 27th Street – 1911-1930);
- Machine Shop (429 West 26th Street 1911);
- Manufacturing (not specified) use (418-420 West 27th Street, 447-455 West 26th Street, 425-427 West 25th Street; 1911-1930);

Both Phase 1 report are presented in Appendix A.

# 3.0 PROJECT MANAGEMENT

## 3.1 Project Organization

The Qualified Environmental Professions (QEP) responsible for preparation of this SIR are Ryan K. Powell, P.G. and Chris Hirschmann, CHMM.

## 3.2 Health and Safety

All work described in this SIR was performed in full compliance with applicable laws and regulations, including Site and OSHA worker safety requirements and HAZWOPER requirements.

## 3.3 Materials Management

All material encountered during the SI was managed in accordance with applicable laws and regulations.

# 4.0 SITE INVESTIGATION ACTIVITIES

Prior to the start of onsite work activities, a Phase II Workplan, dated October 2023 was submitted to the New York City Department of Environmental Protection (NYCDEP) detailing the planned sampling activities. The Workplan was subsequently approved by NYCDEP in an October 25, 2023 email. In accordance with the approved Phase II Workplan, on behalf of Fulton Elliott LLC, HK Engineering & Geology, D.P.C. performed the following scope of work within the boundary of the Site in November 2023:

Fulton Elliott LLC performed the following scope of work at Chelsea Elliott and Fulton 11:

**Fulton 11**

5. Conducted a Site inspection and geophysical survey at the Fulton 11 site to identify AOC, physical obstructions (i.e. structures, buildings, etc.);
6. Installed nine (9) soil borings across the Fulton 11 Site and collected fifteen (15) soil samples for chemical analysis from the soil borings to evaluate soil quality;
7. Installed four (4) groundwater monitoring wells throughout the Site to establish groundwater flow and collected four (4) groundwater samples for chemical analysis to evaluate groundwater quality;
8. Installed six (6) soil vapor probes around Site perimeter and collected six samples for chemical analysis.

**Chelsea Elliott**

5. Conducted a Site inspection and geophysical survey at the Chelsea Elliott site to identify AOC, physical obstructions (i.e. structures, buildings, etc.);
6. Installed eleven (11) soil borings across the Chelsea Elliott Site and collected eighteen (18) soil samples for chemical analysis from the soil borings to evaluate soil quality;
7. Installed five (5) groundwater monitoring wells throughout the Site to establish groundwater flow and collected five (5) groundwater samples for chemical analysis to evaluate groundwater quality;
8. Installed seven (7) soil vapor probes around Site perimeter and collected seven samples for chemical analysis.

## 4.1 Geophysical Investigation

A geophysical survey was completed at each Site on November 14, 2023 prior to any invasive drilling below ground surface. The geophysical survey included the use of ground penetrating radar (GPR), magnetometer and line tracing equipment to identify buried utilities, metallic objects or other anomalies below grade for safe drilling. The geophysical report for each Site is included in Appendix B.

## 4.2 Borings and Monitoring Wells

### Drilling and Soil Logging

A direct push drill was used during the investigation with HK oversight on November 15 through 17 and 20, 2023 at both the Fulton 11 and Chelsea Elliott Sites.

**Fulton 11**

Boring depths were determined based on proposed excavation depths of the of 10 feet below ground surface for the building footprint areas and 0-2 feet in the proposed landscaped areas.

Using a Geoprobe®, soil samples on the exterior portions of the existing building were captured in 2-inch diameter dedicated macro-PVC liners for every 5 feet installed below ground surface (bgs). Soil borings were continuously logged and screened from the surface to terminal boring depth by visual and olfactory means and using a calibrated PID. The results of soil screening are recorded in boring logs in Appendix C. Zero PID readings were recording in all soil boring intervals.

Two soil grab samples were collected from each boring in areas of the proposed building footprint. The first sample was collected from the surface 0-2 feet bgs interval. Deeper interval samples were collected two feet beyond the proposed building footprint at the 10-12 foot bgs interval. For proposed landscaped areas one grab soil sample was collected from the surface 0-2 foot bgs interval.

The existing conjoined buildings each contain a confined entry partial dirt floor crawlspace at 401 and 419 W. 19$^{th}$ Street. The height of each crawl space was measured at 6 feet below grade inside each building. One soil sample was collected from the 6.0-6.5 foot bgs interval above each crawl space entry using an extended steel hand auger. Due to the identified crawlspace, one soil sample

was omitted from sample collection inside the building. Soil sample locations are shown in Figure 2A. Soil sample result data is reported in Table 1A.

Groundwater was encountered in four boring locations across the Site. Four (4) temporary monitoring wells were installed with the Geoprobe® via direct push to the depth of groundwater. The construction of the temporary monitoring well points included a 1-inch diameter 0.010-inch schedule 40 PVC slotted screen installed and PVC riser pipe installed from ground surface to 40 feet bgs. Depth of groundwater was measured using an oil/water interface probe and ranged from 13.50 through 15 feet bgs. Following sample collection, temporary well points were removed. Groundwater sample locations are shown in Figure 2A. Groundwater sample result data is reported in Table 2A.

Six (6) soil vapor probes were installed and six samples were collected for chemical analysis. Soil vapor samples were collected two feet beyond the ten foot bgs proposed excavation depth at 12 feet bgs on exterior areas of the existing building. One additional sub-slab soil vapor sample was collected inside the existing trash compactor room at 401 West. 19$^{th}$ Street. To remove dead air in the tubing and verify water would not intrude air samples, each sample point was purged three times the volume based on the length of the sample tube.

Soil vapor was not captured inside the crawl space due to the floor being observed as a dirt floor in addition to being a confined space for entry. Soil vapor sample locations are shown in Figure 2A. Soil vapor sample result data is reported in Table 3A and shown on Figure 2A. Methodologies used for soil vapor assessment conform to the *NYS DOH Final Guidance on Soil Vapor Intrusion, October 2006.*

**Chelsea Elliott**

Boring depths were determined based on proposed excavation depths of the of 10 feet below ground surface for the building footprint areas and 0-2 feet in the proposed landscaped areas.

Using a Geoprobe®, soil samples on the exterior portions of the existing building were captured in 2-inch diameter dedicated macro-PVC liners for every 5 feet installed below ground surface (bgs). Soil borings were continuously logged and screened from the surface to terminal boring depth by visual and olfactory means and using a calibrated PID. The results of soil screening are recorded in boring logs in Appendix C. Zero PID readings were recording in all soil boring intervals.

Two soil grab samples were collected from each boring in areas of the building footprint. The first sample was collected from the surface 0-2 feet bgs interval. Deeper interval samples were collected two feet beyond the proposed building footprint from the 10-12 foot bgs interval. For proposed landscaped areas one grab soil sample was collected from the surface 0-2 foot bgs interval. Soil samples were also collected beneath the concrete slab inside the basements of the Hudson Guild Center and inside the 436 W. 27th Drive residential building. Soil sample locations are shown in Figure 2B. Soil sample result data is reported in Table 1B.

Five (5) temporary monitoring wells were installed with the Geoprobe® via direct push to the depth of groundwater at boring locations. The construction of the temporary monitoring well points included a 1-inch diameter 0.010-inch schedule 40 PVC slotted screen installed and PVC riser pipe installed from ground surface to 40 feet bgs. Depth of groundwater was measured using an oil/water interface probe and ranged from 11.50 through 14 feet bgs. Following sample collection, temporary well points were removed. Groundwater sample locations are shown in Figure 2B. Groundwater sample result data is reported in Table 2B.

Seven (7) soil vapor probes were installed and seven (7) samples were collected for chemical analysis. Soil vapor samples were collected at twelve feet, two feet beyond the ten foot bgs proposed excavation depth on exterior areas of the existing building. Interior soil vapor samples were collected beneath the sub-slab within the existing building. To remove dead air in the tubing and verify water would not intrude air samples, each sample point was purged three times the volume based on the length of the sample tube.

One proposed sample location that included playground areas across the site were omitted due to inaccessibility with the equipment. Soil vapor sample locations are shown in Figure 2B. Soil vapor sample result data is reported in Table 3B and shown on Figure 2B. Methodologies used for soil vapor assessment conform to the *NYS DOH Final Guidance on Soil Vapor Intrusion, October 2006.*

## 4.3 Chemical Analysis

### Chemical Analysis

Chemical analytical work presented in this SIR has been performed in the following manner:

| Factor | Description |
|---|---|
| Quality Assurance Officer | The chemical analytical quality assurance is directed by Kim James at Integrated Analytical Laboratory and Kelly Ramos at SGS Dayton. |
| Chemical Analytical Laboratory | Chemical analytical laboratory(s) used in the RI is NYS ELAP certified and were Integrated Analytical Laboratory of Randolph, New Jersey and SGS of Dayton, New Jersey. |
| Chemical Analytical Methods | Soil analytical methods:<br>• TAL Metals by EPA Method 6010C (rev. 2007);<br>• VOCs by EPA Method 8260C (rev. 2006);<br>• SVOCs by EPA Method 8270D (rev. 2007);<br>• Pesticides by EPA Method 8081B (rev. 2000);<br>• PCBs by EPA Method 8082A (rev. 2000);<br>Groundwater analytical methods:<br>• TAL and dissolved Metals by EPA Method 6010C (rev. 2007);<br>• VOCs by EPA Method 8260C (rev. 2006);<br>• SVOCs by EPA Method 8270D (rev. 2007);<br>• Pesticides by EPA Method 8081B (rev. 2000);<br>• PCBs by EPA Method 8082A (rev. 2000);<br>Soil vapor analytical methods:<br>• VOCs by TO-15 VOC parameters. |

# 5.0 ENVIRONMENTAL EVALUATION

## 5.1 Results of Chemical Analysis

### 5.2 Soil Chemistry

Soil/fill samples collected during the SI were compared to the New York State Department of Environmental Conservation (NYSDEC) 6NYCRR Part 375 Section 6.8 Unrestricted Use (UU) and Restricted Residential Use (RRU) Soil Cleanup Objectives (SCOs). Appendix D contains the analytical laboratory data deliverables for each Site.

**Fulton 11 – Soil Chemistry**

- No VOCs compounds were detected above the Unrestricted Use SCOs and Restricted Residential Use SCOs.
- Three metals were detected above the Restricted Residential Use SCOs including barium (max of 517 mg/kg), lead (max. of 1,070 mg/kg), and mercury (max of 1.2 mg/kg). One additional metal, zinc (max. of 616 mg/kg) was the only metal above the Unrestricted Use SCO but below the Restricted Residential Use SCOs. Remaining metals were either not detected or detected below the applicable SCO.
- Four pesticides including 4'4-DDD (max. of 0.099 mg/kg), 4,4'-DDE (max. of 1.34 mg/kg), 4,4'-DDT (max. of 1.58 mg/kg), and Dieldrin (max. of 0.012) were detected mainly in shallow samples above Unrestricted Use SCOs. No pesticides were detected above Restricted Residential Use SCOs.
- SVOCs known as Polycyclic aromatic hydrocarbons (PAHs) were detected above both the Unrestricted Use SCOs and Restricted Residential Use SCOs. PAHs that were identified above both SCOs include Benzo[a]anthracene (max 10.6 mg/kg), Benzo[a]pyrene (max 9.82 mg/kg), Benzo[b]fluoranthene (max 9.82 mg/kg), Benzo[k]fluoranthene (max 9.27 mg/kg), Chrysene (max 9.92 mg/kg), Dibenz[a,h]anthracene (max 2.34 mg/kg) and Indeno[1,2,3-cd]pyrene (max 4.97 mg/kg) were detected in exceedance in both shallow and deep intervals. Remaining SVOC compounds analyzed were either not detected or detected below the applicable SCO.
- One PCB Aroclor 1254 (max. of 1.95 mg/kg) was detected in exceedance of the Restricted Residential Use SCOs found in the crawl space sample (SB6-419 CS) located at 419 W. 19$^{th}$ Street. Remaining PCB compounds were not detected in any other soil sample.

**Chelsea Elliott – Soil Chemistry**

- No VOC or PCB compounds were detected above the Unrestricted Use SCOs and Restricted Residential Use SCOs.
- Six metals were detected above its Restricted Residential Use SCOs including barium (max of 2,180 mg/kg), cadmium (max of 12.80 mg/kg) copper (max. of 503 mg/kg), lead (max. of 2,680 mg/kg), manganese (max of 2,890 mg/kg) and mercury (max of 1.10 mg/kg). One additional metal, zinc (max. of 2,550 mg/kg) was the only metal above the Unrestricted Use SCO but below the Restricted Residential Use SCOs. Remaining metals were either not detected or detected below the applicable SCO.
- Three pesticides including 4'4-DDD (max. of 0.011 mg/kg), 4,4'-DDE (max. of 0.095 mg/kg), 4,4'-DDT (max. of 0.096 mg/kg) were detected above the Unrestricted Use SCOs. No pesticides were detected above Restricted Residential Use SCOs.
- Identical PAHs were detected above both Unrestricted Use SCOs and Restricted Residential SCOs. PAHs that were identified above both SCOs include Benzo[a]anthracene (max 15.3 mg/kg), Benzo[a]pyrene (max 13.3 mg/kg), Benzo[b]fluoranthene (max 13.6 mg/kg), Benzo[k]fluoranthene (max 10.4 mg/kg), Chrysene (max 14.0 mg/kg), Dibenz[a,h]anthracene (max 3.51 mg/kg) and Indeno[1,2,3-cd]pyrene (max 7.05 mg/kg) were detected in exceedance in both shallow and deep intervals. Remaining SVOC compounds analyzed were either not detected or detected below the applicable SCO.

A summary table of data for chemical analyses performed on soil samples at Fulton 11 is included in Table 1A and at Chelsea Elliott is included in Table 1B. Figure 3A for the Fulton 11 Site and Figure 3B for Chelsea Elliott Site shows the location and posts the values for soil/fill that exceed the 6NYCRR Part 375-6.8 Soil Cleanup Objectives.

## 5.3 Groundwater Chemistry

The groundwater samples collected during the SI were compared to the New York State 6NYCRR Part 703.5 Class GA Groundwater Ambient Quality Standards (AWQS).

**Fulton 11 – Groundwater Chemistry**

- No pesticides or PCB compounds were identified above their AWQS.

- One VOC, tetrachloroethene was detected above the AWQS in two groundwater samples with a maximum concentration identified at 4.82 µg/L. Remaining analyzed compounds were either not detected or detected below the AWQS.
- Four undissolved metals were identified in exceedance above its AWQS that include beryllium (max of 3.3 µg/L), chromium (max of 66.7 µg/L), copper (max of 105 µg/L), lead (max of 299 µg/L), and sodium (max of 138,000 µg/L).
- Following field filtering, two dissolved metals, sodium and lead were still detected in exceedance above its AWQS. Remaining metals were either not detected or detected below its applicable AWQS.
- Four PAHs were detected above its applicable AWQS which include Benzo[a]anthracene (max. 10.8 µg/L), Benzo[b]fluoranthene (max. 7.43 µg/L), Benzo[k]fluoranthene (max 3.28 µg/L), Chrysene (max. 9.27 µg/L), and Indeno[1,2,3-cd]pyrene (max 3.57 µg/L). Remaining SVOC compounds analyzed were either not detected or detected below its applicable AWQS.

**Chelsea Elliott – Groundwater Chemistry**

- No pesticides or PCB compounds were identified above their AWQS.
- One VOC, chloroform was detected above the AWQS (max of 14.0 µg/L. Remaining analyzed compounds were either not detected or detected below the AWQS.
- Three undissolved metals were identified in exceedance above its AWQS that include lead (max. of 122 µg/L), selenium (max. of 10.5 µg/L) , and sodium (max. of 274,000 µg/L).
- Following field filtering, two dissolved metals, sodium and selenium were still detected in exceedance above its AWQS. Remaining metals, including lead, were either not detected or detected below its applicable AWQS.
- Four PAHs were detected above its applicable AWQS which include Benzo[a]anthracene (max. 10.8 µg/L), Benzo[b]fluoranthene (max. 7.43 µg/L), Benzo[k]fluoranthene (max 3.28 µg/L), Chrysene (max. 9.27 µg/L), and Indeno[1,2,3-cd]pyrene (max 3.57 µg/L). Remaining SVOC compounds analyzed were either not detected or detected below its applicable AWQS.

A summary table of data for chemical analyses performed on groundwater samples is included in Table 2A for the Fulton 11 Site and Table 2B for the Chelsea Elliott Site. Figure 4A for the Fulton 11 Site and Figure 4B for Chelsea Elliott Site shows the location and posts the values for

groundwater that exceed the New York State 6NYCRR Part 703.5 Class GA groundwater standards.

## 5.4 Soil Vapor Chemistry

Soil vapor samples collected during both investigations were compared to the New York State Department of Health (NYSDOH) Final Guidance for Evaluating Soil Vapor Intrusion matrices dated October 2006 (with subsequent updates).

**Fulton 11 – Soil Vapor Chemistry**

- Chlorinated VOCs (CVOCs) detections included tetrachloroethene found at a maximum concentration of 100 µg/$m^3$ identified at the exterior portion of the Site. Other CVOCs including trichloroethene, methylene chloride, cis-1,2-dichloroethene, 1,1-dichloroethene, carbon tetrachloride, 1,1,1-trichloroethane, and vinyl chloride were either detected at low concentrations or not detected in the soil vapor sample.

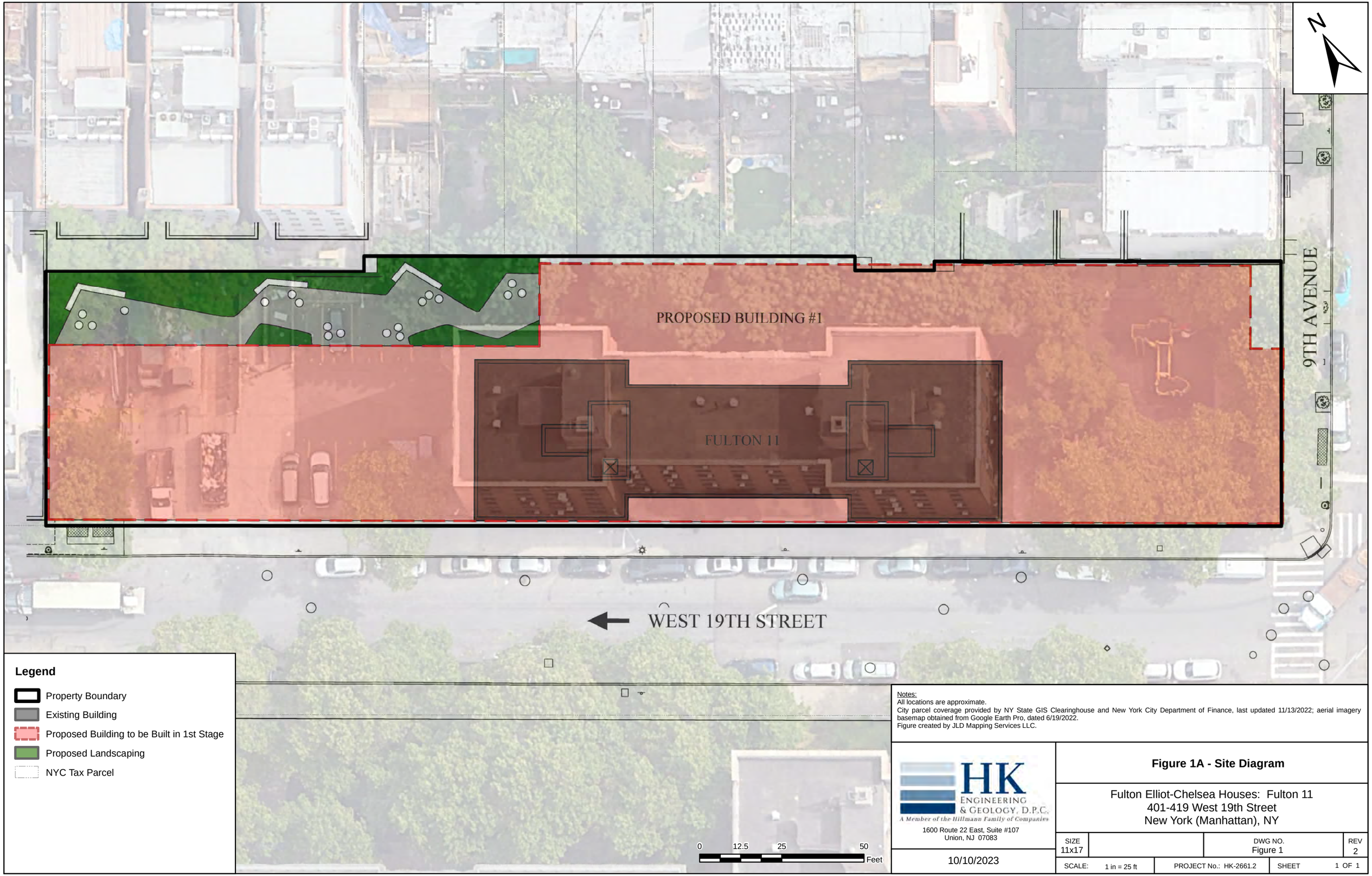
**Chelsea Elliott – Soil Vapor Chemistry**

- Chlorinated VOCs (CVOCs) detections included tetrachloroethene found at a maximum concentration of 73 µg/$m^3$ found inside the basement of the Hudson Guild Center. Other CVOCs including trichloroethene, methylene chloride, cis-1,2-dichloroethene, 1,1-dichloroethene, carbon tetrachloride, 1,1,1-trichloroethane, and vinyl chloride were either detected at low concentrations or not detected in the soil vapor sample.

A summary table of data for chemical analyses performed on soil vapor samples for the Fulton 11 Site is included in Table 3A and the Chelsea Elliott Site is included in Table 3B. Figure 5A shows the location and posts the values for soil vapor samples with detected concentrations at the Fulton 11 Site. Figure 5B shows the location and posts the values for soil vapor samples with detected concentrations at the Chelsea Elliott Site.

# FIGURES

# Fulton 11




**Legend**

- Property Boundary
- Existing Building
- Proposed Building to be Built in 1st Stage
- Proposed Landscaping
- NYC Tax Parcel

Notes:
All locations are approximate.
City parcel coverage provided by NY State GIS Clearinghouse and New York City Department of Finance, last updated 11/13/2022; aerial imagery basemap obtained from Google Earth Pro, dated 6/19/2022.
Figure created by JLD Mapping Services LLC.

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10/10/2023

**Figure 1A - Site Diagram**

Fulton Elliot-Chelsea Houses: Fulton 11
401-419 West 19th Street
New York (Manhattan), NY

| SIZE | | DWG NO. | REV |
|---|---|---|---|
| 11x17 | | Figure 1 | 2 |

| SCALE: | PROJECT No.: | SHEET |
|---|---|---|
| 1 in = 25 ft | HK-2661.2 | 1 OF 1 |

ADDITIONAL NOTES:
1. EXISTING BASEMENT IS 10 FEET BELOW GRADE.
2. PROPOSED BASEMENT WILL BE 10 FEET BELOW GRADE.

N

PROPOSED BUILDING #1

FULTON 11

SB10

SB2/ TWP2/ SV2

SB5/ TWP5/

SB3/ SV3

SB6

SB8

SV8

SB4/ TWP4/ SV4

SB1/ TWP1/ SV1

SB9/ SV9

9TH AVENUE

WEST 19TH STREET

**Legend**

- Soil Sample
- Groundwater Sample
- Soil Vapor Sample
- Property Boundary
- Existing Building
- Proposed Building to be Built in 1st Stage
- Proposed Landscaping
- NYC Tax Parcel

0 12.5 25 50 Feet

Notes:
All locations are approximate; field activities conducted on 11/16/2023 & 11/17/2023.
City parcel coverage provided by NY State GIS Clearinghouse and New York City Department of Finance, last updated 11/13/2022; aerial imagery basemap obtained from Google Earth Pro, dated 6/19/2022.
Figure created by JLD Mapping Services LLC.

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**Figure 2A - Sample Location Map**

Fulton Elliot-Chelsea Houses: Fulton 11
401-419 West 19th Street
New York (Manhattan), NY

| SIZE | | DWG NO. | REV |
|---|---|---|---|
| 11x17 | | Figure 1 | 1 |
| SCALE: 1 in = 25 ft | PROJECT No.: HK-2661.2 | SHEET | 1 OF 1 |

| SAMPLE ID: | SB10A | SB10B |
|---|---|---|
| DATE: | 11/16/2023 | 11/16/2023 |
| DEPTH (FT BGS): | 0-2 | 10-12 |
| VOCS | ND | ND |
| BENZO(A)ANTHRACENE | 1.76 | ND (0.037) |
| BENZO(A)PYRENE | 2.16 | ND (0.037) |
| BENZO(B)FLUORANTHENE | 3.15 | ND (0.037) |
| BENZO(K)FLUORANTHENE | 1.63 | ND (0.037) |
| CHRYSENE | 1.81 | ND (0.037) |
| DIBENZ(A,H)ANTHRACENE | 0.976 | ND (0.037) |
| INDENO(1,2,3-CD)PYRENE | 2.5 | ND (0.037) |
| TOTAL PCBS | ND (0.00386) | ND (0.00371) |
| 4,4'-DDE | 0.055 | 0.000414 J |
| 4,4'-DDD | 0.024 | ND (0.000742) |
| 4,4'-DDT | 0.179 D | 0.000402 J |
| DIELDRIN | 0.012 | ND (0.000742) |
| BARIUM | 280 | 33.5 |
| LEAD | 248 | 9.5 |
| MERCURY | 0.24 | 0.064 |
| ZINC | 277 | 33.9 |

| SAMPLE ID: | SB5 |
|---|---|
| DATE: | 11/16/2023 |
| DEPTH (FT BGS): | 0-2 |
| VOCS | ND |
| BENZO(A)ANTHRACENE | 0.177 |
| BENZO(A)PYRENE | 0.168 |
| BENZO(B)FLUORANTHENE | 0.19 |
| BENZO(K)FLUORANTHENE | 0.134 |
| CHRYSENE | 0.163 |
| DIBENZ(A,H)ANTHRACENE | 0.057 |
| INDENO(1,2,3-CD)PYRENE | 0.116 |
| TOTAL PCBS | ND (0.00375) |
| 4,4'-DDE | 0.07 |
| 4,4'-DDD | 0.00798 |
| 4,4'-DDT | 0.087 |
| DIELDRIN | 0.00603 |
| BARIUM | 96.8 |
| LEAD | 107 |
| MERCURY | 0.13 |
| ZINC | 105 |

| SAMPLE ID: | SB3A | SB3B |
|---|---|---|
| DATE: | 11/16/2023 | 11/16/2023 |
| DEPTH (FT BGS): | 0-2 | 10-12 |
| VOCS | ND | ND |
| BENZO(A)ANTHRACENE | 0.693 | ND (0.035) |
| BENZO(A)PYRENE | 0.672 | ND (0.035) |
| BENZO(B)FLUORANTHENE | 0.616 | ND (0.035) |
| BENZO(K)FLUORANTHENE | 0.656 | ND (0.035) |
| CHRYSENE | 0.674 | ND (0.035) |
| DIBENZ(A,H)ANTHRACENE | 0.21 | ND (0.035) |
| INDENO(1,2,3-CD)PYRENE | 0.467 | ND (0.035) |
| TOTAL PCBS | ND (0.00369) | ND (0.00353) |
| 4,4'-DDE | 0.024 | ND (0.000706) |
| 4,4'-DDD | 0.00289 | ND (0.000706) |
| 4,4'-DDT | 0.05 | ND (0.000706) |
| DIELDRIN | ND (0.000738) | ND (0.000706) |
| BARIUM | 206 | 41.1 |
| LEAD | 301 | 26.2 |
| MERCURY | 0.67 | 0.11 |
| ZINC | 164 | 42.1 |

| SAMPLE ID: | SB4A | SB4B |
|---|---|---|
| DATE: | 11/17/2023 | 11/17/2023 |
| DEPTH (FT BGS): | 0-2 | 10-12 |
| VOCS | ND | NE |
| BENZO(A)ANTHRACENE | 1.81 | 1.35 |
| BENZO(A)PYRENE | 1.72 | 1.44 |
| BENZO(B)FLUORANTHENE | 1.76 | 1.45 |
| BENZO(K)FLUORANTHENE | 1.47 | 1.25 |
| CHRYSENE | 1.64 | 1.29 |
| DIBENZ(A,H)ANTHRACENE | 0.601 | 0.435 |
| INDENO(1,2,3-CD)PYRENE | 1.14 | 0.922 |
| TOTAL PCBS | ND (0.00365) | ND (0.00351) |
| 4,4'-DDE | 0.052 | 0.013 |
| 4,4'-DDD | ND (0.00073) | ND (0.00702) |
| 4,4'-DDT | 0.085 | 0.026 |
| DIELDRIN | 0.00707 | 0.00196 |
| BARIUM | 246 | 194 |
| LEAD | 500 | 353 |
| MERCURY | 1.2 | 0.33 |
| ZINC | 288 | 180 |

| SAMPLE ID: | SB1A | SB1B |
|---|---|---|
| DATE: | 11/17/2023 | 11/17/2023 |
| DEPTH (FT BGS): | 0-2 | 10-12 |
| VOCS | NE | ND |
| BENZO(A)ANTHRACENE | 1.65 | 1.72 |
| BENZO(A)PYRENE | 1.84 | 1.35 |
| BENZO(B)FLUORANTHENE | 2.23 | 1.07 |
| BENZO(K)FLUORANTHENE | 1.21 | 0.917 |
| CHRYSENE | 1.57 | 1.64 |
| DIBENZ(A,H)ANTHRACENE | 0.624 | 0.42 |
| INDENO(1,2,3-CD)PYRENE | 1.28 | 0.677 |
| TOTAL PCBS | ND (0.00365) | ND (0.00337) |
| 4,4'-DDE | 0.011 | 0.00656 |
| 4,4'-DDD | 0.00722 | ND (0.00074) |
| 4,4'-DDT | 0.019 | 0.025 |
| DIELDRIN | ND (0.00073) | ND (0.00074) |
| BARIUM | 84.7 | 408 |
| LEAD | 130 | 547 |
| MERCURY | 0.59 | 0.62 |
| ZINC | 87.4 | 616 |

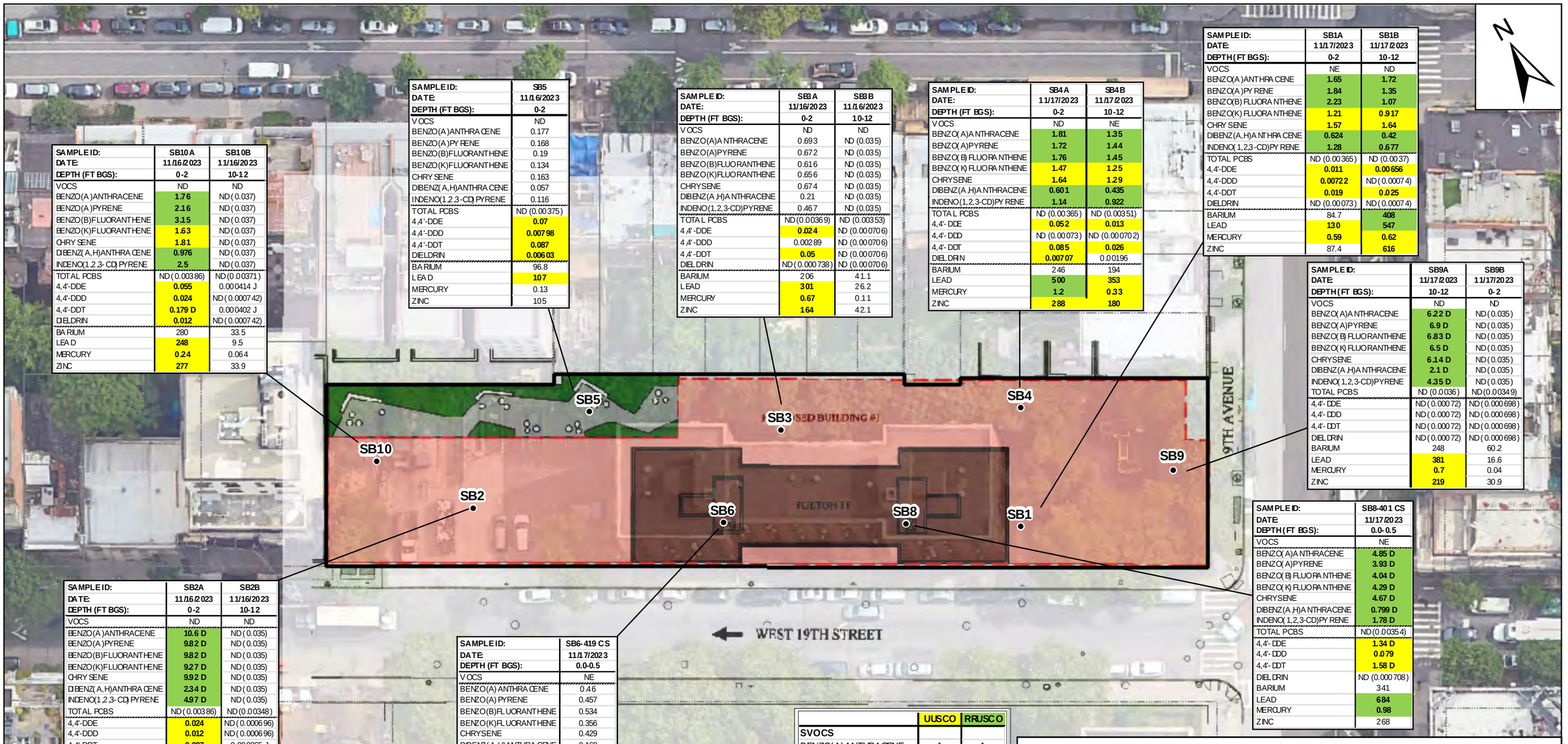
| SAMPLE ID: | SB9A | SB9B |
|---|---|---|
| DATE: | 11/17/2023 | 11/17/2023 |
| DEPTH (FT BGS): | 10-12 | 0-2 |
| VOCS | ND | ND |
| BENZO(A)ANTHRACENE | 6.22 D | ND (0.035) |
| BENZO(A)PYRENE | 6.9 D | ND (0.035) |
| BENZO(B)FLUORANTHENE | 6.83 D | ND (0.035) |
| BENZO(K)FLUORANTHENE | 6.5 D | ND (0.035) |
| CHRYSENE | 6.14 D | ND (0.035) |
| DIBENZ(A,H)ANTHRACENE | 2.1 D | ND (0.035) |
| INDENO(1,2,3-CD)PYRENE | 4.35 D | ND (0.035) |
| TOTAL PCBS | ND (0.0036) | ND (0.00349) |
| 4,4'-DDE | ND (0.00072) | ND (0.000698) |
| 4,4'-DDD | ND (0.00072) | ND (0.000698) |
| 4,4'-DDT | ND (0.00072) | ND (0.000698) |
| DIELDRIN | ND (0.00072) | ND (0.000698) |
| BARIUM | 248 | 60.2 |
| LEAD | 381 | 16.6 |
| MERCURY | 0.7 | 0.04 |
| ZINC | 219 | 30.9 |

| SAMPLE ID: | SB8-401 CS |
|---|---|
| DATE: | 11/17/2023 |
| DEPTH (FT BGS): | 0.0-0.5 |
| VOCS | NE |
| BENZO(A)ANTHRACENE | 4.85 D |
| BENZO(A)PYRENE | 3.93 D |
| BENZO(B)FLUORANTHENE | 4.04 D |
| BENZO(K)FLUORANTHENE | 4.29 D |
| CHRYSENE | 4.67 D |
| DIBENZ(A,H)ANTHRACENE | 0.799 D |
| INDENO(1,2,3-CD)PYRENE | 1.78 D |
| TOTAL PCBS | ND (0.00354) |
| 4,4'-DDE | 1.34 D |
| 4,4'-DDD | 0.079 |
| 4,4'-DDT | 1.58 D |
| DIELDRIN | ND (0.000708) |
| BARIUM | 341 |
| LEAD | 684 |
| MERCURY | 0.98 |
| ZINC | 268 |

| SAMPLE ID: | SB2A | SB2B |
|---|---|---|
| DATE: | 11/16/2023 | 11/16/2023 |
| DEPTH (FT BGS): | 0-2 | 10-12 |
| VOCS | ND | ND |
| BENZO(A)ANTHRACENE | 10.6 D | ND (0.035) |
| BENZO(A)PYRENE | 9.82 D | ND (0.035) |
| BENZO(B)FLUORANTHENE | 9.82 D | ND (0.035) |
| BENZO(K)FLUORANTHENE | 9.27 D | ND (0.035) |
| CHRYSENE | 9.92 D | ND (0.035) |
| DIBENZ(A,H)ANTHRACENE | 2.34 D | ND (0.035) |
| INDENO(1,2,3-CD)PYRENE | 4.97 D | ND (0.035) |
| TOTAL PCBS | ND (0.00386) | ND (0.00348) |
| 4,4'-DDE | 0.024 | ND (0.000696) |
| 4,4'-DDD | 0.012 | ND (0.000696) |
| 4,4'-DDT | 0.097 | 0.000265 J |
| DIELDRIN | ND (0.000772) | ND (0.000696) |
| BARIUM | 363 | 37.9 |
| LEAD | 797 | 8.8 |
| MERCURY | 0.7 | <0.032 |
| ZINC | 329 | 25.4 |

| SAMPLE ID: | SB6-419 CS |
|---|---|
| DATE: | 11/17/2023 |
| DEPTH (FT BGS): | 0.0-0.5 |
| VOCS | NE |
| BENZO(A)ANTHRACENE | 0.46 |
| BENZO(A)PYRENE | 0.457 |
| BENZO(B)FLUORANTHENE | 0.534 |
| BENZO(K)FLUORANTHENE | 0.356 |
| CHRYSENE | 0.429 |
| DIBENZ(A,H)ANTHRACENE | 0.168 |
| INDENO(1,2,3-CD)PYRENE | 0.353 |
| TOTAL PCBS | 1.95 D |
| 4,4'-DDE | 0.555 D |
| 4,4'-DDD | 0.099 |
| 4,4'-DDT | 0.529 D |
| DIELDRIN | ND (0.000722) |
| BARIUM | 517 |
| LEAD | 1,070 |
| MERCURY | 0.37 |
| ZINC | 405 |

| | UUSCO | RRUSCO |
|---|---|---|
| **SVOCS** | | |
| BENZO(A)ANTHRACENE | 1 | 1 |
| BENZO(A)PYRENE | 1 | 1 |
| BENZO(B)FLUORANTHENE | 1 | 1 |
| BENZO(K)FLUORANTHENE | 0.8 | 3.9 |
| CHRYSENE | 1 | 3.9 |
| DIBENZ(A,H)ANTHRACENE | 0.33 | 0.33 |
| INDENO(1,2,3-CD)PYRENE | 0.5 | 0.5 |
| **PCBS** | | |
| TOTAL PCBS | 0.1 | 1 |
| **PESTICIDES** | | |
| 4,4'-DDE | 0.0033 | 8.9 |
| 4,4'-DDD | 0.0033 | 13 |
| 4,4'-DDT | 0.0033 | 7.9 |
| DIELDRIN | 0.005 | 0.2 |
| **METALS** | | |
| BARIUM | 350 | 400 |
| LEAD | 63 | 400 |
| MERCURY | 0.18 | 0.81 |
| ZINC | 109 | 10,000 |




**Legend**

- Soil Sample
- Property Boundary
- Existing Building
- Proposed Building to be Built in 1st Stage
- Proposed Landscaping
- NYC Tax Parcel

Notes:
All locations are approximate; field activities conducted on 11/16/2023 & 11/17/2023.
Only select compounds displayed - full analytical results can be found on Table 1A; all concentrations displayed in milligrams per kilogram (mg/kg);
FT BGS = feet below ground surface
ND = Not Detected; ( ) = Laboratory Reporting Limit (RL) listed with ND value when available; NE = Compounds detected at concentrations that do not exceed applicable remediation standards; D = Compound reported from a Diluted analysis; J = Estimated concentration; exceedance of New York State Department of Environmental Conservation (NYSDEC) Unrestricted Use (UU) Soil Cleanup Objective (SCO) highlighted yellow; exceedance of NYSDEC Restricted Residential Use (RRU) SCO highlighted green.
City parcel coverage provided by NY State GIS Clearinghouse and New York City Department of Finance, last updated 11/13/2022; aerial imagery basemap obtained from Google Earth Pro, dated 6/19/2022.
Figure created by JLD Mapping Services LLC.

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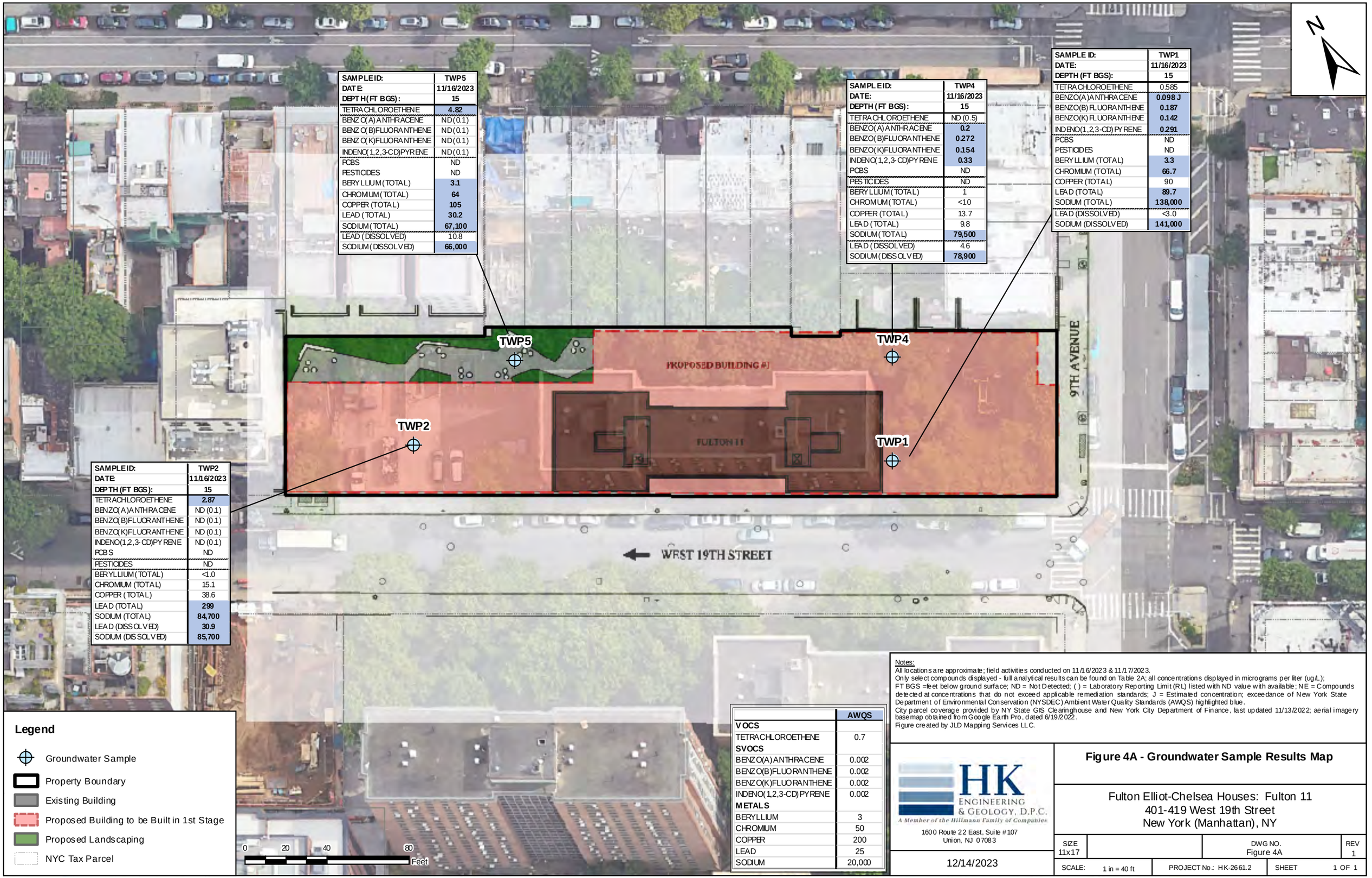
12/14/2023

# Figure 3A - Soil Sample Results Map

Fulton Elliot-Chelsea Houses: Fulton 11
401-419 West 19th Street
New York (Manhattan), NY

| SIZE | | DWG NO. | REV |
|---|---|---|---|
| 11x17 | | Figure 3A | 0 |
| SCALE: 1 in = 40 ft | PROJECT No.: HK-26612 | SHEET | 1 OF 1 |




| SAMPLE ID: | TWP5 |
|---|---|
| DATE: | 11/16/2023 |
| DEPTH (FT BGS): | 15 |
| TETRACHLOROETHENE | 4.82 |
| BENZO(A)ANTHRACENE | ND (0.1) |
| BENZO(B)FLUORANTHENE | ND (0.1) |
| BENZO(K)FLUORANTHENE | ND (0.1) |
| INDENO(1,2,3-CD)PYRENE | ND (0.1) |
| PCBS | ND |
| PESTICIDES | ND |
| BERYLLIUM (TOTAL) | 3.1 |
| CHROMIUM (TOTAL) | 64 |
| COPPER (TOTAL) | 105 |
| LEAD (TOTAL) | 30.2 |
| SODIUM (TOTAL) | 67,100 |
| LEAD (DISSOLVED) | 10.8 |
| SODIUM (DISSOLVED) | 66,000 |

| SAMPLE ID: | TWP4 |
|---|---|
| DATE: | 11/16/2023 |
| DEPTH (FT BGS): | 15 |
| TETRACHLOROETHENE | ND (0.5) |
| BENZO(A)ANTHRACENE | 0.2 |
| BENZO(B)FLUORANTHENE | 0.272 |
| BENZO(K)FLUORANTHENE | 0.154 |
| INDENO(1,2,3-CD)PYRENE | 0.33 |
| PCBS | ND |
| PESTICIDES | ND |
| BERYLLIUM (TOTAL) | 1 |
| CHROMIUM (TOTAL) | <10 |
| COPPER (TOTAL) | 13.7 |
| LEAD (TOTAL) | 9.8 |
| SODIUM (TOTAL) | 79,500 |
| LEAD (DISSOLVED) | 4.6 |
| SODIUM (DISSOLVED) | 78,900 |

| SAMPLE ID: | TWP1 |
|---|---|
| DATE: | 11/16/2023 |
| DEPTH (FT BGS): | 15 |
| TETRACHLOROETHENE | 0.585 |
| BENZO(A)ANTHRACENE | 0.098 J |
| BENZO(B)FLUORANTHENE | 0.187 |
| BENZO(K)FLUORANTHENE | 0.142 |
| INDENO(1,2,3-CD)PYRENE | 0.291 |
| PCBS | ND |
| PESTICIDES | ND |
| BERYLLIUM (TOTAL) | 3.3 |
| CHROMIUM (TOTAL) | 66.7 |
| COPPER (TOTAL) | 90 |
| LEAD (TOTAL) | 89.7 |
| SODIUM (TOTAL) | 138,000 |
| LEAD (DISSOLVED) | <3.0 |
| SODIUM (DISSOLVED) | 141,000 |

| SAMPLE ID: | TWP2 |
|---|---|
| DATE: | 11/16/2023 |
| DEPTH (FT BGS): | 15 |
| TETRACHLOROETHENE | 2.87 |
| BENZO(A)ANTHRACENE | ND (0.1) |
| BENZO(B)FLUORANTHENE | ND (0.1) |
| BENZO(K)FLUORANTHENE | ND (0.1) |
| INDENO(1,2,3-CD)PYRENE | ND (0.1) |
| PCBS | ND |
| PESTICIDES | ND |
| BERYLLIUM (TOTAL) | <1.0 |
| CHROMIUM (TOTAL) | 15.1 |
| COPPER (TOTAL) | 38.6 |
| LEAD (TOTAL) | 299 |
| SODIUM (TOTAL) | 84,700 |
| LEAD (DISSOLVED) | 30.9 |
| SODIUM (DISSOLVED) | 85,700 |

**Legend**

- Groundwater Sample
- Property Boundary
- Existing Building
- Proposed Building to be Built in 1st Stage
- Proposed Landscaping
- NYC Tax Parcel

| | AWQS |
|---|---|
| **VOCS** | |
| TETRACHLOROETHENE | 0.7 |
| **SVOCS** | |
| BENZO(A)ANTHRACENE | 0.002 |
| BENZO(B)FLUORANTHENE | 0.002 |
| BENZO(K)FLUORANTHENE | 0.002 |
| INDENO(1,2,3-CD)PYRENE | 0.002 |
| **METALS** | |
| BERYLLIUM | 3 |
| CHROMIUM | 50 |
| COPPER | 200 |
| LEAD | 25 |
| SODIUM | 20,000 |

Notes:
All locations are approximate; field activities conducted on 11/16/2023 & 11/17/2023.
Only select compounds displayed - full analytical results can be found on Table 2A; all concentrations displayed in micrograms per liter (ug/L);
FT BGS =feet below ground surface; ND = Not Detected; ( ) = Laboratory Reporting Limit (RL) listed with ND value with available; NE = Compounds detected at concentrations that do not exceed applicable remediation standards; J = Estimated concentration; exceedance of New York State Department of Environmental Conservation (NYSDEC) Ambient Water Quality Standards (AWQS) highlighted blue.
City parcel coverage provided by NY State GIS Clearinghouse and New York City Department of Finance, last updated 11/13/2022; aerial imagery basemap obtained from Google Earth Pro, dated 6/19/2022.
Figure created by JLD Mapping Services LLC.

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12/14/2023

# Figure 4A - Groundwater Sample Results Map

Fulton Elliot-Chelsea Houses: Fulton 11
401-419 West 19th Street
New York (Manhattan), NY

| SIZE | | DWG NO. | REV |
|---|---|---|---|
| 11x17 | | Figure 4A | 1 |
| SCALE: 1 in = 40 ft | PROJECT No.: HK-2661.2 | SHEET | 1 OF 1 |

| SAMPLE ID: | SV3 |
|---|---|
| LOCATION: | EXTERIOR |
| DATE: | 11/16/2023 |
| DEPTH (FT BGS): | 12 |
| METHYLENE CHLORIDE | ND (0.69) |
| TETRACHLOROETHENE | 24 |
| TRICHLOROETHENE | ND (0.25) |

| SAMPLE ID: | SV4 |
|---|---|
| LOCATION: | EXTERIOR |
| DATE: | 11/17/2023 |
| DEPTH (FT BGS): | 12 |
| METHYLENE CHLORIDE | ND (0.69) |
| TETRACHLOROETHENE | 49 |
| TRICHLOROETHENE | ND (0.25) |

| SAMPLE ID: | SV1 |
|---|---|
| LOCATION: | EXTERIOR |
| DATE: | 11/17/2023 |
| DEPTH (FT BGS): | 12 |
| METHYLENE CHLORIDE | ND (0.69) |
| TETRACHLOROETHENE | 43 |
| TRICHLOROETHENE | ND (0.25) |

| SAMPLE ID: | SV9 |
|---|---|
| LOCATION: | EXTERIOR |
| DATE: | 11/17/2023 |
| DEPTH (FT BGS): | 12 |
| METHYLENE CHLORIDE | ND (0.69) |
| TETRACHLOROETHENE | 66 |
| TRICHLOROETHENE | ND (0.25) |

| SAMPLE ID: | SV2 |
|---|---|
| LOCATION: | EXTERIOR |
| DATE: | 11/16/2023 |
| DEPTH (FT BGS): | 12 |
| METHYLENE CHLORIDE | 6 |
| TETRACHLOROETHENE | 100 |
| TRICHLOROETHENE | ND (0.25) |

| SAMPLE ID: | SV8 |
|---|---|
| LOCATION: | TRASH COMPACTOR RM |
| DATE: | 11/17/2023 |
| DEPTH (FT BGS): | SUB-SLAB |
| METHYLENE CHLORIDE | ND (0.69) |
| TETRACHLOROETHENE | 12 |
| TRICHLOROETHENE | ND (0.25) |

SV1 SV2 SV3 SV4 SV8 SV9

PROPOSED BUILDING #1

FULTON 11

WEST 19TH STREET

9TH AVENUE

N

0 20 40 80 Feet

**Legend**

- Soil Vapor Sample
- Property Boundary
- Existing Building
- Proposed Building to be Built in 1st Stage
- Proposed Landscaping
- NYC Tax Parcel

Notes:
All locations are approximate; field activities conducted on 11/16/2023 & 11/17/2023.
Only select compounds displayed - full analytical results can be found on Table 3A; all concentrations displayed in micrograms per cubic meter ($ug/m^3$); FT BGS = Feet below ground surface; RM = Room; ND = Not Detected; Laboratory Reporting Limit (RL) listed with ND value with available.
City parcel coverage provided by NY State GIS Clearinghouse and New York City Department of Finance, last updated 11/13/2022; aerial imagery basemap obtained from Google Earth Pro, dated 6/19/2022.
Figure created by JLD Mapping Services LLC.

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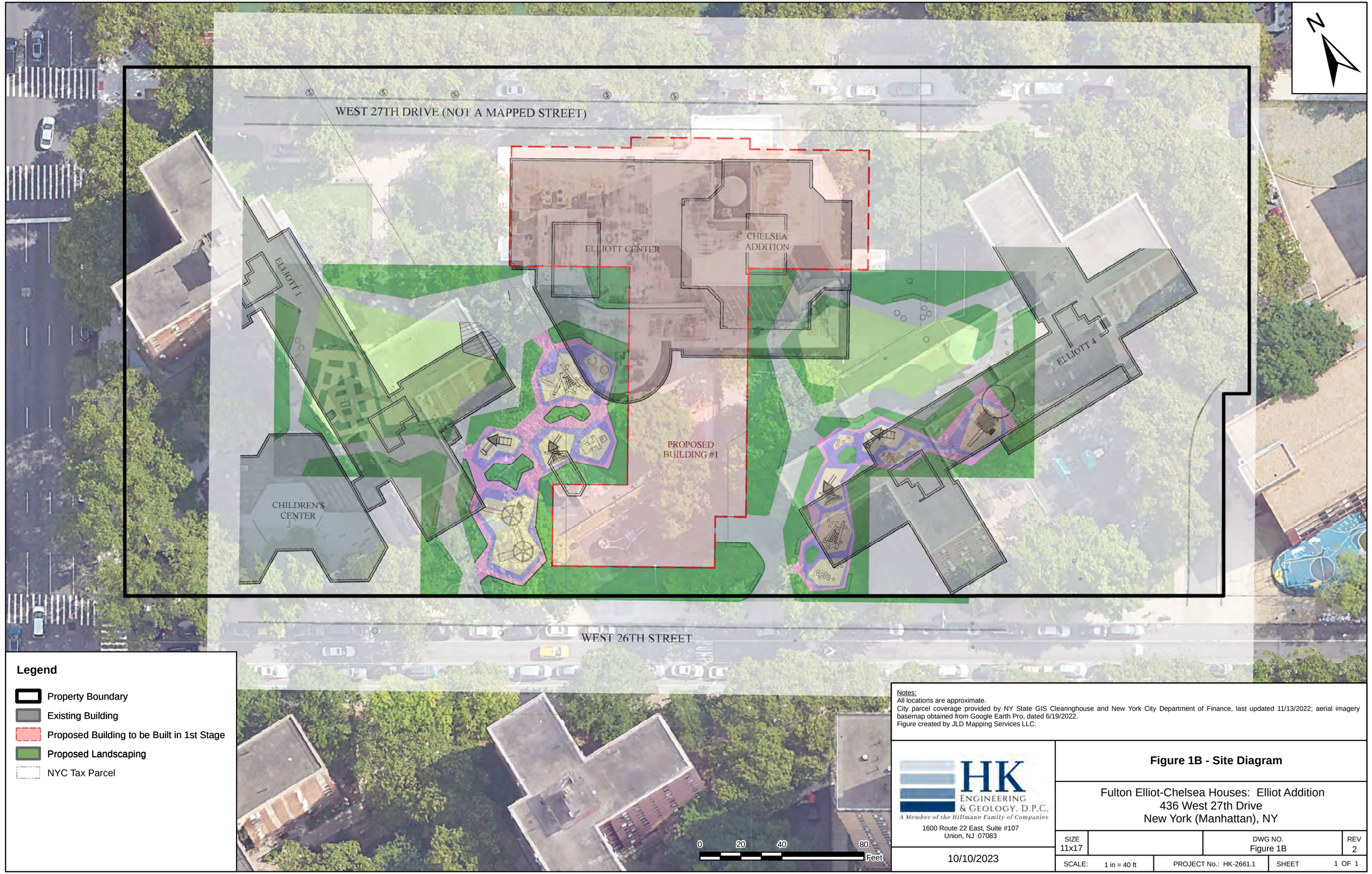
# Figure 5A - Soil Vapor Sample Results Map

Fulton Elliot-Chelsea Houses: Fulton 11
401-419 West 19th Street
New York (Manhattan), NY

| SIZE | | DWG NO. | REV |
|---|---|---|---|
| 11x17 | | Figure 5A | 0 |
| SCALE: 1 in = 40 ft | PROJECT No.: HK-2661.2 | SHEET | 1 OF 1 |

# FIGURES

## Chelsea Elliott




## Legend

- Property Boundary
- Existing Building
- Proposed Building to be Built in 1st Stage
- Proposed Landscaping
- NYC Tax Parcel

Notes:
All locations are approximate.
City parcel coverage provided by NY State GIS Clearinghouse and New York City Department of Finance, last updated 11/13/2022; aerial imagery basemap obtained from Google Earth Pro, dated 6/19/2022.
Figure created by JLD Mapping Services LLC.

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**Figure 1B - Site Diagram**

Fulton Elliot-Chelsea Houses: Elliot Addition
436 West 27th Drive
New York (Manhattan), NY

| SIZE | | DWG NO. | REV |
|---|---|---|---|
| 11x17 | | Figure 1B | 2 |

| SCALE: | PROJECT No.: | SHEET |
|---|---|---|
| 1 in = 40 ft | HK-2661.1 | 1 OF 1 |

ADDITIONAL NOTES:
1. EXISTING BASEMENT IS 10 FEET BELOW GRADE.
2. PROPOSED BASEMENT WILL BE 10 FEET BELOW GRADE.

N

WEST 27TH DRIVE (NOT A MAPPED STREET)

SB9/ SV9
SB11/ SV7
SB5/ TWP5
SB10/ SV6
SB8/ SV8
SB6/ TWP6
SB4/ TWP4
ELLIOTT CENTER
CHELSEA ADDITION
ELLIOTT 1
ELLIOTT 4
SB2/ TW2/ SV2
SB3/ SV3
PROPOSED BUILDING #1
SB12
CHILDREN'S CENTER
SB1/ TWP1/ SV1
WEST 26TH STREET

0 20 40 80 Feet

**Legend**

- Soil Sample
- Groundwater Sample
- Soil Vapor Sample
- Property Boundary
- Project Site Boundary
- Existing Building
- Proposed Building to be Built in 1st Stage
- Proposed Landscaping
- NYC Tax Parcel

Notes:
All locations are approximate; field activities conducted on 11/15/2023, 11/16/2023, & 11/20/2023.
City parcel coverage provided by NY State GIS Clearinghouse and New York City Department of Finance, last updated 11/13/2022; aerial imagery basemap obtained from Google Earth Pro, dated 6/19/2022.
Figure created by JLD Mapping Services LLC.

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12/14/2023

**Figure 2B - Sample Location Map**

Fulton Elliot-Chelsea Houses: Elliot Addition
432 West 27th Drive
New York (Manhattan), NY

| SIZE | | DWG NO. | REV |
|---|---|---|---|
| 11x17 | | Figure 2B | 2 |
| SCALE: 1 in = 40 ft | PROJECT No.: HK-2661.1 | SHEET | 1 OF 1 |

ADDITIONAL NOTES:
1. EXISTING BASEMENT IS 10 FEET BELOW GRADE.
2. PROPOSED BASEMENT WILL BE 10 FEET BELOW GRADE.

| SAMPLE ID: | SB9A | SB9B |
|---|---|---|
| DATE: | 11/20/2023 | 11/20/2023 |
| DEPTH (FT BGS): | 0-2 | 10-12 |
| VOCS | ND | ND |
| BENZO(A) ANTHRACENE | 0.106 | 3.62 |
| BENZO(A) PYRENE | 0.103 | 3.61 |
| | 0.15 | 4.33 |
| | 0.072 | 2.66 |
| CHRYSENE | 0.097 | 3.48 |
| DIBENZ(A,H)ANTHRACENE | 0.119 | 0.942 |
| | 0.254 | 1.93 |
| PCBS | ND | ND |
| 4,4'-DDE | 0.011 | 0.017 |
| 4,4'-DDD | 0.00103 | ND (0.000712) |
| 4,4'-DDT | 0.00808 | 0.023 |
| BARIUM | 46.7 | 157 |
| CADMIUM | <0.53 | <0.55 |
| COPPER | 16 | 25 |
| LEAD | 21.5 | 64.2 |
| MERCURY | 0.044 | 0.06 |
| NICKEL | 24.5 | 31.3 |
| ZINC | 39.9 | 100 |

| SAMPLE ID: | SB10A |
|---|---|
| DATE: | 11/15/2023 |
| DEPTH (FT BGS): | 1.5-2.5 |
| VOCS | NE |
| BENZO(A) ANTHRACENE | 1.62 |
| BENZO(A) PYRENE | 1.48 |
| BENZO(B)FLUORANTHENE | 1.51 |
| BENZO(K)FLUORANTHENE | 1.17 |
| CHRYSENE | 1.39 |
| DIBENZ(A,H)ANTHRACENE | 0.489 |
| INDENO(1,2,3-CD)PYRENE | 0.932 |
| PCBS | ND |
| 4,4'-DDE | 0.095 D |
| 4,4'-DDD | 0.014 |
| 4,4'-DDT | 0.096 D |
| BARIUM | 90.2 |
| CADMIUM | <0.56 |
| COPPER | 26.4 |
| LEAD | 159 |
| MERCURY | 0.27 |
| NICKEL | 18.6 |
| ZINC | 54.9 |

| SAMPLE ID: | SB11A |
|---|---|
| DATE: | 11/15/2023 |
| DEPTH (FT BGS): | 1-2 |
| VOCS | ND |
| BENZO(A)ANTHRACENE | 0.947 |
| BENZO(A)PYRENE | 0.865 |
| BENZO(B)FLUORANTHENE | 0.856 |
| BENZO(K)FLUORANTHENE | 0.739 |
| CHRYSENE | 0.742 |
| DIBENZ(A,H)ANTHRACENE | 0.277 |
| INDENO(1,2,3-CD)PYRENE | 0.511 |
| PCBS | ND |
| 4,4'-DDE | 0.078 |
| 4,4'-DDD | 0.011 |
| 4,4'-DDT | 0.075 |
| BARIUM | 98.7 |
| CADMIUM | <0.58 |
| COPPER | 17.1 |
| LEAD | 56.1 |
| MERCURY | 0.23 |
| NICKEL | 19.4 |
| ZINC | 80.8 |

| SAMPLE ID: | SB5A | SB5B |
|---|---|---|
| DATE: | 11/16/2023 | 11/16/2023 |
| DEPTH (FT BGS): | 0-2 | 10-12 |
| VOCS | NE | ND |
| BENZO(A)ANTHRACENE | 0.035 J | ND (0.039) |
| BENZO(A)PYRENE | 0.03 J | ND (0.039) |
| BENZO(B)FLUORANTHENE | 0.034 J | ND (0.039) |
| BENZO(K)FLUORANTHENE | 0.028 J | ND (0.039) |
| CHRYSENE | 0.031 J | ND (0.039) |
| DIBENZ(A,H)ANTHRACENE | ND (0.037) | ND (0.039) |
| INDENO(1,2,3-CD)PYRENE | ND (0.037) | ND (0.039) |
| PCBS | ND | ND |
| 4,4'-DDE | 0.00285 | 0.00041 J |
| 4,4'-DDD | 0.00649 | 0.000444 J |
| 4,4'-DDT | 0.000589 J | 0.000229 J |
| BARIUM | 59.6 | 43.4 |
| CADMIUM | <0.53 | <0.57 |
| COPPER | 20 | 16.2 |
| LEAD | 29.9 | 27.7 |
| MERCURY | 0.21 | 0.11 |
| NICKEL | 21.9 | 14 |
| ZINC | 51.6 | 30.1 |

| SAMPLE ID: | SB4A | SB4B |
|---|---|---|
| DATE: | 11/16/2023 | 11/16/2023 |
| DEPTH (FT BGS): | 0-2 | 10-12 |
| VOCS | ND | ND |
| BENZO(A)ANTHRACENE | 0.191 | 0.026 J |
| BENZO(A)PYRENE | 0.189 | 0.037 J |
| BENZO(B)FLUORANTHENE | 0.197 | 0.035 J |
| BENZO(K)FLUORANTHENE | 0.157 | 0.034 J |
| CHRYSENE | 0.172 | 0.028 J |
| DIBENZ(A,H)ANTHRACENE | 0.056 | ND (0.041) |
| INDENO(1,2,3-CD)PYRENE | 0.118 | 0.034 J |
| PCBS | ND | ND |
| 4,4'-DDE | ND (0.000768) | ND (0.000826) |
| 4,4'-DDD | ND (0.000768) | ND (0.000826) |
| 4,4'-DDT | ND (0.000768) | ND (0.000826) |
| BARIUM | 298 | 2,180 |
| CADMIUM | <0.60 | 1 |
| COPPER | 25.2 | 35.7 |
| LEAD | 203 | 2,680 |
| MERCURY | 0.23 | 0.57 |
| NICKEL | 14.9 | 21.7 |
| ZINC | 196 | 2,550 |

| SAMPLE ID: | SB6A | SB6B |
|---|---|---|
| DATE: | 11/20/2023 | 11/20/2023 |
| DEPTH (FT BGS): | 0-2 | 10-12 |
| VOCS | ND | NE |
| BENZO(A) ANTHRACENE | 0.304 | 0.225 |
| BENZO(A) PYRENE | 0.314 | 0.215 |
| BENZO(B)FLUORANTHENE | 0.347 | 0.246 |
| BENZO(K)FLUORANTHENE | 0.242 | 0.142 |
| CHRYSENE | 0.271 | 0.19 |
| DIBENZ(A,H)ANTHRACENE | 0.112 | 0.055 |
| INDENO(1,2,3-CD)PYRENE | 0.242 | 0.128 |
| PCBS | ND | ND |
| 4,4'-DDE | 0.023 | 0.000726 J |
| 4,4'-DDD | 0.00236 | ND (0.000732) |
| 4,4'-DDT | 0.038 | 0.00113 |
| BARIUM | 224 | 38 |
| CADMIUM | <0.55 | <0.53 |
| COPPER | 20 | 15.6 |
| LEAD | 143 | 48.9 |
| MERCURY | 0.15 | 0.054 |
| NICKEL | 20.2 | 18.1 |
| ZINC | 148 | 66.2 |

| SAMPLE ID: | SB8A |
|---|---|
| DATE: | 11/15/2023 |
| DEPTH (FT BGS): | 0.0-1.5 |
| VOCS | NE |
| BENZO(A) ANTHRACENE | ND (0.035) |
| BENZO(A) PYRENE | ND (0.035) |
| BENZO(B)FLUORANTHENE | ND (0.035) |
| BENZO(K)FLUORANTHENE | ND (0.035) |
| CHRYSENE | ND (0.035) |
| DIBENZ(A,H)ANTHRACENE | ND (0.035) |
| INDENO(1,2,3-CD)PYRENE | ND (0.035) |
| PCBS | ND |
| 4,4'-DDE | 0.012 |
| 4,4'-DDD | 0.000357 J |
| 4,4'-DDT | 0.0021 |
| BARIUM | 45.1 |
| CADMIUM | <0.52 |
| COPPER | 17.3 |
| LEAD | 12 |
| MERCURY | 0.052 |
| NICKEL | 16.5 |
| ZINC | 26.6 |

| SAMPLE ID: | SB3A | SB3B |
|---|---|---|
| DATE: | 11/15/2023 | 11/15/2023 |
| DEPTH (FT BGS): | 0-2 | 10-12 |
| VOCS | ND | NE |
| BENZO(A)ANTHRACENE | 4.16 D | 15.3 D |
| BENZO(A)PYRENE | 3.97 D | 13.3 D |
| BENZO(B)FLUORANTHENE | 3.81 D | 13.6 D |
| BENZO(K)FLUORANTHENE | 3.22 D | 10.4 D |
| CHRYSENE | 3.86 D | 14 D |
| DIBENZ(A,H)ANTHRACENE | 1.03 D | 3.51 D |
| INDENO(1,2,3-CD)PYRENE | 1.98 D | 7.05 D |
| PCBS | ND | ND |
| 4,4'-DDE | 0.013 | ND (0.00075) |
| 4,4'-DDD | ND (0.000738) | ND (0.00075) |
| 4,4'-DDT | 0.021 | ND (0.00075) |
| BARIUM | 309 | 288 |
| CADMIUM | 1.4 | <11 [a] |
| COPPER | 195 | 503 [a] |
| LEAD | 774 | 888 [a] |
| MERCURY | 0.68 | 0.65 |
| NICKEL | 32.2 | 98.3 [a] |
| ZINC | 483 | 688 |

| | UUSCO | RRUSCO |
|---|---|---|
| **SVOCS** | | |
| BENZO(A)ANTHRACENE | 1 | 1 |
| BENZO(A)PYRENE | 1 | 1 |
| BENZO(B)FLUORANTHENE | 1 | 1 |
| BENZO(K)FLUORANTHENE | 0.8 | 3.9 |
| CHRYSENE | 1 | 3.9 |
| DIBENZ(A,H)ANTHRACENE | 0.33 | 0.33 |
| INDENO(1,2,3-CD)PYRENE | 0.5 | 0.5 |
| **PESTICIDES** | | |
| 4,4'-DDE | 0.0033 | 8.9 |
| 4,4'-DDD | 0.0033 | 13 |
| 4,4'-DDT | 0.0033 | 7.9 |
| **METALS** | | |
| BARIUM | 350 | 400 |
| CADMIUM | 2.5 | 4.3 |
| COPPER | 50 | 270 |
| LEAD | 63 | 400 |
| MERCURY | 0.18 | 0.81 |
| NICKEL | 30 | 310 |
| ZINC | 109 | 10,000 |

| SAMPLE ID: | SB12A |
|---|---|
| DATE: | 11/15/2023 |
| DEPTH (FT BGS): | 0-2 |
| VOCS | ND |
| BENZO(A) ANTHRACENE | 0.313 |
| BENZO(A) PYRENE | 0.299 |
| BENZO(B)FLUORANTHENE | 0.287 |
| BENZO(K)FLUORANTHENE | 0.264 |
| CHRYSENE | 0.332 |
| DIBENZ(A,H)ANTHRACENE | 0.103 |
| INDENO(1,2,3-CD)PYRENE | 0.19 |
| PCBS | ND |
| 4,4'-DDE | ND (0.000766) |
| 4,4'-DDD | ND (0.000766) |
| 4,4'-DDT | ND (0.000766) |
| BARIUM | 173 |
| CADMIUM | 12.8 |
| COPPER | 42.9 |
| LEAD | 773 |
| MERCURY | 5.2 |
| NICKEL | 17.3 |
| ZINC | 2,050 |

| SAMPLE ID: | SB2A | SB2B |
|---|---|---|
| DATE: | 11/15/2023 | 11/15/2023 |
| DEPTH (FT BGS): | 0-2 | 10-12 |
| VOCS | ND | NE |
| BENZO(A)ANTHRACENE | 1.8 | 0.19 |
| BENZO(A)PYRENE | 1.44 | 0.177 |
| BENZO(B)FLUORANTHENE | 1.57 | 0.207 |
| BENZO(K)FLUORANTHENE | 1.08 | 0.138 |
| CHRYSENE | 1.6 | 0.173 |
| DIBENZ(A,H)ANTHRACENE | 0.487 | 0.064 |
| INDENO(1,2,3-CD)PYRENE | 0.845 | 0.114 |
| PCBS | NE | ND |
| 4,4'-DDE | 0.0034 | 0.00226 |
| 4,4'-DDD | ND (0.000718) | 0.000712 J |
| 4,4'-DDT | 0.00556 | 0.00384 |
| BARIUM | 48.5 | 163 |
| CADMIUM | <0.53 | <0.55 |
| COPPER | 21.5 | 31.8 |
| LEAD | 39 | 235 |
| MERCURY | 0.037 | 0.56 |
| NICKEL | 42.8 | 56.8 |
| ZINC | 60.2 | 176 |

| SAMPLE ID: | SB1A | SB1B |
|---|---|---|
| DATE: | 11/15/2023 | 11/15/2023 |
| DEPTH (FT BGS): | 0-2 | 10-12 |
| VOCS | ND | NE |
| BENZO(A)ANTHRACENE | 1.28 | 1.68 |
| BENZO(A)PYRENE | 1.29 | 1.46 |
| BENZO(B)FLUORANTHENE | 1.42 | 1.58 |
| BENZO(K)FLUORANTHENE | 0.858 | 1.1 |
| CHRYSENE | 1.1 | 1.52 |
| DIBENZ(A,H)ANTHRACENE | 0.38 | 0.443 |
| INDENO(1,2,3-CD)PYRENE | 0.788 | 0.858 |
| PCBS | ND | ND |
| 4,4'-DDE | 0.019 | ND (0.000782) |
| 4,4'-DDD | 0.00407 | ND (0.000782) |
| 4,4'-DDT | 0.027 | ND (0.000782) |
| BARIUM | 298 | 463 |
| CADMIUM | 0.63 | 1.9 |
| COPPER | 47.9 | 128 [a] |
| LEAD | 436 | 1,260 |
| MERCURY | 0.61 | 1.1 |
| NICKEL | 15.5 | 22.8 |
| ZINC | 276 | 483 |

Legend
- Soil Sample
- Property Boundary
- Project Site Boundary
- Existing Building
- Proposed Building to be Built in 1st Stage
- Proposed Landscaping
- NYC Tax Parcel

0 25 50 100 Feet

Notes:
All locations are approximate; field activities conducted on 11/15/2023, 11/16/2023, & 11/20/2023.
Only select compounds displayed - full analytical results can be found on Table 1B; all concentrations displayed in milligrams per kilogram (mg/kg); FT BGS = feet below ground surface; ND = Not Detected; ( ) = Laboratory Reporting Limit (RL) listed with ND value when available; NE = Compounds detected at concentrations that do not exceed applicable remediation standards; D = Compound reported from a Diluted analysis; J = Estimated concentration; [a] = Elevated detection limit due to dilution required for high interfering element; exceedance of New York State Department of Environmental Conservation (NYSDEC) Unrestricted Use (UU) Soil Cleanup Objective (SCO) highlighted yellow; exceedance of NYSDEC Restricted Residential Use (RRU) SCO highlighted green.
City parcel coverage provided by NY State GIS Clearinghouse and New York City Department of Finance, last updated 11/13/2022; aerial imagery basemap obtained from Google Earth Pro, dated 6/19/2022.
Figure created by JLD Mapping Services LLC.

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12/14/2023

# Figure 3B - Soil Sample Results Map

Fulton Elliot-Chelsea Houses: Elliot Addition
432 West 27th Drive
New York (Manhattan), NY

| SIZE | | DWG NO. | REV |
|---|---|---|---|
| 11x17 | | Figure 3B | 0 |
| SCALE: 1 in = 50 ft | PROJECT No.: HK-26611 | SHEET | 1 OF 1 |

ADDITIONAL NOTES:
1. EXISTING BASEMENT IS 10 FEET BELOW GRADE.
2. PROPOSED BASEMENT WILL BE 10 FEET BELOW GRADE.

N

WEST 27TH DRIVE (NOT A MAPPED STREET)

WEST 26TH STREET

CHILDREN'S CENTER

ELLIOTT CENTER

CHELSEA ADDITION

SPROCKET BUILDING #1

ELLIOTT

TWP5

TWP6

TWP4

TWP2

TWP1

| SAMPLE ID: | TWP5 |
|---|---|
| DATE: | 11/15/2023 |
| DEPTH (FT BGS): | 13 |
| CHLOROFORM | 7.89 |
| BENZO(A)ANTHRACENE | ND (0.1) |
| BENZO(B)FLUORANTHENE | ND (0.1) |
| BENZO(K)FLUORANTHENE | ND (0.1) |
| CHRYSENE | ND (1) |
| INDENO(1,2,3-CD)PYRENE | ND (0.1) |
| PCBS | ND |
| PESTICIDES | ND |
| LEAD (TOTAL) | 8.7 |
| SODIUM (TOTAL) | 274,000 |
| SODIUM (DISSOLVED) | 264,000 |

| SAMPLE ID: | TWP6 |
|---|---|
| DATE: | 11/20/2023 |
| DEPTH (FT BGS): | 13.5 |
| CHLOROFORM | ND (0.5) |
| BENZO(A)ANTHRACENE | ND (0.1) |
| BENZO(B)FLUORANTHENE | ND (0.1) |
| BENZO(K)FLUORANTHENE | ND (0.1) |
| CHRYSENE | ND (1) |
| INDENO(1,2,3-CD)PYRENE | ND (0.1) |
| PCBS | ND |
| PESTICIDES | ND |
| LEAD (TOTAL) | 20.9 |
| SODIUM (TOTAL) | 193,000 |
| SODIUM (DISSOLVED) | 192,000 |

| SAMPLE ID: | TWP4 |
|---|---|
| DATE: | 11/15/2023 |
| DEPTH (FT BGS): | 13.5 |
| CHLOROFORM | ND (0.5) |
| BENZO(A)ANTHRACENE | 0.103 |
| BENZO(B)FLUORANTHENE | 0.132 |
| BENZO(K)FLUORANTHENE | 0.123 |
| CHRYSENE | ND (1) |
| INDENO(1,2,3-CD)PYRENE | 0.19 |
| PCBS | ND |
| PESTICIDES | ND |
| LEAD (TOTAL) | 122 |
| SODIUM (TOTAL) | 190,000 |
| SODIUM (DISSOLVED) | 209,000 |

| | AWQS |
|---|---|
| VOCS | |
| CHLOROFORM | 5 |
| SVOCS | |
| BENZO(A)ANTHRACENE | 0.002 |
| BENZO(B)FLUORANTHENE | 0.002 |
| BENZO(K)FLUORANTHENE | 0.002 |
| CHRYSENE | 0.002 |
| INDENO(1,2,3-CD)PYRENE | 0.002 |
| METALS | |
| LEAD | 25 |
| SODIUM | 20,000 |

| SAMPLE ID: | TWP2 |
|---|---|
| DATE: | 11/15/2023 |
| DEPTH (FT BGS): | 11.5 |
| CHLOROFORM | ND (0.5) |
| BENZO(A)ANTHRACENE | 10.8 |
| BENZO(B)FLUORANTHENE | 7.43 |
| BENZO(K)FLUORANTHENE | 3.28 |
| CHRYSENE | 9.27 |
| INDENO(1,2,3-CD)PYRENE | 3.57 |
| PCBS | ND |
| PESTICIDES | ND |
| LEAD (TOTAL) | 43.9 |
| SODIUM (TOTAL) | 106,000 |
| SODIUM (DISSOLVED) | 121,000 |

| SAMPLE ID: | TWP1 |
|---|---|
| DATE: | 11/15/2023 |
| DEPTH (FT BGS): | 14 |
| CHLOROFORM | 14 |
| BENZO(A)ANTHRACENE | 1.63 |
| BENZO(B)FLUORANTHENE | 1.62 |
| BENZO(K)FLUORANTHENE | 1.1 |
| CHRYSENE | ND (1) |
| INDENO(1,2,3-CD)PYRENE | 1.01 |
| PCBS | ND |
| PESTICIDES | ND |
| LEAD (TOTAL) | 68.9 |
| SODIUM (TOTAL) | 64,300 |
| SODIUM (DISSOLVED) | 73,000 |

**Legend**

- Groundwater Sample
- Property Boundary
- Project Site Boundary
- Existing Building
- Proposed Building to be Built in 1st Stage
- Proposed Landscaping
- NYC Tax Parcel

0 25 50 100 Feet

Notes:
All locations are approximate; field activities conducted on 11/15/2023, 11/16/2023, & 11/20/2023.
Only select compounds displayed - full analytical results can be found on Table 2B; all concentrations displayed in micrograms per liter (ug/L); FT BGS = feet below ground surface; ND = Not Detected; ( ) = Laboratory Reporting Limit (RL) listed with ND value with available; exceedance of New York State Department of Environmental Conservation (NYSDEC) Ambient Water Quality Standards (AWQS) highlighted blue.
City parcel coverage provided by NY State GIS Clearinghouse and New York City Department of Finance, last updated 11/13/2022; aerial imagery basemap obtained from Google Earth Pro, dated 6/19/2022.
Figure created by JLD Mapping Services LLC.

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12/14/2023

# Figure 4B - Groundwater Sample Results Map

Fulton Elliot-Chelsea Houses: Elliot Addition
432 West 27th Drive
New York (Manhattan), NY

| SIZE | | DWG NO. | REV |
|---|---|---|---|
| 11x17 | | Figure 4B | 0 |
| SCALE: 1 in = 50 ft | PROJECT No.: HK-2661.1 | SHEET | 1 OF 1 |

ADDITIONAL NOTES:
1. EXISTING BASEMENT IS 10 FEET BELOW GRADE.
2. PROPOSED BASEMENT WILL BE 10 FEET BELOW GRADE.

| SAMPLE ID: | SV6 |
|---|---|
| LOCATION: | HUDSON GUILD CENTER BASEMENT HALLWAY |
| DATE: | 11/15/2023 |
| DEPTH (FT BGS): | SUB-SLAB |
| VOCS | |
| METHYLENE CHLORIDE | ND (0.69) |
| TETRACHLOROETHENE | 73 |
| TRICHLOROETHENE | ND (0.25) |

| SAMPLE ID: | SV7 |
|---|---|
| LOCATION: | TRASH COMPACTOR RM @ 436 W 27TH |
| DATE: | 11/16/2023 |
| DEPTH (FT BGS): | SUB-SLAB |
| VOCS | |
| METHYLENE CHLORIDE | ND (0.69) |
| TETRACHLOROETHENE | 12 |
| TRICHLOROETHENE | ND (0.25) |

| SAMPLE ID: | SV9 |
|---|---|
| LOCATION: | EXTERIOR |
| DATE: | 11/20/2023 |
| DEPTH (FT BGS): | 12 |
| VOCS | |
| METHYLENE CHLORIDE | 15 |
| TETRACHLOROETHENE | 46 |
| TRICHLOROETHENE | ND (0.25) |

| SAMPLE ID: | SV3 |
|---|---|
| LOCATION: | EXTERIOR |
| DATE: | 11/15/2023 |
| DEPTH (FT BGS): | 12 |
| VOCS | |
| METHYLENE CHLORIDE | 17 |
| TETRACHLOROETHENE | 44 |
| TRICHLOROETHENE | ND (0.25) |

| SAMPLE ID: | SV8 |
|---|---|
| LOCATION: | BASEMENT HALLWAY AREA @ 436 W 27TH |
| DATE: | 11/16/2023 |
| DEPTH (FT BGS): | SUB-SLAB |
| VOCS | |
| METHYLENE CHLORIDE | 17 |
| TETRACHLOROETHENE | 39 |
| TRICHLOROETHENE | ND (0.25) |

| SAMPLE ID: | SV2 |
|---|---|
| LOCATION: | EXTERIOR |
| DATE: | 11/15/2023 |
| DEPTH (FT BGS): | 12 |
| VOCS | |
| METHYLENE CHLORIDE | ND (0.69) |
| TETRACHLOROETHENE | ND (1.4) |
| TRICHLOROETHENE | ND (0.25) |

| SAMPLE ID: | SV1 |
|---|---|
| LOCATION: | EXTERIOR |
| DATE: | 11/15/2023 |
| DEPTH (FT BGS): | 12 |
| VOCS | |
| METHYLENE CHLORIDE | ND (0.69) |
| TETRACHLOROETHENE | 11 |
| TRICHLOROETHENE | ND (0.25) |

SV9 SV7 SV6 SV8 SV2 SV3 SV1

WEST 27TH DRIVE (NOT A MAPPED STREET)
WEST 26TH STREET
CHILDREN'S CENTER
CHELSEA ADDITION

**Legend**
- Soil Vapor Sample
- Property Boundary
- Project Site Boundary
- Existing Building
- Proposed Building to be Built in 1st Stage
- Proposed Landscaping
- NYC Tax Parcel

0 25 50 100 Feet

Notes:
All locations are approximate; field activities conducted on 11/15/2023, 11/16/2023, & 11/20/2023.
Only select compounds displayed - full analytical results can be found on Table 3B; all concentrations displayed in micrograms per cubic meter ($ug/m^3$);
FT BGS = Feet below ground surface; RM = Room; ND = Not Detected; Laboratory Reporting Limit (RL) listed with ND value with available.
City parcel coverage provided by NY State GIS Clearinghouse and New York City Department of Finance, last updated 11/13/2022; aerial imagery basemap obtained from Google Earth Pro, dated 6/19/2022.
Figure created by JLD Mapping Services LLC.

HK ENGINEERING & GEOLOGY, D.P.C.
A Member of the Hillmann Family of Companies
1600 Route 22 East, Suite #107
Union, NJ 07083

12/14/2023

**Figure 5B - Soil Vapor Sample Results Map**

Fulton Elliot-Chelsea Houses: Elliot Addition
432 West 27th Drive
New York (Manhattan), NY

| SIZE | | DWG NO. | REV |
|---|---|---|---|
| 11x17 | | Figure 5B | 0 |
| SCALE: 1 in = 50 ft | PROJECT No.: HK-2661.1 | SHEET | 1 OF 1 |

# TABLES

# FULTON 11 RESULTS

**Table 1A - Soil Results - VOCs**
**Fulton 11**
**New York, NY**

**HK Engineering & Geology, D.P.C.**
**Project #: HK2661.2**

| Target Compounds | NYSDEC Unrestricted Use SCO | NYSDEC Restricted Residential SCO | SB1A Sample Depth: 0-2' | | | | SB1B Sample Depth: 10-12' | | | | SB2A Sample Depth: 0-2' | | | | SB2B Sample Depth: 10-12' | | | | SB3A Sample Depth: 0-2' | | | | SB3B Sample Depth: 10-12' | | | | SB4A Sample Depth: 0-2' | | | | SB4B Sample Depth: 10-12' | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Volatiles (mg/Kg)** | | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| 1,1,1-Trichloroethane | **0.68** | **100** | ND | | 0.00126 | 0.000387 | ND | | 0.00138 | 0.000424 | ND | | 0.0016 | 0.000491 | ND | | 0.0012 | 0.000368 | ND | | 0.00126 | 0.000387 | ND | | 0.00114 | 0.00035 | ND | | 0.00139 | 0.000427 | ND | | 0.00146 | 0.000448 |
| 1,1,2,2-Tetrachloroethane | **NS** | **NS** | ND | | 0.00126 | 0.000659 | ND | | 0.00138 | 0.000722 | ND | | 0.0016 | 0.000837 | ND | | 0.0012 | 0.000628 | ND | | 0.00126 | 0.000659 | ND | | 0.00114 | 0.000596 | ND | | 0.00139 | 0.000727 | ND | | 0.00146 | 0.000764 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | **NS** | **NS** | ND | | 0.00252 | 0.000752 | ND | | 0.00276 | 0.000824 | ND | | 0.0032 | 0.000955 | ND | | 0.0024 | 0.000716 | ND | | 0.00252 | 0.000752 | ND | | 0.00228 | 0.000681 | ND | | 0.00278 | 0.00083 | ND | | 0.00292 | 0.000872 |
| 1,1,2-Trichloroethane | **NS** | **NS** | ND | | 0.00126 | 0.00027 | ND | | 0.00138 | 0.000295 | ND | | 0.0016 | 0.000342 | ND | | 0.0012 | 0.000257 | ND | | 0.00126 | 0.00027 | ND | | 0.00114 | 0.000244 | ND | | 0.00139 | 0.000297 | ND | | 0.00146 | 0.000312 |
| 1,1-Dichloroethane | **0.27** | **26** | ND | | 0.00252 | 0.000321 | ND | | 0.00276 | 0.000352 | ND | | 0.0032 | 0.000408 | ND | | 0.0024 | 0.000306 | ND | | 0.00252 | 0.000321 | ND | | 0.00228 | 0.000291 | ND | | 0.00278 | 0.000354 | ND | | 0.00292 | 0.000372 |
| 1,1-Dichloroethene | **0.33** | **100** | ND | | 0.00126 | 0.000441 | ND | | 0.00138 | 0.000483 | ND | | 0.0016 | 0.00056 | ND | | 0.0012 | 0.00042 | ND | | 0.00126 | 0.000441 | ND | | 0.00114 | 0.000399 | ND | | 0.00139 | 0.000487 | ND | | 0.00146 | 0.000511 |
| 1,2,3-Trichlorobenzene | **NS** | **NS** | ND | | 0.00252 | 0.000401 | ND | | 0.00276 | 0.000439 | ND | | 0.0032 | 0.000509 | ND | | 0.0024 | 0.000382 | ND | | 0.00252 | 0.000401 | ND | | 0.00228 | 0.000363 | ND | | 0.00278 | 0.000442 | ND | | 0.00292 | 0.000464 |
| 1,2,4-Trichlorobenzene | **NS** | **NS** | ND | | 0.00126 | 0.000529 | ND | | 0.00138 | 0.00058 | ND | | 0.0016 | 0.000672 | ND | | 0.0012 | 0.000504 | ND | | 0.00126 | 0.000529 | ND | | 0.00114 | 0.000479 | ND | | 0.00139 | 0.000584 | ND | | 0.00146 | 0.000613 |
| 1,2-Dibromo-3-chloropropane | **NS** | **NS** | ND | | 0.00126 | 0.00104 | ND | | 0.00138 | 0.00114 | ND | | 0.0016 | 0.00132 | ND | | 0.0012 | 0.000989 | ND | | 0.00126 | 0.00104 | ND | | 0.00114 | 0.000939 | ND | | 0.00139 | 0.00115 | ND | | 0.00146 | 0.0012 |
| 1,2-Dibromoethane (EDB) | **NS** | **NS** | ND | | 0.00126 | 0.000233 | ND | | 0.00138 | 0.000255 | ND | | 0.0016 | 0.000296 | ND | | 0.0012 | 0.000222 | ND | | 0.00126 | 0.000233 | ND | | 0.00114 | 0.000211 | ND | | 0.00139 | 0.000257 | ND | | 0.00146 | 0.00027 |
| 1,2-Dichlorobenzene | **1.1** | **100** | ND | | 0.00126 | 0.000316 | ND | | 0.00138 | 0.000346 | ND | | 0.0016 | 0.000402 | ND | | 0.0012 | 0.000301 | ND | | 0.00126 | 0.000316 | ND | | 0.00114 | 0.000286 | ND | | 0.00139 | 0.000349 | ND | | 0.00146 | 0.000366 |
| 1,2-Dichloroethane (EDC) | **0.02** | **3.1** | ND | | 0.00126 | 0.000291 | ND | | 0.00138 | 0.000319 | ND | | 0.0016 | 0.00037 | ND | | 0.0012 | 0.000277 | ND | | 0.00126 | 0.000291 | ND | | 0.00114 | 0.000263 | ND | | 0.00139 | 0.000321 | ND | | 0.00146 | 0.000337 |
| 1,2-Dichloropropane | **NS** | **NS** | ND | | 0.00126 | 0.000126 | ND | | 0.00138 | 0.000138 | ND | | 0.0016 | 0.00016 | ND | | 0.0012 | 0.00012 | ND | | 0.00126 | 0.000126 | ND | | 0.00114 | 0.000114 | ND | | 0.00139 | 0.000139 | ND | | 0.00146 | 0.000146 |
| 1,3-Dichlorobenzene | **2.4** | **49** | ND | | 0.00126 | 0.000334 | ND | | 0.00138 | 0.000366 | ND | | 0.0016 | 0.000424 | ND | | 0.0012 | 0.000318 | ND | | 0.00126 | 0.000334 | ND | | 0.00114 | 0.000302 | ND | | 0.00139 | 0.000368 | ND | | 0.00146 | 0.000387 |
| 1,3-Dichloropropene (cis- and trans-) | **NS** | **NS** | ND | | 0.00126 | 0.00014 | ND | | 0.00138 | 0.000153 | ND | | 0.0016 | 0.000178 | ND | | 0.0012 | 0.000133 | ND | | 0.00126 | 0.00014 | ND | | 0.00114 | 0.000127 | ND | | 0.00139 | 0.000154 | ND | | 0.00146 | 0.000162 |
| 1,4-Dichlorobenzene | **1.8** | **13** | ND | | 0.00126 | 0.000391 | ND | | 0.00138 | 0.000428 | ND | | 0.0016 | 0.000496 | ND | | 0.0012 | 0.000372 | ND | | 0.00126 | 0.000391 | ND | | 0.00114 | 0.000353 | ND | | 0.00139 | 0.000431 | ND | | 0.00146 | 0.000453 |
| 2-Butanone (MEK) | **0.12** | **100** | ND | | 0.013 | 0.00252 | ND | | 0.014 | 0.00276 | ND | | 0.016 | 0.0032 | ND | | 0.012 | 0.0024 | ND | | 0.013 | 0.00252 | ND | | 0.011 | 0.00228 | ND | | 0.014 | 0.00278 | ND | | 0.015 | 0.00292 |
| 2-Hexanone | **NS** | **NS** | ND | | 0.013 | 0.00193 | ND | | 0.014 | 0.00211 | ND | | 0.016 | 0.00245 | ND | | 0.012 | 0.00184 | ND | | 0.013 | 0.00193 | ND | | 0.011 | 0.00175 | ND | | 0.014 | 0.00213 | ND | | 0.015 | 0.00224 |
| 4-Methyl-2-pentanone (MIBK) | **NS** | **NS** | ND | | 0.013 | 0.000659 | ND | | 0.014 | 0.000722 | ND | | 0.016 | 0.000837 | ND | | 0.012 | 0.000628 | ND | | 0.013 | 0.000659 | ND | | 0.011 | 0.000596 | ND | | 0.014 | 0.000727 | ND | | 0.015 | 0.000764 |
| Acetone | **0.05** | **100** | ND | | 0.013 | 0.0063 | ND | | 0.014 | 0.0069 | ND | | 0.016 | 0.008 | ND | | 0.012 | 0.006 | ND | | 0.013 | 0.0063 | ND | | 0.011 | 0.0057 | ND | | 0.014 | 0.00695 | ND | | 0.015 | 0.0073 |
| Benzene | **0.06** | **4.8** | ND | | 0.00126 | 0.000108 | ND | | 0.00138 | 0.000119 | ND | | 0.0016 | 0.000138 | ND | | 0.0012 | 0.000103 | ND | | 0.00126 | 0.000108 | ND | | 0.00114 | 0.000098 | ND | | 0.00139 | 0.00012 | ND | | 0.00146 | 0.000126 |
| Bromochloromethane | **NS** | **NS** | ND | | 0.00126 | 0.00032 | ND | | 0.00138 | 0.000351 | ND | | 0.0016 | 0.000406 | ND | | 0.0012 | 0.000305 | ND | | 0.00126 | 0.00032 | ND | | 0.00114 | 0.00029 | ND | | 0.00139 | 0.000353 | ND | | 0.00146 | 0.000371 |
| Bromodichloromethane | **NS** | **NS** | ND | | 0.00126 | 0.00015 | ND | | 0.00138 | 0.000164 | ND | | 0.0016 | 0.00019 | ND | | 0.0012 | 0.000143 | ND | | 0.00126 | 0.00015 | ND | | 0.00114 | 0.000136 | ND | | 0.00139 | 0.000165 | ND | | 0.00146 | 0.000174 |
| Bromoform | **NS** | **NS** | ND | | 0.00126 | 0.000392 | ND | | 0.00138 | 0.000429 | ND | | 0.0016 | 0.000498 | ND | | 0.0012 | 0.000373 | ND | | 0.00126 | 0.000392 | ND | | 0.00114 | 0.000355 | ND | | 0.00139 | 0.000432 | ND | | 0.00146 | 0.000454 |
| Bromomethane | **NS** | **NS** | ND | | 0.00252 | 0.0011 | ND | | 0.00276 | 0.0012 | ND | | 0.0032 | 0.0014 | ND | | 0.0024 | 0.00105 | ND | | 0.00252 | 0.0011 | ND | | 0.00228 | 0.000994 | ND | | 0.00278 | 0.00121 | ND | | 0.00292 | 0.00127 |
| Carbon disulfide | **NS** | **NS** | ND | | 0.00126 | 0.000495 | ND | | 0.00138 | 0.000542 | ND | | 0.0016 | 0.000629 | ND | | 0.0012 | 0.000472 | ND | | 0.00126 | 0.000495 | ND | | 0.00114 | 0.000448 | ND | | 0.00139 | 0.000546 | ND | | 0.00146 | 0.000574 |
| Carbon tetrachloride | **0.76** | **2.4** | ND | | 0.00126 | 0.000252 | ND | | 0.00138 | 0.000276 | ND | | 0.0016 | 0.00032 | ND | | 0.0012 | 0.00024 | ND | | 0.00126 | 0.000252 | ND | | 0.00114 | 0.000228 | ND | | 0.00139 | 0.000278 | ND | | 0.00146 | 0.000292 |
| Chlorobenzene | **1.1** | **100** | ND | | 0.00126 | 0.000218 | ND | | 0.00138 | 0.000239 | ND | | 0.0016 | 0.000277 | ND | | 0.0012 | 0.000208 | ND | | 0.00126 | 0.000218 | ND | | 0.00114 | 0.000197 | ND | | 0.00139 | 0.00024 | ND | | 0.00146 | 0.000253 |
| Chloroethane | **NS** | **NS** | ND | | 0.00126 | 0.000374 | ND | | 0.00138 | 0.00041 | ND | | 0.0016 | 0.000475 | ND | | 0.0012 | 0.000356 | ND | | 0.00126 | 0.000374 | ND | | 0.00114 | 0.000339 | ND | | 0.00139 | 0.000413 | ND | | 0.00146 | 0.000434 |
| Chloroform | **0.37** | **49** | ND | | 0.00252 | 0.00063 | ND | | 0.00276 | 0.00069 | ND | | 0.0032 | 0.0008 | ND | | 0.0024 | 0.0006 | ND | | 0.00252 | 0.00063 | ND | | 0.00228 | 0.00057 | ND | | 0.00278 | 0.000695 | ND | | 0.00292 | 0.00073 |
| Chloromethane | **NS** | **NS** | ND | | 0.00252 | 0.000399 | ND | | 0.00276 | 0.000437 | ND | | 0.0032 | 0.000507 | ND | | 0.0024 | 0.00038 | ND | | 0.00252 | 0.000399 | ND | | 0.00228 | 0.000361 | ND | | 0.00278 | 0.000441 | ND | | 0.00292 | 0.000463 |
| cis-1,2-Dichloroethene | **0.25** | **100** | ND | | 0.00252 | 0.00027 | ND | | 0.00276 | 0.000295 | ND | | 0.0032 | 0.000342 | ND | | 0.0024 | 0.000257 | ND | | 0.00252 | 0.00027 | ND | | 0.00228 | 0.000244 | ND | | 0.00278 | 0.000297 | ND | | 0.00292 | 0.000312 |
| cis-1,3-Dichloropropene | **NS** | **NS** | ND | | 0.00126 | 0.000193 | ND | | 0.00138 | 0.000211 | ND | | 0.0016 | 0.000245 | ND | | 0.0012 | 0.000184 | ND | | 0.00126 | 0.000193 | ND | | 0.00114 | 0.000174 | ND | | 0.00139 | 0.000213 | ND | | 0.00146 | 0.000223 |
| Cyclohexane | **NS** | **NS** | ND | | 0.0063 | 0.000227 | ND | | 0.0069 | 0.000248 | ND | | 0.008 | 0.000288 | ND | | 0.006 | 0.000216 | ND | | 0.0063 | 0.000227 | ND | | 0.0057 | 0.000205 | ND | | 0.00695 | 0.00025 | ND | | 0.0073 | 0.000263 |
| Dibromochloromethane | **NS** | **NS** | ND | | 0.00126 | 0.000209 | ND | | 0.00138 | 0.000229 | ND | | 0.0016 | 0.000266 | ND | | 0.0012 | 0.000199 | ND | | 0.00126 | 0.000209 | ND | | 0.00114 | 0.000189 | ND | | 0.00139 | 0.000231 | ND | | 0.00146 | 0.000242 |
| Dichlorodifluoromethane | **NS** | **NS** | ND | | 0.00126 | 0.000654 | ND | | 0.00138 | 0.000716 | ND | | 0.0016 | 0.00083 | ND | | 0.0012 | 0.000623 | ND | | 0.00126 | 0.000654 | ND | | 0.00114 | 0.000592 | ND | | 0.00139 | 0.000721 | ND | | 0.00146 | 0.000758 |
| Ethylbenzene | **1** | **41** | ND | | 0.00126 | 0.000137 | ND | | 0.00138 | 0.00015 | ND | | 0.0016 | 0.000174 | ND | | 0.0012 | 0.000131 | ND | | 0.00126 | 0.000137 | ND | | 0.00114 | 0.000124 | ND | | 0.00139 | 0.000152 | ND | | 0.00146 | 0.000159 |
| Isopropylbenzene | **NS** | **NS** | ND | | 0.00126 | 0.000268 | ND | | 0.00138 | 0.000294 | ND | | 0.0016 | 0.000341 | ND | | 0.0012 | 0.000256 | ND | | 0.00126 | 0.000268 | ND | | 0.00114 | 0.000243 | ND | | 0.00139 | 0.000296 | ND | | 0.00146 | 0.000311 |
| Methyl acetate | **NS** | **NS** | ND | | 0.00126 | 0.00102 | ND | | 0.00138 | 0.00112 | ND | | 0.0016 | 0.00129 | ND | | 0.0012 | 0.00097 | ND | | 0.00126 | 0.00102 | ND | | 0.00114 | 0.000921 | ND | | 0.00139 | 0.00112 | ND | | 0.00146 | 0.00118 |
| Methyl tert-butyl ether (MTBE) | **0.93** | **100** | ND | | 0.00126 | 0.000275 | ND | | 0.00138 | 0.000301 | ND | | 0.0016 | 0.000349 | ND | | 0.0012 | 0.000262 | ND | | 0.00126 | 0.000275 | ND | | 0.00114 | 0.000249 | ND | | 0.00139 | 0.000303 | ND | | 0.00146 | 0.000318 |
| Methylcyclohexane | **NS** | **NS** | ND | | 0.00252 | 0.000217 | ND | | 0.00276 | 0.000237 | ND | | 0.0032 | 0.000275 | ND | | 0.0024 | 0.000206 | ND | | 0.00252 | 0.000217 | ND | | 0.00228 | 0.000196 | ND | | 0.00278 | 0.000239 | ND | | 0.00292 | 0.000251 |
| Methylene chloride | **0.05** | **100** | 0.0041 | CJ | 0.0063 | 0.00378 | ND | | 0.0069 | 0.00414 | ND | | 0.008 | 0.0048 | ND | | 0.006 | 0.0036 | ND | | 0.0063 | 0.00378 | ND | | 0.0057 | 0.00342 | ND | | 0.00695 | 0.00417 | 0.00464 | CJ | 0.0073 | 0.00438 |
| Styrene | **NS** | **NS** | ND | | 0.00126 | 0.000271 | ND | | 0.00138 | 0.000297 | ND | | 0.0016 | 0.000344 | ND | | 0.0012 | 0.000258 | ND | | 0.00126 | 0.000271 | ND | | 0.00114 | 0.000245 | ND | | 0.00139 | 0.000299 | ND | | 0.00146 | 0.000314 |
| Tetrachloroethene | **1.3** | **19** | ND | | 0.00126 | 0.00013 | ND | | 0.00138 | 0.000142 | ND | | 0.0016 | 0.000165 | ND | | 0.0012 | 0.000124 | ND | | 0.00126 | 0.00013 | ND | | 0.00114 | 0.000117 | ND | | 0.00139 | 0.000143 | ND | | 0.00146 | 0.00015 |
| Toluene | **0.7** | **100** | ND | | 0.00126 | 0.00063 | ND | | 0.00138 | 0.00069 | ND | | 0.0016 | 0.0008 | ND | | 0.0012 | 0.0006 | ND | | 0.00126 | 0.00063 | ND | | 0.00114 | 0.00057 | ND | | 0.00139 | 0.000695 | ND | | 0.00146 | 0.00073 |
| Total Xylenes | **0.26** | **100** | ND | | 0.00252 | 0.000176 | ND | | 0.00276 | 0.000193 | ND | | 0.0032 | 0.000224 | ND | | 0.0024 | 0.000168 | ND | | 0.00252 | 0.000176 | ND | | 0.00228 | 0.00016 | ND | | 0.00278 | 0.000195 | ND | | 0.00292 | 0.000204 |
| trans-1,2-Dichloroethene | **0.19** | **100** | ND | | 0.00252 | 0.000446 | ND | | 0.00276 | 0.000489 | ND | | 0.0032 | 0.000566 | ND | | 0.0024 | 0.000425 | ND | | 0.00252 | 0.000446 | ND | | 0.00228 | 0.000404 | ND | | 0.00278 | 0.000492 | ND | | 0.00292 | 0.000517 |
| trans-1,3-Dichloropropene | **NS** | **NS** | ND | | 0.00126 | 0.00014 | ND | | 0.00138 | 0.000153 | ND | | 0.0016 | 0.000178 | ND | | 0.0012 | 0.000133 | ND | | 0.00126 | 0.00014 | ND | | 0.00114 | 0.000127 | ND | | 0.00139 | 0.000154 | ND | | 0.00146 | 0.000162 |
| Trichloroethene | **0.47** | **21** | ND | | 0.00126 | 0.000188 | ND | | 0.00138 | 0.000206 | ND | | 0.0016 | 0.000238 | ND | | 0.0012 | 0.000179 | ND | | 0.00126 | 0.000188 | ND | | 0.00114 | 0.00017 | ND | | 0.00139 | 0.000207 | ND | | 0.00146 | 0.000218 |
| Trichlorofluoromethane | **NS** | **NS** | ND | | 0.00126 | 0.000512 | ND | | 0.00138 | 0.00056 | ND | | 0.0016 | 0.00065 | ND | | 0.0012 | 0.000487 | ND | | 0.00126 | 0.000512 | ND | | 0.00114 | 0.000463 | ND | | 0.00139 | 0.000564 | ND | | 0.00146 | 0.000593 |
| Vinyl chloride | **0.02** | **0.9** | ND | | 0.00126 | 0.000408 | ND | | 0.00138 | 0.000447 | ND | | 0.0016 | 0.000518 | ND | | 0.0012 | 0.000389 | ND | | 0.00126 | 0.000408 | ND | | 0.00114 | 0.000369 | ND | | 0.00139 | 0.00045 | ND | | 0.00146 | 0.000473 |
| TOTAL VO's: | **NS** | **NS** | 0.0041 | CJ | | NA | ND | | | NA | ND | | | NA | ND | | | NA | ND | | | NA | ND | | | NA | ND | | | NA | 0.00464 | CJ | | NA |
| TOTAL TIC's: | **NS** | **NS** | ND | | | NA | ND | | | NA | ND | | | NA | ND | | | NA | ND | | | NA | ND | | | NA | ND | | | NA | ND | | | NA |
| TOTAL VO's & TIC's: | **NS** | **NS** | 0.0041 | CJ | | NA | ND | | | NA | ND | | | NA | ND | | | NA | ND | | | NA | ND | | | NA | ND | | | NA | 0.00464 | CJ | | NA |

**Results in Yellow Highlight displays exceedance above the UUSCO regulatory standard**
**Results in Green Highlight displays exceedance above both UUSCO & RRUSCO regulatory standard**
**J = Concentration detected at a value below the RL and above the MDL for target compounds**
**N = Presumptive evidence of a compound from the use of GC/MS library search.**

**NS = No Standard Available**
**D = The compound was reported from the Diluted analysis**
**ND = Analyzed for but Not Detected at the MDL**

**Table 1A (Cont'd) - Soil Results - SVOCs**
**Fulton 11**
**New York, NY**

**HK Engineering & Geology, D.P.C.**
**Project #: HK2661.2**

| Target Compounds | NYSDEC Unrestricted Use SCO | NYSDEC Restricted Residential SCO | SB1A Sample Depth: 0-2' | | | | SB1B Sample Depth: 10-12' | | | | SB2A Sample Depth: 0-2' | | | | SB2B Sample Depth: 10-12' | | | | SB3A Sample Depth: 0-2' | | | | SB3B Sample Depth: 10-12' | | | | SB4A Sample Depth: 0-2' | | | | SB4B Sample Depth: 10-12' | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Semivolatiles - BNA (mg/Kg)** | | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| 1,1'-Biphenyl | **NS** | **NS** | ND | | 0.037 | 0.00546 | ND | | 0.037 | 0.00549 | ND | | 0.385 | 0.057 | ND | | 0.035 | 0.00519 | ND | | 0.037 | 0.00552 | ND | | 0.035 | 0.00522 | ND | | 0.037 | 0.00544 | ND | | 0.035 | 0.00523 |
| 1,2,4,5-Tetrachlorobenzene | **NS** | **NS** | ND | | 0.037 | 0.012 | ND | | 0.037 | 0.012 | ND | | 0.385 | 0.129 | ND | | 0.035 | 0.012 | ND | | 0.037 | 0.012 | ND | | 0.035 | 0.012 | ND | | 0.037 | 0.012 | ND | | 0.035 | 0.012 |
| 1,4-Dioxane | **0.1** | **13** | ND | | 0.037 | 0.024 | ND | | 0.037 | 0.024 | ND | | 0.385 | 0.249 | ND | | 0.035 | 0.023 | ND | | 0.037 | 0.024 | ND | | 0.035 | 0.023 | ND | | 0.037 | 0.024 | ND | | 0.035 | 0.023 |
| 2,2'-Oxybis(1-Chloropropane) | **NS** | **NS** | ND | | 0.037 | 0.00915 | ND | | 0.037 | 0.0092 | ND | | 0.385 | 0.096 | ND | | 0.035 | 0.0087 | ND | | 0.037 | 0.00925 | ND | | 0.035 | 0.00876 | ND | | 0.037 | 0.00913 | ND | | 0.035 | 0.00877 |
| 2,3,4,6-Tetrachlorophenol | **NS** | **NS** | ND | | 0.037 | 0.013 | ND | | 0.037 | 0.013 | ND | | 0.385 | 0.132 | ND | | 0.035 | 0.012 | ND | | 0.037 | 0.013 | ND | | 0.035 | 0.012 | ND | | 0.037 | 0.013 | ND | | 0.035 | 0.012 |
| 2,4,5-Trichlorophenol | **NS** | **NS** | ND | | 0.037 | 0.028 | ND | | 0.037 | 0.028 | ND | | 0.385 | 0.292 | ND | | 0.035 | 0.027 | ND | | 0.037 | 0.028 | ND | | 0.035 | 0.027 | ND | | 0.037 | 0.028 | ND | | 0.035 | 0.027 |
| 2,4,6-Trichlorophenol | **NS** | **NS** | ND | | 0.037 | 0.010 | ND | | 0.037 | 0.010 | ND | | 0.385 | 0.106 | ND | | 0.035 | 0.00959 | ND | | 0.037 | 0.010 | ND | | 0.035 | 0.00965 | ND | | 0.037 | 0.010 | ND | | 0.035 | 0.00967 |
| 2,4-Dichlorophenol | **NS** | **NS** | ND | | 0.037 | 0.00975 | ND | | 0.037 | 0.0098 | ND | | 0.385 | 0.102 | ND | | 0.035 | 0.00928 | ND | | 0.037 | 0.00986 | ND | | 0.035 | 0.00934 | ND | | 0.037 | 0.00973 | ND | | 0.035 | 0.00935 |
| 2,4-Dimethylphenol | **NS** | **NS** | ND | | 0.037 | 0.011 | ND | | 0.037 | 0.011 | ND | | 0.385 | 0.113 | ND | | 0.035 | 0.010 | ND | | 0.037 | 0.011 | ND | | 0.035 | 0.010 | ND | | 0.037 | 0.011 | ND | | 0.035 | 0.010 |
| 2,4-Dinitrophenol | **NS** | **NS** | ND | | 0.073 | 0.015 | ND | | 0.074 | 0.015 | ND | | 0.769 | 0.158 | ND | | 0.070 | 0.014 | ND | | 0.074 | 0.015 | ND | | 0.070 | 0.014 | ND | | 0.073 | 0.015 | ND | | 0.070 | 0.015 |
| 2,4-Dinitrotoluene | **NS** | **NS** | ND | | 0.073 | 0.042 | ND | | 0.074 | 0.042 | ND | | 0.769 | 0.435 | ND | | 0.070 | 0.040 | ND | | 0.074 | 0.042 | ND | | 0.070 | 0.040 | ND | | 0.073 | 0.041 | ND | | 0.070 | 0.040 |
| 2,6-Dinitrotoluene | **NS** | **NS** | ND | | 0.073 | 0.042 | ND | | 0.074 | 0.042 | ND | | 0.769 | 0.442 | ND | | 0.070 | 0.040 | ND | | 0.074 | 0.043 | ND | | 0.070 | 0.040 | ND | | 0.073 | 0.042 | ND | | 0.070 | 0.040 |
| 2-Chloronaphthalene | **NS** | **NS** | ND | | 0.037 | 0.00847 | ND | | 0.037 | 0.00852 | ND | | 0.385 | 0.089 | ND | | 0.035 | 0.00806 | ND | | 0.037 | 0.00857 | ND | | 0.035 | 0.00811 | ND | | 0.037 | 0.00845 | ND | | 0.035 | 0.00812 |
| 2-Chlorophenol | **NS** | **NS** | ND | | 0.037 | 0.012 | ND | | 0.037 | 0.012 | ND | | 0.385 | 0.125 | ND | | 0.035 | 0.011 | ND | | 0.037 | 0.012 | ND | | 0.035 | 0.011 | ND | | 0.037 | 0.012 | ND | | 0.035 | 0.011 |
| 2-Methylnaphthalene | **NS** | **NS** | ND | | 0.037 | 0.013 | 0.023 | J | 0.037 | 0.013 | 0.197 | DJ | 0.385 | 0.135 | ND | | 0.035 | 0.012 | ND | | 0.037 | 0.013 | ND | | 0.035 | 0.012 | 0.051 | | 0.037 | 0.013 | ND | | 0.035 | 0.012 |
| 2-Methylphenol | **0.33** | **100** | ND | | 0.037 | 0.017 | ND | | 0.037 | 0.017 | ND | | 0.385 | 0.173 | ND | | 0.035 | 0.016 | ND | | 0.037 | 0.017 | ND | | 0.035 | 0.016 | ND | | 0.037 | 0.016 | ND | | 0.035 | 0.016 |
| 2-Nitroaniline | **NS** | **NS** | ND | | 0.037 | 0.020 | ND | | 0.037 | 0.020 | ND | | 0.385 | 0.204 | ND | | 0.035 | 0.019 | ND | | 0.037 | 0.020 | ND | | 0.035 | 0.019 | ND | | 0.037 | 0.019 | ND | | 0.035 | 0.019 |
| 2-Nitrophenol | **NS** | **NS** | ND | | 0.073 | 0.022 | ND | | 0.074 | 0.022 | ND | | 0.769 | 0.229 | ND | | 0.070 | 0.021 | ND | | 0.074 | 0.022 | ND | | 0.070 | 0.021 | ND | | 0.073 | 0.022 | ND | | 0.070 | 0.021 |
| 3,3'-Dichlorobenzidine | **NS** | **NS** | ND | | 0.037 | 0.026 | ND | | 0.037 | 0.026 | ND | | 0.385 | 0.272 | ND | | 0.035 | 0.025 | ND | | 0.037 | 0.026 | ND | | 0.035 | 0.025 | ND | | 0.037 | 0.026 | ND | | 0.035 | 0.025 |
| 3-Methylphenol | **0.33** | **100** | ND | | 0.037 | 0.024 | ND | | 0.037 | 0.024 | ND | | 0.385 | 0.249 | ND | | 0.035 | 0.023 | ND | | 0.037 | 0.024 | ND | | 0.035 | 0.023 | ND | | 0.037 | 0.024 | ND | | 0.035 | 0.023 |
| 3-Nitroaniline | **NS** | **NS** | ND | | 0.037 | 0.023 | ND | | 0.037 | 0.023 | ND | | 0.385 | 0.243 | ND | | 0.035 | 0.022 | ND | | 0.037 | 0.024 | ND | | 0.035 | 0.022 | ND | | 0.037 | 0.023 | ND | | 0.035 | 0.022 |
| 4,6-Dinitro-2-methylphenol | **NS** | **NS** | ND | | 0.073 | 0.016 | ND | | 0.074 | 0.016 | ND | | 0.769 | 0.163 | ND | | 0.070 | 0.015 | ND | | 0.074 | 0.016 | ND | | 0.070 | 0.015 | ND | | 0.073 | 0.016 | ND | | 0.070 | 0.015 |
| 4-Bromophenyl phenyl ether | **NS** | **NS** | ND | | 0.037 | 0.010 | ND | | 0.037 | 0.010 | ND | | 0.385 | 0.107 | ND | | 0.035 | 0.00967 | ND | | 0.037 | 0.010 | ND | | 0.035 | 0.00973 | ND | | 0.037 | 0.010 | ND | | 0.035 | 0.00974 |
| 4-Chloro-3-methylphenol | **NS** | **NS** | ND | | 0.037 | 0.014 | ND | | 0.037 | 0.014 | ND | | 0.385 | 0.149 | ND | | 0.035 | 0.014 | ND | | 0.037 | 0.014 | ND | | 0.035 | 0.014 | ND | | 0.037 | 0.014 | ND | | 0.035 | 0.014 |
| 4-Chloroaniline | **NS** | **NS** | ND | | 0.037 | 0.014 | ND | | 0.037 | 0.014 | ND | | 0.385 | 0.148 | ND | | 0.035 | 0.013 | ND | | 0.037 | 0.014 | ND | | 0.035 | 0.014 | ND | | 0.037 | 0.014 | ND | | 0.035 | 0.014 |
| 4-Chlorophenyl phenyl ether | **NS** | **NS** | ND | | 0.037 | 0.00806 | ND | | 0.037 | 0.0081 | ND | | 0.385 | 0.085 | ND | | 0.035 | 0.00767 | ND | | 0.037 | 0.00815 | ND | | 0.035 | 0.00772 | ND | | 0.037 | 0.00804 | ND | | 0.035 | 0.00773 |
| 4-Methylphenol ** | **0.33** | **100** | ND | | 0.037 | 0.017 | ND | | 0.037 | 0.017 | ND | | 0.385 | 0.175 | ND | | 0.035 | 0.016 | ND | | 0.037 | 0.017 | ND | | 0.035 | 0.016 | ND | | 0.037 | 0.017 | ND | | 0.035 | 0.016 |
| 4-Nitroaniline | **NS** | **NS** | ND | | 0.037 | 0.022 | ND | | 0.037 | 0.022 | ND | | 0.385 | 0.228 | ND | | 0.035 | 0.021 | ND | | 0.037 | 0.022 | ND | | 0.035 | 0.021 | ND | | 0.037 | 0.022 | ND | | 0.035 | 0.021 |
| 4-Nitrophenol | **NS** | **NS** | ND | | 0.073 | 0.037 | ND | | 0.074 | 0.037 | ND | | 0.769 | 0.388 | ND | | 0.070 | 0.035 | ND | | 0.074 | 0.037 | ND | | 0.070 | 0.035 | ND | | 0.073 | 0.037 | ND | | 0.070 | 0.036 |
| Acenaphthene | **20** | **100** | 0.095 | | 0.037 | 0.00724 | 0.081 | | 0.037 | 0.00728 | 0.788 | D | 0.385 | 0.076 | ND | | 0.035 | 0.00689 | 0.053 | | 0.037 | 0.00732 | ND | | 0.035 | 0.00693 | 0.339 | | 0.037 | 0.00723 | 0.125 | | 0.035 | 0.00694 |
| Acenaphthylene | **100** | **100** | 0.184 | | 0.037 | 0.00803 | 0.168 | | 0.037 | 0.00807 | 2.25 | D | 0.385 | 0.084 | ND | | 0.035 | 0.00764 | 0.098 | | 0.037 | 0.00812 | ND | | 0.035 | 0.00769 | 0.117 | | 0.037 | 0.00801 | 0.190 | | 0.035 | 0.0077 |
| Acetophenone | **NS** | **NS** | ND | | 0.037 | 0.022 | ND | | 0.037 | 0.023 | ND | | 0.385 | 0.234 | ND | | 0.035 | 0.021 | ND | | 0.037 | 0.023 | ND | | 0.035 | 0.021 | ND | | 0.037 | 0.022 | ND | | 0.035 | 0.021 |
| Anthracene | **100** | **100** | 0.360 | | 0.037 | 0.00373 | 0.341 | | 0.037 | 0.00375 | 3.27 | D | 0.385 | 0.039 | ND | | 0.035 | 0.00355 | 0.201 | | 0.037 | 0.00377 | ND | | 0.035 | 0.00357 | 0.738 | | 0.037 | 0.00372 | 0.360 | | 0.035 | 0.00358 |
| Atrazine | **NS** | **NS** | ND | | 0.037 | 0.022 | ND | | 0.037 | 0.022 | ND | | 0.385 | 0.229 | ND | | 0.035 | 0.021 | ND | | 0.037 | 0.022 | ND | | 0.035 | 0.021 | ND | | 0.037 | 0.022 | ND | | 0.035 | 0.021 |
| Benzaldehyde | **NS** | **NS** | ND | | 0.073 | 0.028 | 0.135 | | 0.074 | 0.028 | ND | | 0.769 | 0.289 | ND | | 0.070 | 0.026 | ND | | 0.074 | 0.028 | ND | | 0.070 | 0.026 | ND | | 0.073 | 0.028 | ND | | 0.070 | 0.026 |
| Benzo[a]anthracene | **1** | **1** | **1.65** | | 0.037 | 0.013 | **1.72** | | 0.037 | 0.013 | **10.6** | D | 0.385 | 0.140 | ND | | 0.035 | 0.013 | 0.693 | | 0.037 | 0.014 | ND | | 0.035 | 0.013 | **1.81** | | 0.037 | 0.013 | **1.35** | | 0.035 | 0.013 |
| Benzo[a]pyrene | **1** | **1** | **1.84** | | 0.037 | 0.018 | **1.35** | | 0.037 | 0.018 | **9.82** | D | 0.385 | 0.186 | ND | | 0.035 | 0.017 | 0.672 | | 0.037 | 0.018 | ND | | 0.035 | 0.017 | **1.72** | | 0.037 | 0.018 | **1.44** | | 0.035 | 0.017 |
| Benzo[b]fluoranthene | **1** | **1** | **2.23** | | 0.037 | 0.018 | **1.07** | | 0.037 | 0.018 | **9.82** | D | 0.385 | 0.190 | ND | | 0.035 | 0.017 | 0.616 | | 0.037 | 0.018 | ND | | 0.035 | 0.017 | **1.76** | | 0.037 | 0.018 | **1.45** | | 0.035 | 0.017 |
| Benzo[g,h,i]perylene | **100** | **100** | 1.32 | | 0.037 | 0.028 | 0.863 | | 0.037 | 0.028 | 5.20 | D | 0.385 | 0.290 | ND | | 0.035 | 0.026 | 0.514 | | 0.037 | 0.028 | ND | | 0.035 | 0.027 | 1.15 | | 0.037 | 0.028 | 0.887 | | 0.035 | 0.027 |
| Benzo[k]fluoranthene | **0.8** | **3.9** | **1.21** | | 0.037 | 0.025 | **0.917** | | 0.037 | 0.026 | **9.27** | D | 0.385 | 0.266 | ND | | 0.035 | 0.024 | 0.656 | | 0.037 | 0.026 | ND | | 0.035 | 0.024 | **1.47** | | 0.037 | 0.025 | **1.25** | | 0.035 | 0.024 |
| Bis(2-chloroethoxy) methane | **NS** | **NS** | ND | | 0.037 | 0.00817 | ND | | 0.037 | 0.00822 | ND | | 0.385 | 0.086 | ND | | 0.035 | 0.00778 | ND | | 0.037 | 0.00827 | ND | | 0.035 | 0.00783 | ND | | 0.037 | 0.00816 | ND | | 0.035 | 0.00784 |
| Bis(2-chloroethyl) ether | **NS** | **NS** | ND | | 0.037 | 0.013 | ND | | 0.037 | 0.013 | ND | | 0.385 | 0.135 | ND | | 0.035 | 0.012 | ND | | 0.037 | 0.013 | ND | | 0.035 | 0.012 | ND | | 0.037 | 0.013 | ND | | 0.035 | 0.012 |
| Bis(2-ethylhexyl) phthalate | **NS** | **NS** | ND | | 0.037 | 0.024 | ND | | 0.037 | 0.024 | ND | | 0.385 | 0.247 | ND | | 0.035 | 0.022 | ND | | 0.037 | 0.024 | ND | | 0.035 | 0.023 | 0.068 | | 0.037 | 0.024 | 0.040 | | 0.035 | 0.023 |
| Butyl benzyl phthalate | **NS** | **NS** | ND | | 0.037 | 0.016 | ND | | 0.037 | 0.016 | ND | | 0.385 | 0.171 | ND | | 0.035 | 0.016 | ND | | 0.037 | 0.017 | ND | | 0.035 | 0.016 | ND | | 0.037 | 0.016 | ND | | 0.035 | 0.016 |
| Caprolactam | **NS** | **NS** | ND | | 0.073 | 0.027 | ND | | 0.074 | 0.027 | ND | | 0.769 | 0.283 | ND | | 0.070 | 0.026 | ND | | 0.074 | 0.027 | ND | | 0.070 | 0.026 | ND | | 0.073 | 0.027 | ND | | 0.070 | 0.026 |
| Carbazole | **NS** | **NS** | 0.125 | | 0.037 | 0.00855 | 0.055 | | 0.037 | 0.00859 | 1.23 | D | 0.385 | 0.090 | ND | | 0.035 | 0.00814 | 0.122 | | 0.037 | 0.00864 | ND | | 0.035 | 0.00818 | 0.343 | | 0.037 | 0.00853 | 0.154 | | 0.035 | 0.0082 |
| Chrysene | **1** | **3.9** | **1.57** | | 0.037 | 0.010 | **1.64** | | 0.037 | 0.010 | **9.92** | D | 0.385 | 0.106 | ND | | 0.035 | 0.00963 | 0.674 | | 0.037 | 0.010 | ND | | 0.035 | 0.00969 | **1.64** | | 0.037 | 0.010 | **1.29** | | 0.035 | 0.0097 |
| Dibenz[a,h]anthracene | **0.33** | **0.33** | **0.624** | | 0.037 | 0.015 | **0.420** | | 0.037 | 0.015 | **2.34** | D | 0.385 | 0.154 | ND | | 0.035 | 0.014 | 0.210 | | 0.037 | 0.015 | ND | | 0.035 | 0.014 | **0.601** | | 0.037 | 0.015 | **0.435** | | 0.035 | 0.014 |
| Dibenzofuran | **7** | **59** | ND | | 0.037 | 0.0048 | 0.019 | J | 0.037 | 0.00482 | 0.571 | D | 0.385 | 0.050 | ND | | 0.035 | 0.00456 | 0.043 | | 0.037 | 0.00485 | ND | | 0.035 | 0.00459 | 0.168 | | 0.037 | 0.00479 | 0.053 | | 0.035 | 0.0046 |
| Diethyl phthalate | **NS** | **NS** | ND | | 0.037 | 0.011 | ND | | 0.037 | 0.012 | ND | | 0.385 | 0.120 | ND | | 0.035 | 0.011 | ND | | 0.037 | 0.012 | ND | | 0.035 | 0.011 | ND | | 0.037 | 0.011 | ND | | 0.035 | 0.011 |
| Dimethyl phthalate | **NS** | **NS** | ND | | 0.037 | 0.00842 | ND | | 0.037 | 0.00846 | ND | | 0.385 | 0.088 | ND | | 0.035 | 0.00801 | ND | | 0.037 | 0.00851 | ND | | 0.035 | 0.00806 | ND | | 0.037 | 0.0084 | ND | | 0.035 | 0.00807 |
| Di-n-butyl phthalate | **NS** | **NS** | ND | | 0.037 | 0.015 | ND | | 0.037 | 0.015 | ND | | 0.385 | 0.156 | ND | | 0.035 | 0.014 | ND | | 0.037 | 0.015 | ND | | 0.035 | 0.014 | ND | | 0.037 | 0.015 | ND | | 0.035 | 0.014 |
| Dinitrotoluene (2,4- and 2,6-) | **NS** | **NS** | ND | | 0.073 | 0.042 | ND | | 0.074 | 0.042 | ND | | 0.769 | 0.435 | ND | | 0.070 | 0.040 | ND | | 0.074 | 0.042 | ND | | 0.070 | 0.040 | ND | | 0.073 | 0.041 | ND | | 0.070 | 0.040 |
| Di-n-octyl phthalate | **NS** | **NS** | ND | | 0.037 | 0.027 | ND | | 0.037 | 0.027 | ND | | 0.385 | 0.282 | ND | | 0.035 | 0.026 | ND | | 0.037 | 0.027 | ND | | 0.035 | 0.026 | ND | | 0.037 | 0.027 | ND | | 0.035 | 0.026 |
| Fluoranthene | **100** | **100** | 2.98 | | 0.037 | 0.012 | 2.26 | | 0.037 | 0.012 | 24.8 | D | 0.385 | 0.124 | ND | | 0.035 | 0.011 | 1.77 | | 0.037 | 0.012 | ND | | 0.035 | 0.011 | 4.20 | | 0.037 | 0.012 | 2.50 | | 0.035 | 0.011 |
| Fluorene | **30** | **100** | 0.066 | | 0.037 | 0.00987 | 0.069 | | 0.037 | 0.00993 | 0.933 | D | 0.385 | 0.104 | ND | | 0.035 | 0.0094 | 0.052 | | 0.037 | 0.00998 | ND | | 0.035 | 0.00945 | 0.284 | | 0.037 | 0.00985 | 0.099 | | 0.035 | 0.00947 |
| Hexachlorobenzene | **0.33** | **1.2** | ND | | 0.037 | 0.011 | ND | | 0.037 | 0.012 | ND | | 0.385 | 0.120 | ND | | 0.035 | 0.011 | ND | | 0.037 | 0.012 | ND | | 0.035 | 0.011 | ND | | 0.037 | 0.011 | ND | | 0.035 | 0.011 |
| Hexachlorobutadiene | **NS** | **NS** | ND | | 0.037 | 0.010 | ND | | 0.037 | 0.010 | ND | | 0.385 | 0.107 | ND | | 0.035 | 0.00968 | ND | | 0.037 | 0.010 | ND | | 0.035 | 0.00974 | ND | | 0.037 | 0.010 | ND | | 0.035 | 0.00976 |
| Hexachlorocyclopentadiene | **NS** | **NS** | ND | | 0.073 | 0.064 | ND | | 0.074 | 0.064 | ND | | 0.769 | 0.668 | ND | | 0.070 | 0.061 | ND | | 0.074 | 0.064 | ND | | 0.070 | 0.061 | ND | | 0.073 | 0.064 | ND | | 0.070 | 0.061 |
| Hexachloroethane | **NS** | **NS** | ND | | 0.037 | 0.015 | ND | | 0.037 | 0.015 | ND | | 0.385 | 0.160 | ND | | 0.035 | 0.015 | ND | | 0.037 | 0.015 | ND | | 0.035 | 0.015 | ND | | 0.037 | 0.015 | ND | | 0.035 | 0.015 |
| Indeno[1,2,3-cd]pyrene | **0.5** | **0.5** | **1.28** | | 0.037 | 0.024 | **0.677** | | 0.037 | 0.024 | **4.97** | D | 0.385 | 0.246 | ND | | 0.035 | 0.022 | 0.467 | | 0.037 | 0.024 | ND | | 0.035 | 0.023 | **1.14** | | 0.037 | 0.023 | **0.922** | | 0.035 | 0.023 |
| Isophorone | **NS** | **NS** | ND | | 0.037 | 0.015 | ND | | 0.037 | 0.016 | ND | | 0.385 | 0.162 | ND | | 0.035 | 0.015 | ND | | 0.037 | 0.016 | ND | | 0.035 | 0.015 | ND | | 0.037 | 0.015 | ND | | 0.035 | 0.015 |
| Naphthalene | **12** | **100** | 0.029 | J | 0.037 | 0.00535 | 0.026 | J | 0.037 | 0.00538 | 0.424 | D | 0.385 | 0.056 | ND | | 0.035 | 0.00509 | 0.028 | J | 0.037 | 0.00541 | ND | | 0.035 | 0.00512 | 0.108 | | 0.037 | 0.00534 | 0.037 | | 0.035 | 0.00513 |
| Nitrobenzene | **NS** | **15** | ND | | 0.037 | 0.0089 | ND | | 0.037 | 0.00895 | ND | | 0.385 | 0.093 | ND | | 0.035 | 0.00847 | ND | | 0.037 | 0.009 | ND | | 0.035 | 0.00852 | ND | | 0.037 | 0.00888 | ND | | 0.035 | 0.00854 |
| N-Nitrosodi-n-propylamine | **NS** | **NS** | ND | | 0.037 | 0.023 | ND | | 0.037 | 0.023 | ND | | 0.385 | 0.239 | ND | | 0.035 | 0.022 | ND | | 0.037 | 0.023 | ND | | 0.035 | 0.022 | ND | | 0.037 | 0.023 | ND | | 0.035 | 0.022 |
| N-Nitrosodiphenylamine | **NS** | **NS** | ND | | 0.037 | 0.00752 | ND | | 0.037 | 0.00757 | ND | | 0.385 | 0.079 | ND | | 0.035 | 0.00716 | ND | | 0.037 | 0.00761 | ND | | 0.035 | 0.0072 | ND | | 0.037 | 0.00751 | ND | | 0.035 | 0.00721 |
| Pentachlorophenol | **0.8** | **6.7** | ND | | 0.037 | 0.016 | ND | | 0.037 | 0.016 | ND | | 0.385 | 0.170 | ND | | 0.035 | 0.015 | ND | | 0.037 | 0.016 | ND | | 0.035 | 0.016 | ND | | 0.037 | 0.016 | ND | | 0.035 | 0.016 |
| Phenanthrene | **100** | **100** | 1.08 | | 0.037 | 0.006 | 1.61 | | 0.037 | 0.00603 | 14.8 | D | 0.385 | 0.063 | ND | | 0.035 | 0.00571 | 1.09 | | 0.037 | 0.00607 | ND | | 0.035 | 0.00574 | 2.74 | | 0.037 | 0.00599 | 1.10 | | 0.035 | 0.00575 |
| Phenol | **0.33** | **100** | ND | | 0.037 | 0.00829 | ND | | 0.037 | 0.00834 | ND | | 0.385 | 0.087 | ND | | 0.035 | 0.00789 | ND | | 0.037 | 0.00839 | ND | | 0.035 | 0.00794 | ND | | 0.037 | 0.00828 | ND | | 0.035 | 0.00795 |
| Pyrene | **100** | **100** | 2.72 | | 0.037 | 0.00853 | 3.42 | | 0.037 | 0.00858 | 20.5 | D | 0.385 | 0.090 | ND | | 0.035 | 0.00812 | 1.46 | | 0.037 | 0.00863 | ND | | 0.035 | 0.00817 | 3.42 | | 0.037 | 0.00851 | 2.28 | | 0.035 | 0.00818 |
| TOTAL BNA'S: | **NS** | **NS** | 19.4 | J | | NA | 16.9 | J | | NA | 132 | DJ | | NA | ND | | | NA | 9.42 | J | | NA | ND | | | NA | 23.9 | | | NA | 16.0 | | | NA |
| TOTAL TIC's: | **NS** | **NS** | 0.568 | JN | | NA | 2.76 | JN | | NA | 3.54 | DJN | | NA | ND | | | NA | 0.189 | J | | NA | 0.204 | JN | | NA | 0.220 | JN | | NA | ND | | | NA |
| TOTAL BNA'S & TIC's: | **NS** | **NS** | 20.0 | J | | NA | 19.7 | J | | NA | 136 | DJ | | NA | ND | | | NA | 9.61 | J | | NA | 0.204 | | | NA | 24.1 | | | NA | 16.0 | | | NA |

**Results in Yellow Highlight displays exceedance above the UUSCO regulatory standard**
**Results in Green Highlight displays exceedance above both UUSCO & RRUSCO regulatory standard**
**J = Concentration detected at a value below the RL and above the MDL for target compounds**
**N = Presumptive evidence of a compound from the use of GC/MS library search.**

**NS = No Standard Available**
**D = The compound was reported from the Diluted analysis**
**ND = Analyzed for but Not Detected at the MDL**

**Table 1A (Cont'd) - Soil Results - PCBs, Pesticides, Metals**
**Fulton 11**
**New York, NY**

**HK Engineering & Geology, D.P.C.**
**Project #: HK2661.2**

| Target Compounds | NYSDEC Unrestricted Use SCO | NYSDEC Restricted Residential SCO | SB1A Sample Depth: 0-2' | | | | SB1B Sample Depth: 10-12' | | | | SB2A Sample Depth: 0-2' | | | | SB2B Sample Depth: 10-12' | | | | SB3A Sample Depth: 0-2' | | | | SB3B Sample Depth: 10-12' | | | | SB4A Sample Depth: 0-2' | | | | SB4B Sample Depth: 10-12' | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PCB's (mg/Kg)** | | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| Aroclor-1016 | **NS** | **NS** | ND | | 0.00365 | 0.0011 | ND | | 0.0037 | 0.0011 | ND | | 0.00386 | 0.0012 | ND | | 0.00348 | 0.001 | ND | | 0.00369 | 0.0011 | ND | | 0.00353 | 0.0011 | ND | | 0.00365 | 0.0011 | ND | | 0.00351 | 0.0011 |
| Aroclor-1221 | **NS** | **NS** | ND | | 0.00365 | 0.0011 | ND | | 0.0037 | 0.0011 | ND | | 0.00386 | 0.0012 | ND | | 0.00348 | 0.001 | ND | | 0.00369 | 0.0011 | ND | | 0.00353 | 0.0011 | ND | | 0.00365 | 0.0011 | ND | | 0.00351 | 0.0011 |
| Aroclor-1232 | **NS** | **NS** | ND | | 0.00365 | 0.0011 | ND | | 0.0037 | 0.0011 | ND | | 0.00386 | 0.0012 | ND | | 0.00348 | 0.001 | ND | | 0.00369 | 0.0011 | ND | | 0.00353 | 0.0011 | ND | | 0.00365 | 0.0011 | ND | | 0.00351 | 0.0011 |
| Aroclor-1242 | **NS** | **NS** | ND | | 0.00365 | 0.0011 | ND | | 0.0037 | 0.0011 | ND | | 0.00386 | 0.0012 | ND | | 0.00348 | 0.001 | ND | | 0.00369 | 0.0011 | ND | | 0.00353 | 0.0011 | ND | | 0.00365 | 0.0011 | ND | | 0.00351 | 0.0011 |
| Aroclor-1248 | **NS** | **NS** | ND | | 0.00365 | 0.0011 | ND | | 0.0037 | 0.0011 | ND | | 0.00386 | 0.0012 | ND | | 0.00348 | 0.001 | ND | | 0.00369 | 0.0011 | ND | | 0.00353 | 0.0011 | ND | | 0.00365 | 0.0011 | ND | | 0.00351 | 0.0011 |
| Aroclor-1254 | **NS** | **NS** | ND | | 0.00365 | 0.0011 | ND | | 0.0037 | 0.0011 | ND | | 0.00386 | 0.0012 | ND | | 0.00348 | 0.001 | ND | | 0.00369 | 0.0011 | ND | | 0.00353 | 0.0011 | ND | | 0.00365 | 0.0011 | ND | | 0.00351 | 0.0011 |
| Aroclor-1260 | **NS** | **NS** | ND | | 0.00365 | 0.0011 | ND | | 0.0037 | 0.0011 | ND | | 0.00386 | 0.0012 | ND | | 0.00348 | 0.001 | ND | | 0.00369 | 0.0011 | ND | | 0.00353 | 0.0011 | ND | | 0.00365 | 0.0011 | ND | | 0.00351 | 0.0011 |
| Aroclor-1262 | **NS** | **NS** | ND | | 0.00365 | 0.0011 | ND | | 0.0037 | 0.0011 | ND | | 0.00386 | 0.0012 | ND | | 0.00348 | 0.001 | ND | | 0.00369 | 0.0011 | ND | | 0.00353 | 0.0011 | ND | | 0.00365 | 0.0011 | ND | | 0.00351 | 0.0011 |
| Aroclor-1268 | **NS** | **NS** | ND | | 0.00365 | 0.0011 | ND | | 0.0037 | 0.0011 | ND | | 0.00386 | 0.0012 | ND | | 0.00348 | 0.001 | ND | | 0.00369 | 0.0011 | ND | | 0.00353 | 0.0011 | ND | | 0.00365 | 0.0011 | ND | | 0.00351 | 0.0011 |
| PCBs | **0.1** | **1** | ND | | 0.00365 | 0.0011 | ND | | 0.0037 | 0.00111 | ND | | 0.00386 | 0.00116 | ND | | 0.00348 | 0.00104 | ND | | 0.00369 | 0.00111 | ND | | 0.00353 | 0.00106 | ND | | 0.00365 | 0.0011 | ND | | 0.00351 | 0.00105 |
| **Pesticides (mg/Kg)** | | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| alpha-BHC | **0.02** | **0.48** | ND | | 0.00073 | 0.00013 | ND | | 0.00074 | 0.000132 | ND | | 0.000772 | 0.000138 | ND | | 0.000696 | 0.000124 | ND | | 0.000738 | 0.000132 | ND | | 0.000706 | 0.000126 | ND | | 0.00073 | 0.00013 | ND | | 0.000702 | 0.000125 |
| beta-BHC | **0.036** | **0.36** | ND | | 0.00073 | 0.00017 | ND | | 0.00074 | 0.000173 | ND | | 0.000772 | 0.00018 | ND | | 0.000696 | 0.000162 | ND | | 0.000738 | 0.000172 | ND | | 0.000706 | 0.000165 | ND | | 0.00073 | 0.00017 | ND | | 0.000702 | 0.000164 |
| gamma-BHC (Lindane) | **0.1** | **1.3** | ND | | 0.00073 | 0.000163 | ND | | 0.00074 | 0.000165 | ND | | 0.000772 | 0.000172 | ND | | 0.000696 | 0.000155 | ND | | 0.000738 | 0.000165 | ND | | 0.000706 | 0.000157 | ND | | 0.00073 | 0.000163 | ND | | 0.000702 | 0.000157 |
| delta-BHC | **0.04** | **100** | ND | | 0.00073 | 0.000141 | ND | | 0.00074 | 0.000143 | ND | | 0.000772 | 0.00015 | ND | | 0.000696 | 0.000135 | ND | | 0.000738 | 0.000143 | ND | | 0.000706 | 0.000137 | ND | | 0.00073 | 0.000141 | ND | | 0.000702 | 0.000136 |
| Heptachlor | **0.042** | **2.1** | ND | | 0.00073 | 0.000173 | ND | | 0.00074 | 0.000176 | 0.00288 | | 0.000772 | 0.000183 | ND | | 0.000696 | 0.000165 | ND | | 0.000738 | 0.000175 | ND | | 0.000706 | 0.000168 | ND | | 0.00073 | 0.000173 | ND | | 0.000702 | 0.000167 |
| Aldrin | **0.005** | **0.097** | ND | | 0.00073 | 0.000153 | ND | | 0.00074 | 0.000155 | ND | | 0.000772 | 0.000162 | ND | | 0.000696 | 0.000145 | ND | | 0.000738 | 0.000154 | ND | | 0.000706 | 0.000148 | ND | | 0.00073 | 0.000153 | ND | | 0.000702 | 0.000147 |
| Heptachlor epoxide | **NS** | **NS** | 0.00119 | | 0.00073 | 0.000158 | 0.000932 | | 0.00074 | 0.000161 | 0.00404 | | 0.000772 | 0.000168 | ND | | 0.000696 | 0.000151 | ND | | 0.000738 | 0.00016 | ND | | 0.000706 | 0.000153 | ND | | 0.00073 | 0.000158 | ND | | 0.000702 | 0.000152 |
| Endosulfan I | **2.4** | **24** | ND | | 0.00073 | 0.000163 | ND | | 0.00074 | 0.000165 | ND | | 0.000772 | 0.000173 | ND | | 0.000696 | 0.000156 | ND | | 0.000738 | 0.000165 | ND | | 0.000706 | 0.000158 | ND | | 0.00073 | 0.000163 | ND | | 0.000702 | 0.000157 |
| 4,4'-DDE | **0.0033** | **8.9** | **0.011** | | 0.00073 | 0.000149 | **0.00656** | | 0.00074 | 0.000151 | **0.024** | | 0.000772 | 0.000158 | ND | | 0.000696 | 0.000142 | **0.024** | | 0.000738 | 0.000151 | ND | | 0.000706 | 0.000144 | **0.052** | | 0.00073 | 0.000149 | **0.013** | | 0.000702 | 0.000143 |
| Dieldrin | **0.005** | **0.2** | ND | | 0.00073 | 0.000149 | ND | | 0.00074 | 0.000151 | ND | | 0.000772 | 0.000157 | ND | | 0.000696 | 0.000142 | ND | | 0.000738 | 0.0015 | ND | | 0.000706 | 0.000144 | **0.00707** | | 0.00073 | 0.000149 | 0.00196 | | 0.000702 | 0.000143 |
| Endrin | **0.014** | **11** | ND | | 0.00073 | 0.000184 | ND | | 0.00074 | 0.000187 | ND | | 0.000772 | 0.000195 | ND | | 0.000696 | 0.000175 | ND | | 0.000738 | 0.000186 | ND | | 0.000706 | 0.000178 | ND | | 0.00073 | 0.000184 | ND | | 0.000702 | 0.000177 |
| Endosulfan II | **2.4** | **24** | ND | | 0.00073 | 0.000167 | ND | | 0.00074 | 0.00017 | ND | | 0.000772 | 0.000177 | ND | | 0.000696 | 0.000159 | ND | | 0.000738 | 0.000169 | ND | | 0.000706 | 0.000162 | ND | | 0.00073 | 0.000167 | ND | | 0.000702 | 0.000161 |
| 4,4'-DDD | **0.0033** | **13** | **0.00722** | | 0.00073 | 0.000195 | ND | | 0.00074 | 0.000197 | **0.012** | | 0.000772 | 0.000206 | ND | | 0.000696 | 0.000185 | 0.00289 | | 0.000738 | 0.000197 | ND | | 0.000706 | 0.000188 | ND | | 0.00073 | 0.000195 | ND | | 0.000702 | 0.000187 |
| Endrin aldehyde | **NS** | **NS** | ND | | 0.00073 | 0.000153 | ND | | 0.00074 | 0.000155 | ND | | 0.000772 | 0.000162 | ND | | 0.000696 | 0.000146 | ND | | 0.000738 | 0.000154 | ND | | 0.000706 | 0.000148 | ND | | 0.00073 | 0.000153 | ND | | 0.000702 | 0.000147 |
| Endosulfan sulfate | **2.4** | **24** | ND | | 0.00073 | 0.000181 | ND | | 0.00074 | 0.000183 | ND | | 0.000772 | 0.000191 | ND | | 0.000696 | 0.000172 | ND | | 0.000738 | 0.000183 | ND | | 0.000706 | 0.000175 | ND | | 0.00073 | 0.000181 | ND | | 0.000702 | 0.000174 |
| 4,4'-DDT | **0.0033** | **7.9** | **0.019** | | 0.00073 | 0.000136 | **0.025** | | 0.00074 | 0.000138 | **0.097** | | 0.000772 | 0.000144 | 0.000265 | J | 0.000696 | 0.000129 | **0.050** | | 0.000738 | 0.000137 | ND | | 0.000706 | 0.000131 | **0.085** | | 0.00073 | 0.000136 | **0.026** | | 0.000702 | 0.000131 |
| Endrin ketone | **NS** | **NS** | ND | | 0.00073 | 0.000142 | ND | | 0.00074 | 0.000144 | ND | | 0.000772 | 0.00015 | ND | | 0.000696 | 0.000135 | ND | | 0.000738 | 0.000144 | ND | | 0.000706 | 0.000138 | ND | | 0.00073 | 0.000142 | ND | | 0.000702 | 0.000137 |
| Methoxychlor | **NS** | **NS** | ND | | 0.00073 | 0.000195 | ND | | 0.00074 | 0.000198 | ND | | 0.000772 | 0.000206 | ND | | 0.000696 | 0.000186 | ND | | 0.000738 | 0.000197 | ND | | 0.000706 | 0.000189 | ND | | 0.00073 | 0.000195 | ND | | 0.000702 | 0.000188 |
| alpha-Chlordane | **0.094** | **4.2** | 0.00473 | | 0.00073 | 0.000161 | 0.00266 | | 0.00074 | 0.000163 | 0.016 | | 0.000772 | 0.00017 | ND | | 0.000696 | 0.000153 | 0.023 | | 0.000738 | 0.000163 | ND | | 0.000706 | 0.000156 | 0.00577 | | 0.00073 | 0.000161 | 0.00185 | | 0.000702 | 0.000155 |
| gamma-Chlordane | **NS** | **NS** | 0.00584 | | 0.00073 | 0.000143 | 0.00281 | | 0.00074 | 0.000145 | 0.019 | | 0.000772 | 0.000152 | ND | | 0.000696 | 0.000137 | 0.022 | | 0.000738 | 0.000145 | ND | | 0.000706 | 0.000139 | 0.00815 | | 0.00073 | 0.000143 | 0.00203 | | 0.000702 | 0.000138 |
| Toxaphene | **NS** | **NS** | ND | | 0.00913 | 0.00365 | ND | | 0.00925 | 0.0037 | ND | | 0.00965 | 0.00386 | ND | | 0.0087 | 0.00348 | ND | | 0.00923 | 0.00369 | ND | | 0.00883 | 0.00353 | ND | | 0.00913 | 0.00365 | ND | | 0.00878 | 0.00351 |
| Endosulfan (I and II) | **NS** | **NS** | ND | | 0.00073 | 0.000163 | ND | | 0.00074 | 0.000165 | ND | | 0.000772 | 0.000173 | ND | | 0.000696 | 0.000156 | ND | | 0.000738 | 0.000165 | ND | | 0.000706 | 0.000158 | ND | | 0.00073 | 0.000163 | ND | | 0.000702 | 0.000157 |
| Chlordane (alpha and gamma) | **NS** | **NS** | 0.011 | | 0.00073 | 0.000143 | 0.00547 | | 0.00074 | 0.000145 | 0.034 | | 0.000772 | 0.000152 | ND | | 0.000696 | 0.000137 | 0.044 | | 0.000738 | 0.000145 | ND | | 0.000706 | 0.000139 | 0.014 | | 0.00073 | 0.000143 | 0.00388 | | 0.000702 | 0.000138 |
| *** Metals (mg/Kg)** | | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| Aluminum | **NS** | **NS** | 2040 | | | | 3770 | | | | 6220 | | | | 3640 | | | | 5880 | | | | 4440 | | | | 7330 | | | | 6130 | | | |
| Antimony | **NS** | **NS** | <2.2 | | | | <2.1 | | | | <2.3 | | | | <2.1 | | | | <2.2 | | | | <2.1 | | | | <2.2 | | | | <2.2 | | | |
| Arsenic | **13** | **16** | <2.2 | | | | 5.6 | | | | 5.7 | | | | <2.1 | | | | 4.2 | | | | 2.4 | | | | 12.2 | | | | 6.7 | | | |
| Barium | **350** | **400** | 84.7 | | | | **408** | | | | **363** | | | | 37.9 | | | | 206 | | | | 41.1 | | | | 246 | | | | 194 | | | |
| Beryllium | **7.2** | **72** | 0.26 | | | | 0.3 | | | | 0.45 | | | | 0.41 | | | | 0.45 | | | | 0.4 | | | | 0.33 | | | | 0.42 | | | |
| Cadmium | **2.5** | **4.3** | <0.56 | | | | 1.3 | | | | <0.58 | | | | <0.53 | | | | <0.56 | | | | <0.52 | | | | 0.61 | | | | <0.55 | | | |
| Calcium | **NS** | **NS** | 17400 | | | | 14600 | | | | 31500 | | | | 1980 | | | | 9640 | | | | 5710 | | | | 15500 | | | | 20000 | | | |
| Chromium | **NS** | **NS** | 5 | | | | 12.8 | | | | 14.2 | | | | 9.9 | | | | 12.3 | | | | 10.8 | | | | 13.6 | | | | 14.9 | | | |
| Cobalt | **NS** | **NS** | <5.6 | | | | <5.3 | | | | <5.8 | | | | <5.3 | | | | <5.6 | | | | <5.2 | | | | <5.4 | | | | <5.5 | | | |
| Copper | **50** | **270** | 12.6 | | | | 19.7 | | | | 34.7 | | | | 10.9 | | | | 16.8 | | | | 14 | | | | 34.9 | | | | 23.8 | | | |
| Iron | **NS** | **NS** | 3370 | | | | 9690 | | | | 9550 | | | | 7770 | | | | 13900 | | | | 8580 | | | | 11600 | | | | 10300 | | | |
| Lead | **63** | **400** | **130** | | | | **547** | | | | **797** | | | | 8.8 | | | | **301** | | | | 26.2 | | | | **500** | | | | **353** | | | |
| Magnesium | **NS** | **NS** | 2140 | | | | 3550 | | | | 2970 | | | | 1920 | | | | 3430 | | | | 2510 | | | | 2460 | | | | 2940 | | | |
| Manganese | **1600** | **2000** | 97.7 | | | | 269 | | | | 293 | | | | 236 | | | | 258 | | | | 299 | | | | 241 | | | | 337 | | | |
| Mercury | **0.18** | **0.81** | **0.59** | | | | **0.62** | | | | **0.7** | | | | <0.032 | | | | **0.67** | | | | 0.11 | | | | **1.2** | | | | **0.33** | | | |
| Nickel | **30** | **310** | 4.5 | | | | 8.6 | | | | 11.3 | | | | 8.4 | | | | 12.6 | | | | 14 | | | | 10.6 | | | | 12 | | | |
| Potassium | **NS** | **NS** | <1100 | | | | <1100 | | | | 1240 | | | | 1150 | | | | 1530 | | | | <1000 | | | | <1100 | | | | <1100 | | | |
| Selenium | **3.9** | **180** | <2.2 | | | | <2.1 | | | | <2.3 | | | | <2.1 | | | | <2.2 | | | | <2.1 | | | | <2.2 | | | | <2.2 | | | |
| Silver | **2** | **180** | 1.2 | | | | 0.63 | | | | <0.58 | | | | <0.53 | | | | 0.62 | | | | <0.52 | | | | 0.68 | | | | 0.58 | | | |
| Sodium | **NS** | **NS** | <1100 | | | | <1100 | | | | <1200 | | | | <1100 | | | | <1100 | | | | <1000 | | | | <1100 | | | | <1100 | | | |
| Thallium | **NS** | **NS** | <1.1 | | | | <1.1 | | | | <1.2 | | | | <1.1 | | | | <1.1 | | | | <1.0 | | | | <1.1 | | | | <1.1 | | | |
| Vanadium | **NS** | **NS** | 5.8 | | | | 14.3 | | | | 22.4 | | | | 12.5 | | | | 25.9 | | | | 14.9 | | | | 20.9 | | | | 16.3 | | | |
| Zinc | **109** | **10000** | 87.4 | | | | **616** | | | | **329** | | | | 25.4 | | | | **164** | | | | 42.1 | | | | **288** | | | | **180** | | | |
| **General Analytical** | | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | 4.73 | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| Cyanide, Total | **27** | **27** | ND | | 1.10 | 0.220 | ND | | 1.11 | 0.223 | ND | | 1.16 | 0.232 | ND | | 1.05 | 0.209 | ND | | 1.11 | 0.222 | ND | | 1.04 | 0.208 | ND | | 1.10 | 0.220 | ND | | 1.05 | 0.211 |

**Results in Yellow Highlight displays exceedance above the UUSCO regulatory standard**
**Results in Green Highlight displays exceedance above both UUSCO & RRUSCO regulatory standard**
**J = Concentration detected at a value below the RL and above the MDL for target compounds**
**N = Presumptive evidence of a compound from the use of GC/MS library search.**

**NS = No Standard Available**
**D = The compound was reported from the Diluted analysis**
**ND = Analyzed for but Not Detected at the MDL**
**~ = Sample not analyzed**

*** TAL Metals analyzed by SGS Dayton.**

**Table 1A (Cont'd) - Soil Results - VOCs**
**Fulton 11**
**New York, NY**

**HK Engineering & Geology, D.P.C.**
**Project #: HK2661.2**

| Target Compounds | NYSDEC Unrestricted Use SCO | NYSDEC Restricted Residential SCO | SB5 Sample Depth: 0-2' | | | | SB6-419 CS Sample Depth: 0-0.5' | | | | SB8-401 CS Sample Depth: 0-0.5' | | | | SB9A Sample Depth: 10-12' | | | | SB9B Sample Depth: 0-2' | | | | SB10A Sample Depth: 0-2' | | | | SB10B Sample Depth: 10-12' | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Volatiles (mg/Kg)** | | | Conc | Q | RL | MDL | Conc | Q | RL | MDL | Conc | Q | RL | MDL | Conc | Q | RL | MDL | Conc | Q | RL | MDL | Conc | Q | RL | MDL | Conc | Q | RL | MDL |
| 1,1,1-Trichloroethane | **0.68** | **100** | ND | | 0.00132 | 0.000405 | ND | | 0.00136 | 0.000418 | ND | | 0.00141 | 0.000433 | ND | | 0.00157 | 0.000482 | ND | | 0.00137 | 0.000421 | ND | | 0.00146 | 0.000448 | ND | | 0.00108 | 0.000332 |
| 1,1,2,2-Tetrachloroethane | **NS** | **NS** | ND | | 0.00132 | 0.00069 | ND | | 0.00136 | 0.000711 | ND | | 0.00141 | 0.000737 | ND | | 0.00157 | 0.000821 | ND | | 0.00137 | 0.000717 | ND | | 0.00146 | 0.000764 | ND | | 0.00108 | 0.000565 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | **NS** | **NS** | ND | | 0.00264 | 0.000788 | ND | | 0.00272 | 0.000812 | ND | | 0.00282 | 0.000842 | ND | | 0.00314 | 0.000937 | ND | | 0.00274 | 0.000818 | ND | | 0.00292 | 0.000872 | ND | | 0.00216 | 0.000645 |
| 1,1,2-Trichloroethane | **NS** | **NS** | ND | | 0.00132 | 0.000282 | ND | | 0.00136 | 0.000291 | ND | | 0.00141 | 0.000302 | ND | | 0.00157 | 0.000336 | ND | | 0.00137 | 0.000293 | ND | | 0.00146 | 0.000312 | ND | | 0.00108 | 0.000231 |
| 1,1-Dichloroethane | **0.27** | **26** | ND | | 0.00264 | 0.000337 | ND | | 0.00272 | 0.000347 | ND | | 0.00282 | 0.00036 | ND | | 0.00314 | 0.0004 | ND | | 0.00274 | 0.000349 | ND | | 0.00292 | 0.000372 | ND | | 0.00216 | 0.000275 |
| 1,1-Dichloroethene | **0.33** | **100** | ND | | 0.00132 | 0.000462 | ND | | 0.00136 | 0.000476 | ND | | 0.00141 | 0.000494 | ND | | 0.00157 | 0.00055 | ND | | 0.00137 | 0.00048 | ND | | 0.00146 | 0.000511 | ND | | 0.00108 | 0.000378 |
| 1,2,3-Trichlorobenzene | **NS** | **NS** | ND | | 0.00264 | 0.00042 | ND | | 0.00272 | 0.000432 | ND | | 0.00282 | 0.000448 | ND | | 0.00314 | 0.000499 | ND | | 0.00274 | 0.000436 | ND | | 0.00292 | 0.000464 | ND | | 0.00216 | 0.000343 |
| 1,2,4-Trichlorobenzene | **NS** | **NS** | ND | | 0.00132 | 0.000554 | ND | | 0.00136 | 0.000571 | ND | | 0.00141 | 0.000592 | ND | | 0.00157 | 0.000659 | ND | | 0.00137 | 0.000575 | ND | | 0.00146 | 0.000613 | ND | | 0.00108 | 0.000454 |
| 1,2-Dibromo-3-chloropropane | **NS** | **NS** | ND | | 0.00132 | 0.00109 | ND | | 0.00136 | 0.00112 | ND | | 0.00141 | 0.00116 | ND | | 0.00157 | 0.00129 | ND | | 0.00137 | 0.00113 | ND | | 0.00146 | 0.0012 | ND | | 0.00108 | 0.00089 |
| 1,2-Dibromoethane (EDB) | **NS** | **NS** | ND | | 0.00132 | 0.000244 | ND | | 0.00136 | 0.000252 | ND | | 0.00141 | 0.000261 | ND | | 0.00157 | 0.00029 | ND | | 0.00137 | 0.000253 | ND | | 0.00146 | 0.00027 | ND | | 0.00108 | 0.0002 |
| 1,2-Dichlorobenzene | **1.1** | **100** | ND | | 0.00132 | 0.000331 | ND | | 0.00136 | 0.000341 | ND | | 0.00141 | 0.000354 | ND | | 0.00157 | 0.000394 | ND | | 0.00137 | 0.000344 | ND | | 0.00146 | 0.000366 | ND | | 0.00108 | 0.000271 |
| 1,2-Dichloroethane (EDC) | **0.02** | **3.1** | ND | | 0.00132 | 0.000305 | ND | | 0.00136 | 0.000314 | ND | | 0.00141 | 0.000326 | ND | | 0.00157 | 0.000363 | ND | | 0.00137 | 0.000316 | ND | | 0.00146 | 0.000337 | ND | | 0.00108 | 0.000249 |
| 1,2-Dichloropropane | **NS** | **NS** | ND | | 0.00132 | 0.000132 | ND | | 0.00136 | 0.000136 | ND | | 0.00141 | 0.000141 | ND | | 0.00157 | 0.000157 | ND | | 0.00137 | 0.000137 | ND | | 0.00146 | 0.000146 | ND | | 0.00108 | 0.000108 |
| 1,3-Dichlorobenzene | **2.4** | **49** | ND | | 0.00132 | 0.00035 | ND | | 0.00136 | 0.00036 | ND | | 0.00141 | 0.000374 | ND | | 0.00157 | 0.000416 | ND | | 0.00137 | 0.000363 | ND | | 0.00146 | 0.000387 | ND | | 0.00108 | 0.000286 |
| 1,3-Dichloropropene (cis- and trans-) | **NS** | **NS** | ND | | 0.00132 | 0.000147 | ND | | 0.00136 | 0.000151 | ND | | 0.00141 | 0.000157 | ND | | 0.00157 | 0.000174 | ND | | 0.00137 | 0.000152 | ND | | 0.00146 | 0.000162 | ND | | 0.00108 | 0.00012 |
| 1,4-Dichlorobenzene | **1.8** | **13** | ND | | 0.00132 | 0.000409 | ND | | 0.00136 | 0.000422 | ND | | 0.00141 | 0.000437 | ND | | 0.00157 | 0.000487 | ND | | 0.00137 | 0.000425 | ND | | 0.00146 | 0.000453 | ND | | 0.00108 | 0.000335 |
| 2-Butanone (MEK) | **0.12** | **100** | ND | | 0.013 | 0.00264 | ND | | 0.014 | 0.00272 | ND | | 0.014 | 0.00282 | ND | | 0.016 | 0.00314 | ND | | 0.014 | 0.00274 | ND | | 0.015 | 0.00292 | ND | | 0.011 | 0.00216 |
| 2-Hexanone | **NS** | **NS** | ND | | 0.013 | 0.00202 | ND | | 0.014 | 0.00208 | ND | | 0.014 | 0.00216 | ND | | 0.016 | 0.0021 | ND | | 0.014 | 0.0021 | ND | | 0.015 | 0.00224 | ND | | 0.011 | 0.00165 |
| 4-Methyl-2-pentanone (MIBK) | **NS** | **NS** | ND | | 0.013 | 0.00069 | ND | | 0.014 | 0.000711 | ND | | 0.014 | 0.000737 | ND | | 0.016 | 0.000821 | ND | | 0.014 | 0.000717 | ND | | 0.015 | 0.000764 | ND | | 0.011 | 0.000565 |
| Acetone | **0.05** | **100** | ND | | 0.013 | 0.0066 | ND | | 0.014 | 0.0068 | ND | | 0.014 | 0.00705 | ND | | 0.016 | 0.00785 | ND | | 0.014 | 0.00685 | ND | | 0.015 | 0.0073 | ND | | 0.011 | 0.0054 |
| Benzene | **0.06** | **4.8** | ND | | 0.00132 | 0.000114 | ND | | 0.00136 | 0.000117 | ND | | 0.00141 | 0.000121 | ND | | 0.00157 | 0.000135 | ND | | 0.00137 | 0.000118 | ND | | 0.00146 | 0.000126 | ND | | 0.00108 | 0.0000929 |
| Bromochloromethane | **NS** | **NS** | ND | | 0.00132 | 0.000335 | ND | | 0.00136 | 0.000345 | ND | | 0.00141 | 0.000358 | ND | | 0.00157 | 0.000399 | ND | | 0.00137 | 0.000358 | ND | | 0.00146 | 0.000371 | ND | | 0.00108 | 0.000274 |
| Bromodichloromethane | **NS** | **NS** | ND | | 0.00132 | 0.000157 | ND | | 0.00136 | 0.000162 | ND | | 0.00141 | 0.000168 | ND | | 0.00157 | 0.000187 | ND | | 0.00137 | 0.000163 | ND | | 0.00146 | 0.000174 | ND | | 0.00108 | 0.000129 |
| Bromoform | **NS** | **NS** | ND | | 0.00132 | 0.000411 | ND | | 0.00136 | 0.000423 | ND | | 0.00141 | 0.000439 | ND | | 0.00157 | 0.000488 | ND | | 0.00137 | 0.000426 | ND | | 0.00146 | 0.000454 | ND | | 0.00108 | 0.000336 |
| Bromomethane | **NS** | **NS** | ND | | 0.00264 | 0.00115 | ND | | 0.00272 | 0.00119 | ND | | 0.00282 | 0.00123 | ND | | 0.00314 | 0.00137 | ND | | 0.00274 | 0.00119 | ND | | 0.00292 | 0.00127 | ND | | 0.00216 | 0.000942 |
| Carbon disulfide | **NS** | **NS** | ND | | 0.00132 | 0.000519 | ND | | 0.00136 | 0.000534 | ND | | 0.00141 | 0.000554 | ND | | 0.00157 | 0.000617 | ND | | 0.00137 | 0.000538 | ND | | 0.00146 | 0.000574 | ND | | 0.00108 | 0.000424 |
| Carbon tetrachloride | **0.76** | **2.4** | ND | | 0.00132 | 0.000264 | ND | | 0.00136 | 0.000272 | ND | | 0.00141 | 0.000282 | ND | | 0.00157 | 0.000314 | ND | | 0.00137 | 0.000274 | ND | | 0.00146 | 0.000292 | ND | | 0.00108 | 0.000216 |
| Chlorobenzene | **1.1** | **100** | ND | | 0.00132 | 0.000228 | ND | | 0.00136 | 0.000235 | ND | | 0.00141 | 0.000244 | ND | | 0.00157 | 0.000272 | ND | | 0.00137 | 0.000237 | ND | | 0.00146 | 0.000253 | ND | | 0.00108 | 0.000187 |
| Chloroethane | **NS** | **NS** | ND | | 0.00132 | 0.000392 | ND | | 0.00136 | 0.000404 | ND | | 0.00141 | 0.000419 | ND | | 0.00157 | 0.000466 | ND | | 0.00137 | 0.000407 | ND | | 0.00146 | 0.000434 | ND | | 0.00108 | 0.000321 |
| Chloroform | **0.37** | **49** | ND | | 0.00264 | 0.00066 | ND | | 0.00272 | 0.00068 | ND | | 0.00282 | 0.000705 | ND | | 0.00314 | 0.000785 | ND | | 0.00274 | 0.000685 | ND | | 0.00292 | 0.00073 | ND | | 0.00216 | 0.00054 |
| Chloromethane | **NS** | **NS** | ND | | 0.00264 | 0.000418 | ND | | 0.00272 | 0.000431 | ND | | 0.00282 | 0.000447 | ND | | 0.00314 | 0.000498 | ND | | 0.00274 | 0.000434 | ND | | 0.00292 | 0.000463 | ND | | 0.00216 | 0.000342 |
| cis-1,2-Dichloroethene | **0.25** | **100** | ND | | 0.00264 | 0.000282 | ND | | 0.00272 | 0.000291 | ND | | 0.00282 | 0.000302 | ND | | 0.00314 | 0.000336 | ND | | 0.00274 | 0.000293 | ND | | 0.00292 | 0.000312 | ND | | 0.00216 | 0.000231 |
| cis-1,3-Dichloropropene | **NS** | **NS** | ND | | 0.00132 | 0.000202 | ND | | 0.00136 | 0.000208 | ND | | 0.00141 | 0.000216 | ND | | 0.00157 | 0.00024 | ND | | 0.00137 | 0.00021 | ND | | 0.00146 | 0.000223 | ND | | 0.00108 | 0.000165 |
| Cyclohexane | **NS** | **NS** | ND | | 0.0066 | 0.000238 | ND | | 0.0068 | 0.000245 | ND | | 0.00705 | 0.000254 | ND | | 0.00785 | 0.000283 | ND | | 0.00685 | 0.000247 | ND | | 0.0073 | 0.000263 | ND | | 0.0054 | 0.000194 |
| Dibromochloromethane | **NS** | **NS** | ND | | 0.00132 | 0.000219 | ND | | 0.00136 | 0.000226 | ND | | 0.00141 | 0.000234 | ND | | 0.00157 | 0.000261 | ND | | 0.00137 | 0.000227 | ND | | 0.00146 | 0.000242 | ND | | 0.00108 | 0.000179 |
| Dichlorodifluoromethane | **NS** | **NS** | ND | | 0.00132 | 0.000685 | ND | | 0.00136 | 0.000706 | ND | | 0.00141 | 0.000732 | ND | | 0.00157 | 0.000815 | ND | | 0.00137 | 0.000711 | ND | | 0.00146 | 0.000758 | ND | | 0.00108 | 0.000561 |
| Ethylbenzene | **1** | **41** | ND | | 0.00132 | 0.000144 | ND | | 0.00136 | 0.000148 | ND | | 0.00141 | 0.000154 | ND | | 0.00157 | 0.000171 | ND | | 0.00137 | 0.000149 | ND | | 0.00146 | 0.000159 | ND | | 0.00108 | 0.000118 |
| Isopropylbenzene | **NS** | **NS** | ND | | 0.00132 | 0.000281 | ND | | 0.00136 | 0.00029 | ND | | 0.00141 | 0.0003 | ND | | 0.00157 | 0.000334 | ND | | 0.00137 | 0.000292 | ND | | 0.00146 | 0.000311 | ND | | 0.00108 | 0.00023 |
| Methyl acetate | **NS** | **NS** | ND | | 0.00132 | 0.00107 | ND | | 0.00136 | 0.0011 | ND | | 0.00141 | 0.00114 | ND | | 0.00157 | 0.00127 | ND | | 0.00137 | 0.00111 | ND | | 0.00146 | 0.00118 | ND | | 0.00108 | 0.000873 |
| Methyl tert-butyl ether (MTBE) | **0.93** | **100** | ND | | 0.00132 | 0.000288 | ND | | 0.00136 | 0.000296 | ND | | 0.00141 | 0.000307 | ND | | 0.00157 | 0.000342 | ND | | 0.00137 | 0.000299 | ND | | 0.00146 | 0.000318 | ND | | 0.00108 | 0.000235 |
| Methylcyclohexane | **NS** | **NS** | ND | | 0.00264 | 0.000227 | ND | | 0.00272 | 0.000234 | ND | | 0.00282 | 0.000243 | ND | | 0.00314 | 0.00027 | ND | | 0.00274 | 0.000236 | ND | | 0.00292 | 0.000251 | ND | | 0.00216 | 0.000186 |
| Methylene chloride | **0.05** | **100** | ND | | 0.0066 | 0.00396 | 0.00487 | CJ | 0.0068 | 0.00408 | 0.00449 | CJ | 0.00705 | 0.00423 | ND | | 0.00785 | 0.00471 | ND | | 0.00685 | 0.00411 | ND | | 0.0073 | 0.00438 | ND | | 0.0054 | 0.00324 |
| Styrene | **NS** | **NS** | ND | | 0.00132 | 0.000284 | ND | | 0.00136 | 0.000292 | ND | | 0.00141 | 0.000303 | ND | | 0.00157 | 0.000338 | ND | | 0.00137 | 0.000295 | ND | | 0.00146 | 0.000314 | ND | | 0.00108 | 0.000232 |
| Tetrachloroethene | **1.3** | **19** | ND | | 0.00132 | 0.000136 | ND | | 0.00136 | 0.00014 | ND | | 0.00141 | 0.000145 | ND | | 0.00157 | 0.000162 | ND | | 0.00137 | 0.000141 | ND | | 0.00146 | 0.00015 | ND | | 0.00108 | 0.000111 |
| Toluene | **0.7** | **100** | ND | | 0.00132 | 0.00066 | ND | | 0.00136 | 0.00068 | ND | | 0.00141 | 0.000705 | ND | | 0.00157 | 0.000785 | ND | | 0.00137 | 0.000685 | ND | | 0.00146 | 0.00073 | ND | | 0.00108 | 0.00054 |
| Total Xylenes | **0.26** | **100** | ND | | 0.00264 | 0.000185 | ND | | 0.00272 | 0.00019 | ND | | 0.00282 | 0.000197 | ND | | 0.00314 | 0.00022 | ND | | 0.00274 | 0.000192 | ND | | 0.00292 | 0.000204 | ND | | 0.00216 | 0.000151 |
| trans-1,2-Dichloroethene | **0.19** | **100** | ND | | 0.00264 | 0.000467 | ND | | 0.00272 | 0.000481 | ND | | 0.00282 | 0.000499 | ND | | 0.00314 | 0.000556 | ND | | 0.00274 | 0.000485 | ND | | 0.00292 | 0.000517 | ND | | 0.00216 | 0.000382 |
| trans-1,3-Dichloropropene | **NS** | **NS** | ND | | 0.00132 | 0.000147 | ND | | 0.00136 | 0.000151 | ND | | 0.00141 | 0.000157 | ND | | 0.00157 | 0.000174 | ND | | 0.00137 | 0.000152 | ND | | 0.00146 | 0.000162 | ND | | 0.00108 | 0.00012 |
| Trichloroethene | **0.47** | **21** | ND | | 0.00132 | 0.000197 | ND | | 0.00136 | 0.000203 | ND | | 0.00141 | 0.00021 | ND | | 0.00157 | 0.000234 | ND | | 0.00137 | 0.000204 | ND | | 0.00146 | 0.000218 | ND | | 0.00108 | 0.000161 |
| Trichlorofluoromethane | **NS** | **NS** | ND | | 0.00132 | 0.000536 | ND | | 0.00136 | 0.000552 | ND | | 0.00141 | 0.000572 | ND | | 0.00157 | 0.000637 | ND | | 0.00137 | 0.000556 | ND | | 0.00146 | 0.000593 | ND | | 0.00108 | 0.000438 |
| Vinyl chloride | **0.02** | **0.9** | ND | | 0.00132 | 0.000428 | ND | | 0.00136 | 0.000441 | ND | | 0.00141 | 0.000457 | ND | | 0.00157 | 0.000509 | ND | | 0.00137 | 0.000444 | ND | | 0.00146 | 0.000473 | ND | | 0.00108 | 0.00035 |
| TOTAL VO's: | **NS** | **NS** | ND | | | NA | 0.00487 | CJ | | NA | 0.00449 | CJ | | NA | ND | | | NA | ND | | | NA | ND | | | NA | ND | | | NA |
| TOTAL TIC's: | **NS** | **NS** | ND | | | NA | ND | | | NA | 0.030 | JN | | NA | ND | | | NA | ND | | | NA | ND | | | NA | ND | | | NA |
| TOTAL VO's & TIC's: | **NS** | **NS** | ND | | | NA | 0.00487 | CJ | | NA | 0.035 | CJ | | NA | ND | | | NA | ND | | | NA | ND | | | NA | ND | | | NA |

**Results in Yellow Highlight displays exceedance above the UUSCO regulatory standard**
**Results in Green Highlight displays exceedance above both UUSCO & RRUSCO regulatory standard**
**J = Concentration detected at a value below the RL and above the MDL for target compounds**
**N = Presumptive evidence of a compound from the use of GC/MS library search.**

**NS = No Standard Available**
**D = The compound was reported from the Diluted analysis**
**ND = Analyzed for but Not Detected at the MDL**

**Table 1A (Cont'd) - Soil Results - SVOCs**

# Fulton 11

**New York, NY**

**HK Engineering & Geology, D.P.C.**
**Project #: HK2661.2**

| Target Compounds | NYSDEC Unrestricted Use SCO | NYSDEC Restricted Residential SCO | SB5 Sample Depth: 0-2' | | | | SB6-419 CS Sample Depth: 0-0.5' | | | | SB8-401 CS Sample Depth: 0-0.5' | | | | SB9A Sample Depth: 10-12' | | | | SB9B Sample Depth: 0-2' | | | | SB10A Sample Depth: 0-2' | | | | SB10B Sample Depth: 10-12' | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Semivolatiles - BNA (mg/Kg)** | | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| 1,1'-Biphenyl | **NS** | **NS** | ND | | 0.038 | 0.00559 | ND | | 0.036 | 0.00534 | 0.112 | DJ | 0.177 | 0.026 | ND | | 0.181 | 0.027 | ND | | 0.035 | 0.00517 | ND | | 0.038 | 0.0057 | ND | | 0.037 | 0.0055 |
| 1,2,4,5-Tetrachlorobenzene | **NS** | **NS** | ND | | 0.038 | 0.013 | ND | | 0.036 | 0.012 | ND | | 0.177 | 0.059 | ND | | 0.181 | 0.060 | ND | | 0.035 | 0.012 | ND | | 0.038 | 0.013 | ND | | 0.037 | 0.012 |
| 1,4-Dioxane | **0.1** | **13** | ND | | 0.038 | 0.024 | ND | | 0.036 | 0.023 | ND | | 0.177 | 0.114 | ND | | 0.181 | 0.117 | ND | | 0.035 | 0.023 | ND | | 0.038 | 0.025 | ND | | 0.037 | 0.024 |
| 2,2'-Oxybis(1-Chloropropane) | **NS** | **NS** | ND | | 0.038 | 0.00937 | ND | | 0.036 | 0.00896 | ND | | 0.177 | 0.044 | ND | | 0.181 | 0.045 | ND | | 0.035 | 0.00867 | ND | | 0.038 | 0.00956 | ND | | 0.037 | 0.00922 |
| 2,3,4,6-Tetrachlorophenol | **NS** | **NS** | ND | | 0.038 | 0.013 | ND | | 0.036 | 0.012 | ND | | 0.177 | 0.060 | ND | | 0.181 | 0.062 | ND | | 0.035 | 0.012 | ND | | 0.038 | 0.013 | ND | | 0.037 | 0.013 |
| 2,4,5-Trichlorophenol | **NS** | **NS** | ND | | 0.038 | 0.029 | ND | | 0.036 | 0.027 | ND | | 0.177 | 0.134 | ND | | 0.181 | 0.137 | ND | | 0.035 | 0.026 | ND | | 0.038 | 0.029 | ND | | 0.037 | 0.028 |
| 2,4,6-Trichlorophenol | **NS** | **NS** | ND | | 0.038 | 0.010 | ND | | 0.036 | 0.00987 | ND | | 0.177 | 0.049 | ND | | 0.181 | 0.050 | ND | | 0.035 | 0.00955 | ND | | 0.038 | 0.011 | ND | | 0.037 | 0.010 |
| 2,4-Dichlorophenol | **NS** | **NS** | ND | | 0.038 | 0.00999 | ND | | 0.036 | 0.00955 | ND | | 0.177 | 0.047 | ND | | 0.181 | 0.048 | ND | | 0.035 | 0.00924 | ND | | 0.038 | 0.010 | ND | | 0.037 | 0.00983 |
| 2,4-Dimethylphenol | **NS** | **NS** | ND | | 0.038 | 0.011 | ND | | 0.036 | 0.011 | ND | | 0.177 | 0.052 | ND | | 0.181 | 0.053 | ND | | 0.035 | 0.010 | ND | | 0.038 | 0.011 | ND | | 0.037 | 0.011 |
| 2,4-Dinitrophenol | **NS** | **NS** | ND | | 0.075 | 0.015 | ND | | 0.072 | 0.015 | ND | | 0.353 | 0.073 | ND | | 0.362 | 0.074 | ND | | 0.070 | 0.014 | ND | | 0.077 | 0.016 | ND | | 0.074 | 0.015 |
| 2,4-Dinitrotoluene | **NS** | **NS** | ND | | 0.075 | 0.043 | ND | | 0.072 | 0.041 | ND | | 0.353 | 0.200 | ND | | 0.362 | 0.205 | ND | | 0.070 | 0.039 | ND | | 0.077 | 0.043 | ND | | 0.074 | 0.042 |
| 2,6-Dinitrotoluene | **NS** | **NS** | ND | | 0.075 | 0.043 | ND | | 0.072 | 0.041 | ND | | 0.353 | 0.203 | ND | | 0.362 | 0.208 | ND | | 0.070 | 0.040 | ND | | 0.077 | 0.044 | ND | | 0.074 | 0.042 |
| 2-Chloronaphthalene | **NS** | **NS** | ND | | 0.038 | 0.00868 | ND | | 0.036 | 0.0083 | ND | | 0.177 | 0.041 | ND | | 0.181 | 0.042 | ND | | 0.035 | 0.00803 | ND | | 0.038 | 0.00885 | ND | | 0.037 | 0.00854 |
| 2-Chlorophenol | **NS** | **NS** | ND | | 0.038 | 0.012 | ND | | 0.036 | 0.012 | ND | | 0.177 | 0.057 | ND | | 0.181 | 0.059 | ND | | 0.035 | 0.011 | ND | | 0.038 | 0.013 | ND | | 0.037 | 0.012 |
| 2-Methylnaphthalene | **NS** | **NS** | ND | | 0.038 | 0.013 | ND | | 0.036 | 0.013 | 0.245 | D | 0.177 | 0.062 | 0.177 | DJ | 0.181 | 0.064 | ND | | 0.035 | 0.012 | ND | | 0.038 | 0.014 | ND | | 0.037 | 0.013 |
| 2-Methylphenol | **0.33** | **100** | ND | | 0.038 | 0.017 | ND | | 0.036 | 0.016 | ND | | 0.177 | 0.079 | ND | | 0.181 | 0.081 | ND | | 0.035 | 0.016 | ND | | 0.038 | 0.017 | ND | | 0.037 | 0.017 |
| 2-Nitroaniline | **NS** | **NS** | ND | | 0.038 | 0.020 | ND | | 0.036 | 0.019 | ND | | 0.177 | 0.094 | ND | | 0.181 | 0.096 | ND | | 0.035 | 0.019 | ND | | 0.038 | 0.020 | ND | | 0.037 | 0.020 |
| 2-Nitrophenol | **NS** | **NS** | ND | | 0.075 | 0.022 | ND | | 0.072 | 0.021 | ND | | 0.353 | 0.105 | ND | | 0.362 | 0.108 | ND | | 0.070 | 0.021 | ND | | 0.077 | 0.023 | ND | | 0.074 | 0.022 |
| 3,3'-Dichlorobenzidine | **NS** | **NS** | ND | | 0.038 | 0.027 | ND | | 0.036 | 0.025 | ND | | 0.177 | 0.125 | ND | | 0.181 | 0.128 | ND | | 0.035 | 0.025 | ND | | 0.038 | 0.027 | ND | | 0.037 | 0.026 |
| 3-Methylphenol | **0.33** | **100** | ND | | 0.038 | 0.024 | ND | | 0.036 | 0.023 | ND | | 0.177 | 0.114 | ND | | 0.181 | 0.117 | ND | | 0.035 | 0.023 | ND | | 0.038 | 0.025 | ND | | 0.037 | 0.024 |
| 3-Nitroaniline | **NS** | **NS** | ND | | 0.038 | 0.024 | ND | | 0.036 | 0.023 | ND | | 0.177 | 0.112 | ND | | 0.181 | 0.114 | ND | | 0.035 | 0.022 | ND | | 0.038 | 0.024 | ND | | 0.037 | 0.023 |
| 4,6-Dinitro-2-methylphenol | **NS** | **NS** | ND | | 0.075 | 0.016 | ND | | 0.072 | 0.015 | ND | | 0.353 | 0.075 | ND | | 0.362 | 0.076 | ND | | 0.070 | 0.015 | ND | | 0.077 | 0.016 | ND | | 0.074 | 0.016 |
| 4-Bromophenyl phenyl ether | **NS** | **NS** | ND | | 0.038 | 0.010 | ND | | 0.036 | 0.00995 | ND | | 0.177 | 0.049 | ND | | 0.181 | 0.050 | ND | | 0.035 | 0.00963 | ND | | 0.038 | 0.011 | ND | | 0.037 | 0.010 |
| 4-Chloro-3-methylphenol | **NS** | **NS** | ND | | 0.038 | 0.015 | ND | | 0.036 | 0.014 | ND | | 0.177 | 0.068 | ND | | 0.181 | 0.070 | ND | | 0.035 | 0.013 | ND | | 0.038 | 0.015 | ND | | 0.037 | 0.014 |
| 4-Chloroaniline | **NS** | **NS** | ND | | 0.038 | 0.014 | ND | | 0.036 | 0.014 | ND | | 0.177 | 0.068 | ND | | 0.181 | 0.070 | ND | | 0.035 | 0.013 | ND | | 0.038 | 0.015 | ND | | 0.037 | 0.014 |
| 4-Chlorophenyl phenyl ether | **NS** | **NS** | ND | | 0.038 | 0.00826 | ND | | 0.036 | 0.00789 | ND | | 0.177 | 0.039 | ND | | 0.181 | 0.040 | ND | | 0.035 | 0.00764 | ND | | 0.038 | 0.00842 | ND | | 0.037 | 0.00812 |
| 4-Methylphenol ** | **0.33** | **100** | ND | | 0.038 | 0.017 | ND | | 0.036 | 0.016 | ND | | 0.177 | 0.080 | ND | | 0.181 | 0.082 | ND | | 0.035 | 0.016 | ND | | 0.038 | 0.018 | ND | | 0.037 | 0.017 |
| 4-Nitroaniline | **NS** | **NS** | ND | | 0.038 | 0.022 | ND | | 0.036 | 0.021 | ND | | 0.177 | 0.105 | ND | | 0.181 | 0.107 | ND | | 0.035 | 0.021 | ND | | 0.038 | 0.023 | ND | | 0.037 | 0.022 |
| 4-Nitrophenol | **NS** | **NS** | ND | | 0.075 | 0.038 | ND | | 0.072 | 0.036 | ND | | 0.353 | 0.178 | ND | | 0.362 | 0.182 | ND | | 0.070 | 0.035 | ND | | 0.077 | 0.039 | ND | | 0.074 | 0.037 |
| Acenaphthene | **20** | **100** | ND | | 0.038 | 0.00742 | 0.024 | J | 0.036 | 0.00709 | 0.284 | D | 0.177 | 0.035 | 0.634 | D | 0.181 | 0.036 | ND | | 0.035 | 0.00686 | ND | | 0.038 | 0.00757 | ND | | 0.037 | 0.0073 |
| Acenaphthylene | **100** | **100** | ND | | 0.038 | 0.00823 | 0.133 | | 0.036 | 0.00786 | 1.83 | D | 0.177 | 0.039 | 2.11 | D | 0.181 | 0.040 | ND | | 0.035 | 0.00761 | 1.04 | | 0.038 | 0.00839 | ND | | 0.037 | 0.00809 |
| Acetophenone | **NS** | **NS** | ND | | 0.038 | 0.023 | ND | | 0.036 | 0.022 | ND | | 0.177 | 0.108 | ND | | 0.181 | 0.110 | ND | | 0.035 | 0.021 | ND | | 0.038 | 0.023 | ND | | 0.037 | 0.023 |
| Anthracene | **100** | **100** | 0.054 | | 0.038 | 0.00383 | 0.115 | | 0.036 | 0.00366 | 2.02 | D | 0.177 | 0.018 | 2.32 | D | 0.181 | 0.018 | ND | | 0.035 | 0.00354 | 0.400 | | 0.038 | 0.0039 | ND | | 0.037 | 0.00376 |
| Atrazine | **NS** | **NS** | ND | | 0.038 | 0.022 | ND | | 0.036 | 0.021 | ND | | 0.177 | 0.105 | ND | | 0.181 | 0.108 | ND | | 0.035 | 0.021 | ND | | 0.038 | 0.023 | ND | | 0.037 | 0.022 |
| Benzaldehyde | **NS** | **NS** | ND | | 0.075 | 0.028 | ND | | 0.072 | 0.027 | ND | | 0.353 | 0.133 | ND | | 0.362 | 0.136 | ND | | 0.070 | 0.026 | ND | | 0.077 | 0.029 | ND | | 0.074 | 0.028 |
| Benzo[a]anthracene | **1** | **1** | 0.177 | | 0.038 | 0.014 | 0.460 | | 0.036 | 0.013 | **4.85** | D | 0.177 | 0.064 | **6.22** | D | 0.181 | 0.066 | ND | | 0.035 | 0.013 | **1.76** | | 0.038 | 0.014 | ND | | 0.037 | 0.014 |
| Benzo[a]pyrene | **1** | **1** | 0.168 | | 0.038 | 0.018 | 0.457 | | 0.036 | 0.017 | **3.93** | D | 0.177 | 0.086 | **6.90** | D | 0.181 | 0.088 | ND | | 0.035 | 0.017 | **2.16** | | 0.038 | 0.019 | ND | | 0.037 | 0.018 |
| Benzo[b]fluoranthene | **1** | **1** | 0.190 | | 0.038 | 0.019 | 0.534 | | 0.036 | 0.018 | **4.04** | D | 0.177 | 0.087 | **6.83** | D | 0.181 | 0.089 | ND | | 0.035 | 0.017 | **3.15** | | 0.038 | 0.019 | ND | | 0.037 | 0.018 |
| Benzo[g,h,i]perylene | **100** | **100** | 0.118 | | 0.038 | 0.028 | 0.378 | | 0.036 | 0.027 | 1.50 | D | 0.177 | 0.133 | 5.61 | D | 0.181 | 0.136 | ND | | 0.035 | 0.026 | 3.34 | | 0.038 | 0.029 | ND | | 0.037 | 0.028 |
| Benzo[k]fluoranthene | **0.8** | **3.9** | 0.134 | | 0.038 | 0.026 | 0.356 | | 0.036 | 0.025 | **4.29** | D | 0.177 | 0.122 | **6.50** | D | 0.181 | 0.125 | ND | | 0.035 | 0.024 | **1.63** | | 0.038 | 0.027 | ND | | 0.037 | 0.026 |
| Bis(2-chloroethoxy) methane | **NS** | **NS** | ND | | 0.038 | 0.00838 | ND | | 0.036 | 0.008 | ND | | 0.177 | 0.039 | ND | | 0.181 | 0.040 | ND | | 0.035 | 0.00775 | ND | | 0.038 | 0.00854 | ND | | 0.037 | 0.00824 |
| Bis(2-chloroethyl) ether | **NS** | **NS** | ND | | 0.038 | 0.013 | ND | | 0.036 | 0.013 | ND | | 0.177 | 0.062 | ND | | 0.181 | 0.064 | ND | | 0.035 | 0.012 | ND | | 0.038 | 0.014 | ND | | 0.037 | 0.013 |
| Bis(2-ethylhexyl) phthalate | **NS** | **NS** | 0.073 | | 0.038 | 0.024 | 0.422 | | 0.036 | 0.023 | 0.573 | D | 0.177 | 0.113 | ND | | 0.181 | 0.116 | ND | | 0.035 | 0.022 | ND | | 0.038 | 0.025 | ND | | 0.037 | 0.024 |
| Butyl benzyl phthalate | **NS** | **NS** | ND | | 0.038 | 0.017 | ND | | 0.036 | 0.016 | ND | | 0.177 | 0.078 | ND | | 0.181 | 0.080 | ND | | 0.035 | 0.015 | ND | | 0.038 | 0.017 | ND | | 0.037 | 0.016 |
| Caprolactam | **NS** | **NS** | ND | | 0.075 | 0.028 | ND | | 0.072 | 0.027 | ND | | 0.353 | 0.130 | ND | | 0.362 | 0.133 | ND | | 0.070 | 0.026 | ND | | 0.077 | 0.028 | ND | | 0.074 | 0.027 |
| Carbazole | **NS** | **NS** | 0.020 | J | 0.038 | 0.00876 | 0.081 | | 0.036 | 0.00837 | 1.28 | D | 0.177 | 0.041 | 1.15 | D | 0.181 | 0.042 | ND | | 0.035 | 0.0081 | 0.371 | | 0.038 | 0.00893 | ND | | 0.037 | 0.00862 |
| Chrysene | **1** | **3.9** | 0.163 | | 0.038 | 0.010 | 0.429 | | 0.036 | 0.00991 | **4.67** | D | 0.177 | 0.049 | **6.14** | D | 0.181 | 0.050 | ND | | 0.035 | 0.00959 | **1.81** | | 0.038 | 0.011 | ND | | 0.037 | 0.010 |
| Dibenz[a,h]anthracene | **0.33** | **0.33** | 0.057 | | 0.038 | 0.015 | 0.168 | | 0.036 | 0.014 | **0.799** | D | 0.177 | 0.071 | **2.10** | D | 0.181 | 0.072 | ND | | 0.035 | 0.014 | **0.976** | | 0.038 | 0.015 | ND | | 0.037 | 0.015 |
| Dibenzofuran | **7** | **59** | ND | | 0.038 | 0.00492 | ND | | 0.036 | 0.0047 | 0.857 | D | 0.177 | 0.023 | 0.400 | D | 0.181 | 0.024 | ND | | 0.035 | 0.00455 | 0.079 | | 0.038 | 0.00501 | ND | | 0.037 | 0.00483 |
| Diethyl phthalate | **NS** | **NS** | ND | | 0.038 | 0.012 | ND | | 0.036 | 0.011 | ND | | 0.177 | 0.055 | ND | | 0.181 | 0.056 | ND | | 0.035 | 0.011 | ND | | 0.038 | 0.012 | ND | | 0.037 | 0.012 |
| Dimethyl phthalate | **NS** | **NS** | ND | | 0.038 | 0.00862 | ND | | 0.036 | 0.00824 | ND | | 0.177 | 0.041 | ND | | 0.181 | 0.042 | ND | | 0.035 | 0.00798 | ND | | 0.038 | 0.00879 | ND | | 0.037 | 0.00848 |
| Di-n-butyl phthalate | **NS** | **NS** | ND | | 0.038 | 0.015 | ND | | 0.036 | 0.015 | ND | | 0.177 | 0.072 | ND | | 0.181 | 0.073 | ND | | 0.035 | 0.014 | ND | | 0.038 | 0.016 | ND | | 0.037 | 0.015 |
| Dinitrotoluene (2,4- and 2,6-) | **NS** | **NS** | ND | | 0.075 | 0.043 | ND | | 0.072 | 0.041 | ND | | 0.353 | 0.200 | ND | | 0.362 | 0.205 | ND | | 0.070 | 0.039 | ND | | 0.077 | 0.043 | ND | | 0.074 | 0.042 |
| Di-n-octyl phthalate | **NS** | **NS** | ND | | 0.038 | 0.028 | ND | | 0.036 | 0.026 | ND | | 0.177 | 0.129 | ND | | 0.181 | 0.132 | ND | | 0.035 | 0.025 | ND | | 0.038 | 0.028 | ND | | 0.037 | 0.027 |
| Fluoranthene | **100** | **100** | 0.379 | | 0.038 | 0.012 | 0.953 | | 0.036 | 0.012 | 13.6 | D | 0.177 | 0.057 | 13.1 | D | 0.181 | 0.058 | ND | | 0.035 | 0.011 | 4.03 | | 0.038 | 0.012 | ND | | 0.037 | 0.012 |
| Fluorene | **30** | **100** | ND | | 0.038 | 0.010 | 0.034 | J | 0.036 | 0.00967 | 1.01 | D | 0.177 | 0.048 | 0.626 | D | 0.181 | 0.049 | ND | | 0.035 | 0.00935 | 0.117 | | 0.038 | 0.010 | ND | | 0.037 | 0.00995 |
| Hexachlorobenzene | **0.33** | **1.2** | ND | | 0.038 | 0.012 | ND | | 0.036 | 0.011 | ND | | 0.177 | 0.055 | ND | | 0.181 | 0.056 | ND | | 0.035 | 0.011 | ND | | 0.038 | 0.012 | ND | | 0.037 | 0.012 |
| Hexachlorobutadiene | **NS** | **NS** | ND | | 0.038 | 0.010 | ND | | 0.036 | 0.00997 | ND | | 0.177 | 0.049 | ND | | 0.181 | 0.050 | ND | | 0.035 | 0.00964 | ND | | 0.038 | 0.011 | ND | | 0.037 | 0.010 |
| Hexachlorocyclopentadiene | **NS** | **NS** | ND | | 0.075 | 0.065 | ND | | 0.072 | 0.062 | ND | | 0.353 | 0.307 | ND | | 0.362 | 0.314 | ND | | 0.070 | 0.060 | ND | | 0.077 | 0.067 | ND | | 0.074 | 0.064 |
| Hexachloroethane | **NS** | **NS** | ND | | 0.038 | 0.016 | ND | | 0.036 | 0.015 | ND | | 0.177 | 0.073 | ND | | 0.181 | 0.075 | ND | | 0.035 | 0.014 | ND | | 0.038 | 0.016 | ND | | 0.037 | 0.015 |
| Indeno[1,2,3-cd]pyrene | **0.5** | **0.5** | 0.116 | | 0.038 | 0.024 | 0.353 | | 0.036 | 0.023 | **1.78** | D | 0.177 | 0.113 | **4.35** | D | 0.181 | 0.116 | ND | | 0.035 | 0.022 | **2.50** | | 0.038 | 0.025 | ND | | 0.037 | 0.024 |
| Isophorone | **NS** | **NS** | ND | | 0.038 | 0.016 | ND | | 0.036 | 0.015 | ND | | 0.177 | 0.074 | ND | | 0.181 | 0.076 | ND | | 0.035 | 0.015 | ND | | 0.038 | 0.016 | ND | | 0.037 | 0.016 |
| Naphthalene | **12** | **100** | ND | | 0.038 | 0.00548 | 0.019 | J | 0.036 | 0.00524 | 0.288 | D | 0.177 | 0.026 | 0.554 | D | 0.181 | 0.026 | ND | | 0.035 | 0.00507 | 0.038 | J | 0.038 | 0.00559 | ND | | 0.037 | 0.00539 |
| Nitrobenzene | **NS** | **15** | ND | | 0.038 | 0.00912 | ND | | 0.036 | 0.00872 | ND | | 0.177 | 0.043 | ND | | 0.181 | 0.044 | ND | | 0.035 | 0.00844 | ND | | 0.038 | 0.0093 | ND | | 0.037 | 0.00897 |
| N-Nitrosodi-n-propylamine | **NS** | **NS** | ND | | 0.038 | 0.023 | ND | | 0.036 | 0.022 | ND | | 0.177 | 0.109 | ND | | 0.181 | 0.112 | ND | | 0.035 | 0.022 | ND | | 0.038 | 0.024 | ND | | 0.037 | 0.023 |
| N-Nitrosodiphenylamine | **NS** | **NS** | ND | | 0.038 | 0.00771 | ND | | 0.036 | 0.00737 | ND | | 0.177 | 0.036 | ND | | 0.181 | 0.037 | ND | | 0.035 | 0.00713 | ND | | 0.038 | 0.00786 | ND | | 0.037 | 0.00758 |
| Pentachlorophenol | **0.8** | **6.7** | ND | | 0.038 | 0.017 | ND | | 0.036 | 0.016 | ND | | 0.177 | 0.078 | ND | | 0.181 | 0.080 | ND | | 0.035 | 0.015 | ND | | 0.038 | 0.017 | ND | | 0.037 | 0.016 |
| Phenanthrene | **100** | **100** | 0.188 | | 0.038 | 0.00615 | 0.494 | | 0.036 | 0.00587 | 12.0 | D | 0.177 | 0.029 | 7.99 | D | 0.181 | 0.030 | ND | | 0.035 | 0.00569 | 2.06 | | 0.038 | 0.00627 | ND | | 0.037 | 0.00605 |
| Phenol | **0.33** | **100** | ND | | 0.038 | 0.0085 | ND | | 0.036 | 0.00812 | ND | | 0.177 | 0.040 | ND | | 0.181 | 0.041 | ND | | 0.035 | 0.00786 | ND | | 0.038 | 0.00867 | ND | | 0.037 | 0.00836 |
| Pyrene | **100** | **100** | 0.316 | | 0.038 | 0.00874 | 0.835 | | 0.036 | 0.00836 | 9.96 | D | 0.177 | 0.041 | 10.9 | D | 0.181 | 0.042 | ND | | 0.035 | 0.00809 | 3.16 | | 0.038 | 0.00892 | ND | | 0.037 | 0.0086 |
| TOTAL BNA'S: | **NS** | **NS** | 2.15 | J | | NA | 6.25 | J | | NA | 69.9 | DJ | | NA | 84.6 | DJ | | NA | ND | | | NA | 28.6 | J | | NA | ND | | | NA |
| TOTAL TIC's: | **NS** | **NS** | 0.180 | JN | | NA | 0.147 | JN | | NA | ND | | | NA | ND | | | NA | ND | | | NA | 0.525 | J | | NA | ND | | | NA |
| TOTAL BNA'S & TIC's: | **NS** | **NS** | 2.33 | J | | NA | 6.40 | J | | NA | 69.9 | DJ | | NA | 84.6 | DJ | | NA | ND | | | NA | 29.1 | J | | NA | ND | | | NA |

**Results in Yellow Highlight displays exceedance above the UUSCO regulatory standard**
**Results in Green Highlight displays exceedance above both UUSCO & RRUSCO regulatory standard**
**J = Concentration detected at a value below the RL and above the MDL for target compounds**
**N = Presumptive evidence of a compound from the use of GC/MS library search.**

**NS = No Standard Available**
**D = The compound was reported from the Diluted analysis**
**ND = Analyzed for but Not Detected at the MDL**

**Table 1A (Cont'd) - Soil Results - PCBs, Pesticides, Metals**
**Fulton 11**
**New York, NY**

**HK Engineering & Geology, D.P.C.**
**Project #: HK2661.2**

| Target Compounds | NYSDEC Unrestricted Use SCO | NYSDEC Restricted Residential SCO | SB5 Sample Depth: 0-2' | | | | SB6-419 CS Sample Depth: 0-0.5' | | | | SB8-401 CS Sample Depth: 0-0.5' | | | | SB9A Sample Depth: 10-12' | | | | SB9B Sample Depth: 0-2' | | | | SB10A Sample Depth: 0-2' | | | | SB10B Sample Depth: 10-12' | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PCB's (mg/Kg)** | | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| Aroclor-1016 | **NS** | **NS** | ND | | 0.00375 | 0.0011 | ND | | 0.00361 | 0.0011 | ND | | 0.00354 | 0.0011 | ND | | 0.0036 | 0.0011 | ND | | 0.00349 | 0.001 | ND | | 0.00386 | 0.0012 | ND | | 0.00371 | 0.0011 |
| Aroclor-1221 | **NS** | **NS** | ND | | 0.00375 | 0.0011 | ND | | 0.00361 | 0.0011 | ND | | 0.00354 | 0.0011 | ND | | 0.0036 | 0.0011 | ND | | 0.00349 | 0.001 | ND | | 0.00386 | 0.0012 | ND | | 0.00371 | 0.0011 |
| Aroclor-1232 | **NS** | **NS** | ND | | 0.00375 | 0.0011 | ND | | 0.00361 | 0.0011 | ND | | 0.00354 | 0.0011 | ND | | 0.0036 | 0.0011 | ND | | 0.00349 | 0.001 | ND | | 0.00386 | 0.0012 | ND | | 0.00371 | 0.0011 |
| Aroclor-1242 | **NS** | **NS** | ND | | 0.00375 | 0.0011 | ND | | 0.00361 | 0.0011 | ND | | 0.00354 | 0.0011 | ND | | 0.0036 | 0.0011 | ND | | 0.00349 | 0.001 | ND | | 0.00386 | 0.0012 | ND | | 0.00371 | 0.0011 |
| Aroclor-1248 | **NS** | **NS** | ND | | 0.00375 | 0.0011 | ND | | 0.00361 | 0.0011 | ND | | 0.00354 | 0.0011 | ND | | 0.0036 | 0.0011 | ND | | 0.00349 | 0.001 | ND | | 0.00386 | 0.0012 | ND | | 0.00371 | 0.0011 |
| Aroclor-1254 | **NS** | **NS** | ND | | 0.00375 | 0.0011 | 1.95 | D | 0.036 | 0.011 | ND | | 0.00354 | 0.0011 | ND | | 0.0036 | 0.0011 | ND | | 0.00349 | 0.001 | ND | | 0.00386 | 0.0012 | ND | | 0.00371 | 0.0011 |
| Aroclor-1260 | **NS** | **NS** | ND | | 0.00375 | 0.0011 | ND | | 0.00361 | 0.0011 | ND | | 0.00354 | 0.0011 | ND | | 0.0036 | 0.0011 | ND | | 0.00349 | 0.001 | ND | | 0.00386 | 0.0012 | ND | | 0.00371 | 0.0011 |
| Aroclor-1262 | **NS** | **NS** | ND | | 0.00375 | 0.0011 | ND | | 0.00361 | 0.0011 | ND | | 0.00354 | 0.0011 | ND | | 0.0036 | 0.0011 | ND | | 0.00349 | 0.001 | ND | | 0.00386 | 0.0012 | ND | | 0.00371 | 0.0011 |
| Aroclor-1268 | **NS** | **NS** | ND | | 0.00375 | 0.0011 | ND | | 0.00361 | 0.0011 | ND | | 0.00354 | 0.0011 | ND | | 0.0036 | 0.0011 | ND | | 0.00349 | 0.001 | ND | | 0.00386 | 0.0012 | ND | | 0.00371 | 0.0011 |
| PCBs | **0.1** | **1** | ND | | 0.00375 | 0.00113 | **1.95** | D | 0.036 | 0.011 | ND | | 0.00354 | 0.00106 | ND | | 0.0036 | 0.00108 | ND | | 0.00349 | 0.00105 | ND | | 0.00386 | 0.00116 | ND | | 0.00371 | 0.00111 |
| **Pesticides (mg/Kg)** | | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| alpha-BHC | **0.02** | **0.48** | ND | | 0.00075 | 0.000134 | ND | | 0.000722 | 0.000129 | ND | | 0.000708 | 0.000126 | ND | | 0.00072 | 0.000129 | ND | | 0.000698 | 0.000125 | ND | | 0.000772 | 0.000138 | ND | | 0.000742 | 0.000132 |
| beta-BHC | **0.036** | **0.36** | ND | | 0.00075 | 0.000175 | ND | | 0.000722 | 0.000168 | ND | | 0.000708 | 0.000165 | ND | | 0.00072 | 0.000168 | ND | | 0.000698 | 0.000163 | ND | | 0.000772 | 0.00018 | ND | | 0.000742 | 0.000173 |
| gamma-BHC (Lindane) | **0.1** | **1.3** | ND | | 0.00075 | 0.000167 | ND | | 0.000722 | 0.000161 | ND | | 0.000708 | 0.000158 | ND | | 0.00072 | 0.000161 | ND | | 0.000698 | 0.000155 | ND | | 0.000772 | 0.000172 | ND | | 0.000742 | 0.000165 |
| delta-BHC | **0.04** | **100** | ND | | 0.00075 | 0.000145 | ND | | 0.000722 | 0.00014 | ND | | 0.000708 | 0.000137 | ND | | 0.00072 | 0.00014 | ND | | 0.000698 | 0.000135 | ND | | 0.000772 | 0.000149 | ND | | 0.000742 | 0.000144 |
| Heptachlor | **0.042** | **2.1** | ND | | 0.00075 | 0.000178 | ND | | 0.000722 | 0.000171 | ND | | 0.000708 | 0.000168 | ND | | 0.00072 | 0.000171 | ND | | 0.000698 | 0.000165 | 0.000768 | J | 0.000772 | 0.000183 | ND | | 0.000742 | 0.000176 |
| Aldrin | **0.005** | **0.097** | ND | | 0.00075 | 0.000157 | ND | | 0.000722 | 0.000151 | ND | | 0.000708 | 0.000148 | ND | | 0.00072 | 0.000151 | ND | | 0.000698 | 0.000146 | ND | | 0.000772 | 0.000161 | ND | | 0.000742 | 0.000155 |
| Heptachlor epoxide | **NS** | **NS** | 0.00122 | | 0.00075 | 0.000163 | ND | | 0.000722 | 0.000157 | ND | | 0.000708 | 0.000154 | ND | | 0.00072 | 0.000156 | ND | | 0.000698 | 0.000151 | 0.00293 | | 0.000772 | 0.000167 | ND | | 0.000742 | 0.000161 |
| Endosulfan I | **2.4** | **24** | ND | | 0.00075 | 0.000168 | ND | | 0.000722 | 0.000161 | ND | | 0.000708 | 0.000158 | ND | | 0.00072 | 0.000161 | ND | | 0.000698 | 0.000156 | ND | | 0.000772 | 0.000172 | ND | | 0.000742 | 0.000166 |
| 4,4'-DDE | **0.0033** | **8.9** | **0.070** | | 0.00075 | 0.000153 | **0.555** | D | 0.014 | 0.00294 | **1.34** | D | 0.035 | 0.00722 | ND | | 0.00072 | 0.000147 | ND | | 0.000698 | 0.000142 | **0.055** | | 0.000772 | 0.000157 | 0.000414 | J | 0.000742 | 0.000151 |
| Dieldrin | **0.005** | **0.2** | **0.00603** | | 0.00075 | 0.000153 | ND | | 0.000722 | 0.000147 | ND | | 0.000708 | 0.000144 | ND | | 0.00072 | 0.000147 | ND | | 0.000698 | 0.000142 | **0.012** | | 0.000772 | 0.000157 | ND | | 0.000742 | 0.000151 |
| Endrin | **0.014** | **11** | ND | | 0.00075 | 0.000189 | ND | | 0.000722 | 0.000182 | ND | | 0.000708 | 0.000179 | ND | | 0.00072 | 0.000182 | ND | | 0.000698 | 0.000176 | ND | | 0.000772 | 0.000194 | ND | | 0.000742 | 0.000187 |
| Endosulfan II | **2.4** | **24** | ND | | 0.00075 | 0.000172 | ND | | 0.000722 | 0.000165 | ND | | 0.000708 | 0.000162 | ND | | 0.00072 | 0.000165 | ND | | 0.000698 | 0.00016 | ND | | 0.000772 | 0.000177 | ND | | 0.000742 | 0.00017 |
| 4,4'-DDD | **0.0033** | **13** | **0.00798** | | 0.00075 | 0.0002 | **0.099** | | 0.000722 | 0.000192 | **0.079** | | 0.000708 | 0.000189 | ND | | 0.00072 | 0.000192 | ND | | 0.000698 | 0.000186 | **0.024** | | 0.000772 | 0.000206 | ND | | 0.000742 | 0.000198 |
| Endrin aldehyde | **NS** | **NS** | ND | | 0.00075 | 0.000157 | ND | | 0.000722 | 0.000151 | ND | | 0.000708 | 0.000148 | ND | | 0.00072 | 0.000151 | ND | | 0.000698 | 0.000146 | ND | | 0.000772 | 0.000161 | ND | | 0.000742 | 0.000155 |
| Endosulfan sulfate | **2.4** | **24** | ND | | 0.00075 | 0.000186 | ND | | 0.000722 | 0.000179 | ND | | 0.000708 | 0.000175 | ND | | 0.00072 | 0.000178 | ND | | 0.000698 | 0.000173 | ND | | 0.000772 | 0.000191 | ND | | 0.000742 | 0.000184 |
| 4,4'-DDT | **0.0033** | **7.9** | **0.087** | | 0.00075 | 0.00014 | **0.529** | D | 0.014 | 0.00268 | **1.58** | D | 0.035 | 0.00658 | ND | | 0.00072 | 0.000134 | ND | | 0.000698 | 0.00013 | **0.179** | D | 0.00154 | 0.000287 | 0.000402 | J | 0.000742 | 0.000138 |
| Endrin ketone | **NS** | **NS** | ND | | 0.00075 | 0.000146 | ND | | 0.000722 | 0.00014 | ND | | 0.000708 | 0.000138 | ND | | 0.00072 | 0.00014 | ND | | 0.000698 | 0.000136 | ND | | 0.000772 | 0.00015 | ND | | 0.000742 | 0.000144 |
| Methoxychlor | **NS** | **NS** | ND | | 0.00075 | 0.000201 | ND | | 0.000722 | 0.000193 | ND | | 0.000708 | 0.000189 | ND | | 0.00072 | 0.000193 | ND | | 0.000698 | 0.000186 | ND | | 0.000772 | 0.000206 | ND | | 0.000742 | 0.000198 |
| alpha-Chlordane | **0.094** | **4.2** | 0.00385 | | 0.00075 | 0.000166 | ND | | 0.000722 | 0.000159 | ND | | 0.000708 | 0.000156 | ND | | 0.00072 | 0.000159 | ND | | 0.000698 | 0.000154 | 0.027 | | 0.000772 | 0.00017 | ND | | 0.000742 | 0.000164 |
| gamma-Chlordane | **NS** | **NS** | 0.00198 | | 0.00075 | 0.000147 | ND | | 0.000722 | 0.000142 | ND | | 0.000708 | 0.000139 | ND | | 0.00072 | 0.000142 | ND | | 0.000698 | 0.000137 | 0.020 | | 0.000772 | 0.000152 | ND | | 0.000742 | 0.000146 |
| Toxaphene | **NS** | **NS** | ND | | 0.00938 | 0.00375 | ND | | 0.00903 | 0.00361 | ND | | 0.00885 | 0.00354 | ND | | 0.009 | 0.0036 | ND | | 0.00873 | 0.00349 | ND | | 0.00965 | 0.00386 | ND | | 0.00928 | 0.00371 |
| Endosulfan (I and II) | **NS** | **NS** | ND | | 0.00075 | 0.000168 | ND | | 0.000722 | 0.000161 | ND | | 0.000708 | 0.000158 | ND | | 0.00072 | 0.000161 | ND | | 0.000698 | 0.000156 | ND | | 0.000772 | 0.000172 | ND | | 0.000742 | 0.000166 |
| Chlordane (alpha and gamma) | **NS** | **NS** | 0.00583 | | 0.00075 | 0.000147 | ND | | 0.000722 | 0.000142 | ND | | 0.000708 | 0.000139 | ND | | 0.00072 | 0.000142 | ND | | 0.000698 | 0.000137 | 0.046 | | 0.000772 | 0.000152 | ND | | 0.000742 | 0.000146 |
| *** Metals (mg/Kg)** | | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| Aluminum | **NS** | **NS** | 9790 | | | | 4840 | | | | 5230 | | | | 6910 | | | | 6010 | | | | 4960 | | | | 5670 | | | |
| Antimony | **NS** | **NS** | <2.2 | | | | <2.2 | | | | <2.1 | | | | <2.2 | | | | <2.1 | | | | <2.2 | | | | <2.2 | | | |
| Arsenic | **13** | **16** | 6.2 | | | | 3.5 | | | | 4.5 | | | | 5.9 | | | | 2.2 | | | | 4.6 | | | | 2.2 | | | |
| Barium | **350** | **400** | 96.8 | | | | **517** | | | | 341 | | | | 248 | | | | 60.2 | | | | 280 | | | | 33.5 | | | |
| Beryllium | **7.2** | **72** | 0.51 | | | | 0.36 | | | | 0.41 | | | | 0.49 | | | | 0.52 | | | | 0.35 | | | | 0.52 | | | |
| Cadmium | **2.5** | **4.3** | <0.55 | | | | 0.63 | | | | 0.68 | | | | 1 | | | | <0.53 | | | | <0.55 | | | | <0.54 | | | |
| Calcium | **NS** | **NS** | 3790 | | | | 32100 | | | | 22400 | | | | 47900 | | | | 7980 | | | | 24700 | | | | 1380 | | | |
| Chromium | **NS** | **NS** | 31.5 | | | | 14 | | | | 14.5 | | | | 14.5 | | | | 13.3 | | | | 12.2 | | | | 11.9 | | | |
| Cobalt | **NS** | **NS** | 6.5 | | | | <5.5 | | | | <5.3 | | | | <5.4 | | | | <5.3 | | | | <5.5 | | | | <5.4 | | | |
| Copper | **50** | **270** | 25.3 | | | | 34.8 | | | | 20.8 | | | | 26.7 | | | | 16.7 | | | | 11.9 | | | | 9.7 | | | |
| Iron | **NS** | **NS** | 13200 | | | | 10200 | | | | 9740 | | | | 8460 | | | | 9870 | | | | 8700 | | | | 9570 | | | |
| Lead | **63** | **400** | **107** | | | | **1070** | | | | **684** | | | | **381** | | | | 16.6 | | | | **248** | | | | 9.5 | | | |
| Magnesium | **NS** | **NS** | 5470 | | | | 3800 | | | | 4360 | | | | 5830 | | | | 2890 | | | | 2080 | | | | 2050 | | | |
| Manganese | **1600** | **2000** | 250 | | | | 222 | | | | 241 | | | | 272 | | | | 370 | | | | 318 | | | | 259 | | | |
| Mercury | **0.18** | **0.81** | 0.13 | | | | **0.37** | | | | **0.98** | | | | **0.7** | | | | 0.04 | | | | **0.24** | | | | 0.064 | | | |
| Nickel | **30** | **310** | 18.1 | | | | 13.1 | | | | 13.7 | | | | 10 | | | | 13.7 | | | | 8.6 | | | | 11.1 | | | |
| Potassium | **NS** | **NS** | 1180 | | | | <1100 | | | | 1370 | | | | <1100 | | | | 1370 | | | | <1100 | | | | 1430 | | | |
| Selenium | **3.9** | **180** | <2.2 | | | | <2.2 | | | | <2.1 | | | | <2.2 | | | | <2.1 | | | | <2.2 | | | | <2.2 | | | |
| Silver | **2** | **180** | 0.65 | | | | 0.75 | | | | 0.6 | | | | 0.63 | | | | <0.53 | | | | 0.55 | | | | <0.54 | | | |
| Sodium | **NS** | **NS** | <1100 | | | | <1100 | | | | <1100 | | | | <1100 | | | | <1100 | | | | <1100 | | | | <1100 | | | |
| Thallium | **NS** | **NS** | <1.1 | | | | <1.1 | | | | <1.1 | | | | <1.1 | | | | <1.1 | | | | <1.1 | | | | <1.1 | | | |
| Vanadium | **NS** | **NS** | 23.9 | | | | 17.3 | | | | 16.4 | | | | 23.2 | | | | 17.1 | | | | 19.6 | | | | 16.1 | | | |
| Zinc | **109** | **10000** | 105 | | | | **405** | | | | **268** | | | | **219** | | | | 30.9 | | | | **277** | | | | 33.9 | | | |
| **General Analytical** | | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | 4.73 | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| Cyanide, Total | **27** | **27** | ND | | 1.13 | 0.225 | ND | | 1.06 | 0.213 | ND | | 1.07 | 0.213 | ND | | 1.08 | 0.217 | ND | | 1.05 | 0.210 | ND | | 1.16 | 0.231 | ND | | 1.12 | 0.223 |

**Results in Yellow Highlight displays exceedance above the UUSCO regulatory standard**
**Results in Green Highlight displays exceedance above both UUSCO & RRUSCO regulatory standard**
**J = Concentration detected at a value below the RL and above the MDL for target compounds**
**N = Presumptive evidence of a compound from the use of GC/MS library search.**

**NS = No Standard Available**
**D = The compound was reported from the Diluted analysis**
**ND = Analyzed for but Not Detected at the MDL**
**~ = Sample not analyzed**

*** TAL Metals analyzed by SGS Dayton.**

**Table 2A - Groundwater Results - VOCs**
**Fulton 11**
**New York, NY**

**HK Engineering & Geology, D.P.C.**
**Project #: HK2661.2**

| Target Compounds | NYSDEC Ambient Water Quality Standards (AWQS) | TWP1 GW Depth: 15' | | | | TWP2 GW Depth: 15' | | | | TWP4 GW Depth: 15' | | | | TWP5 GW Depth: 15' | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Volatiles (ug/L)** | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| 1,1,1-Trichloroethane | **5** | ND | | 0.500 | 0.381 | ND | | 0.500 | 0.381 | ND | | 0.500 | 0.381 | ND | | 0.500 | 0.381 |
| 1,1,2,2-Tetrachloroethane | **0.2** | ND | | 0.500 | 0.284 | ND | | 0.500 | 0.284 | ND | | 0.500 | 0.284 | ND | | 0.500 | 0.284 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | **5** | ND | | 1.00 | 0.538 | ND | | 1.00 | 0.538 | ND | | 1.00 | 0.538 | ND | | 1.00 | 0.538 |
| 1,1,2-Trichloroethane | **1** | ND | | 0.500 | 0.313 | ND | | 0.500 | 0.313 | ND | | 0.500 | 0.313 | ND | | 0.500 | 0.313 |
| 1,1-Dichloroethane | **5** | ND | | 0.500 | 0.285 | ND | | 0.500 | 0.285 | ND | | 0.500 | 0.285 | ND | | 0.500 | 0.285 |
| 1,1-Dichloroethene | **0.07** | ND | | 0.500 | 0.363 | ND | | 0.500 | 0.363 | ND | | 0.500 | 0.363 | ND | | 0.500 | 0.363 |
| 1,2,3-Trichlorobenzene | **5** | ND | | 0.500 | 0.406 | ND | | 0.500 | 0.406 | ND | | 0.500 | 0.406 | ND | | 0.500 | 0.406 |
| 1,2,3-Trichloropropane | **0.04** | ND | | 0.00961 | 0.0072 | ND | | 0.00947 | 0.0071 | ND | | 0.00952 | 0.00714 | ND | | 0.00961 | 0.0072 |
| 1,2,4-Trichlorobenzene | **5** | ND | | 0.500 | 0.358 | ND | | 0.500 | 0.358 | ND | | 0.500 | 0.358 | ND | | 0.500 | 0.358 |
| 1,2-Dibromo-3-chloropropane | **0.04** | ND | | 0.0048 | 0.00364 | ND | | 0.00474 | 0.00364 | ND | | 0.00476 | 0.00364 | ND | | 0.0048 | 0.00364 |
| 1,2-Dibromo-3-chloropropane | **0.04** | ND | | 0.0048 | 0.0036 | ND | | 0.00474 | 0.00355 | ND | | 0.00476 | 0.00357 | ND | | 0.0048 | 0.0036 |
| 1,2-Dibromoethane (EDB) | **0.0006** | ND | | 0.0048 | 0.00364 | ND | | 0.00474 | 0.00364 | ND | | 0.00476 | 0.00364 | ND | | 0.0048 | 0.00364 |
| 1,2-Dibromoethane (EDB) | **0.0006** | ND | | 0.0048 | 0.0036 | ND | | 0.00474 | 0.00355 | ND | | 0.00476 | 0.00357 | ND | | 0.0048 | 0.0036 |
| 1,2-Dichlorobenzene | **3** | ND | | 0.500 | 0.354 | ND | | 0.500 | 0.354 | ND | | 0.500 | 0.354 | ND | | 0.500 | 0.354 |
| 1,2-Dichloroethane (EDC) | **0.6** | ND | | 0.500 | 0.273 | ND | | 0.500 | 0.273 | ND | | 0.500 | 0.273 | ND | | 0.500 | 0.273 |
| 1,2-Dichloropropane | **1** | ND | | 0.500 | 0.272 | ND | | 0.500 | 0.272 | ND | | 0.500 | 0.272 | ND | | 0.500 | 0.272 |
| 1,3-Dichlorobenzene | **3** | ND | | 0.500 | 0.386 | ND | | 0.500 | 0.386 | ND | | 0.500 | 0.386 | ND | | 0.500 | 0.386 |
| 1,3-Dichloropropene (cis- and trans-) | **0.4** | ND | | 0.500 | 0.264 | ND | | 0.500 | 0.264 | ND | | 0.500 | 0.264 | ND | | 0.500 | 0.264 |
| 1,4-Dichlorobenzene | **3** | ND | | 0.500 | 0.397 | ND | | 0.500 | 0.397 | ND | | 0.500 | 0.397 | ND | | 0.500 | 0.397 |
| 2-Butanone (MEK) | **50** | ND | | 1.00 | 0.802 | ND | | 1.00 | 0.802 | ND | | 1.00 | 0.802 | ND | | 1.00 | 0.802 |
| 2-Hexanone | **50** | ND | | 1.00 | 0.818 | ND | | 1.00 | 0.818 | ND | | 1.00 | 0.818 | ND | | 1.00 | 0.818 |
| 4-Methyl-2-pentanone (MIBK) | **NS** | ND | | 1.00 | 0.611 | ND | | 1.00 | 0.611 | ND | | 1.00 | 0.611 | ND | | 1.00 | 0.611 |
| Acetone | **50** | ND | | 1.00 | 1.00 | ND | | 1.00 | 1.00 | ND | | 1.00 | 1.00 | ND | | 1.00 | 1.00 |
| Benzene | **1** | ND | | 0.500 | 0.270 | ND | | 0.500 | 0.270 | ND | | 0.500 | 0.270 | ND | | 0.500 | 0.270 |
| Bromochloromethane | **5** | ND | | 0.500 | 0.379 | ND | | 0.500 | 0.379 | ND | | 0.500 | 0.379 | ND | | 0.500 | 0.379 |
| Bromodichloromethane | **50** | ND | | 0.500 | 0.258 | ND | | 0.500 | 0.258 | ND | | 0.500 | 0.258 | ND | | 0.500 | 0.258 |
| Bromoform | **50** | ND | | 0.500 | 0.328 | ND | | 0.500 | 0.328 | ND | | 0.500 | 0.328 | ND | | 0.500 | 0.328 |
| Bromomethane | **5** | ND | | 0.500 | 0.386 | ND | | 0.500 | 0.386 | ND | | 0.500 | 0.386 | ND | | 0.500 | 0.386 |
| Carbon disulfide | **60** | ND | | 0.500 | 0.403 | ND | | 0.500 | 0.403 | ND | | 0.500 | 0.403 | ND | | 0.500 | 0.403 |
| Carbon tetrachloride | **0.4** | ND | | 0.500 | 0.349 | ND | | 0.500 | 0.349 | ND | | 0.500 | 0.349 | ND | | 0.500 | 0.349 |
| Chlorobenzene | **5** | ND | | 0.500 | 0.304 | ND | | 0.500 | 0.304 | ND | | 0.500 | 0.304 | ND | | 0.500 | 0.304 |
| Chloroethane | **5** | ND | | 0.500 | 0.324 | ND | | 0.500 | 0.324 | ND | | 0.500 | 0.324 | ND | | 0.500 | 0.324 |
| Chloroform | **7** | 1.91 | | 0.500 | 0.285 | ND | | 0.500 | 0.285 | 2.11 | | 0.500 | 0.285 | ND | | 0.500 | 0.285 |
| Chloromethane | **5** | ND | | 0.500 | 0.309 | ND | | 0.500 | 0.309 | ND | | 0.500 | 0.309 | ND | | 0.500 | 0.309 |
| cis-1,2-Dichloroethene | **5** | ND | | 0.500 | 0.277 | ND | | 0.500 | 0.277 | ND | | 0.500 | 0.277 | ND | | 0.500 | 0.277 |
| cis-1,3-Dichloropropene | **NS** | ND | | 0.500 | 0.264 | ND | | 0.500 | 0.264 | ND | | 0.500 | 0.264 | ND | | 0.500 | 0.264 |
| Cyclohexane | **NS** | ND | | 1.00 | 0.469 | ND | | 1.00 | 0.469 | ND | | 1.00 | 0.469 | ND | | 1.00 | 0.469 |
| Dibromochloromethane | **50** | ND | | 0.500 | 0.263 | ND | | 0.500 | 0.263 | ND | | 0.500 | 0.263 | ND | | 0.500 | 0.263 |
| Dichlorodifluoromethane | **5** | ND | | 1.00 | 0.552 | ND | | 1.00 | 0.552 | 0.581 | J | 1.00 | 0.552 | ND | | 1.00 | 0.552 |
| Ethylbenzene | **5** | ND | | 0.500 | 0.313 | ND | | 0.500 | 0.313 | ND | | 0.500 | 0.313 | ND | | 0.500 | 0.313 |
| Isopropylbenzene | **5** | ND | | 0.500 | 0.332 | ND | | 0.500 | 0.332 | ND | | 0.500 | 0.332 | ND | | 0.500 | 0.332 |
| Methyl acetate | **NS** | ND | | 0.500 | 0.345 | ND | | 0.500 | 0.345 | ND | | 0.500 | 0.345 | ND | | 0.500 | 0.345 |
| Methyl tert-butyl ether (MTBE) | **10** | ND | | 0.500 | 0.245 | ND | | 0.500 | 0.245 | ND | | 0.500 | 0.245 | ND | | 0.500 | 0.245 |
| Methylcyclohexane | **NS** | ND | | 0.500 | 0.421 | ND | | 0.500 | 0.421 | ND | | 0.500 | 0.421 | ND | | 0.500 | 0.421 |
| Methylene chloride | **5** | ND | | 1.00 | 0.500 | ND | | 1.00 | 0.500 | ND | | 1.00 | 0.500 | ND | | 1.00 | 0.500 |
| Styrene | **5** | ND | | 0.500 | 0.317 | ND | | 0.500 | 0.317 | ND | | 0.500 | 0.317 | ND | | 0.500 | 0.317 |
| Tetrachloroethene | **0.7** | 0.585 | | 0.500 | 0.365 | **2.87** | | 0.500 | 0.365 | ND | | 0.500 | 0.365 | **4.82** | | 0.500 | 0.365 |
| Toluene | **5** | ND | | 0.500 | 0.302 | ND | | 0.500 | 0.302 | ND | | 0.500 | 0.302 | ND | | 0.500 | 0.302 |
| Total Xylenes | **NS** | ND | | 1.00 | 0.345 | ND | | 1.00 | 0.345 | ND | | 1.00 | 0.345 | ND | | 1.00 | 0.345 |
| trans-1,2-Dichloroethene | **5** | ND | | 0.500 | 0.372 | ND | | 0.500 | 0.372 | ND | | 0.500 | 0.372 | ND | | 0.500 | 0.372 |
| trans-1,3-Dichloropropene | **NS** | ND | | 0.500 | 0.330 | ND | | 0.500 | 0.330 | ND | | 0.500 | 0.330 | ND | | 0.500 | 0.330 |
| Trichloroethene | **5** | ND | | 0.500 | 0.347 | 0.585 | | 0.500 | 0.347 | ND | | 0.500 | 0.347 | 0.364 | J | 0.500 | 0.347 |
| Trichlorofluoromethane | **5** | ND | | 1.00 | 0.503 | ND | | 1.00 | 0.503 | ND | | 1.00 | 0.503 | ND | | 1.00 | 0.503 |
| Vinyl chloride | **2** | ND | | 0.500 | 0.352 | ND | | 0.500 | 0.352 | ND | | 0.500 | 0.352 | ND | | 0.500 | 0.352 |
| TOTAL VO's: | **NS** | 2.50 | | | NA | 3.46 | | | NA | 2.69 | J | | NA | 5.18 | J | | NA |
| TOTAL TIC's: | **NS** | ND | | | NA | ND | | | NA | ND | | | NA | ND | | | NA |
| TOTAL VO's & TIC's: | **NS** | 2.50 | | | NA | 3.46 | | | NA | 2.69 | J | | NA | 5.18 | J | | NA |

**Results in Blue Highlight displays exceedance above the Groundwater Effluent Limitations**

**~ = Sample not analyzed**

**B : Compound was found in the blank and sample.**

**I : Value is EMPC (estimated maximum possible concentration).**

**J = Concentration detected at a value below the RL and above the MDL for target compounds**

**N = Presumptive evidence of a compound from the use of GC/MS library search.**

**Table 2A (Cont'd) - Groundwater Results - SVOCs**
**Fulton 11**
**New York, NY**

**HK Engineering & Geology, D.P.C.**
**Project #: HK2661.2**

| Target Compounds | NYSDEC Ambient Water Quality Standards (AWQS) | TWP1 GW Depth: 15' | | | | TWP2 GW Depth: 15' | | | | TWP4 GW Depth: 15' | | | | TWP5 GW Depth: 15' | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Semivolatiles - BNA (µg/L)** | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| 1,1'-Biphenyl | **5** | ND | | 1.00 | 0.212 | ND | | 1.00 | 0.212 | ND | | 1.00 | 0.212 | ND | | 1.00 | 0.212 |
| 1,2,4,5-Tetrachlorobenzene | **5** | ND | | 1.00 | 0.326 | ND | | 1.00 | 0.326 | ND | | 1.00 | 0.326 | ND | | 1.00 | 0.326 |
| 1,4-Dioxane | **NS** | ND | | 0.400 | 0.329 | ND | | 0.400 | 0.329 | ND | | 0.400 | 0.329 | ND | | 0.400 | 0.329 |
| 2,2'-Oxybis(1-Chloropropane) | **5** | ND | | 1.00 | 0.682 | ND | | 1.00 | 0.682 | ND | | 1.00 | 0.682 | ND | | 1.00 | 0.682 |
| 2,3,4,6-Tetrachlorophenol | **NS** | ND | | 1.00 | 0.872 | ND | | 1.00 | 0.872 | ND | | 1.00 | 0.872 | ND | | 1.00 | 0.872 |
| 2,4,5-Trichlorophenol | **NS** | ND | | 2.00 | 0.505 | ND | | 2.00 | 0.505 | ND | | 2.00 | 0.505 | ND | | 2.00 | 0.505 |
| 2,4,6-Trichlorophenol | **NS** | ND | | 1.00 | 0.497 | ND | | 1.00 | 0.497 | ND | | 1.00 | 0.497 | ND | | 1.00 | 0.497 |
| 2,4-Dichlorophenol | **5** | ND | | 1.00 | 0.383 | ND | | 1.00 | 0.383 | ND | | 1.00 | 0.383 | ND | | 1.00 | 0.383 |
| 2,4-Dimethylphenol | **50** | ND | | 2.00 | 1.06 | ND | | 2.00 | 1.06 | ND | | 2.00 | 1.06 | ND | | 2.00 | 1.06 |
| 2,4-Dinitrophenol | **10** | ND | | 3.00 | 2.35 | ND | | 3.00 | 2.35 | ND | | 3.00 | 2.35 | ND | | 3.00 | 2.35 |
| 2,4-Dinitrotoluene | **5** | ND | | 1.00 | 0.886 | ND | | 1.00 | 0.886 | ND | | 1.00 | 0.886 | ND | | 1.00 | 0.886 |
| 2,6-Dinitrotoluene | **5** | ND | | 1.00 | 0.996 | ND | | 1.00 | 0.996 | ND | | 1.00 | 0.996 | ND | | 1.00 | 0.996 |
| 2-Chloronaphthalene | **NS** | ND | | 1.00 | 0.234 | ND | | 1.00 | 0.234 | ND | | 1.00 | 0.234 | ND | | 1.00 | 0.234 |
| 2-Chlorophenol | **NS** | ND | | 1.00 | 0.257 | ND | | 1.00 | 0.257 | ND | | 1.00 | 0.257 | ND | | 1.00 | 0.257 |
| 2-Methylnaphthalene | **NS** | ND | | 1.00 | 0.200 | ND | | 1.00 | 0.200 | ND | | 1.00 | 0.200 | ND | | 1.00 | 0.200 |
| 2-Methylphenol | **NS** | ND | | 1.00 | 0.267 | ND | | 1.00 | 0.267 | ND | | 1.00 | 0.267 | ND | | 1.00 | 0.267 |
| 2-Nitroaniline | **5** | ND | | 2.00 | 0.702 | ND | | 2.00 | 0.702 | ND | | 2.00 | 0.702 | ND | | 2.00 | 0.702 |
| 2-Nitrophenol | **NS** | ND | | 2.00 | 0.581 | ND | | 2.00 | 0.581 | ND | | 2.00 | 0.581 | ND | | 2.00 | 0.581 |
| 3,3'-Dichlorobenzidine | **5** | ND | | 1.00 | 0.524 | ND | | 1.00 | 0.524 | ND | | 1.00 | 0.524 | ND | | 1.00 | 0.524 |
| 3-Nitroaniline | **5** | ND | | 3.00 | 0.436 | ND | | 3.00 | 0.436 | ND | | 3.00 | 0.436 | ND | | 3.00 | 0.436 |
| 4,6-Dinitro-2-methylphenol | **NS** | ND | | 0.100 | 0.033 | ND | | 0.100 | 0.033 | ND | | 0.100 | 0.033 | ND | | 0.100 | 0.033 |
| 4-Bromophenyl phenyl ether | **NS** | ND | | 1.00 | 0.940 | ND | | 1.00 | 0.940 | ND | | 1.00 | 0.940 | ND | | 1.00 | 0.940 |
| 4-Chloro-3-methylphenol | **NS** | ND | | 1.00 | 0.336 | ND | | 1.00 | 0.336 | ND | | 1.00 | 0.336 | ND | | 1.00 | 0.336 |
| 4-Chloroaniline | **5** | ND | | 1.00 | 0.612 | ND | | 1.00 | 0.612 | ND | | 1.00 | 0.612 | ND | | 1.00 | 0.612 |
| 4-Chlorophenyl phenyl ether | **NS** | ND | | 1.00 | 0.396 | ND | | 1.00 | 0.396 | ND | | 1.00 | 0.396 | ND | | 1.00 | 0.396 |
| 4-Methylphenol ** | **NS** | ND | | 1.00 | 0.337 | ND | | 1.00 | 0.337 | ND | | 1.00 | 0.337 | ND | | 1.00 | 0.337 |
| 4-Nitroaniline | **5** | ND | | 2.00 | 0.692 | ND | | 2.00 | 0.692 | ND | | 2.00 | 0.692 | ND | | 2.00 | 0.692 |
| 4-Nitrophenol | **NS** | ND | | 3.00 | 2.41 | ND | | 3.00 | 2.41 | ND | | 3.00 | 2.41 | ND | | 3.00 | 2.41 |
| Acenaphthene | **NS** | ND | | 1.00 | 0.281 | ND | | 1.00 | 0.281 | ND | | 1.00 | 0.281 | ND | | 1.00 | 0.281 |
| Acenaphthylene | **NS** | ND | | 1.00 | 0.268 | ND | | 1.00 | 0.268 | ND | | 1.00 | 0.268 | ND | | 1.00 | 0.268 |
| Acetophenone | **NS** | ND | | 1.00 | 0.241 | ND | | 1.00 | 0.241 | ND | | 1.00 | 0.241 | ND | | 1.00 | 0.241 |
| Anthracene | **50** | ND | | 1.00 | 0.560 | ND | | 1.00 | 0.560 | ND | | 1.00 | 0.560 | ND | | 1.00 | 0.560 |
| Atrazine | **3** | ND | | 1.00 | 0.468 | ND | | 1.00 | 0.468 | ND | | 1.00 | 0.468 | ND | | 1.00 | 0.468 |
| Benzaldehyde | **NS** | ND | | 2.00 | 0.492 | ND | | 2.00 | 0.492 | ND | | 2.00 | 0.492 | ND | | 2.00 | 0.492 |
| Benzo[a]anthracene | **0.002** | **0.098** | J | 0.100 | 0.029 | ND | | 0.100 | 0.029 | **0.200** | | 0.100 | 0.029 | ND | | 0.100 | 0.029 |
| Benzo[a]pyrene | **ND** | 0.137 | | 0.100 | 0.027 | ND | | 0.100 | 0.027 | 0.245 | | 0.100 | 0.027 | ND | | 0.100 | 0.027 |
| Benzo[b]fluoranthene | **0.002** | **0.187** | | 0.100 | 0.026 | ND | | 0.100 | 0.026 | **0.272** | | 0.100 | 0.026 | ND | | 0.100 | 0.026 |
| Benzo[g,h,i]perylene | **NS** | ND | | 2.00 | 1.04 | ND | | 2.00 | 1.04 | ND | | 2.00 | 1.04 | ND | | 2.00 | 1.04 |
| Benzo[k]fluoranthene | **0.002** | **0.142** | | 0.100 | 0.035 | ND | | 0.100 | 0.035 | **0.154** | | 0.100 | 0.035 | ND | | 0.100 | 0.035 |
| Bis(2-chloroethoxy) methane | **5** | ND | | 1.00 | 0.344 | ND | | 1.00 | 0.344 | ND | | 1.00 | 0.344 | ND | | 1.00 | 0.344 |
| Bis(2-chloroethyl) ether | **1** | ND | | 1.00 | 0.459 | ND | | 1.00 | 0.459 | ND | | 1.00 | 0.459 | ND | | 1.00 | 0.459 |
| Bis(2-ethylhexyl) phthalate | **5** | ND | | 2.00 | 1.38 | ND | | 2.00 | 1.38 | ND | | 2.00 | 1.38 | ND | | 2.00 | 1.38 |
| Butyl benzyl phthalate | **50** | ND | | 1.00 | 0.642 | ND | | 1.00 | 0.642 | ND | | 1.00 | 0.642 | ND | | 1.00 | 0.642 |
| Caprolactam | **NS** | ND | | 3.00 | 1.15 | ND | | 3.00 | 1.15 | ND | | 3.00 | 1.15 | ND | | 3.00 | 1.15 |
| Carbazole | **NS** | ND | | 1.00 | 0.594 | ND | | 1.00 | 0.594 | ND | | 1.00 | 0.594 | ND | | 1.00 | 0.594 |
| Chrysene | **0.002** | ND | | 1.00 | 0.232 | ND | | 1.00 | 0.232 | ND | | 1.00 | 0.232 | ND | | 1.00 | 0.232 |
| Dibenz[a,h]anthracene | **NS** | 0.303 | | 0.100 | 0.031 | ND | | 0.100 | 0.031 | 0.253 | | 0.100 | 0.031 | ND | | 0.100 | 0.031 |
| Dibenzofuran | **NS** | ND | | 1.00 | 0.199 | ND | | 1.00 | 0.199 | ND | | 1.00 | 0.199 | ND | | 1.00 | 0.199 |
| Diethyl phthalate | **50** | ND | | 1.00 | 0.239 | ND | | 1.00 | 0.239 | ND | | 1.00 | 0.239 | ND | | 1.00 | 0.239 |
| Dimethyl phthalate | **50** | ND | | 1.00 | 0.197 | ND | | 1.00 | 0.197 | ND | | 1.00 | 0.197 | ND | | 1.00 | 0.197 |
| Di-n-butyl phthalate | **50** | ND | | 1.00 | 0.343 | ND | | 1.00 | 0.343 | ND | | 1.00 | 0.343 | ND | | 1.00 | 0.343 |
| Dinitrotoluene (2,4- and 2,6-) | **NS** | ND | | 1.00 | 0.886 | ND | | 1.00 | 0.886 | ND | | 1.00 | 0.886 | ND | | 1.00 | 0.886 |
| Di-n-octyl phthalate | **50** | ND | | 2.00 | 1.09 | ND | | 2.00 | 1.09 | ND | | 2.00 | 1.09 | ND | | 2.00 | 1.09 |
| Fluoranthene | **50** | ND | | 1.00 | 0.482 | ND | | 1.00 | 0.482 | ND | | 1.00 | 0.482 | ND | | 1.00 | 0.482 |
| Fluorene | **50** | ND | | 1.00 | 0.367 | ND | | 1.00 | 0.367 | ND | | 1.00 | 0.367 | ND | | 1.00 | 0.367 |
| Hexachlorobenzene | **0.04** | ND | | 0.020 | 0.016 | ND | | 0.020 | 0.016 | ND | | 0.020 | 0.016 | ND | | 0.020 | 0.016 |
| Hexachlorobutadiene | **0.5** | ND | | 1.00 | 0.561 | ND | | 1.00 | 0.561 | ND | | 1.00 | 0.561 | ND | | 1.00 | 0.561 |
| Hexachlorocyclopentadiene | **5** | ND | | 2.00 | 1.89 | ND | | 2.00 | 1.89 | ND | | 2.00 | 1.89 | ND | | 2.00 | 1.89 |
| Hexachloroethane | **5** | ND | | 1.00 | 0.470 | ND | | 1.00 | 0.470 | ND | | 1.00 | 0.470 | ND | | 1.00 | 0.470 |
| Indeno[1,2,3-cd]pyrene | **0.002** | **0.291** | | 0.100 | 0.036 | ND | | 0.100 | 0.036 | **0.330** | | 0.100 | 0.036 | ND | | 0.100 | 0.036 |
| Isophorone | **50** | ND | | 1.00 | 0.232 | ND | | 1.00 | 0.232 | ND | | 1.00 | 0.232 | ND | | 1.00 | 0.232 |
| Naphthalene | **NS** | ND | | 1.00 | 0.183 | ND | | 1.00 | 0.183 | ND | | 1.00 | 0.183 | ND | | 1.00 | 0.183 |
| Nitrobenzene | **0.4** | ND | | 1.00 | 0.442 | ND | | 1.00 | 0.442 | ND | | 1.00 | 0.442 | ND | | 1.00 | 0.442 |
| N-Nitrosodi-n-propylamine | **NS** | ND | | 1.00 | 0.391 | ND | | 1.00 | 0.391 | ND | | 1.00 | 0.391 | ND | | 1.00 | 0.391 |
| N-Nitrosodiphenylamine | **50** | ND | | 1.00 | 0.196 | ND | | 1.00 | 0.196 | ND | | 1.00 | 0.196 | ND | | 1.00 | 0.196 |
| Pentachlorophenol | **NS** | ND | | 0.100 | 0.052 | ND | | 0.100 | 0.052 | ND | | 0.100 | 0.052 | ND | | 0.100 | 0.052 |
| Phenanthrene | **50** | ND | | 1.00 | 0.263 | ND | | 1.00 | 0.263 | ND | | 1.00 | 0.263 | ND | | 1.00 | 0.263 |
| Phenol | **NS** | ND | | 1.00 | 0.276 | ND | | 1.00 | 0.276 | ND | | 1.00 | 0.276 | ND | | 1.00 | 0.276 |
| Pyrene | **50** | ND | | 1.00 | 0.555 | ND | | 1.00 | 0.555 | ND | | 1.00 | 0.555 | ND | | 1.00 | 0.555 |
| TOTAL BNA'S: | **NS** | 1.16 | J | | NA | ND | | | NA | 1.45 | | | NA | ND | | | NA |
| TOTAL TIC's: | **NS** | 44.4 | JN | | NA | ND | | | NA | 16.2 | J | | NA | 29.3 | JN | | NA |
| TOTAL BNA'S & TIC's: | **NS** | 45.6 | JN | | NA | ND | | | NA | 17.7 | J | | NA | 29.3 | JN | | NA |

**Results in Blue Highlight displays exceedance above the Groundwater Effluent Limitations**
**J = Concentration detected at a value below the RL and above the MDL for target compounds**
**N = Presumptive evidence of a compound from the use of GC/MS library search.**

**Table 2A (Cont'd) - Groundwater Results - PCBs, Pesticides, Metals**
**Fulton 11**
**New York, NY**

**HK Engineering & Geology, D.P.C.**
**Project #: HK2661.2**

| Target Compounds | NYSDEC Ambient Water Quality Standards (AWQS) | TWP1 GW Depth: 15' | | | | TWP2 GW Depth: 15' | | | | TWP4 GW Depth: 15' | | | | TWP5 GW Depth: 15' | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PCB's (µg/L)** | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| Aroclor-1016 | **NS** | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 |
| Aroclor-1221 | **NS** | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 |
| Aroclor-1232 | **NS** | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 |
| Aroclor-1242 | **NS** | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 |
| Aroclor-1248 | **NS** | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 |
| Aroclor-1254 | **NS** | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 |
| Aroclor-1260 | **NS** | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 |
| Aroclor-1262 | **NS** | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 |
| Aroclor-1268 | **NS** | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 |
| PCBs | **0.09** | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 |
| **Pesticides (µg/L)** | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| alpha-BHC | **0.01** | ND | | 0.010 | 0.00206 | ND | | 0.010 | 0.00206 | ND | | 0.010 | 0.00206 | ND | | 0.010 | 0.00206 |
| beta-BHC | **0.04** | ND | | 0.010 | 0.00303 | ND | | 0.010 | 0.00303 | ND | | 0.010 | 0.00303 | ND | | 0.010 | 0.00303 |
| gamma-BHC (Lindane) | **0.05** | ND | | 0.010 | 0.00201 | ND | | 0.010 | 0.00201 | ND | | 0.010 | 0.00201 | ND | | 0.010 | 0.00201 |
| delta-BHC | **0.04** | ND | | 0.010 | 0.00238 | ND | | 0.010 | 0.00238 | ND | | 0.010 | 0.00238 | ND | | 0.010 | 0.00238 |
| Heptachlor | **0.04** | ND | | 0.010 | 0.00235 | ND | | 0.010 | 0.00235 | ND | | 0.010 | 0.00235 | ND | | 0.010 | 0.00235 |
| Aldrin | **ND** | ND | | 0.010 | 0.00187 | ND | | 0.010 | 0.00187 | ND | | 0.010 | 0.00187 | ND | | 0.010 | 0.00187 |
| Heptachlor epoxide | **0.03** | ND | | 0.010 | 0.00217 | ND | | 0.010 | 0.00217 | ND | | 0.010 | 0.00217 | ND | | 0.010 | 0.00217 |
| Endosulfan I | **NS** | ND | | 0.010 | 0.00208 | ND | | 0.010 | 0.00208 | ND | | 0.010 | 0.00208 | ND | | 0.010 | 0.00208 |
| 4,4'-DDE | **0.2** | ND | | 0.010 | 0.00197 | ND | | 0.010 | 0.00197 | ND | | 0.010 | 0.00197 | ND | | 0.010 | 0.00197 |
| Dieldrin | **0.004** | ND | | 0.010 | 0.00237 | ND | | 0.010 | 0.00237 | ND | | 0.010 | 0.00237 | ND | | 0.010 | 0.00237 |
| Endrin | **ND** | ND | | 0.010 | 0.00289 | ND | | 0.010 | 0.00289 | ND | | 0.010 | 0.00289 | ND | | 0.010 | 0.00289 |
| Endosulfan II | **NS** | ND | | 0.010 | 0.00258 | ND | | 0.010 | 0.00258 | ND | | 0.010 | 0.00258 | ND | | 0.010 | 0.00258 |
| 4,4'-DDD | **0.3** | ND | | 0.010 | 0.00294 | ND | | 0.010 | 0.00294 | ND | | 0.010 | 0.00294 | ND | | 0.010 | 0.00294 |
| Endrin aldehyde | **5** | ND | | 0.010 | 0.0023 | ND | | 0.010 | 0.0023 | ND | | 0.010 | 0.0023 | ND | | 0.010 | 0.0023 |
| Endosulfan sulfate | **NS** | ND | | 0.010 | 0.00314 | ND | | 0.010 | 0.00314 | ND | | 0.010 | 0.00314 | ND | | 0.010 | 0.00314 |
| 4,4'-DDT | **0.2** | ND | | 0.010 | 0.00202 | ND | | 0.010 | 0.00202 | ND | | 0.010 | 0.00202 | ND | | 0.010 | 0.00202 |
| Endrin ketone | **5** | ND | | 0.010 | 0.00323 | ND | | 0.010 | 0.00323 | ND | | 0.010 | 0.00323 | ND | | 0.010 | 0.00323 |
| Methoxychlor | **35** | ND | | 0.010 | 0.00337 | ND | | 0.010 | 0.00337 | ND | | 0.010 | 0.00337 | ND | | 0.010 | 0.00337 |
| alpha-Chlordane | **NS** | ND | | 0.010 | 0.00215 | ND | | 0.010 | 0.00215 | ND | | 0.010 | 0.00215 | ND | | 0.010 | 0.00215 |
| gamma-Chlordane | **NS** | ND | | 0.010 | 0.00314 | ND | | 0.010 | 0.00314 | ND | | 0.010 | 0.00314 | ND | | 0.010 | 0.00314 |
| Toxaphene | **0.06** | ND | | 0.125 | 0.050 | ND | | 0.125 | 0.050 | ND | | 0.125 | 0.050 | ND | | 0.125 | 0.050 |
| Endosulfan (I and II) | **NS** | ND | | 0.010 | 0.00208 | ND | | 0.010 | 0.00208 | ND | | 0.010 | 0.00208 | ND | | 0.010 | 0.00208 |
| Chlordane (alpha and gamma) | **0.05** | ND | | 0.010 | 0.00215 | ND | | 0.010 | 0.00215 | ND | | 0.010 | 0.00215 | ND | | 0.010 | 0.00215 |
| *** Metals - TOTAL (µg/L)** | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| Aluminum | **NS** | 23600 | | | | 5200 | | | | 3730 | | | | 22800 | | | |
| Antimony | **3** | <6.0 | | | | <6.0 | | | | <6.0 | | | | <6.0 | | | |
| Arsenic | **25** | 10.6 | | | | 3.8 | | | | <3.0 | | | | 8 | | | |
| Barium | **1000** | 400 | | | | 298 | | | | <200 | | | | 589 | | | |
| Beryllium | **3** | **3.3** | | | | <1.0 | | | | 1 | | | | **3.1** | | | |
| Cadmium | **5** | <3.0 | | | | <3.0 | | | | <3.0 | | | | <3.0 | | | |
| Calcium | **NS** | 94900 | | | | 81800 | | | | 51900 | | | | 41800 | | | |
| Chromium | **50** | **66.7** | | | | 15.1 | | | | <10 | | | | **64** | | | |
| Cobalt | **NS** | <50 | | | | <50 | | | | <50 | | | | <50 | | | |
| Copper | **200** | 90 | | | | 38.6 | | | | 13.7 | | | | **105** | | | |
| Iron | **NS** | 30200 | | | | 6370 | | | | 4370 | | | | 29000 | | | |
| Lead | **25** | **89.7** | | | | **299** | | | | 9.8 | | | | **30.2** | | | |
| Magnesium | **35000** | 26800 | | | | 11900 | | | | 10000 | | | | 15600 | | | |
| Manganese | **NS** | 4020 | | | | 514 | | | | 423 | | | | 3540 | | | |
| Mercury | **0.7** | <0.20 | | | | <0.20 | | | | <0.20 | | | | <0.20 | | | |
| Nickel | **100** | 99.9 | | | | 25.3 | | | | 11.4 | | | | 78.7 | | | |
| Potassium | **NS** | 14800 | | | | <10000 | | | | 12000 | | | | 11600 | | | |
| Selenium | **10** | <10 | | | | <10 | | | | <10 | | | | <10 | | | |
| Silver | **50** | <10 | | | | <10 | | | | <10 | | | | <10 | | | |
| Sodium | **20000** | **138000** | | | | **84700** | | | | **79500** | | | | **67100** | | | |
| Thallium | **0.5** | <10 | | | | <10 | | | | <10 | | | | <10 | | | |
| Vanadium | **NS** | 60.8 | | | | <50 | | | | <50 | | | | 62.2 | | | |
| Zinc | **2000** | 174 | | | | 129 | | | | 21.9 | | | | 201 | | | |
| *** Metals - DISSOLVED (µg/L)** | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| Aluminum | **NS** | <200 | | | | 486 | | | | 1330 | | | | 6060 | | | |
| Antimony | **3** | <6.0 | | | | <6.0 | | | | <6.0 | | | | <6.0 | | | |
| Arsenic | **25** | <3.0 | | | | <3.0 | | | | <3.0 | | | | <3.0 | | | |
| Barium | **1000** | <200 | | | | <200 | | | | <200 | | | | 296 | | | |
| Beryllium | **3** | <1.0 | | | | <1.0 | | | | <1.0 | | | | 1.1 | | | |
| Cadmium | **5** | <3.0 | | | | <3.0 | | | | <3.0 | | | | <3.0 | | | |
| Calcium | **NS** | 76700 | | | | 101000 | | | | 52300 | | | | 40500 | | | |
| Chromium | **50** | <10 | | | | <10 | | | | <10 | | | | 16.1 | | | |
| Cobalt | **NS** | <50 | | | | <50 | | | | <50 | | | | <50 | | | |
| Copper | **200** | <10 | | | | <10 | | | | <10 | | | | 33.7 | | | |
| Iron | **NS** | 165 | | | | 630 | | | | 1580 | | | | 6950 | | | |
| Lead | **25** | <3.0 | | | | **30.9** | | | | 4.6 | | | | 10.8 | | | |
| Magnesium | **35000** | 13800 | | | | 12400 | | | | 9420 | | | | 10900 | | | |
| Manganese | **NS** | 195 | | | | 496 | | | | 223 | | | | 1060 | | | |
| Mercury | **0.7** | <0.20 | | | | <0.20 | | | | <0.20 | | | | <0.20 | | | |
| Nickel | **100** | <10 | | | | <10 | | | | <10 | | | | 25.5 | | | |
| Potassium | **NS** | 11000 | | | | <10000 | | | | 11500 | | | | <10000 | | | |
| Selenium | **10** | <10 | | | | <10 | | | | <10 | | | | <10 | | | |
| Silver | **50** | <10 | | | | <10 | | | | <10 | | | | <10 | | | |
| Sodium | **20000** | **141000** | | | | **85700** | | | | **78900** | | | | **66000** | | | |
| Thallium | **0.5** | <10 | | | | <10 | | | | <10 | | | | <10 | | | |
| Vanadium | **NS** | <50 | | | | <50 | | | | <50 | | | | <50 | | | |
| Zinc | **2000** | <20 | | | | 29.9 | | | | 74 | | | | 84.5 | | | |
| **General Analytical (µg/L)** | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | 4.73 | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| Cyanide, Total | **200** | ND | | 20.0 | 4.00 | ND | | 20.0 | 4.00 | ND | | 20.0 | 4.00 | ND | | 20.0 | 4.00 |

**Results in Blue Highlight displays exceedance above the Groundwater Effluent Limitations**
**J = Concentration detected at a value below the RL and above the MDL for target compounds**
**N = Presumptive evidence of a compound from the use of GC/MS library search.**
*** TAL Metals analyzed by SGS Dayton.**

**Table 3A - Soil Vapor Results - VOCs**
**Fulton 11**
**New York, NY**

**HK Engineering & Geology, D.P.C.**
**Project #: HK2661.2**

| | *Sample Depth: 12'* | | | | | | | | | | | | | | | *Sample Depth: Sub-Slab* | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Target Compounds** | **SV1** *Sample Location: Exterior* | | | **SV2** *Sample Location: Exterior* | | | **SV3** *Sample Location: Exterior* | | | **SV4** *Sample Location: Exterior* | | | **SV9** *Sample Location: Exterior* | | | **SV8** *Sample Location: Trash Compactor Room* | | |
| **Volatiles (µg/m³)** | **Q** | **Conc** | **RL** | **Q** | **Conc** | **RL** | **Q** | **Conc** | **RL** | **Q** | **Conc** | **RL** | **Q** | **Conc** | **RL** | **Q** | **Conc** | **RL** |
| Acetone | | 46 | 0.48 | | 41 | 0.48 | | 33 | 0.48 | | 53 | 0.48 | | 35 | 0.48 | | 35 | 0.48 |
| Benzene | | 2.6 | 0.64 | | 10 | 0.64 | | 12 | 0.64 | | 9.2 | 0.64 | | 1.4 | 0.64 | | 0.96 | 0.64 |
| Bromodichloromethane | | ND | 1.3 | | ND | 1.3 | | ND | 1.3 | | ND | 1.3 | | ND | 1.3 | | ND | 1.3 |
| Bromoform | | ND | 2.1 | | ND | 2.1 | | ND | 2.1 | | ND | 2.1 | | ND | 2.1 | | ND | 2.1 |
| Bromomethane | | ND | 0.78 | | ND | 0.78 | | ND | 0.78 | | ND | 0.78 | | ND | 0.78 | | ND | 0.78 |
| 1,3-Butadiene | | ND | 0.44 | | ND | 0.44 | | ND | 0.44 | | ND | 0.44 | | ND | 0.44 | | ND | 0.44 |
| Chlorobenzene | | ND | 0.92 | | ND | 0.92 | | ND | 0.92 | | ND | 0.92 | | ND | 0.92 | | ND | 0.92 |
| Chloroethane | | ND | 0.53 | | ND | 0.53 | | ND | 0.53 | | ND | 0.53 | | ND | 0.53 | | ND | 0.53 |
| Chloroform | | 8.7 | 0.98 | | 19 | 0.98 | | ND | 0.98 | | ND | 0.98 | | ND | 0.98 | | ND | 0.98 |
| Chloromethane | | ND | 0.41 | | ND | 0.41 | | ND | 0.41 | | ND | 0.41 | | ND | 0.41 | | ND | 0.41 |
| Carbon disulfide | | 6.2 | 0.62 | | 7.6 | 0.62 | | 9.5 | 0.62 | | 3.4 | 0.62 | | 4.6 | 0.62 | | 1.4 | 0.62 |
| Carbon tetrachloride | | ND | 0.25 | | ND | 0.25 | | ND | 0.25 | | ND | 0.25 | | ND | 0.25 | | ND | 0.25 |
| Cyclohexane | | 2.9 | 0.69 | | 5.2 | 0.69 | | 8.5 | 0.69 | | 4.5 | 0.69 | | 2.3 | 0.69 | | ND | 0.69 |
| Dibromochloromethane | | ND | 1.7 | | ND | 1.7 | | ND | 1.7 | | ND | 1.7 | | ND | 1.7 | | ND | 1.7 |
| 1,2-Dibromoethane | | ND | 1.5 | | ND | 1.5 | | ND | 1.5 | | ND | 1.5 | | ND | 1.5 | | ND | 1.5 |
| 1,2-Dichlorobenzene | | ND | 1.2 | | ND | 1.2 | | ND | 1.2 | | ND | 1.2 | | ND | 1.2 | | ND | 1.2 |
| 1,3-Dichlorobenzene | | ND | 1.2 | | ND | 1.2 | | ND | 1.2 | | ND | 1.2 | | ND | 1.2 | | ND | 1.2 |
| 1,4-Dichlorobenzene | | ND | 1.2 | | ND | 1.2 | | ND | 1.2 | | ND | 1.2 | | ND | 1.2 | | ND | 1.2 |
| Dichlorodifluoromethane | | ND | 0.99 | | ND | 0.99 | | ND | 0.99 | | ND | 0.99 | | ND | 0.99 | | ND | 0.99 |
| 1,1-Dichloroethane | | ND | 0.81 | | ND | 0.81 | | ND | 0.81 | | ND | 0.81 | | ND | 0.81 | | ND | 0.81 |
| 1,2-Dichloroethane | | ND | 0.81 | | ND | 0.81 | | ND | 0.81 | | ND | 0.81 | | ND | 0.81 | | ND | 0.81 |
| 1,1-Dichloroethene | | ND | 0.79 | | ND | 0.79 | | ND | 0.79 | | ND | 0.79 | | ND | 0.79 | | ND | 0.79 |
| 1,2-Dichloroethene (cis) | | ND | 0.79 | | ND | 0.79 | | ND | 0.79 | | ND | 0.79 | | ND | 0.79 | | ND | 0.79 |
| 1,2-Dichloroethene (trans) | | ND | 0.79 | | ND | 0.79 | | ND | 0.79 | | ND | 0.79 | | ND | 0.79 | | ND | 0.79 |
| 1,2-Dichloropropane | | ND | 0.92 | | ND | 0.92 | | ND | 0.92 | | ND | 0.92 | | ND | 0.92 | | ND | 0.92 |
| 1,3-Dichloropropene (cis) | | ND | 0.91 | | ND | 0.91 | | ND | 0.91 | | ND | 0.91 | | ND | 0.91 | | ND | 0.91 |
| 1,3-Dichloropropene (trans) | | ND | 0.91 | | ND | 0.91 | | ND | 0.91 | | ND | 0.91 | | ND | 0.91 | | ND | 0.91 |
| 1,3-Dichloropropene - TOTAL | | ND | 0.91 | | ND | 0.91 | | ND | 0.91 | | ND | 0.91 | | ND | 0.91 | | ND | 0.91 |
| 1,2-Dichlorotetrafluoroethane | | ND | 1.4 | | ND | 1.4 | | ND | 1.4 | | ND | 1.4 | | ND | 1.4 | | ND | 1.4 |
| 1,4-Dioxane | | ND | 0.72 | | ND | 0.72 | | ND | 0.72 | | ND | 0.72 | | ND | 0.72 | | ND | 0.72 |
| Ethylbenzene | D | 280 | 4.3 | | 120 | 0.87 | | 110 | 0.87 | | 4.1 | 0.87 | D | 210 | 4.3 | | 100 | 0.87 |
| n-Heptane | | 12 | 0.82 | | 8.8 | 0.82 | | 20 | 0.82 | | 9.2 | 0.82 | | 11 | 0.82 | | 3.4 | 0.82 |
| 1,3-Hexachlorobutadiene | | ND | 2.1 | | ND | 2.1 | | ND | 2.1 | | ND | 2.1 | | ND | 2.1 | | ND | 2.1 |
| n-Hexane | | ND | 0.70 | | ND | 0.70 | | 29 | 0.70 | | 10 | 0.70 | | 8.7 | 0.70 | | 0.80 | 0.70 |
| Methylene chloride | | ND | 0.69 | | 6.0 | 0.69 | | ND | 0.69 | | ND | 0.69 | | ND | 0.69 | | ND | 0.69 |
| Methyl ethyl ketone | | 5.8 | 0.59 | | 4.6 | 0.59 | | 3.2 | 0.59 | | 4.1 | 0.59 | | 3.1 | 0.59 | | 1.6 | 0.59 |
| Methyl isobutyl ketone | | ND | 0.82 | | ND | 0.82 | | ND | 0.82 | | ND | 0.82 | | ND | 0.82 | | ND | 0.82 |
| Methyl tert-butyl ether | | ND | 0.72 | | ND | 0.72 | | ND | 0.72 | | ND | 0.72 | | ND | 0.72 | | ND | 0.72 |
| Styrene | | 1.9 | 0.85 | | 1.9 | 0.85 | | 1.2 | 0.85 | | 1.6 | 0.85 | | 2.1 | 0.85 | | 1.1 | 0.85 |
| Tert-butyl alcohol | | 24 | 0.61 | | 11 | 0.61 | | 11 | 0.61 | | 7.9 | 0.61 | | 18 | 0.61 | | 4.8 | 0.61 |
| 1,1,2,2-Tetrachloroethane | | ND | 1.4 | | ND | 1.4 | | ND | 1.4 | | ND | 1.4 | | ND | 1.4 | | ND | 1.4 |
| Tetrachloroethene | | 43 | 1.4 | | 100 | 1.4 | | 24 | 1.4 | | 49 | 1.4 | | 66 | 1.4 | | 12 | 1.4 |
| Toluene | | 8.2 | 0.75 | | 12 | 0.75 | | 8.1 | 0.75 | | 8.9 | 0.75 | | 6.4 | 0.75 | | 3.4 | 0.75 |
| 1,2,4-Trichlorobenzene | | ND | 1.5 | | ND | 1.5 | | ND | 1.5 | | ND | 1.5 | | ND | 1.5 | | ND | 1.5 |
| 1,1,1-Trichloroethane | | ND | 1.1 | | ND | 1.1 | | ND | 1.1 | | ND | 1.1 | | ND | 1.1 | | ND | 1.1 |
| 1,1,2-Trichloroethane | | ND | 1.1 | | ND | 1.1 | | ND | 1.1 | | ND | 1.1 | | ND | 1.1 | | ND | 1.1 |
| Trichloroethene | | ND | 0.25 | | ND | 0.25 | | ND | 0.25 | | ND | 0.25 | | ND | 0.25 | | ND | 0.25 |
| Trichlorofluoromethane | | 1.7 | 1.1 | | 1.8 | 1.1 | | 1.7 | 1.1 | | 1.9 | 1.1 | | 1.8 | 1.1 | | 1.7 | 1.1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | | ND | 1.5 | | ND | 1.5 | | ND | 1.5 | | ND | 1.5 | | ND | 1.5 | | ND | 1.5 |
| 1,2,4-Trimethylbenzene | | 6.7 | 0.98 | | 7.9 | 0.98 | | 3.8 | 0.98 | | 3.2 | 0.98 | | 13 | 0.98 | | 7.1 | 0.98 |
| 1,3,5-Trimethylbenzene | | 2.2 | 0.98 | | 2.6 | 0.98 | | 1.3 | 0.98 | | 1.0 | 0.98 | | 5.1 | 0.98 | | 2.1 | 0.98 |
| 2,2,4-Trimethylpentane | | ND | 0.93 | | ND | 0.93 | | ND | 0.93 | | ND | 0.93 | | 0.97 | 0.93 | | ND | 0.93 |
| Vinyl bromide | | ND | 0.87 | | ND | 0.87 | | ND | 0.87 | | ND | 0.87 | | ND | 0.87 | | ND | 0.87 |
| Vinyl chloride | | ND | 0.51 | | ND | 0.51 | | ND | 0.51 | | ND | 0.51 | | ND | 0.51 | | ND | 0.51 |
| Xylenes (m&p) | D | 1000 | 4.3 | D | 630 | 8.7 | D | 780 | 8.7 | | 16 | 0.87 | D | 890 | 4.3 | D | 650 | 4.3 |
| Xylenes (o) | D | 220 | 4.3 | | 93 | 0.87 | | 94 | 0.87 | | 8.9 | 0.87 | | 170 | 0.87 | | 90 | 0.87 |
| Xylenes - TOTAL | D | 1220 | 4.3 | D | 723 | 8.7 | D | 874 | 8.7 | | 24.9 | 0.87 | D | 1060 | 4.3 | D | 740 | 4.3 |

***No applicable NYSDEC remediation benchmarks available for soil vapor**
**J = Concentration detected at a value below the RL and above the MDL for target compounds**
**ND = Analyzed for but Not Detected at the RL**
**D = Extra dilution required for this compound**

# TABLES

# CHELSEA ELLIOTT RESULTS

**Table 1B - Soil Results - VOCs**
**Chelsea Elliott**
**New York, NY**

**HK Engineering & Geology, D.P.C.**
**Project #: HK2661.1**

| Target Compounds | NYSDEC Unrestricted Use SCO | NYSDEC Restricted Residential SCO | SB1A Sample Depth: 0-2' | | | | SB1B Sample Depth: 10-12' | | | | SB2A Sample Depth: 0-2' | | | | SB2B Sample Depth: 10-12' | | | | SB3A Sample Depth: 0-2' | | | | SB3B Sample Depth: 10-12' | | | | SB4A Sample Depth: 0-2' | | | | SB4B Sample Depth: 10-12' | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Volatiles (mg/Kg)** | | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| 1,1,1-Trichloroethane | **0.68** | **100** | ND | | 0.00159 | 0.000488 | ND | | 0.00117 | 0.000359 | ND | | 0.00096 | 0.000295 | ND | | 0.00129 | 0.000396 | ND | | 0.00119 | 0.000365 | ND | | 0.00119 | 0.000365 | ND | | 0.00126 | 0.000387 | ND | | 0.00117 | 0.000359 |
| 1,1,2,2-Tetrachloroethane | **NS** | **NS** | ND | | 0.00159 | 0.000832 | ND | | 0.00117 | 0.000612 | ND | | 0.00096 | 0.000502 | ND | | 0.00129 | 0.000675 | ND | | 0.00119 | 0.000622 | ND | | 0.00119 | 0.000622 | ND | | 0.00126 | 0.000659 | ND | | 0.00117 | 0.000612 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | **NS** | **NS** | ND | | 0.00318 | 0.000949 | ND | | 0.00234 | 0.000698 | ND | | 0.00192 | 0.000573 | ND | | 0.00258 | 0.00077 | ND | | 0.00238 | 0.00071 | ND | | 0.00238 | 0.00071 | ND | | 0.00252 | 0.000752 | ND | | 0.00234 | 0.000698 |
| 1,1,2-Trichloroethane | **NS** | **NS** | ND | | 0.00159 | 0.00034 | ND | | 0.00117 | 0.00025 | ND | | 0.00096 | 0.000205 | ND | | 0.00129 | 0.000276 | ND | | 0.00119 | 0.000255 | ND | | 0.00119 | 0.000255 | ND | | 0.00126 | 0.00027 | ND | | 0.00117 | 0.00025 |
| 1,1-Dichloroethane | **0.27** | **26** | ND | | 0.00318 | 0.000405 | ND | | 0.00234 | 0.000298 | ND | | 0.00192 | 0.000245 | ND | | 0.00258 | 0.000329 | ND | | 0.00238 | 0.000303 | ND | | 0.00238 | 0.000303 | ND | | 0.00252 | 0.000321 | ND | | 0.00234 | 0.000298 |
| 1,1-Dichloroethene | **0.33** | **100** | ND | | 0.00159 | 0.000557 | ND | | 0.00117 | 0.00041 | ND | | 0.00096 | 0.000336 | ND | | 0.00129 | 0.000452 | ND | | 0.00119 | 0.000417 | ND | | 0.00119 | 0.000417 | ND | | 0.00126 | 0.000441 | ND | | 0.00117 | 0.00041 |
| 1,2,3-Trichlorobenzene | **NS** | **NS** | ND | | 0.00318 | 0.000506 | ND | | 0.00234 | 0.000372 | ND | | 0.00192 | 0.000305 | ND | | 0.00258 | 0.00041 | ND | | 0.00238 | 0.000378 | ND | | 0.00238 | 0.000378 | ND | | 0.00252 | 0.000401 | ND | | 0.00234 | 0.000372 |
| 1,2,4-Trichlorobenzene | **NS** | **NS** | ND | | 0.00159 | 0.000668 | ND | | 0.00117 | 0.000491 | ND | | 0.00096 | 0.000403 | ND | | 0.00129 | 0.000542 | ND | | 0.00119 | 0.0005 | ND | | 0.00119 | 0.0005 | ND | | 0.00126 | 0.000529 | ND | | 0.00117 | 0.000491 |
| 1,2-Dibromo-3-chloropropane | **NS** | **NS** | ND | | 0.00159 | 0.00131 | ND | | 0.00117 | 0.000964 | ND | | 0.00096 | 0.000791 | ND | | 0.00129 | 0.00106 | ND | | 0.00119 | 0.000981 | ND | | 0.00119 | 0.000981 | ND | | 0.00126 | 0.00104 | ND | | 0.00117 | 0.000964 |
| 1,2-Dibromoethane (EDB) | **NS** | **NS** | ND | | 0.00159 | 0.000294 | ND | | 0.00117 | 0.000216 | ND | | 0.00096 | 0.000178 | ND | | 0.00129 | 0.000239 | ND | | 0.00119 | 0.00022 | ND | | 0.00119 | 0.00022 | ND | | 0.00126 | 0.000233 | ND | | 0.00117 | 0.000216 |
| 1,2-Dichlorobenzene | **1.1** | **100** | ND | | 0.00159 | 0.000399 | ND | | 0.00117 | 0.000294 | ND | | 0.00096 | 0.000241 | ND | | 0.00129 | 0.000324 | ND | | 0.00119 | 0.000299 | ND | | 0.00119 | 0.000299 | ND | | 0.00126 | 0.000316 | ND | | 0.00117 | 0.000294 |
| 1,2-Dichloroethane (EDC) | **0.02** | **3.1** | ND | | 0.00159 | 0.000367 | ND | | 0.00117 | 0.00027 | ND | | 0.00096 | 0.000222 | ND | | 0.00129 | 0.000298 | ND | | 0.00119 | 0.000275 | ND | | 0.00119 | 0.000275 | ND | | 0.00126 | 0.000291 | ND | | 0.00117 | 0.00027 |
| 1,2-Dichloropropane | **NS** | **NS** | ND | | 0.00159 | 0.000159 | ND | | 0.00117 | 0.000117 | ND | | 0.00096 | 0.000096 | ND | | 0.00129 | 0.000129 | ND | | 0.00119 | 0.000119 | ND | | 0.00119 | 0.000119 | ND | | 0.00126 | 0.000126 | ND | | 0.00117 | 0.000117 |
| 1,3-Dichlorobenzene | **2.4** | **49** | ND | | 0.00159 | 0.000421 | ND | | 0.00117 | 0.00031 | ND | | 0.00096 | 0.000254 | ND | | 0.00129 | 0.000342 | ND | | 0.00119 | 0.000315 | ND | | 0.00119 | 0.000315 | ND | | 0.00126 | 0.000334 | ND | | 0.00117 | 0.00031 |
| 1,3-Dichloropropene (cis- and trans-) | **NS** | **NS** | ND | | 0.00159 | 0.000176 | ND | | 0.00117 | 0.00013 | ND | | 0.00096 | 0.000107 | ND | | 0.00129 | 0.000143 | ND | | 0.00119 | 0.000132 | ND | | 0.00119 | 0.000132 | ND | | 0.00126 | 0.00014 | ND | | 0.00117 | 0.00013 |
| 1,4-Dichlorobenzene | **1.8** | **13** | ND | | 0.00159 | 0.000493 | ND | | 0.00117 | 0.000363 | ND | | 0.00096 | 0.000298 | ND | | 0.00129 | 0.0004 | ND | | 0.00119 | 0.000369 | ND | | 0.00119 | 0.000369 | ND | | 0.00126 | 0.000391 | ND | | 0.00117 | 0.000363 |
| 2-Butanone (MEK) | **0.12** | **100** | ND | | 0.016 | 0.00318 | ND | | 0.012 | 0.00234 | ND | | 0.0096 | 0.00192 | ND | | 0.013 | 0.00258 | ND | | 0.012 | 0.00238 | ND | | 0.012 | 0.00238 | ND | | 0.013 | 0.00252 | ND | | 0.012 | 0.00234 |
| 2-Hexanone | **NS** | **NS** | ND | | 0.016 | 0.00244 | ND | | 0.012 | 0.00179 | ND | | 0.0096 | 0.00147 | ND | | 0.013 | 0.00198 | ND | | 0.012 | 0.00182 | ND | | 0.012 | 0.00182 | ND | | 0.013 | 0.00193 | ND | | 0.012 | 0.00179 |
| 4-Methyl-2-pentanone (MIBK) | **NS** | **NS** | ND | | 0.016 | 0.000832 | ND | | 0.012 | 0.000612 | ND | | 0.0096 | 0.000502 | ND | | 0.013 | 0.000675 | ND | | 0.012 | 0.000622 | ND | | 0.012 | 0.000622 | ND | | 0.013 | 0.000659 | ND | | 0.012 | 0.000612 |
| Acetone | **0.05** | **100** | ND | | 0.016 | 0.00795 | ND | | 0.012 | 0.00585 | ND | | 0.0096 | 0.0048 | 0.00904 | J | 0.013 | 0.00645 | ND | | 0.012 | 0.00595 | 0.019 | | 0.012 | 0.00595 | ND | | 0.013 | 0.0063 | ND | | 0.012 | 0.00585 |
| Benzene | **0.06** | **4.8** | ND | | 0.00159 | 0.000137 | ND | | 0.00117 | 0.000101 | ND | | 0.00096 | 0.0000826 | ND | | 0.00129 | 0.000111 | ND | | 0.00119 | 0.000102 | ND | | 0.00119 | 0.000102 | ND | | 0.00126 | 0.000108 | ND | | 0.00117 | 0.000101 |
| Bromochloromethane | **NS** | **NS** | ND | | 0.00159 | 0.000404 | ND | | 0.00117 | 0.000297 | ND | | 0.00096 | 0.000244 | ND | | 0.00129 | 0.000328 | ND | | 0.00119 | 0.000302 | ND | | 0.00119 | 0.000302 | ND | | 0.00126 | 0.00032 | ND | | 0.00117 | 0.000297 |
| Bromodichloromethane | **NS** | **NS** | ND | | 0.00159 | 0.000189 | ND | | 0.00117 | 0.000139 | ND | | 0.00096 | 0.000114 | ND | | 0.00129 | 0.000154 | ND | | 0.00119 | 0.000142 | ND | | 0.00119 | 0.000142 | ND | | 0.00126 | 0.00015 | ND | | 0.00117 | 0.000139 |
| Bromoform | **NS** | **NS** | ND | | 0.00159 | 0.000494 | ND | | 0.00117 | 0.000364 | ND | | 0.00096 | 0.000299 | ND | | 0.00129 | 0.000401 | ND | | 0.00119 | 0.00037 | ND | | 0.00119 | 0.00037 | ND | | 0.00126 | 0.000392 | ND | | 0.00117 | 0.000364 |
| Bromomethane | **NS** | **NS** | ND | | 0.00318 | 0.00139 | ND | | 0.00234 | 0.00102 | ND | | 0.00192 | 0.000837 | ND | | 0.00258 | 0.00112 | ND | | 0.00238 | 0.00104 | ND | | 0.00238 | 0.00104 | ND | | 0.00252 | 0.0011 | ND | | 0.00234 | 0.00102 |
| Carbon disulfide | **NS** | **NS** | ND | | 0.00159 | 0.000625 | ND | | 0.00117 | 0.00046 | ND | | 0.00096 | 0.000377 | ND | | 0.00129 | 0.000507 | ND | | 0.00119 | 0.000468 | ND | | 0.00119 | 0.000468 | ND | | 0.00126 | 0.000495 | ND | | 0.00117 | 0.00046 |
| Carbon tetrachloride | **0.76** | **2.4** | ND | | 0.00159 | 0.000318 | ND | | 0.00117 | 0.000234 | ND | | 0.00096 | 0.000192 | ND | | 0.00129 | 0.000258 | ND | | 0.00119 | 0.000238 | ND | | 0.00119 | 0.000238 | ND | | 0.00126 | 0.000252 | ND | | 0.00117 | 0.000234 |
| Chlorobenzene | **1.1** | **100** | ND | | 0.00159 | 0.000275 | ND | | 0.00117 | 0.000202 | ND | | 0.00096 | 0.000166 | ND | | 0.00129 | 0.000223 | ND | | 0.00119 | 0.000206 | ND | | 0.00119 | 0.000206 | ND | | 0.00126 | 0.000218 | ND | | 0.00117 | 0.000202 |
| Chloroethane | **NS** | **NS** | ND | | 0.00159 | 0.000472 | ND | | 0.00117 | 0.000347 | ND | | 0.00096 | 0.000285 | ND | | 0.00129 | 0.000383 | ND | | 0.00119 | 0.000353 | ND | | 0.00119 | 0.000353 | ND | | 0.00126 | 0.000374 | ND | | 0.00117 | 0.000347 |
| Chloroform | **0.37** | **49** | ND | | 0.00318 | 0.000795 | ND | | 0.00234 | 0.000585 | ND | | 0.00192 | 0.00048 | ND | | 0.00258 | 0.000645 | ND | | 0.00238 | 0.000595 | ND | | 0.00238 | 0.000595 | ND | | 0.00252 | 0.00063 | ND | | 0.00234 | 0.000585 |
| Chloromethane | **NS** | **NS** | ND | | 0.00318 | 0.000504 | ND | | 0.00234 | 0.000371 | ND | | 0.00192 | 0.000304 | ND | | 0.00258 | 0.000409 | ND | | 0.00238 | 0.000377 | ND | | 0.00238 | 0.000377 | ND | | 0.00252 | 0.000399 | ND | | 0.00234 | 0.000371 |
| cis-1,2-Dichloroethene | **0.25** | **100** | ND | | 0.00318 | 0.00034 | ND | | 0.00234 | 0.00025 | ND | | 0.00192 | 0.000205 | ND | | 0.00258 | 0.000276 | ND | | 0.00238 | 0.000255 | ND | | 0.00238 | 0.000255 | ND | | 0.00252 | 0.00027 | ND | | 0.00234 | 0.00025 |
| cis-1,3-Dichloropropene | **NS** | **NS** | ND | | 0.00159 | 0.000243 | ND | | 0.00117 | 0.000179 | ND | | 0.00096 | 0.000147 | ND | | 0.00129 | 0.000197 | ND | | 0.00119 | 0.000182 | ND | | 0.00119 | 0.000182 | ND | | 0.00126 | 0.000193 | ND | | 0.00117 | 0.000179 |
| Cyclohexane | **NS** | **NS** | ND | | 0.00795 | 0.000286 | ND | | 0.00585 | 0.000211 | ND | | 0.0048 | 0.000173 | ND | | 0.00645 | 0.000232 | ND | | 0.00595 | 0.000214 | ND | | 0.00595 | 0.000214 | ND | | 0.0063 | 0.000227 | ND | | 0.00585 | 0.000211 |
| Dibromochloromethane | **NS** | **NS** | ND | | 0.00159 | 0.000264 | ND | | 0.00117 | 0.000194 | ND | | 0.00096 | 0.000159 | ND | | 0.00129 | 0.000214 | ND | | 0.00119 | 0.000198 | ND | | 0.00119 | 0.000198 | ND | | 0.00126 | 0.000209 | ND | | 0.00117 | 0.000194 |
| Dichlorodifluoromethane | **NS** | **NS** | ND | | 0.00159 | 0.000825 | ND | | 0.00117 | 0.000607 | ND | | 0.00096 | 0.000498 | ND | | 0.00129 | 0.00067 | ND | | 0.00119 | 0.000618 | ND | | 0.00119 | 0.000618 | ND | | 0.00126 | 0.000654 | ND | | 0.00117 | 0.000607 |
| Ethylbenzene | **1** | **41** | ND | | 0.00159 | 0.000173 | ND | | 0.00117 | 0.000128 | ND | | 0.00096 | 0.000105 | ND | | 0.00129 | 0.000141 | ND | | 0.00119 | 0.00013 | ND | | 0.00119 | 0.00013 | ND | | 0.00126 | 0.000137 | ND | | 0.00117 | 0.000128 |
| Isopropylbenzene | **NS** | **NS** | ND | | 0.00159 | 0.000339 | ND | | 0.00117 | 0.000249 | ND | | 0.00096 | 0.000204 | ND | | 0.00129 | 0.000275 | ND | | 0.00119 | 0.000253 | ND | | 0.00119 | 0.000253 | ND | | 0.00126 | 0.000268 | ND | | 0.00117 | 0.000249 |
| Methyl acetate | **NS** | **NS** | ND | | 0.00159 | 0.00128 | ND | | 0.00117 | 0.000945 | ND | | 0.00096 | 0.000776 | ND | | 0.00129 | 0.00104 | ND | | 0.00119 | 0.000962 | ND | | 0.00119 | 0.000962 | ND | | 0.00126 | 0.00102 | ND | | 0.00117 | 0.000945 |
| Methyl tert-butyl ether (MTBE) | **0.93** | **100** | ND | | 0.00159 | 0.000347 | ND | | 0.00117 | 0.000255 | ND | | 0.00096 | 0.000209 | ND | | 0.00129 | 0.000281 | ND | | 0.00119 | 0.000259 | ND | | 0.00119 | 0.000259 | ND | | 0.00126 | 0.000275 | ND | | 0.00117 | 0.000255 |
| Methylcyclohexane | **NS** | **NS** | ND | | 0.00318 | 0.000273 | ND | | 0.00234 | 0.000201 | ND | | 0.00192 | 0.000165 | ND | | 0.00258 | 0.000222 | ND | | 0.00238 | 0.000205 | ND | | 0.00238 | 0.000205 | ND | | 0.00252 | 0.000217 | ND | | 0.00234 | 0.000201 |
| Methylene chloride | **0.05** | **100** | ND | | 0.00795 | 0.00477 | 0.00432 | CJ | 0.00585 | 0.00351 | ND | | 0.0048 | 0.00288 | 0.0046 | CJ | 0.00645 | 0.00387 | ND | | 0.00595 | 0.00357 | ND | | 0.00595 | 0.00357 | ND | | 0.0063 | 0.00378 | ND | | 0.00585 | 0.00351 |
| Styrene | **NS** | **NS** | ND | | 0.00159 | 0.000342 | ND | | 0.00117 | 0.000252 | ND | | 0.00096 | 0.000206 | ND | | 0.00129 | 0.000277 | ND | | 0.00119 | 0.000256 | ND | | 0.00119 | 0.000256 | ND | | 0.00126 | 0.000271 | ND | | 0.00117 | 0.000252 |
| Tetrachloroethene | **1.3** | **19** | ND | | 0.00159 | 0.000164 | ND | | 0.00117 | 0.000121 | ND | | 0.00096 | 0.0000989 | ND | | 0.00129 | 0.000133 | ND | | 0.00119 | 0.000123 | ND | | 0.00119 | 0.000123 | ND | | 0.00126 | 0.00013 | ND | | 0.00117 | 0.000121 |
| Toluene | **0.7** | **100** | ND | | 0.00159 | 0.000795 | ND | | 0.00117 | 0.000585 | ND | | 0.00096 | 0.00048 | ND | | 0.00129 | 0.000645 | ND | | 0.00119 | 0.000595 | ND | | 0.00119 | 0.000595 | ND | | 0.00126 | 0.00063 | ND | | 0.00117 | 0.000585 |
| Total Xylenes | **0.26** | **100** | ND | | 0.00318 | 0.000223 | ND | | 0.00234 | 0.000164 | ND | | 0.00192 | 0.000134 | ND | | 0.00258 | 0.000181 | ND | | 0.00238 | 0.000167 | ND | | 0.00238 | 0.000167 | ND | | 0.00252 | 0.000176 | ND | | 0.00234 | 0.000164 |
| trans-1,2-Dichloroethene | **0.19** | **100** | ND | | 0.00318 | 0.000563 | ND | | 0.00234 | 0.000414 | ND | | 0.00192 | 0.00034 | ND | | 0.00258 | 0.000457 | ND | | 0.00238 | 0.000421 | ND | | 0.00238 | 0.000421 | ND | | 0.00252 | 0.000446 | ND | | 0.00234 | 0.000414 |
| trans-1,3-Dichloropropene | **NS** | **NS** | ND | | 0.00159 | 0.000176 | ND | | 0.00117 | 0.00013 | ND | | 0.00096 | 0.000107 | ND | | 0.00129 | 0.000143 | ND | | 0.00119 | 0.000132 | ND | | 0.00119 | 0.000132 | ND | | 0.00126 | 0.00014 | ND | | 0.00117 | 0.00013 |
| Trichloroethene | **0.47** | **21** | ND | | 0.00159 | 0.000237 | ND | | 0.00117 | 0.000174 | ND | | 0.00096 | 0.000143 | ND | | 0.00129 | 0.000192 | ND | | 0.00119 | 0.000177 | ND | | 0.00119 | 0.000177 | ND | | 0.00126 | 0.000188 | ND | | 0.00117 | 0.000174 |
| Trichlorofluoromethane | **NS** | **NS** | ND | | 0.00159 | 0.000646 | ND | | 0.00117 | 0.000475 | ND | | 0.00096 | 0.00039 | ND | | 0.00129 | 0.000524 | ND | | 0.00119 | 0.000483 | ND | | 0.00119 | 0.000483 | ND | | 0.00126 | 0.000512 | ND | | 0.00117 | 0.000475 |
| Vinyl chloride | **0.02** | **0.9** | ND | | 0.00159 | 0.000515 | ND | | 0.00117 | 0.000379 | ND | | 0.00096 | 0.000311 | ND | | 0.00129 | 0.000418 | ND | | 0.00119 | 0.000386 | ND | | 0.00119 | 0.000386 | ND | | 0.00126 | 0.000408 | ND | | 0.00117 | 0.000379 |
| TOTAL VO's: | **NS** | **NS** | ND | | | NA | 0.00432 | CJ | | NA | ND | | | NA | 0.014 | CJ | | NA | ND | | | NA | 0.019 | | | NA | ND | | | NA | ND | | | NA |
| TOTAL TIC's: | **NS** | **NS** | ND | | | NA | ND | | | NA | ND | | | NA | 0.0071 | JN | | NA | ND | | | NA | 0.030 | JN | | NA | ND | | | NA | ND | | | NA |
| TOTAL VO's & TIC's: | **NS** | **NS** | ND | | | NA | 0.00432 | CJ | | NA | ND | | | NA | 0.021 | CJ | | NA | ND | | | NA | 0.049 | | | NA | ND | | | NA | ND | | | NA |

**Results in Yellow Highlight displays exceedance above the UUSCO regulatory standard**
**Results in Green Highlight displays exceedance above both UUSCO & RRUSCO regulatory standard**
**J = Concentration detected at a value below the RL and above the MDL for target compounds**
**N = Presumptive evidence of a compound from the use of GC/MS library search.**

**NS = No Standard Available**
**D = The compound was reported from the Diluted analysis**
**ND = Analyzed for but Not Detected at the MDL**

**Table 1B (Cont'd) - Soil Results - SVOCs**
**Chelsea Elliott**
**New York, NY**

**HK Engineering & Geology, D.P.C.**
**Project #: HK2661.1**

| Target Compounds | NYSDEC Unrestricted Use SCO | NYSDEC Restricted Residential SCO | SB1A Sample Depth: 0-2' | | | | SB1B Sample Depth: 10-12' | | | | SB2A Sample Depth: 0-2' | | | | SB2B Sample Depth: 10-12' | | | | SB3A Sample Depth: 0-2' | | | | SB3B Sample Depth: 10-12' | | | | SB4A Sample Depth: 0-2' | | | | SB4B Sample Depth: 10-12' | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Semivolatiles - BNA (mg/Kg)** | | | Conc | Q | RL | MDL | Conc | Q | RL | MDL | Conc | Q | RL | MDL | Conc | Q | RL | MDL | Conc | Q | RL | MDL | Conc | Q | RL | MDL | Conc | Q | RL | MDL | Conc | Q | RL | MDL |
| 1,1'-Biphenyl | NS | NS | ND | | 0.037 | 0.00546 | ND | | 0.039 | 0.0058 | 0.020 | J | 0.036 | 0.00535 | ND | | 0.036 | 0.00537 | ND | | 0.074 | 0.011 | 0.265 | DJ | 0.373 | 0.056 | ND | | 0.038 | 0.00569 | ND | | 0.041 | 0.00616 |
| 1,2,4,5-Tetrachlorobenzene | NS | NS | ND | | 0.037 | 0.012 | ND | | 0.039 | 0.013 | ND | | 0.036 | 0.012 | ND | | 0.036 | 0.012 | ND | | 0.074 | 0.025 | ND | | 0.373 | 0.125 | ND | | 0.038 | 0.013 | ND | | 0.041 | 0.014 |
| 1,4-Dioxane | 0.1 | 13 | ND | | 0.037 | 0.024 | ND | | 0.039 | 0.025 | ND | | 0.036 | 0.023 | ND | | 0.036 | 0.023 | ND | | 0.074 | 0.048 | ND | | 0.373 | 0.241 | ND | | 0.038 | 0.025 | ND | | 0.041 | 0.027 |
| 2,2'-Oxybis(1-Chloropropane) | NS | NS | ND | | 0.037 | 0.00916 | ND | | 0.039 | 0.00973 | ND | | 0.036 | 0.00897 | ND | | 0.036 | 0.00901 | ND | | 0.074 | 0.019 | ND | | 0.373 | 0.093 | ND | | 0.038 | 0.00954 | ND | | 0.041 | 0.010 |
| 2,3,4,6-Tetrachlorophenol | NS | NS | ND | | 0.037 | 0.013 | ND | | 0.039 | 0.013 | ND | | 0.036 | 0.012 | ND | | 0.036 | 0.012 | ND | | 0.074 | 0.025 | ND | | 0.373 | 0.128 | ND | | 0.038 | 0.013 | ND | | 0.041 | 0.014 |
| 2,4,5-Trichlorophenol | NS | NS | ND | | 0.037 | 0.028 | ND | | 0.039 | 0.030 | ND | | 0.036 | 0.027 | ND | | 0.036 | 0.027 | ND | | 0.074 | 0.056 | ND | | 0.373 | 0.283 | ND | | 0.038 | 0.029 | ND | | 0.041 | 0.032 |
| 2,4,6-Trichlorophenol | NS | NS | ND | | 0.037 | 0.010 | ND | | 0.039 | 0.011 | ND | | 0.036 | 0.00989 | ND | | 0.036 | 0.00993 | ND | | 0.074 | 0.020 | ND | | 0.373 | 0.103 | ND | | 0.038 | 0.011 | ND | | 0.041 | 0.011 |
| 2,4-Dichlorophenol | NS | NS | ND | | 0.037 | 0.00976 | ND | | 0.039 | 0.010 | ND | | 0.036 | 0.00956 | ND | | 0.036 | 0.0096 | ND | | 0.074 | 0.020 | ND | | 0.373 | 0.099 | ND | | 0.038 | 0.010 | ND | | 0.041 | 0.011 |
| 2,4-Dimethylphenol | NS | NS | ND | | 0.037 | 0.011 | ND | | 0.039 | 0.012 | ND | | 0.036 | 0.011 | ND | | 0.036 | 0.011 | ND | | 0.074 | 0.022 | ND | | 0.373 | 0.110 | ND | | 0.038 | 0.011 | ND | | 0.041 | 0.012 |
| 2,4-Dinitrophenol | NS | NS | ND | | 0.073 | 0.015 | ND | | 0.078 | 0.016 | ND | | 0.072 | 0.015 | ND | | 0.072 | 0.015 | ND | | 0.148 | 0.031 | ND | | 0.746 | 0.153 | ND | | 0.077 | 0.016 | ND | | 0.083 | 0.017 |
| 2,4-Dinitrotoluene | NS | NS | ND | | 0.073 | 0.042 | ND | | 0.078 | 0.044 | ND | | 0.072 | 0.041 | ND | | 0.072 | 0.041 | ND | | 0.148 | 0.084 | ND | | 0.746 | 0.422 | ND | | 0.077 | 0.043 | ND | | 0.083 | 0.047 |
| 2,6-Dinitrotoluene | NS | NS | ND | | 0.073 | 0.042 | ND | | 0.078 | 0.045 | ND | | 0.072 | 0.041 | ND | | 0.072 | 0.042 | ND | | 0.148 | 0.085 | ND | | 0.746 | 0.428 | ND | | 0.077 | 0.044 | ND | | 0.083 | 0.048 |
| 2-Chloronaphthalene | NS | NS | ND | | 0.037 | 0.00848 | ND | | 0.039 | 0.00901 | ND | | 0.036 | 0.00831 | ND | | 0.036 | 0.00834 | ND | | 0.074 | 0.017 | ND | | 0.373 | 0.086 | ND | | 0.038 | 0.00883 | ND | | 0.041 | 0.00957 |
| 2-Chlorophenol | NS | NS | ND | | 0.037 | 0.012 | ND | | 0.039 | 0.013 | ND | | 0.036 | 0.012 | ND | | 0.036 | 0.012 | ND | | 0.074 | 0.024 | ND | | 0.373 | 0.121 | ND | | 0.038 | 0.012 | ND | | 0.041 | 0.014 |
| 2-Methylnaphthalene | NS | NS | 0.023 | J | 0.037 | 0.013 | 0.156 | | 0.039 | 0.014 | 0.065 | | 0.036 | 0.013 | ND | | 0.036 | 0.013 | 0.084 | D | 0.074 | 0.026 | 0.910 | D | 0.373 | 0.131 | ND | | 0.038 | 0.014 | ND | | 0.041 | 0.015 |
| 2-Methylphenol | 0.33 | 100 | ND | | 0.037 | 0.017 | ND | | 0.039 | 0.018 | ND | | 0.036 | 0.016 | ND | | 0.036 | 0.016 | ND | | 0.074 | 0.033 | ND | | 0.373 | 0.168 | ND | | 0.038 | 0.017 | ND | | 0.041 | 0.019 |
| 2-Nitroaniline | NS | NS | ND | | 0.037 | 0.020 | ND | | 0.039 | 0.021 | ND | | 0.036 | 0.019 | ND | | 0.036 | 0.019 | ND | | 0.074 | 0.039 | ND | | 0.373 | 0.198 | ND | | 0.038 | 0.020 | ND | | 0.041 | 0.022 |
| 2-Nitrophenol | NS | NS | ND | | 0.073 | 0.022 | ND | | 0.078 | 0.023 | ND | | 0.072 | 0.021 | ND | | 0.072 | 0.022 | ND | | 0.148 | 0.044 | ND | | 0.746 | 0.222 | ND | | 0.077 | 0.023 | ND | | 0.083 | 0.025 |
| 3,3'-Dichlorobenzidine | NS | NS | ND | | 0.037 | 0.026 | ND | | 0.039 | 0.028 | ND | | 0.036 | 0.025 | ND | | 0.036 | 0.026 | ND | | 0.074 | 0.052 | ND | | 0.373 | 0.264 | ND | | 0.038 | 0.027 | ND | | 0.041 | 0.029 |
| 3-Methylphenol | 0.33 | 100 | ND | | 0.037 | 0.024 | ND | | 0.039 | 0.025 | ND | | 0.036 | 0.023 | ND | | 0.036 | 0.023 | ND | | 0.074 | 0.048 | ND | | 0.373 | 0.241 | ND | | 0.038 | 0.025 | ND | | 0.041 | 0.027 |
| 3-Nitroaniline | NS | NS | ND | | 0.037 | 0.023 | ND | | 0.039 | 0.025 | ND | | 0.036 | 0.023 | ND | | 0.036 | 0.023 | ND | | 0.074 | 0.047 | ND | | 0.373 | 0.236 | ND | | 0.038 | 0.024 | ND | | 0.041 | 0.026 |
| 4,6-Dinitro-2-methylphenol | NS | NS | ND | | 0.073 | 0.016 | ND | | 0.078 | 0.017 | ND | | 0.072 | 0.015 | ND | | 0.072 | 0.015 | ND | | 0.148 | 0.031 | ND | | 0.746 | 0.158 | ND | | 0.077 | 0.016 | ND | | 0.083 | 0.018 |
| 4-Bromophenyl phenyl ether | NS | NS | ND | | 0.037 | 0.010 | ND | | 0.039 | 0.011 | ND | | 0.036 | 0.00996 | ND | | 0.036 | 0.010 | ND | | 0.074 | 0.021 | ND | | 0.373 | 0.103 | ND | | 0.038 | 0.011 | ND | | 0.041 | 0.012 |
| 4-Chloro-3-methylphenol | NS | NS | ND | | 0.037 | 0.014 | ND | | 0.039 | 0.015 | ND | | 0.036 | 0.014 | ND | | 0.036 | 0.014 | ND | | 0.074 | 0.029 | ND | | 0.373 | 0.144 | ND | | 0.038 | 0.015 | ND | | 0.041 | 0.016 |
| 4-Chloroaniline | NS | NS | ND | | 0.037 | 0.014 | ND | | 0.039 | 0.015 | ND | | 0.036 | 0.014 | ND | | 0.036 | 0.014 | ND | | 0.074 | 0.029 | ND | | 0.373 | 0.143 | ND | | 0.038 | 0.015 | ND | | 0.041 | 0.016 |
| 4-Chlorophenyl phenyl ether | NS | NS | ND | | 0.037 | 0.00807 | ND | | 0.039 | 0.00857 | ND | | 0.036 | 0.0079 | ND | | 0.036 | 0.00794 | ND | | 0.074 | 0.016 | ND | | 0.373 | 0.082 | ND | | 0.038 | 0.00841 | ND | | 0.041 | 0.0091 |
| 4-Methylphenol ** | 0.33 | 100 | ND | | 0.037 | 0.017 | ND | | 0.039 | 0.018 | ND | | 0.036 | 0.016 | ND | | 0.036 | 0.016 | ND | | 0.074 | 0.034 | ND | | 0.373 | 0.170 | ND | | 0.038 | 0.017 | ND | | 0.041 | 0.019 |
| 4-Nitroaniline | NS | NS | ND | | 0.037 | 0.022 | ND | | 0.039 | 0.023 | ND | | 0.036 | 0.021 | ND | | 0.036 | 0.021 | ND | | 0.074 | 0.044 | ND | | 0.373 | 0.221 | ND | | 0.038 | 0.023 | ND | | 0.041 | 0.025 |
| 4-Nitrophenol | NS | NS | ND | | 0.073 | 0.037 | ND | | 0.078 | 0.039 | ND | | 0.072 | 0.036 | ND | | 0.072 | 0.037 | ND | | 0.148 | 0.075 | ND | | 0.746 | 0.376 | ND | | 0.077 | 0.039 | ND | | 0.083 | 0.042 |
| Acenaphthene | 20 | 100 | 0.091 | | 0.037 | 0.00725 | 0.335 | | 0.039 | 0.0077 | 0.143 | | 0.036 | 0.0071 | ND | | 0.036 | 0.00713 | 0.444 | D | 0.074 | 0.015 | 3.45 | D | 0.373 | 0.074 | ND | | 0.038 | 0.00755 | ND | | 0.041 | 0.00818 |
| Acenaphthylene | 100 | 100 | 0.076 | | 0.037 | 0.00804 | 0.125 | | 0.039 | 0.00854 | 0.074 | | 0.036 | 0.00787 | ND | | 0.036 | 0.0079 | 0.251 | D | 0.074 | 0.016 | 0.969 | D | 0.373 | 0.082 | 0.037 | J | 0.038 | 0.00837 | ND | | 0.041 | 0.00906 |
| Acetophenone | NS | NS | ND | | 0.037 | 0.022 | ND | | 0.039 | 0.024 | ND | | 0.036 | 0.022 | ND | | 0.036 | 0.022 | ND | | 0.074 | 0.045 | ND | | 0.373 | 0.227 | ND | | 0.038 | 0.023 | ND | | 0.041 | 0.025 |
| Anthracene | 100 | 100 | 0.311 | | 0.037 | 0.00374 | 0.524 | | 0.039 | 0.00397 | 0.626 | | 0.036 | 0.00366 | 0.059 | | 0.036 | 0.00368 | 1.28 | D | 0.074 | 0.00755 | 7.19 | D | 0.373 | 0.038 | 0.062 | | 0.038 | 0.00389 | ND | | 0.041 | 0.00422 |
| Atrazine | NS | NS | ND | | 0.037 | 0.022 | ND | | 0.039 | 0.023 | ND | | 0.036 | 0.022 | ND | | 0.036 | 0.022 | ND | | 0.074 | 0.044 | ND | | 0.373 | 0.222 | ND | | 0.038 | 0.023 | ND | | 0.041 | 0.025 |
| Benzaldehyde | NS | NS | ND | | 0.073 | 0.028 | ND | | 0.078 | 0.029 | ND | | 0.072 | 0.027 | 0.102 | | 0.072 | 0.027 | ND | | 0.148 | 0.056 | ND | | 0.746 | 0.280 | ND | | 0.077 | 0.029 | 0.173 | | 0.083 | 0.031 |
| Benzo[a]anthracene | 1 | 1 | 1.28 | | 0.037 | 0.013 | 1.68 | | 0.039 | 0.014 | 1.80 | | 0.036 | 0.013 | 0.190 | | 0.036 | 0.013 | 4.16 | D | 0.074 | 0.027 | 15.3 | D | 0.373 | 0.136 | 0.191 | | 0.038 | 0.014 | 0.026 | J | 0.041 | 0.015 |
| Benzo[a]pyrene | 1 | 1 | 1.29 | | 0.037 | 0.018 | 1.46 | | 0.039 | 0.019 | 1.44 | | 0.036 | 0.017 | 0.177 | | 0.036 | 0.018 | 3.97 | D | 0.074 | 0.036 | 13.3 | D | 0.373 | 0.181 | 0.189 | | 0.038 | 0.019 | 0.037 | J | 0.041 | 0.020 |
| Benzo[b]fluoranthene | 1 | 1 | 1.42 | | 0.037 | 0.018 | 1.58 | | 0.039 | 0.019 | 1.57 | | 0.036 | 0.018 | 0.207 | | 0.036 | 0.018 | 3.81 | D | 0.074 | 0.037 | 13.6 | D | 0.373 | 0.184 | 0.197 | | 0.038 | 0.019 | 0.035 | J | 0.041 | 0.020 |
| Benzo[g,h,i]perylene | 100 | 100 | 0.831 | | 0.037 | 0.028 | 0.874 | | 0.039 | 0.029 | 0.870 | | 0.036 | 0.027 | 0.120 | | 0.036 | 0.027 | 1.89 | D | 0.074 | 0.056 | 7.07 | D | 0.373 | 0.281 | 0.121 | | 0.038 | 0.029 | 0.042 | | 0.041 | 0.031 |
| Benzo[k]fluoranthene | 0.8 | 3.9 | 0.858 | | 0.037 | 0.025 | 1.10 | | 0.039 | 0.027 | 1.08 | | 0.036 | 0.025 | 0.138 | | 0.036 | 0.025 | 3.22 | D | 0.074 | 0.051 | 10.4 | D | 0.373 | 0.258 | 0.157 | | 0.038 | 0.026 | 0.034 | J | 0.041 | 0.029 |
| Bis(2-chloroethoxy) methane | NS | NS | ND | | 0.037 | 0.00818 | ND | | 0.039 | 0.00869 | ND | | 0.036 | 0.00802 | ND | | 0.036 | 0.00805 | ND | | 0.074 | 0.017 | ND | | 0.373 | 0.083 | ND | | 0.038 | 0.00852 | ND | | 0.041 | 0.00923 |
| Bis(2-chloroethyl) ether | NS | NS | ND | | 0.037 | 0.013 | ND | | 0.039 | 0.014 | ND | | 0.036 | 0.013 | ND | | 0.036 | 0.013 | ND | | 0.074 | 0.026 | ND | | 0.373 | 0.131 | ND | | 0.038 | 0.013 | ND | | 0.041 | 0.015 |
| Bis(2-ethylhexyl) phthalate | NS | NS | 0.280 | | 0.037 | 0.024 | 0.125 | | 0.039 | 0.025 | ND | | 0.036 | 0.023 | ND | | 0.036 | 0.023 | ND | | 0.074 | 0.048 | ND | | 0.373 | 0.239 | ND | | 0.038 | 0.025 | ND | | 0.041 | 0.027 |
| Butyl benzyl phthalate | NS | NS | ND | | 0.037 | 0.016 | ND | | 0.039 | 0.017 | ND | | 0.036 | 0.016 | ND | | 0.036 | 0.016 | ND | | 0.074 | 0.033 | ND | | 0.373 | 0.166 | ND | | 0.038 | 0.017 | ND | | 0.041 | 0.018 |
| Caprolactam | NS | NS | ND | | 0.073 | 0.027 | ND | | 0.078 | 0.029 | ND | | 0.072 | 0.027 | ND | | 0.072 | 0.027 | ND | | 0.148 | 0.055 | ND | | 0.746 | 0.275 | ND | | 0.077 | 0.028 | ND | | 0.083 | 0.031 |
| Carbazole | NS | NS | 0.103 | | 0.037 | 0.00856 | ND | | 0.039 | 0.00909 | 0.163 | | 0.036 | 0.00838 | ND | | 0.036 | 0.00842 | 0.426 | D | 0.074 | 0.017 | 2.76 | D | 0.373 | 0.087 | 0.028 | J | 0.038 | 0.00891 | ND | | 0.041 | 0.00965 |
| Chrysene | 1 | 3.9 | 1.10 | | 0.037 | 0.010 | 1.52 | | 0.039 | 0.011 | 1.60 | | 0.036 | 0.00992 | 0.173 | | 0.036 | 0.00997 | 3.86 | D | 0.074 | 0.021 | 14.0 | D | 0.373 | 0.103 | 0.172 | | 0.038 | 0.011 | 0.028 | J | 0.041 | 0.011 |
| Dibenz[a,h]anthracene | 0.33 | 0.33 | 0.380 | | 0.037 | 0.015 | 0.443 | | 0.039 | 0.016 | 0.487 | | 0.036 | 0.014 | 0.064 | | 0.036 | 0.014 | 1.03 | D | 0.074 | 0.030 | 3.51 | D | 0.373 | 0.149 | 0.056 | | 0.038 | 0.015 | ND | | 0.041 | 0.017 |
| Dibenzofuran | 7 | 59 | 0.039 | | 0.037 | 0.0048 | ND | | 0.039 | 0.0051 | 0.102 | | 0.036 | 0.0047 | ND | | 0.036 | 0.00472 | 0.197 | D | 0.074 | 0.0097 | 1.68 | D | 0.373 | 0.049 | ND | | 0.038 | 0.005 | ND | | 0.041 | 0.00542 |
| Diethyl phthalate | NS | NS | ND | | 0.037 | 0.011 | ND | | 0.039 | 0.012 | ND | | 0.036 | 0.011 | ND | | 0.036 | 0.011 | ND | | 0.074 | 0.023 | ND | | 0.373 | 0.116 | ND | | 0.038 | 0.012 | ND | | 0.041 | 0.013 |
| Dimethyl phthalate | NS | NS | ND | | 0.037 | 0.00842 | ND | | 0.039 | 0.00895 | ND | | 0.036 | 0.00825 | ND | | 0.036 | 0.00829 | ND | | 0.074 | 0.017 | ND | | 0.373 | 0.086 | ND | | 0.038 | 0.00878 | ND | | 0.041 | 0.0095 |
| Di-n-butyl phthalate | NS | NS | 0.029 | J | 0.037 | 0.015 | ND | | 0.039 | 0.016 | ND | | 0.036 | 0.015 | ND | | 0.036 | 0.015 | 0.112 | D | 0.074 | 0.030 | ND | | 0.373 | 0.151 | ND | | 0.038 | 0.016 | ND | | 0.041 | 0.017 |
| Dinitrotoluene (2,4- and 2,6-) | NS | NS | ND | | 0.073 | 0.042 | ND | | 0.078 | 0.044 | ND | | 0.072 | 0.041 | ND | | 0.072 | 0.041 | ND | | 0.148 | 0.084 | ND | | 0.746 | 0.422 | ND | | 0.077 | 0.043 | ND | | 0.083 | 0.047 |
| Di-n-octyl phthalate | NS | NS | ND | | 0.037 | 0.027 | ND | | 0.039 | 0.029 | ND | | 0.036 | 0.026 | ND | | 0.036 | 0.026 | ND | | 0.074 | 0.054 | ND | | 0.373 | 0.273 | ND | | 0.038 | 0.028 | ND | | 0.041 | 0.030 |
| Fluoranthene | 100 | 100 | 2.25 | | 0.037 | 0.012 | 3.89 | | 0.039 | 0.013 | 3.46 | | 0.036 | 0.012 | 0.379 | | 0.036 | 0.012 | 9.14 | D | 0.074 | 0.024 | 38.7 | D | 0.373 | 0.120 | 0.371 | | 0.038 | 0.012 | 0.030 | J | 0.041 | 0.013 |
| Fluorene | 30 | 100 | 0.068 | | 0.037 | 0.00988 | 0.193 | | 0.039 | 0.011 | 0.166 | | 0.036 | 0.00968 | ND | | 0.036 | 0.00972 | 0.318 | D | 0.074 | 0.020 | 2.22 | D | 0.373 | 0.100 | 0.020 | J | 0.038 | 0.010 | ND | | 0.041 | 0.011 |
| Hexachlorobenzene | 0.33 | 1.2 | ND | | 0.037 | 0.011 | ND | | 0.039 | 0.012 | ND | | 0.036 | 0.011 | ND | | 0.036 | 0.011 | ND | | 0.074 | 0.023 | ND | | 0.373 | 0.116 | ND | | 0.038 | 0.012 | ND | | 0.041 | 0.013 |
| Hexachlorobutadiene | NS | NS | ND | | 0.037 | 0.010 | ND | | 0.039 | 0.011 | ND | | 0.036 | 0.00998 | ND | | 0.036 | 0.010 | ND | | 0.074 | 0.021 | ND | | 0.373 | 0.103 | ND | | 0.038 | 0.011 | ND | | 0.041 | 0.012 |
| Hexachlorocyclopentadiene | NS | NS | ND | | 0.073 | 0.064 | ND | | 0.078 | 0.068 | ND | | 0.072 | 0.062 | ND | | 0.072 | 0.063 | ND | | 0.148 | 0.129 | ND | | 0.746 | 0.648 | ND | | 0.077 | 0.066 | ND | | 0.083 | 0.072 |
| Hexachloroethane | NS | NS | ND | | 0.037 | 0.015 | ND | | 0.039 | 0.016 | ND | | 0.036 | 0.015 | ND | | 0.036 | 0.015 | ND | | 0.074 | 0.031 | ND | | 0.373 | 0.155 | ND | | 0.038 | 0.016 | ND | | 0.041 | 0.017 |
| Indeno[1,2,3-cd]pyrene | 0.5 | 0.5 | 0.788 | | 0.037 | 0.024 | 0.858 | | 0.039 | 0.025 | 0.845 | | 0.036 | 0.023 | 0.114 | | 0.036 | 0.023 | 1.98 | D | 0.074 | 0.048 | 7.05 | D | 0.373 | 0.239 | 0.118 | | 0.038 | 0.025 | 0.034 | J | 0.041 | 0.027 |
| Isophorone | NS | NS | ND | | 0.037 | 0.016 | ND | | 0.039 | 0.016 | ND | | 0.036 | 0.015 | ND | | 0.036 | 0.015 | ND | | 0.074 | 0.031 | ND | | 0.373 | 0.157 | ND | | 0.038 | 0.016 | ND | | 0.041 | 0.017 |
| Naphthalene | 12 | 100 | 0.032 | J | 0.037 | 0.00536 | 0.108 | | 0.039 | 0.00569 | 0.085 | | 0.036 | 0.00525 | ND | | 0.036 | 0.00527 | 0.117 | D | 0.074 | 0.011 | 1.29 | D | 0.373 | 0.054 | ND | | 0.038 | 0.00558 | ND | | 0.041 | 0.00604 |
| Nitrobenzene | NS | 15 | ND | | 0.037 | 0.00891 | ND | | 0.039 | 0.00947 | ND | | 0.036 | 0.00873 | ND | | 0.036 | 0.00877 | ND | | 0.074 | 0.018 | ND | | 0.373 | 0.091 | ND | | 0.038 | 0.00928 | ND | | 0.041 | 0.010 |
| N-Nitrosodi-n-propylamine | NS | NS | ND | | 0.037 | 0.023 | ND | | 0.039 | 0.024 | ND | | 0.036 | 0.022 | ND | | 0.036 | 0.022 | ND | | 0.074 | 0.046 | ND | | 0.373 | 0.231 | ND | | 0.038 | 0.024 | ND | | 0.041 | 0.026 |
| N-Nitrosodiphenylamine | NS | NS | ND | | 0.037 | 0.00753 | ND | | 0.039 | 0.008 | ND | | 0.036 | 0.00738 | ND | | 0.036 | 0.00741 | ND | | 0.074 | 0.015 | ND | | 0.373 | 0.077 | ND | | 0.038 | 0.00785 | ND | | 0.041 | 0.0085 |
| Pentachlorophenol | 0.8 | 6.7 | ND | | 0.037 | 0.016 | ND | | 0.039 | 0.017 | ND | | 0.036 | 0.016 | ND | | 0.036 | 0.016 | ND | | 0.074 | 0.033 | ND | | 0.373 | 0.165 | ND | | 0.038 | 0.017 | ND | | 0.041 | 0.018 |
| Phenanthrene | 100 | 100 | 1.18 | | 0.037 | 0.00601 | 2.95 | | 0.039 | 0.00638 | 2.61 | | 0.036 | 0.00588 | 0.180 | | 0.036 | 0.00591 | 5.70 | D | 0.074 | 0.012 | 33.6 | D | 0.373 | 0.061 | 0.212 | | 0.038 | 0.00626 | ND | | 0.041 | 0.00677 |
| Phenol | 0.33 | 100 | ND | | 0.037 | 0.0083 | ND | | 0.039 | 0.00882 | ND | | 0.036 | 0.00813 | ND | | 0.036 | 0.00817 | ND | | 0.074 | 0.017 | ND | | 0.373 | 0.084 | ND | | 0.038 | 0.00865 | ND | | 0.041 | 0.00937 |
| Pyrene | 100 | 100 | 2.17 | | 0.037 | 0.00854 | 3.32 | | 0.039 | 0.00908 | 3.17 | | 0.036 | 0.00837 | 0.325 | | 0.036 | 0.0084 | 8.24 | D | 0.074 | 0.017 | 34.2 | D | 0.373 | 0.087 | 0.333 | | 0.038 | 0.0089 | 0.025 | J | 0.041 | 0.00964 |
| TOTAL BNA'S: | NS | NS | 14.6 | J | | NA | 21.2 | | | NA | 20.4 | J | | NA | 2.23 | | | NA | 50.2 | D | | NA | 211 | DJ | | NA | 2.26 | J | | NA | 0.464 | J | | NA |
| TOTAL TIC's: | NS | NS | 0.191 | J | | NA | 23.4 | JN | | NA | 0.676 | JN | | NA | ND | | | NA | 1.53 | DJ | | NA | 2.42 | DJN | | NA | ND | | | NA | 0.911 | J | | NA |
| TOTAL BNA'S & TIC's: | NS | NS | 14.8 | J | | NA | 44.6 | | | NA | 21.1 | J | | NA | 2.23 | | | NA | 51.7 | D | | NA | 213 | DJ | | NA | 2.26 | J | | NA | 1.38 | J | | NA |

**Results in Yellow Highlight displays exceedance above the UUSCO regulatory standard**
**Results in Green Highlight displays exceedance above both UUSCO & RRUSCO regulatory standard**
**J = Concentration detected at a value below the RL and above the MDL for target compounds**
**N = Presumptive evidence of a compound from the use of GC/MS library search.**

**NS = No Standard Available**
**D = The compound was reported from the Diluted analysis**
**ND = Analyzed for but Not Detected at the MDL**

**Table 1B (Cont'd) - Soil Results - PCBs, Pesticides, Metals**
**Chelsea Elliott**
**New York, NY**

**HK Engineering & Geology, D.P.C.**
**Project #: HK2661.1**

| Target Compounds | NYSDEC Unrestricted Use SCO | NYSDEC Restricted Residential SCO | SB1A Sample Depth: 0-2' | | | | SB1B Sample Depth: 10-12' | | | | SB2A Sample Depth: 0-2' | | | | SB2B Sample Depth: 10-12' | | | | SB3A Sample Depth: 0-2' | | | | SB3B Sample Depth: 10-12' | | | | SB4A Sample Depth: 0-2' | | | | SB4B Sample Depth: 10-12' | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PCB's (mg/Kg)** | | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| Aroclor-1016 | **NS** | **NS** | ND | | 0.00369 | 0.0011 | ND | | 0.00391 | 0.0012 | ND | | 0.00359 | 0.0011 | ND | | 0.00364 | 0.0011 | ND | | 0.00369 | 0.0011 | ND | | 0.00375 | 0.0011 | ND | | 0.00384 | 0.0012 | ND | | 0.00413 | 0.0012 |
| Aroclor-1221 | **NS** | **NS** | ND | | 0.00369 | 0.0011 | ND | | 0.00391 | 0.0012 | ND | | 0.00359 | 0.0011 | ND | | 0.00364 | 0.0011 | ND | | 0.00369 | 0.0011 | ND | | 0.00375 | 0.0011 | ND | | 0.00384 | 0.0012 | ND | | 0.00413 | 0.0012 |
| Aroclor-1232 | **NS** | **NS** | ND | | 0.00369 | 0.0011 | ND | | 0.00391 | 0.0012 | ND | | 0.00359 | 0.0011 | ND | | 0.00364 | 0.0011 | ND | | 0.00369 | 0.0011 | ND | | 0.00375 | 0.0011 | ND | | 0.00384 | 0.0012 | ND | | 0.00413 | 0.0012 |
| Aroclor-1242 | **NS** | **NS** | ND | | 0.00369 | 0.0011 | ND | | 0.00391 | 0.0012 | ND | | 0.00359 | 0.0011 | ND | | 0.00364 | 0.0011 | ND | | 0.00369 | 0.0011 | ND | | 0.00375 | 0.0011 | ND | | 0.00384 | 0.0012 | ND | | 0.00413 | 0.0012 |
| Aroclor-1248 | **NS** | **NS** | ND | | 0.00369 | 0.0011 | ND | | 0.00391 | 0.0012 | ND | | 0.00359 | 0.0011 | ND | | 0.00364 | 0.0011 | ND | | 0.00369 | 0.0011 | ND | | 0.00375 | 0.0011 | ND | | 0.00384 | 0.0012 | ND | | 0.00413 | 0.0012 |
| Aroclor-1254 | **NS** | **NS** | ND | | 0.00369 | 0.0011 | ND | | 0.00391 | 0.0012 | 0.080 | | 0.00359 | 0.0011 | ND | | 0.00364 | 0.0011 | ND | | 0.00369 | 0.0011 | ND | | 0.00375 | 0.0011 | ND | | 0.00384 | 0.0012 | ND | | 0.00413 | 0.0012 |
| Aroclor-1260 | **NS** | **NS** | ND | | 0.00369 | 0.0011 | ND | | 0.00391 | 0.0012 | ND | | 0.00359 | 0.0011 | ND | | 0.00364 | 0.0011 | ND | | 0.00369 | 0.0011 | ND | | 0.00375 | 0.0011 | ND | | 0.00384 | 0.0012 | ND | | 0.00413 | 0.0012 |
| Aroclor-1262 | **NS** | **NS** | ND | | 0.00369 | 0.0011 | ND | | 0.00391 | 0.0012 | ND | | 0.00359 | 0.0011 | ND | | 0.00364 | 0.0011 | ND | | 0.00369 | 0.0011 | ND | | 0.00375 | 0.0011 | ND | | 0.00384 | 0.0012 | ND | | 0.00413 | 0.0012 |
| Aroclor-1268 | **NS** | **NS** | ND | | 0.00369 | 0.0011 | ND | | 0.00391 | 0.0012 | ND | | 0.00359 | 0.0011 | ND | | 0.00364 | 0.0011 | ND | | 0.00369 | 0.0011 | ND | | 0.00375 | 0.0011 | ND | | 0.00384 | 0.0012 | ND | | 0.00413 | 0.0012 |
| PCBs | **0.1** | **1** | ND | | 0.00369 | 0.00111 | ND | | 0.00391 | 0.00117 | 0.080 | | 0.00359 | 0.00108 | ND | | 0.00364 | 0.00109 | ND | | 0.00369 | 0.00111 | ND | | 0.00375 | 0.00113 | ND | | 0.00384 | 0.00115 | ND | | 0.00413 | 0.00124 |
| **Pesticides (mg/Kg)** | | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| alpha-BHC | **0.02** | **0.48** | ND | | 0.000738 | 0.000132 | ND | | 0.000782 | 0.00014 | ND | | 0.000718 | 0.000128 | ND | | 0.000728 | 0.00013 | ND | | 0.000738 | 0.000132 | ND | | 0.00075 | 0.000134 | ND | | 0.000768 | 0.000137 | ND | | 0.000826 | 0.000148 |
| beta-BHC | **0.036** | **0.36** | ND | | 0.000738 | 0.000172 | ND | | 0.000782 | 0.000182 | ND | | 0.000718 | 0.000168 | ND | | 0.000728 | 0.00017 | ND | | 0.000738 | 0.000172 | ND | | 0.00075 | 0.000175 | ND | | 0.000768 | 0.000179 | ND | | 0.000826 | 0.000193 |
| gamma-BHC (Lindane) | **0.1** | **1.3** | ND | | 0.000738 | 0.000164 | ND | | 0.000782 | 0.000174 | ND | | 0.000718 | 0.00016 | ND | | 0.000728 | 0.000162 | ND | | 0.000738 | 0.000165 | ND | | 0.00075 | 0.000167 | ND | | 0.000768 | 0.000171 | ND | | 0.000826 | 0.000184 |
| delta-BHC | **0.04** | **100** | ND | | 0.000738 | 0.000143 | ND | | 0.000782 | 0.000152 | ND | | 0.000718 | 0.000139 | ND | | 0.000728 | 0.000141 | ND | | 0.000738 | 0.000143 | ND | | 0.00075 | 0.000145 | ND | | 0.000768 | 0.000149 | ND | | 0.000826 | 0.00016 |
| Heptachlor | **0.042** | **2.1** | ND | | 0.000738 | 0.000175 | ND | | 0.000782 | 0.000186 | ND | | 0.000718 | 0.00017 | ND | | 0.000728 | 0.000173 | ND | | 0.000738 | 0.000175 | ND | | 0.00075 | 0.000178 | ND | | 0.000768 | 0.000182 | ND | | 0.000826 | 0.000196 |
| Aldrin | **0.005** | **0.097** | ND | | 0.000738 | 0.000154 | ND | | 0.000782 | 0.000164 | ND | | 0.000718 | 0.00015 | ND | | 0.000728 | 0.000152 | ND | | 0.000738 | 0.000155 | ND | | 0.00075 | 0.000157 | ND | | 0.000768 | 0.000161 | ND | | 0.000826 | 0.000173 |
| Heptachlor epoxide | **NS** | **NS** | ND | | 0.000738 | 0.00016 | ND | | 0.000782 | 0.00017 | ND | | 0.000718 | 0.000156 | ND | | 0.000728 | 0.000158 | ND | | 0.000738 | 0.00016 | ND | | 0.00075 | 0.000163 | ND | | 0.000768 | 0.000167 | ND | | 0.000826 | 0.000179 |
| Endosulfan I | **2.4** | **24** | ND | | 0.000738 | 0.000165 | ND | | 0.000782 | 0.000175 | ND | | 0.000718 | 0.000161 | ND | | 0.000728 | 0.000163 | ND | | 0.000738 | 0.000165 | ND | | 0.00075 | 0.000168 | ND | | 0.000768 | 0.000172 | ND | | 0.000826 | 0.000185 |
| 4,4'-DDE | **0.0033** | **8.9** | **0.019** | | 0.000738 | 0.00015 | ND | | 0.000782 | 0.00016 | **0.0034** | | 0.000718 | 0.000146 | 0.00226 | | 0.000728 | 0.000148 | **0.013** | | 0.000738 | 0.000151 | ND | | 0.00075 | 0.000153 | ND | | 0.000768 | 0.000157 | ND | | 0.000826 | 0.000168 |
| Dieldrin | **0.005** | **0.2** | 0.00332 | | 0.000738 | 0.00015 | ND | | 0.000782 | 0.000159 | 0.00127 | | 0.000718 | 0.000146 | ND | | 0.000728 | 0.000148 | ND | | 0.000738 | 0.00015 | ND | | 0.00075 | 0.000153 | ND | | 0.000768 | 0.000156 | ND | | 0.000826 | 0.000168 |
| Endrin | **0.014** | **11** | ND | | 0.000738 | 0.000186 | ND | | 0.000782 | 0.000197 | ND | | 0.000718 | 0.000181 | ND | | 0.000728 | 0.000183 | ND | | 0.000738 | 0.000186 | ND | | 0.00075 | 0.000189 | ND | | 0.000768 | 0.000194 | ND | | 0.000826 | 0.000208 |
| Endosulfan II | **2.4** | **24** | ND | | 0.000738 | 0.000169 | ND | | 0.000782 | 0.000179 | ND | | 0.000718 | 0.000165 | ND | | 0.000728 | 0.000167 | ND | | 0.000738 | 0.000169 | ND | | 0.00075 | 0.000172 | ND | | 0.000768 | 0.000176 | ND | | 0.000826 | 0.000189 |
| 4,4'-DDD | **0.0033** | **13** | **0.00407** | | 0.000738 | 0.000197 | ND | | 0.000782 | 0.000209 | ND | | 0.000718 | 0.000192 | 0.000712 | J | 0.000728 | 0.000194 | ND | | 0.000738 | 0.000197 | ND | | 0.00075 | 0.0002 | ND | | 0.000768 | 0.000205 | ND | | 0.000826 | 0.00022 |
| Endrin aldehyde | **NS** | **NS** | ND | | 0.000738 | 0.000154 | ND | | 0.000782 | 0.000164 | ND | | 0.000718 | 0.00015 | ND | | 0.000728 | 0.000152 | ND | | 0.000738 | 0.000155 | ND | | 0.00075 | 0.000157 | 0.018 | | 0.000768 | 0.000161 | ND | | 0.000826 | 0.000173 |
| Endosulfan sulfate | **2.4** | **24** | ND | | 0.000738 | 0.000183 | ND | | 0.000782 | 0.000194 | ND | | 0.000718 | 0.000178 | ND | | 0.000728 | 0.00018 | ND | | 0.000738 | 0.000183 | ND | | 0.00075 | 0.000186 | ND | | 0.000768 | 0.00019 | ND | | 0.000826 | 0.000205 |
| 4,4'-DDT | **0.0033** | **7.9** | **0.027** | | 0.000738 | 0.000137 | ND | | 0.000782 | 0.000145 | **0.00556** | | 0.000718 | 0.000134 | **0.00384** | | 0.000728 | 0.000135 | **0.021** | | 0.000738 | 0.000137 | ND | | 0.00075 | 0.000139 | ND | | 0.000768 | 0.000143 | ND | | 0.000826 | 0.000154 |
| Endrin ketone | **NS** | **NS** | ND | | 0.000738 | 0.000144 | ND | | 0.000782 | 0.000152 | ND | | 0.000718 | 0.00014 | ND | | 0.000728 | 0.000142 | ND | | 0.000738 | 0.000144 | ND | | 0.00075 | 0.000146 | ND | | 0.000768 | 0.000149 | ND | | 0.000826 | 0.000161 |
| Methoxychlor | **NS** | **NS** | ND | | 0.000738 | 0.000197 | ND | | 0.000782 | 0.000209 | ND | | 0.000718 | 0.000192 | ND | | 0.000728 | 0.000194 | ND | | 0.000738 | 0.000197 | ND | | 0.00075 | 0.0002 | ND | | 0.000768 | 0.000205 | ND | | 0.000826 | 0.000221 |
| alpha-Chlordane | **0.094** | **4.2** | 0.00369 | | 0.000738 | 0.000163 | ND | | 0.000782 | 0.000173 | ND | | 0.000718 | 0.000159 | ND | | 0.000728 | 0.00016 | ND | | 0.000738 | 0.000163 | ND | | 0.00075 | 0.000165 | ND | | 0.000768 | 0.000169 | ND | | 0.000826 | 0.000182 |
| gamma-Chlordane | **NS** | **NS** | 0.00319 | | 0.000738 | 0.000145 | ND | | 0.000782 | 0.000154 | ND | | 0.000718 | 0.000141 | ND | | 0.000728 | 0.000143 | ND | | 0.000738 | 0.000145 | ND | | 0.00075 | 0.000147 | ND | | 0.000768 | 0.000151 | ND | | 0.000826 | 0.000162 |
| Toxaphene | **NS** | **NS** | ND | | 0.00923 | 0.00369 | ND | | 0.00978 | 0.00391 | ND | | 0.00898 | 0.00359 | ND | | 0.0091 | 0.00364 | ND | | 0.00923 | 0.00369 | ND | | 0.00938 | 0.00375 | ND | | 0.0096 | 0.00384 | ND | | 0.010 | 0.00413 |
| Endosulfan (I and II) | **NS** | **NS** | ND | | 0.000738 | 0.000165 | ND | | 0.000782 | 0.000175 | ND | | 0.000718 | 0.000161 | ND | | 0.000728 | 0.000163 | ND | | 0.000738 | 0.000165 | ND | | 0.00075 | 0.000168 | ND | | 0.000768 | 0.000172 | ND | | 0.000826 | 0.000185 |
| Chlordane (alpha and gamma) | **NS** | **NS** | 0.00688 | | 0.000738 | 0.000145 | ND | | 0.000782 | 0.000154 | ND | | 0.000718 | 0.000141 | ND | | 0.000728 | 0.000143 | ND | | 0.000738 | 0.000145 | ND | | 0.00075 | 0.000147 | ND | | 0.000768 | 0.000151 | ND | | 0.000826 | 0.000162 |
| *** Metals (mg/Kg)** | | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| Aluminum | **NS** | **NS** | 7910 | | | | 10700 | | | | 6300 | | | | 5040 | | | | 6400 | | | | 5390 | | | | 11900 | | | | 8270 | | | |
| Antimony | **NS** | **NS** | <2.2 | | | | <2.2 | | | | <2.1 | | | | <2.2 | | | | 8.0 | | | | <45 [a] | | | | <2.4 | | | | <2.4 | | | |
| Arsenic | **13** | **16** | 7.5 | | | | 7.6 | | | | 2.9 | | | | 3.8 | | | | 8.9 | | | | <45 [a] | | | | 6.4 | | | | 9.2 | | | |
| Barium | **350** | **400** | 298 | | | | **463** | | | | 48.5 | | | | 163 | | | | 309 | | | | 288 | | | | 298 | | | | **2180** | | | |
| Beryllium | **7.2** | **72** | 0.46 | | | | 0.64 | | | | 0.41 | | | | 0.76 | | | | 0.43 | | | | <4.5 [a] | | | | 0.60 | | | | 0.56 | | | |
| Cadmium | **2.5** | **4.3** | 0.63 | | | | 1.9 | | | | <0.53 | | | | <0.55 | | | | 1.4 | | | | <11 [a] | | | | <0.60 | | | | 1.0 | | | |
| Calcium | **NS** | **NS** | 14000 | | | | 77400 | | | | 17800 | | | | 10500 | | | | 34300 | | | | 49000 | | | | 8670 | | | | 67200 | | | |
| Chromium | **NS** | **NS** | 20.8 | | | | 28.8 | | | | 20.7 | | | | 15.9 | | | | 16.8 | | | | 70.1 [a] | | | | 19.9 | | | | 24.9 | | | |
| Cobalt | **NS** | **NS** | <5.5 | | | | 5.8 | | | | 6.5 | | | | 7.7 | | | | <5.7 | | | | 39.9 | | | | <6.0 | | | | 6.5 | | | |
| Copper | **50** | **270** | 47.9 | | | | **128** [a] | | | | 21.5 | | | | 31.8 | | | | **195** | | | | **503** [a] | | | | 25.2 | | | | 35.7 | | | |
| Iron | **NS** | **NS** | 12500 | | | | 32600 | | | | 12200 | | | | 13100 | | | | 13400 | | | | 25400 | | | | 16200 | | | | 18900 | | | |
| Lead | **63** | **400** | **436** | | | | **1260** | | | | 39.0 | | | | **235** | | | | **774** | | | | **888** [a] | | | | **203** | | | | **2680** | | | |
| Magnesium | **NS** | **NS** | 2880 | | | | 12800 | | | | 6090 | | | | 6400 | | | | 2920 | | | | 3500 | | | | 2690 | | | | 4210 | | | |
| Manganese | **1600** | **2000** | 241 | | | | 704 | | | | 263 | | | | 292 | | | | 1210 | | | | **2890** | | | | 461 | | | | 604 | | | |
| Mercury | **0.18** | **0.81** | **0.61** | | | | **1.1** | | | | 0.037 | | | | **0.56** | | | | **0.68** | | | | **0.65** | | | | **0.23** | | | | **0.57** | | | |
| Nickel | **30** | **310** | 15.5 | | | | 22.8 | | | | **42.8** | | | | **56.8** | | | | **32.2** | | | | **98.3** [a] | | | | 14.9 | | | | 21.7 | | | |
| Potassium | **NS** | **NS** | <1100 | | | | 1670 | | | | 1780 | | | | 1270 | | | | <1100 | | | | <1100 | | | | <1200 | | | | 1560 | | | |
| Selenium | **3.9** | **180** | <2.2 | | | | <11 [a] | | | | <2.1 | | | | <2.2 | | | | <2.3 | | | | <45 [a] | | | | <2.4 | | | | <2.4 | | | |
| Silver | **2** | **180** | 0.86 | | | | <2.8 [a] | | | | 0.78 | | | | 0.78 | | | | 1.2 | | | | <11 [a] | | | | 0.85 | | | | 1.1 | | | |
| Sodium | **NS** | **NS** | <1100 | | | | <1100 | | | | <1100 | | | | <1100 | | | | <1100 | | | | 1100 | | | | <1200 | | | | <1200 | | | |
| Thallium | **NS** | **NS** | <1.1 | | | | <2.3 [a] | | | | <1.1 | | | | <1.1 | | | | <2.3 [a] | | | | <22 [a] | | | | <1.2 | | | | <1.2 | | | |
| Vanadium | **NS** | **NS** | 24.9 | | | | 25.8 | | | | 22.7 | | | | 20.2 | | | | 25.8 | | | | 94.8 | | | | 27.4 | | | | 23.0 | | | |
| Zinc | **109** | **10000** | **276** | | | | **483** | | | | 60.2 | | | | **176** | | | | **483** | | | | **688** | | | | **196** | | | | **2550** | | | |
| **General Analytical** | | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | 4.73 | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| Cyanide, Total | **27** | **27** | 0.222 | J | 1.11 | 0.222 | 5.71 | | 1.18 | 0.236 | ND | | 1.08 | 0.216 | ND | | 1.09 | 0.218 | 0.501 | J | 1.11 | 0.222 | 1.24 | | 1.13 | 0.225 | ND | | 1.15 | 0.231 | ND | | 1.22 | 0.244 |

**Results in Yellow Highlight displays exceedance above the UUSCO regulatory standard**
**Results in Green Highlight displays exceedance above both UUSCO & RRUSCO regulatory standard**
**J = Concentration detected at a value below the RL and above the MDL for target compounds**
**N = Presumptive evidence of a compound from the use of GC/MS library search.**

**NS = No Standard Available**
**D = The compound was reported from the Diluted analysis**
**ND OR < = Analyzed for but Not Detected at the MDL**
**~ = Sample not analyzed**

*** TAL Metals analyzed by SGS Dayton.**
**[a] = Elevated detection limit due to dilution required for high interfering element**

**Table 1B (Cont'd)- Soil Results - VOCs**
**Chelsea Elliott**
**New York, NY**

**HK Engineering & Geology, D.P.C.**
**Project #: HK2661.1**

| Target Compounds | NYSDEC Unrestricted Use SCO | NYSDEC Restricted Residential SCO | SB5A Sample Depth: 0-2' | | | | SB5B Sample Depth: 10-12' | | | | SB6A Sample Depth: 0-2' | | | | SB6B Sample Depth: 10-12' | | | | SB8A Sample Depth: 2-14" | | | | SB9A Sample Depth: 0-2' | | | | SB9B Sample Depth: 10-12' | | | | SB10A Sample Depth: 18-30" | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Volatiles (mg/Kg)** | | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| 1,1,1-Trichloroethane | **0.68** | **100** | ND | | 0.00105 | 0.000322 | ND | | 0.00117 | 0.000359 | ND | | 0.00114 | 0.00035 | ND | | 0.00102 | 0.000313 | ND | | 0.00112 | 0.000344 | ND | | 0.00116 | 0.000356 | ND | | 0.00119 | 0.000365 | ND | | 0.0011 | 0.000338 |
| 1,1,2,2-Tetrachloroethane | **NS** | **NS** | ND | | 0.00105 | 0.000549 | ND | | 0.00117 | 0.000612 | ND | | 0.00114 | 0.000596 | ND | | 0.00102 | 0.000533 | ND | | 0.00112 | 0.000586 | ND | | 0.00116 | 0.000607 | ND | | 0.00119 | 0.000622 | ND | | 0.0011 | 0.000575 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | **NS** | **NS** | ND | | 0.0021 | 0.000627 | ND | | 0.00234 | 0.000698 | ND | | 0.00228 | 0.000681 | ND | | 0.00204 | 0.000609 | ND | | 0.00224 | 0.000669 | ND | | 0.00232 | 0.000693 | ND | | 0.00238 | 0.00071 | ND | | 0.0022 | 0.000657 |
| 1,1,2-Trichloroethane | **NS** | **NS** | ND | | 0.00105 | 0.000225 | ND | | 0.00117 | 0.00025 | ND | | 0.00114 | 0.000244 | ND | | 0.00102 | 0.000218 | ND | | 0.00112 | 0.00024 | ND | | 0.00116 | 0.000248 | ND | | 0.00119 | 0.000255 | ND | | 0.0011 | 0.000235 |
| 1,1-Dichloroethane | **0.27** | **26** | ND | | 0.0021 | 0.000268 | ND | | 0.00234 | 0.000298 | ND | | 0.00228 | 0.000291 | ND | | 0.00204 | 0.00026 | ND | | 0.00224 | 0.000286 | ND | | 0.00232 | 0.000296 | ND | | 0.00238 | 0.000303 | ND | | 0.0022 | 0.000281 |
| 1,1-Dichloroethene | **0.33** | **100** | ND | | 0.00105 | 0.000368 | ND | | 0.00117 | 0.00041 | ND | | 0.00114 | 0.000399 | ND | | 0.00102 | 0.000357 | ND | | 0.00112 | 0.000392 | ND | | 0.00116 | 0.000406 | ND | | 0.00119 | 0.000417 | ND | | 0.0011 | 0.000385 |
| 1,2,3-Trichlorobenzene | **NS** | **NS** | ND | | 0.0021 | 0.000334 | ND | | 0.00234 | 0.000372 | ND | | 0.00228 | 0.000363 | ND | | 0.00204 | 0.000324 | ND | | 0.00224 | 0.000356 | ND | | 0.00232 | 0.000369 | ND | | 0.00238 | 0.000378 | ND | | 0.0022 | 0.00035 |
| 1,2,4-Trichlorobenzene | **NS** | **NS** | ND | | 0.00105 | 0.000441 | ND | | 0.00117 | 0.000491 | ND | | 0.00114 | 0.000479 | ND | | 0.00102 | 0.000428 | ND | | 0.00112 | 0.00047 | ND | | 0.00116 | 0.000487 | ND | | 0.00119 | 0.0005 | ND | | 0.0011 | 0.000462 |
| 1,2-Dibromo-3-chloropropane | **NS** | **NS** | ND | | 0.00105 | 0.000865 | ND | | 0.00117 | 0.000964 | ND | | 0.00114 | 0.000939 | ND | | 0.00102 | 0.00084 | ND | | 0.00112 | 0.000923 | ND | | 0.00116 | 0.000956 | ND | | 0.00119 | 0.000981 | ND | | 0.0011 | 0.000906 |
| 1,2-Dibromoethane (EDB) | **NS** | **NS** | ND | | 0.00105 | 0.000194 | ND | | 0.00117 | 0.000216 | ND | | 0.00114 | 0.000211 | ND | | 0.00102 | 0.000189 | ND | | 0.00112 | 0.000207 | ND | | 0.00116 | 0.000215 | ND | | 0.00119 | 0.00022 | ND | | 0.0011 | 0.000204 |
| 1,2-Dichlorobenzene | **1.1** | **100** | ND | | 0.00105 | 0.000264 | ND | | 0.00117 | 0.000294 | ND | | 0.00114 | 0.000286 | ND | | 0.00102 | 0.000256 | ND | | 0.00112 | 0.000281 | ND | | 0.00116 | 0.000291 | ND | | 0.00119 | 0.000299 | ND | | 0.0011 | 0.000276 |
| 1,2-Dichloroethane (EDC) | **0.02** | **3.1** | ND | | 0.00105 | 0.000243 | ND | | 0.00117 | 0.00027 | ND | | 0.00114 | 0.000263 | ND | | 0.00102 | 0.000236 | ND | | 0.00112 | 0.000259 | ND | | 0.00116 | 0.000268 | ND | | 0.00119 | 0.000275 | ND | | 0.0011 | 0.000254 |
| 1,2-Dichloropropane | **NS** | **NS** | ND | | 0.00105 | 0.000105 | ND | | 0.00117 | 0.000117 | ND | | 0.00114 | 0.000114 | ND | | 0.00102 | 0.000102 | ND | | 0.00112 | 0.000112 | ND | | 0.00116 | 0.000116 | ND | | 0.00119 | 0.000119 | ND | | 0.0011 | 0.00011 |
| 1,3-Dichlorobenzene | **2.4** | **49** | ND | | 0.00105 | 0.000278 | ND | | 0.00117 | 0.00031 | ND | | 0.00114 | 0.000302 | ND | | 0.00102 | 0.00027 | ND | | 0.00112 | 0.000297 | ND | | 0.00116 | 0.000307 | ND | | 0.00119 | 0.000315 | ND | | 0.0011 | 0.000292 |
| 1,3-Dichloropropene (cis- and trans-) | **NS** | **NS** | ND | | 0.00105 | 0.000117 | ND | | 0.00117 | 0.00013 | ND | | 0.00114 | 0.000127 | ND | | 0.00102 | 0.000113 | ND | | 0.00112 | 0.000124 | ND | | 0.00116 | 0.000129 | ND | | 0.00119 | 0.000132 | ND | | 0.0011 | 0.000122 |
| 1,4-Dichlorobenzene | **1.8** | **13** | ND | | 0.00105 | 0.000326 | ND | | 0.00117 | 0.000363 | ND | | 0.00114 | 0.000353 | ND | | 0.00102 | 0.000316 | ND | | 0.00112 | 0.000347 | ND | | 0.00116 | 0.00036 | ND | | 0.00119 | 0.000369 | ND | | 0.0011 | 0.000341 |
| 2-Butanone (MEK) | **0.12** | **100** | ND | | 0.011 | 0.0021 | ND | | 0.012 | 0.00234 | ND | | 0.011 | 0.00228 | ND | | 0.010 | 0.00204 | ND | | 0.011 | 0.00224 | ND | | 0.012 | 0.00232 | ND | | 0.012 | 0.00238 | ND | | 0.011 | 0.0022 |
| 2-Hexanone | **NS** | **NS** | ND | | 0.011 | 0.00161 | ND | | 0.012 | 0.00179 | ND | | 0.011 | 0.00175 | ND | | 0.010 | 0.00156 | ND | | 0.011 | 0.00172 | ND | | 0.012 | 0.00178 | ND | | 0.012 | 0.00182 | ND | | 0.011 | 0.00169 |
| 4-Methyl-2-pentanone (MIBK) | **NS** | **NS** | ND | | 0.011 | 0.000549 | ND | | 0.012 | 0.000612 | ND | | 0.011 | 0.000596 | ND | | 0.010 | 0.000533 | ND | | 0.011 | 0.000586 | ND | | 0.012 | 0.000607 | ND | | 0.012 | 0.000622 | ND | | 0.011 | 0.000575 |
| Acetone | **0.05** | **100** | 0.031 | | 0.011 | 0.00525 | ND | | 0.012 | 0.00585 | ND | | 0.011 | 0.0057 | 0.00529 | J | 0.010 | 0.0051 | 0.00649 | J | 0.011 | 0.0056 | ND | | 0.012 | 0.0058 | ND | | 0.012 | 0.00595 | 0.0068 | J | 0.011 | 0.0055 |
| Benzene | **0.06** | **4.8** | ND | | 0.00105 | 0.0000903 | ND | | 0.00117 | 0.000101 | ND | | 0.00114 | 0.000098 | ND | | 0.00102 | 0.0000877 | ND | | 0.00112 | 0.0000963 | ND | | 0.00116 | 0.0000998 | ND | | 0.00119 | 0.000102 | ND | | 0.0011 | 0.0000946 |
| Bromochloromethane | **NS** | **NS** | ND | | 0.00105 | 0.000267 | ND | | 0.00117 | 0.000297 | ND | | 0.00114 | 0.00029 | ND | | 0.00102 | 0.000259 | ND | | 0.00112 | 0.000284 | ND | | 0.00116 | 0.000295 | ND | | 0.00119 | 0.000302 | ND | | 0.0011 | 0.000279 |
| Bromodichloromethane | **NS** | **NS** | ND | | 0.00105 | 0.000125 | ND | | 0.00117 | 0.000139 | ND | | 0.00114 | 0.000136 | ND | | 0.00102 | 0.000121 | ND | | 0.00112 | 0.000133 | ND | | 0.00116 | 0.000138 | ND | | 0.00119 | 0.000142 | ND | | 0.0011 | 0.000131 |
| Bromoform | **NS** | **NS** | ND | | 0.00105 | 0.000327 | ND | | 0.00117 | 0.000364 | ND | | 0.00114 | 0.000355 | ND | | 0.00102 | 0.000317 | ND | | 0.00112 | 0.000348 | ND | | 0.00116 | 0.000361 | ND | | 0.00119 | 0.00037 | ND | | 0.0011 | 0.000342 |
| Bromomethane | **NS** | **NS** | ND | | 0.0021 | 0.000916 | ND | | 0.00234 | 0.00102 | ND | | 0.00228 | 0.000994 | ND | | 0.00204 | 0.000889 | ND | | 0.00224 | 0.000977 | ND | | 0.00232 | 0.00101 | ND | | 0.00238 | 0.00104 | ND | | 0.0022 | 0.000959 |
| Carbon disulfide | **NS** | **NS** | ND | | 0.00105 | 0.000413 | ND | | 0.00117 | 0.00046 | ND | | 0.00114 | 0.000448 | ND | | 0.00102 | 0.000401 | ND | | 0.00112 | 0.00044 | ND | | 0.00116 | 0.000456 | ND | | 0.00119 | 0.000468 | ND | | 0.0011 | 0.000432 |
| Carbon tetrachloride | **0.76** | **2.4** | ND | | 0.00105 | 0.00021 | ND | | 0.00117 | 0.000234 | ND | | 0.00114 | 0.000228 | ND | | 0.00102 | 0.000204 | ND | | 0.00112 | 0.000224 | ND | | 0.00116 | 0.000232 | ND | | 0.00119 | 0.000238 | ND | | 0.0011 | 0.00022 |
| Chlorobenzene | **1.1** | **100** | ND | | 0.00105 | 0.000182 | ND | | 0.00117 | 0.000202 | ND | | 0.00114 | 0.000197 | ND | | 0.00102 | 0.000176 | ND | | 0.00112 | 0.000194 | ND | | 0.00116 | 0.000201 | ND | | 0.00119 | 0.000206 | ND | | 0.0011 | 0.00019 |
| Chloroethane | **NS** | **NS** | ND | | 0.00105 | 0.000312 | ND | | 0.00117 | 0.000347 | ND | | 0.00114 | 0.000339 | ND | | 0.00102 | 0.000303 | ND | | 0.00112 | 0.000333 | ND | | 0.00116 | 0.000345 | ND | | 0.00119 | 0.000353 | ND | | 0.0011 | 0.000327 |
| Chloroform | **0.37** | **49** | ND | | 0.0021 | 0.000525 | ND | | 0.00234 | 0.000585 | ND | | 0.00228 | 0.00057 | ND | | 0.00204 | 0.00051 | ND | | 0.00224 | 0.00056 | ND | | 0.00232 | 0.00058 | ND | | 0.00238 | 0.000595 | ND | | 0.0022 | 0.00055 |
| Chloromethane | **NS** | **NS** | ND | | 0.0021 | 0.000333 | ND | | 0.00234 | 0.000371 | ND | | 0.00228 | 0.000361 | ND | | 0.00204 | 0.000323 | ND | | 0.00224 | 0.000355 | ND | | 0.00232 | 0.000368 | ND | | 0.00238 | 0.000377 | ND | | 0.0022 | 0.000349 |
| cis-1,2-Dichloroethene | **0.25** | **100** | ND | | 0.0021 | 0.000225 | ND | | 0.00234 | 0.00025 | ND | | 0.00228 | 0.000244 | ND | | 0.00204 | 0.000218 | ND | | 0.00224 | 0.00024 | ND | | 0.00232 | 0.000248 | ND | | 0.00238 | 0.000255 | ND | | 0.0022 | 0.000235 |
| cis-1,3-Dichloropropene | **NS** | **NS** | ND | | 0.00105 | 0.000161 | ND | | 0.00117 | 0.000179 | ND | | 0.00114 | 0.000174 | ND | | 0.00102 | 0.000156 | ND | | 0.00112 | 0.000171 | ND | | 0.00116 | 0.000177 | ND | | 0.00119 | 0.000182 | ND | | 0.0011 | 0.000168 |
| Cyclohexane | **NS** | **NS** | ND | | 0.00525 | 0.000189 | ND | | 0.00585 | 0.000211 | ND | | 0.0057 | 0.000205 | ND | | 0.0051 | 0.000184 | ND | | 0.0056 | 0.000202 | ND | | 0.0058 | 0.000209 | ND | | 0.00595 | 0.000214 | ND | | 0.0055 | 0.000198 |
| Dibromochloromethane | **NS** | **NS** | ND | | 0.00105 | 0.000174 | ND | | 0.00117 | 0.000194 | ND | | 0.00114 | 0.000189 | ND | | 0.00102 | 0.000169 | ND | | 0.00112 | 0.000186 | ND | | 0.00116 | 0.000193 | ND | | 0.00119 | 0.000198 | ND | | 0.0011 | 0.000183 |
| Dichlorodifluoromethane | **NS** | **NS** | ND | | 0.00105 | 0.000545 | ND | | 0.00117 | 0.000607 | ND | | 0.00114 | 0.000592 | ND | | 0.00102 | 0.000529 | ND | | 0.00112 | 0.000581 | ND | | 0.00116 | 0.000602 | ND | | 0.00119 | 0.000618 | ND | | 0.0011 | 0.000571 |
| Ethylbenzene | **1** | **41** | ND | | 0.00105 | 0.000114 | ND | | 0.00117 | 0.000128 | ND | | 0.00114 | 0.000124 | ND | | 0.00102 | 0.000111 | ND | | 0.00112 | 0.000122 | ND | | 0.00116 | 0.000126 | ND | | 0.00119 | 0.00013 | ND | | 0.0011 | 0.00012 |
| Isopropylbenzene | **NS** | **NS** | ND | | 0.00105 | 0.000224 | ND | | 0.00117 | 0.000249 | ND | | 0.00114 | 0.000243 | ND | | 0.00102 | 0.000217 | ND | | 0.00112 | 0.000239 | ND | | 0.00116 | 0.000247 | ND | | 0.00119 | 0.000253 | ND | | 0.0011 | 0.000234 |
| Methyl acetate | **NS** | **NS** | ND | | 0.00105 | 0.000848 | ND | | 0.00117 | 0.000945 | ND | | 0.00114 | 0.000921 | ND | | 0.00102 | 0.000824 | ND | | 0.00112 | 0.000905 | ND | | 0.00116 | 0.000937 | ND | | 0.00119 | 0.000962 | ND | | 0.0011 | 0.000889 |
| Methyl tert-butyl ether (MTBE) | **0.93** | **100** | ND | | 0.00105 | 0.000229 | ND | | 0.00117 | 0.000255 | ND | | 0.00114 | 0.000249 | ND | | 0.00102 | 0.000222 | ND | | 0.00112 | 0.000244 | ND | | 0.00116 | 0.000253 | ND | | 0.00119 | 0.000259 | ND | | 0.0011 | 0.00024 |
| Methylcyclohexane | **NS** | **NS** | ND | | 0.0021 | 0.000181 | ND | | 0.00234 | 0.000201 | ND | | 0.00228 | 0.000196 | ND | | 0.00204 | 0.000175 | ND | | 0.00224 | 0.000193 | ND | | 0.00232 | 0.0002 | ND | | 0.00238 | 0.000205 | ND | | 0.0022 | 0.000189 |
| Methylene chloride | **0.05** | **100** | ND | | 0.00525 | 0.00315 | ND | | 0.00585 | 0.00351 | ND | | 0.0057 | 0.00342 | ND | | 0.0051 | 0.00306 | ND | | 0.0056 | 0.00336 | ND | | 0.0058 | 0.00348 | ND | | 0.00595 | 0.00357 | ND | | 0.0055 | 0.0033 |
| Styrene | **NS** | **NS** | ND | | 0.00105 | 0.000226 | ND | | 0.00117 | 0.000252 | ND | | 0.00114 | 0.000245 | ND | | 0.00102 | 0.000219 | ND | | 0.00112 | 0.000241 | ND | | 0.00116 | 0.000249 | ND | | 0.00119 | 0.000256 | ND | | 0.0011 | 0.000237 |
| Tetrachloroethene | **1.3** | **19** | ND | | 0.00105 | 0.000108 | ND | | 0.00117 | 0.000121 | ND | | 0.00114 | 0.000117 | ND | | 0.00102 | 0.000105 | ND | | 0.00112 | 0.000115 | ND | | 0.00116 | 0.000119 | ND | | 0.00119 | 0.000123 | ND | | 0.0011 | 0.000113 |
| Toluene | **0.7** | **100** | ND | | 0.00105 | 0.000525 | ND | | 0.00117 | 0.000585 | ND | | 0.00114 | 0.00057 | ND | | 0.00102 | 0.00051 | ND | | 0.00112 | 0.00056 | ND | | 0.00116 | 0.00058 | ND | | 0.00119 | 0.000595 | ND | | 0.0011 | 0.00055 |
| Total Xylenes | **0.26** | **100** | ND | | 0.0021 | 0.000147 | ND | | 0.00234 | 0.000164 | ND | | 0.00228 | 0.00016 | ND | | 0.00204 | 0.000143 | ND | | 0.00224 | 0.000157 | ND | | 0.00232 | 0.000162 | ND | | 0.00238 | 0.000167 | ND | | 0.0022 | 0.000154 |
| trans-1,2-Dichloroethene | **0.19** | **100** | ND | | 0.0021 | 0.000372 | ND | | 0.00234 | 0.000414 | ND | | 0.00228 | 0.000404 | ND | | 0.00204 | 0.000361 | ND | | 0.00224 | 0.000396 | ND | | 0.00232 | 0.000411 | ND | | 0.00238 | 0.000421 | ND | | 0.0022 | 0.000389 |
| trans-1,3-Dichloropropene | **NS** | **NS** | ND | | 0.00105 | 0.000117 | ND | | 0.00117 | 0.00013 | ND | | 0.00114 | 0.000127 | ND | | 0.00102 | 0.000113 | ND | | 0.00112 | 0.000124 | ND | | 0.00116 | 0.000129 | ND | | 0.00119 | 0.000132 | ND | | 0.0011 | 0.000122 |
| Trichloroethene | **0.47** | **21** | ND | | 0.00105 | 0.000156 | ND | | 0.00117 | 0.000174 | ND | | 0.00114 | 0.00017 | ND | | 0.00102 | 0.000152 | ND | | 0.00112 | 0.000167 | ND | | 0.00116 | 0.000173 | ND | | 0.00119 | 0.000177 | ND | | 0.0011 | 0.000164 |
| Trichlorofluoromethane | **NS** | **NS** | ND | | 0.00105 | 0.000426 | ND | | 0.00117 | 0.000475 | ND | | 0.00114 | 0.000463 | ND | | 0.00102 | 0.000414 | ND | | 0.00112 | 0.000455 | ND | | 0.00116 | 0.000471 | ND | | 0.00119 | 0.000483 | ND | | 0.0011 | 0.000447 |
| Vinyl chloride | **0.02** | **0.9** | ND | | 0.00105 | 0.00034 | ND | | 0.00117 | 0.000379 | ND | | 0.00114 | 0.000369 | ND | | 0.00102 | 0.00033 | ND | | 0.00112 | 0.000363 | ND | | 0.00116 | 0.000376 | ND | | 0.00119 | 0.000386 | ND | | 0.0011 | 0.000356 |
| TOTAL VO's: | **NS** | **NS** | 0.031 | | | NA | ND | | | NA | ND | | | NA | 0.00529 | J | | NA | 0.00649 | J | | NA | ND | | | NA | ND | | | NA | 0.0068 | J | | NA |
| TOTAL TIC's: | **NS** | **NS** | ND | | | NA | ND | | | NA | ND | | | NA | ND | | | NA | ND | | | NA | ND | | | NA | ND | | | NA | 0.041 | JN | | NA |
| TOTAL VO's & TIC's: | **NS** | **NS** | 0.031 | | | NA | ND | | | NA | ND | | | NA | 0.00529 | J | | NA | 0.00649 | J | | NA | ND | | | NA | ND | | | NA | 0.048 | J | | NA |

**Results in Yellow Highlight displays exceedance above the UUSCO regulatory standard**
**Results in Green Highlight displays exceedance above both UUSCO & RRUSCO regulatory standard**
**J = Concentration detected at a value below the RL and above the MDL for target compounds**
**N = Presumptive evidence of a compound from the use of GC/MS library search.**

**NS = No Standard Available**
**D = The compound was reported from the Diluted analysis**
**ND = Analyzed for but Not Detected at the MDL**

**Table 1B (Cont'd) - Soil Results - SVOCs**
**Chelsea Elliott**
**New York, NY**

**HK Engineering & Geology, D.P.C.**
**Project #: HK2661.1**

| Target Compounds | NYSDEC Unrestricted Use SCO | NYSDEC Restricted Residential SCO | SB5A Sample Depth: 0-2' | | | | SB5B Sample Depth: 10-12' | | | | SB6A Sample Depth: 0-2' | | | | SB6B Sample Depth: 10-12' | | | | SB8A Sample Depth: 2-14" | | | | SB9A Sample Depth: 0-2' | | | | SB9B Sample Depth: 10-12' | | | | SB10A Sample Depth: 18-30" | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Semivolatiles - BNA (mg/Kg)** | | | Conc | Q | RL | MDL | Conc | Q | RL | MDL | Conc | Q | RL | MDL | Conc | Q | RL | MDL | Conc | Q | RL | MDL | Conc | Q | RL | MDL | Conc | Q | RL | MDL | Conc | Q | RL | MDL |
| 1,1'-Biphenyl | NS | NS | ND | | 0.037 | 0.00545 | ND | | 0.039 | 0.00579 | ND | | 0.036 | 0.00528 | ND | | 0.036 | 0.00542 | ND | | 0.035 | 0.00523 | ND | | 0.036 | 0.00532 | ND | | 0.036 | 0.00528 | ND | | 0.037 | 0.00544 |
| 1,2,4,5-Tetrachlorobenzene | NS | NS | ND | | 0.037 | 0.012 | ND | | 0.039 | 0.013 | ND | | 0.036 | 0.012 | ND | | 0.036 | 0.012 | ND | | 0.035 | 0.012 | ND | | 0.036 | 0.012 | ND | | 0.036 | 0.012 | ND | | 0.037 | 0.012 |
| 1,4-Dioxane | 0.1 | 13 | ND | | 0.037 | 0.024 | ND | | 0.039 | 0.025 | ND | | 0.036 | 0.023 | ND | | 0.036 | 0.024 | ND | | 0.035 | 0.23 | ND | | 0.036 | 0.023 | ND | | 0.036 | 0.023 | ND | | 0.037 | 0.024 |
| 2,2'-Oxybis(1-Chloropropane) | NS | NS | ND | | 0.037 | 0.00914 | ND | | 0.039 | 0.00971 | ND | | 0.036 | 0.00885 | ND | | 0.036 | 0.00909 | ND | | 0.035 | 0.00877 | ND | | 0.036 | 0.00891 | ND | | 0.036 | 0.00885 | ND | | 0.037 | 0.00913 |
| 2,3,4,6-Tetrachlorophenol | NS | NS | ND | | 0.037 | 0.013 | ND | | 0.039 | 0.013 | ND | | 0.036 | 0.012 | ND | | 0.036 | 0.013 | ND | | 0.035 | 0.012 | ND | | 0.036 | 0.012 | ND | | 0.036 | 0.012 | ND | | 0.037 | 0.013 |
| 2,4,5-Trichlorophenol | NS | NS | ND | | 0.037 | 0.028 | ND | | 0.039 | 0.030 | ND | | 0.036 | 0.027 | ND | | 0.036 | 0.028 | ND | | 0.035 | 0.027 | ND | | 0.036 | 0.027 | ND | | 0.036 | 0.027 | ND | | 0.037 | 0.028 |
| 2,4,6-Trichlorophenol | NS | NS | ND | | 0.037 | 0.010 | ND | | 0.039 | 0.011 | ND | | 0.036 | 0.00976 | ND | | 0.036 | 0.010 | ND | | 0.035 | 0.00967 | ND | | 0.036 | 0.00982 | ND | | 0.036 | 0.00976 | ND | | 0.037 | 0.010 |
| 2,4-Dichlorophenol | NS | NS | ND | | 0.037 | 0.00974 | ND | | 0.039 | 0.010 | ND | | 0.036 | 0.00944 | ND | | 0.036 | 0.00969 | ND | | 0.035 | 0.00935 | ND | | 0.036 | 0.0095 | ND | | 0.036 | 0.00944 | ND | | 0.037 | 0.00973 |
| 2,4-Dimethylphenol | NS | NS | ND | | 0.037 | 0.011 | ND | | 0.039 | 0.012 | ND | | 0.036 | 0.010 | ND | | 0.036 | 0.011 | ND | | 0.035 | 0.010 | ND | | 0.036 | 0.011 | ND | | 0.036 | 0.010 | ND | | 0.037 | 0.011 |
| 2,4-Dinitrophenol | NS | NS | ND | | 0.073 | 0.015 | ND | | 0.078 | 0.016 | ND | | 0.071 | 0.015 | ND | | 0.073 | 0.015 | ND | | 0.070 | 0.015 | ND | | 0.072 | 0.015 | ND | | 0.071 | 0.015 | ND | | 0.073 | 0.015 |
| 2,4-Dinitrotoluene | NS | NS | ND | | 0.073 | 0.042 | ND | | 0.078 | 0.044 | ND | | 0.071 | 0.040 | ND | | 0.073 | 0.041 | ND | | 0.070 | 0.040 | ND | | 0.072 | 0.041 | ND | | 0.071 | 0.040 | ND | | 0.073 | 0.041 |
| 2,6-Dinitrotoluene | NS | NS | ND | | 0.073 | 0.042 | ND | | 0.078 | 0.045 | ND | | 0.071 | 0.041 | ND | | 0.073 | 0.042 | ND | | 0.070 | 0.040 | ND | | 0.072 | 0.041 | ND | | 0.071 | 0.041 | ND | | 0.073 | 0.042 |
| 2-Chloronaphthalene | NS | NS | ND | | 0.037 | 0.00846 | ND | | 0.039 | 0.009 | ND | | 0.036 | 0.0082 | ND | | 0.036 | 0.00842 | ND | | 0.035 | 0.00812 | ND | | 0.036 | 0.00825 | ND | | 0.036 | 0.0082 | ND | | 0.037 | 0.00845 |
| 2-Chlorophenol | NS | NS | ND | | 0.037 | 0.012 | ND | | 0.039 | 0.013 | ND | | 0.036 | 0.012 | ND | | 0.036 | 0.012 | ND | | 0.035 | 0.011 | ND | | 0.036 | 0.012 | ND | | 0.036 | 0.012 | ND | | 0.037 | 0.012 |
| 2-Methylnaphthalene | NS | NS | ND | | 0.037 | 0.013 | ND | | 0.039 | 0.014 | ND | | 0.036 | 0.013 | ND | | 0.036 | 0.013 | ND | | 0.035 | 0.012 | ND | | 0.036 | 0.013 | 0.031 | J | 0.036 | 0.013 | ND | | 0.037 | 0.013 |
| 2-Methylphenol | 0.33 | 100 | ND | | 0.037 | 0.017 | ND | | 0.039 | 0.018 | ND | | 0.036 | 0.016 | ND | | 0.036 | 0.016 | ND | | 0.035 | 0.016 | ND | | 0.036 | 0.016 | ND | | 0.036 | 0.016 | ND | | 0.037 | 0.016 |
| 2-Nitroaniline | NS | NS | ND | | 0.037 | 0.020 | ND | | 0.039 | 0.021 | ND | | 0.036 | 0.019 | ND | | 0.036 | 0.019 | ND | | 0.035 | 0.019 | ND | | 0.036 | 0.019 | ND | | 0.036 | 0.019 | ND | | 0.037 | 0.019 |
| 2-Nitrophenol | NS | NS | ND | | 0.073 | 0.022 | ND | | 0.078 | 0.023 | ND | | 0.071 | 0.021 | ND | | 0.073 | 0.022 | ND | | 0.070 | 0.021 | ND | | 0.072 | 0.021 | ND | | 0.071 | 0.021 | ND | | 0.073 | 0.022 |
| 3,3'-Dichlorobenzidine | NS | NS | ND | | 0.037 | 0.026 | ND | | 0.039 | 0.028 | ND | | 0.036 | 0.025 | ND | | 0.036 | 0.026 | ND | | 0.035 | 0.025 | ND | | 0.036 | 0.025 | ND | | 0.036 | 0.025 | ND | | 0.037 | 0.026 |
| 3-Nitroaniline | NS | NS | ND | | 0.037 | 0.023 | ND | | 0.039 | 0.025 | ND | | 0.036 | 0.023 | ND | | 0.036 | 0.023 | ND | | 0.035 | 0.022 | ND | | 0.036 | 0.023 | ND | | 0.036 | 0.023 | ND | | 0.037 | 0.023 |
| 4,6-Dinitro-2-methylphenol | NS | NS | ND | | 0.073 | 0.016 | ND | | 0.078 | 0.017 | ND | | 0.071 | 0.015 | ND | | 0.073 | 0.015 | ND | | 0.070 | 0.015 | ND | | 0.072 | 0.015 | ND | | 0.071 | 0.015 | ND | | 0.073 | 0.016 |
| 4-Bromophenyl phenyl ether | NS | NS | ND | | 0.037 | 0.010 | ND | | 0.039 | 0.011 | ND | | 0.036 | 0.00983 | ND | | 0.036 | 0.010 | ND | | 0.035 | 0.00974 | ND | | 0.036 | 0.0099 | ND | | 0.036 | 0.00983 | ND | | 0.037 | 0.010 |
| 4-Chloro-3-methylphenol | NS | NS | ND | | 0.037 | 0.014 | ND | | 0.039 | 0.015 | ND | | 0.036 | 0.014 | ND | | 0.036 | 0.014 | ND | | 0.035 | 0.014 | ND | | 0.036 | 0.014 | ND | | 0.036 | 0.014 | ND | | 0.037 | 0.014 |
| 4-Chloroaniline | NS | NS | ND | | 0.037 | 0.014 | ND | | 0.039 | 0.015 | ND | | 0.036 | 0.014 | ND | | 0.036 | 0.014 | ND | | 0.035 | 0.014 | ND | | 0.036 | 0.014 | ND | | 0.036 | 0.014 | ND | | 0.037 | 0.014 |
| 4-Chlorophenyl phenyl ether | NS | NS | ND | | 0.037 | 0.00805 | ND | | 0.039 | 0.00856 | ND | | 0.036 | 0.0078 | ND | | 0.036 | 0.00801 | ND | | 0.035 | 0.00773 | ND | | 0.036 | 0.00785 | ND | | 0.036 | 0.0078 | ND | | 0.037 | 0.00804 |
| 4-Methylphenol ** | 0.33 | 100 | ND | | 0.037 | 0.017 | ND | | 0.039 | 0.018 | ND | | 0.036 | 0.016 | ND | | 0.036 | 0.017 | ND | | 0.035 | 0.016 | ND | | 0.036 | 0.016 | ND | | 0.036 | 0.016 | ND | | 0.037 | 0.017 |
| 4-Nitroaniline | NS | NS | ND | | 0.037 | 0.022 | ND | | 0.039 | 0.023 | ND | | 0.036 | 0.021 | ND | | 0.036 | 0.022 | ND | | 0.035 | 0.021 | ND | | 0.036 | 0.021 | ND | | 0.036 | 0.021 | ND | | 0.037 | 0.022 |
| 4-Nitrophenol | NS | NS | ND | | 0.073 | 0.037 | ND | | 0.078 | 0.039 | ND | | 0.071 | 0.036 | ND | | 0.073 | 0.037 | ND | | 0.070 | 0.036 | ND | | 0.072 | 0.036 | ND | | 0.071 | 0.036 | ND | | 0.073 | 0.037 |
| Acenaphthene | 20 | 100 | ND | | 0.037 | 0.00723 | ND | | 0.039 | 0.00769 | 0.021 | J | 0.036 | 0.00701 | ND | | 0.036 | 0.00719 | ND | | 0.035 | 0.00694 | ND | | 0.036 | 0.00706 | 0.209 | | 0.036 | 0.00701 | 0.115 | | 0.037 | 0.00723 |
| Acenaphthylene | 100 | 100 | ND | | 0.037 | 0.00802 | ND | | 0.039 | 0.00852 | 0.027 | J | 0.036 | 0.00777 | ND | | 0.036 | 0.00797 | ND | | 0.035 | 0.0077 | ND | | 0.036 | 0.00782 | ND | | 0.036 | 0.00777 | 0.078 | | 0.037 | 0.00801 |
| Acetophenone | NS | NS | ND | | 0.037 | 0.022 | ND | | 0.039 | 0.024 | ND | | 0.036 | 0.022 | ND | | 0.036 | 0.022 | ND | | 0.035 | 0.021 | ND | | 0.036 | 0.022 | ND | | 0.036 | 0.022 | ND | | 0.037 | 0.022 |
| Anthracene | 100 | 100 | ND | | 0.037 | 0.00373 | ND | | 0.039 | 0.00396 | 0.075 | | 0.036 | 0.00361 | 0.051 | | 0.036 | 0.00371 | ND | | 0.035 | 0.00358 | 0.031 | J | 0.036 | 0.00364 | 0.707 | | 0.036 | 0.00361 | 0.447 | | 0.037 | 0.00372 |
| Atrazine | NS | NS | ND | | 0.037 | 0.022 | ND | | 0.039 | 0.023 | ND | | 0.036 | 0.021 | ND | | 0.036 | 0.022 | ND | | 0.035 | 0.021 | ND | | 0.036 | 0.021 | ND | | 0.036 | 0.021 | ND | | 0.037 | 0.022 |
| Benzaldehyde | NS | NS | ND | | 0.073 | 0.028 | ND | | 0.078 | 0.029 | ND | | 0.071 | 0.027 | ND | | 0.073 | 0.027 | ND | | 0.070 | 0.026 | ND | | 0.072 | 0.027 | ND | | 0.071 | 0.027 | ND | | 0.073 | 0.028 |
| Benzo[a]anthracene | 1 | 1 | 0.035 | J | 0.037 | 0.013 | ND | | 0.039 | 0.014 | 0.304 | | 0.036 | 0.013 | 0.225 | | 0.036 | 0.013 | ND | | 0.035 | 0.013 | 0.106 | | 0.036 | 0.013 | **3.62** | | 0.036 | 0.013 | **1.62** | | 0.037 | 0.013 |
| Benzo[a]pyrene | 1 | 1 | 0.030 | J | 0.037 | 0.018 | ND | | 0.039 | 0.019 | 0.314 | | 0.036 | 0.017 | 0.215 | | 0.036 | 0.018 | ND | | 0.035 | 0.017 | 0.103 | | 0.036 | 0.017 | **3.61** | | 0.036 | 0.017 | **1.48** | | 0.037 | 0.018 |
| Benzo[b]fluoranthene | 1 | 1 | 0.034 | J | 0.037 | 0.018 | ND | | 0.039 | 0.019 | 0.347 | | 0.036 | 0.018 | 0.246 | | 0.036 | 0.018 | ND | | 0.035 | 0.017 | 0.150 | | 0.036 | 0.018 | **4.33** | | 0.036 | 0.018 | **1.51** | | 0.037 | 0.018 |
| Benzo[g,h,i]perylene | 100 | 100 | ND | | 0.037 | 0.028 | ND | | 0.039 | 0.029 | 0.308 | | 0.036 | 0.027 | 0.125 | | 0.036 | 0.028 | ND | | 0.035 | 0.027 | 0.453 | | 0.036 | 0.027 | 1.89 | | 0.036 | 0.027 | 1.07 | | 0.037 | 0.028 |
| Benzo[k]fluoranthene | 0.8 | 3.9 | 0.028 | J | 0.037 | 0.025 | ND | | 0.039 | 0.027 | 0.242 | | 0.036 | 0.025 | 0.142 | | 0.036 | 0.025 | ND | | 0.035 | 0.024 | 0.072 | | 0.036 | 0.025 | **2.66** | | 0.036 | 0.025 | **1.17** | | 0.037 | 0.025 |
| Bis(2-chloroethoxy) methane | NS | NS | ND | | 0.037 | 0.00816 | ND | | 0.039 | 0.00868 | ND | | 0.036 | 0.00791 | ND | | 0.036 | 0.00812 | ND | | 0.035 | 0.00784 | ND | | 0.036 | 0.00796 | ND | | 0.036 | 0.00791 | ND | | 0.037 | 0.00816 |
| Bis(2-chloroethyl) ether | NS | NS | ND | | 0.037 | 0.013 | ND | | 0.039 | 0.014 | ND | | 0.036 | 0.013 | ND | | 0.036 | 0.013 | ND | | 0.035 | 0.012 | ND | | 0.036 | 0.013 | ND | | 0.036 | 0.013 | ND | | 0.037 | 0.013 |
| Bis(2-ethylhexyl) phthalate | NS | NS | ND | | 0.037 | 0.024 | ND | | 0.039 | 0.025 | 0.035 | J | 0.036 | 0.023 | ND | | 0.036 | 0.023 | 0.032 | J | 0.035 | 0.023 | ND | | 0.036 | 0.023 | 0.109 | | 0.036 | 0.023 | ND | | 0.037 | 0.024 |
| Butyl benzyl phthalate | NS | NS | ND | | 0.037 | 0.016 | ND | | 0.039 | 0.017 | ND | | 0.036 | 0.016 | ND | | 0.036 | 0.016 | ND | | 0.035 | 0.016 | ND | | 0.036 | 0.016 | ND | | 0.036 | 0.016 | ND | | 0.037 | 0.016 |
| Caprolactam | NS | NS | ND | | 0.073 | 0.027 | ND | | 0.078 | 0.029 | ND | | 0.071 | 0.026 | ND | | 0.073 | 0.027 | ND | | 0.070 | 0.026 | ND | | 0.072 | 0.026 | ND | | 0.071 | 0.026 | ND | | 0.073 | 0.027 |
| Carbazole | NS | NS | ND | | 0.037 | 0.00854 | ND | | 0.039 | 0.00908 | 0.030 | J | 0.036 | 0.00827 | ND | | 0.036 | 0.00849 | ND | | 0.035 | 0.0082 | 0.018 | J | 0.036 | 0.00833 | 0.432 | | 0.036 | 0.00827 | 0.098 | | 0.037 | 0.00853 |
| Chrysene | 1 | 3.9 | 0.031 | J | 0.037 | 0.010 | ND | | 0.039 | 0.011 | 0.271 | | 0.036 | 0.0098 | 0.190 | | 0.036 | 0.010 | ND | | 0.035 | 0.0097 | 0.097 | | 0.036 | 0.00986 | **3.48** | | 0.036 | 0.0098 | **1.39** | | 0.037 | 0.010 |
| Dibenz[a,h]anthracene | 0.33 | 0.33 | ND | | 0.037 | 0.015 | ND | | 0.039 | 0.016 | 0.112 | | 0.036 | 0.014 | 0.055 | | 0.036 | 0.015 | ND | | 0.035 | 0.014 | 0.119 | | 0.036 | 0.014 | **0.942** | | 0.036 | 0.014 | **0.489** | | 0.037 | 0.015 |
| Dibenzofuran | 7 | 59 | ND | | 0.037 | 0.00479 | ND | | 0.039 | 0.00509 | ND | | 0.036 | 0.00464 | ND | | 0.036 | 0.00477 | ND | | 0.035 | 0.0046 | ND | | 0.036 | 0.00467 | 0.063 | | 0.036 | 0.00464 | 0.048 | | 0.037 | 0.00479 |
| Diethyl phthalate | NS | NS | ND | | 0.037 | 0.011 | ND | | 0.039 | 0.012 | ND | | 0.036 | 0.011 | ND | | 0.036 | 0.011 | ND | | 0.035 | 0.011 | ND | | 0.036 | 0.011 | ND | | 0.036 | 0.011 | ND | | 0.037 | 0.011 |
| Dimethyl phthalate | NS | NS | ND | | 0.037 | 0.00841 | ND | | 0.039 | 0.00894 | ND | | 0.036 | 0.00814 | ND | | 0.036 | 0.00836 | ND | | 0.035 | 0.00807 | ND | | 0.036 | 0.0082 | ND | | 0.036 | 0.00814 | ND | | 0.037 | 0.0084 |
| Di-n-butyl phthalate | NS | NS | ND | | 0.037 | 0.015 | ND | | 0.039 | 0.016 | ND | | 0.036 | 0.014 | ND | | 0.036 | 0.015 | ND | | 0.035 | 0.014 | ND | | 0.036 | 0.015 | ND | | 0.036 | 0.014 | ND | | 0.037 | 0.015 |
| Dinitrotoluene (2,4- and 2,6-) | NS | NS | ND | | 0.073 | 0.042 | ND | | 0.078 | 0.044 | ND | | 0.071 | 0.040 | ND | | 0.073 | 0.041 | ND | | 0.070 | 0.040 | ND | | 0.072 | 0.041 | ND | | 0.071 | 0.040 | ND | | 0.073 | 0.041 |
| Di-n-octyl phthalate | NS | NS | ND | | 0.037 | 0.027 | ND | | 0.039 | 0.029 | ND | | 0.036 | 0.026 | ND | | 0.036 | 0.027 | ND | | 0.035 | 0.026 | ND | | 0.036 | 0.026 | ND | | 0.036 | 0.026 | ND | | 0.037 | 0.027 |
| Fluoranthene | 100 | 100 | 0.057 | | 0.037 | 0.012 | 0.023 | J | 0.039 | 0.013 | 0.549 | | 0.036 | 0.011 | 0.451 | | 0.036 | 0.012 | 0.018 | J | 0.035 | 0.011 | 0.213 | | 0.036 | 0.012 | 10.6 | D | 0.426 | 0.137 | 3.39 | | 0.037 | 0.012 |
| Fluorene | 30 | 100 | ND | | 0.037 | 0.00986 | ND | | 0.039 | 0.011 | 0.020 | J | 0.036 | 0.00955 | ND | | 0.036 | 0.00981 | ND | | 0.035 | 0.00947 | ND | | 0.036 | 0.00962 | 0.154 | | 0.036 | 0.00955 | 0.098 | | 0.037 | 0.00985 |
| Hexachlorobenzene | 0.33 | 1.2 | ND | | 0.037 | 0.011 | ND | | 0.039 | 0.012 | ND | | 0.036 | 0.011 | ND | | 0.036 | 0.011 | ND | | 0.035 | 0.011 | ND | | 0.036 | 0.011 | ND | | 0.036 | 0.011 | ND | | 0.037 | 0.011 |
| Hexachlorobutadiene | NS | NS | ND | | 0.037 | 0.010 | ND | | 0.039 | 0.011 | ND | | 0.036 | 0.00985 | ND | | 0.036 | 0.010 | ND | | 0.035 | 0.00976 | ND | | 0.036 | 0.00992 | ND | | 0.036 | 0.00985 | ND | | 0.037 | 0.010 |
| Hexachlorocyclopentadiene | NS | NS | ND | | 0.073 | 0.064 | ND | | 0.078 | 0.068 | ND | | 0.071 | 0.062 | ND | | 0.073 | 0.063 | ND | | 0.070 | 0.061 | ND | | 0.072 | 0.062 | ND | | 0.071 | 0.062 | ND | | 0.073 | 0.064 |
| Hexachloroethane | NS | NS | ND | | 0.037 | 0.015 | ND | | 0.039 | 0.016 | ND | | 0.036 | 0.015 | ND | | 0.036 | 0.015 | ND | | 0.035 | 0.015 | ND | | 0.036 | 0.015 | ND | | 0.036 | 0.015 | ND | | 0.037 | 0.015 |
| Indeno[1,2,3-cd]pyrene | 0.5 | 0.5 | ND | | 0.037 | 0.023 | ND | | 0.039 | 0.025 | 0.242 | | 0.036 | 0.023 | 0.128 | | 0.036 | 0.023 | ND | | 0.035 | 0.023 | 0.254 | | 0.036 | 0.023 | **1.93** | | 0.036 | 0.023 | **0.932** | | 0.037 | 0.023 |
| Isophorone | NS | NS | ND | | 0.037 | 0.015 | ND | | 0.039 | 0.016 | ND | | 0.036 | 0.015 | ND | | 0.036 | 0.015 | ND | | 0.035 | 0.015 | ND | | 0.036 | 0.015 | ND | | 0.036 | 0.015 | ND | | 0.037 | 0.015 |
| Naphthalene | 12 | 100 | ND | | 0.037 | 0.00534 | ND | | 0.039 | 0.00568 | ND | | 0.036 | 0.00518 | ND | | 0.036 | 0.00532 | ND | | 0.035 | 0.00513 | ND | | 0.036 | 0.00521 | 0.029 | J | 0.036 | 0.00518 | ND | | 0.037 | 0.00534 |
| Nitrobenzene | NS | 15 | ND | | 0.037 | 0.00889 | ND | | 0.039 | 0.00945 | ND | | 0.036 | 0.00862 | ND | | 0.036 | 0.00885 | ND | | 0.035 | 0.00854 | ND | | 0.036 | 0.00868 | ND | | 0.036 | 0.00862 | ND | | 0.037 | 0.00888 |
| N-Nitrosodi-n-propylamine | NS | NS | ND | | 0.037 | 0.023 | ND | | 0.039 | 0.024 | ND | | 0.036 | 0.022 | ND | | 0.036 | 0.023 | ND | | 0.035 | 0.022 | ND | | 0.036 | 0.022 | ND | | 0.036 | 0.022 | ND | | 0.037 | 0.023 |
| N-Nitrosodiphenylamine | NS | NS | ND | | 0.037 | 0.00752 | ND | | 0.039 | 0.00799 | ND | | 0.036 | 0.00728 | ND | | 0.036 | 0.00748 | ND | | 0.035 | 0.00721 | ND | | 0.036 | 0.00733 | ND | | 0.036 | 0.00728 | ND | | 0.037 | 0.00751 |
| Pentachlorophenol | 0.8 | 6.7 | ND | | 0.037 | 0.016 | ND | | 0.039 | 0.017 | ND | | 0.036 | 0.016 | ND | | 0.036 | 0.016 | ND | | 0.035 | 0.016 | ND | | 0.036 | 0.016 | ND | | 0.036 | 0.016 | ND | | 0.037 | 0.016 |
| Phenanthrene | 100 | 100 | 0.035 | J | 0.037 | 0.00599 | ND | | 0.039 | 0.00637 | 0.237 | | 0.036 | 0.00581 | 0.150 | | 0.036 | 0.00596 | ND | | 0.035 | 0.00575 | 0.113 | | 0.036 | 0.00585 | 2.56 | | 0.036 | 0.00581 | 1.62 | | 0.037 | 0.00599 |
| Phenol | 0.33 | 100 | ND | | 0.037 | 0.00829 | ND | | 0.039 | 0.00881 | ND | | 0.036 | 0.00803 | ND | | 0.036 | 0.00824 | ND | | 0.035 | 0.00795 | ND | | 0.036 | 0.00808 | ND | | 0.036 | 0.00803 | ND | | 0.037 | 0.00828 |
| Pyrene | 100 | 100 | 0.054 | | 0.037 | 0.00852 | 0.024 | J | 0.039 | 0.00906 | 0.500 | | 0.036 | 0.00826 | 0.386 | | 0.036 | 0.00848 | 0.019 | J | 0.035 | 0.00818 | 0.174 | | 0.036 | 0.00831 | 8.03 | D | 0.426 | 0.099 | 2.81 | | 0.037 | 0.00851 |
| TOTAL BNA'S: | NS | NS | 0.304 | J | | NA | 0.047 | J | | NA | 3.63 | J | | NA | 2.36 | | | NA | 0.069 | J | | NA | 1.90 | J | | NA | 45.4 | JD | | NA | 18.4 | | | NA |
| TOTAL TIC's: | NS | NS | 0.568 | JN | | NA | 0.903 | JN | | NA | 0.479 | JN | | NA | 0.215 | JN | | NA | 0.232 | JN | | NA | ND | | | NA | 1.76 | JN | | NA | 0.168 | JN | | NA |
| TOTAL BNA'S & TIC's: | NS | NS | 0.872 | J | | NA | 0.950 | J | | NA | 4.11 | JN | | NA | 2.57 | JN | | NA | 0.301 | J | | NA | 1.90 | J | | NA | 47.2 | JDN | | NA | 18.6 | | | NA |

**Results in Yellow Highlight displays exceedance above the UUSCO regulatory standard**
**Results in Green Highlight displays exceedance above both UUSCO & RRUSCO regulatory standard**
**J = Concentration detected at a value below the RL and above the MDL for target compounds**
**N = Presumptive evidence of a compound from the use of GC/MS library search.**

**NS = No Standard Available**
**D = The compound was reported from the Diluted analysis**
**ND = Analyzed for but Not Detected at the MDL**

**Table 1B (Cont'd) - Soil Results - PCBs, Pesticides, Metals**
**Chelsea Elliott**
**New York, NY**

**HK Engineering & Geology, D.P.C.**
**Project #: HK2661.1**

| Target Compounds | NYSDEC Unrestricted Use SCO | NYSDEC Restricted Residential SCO | SB5A Sample Depth: 0-2' | | | | SB5B Sample Depth: 10-12' | | | | SB6A Sample Depth: 0-2' | | | | SB6B Sample Depth: 10-12' | | | | SB8A Sample Depth: 2-14" | | | | SB9A Sample Depth: 0-2' | | | | SB9B Sample Depth: 10-12' | | | | SB10A Sample Depth: 18-30" | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PCB's (mg/Kg)** | | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| Aroclor-1016 | **NS** | **NS** | ND | | 0.00365 | 0.0011 | ND | | 0.00389 | 0.0012 | ND | | 0.00356 | 0.0011 | ND | | 0.00366 | 0.0011 | ND | | 0.0035 | 0.0011 | ND | | 0.00356 | 0.0011 | ND | | 0.00356 | 0.0011 | ND | | 0.00364 | 0.0011 |
| Aroclor-1221 | **NS** | **NS** | ND | | 0.00365 | 0.0011 | ND | | 0.00389 | 0.0012 | ND | | 0.00356 | 0.0011 | ND | | 0.00366 | 0.0011 | ND | | 0.0035 | 0.0011 | ND | | 0.00356 | 0.0011 | ND | | 0.00356 | 0.0011 | ND | | 0.00364 | 0.0011 |
| Aroclor-1232 | **NS** | **NS** | ND | | 0.00365 | 0.0011 | ND | | 0.00389 | 0.0012 | ND | | 0.00356 | 0.0011 | ND | | 0.00366 | 0.0011 | ND | | 0.0035 | 0.0011 | ND | | 0.00356 | 0.0011 | ND | | 0.00356 | 0.0011 | ND | | 0.00364 | 0.0011 |
| Aroclor-1242 | **NS** | **NS** | ND | | 0.00365 | 0.0011 | ND | | 0.00389 | 0.0012 | ND | | 0.00356 | 0.0011 | ND | | 0.00366 | 0.0011 | ND | | 0.0035 | 0.0011 | ND | | 0.00356 | 0.0011 | ND | | 0.00356 | 0.0011 | ND | | 0.00364 | 0.0011 |
| Aroclor-1248 | **NS** | **NS** | ND | | 0.00365 | 0.0011 | ND | | 0.00389 | 0.0012 | ND | | 0.00356 | 0.0011 | ND | | 0.00366 | 0.0011 | ND | | 0.0035 | 0.0011 | ND | | 0.00356 | 0.0011 | ND | | 0.00356 | 0.0011 | ND | | 0.00364 | 0.0011 |
| Aroclor-1254 | **NS** | **NS** | ND | | 0.00365 | 0.0011 | ND | | 0.00389 | 0.0012 | ND | | 0.00356 | 0.0011 | ND | | 0.00366 | 0.0011 | ND | | 0.0035 | 0.0011 | ND | | 0.00356 | 0.0011 | ND | | 0.00356 | 0.0011 | ND | | 0.00364 | 0.0011 |
| Aroclor-1260 | **NS** | **NS** | ND | | 0.00365 | 0.0011 | ND | | 0.00389 | 0.0012 | ND | | 0.00356 | 0.0011 | ND | | 0.00366 | 0.0011 | ND | | 0.0035 | 0.0011 | ND | | 0.00356 | 0.0011 | ND | | 0.00356 | 0.0011 | ND | | 0.00364 | 0.0011 |
| Aroclor-1262 | **NS** | **NS** | ND | | 0.00365 | 0.0011 | ND | | 0.00389 | 0.0012 | ND | | 0.00356 | 0.0011 | ND | | 0.00366 | 0.0011 | ND | | 0.0035 | 0.0011 | ND | | 0.00356 | 0.0011 | ND | | 0.00356 | 0.0011 | ND | | 0.00364 | 0.0011 |
| Aroclor-1268 | **NS** | **NS** | ND | | 0.00365 | 0.0011 | ND | | 0.00389 | 0.0012 | ND | | 0.00356 | 0.0011 | ND | | 0.00366 | 0.0011 | ND | | 0.0035 | 0.0011 | ND | | 0.00356 | 0.0011 | ND | | 0.00356 | 0.0011 | ND | | 0.00364 | 0.0011 |
| PCBs | **0.1** | **1** | ND | | 0.00365 | 0.0011 | ND | | 0.00389 | 0.00117 | ND | | 0.00356 | 0.00107 | ND | | 0.00366 | 0.0011 | ND | | 0.0035 | 0.00105 | ND | | 0.00356 | 0.00107 | ND | | 0.00356 | 0.00107 | ND | | 0.00364 | 0.00109 |
| **Pesticides (mg/Kg)** | | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| alpha-BHC | **0.02** | **0.48** | ND | | 0.00073 | 0.00013 | ND | | 0.000778 | 0.000139 | ND | | 0.000712 | 0.000127 | ND | | 0.000732 | 0.000131 | ND | | 0.0007 | 0.000125 | ND | | 0.000712 | 0.000127 | ND | | 0.000712 | 0.000127 | ND | | 0.000728 | 0.00013 |
| beta-BHC | **0.036** | **0.36** | ND | | 0.00073 | 0.00017 | ND | | 0.000778 | 0.000181 | ND | | 0.000712 | 0.000166 | ND | | 0.000732 | 0.000171 | ND | | 0.0007 | 0.000163 | ND | | 0.000712 | 0.000166 | ND | | 0.000712 | 0.000166 | ND | | 0.000728 | 0.00017 |
| gamma-BHC (Lindane) | **0.1** | **1.3** | ND | | 0.00073 | 0.000163 | ND | | 0.000778 | 0.000173 | ND | | 0.000712 | 0.000159 | ND | | 0.000732 | 0.000163 | ND | | 0.0007 | 0.000156 | ND | | 0.000712 | 0.000159 | ND | | 0.000712 | 0.000159 | ND | | 0.000728 | 0.000162 |
| delta-BHC | **0.04** | **100** | ND | | 0.00073 | 0.000141 | ND | | 0.000778 | 0.000151 | ND | | 0.000712 | 0.000138 | ND | | 0.000732 | 0.000142 | ND | | 0.0007 | 0.000136 | ND | | 0.000712 | 0.000138 | ND | | 0.000712 | 0.000138 | ND | | 0.000728 | 0.000141 |
| Heptachlor | **0.042** | **2.1** | ND | | 0.00073 | 0.000173 | ND | | 0.000778 | 0.000185 | ND | | 0.000712 | 0.000169 | ND | | 0.000732 | 0.000174 | ND | | 0.0007 | 0.000166 | ND | | 0.000712 | 0.000169 | ND | | 0.000712 | 0.000169 | ND | | 0.000728 | 0.000173 |
| Aldrin | **0.005** | **0.097** | ND | | 0.00073 | 0.000153 | ND | | 0.000778 | 0.000163 | ND | | 0.000712 | 0.000149 | ND | | 0.000732 | 0.000153 | ND | | 0.0007 | 0.000147 | ND | | 0.000712 | 0.000149 | ND | | 0.000712 | 0.000149 | ND | | 0.000728 | 0.000152 |
| Heptachlor epoxide | **NS** | **NS** | ND | | 0.00073 | 0.000159 | ND | | 0.000778 | 0.000169 | ND | | 0.000712 | 0.000155 | ND | | 0.000732 | 0.000159 | ND | | 0.0007 | 0.000152 | ND | | 0.000712 | 0.000155 | ND | | 0.000712 | 0.000155 | ND | | 0.000728 | 0.000158 |
| Endosulfan I | **2.4** | **24** | ND | | 0.00073 | 0.000163 | ND | | 0.000778 | 0.000174 | ND | | 0.000712 | 0.000159 | ND | | 0.000732 | 0.000164 | ND | | 0.0007 | 0.000157 | ND | | 0.000712 | 0.000159 | ND | | 0.000712 | 0.000159 | ND | | 0.000728 | 0.000163 |
| 4,4'-DDE | **0.0033** | **8.9** | 0.00285 | | 0.00073 | 0.000149 | 0.00041 | J | 0.000778 | 0.000159 | **0.023** | | 0.000712 | 0.000145 | 0.000726 | J | 0.000732 | 0.000149 | **0.012** | | 0.0007 | 0.000143 | **0.011** | | 0.000712 | 0.000145 | **0.017** | | 0.000712 | 0.000145 | **0.095** | D | 0.00146 | 0.000297 |
| Dieldrin | **0.005** | **0.2** | ND | | 0.00073 | 0.000149 | ND | | 0.000778 | 0.000158 | ND | | 0.000712 | 0.000145 | ND | | 0.000732 | 0.000149 | ND | | 0.0007 | 0.000143 | ND | | 0.000712 | 0.000145 | ND | | 0.000712 | 0.000145 | ND | | 0.000728 | 0.000148 |
| Endrin | **0.014** | **11** | ND | | 0.00073 | 0.000184 | ND | | 0.000778 | 0.000196 | ND | | 0.000712 | 0.00018 | ND | | 0.000732 | 0.000184 | ND | | 0.0007 | 0.000177 | ND | | 0.000712 | 0.00018 | ND | | 0.000712 | 0.00018 | ND | | 0.000728 | 0.000184 |
| Endosulfan II | **2.4** | **24** | ND | | 0.00073 | 0.000167 | ND | | 0.000778 | 0.000178 | ND | | 0.000712 | 0.000163 | ND | | 0.000732 | 0.000168 | ND | | 0.0007 | 0.00016 | ND | | 0.000712 | 0.000163 | ND | | 0.000712 | 0.000163 | ND | | 0.000728 | 0.000167 |
| 4,4'-DDD | **0.0033** | **13** | **0.00649** | | 0.00073 | 0.000195 | 0.000444 | J | 0.000778 | 0.000207 | 0.00236 | | 0.000712 | 0.00019 | ND | | 0.000732 | 0.000195 | 0.000357 | J | 0.0007 | 0.000187 | 0.00103 | | 0.000712 | 0.00019 | **0.014** | | 0.000712 | 0.00019 | **0.014** | | 0.000728 | 0.000194 |
| Endrin aldehyde | **NS** | **NS** | ND | | 0.00073 | 0.000153 | ND | | 0.000778 | 0.000163 | ND | | 0.000712 | 0.000149 | ND | | 0.000732 | 0.000153 | ND | | 0.0007 | 0.000147 | ND | | 0.000712 | 0.000149 | ND | | 0.000712 | 0.000149 | ND | | 0.000728 | 0.000153 |
| Endosulfan sulfate | **2.4** | **24** | ND | | 0.00073 | 0.000181 | ND | | 0.000778 | 0.000193 | ND | | 0.000712 | 0.000176 | ND | | 0.000732 | 0.000181 | ND | | 0.0007 | 0.000173 | ND | | 0.000712 | 0.000176 | ND | | 0.000712 | 0.000176 | ND | | 0.000728 | 0.00018 |
| 4,4'-DDT | **0.0033** | **7.9** | 0.000589 | J | 0.00073 | 0.000136 | 0.000229 | J | 0.000778 | 0.000145 | **0.038** | | 0.000712 | 0.000133 | 0.00113 | | 0.000732 | 0.000136 | 0.0021 | | 0.0007 | 0.00013 | **0.00808** | | 0.000712 | 0.000133 | **0.023** | | 0.000712 | 0.000132 | **0.096** | D | 0.00146 | 0.000271 |
| Endrin ketone | **NS** | **NS** | ND | | 0.00073 | 0.000142 | ND | | 0.000778 | 0.000151 | ND | | 0.000712 | 0.000139 | ND | | 0.000732 | 0.000142 | ND | | 0.0007 | 0.000136 | ND | | 0.000712 | 0.000139 | ND | | 0.000712 | 0.000139 | ND | | 0.000728 | 0.000142 |
| Methoxychlor | **NS** | **NS** | ND | | 0.00073 | 0.000195 | ND | | 0.000778 | 0.000208 | ND | | 0.000712 | 0.00019 | ND | | 0.000732 | 0.000196 | ND | | 0.0007 | 0.000187 | ND | | 0.000712 | 0.00019 | ND | | 0.000712 | 0.00019 | ND | | 0.000728 | 0.000195 |
| alpha-Chlordane | **0.094** | **4.2** | ND | | 0.00073 | 0.000161 | ND | | 0.000778 | 0.000172 | 0.00126 | | 0.000712 | 0.000157 | ND | | 0.000732 | 0.000161 | ND | | 0.0007 | 0.000155 | 0.00913 | | 0.000712 | 0.000157 | 0.00246 | | 0.000712 | 0.000157 | ND | | 0.000728 | 0.000161 |
| gamma-Chlordane | **NS** | **NS** | ND | | 0.00073 | 0.000143 | ND | | 0.000778 | 0.000153 | 0.00125 | | 0.000712 | 0.00014 | ND | | 0.000732 | 0.000144 | ND | | 0.0007 | 0.000138 | 0.00769 | | 0.000712 | 0.00014 | 0.00274 | | 0.000712 | 0.00014 | ND | | 0.000728 | 0.000143 |
| Toxaphene | **NS** | **NS** | ND | | 0.00913 | 0.00365 | ND | | 0.00973 | 0.00389 | ND | | 0.0089 | 0.00356 | ND | | 0.00915 | 0.00366 | ND | | 0.00875 | 0.0035 | ND | | 0.0089 | 0.00356 | ND | | 0.0089 | 0.00356 | ND | | 0.0091 | 0.00364 |
| Endosulfan (I and II) | **NS** | **NS** | ND | | 0.00073 | 0.000163 | ND | | 0.000778 | 0.000174 | ND | | 0.000712 | 0.000159 | ND | | 0.000732 | 0.000164 | ND | | 0.0007 | 0.000157 | ND | | 0.000712 | 0.000159 | ND | | 0.000712 | 0.000159 | ND | | 0.000728 | 0.000163 |
| Chlordane (alpha and gamma) | **NS** | **NS** | ND | | 0.00073 | 0.000143 | ND | | 0.000778 | 0.000153 | 0.00251 | | 0.000712 | 0.00014 | ND | | 0.000732 | 0.000144 | ND | | 0.0007 | 0.000138 | 0.017 | | 0.000712 | 0.00014 | 0.0052 | | 0.000712 | 0.00014 | ND | | 0.000728 | 0.000143 |
| *** Metals (mg/Kg)** | | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| Aluminum | **NS** | **NS** | 10700 | | | | 7620 | | | | 5550 | | | | 6100 | | | | 6710 | | | | 6140 | | | | 11900 | | | | 7400 | | | |
| Antimony | **NS** | **NS** | <2.1 | | | | <2.3 | | | | <2.2 | | | | <2.1 | | | | <2.1 | | | | <2.1 | | | | <2.2 | | | | <2.2 | | | |
| Arsenic | **13** | **16** | 3.1 | | | | 2.5 | | | | 4.5 | | | | 3.8 | | | | 2.5 | | | | 3.5 | | | | 4.4 | | | | 3.6 | | | |
| Barium | **350** | **400** | 59.6 | | | | 43.4 | | | | 224 | | | | 38.0 | | | | 45.1 | | | | 46.7 | | | | 157 | | | | 90.2 | | | |
| Beryllium | **7.2** | **72** | 0.61 | | | | 0.47 | | | | 0.31 | | | | .28 | | | | 0.39 | | | | 0.37 | | | | 0.71 | | | | 0.46 | | | |
| Cadmium | **2.5** | **4.3** | <0.53 | | | | <0.57 | | | | <0.55 | | | | <0.53 | | | | <0.52 | | | | <0.53 | | | | <0.55 | | | | <0.56 | | | |
| Calcium | **NS** | **NS** | 2980 | | | | 2090 | | | | 30600 | | | | 17300 | | | | 15800 | | | | 9440 | | | | 8260 | | | | 31300 | | | |
| Chromium | **NS** | **NS** | 23.6 | | | | 17.0 | | | | 14.4 | | | | 13.5 | | | | 17.0 | | | | 14.2 | | | | 29.4 | | | | 22.0 | | | |
| Cobalt | **NS** | **NS** | 7.4 | | | | <5.7 | | | | <5.5 | | | | <5.3 | | | | <5.2 | | | | 6.6 | | | | 8.2 | | | | 6.1 | | | |
| Copper | **50** | **270** | 20.0 | | | | 16.2 | | | | 20.0 | | | | 15.6 | | | | 17.3 | | | | 16.0 | | | | 25.0 | | | | 26.4 | | | |
| Iron | **NS** | **NS** | 15600 | | | | 11300 | | | | 11000 | | | | 9790 | | | | 10900 | | | | 11700 | | | | 18400 | | | | 13700 | | | |
| Lead | **63** | **400** | 29.9 | | | | 27.7 | | | | **143** | | | | 48.9 | | | | 12 | | | | 21.5 | | | | **64.2** | | | | **159** | | | |
| Magnesium | **NS** | **NS** | 3310 | | | | 2480 | | | | 14100 | | | | 6650 | | | | 2740 | | | | 4360 | | | | 6700 | | | | 3600 | | | |
| Manganese | **1600** | **2000** | 443 | | | | 307 | | | | 275 | | | | 201 | | | | 321 | | | | 335 | | | | 562 | | | | 386 | | | |
| Mercury | **0.18** | **0.81** | **0.21** | | | | 0.11 | | | | 0.15 | | | | 0.054 | | | | 0.052 | | | | 0.044 | | | | 0.060 | | | | **0.27** | | | |
| Nickel | **30** | **310** | 21.9 | | | | 14 | | | | 20.2 | | | | 18.1 | | | | 16.5 | | | | 24.5 | | | | **31.3** | | | | 18.6 | | | |
| Potassium | **NS** | **NS** | 390 | | | | 1390 | | | | <1100 | | | | <1100 | | | | <1000 | | | | <1100 | | | | 2200 | | | | 1520 | | | |
| Selenium | **3.9** | **180** | <2.1 | | | | <2.3 | | | | <2.2 | | | | <2.1 | | | | <2.1 | | | | <2.1 | | | | <2.2 | | | | <2.2 | | | |
| Silver | **2** | **180** | 0.70 | | | | <0.57 | | | | 0.77 | | | | 0.78 | | | | <0.52 | | | | 0.86 | | | | 1.4 | | | | 0.58 | | | |
| Sodium | **NS** | **NS** | <1100 | | | | <1100 | | | | <1100 | | | | <1100 | | | | <1000 | | | | <1100 | | | | <1100 | | | | <1100 | | | |
| Thallium | **NS** | **NS** | <1.1 | | | | <1.1 | | | | <1.1 | | | | <1.1 | | | | <1.0 | | | | <1.1 | | | | <1.1 | | | | <1.1 | | | |
| Vanadium | **NS** | **NS** | 26.8 | | | | 19.5 | | | | 21.5 | | | | 20.0 | | | | 17.3 | | | | 19.1 | | | | 31.7 | | | | 21.6 | | | |
| Zinc | **109** | **10000** | 51.6 | | | | 30.1 | | | | 148 | | | | 66.2 | | | | 26.6 | | | | 39.9 | | | | 100 | | | | 54.9 | | | |
| **General Analytical** | | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | 4.73 | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| Cyanide, Total | **27** | **27** | ND | | 1.10 | 0.220 | ND | | 1.17 | 0.234 | ND | | 1.07 | 0.214 | ND | | 1.10 | 0.220 | ND | | 1.05 | 0.211 | ND | | 1.07 | 0.214 | ND | | 1.07 | 0.214 | ND | | 1.10 | 0.220 |

**Results in Yellow Highlight displays exceedance above the UUSCO regulatory standard**
**Results in Green Highlight displays exceedance above both UUSCO & RRUSCO regulatory standard**
**J = Concentration detected at a value below the RL and above the MDL for target compounds**
**N = Presumptive evidence of a compound from the use of GC/MS library search.**

**NS = No Standard Available**
**D = The compound was reported from the Diluted analysis**
**ND OR < = Analyzed for but Not Detected at the MDL**
**~ = Sample not analyzed**

*** TAL Metals analyzed by SGS Dayton.**
**[a] = Elevated detection limit due to dilution required for high interfering element**

**Table 1B (Cont'd) - Soil Results - VOCs**
**Chelsea Elliott**
**New York, NY**

**HK Engineering & Geology, D.P.C.**
**Project #: HK2661.1**

| Target Compounds | NYSDEC Unrestricted Use SCO | NYSDEC Restricted Residential SCO | SB11A Sample Depth: 8-24" | | | | SB12A Sample Depth: 0-2' | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatiles (mg/Kg)** | | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| 1,1,1-Trichloroethane | **0.68** | **100** | ND | | 0.00103 | 0.000316 | ND | | 0.0014 | 0.00043 |
| 1,1,2,2-Tetrachloroethane | **NS** | **NS** | ND | | 0.00103 | 0.000539 | ND | | 0.0014 | 0.000732 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | **NS** | **NS** | ND | | 0.00206 | 0.000615 | ND | | 0.0028 | 0.000836 |
| 1,1,2-Trichloroethane | **NS** | **NS** | ND | | 0.00103 | 0.00022 | ND | | 0.0014 | 0.0003 |
| 1,1-Dichloroethane | **0.27** | **26** | ND | | 0.00206 | 0.000263 | ND | | 0.0028 | 0.000357 |
| 1,1-Dichloroethene | **0.33** | **100** | ND | | 0.00103 | 0.000361 | ND | | 0.0014 | 0.00049 |
| 1,2,3-Trichlorobenzene | **NS** | **NS** | ND | | 0.00206 | 0.000328 | ND | | 0.0028 | 0.000445 |
| 1,2,4-Trichlorobenzene | **NS** | **NS** | ND | | 0.00103 | 0.000433 | ND | | 0.0014 | 0.000588 |
| 1,2-Dibromo-3-chloropropane | **NS** | **NS** | ND | | 0.00103 | 0.000849 | ND | | 0.0014 | 0.00115 |
| 1,2-Dibromoethane (EDB) | **NS** | **NS** | ND | | 0.00103 | 0.000191 | ND | | 0.0014 | 0.000259 |
| 1,2-Dichlorobenzene | **1.1** | **100** | ND | | 0.00103 | 0.000259 | ND | | 0.0014 | 0.000351 |
| 1,2-Dichloroethane (EDC) | **0.02** | **3.1** | ND | | 0.00103 | 0.000238 | ND | | 0.0014 | 0.000323 |
| 1,2-Dichloropropane | **NS** | **NS** | ND | | 0.00103 | 0.000103 | ND | | 0.0014 | 0.00014 |
| 1,3-Dichlorobenzene | **2.4** | **49** | ND | | 0.00103 | 0.000273 | ND | | 0.0014 | 0.000371 |
| 1,3-Dichloropropene (cis- and trans-) | **NS** | **NS** | ND | | 0.00103 | 0.000114 | ND | | 0.0014 | 0.000155 |
| 1,4-Dichlorobenzene | **1.8** | **13** | ND | | 0.00103 | 0.000319 | ND | | 0.0014 | 0.000434 |
| 2-Butanone (MEK) | **0.12** | **100** | ND | | 0.010 | 0.00206 | ND | | 0.014 | 0.0028 |
| 2-Hexanone | **NS** | **NS** | ND | | 0.010 | 0.00158 | ND | | 0.014 | 0.00214 |
| 4-Methyl-2-pentanone (MIBK) | **NS** | **NS** | ND | | 0.010 | 0.000539 | ND | | 0.014 | 0.000732 |
| Acetone | **0.05** | **100** | ND | | 0.010 | 0.00515 | ND | | 0.014 | 0.007 |
| Benzene | **0.06** | **4.8** | ND | | 0.00103 | 0.0000886 | ND | | 0.0014 | 0.00012 |
| Bromochloromethane | **NS** | **NS** | ND | | 0.00103 | 0.000262 | ND | | 0.0014 | 0.000356 |
| Bromodichloromethane | **NS** | **NS** | ND | | 0.00103 | 0.000123 | ND | | 0.0014 | 0.000167 |
| Bromoform | **NS** | **NS** | ND | | 0.00103 | 0.00032 | ND | | 0.0014 | 0.000435 |
| Bromomethane | **NS** | **NS** | ND | | 0.00206 | 0.000898 | ND | | 0.0028 | 0.00122 |
| Carbon disulfide | **NS** | **NS** | ND | | 0.00103 | 0.000405 | ND | | 0.0014 | 0.00055 |
| Carbon tetrachloride | **0.76** | **2.4** | ND | | 0.00103 | 0.000206 | ND | | 0.0014 | 0.00028 |
| Chlorobenzene | **1.1** | **100** | ND | | 0.00103 | 0.000178 | ND | | 0.0014 | 0.000242 |
| Chloroethane | **NS** | **NS** | ND | | 0.00103 | 0.000306 | ND | | 0.0014 | 0.000416 |
| Chloroform | **0.37** | **49** | ND | | 0.00206 | 0.000515 | ND | | 0.0028 | 0.0007 |
| Chloromethane | **NS** | **NS** | ND | | 0.00206 | 0.000327 | ND | | 0.0028 | 0.000444 |
| cis-1,2-Dichloroethene | **0.25** | **100** | ND | | 0.00206 | 0.00022 | ND | | 0.0028 | 0.0003 |
| cis-1,3-Dichloropropene | **NS** | **NS** | ND | | 0.00103 | 0.000158 | ND | | 0.0014 | 0.000214 |
| Cyclohexane | **NS** | **NS** | ND | | 0.00515 | 0.000185 | ND | | 0.007 | 0.000252 |
| Dibromochloromethane | **NS** | **NS** | ND | | 0.00103 | 0.000171 | ND | | 0.0014 | 0.000232 |
| Dichlorodifluoromethane | **NS** | **NS** | ND | | 0.00103 | 0.000535 | ND | | 0.0014 | 0.000727 |
| Ethylbenzene | **1** | **41** | ND | | 0.00103 | 0.000112 | ND | | 0.0014 | 0.000153 |
| Isopropylbenzene | **NS** | **NS** | ND | | 0.00103 | 0.000219 | ND | | 0.0014 | 0.000298 |
| Methyl acetate | **NS** | **NS** | ND | | 0.00103 | 0.000832 | ND | | 0.0014 | 0.00113 |
| Methyl tert-butyl ether (MTBE) | **0.93** | **100** | ND | | 0.00103 | 0.000225 | ND | | 0.0014 | 0.000305 |
| Methylcyclohexane | **NS** | **NS** | ND | | 0.00206 | 0.000177 | ND | | 0.0028 | 0.000241 |
| Methylene chloride | **0.05** | **100** | ND | | 0.00515 | 0.00309 | ND | | 0.007 | 0.0042 |
| Styrene | **NS** | **NS** | ND | | 0.00103 | 0.000221 | ND | | 0.0014 | 0.000301 |
| Tetrachloroethene | **1.3** | **19** | ND | | 0.00103 | 0.000106 | ND | | 0.0014 | 0.000144 |
| Toluene | **0.7** | **100** | ND | | 0.00103 | 0.000515 | ND | | 0.0014 | 0.0007 |
| Total Xylenes | **0.26** | **100** | ND | | 0.00206 | 0.000144 | ND | | 0.0028 | 0.000196 |
| trans-1,2-Dichloroethene | **0.19** | **100** | ND | | 0.00206 | 0.000365 | ND | | 0.0028 | 0.000496 |
| trans-1,3-Dichloropropene | **NS** | **NS** | ND | | 0.00103 | 0.000114 | ND | | 0.0014 | 0.000155 |
| Trichloroethene | **0.47** | **21** | ND | | 0.00103 | 0.000153 | ND | | 0.0014 | 0.000209 |
| Trichlorofluoromethane | **NS** | **NS** | ND | | 0.00103 | 0.000418 | ND | | 0.0014 | 0.000568 |
| Vinyl chloride | **0.02** | **0.9** | ND | | 0.00103 | 0.000334 | ND | | 0.0014 | 0.000454 |
| TOTAL VO's: | **NS** | **NS** | ND | | | NA | ND | | | NA |
| TOTAL TIC's: | **NS** | **NS** | ND | | | NA | ND | | | NA |
| TOTAL VO's & TIC's: | **NS** | **NS** | ND | | | NA | ND | | | NA |

**Results in Yellow Highlight displays exceedance above the UUSCO regulatory standard**
**Results in Green Highlight displays exceedance above both UUSCO & RRUSCO regulatory standard**
**J = Concentration detected at a value below the RL and above the MDL for target compounds**
**N = Presumptive evidence of a compound from the use of GC/MS library search.**

**Table 1B (Cont'd) - Soil Results - SVOCs**
**Chelsea Elliott**
**New York, NY**

**HK Engineering & Geology, D.P.C.**
**Project #: HK2661.1**

| Target Compounds | NYSDEC Unrestricted Use SCO | NYSDEC Restricted Residential SCO | SB11A Sample Depth: 1-2' | | | | SB12A Sample Depth: 0-2' | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semivolatiles - BNA (mg/Kg)** | | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| 1,1'-Biphenyl | **NS** | **NS** | ND | | 0.039 | 0.00584 | ND | | 0.038 | 0.00568 |
| 1,2,4,5-Tetrachlorobenzene | **NS** | **NS** | ND | | 0.039 | 0.013 | ND | | 0.038 | 0.013 |
| 1,4-Dioxane | **0.1** | **13** | ND | | 0.039 | 0.025 | ND | | 0.038 | 0.025 |
| 2,2'-Oxybis(1-Chloropropane) | **NS** | **NS** | ND | | 0.039 | 0.00978 | ND | | 0.038 | 0.00952 |
| 2,3,4,6-Tetrachlorophenol | **NS** | **NS** | ND | | 0.039 | 0.013 | ND | | 0.038 | 0.013 |
| 2,4,5-Trichlorophenol | **NS** | **NS** | ND | | 0.039 | 0.030 | ND | | 0.038 | 0.029 |
| 2,4,6-Trichlorophenol | **NS** | **NS** | ND | | 0.039 | 0.011 | ND | | 0.038 | 0.011 |
| 2,4-Dichlorophenol | **NS** | **NS** | ND | | 0.039 | 0.010 | ND | | 0.038 | 0.010 |
| 2,4-Dimethylphenol | **NS** | **NS** | ND | | 0.039 | 0.012 | ND | | 0.038 | 0.011 |
| 2,4-Dinitrophenol | **NS** | **NS** | ND | | 0.079 | 0.016 | ND | | 0.076 | 0.016 |
| 2,4-Dinitrotoluene | **NS** | **NS** | ND | | 0.079 | 0.044 | ND | | 0.076 | 0.043 |
| 2,6-Dinitrotoluene | **NS** | **NS** | ND | | 0.079 | 0.045 | ND | | 0.076 | 0.044 |
| 2-Chloronaphthalene | **NS** | **NS** | ND | | 0.039 | 0.00906 | ND | | 0.038 | 0.00882 |
| 2-Chlorophenol | **NS** | **NS** | ND | | 0.039 | 0.013 | ND | | 0.038 | 0.012 |
| 2-Methylnaphthalene | **NS** | **NS** | ND | | 0.039 | 0.014 | ND | | 0.038 | 0.013 |
| 2-Methylphenol | **0.33** | **100** | ND | | 0.039 | 0.018 | ND | | 0.038 | 0.017 |
| 2-Nitroaniline | **NS** | **NS** | ND | | 0.039 | 0.021 | ND | | 0.038 | 0.020 |
| 2-Nitrophenol | **NS** | **NS** | ND | | 0.079 | 0.023 | ND | | 0.076 | 0.023 |
| 3,3'-Dichlorobenzidine | **NS** | **NS** | ND | | 0.039 | 0.028 | ND | | 0.038 | 0.027 |
| 3-Methylphenol | **0.33** | **100** | ND | | 0.039 | 0.025 | ND | | 0.038 | 0.025 |
| 3-Nitroaniline | **NS** | **NS** | ND | | 0.039 | 0.025 | ND | | 0.038 | 0.024 |
| 4,6-Dinitro-2-methylphenol | **NS** | **NS** | ND | | 0.079 | 0.017 | ND | | 0.076 | 0.016 |
| 4-Bromophenyl phenyl ether | **NS** | **NS** | ND | | 0.039 | 0.011 | ND | | 0.038 | 0.011 |
| 4-Chloro-3-methylphenol | **NS** | **NS** | ND | | 0.039 | 0.015 | ND | | 0.038 | 0.015 |
| 4-Chloroaniline | **NS** | **NS** | ND | | 0.039 | 0.015 | ND | | 0.038 | 0.015 |
| 4-Chlorophenyl phenyl ether | **NS** | **NS** | ND | | 0.039 | 0.00862 | ND | | 0.038 | 0.00839 |
| 4-Methylphenol ** | **0.33** | **100** | ND | | 0.039 | 0.018 | ND | | 0.038 | 0.017 |
| 4-Nitroaniline | **NS** | **NS** | ND | | 0.039 | 0.023 | ND | | 0.038 | 0.023 |
| 4-Nitrophenol | **NS** | **NS** | ND | | 0.079 | 0.040 | ND | | 0.076 | 0.039 |
| Acenaphthene | **20** | **100** | 0.032 | J | 0.039 | 0.00775 | ND | | 0.038 | 0.00754 |
| Acenaphthylene | **100** | **100** | 0.048 | | 0.039 | 0.00859 | 0.031 | J | 0.038 | 0.00836 |
| Acetophenone | **NS** | **NS** | ND | | 0.039 | 0.024 | ND | | 0.038 | 0.023 |
| Anthracene | **100** | **100** | 0.177 | | 0.039 | 0.00399 | 0.080 | | 0.038 | 0.00389 |
| Atrazine | **NS** | **NS** | ND | | 0.039 | 0.023 | ND | | 0.038 | 0.023 |
| Benzaldehyde | **NS** | **NS** | ND | | 0.079 | 0.030 | ND | | 0.076 | 0.029 |
| Benzo[a]anthracene | **1** | **1** | 0.947 | | 0.039 | 0.014 | 0.313 | | 0.038 | 0.014 |
| Benzo[a]pyrene | **1** | **1** | 0.865 | | 0.039 | 0.019 | 0.299 | | 0.038 | 0.019 |
| Benzo[b]fluoranthene | **1** | **1** | 0.856 | | 0.039 | 0.019 | 0.287 | | 0.038 | 0.019 |
| Benzo[g,h,i]perylene | **100** | **100** | 0.511 | | 0.039 | 0.030 | 0.199 | | 0.038 | 0.029 |
| Benzo[k]fluoranthene | **0.8** | **3.9** | 0.739 | | 0.039 | 0.027 | 0.264 | | 0.038 | 0.026 |
| Bis(2-chloroethoxy) methane | **NS** | **NS** | ND | | 0.039 | 0.00874 | ND | | 0.038 | 0.00851 |
| Bis(2-chloroethyl) ether | **NS** | **NS** | ND | | 0.039 | 0.014 | ND | | 0.038 | 0.013 |
| Bis(2-ethylhexyl) phthalate | **NS** | **NS** | ND | | 0.039 | 0.025 | ND | | 0.038 | 0.025 |
| Butyl benzyl phthalate | **NS** | **NS** | ND | | 0.039 | 0.017 | ND | | 0.038 | 0.017 |
| Caprolactam | **NS** | **NS** | ND | | 0.079 | 0.029 | ND | | 0.076 | 0.028 |
| Carbazole | **NS** | **NS** | 0.041 | | 0.039 | 0.00914 | 0.026 | J | 0.038 | 0.0089 |
| Chrysene | **1** | **3.9** | 0.742 | | 0.039 | 0.011 | 0.332 | | 0.038 | 0.011 |
| Dibenz[a,h]anthracene | **0.33** | **0.33** | 0.277 | | 0.039 | 0.016 | 0.103 | | 0.038 | 0.015 |
| Dibenzofuran | **7** | **59** | ND | | 0.039 | 0.00513 | ND | | 0.038 | 0.005 |
| Diethyl phthalate | **NS** | **NS** | ND | | 0.039 | 0.012 | ND | | 0.038 | 0.012 |
| Dimethyl phthalate | **NS** | **NS** | ND | | 0.039 | 0.009 | ND | | 0.038 | 0.00876 |
| Di-n-butyl phthalate | **NS** | **NS** | ND | | 0.039 | 0.016 | ND | | 0.038 | 0.016 |
| Dinitrotoluene (2,4- and 2,6-) | **NS** | **NS** | ND | | 0.079 | 0.044 | ND | | 0.076 | 0.043 |
| Di-n-octyl phthalate | **NS** | **NS** | ND | | 0.039 | 0.029 | ND | | 0.038 | 0.028 |
| Fluoranthene | **100** | **100** | 1.74 | | 0.039 | 0.013 | 0.601 | | 0.038 | 0.012 |
| Fluorene | **30** | **100** | 0.032 | J | 0.039 | 0.011 | ND | | 0.038 | 0.010 |
| Hexachlorobenzene | **0.33** | **1.2** | ND | | 0.039 | 0.012 | ND | | 0.038 | 0.012 |
| Hexachlorobutadiene | **NS** | **NS** | ND | | 0.039 | 0.011 | ND | | 0.038 | 0.011 |
| Hexachlorocyclopentadiene | **NS** | **NS** | ND | | 0.079 | 0.068 | ND | | 0.076 | 0.066 |
| Hexachloroethane | **NS** | **NS** | ND | | 0.039 | 0.016 | ND | | 0.038 | 0.016 |
| Indeno[1,2,3-cd]pyrene | **0.5** | **0.5** | **0.511** | | 0.039 | 0.025 | 0.190 | | 0.038 | 0.024 |
| Isophorone | **NS** | **NS** | ND | | 0.039 | 0.017 | ND | | 0.038 | 0.016 |
| Naphthalene | **12** | **100** | ND | | 0.039 | 0.00572 | ND | | 0.038 | 0.00557 |
| Nitrobenzene | **NS** | **15** | ND | | 0.039 | 0.00953 | ND | | 0.038 | 0.00927 |
| N-Nitrosodi-n-propylamine | **NS** | **NS** | ND | | 0.039 | 0.024 | ND | | 0.038 | 0.024 |
| N-Nitrosodiphenylamine | **NS** | **NS** | ND | | 0.039 | 0.00805 | ND | | 0.038 | 0.00784 |
| Pentachlorophenol | **0.8** | **6.7** | ND | | 0.039 | 0.017 | ND | | 0.038 | 0.017 |
| Phenanthrene | **100** | **100** | 0.626 | | 0.039 | 0.00642 | 0.353 | | 0.038 | 0.00625 |
| Phenol | **0.33** | **100** | ND | | 0.039 | 0.00887 | ND | | 0.038 | 0.00864 |
| Pyrene | **100** | **100** | 1.46 | | 0.039 | 0.00913 | 0.608 | | 0.038 | 0.00889 |
| TOTAL BNA'S: | **NS** | **NS** | 9.60 | J | | NA | 3.69 | J | | NA |
| TOTAL TIC's: | **NS** | **NS** | 0.180 | JN | | NA | ND | | | NA |
| TOTAL BNA'S & TIC's: | **NS** | **NS** | 9.78 | J | | NA | 3.69 | J | | NA |

**Results in Yellow Highlight displays exceedance above the UUSCO regulatory standard**
**Results in Green Highlight displays exceedance above both UUSCO & RRUSCO regulatory standard**
**J = Concentration detected at a value below the RL and above the MDL for target compounds**
**N = Presumptive evidence of a compound from the use of GC/MS library search.**

**Table 1B (Cont'd) - Soil Results - PCBs, Pesticides, Metals**
**Chelsea Elliott**
**New York, NY**

**HK Engineering & Geology, D.P.C.**
**Project #: HK2661.1**

| Target Compounds | NYSDEC Unrestricted Use SCO | NYSDEC Restricted Residential SCO | SB11A Sample Depth: 1-2' | | | | SB12A Sample Depth: 0-2' | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **PCB's (mg/Kg)** | | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| Aroclor-1016 | **NS** | **NS** | ND | | 0.00394 | 0.0012 | ND | | 0.00383 | 0.0011 |
| Aroclor-1221 | **NS** | **NS** | ND | | 0.00394 | 0.0012 | ND | | 0.00383 | 0.0011 |
| Aroclor-1232 | **NS** | **NS** | ND | | 0.00394 | 0.0012 | ND | | 0.00383 | 0.0011 |
| Aroclor-1242 | **NS** | **NS** | ND | | 0.00394 | 0.0012 | ND | | 0.00383 | 0.0011 |
| Aroclor-1248 | **NS** | **NS** | ND | | 0.00394 | 0.0012 | ND | | 0.00383 | 0.0011 |
| Aroclor-1254 | **NS** | **NS** | ND | | 0.00394 | 0.0012 | ND | | 0.00383 | 0.0011 |
| Aroclor-1260 | **NS** | **NS** | ND | | 0.00394 | 0.0012 | ND | | 0.00383 | 0.0011 |
| Aroclor-1262 | **NS** | **NS** | ND | | 0.00394 | 0.0012 | ND | | 0.00383 | 0.0011 |
| Aroclor-1268 | **NS** | **NS** | ND | | 0.00394 | 0.0012 | ND | | 0.00383 | 0.0011 |
| PCBs | **0.1** | **1** | ND | | 0.00394 | 0.00118 | ND | | 0.00383 | 0.00115 |
| **Pesticides (mg/Kg)** | | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| alpha-BHC | **0.02** | **0.48** | ND | | 0.000788 | 0.000141 | ND | | 0.000766 | 0.000137 |
| beta-BHC | **0.036** | **0.36** | ND | | 0.000788 | 0.000184 | ND | | 0.000766 | 0.000179 |
| gamma-BHC (Lindane) | **0.1** | **1.3** | ND | | 0.000788 | 0.000176 | ND | | 0.000766 | 0.000171 |
| delta-BHC | **0.04** | **100** | ND | | 0.000788 | 0.000153 | ND | | 0.000766 | 0.000149 |
| Heptachlor | **0.042** | **2.1** | ND | | 0.000788 | 0.000187 | ND | | 0.000766 | 0.000182 |
| Aldrin | **0.005** | **0.097** | ND | | 0.000788 | 0.000165 | ND | | 0.000766 | 0.00016 |
| Heptachlor epoxide | **NS** | **NS** | ND | | 0.000788 | 0.000171 | ND | | 0.000766 | 0.000166 |
| Endosulfan I | **2.4** | **24** | ND | | 0.000788 | 0.000176 | ND | | 0.000766 | 0.000172 |
| 4,4'-DDE | **0.0033** | **8.9** | **0.078** | | 0.000788 | 0.000161 | ND | | 0.000766 | 0.000156 |
| Dieldrin | **0.005** | **0.2** | ND | | 0.000788 | 0.00016 | ND | | 0.000766 | 0.000156 |
| Endrin | **0.014** | **11** | ND | | 0.000788 | 0.000199 | ND | | 0.000766 | 0.000193 |
| Endosulfan II | **2.4** | **24** | ND | | 0.000788 | 0.00018 | ND | | 0.000766 | 0.000176 |
| 4,4'-DDD | **0.0033** | **13** | **0.011** | | 0.000788 | 0.00021 | ND | | 0.000766 | 0.000204 |
| Endrin aldehyde | **NS** | **NS** | ND | | 0.000788 | 0.000165 | ND | | 0.000766 | 0.00016 |
| Endosulfan sulfate | **2.4** | **24** | ND | | 0.000788 | 0.000195 | ND | | 0.000766 | 0.00019 |
| 4,4'-DDT | **0.0033** | **7.9** | **0.075** | | 0.000788 | 0.000146 | ND | | 0.000766 | 0.000143 |
| Endrin ketone | **NS** | **NS** | ND | | 0.000788 | 0.000153 | ND | | 0.000766 | 0.000149 |
| Methoxychlor | **NS** | **NS** | ND | | 0.000788 | 0.00021 | ND | | 0.000766 | 0.000205 |
| alpha-Chlordane | **0.094** | **4.2** | ND | | 0.000788 | 0.000174 | ND | | 0.000766 | 0.000169 |
| gamma-Chlordane | **NS** | **NS** | ND | | 0.000788 | 0.000155 | ND | | 0.000766 | 0.000151 |
| Toxaphene | **NS** | **NS** | ND | | 0.00985 | 0.00394 | ND | | 0.00958 | 0.00383 |
| Endosulfan (I and II) | **NS** | **NS** | ND | | 0.000788 | 0.000176 | ND | | 0.000766 | 0.000172 |
| Chlordane (alpha and gamma) | **NS** | **NS** | ND | | 0.000788 | 0.000155 | ND | | 0.000766 | 0.000151 |
| *** Metals (mg/Kg)** | | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| Aluminum | **NS** | **NS** | 7780 | | | | 4950 | | | |
| Antimony | **NS** | **NS** | <2.3 | | | | <2.3 | | | |
| Arsenic | **13** | **16** | 3.9 | | | | 8.7 | | | |
| Barium | **350** | **400** | 98.7 | | | | 173 | | | |
| Beryllium | **7.2** | **72** | 0.44 | | | | 0.39 | | | |
| Cadmium | **2.5** | **4.3** | <0.58 | | | | **12.8** | | | |
| Calcium | **NS** | **NS** | 5130 | | | | 50200 | | | |
| Chromium | **NS** | **NS** | 16.9 | | | | 17.6 | | | |
| Cobalt | **NS** | **NS** | 6.4 | | | | 6.0 | | | |
| Copper | **50** | **270** | 17.1 | | | | 42.9 | | | |
| Iron | **NS** | **NS** | 16100 | | | | 19700 | | | |
| Lead | **63** | **400** | 56.1 | | | | **773** | | | |
| Magnesium | **NS** | **NS** | 3220 | | | | 2110 | | | |
| Manganese | **1600** | **2000** | 442 | | | | 351 | | | |
| Mercury | **0.18** | **0.81** | **0.23** | | | | **5.2** | | | |
| Nickel | **30** | **310** | 19.4 | | | | 17.3 | | | |
| Potassium | **NS** | **NS** | <1200 | | | | <1100 | | | |
| Selenium | **3.9** | **180** | <2.3 | | | | <2.3 | | | |
| Silver | **2** | **180** | <0.58 | | | | 1.1 | | | |
| Sodium | **NS** | **NS** | <1200 | | | | <1100 | | | |
| Thallium | **NS** | **NS** | <1.2 | | | | <1.1 | | | |
| Vanadium | **NS** | **NS** | 17.7 | | | | 20.7 | | | |
| Zinc | **109** | **10000** | 80.8 | | | | **2050** | | | |
| **General Analytical** | | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| Cyanide, Total | **27** | **27** | ND | | 1.18 | 0.237 | 0.288 | J | 1.15 | 0.231 |

**Results in Yellow Highlight displays exceedance above the UUSCO regulatory standard**
**Results in Green Highlight displays exceedance above both UUSCO & RRUSCO regulatory standard**
**J = Concentration detected at a value below the RL and above the MDL for target compounds**
**NS = No Standard Available**
**ND OR < = Analyzed for but Not Detected at the MDL**
*** TAL Metals analyzed by SGS Dayton.**
**[a] = Elevated detection limit due to dilution required for high interfering element**

**Table 2B - Groundwater Results - VOCs**
**Chelsea Elliott**
**Bronx, New York**

**HK Engineering & Geology, D.P.C.**
**Project #: HK2661.1**

| Target Compounds | NYSDEC Ambient Water Quality Standards (AWQS) | TWP1 GW Depth: 14' | | | | TWP2 GW Depth: 11.5' | | | | TWP4 GW Depth: 13.5' | | | | TWP5 GW Depth: 13' | | | | TWP6 GW Depth: 13.5' | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Volatiles (ug/L)** | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| 1,1,1-Trichloroethane | **5** | ND | | 0.500 | 0.381 | ND | | 0.500 | 0.381 | ND | | 0.500 | 0.381 | ND | | 0.500 | 0.381 | ND | | 0.500 | 0.381 |
| 1,1,2,2-Tetrachloroethane | **0.2** | ND | | 0.500 | 0.284 | ND | | 0.500 | 0.284 | ND | | 0.500 | 0.284 | ND | | 0.500 | 0.284 | ND | | 0.500 | 0.284 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | **5** | ND | | 1.00 | 0.538 | ND | | 1.00 | 0.538 | ND | | 1.00 | 0.538 | ND | | 1.00 | 0.538 | ND | | 1.00 | 0.538 |
| 1,1,2-Trichloroethane | **1** | ND | | 0.500 | 0.313 | ND | | 0.500 | 0.313 | ND | | 0.500 | 0.313 | ND | | 0.500 | 0.313 | ND | | 0.500 | 0.313 |
| 1,1-Dichloroethane | **5** | ND | | 0.500 | 0.285 | ND | | 0.500 | 0.285 | ND | | 0.500 | 0.285 | ND | | 0.500 | 0.285 | ND | | 0.500 | 0.285 |
| 1,1-Dichloroethene | **0.07** | ND | | 0.500 | 0.363 | ND | | 0.500 | 0.363 | ND | | 0.500 | 0.363 | ND | | 0.500 | 0.363 | ND | | 0.500 | 0.363 |
| 1,2,3-Trichlorobenzene | **5** | ND | | 0.500 | 0.406 | ND | | 0.500 | 0.406 | ND | | 0.500 | 0.406 | ND | | 0.500 | 0.406 | ND | | 0.500 | 0.406 |
| 1,2,4-Trichlorobenzene | **5** | ND | | 0.500 | 0.358 | ND | | 0.500 | 0.358 | ND | | 0.500 | 0.358 | ND | | 0.500 | 0.358 | ND | | 0.500 | 0.358 |
| 1,2-Dibromo-3-chloropropane | **0.04** | ND | | 0.00484 | 0.00364 | ND | | 0.00483 | 0.00364 | ND | | 0.00487 | 0.00364 | ND | | 0.00483 | 0.00364 | ND | | 0.00482 | 0.00364 |
| 1,2-Dibromoethane (EDB) | **0.0006** | ND | | 0.00484 | 0.00364 | ND | | 0.00483 | 0.00364 | ND | | 0.00487 | 0.00364 | ND | | 0.00483 | 0.00364 | ND | | 0.00482 | 0.00364 |
| 1,2-Dichlorobenzene | **3** | ND | | 0.500 | 0.354 | ND | | 0.500 | 0.354 | ND | | 0.500 | 0.354 | ND | | 0.500 | 0.354 | ND | | 0.500 | 0.354 |
| 1,2-Dichloroethane (EDC) | **0.6** | ND | | 0.500 | 0.273 | ND | | 0.500 | 0.273 | ND | | 0.500 | 0.273 | ND | | 0.500 | 0.273 | ND | | 0.500 | 0.273 |
| 1,2-Dichloropropane | **1** | ND | | 0.500 | 0.272 | ND | | 0.500 | 0.272 | ND | | 0.500 | 0.272 | ND | | 0.500 | 0.272 | ND | | 0.500 | 0.272 |
| 1,3-Dichlorobenzene | **3** | ND | | 0.500 | 0.386 | ND | | 0.500 | 0.386 | ND | | 0.500 | 0.386 | ND | | 0.500 | 0.386 | ND | | 0.500 | 0.386 |
| 1,3-Dichloropropene (cis- and trans-) | **0.4** | ND | | 0.500 | 0.264 | ND | | 0.500 | 0.264 | ND | | 0.500 | 0.264 | ND | | 0.500 | 0.264 | ND | | 0.500 | 0.264 |
| 1,4-Dichlorobenzene | **3** | ND | | 0.500 | 0.397 | ND | | 0.500 | 0.397 | ND | | 0.500 | 0.397 | ND | | 0.500 | 0.397 | ND | | 0.500 | 0.397 |
| 2-Butanone (MEK) | **NS** | ND | | 1.00 | 0.802 | ND | | 1.00 | 0.802 | ND | | 1.00 | 0.802 | ND | | 1.00 | 0.802 | ND | | 1.00 | 0.802 |
| 2-Hexanone | **50** | ND | | 1.00 | 0.818 | ND | | 1.00 | 0.818 | ND | | 1.00 | 0.818 | ND | | 1.00 | 0.818 | ND | | 1.00 | 0.818 |
| 4-Methyl-2-pentanone (MIBK) | **50** | ND | | 1.00 | 0.611 | ND | | 1.00 | 0.611 | ND | | 1.00 | 0.611 | ND | | 1.00 | 0.611 | ND | | 1.00 | 0.611 |
| Acetone | **NS** | ND | | 1.00 | 1.00 | ND | | 1.00 | 1.00 | ND | | 1.00 | 1.00 | ND | | 1.00 | 1.00 | ND | | 1.00 | 1.00 |
| Benzene | **50** | ND | | 0.500 | 0.270 | ND | | 0.500 | 0.270 | ND | | 0.500 | 0.270 | ND | | 0.500 | 0.270 | ND | | 0.500 | 0.270 |
| Bromochloromethane | **1** | ND | | 0.500 | 0.379 | ND | | 0.500 | 0.379 | ND | | 0.500 | 0.379 | ND | | 0.500 | 0.379 | ND | | 0.500 | 0.379 |
| Bromodichloromethane | **5** | ND | | 0.500 | 0.258 | ND | | 0.500 | 0.258 | ND | | 0.500 | 0.258 | ND | | 0.500 | 0.258 | ND | | 0.500 | 0.258 |
| Bromoform | **50** | ND | | 0.500 | 0.328 | ND | | 0.500 | 0.328 | ND | | 0.500 | 0.328 | ND | | 0.500 | 0.328 | ND | | 0.500 | 0.328 |
| Bromomethane | **50** | ND | | 0.500 | 0.386 | ND | | 0.500 | 0.386 | ND | | 0.500 | 0.386 | ND | | 0.500 | 0.386 | ND | | 0.500 | 0.386 |
| Carbon disulfide | **5** | ND | | 0.500 | 0.403 | ND | | 0.500 | 0.403 | ND | | 0.500 | 0.403 | ND | | 0.500 | 0.403 | ND | | 0.500 | 0.403 |
| Carbon tetrachloride | **60** | ND | | 0.500 | 0.349 | ND | | 0.500 | 0.349 | ND | | 0.500 | 0.349 | ND | | 0.500 | 0.349 | ND | | 0.500 | 0.349 |
| Chlorobenzene | **0.4** | ND | | 0.500 | 0.304 | ND | | 0.500 | 0.304 | ND | | 0.500 | 0.304 | ND | | 0.500 | 0.304 | ND | | 0.500 | 0.304 |
| Chloroethane | **5** | ND | | 0.500 | 0.324 | ND | | 0.500 | 0.324 | ND | | 0.500 | 0.324 | ND | | 0.500 | 0.324 | ND | | 0.500 | 0.324 |
| Chloroform | **5** | **14.0** | | 0.500 | 0.285 | ND | | 0.500 | 0.285 | ND | | 0.500 | 0.285 | **7.89** | | 0.500 | 0.285 | ND | | 0.500 | 0.285 |
| Chloromethane | **7** | ND | | 0.500 | 0.309 | ND | | 0.500 | 0.309 | ND | | 0.500 | 0.309 | ND | | 0.500 | 0.309 | ND | | 0.500 | 0.309 |
| cis-1,2-Dichloroethene | **5** | ND | | 0.500 | 0.277 | ND | | 0.500 | 0.277 | ND | | 0.500 | 0.277 | ND | | 0.500 | 0.277 | 0.442 | J | 0.500 | 0.277 |
| cis-1,3-Dichloropropene | **5** | ND | | 0.500 | 0.264 | ND | | 0.500 | 0.264 | ND | | 0.500 | 0.264 | ND | | 0.500 | 0.264 | ND | | 0.500 | 0.264 |
| Cyclohexane | **NS** | ND | | 1.00 | 0.469 | ND | | 1.00 | 0.469 | ND | | 1.00 | 0.469 | ND | | 1.00 | 0.469 | ND | | 1.00 | 0.469 |
| Dibromochloromethane | **NS** | ND | | 0.500 | 0.263 | ND | | 0.500 | 0.263 | ND | | 0.500 | 0.263 | ND | | 0.500 | 0.263 | ND | | 0.500 | 0.263 |
| Dichlorodifluoromethane | **50** | ND | | 1.00 | 0.552 | ND | | 1.00 | 0.552 | ND | | 1.00 | 0.552 | ND | | 1.00 | 0.552 | ND | | 1.00 | 0.552 |
| Ethylbenzene | **5** | ND | | 0.500 | 0.313 | ND | | 0.500 | 0.313 | ND | | 0.500 | 0.313 | ND | | 0.500 | 0.313 | ND | | 0.500 | 0.313 |
| Isopropylbenzene | **5** | ND | | 0.500 | 0.332 | ND | | 0.500 | 0.332 | ND | | 0.500 | 0.332 | ND | | 0.500 | 0.332 | ND | | 0.500 | 0.332 |
| Methyl acetate | **5** | ND | | 0.500 | 0.345 | ND | | 0.500 | 0.345 | ND | | 0.500 | 0.345 | ND | | 0.500 | 0.345 | ND | | 0.500 | 0.345 |
| Methyl tert-butyl ether (MTBE) | **NS** | ND | | 0.500 | 0.245 | ND | | 0.500 | 0.245 | ND | | 0.500 | 0.245 | ND | | 0.500 | 0.245 | ND | | 0.500 | 0.245 |
| Methylcyclohexane | **10** | ND | | 0.500 | 0.421 | ND | | 0.500 | 0.421 | ND | | 0.500 | 0.421 | ND | | 0.500 | 0.421 | ND | | 0.500 | 0.421 |
| Methylene chloride | **NS** | ND | | 1.00 | 0.500 | ND | | 1.00 | 0.500 | ND | | 1.00 | 0.500 | ND | | 1.00 | 0.500 | ND | | 1.00 | 0.500 |
| Styrene | **5** | ND | | 0.500 | 0.317 | ND | | 0.500 | 0.317 | ND | | 0.500 | 0.317 | ND | | 0.500 | 0.317 | ND | | 0.500 | 0.317 |
| Tetrachloroethene | **5** | ND | | 0.500 | 0.365 | ND | | 0.500 | 0.365 | ND | | 0.500 | 0.365 | ND | | 0.500 | 0.365 | ND | | 0.500 | 0.365 |
| Toluene | **0.7** | ND | | 0.500 | 0.302 | ND | | 0.500 | 0.302 | ND | | 0.500 | 0.302 | ND | | 0.500 | 0.302 | ND | | 0.500 | 0.302 |
| Total Xylenes | **5** | ND | | 1.00 | 0.345 | ND | | 1.00 | 0.345 | ND | | 1.00 | 0.345 | ND | | 1.00 | 0.345 | ND | | 1.00 | 0.345 |
| trans-1,2-Dichloroethene | **NS** | ND | | 0.500 | 0.372 | ND | | 0.500 | 0.372 | ND | | 0.500 | 0.372 | ND | | 0.500 | 0.372 | ND | | 0.500 | 0.372 |
| trans-1,3-Dichloropropene | **5** | ND | | 0.500 | 0.330 | ND | | 0.500 | 0.330 | ND | | 0.500 | 0.330 | ND | | 0.500 | 0.330 | ND | | 0.500 | 0.330 |
| Trichloroethene | **NS** | ND | | 0.500 | 0.347 | ND | | 0.500 | 0.347 | ND | | 0.500 | 0.347 | ND | | 0.500 | 0.347 | 0.776 | | 0.500 | 0.347 |
| Trichlorofluoromethane | **5** | ND | | 1.00 | 0.503 | ND | | 1.00 | 0.503 | ND | | 1.00 | 0.503 | ND | | 1.00 | 0.503 | ND | | 1.00 | 0.503 |
| Vinyl chloride | **5** | ND | | 0.500 | 0.352 | ND | | 0.500 | 0.352 | ND | | 0.500 | 0.352 | ND | | 0.500 | 0.352 | ND | | 0.500 | 0.352 |
| TOTAL VO's: | **NS** | 14.0 | | | NA | ND | | | NA | ND | | | NA | 7.89 | | | NA | 1.22 | J | | NA |
| TOTAL TIC's: | **NS** | ND | | | NA | ND | | | NA | ND | | | NA | ND | | | NA | ND | | | NA |
| TOTAL VO's & TIC's: | **NS** | 14.0 | | | NA | ND | | | NA | ND | | | NA | 7.89 | | | NA | 1.22 | J | | NA |

**Results in Blue Highlight displays exceedance above the AWQS**

**~ = Sample not analyzed**

**B : Compound was found in the blank and sample.**
**I : Value is EMPC (estimated maximum possible concentration).**
**J = Concentration detected at a value below the RL and above the MDL for target compounds**
**N = Presumptive evidence of a compound from the use of GC/MS library search.**

**Table 2B (Cont'd) - Groundwater Results - SVOCs**
**Chelsea Elliott**
**Bronx, New York**

**HK Engineering & Geology, D.P.C.**
**Project #: HK2661.1**

| Target Compounds | NYSDEC TOGs Table 1 Ambient Water Quality Standards (AWQS) | TWP1 GW Depth: 14' | | | | TWP2 GW Depth: 11.5' | | | | TWP4 GW Depth: 13.5' | | | | TWP5 GW Depth: 13' | | | | TWP6 GW Depth: 13.5' | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Semivolatiles - BNA (µg/L)** | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| 1,1'-Biphenyl | **5** | ND | | 1.00 | 0.212 | ND | | 1.00 | 0.212 | ND | | 1.00 | 0.212 | ND | | 1.00 | 0.212 | ND | | 1.00 | 0.212 |
| 1,2,4,5-Tetrachlorobenzene | **5** | ND | | 1.00 | 0.326 | ND | | 1.00 | 0.326 | ND | | 1.00 | 0.326 | ND | | 1.00 | 0.326 | ND | | 1.00 | 0.326 |
| 1,4-Dioxane | **NS** | ND | | 0.400 | 0.329 | ND | | 0.400 | 0.329 | ND | | 0.400 | 0.329 | ND | | 0.400 | 0.329 | ND | | 0.400 | 0.329 |
| 2,2'-Oxybis(1-Chloropropane) | **5** | ND | | 1.00 | 0.682 | ND | | 1.00 | 0.682 | ND | | 1.00 | 0.682 | ND | | 1.00 | 0.682 | ND | | 1.00 | 0.682 |
| 2,3,4,6-Tetrachlorophenol | **NS** | ND | | 1.00 | 0.872 | ND | | 1.00 | 0.872 | ND | | 1.00 | 0.872 | ND | | 1.00 | 0.872 | ND | | 1.00 | 0.872 |
| 2,4,5-Trichlorophenol | **NS** | ND | | 2.00 | 0.505 | ND | | 2.00 | 0.505 | ND | | 2.00 | 0.505 | ND | | 2.00 | 0.505 | ND | | 2.00 | 0.505 |
| 2,4,6-Trichlorophenol | **NS** | ND | | 1.00 | 0.497 | ND | | 1.00 | 0.497 | ND | | 1.00 | 0.497 | ND | | 1.00 | 0.497 | ND | | 1.00 | 0.497 |
| 2,4-Dichlorophenol | **5** | ND | | 1.00 | 0.383 | ND | | 1.00 | 0.383 | ND | | 1.00 | 0.383 | ND | | 1.00 | 0.383 | ND | | 1.00 | 0.383 |
| 2,4-Dimethylphenol | **50** | ND | | 2.00 | 1.06 | ND | | 2.00 | 1.06 | ND | | 2.00 | 1.06 | ND | | 2.00 | 1.06 | ND | | 2.00 | 1.06 |
| 2,4-Dinitrophenol | **10** | ND | | 3.00 | 2.35 | ND | | 3.00 | 2.35 | ND | | 3.00 | 2.35 | ND | | 3.00 | 2.35 | ND | | 3.00 | 2.35 |
| 2,4-Dinitrotoluene | **5** | ND | | 1.00 | 0.886 | ND | | 1.00 | 0.886 | ND | | 1.00 | 0.886 | ND | | 1.00 | 0.886 | ND | | 1.00 | 0.886 |
| 2,6-Dinitrotoluene | **5** | ND | | 1.00 | 0.996 | ND | | 1.00 | 0.996 | ND | | 1.00 | 0.996 | ND | | 1.00 | 0.996 | ND | | 1.00 | 0.996 |
| 2-Chloronaphthalene | **NS** | ND | | 1.00 | 0.234 | ND | | 1.00 | 0.234 | ND | | 1.00 | 0.234 | ND | | 1.00 | 0.234 | ND | | 1.00 | 0.234 |
| 2-Chlorophenol | **NS** | ND | | 1.00 | 0.257 | ND | | 1.00 | 0.257 | ND | | 1.00 | 0.257 | ND | | 1.00 | 0.257 | ND | | 1.00 | 0.257 |
| 2-Methylnaphthalene | **NS** | ND | | 1.00 | 0.200 | ND | | 1.00 | 0.200 | ND | | 1.00 | 0.200 | ND | | 1.00 | 0.200 | ND | | 1.00 | 0.200 |
| 2-Methylphenol | **NS** | ND | | 1.00 | 0.267 | ND | | 1.00 | 0.267 | ND | | 1.00 | 0.267 | ND | | 1.00 | 0.267 | ND | | 1.00 | 0.267 |
| 2-Nitroaniline | **5** | ND | | 2.00 | 0.702 | ND | | 2.00 | 0.702 | ND | | 2.00 | 0.702 | ND | | 2.00 | 0.702 | ND | | 2.00 | 0.702 |
| 2-Nitrophenol | **NS** | ND | | 2.00 | 0.581 | ND | | 2.00 | 0.581 | ND | | 2.00 | 0.581 | ND | | 2.00 | 0.581 | ND | | 2.00 | 0.581 |
| 3,3'-Dichlorobenzidine | **5** | ND | | 1.00 | 0.524 | ND | | 1.00 | 0.524 | ND | | 1.00 | 0.524 | ND | | 1.00 | 0.524 | ND | | 1.00 | 0.524 |
| 3-Nitroaniline | **5** | ND | | 3.00 | 0.436 | ND | | 3.00 | 0.436 | ND | | 3.00 | 0.436 | ND | | 3.00 | 0.436 | ND | | 3.00 | 0.436 |
| 4,6-Dinitro-2-methylphenol | **NS** | ND | | 0.100 | 0.033 | ND | | 2.00 | 1.99 | ND | | 0.100 | 0.033 | ND | | 0.100 | 0.033 | ND | | 0.100 | 0.033 |
| 4-Bromophenyl phenyl ether | **NS** | ND | | 1.00 | 0.940 | ND | | 1.00 | 0.940 | ND | | 1.00 | 0.940 | ND | | 1.00 | 0.940 | ND | | 1.00 | 0.940 |
| 4-Chloro-3-methylphenol | **NS** | ND | | 1.00 | 0.336 | ND | | 1.00 | 0.336 | ND | | 1.00 | 0.336 | ND | | 1.00 | 0.336 | ND | | 1.00 | 0.336 |
| 4-Chloroaniline | **5** | ND | | 1.00 | 0.612 | ND | | 1.00 | 0.612 | ND | | 1.00 | 0.612 | ND | | 1.00 | 0.612 | ND | | 1.00 | 0.612 |
| 4-Chlorophenyl phenyl ether | **NS** | ND | | 1.00 | 0.396 | ND | | 1.00 | 0.396 | ND | | 1.00 | 0.396 | ND | | 1.00 | 0.396 | ND | | 1.00 | 0.396 |
| 4-Methylphenol ** | **NS** | ND | | 1.00 | 0.337 | ND | | 1.00 | 0.337 | ND | | 1.00 | 0.337 | ND | | 1.00 | 0.337 | ND | | 1.00 | 0.337 |
| 4-Nitroaniline | **5** | ND | | 2.00 | 0.692 | ND | | 2.00 | 0.692 | ND | | 2.00 | 0.692 | ND | | 2.00 | 0.692 | ND | | 2.00 | 0.692 |
| 4-Nitrophenol | **NS** | ND | | 3.00 | 2.41 | ND | | 3.00 | 2.41 | ND | | 3.00 | 2.41 | ND | | 3.00 | 2.41 | ND | | 3.00 | 2.41 |
| Acenaphthene | **NS** | ND | | 1.00 | 0.281 | ND | | 1.00 | 0.281 | ND | | 1.00 | 0.281 | ND | | 1.00 | 0.281 | ND | | 1.00 | 0.281 |
| Acenaphthylene | **NS** | ND | | 1.00 | 0.268 | ND | | 1.00 | 0.268 | ND | | 1.00 | 0.268 | ND | | 1.00 | 0.268 | ND | | 1.00 | 0.268 |
| Acetophenone | **NS** | ND | | 1.00 | 0.241 | ND | | 1.00 | 0.241 | ND | | 1.00 | 0.241 | ND | | 1.00 | 0.241 | ND | | 1.00 | 0.241 |
| Anthracene | **50** | ND | | 1.00 | 0.560 | ND | | 1.00 | 0.560 | ND | | 1.00 | 0.560 | ND | | 1.00 | 0.560 | ND | | 1.00 | 0.560 |
| Atrazine | **3** | ND | | 1.00 | 0.468 | ND | | 1.00 | 0.468 | ND | | 1.00 | 0.468 | ND | | 1.00 | 0.468 | ND | | 1.00 | 0.468 |
| Benzaldehyde | **NS** | ND | | 2.00 | 0.492 | ND | | 2.00 | 0.492 | ND | | 2.00 | 0.492 | ND | | 2.00 | 0.492 | ND | | 2.00 | 0.492 |
| Benzo[a]anthracene | **0.002** | **1.63** | | 0.100 | 0.029 | **10.8** | | 1.00 | 0.300 | **0.103** | | 0.100 | 0.029 | ND | | 0.100 | 0.029 | ND | | 0.100 | 0.029 |
| Benzo[a]pyrene | **ND** | 1.47 | | 0.100 | 0.027 | 6.64 | | 1.00 | 0.285 | 0.153 | | 0.100 | 0.027 | ND | | 0.100 | 0.027 | ND | | 0.100 | 0.027 |
| Benzo[b]fluoranthene | **0.002** | **1.62** | | 0.100 | 0.026 | **7.43** | | 1.00 | 0.605 | **0.132** | | 0.100 | 0.026 | ND | | 0.100 | 0.026 | ND | | 0.100 | 0.026 |
| Benzo[g,h,j]perylene | **NS** | ND | | 2.00 | 1.04 | 3.84 | | 2.00 | 1.04 | ND | | 2.00 | 1.04 | ND | | 2.00 | 1.04 | ND | | 2.00 | 1.04 |
| Benzo[k]fluoranthene | **0.002** | **1.10** | | 0.100 | 0.035 | **3.28** | | 2.00 | 0.403 | **0.123** | | 0.100 | 0.035 | ND | | 0.100 | 0.035 | ND | | 0.100 | 0.035 |
| Bis(2-chloroethoxy) methane | **5** | ND | | 1.00 | 0.344 | ND | | 1.00 | 0.344 | ND | | 1.00 | 0.344 | ND | | 1.00 | 0.344 | ND | | 1.00 | 0.344 |
| Bis(2-chloroethyl) ether | **1** | ND | | 1.00 | 0.459 | ND | | 1.00 | 0.459 | ND | | 1.00 | 0.459 | ND | | 1.00 | 0.459 | ND | | 1.00 | 0.459 |
| Bis(2-ethylhexyl) phthalate | **5** | ND | | 2.00 | 1.38 | ND | | 2.00 | 1.38 | ND | | 2.00 | 1.38 | ND | | 2.00 | 1.38 | ND | | 2.00 | 1.38 |
| Butyl benzyl phthalate | **50** | ND | | 1.00 | 0.642 | ND | | 1.00 | 0.642 | ND | | 1.00 | 0.642 | ND | | 1.00 | 0.642 | ND | | 1.00 | 0.642 |
| Caprolactam | **NS** | ND | | 3.00 | 1.15 | ND | | 3.00 | 1.15 | ND | | 3.00 | 1.15 | ND | | 3.00 | 1.15 | ND | | 3.00 | 1.15 |
| Carbazole | **NS** | ND | | 1.00 | 0.594 | ND | | 1.00 | 0.594 | ND | | 1.00 | 0.594 | ND | | 1.00 | 0.594 | ND | | 1.00 | 0.594 |
| Chrysene | **0.002** | ND | | 1.00 | 0.232 | **9.27** | | 1.00 | 0.232 | ND | | 1.00 | 0.232 | ND | | 1.00 | 0.232 | ND | | 1.00 | 0.232 |
| Dibenz[a,h]anthracene | **NS** | 0.594 | | 0.100 | 0.031 | 4.62 | | 2.00 | 1.35 | 0.166 | | 0.100 | 0.031 | ND | | 0.100 | 0.031 | ND | | 0.100 | 0.031 |
| Dibenzofuran | **NS** | ND | | 1.00 | 0.199 | ND | | 1.00 | 0.199 | ND | | 1.00 | 0.199 | ND | | 1.00 | 0.199 | ND | | 1.00 | 0.199 |
| Diethyl phthalate | **50** | ND | | 1.00 | 0.239 | ND | | 1.00 | 0.239 | ND | | 1.00 | 0.239 | ND | | 1.00 | 0.239 | ND | | 1.00 | 0.239 |
| Dimethyl phthalate | **50** | ND | | 1.00 | 0.197 | ND | | 1.00 | 0.197 | ND | | 1.00 | 0.197 | ND | | 1.00 | 0.197 | ND | | 1.00 | 0.197 |
| Di-n-butyl phthalate | **50** | ND | | 1.00 | 0.343 | 1.84 | | 1.00 | 0.343 | ND | | 1.00 | 0.343 | ND | | 1.00 | 0.343 | ND | | 1.00 | 0.343 |
| Dinitrotoluene (2,4- and 2,6-) | **NS** | ND | | 1.00 | 0.886 | ND | | 1.00 | 0.886 | ND | | 1.00 | 0.886 | ND | | 1.00 | 0.886 | ND | | 1.00 | 0.886 |
| Di-n-octyl phthalate | **50** | ND | | 2.00 | 1.09 | ND | | 2.00 | 1.09 | ND | | 2.00 | 1.09 | ND | | 2.00 | 1.09 | ND | | 2.00 | 1.09 |
| Fluoranthene | **50** | 1.65 | | 1.00 | 0.482 | 21.1 | | 1.00 | 0.482 | ND | | 1.00 | 0.482 | ND | | 1.00 | 0.482 | ND | | 1.00 | 0.482 |
| Fluorene | **50** | ND | | 1.00 | 0.367 | ND | | 1.00 | 0.367 | ND | | 1.00 | 0.367 | ND | | 1.00 | 0.367 | ND | | 1.00 | 0.367 |
| Hexachlorobenzene | **0.04** | ND | | 0.020 | 0.016 | ND | | 1.00 | 0.584 | ND | | 0.020 | 0.016 | ND | | 0.020 | 0.016 | ND | | 0.020 | 0.016 |
| Hexachlorobutadiene | **0.5** | ND | | 1.00 | 0.561 | ND | | 1.00 | 0.561 | ND | | 1.00 | 0.561 | ND | | 1.00 | 0.561 | ND | | 1.00 | 0.561 |
| Hexachlorocyclopentadiene | **5** | ND | | 2.00 | 1.89 | ND | | 2.00 | 1.89 | ND | | 2.00 | 1.89 | ND | | 2.00 | 1.89 | ND | | 2.00 | 1.89 |
| Hexachloroethane | **5** | ND | | 1.00 | 0.470 | ND | | 1.00 | 0.470 | ND | | 1.00 | 0.470 | ND | | 1.00 | 0.470 | ND | | 1.00 | 0.470 |
| Indeno[1,2,3-cd]pyrene | **0.002** | **1.01** | | 0.100 | 0.036 | **3.57** | | 2.00 | 1.14 | **0.190** | | 0.100 | 0.036 | ND | | 0.100 | 0.036 | ND | | 0.100 | 0.036 |
| Isophorone | **50** | ND | | 1.00 | 0.232 | ND | | 1.00 | 0.232 | ND | | 1.00 | 0.232 | ND | | 1.00 | 0.232 | ND | | 1.00 | 0.232 |
| Naphthalene | **NS** | ND | | 1.00 | 0.183 | ND | | 1.00 | 0.183 | ND | | 1.00 | 0.183 | ND | | 1.00 | 0.183 | ND | | 1.00 | 0.183 |
| Nitrobenzene | **0.4** | ND | | 1.00 | 0.442 | ND | | 1.00 | 0.442 | ND | | 1.00 | 0.442 | ND | | 1.00 | 0.442 | ND | | 1.00 | 0.442 |
| N-Nitrosodi-n-propylamine | **NS** | ND | | 1.00 | 0.391 | ND | | 1.00 | 0.391 | ND | | 1.00 | 0.391 | ND | | 1.00 | 0.391 | ND | | 1.00 | 0.391 |
| N-Nitrosodiphenylamine | **50** | ND | | 1.00 | 0.196 | ND | | 1.00 | 0.196 | ND | | 1.00 | 0.196 | ND | | 1.00 | 0.196 | ND | | 1.00 | 0.196 |
| Pentachlorophenol | **NS** | ND | | 0.100 | 0.052 | ND | | 3.00 | 2.34 | ND | | 0.100 | 0.052 | ND | | 0.100 | 0.052 | ND | | 0.100 | 0.052 |
| Phenanthrene | **50** | 1.69 | | 1.00 | 0.263 | 20.2 | | 1.00 | 0.263 | ND | | 1.00 | 0.263 | ND | | 1.00 | 0.263 | ND | | 1.00 | 0.263 |
| Phenol | **NS** | ND | | 1.00 | 0.276 | ND | | 1.00 | 0.276 | ND | | 1.00 | 0.276 | ND | | 1.00 | 0.276 | ND | | 1.00 | 0.276 |
| Pyrene | **50** | 1.32 | | 1.00 | 0.555 | 29.6 | | 1.00 | 0.555 | ND | | 1.00 | 0.555 | ND | | 1.00 | 0.555 | ND | | 1.00 | 0.555 |
| TOTAL BNA'S: | **NS** | 12.1 | | | NA | 122 | | | NA | 0.867 | | | NA | ND | | | NA | ND | | | NA |
| TOTAL TIC's: | **NS** | 23.7 | J | | NA | 614 | JN | | NA | 22.8 | J | | NA | 23.1 | J | | NA | 45.7 | JN | | NA |
| TOTAL BNA'S & TIC's: | **NS** | 35.8 | | | NA | 736 | | | NA | 23.7 | | | NA | 23.1 | | | NA | 45.7 | JN | | NA |

**Results in Blue Highlight displays exceedance above the AWQS**
**J = Concentration detected at a value below the RL and above the MDL for target compounds**
**N = Presumptive evidence of a compound from the use of GC/MS library search.**

**Table 2B (Cont'd) - Groundwater Results - PCBs, Pesticides, Metals**
**Chelsea Elliott**
**Bronx, New York**

**HK Engineering & Geology, D.P.C.**
**Project #: HK2661.1**

| Target Compounds | NYSDEC Ambient Water Quality Standards (AWQS) | TWP1 GW Depth: 14' | | | | TWP2 GW Depth: 11.5' | | | | TWP4 GW Depth: 13.5' | | | | TWP5 GW Depth: 13' | | | | TWP6 GW Depth: 13.5' | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PCB's (µg/L)** | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| Aroclor 1016 | **NS** | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 |
| Aroclor 1221 | **NS** | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 |
| Aroclor 1232 | **NS** | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 |
| Aroclor 1242 | **NS** | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 |
| Aroclor 1248 | **NS** | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 |
| Aroclor 1254 | **NS** | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 |
| Aroclor 1260 | **NS** | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 |
| Aroclor 1262 | **NS** | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 |
| Aroclor 1268 | **NS** | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 |
| PCBs, Total | **0.09** | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 | ND | | 0.050 | 0.015 |
| **Pesticides (µg/L)** | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| alpha-BHC | **0.01** | ND | | 0.010 | 0.00206 | ND | | 0.010 | 0.00206 | ND | | 0.010 | 0.00206 | ND | | 0.010 | 0.00206 | ND | | 0.00001 | 0.00000206 |
| beta-BHC | **0.04** | ND | | 0.010 | 0.00303 | ND | | 0.010 | 0.00303 | ND | | 0.010 | 0.00303 | ND | | 0.010 | 0.00303 | ND | | 0.00001 | 0.00000303 |
| gamma-BHC (Lindane) | **0.05** | ND | | 0.010 | 0.00201 | ND | | 0.010 | 0.00201 | ND | | 0.010 | 0.00201 | ND | | 0.010 | 0.00201 | ND | | 0.00001 | 0.00000201 |
| delta-BHC | **0.04** | ND | | 0.010 | 0.00238 | ND | | 0.010 | 0.00238 | ND | | 0.010 | 0.00238 | ND | | 0.010 | 0.00238 | ND | | 0.00001 | 0.00000238 |
| Heptachlor | **0.04** | ND | | 0.010 | 0.00235 | ND | | 0.010 | 0.00235 | ND | | 0.010 | 0.00235 | ND | | 0.010 | 0.00235 | ND | | 0.00001 | 0.00000235 |
| Aldrin | **ND** | ND | | 0.010 | 0.00187 | ND | | 0.010 | 0.00187 | ND | | 0.010 | 0.00187 | ND | | 0.010 | 0.00187 | ND | | 0.00001 | 0.00000188 |
| Heptachlor epoxide | **0.03** | ND | | 0.010 | 0.00217 | ND | | 0.010 | 0.00217 | ND | | 0.010 | 0.00217 | ND | | 0.010 | 0.00217 | ND | | 0.00001 | 0.00000217 |
| Endosulfan I | **NS** | ND | | 0.010 | 0.00208 | ND | | 0.010 | 0.00208 | ND | | 0.010 | 0.00208 | ND | | 0.010 | 0.00208 | ND | | 0.00001 | 0.00000208 |
| 4,4'-DDE | **0.2** | ND | | 0.010 | 0.00197 | ND | | 0.010 | 0.00197 | ND | | 0.010 | 0.00197 | ND | | 0.010 | 0.00197 | ND | | 0.00001 | 0.00000197 |
| Dieldrin | **0.004** | ND | | 0.010 | 0.00237 | ND | | 0.010 | 0.00237 | ND | | 0.010 | 0.00237 | ND | | 0.010 | 0.00237 | ND | | 0.00001 | 0.00000237 |
| Endrin | **ND** | ND | | 0.010 | 0.00289 | ND | | 0.010 | 0.00289 | ND | | 0.010 | 0.00289 | ND | | 0.010 | 0.00289 | ND | | 0.00001 | 0.00000289 |
| Endosulfan II | **NS** | ND | | 0.010 | 0.00258 | ND | | 0.010 | 0.00258 | ND | | 0.010 | 0.00258 | ND | | 0.010 | 0.00258 | ND | | 0.00001 | 0.00000258 |
| 4,4'-DDD | **0.3** | ND | | 0.010 | 0.00294 | ND | | 0.010 | 0.00294 | ND | | 0.010 | 0.00294 | ND | | 0.010 | 0.00294 | ND | | 0.00001 | 0.00000294 |
| Endrin aldehyde | **5** | ND | | 0.010 | 0.0023 | ND | | 0.010 | 0.0023 | ND | | 0.010 | 0.0023 | ND | | 0.010 | 0.0023 | ND | | 0.00001 | 0.0000023 |
| Endosulfan sulfate | **NS** | ND | | 0.010 | 0.00314 | ND | | 0.010 | 0.00314 | ND | | 0.010 | 0.00314 | ND | | 0.010 | 0.00314 | ND | | 0.00001 | 0.00000314 |
| 4,4'-DDT | **0.2** | ND | | 0.010 | 0.00202 | ND | | 0.010 | 0.00202 | ND | | 0.010 | 0.00202 | ND | | 0.010 | 0.00202 | ND | | 0.00001 | 0.00000202 |
| Endrin ketone | **5** | ND | | 0.010 | 0.00323 | ND | | 0.010 | 0.00323 | ND | | 0.010 | 0.00323 | ND | | 0.010 | 0.00323 | ND | | 0.00001 | 0.00000323 |
| Methoxychlor | **35** | ND | | 0.010 | 0.00337 | ND | | 0.010 | 0.00337 | ND | | 0.010 | 0.00337 | ND | | 0.010 | 0.00337 | ND | | 0.00001 | 0.00000337 |
| alpha-Chlordane | **NS** | ND | | 0.010 | 0.00215 | ND | | 0.010 | 0.00215 | ND | | 0.010 | 0.00215 | ND | | 0.010 | 0.00215 | ND | | 0.00001 | 0.00000215 |
| gamma-Chlordane | **NS** | ND | | 0.010 | 0.00314 | ND | | 0.010 | 0.00314 | ND | | 0.010 | 0.00314 | ND | | 0.010 | 0.00314 | ND | | 0.00001 | 0.00000314 |
| Toxaphene | **0.06** | ND | | 0.125 | 0.050 | ND | | 0.125 | 0.050 | ND | | 0.125 | 0.050 | ND | | 0.125 | 0.050 | ND | | 0.000125 | 0.00005 |
| Endosulfan (I and II) | **NS** | ND | | 0.010 | 0.00208 | ND | | 0.010 | 0.00208 | ND | | 0.010 | 0.00208 | ND | | 0.010 | 0.00208 | ND | | 0.00001 | 0.00000208 |
| Chlordane (alpha and gamma) | **0.05** | ND | | 0.010 | 0.00215 | ND | | 0.010 | 0.00215 | ND | | 0.010 | 0.00215 | ND | | 0.010 | 0.00215 | ND | | 0.00001 | 0.00000215 |
| ***Metals - TOTAL (µg/L)** | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| Aluminum | **NS** | 6990 | | | | 3300 | | | | 6580 | | | | 4230 | | | | 5960 | | | |
| Antimony | **3** | <6.0 | | | | <6.0 | | | | <6.0 | | | | <6.0 | | | | <6.0 | | | |
| Arsenic | **25** | 5.0 | | | | 7.7 | | | | 5.2 | | | | <3.0 | | | | <3.0 | | | |
| Barium | **1000** | 229 | | | | <200 | | | | 487 | | | | <200 | | | | 440 | | | |
| Beryllium | **3** | 1.3 | | | | <1.0 | | | | 1.1 | | | | <1.0 | | | | 1.2 | | | |
| Cadmium | **5** | <3.0 | | | | <3.0 | | | | <3.0 | | | | <3.0 | | | | <3.0 | | | |
| Calcium | **NS** | 118000 | | | | 75100 | | | | 169000 | | | | 33100 | | | | 74300 | | | |
| Chromium | **50** | 29.5 | | | | 10.9 | | | | 11.0 | | | | 15.2 | | | | 18.1 | | | |
| Cobalt | **NS** | <50 | | | | <50 | | | | <50 | | | | <50 | | | | <50 | | | |
| Copper | **200** | 60.5 | | | | 56.9 | | | | 27.1 | | | | 13.3 | | | | 44.5 | | | |
| Iron | **NS** | 10400 | | | | 10400 | | | | 9230 | | | | 8200 | | | | 8980 | | | |
| Lead | **25** | **68.9** | | | | **43.9** | | | | **122** | | | | 8.7 | | | | 20.9 | | | |
| Magnesium | **35000** | 14700 | | | | <5000 | | | | 24400 | | | | <5000 | | | | 22200 | | | |
| Manganese | **NS** | 1100 | | | | 182 | | | | 2110 | | | | 140 | | | | 3260 | | | |
| Mercury | **0.7** | <0.20 | | | | 0.63 | | | | <0.20 | | | | <.20 | | | | <0.20 | | | |
| Nickel | **100** | 24.7 | | | | 11.2 | | | | 24.0 | | | | <10 | | | | 26.1 | | | |
| Potassium | **NS** | 10400 | | | | 11200 | | | | 15200 | | | | <10000 | | | | 16300 | | | |
| Selenium | **10** | <10 | | | | <10 | | | | <10 | | | | <10 | | | | **10.5** | | | |
| Silver | **50** | <10 | | | | <10 | | | | <10 | | | | <10 | | | | <10 | | | |
| Sodium | **20000** | **64300** | | | | **106000** | | | | **190000** | | | | **274000** | | | | **193000** | | | |
| Thallium | **0.5** | <10 | | | | <10 | | | | <10 | | | | <10 | | | | <10 | | | |
| Vanadium | **NS** | <50 | | | | <50 | | | | <50 | | | | <50 | | | | <50 | | | |
| Zinc | **2000** | 64 | | | | 49.2 | | | | 107 | | | | 26.9 | | | | 57.4 | | | |
| ***Metals - DISSOLVED (µg/L)** | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| Aluminum | **NS** | 850 | | | | 579 | | | | <200 | | | | <200 | | | | 6990 | | | |
| Antimony | **3** | <6.0 | | | | <6.0 | | | | <6.0 | | | | <6.0 | | | | <6.0 | | | |
| Arsenic | **25** | <3.0 | | | | 7.1 | | | | <3.0 | | | | <3.0 | | | | <3.0 | | | |
| Barium | **1000** | <200 | | | | <200 | | | | 236 | | | | <200 | | | | 328 | | | |
| Beryllium | **3** | <1.0 | | | | <1.0 | | | | <1.0 | | | | <1.0 | | | | <1.0 | | | |
| Cadmium | **5** | <3.0 | | | | <3.0 | | | | <3.0 | | | | <3.0 | | | | <3.0 | | | |
| Calcium | **NS** | 128000 | | | | 60900 | | | | 170000 | | | | 31300 | | | | 70000 | | | |
| Chromium | **50** | <10 | | | | <10 | | | | <10 | | | | <10 | | | | 13.2 | | | |
| Cobalt | **NS** | <50 | | | | <50 | | | | <50 | | | | <50 | | | | <50 | | | |
| Copper | **200** | <10 | | | | <10 | | | | <10 | | | | <10 | | | | 35.7 | | | |
| Iron | **NS** | 1090 | | | | 784 | | | | 110 | | | | 294 | | | | 9040 | | | |
| Lead | **25** | 8 | | | | 4.7 | | | | <3.0 | | | | <3.0 | | | | 9.6 | | | |
| Magnesium | **35000** | 13700 | | | | <5000 | | | | 23300 | | | | <5000 | | | | 20000 | | | |
| Manganese | **NS** | 145 | | | | 20.3 | | | | 1020 | | | | 89.2 | | | | 2730 | | | |
| Mercury | **0.7** | <0.20 | | | | <.20 | | | | <0.20 | | | | <0.20 | | | | <0.20 | | | |
| Nickel | **100** | <10 | | | | <10 | | | | <10 | | | | <10 | | | | 19.6 | | | |
| Potassium | **NS** | 10600 | | | | 11700 | | | | 15600 | | | | <10000 | | | | 16600 | | | |
| Selenium | **10** | <10 | | | | <10 | | | | <10 | | | | <10 | | | | **10.7** | | | |
| Silver | **50** | <10 | | | | <10 | | | | <10 | | | | <10 | | | | <10 | | | |
| Sodium | **20000** | **73000** | | | | **121000** | | | | **209000** | | | | **264000** | | | | **192000** | | | |
| Thallium | **0.5** | <10 | | | | <10 | | | | <10 | | | | <10 | | | | <10 | | | |
| Vanadium | **NS** | <50 | | | | <50 | | | | <50 | | | | <50 | | | | <50 | | | |
| Zinc | **2000** | <20 | | | | <20 | | | | <20 | | | | <20 | | | | 32.7 | | | |
| **General Analytical (µg/L)** | | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | 4.73 | **MDL** | **Conc** | **Q** | **RL** | **MDL** | **Conc** | **Q** | **RL** | **MDL** |
| Cyanide, Total | **200** | ND | | 20.0 | 4.00 | ND | | 20.0 | 4.00 | ND | | 20.0 | 4.00 | ND | | 20.0 | 4.00 | ND | | 20.0 | 4.00 |

**Results in Blue Highlight displays exceedance above the AWQS**
**J = Concentration detected at a value below the RL and above the MDL for target compounds**
**NS = No Standard Available**
**ND OR < = Analyzed for but Not Detected at the MDL**
*** TAL Metals analyzed by SGS Dayton.**

**Table 3B - Soil Vapor Results - VOCs**
**Chelsea Elliott**
**Bronx, New York**

**HK Engineering & Geology, D.P.C.**
**Project #: HK2661.1**

| | *Sample Depth: 12'* | | | | | | | | | *Sample Depth: Sub Slab* | | | | | | | | | | *Sample Depth: 12'* | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Target Compounds** | **SV1** *Sample Location: Exterior* | | | **SV2** *Sample Location: Exterior* | | | **SV3** *Sample Location: Exterior* | | | **SV6** *Sample Location: Hudson Guild Center Basement Hallway* | | | **SV7** *Sample Location: Trash Compactor Room at 436 W. 27th* | | | **SV8** *Sample Location: Basement Hallway Area at 436 W. 27th* | | | **SV9** *Sample Location: Exterior* | | |
| **Volatiles (µg/m³)** | **Q** | **Conc** | **RL** | **Q** | **Conc** | **RL** | **Q** | **Conc** | **RL** | **Q** | **Conc** | **RL** | **Q** | **Conc** | **RL** | **Q** | **Conc** | **RL** | **Q** | **Conc** | **RL** |
| Acetone | | 27 | 0.48 | | 15 | 0.48 | | 78 | 0.48 | D | 100 | 2.4 | | 15 | 0.48 | D | 230 | 2.4 | D | 160 | 2.4 |
| Benzene | | 3.9 | 0.64 | | 1.00 | 0.64 | | 32 | 0.64 | | 30 | 0.64 | | ND | 0.64 | | 6.0 | 0.64 | | 11 | 0.64 |
| Bromodichloromethane | | ND | 1.3 | | ND | 1.3 | | ND | 1.3 | | ND | 1.3 | | ND | 1.3 | | ND | 1.3 | | ND | 1.3 |
| Bromoform | | ND | 2.1 | | ND | 2.1 | | ND | 2.1 | | ND | 2.1 | | ND | 2.1 | | ND | 2.1 | | ND | 2.1 |
| Bromomethane | | ND | 0.78 | | ND | 0.78 | | ND | 0.78 | | ND | 0.78 | | ND | 0.78 | | ND | 0.78 | | ND | 0.78 |
| 1,3-Butadiene | | ND | 0.44 | | ND | 0.44 | | ND | 0.44 | | ND | 0.44 | | ND | 0.44 | | ND | 0.44 | | ND | 0.44 |
| Chlorobenzene | | ND | 0.92 | | ND | 0.92 | | ND | 0.92 | | ND | 0.92 | | ND | 0.92 | | ND | 0.92 | | ND | 0.92 |
| Chloroethane | | ND | 0.53 | | ND | 0.53 | | ND | 0.53 | | ND | 0.53 | | ND | 0.53 | | ND | 0.53 | | ND | 0.53 |
| Chloroform | | ND | 0.98 | | ND | 0.98 | | ND | 0.98 | | ND | 0.98 | | 5.5 | 0.98 | | 72 | 0.98 | | ND | 0.98 |
| Chloromethane | | ND | 0.41 | | ND | 0.41 | | ND | 0.41 | | ND | 0.41 | | ND | 0.41 | | ND | 0.41 | | ND | 0.41 |
| Carbon disulfide | | 4.4 | 0.62 | | ND | 0.62 | | 79 | 0.62 | | 48 | 0.62 | | ND | 0.62 | | 18 | 0.62 | | 4.6 | 0.62 |
| Carbon tetrachloride | | ND | 0.25 | | ND | 0.25 | | 14 | 0.25 | | ND | 0.25 | | ND | 0.25 | | ND | 0.25 | | ND | 0.25 |
| Cyclohexane | | 11 | 0.69 | | ND | 0.69 | | 12 | 0.69 | | 28 | 0.69 | | ND | 0.69 | | 5.2 | 0.69 | | 2.6 | 0.69 |
| Dibromochloromethane | | ND | 1.7 | | ND | 1.7 | | ND | 1.7 | | ND | 1.7 | | ND | 1.7 | | ND | 1.7 | | ND | 1.7 |
| 1,2-Dibromoethane | | ND | 1.5 | | ND | 1.5 | | ND | 1.5 | | ND | 1.5 | | ND | 1.5 | | ND | 1.5 | | ND | 1.5 |
| 1,2-Dichlorobenzene | | ND | 1.2 | | ND | 1.2 | | ND | 1.2 | | ND | 1.2 | | ND | 1.2 | | ND | 1.2 | | ND | 1.2 |
| 1,3-Dichlorobenzene | | ND | 1.2 | | ND | 1.2 | | ND | 1.2 | | ND | 1.2 | | ND | 1.2 | | ND | 1.2 | | ND | 1.2 |
| 1,4-Dichlorobenzene | | ND | 1.2 | | ND | 1.2 | | ND | 1.2 | | ND | 1.2 | | ND | 1.2 | | ND | 1.2 | | ND | 1.2 |
| Dichlorodifluoromethane | | ND | 0.99 | | ND | 0.99 | | ND | 0.99 | | ND | 0.99 | | ND | 0.99 | | ND | 0.99 | | ND | 0.99 |
| 1,1-Dichloroethane | | ND | 0.81 | | ND | 0.81 | | ND | 0.81 | | ND | 0.81 | | ND | 0.81 | | ND | 0.81 | | ND | 0.81 |
| 1,2-Dichloroethane | | ND | 0.81 | | ND | 0.81 | | ND | 0.81 | | ND | 0.81 | | ND | 0.81 | | ND | 0.81 | | ND | 0.81 |
| 1,1-Dichloroethene | | ND | 0.79 | | ND | 0.79 | | ND | 0.79 | | ND | 0.79 | | ND | 0.79 | | ND | 0.79 | | ND | 0.79 |
| 1,2-Dichloroethene (cis) | | ND | 0.79 | | ND | 0.79 | | ND | 0.79 | | ND | 0.79 | | ND | 0.79 | | ND | 0.79 | | ND | 0.79 |
| 1,2-Dichloroethene (trans) | | ND | 0.79 | | ND | 0.79 | | ND | 0.79 | | ND | 0.79 | | ND | 0.79 | | ND | 0.79 | | ND | 0.79 |
| 1,2-Dichloropropane | | ND | 0.92 | | ND | 0.92 | | ND | 0.92 | | ND | 0.92 | | ND | 0.92 | | ND | 0.92 | | ND | 0.92 |
| 1,3-Dichloropropene (cis) | | ND | 0.91 | | ND | 0.91 | | ND | 0.91 | | ND | 0.91 | | ND | 0.91 | | ND | 0.91 | | ND | 0.91 |
| 1,3-Dichloropropene (trans) | | ND | 0.91 | | ND | 0.91 | | ND | 0.91 | | ND | 0.91 | | ND | 0.91 | | ND | 0.91 | | ND | 0.91 |
| 1,3-Dichloropropene - TOTAL | | ND | 0.91 | | ND | 0.91 | | ND | 0.91 | | ND | 0.91 | | ND | 0.91 | | ND | 0.91 | | ND | 0.91 |
| 1,2-Dichlorotetrafluoroethane | | ND | 1.4 | | ND | 1.4 | | ND | 1.4 | | ND | 1.4 | | ND | 1.4 | | ND | 1.4 | | ND | 1.4 |
| 1,4-Dioxane | | ND | 0.72 | | ND | 0.72 | | ND | 0.72 | | ND | 0.72 | | ND | 0.72 | | ND | 0.72 | | ND | 0.72 |
| Ethylbenzene | | 63 | 0.87 | | 5.0 | 0.87 | D | 170 | 8.7 | | 7.9 | 0.87 | | 1.1 | 0.87 | | 6.0 | 0.87 | | 3.9 | 0.87 |
| n-Heptane | | 51 | 0.82 | | ND | 0.82 | | 27 | 0.82 | | 29 | 0.82 | | ND | 0.82 | | 2.4 | 0.82 | | 6.5 | 0.82 |
| 1,3-Hexachlorobutadiene | | ND | 2.1 | | ND | 2.1 | | ND | 2.1 | | ND | 2.1 | | ND | 2.1 | | ND | 2.1 | | ND | 2.1 |
| n-Hexane | | 87 | 0.70 | | 1.3 | 0.70 | | 26 | 0.70 | | 36 | 0.70 | | 0.82 | 0.70 | | 2.8 | 0.70 | | ND | 0.70 |
| Methylene chloride | | ND | 0.69 | | ND | 0.69 | | 17 | 0.69 | | ND | 0.69 | | ND | 0.69 | | 17 | 0.69 | | 15 | 0.69 |
| Methyl ethyl ketone | | ND | 0.59 | | 0.94 | 0.59 | | 8.8 | 0.59 | | 9.3 | 0.59 | | 1.8 | 0.59 | | 29 | 0.59 | D | 230 | 2.9 |
| Methyl isobutyl ketone | | ND | 0.82 | | ND | 0.82 | | ND | 0.82 | | ND | 0.82 | | ND | 0.82 | | ND | 0.82 | | ND | 0.82 |
| Methyl tert-butyl ether | | ND | 0.72 | | ND | 0.72 | | ND | 0.72 | | ND | 0.72 | | ND | 0.72 | | ND | 0.72 | | ND | 0.72 |
| Styrene | | ND | 0.85 | | ND | 0.85 | | 3.7 | 0.85 | | 3.4 | 0.85 | | ND | 0.85 | | 1.1 | 0.85 | | 1.4 | 0.85 |
| Tert-butyl alcohol | | 4.8 | 0.61 | | ND | 0.61 | | 27 | 0.61 | | 43 | 0.61 | | 4.1 | 0.61 | | 5.2 | 0.61 | | 18 | 0.61 |
| 1,1,2,2-Tetrachloroethane | | ND | 1.4 | | ND | 1.4 | | ND | 1.4 | | ND | 1.4 | | ND | 1.4 | | ND | 1.4 | | ND | 1.4 |
| Tetrachloroethene | | 11 | 1.4 | | ND | 1.4 | | 44 | 1.4 | | 73 | 1.4 | | 12 | 1.4 | | 39 | 1.4 | | 46 | 1.4 |
| Toluene | | 3.8 | 0.75 | | 1.3 | 0.75 | | 23 | 0.75 | | 24 | 0.75 | | 2.4 | 0.75 | | 17 | 0.75 | | 10 | 0.75 |
| 1,2,4-Trichlorobenzene | | ND | 1.5 | | ND | 1.5 | | ND | 1.5 | | ND | 1.5 | | ND | 1.5 | | ND | 1.5 | | ND | 1.5 |
| 1,1,1-Trichloroethane | | ND | 1.1 | | ND | 1.1 | | 1.1 | 1.1 | | ND | 1.1 | | ND | 1.1 | | ND | 1.1 | | ND | 1.1 |
| 1,1,2-Trichloroethane | | ND | 1.1 | | ND | 1.1 | | 3.4 | 1.1 | | ND | 1.1 | | ND | 1.1 | | ND | 1.1 | | ND | 1.1 |
| Trichloroethene | | ND | 0.25 | | ND | 0.25 | | ND | 0.25 | | ND | 0.25 | | ND | 0.25 | | ND | 0.25 | | ND | 0.25 |
| Trichlorofluoromethane | | 1.8 | 1.1 | | 1.9 | 1.1 | | 2.9 | 1.1 | | 1.8 | 1.1 | | 1.8 | 1.1 | | 1.8 | 1.1 | | 1.5 | 1.1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | | ND | 1.5 | | ND | 1.5 | | ND | 1.5 | | ND | 1.5 | | ND | 1.5 | | ND | 1.5 | | ND | 1.5 |
| 1,2,4-Trimethylbenzene | | 3.3 | 0.98 | | ND | 0.98 | | 8.8 | 0.98 | | 8.2 | 0.98 | | 0.99 | 0.98 | | 3.5 | 0.98 | | 1.1 | 0.98 |
| 1,3,5-Trimethylbenzene | | 1.1 | 0.98 | | ND | 0.98 | | 4.1 | 0.98 | | 2.6 | 0.98 | | ND | 0.98 | | 1.7 | 0.98 | | ND | 0.98 |
| 2,2,4-Trimethylpentane | | ND | 0.93 | | ND | 0.93 | | ND | 0.93 | | ND | 0.93 | | ND | 0.93 | | ND | 0.93 | | ND | 0.93 |
| Vinyl bromide | | ND | 0.87 | | ND | 0.87 | | ND | 0.87 | | ND | 0.87 | | ND | 0.87 | | ND | 0.87 | | ND | 0.87 |
| Vinyl chloride | | ND | 0.51 | | ND | 0.51 | | ND | 0.51 | | ND | 0.51 | | ND | 0.51 | | ND | 0.51 | | ND | 0.51 |
| Xylenes (m&p) | | 270 | 0.87 | | 23 | 0.87 | D | 750 | 8.7 | | 29 | 0.87 | | 4.4 | 0.87 | | 20 | 0.87 | | 14 | 0.87 |
| Xylenes (o) | | 46 | 0.87 | | 3.9 | 0.87 | | 170 | 0.87 | | 11 | 0.87 | | 1.8 | 0.87 | | 8.9 | 0.87 | | 5.0 | 0.87 |
| Xylenes - TOTAL | | 316 | 0.87 | | 26.9 | 0.87 | | 920 | 8.7 | | 40 | 0.87 | | 6.2 | 0.87 | | 28.9 | 0.87 | | 19 | 0.87 |

***No applicable NYSDEC remediation benchmarks available for soil vapor**
**J = Concentration detected at a value below the RL and above the MDL for target compounds**
**ND = Analyzed for but Not Detected at the RL**
**D = Extra dilution required for this compound**

# Appendix A

## Phase I Environmental Site Assessment

HILLMANN
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# PHASE I ENVIRONMENTAL SITE ASSESSMENT

Fulton
401 West 19th Street, 401 West 18th Street, 427 and 430 West 17th Street
New York, New York 10011

Prepared For:

Elliott Fulton LLC c/o Essence Development
30 Hudson Yards
New York, NY 10001

Report Issuance Date: April 21, 2022
Site Reconnaissance Date: April 19, 2022

Hillmann Project Number Z34898

HILLMANN
CONSULTING

April 21, 2022

Mr. Jamar Adams
Elliott Fulton LLC c/o Essence Development
30 Hudson Yards
New York, NY 10001

**RE: Phase I Environmental Site Assessment**
Fulton
401 West 19th Street, 401 West 18th Street, 427 and 430 West 17th Street
New York, New York 10011
Hillmann Project No: Z34898

Dear Mr. Adams:

Hillmann Consulting LLC has completed a Phase I Environmental Site Assessment of the above referenced property. This assessment was performed in conformance with our contract agreement and the scope and limitations of ASTM Practice E 1527-21, which is the latest version of the E1527 standard published by the ASTM.

We appreciate the opportunity to provide environmental due diligence services. If you have any questions concerning this report, or if we can assist you in any other matter, please contact our office at 908-688-7800.

Sincerely,

Hillmann Consulting, LLC

Chris Hirschmann
Environmental Services Director

Etan Hindin
Senior Project Manager

# TABLE OF CONTENTS

## List of Abbreviations/Acronyms

Hillmann may use the following abbreviations and acronyms for common terminology described in our report. Not all abbreviations or acronyms may be applicable to this report:

| | |
|---|---|
| ACM | – Asbestos Containing Material |
| AOC | – Area of Concern |
| AST | – Aboveground Storage Tank |
| ASTM | – American Society for Testing Materials |
| BER | – Business Environmental Risk |
| CEA | – Classification Exception Area |
| CERCLA | – Comprehensive Environmental Response Compensation and Liability Act |
| CERCLIS | – Comprehensive Environmental Response Compensation and Liability Information System |
| CESQG | – Conditionally Exempt Small Quantity Generator |
| COC | – Chemicals of Concern |
| CORRACTS | – Corrective Action Sites |
| CREC | – Controlled Recognized Environmental Condition |
| DEC | – Department of Environmental Conservation |
| DEP | – Department of Environmental Protection |
| DHS | – Department of Health Services |
| DNPL | – Delisted National Priority List |
| DOB | – Department of Buildings |
| DOH | – Department of Health |
| DOT | – Department of Transportation |
| DTSC | – Department of Toxic Substances Control |
| ENG | – Engineering |
| EPA | – Environmental Protection Agency |
| ERNS | – Emergency Response Notification System |
| FD | – Fire Department |
| FOI/FOIA/FOIL | – Freedom of Information / Freedom of Information Act / Freedom of Information Letter |
| HVAC | – Heating Ventilation & Air Conditioning |
| HREC | – Historic Recognized Environmental Condition |
| IAQ | – Indoor Air Quality |
| ISRA | – Industrial Site Recovery Act |
| LBP | – Lead-Based Paint |
| LCP | – Lead-Containing Paint |
| LQG | – Large Quantity Generator |
| LTANK | – Leaking Storage Tank |
| LUST | – Leaking Underground Storage Tank |
| SDS/MSDS | – Safety Data Sheet / Material Safety Data Sheet |
| NA | – Not Applicable |
| NFA | – No Further Action |
| NFRAP | – No Further Remedial Actions Planned |
| NPDES | – National Pollutant Discharge Elimination System |
| NPL | – National Priority List |
| OER | – Office of Environmental Remediation |
| OPRA | – Open Public Records Act |
| PAH | – Polycyclic Aromatic Hydrocarbon |
| PCE | – Perchloroethylene |
| RAO | – Response Action Outcome |
| RCRA | – Resource Conservation and Recovery Act |
| RCRIS | – Resource Conservation and Recovery Information System |
| REC | – Recognized Environmental Condition |
| RWQCB | – Regional Water Quality Control Board |
| SCAQMD | – South Coast Air Quality Management District |
| SDG | – Significant Data Gap |
| SEMS | – Superfund Enterprise Management System |
| SRP | – Site Remediation Program |
| SQG | – Small Quantity Generator |
| SVOC | – Semi-Volatile Organic Compound |
| TCE | – Trichloroethylene |
| TSDF | – Treatment Storage and/or Disposal Facility |
| UST | – Underground Storage Tank |
| VEC | – Vapor Encroachment Condition |
| VOC | – Volatile Organic Compound |

# 1.0 FINDINGS, OPINIONS, AND CONCLUSIONS

Hillmann Consulting, LLC (Hillmann) performed a Phase I Environmental Site Assessment (ESA) of 401 West 19th Street, 401 West 18th Street, 427 and 430 West 17th Street, New York, New York (the Subject Property). The assessment has been conducted in accordance with our contracted scope of work and the ASTM Standard Practice E 1527-21 for Phase I Environmental Site Assessments and All Appropriate Inquiries (AAI) Final Rule 40 CFR Part 312. This section contains a summary of findings, opinions and conclusions made by this assessment. However, this section, alone, does not constitute the complete assessment. The report must be read in its entirety.

## 1.1 Summary of Project Details

| | | | | | |
|---|---|---|---|---|---|
| **Primary Street Address:** | | 401 West 19th Street, 401 West 18th Street, 427 and 430 West 17th Street | | | |
| **City:** | New York | **County:** | New York | **State:** | New York |
| **Tax ID/Parcel Number:** | | 401W19th: Block 717, Lot 19; 401W18th: Block 716, Lot 17; 427W17th: Block 715, Lot 10; 430W17th: Block 714, Lot 31 | | | |
| **Property Owner:** | | New York City Housing Authority (NYCHA) | | | |
| **Zoning Designation:** | | R8-C2-5 (Residential with Commercial Overlay) | | | |
| **Approx. Property Area:** | | 6.21-acres (combined) | | | |
| **Buildings:** | | Eleven residential apartment buildings: B2, B6, B9 are high-rise 25-story plus basement; B1, B3, B4, B5, B7, B8, B10, B11 each 6-story with no basement except B1 and B3 which have a basement; and B12 - freestanding garage (1-story / 2-bay)<br><br>NOTE: See Appendix A for building numbering/locations | | | |
| **Approx. Building Size:** | | 974-units (combined) | | | |
| **Approx. Year Built:** | | 1963-1965 | | | |
| **Commercial Occupants:** | | Primarily residential with senior center, development/management office and computer lab | | | |
| **Current Use:** | | Multifamily residential | | | |
| **Inspected By:** | | Mr. Etan Hindin and Mr. Dominick Aponte | | | |
| **Site Contact/Company:** | | Mr. Patrick Chan / Property Manager (NYCHA) | | | |
| **Site Escort/Company:** | | Rico / Site Caretaker (NYCHA) | | | |
| **Inspection Date:** | | April 19, 2022 | | | |
| **Weather Conditions:** | | Overcast 42 degrees Fahrenheit | | | |

## 1.2 Findings Summary Table

| Assessment Subject | No REC | REC | CREC | HREC | SDG | Rpt. Ref. |
|---|---|---|---|---|---|---|
| **Property Regulatory Records Review:** | | | | X | | 4.3 |
| **Property Historical Records Review:** | | X | | | | 4.2 |
| **Bulk Petroleum Storage:** | X | | | | | 6.3 |
| **On-Site Operations:** | X | | | | | 6.3 |
| **On-Site Haz-Mat Storage/Use/Spills:** | X | | | | | 6.3 |
| **Transformers/Hydraulic Systems:** | X | | | | | 6.3 |
| **Waste Discharges:** | X | | | | | 6.3 |
| **Interviews:** | X | | | | | 5.0 |
| **Adjoining & Nearby Properties:** | X | | | | | 4.3<br>6.2 |
| **Prior Env. Reports/User Provided Info:** | X | | | | | 3.0 |

## 1.3 Findings, Opinions and Conclusions

### Recognized Environmental Conditions & Significant Data Gaps

Hillmann has performed a Phase I Environmental Site Assessment in accordance with the scope and limitations of ASTM Practice E 1527-21 of the Subject Property as described in Section 2.2 of this report. Any additions to, exceptions to, or deletions from this practice are also described in Section 2 of this report. This assessment has revealed the following *recognized environmental conditions* (RECs), *controlled recognized environmental conditions* (CRECs) and/or *significant data gaps* (SDGs) in connection with the Subject Property:

**RECOGNIZED ENVIRONMENTAL CONDITIONS**

Multiple historic uses of potential environmental concern occurred at the Property prior to the 1963-1965 construction of the present Property buildings, per review of Sanborn Fire Insurance Maps, as follows:

- Vinegar Factory at 424-426 West 17th Street (off the east side of the present Property Building 4) in 1895;
- "Chinese Laundry" at 101 and 119 9th Avenue (near present Property Buildings 2 and 7) in 1904;
- 165-car garage with auto-repair operations in the basement and a 1,500-gallon gasoline buried tank (in the vicinity of the present asphalt surface parking south of Building 2) and a 15-car private garage with a buried gasoline tank (capacity indecipherable) at 409 West 17th Avenue (off the west side of the present Property Building 7), and iron works 434-436 West 17th Avenue and 414 19th Avenue in 1921;
- Filling station (gas station), taxi garage and auto repair with multiple gasoline tanks depicted along ninth avenue between West 16th and West 17th Avenue and along West 16th and West 17th Avenue (see Appendix A figure), and an additional auto filling/service station with multiple gasoline tanks depicted at the northwest corner of 9th Avenue and West 17th Street (near the southern edge of the present Building 7) and auto painting (431-433 West 17th) and repair (443-445 West 17th), a motor freight terminal (410-412 West 19th) in 1950.

| |
|---|
| The aforementioned historic uses including a factory, laundry, iron works, motor freight station, auto filling/service stations with multiple gasoline tanks is considered a REC.<br><br>Two (2) groundwater monitoring wells were observed within the Property north of B12 (two-bay Property garage) and northwest of B4 on the south side of West 18th and West 17th Streets respectively. The trigger for the installation of these wells and their use for sampling/monitoring if any was unknown by the site escort/contact.<br><br>Hillmann recommends obtaining records of a subsurface investigation (if already performed) or performing a subsurface investigation to determine the presence/absence of impact to underlying environmental media from aforementioned uses and the presence/absence of abandoned underground storage tanks (USTs) in areas not excavated in the 1960's for the construction of the present Property buildings. If the onsite groundwater monitoring wells observed during the site reconnaissance are no longer in use, said wells should be decommissioned in accordance with applicable regulations. |
| **CONTROLLED RECOGNIZED ENVIRONMENTAL CONDITIONS (CRECs)** |
| No CRECs were identified. |
| **SIGNIFICANT DATA GAPS (SDGs)** |
| No SDGs were identified. |

### Historical Recognized Environmental Conditions (HRECs)

This assessment has revealed the following *historical recognized environmental conditions* (HRECs) in connection with the Subject Property:

| **HISTORICAL RECOGNIZED ENVIRONMENTAL CONDITIONS** | |
|---|---|
| | An NY SPILLS database listing for the "Excavation Site - Front of 413 West 16th Street" details the discovery of a fuel odor during an unrelated excavation (infrastructure work on a sewer line and transformer vault) leading to the removal of approximately 40 cubic yards of soil on May 27, 2005. Given the impact identified and subsequent remediation (soil removal) and regulatory closure, listed as closed on December 27, 2005, the NY SPILLS listing is considered an HREC.<br><br>Hillmann notes that given the nature of the discovery of the impact (unrelated excavation likely along the sidewalk in front of 413 West 16th Street) and title of the listing "Front of…" the investigation/soil removal was likely not comprehensive enough to determine the presence/absence of impact from historical uses to the rest of the 430 West 17th Street Parcel (Block 714, Lot 31), a parcel noted above with historic uses including multiple gasoline tanks and an auto filling/service station. |

### De Minimis and Other Environmental Conditions

The following *de minimis* and other environmental conditions were identified:

| **OTHER ENVIRONMENTAL CONDITIONS / DE MINIMIS CONDITIONS** |
|---|
| 401-411 West 18th Street (Building 8) is listed on the UST database for a 1,500-gallon UST removed on June 5, 2017. The listing does not indicate any release was identified during the UST removal and is not considered a REC. |
| 400 West 17th Street (Building 7) is listed on the NY SPILLS database due to an incident involving wastewater in June 2020. The case obtained regulatory closure and due to the nature of the spill and regulatory status is not considered a REC. |
| Multiple Con-Edison listings (MANIFEST, RCRA-NonGen, FINDS, ECHO) associated with Property addresses were identified. The listings are associated with infrastructure work generating regulated waste. The listings are not indicative of a release and not considered a REC. |

| |
|---|
| 427-431 West 17th Street / NYCHA-Fulton Houses is listed on the RCRA-NonGen, FINDS and ECHO databases likely associated with the removal of regulated waste. The listings are regulatory in nature, not indicative of a release and not considered a REC. |
| West 17th Street and 10th Avenue is listed on the Brownfields database. The site is located to the adjacent west of Property building 4. In 2004 during a Phase I and II, contaminants of concern were identified associated with past uses of petroleum and historic fill. Soils and groundwater were identified to be contaminated with VOCs, petroleum related and chlorinated solvents and SVOCs. The listings details the subsequent remediation as follows:<br><br>"*A Track 4 cleanup was achieved for the site. Engineering and Institutional Controls have been instituted to manage the residual contamination. These controls have been memorialized in the Environmental Easement that has been recorded in the New York County Clerk's office. The Certificate of Completion was issued on October 6, 2008.*<br><br>*Public water is provided to the area, thereby preventing exposures to groundwater. The remedial action work plan for the site calls for the removal of contaminated soil from the site prior to construction of a residential building on-site. Soil gas is contaminated by chlorinated solvents that are likely due to an off-site source. The site owner will include measures in the building construction to prevent soil vapor migration into the building.*"<br><br>Given the above, a vapor encroachment condition to the Property cannot be ruled out. |

**Environmental Professional Statement**

I/We declare that, to the best of my professional knowledge and belief, I/we meet the definition of *Environmental professional* as defined in § 312.10 of 40 C.F.R. 312. I/we have the specific qualifications based on education, training and experience to assess a *property* of the nature, history and setting of the *subject property*. I/We have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 C.F.R. Part 312.

_____

Etan Hindin
Environmental Professional

_____

Chris Hirschmann
Environmental Professional

## 1.4 Business Environmental Risks / Non-ASTM Scope

Hillmann has performed a limited review of the following potential Business Environmental Risks (BER), also known as "Non-ASTM Scope concerns", in accordance with the contracted scope of work scope for this assessment. BER is defined by ASTM E1527-21 as *"a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice."* The following is a summary of findings for the limited review of potential BERs, where applicable, as per the contracted scope of work and limitations outlined in Section 2. For a more detailed discussion of the findings and contracted scope of work, please see the referenced report section.

| BUSINESS ENVIRONMENTAL RISKS / NON-ASTM SCOPE | | | |
|---|---|---|---|
| **Subject** | **Findings** | **Not Appl.** | **Rpt. Ref.** |
| **Asbestos** | Given the 1963-1965 years of construction, asbestos containing materials are suspected unless ruled out by laboratory analysis.<br><br>Suspected ACM noted within the accessed building areas included floor tile, wall-board, spray-of insulation and roofing materials | | 7.1 |
| **Lead Paint** | Given the 1963-1965 years of construction, lead-paint is suspected unless ruled out by field survey or laboratory analysis.<br><br>Lead sampling was reportedly being performed due to the December 21, 2021 modification to the legal lead-based paint standard to 0.5 $mg/cm^2$ (Local Law 66 and rules adopted by the Department of Housing Preservation and Development [HPD]) The results of the survey have been requested by Hillmann. | | 7.2 |
| **Radon** | The Property is located in the USEPA radon designation Zone 3 or 'low risk' area for radon. | | 7.3 |
| **Mold / Microbial Damage** | The basement of Building 1 was observed to have standing water on the concrete surface with some discoloration. Intermittent pipe and roof leaks were reportedly common given the age of the building. Mold abatement, primarily removing water damaged wall-board is reportedly performed by NYCHA staff as needed. | | 7.4 |
| **NWI Wetlands** | No NWI Wetlands were depicted within the Property. | | 7.5 |
| **Lead in Drinking Water** | Potable water service at the Subject Property is provided by the City of New York. The water purveyor water supply is within acceptable standards. Property building specific lead-in-drinking water sampling was not performed. | | 7.6 |

# 2.0 INTRODUCTION

## 2.1 Purpose and Scope

This assessment was conducted utilizing generally accepted Phase I ESA industry standards in accordance with the ASTM Standard Practice E 1527-21. The ASTM describes these methodologies as representing good commercial and customary practice in the United States of America for conducting an environmental site assessment of a parcel of commercial real estate with respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. § 9601) and petroleum products. As such, this practice is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner or bona fide prospective purchaser limitations on CERCLA liability (hereinafter, the "landowner liability protections," or "LLPs"): that is, the practice that constitutes all appropriate inquiries into the previous ownership and uses the property consistent with good commercial and customary practice as defined at 42 U.S.C. §9601(35) (B). The goal of the processes established by ASTM E1527-21 is to identify *recognized environmental conditions* in connection with the Subject Property.

The term *recognized environmental condition* (REC) is defined by ASTM E1527-21 as *"(1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment."*

The term *controlled recognized environmental condition* is a type of recognized environmental condition and defined by ASTM E1527-21 as a *"recognized environmental condition affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (for example, activity and use limitations or other property use limitations)."*

The term *historical recognized environmental condition* is defined as a *"previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls (for example, activity and use limitations or other property use limitations)."* The ASTM E1527-21 standard has clarified that a *historical recognized environmental condition* (HREC) is not a *recognized environmental condition* (REC).

The term *de minimis condition* is defined by the ASTM, *"…a condition related to a release that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies."* A condition determined to be a *de minimis condition* is not REC nor a CREC.

The chief components of this assessment are generally described as follows:

- A non-invasive visual reconnaissance of the Subject Property and adjoining properties in accordance with ASTM guidelines for evidence of RECs.

- Interviews of past and present owners and occupants and state and local government officials, seeking information related to the potential presence of RECs at the Subject Property.

- A review of standard physical record sources for available topographic, geologic and groundwater data.

- A review of standard historic record sources, such as fire insurance maps, city directories, aerial photographs, prior reports and interviews, etc., to determine prior uses of the Subject Property from the present, back to the Subject Property's first developed use, or back to 1940, whichever is earlier.

- A review of standard environmental record sources including federal and state environmental databases, and additional environmental record sources, to identify potential regulatory concerns with the Subject Property, adjoining properties and properties located within the surrounding area.

An evaluation of environmental or other regulatory compliance matters is excluded from the scope of this assessment.

These methodologies are described as representing good commercial and customary practice for conducting an Environmental Site Assessment of a property for the purpose of identifying recognized environmental conditions.

**Business Environmental Risks/Non-ASTM Scope Considerations**

In accordance with our contract agreement, Hillmann may have addressed the following potential environmental subject matters that are outside of the requirements of the ASTM E1527-21 standard:

- Asbestos-Containing Materials (ACM): A cursory non-intrusive visual screening for the presence of suspect ACM within the accessed areas of buildings built prior to 1990 on the Subject Property. If the Subject Property contains buildings built in 1990 or later, the contracted scope of work excludes a cursory non-intrusive visual screening or any other level of evaluation for suspect ACM; however, the exclusion for buildings built ≥1990 should not be interpreted to suggest that any such buildings are free of ACM or would not warrant evaluation of building materials for ACM prior to disturbance. It is emphasized that this cursory non-intrusive visual screening does not constitute an asbestos survey/inspection of the premises. An asbestos survey/inspection should be sought by the report User(s) if a greater certainty is desired regarding ACM and potential asbestos hazards at the Subject Property. Furthermore, a review of regulatory compliance matters pertaining to asbestos is excluded from the scope of work.

- Lead-Based Paint (LBP): A cursory non-intrusive visual screening of the condition of painted surfaces in the accessed areas of residential buildings/units built prior to 1980 on the Subject Property. If the Property contains buildings built in 1980 or later, the contracted scope of work excludes any cursory non-intrusive visual screening or other level of evaluation for suspect

LPB; however, the scope of work exclusion for building built ≥1980 should not be interpreted to suggest that any such buildings are free of LPB or other lead hazards. It is emphasized that this cursory non-intrusive visual screening does not constitute a comprehensive survey for LBP or potential lead hazards. A comprehensive inspection should be sought by the report User(s) if more certainty is desired regarding LBP at the Subject Property. Furthermore, a review of regulatory compliance matters pertaining to lead-based paint is excluded from the scope of work.

- USEPA Designated Radon Potential: Review of general non-site specific data published by the USEPA regarding the Radon Zone classification for the area of the Subject Property.

- Mold/Microbial Damage: A cursory non-intrusive visual screening within the accessed areas of buildings on the Subject Property for evidence of systemic microbial problems, including visible mold growth, water damaged building materials or musty odors. It is emphasized that this cursory non-intrusive visual screening does not constitute a comprehensive survey for moisture/mold/microbial damage. A more comprehensive inspection should be sought by the report User(s) if more certainty is desired regarding the potential for moisture/mold/microbial damages at the Subject Property.

- NWI Wetlands: The Property has been reviewed for jurisdictional wetlands using the National Wetlands Inventory Wetland Mapper (http://wetlandsfws.er.usgs.gov/NWI/download.html) to determine whether mapped federal wetlands have been indicated on the Subject Property. Any further evaluation or legal delineation of regulated wetlands areas is excluded from the scope of work. It is also emphasized that a field delineation of regulated wetlands by a qualified professional would be warranted to more fully determine the presence or absence of regulated wetlands at the Subject Property.

- Lead in Drinking Water: Review of the potential for elevated levels of lead in the drinking water by determining the source of the drinking water supply and a review of available testing or compliance data reports.

## 2.2 Property Location/Legal Description

Property location and legal description details are described as follows:

| | | | | | |
|---|---|---|---|---|---|
| **Primary Street Address:** | 401 West 19th Street, 401 West 18th Street, 427 and 430 West 17th Street | | | | |
| **City:** | New York | **County:** | New York | **State:** | New York |
| **Tax ID/Parcel Number:** | 401W19th: Block 717, Lot 19; 401W18th: Block 716, Lot 17; 427W17th: Block 715, Lot 10; 430W17th: Block 714, Lot 31 | | | | |
| **Approx. Land Area:** | 6.21-acres (combined) | | | | |
| **Apprx. Latitude/Longitude:** | North 40.7436330 degrees/West 74.0043040 degrees | | | | |
| **Additional Details (if appl.):** | Secondary address range:<br>89-157 9th Avenue;<br>401-433 West 19th; | | | | |

| | |
|---|---|
| | 400-426 West 19th;<br>401-423 West 18th;<br>400-434 West 18th;<br>401-445 West 17th;<br>400-438 West 17th;<br>401-429 West 16th; |
| **Property Owner:** | New York City Housing Authority (NYCHA) |
| **Zoning Designation:** | R8-C2-5 (Residential with Commercial Overlay) |

## 2.3 Data Gaps

A *data gap* is defined by the ASTM as a lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information. A data gap is only significant if other information and/or professional experience raises reasonable concerns involving the data gap and the ability to determine the presence or absence of recognized environmental conditions. The following table summarizes data gaps encountered during the assessment as well as a discussion of their significance.

| Data Gap: | Significant (Yes/No)? | Discussion |
|---|---|---|
| Historical records data failure | No | Records gaps exceeding five years were encountered; however, no significant site use changes are suspected during these intervals. |
| Response to agency records requests not received as of date of report. | No | Any additional information indicative of a REC will be forwarded upon receipt. |

## 2.4 ESA Report Component Dates/Viability

The ASTM E1527-21 standard states that an environmental site assessment (ESA) is presumed to be viable when it is conducted within 180 days prior to the date of acquisition of the Subject Property (or, for transactions not involving an acquisition such as a lease or refinance, the date of the intended transaction). Specifically, all of the following components must be conducted or updated within 180 days prior to the date of acquisition or prior to the date of the transaction. The following table summarizes the component completion dates:

| ESA Component | Completion Date |
|---|---|
| Interviews | April 19, 2022 |
| Env Lien Search | (excluded from scope) |
| Government Records Review | March 31 |
| Visual Inspections | April 19, 2022 |
| Env. Professional Declaration | April 21, 2022 |

## 2.5 User Reliance

This report is for the exclusive use of Elliott Fulton LLC c/o Essence Development and additional relying entities, if any, named on the front cover. No additional individuals or entities shall be

permitted to rely upon any data, interpretation, reports or other information or documentation contained in this report, without first obtaining the consent of Elliott Fulton LLC c/o Essence Development; and without obtaining written consent from Hillmann in the form of a reliance agreement/letter.

Hillmann may, in its sole discretion, withhold its consent to additional reliance and/or Hillmann may condition consent for reliance upon payment of a fee or other conditions.

## 2.6 Significant Assumptions

The following significant assumptions are made:

- The site operations at the time of the site visit are assumed to reflect typical site conditions relative to potential environmental conditions and that no concealment of environmental conditions or releases by site owners or occupants has occurred. Likewise, it is assumed that no areas of the Subject Property with potential environmental concerns or RECs were concealed or otherwise not reported, intentionally or unknowingly, by the Subject Property owners/occupants and/or site escort at the time of the site visit.

- For the purpose of estimating the approximate direction of groundwater flow in the absence of site specific groundwater data, unless indicated otherwise, an assumption has been made that the gradient of groundwater flow follows the surface topography of the Subject Property and immediate surrounding area.

## 2.7 General Limitations and Exceptions

### Limitations

The report turnaround time specified by the contract agreement for this assessment may present a limitation to the availability of pertinent regulatory agency records. Such limitations, if encountered, would be further specified in Section 4.1.

Significant limitations related to the condition or accessibility of the Subject Property at the time of the site reconnaissance, if encountered, are reported in Section 6.1.

### Other Exceptions or Deletions

No other exceptions or deletions from the ASTM Standard E 1527-21 are reported.

### Special Terms and Conditions

This Phase I Environmental Site Assessment has been prepared using reasonable efforts in each phase of its work to identify recognized environmental conditions associated with hazardous substances, wastes and petroleum products at the Subject Property. Findings within this report are based on information collected from observations made on the day of the site reconnaissance and from reasonably ascertainable information obtained from governing public agencies and private sources.

This report is not definitive and should not be assumed to be a complete or specific definition of the conditions above or below grade. Information in this report is not intended to be used as a construction document and should not be used for demolition, renovation, site development, redevelopment, or other construction purposes. No representation or warranty is made that the past or current operations at the Subject Property are, or have been, in compliance with all applicable federal, state and local laws, regulations and codes.

Findings, conclusions and recommendations presented in this report are based on visual observations of the Subject Property, interviews conducted, the records reviewed, information provided by the Client, and/or a review of readily available and supplied drawings and documents. Information obtained during the assessment, whether written, graphic or verbal, provided by the Subject Property contact(s) or as shown on any documents reviewed or received from the Subject Property contact, owner or agent, or government agency source; is assumed to be accurate except as specifically stated otherwise in this report. Independent verification of the accuracy or completeness of all information reviewed or received during the course of this assessment is not made and excluded from the scope of work for this assessment. No warranty or guarantee is made of the accuracy or completeness of information that was obtained from ostensibly knowledgeable individuals, regulatory agency representatives or other secondary sources.

Regardless of the findings stated in this report, Hillmann is not responsible for consequences or conditions arising from facts that were concealed, withheld or not fully disclosed at the time the assessment was conducted.

This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated.

The regulatory database report provided is based on an evaluation of the data collected and compiled by a contracted data research company. Hillmann can neither warrant nor guarantee the accuracy or completeness of the information obtained from the regulatory database report provider during the course of this assessment.

Subsurface conditions may differ from the conditions implied by the surface observations and can only be reliably evaluated through intrusive techniques.

Reasonable efforts have been made during this assessment to identify aboveground and underground storage tanks and ancillary equipment. Reasonable efforts are limited to information gained from visual observation of largely unobstructed areas, recorded database information held in public record and available information gathered from interviews. Such methods may not identify surficial and subsurface features that may have been hidden from view due to parked automobiles and other vehicles, snow cover, vegetative growth, pavement, construction or debris pile storage or incorrect information from sources.

No guarantee, explicit or implied, is made that the records pertaining to historical ownership or occupancy which were reviewed represent a comprehensive or precise delineation of past Property ownership or tenancy for legal purposes.

The ASTM E1527-21 standard states that recommendations are not required to be included in a Phase I ESA report; however, further that recommendations are an additional service that may be useful in the User's analysis of landowner liability protections or business environmental risks; and that the User should consider whether recommendations for additional inquiries or other services are desired.

Recommended response actions offered in Section 1.3, if any, are provided as an option to the Client, and may have taken into account the Client's relation to the Subject Property and/or their intended purpose of this assessment. If included, it is not intended by Hillmann to represent the only course(s) of action, or inaction, to take. Furthermore, it is emphasized that additional response actions may become advisable depending on the outcome of the initial action(s) taken. Hillmann advises that Client and any additional authorized relying parties as specified on the report Cover and Section 2.5, or via letter of reliance extension, undertake consultation with legal counsel familiar with environmental and real estate law would be beneficial to the decision making process for the type and timing of a response action to identified RECs or Business Environmental Risks, if any.

Due to the limited nature of our review of potential Business Environmental Risks, the User(s) of the report should consider whether to take additional action(s) to further define, properly manage and/or mitigate potential BERs.

The User(s) assumes responsibility for business decisions that it makes utilizing information in the report provided by Hillmann. Hillmann shall not be responsible for any conclusions, interpretations and/or decisions of the User(s).

In the event of any conflict between the terms and conditions of this report and the terms and conditions of the consulting services agreement for this project, the consulting services agreement shall control.

# 3.0 USER PROVIDED INFORMATION

The term "User" is defined by ASTM as the party seeking to use Practice E1527 to complete an environmental site assessment of the Subject Property; specifically, the entity or entities named on the front cover to which the report has been addressed.

## 3.1 Environmental Lien and Activity and Use Limitation (AUL) Search

The User did not provide Hillmann with the results of an environmental lien and AUL search for the Subject Property.

## 3.2 Prior Environmental Reports/Documentation

No prior environmental reports/documentation were provided.

## 3.3 User Responsibilities

Section 6 of the ASTM E1527-21 standard describes certain tasks required to be performed by the report User in order to qualify for landowner liability protections to CERCLA liability. To assist the report User to meet these requirements, the ASTM E1527-21 standard recommends a questionnaire of inquiries (User Questionnaire) specified in 40 CFR 312.25, 312.28, 312.29, 312.30, and 312.31 be provided to the original report User. A User Questionnaire has been provided to the report User; however, a completed questionnaire was not returned to Hillmann.

| Question: | Yes/No: | Detail: |
|---|---|---|
| **Environmental liens that are filed or recorded against the property:** Did a search of recorded land title records identify any environmental liens filed or recorded against the property under federal, tribal, state or local law? | NR | |
| **Activity and use limitations that are in place on the property or that have been filed or recorded against the property:** Did a search of recorded land title records (or judicial records where appropriate, identify any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the property and/or have been filed or recorded against the property under federal, tribal, state or local law? | NR | |
| **Specialized knowledge or experience of the person seeking to qualify for the LLP:** Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business? | NR | |
| **Relationship of the purchase price to the fair market value of the property if it were not contaminated:** Does the purchase price being paid for this property reasonably reflect the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower | NR | |

| Question: | Yes/No: | Detail: |
|---|---|---|
| purchase price is because contamination is known or believed to be present at the property? | | |
| **Commonly Known or Reasonably Ascertainable Information:** Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, | | |
| -Do you know the past uses of the property? | NR | |
| -Do you know of specific chemicals that are present or were once present at the property? | NR | |
| -Do you know of spills or other chemical releases that have taken place at the property? | NR | |
| -Do you know of any environmental cleanups that have taken place at the property? | NR | |
| **The degree of obviousness of the presence or likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation:** Based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of releases at the property? | NR | |
| **Litigation/Administrative Proceedings/Government Notices** As the User of this ESA, do you have knowledge of (1) any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property; (2) any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the property; and (3) any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products. | NR | |

*NR-no response*

## 3.4 User's Reason for Performing Phase I ESA

The User did not indicate the purpose of the assessment. In accordance with ASTM E1527-21, it is assumed that the Phase I ESA was being performed in order to qualify for landowner liability protection to CERCLA liability.

# 4.0 RECORDS REVIEW

## 4.1 Environmental Information

### Physical Setting

| Source | Discussion |
|---|---|
| USGS 7.5 minute Topographic Map Data: (EDR Geocheck-Physical Setting Source Addendum) | The Property lies at an elevation of approximately 14 feet above mean sea level. An interpretation of topographic contour lines as well as a review of the EDR Geocheck-General Topographic Gradient suggested terrain sloping downward towards the west-northwest. The closest down gradient water body is the Hudson River, located approximately 850-ft to the west-northwest. |
| USDA SCS Soil Data: (EDR Geocheck-Physical Setting Source Addendum) | The soil type at the Subject Property is classified as "Urban Land". The Urban Land designation indicates that a majority of the original soils on the site have been disturbed by development or covered with impervious surfaces, such as buildings or pavement. |
| Geologic Data: (EDR Geocheck-Physical Setting Source Addendum) | The Geologic Age Identification Category for the Property is Stratified Sequence, and the Rock Stratigraphic Unit is the Paleozoic Eta, Ordovicias System and Lower Orodovician and Cambrian carbonate rocks Series. |
| Prior Env. Reports: (Section 3.2) | None provided. |
| Additional Sources/ Data: | An eastern adjacent Property listed on the Brownfields database, 10th Avenue between West 16th and 17th Streets is listed as having groundwater at 10-14 feet below ground surface (bgs). |
| Groundwater Flow Discussion: | Based on a review of the above information as well as observation of the site, the direction of shallow groundwater flow at the site is inferred to be towards the west-northwest. |

### Federal, State and Tribal Environmental Record Sources

Standard government records were obtained and reviewed primarily via a third-party regulatory database report, titled EDR Radius Map™ Report, prepared by Environmental Data Resources of Shelton, CT. The report provided government records from the standard environmental resources and within minimum search distances specified by Section 8.2.2-Table 2 of the ASTM E1527-21; and were reviewed for the purpose of identifying potential RECs in connection with the Subject Property. Additional detail of the source and significance of the regulatory databases can be found in the regulatory database report in Appendix E. Hillmann has also included discussion of records pertaining to the Subject Property from other government record sources not specifically listed under Table 2, as applicable.

Reported distances for adjoining property listings, if applicable, are approximate and indicative of the presence of a public roadway or right-of-way between the adjoining site and Property.

The reported gradients have been estimated based on a number of factors including but not necessarily limited to field observation, review of topographic maps, database listing details and/or site specific geo-technical data.

Limited analysis of the details of on-site, adjoining and vicinity database sites was conducted to identify potential sources of sub-surface vapor encroachment. This review was based on elements of the ASTM "Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions" (ASTM E 2600-15); and also on elements of "Methodology for Identifying the Area of Concern Around a Property Potentially Impacted by Vapor Migration from Nearby

Contaminated Sources" (Buonicore, 2011-S-103-AWMA). Vicinity database sites pertaining to non-petroleum product releases within 1,760 feet of the Subject Property in the up-gradient direction, 365 feet of the Subject Property in the cross gradient direction and 100 feet of the Subject Property in the down gradient direction; and vicinity database sites pertaining to petroleum product releases within 528 feet of the Subject Property in the up-gradient direction, 165 feet of the Subject Property in the cross gradient direction and 100 feet of the Subject Property in the down gradient direction were reviewed to identify active contamination sites with the potential to affect subsurface vapor conditions at the Subject Property. The potential for vapor encroachment was considered in assessing whether or not a REC exists in connection with the Subject Property when reviewing applicable sites within those distances.

Regulatory database sites with active petroleum or non-petroleum releases that are considered to constitute a vapor encroachment condition (VEC) to the Subject Property, if any, are identified and discussed in this section.

The EDR Radius Map report is attached in Appendix E.

**Property Listings**

The following listings of the Subject Property were identified:

- An NY SPILLS database listing for the "Excavation Site - Front of 413 West 16th Street" details the discovery of a fuel odor during an unrelated excavation (sewer line to transformer vault) leading to the removal of approximately 40 cubic yards of soil on May 27, 2005. Given the impact identified and subsequent remediation (soil removal) and regulatory closure – listed as closed on December 27, 2005, the NY SPILLS listing is considered an HREC.

  Hillmann notes that given the nature of the discovery of the impact (unrelated excavation likely along the sidewalk in front of 413 West 16th Street) and title of the listing "Front of…" the investigation/soil removal was likely not comprehensive enough to determine the presence/absence of impact to the rest of the 430 West 17th Street Parcel (Block 714, Lot 31), a parcel noted above with historic uses including multiple gasoline tanks and an auto filling/service station.

- 401-411 West 18th Street (Building 8) is listed on the UST database for a 1,500-gallon UST removed on June 5, 2017. The listing does not indicate any release was identified during the UST removal and is not considered a REC.

- 400 West 17th Street (Building 7) is listed on the NY SPILLS database due to an incident involving wastewater in June 2020. The case obtained regulatory closure and due to the nature of the spill and regulatory status is not considered a REC.

- Multiple Con-Edison listings (MANIFEST, RCRA-NonGen, FINDS, ECHO) associated with Property addresses were identified. The listings are associated with infrastructure work generating regulated waste. The listings are not indicative of a release and not considered a REC.

- 427-431 West 17th Street / NYCHA-Fulton Houses is listed on the RCRA-NonGen, FINDS and ECHO databases likely associated with the removal of regulated waste. The listings are regulatory in nature, not indicative of a release and not considered a REC.

**Adjoining Property Listings**

The following adjoining property listings were identified.

- Multiple adjacent Con-Edison listings (MANIFEST, RCRA-NonGen, FINDS, ECHO) were identified. The listings are associated with infrastructure work generating regulated waste. The listings are not indicative of a release and not considered a REC in connection with the Property.

- Multiple adjacent sites are listed on the NY SPILLS and LTANKS databases. Each of the adjacent listings obtained regulatory closure and are not considered a REC in connection with the Property.

- West 17th Street and 10th Avenue is listed on the Brownfields database. The site is located to the adjacent west of Property building 4. In 2004 during a Phase I and II, contaminants of concern were identified associated with past uses of petroleum and historic fill. Soils and groundwater were identified to be contaminated with VOCs petroleum related and chlorinated solvents and SVOCs. The listings details the subsequent remediation as follows:

  "*A Track 4 cleanup was achieved for the site. Engineering and Institutional Controls have been instituted to manage the residual contamination. These controls have been memorialized in the Environmental Easement that has been recorded in the New York County Clerk's office. The Certificate of Completion was issued on October 6, 2008.*

  *Public water is provided to the area, thereby preventing exposures to groundwater. The remedial action work plan for the site calls for the removal of contaminated soil from the site prior to construction of a residential building on-site. Soil gas is contaminated by chlorinated solvents that are likely due to an off-site source. The site owner will include measures in the building construction to prevent soil vapor migration into the building.*"

  Given the above, a vapor encroachment condition to the Property cannot be ruled out.

**Surrounding Area Findings**

The following is a discussion of non-adjoining sites identified as located within the ASTM specified search distance surrounding the Subject Property. In order to keep this discussion informative and concise, discussion(s) is/are provided of the listed site(s) for each database category that appears most likely to impact the Subject Property based on distance, area topography and/or regulatory status. Listings of sites within the applicable search distances not specifically discussed below were reviewed and concluded not to be RECs in connection with the Subject Property or VECs based on various factors including distance, area topography, known or inferred groundwater flow direction and/or regulatory status.

| **Federal NPL** | | | | **# of sites:** | 1 | **Search Distance:** | 1-mile |
|---|---|---|---|---|---|---|---|
| **Notable Listing:** | Hudson River PCBs | | | | | | |
| **Distance in feet:** | 850 | **Direction:** | WNW | **Gradient:** | Down | | |
| **Data Discussion:** | Given the location and nature of the NPL case – PCBs in the Hudson River sediment, the listing is not considered a REC to the Property. | | | | | | |
| **REC Discussion:** | Based on the details provided above, a REC is not suspected in connection with the Property. | | | | | | |
| **VEC Discussion:** | Based on the available data, a VEC is not suspected. | | | | | | |

| **Federal Delisted NPL** | | | | **# of sites:** | 0 | **Search Distance:** | 1-mile |
|---|---|---|---|---|---|---|---|
| **Notable Listing:** | None | | | | | | |
| **Distance in feet:** | | **Direction:** | | **Gradient:** | | | |
| **Data Discussion:** | | | | | | | |
| **REC Discussion:** | | | | | | | |
| **VEC Discussion:** | | | | | | | |

| **Federal SEMS** | | | | **# of sites:** | 1 | **Search Distance:** | ½-mile |
|---|---|---|---|---|---|---|---|
| **Notable Listing:** | Hudson River PCBs | | | | | | |
| **Distance in feet:** | 850 | **Direction:** | WNW | **Gradient:** | Down | | |
| **Data Discussion:** | Given the location and nature of the SEMS case (also listed on the NPL database) – PCBs in the Hudson River sediment, the listing is not considered a REC to the Property. | | | | | | |
| **REC Discussion:** | Based on the details provided above, a REC is not suspected in connection with the Property. | | | | | | |
| **VEC Discussion:** | Based on the available data, a VEC is not suspected. | | | | | | |

| **Federal SEMS-ARCHIVE** | | | | **# of sites:** | 2 | **Search Distance:** | ½-mile |
|---|---|---|---|---|---|---|---|
| **Notable Listing:** | Federal Building / 252 7th Avenue | | | | | | |
| **Distance in feet:** | 2,216 | **Direction:** | E | **Gradient:** | Up/Cross | | |
| **Data Discussion:** | Given the distance the SEMS-ARCHIVE sites are not considered a REC in connection with the Property. | | | | | | |
| **REC Discussion:** | Based on the details provided above, a REC is not suspected in connection with the Property. | | | | | | |
| **VEC Discussion:** | Based on the available data, a VEC is not suspected. | | | | | | |

| **Federal CORRACTS** | | | | **# of sites:** | 0 | **Search Distance:** | 1-mile |
|---|---|---|---|---|---|---|---|
| **Notable Listing:** | None | | | | | | |
| **Distance in feet:** | | **Direction:** | | **Gradient:** | | | |
| **Data Discussion:** | | | | | | | |
| **REC Discussion:** | | | | | | | |
| **VEC Discussion:** | | | | | | | |

| **Federal RCRA-TSD** | | | | **# of sites:** | 0 | **Search Distance:** | ½-mile |
|---|---|---|---|---|---|---|---|
| **Notable Listing:** | None | | | | | | |
| **Distance in feet:** | | **Direction:** | | **Gradient:** | | | |
| **Data Discussion:** | | | | | | | |
| **REC Discussion:** | | | | | | | |
| **VEC Discussion:** | | | | | | | |

| **State/Tribal SUPERFUND & HAZARDOUS WASTE** | **# of sites:** | 7 | **Search Distance:** | 1-mile |
|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| **Notable Listing:** | Bayview Correctional Facility / 550 West 20th Street | | | | |
| **Distance in feet:** | 987 | **Direction:** | NW | **Gradient:** | Down |
| **Data Discussion:** | Given the distance, gradient and/or regulatory status the SHWS listing are not considered a REC in connection with the Property. | | | | |
| **REC Discussion:** | Based on the details provided above, a REC is not suspected in connection with the Property. | | | | |
| **VEC Discussion:** | Based on the available data, a VEC is not suspected. | | | | |

| **State/Tribal LANDFILL/SOLID WASTE DISPOSAL** | | | | **# of sites:** | 1 | **Search Distance:** | ½-mile |
|---|---|---|---|---|---|---|---|
| **Notable Listing:** | NYCDOS Ganesvoort MTS (near 14th Street) | | | | | | |
| **Distance in feet:** | 1,718 | **Direction:** | SSW | **Gradient:** | Down | | |
| **Data Discussion:** | Given the distance and downgradient location, the NYCDOS transfer station is not considered a REC in connection with the Property. | | | | | | |
| **REC Discussion:** | Based on the details provided above, a REC is not suspected in connection with the Property. | | | | | | |
| **VEC Discussion:** | Based on the available data, a VEC is not suspected. | | | | | | |

| **State/Tribal LEAKING STORAGE TANKS** | | | | **# of sites:** | 132 | **Search Distance:** | ½-mile |
|---|---|---|---|---|---|---|---|
| **Notable Listing:** | Auto Care West / 464 West 18th Street | | | | | | |
| **Distance in feet:** | 145 | **Direction:** | W | **Gradient:** | Down | | |
| **Data Discussion:** | Given the distance, gradient and/or regulatory status, the LTANKS listings are not considered a REC in connection with the Property. | | | | | | |
| **REC Discussion:** | Based on the details provided above, a REC is not suspected in connection with the Property. | | | | | | |
| **VEC Discussion:** | Based on the available data, a VEC is not suspected. | | | | | | |

| **State/Tribal VOLUNTARY CLEANUP SITES** | | | | **# of sites:** | 20 | **Search Distance:** | ½-mile |
|---|---|---|---|---|---|---|---|
| **Notable Listing:** | 118 10th Avenue / Hudson Yards-Chelsea-Flatiron Union Square | | | | | | |
| **Distance in feet:** | 209 | **Direction:** | NW | **Gradient:** | Down | | |
| **Data Discussion:** | Given the nature of the listings and/or distance/gradient the VCP sites are not considered a REC in connection with the Property. | | | | | | |
| **REC Discussion:** | Based on the details provided above, a REC is not suspected in connection with the Property. | | | | | | |
| **VEC Discussion:** | Based on the available data, a VEC is not suspected. | | | | | | |

| **State/Tribal BROWNFIELD SITES** | | | | **# of sites:** | 11 | **Search Distance:** | ½-mile |
|---|---|---|---|---|---|---|---|
| **Notable Listing:** | 515 West 18th Street | | | | | | |
| **Distance in feet:** | 575 | **Direction:** | W | **Gradient:** | Down | | |
| **Data Discussion:** | Given the distance and gradient, the Brownfields listings are not considered a REC in connection with the Property. | | | | | | |
| **REC Discussion:** | Based on the details provided above, a REC is not suspected in connection with the Property. | | | | | | |
| **VEC Discussion:** | Based on the available data, a VEC is not suspected. | | | | | | |

| **UNMAPPED/ORPHAN LIST SITES** | |
|---|---|
| | Hillmann has also reviewed a list of unmapped sites (a.k.a. "Orphan List" sites) indicated by the database report. Unmapped sites that were identified as falling within an applicable specific search distance or warranting discussion have either been discussed in the preceding tables or are detailed below: |

| **Notable Listings:** | None |
|---|---|

### Additional Environmental Record Sources

Requests have been submitted to local, municipal and state agencies for pertinent records pertaining to the Subject Property, particularly with regard to potential environmental concerns such as petroleum storage tanks, storage and usage of hazardous substances and petroleum products, and/or known or suspected environmental contamination. Where applicable, internet research of government environmental regulatory databases was also conducted, as well as a general cursory internet search of the Subject Property address, for information indicative of a REC. The following table summarizes the findings of the research:

| Source | Type of Request | Outcome |
|---|---|---|
| NYCFD-Public Records Unit / Tank Section | FOI request | No response was received prior to report issuance. |
| NYS DEC | FOI request | A response was received stating that no records were found. |
| NYCDEP | FOI request | No response was received prior to report issuance. |
| NY DOB | Online search | Records corroborating historic filling station within the Property identified. |
| USEPA | Online search | No records indicative of a REC identified. |
| Internet | Online Search | No records indicative of a REC identified. |

Pertinent records referenced in the above table have been included in Appendix F.

## 4.2 Historical Research

Historical records have been compiled and analyzed for historical property information and developing a history of previous uses of the Subject Property, adjoining properties and surrounding area. These records were reviewed for the purpose of identifying the likelihood of past uses having led to RECs in connection with the Subject Property.

The historical record sources listed below have been sought with the objective to document past uses of the Subject Property from the present back to the Subject Property's first developed use, or back to 1940, whichever is earlier. The term "developed use" includes agricultural use, placement of fill dirt and other uses that do not involve structures. Hillmann has sought to review historical records in minimum intervals of five years.

### Fire Insurance Maps

A Certified Sanborn Map Report was obtained from EDR for a review of published historic fire insurance maps for the Subject Property and surrounding area. The following is a summary of site uses and notable details depicted by the available maps:

*430 West 17th Street (Block 714, Lot 31)*

| Year(s) | Prop/Adj | Depicted Use(s) | Notable Details |
|---|---|---|---|
| 1895, 1904, 1919, 1921, 1928 | **Property:** | Multiple multi-story dwellings and commercial occupants including of potential environmental concern. | Vinegar Factory (1895); Chinese Laundry (101 9th Avenue – 1904); 165-car garage with auto repair operation in basement and 1,500-gallon gasoline UST in basement (415-425 West 16th Street – 1921-1950); Iron works (1921). |
| | **Adjoining:** | National Biscuit Company factory/warehouse noted to the south. | |
| 1950 | **Property:** | Dwellings have been cleared and replaced with a filling station and a taxi garage. | Taxi garage and filling station each with multiple gasoline tanks along West 16th Street, 9th Avenue and West 17th Street (1950). |
| | **Adjoining:** | Warehouse to the south, residential and commercial in other directions. | Auto repair and freight terminal to the west. |
| 1969, 1975, 1979, 1980, 1983, 1985, 1987, 1988, 1991-1996, 2001-2005 | **Property:** | Four Property buildings corresponding to the present configuration are depicted. | |
| | **Adjoining:** | Manhattan Industrial Center to the south, residential and commercial in other directions. | |

*427 West 17th Street (Block 715, Lot 10)*

| Year(s) | Prop/Adj | Depicted Use(s) | Notable Details |
|---|---|---|---|
| 1895, 1904, 1919, 1921, 1928 | **Property:** | Multiple multi-story dwellings and commercial occupants including of potential environmental concern. | Chinese Laundry (119 9th Avenue in 1904) |
| | **Adjoining:** | Consolidated Gas Company Gas Holders to the west; residential and commercial in other directions. In | Gas holding silos depicted to the west (1895-1904); |
| 1950 | **Property:** | An auto service and filling station with three gasoline tanks with multiple gasoline tanks is noted at 109 9th Avenue. Auto painting and repair are noted along West 17th. A cheese dealer, lumber yard and waste paper are depicted in addition to multiple mixed-use store/dwelling buildings. | Auto painting, repair and filling with multiple gasoline tanks. |
| | **Adjoining:** | Garage with gasoline tanks noted to the adjacent west. | Gasoline tanks depicted to the adjacent west. |
| 1969, 1975, 1979, 1980, 1983, 1985, 1987, 1988, 1991-1996, 2001-2005 | **Property:** | Three Property buildings corresponding to the present configuration are depicted. The apartment complex is listed as "Fulton Houses Apartments" with 944 units and parking. | |
| | **Adjoining:** | Beginning in 2002 the western adjacent building is listed as a Verizon site. | |

*401 West 18th Street (Block 716, Lot 17)*

| Year(s) | Prop/Adj | Depicted Use(s) | Notable Details |
|---|---|---|---|
| 1895, 1904, 1919, 1921, 1928 | **Property:** | Multiple multi-story dwellings and commercial occupants including a pharmacy and bakery. | |
| | **Adjoining:** | Residential/commercial buildings. | |
| 1950 | **Property:** | Motor freight terminal noted at 410-412 West 19th Street. | Motor freight terminal |

| Year(s) | Prop/Adj | Depicted Use(s) | Notable Details |
|---|---|---|---|
| | **Adjoining:** | Auto body shop noted to the adjacent west. | |
| 1969, 1975, 1979, 1980, 1983, 1985, 1987, 1988, 1991-1996, 2001-2005 | **Property:** | Three Property buildings corresponding to the present configuration are depicted. | |
| | **Adjoining:** | No significant changes noted. | |

*401 West 19th Street (Block 717, Lot 19)*

| Year(s) | Prop/Adj | Depicted Use(s) | Notable Details |
|---|---|---|---|
| 1895, 1904, 1919, 1921, 1928 | **Property:** | Multiple multi-story dwellings and a convent. | |
| | **Adjoining:** | Residential/commercial buildings. | |
| 1950 | **Property:** | The dwellings are not listed as mixed-use (store/dwelling) buildings. | |
| | **Adjoining:** | Primarily mixed-use buildings. | |
| 1969, 1975, 1979, 1980, 1983, 1985, 1987, 1988, 1991-1996, 2001-2005 | **Property:** | One Property building corresponding to the present configuration is depicted. | |
| | **Adjoining:** | No significant changes noted. | |

A copy of the Certified Sanborn Map Report is attached in Appendix D.

### City Directories

An EDR City Directory Abstract report was reviewed for data of former occupants of the Subject Property's street address. The following is a generalized summary of the findings of city directory research for past occupants of the Subject Property.

| Property | |
|---|---|
| **Use(s) / Occupant(s):** | **Years** |
| Residential and mixed-use listings | 1920-2017 |
| 403 West 18th Street – Cleveland Automotive Prod Co, Unit Auto Parts Co | 1950 |
| 424 West 18th Street – Drayer scrap metal, Dry Lee Plastic Co Inc. | 1956-1958 |

The EDR City Directory Abstract report was also reviewed for listings of historic occupants of the adjoining properties. The following is a general summary of listings of historic adjoining property occupants:

| Adjoining Properties | |
|---|---|
| **Use and/or Occupant(s)** | **Years** |
| Mix of residential and commercial occupants. | 1920-2017 |

A copy of the EDR City Directory report is attached in Appendix D.

### Historical Topographic Maps

Due to the availability of alternate historic sources, as well as the likelihood that this source would not provide any significant data, historical aerial photographs were not researched for this assessment.

### Historical Aerial Photographs

Due to the availability of alternate historic sources, as well as the likelihood that this source would not provide any significant data, historical aerial photographs were not researched for this assessment.

### EDR High-Risk Historical Records

The EDR Radius Map™ report, which is discussed in greater detail in Section 4.1 and attached in Appendix E, provided a search of proprietary databases of potential historical high-risk uses at or in the vicinity of the Subject Property. These databases include EDR Historic Cleaners – a database of property addresses with records of historical occupancy by suspected cleaners businesses; EDR Historic Auto – a database of property addresses with records of historical occupancy by potential automotive gas/filling stations and repair facilities; and EDR MGP- a database of sites historically occupied by manufactured gas plants and related facilities.

| EDR Database | On-site Listings: | Adjoining/Off-Site Listings |
|---|---|---|
| **Historic Cleaners:** (on-site/adjoining only) | None | 322 Franklin Street, Indigo Cleaners and Dyers, listed for the years 1957 to 1972 |
| **Historic Auto:** (on-site/adjoining only) | None | None |
| **MGP:** (1-mile distance) | None | ConEdison-West 58th St. Station MGP 11th Ave Between W. 58th – W. 59th Sts, was incorrectly plotted by EDR, and is actually located over a mile to the west-northwest. |

### Petroleum/Natural Gas Well Review

The historical record sources were reviewed for records of historic petroleum and/or natural gas wells at the Subject Property. No record of any historical petroleum/natural gas wells at or adjoining the Property was identified.

### Additional Historical Data

Where applicable, the following additional pertinent historical data was obtained:

| | |
|---|---|
| **Interviews/Anecdotal:** | No additional pertinent historical data was obtained. |
| **Local Gov't Records:** | The following additional pertinent historical data was obtained:<br><br>NYC DOB records corroborate Sanborn depictions of gasoline tanks/fillings stations historically within the Property. |

| | |
|---|---|
| **Prior Env. Reports:** (Section 3.2) | Not applicable; no prior reports were provided. |
| **Site Observations:** | Indications of historic uses of the Property or adjoining properties were not observed during the site reconnaissance. |
| **Other Sources:** | No additional pertinent historical data was obtained. |

**Summary of Identified Historic Uses**

The following table presents a summary of the types and approximate date ranges of identified prior uses of the Subject Property:

| Property | |
|---|---|
| **Date Range** | **Use** |
| Late 1800's to 1963 | Residential and auto repair / fillings station among other commercial uses. |
| 1963-Present | Fulton apartment buildings |

The following table presents a summary of the types of identified prior uses of the adjoining properties:

| Adjoining Properties | |
|---|---|
| **Date Range** | **Use** |
| Unk to Present | Residential, commercial and auto repair, industrial warehouses (south), Chelsea Market (south) |

**Historical Records Data Failure**

The ASTM E1527-21 standard defines data failure as failure to achieve the historical research objective even after reviewing the standard historical sources that are reasonably ascertainable and likely to be useful. The objective is to identify all obvious uses of the property from the present, back to the property's first developed use, or back to 1940, whichever is earlier. Furthermore, records of historic use/conditions were sought in intervals no less than approximately five years, unless the property conditions appear unchanged over a longer interval. In encountered, data failure and its significance as a data gap is discussed below:

| Objective | Met? | Detail | Significant? |
|---|---|---|---|
| First developed use/date determined? | Yes | The first developed use of the Property was for dwellings in the late 1800's. | No |
| Record sources at 5-year intervals back to 1940 or first developed use? | Yes | Historical record gaps exceeding five years were encountered. However, significant site-use changes or undiscovered site uses appear unlikely to have occurred during the record gaps. | No |
| All obvious prior uses identified? | Yes | See Summary of Identified Past Uses of this section. | No |

Please refer to Section 2.3 for additional discussion of data gaps and their significance to the findings of the assessment.

**Historic Uses REC Discussion**

The review of historical records indicated evidence of the following potential RECs in connection with the Property:

Multiple historic uses of potential environmental concern, based on a review of Sanborn Fire Insurance Maps, occurred at the Property prior to the construction of the present Property buildings in the 1960's as follows:

- Vinegar Factory at 424-426 West 17th Street (off the east side of the present Property Building 4) in 1895;
- "Chinese Laundry" at 101 and 119 9th Avenue (near present Property Buildings 2 and 7) in 1904;
- 165-car garage with auto-repair operations in the basement and a 1,500-gallon gasoline buried tank (in the vicinity of the present asphalt surface parking south of Building 2) and a 15-car private garage with a buried gasoline tank (capacity indecipherable) at 409 West 17th Avenue (off the west side of the present Property Building 7), and iron works 434-436 West 17th Avenue and 414 19th Avenue in 1921;
- Filling station (gas station), taxi garage and auto repair with multiple gasoline tanks depicted along ninth avenue between West 16th and West 17th Avenue and along West 16th and West 17th Avenue (see Appendix A figure), and an additional auto filling/service station with multiple gasoline tanks depicted at the northwest corner of 9th Avenue and West 17th Street (near the southern edge of the present Building 7) and auto painting (431-433 West 17th) and repair (443-445 West 17th), a motor freight terminal (410-412 West 19th) in 1950.

The aforementioned historic uses including a factory, laundry, iron works, motor freight station, auto filling/service stations with multiple gasoline tanks is considered a REC.

# 5.0 INTERVIEWS

## 5.1 Interviews with Owners, Operators and Occupants

### Current Owner / Key Site Operator

| **Property Owner** | **Contact Name** | **Affiliation** | **Interview Type** |
|---|---|---|---|
| New York City Housing Authority (NYCHA) representative | Patrick Chan | Property Manager with NYCHA | In person |
| **Interview Date:** | April 19, 2022 | | |
| **Interview Outcome/Findings:** | | | |
| An interview for information pertinent to the assessment was conducted in person at the time of the site visit. The following pertinent information was indicated:<br><br>The Property was reportedly always supplied with high pressure steam and no heating oil is or was present to Mr. Chan's knowledge. | | | |

### Prior Owners/Operators/Occupants

| **Name** | **Company/Title** | **Yrs @ Site** | **Interview Type** |
|---|---|---|---|
| | | | |
| **Interview Date:** | | | |
| **Interview Outcome/Findings:** | | | |
| No prior owners, operators or occupants were interviewed. | | | |

### Neighboring Property Owner/Occupants

| **Name** | **Company/Title** | **Yrs at site** | **Interview Type** |
|---|---|---|---|
| | | | |
| **Interview Date:** | | | |
| **Interview Outcome/Findings:** | | | |
| The Property was not an abandoned property with evidence of unauthorized uses or uncontrolled access; therefore, interviews with adjoining or nearby property owners or occupants were not conducted. | | | |

## 5.2 Interviews with State and/or Local Government Officials

State and/or local governmental officials have been interviewed to obtain information of potential RECs in connection with the Subject Property. Many government agencies and their officials require submittal of written request for records in order to respond. The details in Section 4.1 list the various state and local government agencies contacted as part of this assessment, and the outcome of each inquiry. In addition, the details of regulatory database research in Section 4.1 may

have included detail of interviews with officials pertinent to government records review and identification of RECs.

Additional interview of government officials not previously detailed in Sections 4.1 are discussed below, if applicable.

| **Name** | **Agency Name/Title** | **Interview Type** |
|---|---|---|
| | | |
| **Interview Outcome/Findings:** | | |
| No additional local/state government officials were interviewed. | | |

# 6.0 SITE RECONNAISSANCE

## 6.1 Methodology and Limiting Conditions

A site reconnaissance was conducted to collect information and make observations to help identify RECs in connection with the Subject Property. This included visual and/or physical observations of the Subject Property and its structures, adjoining properties as viewed from the Subject Property boundaries and the surrounding area based on visual observations from adjoining public thoroughfares and accessed Subject Property structures. Subject property building exteriors were observed at ground level, unless otherwise indicated. Where applicable, building interiors were accessed and observed to the extent they were made safely accessible with the cooperation of the site escort.

| | |
|---|---|
| **Site Inspection Personnel:** | Mr. Etan Hindin and Mr. Dominick Aponte |
| **Property Escort/Company:** | Rico / Property Caretaker |
| **Inspection Date:** | April 19, 2022 |
| **Weather Conditions:** | Overcast 45 degrees Fahrenheit |

### Significant Inaccessible Areas

Due to the pandemic occupied units were inaccessible. The inability to access these units is not considered a Significant Data Gap.

### Significant Limiting Site Conditions

No significant limiting site conditions were noted at the time of the site reconnaissance.

## 6.2 General Site Setting

### Site and Vicinity Characteristics

| | |
|---|---|
| **Abutting Roadways:** | 9th Avenue to the east; West 16th Street to the south; West 17th, 18th and 19th divide the Property parcels. |
| **Current Property Use:** | Multifamily residential |
| **Evidence of Past Property Uses:** | None observed. |
| **Evidence of Past Adjoining Property Uses:** | None observed. |
| **Surrounding Area Uses:** | Commercial, residential |

### Current Adjoining Property Uses

| Dir | Street Address | Description |
|---|---|---|
| **N** | Multiple West 20th addresses | Primarily residential |
| **W** | Multiple West 16th-20th addresses | Residential and commercial |
| **E** | Multiple 9th Avenue addresses | Commercial and residential |
| **S** | 75 9th Avenue | Commercial |

No visual observations indicative of a potential environmental concern were noted on the adjoining properties.

### Topographic Characteristics

| | |
|---|---|
| **Terrain:** | Flat to gently sloping |
| **Direction of Downward Slope:** | Towards the northwest |
| **On-site Water Bodies:** | None observed |
| **Other Significant Features:** | None observed |

### General Description of Structures and Improvements

| | |
|---|---|
| **Buildings:** | Twelve |
| **Approx. Building Size:** | 974-units (combined) |
| **Approx. Year Built:** | 1963-1965 |
| **Number of Stories:** | B12 – 1; B2, B6, B9 – 25-story plus basement; B1, B3 6-story plus basement; B4, B5, B7, B8, B10, B11 – 6-story |
| **Basement/Subgrade Levels:** | See above |
| **Exterior Ground Cover:** | Asphalt, cement and landscaped areas, |
| **Ancillary Structures:** | B12 as noted above |
| **Sources of Heating & Cooling:** | High pressure steam supplied by Con Edison for heat and tenant-owned optional electric window units for cooling. |
| **Potable Water/Sewage Disposal:** | Municipal utility connections |

## 6.3 Site Features and Conditions

### Storage/Usage of Hazardous Substances and Petroleum Products

The following approximate number of containers, and general description of their contents, capacity, container types and storage conditions, were observed to be stored and/or used at the Subject Property:

| Occupant | Substance | Qty/Container Type | Storage Conditions |
|---|---|---|---|
| NYCHA | Maintenance and cleaning materials (including paint) | 1-30-gallon | All stored indoors on intact concrete. No storage concerns noted.<br><br>Paint storage within western side of B4. |

**Bulk Petroleum/Hazardous Material Storage Tanks**

The following storage tanks for bulk petroleum or hazardous material storage were identified or reported to be present; or are suspected to be present based on visual observations:

| AST/UST | Product | Capacity | Construction | Year Installed | Status | Location/Notes |
|---|---|---|---|---|---|---|
| None observed | | | | | | |

One UST noted to have been removed from the Property, specifically, 401-411 West 18th Street (Building 8) is listed on the UST database for a 1,500-gallon UST removed on June 5, 2017.

While no visual evidence of a UST was noted, considering the history of development, the potential presence of abandoned USTs and/or associated buried piping at the Subject Property cannot be ruled out.

**Strong, Pungent or Noxious Odors and their Sources**

No strong, pungent or noxious odors were noted at the Subject Property.

**Standing Surface Water/Pools & Sumps**

No standing water, pools or sumps containing liquids likely to be hazardous substances or petroleum products were noted.

**Drums, Totes and Intermediate Bulk Containers**

No hazardous substance or petroleum product drums were noted.

**Unidentified Substance Containers**

No unidentified substance containers suspected of containing hazardous substance or petroleum product were noted.

**PCBs in Oil Filled Electrical/Hydraulic Equipment**

No oil-filled electrical or hydraulic equipment was identified at the Subject Property.

It is noted that identification of PCB containing fluorescent light ballasts, caulk, paint, or other materials located inside and are part of the building or structure is outside of the scope of the ASTM

E1527-21 standard and this assessment.

**Stains or Corrosion on Floors, Walls or Ceilings**

No stains or corrosion of floors, walls or ceilings, excluding any staining from water, were noted.

**Drains and Sumps**

Floor drains and a basement sump designed for the purpose of managing sanitary sewage were noted. No conditions indicative of a REC were observed.

**Pits/Ponds/Lagoons**

No pits, ponds or lagoons were identified in connection with waste treatment or disposal.

**Stained Soil, Pavement/Stressed Vegetation**

No stained soil, pavement or stressed vegetation was observed.

**On-Site Solid Waste Disposal/Fill Material**

No evidence of on-site disposal of trash, construction debris, demolition debris or other solid waste was observed.

Based on the history of previous site development, historical fill material may be present in the subsurface at areas of previous site grading or building structures.

**Waste Water**

Sanitary sewage generated at the Subject Property is discharged via a connection to the local public sewer system.

Storm water runoff at the Subject Property is discharged via roof drains into the municipal sewer system.

**Septic Systems/Cesspools**

No septic systems/cesspools identified.

**Wells**

The following wells were identified at the Subject Property:

Two (2) groundwater monitoring wells were observed within the Property north of B12 (two-bay Property garage) and northwest of B4 on the south side of West 18$^{th}$ and West 17$^{th}$ Streets respectively. The trigger for the installation of these wells and their use for sampling/monitoring, if any, was unknown by the site escort/contact.

**Railroad Spurs**

No railroad spurs were identified on the Subject Property.

# 7.0 BUSINESS ENVIRONMENTAL RISKS

In accordance with the contract agreement for this assessment, Hillmann has performed cursory reviews of several potential Business Environmental Risks (also known as "Non-Scope Considerations"). The ASTM E1527-21 standard defines the term business environmental risk (BER) as, *"a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice."*

## 7.1 Asbestos-Containing Material (ACM)

The contracted scope of work included a cursory visual screening of the accessed portions of buildings at the Subject Property built prior to 1990 for suspect asbestos containing materials (ACM). The information provided in this section, where applicable, is limited to identification of potential suspect materials in the readily accessible and observed areas of the building, and their general condition. This is not intended to be a comprehensive survey for the presence of ACM, and no testing has been conducted.

Given the 1963-1965 years of construction, asbestos containing materials are suspected unless ruled out by laboratory analysis.

Suspected ACM noted within the accessed building areas included floor tile, wall-board, spray-of insulation and roofing materials.

## 7.2 Lead-Based Paint

The contracted scope of work included a cursory visual screening of the condition of painted surfaces in the accessed areas of residential buildings/units built prior to 1980. This is not intended to constitute a comprehensive survey for LBP or potential lead hazards, and no testing has been conducted.

Given the 1963-1965 years of construction, lead-paint is suspected unless ruled out by field survey or laboratory analysis.

Lead sampling was reportedly being performed due to the December 21, 2021 modification to the legal lead-based paint standard to 0.5 $mg/cm^2$ (Local Law 66 and rules adopted by the Department of Housing Preservation and Development [HPD]) The results of the survey have been requested by Hillmann.

## 7.3 Radon

Data compiled by the USEPA, as summarized by the regulatory database report, indicated that the Subject Property is located in an area classified as Zone 3 or 'low risk' area for radon. Radon testing was not included in the scope of this assessment.

## 7.4 Mold/Microbial Damage

The contracted scope of work included a cursory visual screening of the accessed areas of the building for evidence of significant damage to building materials and finishes as result of moisture intrusion and/or mold/microbial growth.

The following evidence of significant moisture intrusion or mold/microbial growth was noted:

The basement of Building 1 was observed to have standing water on the concrete surface with some discoloration. Intermittent pipe and roof leaks were reportedly common given the age of the building. Mold abatement, primarily removing water damaged wall-board is reportedly performed by NYCHA staff as needed.

## 7.5 NWI Mapped Wetlands

The National Wetlands Inventory online Wetland Mapper (https://www.fws.gov/wetlands/data/mapper.html) was reviewed for indications of jurisdictional wetlands at or immediately adjoining the Subject Property. The scope of work for this assessment excluded a visual determination of regulated wetlands at the Subject Property. It is emphasized that, regardless of the data reviewed via the NWI Wetlands Mapper, a field delineation of regulated wetlands by a qualified professional would be warranted to determine the presence or absence of regulated wetlands at the Subject Property.

The review did not indicate regulated wetland areas on the Property.

## 7.6 Lead in Drinking Water

The scope of work for this assessment included a review of the potential for elevated levels of lead in drinking water by determining the source of the drinking water supply and a review of available compliance or testing data.

Potable water service at the Property is provided by a utility connection with the City of New York. A recently published water quality report from the utility indicated compliance with USEPA water quality standards for lead in drinking water. A copy of the report has been attached in Appendix F. Note – no site-specific lead-in-water sampling was performed within the context of the Phase I.

# 8.0 REFERENCES

ASTM E1527-21-Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process; ASTM International, 2021

ASTM E12600-15-Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transaction, ASTM International, 2015

EDR Radius Map Report, and historical record reports discussed in Section 4, Environmental Data Resources

Methodology for Identifying the Area of Concern Around a Property Potentially Impacted by Vapor Migration from Nearby Contaminated Sources; A. Buonicore, 2011

# 9.0 APPENDICES

| | |
|---|---|
| Appendix A | Site Diagram / Vicinity Map |
| Appendix B | Site Photographs |
| Appendix C | Questionnaires / User Provided Information |
| Appendix D | Historical Records Documentation |
| Appendix E | Regulatory Records Documentation |
| Appendix F | Other Documents / Lab Results |
| Appendix G | Project Personnel Qualifications |

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# PHASE I ENVIRONMENTAL SITE ASSESSMENT


Chelsea-Elliott
264 & 278 10th Avenue, 427 & 441 West 26th Street, 407 West 25th Street
New York, New York 10001

Prepared For:

Elliott Fulton LLC c/o Essence Development
30 Hudson Yards
New York, NY 10001

Report Issuance Date: May 6, 2022
Site Reconnaissance Date: April 19, 2022

Hillmann Project Number Z34898

HILLMANN
CONSULTING

May 6, 2022

Mr. Jamar Adams
Elliott Fulton LLC c/o Essence Development
30 Hudson Yards
New York, NY 10001

**RE: Phase I Environmental Site Assessment**
Chelsea-Elliott
264 & 278 10th Avenue, 427 & 441 West 26th Street, 407 West 25th Street
New York, New York 10001
Hillmann Project No: Z34898

Dear Mr. Adams:

Hillmann Consulting LLC has completed a Phase I Environmental Site Assessment of the above referenced property. This assessment was performed in conformance with our contract agreement and the scope and limitations of ASTM Practice E 1527-21, which is the latest version of the E1527 standard published by the ASTM.

We appreciate the opportunity to provide environmental due diligence services. If you have any questions concerning this report, or if we can assist you in any other matter, please contact our office at 908-688-7800.

Sincerely,

Hillmann Consulting, LLC

Chris Hirschmann
Environmental Services Director

Etan Hindin
Senior Project Manager

# TABLE OF CONTENTS

## List of Abbreviations/Acronyms

Hillmann may use the following abbreviations and acronyms for common terminology described in our report. Not all abbreviations or acronyms may be applicable to this report:

| | |
|---|---|
| ACM | – Asbestos Containing Material |
| AOC | – Area of Concern |
| AST | – Aboveground Storage Tank |
| ASTM | – American Society for Testing Materials |
| BER | – Business Environmental Risk |
| CEA | – Classification Exception Area |
| CERCLA | – Comprehensive Environmental Response Compensation and Liability Act |
| CERCLIS | – Comprehensive Environmental Response Compensation and Liability Information System |
| CESQG | – Conditionally Exempt Small Quantity Generator |
| COC | – Chemicals of Concern |
| CORRACTS | – Corrective Action Sites |
| CREC | – Controlled Recognized Environmental Condition |
| DEC | – Department of Environmental Conservation |
| DEP | – Department of Environmental Protection |
| DHS | – Department of Health Services |
| DNPL | – Delisted National Priority List |
| DOB | – Department of Buildings |
| DOH | – Department of Health |
| DOT | – Department of Transportation |
| DTSC | – Department of Toxic Substances Control |
| ENG | – Engineering |
| EPA | – Environmental Protection Agency |
| ERNS | – Emergency Response Notification System |
| FD | – Fire Department |
| FOI/FOIA/FOIL | – Freedom of Information / Freedom of Information Act / Freedom of Information Letter |
| HVAC | – Heating Ventilation & Air Conditioning |
| HREC | – Historic Recognized Environmental Condition |
| IAQ | – Indoor Air Quality |
| ISRA | – Industrial Site Recovery Act |
| LBP | – Lead-Based Paint |
| LCP | – Lead-Containing Paint |
| LQG | – Large Quantity Generator |
| LTANK | – Leaking Storage Tank |
| LUST | – Leaking Underground Storage Tank |
| SDS/MSDS | – Safety Data Sheet / Material Safety Data Sheet |
| NA | – Not Applicable |
| NFA | – No Further Action |
| NFRAP | – No Further Remedial Actions Planned |
| NPDES | – National Pollutant Discharge Elimination System |
| NPL | – National Priority List |
| OER | – Office of Environmental Remediation |
| OPRA | – Open Public Records Act |
| PAH | – Polycyclic Aromatic Hydrocarbon |
| PCE | – Perchloroethylene |
| RAO | – Response Action Outcome |
| RCRA | – Resource Conservation and Recovery Act |
| RCRIS | – Resource Conservation and Recovery Information System |
| REC | – Recognized Environmental Condition |
| RWQCB | – Regional Water Quality Control Board |
| SCAQMD | – South Coast Air Quality Management District |
| SDG | – Significant Data Gap |
| SEMS | – Superfund Enterprise Management System |
| SRP | – Site Remediation Program |
| SQG | – Small Quantity Generator |
| SVOC | – Semi-Volatile Organic Compound |
| TCE | – Trichloroethylene |
| TSDF | – Treatment Storage and/or Disposal Facility |
| UST | – Underground Storage Tank |
| VEC | – Vapor Encroachment Condition |
| VOC | – Volatile Organic Compound |

# 1.0 FINDINGS, OPINIONS, AND CONCLUSIONS

Hillmann Consulting, LLC (Hillmann) performed a Phase I Environmental Site Assessment (ESA) of 264 & 278 10th Avenue, 427 & 441 West 26th Street, 407 West 25th Street, New York, New York (the Subject Property). The assessment has been conducted in accordance with our contracted scope of work and the ASTM Standard Practice E 1527-21 for Phase I Environmental Site Assessments and All Appropriate Inquiries (AAI) Final Rule 40 CFR Part 312. This section contains a summary of findings, opinions and conclusions made by this assessment. However, this section, alone, does not constitute the complete assessment. The report must be read in its entirety.

## 1.1 Summary of Project Details

| | | | | | |
|---|---|---|---|---|---|
| **Primary Street Address:** | 264 & 278 10th Avenue, 427 & 441 West 26th Street, 407 West 25th Street | | | | |
| **City:** | New York | **County:** | New York | **State:** | New York |
| **Tax ID/Parcel Number:** | 278 10th Avenue: Block 724, Lot 1; 441W26th: Block 724, Lot 10; 427W26th: Block 724, Lot 15; 264 10th Avenue: Block 723, Lot 1; 407W25th: Block 723, Lot 15 | | | | |
| **Property Owner:** | New York City Housing Authority (NYCHA) | | | | |
| **Zoning Designation:** | R8 (Residential) | | | | |
| **Approx. Property Area:** | 6.53-acres (combined) | | | | |
| **Buildings:** | Seven residential apartment buildings and a daycare building:<br><br>**Chelsea**: 407 West 25th Street parcel (Block 723, Lot 15) is comprised of two (2) 21-story plus basement apartment buildings. The eastern building is equipped with a two-bay maintenance garage on the east side and a waste management areas east of the building.<br><br>**Chelsea Addition**: 441 West 26th Street parcel (Block 724, Lot 10) – one (1) 14-story plus basement apartment building (ground level day center).<br><br>**Elliott**: three (3) parcels (Block 724, Lots 1 and 15 and Block 723, Lot 1), four (4) 11-story and 12-story plus basement apartment buildings and one freestanding daycare at the northeast corner of West 26th Street and 10th Avenue.<br><br>NOTE: See Appendix A for building numbering/locations | | | | |
| **Approx. Building Size:** | 1,002-units (combined) | | | | |
| **Approx. Year Built:** | 1940-1968 | | | | |

| | |
|---|---|
| **Commercial Occupants:** | Primarily residential with a day-center, and management office plus a freestanding daycare |
| **Current Use:** | Multifamily residential and daycare |
| **Inspected By:** | Mr. Etan Hindin and Mr. Dominick Aponte |
| **Site Contact/Company:** | Mr. Patrick Chan / Property Manager (NYCHA) |
| **Site Escort/Company:** | Sidiya Harris / Site Caretaker (NYCHA) |
| **Inspection Date:** | April 19, 2022 |
| **Weather Conditions:** | Overcast 42 degrees Fahrenheit |

## 1.2 Findings Summary Table

| Assessment Subject | No REC | REC | CREC | HREC | SDG | Rpt. Ref. |
|---|---|---|---|---|---|---|
| **Property Regulatory Records Review:** | | | X | X | | 4.3 |
| **Property Historical Records Review:** | | X | | | | 4.2 |
| **Bulk Petroleum Storage:** | X | | | | | 6.3 |
| **On-Site Operations:** | X | | | | | 6.3 |
| **On-Site Haz-Mat Storage/Use/Spills:** | X | | | | | 6.3 |
| **Transformers/Hydraulic Systems:** | X | | | | | 6.3 |
| **Waste Discharges:** | X | | | | | 6.3 |
| **Interviews:** | X | | | | | 5.0 |
| **Adjoining & Nearby Properties:** | X | | | | | 4.3<br>6.2 |
| **Prior Env. Reports/User Provided Info:** | X | | | | | 3.0 |

## 1.3 Findings, Opinions and Conclusions

### Recognized Environmental Conditions & Significant Data Gaps

Hillmann has performed a Phase I Environmental Site Assessment in accordance with the scope and limitations of ASTM Practice E 1527-21 of the Subject Property as described in Section 2.2 of this report. Any additions to, exceptions to, or deletions from this practice are also described in Section 2 of this report. This assessment has revealed the following *recognized environmental conditions* (RECs), *controlled recognized environmental conditions* (CRECs) and/or *significant data gaps* (SDGs) in connection with the Subject Property:

**RECOGNIZED ENVIRONMENTAL CONDITIONS**

Multiple historic uses of potential environmental concern, based on a review of Sanborn Fire Insurance Maps, occurred at the Property prior to the construction of the present Property buildings in the 1940's-1960's, as follows:

- N.Y. Edison Co. Sub Station/transformer station (452 West 27th Street – 1911-1930);
- Machine Shop (429 West 26th Street 1911);
- Manufacturing (not specified) use (418-420 West 27th Street, 447-455 West 26th Street, 425-427 West 25th Street; 1911-1930);
- Garage with a 10,000-gallon buried tank (417-423 West 25th Street – 1930-1950);
- Printer-Lithographer operation with multiple tanks noted to the immediate east of the Property at the southwest corner of 9th Avenue and West 26th Street – 263 9th Avenue (1930-2005).

The aforementioned historic uses, including a transformer sub-station, machine shop, manufacturing, and garage with a UST, and a printer/lithographer immediately east of the Property, are considered a REC.

Hillmann recommends obtaining records of a subsurface investigation (if already performed) or performing a subsurface investigation to determine the presence/absence of impact to underlying environmental media from

aforementioned uses and the presence/absence of an abandoned underground storage tanks (USTs) in the area of the former garage (417-423 West 25th Street).

Hillmann notes that prior reports reviewed by Hillmann (See Section 3.1) detail investigations limited to the leaking USTs and not site-wide subsurface investigations.

**CONTROLLED RECOGNIZED ENVIRONMENTAL CONDITIONS (CRECs)**

Elliott-Houses-NYCHA, 426 West 27th Street is listed on the LTANKS database for Spill Number: 9602200 due to a tank test failure on May 15, 1996. The spill listed as consolidated with Spill Number: 8908401 is listed as having obtained regulatory closure on February 2, 2006. The remarks detail a discharge of #6-fuel oil, extensive remediation and monitoring and the installation of an oil recovery system detailed in Section 3.1 above. The database listing remarks state:

*"20K TANK - EVERYTIME FILLED ACTIVE FLOW TAKES PLACE INTO BASEMENT THRU WALLS - ABSORBED WITH SPEEDY DRY AND TEMPORARILY TAKING TANK OUT OF SERVICE"*

The database listing detail regarding the backdrop to the regulatory closure is as follows:

*The PRS [Petroleum Recovery System] was operated between 1998 and 2014. Free product has not been observed in the accessible monitoring wells since 2007. Since halting the PRS in 2014, free product has not been observed in the accessible monitoring wells and little free product (less than 0.25in) has been observed in the recovery wells. No petroleum related VOCs or SVOCs (listed in Table 3 of CP-51) were detected in groundwater samples collected in April 2015 from the accessible monitoring wells. As per Randy in a discussion of January 20, 2017 if less than 0.25 inches of No. 6 oil has been in on-site wells for 2+ years and contamination has been delineated all around the impacted area and there is nothing off-site and no dissolved phase in wells, spills can be closed. The Closure Letter should contain the contaminated soil clause. Spill closure email will be prepared with contaminated soil clause and sent to NYCHA.*

Given the closure with a "*soil clause"* the above is considered a CREC. Hillmann recommends obtaining the closure records from NYCHA to understand the nature of any closure conditions e.g., monitoring or administrative requirements or institutional/engineering controls.

If the onsite groundwater monitoring wells, petroleum recovery system and associated 275-gallon waste oil UST observed during the site reconnaissance are no longer in use these wells and equipment should be decommissioned in accordance with applicable regulations.

**SIGNIFICANT DATA GAPS (SDGs)**

No SDGs were identified.

### Historical Recognized Environmental Conditions (HRECs)

This assessment has revealed the following *historical recognized environmental conditions* (HRECs) in connection with the Subject Property:

**HISTORICAL RECOGNIZED ENVIRONMENTAL CONDITIONS**

Chelsea Houses-NYCHA, 431 West 25th Street is listed on the LTANKS, NY SPILLS and UST databases. The LTANKS listings is for Spill Number: 9806339 due to a tank test failure on August 21, 1998. The spill is listed as having obtained regulatory closure on August 27, 2013. The listing details the removal of a 30,000-gallon #2 fuel oil UST with six post excavation samples leading to the removal of 900-tons of soil. Exceedances included Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(g,h,i)perylene, Chrysene, Dibenzo(a,h)anthracene.

The listing details the backdrop to regulatory closure as follows:

"*30,000 gallon UST removed in 8/2000. -890 tons of contaminated soils removed in 2000 -investigation done in 2006 along fill lines and by fill port (DEC request) -some PAHs detected in grab groundwater sample in 2006 -5 permanent wells installed in 2010 -All gw under TOGS with the exception of MW-5 (3 minor VOC compound exceedences) -Slight sheen subsequently detected in MW-5. Absorbent sock placed in well. -Minor impacts on sock in 2012. -No oil detect on absorbent sock in 2013. -Confirmed no product sheen in well during site visit of 7/31/13. NFA. Email sent to NYCHA on 8/27/13 requesting wells be decommissioned*."

Hillmann recommends obtaining the closure letter. If it is determined that any conditions are linked to the No Further Action (other than decommissioning the wells), the case would be re-classified as a CREC, however available database listing detail does not list and conditions.

Additionally, Hillmann observed multiple monitoring wells in the vicinity of the former 30,000-gallon UST. Hillmann recommends decommissioning the wells if no ongoing monitoring requirements apply.

### De Minimis and Other Environmental Conditions

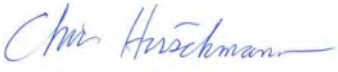
The following *de minimis* and other environmental conditions were identified:

| OTHER ENVIRONMENTAL CONDITIONS / DE MINIMIS CONDITIONS |
|---|
| The Property is equipped with two (2) 25,000-gallon #2 fuel oil USTs. Hillmann recommends continued maintenance and permitting and obtaining most recent maintenance record logs from NYCHA. |
| Multiple NY SPILLS listings were identified associated with Property addresses. Given their regulatory closure and the nature/quantity of the spills (contained with not impact to soil/groundwater), they are not considered a REC. |
| Multiple Property and adjacent Con-Edison listings (MANIFEST, RCRA-NonGen, FINDS, ECHO) were identified. The listings are associated with infrastructure work generating regulated waste. The listings are not indicative of a release and not considered a REC in connection with the Property. |
| Multiple adjacent sites are listed on the NY SPILLS and LTANKS databases. Each of the adjacent listings obtained regulatory closure and are not considered a REC in connection with the Property. |
| 500 West 25th Street, listed on the VCP database for OER Site Number: 17CVCP047M associated with redevelopment and investigations/remediation associated with historic use obtained a notice of completion dated November 9, 2020. Given the status and findings of the investigations, the southwestern adjacent VCP site is not considered a REC in connection with the Property. Records were reviewed via the NYC EPIC Online Document Repository. |

### Environmental Professional Statement

I/We declare that, to the best of my professional knowledge and belief, I/we meet the definition of *Environmental professional* as defined in § 312.10 of 40 C.F.R. 312. I/we have the specific qualifications based on education, training and experience to assess a *property* of the nature, history and setting of the *subject property*. I/We have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 C.F.R. Part 312.

Etan Hindin
Environmental Professional



Chris Hirschmann
Environmental Professional

## 1.4 Business Environmental Risks / Non-ASTM Scope

Hillmann has performed a limited review of the following potential Business Environmental Risks (BER), also known as "Non-ASTM Scope concerns", in accordance with the contracted scope of work scope for this assessment. BER is defined by ASTM E1527-21 as *"a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice."* The following is a summary of findings for the limited review of potential BERs, where applicable, as per the contracted scope of work and limitations outlined in Section 2. For a more detailed discussion of the findings and contracted scope of work, please see the referenced report section.

| BUSINESS ENVIRONMENTAL RISKS / NON-ASTM SCOPE | | | |
|---|---|---|---|
| **Subject** | **Findings** | **Not Appl.** | **Rpt. Ref.** |
| **Asbestos** | Given the 1940-1968 years of construction, asbestos containing materials are suspected unless ruled out by laboratory analysis.<br><br>Suspected ACM noted within the accessed building areas included floor tile, wall-board, spray-on insulation and roofing materials. | | 7.1 |
| **Lead Paint** | Given the 1940-1968 years of construction, lead-paint is suspected unless ruled out by field survey or laboratory analysis.<br><br>Lead sampling was reportedly being performed due to the December 21, 2021 modification to the legal lead-based paint standard to 0.5 mg/cm$^2$ (Local Law 66 and rules adopted by the Department of Housing Preservation and Development [HPD]) The results of the survey have been requested by Hillmann. | | 7.2 |
| **Radon** | The Property is located in the USEPA radon designation Zone 3 or 'low risk' area for radon. | | 7.3 |
| **Mold / Microbial Damage** | The basement of Building Elliot-1 was observed to have standing water on the concrete surface. Intermittent pipe and roof leaks were reportedly common given the age of the building. Mold abatement, primarily removing water damaged wall-board is reportedly performed by NYCHA staff as needed. | | 7.4 |
| **NWI Wetlands** | No NWI Wetlands were depicted within the Property. | | 7.5 |
| **Lead in Drinking Water** | Potable water service at the Subject Property is provided by the City of New York. The water purveyor water supply is within acceptable standards. Property building specific lead-in-drinking water sampling was not performed. | | 7.6 |

# 2.0 INTRODUCTION

## 2.1 Purpose and Scope

This assessment was conducted utilizing generally accepted Phase I ESA industry standards in accordance with the ASTM Standard Practice E 1527-21. The ASTM describes these methodologies as representing good commercial and customary practice in the United States of America for conducting an environmental site assessment of a parcel of commercial real estate with respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. § 9601) and petroleum products. As such, this practice is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner or bona fide prospective purchaser limitations on CERCLA liability (hereinafter, the "landowner liability protections," or "LLPs"): that is, the practice that constitutes all appropriate inquiries into the previous ownership and uses the property consistent with good commercial and customary practice as defined at 42 U.S.C. §9601(35) (B). The goal of the processes established by ASTM E1527-21 is to identify *recognized environmental conditions* in connection with the Subject Property.

The term *recognized environmental condition* (REC) is defined by ASTM E1527-21 as *"(1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment."*

The term *controlled recognized environmental condition* is a type of recognized environmental condition and defined by ASTM E1527-21 as a *"recognized environmental condition affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (for example, activity and use limitations or other property use limitations)."*

The term *historical recognized environmental condition* is defined as a *"previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls (for example, activity and use limitations or other property use limitations)."* The ASTM E1527-21 standard has clarified that a *historical recognized environmental condition* (HREC) is not a *recognized environmental condition* (REC).

The term *de minimis condition* is defined by the ASTM, *"…a condition related to a release that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies."* A condition determined to be a *de minimis condition* is not REC nor a CREC.

The chief components of this assessment are generally described as follows:

- A non-invasive visual reconnaissance of the Subject Property and adjoining properties in accordance with ASTM guidelines for evidence of RECs.

- Interviews of past and present owners and occupants and state and local government officials, seeking information related to the potential presence of RECs at the Subject Property.

- A review of standard physical record sources for available topographic, geologic and groundwater data.

- A review of standard historic record sources, such as fire insurance maps, city directories, aerial photographs, prior reports and interviews, etc., to determine prior uses of the Subject Property from the present, back to the Subject Property's first developed use, or back to 1940, whichever is earlier.

- A review of standard environmental record sources including federal and state environmental databases, and additional environmental record sources, to identify potential regulatory concerns with the Subject Property, adjoining properties and properties located within the surrounding area.

An evaluation of environmental or other regulatory compliance matters is excluded from the scope of this assessment.

These methodologies are described as representing good commercial and customary practice for conducting an Environmental Site Assessment of a property for the purpose of identifying recognized environmental conditions.

**Business Environmental Risks/Non-ASTM Scope Considerations**

In accordance with our contract agreement, Hillmann may have addressed the following potential environmental subject matters that are outside of the requirements of the ASTM E1527-21 standard:

- Asbestos-Containing Materials (ACM): A cursory non-intrusive visual screening for the presence of suspect ACM within the accessed areas of buildings built prior to 1990 on the Subject Property. If the Subject Property contains buildings built in 1990 or later, the contracted scope of work excludes a cursory non-intrusive visual screening or any other level of evaluation for suspect ACM; however, the exclusion for buildings built ≥1990 should not be interpreted to suggest that any such buildings are free of ACM or would not warrant evaluation of building materials for ACM prior to disturbance. It is emphasized that this cursory non-intrusive visual screening does not constitute an asbestos survey/inspection of the premises. An asbestos survey/inspection should be sought by the report User(s) if a greater certainty is desired regarding ACM and potential asbestos hazards at the Subject Property. Furthermore, a review of regulatory compliance matters pertaining to asbestos is excluded from the scope of work.

- Lead-Based Paint (LBP): A cursory non-intrusive visual screening of the condition of painted surfaces in the accessed areas of residential buildings/units built prior to 1980 on the Subject Property. If the Property contains buildings built in 1980 or later, the contracted scope of work excludes any cursory non-intrusive visual screening or other level of evaluation for suspect

LPB; however, the scope of work exclusion for building built ≥1980 should not be interpreted to suggest that any such buildings are free of LPB or other lead hazards. It is emphasized that this cursory non-intrusive visual screening does not constitute a comprehensive survey for LBP or potential lead hazards. A comprehensive inspection should be sought by the report User(s) if more certainty is desired regarding LBP at the Subject Property. Furthermore, a review of regulatory compliance matters pertaining to lead-based paint is excluded from the scope of work.

- USEPA Designated Radon Potential: Review of general non-site specific data published by the USEPA regarding the Radon Zone classification for the area of the Subject Property.

- Mold/Microbial Damage: A cursory non-intrusive visual screening within the accessed areas of buildings on the Subject Property for evidence of systemic microbial problems, including visible mold growth, water damaged building materials or musty odors. It is emphasized that this cursory non-intrusive visual screening does not constitute a comprehensive survey for moisture/mold/microbial damage. A more comprehensive inspection should be sought by the report User(s) if more certainty is desired regarding the potential for moisture/mold/microbial damages at the Subject Property.

- NWI Wetlands: The Property has been reviewed for jurisdictional wetlands using the National Wetlands Inventory Wetland Mapper (http://wetlandsfws.er.usgs.gov/NWI/download.html) to determine whether mapped federal wetlands have been indicated on the Subject Property. Any further evaluation or legal delineation of regulated wetlands areas is excluded from the scope of work. It is also emphasized that a field delineation of regulated wetlands by a qualified professional would be warranted to more fully determine the presence or absence of regulated wetlands at the Subject Property.

- Lead in Drinking Water: Review of the potential for elevated levels of lead in the drinking water by determining the source of the drinking water supply and a review of available testing or compliance data reports.

## 2.2 Property Location/Legal Description

Property location and legal description details are described as follows:

| | | | | | |
|---|---|---|---|---|---|
| **Primary Street Address:** | 264 & 278 10th Avenue, 427 & 441 West 26th Street, 407 West 25th Street | | | | |
| **City:** | New York | **County:** | New York | **State:** | New York |
| **Tax ID/Parcel Number:** | 278 10th Avenue: Block 724, Lot 1; 441W26th: Block 724, Lot 10; 427W26th: Block 724, Lot 15; 264 10th Avenue: Block 723, Lot 1; 407W25th: Block 723, Lot 15 | | | | |
| **Approx. Land Area:** | 6.53-acres (combined) | | | | |
| **Apprx. Latitude/Longitude:** | North 40.7496440 degrees/West 74.0014680 degrees | | | | |
| **Additional Details (if appl.):** | Secondary address range:<br>407-461 West 25th Street; | | | | |

| | |
|---|---|
| | 408-466 and 421-465 West 26th Street;<br>416-460 West 27th Street. |
| **Property Owner:** | New York City Housing Authority (NYCHA) |
| **Zoning Designation:** | R8 (Residential) |

## 2.3 Data Gaps

A *data gap* is defined by the ASTM as a lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information. A data gap is only significant if other information and/or professional experience raises reasonable concerns involving the data gap and the ability to determine the presence or absence of recognized environmental conditions. The following table summarizes data gaps encountered during the assessment as well as a discussion of their significance.

| Data Gap: | Significant (Yes/No)? | Discussion |
|---|---|---|
| Historical records data failure | No | Records gaps exceeding five years were encountered; however, no significant site use changes are suspected during these intervals. |
| Response to agency records requests not received as of date of report. | No | Any additional information indicative of a REC will be forwarded upon receipt. |

## 2.4 ESA Report Component Dates/Viability

The ASTM E1527-21 standard states that an environmental site assessment (ESA) is presumed to be viable when it is conducted within 180 days prior to the date of acquisition of the Subject Property (or, for transactions not involving an acquisition such as a lease or refinance, the date of the intended transaction). Specifically, all of the following components must be conducted or updated within 180 days prior to the date of acquisition or prior to the date of the transaction. The following table summarizes the component completion dates:

| ESA Component | Completion Date |
|---|---|
| Interviews | April 19, 2022 |
| Env Lien Search | (excluded from scope) |
| Government Records Review | March 28, 2022 |
| Visual Inspections | April 19, 2022 |
| Env. Professional Declaration | May 6, 2022 |

## 2.5 User Reliance

This report is for the exclusive use of Elliott Fulton LLC c/o Essence Development and additional relying entities, if any, named on the front cover. No additional individuals or entities shall be permitted to rely upon any data, interpretation, reports or other information or documentation contained in this report, without first obtaining the consent of Elliott Fulton LLC c/o Essence Development; and without obtaining written consent from Hillmann in the form of a reliance agreement/letter.

Hillmann may, in its sole discretion, withhold its consent to additional reliance and/or Hillmann may condition consent for reliance upon payment of a fee or other conditions.

## 2.6 Significant Assumptions

The following significant assumptions are made:

- The site operations at the time of the site visit are assumed to reflect typical site conditions relative to potential environmental conditions and that no concealment of environmental conditions or releases by site owners or occupants has occurred. Likewise, it is assumed that no areas of the Subject Property with potential environmental concerns or RECs were concealed or otherwise not reported, intentionally or unknowingly, by the Subject Property owners/occupants and/or site escort at the time of the site visit.

- For the purpose of estimating the approximate direction of groundwater flow in the absence of site specific groundwater data, unless indicated otherwise, an assumption has been made that the gradient of groundwater flow follows the surface topography of the Subject Property and immediate surrounding area.

## 2.7 General Limitations and Exceptions

### Limitations

The report turnaround time specified by the contract agreement for this assessment may present a limitation to the availability of pertinent regulatory agency records. Such limitations, if encountered, would be further specified in Section 4.1.

Significant limitations related to the condition or accessibility of the Subject Property at the time of the site reconnaissance, if encountered, are reported in Section 6.1.

### Other Exceptions or Deletions

No other exceptions or deletions from the ASTM Standard E 1527-21 are reported.

### Special Terms and Conditions

This Phase I Environmental Site Assessment has been prepared using reasonable efforts in each phase of its work to identify recognized environmental conditions associated with hazardous substances, wastes and petroleum products at the Subject Property. Findings within this report are based on information collected from observations made on the day of the site reconnaissance and from reasonably ascertainable information obtained from governing public agencies and private sources.

This report is not definitive and should not be assumed to be a complete or specific definition of the conditions above or below grade. Information in this report is not intended to be used as a construction document and should not be used for demolition, renovation, site development,

redevelopment, or other construction purposes. No representation or warranty is made that the past or current operations at the Subject Property are, or have been, in compliance with all applicable federal, state and local laws, regulations and codes.

Findings, conclusions and recommendations presented in this report are based on visual observations of the Subject Property, interviews conducted, the records reviewed, information provided by the Client, and/or a review of readily available and supplied drawings and documents. Information obtained during the assessment, whether written, graphic or verbal, provided by the Subject Property contact(s) or as shown on any documents reviewed or received from the Subject Property contact, owner or agent, or government agency source; is assumed to be accurate except as specifically stated otherwise in this report. Independent verification of the accuracy or completeness of all information reviewed or received during the course of this assessment is not made and excluded from the scope of work for this assessment. No warranty or guarantee is made of the accuracy or completeness of information that was obtained from ostensibly knowledgeable individuals, regulatory agency representatives or other secondary sources.

Regardless of the findings stated in this report, Hillmann is not responsible for consequences or conditions arising from facts that were concealed, withheld or not fully disclosed at the time the assessment was conducted.

This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated.

The regulatory database report provided is based on an evaluation of the data collected and compiled by a contracted data research company. Hillmann can neither warrant nor guarantee the accuracy or completeness of the information obtained from the regulatory database report provider during the course of this assessment.

Subsurface conditions may differ from the conditions implied by the surface observations and can only be reliably evaluated through intrusive techniques.

Reasonable efforts have been made during this assessment to identify aboveground and underground storage tanks and ancillary equipment. Reasonable efforts are limited to information gained from visual observation of largely unobstructed areas, recorded database information held in public record and available information gathered from interviews. Such methods may not identify surficial and subsurface features that may have been hidden from view due to parked automobiles and other vehicles, snow cover, vegetative growth, pavement, construction or debris pile storage or incorrect information from sources.

No guarantee, explicit or implied, is made that the records pertaining to historical ownership or occupancy which were reviewed represent a comprehensive or precise delineation of past Property ownership or tenancy for legal purposes.

The ASTM E1527-21 standard states that recommendations are not required to be included in a Phase I ESA report; however, further that recommendations are an additional service that may be useful in the User's analysis of landowner liability protections or business environmental risks; and

that the User should consider whether recommendations for additional inquiries or other services are desired.

Recommended response actions offered in Section 1.3, if any, are provided as an option to the Client, and may have taken into account the Client's relation to the Subject Property and/or their intended purpose of this assessment. If included, it is not intended by Hillmann to represent the only course(s) of action, or inaction, to take. Furthermore, it is emphasized that additional response actions may become advisable depending on the outcome of the initial action(s) taken. Hillmann advises that Client and any additional authorized relying parties as specified on the report Cover and Section 2.5, or via letter of reliance extension, undertake consultation with legal counsel familiar with environmental and real estate law would be beneficial to the decision making process for the type and timing of a response action to identified RECs or Business Environmental Risks, if any.

Due to the limited nature of our review of potential Business Environmental Risks, the User(s) of the report should consider whether to take additional action(s) to further define, properly manage and/or mitigate potential BERs.

The User(s) assumes responsibility for business decisions that it makes utilizing information in the report provided by Hillmann. Hillmann shall not be responsible for any conclusions, interpretations and/or decisions of the User(s).

In the event of any conflict between the terms and conditions of this report and the terms and conditions of the consulting services agreement for this project, the consulting services agreement shall control.

# 3.0 USER PROVIDED INFORMATION

The term "User" is defined by ASTM as the party seeking to use Practice E1527 to complete an environmental site assessment of the Subject Property; specifically, the entity or entities named on the front cover to which the report has been addressed.

## 3.1 Environmental Lien and Activity and Use Limitation (AUL) Search

The User did not provide Hillmann with the results of an environmental lien and AUL search for the Subject Property.

## 3.2 Prior Environmental Reports/Documentation

The following prior environmental reports/documentation was provided:

*Excel Spreadsheet – R9.5 Sites*

An excel spreadsheet was provided listing PBS (Petroleum Bulk Storage) 475483 for Chelsea as having an active tank (Tank #1) ad Elliot PBS 601955 with an active tank (Tank #2). Both are listed as having closed spills, no tank testing and Elliott is listed as having had a visual inspection.

Below is the excel table provided:

| Consolidation Name | Development Name | PBS | Active | Tank #s | Tank Testing | Visual inspections | Open Spills | Closed Spills |
|---|---|---|---|---|---|---|---|---|
| Chelsea | CHELSEA | 475483 | Y | 1 | N | N | N | Y |
| Chelsea | CHELSEA ADDITION | | N | | N | N | N | N |
| Chelsea | ELLIOTT | 601955 | Y | 2 | N | Y | N | Y |
| Fulton | FULTON | | N | | N | N | N | N |

Site Specific Field Investigation Work Plan Elliott Houses, 426 West 27th Street, New York, New York NYSDEC Spill Number 89-08401 PBS Number 601955; prepared by Gannett Fleming Engineers and Architects, P.C. (GF) dated July 2007 (DRAFT)

The draft report prepared by GF for NYCHA details a subsurface investigation in the vicinity of two (2) 20,000-gallon single-walled underground storage tanks (USTs) [PBS No. 601955] removed and replaced with one (1) 25,000-gallon double-walled UST in 1997. "*The purpose of this assessment is to evaluate the effectiveness of the existing on-site oil recovery system and to assess the horizontal extent of the product plume".*

The draft report notes that the groundwater table is approximately 10 to 17 feet below ground surface (bgs) and groundwater flow is towards the west. The USTs that were removed (per the GF report according to NYCHA) were installed in 1947 and contained No. 4 and No. 6 fuel oil. A 275-gallon AST is noted to be located onsite associated with an oil recovery system installed in 1998. The GF report notes that a Phase II was conducted by TRC in November 1989 due to fuel oil observed to leak into the boiler room through the northern wall of the boiler room. The tank was repaired, and seepage into the boiler room ceased, however TRC noted there could still be product within the subsurface soil. Soil and groundwater sampling confirmed free product in the subsurface

(~4-ft thick). In 1998 after the two aforementioned tanks were removed an oil recovery system including two recovery wells, an oil/water separator, and a 275-gallon holding tank was installed. "*According to the NYCHA, free product was observed in monitoring well MW-2 in March 2007".*

The Draft GF report, in Section 3.0 lays out a proposed scope of work which would include monitoring well measurements and sampling, fingerprint analysis, and recovery system evaluation.

Hillmann has included a figure from the GF report showing the locations of the former USTs relative to the present UST as well as the locations of monitoring wells. See Appendix A Figure 3.

Phase II Field Investigation Elliott Houses, 426 West 27th Street, New York, NY 10001, NYSDEC Spill #89-08401; prepared by American Environmental Assessment & Solutions, Inc. (AEASinc) dated March 15, 2011

The Phase II was performed "*to evaluate the effectiveness of the existing on-site recovery system and to assess the horizontal extent of the product plume. The assessment was performed in the vicinity of two former 20,000-gallon single walled underground storage tanks (USTs) which were removed and replaced with one 25,000 gallon double walled UST in 1997".*

The Phase II included soil and groundwater sampling with the following results:

Soil Contamination

VOCs were identified in soil sample SB-4 at 13 to 15 feet. The compound Isoproplybenzene and n-Propylbenzene were detected at levels exceeding their respective RSCO. SB-4 was installed west of RW-1.

SVOCs were identified in soil sample SB-6 and SB-7 exceeding their respective RSCO. The compound Chrysene was detected in SB-6 at 400 µg/kg exceeding its respective RSCO of 400 µg /kg.

Five SVOCs were detected in SB-7 exceeding their respective RSCO. The compounds Benzo(a)Anthracene; Benzo(a)Pyrene; Benzo(b)Fluoranthene; Benzo(k)Fluoranthene; and Chrysene were identified at levels exceeding their respective Recommended Soil Cleanup Objective (RSCO). SB-7 was installed between RW-2 and MW-2

Groundwater Contamination

VOCs were detected in groundwater sample GW-3 at levels exceeding the NYSDEC Groundwater Quality Standards. Five VOCs were detected in groundwater sample GW-3 above their respective groundwater standard. The compounds 1,2,4-Trimethylbenzene; Benzene; Isopropylbenzene; Isopropylbenzene; n-Butylbenzene; and n-Propylbenzene were detected in GW-3 exceeding their respective NYSDEC Ambient Groundwater Quality Standards.

Other VOCs were detected at very low levels below their respective groundwater standard in GW-3 and GW-4.

> No VOCs were detected [in] groundwater sample GW-1 or GW-2.
> No SVOCs were identified in any of the groundwater samples obtained from GW-01 through GW-04.

The AEASinc report concludes and recommends:

> *It is evident that the remediation system has been effective in removing the free floating product from the groundwater as was revealed from the monitoring data and previous environmental report indicating that product thickness has greatly reduced from 4.5 feet in 1992 to 3 inches currently and should be kept in use until no free floating product is present in the groundwater. However although the remediation system usage should be continued, the dissolved constituents in the groundwater should also be addressed.*
>
> *The remediation system should be kept in use to further reduce product thickness until no free floating product is detected in any of the wells or in the groundwater.*
>
> *Since the observed fuel oil impacts have shown to represent an isolated area, no further subsurface investigation is warranted. AEASinc recommends conducting Vacuum Enhanced Fluid Recovery (EFR) and product thickness measurements on a monthly basis for a period of 12 months. The purpose is to remove contamination from the subsurface of the AOC in the liquid, vapor and dissolved phases. After such period the effectiveness of the product recovery strategy should be evaluated by NYCHA and possibly increase recovery efforts of the impacted groundwater twice a month until petitioned for spill closure.*

## 3.3 User Responsibilities

Section 6 of the ASTM E1527-21 standard describes certain tasks required to be performed by the report User in order to qualify for landowner liability protections to CERCLA liability. To assist the report User to meet these requirements, the ASTM E1527-21 standard recommends a questionnaire of inquiries (User Questionnaire) specified in 40 CFR 312.25, 312.28, 312.29, 312.30, and 312.31 be provided to the original report User. A User Questionnaire has been provided to the report User; however, a completed questionnaire was not returned to Hillmann.

| Question: | Yes/No: | Detail: |
|---|---|---|
| **Environmental liens that are filed or recorded against the property:** Did a search of recorded land title records identify any environmental liens filed or recorded against the property under federal, tribal, state or local law? | NR | |
| **Activity and use limitations that are in place on the property or that have been filed or recorded against the property:** Did a search of recorded land title records (or judicial records where appropriate, identify any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the property and/or have been filed or recorded against the property under federal, tribal, state or local law? | NR | |
| **Specialized knowledge or experience of the person seeking to qualify for the LLP:** | NR | |

| Question: | Yes/No: | Detail: |
|---|---|---|
| Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business? | | |
| **Relationship of the purchase price to the fair market value of the property if it were not contaminated:** Does the purchase price being paid for this property reasonably reflect the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property? | NR | |
| **Commonly Known or Reasonably Ascertainable Information:** Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, | | |
| -Do you know the past uses of the property? | NR | |
| -Do you know of specific chemicals that are present or were once present at the property? | NR | |
| -Do you know of spills or other chemical releases that have taken place at the property? | NR | |
| -Do you know of any environmental cleanups that have taken place at the property? | NR | |
| **The degree of obviousness of the presence or likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation:** Based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of releases at the property? | NR | |
| **Litigation/Administrative Proceedings/Government Notices** As the User of this ESA, do you have knowledge of (1) any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property; (2) any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the property; and (3) any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products. | NR | |

*NR-no response*

## 3.4 User's Reason for Performing Phase I ESA

The User did not indicate the purpose of the assessment. In accordance with ASTM E1527-21, it is assumed that the Phase I ESA was being performed in order to qualify for landowner liability protection to CERCLA liability.

# 4.0 RECORDS REVIEW

## 4.1 Environmental Information

### Physical Setting

| Source | Discussion |
|---|---|
| USGS 7.5 minute Topographic Map Data: (EDR Geocheck-Physical Setting Source Addendum) | The Property lies at an elevation of approximately 16 feet above mean sea level. An interpretation of topographic contour lines as well as a review of the EDR Geocheck-General Topographic Gradient suggested terrain sloping downward towards the west. The closest down gradient water body is the Hudson River, located approximately 1,750-ft to the west-northwest. |
| USDA SCS Soil Data: (EDR Geocheck-Physical Setting Source Addendum) | The soil type at the Subject Property is classified as "Urban Land". The Urban Land designation indicates that a majority of the original soils on the site have been disturbed by development or covered with impervious surfaces, such as buildings or pavement. |
| Geologic Data: (EDR Geocheck-Physical Setting Source Addendum) | The Geologic Age Identification Category for the Property is Stratified Sequence, and the Rock Stratigraphic Unit is the Paleozoic Eta, Ordovicias System and Lower Orodovician and Cambrian carbonate rocks Series. |
| Prior Env. Reports: (Section 3.2) | Prior reports discussed in Section 3.2 detail investigations performed at the site which indicated groundwater to be 10-17-ft bgs and flowing westward. |
| Additional Sources/ Data: | None |
| Groundwater Flow Discussion: | Based on a review of the above information as well as observation of the site, the direction of shallow groundwater flow at the site is inferred to be towards the west. |

### Federal, State and Tribal Environmental Record Sources

Standard government records were obtained and reviewed primarily via a third-party regulatory database report, titled EDR Radius Map™ Report, prepared by Environmental Data Resources of Shelton, CT. The report provided government records from the standard environmental resources and within minimum search distances specified by Section 8.2.2-Table 2 of the ASTM E1527-21; and were reviewed for the purpose of identifying potential RECs in connection with the Subject Property. Additional detail of the source and significance of the regulatory databases can be found in the regulatory database report in Appendix E. Hillmann has also included discussion of records pertaining to the Subject Property from other government record sources not specifically listed under Table 2, as applicable.

Reported distances for adjoining property listings, if applicable, are approximate and indicative of the presence of a public roadway or right-of-way between the adjoining site and Property.

The reported gradients have been estimated based on a number of factors including but not necessarily limited to field observation, review of topographic maps, database listing details and/or site specific geo-technical data.

Limited analysis of the details of on-site, adjoining and vicinity database sites was conducted to identify potential sources of sub-surface vapor encroachment. This review was based on elements of the ASTM "Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions" (ASTM E 2600-15); and also on elements of "Methodology for Identifying the Area of Concern Around a Property Potentially Impacted by Vapor Migration from Nearby

Contaminated Sources" (Buonicore, 2011-S-103-AWMA). Vicinity database sites pertaining to non-petroleum product releases within 1,760 feet of the Subject Property in the up-gradient direction, 365 feet of the Subject Property in the cross gradient direction and 100 feet of the Subject Property in the down gradient direction; and vicinity database sites pertaining to petroleum product releases within 528 feet of the Subject Property in the up-gradient direction, 165 feet of the Subject Property in the cross gradient direction and 100 feet of the Subject Property in the down gradient direction were reviewed to identify active contamination sites with the potential to affect subsurface vapor conditions at the Subject Property. The potential for vapor encroachment was considered in assessing whether or not a REC exists in connection with the Subject Property when reviewing applicable sites within those distances.

Regulatory database sites with active petroleum or non-petroleum releases that are considered to constitute a vapor encroachment condition (VEC) to the Subject Property, if any, are identified and discussed in this section.

The EDR Radius Map report is attached in Appendix E.

**Property Listings**

The following listings of the Subject Property were identified:

- An NY SPILLS database listing, Spill number 0511572, for "Elliott Houses-NYCHA" associated with 426 West 27th Drive obtained regulatory closure on January 9, 2006. The spill occurred on January 6, 2006 when NYC DEP received a call pertaining to the release of 30-gallons of #2 fuel oil. The remarks state that the spill was due to a mechanical failure, and the spill contained in the basement and cleaned. Given no indication that remediation was needed and regulatory closure, the listing is not considered a REC or HREC.

- Elliott- Houses (Chelsea Houses), 426 West 27th Street is listed on the AST database for a permitted Petroleum Bulk Storage aboveground storage tank with ID: 2-601955. The AST capacity is listed as 275-gallon, for waste oil, and installed in 1995.

- Elliott-Houses-NYCHA, 426 West 27th Street is listed on the LTANKS database for Spill Number: 9602200 due to a tank test failure on May 15, 1996. The spill listed as consolidated with Spill Number: 8908401 is listed as having obtained regulatory closure on February 2, 2006. The remarks detail a discharge of #6-fuel oil, extensive remediation and monitoring and the installation of an oil recovery system detailed in Section 3.1 above. The database listing remarks state:

  *"20K TANK - EVERYTIME FILLED ACTIVE FLOW TAKES PLACE INTO BASEMENT THRU WALLS - ABSORBED WITH SPEEDY DRY AND TEMPORARILY TAKING TANK OUT OF SERVICE"*

  The database listing detail regarding the backdrop to the regulatory closure is as follows:

  *The PRS [Petroleum Recovery System] was operated between 1998 and 2014. Free product has not been observed in the accessible monitoring wells since 2007. Since halting the PRS in 2014, free product has not been observed in the accessible monitoring wells and little free product (less than*

*0.25in) has been observed in the recovery wells. No petroleum related VOCs or SVOCs (listed in Table 3 of CP-51) were detected in groundwater samples collected in April 2015 from the accessible monitoring wells. As per Randy in a discussion of January 20, 2017 if less than 0.25 inches of No. 6 oil has been in on-site wells for 2+ years and contamination has been delineated all around the impacted area and there is nothing off-site and no dissolved phase in wells, spills can be closed. The Closure Letter should contain the contaminated soil clause. Spill closure email will be prepared with contaminated soil clause and sent to NYCHA.*

Given the closure with a "*soil clause"* the above is considered a CREC. Hillmann recommends obtaining the closure records from NYCHA to understand the nature of any closure conditions e.g., monitoring or administrative requirements or institutional/engineering controls.

- Multiple Con-Edison listings (MANIFEST, RCRA-NonGen, FINDS, ECHO) associated with Property addresses were identified. The listings are associated with infrastructure work generating regulated waste. The listings are not indicative of a release and not considered a REC.

- Chelsea-Elliott Municipal Housing Project, 427 West 26th Street is listed on the NY SPILLS database for Spills 1104033 – closed July 13, 2011 and 1711615 – closed March 23, 2018. 425 West 25th Street is listed for Spill 9802923 – closed July 21, 1998. The spills were contained and closed with no impact to soil/groundwater. Given the nature of the cases, they are not considered a REC or HREC.

- The Property is listed on the RCRA-NonGen, FINDS and ECHO databases likely associated with the removal of regulated waste. The listings are regulatory in nature, not indicative of a release and not considered a REC.

- Chelsea Houses-NYCHA, 431 West 25th Street is listed on the LTANKS, NY SPILLS and UST databases. The LTANKS listings is for Spill Number: 9806339 due to a tank test failure on August 21, 1998. The is listed as having obtained regulatory closure on August 27, 2013. The listing details the removal of a 30,000-gallon #2 fuel oil UST with six post excavation samples leading to the removal of 900-tons of soil. Exceedances included Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(g,h,i)perylene, Chrysene, Dibenzo(a,h)anthracene.

  The listing details the backdrop to regulatory closure as follows:

  "*30,000 gallon UST removed in 8/2000. -890 tons of contaminated soils removed in 2000 - investigation done in 2006 along fill lines and by fill port (DEC request) -some PAHs detected in grab groundwater sample in 2006 -5 permanent wells installed in 2010 -All gw under TOGS with the exception of MW-5 (3 minor VOC compound exceedences) -Slight sheen subsequently detected in MW-5. Absorbent sock placed in well. -Minor impacts on sock in 2012. -No oil detect on absorbent sock in 2013. -Confirmed no product sheen in well during site visit of 7/31/13. NFA. Email sent to NYCHA on 8/27/13 requesting wells be decommissioned*."

  Hillmann recommends obtaining the closure letter to determine what, if any, conditions are linked to the No Further Action. Additionally, Hillmann observed multiple monitoring wells

in the vicinity of the former 30,000-gallon UST. Hillmann recommends decommissioning the wells if no ongoing monitoring requirements apply.

Chelsea-Houses, 431 West 25th Street is listed as being equipped with one (1) 25,000-gallon #2 fuel oil UST installed on September 1, 2000. The UST is listed as having secondary containment and leak detection. A 30,000-gallon UST is listed as having been installed in 1964 and removed in 2000.

Given the above and historic uses a VEC cannot be ruled out for the Property.

**Adjoining Property Listings**

The following adjoining property listings were identified.

- Multiple adjacent Con-Edison listings (MANIFEST, RCRA-NonGen, FINDS, ECHO) were identified. The listings are associated with infrastructure work generating regulated waste. The listings are not indicative of a release and not considered a REC in connection with the Property.

- Multiple adjacent sites are listed on the NY SPILLS and LTANKS databases. Each of the adjacent listings obtained regulatory closure and are not considered a REC in connection with the Property.

- 500 West 25th Street, listed on the VCP database for OER Site Number: 17CVCP047M associated with redevelopment and investigations/remediation associated with historic use obtained a notice of completion dated November 9, 2020. Given the status and findings of the investigations, the southwestern adjacent VCP site is not considered a REC in connection with the Property. Records were reviewed via the NYC EPIC Online Document Repository.

**Surrounding Area Findings**

The following is a discussion of non-adjoining sites identified as located within the ASTM specified search distance surrounding the Subject Property. In order to keep this discussion informative and concise, discussion(s) is/are provided of the listed site(s) for each database category that appears most likely to impact the Subject Property based on distance, area topography and/or regulatory status. Listings of sites within the applicable search distances not specifically discussed below were reviewed and concluded not to be RECs in connection with the Subject Property or VECs based on various factors including distance, area topography, known or inferred groundwater flow direction and/or regulatory status.

| **Federal NPL** | | | | **# of sites:** | 1 | **Search Distance:** | 1-mile |
|---|---|---|---|---|---|---|---|
| **Notable Listing:** | Hudson River PCBs | | | | | | |
| **Distance in feet:** | 1,600 | **Direction:** | WNW | **Gradient:** | Down | | |
| **Data Discussion:** | Given the location and nature of the NPL case – PCBs in the Hudson River sediment, the listing is not considered a REC to the Property. | | | | | | |

| | |
|---|---|
| **REC Discussion:** | Based on the details provided above, a REC is not suspected in connection with the Property. |
| **VEC Discussion:** | Based on the available data, a VEC is not suspected. |

| **Federal Delisted NPL** | | | | **# of sites:** | 0 | **Search Distance:** | 1-mile |
|---|---|---|---|---|---|---|---|
| **Notable Listing:** | None | | | | | | |
| **Distance in feet:** | | **Direction:** | | **Gradient:** | | | |
| **Data Discussion:** | | | | | | | |
| **REC Discussion:** | | | | | | | |
| **VEC Discussion:** | | | | | | | |

| **Federal SEMS** | | | | **# of sites:** | 2 | **Search Distance:** | ½-mile |
|---|---|---|---|---|---|---|---|
| **Notable Listing:** | Hudson River PCBs | | | | | | |
| **Distance in feet:** | 1,600 | **Direction:** | WNW | **Gradient:** | Down | | |
| **Data Discussion:** | Given the location and nature of the SEMS case (also listed on the NPL database) – PCBs in the Hudson River sediment, the listing is not considered a REC to the Property. The second SEMS listing is 1,925-ft from the Property to the east. Given the distance the SEMS case (USPS JAF Building) is not considered a REC in connection with the Property. | | | | | | |
| **REC Discussion:** | Based on the details provided above, a REC is not suspected in connection with the Property. | | | | | | |
| **VEC Discussion:** | Based on the available data, a VEC is not suspected. | | | | | | |

| **Federal SEMS-ARCHIVE** | | | | **# of sites:** | 3 | **Search Distance:** | ½-mile |
|---|---|---|---|---|---|---|---|
| **Notable Listing:** | Manhattan General Mail Facility | | | | | | |
| **Distance in feet:** | 567 | **Direction:** | NE | **Gradient:** | Up/Cross | | |
| **Data Discussion:** | Given the regulatory status and/or distance, the SEMS-ARCHIVE sites are not considered a REC in connection with the Property. | | | | | | |
| **REC Discussion:** | Based on the details provided above, a REC is not suspected in connection with the Property. | | | | | | |
| **VEC Discussion:** | Based on the available data, a VEC is not suspected. | | | | | | |

| **Federal CORRACTS** | | | | **# of sites:** | 0 | **Search Distance:** | 1-mile |
|---|---|---|---|---|---|---|---|
| **Notable Listing:** | None | | | | | | |
| **Distance in feet:** | | **Direction:** | | **Gradient:** | | | |
| **Data Discussion:** | | | | | | | |
| **REC Discussion:** | | | | | | | |
| **VEC Discussion:** | | | | | | | |

| **Federal RCRA-TSD** | | | | **# of sites:** | 0 | **Search Distance:** | ½-mile |
|---|---|---|---|---|---|---|---|
| **Notable Listing:** | None | | | | | | |
| **Distance in feet:** | | **Direction:** | | **Gradient:** | | | |
| **Data Discussion:** | | | | | | | |
| **REC Discussion:** | | | | | | | |
| **VEC Discussion:** | | | | | | | |

| **State/Tribal SUPERFUND & HAZARDOUS WASTE** | | | | **# of sites:** | 4 | **Search Distance:** | 1-mile |
|---|---|---|---|---|---|---|---|
| **Notable Listing:** | Bayview Correctional Facility / 550 West 20th Street | | | | | | |
| **Distance in feet:** | 1,492 | **Direction:** | SW | **Gradient:** | Down | | |
| **Data Discussion:** | Given the distance, gradient and/or regulatory status the SHWS listing are not considered a REC in connection with the Property. | | | | | | |
| **REC Discussion:** | Based on the details provided above, a REC is not suspected in connection with the Property. | | | | | | |

| | |
|---|---|
| **VEC Discussion:** | Based on the available data, a VEC is not suspected. |

| **State/Tribal LANDFILL/SOLID WASTE DISPOSAL** | | | | **# of sites:** | 3 | **Search Distance:** | ½-mile |
|---|---|---|---|---|---|---|---|
| **Notable Listing:** | Westside Operations Center (WOC) / 281 11th Avenue | | | | | | |
| **Distance in feet:** | 1,069 | **Direction:** | NW | **Gradient:** | Down | | |
| **Data Discussion:** | Given the distance and downgradient location, the WOC transfer station is not considered a REC in connection with the Property. | | | | | | |
| **REC Discussion:** | Based on the details provided above, a REC is not suspected in connection with the Property. | | | | | | |
| **VEC Discussion:** | Based on the available data, a VEC is not suspected. | | | | | | |

| **State/Tribal LEAKING STORAGE TANKS** | | | | **# of sites:** | 144 | **Search Distance:** | ½-mile |
|---|---|---|---|---|---|---|---|
| **Notable Listing:** | 28th Under Highline Associates LLC / 505 West 27th | | | | | | |
| **Distance in feet:** | 182 | **Direction:** | W | **Gradient:** | Down | | |
| **Data Discussion:** | Given the distance, gradient and/or regulatory status, the LTANKS listings are not considered a REC in connection with the Property. | | | | | | |
| **REC Discussion:** | Based on the details provided above, a REC is not suspected in connection with the Property. | | | | | | |
| **VEC Discussion:** | Based on the available data, a VEC is not suspected. | | | | | | |

| **State/Tribal VOLUNTARY CLEANUP SITES** | | | | **# of sites:** | 41 | **Search Distance:** | ½-mile |
|---|---|---|---|---|---|---|---|
| **Notable Listing:** | 311 10th Avenue | | | | | | |
| **Distance in feet:** | 218 | **Direction:** | NW | **Gradient:** | Down | | |
| **Data Discussion:** | Given the nature of the listings and/or distance/gradient the VCP sites are not considered a REC in connection with the Property. | | | | | | |
| **REC Discussion:** | Based on the details provided above, a REC is not suspected in connection with the Property. | | | | | | |
| **VEC Discussion:** | Based on the available data, a VEC is not suspected. | | | | | | |

| **State/Tribal BROWNFIELD SITES** | | | | **# of sites:** | 15 | **Search Distance:** | ½-mile |
|---|---|---|---|---|---|---|---|
| **Notable Listing:** | Former Getty Service Station / 239 10th Avenue | | | | | | |
| **Distance in feet:** | 238 | **Direction:** | W | **Gradient:** | Down | | |
| **Data Discussion:** | Given the distance, gradient and/or regulatory statut, the Brownfields listings are not considered a REC in connection with the Property. | | | | | | |
| **REC Discussion:** | Based on the details provided above, a REC is not suspected in connection with the Property. | | | | | | |
| **VEC Discussion:** | Based on the available data, a VEC is not suspected. | | | | | | |

| **UNMAPPED/ORPHAN LIST SITES** | |
|---|---|
| | Hillmann has also reviewed a list of unmapped sites (a.k.a. "Orphan List" sites) indicated by the database report. Unmapped sites that were identified as falling within an applicable specific search distance or warranting discussion have either been discussed in the preceding tables or are detailed below: |
| **Notable Listings:** | None |

**Additional Environmental Record Sources**

Requests have been submitted to local, municipal and state agencies for pertinent records pertaining to the Subject Property, particularly with regard to potential environmental concerns such as petroleum storage tanks, storage and usage of hazardous substances and petroleum products, and/or known or suspected environmental contamination. Where applicable, internet research of government environmental regulatory databases was also conducted, as well as a general cursory internet search of the Subject Property address, for information indicative of a REC. The following table summarizes the findings of the research:

| Source | Type of Request | Outcome |
|---|---|---|
| NYCFD-Public Records Unit / Tank Section | FOI request | No response was received prior to report issuance. |
| NYS DEC | FOI request | No response was received prior to report issuance. |
| NYCDEP | FOI request | No response was received prior to report issuance. |
| NY DOB | Online search | Records included in Appendix F including certificates to operate dual natural gas/heating oil number 2 boilers. |
| USEPA | Online search | No records indicative of a REC identified. |
| Internet | Online Search | No records indicative of a REC identified. |

Pertinent records referenced in the above table have been included in Appendix F.

## 4.2 Historical Research

Historical records have been compiled and analyzed for historical property information and developing a history of previous uses of the Subject Property, adjoining properties and surrounding area. These records were reviewed for the purpose of identifying the likelihood of past uses having led to RECs in connection with the Subject Property.

The historical record sources listed below have been sought with the objective to document past uses of the Subject Property from the present back to the Subject Property's first developed use, or back to 1940, whichever is earlier. The term "developed use" includes agricultural use, placement of fill dirt and other uses that do not involve structures. Hillmann has sought to review historical records in minimum intervals of five years.

### Fire Insurance Maps

A Certified Sanborn Map Report was obtained from EDR for a review of published historic fire insurance maps for the Subject Property and surrounding area. The following is a summary of site uses and notable details depicted by the available maps:

| Year(s) | Prop/Adj | Depicted Use(s) | Notable Details |
|---|---|---|---|
| 1890, 1899, 1911, 1930 | **Property:** | The southwest portion of the Property (Block 723, Lot 1) is depicted as the Columbia Ale Brewery. The southeastern portion of the Property is depicted as a coal yard, stable and elevator factory among multiple multi-story mixed use buildings.<br><br>The Property north of West 26th Street is improved with multiple multi-story mixed use buildings and a Copper Works company in the present Chelsea Addition portion of the Property.<br><br>Multiple Property addresses were used for manufacturing listed to the right and depicted spatially relative to the present Property configuration in Appendix A, Figure 4. | N.Y. Edison Co. Sub Station/transformer station (452 West 27th Street – 1911-1930); Machine Shop (429 West 26th Street 1911); Manufacturing use (418-420 West 27th Street, 447-455 West 26th Street, 425-427 West 25th Street; 1911-1930); Garage with a 10,000-gallon buried tank (417-423 West 25th Street – 1930-1950). |
| | **Adjoining:** | Multiple mixed-use buildings and a manufacturing establishments building to the northeast, | Printer-Lithographer operation with multiple tanks noted to the immediate east of the Property at the southwest corner of 9th Avenue and West 26th Street – 263 9th Avenue (1930-2005).<br><br>Motor freight station / auto repair shop equipped with multiple gasoline tanks noted to the adjacent west across 10th Avenue at 293 10th Avenue (1930-2001). Given the location downgradient and across a multi-lane road not considered a REC in connection with the Property. |
| 1950, 1976, 1979, 1980, 1982, 1985, 1987, 1988, 1991-1996, 2001-2005 | **Property:** | The present Elliott Buildings 2 and 3 south of West 26th Street are depicted and listed as John Lovejoy, 11-story plus basement apartment buildings.<br><br>The present Elliott Buildings 1 and 4 between West 26th and 27th Streets are depicted and listed as "Elliott Houses – New York City Housing Authority", 12-story plus basement apartment buildings.<br><br>The area of the present Chelsea Addition building between Elliott Buildings 1 and 4 has been cleared except for the Hudson Guild Neighborhood House (5-story plus basement building constructed in 1908-09). In the subsequent 1976 Sanborn Fire Insurance Map it is depicted as a 96 unit 14-story plus basement Chelsea Houses Addition with an auditorium/community house corresponding to its present configuration. | |
| | **Adjoining:** | Public school to the immediate east of the Property. | |

A copy of the Certified Sanborn Map Report is attached in Appendix D.

### City Directories

An EDR City Directory Abstract report was reviewed for data of former occupants of the Subject Property's street address. The following is a generalized summary of the findings of city directory research for past occupants of the Subject Property.

| Property | |
|---|---|
| **Use(s) / Occupant(s):** | **Years** |
| Residential and mixed-use listings | 1920-2017 |
| Hand Laundry (Glassman Standard Hand Laundry) at 436 West 26th Street | 1923 |

The EDR City Directory Abstract report was also reviewed for listings of historic occupants of the adjoining properties. The following is a general summary of listings of historic adjoining property occupants:

| Adjoining Properties | |
|---|---|
| **Use and/or Occupant(s)** | **Years** |
| Mix of residential and commercial occupants. | 1920-2017 |

A copy of the EDR City Directory report is attached in Appendix D.

### Historical Topographic Maps

Due to the availability of alternate historic sources, as well as the likelihood that this source would not provide any significant data, historical aerial photographs were not researched for this assessment.

### Historical Aerial Photographs

Due to the availability of alternate historic sources, as well as the likelihood that this source would not provide any significant data, historical aerial photographs were not researched for this assessment.

### EDR High-Risk Historical Records

The EDR Radius Map™ report, which is discussed in greater detail in Section 4.1 and attached in Appendix E, provided a search of proprietary databases of potential historical high-risk uses at or in the vicinity of the Subject Property. These databases include EDR Historic Cleaners – a database of property addresses with records of historical occupancy by suspected cleaners businesses; EDR Historic Auto – a database of property addresses with records of historical occupancy by potential automotive gas/filling stations and repair facilities; and EDR MGP- a database of sites historically occupied by manufactured gas plants and related facilities.

| EDR Database | On-site Listings: | Adjoining/Off-Site Listings |
|---|---|---|
| **Historic Cleaners:** (on-site/adjoining only) | None | Tonis Dry Cleaners, 2001-2006 at 243 9th Avenue to the adjacent southeast across West 25th Street; |

| | | |
|---|---|---|
| **Historic Auto:** (on-site/adjoining only) | None | Carlo and Peter Truck Repair 289 10th Avenue, 1975-2002 and Marial Service Station, 279 10th Avenue, 1971-2014 to the adjacent west across 10th Avenue. |
| **MGP:** (1-mile distance) | None | Six listings within 1-mile. Each greater than 1,600-ft from the Property and downgradient. |

### Petroleum/Natural Gas Well Review

The historical record sources were reviewed for records of historic petroleum and/or natural gas wells at the Subject Property. No record of any historical petroleum/natural gas wells at or adjoining the Property was identified.

### Additional Historical Data

Where applicable, the following additional pertinent historical data was obtained:

| | |
|---|---|
| **Interviews/Anecdotal:** | No additional pertinent historical data was obtained. |
| **Local Gov't Records:** | No additional pertinent historical data was obtained. |
| **Prior Env. Reports:** (Section 3.2) | Not applicable; no prior reports were provided. |
| **Site Observations:** | Indications of historic uses of the Property or adjoining properties were not observed during the site reconnaissance. |
| **Other Sources:** | No additional pertinent historical data was obtained. |

### Summary of Identified Historic Uses

The following table presents a summary of the types and approximate date ranges of identified prior uses of the Subject Property:

| Property | |
|---|---|
| **Date Range** | **Use** |
| Late 1800's to 1940's | Mixed-use and manufacturing including a machine shop, brewery |
| 1940's-Present | Apartment buildings |

The following table presents a summary of the types of identified prior uses of the adjoining properties:

| Adjoining Properties | |
|---|---|
| **Date Range** | **Use** |
| Unk to Present | Residential, commercial and printing/lithography |

### Historical Records Data Failure

The ASTM E1527-21 standard defines data failure as failure to achieve the historical research objective even after reviewing the standard historical sources that are reasonably ascertainable and

likely to be useful. The objective is to identify all obvious uses of the property from the present, back to the property's first developed use, or back to 1940, whichever is earlier. Furthermore, records of historic use/conditions were sought in intervals no less than approximately five years, unless the property conditions appear unchanged over a longer interval. In encountered, data failure and its significance as a data gap is discussed below:

| Objective | Met? | Detail | Significant? |
|---|---|---|---|
| First developed use/date determined? | Yes | The first developed use of the Property was for dwellings in the late 1800's. | No |
| Record sources at 5-year intervals back to 1940 or first developed use? | Yes | Historical record gaps exceeding five years were encountered. However, significant site-use changes or undiscovered site uses appear unlikely to have occurred during the record gaps. | No |
| All obvious prior uses identified? | Yes | See Summary of Identified Past Uses of this section. | No |

Please refer to Section 2.3 for additional discussion of data gaps and their significance to the findings of the assessment.

**Historic Uses REC Discussion**

The review of historical records indicated evidence of the following potential RECs in connection with the Property:

Multiple historic uses of potential environmental concern, based on a review of Sanborn Fire Insurance Maps, occurred at the Property prior to the construction of the present Property buildings in the 1940's-1960's as follows:

- N.Y. Edison Co. Sub Station/transformer station (452 West 27th Street – 1911-1930);
- Machine Shop (429 West 26th Street 1911);
- Manufacturing (not specified) use (418-420 West 27th Street, 447-455 West 26th Street, 425-427 West 25th Street; 1911-1930);
- Garage with a 10,000-gallon buried tank (417-423 West 25th Street – 1930-1950);
- Printer-Lithographer operation with multiple tanks noted to the immediate east of the Property at the southwest corner of 9th Avenue and West 26th Street – 263 9th Avenue (1930-2005).

The aforementioned historic uses including a transformer sub-station, machine shop, manufacturing, and garage with a UST, and a printer/lithographer immediately east of the Property are considered a REC.

# 5.0 INTERVIEWS

## 5.1 Interviews with Owners, Operators and Occupants

### Current Owner / Key Site Operator

| Property Owner | Contact Name | Affiliation | Interview Type |
|---|---|---|---|
| New York City Housing Authority (NYCHA) representative | Sidiya Harris | Property Caretaker with NYCHA | In person |
| **Interview Date:** | April 19, 2022 | | |
| **Interview Outcome/Findings:** | | | |
| An interview for information pertinent to the assessment was conducted in person at the time of the site visit. The following pertinent information was indicated:<br><br>Sidiya was unaware of any known environmental concerns at the Property. | | | |

### Prior Owners/Operators/Occupants

| Name | Company/Title | Yrs @ Site | Interview Type |
|---|---|---|---|
| | | | |
| **Interview Date:** | | | |
| **Interview Outcome/Findings:** | | | |
| No prior owners, operators or occupants were interviewed. | | | |

### Neighboring Property Owner/Occupants

| Name | Company/Title | Yrs at site | Interview Type |
|---|---|---|---|
| | | | |
| **Interview Date:** | | | |
| **Interview Outcome/Findings:** | | | |
| The Property was not an abandoned property with evidence of unauthorized uses or uncontrolled access; therefore, interviews with adjoining or nearby property owners or occupants were not conducted. | | | |

## 5.2 Interviews with State and/or Local Government Officials

State and/or local governmental officials have been interviewed to obtain information of potential RECs in connection with the Subject Property. Many government agencies and their officials require submittal of written request for records in order to respond. The details in Section 4.1 list the various state and local government agencies contacted as part of this assessment, and the outcome of each inquiry. In addition, the details of regulatory database research in Section 4.1 may

have included detail of interviews with officials pertinent to government records review and identification of RECs.

Additional interview of government officials not previously detailed in Sections 4.1 are discussed below, if applicable.

| **Name** | **Agency Name/Title** | **Interview Type** |
|---|---|---|
| | | |
| **Interview Outcome/Findings:** | | |
| No additional local/state government officials were interviewed. | | |

# 6.0 SITE RECONNAISSANCE

## 6.1 Methodology and Limiting Conditions

A site reconnaissance was conducted to collect information and make observations to help identify RECs in connection with the Subject Property. This included visual and/or physical observations of the Subject Property and its structures, adjoining properties as viewed from the Subject Property boundaries and the surrounding area based on visual observations from adjoining public thoroughfares and accessed Subject Property structures. Subject property building exteriors were observed at ground level, unless otherwise indicated. Where applicable, building interiors were accessed and observed to the extent they were made safely accessible with the cooperation of the site escort.

| | |
|---|---|
| **Site Inspection Personnel:** | Mr. Etan Hindin and Mr. Dominick Aponte |
| **Property Escort/Company:** | Sidiya Harris / Property Caretaker |
| **Inspection Date:** | April 19, 2022 |
| **Weather Conditions:** | Overcast 45 degrees Fahrenheit |

### Significant Inaccessible Areas

Due to the pandemic occupied units were inaccessible. The inability to access these units is not considered a Significant Data Gap.

### Significant Limiting Site Conditions

No significant limiting site conditions were noted at the time of the site reconnaissance.

## 6.2 General Site Setting

### Site and Vicinity Characteristics

| | |
|---|---|
| **Abutting Roadways:** | West 25th Street to the south; West 27th Street – Drive to the north; 10th Avenue to the west; West 26th Street divides the Property parcels. |
| **Current Property Use:** | Multifamily residential and daycare |
| **Evidence of Past Property Uses:** | None observed. |
| **Evidence of Past Adjoining Property Uses:** | None observed. |
| **Surrounding Area Uses:** | Commercial, residential |

### Current Adjoining Property Uses

| Dir | Street Address | Description |
|---|---|---|
| **N** | 294 10th Avenue | Park |
| **W** | 259-293 10th Avenue | Residential and commercial |
| **E** | 281 9th Ave<br>401 West 25th Street<br>263 9th Avenue | Public School<br>Residential and commercial<br>Residential and commercial |
| **S** | 406-462 West 25th Street | Residential and commercial |

No visual observations indicative of a potential environmental concern were noted on the adjoining properties.

### Topographic Characteristics

| | |
|---|---|
| **Terrain:** | Flat to gently sloping |
| **Direction of Downward Slope:** | Towards the northwest |
| **On-site Water Bodies:** | None observed |
| **Other Significant Features:** | None observed |

### General Description of Structures and Improvements

| | |
|---|---|
| **Buildings:** | Eight |
| **Approx. Building Size:** | 1,002-units (combined) |
| **Approx. Year Built:** | 1963-1965 |
| **Number of Stories:** | **Chelsea**: 407 West 25th Street parcel (Block 723, Lot 15) is comprised of two (2) 21-story plus basement apartment buildings. The eastern building is equipped with a two-bay maintenance garage on the east side and a waste management areas east of the building.<br><br>**Chelsea Addition**: 441 West 26th Street parcel (Block 724, Lot 10) – one (1) 14-story plus basement apartment building (ground level day center).<br><br>**Elliott**: three (3) parcels (Block 724, Lots 1 and 15 and Block 723, Lot 1), four (4) 11-story and 12-story plus basement apartment buildings and one freestanding daycare at the northeast corner of West 26th Street and 10th Avenue.<br><br>NOTE: See Appendix A for building numbering/locations |
| **Basement/Subgrade Levels:** | See above |
| **Exterior Ground Cover:** | Asphalt, cement and landscaped areas, |

| | |
|---|---|
| **Ancillary Structures:** | Bulk trash/compactor covered-masonry enclosure with two overhead doors. Northeast of Chelsea Building 2 |
| **Sources of Heating & Cooling:** | Dual natural gas/heating oil boilers for onsite generated steam heat and tenant-owned optional electric window units for cooling. |
| **Potable Water/Sewage Disposal:** | Municipal utility connections |

## 6.3 Site Features and Conditions

### Storage/Usage of Hazardous Substances and Petroleum Products

The following approximate number of containers, and general description of their contents, capacity, container types and storage conditions, were observed to be stored and/or used at the Subject Property:

| Occupant | Substance | Qty/Container Type | Storage Conditions |
|---|---|---|---|
| NYCHA | Maintenance and cleaning materials (including paint) | 1-30-gallon | All stored indoors on intact concrete. No storage concerns noted. |

### Bulk Petroleum/Hazardous Material Storage Tanks

The following storage tanks for bulk petroleum or hazardous material storage were identified or reported to be present; or are suspected to be present based on visual observations:

| AST/UST | Product | Capacity | Construction | Year Installed | Status | Location/Notes |
|---|---|---|---|---|---|---|
| UST | Heating oil Number 2 | 25,000-gal | Double walled | 1998 | Active (natural gas generally used) | In area of former UST with monitoring wells noted.<br><br>West of Chelsea Building 1 just north of West 25th Street. |
| UST | Heating oil Number 2 | 25,000-gal | Double walled | 1998 | Active (natural gas generally used) | West of Elliott Building 4 south of West 27th Street – Drive |
| AST | Waste oil | 275 | Steel | 1990's | Status unknown | Elliott Building 4 Boiler Room – Remediation Oil Recovery System waste oil tank (see discussion Section 3.1) |
| AST | Holding tank | 275 | Steel | 1990's | Status unknown | Elliott Building 4 Boiler Room - Remediation Oil Recovery System holding tank (see discussion Section 3.1) |

### Strong, Pungent or Noxious Odors and their Sources

No strong, pungent or noxious odors were noted at the Subject Property.

**Standing Surface Water/Pools & Sumps**

No standing water, pools or sumps containing liquids likely to be hazardous substances or petroleum products were noted.

**Drums, Totes and Intermediate Bulk Containers**

No hazardous substance or petroleum product drums were noted.

**Unidentified Substance Containers**

No unidentified substance containers suspected of containing hazardous substance or petroleum product were noted.

**PCBs in Oil Filled Electrical/Hydraulic Equipment**

The Property is equipped with a trach compactor northeast of Chelsea Building 2 just south of West 26th Street. The compactor area is masonry enclosed with a roof and two overhead garage bay doors. No concerns were noted.

It is noted that identification of PCB containing fluorescent light ballasts, caulk, paint, or other materials located inside and are part of the building or structure is outside of the scope of the ASTM E1527-21 standard and this assessment.

**Stains or Corrosion on Floors, Walls or Ceilings**

No stains or corrosion of floors, walls or ceilings, excluding any staining from water, were noted.

**Drains and Sumps**

Floor drains and a basement sump designed for the purpose of managing sanitary sewage were noted. No conditions indicative of a REC were observed.

**Pits/Ponds/Lagoons**

No pits, ponds or lagoons were identified in connection with waste treatment or disposal.

**Stained Soil, Pavement/Stressed Vegetation**

No stained soil, pavement or stressed vegetation was observed.

**On-Site Solid Waste Disposal/Fill Material**

No evidence of on-site disposal of trash, construction debris, demolition debris or other solid waste was observed.

Based on the history of previous site development, historical fill material may be present in the subsurface at areas of previous site grading or building structures.

**Waste Water**

Sanitary sewage generated at the Subject Property is discharged via a connection to the local public sewer system.

Storm water runoff at the Subject Property is discharged via roof drains into the municipal sewer system.

**Septic Systems/Cesspools**

No septic systems/cesspools identified.

**Wells**

The following wells were identified at the Subject Property:

Multiple monitoring wells were observed in the vicinity of the two (2) Property heating oil USTs, west of Chelsea Building 1 just north of West 25th Street, and west of Elliott Building 4 south of West 27th Street – Drive. The wells are associated with documented releases from USTs removed from the Property discussed in Section 3 and 4 above.

**Railroad Spurs**

No railroad spurs were identified on the Subject Property.

# 7.0 BUSINESS ENVIRONMENTAL RISKS

In accordance with the contract agreement for this assessment, Hillmann has performed cursory reviews of several potential Business Environmental Risks (also known as "Non-Scope Considerations"). The ASTM E1527-21 standard defines the term business environmental risk (BER) as, *"a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice."*

## 7.1 Asbestos-Containing Material (ACM)

The contracted scope of work included a cursory visual screening of the accessed portions of buildings at the Subject Property built prior to 1990 for suspect asbestos containing materials (ACM). The information provided in this section, where applicable, is limited to identification of potential suspect materials in the readily accessible and observed areas of the building, and their general condition. This is not intended to be a comprehensive survey for the presence of ACM, and no testing has been conducted.

Given the 1940-1968 years of construction, asbestos containing materials are suspected unless ruled out by laboratory analysis.

Suspected ACM noted within the accessed building areas included floor tile, wall-board, spray-of insulation and roofing materials.

## 7.2 Lead-Based Paint

The contracted scope of work included a cursory visual screening of the condition of painted surfaces in the accessed areas of residential buildings/units built prior to 1980. This is not intended to constitute a comprehensive survey for LBP or potential lead hazards, and no testing has been conducted.

Given the 1940-1968 years of construction, lead-paint is suspected unless ruled out by field survey or laboratory analysis.

Lead sampling was reportedly being performed due to the December 21, 2021 modification to the legal lead-based paint standard to 0.5 $mg/cm^2$ (Local Law 66 and rules adopted by the Department of Housing Preservation and Development [HPD]) The results of the survey have been requested by Hillmann.

## 7.3 Radon

Data compiled by the USEPA, as summarized by the regulatory database report, indicated that the Subject Property is located in an area classified as Zone 3 or 'low risk' area for radon. Radon testing was not included in the scope of this assessment.

## 7.4 Mold/Microbial Damage

The contracted scope of work included a cursory visual screening of the accessed areas of the building for evidence of significant damage to building materials and finishes as result of moisture intrusion and/or mold/microbial growth.

The following evidence of significant moisture intrusion or mold/microbial growth was noted:

The basement of Building Elliott - 1 was observed to have standing water on the concrete surface with some discoloration. Intermittent pipe and roof leaks were reportedly common given the age of the building. Mold abatement, primarily removing water damaged wall-board is reportedly performed by NYCHA staff as needed.

## 7.5 NWI Mapped Wetlands

The National Wetlands Inventory online Wetland Mapper (https://www.fws.gov/wetlands/data/mapper.html) was reviewed for indications of jurisdictional wetlands at or immediately adjoining the Subject Property. The scope of work for this assessment excluded a visual determination of regulated wetlands at the Subject Property. It is emphasized that, regardless of the data reviewed via the NWI Wetlands Mapper, a field delineation of regulated wetlands by a qualified professional would be warranted to determine the presence or absence of regulated wetlands at the Subject Property.

The review did not indicate regulated wetland areas on the Property.

## 7.6 Lead in Drinking Water

The scope of work for this assessment included a review of the potential for elevated levels of lead in drinking water by determining the source of the drinking water supply and a review of available compliance or testing data.

Potable water service at the Property is provided by a utility connection with the City of New York. A recently published water quality report from the utility indicated compliance with USEPA water quality standards for lead in drinking water. A copy of the report has been attached in Appendix F. Note – no site-specific lead-in-water sampling was performed within the context of the Phase I.

# 8.0 REFERENCES

ASTM E1527-21-Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process; ASTM International, 2021

ASTM E12600-15-Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transaction, ASTM International, 2015

EDR Radius Map Report, and historical record reports discussed in Section 4, Environmental Data Resources

Methodology for Identifying the Area of Concern Around a Property Potentially Impacted by Vapor Migration from Nearby Contaminated Sources; A. Buonicore, 2011

Site Specific Field Investigation Work Plan Elliott Houses, 426 West 27th Street, New York, New York NYSDEC Spill Number 89-08401 PBS Number 601955; prepared by Gannett Fleming Engineers and Architects, P.C. (GF) dated July 2007 (DRAFT)

Phase II Field Investigation Elliott Houses, 426 West 27th Street, New York, NY 10001, NYSDEC Spill #89-08401; prepared by American Environmental Assessment & Solutions, Inc. (AEASinc) dated March 15, 2011

# 9.0 APPENDICES

| | |
|---|---|
| Appendix A | Site Diagram / Vicinity Map |
| Appendix B | Site Photographs |
| Appendix C | Questionnaires / User Provided Information |
| Appendix D | Historical Records Documentation |
| Appendix E | Regulatory Records Documentation |
| Appendix F | Other Documents / Lab Results |
| Appendix G | Project Personnel Qualifications |

# Appendix B

## GEOPHYSICAL SURVEY REPORTS

Coastal Environmental Solutions, Inc.

# GEOPHYSICAL INVESTIGATION REPORT

**11.22.2023**

**NYCHA Fulton 11, Manhattan, NY**
**Date of Investigation: 11/14/2023**

**Prepared for:**

H.K. Engineering
1600 Rt. 22 East
Union, New Jersey 07083

**Prepared By:**

Dennis Berthold
Director of Geophysical Operations
Coastal Environmental Solutions, Inc.
PO Box 342
Medford, New York 11763

# 1.0 INTRODUCTION

On 11/14/2023, Coastal Environmental Solutions, Inc (Coastal) personnel performed a limited geophysical investigation at NYCHA Fulton 11, Manhattan, NY. The areas of interest included the exterior of the building for the clearing of approximately 7 proposed soil borings as directed by the client. Surface conditions consisted of soil/grass, asphalt and concrete.

# 2.0 SCOPE OF WORK

1. Locate and mark detectable evidence of subsurface features such as utilities and former or existing Underground Storage Tanks (USTs) and related piping.

# 3.0 EQUIPMENT

**ImpulseRadar PinPointR Ultra-Wide Band (UWB) Penetrating Radar System**

Ground Penetrating RADAR (GPR) is a non-destructive geophysical method that produces a continuous cross-sectional profile of subsurface features in real time. GPR operates by transmitting both high and low frequency electromagnetic wave pulses down into the ground through a transmitter in the antenna. The transmitted electromagnetic waves reflect off materials with contrasting dielectric properties from surrounding medium such as underground storage tanks, utilities, distinct contacts between different earth materials, and other various subsurface objects. The antenna receiver collects the reflected electromagnetic waves which are then interpreted by the operator.

The ImpulseRadar PinPointR UWB GPR utilizes a dual band 400/800 MHz HS antenna mounted to a stroller frame which rolls over the surface. The total depth of penetration achieved with the antenna can be up to 10 feet but widely varies based on site-specific subsurface conditions. Conductive materials in the soil attenuate the GPR signal causing a decrease in effective depth of penetration and clarity.

**Vivax-Metrotech vLoc3-Pro Receiver/Transmitter**

The vLoc3-Pro Receiver is a hand-operated antenna capable of detecting electromagnetic (EM) fields emitted from a source. The EM antenna can detect pipes and cables in the ground at depths of up to 20 feet using active or passive tracing techniques. Passive tracing is the act of locating an underground utility through the detection of electrical or radio signals travelling along conductive utilities. Active tracing is used in conjunction with the Transmitter that is directly connected to the target utility or to a conductive rodder within a non-conductive line. A signal is sent through the utility at a specific frequency that can be detected by the Receiver. The detectability of a target utility depends on many factors including access to the target utility, grounding, depth of utility, conductivity, and other site-specific factors.

**TW-6 Pipe and Cable Locator**

The TW-6 Pipe and Cable locator is a handheld magnetometer which utilizes a transmitter-receiver pair attached to opposite ends of a handle and carried approximately 1-2ft from the surface. The magnetometer induces an electromagnetic (EM) field into the ground that is generated by the

transmitter. Once the induced EM field passes through a buried metallic object, it generates a secondary EM field which is detected by the receiver, generating an audible tone. Based on the calibration of the magnetometer, the audible tone reflects the strongest response as the highest pitched sound, trailing off on all sides of the peak. This piece of technology can be used to detect subsurface features such as metallic USTs, large diameter conductive pipes, and buried manholes, especially in areas in which traditional GPR methods cannot be utilized, such as overgrown or uneven surfaces.

# 4.0 METHODOLOGY

1. A subsurface investigation was performed in close proximity to the client proposed area. Active and passive detection methods were utilized with the VLoc3-Pro receiver/transmitter. Coastal personnel directly connected to all accessible and traceable pipes, conduits, valve covers, and any other surface feature throughout the site. A passive scan was performed throughout the site to detect any potential underground utilities that could not be located with active scan.
2. (If applicable) The TW-6 was utilized to sweep any accessible areas for suspected UST locations in 3-to-5-foot spacings for readings that may represent a buried metallic anomaly. Upon detection of a reading, the approximate size and shape of the anomalous area was marked on the surface to be investigated further with GPR.
3. GPR was utilized to further characterize the approximate dimensions, depth, and shape of the anomalies located with the TW-6 and other detections. The remainder of the areas around suspected UST locations were scanned with GPR in 3-to-5-foot spacing to locate any anomalous features not previously detected such as non-conductive piping and former excavations.
4. All findings were marked on the surface utilizing the American Public Works Association (APWA) recommended color code, seen below:

| | |
|---|---|
| WHITE | Proposed Excavation |
| PINK | Temporary Survey Markings (Approximate UST Locations, Soil Boring Locations) |
| RED | Electric Power Lines, Cables, Conduit and Lighting Cables |
| YELLOW | Gas, Oil, Steam, Petroleum or Gaseous Materials |
| ORANGE | Communication, Alarm or Signal Lines, Cables or Conduit |
| BLUE | Water (Domestic and Fire Lines) |
| PURPLE | Irrigation (Not commonly used) |
| GREEN | Sewers and Drain Lines |

# 5.0 SUMMARY OF FINDINGS

**Geophysical Investigation**

Coastal personnel conducted a geophysical investigation within all accessible areas of concern as indicated by the client. The investigation began with a visual inspection of the areas surrounding the building prior to a thorough search with the above referenced equipment. Within the asphalt

parking lot area, an electrical line and storm drain line was detected and marked out. Within the rear of the building, one storm drain was also found and marked. The area indicated as the playground area was also investigated and found to be absent of utilities with the exception of one storm drain which immediately exited the site at the southern interface. No evidence of current or recently excavated USTs was detected.

**Limitations**

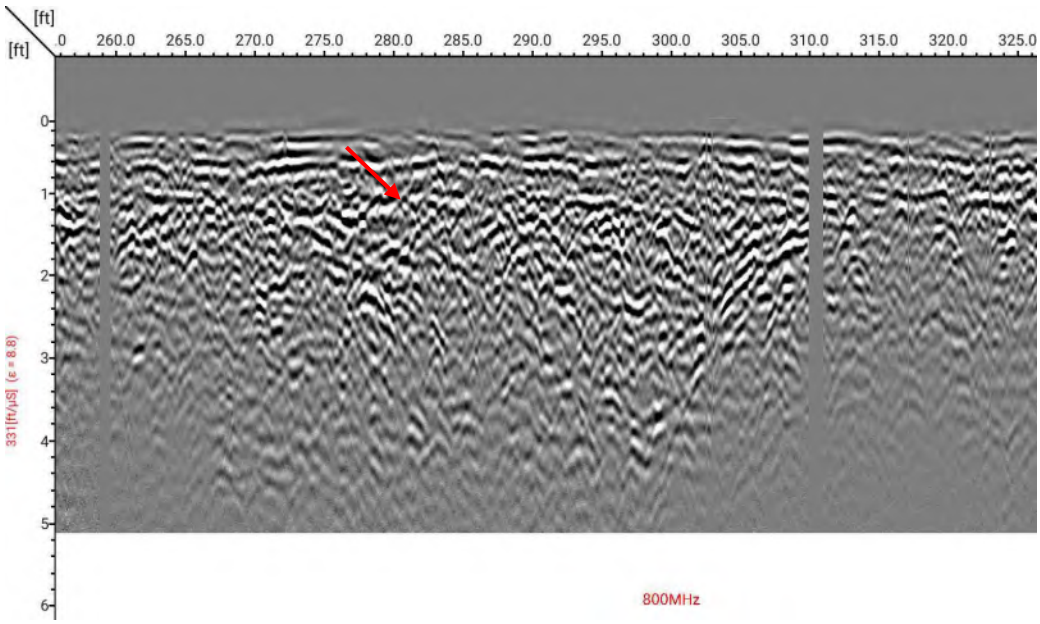
The effective depth of GPR penetration was limited to approximately 2.5 feet below the concrete/asphalt grade and 4 feet below soil grade. The limiting factor was likely due to soil conductivity attenuating the GPR signal, shallow bedrock containing moisture, or non-conductive materials utilized for the utilities. The GPR and TW-6 are unable to be utilized within close proximity to parked vehicles and exterior walls or on reinforced concrete, such as sidewalks.

**Disclaimer**

The subsurface investigation was performed by Coastal after considering the limits of the scope of work and the time constraint for the investigation. The investigation that is described in this report was undertaken in accordance with current accepted standards and practices of the geophysical survey industry. The results and interpretations that are presented are based on professional judgment and are as accurate as can reasonably be achieved. However, no geophysical equipment can accurately depict all subsurface features due to the geology and environmental conditions of the subsurface. Any intrusive work in proximity to identified anomalies should be carefully considered and cross-referenced with all available site-specific documentation. Coastal is not liable for the use, interpretation, or application of the data and information in this report.

# PHOTOS & GPR SCREENSHOTS

**Photo 1 – Photo of the asphalt parking lot area containing the electrical line leading to the pole visible in the background.**




**GPR Screenshot 1 – GPR screenshot showing the electrical line detected beneath the asphalt within the above parking lot.**

**Photo 2 – Area located behind the building on site. The white circle shows a proposed soil boring location, while the green arrow shows the location of a partially covered storm drain. The storm drain line extended away from the area of concern towards the parking lot in the background.**


**Photo 3 – Photo of a proposed soil boring located on the east side of the building, adjacent to the playground area.**

**Photos 4 & 5 – Photos of the proposed soil borings located in the asphalt playground area. Both locations were cleared of all utilities.**

Coastal Environmental Solutions, Inc.

# GEOPHYSICAL INVESTIGATION REPORT

**11.22.2023**

**NYCHA Chelsea-Elliot Addition, Manhattan, NY**
**Date of Investigation: 11/14/2023**

**Prepared for:**

H.K. Engineering
1600 Rt. 22 East
Union, New Jersey 07083

**Prepared By:**

Dennis Berthold
Director of Geophysical Operations
Coastal Environmental Solutions, Inc.
PO Box 342
Medford, New York 11763

# 1.0 INTRODUCTION

On 11/14/2023, Coastal Environmental Solutions, Inc (Coastal) personnel performed a limited geophysical investigation at NYCHA Chelsea-Elliot Addition, Manhattan, NY. The areas of interest included locations within the building and along the exterior of the building for the clearing of approximately 13 proposed soil borings as directed by the client. Surface conditions consisted of soil/grass, asphalt and concrete.

# 2.0 SCOPE OF WORK

1. Locate and mark detectable evidence of subsurface features such as utilities and former or existing Underground Storage Tanks (USTs) and related piping.

# 3.0 EQUIPMENT

**ImpulseRadar PinPointR Ultra-Wide Band (UWB) Penetrating Radar System**

Ground Penetrating RADAR (GPR) is a non-destructive geophysical method that produces a continuous cross-sectional profile of subsurface features in real time. GPR operates by transmitting both high and low frequency electromagnetic wave pulses down into the ground through a transmitter in the antenna. The transmitted electromagnetic waves reflect off materials with contrasting dielectric properties from surrounding medium such as underground storage tanks, utilities, distinct contacts between different earth materials, and other various subsurface objects. The antenna receiver collects the reflected electromagnetic waves which are then interpreted by the operator.

The ImpulseRadar PinPointR UWB GPR utilizes a dual band 400/800 MHz HS antenna mounted to a stroller frame which rolls over the surface. The total depth of penetration achieved with the antenna can be up to 10 feet but widely varies based on site-specific subsurface conditions. Conductive materials in the soil attenuate the GPR signal causing a decrease in effective depth of penetration and clarity.

**Vivax-Metrotech vLoc3-Pro Receiver/Transmitter**

The vLoc3-Pro Receiver is a hand-operated antenna capable of detecting electromagnetic (EM) fields emitted from a source. The EM antenna can detect pipes and cables in the ground at depths of up to 20 feet using active or passive tracing techniques. Passive tracing is the act of locating an underground utility through the detection of electrical or radio signals travelling along conductive utilities. Active tracing is used in conjunction with the Transmitter that is directly connected to the target utility or to a conductive rodder within a non-conductive line. A signal is sent through the utility at a specific frequency that can be detected by the Receiver. The detectability of a target utility depends on many factors including access to the target utility, grounding, depth of utility, conductivity, and other site-specific factors.

**TW-6 Pipe and Cable Locator**

The TW-6 Pipe and Cable locator is a handheld magnetometer which utilizes a transmitter-receiver pair attached to opposite ends of a handle and carried approximately 1-2ft from the surface. The

magnetometer induces an electromagnetic (EM) field into the ground that is generated by the transmitter. Once the induced EM field passes through a buried metallic object, it generates a secondary EM field which is detected by the receiver, generating an audible tone. Based on the calibration of the magnetometer, the audible tone reflects the strongest response as the highest pitched sound, trailing off on all sides of the peak. This piece of technology can be used to detect subsurface features such as metallic USTs, large diameter conductive pipes, and buried manholes, especially in areas in which traditional GPR methods cannot be utilized, such as overgrown or uneven surfaces.

# 4.0 METHODOLOGY

1. A subsurface investigation was performed in close proximity to the client proposed area. Active and passive detection methods were utilized with the VLoc3-Pro receiver/transmitter. Coastal personnel directly connected to all accessible and traceable pipes, conduits, valve covers, and any other surface feature throughout the site. A passive scan was performed throughout the site to detect any potential underground utilities that could not be located with active scan.
2. (If applicable) The TW-6 was utilized to sweep any accessible areas for suspected UST locations in 3-to-5-foot spacings for readings that may represent a buried metallic anomaly. Upon detection of a reading, the approximate size and shape of the anomalous area was marked on the surface to be investigated further with GPR.
3. GPR was utilized to further characterize the approximate dimensions, depth, and shape of the anomalies located with the TW-6 and other detections. The remainder of the areas around suspected UST locations were scanned with GPR in 3-to-5-foot spacing to locate any anomalous features not previously detected such as non-conductive piping and former excavations.
4. All findings were marked on the surface utilizing the American Public Works Association (APWA) recommended color code, seen below:

| | |
|---|---|
| WHITE | Proposed Excavation |
| PINK | Temporary Survey Markings (Approximate UST Locations, Soil Boring Locations) |
| RED | Electric Power Lines, Cables, Conduit and Lighting Cables |
| YELLOW | Gas, Oil, Steam, Petroleum or Gaseous Materials |
| ORANGE | Communication, Alarm or Signal Lines, Cables or Conduit |
| BLUE | Water (Domestic and Fire Lines) |
| PURPLE | Irrigation (Not commonly used) |
| GREEN | Sewers and Drain Lines |

# 5.0 SUMMARY OF FINDINGS

**Geophysical Investigation**

Coastal personnel conducted a geophysical investigation within all accessible areas of concern as indicated by the client. The investigation began with a visual inspection of the areas surrounding

the building prior to a thorough search with the above referenced equipment. The exterior investigations showed evidence of multiple utilities including electric, water, and possible steam lines connecting to multiple buildings. No evidence of current or recently excavated USTs was detected throughout the investigation areas, though a known UST is present within the concrete walkway east of the investigation area near Elliot 4.

Within the Elliot Center building, multiple areas were investigated for the purposes of clearing safe locations for further investigation. No utilities were detected within the subsurface at the investigated locations.

**Limitations**

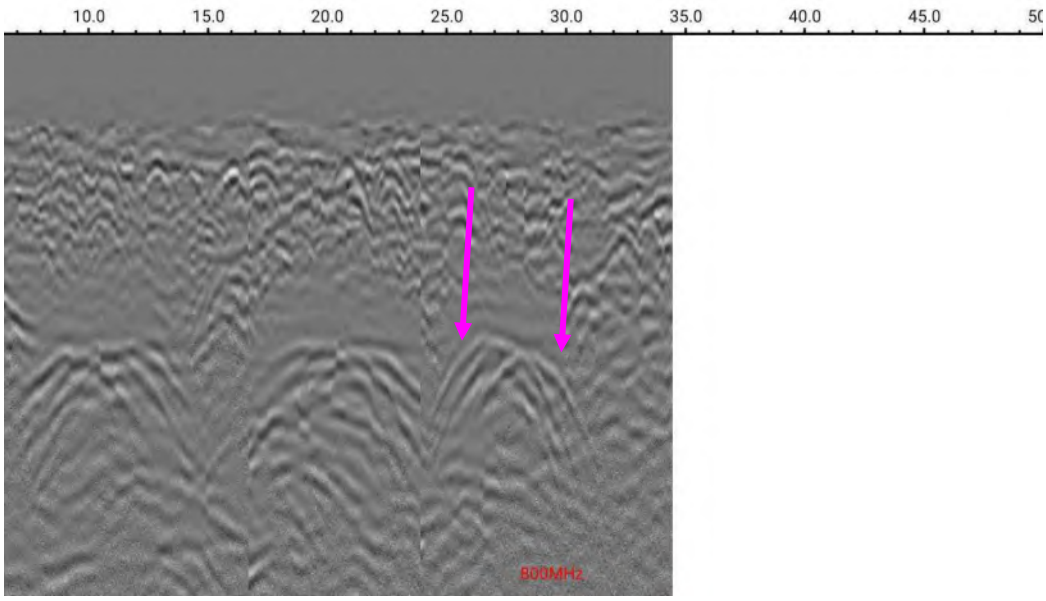
The effective depth of GPR penetration was limited to approximately 2.5 feet below the concrete/asphalt grade and 4 feet below soil grade. The limiting factor was likely due to soil conductivity attenuating the GPR signal, shallow bedrock containing moisture, or non-conductive materials utilized for the utilities. The GPR and TW-6 are unable to be utilized within close proximity to parked vehicles and exterior walls or on reinforced concrete, such as sidewalks.

**Disclaimer**

The subsurface investigation was performed by Coastal after considering the limits of the scope of work and the time constraint for the investigation. The investigation that is described in this report was undertaken in accordance with current accepted standards and practices of the geophysical survey industry. The results and interpretations that are presented are based on professional judgment and are as accurate as can reasonably be achieved. However, no geophysical equipment can accurately depict all subsurface features due to the geology and environmental conditions of the subsurface. Any intrusive work in proximity to identified anomalies should be carefully considered and cross-referenced with all available site-specific documentation. Coastal is not liable for the use, interpretation, or application of the data and information in this report.

# PHOTOS & GPR SCREENSHOTS

**Photo 1 – Photo of the concrete walkway between Elliot 4 and the playground area. This area contained multiple utilities including storm drainage, electrical, and water lines. There was also a possible steam line leading from Elliot 4 towards Elliot 1, though this area was marked out later in pink as a trench to avoid during drilling activities.**




**GPR Screenshot 1 – GPR screenshot showing multiple scans of the series of utility lines within the trench. Due to the proximity of the water, steam, electrical, and other lines to eachother, the entire trench was marked out to avoid.**

**Photo 2 – Additional view of the playground area with the electrical lines within the trench marked out (highlighted for clarity).**


**Photo 3 – Photo of a manhole containing a sanitary line leading off the west side of the Elliot Center. The grass area in the background was investigated and shown to be absent of any evidence of utilities.**

**Photos 4 & 5 – Photos of the proposed soil borings located in the Elliot Center basement. All locations were cleared of all utilities.**

# Appendix C

## Boring Logs

# Soil Boring: SB1

| | | | | | |
|---|---|---|---|---|---|
| Project: | HK2661.2 - Fulton 11 | Date Started: | 11/17/2023 | Permit No.: | - |
| Client: | Elliot Fulton LLC | Date Finished: | 11/17/2023 | Well Diameter: | 1" |
| Location: | 401-419 West 19th St. | Boring Depth: | 15' | Well Material: | Schedule 40 PVC |
| | Manhattan, NY | GW Bore Depth: | - | Slot Size: | - |
| Drilling Co.: | Coastal | Lat/Northing: | - | Depth to GW: | 15' |
| Rig Type: | Geoprobe 6620DT | Long/Easting: | - | Screen Interval: | 10' |
| Sample Type: | Macrocore 5' | Surface Elev: | - | Riser Interval: | 5' |
| Logged By: | Dominick A. | Install Method: | Direct Push | Flush/Stickup: | Stickup |
| | | | | Development Method: | - |

HK ENGINEERING & GEOLOGY, D.P.C.

| Depth (ft bgs) | Material Depth (ft bgs) | Material Description | PID/OVM Reading (ppm) | Recovery (inches) | Comments |
|---|---|---|---|---|---|
| SURFACE | | | | | |
| 0 | 0-4' | Fill material | 0.0 | 36 | **TWP1 and SV1 installed here** |
| | | | 0.0 | | |
| 1 | | | 0.0 | | **Sample SB1A collected from 0-2'** |
| | | | 0.0 | | |
| 2 | | | 0.0 | | |
| | | | 0.0 | | |
| 3 | | | 0.0 | | |
| | | | 0.0 | | |
| 4 | 4-15' | Dark brown sand (Medium to fine) | 0.0 | | |
| | | | 0.0 | | |
| 5 | | | 0.0 | 36 | |
| | | | 0.0 | | |
| 6 | | | 0.0 | | |
| | | | 0.0 | | |
| 7 | | | 0.0 | | |
| | | | 0.0 | | |
| 8 | | | 0.0 | | |
| | | | 0.0 | | |
| 9 | | | 0.0 | | |
| | | | 0.0 | | |
| 10 | | | 0.0 | 48 | **Sample SB1B collected from 10-12'** |
| | | | 0.0 | | |
| 11 | | | 0.0 | | |
| | | | 0.0 | | |
| 12 | | | 0.0 | | |
| | | | 0.0 | | |
| 13 | | | 0.0 | | **Groundwater encountered at 15'** |
| | | | 0.0 | | |
| 14 | | | 0.0 | | |
| | | | 0.0 | | |
| 15 | | | | | |
| | | | | | |
| 16 | | | | | |
| | | | | | |
| 17 | | | | | |
| | | | | | |
| 18 | | | | | |
| | | | | | |
| 19 | | | | | |
| | | | | | |
| 20 | | **Boring terminated at 15'** | | | |

# Soil Boring: SB2

| | | | | | |
|---|---|---|---|---|---|
| Project: | HK2661.2 - Fulton 11 | Date Started: | 11/16/2023 | Permit No.: | - |
| Client: | Elliot Fulton LLC | Date Finished: | 11/16/2023 | Well Diameter: | 1" |
| Location: | 401-419 West 19th St. | Boring Depth: | 15' | Well Material: | Schedule 40 PVC |
| | Manhattan, NY | GW Bore Depth: | - | Slot Size: | - |
| Drilling Co.: | Coastal | Lat/Northing: | - | Depth to GW: | 15' |
| Rig Type: | Geoprobe 6620DT | Long/Easting: | - | Screen Interval: | 10' |
| Sample Type: | Macrocore 5' | Surface Elev: | - | Riser Interval: | 5' |
| Logged By: | Dominick A. | Install Method: | Direct Push | Flush/Stickup: | Stickup |
| | | | | Development Method: | - |

HK ENGINEERING & GEOLOGY, D.P.C.

| Depth (ft bgs) | Material Depth (ft bgs) | Material Description | PID/OVM Reading (ppm) | Recovery (inches) | Comments |
|---|---|---|---|---|---|
| SURFACE | | | | | |
| 0 | 0-4' | Fill material | 0.0 | 36 | **TWP2 and SV2 installed here** |
| | | | 0.0 | | |
| 1 | | | 0.0 | | **Sample SB2A collected from 0-2'** |
| | | | 0.0 | | |
| 2 | | | 0.0 | | |
| | | | 0.0 | | |
| 3 | | | 0.0 | | |
| | | | 0.0 | | |
| 4 | 4-15' | Light brown sand (Medium to coarse) | 0.0 | | |
| | | | 0.0 | | |
| 5 | | | 0.0 | 36 | |
| | | | 0.0 | | |
| 6 | | | 0.0 | | |
| | | | 0.0 | | |
| 7 | | | 0.0 | | |
| | | | 0.0 | | |
| 8 | | | 0.0 | | |
| | | | 0.0 | | |
| 9 | | | 0.0 | | |
| | | | 0.0 | | |
| 10 | | | 0.0 | 48 | **Sample SB2B collected from 10-12'** |
| | | | 0.0 | | |
| 11 | | | 0.0 | | |
| | | | 0.0 | | |
| 12 | | | 0.0 | | |
| | | | 0.0 | | |
| 13 | | | 0.0 | | **Groundwater encountered at 13.5'** |
| | | | 0.0 | | |
| 14 | | | 0.0 | | |
| | | | 0.0 | | |
| 15 | | | | | |
| | | | | | |
| 16 | | | | | |
| | | | | | |
| 17 | | | | | |
| | | | | | |
| 18 | | | | | |
| | | | | | |
| 19 | | | | | |
| | | | | | |
| 20 | | **Boring terminated at 15'** | | | |

# Soil Boring: SB3

| | | | | | |
|---|---|---|---|---|---|
| Project: | HK2661.2 - Fulton 11 | Date Started: | 11/16/2023 | Permit No.: | - |
| Client: | Elliot Fulton LLC | Date Finished: | 11/16/2023 | Well Diameter: | - |
| Location: | 401-419 West 19th St. | Boring Depth: | 15' | Well Material: | - |
| | Manhattan, NY | GW Bore Depth: | - | Slot Size: | - |
| Drilling Co.: | Coastal | Lat/Northing: | - | Depth to GW: | Not encountered |
| Rig Type: | Geoprobe 6620DT | Long/Easting: | - | Screen Interval: | - |
| Sample Type: | Macrocore 5' | Surface Elev: | - | Riser Interval: | - |
| Logged By: | Dominick A. | Install Method: | Direct Push | Flush/Stickup: | - |
| | | | | Development Method: | - |

HK ENGINEERING & GEOLOGY, D.P.C.

| Depth (ft bgs) | Material Depth (ft bgs) | Material Description | PID/OVM Reading (ppm) | Recovery (inches) | Comments |
|---|---|---|---|---|---|
| SURFACE | | | | | |
| 0 | 0-2' | Fill material | 0.0 | | **SV3 installed here** |
| | | | 0.0 | | |
| 1 | | | 0.0 | | **Sample SB3A collected from 0-2'** |
| | | | 0.0 | | |
| 2 | 2-15' | Dark brown sand (Medium to coarse) | 0.0 | 48 | **Groundwater not encountered** |
| | | | 0.0 | | |
| 3 | | | 0.0 | | |
| | | | 0.0 | | |
| 4 | | | 0.0 | | |
| | | | 0.0 | | |
| 5 | | | 0.0 | | |
| | | | 0.0 | | |
| 6 | | | 0.0 | | |
| | | | 0.0 | | |
| 7 | | | 0.0 | 36 | |
| | | | 0.0 | | |
| 8 | | | 0.0 | | |
| | | | 0.0 | | |
| 9 | | | 0.0 | | |
| | | | 0.0 | | |
| 10 | | | 0.0 | | **Sample SB3B collected from 10-12'** |
| | | | 0.0 | | |
| 11 | | | 0.0 | | |
| | | | 0.0 | | |
| 12 | | | 0.0 | 48 | |
| | | | 0.0 | | |
| 13 | | | 0.0 | | |
| | | | 0.0 | | |
| 14 | | | 0.0 | | |
| | | | 0.0 | | |
| 15 | | | | | |
| | | | | | |
| 16 | | | | | |
| | | | | | |
| 17 | | | | | |
| | | | | | |
| 18 | | | | | |
| | | | | | |
| 19 | | | | | |
| | | | | | |
| 20 | | **Boring terminated at 15'** | | | |

# Soil Boring: SB4

| | | | | | |
|---|---|---|---|---|---|
| Project: | HK2661.2 - Fulton 11 | Date Started: | 11/17/2023 | Permit No.: | - |
| Client: | Elliot Fulton LLC | Date Finished: | 11/17/2023 | Well Diameter: | 1" |
| Location: | 401-419 West 19th St. | Boring Depth: | 15' | Well Material: | Schedule 40 PVC |
| | Manhattan, NY | GW Bore Depth: | - | Slot Size: | - |
| Drilling Co.: | Coastal | Lat/Northing: | - | Depth to GW: | 15' |
| Rig Type: | Geoprobe 6620DT | Long/Easting: | - | Screen Interval: | 10' |
| Sample Type: | Macrocore 5' | Surface Elev: | - | Riser Interval: | 5' |
| Logged By: | Dominick A. | Install Method: | Direct Push | Flush/Stickup: | Stickup |
| | | | | Development Method: | - |

HK ENGINEERING & GEOLOGY, D.P.C.

| Depth (ft bgs) | Material Depth (ft bgs) | Material Description | PID/OVM Reading (ppm) | Recovery (inches) | Comments |
|---|---|---|---|---|---|
| SURFACE | | | | | |
| 0 | 0-3' | Fill material | 0.0 | 36 | **TWP4 and SV4 installed here** |
| | | | 0.0 | | |
| 1 | | | 0.0 | | **Sample SB4A collected from 0-2'** |
| | | | 0.0 | | |
| 2 | | | 0.0 | | |
| | | | 0.0 | | |
| 3 | 3-15' | Dark brown sand (Medium to coarse) | 0.0 | | |
| | | | 0.0 | | |
| 4 | | | 0.0 | | |
| | | | 0.0 | | |
| 5 | | | 0.0 | 48 | |
| | | | 0.0 | | |
| 6 | | | 0.0 | | |
| | | | 0.0 | | |
| 7 | | | 0.0 | | |
| | | | 0.0 | | |
| 8 | | | 0.0 | | |
| | | | 0.0 | | |
| 9 | | | 0.0 | | |
| | | | 0.0 | | |
| 10 | | | 0.0 | 48 | **Sample SB4B collected from 10-12'** |
| | | | 0.0 | | |
| 11 | | | 0.0 | | |
| | | | 0.0 | | |
| 12 | | | 0.0 | | |
| | | | 0.0 | | |
| 13 | | | 0.0 | | |
| | | | 0.0 | | |
| 14 | | | 0.0 | | |
| | | | 0.0 | | |
| 15 | | | | | |
| | | | | | |
| 16 | | | | | |
| | | | | | |
| 17 | | | | | |
| | | | | | |
| 18 | | | | | |
| | | | | | |
| 19 | | | | | |
| | | | | | |
| 20 | | **Boring terminated at 15'** | | | |

# Soil Boring: SB5

| | | | | | |
|---|---|---|---|---|---|
| Project: | HK2661.2 - Fulton 11 | Date Started: | 11/17/2023 | Permit No.: | - |
| Client: | Elliot Fulton LLC | Date Finished: | 11/17/2023 | Well Diameter: | 1" |
| Location: | 401-419 West 19th St. | Boring Depth: | 15' | Well Material: | Schedule 40 PVC |
| | Manhattan, NY | GW Bore Depth: | - | Slot Size: | - |
| Drilling Co.: | Coastal | Lat/Northing: | - | Depth to GW: | 15' |
| Rig Type: | Geoprobe 6620DT | Long/Easting: | - | Screen Interval: | 10' |
| Sample Type: | Macrocore 5' | Surface Elev: | - | Riser Interval: | 5' |
| Logged By: | Dominick A. | Install Method: | Direct Push | Flush/Stickup: | Stickup |
| | | | | Development Method: | - |

HK ENGINEERING & GEOLOGY, D.P.C.

| Depth (ft bgs) | Material Depth (ft bgs) | Material Description | PID/OVM Reading (ppm) | Recovery (inches) | Comments |
|---|---|---|---|---|---|
| SURFACE | | | | | |
| 0 | 0-3' | Fill material | 0.0 | 48 | **TWP5 installed here** |
| | | | 0.0 | | |
| 1 | | | 0.0 | | **Sample SB5 collected from 0-2'** |
| | | | 0.0 | | |
| 2 | | | 0.0 | | |
| | | | 0.0 | | |
| 3 | 3-5' | Dark brown sand (Medium to coarse) | 0.0 | | |
| | | | 0.0 | | |
| 4 | | | 0.0 | | |
| | | | 0.0 | | |
| 5 | | Soil not captured | | | |
| | | | | | |
| 6 | | | | | |
| | | | | | |
| 7 | | | | | |
| | | | | | |
| 8 | | | | | |
| | | | | | |
| 9 | | | | | |
| | | | | | |
| 10 | | | | | |
| | | | | | |
| 11 | | | | | |
| | | | | | |
| 12 | | | | | |
| | | | | | |
| 13 | | | | | |
| | | | | | |
| 14 | | | | | |
| | | | | | |
| 15 | | | | | **Groundwater encountered at 15'** |
| | | | | | |
| 16 | | | | | |
| | | | | | |
| 17 | | | | | |
| | | | | | |
| 18 | | | | | |
| | | | | | |
| 19 | | | | | |
| | | | | | |
| 20 | | **Boring terminated at 15'** | | | |

# Soil Boring: SB6

| | | | | | |
|---|---|---|---|---|---|
| Project: | HK2661.2 - Fulton 11 | Date Started: | 11/17/2023 | Permit No.: | - |
| Client: | Elliot Fulton LLC | Date Finished: | 11/17/2023 | Well Diameter: | - |
| Location: | 401-419 West 19th St. | Boring Depth: | 6.5' | Well Material: | - |
| | Manhattan, NY | GW Bore Depth: | - | Slot Size: | - |
| Drilling Co.: | Coastal | Lat/Northing: | - | Depth to GW: | - |
| Rig Type: | Geoprobe 6620DT | Long/Easting: | - | Screen Interval: | - |
| Sample Type: | Hand Auger | Surface Elev: | - | Riser Interval: | - |
| Logged By: | Dominick A. | Install Method: | Direct Push | Flush/Stickup: | - |
| | | | | Development Method: | - |

HK ENGINEERING & GEOLOGY, D.P.C.

| Depth (ft bgs) | Material Depth (ft bgs) | Material Description | PID/OVM Reading (ppm) | Recovery (inches) | Comments |
|---|---|---|---|---|---|
| SURFACE | | | | | |
| 0 | 0-6' | Crawlspace height | | | |
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| 5 | | | | | |
| 6 | 6-6.5' | Dark brown sand (Medium to coarse) | 0.0 | 6 | **Sample SB6 was collected from the building crawlspace via Hand Auger.** |
| | | | 0.0 | | |
| 7 | | | | | **The depth of the crawlspace was 6'.** |
| 8 | | | | | **Sample SB6 was collected via Hand Auger from 6 - 6.5'** |
| 9 | | | | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | **Boring terminated at 6.5'** | | | |

# Soil Boring: SB8

| | | | | | |
|---|---|---|---|---|---|
| Project: | HK2661.2 - Fulton 11 | Date Started: | 11/17/2023 | Permit No.: | - |
| Client: | Elliot Fulton LLC | Date Finished: | 11/17/2023 | Well Diameter: | - |
| Location: | 401-419 West 19th St. | Boring Depth: | 6.5' | Well Material: | - |
| | Manhattan, NY | GW Bore Depth: | - | Slot Size: | - |
| Drilling Co.: | Coastal | Lat/Northing: | - | Depth to GW: | - |
| Rig Type: | Geoprobe 6620DT | Long/Easting: | - | Screen Interval: | - |
| Sample Type: | Hand Auger | Surface Elev: | - | Riser Interval: | - |
| Logged By: | Dominick A. | Install Method: | Direct Push | Flush/Stickup: | - |
| | | | | Development Method: | - |

HK ENGINEERING & GEOLOGY, D.P.C.

| Depth (ft bgs) | Material Depth (ft bgs) | Material Description | PID/OVM Reading (ppm) | Recovery (inches) | Comments |
|---|---|---|---|---|---|
| SURFACE | | | | | |
| 0 | 0-6' | Crawlspace height | | | |
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| 5 | | | | | |
| 6 | 6-6.5' | Dark brown sand (Medium to coarse) | 0.0 | 6 | **Sample SB8 was collected from the building crawlspace via Hand Auger.** |
| | | | 0.0 | | |
| 7 | | | | | **The depth of the crawlspace was 6'.** |
| 8 | | | | | **Sample SB8 was collected via Hand Auger from 6 - 6.5'** |
| 9 | | | | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | **Boring terminated at 6.5'** | | | |

# Soil Boring: SB9

| | | | | | |
|---|---|---|---|---|---|
| Project: | HK2661.2 - Fulton 11 | Date Started: | 11/17/2023 | Permit No.: | - |
| Client: | Elliot Fulton LLC | Date Finished: | 11/17/2023 | Well Diameter: | - |
| Location: | 401-419 West 19th St. | Boring Depth: | 15' | Well Material: | - |
| | Manhattan, NY | GW Bore Depth: | - | Slot Size: | - |
| Drilling Co.: | Coastal | Lat/Northing: | - | Depth to GW: | Not encountered |
| Rig Type: | Geoprobe 6620DT | Long/Easting: | - | Screen Interval: | - |
| Sample Type: | Macrocore 5' | Surface Elev: | - | Riser Interval: | - |
| Logged By: | Dominick A. | Install Method: | Direct Push | Flush/Stickup: | - |
| | | | | Development Method: | - |

HK ENGINEERING & GEOLOGY, D.P.C.

| Depth (ft bgs) | Material Depth (ft bgs) | Material Description | PID/OVM Reading (ppm) | Recovery (inches) | Comments |
|---|---|---|---|---|---|
| SURFACE | | | | | |
| 0 | 0-4' | Fill material | 0.0 | 36 | **SV9 installed here** |
| | | | 0.0 | | |
| 1 | | | 0.0 | | **Sample SB9A collected from 0-2'** |
| | | | 0.0 | | |
| 2 | | | 0.0 | | **Groundwater not encountered** |
| | | | 0.0 | | |
| 3 | | | 0.0 | | |
| | | | 0.0 | | |
| 4 | 4-15' | Dark brown sand (Medium to coarse) | 0.0 | | |
| | | | 0.0 | | |
| 5 | | | 0.0 | 48 | |
| | | | 0.0 | | |
| 6 | | | 0.0 | | |
| | | | 0.0 | | |
| 7 | | | 0.0 | | |
| | | | 0.0 | | |
| 8 | | | 0.0 | | |
| | | | 0.0 | | |
| 9 | | | 0.0 | | |
| | | | 0.0 | | |
| 10 | | | 0.0 | 48 | **Sample SB9B collected from 10-12'** |
| | | | 0.0 | | |
| 11 | | | 0.0 | | |
| | | | 0.0 | | |
| 12 | | | 0.0 | | |
| | | | 0.0 | | |
| 13 | | | 0.0 | | |
| | | | 0.0 | | |
| 14 | | | 0.0 | | |
| | | | 0.0 | | |
| 15 | | | | | |
| | | | | | |
| 16 | | | | | |
| | | | | | |
| 17 | | | | | |
| | | | | | |
| 18 | | | | | |
| | | | | | |
| 19 | | | | | |
| | | | | | |
| 20 | | **Boring terminated at 15'** | | | |

# Soil Boring: SB10

| | | | | | |
|---|---|---|---|---|---|
| Project: | HK2661.2 - Fulton 11 | Date Started: | 11/17/2023 | Permit No.: | - |
| Client: | Elliot Fulton LLC | Date Finished: | 11/17/2023 | Well Diameter: | - |
| Location: | 401-419 West 19th St. | Boring Depth: | 15' | Well Material: | - |
| | Manhattan, NY | GW Bore Depth: | - | Slot Size: | - |
| Drilling Co.: | Coastal | Lat/Northing: | - | Depth to GW: | Not encountered |
| Rig Type: | Geoprobe 6620DT | Long/Easting: | - | Screen Interval: | - |
| Sample Type: | Macrocore 5' | Surface Elev: | - | Riser Interval: | - |
| Logged By: | Dominick A. | Install Method: | Direct Push | Flush/Stickup: | - |
| | | | | Development Method: | - |

HK ENGINEERING & GEOLOGY, D.P.C.

| Depth (ft bgs) | Material Depth (ft bgs) | Material Description | PID/OVM Reading (ppm) | Recovery (inches) | Comments |
|---|---|---|---|---|---|
| SURFACE | | | | | |
| 0 | 0-3' | Fill material | 0.0 | 36 | |
| | | | 0.0 | | |
| 1 | | | 0.0 | | **Sample SB10A collected from 0-2'** |
| | | | 0.0 | | |
| 2 | | | 0.0 | | **Groundwater not encountered** |
| | | | 0.0 | | |
| 3 | 3-15' | Light brown sand (Medium to coarse) | 0.0 | | |
| | | | 0.0 | | |
| 4 | | | 0.0 | | |
| | | | 0.0 | | |
| 5 | | | 0.0 | 48 | |
| | | | 0.0 | | |
| 6 | | | 0.0 | | |
| | | | 0.0 | | |
| 7 | | | 0.0 | | |
| | | | 0.0 | | |
| 8 | | | 0.0 | | |
| | | | 0.0 | | |
| 9 | | | 0.0 | | |
| | | | 0.0 | | |
| 10 | | | 0.0 | 48 | **Sample SB10B collected from 10-12'** |
| | | | 0.0 | | |
| 11 | | | 0.0 | | |
| | | | 0.0 | | |
| 12 | | | 0.0 | | |
| | | | 0.0 | | |
| 13 | | | 0.0 | | |
| | | | 0.0 | | |
| 14 | | | 0.0 | | |
| | | | 0.0 | | |
| 15 | | | | | |
| | | | | | |
| 16 | | | | | |
| | | | | | |
| 17 | | | | | |
| | | | | | |
| 18 | | | | | |
| | | | | | |
| 19 | | | | | |
| | | | | | |
| 20 | | **Boring terminated at 15'** | | | |

# Soil Boring: SB1

| | | | | | |
|---|---|---|---|---|---|
| Project: | HK2661.1 - Chelsea | Date Started: | 11/15/2023 | Permit No.: | |
| Client: | Elliot Fulton LLC | Date Finished: | 11/15/2023 | Well Diameter: | 1" |
| Location: | 436 West 27th Dive | Boring Depth: | 20' | Well Material: | Schedule 40 PVC |
| | Manhattan, NY | GW Bore Depth: | - | Slot Size: | - |
| Drilling Co.: | Coastal | Lat/Northing: | - | Depth to GW: | 14' |
| Rig Type: | Geoprobe 6620DT | Long/Easting: | - | Screen Interval: | 10' |
| Sample Type: | Macrocore 5' | Surface Elev: | | Riser Interval: | 10' |
| Logged By: | R. Powell. | Install Method: | Direct Push | Flush/Stickup: | Stickup |
| | | | | Development Method: | |

HK ENGINEERING & GEOLOGY, D.P.C.

| Depth (ft bgs) | Material Depth (ft bgs) | Material Description | PID/OVM Reading (ppm) | Recovery (inches) | Comments |
|---|---|---|---|---|---|
| SURFACE | | | | | |
| 0 | | Fill Material | 0.0 | 50 | **TWP1 installed here** |
| | | | 0.0 | | **SV1 installed here** |
| 1 | | | 0.0 | | |
| | | | 0.0 | | |
| 2 | | | 0.0 | | **Sample SB1A collected from 0-2'** |
| | | | 0.0 | | |
| 3 | | | 0.0 | | |
| | | | 0.0 | | |
| 4 | | | 0.0 | | |
| | | | 0.0 | | |
| 5 | | | 0.0 | 45 | |
| | | | 0.0 | | |
| 6 | | | 0.0 | | |
| | 0-14' | | 0.0 | | |
| 7 | | | 0.0 | | |
| | | | 0.0 | | |
| 8 | | | 0.0 | | |
| | | | 0.0 | | |
| 9 | | | 0.0 | | |
| | | | 0.0 | | |
| 10 | | | 0.0 | 47 | **Sample SB1B collected from 10-12'** |
| | | | 0.0 | | |
| 11 | | | 0.0 | | |
| | | | 0.0 | | |
| 12 | | | 0.0 | | |
| | | | 0.0 | | |
| 13 | | | 0.0 | | |
| | | | 0.0 | | **Groundwater encountered at 14.0'** |
| 14 | 14-15' | Brown Sand medium grain, wet | 0.0 | | |
| | | | 0.0 | | |
| 15 | | No soil captured | | | |
| | | | | | |
| 16 | | | | | |
| | | | | | |
| 17 | | | | | |
| | | | | | |
| 18 | | | | | |
| | | | | | |
| 19 | | | | | |
| | | | | | |
| 20 | | **Boring terminated at 20'** | | | |

# Soil Boring: SB2

| | | | | | |
|---|---|---|---|---|---|
| Project: | HK2661.1 - Chelsea | Date Started: | 11/15/2023 | Permit No.: | |
| Client: | Elliot Fulton LLC | Date Finished: | 11/15/2023 | Well Diameter: | 1" |
| Location: | 436 West 27th Dive | Boring Depth: | 20' | Well Material: | Schedule 40 PVC |
| | Manhattan, NY | GW Bore Depth: | - | Slot Size: | - |
| Drilling Co.: | Coastal | Lat/Northing: | - | Depth to GW: | 11.5' |
| Rig Type: | Geoprobe 6620DT | Long/Easting: | - | Screen Interval: | 10' |
| Sample Type: | Macrocore 5' | Surface Elev: | | Riser Interval: | 10' |
| Logged By: | R. Powell. | Install Method: | Direct Push | Flush/Stickup: | Stickup |
| | | | | Development Method: | |

HK ENGINEERING & GEOLOGY, D.P.C.

| Depth (ft bgs) | Material Depth (ft bgs) | Material Description | PID/OVM Reading (ppm) | Recovery (inches) | Comments |
|---|---|---|---|---|---|
| SURFACE | | | | | |
| 0 | | Concrete | 0.0 | | **TWP2 installed here** |
| | 0 - 1 | | 0.0 | | **SV2 installed here** |
| 1 | | Fill Material | 0.0 | | |
| | | | 0.0 | | |
| 2 | | | 0.0 | 28 | **Sample SB2A collected from 0-2'** |
| | 2 - 5 | | 0.0 | | |
| 3 | | | 0.0 | | |
| | | | 0.0 | | |
| 4 | | | 0.0 | | |
| | | | 0.0 | | |
| 5 | | Brown Sand, fine | 0.0 | | |
| | | | 0.0 | | |
| 6 | | | 0.0 | | |
| | | | 0.0 | | |
| 7 | | | 0.0 | 35 | |
| | | | 0.0 | | |
| 8 | | | 0.0 | | |
| | | | 0.0 | | |
| 9 | | | 0.0 | | |
| | | | 0.0 | | |
| 10 | 5 - 15 | | 0.0 | | **Sample SB2B collected from 10-12'** |
| | | | 0.0 | | |
| 11 | | | 0.0 | | **Groundwater encountered at 11.50'** |
| | | | 0.0 | | |
| 12 | | | 0.0 | 40 | |
| | | | 0.0 | | |
| 13 | | | 0.0 | | |
| | | | 0.0 | | |
| 14 | | | 0.0 | | |
| | | | 0.0 | | |
| 15 | | No soil captured | | | |
| | | | | | |
| 16 | | | | | |
| | | | | | |
| 17 | | | | | |
| | | | | | |
| 18 | | | | | |
| | | | | | |
| 19 | | | | | |
| | | | | | |
| 20 | | **Boring terminated at 20'** | | | |

# Soil Boring: SB3

| | | | | | |
|---|---|---|---|---|---|
| Project: | HK2661.1 - Chelsea | Date Started: | 11/15/2023 | Permit No.: | |
| Client: | Elliot Fulton LLC | Date Finished: | 11/15/2023 | Well Diameter: | |
| Location: | 436 West 27th Dive | Boring Depth: | 15' | Well Material: | |
| | Manhattan, NY | GW Bore Depth: | - | Slot Size: | |
| Drilling Co.: | Coastal | Lat/Northing: | - | Depth to GW: | N/A |
| Rig Type: | Geoprobe 6620DT | Long/Easting: | - | Screen Interval: | |
| Sample Type: | Macrocore 5' | Surface Elev: | | Riser Interval: | |
| Logged By: | R. Powell | Install Method: | Direct Push | Flush/Stickup: | |
| | | | | Development Method: | |

HK ENGINEERING & GEOLOGY, D.P.C.

| Depth (ft bgs) | Material Depth (ft bgs) | Material Description | PID/OVM Reading (ppm) | Recovery (inches) | Comments |
|---|---|---|---|---|---|
| SURFACE | | | | | |
| 0 | | Fill Material | 0.0 | | |
| | | | 0.0 | | **SV3 installed here** |
| 1 | | | 0.0 | | |
| | | | 0.0 | | |
| 2 | | | 0.0 | 30 | **Sample SB3A collected from 0-2'** |
| | | | 0.0 | | |
| 3 | | | 0.0 | | |
| | | | 0.0 | | |
| 4 | | | 0.0 | | |
| | | | 0.0 | | |
| 5 | | | 0.0 | | |
| | | | 0.0 | | |
| 6 | | | 0.0 | | |
| | | | 0.0 | | |
| 7 | | | 0.0 | 41 | |
| | 0 - 15 | | 0.0 | | |
| 8 | | | 0.0 | | |
| | | | 0.0 | | |
| 9 | | | 0.0 | | |
| | | | 0.0 | | |
| 10 | | | 0.0 | | **Sample SB3B collected from 10-12'** |
| | | | 0.0 | | |
| 11 | | | 0.0 | | |
| | | | 0.0 | | |
| 12 | | | 0.0 | 37 | |
| | | | 0.0 | | |
| 13 | | | 0.0 | | |
| | | | 0.0 | | **Groundwater encountered at 14.0'** |
| 14 | | | 0.0 | | |
| | | | 0.0 | | |
| 15 | | | | | |
| | | | | | |
| 16 | | | | | |
| | | | | | |
| 17 | | | | | |
| | | | | | |
| 18 | | | | | |
| | | | | | |
| 19 | | | | | |
| | | | | | |
| 20 | | **Boring terminated at 15'** | | | |

# Soil Boring: SB4

| | | | | | |
|---|---|---|---|---|---|
| Project: | HK2661.1 - Chelsea | Date Started: | 11/16/2023 | Permit No.: | - |
| Client: | Elliot Fulton LLC | Date Finished: | 11/16/2023 | Well Diameter: | 1" |
| Location: | 436 West 27th Dive | Boring Depth: | 15' | Well Material: | Schedule 40 PVC |
| | Manhattan, NY | GW Bore Depth: | - | Slot Size: | - |
| Drilling Co.: | Coastal | Lat/Northing: | - | Depth to GW: | 13.5' |
| Rig Type: | Geoprobe 6620DT | Long/Easting: | - | Screen Interval: | 10' |
| Sample Type: | Macrocore 5' | Surface Elev: | - | Riser Interval: | 5' |
| Logged By: | Dominick A. | Install Method: | Direct Push | Flush/Stickup: | Stickup |
| | | | | Development Method: | - |

HK ENGINEERING & GEOLOGY, D.P.C.

| Depth (ft bgs) | Material Depth (ft bgs) | Material Description | PID/OVM Reading (ppm) | Recovery (inches) | Comments |
|---|---|---|---|---|---|
| SURFACE | | | | | |
| 0 | 0-3' | Fill material | 0.0 | 36 | **TWP4 installed here** |
| | | | 0.0 | | |
| 1 | | | 0.0 | | **Sample SB4A collected from 0-2'** |
| | | | 0.0 | | |
| 2 | | | 0.0 | | |
| | | | 0.0 | | |
| 3 | 3-15' | Dark brown sand (Medium to coarse) | 0.0 | | |
| | | | 0.0 | | |
| 4 | | | 0.0 | | |
| | | | 0.0 | | |
| 5 | | | 0.0 | 36 | |
| | | | 0.0 | | |
| 6 | | | 0.0 | | |
| | | | 0.0 | | |
| 7 | | | 0.0 | | |
| | | | 0.0 | | |
| 8 | | | 0.0 | | |
| | | | 0.0 | | |
| 9 | | | 0.0 | | |
| | | | 0.0 | | |
| 10 | | | 0.0 | 48 | **Sample SB4B collected from 10-12'** |
| | | | 0.0 | | |
| 11 | | | 0.0 | | |
| | | | 0.0 | | |
| 12 | | | 0.0 | | |
| | | | 0.0 | | |
| 13 | | | 0.0 | | **Groundwater encountered at 13.5'** |
| | | | 0.0 | | |
| 14 | | | 0.0 | | |
| | | | 0.0 | | |
| 15 | | | | | |
| | | | | | |
| 16 | | | | | |
| | | | | | |
| 17 | | | | | |
| | | | | | |
| 18 | | | | | |
| | | | | | |
| 19 | | | | | |
| | | | | | |
| 20 | | **Boring terminated at 15'** | | | |

# Soil Boring: SB5

| | | | | | |
|---|---|---|---|---|---|
| Project: | HK2661.1 - Chelsea | Date Started: | 11/16/2023 | Permit No.: | - |
| Client: | Elliot Fulton LLC | Date Finished: | 11/16/2023 | Well Diameter: | 1" |
| Location: | 436 West 27th Dive | Boring Depth: | 15' | Well Material: | Schedule 40 PVC |
| | Manhattan, NY | GW Bore Depth: | - | Slot Size: | - |
| Drilling Co.: | Coastal | Lat/Northing: | - | Depth to GW: | 13' |
| Rig Type: | Geoprobe 6620DT | Long/Easting: | - | Screen Interval: | 10' |
| Sample Type: | Macrocore 5' | Surface Elev: | - | Riser Interval: | 5' |
| Logged By: | Dominick A. | Install Method: | Direct Push | Flush/Stickup: | Stickup |
| | | | | Development Method: | - |

HK ENGINEERING & GEOLOGY, D.P.C.

| Depth (ft bgs) | Material Depth (ft bgs) | Material Description | PID/OVM Reading (ppm) | Recovery (inches) | Comments |
|---|---|---|---|---|---|
| SURFACE | | | | | |
| 0 | 0-15' | Dark brown sand (Medium to coarse) | 0.0 | 48 | **TWP5 installed here** |
| | | | 0.0 | | |
| 1 | | | 0.0 | | **Sample SB5A collected from 0-2'** |
| | | | 0.0 | | |
| 2 | | | 0.0 | | |
| | | | 0.0 | | |
| 3 | | | 0.0 | | |
| | | | 0.0 | | |
| 4 | | | 0.0 | | |
| | | | 0.0 | | |
| 5 | | | 0.0 | 48 | |
| | | | 0.0 | | |
| 6 | | | 0.0 | | |
| | | | 0.0 | | |
| 7 | | | 0.0 | | |
| | | | 0.0 | | |
| 8 | | | 0.0 | | |
| | | | 0.0 | | |
| 9 | | | 0.0 | | |
| | | | 0.0 | | |
| 10 | | | 0.0 | 60 | **Sample SB5B collected from 10-12'** |
| | | | 0.0 | | |
| 11 | | | 0.0 | | |
| | | | 0.0 | | |
| 12 | | | 0.0 | | |
| | | | 0.0 | | |
| 13 | | | 0.0 | | **Groundwater encountered at 13'** |
| | | | 0.0 | | |
| 14 | | | 0.0 | | |
| | | | 0.0 | | |
| 15 | | | | | |
| | | | | | |
| 16 | | | | | |
| | | | | | |
| 17 | | | | | |
| | | | | | |
| 18 | | | | | |
| | | | | | |
| 19 | | | | | |
| | | | | | |
| 20 | | **Boring terminated at 15'** | | | |

# Soil Boring: SB6

| | | | | | |
|---|---|---|---|---|---|
| Project: | HK2661.1 - Chelsea | Date Started: | 11/20/2023 | Permit No.: | - |
| Client: | Elliot Fulton LLC | Date Finished: | 11/20/2023 | Well Diameter: | 1" |
| Location: | 436 West 27th Dive | Boring Depth: | 15' | Well Material: | Schedule 40 PVC |
| | Manhattan, NY | GW Bore Depth: | - | Slot Size: | - |
| Drilling Co.: | Coastal | Lat/Northing: | - | Depth to GW: | 13.5' |
| Rig Type: | Geoprobe 6620DT | Long/Easting: | - | Screen Interval: | 10' |
| Sample Type: | Macrocore 5' | Surface Elev: | - | Riser Interval: | 5' |
| Logged By: | Dominick A. | Install Method: | Direct Push | Flush/Stickup: | Stickup |
| | | | | Development Method: | - |

HK ENGINEERING & GEOLOGY, D.P.C.

| Depth (ft bgs) | Material Depth (ft bgs) | Material Description | PID/OVM Reading (ppm) | Recovery (inches) | Comments |
|---|---|---|---|---|---|
| SURFACE | | | | | |
| 0 | 0-3' | Fill material | 0.0 | 48 | **TWP6 installed here** |
| | | | 0.0 | | |
| 1 | | | 0.0 | | **Sample SB6A collected from 0-2'** |
| | | | 0.0 | | |
| 2 | | | 0.0 | | |
| | | | 0.0 | | |
| 3 | 3-15' | Dark brown sand (Medium to coarse) | 0.0 | | |
| | | | 0.0 | | |
| 4 | | | 0.0 | | |
| | | | 0.0 | | |
| 5 | | | 0.0 | 48 | |
| | | | 0.0 | | |
| 6 | | | 0.0 | | |
| | | | 0.0 | | |
| 7 | | | 0.0 | | |
| | | | 0.0 | | |
| 8 | | | 0.0 | | |
| | | | 0.0 | | |
| 9 | | | 0.0 | | |
| | | | 0.0 | | |
| 10 | | | 0.0 | 60 | **Sample SB6B collected from 10-12'** |
| | | | 0.0 | | |
| 11 | | | 0.0 | | |
| | | | 0.0 | | |
| 12 | | | 0.0 | | |
| | | | 0.0 | | |
| 13 | | | 0.0 | | **Groundwater encountered at 13.5'** |
| | | | 0.0 | | |
| 14 | | | 0.0 | | |
| | | | 0.0 | | |
| 15 | | | | | |
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| 16 | | | | | |
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| 18 | | | | | |
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| 19 | | | | | |
| | | | | | |
| 20 | | **Boring terminated at 15'** | | | |

# Soil Boring: SB8

| | | | | | |
|---|---|---|---|---|---|
| Project: | HK2661.1 - Chelsea | Date Started: | 11/15/2023 | Permit No.: | |
| Client: | Elliot Fulton LLC | Date Finished: | 11/15/2023 | Well Diameter: | |
| Location: | 436 West 27th Dive | Boring Depth: | 14" | Well Material: | |
| | Manhattan, NY | GW Bore Depth: | - | Slot Size: | |
| Drilling Co.: | Coastal | Lat/Northing: | - | Depth to GW: | N/A |
| Rig Type: | Concrete Core Drill | Long/Easting: | - | Screen Interval: | |
| Sample Type: | Hand Auger | Surface Elev: | | Riser Interval: | |
| Logged By: | R. Powell | Install Method: | Direct Push | Flush/Stickup: | |
| | | | | Development Method: | |

HK ENGINEERING & GEOLOGY, D.P.C.

| Depth (ft bgs) | Material Depth (in bgs) | Material Description | PID/OVM Reading (ppm) | Recovery (inches) | Comments |
|---|---|---|---|---|---|
| SURFACE | | | | | |
| 0 | 0 - 2 inches | Concrete | 0.0 | N/A | **Collected inside basement** |
| | | Brown Sand, fine | 0.0 | | **hallway near elevator at** |
| 1 | 2 -14 inches | | 0.0 | | **427 W. 26th Drive** |
| | | | | | |
| 2 | | | | | **Sample SB8A collected from 2-14"** |
| | | | | | **SV8 installed here** |
| 3 | | | | | |
| | | | | | |
| 4 | | | | | |
| | | | | | |
| 5 | | | | | |
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| 6 | | | | | |
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| 18 | | | | | |
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| 19 | | | | | |
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| 20 | | **Boring terminated at 14"** | | | |

# Soil Boring: SB9

| | | | | | |
|---|---|---|---|---|---|
| Project: | HK2661.1 - Chelsea | Date Started: | 11/20/2023 | Permit No.: | - |
| Client: | Elliot Fulton LLC | Date Finished: | 11/20/2023 | Well Diameter: | - |
| Location: | 436 West 27th Dive | Boring Depth: | 15' | Well Material: | - |
| | Manhattan, NY | GW Bore Depth: | - | Slot Size: | - |
| Drilling Co.: | Coastal | Lat/Northing: | - | Depth to GW: | 13' |
| Rig Type: | Geoprobe 6620DT | Long/Easting: | - | Screen Interval: | - |
| Sample Type: | Macrocore 5' | Surface Elev: | - | Riser Interval: | - |
| Logged By: | Dominick A. | Install Method: | Direct Push | Flush/Stickup: | - |
| | | | | Development Method: | - |

HK ENGINEERING & GEOLOGY, D.P.C.

| Depth (ft bgs) | Material Depth (ft bgs) | Material Description | PID/OVM Reading (ppm) | Recovery (inches) | Comments |
|---|---|---|---|---|---|
| SURFACE | | | | | |
| 0 | 0-3' | Fill material | 0.0 | 36 | **SV9 installed here** |
| | | | 0.0 | | |
| 1 | | | 0.0 | | **Sample SB9A collected from 0-2'** |
| | | | 0.0 | | |
| 2 | | | 0.0 | | |
| | | | 0.0 | | |
| 3 | 3-15' | Dark brown sand (Medium to coarse) | 0.0 | | |
| | | | 0.0 | | |
| 4 | | | 0.0 | | |
| | | | 0.0 | | |
| 5 | | | 0.0 | 48 | |
| | | | 0.0 | | |
| 6 | | | 0.0 | | |
| | | | 0.0 | | |
| 7 | | | 0.0 | | |
| | | | 0.0 | | |
| 8 | | | 0.0 | | |
| | | | 0.0 | | |
| 9 | | | 0.0 | | |
| | | | 0.0 | | |
| 10 | | | 0.0 | 48 | **Sample SB9B collected from 10-12'** |
| | | | 0.0 | | |
| 11 | | | 0.0 | | |
| | | | 0.0 | | |
| 12 | | | 0.0 | | |
| | | | 0.0 | | |
| 13 | | | 0.0 | | **Groundwater encountered at 13'** |
| | | | 0.0 | | |
| 14 | | | 0.0 | | |
| | | | 0.0 | | |
| 15 | | | | | |
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| 16 | | | | | |
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| 19 | | | | | |
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| 20 | | **Boring terminated at 15'** | | | |

# Soil Boring: SB10

| | | | | | |
|---|---|---|---|---|---|
| Project: | HK2661.1 - Chelsea | Date Started: | 11/15/2023 | Permit No.: | |
| Client: | Elliot Fulton LLC | Date Finished: | 11/15/2023 | Well Diameter: | |
| Location: | 436 West 27th Dive | Boring Depth: | 30 inches | Well Material: | |
| | Manhattan, NY | GW Bore Depth: | - | Slot Size: | |
| Drilling Co.: | Coastal | Lat/Northing: | - | Depth to GW: | N/A |
| Rig Type: | Concrete Core Drill | Long/Easting: | - | Screen Interval: | |
| Sample Type: | Hand Auger | Surface Elev: | | Riser Interval: | |
| Logged By: | R. Powell | Install Method: | Direct Push | Flush/Stickup: | |
| | | | | Development Method: | |

HK ENGINEERING & GEOLOGY, D.P.C.

| Depth (ft bgs) | Material Depth (in bgs) | Material Description | PID/OVM Reading (ppm) | Recovery (inches) | Comments |
|---|---|---|---|---|---|
| SURFACE | | | | | |
| 0 | | | 0.0 | | **Collected at Hudson Guild** |
| | 0 - 15 | Concrete | 0.0 | | **Center inside unused hallway** |
| 1 | | | 0.0 | | |
| | | | 0.0 | | **Sample SB10A collected from 18-30"** |
| 2 | 15 - 30 | Brown Sand, fine | 0.0 | N/A | |
| | | | | | **SV6 installed here** |
| 3 | | | | | |
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| 4 | | | | | |
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| 5 | | | | | |
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| 6 | | | | | |
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| 19 | | | | | |
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| 20 | | **Boring terminated at 30"** | | | |

# Soil Boring: SB11

| | | | | | |
|---|---|---|---|---|---|
| Project: | HK2661.1 - Chelsea | Date Started: | 11/15/2023 | Permit No.: | |
| Client: | Elliot Fulton LLC | Date Finished: | 11/15/2023 | Well Diameter: | |
| Location: | 436 West 27th Dive | Boring Depth: | 24 inches | Well Material: | |
| | Manhattan, NY | GW Bore Depth: | - | Slot Size: | |
| Drilling Co.: | Coastal | Lat/Northing: | - | Depth to GW: | N/A |
| Rig Type: | Concrete Core Drill | Long/Easting: | - | Screen Interval: | |
| Sample Type: | Hand Auger | Surface Elev: | | Riser Interval: | |
| Logged By: | R. Powell | Install Method: | Direct Push | Flush/Stickup: | |
| | | | | Development Method: | |

HK ENGINEERING & GEOLOGY, D.P.C.

| Depth (ft bgs) | Material Depth (in bgs) | Material Description | PID/OVM Reading (ppm) | Recovery (inches) | Comments |
|---|---|---|---|---|---|
| SURFACE | | | | | |
| 0 | 0 - 8 | Concrete | 0.0 | N/A | **Collected inside trash compactor** |
| | | | 0.0 | | **room at 427 W. 26th Drive** |
| 1 | | | 0.0 | | |
| | | Brown Sand, fine | 0.0 | | |
| 2 | 8 - 24 | | 0.0 | | |
| | | | 0.0 | | **SV7 installed here** |
| 3 | | | | | |
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| 4 | | | | | |
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| 19 | | | | | |
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| 20 | | **Boring terminated at 24"** | | | |

# Soil Boring: SB12

| | | | | | |
|---|---|---|---|---|---|
| Project: | HK2661.1 - Chelsea | Date Started: | 11/15/2023 | Permit No.: | |
| Client: | Elliot Fulton LLC | Date Finished: | 11/5/2023 | Well Diameter: | |
| Location: | 436 West 27th Dive | Boring Depth: | 5' | Well Material: | |
| | Manhattan, NY | GW Bore Depth: | - | Slot Size: | |
| Drilling Co.: | Coastal | Lat/Northing: | - | Depth to GW: | N/A |
| Rig Type: | Geoprobe 6620DT | Long/Easting: | - | Screen Interval: | |
| Sample Type: | Macrocore 5' | Surface Elev: | | Riser Interval: | |
| Logged By: | R. Powell. | Install Method: | Direct Push | Flush/Stickup: | |
| | | | | Development Method: | |

HK ENGINEERING & GEOLOGY, D.P.C.

| Depth (ft bgs) | Material Depth (ft bgs) | Material Description | PID/OVM Reading (ppm) | Recovery (inches) | Comments |
|---|---|---|---|---|---|
| SURFACE | | | | | |
| 0 | | Fill Material | 0.0 | 36 | |
| | | | 0.0 | | |
| 1 | | | 0.0 | | |
| | | | 0.0 | | |
| 2 | | | 0.0 | | **Sample SB12A collected from 0-2'** |
| | | | 0.0 | | |
| 3 | 0 - 5 | | 0.0 | | |
| | | | 0.0 | | |
| 4 | | | 0.0 | | |
| | | | 0.0 | | |
| 5 | | | | | |
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| 6 | | | | | |
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| 7 | | | | | |
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| 19 | | | | | |
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| 20 | | **Boring terminated at 5'** | | | |

# Appendix D

## Analytical Lab Reports

# Appendix D

## Lab Reports Fulton 11

Integrated Analytical Laboratories LLC

# *ANALYTICAL DATA REPORT*

HK Engineering & Geology, D.P.C.
1600 Route 22 East
Union, NJ 07083

Project Name: **HK2661.2**
IAL Case Number: **E23-05066**

These data have been reviewed and accepted by:

Michael H. Lefkin, Ph.D.
Laboratory Director



273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252

IAL is a NELAP accredited lab (TNI01284) and maintains certification in Connecticut (PH-0699), New Jersey (14751), New York (11402) and Pennsylvania (68-00773).

# Integrated Analytical Laboratories - Table of Contents

# Sample Summary

*IAL Case No.*

**E23-05066**

*Client* HK Engineering & Geology, D.P.C.

*Project* HK2661.2

*Received On* 11/17/2023@16:40

| *Lab ID* | *Client Sample ID* | *Depth Top/Bottom* | *Sampling Time* | *Matrix* | *# of Container* |
|---|---|---|---|---|---|
| 05066-001 | SB10A | 0/2 | 11/16/2023@09:30 | Soil | 5 |
| 05066-002 | SB10B | 10/12 | 11/16/2023@09:45 | Soil | 5 |
| 05066-003 | SB2A | 0/2 | 11/16/2023@10:00 | Soil | 5 |
| 05066-004 | SB2B | 10/12 | 11/16/2023@10:20 | Soil | 5 |
| 05066-005 | SB5 | 0/2 | 11/16/2023@13:40 | Soil | 5 |
| 05066-006 | SB3A | 0/2 | 11/16/2023@13:05 | Soil | 5 |
| 05066-007 | SB3B | 10/12 | 11/16/2023@13:10 | Soil | 5 |
| 05066-008 | SB9A | 0/2 | 11/17/2023@08:00 | Soil | 5 |
| 05066-009 | SB9B | 10/12 | 11/17/2023@08:10 | Soil | 5 |
| 05066-010 | SB1A | 0/2 | 11/17/2023@09:00 | Soil | 5 |
| 05066-011 | SB1B | 10/12 | 11/17/2023@09:15 | Soil | 5 |
| 05066-012 | SB4A | 0/2 | 11/17/2023@09:55 | Soil | 5 |
| 05066-013 | SB4B | 10/12 | 11/17/2023@10:05 | Soil | 5 |
| 05066-014 | SB6-419-CS | 0/0.5 | 11/17/2023@11:30 | Soil | 5 |
| 05066-015 | SB8-401-CS | 0/0.5 | 11/17/2023@11:40 | Soil | 5 |
| 05066-016 | TWP1 | n/a | 11/16/2023@09:30 | Aqueous | 10 |
| 05066-017 | TWP4 | n/a | 11/16/2023@10:20 | Aqueous | 10 |
| 05066-018 | TWP2 | n/a | 11/16/2023@10:00 | Aqueous | 10 |
| 05066-019 | TWP5 | n/a | 11/16/2023@14:00 | Aqueous | 10 |
| 05066-020 | TWP1 FILT | n/a | 11/16/2023@09:30 | Aqueous | 1 |
| 05066-021 | TWP4 FILT | n/a | 11/16/2023@10:20 | Aqueous | 1 |
| 05066-022 | TWP2 FILT | n/a | 11/16/2023@10:00 | Aqueous | 1 |
| 05066-023 | TWP5 FILT | n/a | 11/16/2023@14:00 | Aqueous | 1 |



*Integrated Analytical Labs ~ 273 Franklin Road, Randolph, NJ 07869 ~ (973) 361-4252*

SAMPLE DELIVERY GROUP CASE NARRATIVE
(Conformance / Non-Conformance Summary)

# SAMPLE DELIVERY GROUP CASE NARRATIVE

## SDG#: E23-05066

Integrated Analytical Laboratories, LLC. received twenty-three (23) samples** from HK Engineering & Geology, D.P.C. (IAL SDG# **E23-05066**, Project: HK2661.2) on November 17, 2023 for the analysis of :

( 4 ) Low Level TCL VO for 8260+8011 + 15
( 15 ) TCL VO + 15
( 15 ) TCL BNA + 15
( 4 ) TCL BNA + SIMS + 15
( 19 ) TCL PCB
( 19 ) TCL Pesticides
( 19 ) Cyanide, Total
( 23 ) TAL Metals (6020B/7471B) by SGS Dayton

**Number of samples listed above may be greater than what is listed on the chain of custody. Any samples that require in-house filtration or splitting will be counted as separate samples.

Samples were received in good condition with documentation in order.
Cooler temperature was acceptable at 4 ± 2 degree C.

| **Volatiles By SW 8260D** | **Batch: 231122-01** | **Matrix: Aqueous** |
|---|---|---|

**QC**
- Calibration curve met QC criteria.
- Internal standards recovery met QC criteria.
- Surrogate percent recovery met QC criteria.
- Method blank met QC criteria.
- LCS percent recovery met QC criteria. NJDEP DKQP criteria not met.
- MS/MSD RPD met QC criteria.
- MS/MSD percent recovery met QC criteria. NJDEP DKQP criteria not met.

**E23-05066**
- All samples were received within holding time.
- All samples were analyzed within holding time.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05066-016 | 1 | NA |
| E23-05066-017 | 1 | NA |
| E23-05066-018 | 1 | NA |
| E23-05066-019 | 1 | NA |

# SAMPLE DELIVERY GROUP CASE NARRATIVE

## SDG#: E23-05066

**Volatiles By SW 8260D** | **Batch: L231121-01** | **Matrix: Soil**

**QC**
- Calibration curve met QC criteria.
- Internal standards recovery met QC criteria.
- Surrogate percent recovery met QC criteria.
- Method blank met QC criteria.
- LCS percent recovery met QC criteria.
- MS/MSD RPD met QC criteria.
- MS/MSD did not meet QC criteria due to QC sample matrix interference. NJDEP DKQP criteria not met.

**E23-05066**
- All samples were received within holding time.
- All samples were analyzed within holding time.
- #10, #13, #14 and #15 were flagged with a C qualifier, indicating laboratory contamination for Methylene chloride. Methylene chloride is used as a solvent in the laboratory, resulting in occasional laboratory contamination.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05066-001 | 1 | NA |
| E23-05066-002 | 1 | NA |
| E23-05066-003 | 1 | NA |
| E23-05066-004 | 1 | NA |
| E23-05066-005 | 1 | NA |
| E23-05066-006 | 1 | NA |
| E23-05066-007 | 1 | NA |
| E23-05066-008 | 1 | NA |
| E23-05066-009 | 1 | NA |
| E23-05066-010 | 1 | NA |
| E23-05066-011 | 1 | NA |
| E23-05066-012 | 1 | NA |
| E23-05066-013 | 1 | NA |
| E23-05066-014 | 1 | NA |
| E23-05066-015 | 1 | NA |

**Microextractable By SW 8011** | **Batch: 231121-01** | **Matrix: Aqueous**

**QC**
- Calibration curve met QC criteria.
- Method blank met QC criteria.
- LCS Percent Recovery met QC criteria.
- MS Percent Recovery met QC criteria.
- RPD between the Sample/Duplicate met QC criteria.

**E23-05066**
- All samples were received within holding time.
- All samples were analyzed within holding time.
- Retention Time Shift met QC criteria.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05066-016 | 1 | NA |
| E23-05066-017 | 1 | NA |
| E23-05066-018 | 1 | NA |
| E23-05066-019 | 1 | NA |

# SAMPLE DELIVERY GROUP CASE NARRATIVE

## SDG#: E23-05066

**Semivolatiles By SW 8270E** | **Batch: 231120-02** | **Matrix: Soil**

**QC**

- Calibration curve met QC criteria.
- Internal standard recovery met QC criteria.
- Surrogate recovery met QC criteria. NJDEP DKQP criteria not met.
- Method blank met QC criteria.
- LCS percent recovery met QC criteria. NJDEP DKQP criteria not met.
- MS/MSD RPD did not meet QC criteria due to matrix interference. NJDEP DKQP criteria not met.
- MS/MSD percent recovery did not meet QC criteria due to matrix interference. NJDEP DKQP criteria not met.
- CCV did not meet QC criteria some target compounds high, but no positive hits was/were found in the associated sample.

**E23-05066**

- All samples were received within holding time.
- All samples were extracted within holding time.
- All samples were analyzed within holding time.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05066-001 | 1 | NA |
| E23-05066-002 | 1 | NA |
| E23-05066-003 | 10 | Target compound(s). |
| E23-05066-004 | 1 | NA |
| E23-05066-005 | 1 | NA |
| E23-05066-006 | 1 | NA |
| E23-05066-007 | 1 | NA |
| E23-05066-008 | 5 | Target compound(s). |
| E23-05066-009 | 1 | NA |
| E23-05066-010 | 1 | NA |
| E23-05066-011 | 1 | NA |
| E23-05066-012 | 1 | NA |
| E23-05066-013 | 1 | NA |
| E23-05066-014 | 1 | NA |
| E23-05066-015 | 5 | Target compound(s). |

The result reported for 1,2-Diphenylhydrazine is also representative of Azobenzene. 1,2-Diphenylhydrazine rapidly decomposes to Azobenzene when exposed to water or heat. Analytical results from analysis of 1,2-Diphenylhydrazine will be directly compared to the applicable criteria for Azobenzene and/or 1,2-Diphenylhydrazine.

# SAMPLE DELIVERY GROUP CASE NARRATIVE

## SDG#: E23-05066

**Semivolatiles By SW 8270E, SW 8270E SIM** **Batch: 231120-04** **Matrix: Aqueous**

**QC**
- Calibration curve met QC criteria.
- Internal standard recovery met QC criteria.
- Surrogate recovery met QC criteria. NJDEP DKQP criteria not met.
- Method blank met QC criteria.
- LCS percent recovery met QC criteria. NJDEP DKQP criteria not met.
- MS/MSD RPD did not meet QC criteria due to RPD failing high for benzaldehyde. NJDEP DKQP criteria not met.
- MS/MSD percent recovery met QC criteria. NJDEP DKQP criteria not met.
- CCV did not pass for all compounds. A sensitivity check was ran for Benzaldehyde. Compounds that did not have a passing CCV were reported as non-detect.

**E23-05066**
- All samples were received within holding time.
- All samples were extracted within holding time.
- All samples were analyzed within holding time.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05066-016 | 1 | NA |
| E23-05066-017 | 1 | NA |
| E23-05066-018 | 1 | NA |
| E23-05066-019 | 1 | NA |

The result reported for 1,2-Diphenylhydrazine is also representative of Azobenzene. 1,2-Diphenylhydrazine rapidly decomposes to Azobenzene when exposed to water or heat. Analytical results from analysis of 1,2-Diphenylhydrazine will be directly compared to the applicable criteria for Azobenzene and/or 1,2-Diphenylhydrazine.

**PCB By SW 8082A** **Batch: 231120-01** **Matrix: Aqueous**

**QC**
- Calibration curve met QC criteria.
- Surrogate percent recovery met QC criteria.
- Method blank met QC criteria.
- LCS Percent Recovery met QC criteria.
- RPD between MS/MSD met QC criteria.
- MS/MSD Percent Recovery met QC criteria.
- The following samples were cleaned up using method 3660B to remove sulfur: BLKA231120-01, LCSA231120-01, E23-05046-014MS, E23-05046-014MSD, E23-05066-016, E23-05066-017, E23-05066-018, E23-05066-019.

**E23-05066**
- All samples were received within holding time.
- All samples were extracted within holding time.
- All samples were analyzed within holding time.
- Retention Time Shift met QC criteria.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05066-016 | 1 | NA |
| E23-05066-017 | 1 | NA |
| E23-05066-018 | 1 | NA |
| E23-05066-019 | 1 | NA |

# SAMPLE DELIVERY GROUP CASE NARRATIVE

## SDG#: E23-05066

| PCB By SW 8082A | Batch: 231121-02 | Matrix: Soil |
|---|---|---|

**QC**

- Calibration curve met QC criteria.
- Surrogate percent recovery did not meet QC criteria due to matrix interference for #008; #012. NJDEP DKQP criteria not met.
- Method blank met QC criteria.
- LCS Percent Recovery met QC criteria.
- RPD between MS/MSD met QC criteria.
- MS/MSD Percent Recovery met QC criteria.
- The following samples were cleaned up using method 3660B to remove sulfur: BLKS231121-02, LCSS231121-02, E23-05066-002MS, E23-05066-002MSD, E23-05066-001, E23-05066-002, E23-05066-003, E23-05066-004, E23-05066-005, E23-05066-006, E23-05066-007, E23-05066-008, E23-05066-009, E23-05066-010, E23-05066-011, E23-05066-012, E23-05066-013, E23-05066-014, E23-05066-015.

**E23-05066**

- All samples were received within holding time.
- All samples were extracted within holding time.
- All samples were analyzed within holding time.
- Retention Time Shift met QC criteria.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05066-001 | 1 | NA |
| E23-05066-002 | 1 | NA |
| E23-05066-003 | 1 | NA |
| E23-05066-004 | 1 | NA |
| E23-05066-005 | 1 | NA |
| E23-05066-006 | 1 | NA |
| E23-05066-007 | 1 | NA |
| E23-05066-008 | 1 | NA |
| E23-05066-009 | 1 | NA |
| E23-05066-010 | 1 | NA |
| E23-05066-011 | 1 | NA |
| E23-05066-012 | 1 | NA |
| E23-05066-013 | 1 | NA |
| E23-05066-014 | 1;10 | Target compound(s). |
| E23-05066-015 | 1 | NA |

# SAMPLE DELIVERY GROUP CASE NARRATIVE

## SDG#: E23-05066

| Pesticides By SW 8081B | Batch: 231120-01 | Matrix: Aqueous |
|---|---|---|

**QC**

- Calibration curve met QC criteria.
- Surrogate percent recovery met QC criteria.
- Method blank met QC criteria.
- LCS Percent Recovery met QC criteria.
- RPD between MS/MSD met QC criteria.
- MS/MSD percent recovery did not meet QC criteria due to matrix interference. NJDEP DKQP criteria not met.
- The following samples were cleaned up using method 3660B to remove sulfur: BLKA231120-01, E23-05009-001MSD, LCSA231120-01, E23-05066-016, E23-05066-017, E23-05066-018, E23-05066-019.

**E23-05066**

- All samples were received within holding time.
- All samples were extracted within holding time.
- All samples were analyzed within holding time.
- Retention Time Shift met QC criteria.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05066-016 | 1 | NA |
| E23-05066-017 | 1 | NA |
| E23-05066-018 | 1 | NA |
| E23-05066-019 | 1 | NA |

# SAMPLE DELIVERY GROUP CASE NARRATIVE

## SDG#: E23-05066

**Pesticides By SW 8081B** | **Batch: 231121-02** | **Matrix: Soil**

**QC**

- Calibration curve met QC criteria.
- Surrogate percent recovery did not meet QC criteria due to matrix interference for #003; #006; #011; #012; #015. NJDEP DKQP criteria not met.
- Method blank met QC criteria.
- LCS Percent Recovery met QC criteria.
- RPD between MS/MSD met QC criteria.
- MS/MSD Percent Recovery met QC criteria.
- The RPD between the primary and secondary column was >40% for the following samples: #001; #003; #008; #012; #015. Per SW-846 8000D, the lower of the two concentrations was reported.
- The following samples were cleaned up using method 3660B to remove sulfur: BLKS231121-02, LCSS231121-02, E23-05066-002MS, E23-05066-002MSD, E23-05066-001, E23-05066-002, E23-05066-003, E23-05066-004, E23-05066-005, E23-05066-006, E23-05066-007, E23-05066-008, E23-05066-009, E23-05066-010, E23-05066-011, E23-05066-012, E23-05066-013, E23-05066-014, E23-05066-015.

**E23-05066**

- All samples were received within holding time.
- All samples were extracted within holding time.
- All samples were analyzed within holding time.
- Retention Time Shift met QC criteria.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05066-001 | 1;2 | Target compound(s). |
| E23-05066-002 | 1 | NA |
| E23-05066-003 | 1 | NA |
| E23-05066-004 | 1 | NA |
| E23-05066-005 | 1 | NA |
| E23-05066-006 | 1 | NA |
| E23-05066-007 | 1 | NA |
| E23-05066-008 | 1 | NA |
| E23-05066-009 | 1 | NA |
| E23-05066-010 | 1 | NA |
| E23-05066-011 | 1 | NA |
| E23-05066-012 | 1 | NA |
| E23-05066-013 | 1 | NA |
| E23-05066-014 | 1;20 | Target compound(s). |
| E23-05066-015 | 1;50 | Target compound(s). |

**Cyanide, Total By EPA 335.4** | **Batch: AP013-0113** | **Matrix: Aqueous**

**QC**

- Method blank met QC criteria.
- LCS percent recovery met QC criteria.
- MS/MSD Percent Recovery met QC criteria.
- Duplicate Recoveries met QC criteria.

**E23-05066**

- All samples were received within holding time.
- All samples were analyzed within holding time.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05066-016 | 1 | NA |
| E23-05066-017 | 1 | NA |
| E23-05066-018 | 1 | NA |
| E23-05066-019 | 1 | NA |

# SAMPLE DELIVERY GROUP CASE NARRATIVE

## SDG#: E23-05066

**Cyanide, Total By SW 9012B** **Batch: AP013-0115** **Matrix: Soil**

**QC** - Method blank met QC criteria.
- LCS percent recovery met QC criteria.
- MS/MSD Percent Recovery met QC criteria.
- Duplicate Recoveries met QC criteria.

**E23-05066** - All samples were received within holding time.
- All samples were analyzed within holding time.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05066-001 | 1 | NA |
| E23-05066-002 | 1 | NA |
| E23-05066-003 | 1 | NA |
| E23-05066-004 | 1 | NA |
| E23-05066-005 | 1 | NA |
| E23-05066-006 | 1 | NA |
| E23-05066-007 | 1 | NA |
| E23-05066-008 | 1 | NA |
| E23-05066-009 | 1 | NA |
| E23-05066-010 | 1 | NA |
| E23-05066-011 | 1 | NA |
| E23-05066-012 | 1 | NA |
| E23-05066-013 | 1 | NA |
| E23-05066-014 | 1 | NA |
| E23-05066-015 | 1 | NA |

**Subcontracted to SGS Dayton, TNI certified*, #TNI01283, NJ certified**

**Method: 6020B/7471B** **Matrix: Soil, Aqueous**

**QC** - Some analyses did not meet QC criteria. See subcontracted report case narrative.

**E23-05066** - Please see Case Narrative of Subcontracted Report.

Integrated Analytical Laboratories has subcontracted part or all of the results in this report. The laboratory performing the subcontracted work is listed above. These analyses were performed by a NELAP/TNI accredited laboratory, unless otherwise specified. This work was placed with a laboratory accredited for TNI standards for the tests to be performed OR with a laboratory that meets applicable statutory and regulatory requirements for performing the tests and submitting the results of tests performed. Integrated Analytical Laboratories will keep a copy of the subcontractor's report on file.
*TNI, The NELAC Institute, is a nationally recognized laboratory accreditation program. The TNI Standard is intended as an application of ISO/IEC 17025:2005(E), General Requirements for the Competence of Testing and Calibration Laboratories. While individual states and entities offer certification, TNI standards foster the generation of environmental data of known and documented quality through an open, inclusive, and transparent process that is responsive to the needs of the community.

A review of the QA/QC measures for the analysis of the sample(s) contained in this report has been performed by:

Reviewed by

12/4/2023
Date

# CASE NARRATIVE / CONFORMANCE SUMMARY



**Client:** Integrated Analytical Lab **Job No:** JD77365

**Site:** Integrated Analytical Lab, Randolph, NJ **Report Date** 12/1/2023 8:11:50 AM

On 11/21/2023, 19 sample(s), 0 Trip Blank(s), 0 Equip. Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. (SGS) at a temperature of 0.6 °C. The samples were intact and properly preserved, unless noted below. An SGS Job Number of JD77365 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

## Metals Analysis By Method SW846 6010D

**Matrix:** AQ **Batch ID:** MP43317

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD77367-1MS, JD77367-1MSD, JD77367-1SDL were used as the QC samples for the metals analysis.
- The serial dilution RPD(s) for Aluminum, Arsenic, Beryllium, Copper, Selenium, Silver, Vanadium, Zinc are outside control limits for sample MP43317-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP43317-SD1 for Zinc: Serial dilution indicates possible matrix interference.

**Matrix:** SO **Batch ID:** MP43322

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD77365-2MS, JD77365-2MSD, JD77365-2PS, JD77365-2SDL were used as the QC samples for the metals analysis.
- The matrix spike (MS) recovery(s) of Aluminum, Antimony, Potassium are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- The matrix spike duplicate (MSD) recovery(s) of Antimony, Potassium are outside control limits. Probable cause due to matrix interference.
- The serial dilution RPD(s) for Antimony, Arsenic, Beryllium, Cadmium, Silver are outside control limits for sample MP43322-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

## Metals Analysis By Method SW846 7470A

**Matrix:** AQ **Batch ID:** MP43408

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD77458-4FMS, JD77458-4FMSD were used as the QC samples for the metals analysis.

## Metals Analysis By Method SW846 7471B

| Matrix: SO | Batch ID: MP43401 |
|---|---|

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD77365-1MS, JD77365-1MSD were used as the QC samples for the metals analysis.
- The matrix spike (MS) recovery(s) of Mercury are outside control limits. Probable cause due to matrix interference.

## General Chemistry By Method SM2540 G 18TH ED MOD

| Matrix: SO | Batch ID: GN48524 |
|---|---|

- Sample(s) JD77365-1DUP were used as the QC samples for the Solids, Percent analysis.

SGS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting SGS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by SGS indicated via signature on the report cover.

## DATA QUALIFIERS AND FLAGS

**B** Indicates the analyte found in the associated method blank and in the sample due to potential lab contamination.
**C** Indicates analyte is a common laboratory contaminant.
**D** Indicates analyte was reported from diluted analysis.
**E** Identifies a compound concentration that exceeds the upper level of the calibration range of the instrument
**J** Indicates an estimated value either when the concentration in the sample is less than the RL or for qualification of TICs
**J1** Indicates an estimated value when ICC or CCV did not meet the criteria.
**M** Indicates matrix interference
**N** Presumptive evidence of a compound from the use of GC/MS library search.
**T** Sample analyzed outside of holding time
**X** Indicates samples analyzed for total and dissolved metals differ at ≤20% RPD.
**Y** Indicates DO depletion in the BOD blank is >0.20ppm
**Z** Indicates internal standard failure. Sample results are either biased high or biased low.
**$** Value outside NJDEP DKQP Limits
***** Result outside of QC limits

## PROJECT NOTES

- All results for soils, solids, and sludges are reported on a dry-weight basis except where noted
- All test results and QC are compliant with TNI or other applicable state agency requirements/guidance unless otherwise notated in the case narrative and/or project information page.
- The case narrative for this SDG should be consulted to determine any non-conformances.
- Any samples with 15-minute or "analyze immediately" holding times (e.g. pH, Dissolved Oxygen, Sulfite, etc.) which are analyzed in the laboratory are considered out of holding time.
- IAL is a NELAP/TNI certified laboratory (TNI ID# TNI01284). IAL retains certification in Connecticut (PH-0699), New Jersey (14751), New York (11402), and Pennsylvania (68-00773).
- Certification is not required to perform analyses in the following states: AL, CO, DE, GA, HI, ID, IN, KY, MD, MI, MS, MO, MT, NE, NM, SD and TN. IAL can perform all analyses, except Drinking Water, within its scope of capabilities in these states.

## ACRONYMS AND ABBREVIATIONS

| | | | |
|---|---|---|---|
| **CFU** | Colony Forming Unit | **ND** | Indicates analyte was analyzed for but not detected at MDL or RL (only if MDL is not used) |
| **CCB** | Continuing Calibration Blank | | |
| **CCV** | Continuing Calibration Verification | **NTU** | Nephelometric Turbidity Units |
| **DF** | Dilution Factor | **ppb** | Parts per billion. Reported as µg/L or µg/kg |
| **DL** | Attached as a suffix to a diluted sample | **ppm** | Parts per million. Reported as mg/L, µg/mL or mg/kg |
| **DUP** | Duplicate | **QC** | Quality Control |
| **ICB** | Initial Calibration Blank | **% Rec** | Percent Recovery |
| **ICC** | Initial Calibration Curve | **RL** | Reporting Limit. The RL is typically determined by the concentration of the lowest standard in the calibration curve |
| **ICV** | Initial Calibration Verification | | |
| **kg** | kilogram | | |
| **L** | Liter | **RPD** | Relative Percent Difference |
| **LCS** | Laboratory Control Sample | **RSD** | Relative Standard Deviation |
| **LCSD** | Laboratory Control Sample Duplicate | **RT** | Retention Time |
| **MDL** | Method Detection Limit as determined according to 40 CFR Part 136 Appendix B | **SU** | Standard Units |
| | | **TIC** | Tentatively Identified Compound AKA Library Search Compounds |
| **MF** | Membrane Filter | | |
| **mg** | milligram (1000mg = 1g) | **TNI** | The NELAC (National Environmental Laboratory Accreditation Council) Institute |
| **µg** | microgram (1000µg = 1mg) | | |
| **ml** | milliliter (1000ml = 1L) | **TNTC** | Too numerous to count |
| **µl** | microliter (1000µl = 1ml) | ***** | When attached to a compound name, indicates this analyte was analyzed by Method SW-846 8270 SIM |
| **µmhos** | Conductivity units - resistance expressed in ohms | | |
| **MPN** | Most Probable Number | **^** | When attached to a compound name, indicates this analyte was analyzed by Method SW-846 8011 or EPA 504.1 |
| **MS** | Matrix Spike | | |
| **MSD** | Matrix Spike Duplicate | | |
| **NA** | Not applicable | **<** | Less than; In conjunction with a numerical value, indicates a concentration less than the RL or MDL |
| **NC** | Not calculated | | |

RESULTS SUMMARY REPORT

**SUMMARY REPORT**
**Client: HK Engineering & Geology, D.P.C.**
**Project: HK2661.2**
**Lab Case No.: E23-05066**

| Lab ID: | 05066-016 | | | 05066-017 | | | 05066-018 | | | 05066-019 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | TWP1 | | | TWP4 | | | TWP2 | | | TWP5 | | |
| Matrix: | Aqueous | | | Aqueous | | | Aqueous | | | Aqueous | | |
| Sampled Date | 11/16/23 | | | 11/16/23 | | | 11/16/23 | | | 11/16/23 | | |
| PARAMETER(Units) | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL |
| **Volatiles (Units)** | *(ug/L)* | | | *(ug/L)* | | | *(ug/L)* | | | *(ug/L)* | | |
| Dichlorodifluoromethane | ND | | 0.552 | 0.581 | J | 0.552 | ND | | 0.552 | ND | | 0.552 |
| Chloroform | 1.91 | | 0.285 | 2.11 | | 0.285 | ND | | 0.285 | ND | | 0.285 |
| Trichloroethene | ND | | 0.347 | ND | | 0.347 | 0.585 | | 0.347 | 0.364 | J | 0.347 |
| Tetrachloroethene | 0.585 | | 0.365 | ND | | 0.365 | 2.87 | | 0.365 | 4.82 | | 0.365 |
| **TOTAL VO's:** | 2.50 | | | 2.69 | J | | 3.46 | | | 5.18 | J | |
| **TOTAL TIC's:** | ND | | | ND | | | ND | | | ND | | |
| **TOTAL VO's & TIC's:** | 2.50 | | | 2.69 | J | | 3.46 | | | 5.18 | J | |
| **Semivolatiles - BNA (Units)** | *(ug/L)* | | | *(ug/L)* | | | *(ug/L)* | | | *(ug/L)* | | |
| Benzo[a]anthracene | 0.098 | J | 0.029 | 0.200 | | 0.029 | ND | | 0.029 | ND | | 0.029 |
| Benzo[b]fluoranthene | 0.187 | | 0.026 | 0.272 | | 0.026 | ND | | 0.026 | ND | | 0.026 |
| Benzo[k]fluoranthene | 0.142 | | 0.035 | 0.154 | | 0.035 | ND | | 0.035 | ND | | 0.035 |
| Benzo[a]pyrene | 0.137 | | 0.027 | 0.245 | | 0.027 | ND | | 0.027 | ND | | 0.027 |
| Indeno[1,2,3-cd]pyrene | 0.291 | | 0.036 | 0.330 | | 0.036 | ND | | 0.036 | ND | | 0.036 |
| Dibenz[a,h]anthracene | 0.303 | | 0.031 | 0.253 | | 0.031 | ND | | 0.031 | ND | | 0.031 |
| **TOTAL BNA'S:** | 1.16 | J | | 1.45 | | | ND | | | ND | | |
| **TOTAL TIC's:** | 44.4 | JN | | 16.2 | J | | ND | | | 29.3 | JN | |
| **TOTAL BNA'S & TIC's:** | 45.6 | JN | | 17.7 | J | | ND | | | 29.3 | JN | |
| **PCB's (Units)** | *(ug/L)* | | | *(ug/L)* | | | *(ug/L)* | | | *(ug/L)* | | |
| Aroclor-1016 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 |
| Aroclor-1221 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 |
| Aroclor-1232 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 |
| Aroclor-1242 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 |
| Aroclor-1248 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 |
| Aroclor-1254 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 |
| Aroclor-1260 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 |
| Aroclor-1262 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 |
| Aroclor-1268 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 |
| PCBs | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 |

ND = Analyzed for but Not Detected at the MDL
J = Indicates an estimated value either when the concentration in the sample is greater than MDL and less than RL, or for qualification of TICs
All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.
N = Presumptive evidence of a compound from the use of GC/MS library search.

**SUMMARY REPORT**
**Client: HK Engineering & Geology, D.P.C.**
**Project: HK2661.2**
**Lab Case No.: E23-05066**

| Lab ID: | 05066-016 | | | 05066-017 | | | 05066-018 | | | 05066-019 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | TWP1 | | | TWP4 | | | TWP2 | | | TWP5 | | |
| Matrix: | Aqueous | | | Aqueous | | | Aqueous | | | Aqueous | | |
| Sampled Date | 11/16/23 | | | 11/16/23 | | | 11/16/23 | | | 11/16/23 | | |
| **PARAMETER(Units)** | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL |
| **Pesticides (Units)** | *(ug/L)* | | | *(ug/L)* | | | *(ug/L)* | | | *(ug/L)* | | |
| alpha-BHC | ND | | 0.00206 | ND | | 0.00206 | ND | | 0.00206 | ND | | 0.00206 |
| beta-BHC | ND | | 0.00303 | ND | | 0.00303 | ND | | 0.00303 | ND | | 0.00303 |
| gamma-BHC (Lindane) | ND | | 0.00201 | ND | | 0.00201 | ND | | 0.00201 | ND | | 0.00201 |
| delta-BHC | ND | | 0.00238 | ND | | 0.00238 | ND | | 0.00238 | ND | | 0.00238 |
| Heptachlor | ND | | 0.00235 | ND | | 0.00235 | ND | | 0.00235 | ND | | 0.00235 |
| Aldrin | ND | | 0.00187 | ND | | 0.00187 | ND | | 0.00187 | ND | | 0.00187 |
| Heptachlor epoxide | ND | | 0.00217 | ND | | 0.00217 | ND | | 0.00217 | ND | | 0.00217 |
| Endosulfan I | ND | | 0.00208 | ND | | 0.00208 | ND | | 0.00208 | ND | | 0.00208 |
| 4,4'-DDE | ND | | 0.00197 | ND | | 0.00197 | ND | | 0.00197 | ND | | 0.00197 |
| Dieldrin | ND | | 0.00237 | ND | | 0.00237 | ND | | 0.00237 | ND | | 0.00237 |
| Endrin | ND | | 0.00289 | ND | | 0.00289 | ND | | 0.00289 | ND | | 0.00289 |
| Endosulfan II | ND | | 0.00258 | ND | | 0.00258 | ND | | 0.00258 | ND | | 0.00258 |
| 4,4'-DDD | ND | | 0.00294 | ND | | 0.00294 | ND | | 0.00294 | ND | | 0.00294 |
| Endrin aldehyde | ND | | 0.0023 | ND | | 0.0023 | ND | | 0.0023 | ND | | 0.0023 |
| Endosulfan sulfate | ND | | 0.00314 | ND | | 0.00314 | ND | | 0.00314 | ND | | 0.00314 |
| 4,4'-DDT | ND | | 0.00202 | ND | | 0.00202 | ND | | 0.00202 | ND | | 0.00202 |
| Endrin ketone | ND | | 0.00323 | ND | | 0.00323 | ND | | 0.00323 | ND | | 0.00323 |
| Methoxychlor | ND | | 0.00337 | ND | | 0.00337 | ND | | 0.00337 | ND | | 0.00337 |
| alpha-Chlordane | ND | | 0.00215 | ND | | 0.00215 | ND | | 0.00215 | ND | | 0.00215 |
| gamma-Chlordane | ND | | 0.00314 | ND | | 0.00314 | ND | | 0.00314 | ND | | 0.00314 |
| Toxaphene | ND | | 0.050 | ND | | 0.050 | ND | | 0.050 | ND | | 0.050 |
| Endosulfan (I and II) | ND | | 0.00208 | ND | | 0.00208 | ND | | 0.00208 | ND | | 0.00208 |
| Chlordane (alpha and gamma) | ND | | 0.00215 | ND | | 0.00215 | ND | | 0.00215 | ND | | 0.00215 |
| **General Analytical (Units)** | | | | | | | | | | | | |
| Cyanide, Total(ug/L) | ND | | 4.00 | ND | | 4.00 | ND | | 4.00 | ND | | 4.00 |

ND = Analyzed for but Not Detected at the MDL
+ Subcontracted data for TAL Metals (6020B/7471B) by SGS Dayton is available in the Subcontracted Reports section.

# SUMMARY REPORT
**Client: HK Engineering & Geology, D.P.C.**
**Project: HK2661.2**
**Lab Case No.: E23-05066**

| Lab ID: | 05066-001 | | | 05066-002 | | | 05066-003 | | | 05066-004 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | SB10A | | | SB10B | | | SB2A | | | SB2B | | |
| Depth: | 0/2 | | | 10/12 | | | 0/2 | | | 10/12 | | |
| Matrix: | Soil | | | Soil | | | Soil | | | Soil | | |
| Sampled Date | 11/16/23 | | | 11/16/23 | | | 11/16/23 | | | 11/16/23 | | |
| **PARAMETER(Units)** | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL |
| **Volatiles (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| **TOTAL VO's:** | ND | | | ND | | | ND | | | ND | | |
| **TOTAL TIC's:** | ND | | | ND | | | ND | | | ND | | |
| **TOTAL VO's & TIC's:** | ND | | | ND | | | ND | | | ND | | |
| **Semivolatiles - BNA (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| Naphthalene | 0.038 | J | 0.00559 | ND | | 0.00539 | 0.424 | D | 0.056 | ND | | 0.00509 |
| 2-Methylnaphthalene | ND | | 0.014 | ND | | 0.013 | 0.197 | DJ | 0.135 | ND | | 0.012 |
| Acenaphthylene | 1.04 | | 0.00839 | ND | | 0.00809 | 2.25 | D | 0.084 | ND | | 0.00764 |
| Acenaphthene | ND | | 0.00757 | ND | | 0.0073 | 0.788 | D | 0.076 | ND | | 0.00689 |
| Dibenzofuran | 0.079 | | 0.00501 | ND | | 0.00483 | 0.571 | D | 0.050 | ND | | 0.00456 |
| Fluorene | 0.117 | | 0.010 | ND | | 0.00995 | 0.933 | D | 0.104 | ND | | 0.0094 |
| Phenanthrene | 2.06 | | 0.00627 | ND | | 0.00605 | 14.8 | D | 0.063 | ND | | 0.00571 |
| Anthracene | 0.400 | | 0.0039 | ND | | 0.00376 | 3.27 | D | 0.039 | ND | | 0.00355 |
| Carbazole | 0.371 | | 0.00893 | ND | | 0.00862 | 1.23 | D | 0.090 | ND | | 0.00814 |
| Fluoranthene | 4.03 | | 0.012 | ND | | 0.012 | 24.8 | D | 0.124 | ND | | 0.011 |
| Pyrene | 3.16 | | 0.00892 | ND | | 0.0086 | 20.5 | D | 0.090 | ND | | 0.00812 |
| Benzo[a]anthracene | 1.76 | | 0.014 | ND | | 0.014 | 10.6 | D | 0.140 | ND | | 0.013 |
| Chrysene | 1.81 | | 0.011 | ND | | 0.010 | 9.92 | D | 0.106 | ND | | 0.00963 |
| Benzo[b]fluoranthene | 3.15 | | 0.019 | ND | | 0.018 | 9.82 | D | 0.190 | ND | | 0.017 |
| Benzo[k]fluoranthene | 1.63 | | 0.027 | ND | | 0.026 | 9.27 | D | 0.266 | ND | | 0.024 |
| Benzo[a]pyrene | 2.16 | | 0.019 | ND | | 0.018 | 9.82 | D | 0.186 | ND | | 0.017 |
| Indeno[1,2,3-cd]pyrene | 2.50 | | 0.025 | ND | | 0.024 | 4.97 | D | 0.246 | ND | | 0.022 |
| Dibenz[a,h]anthracene | 0.976 | | 0.015 | ND | | 0.015 | 2.34 | D | 0.154 | ND | | 0.014 |
| Benzo[g,h,i]perylene | 3.34 | | 0.029 | ND | | 0.028 | 5.20 | D | 0.290 | ND | | 0.026 |
| **TOTAL BNA'S:** | 28.6 | J | | ND | | | 132 | DJ | | ND | | |
| **TOTAL TIC's:** | 0.525 | J | | ND | | | 3.54 | DJN | | ND | | |
| **TOTAL BNA'S & TIC's:** | 29.1 | J | | ND | | | 136 | DJN | | ND | | |
| **PCB's (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| Aroclor-1016 | ND | | 0.0012 | ND | | 0.0011 | ND | | 0.0012 | ND | | 0.001 |
| Aroclor-1221 | ND | | 0.0012 | ND | | 0.0011 | ND | | 0.0012 | ND | | 0.001 |
| Aroclor-1232 | ND | | 0.0012 | ND | | 0.0011 | ND | | 0.0012 | ND | | 0.001 |
| Aroclor-1242 | ND | | 0.0012 | ND | | 0.0011 | ND | | 0.0012 | ND | | 0.001 |
| Aroclor-1248 | ND | | 0.0012 | ND | | 0.0011 | ND | | 0.0012 | ND | | 0.001 |
| Aroclor-1254 | ND | | 0.0012 | ND | | 0.0011 | ND | | 0.0012 | ND | | 0.001 |
| Aroclor-1260 | ND | | 0.0012 | ND | | 0.0011 | ND | | 0.0012 | ND | | 0.001 |
| Aroclor-1262 | ND | | 0.0012 | ND | | 0.0011 | ND | | 0.0012 | ND | | 0.001 |
| Aroclor-1268 | ND | | 0.0012 | ND | | 0.0011 | ND | | 0.0012 | ND | | 0.001 |
| PCBs | ND | | 0.00116 | ND | | 0.00111 | ND | | 0.00116 | ND | | 0.00104 |

ND = Analyzed for but Not Detected at the MDL
J = Indicates an estimated value either when the concentration in the sample is greater than MDL and less than RL, or for qualification of TICs
D = The compound was reported from the Diluted analysis
All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.
N = Presumptive evidence of a compound from the use of GC/MS library search.

**SUMMARY REPORT**
**Client: HK Engineering & Geology, D.P.C.**
**Project: HK2661.2**
**Lab Case No.: E23-05066**

| Lab ID: | 05066-001 | | | 05066-002 | | | 05066-003 | | | 05066-004 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | SB10A | | | SB10B | | | SB2A | | | SB2B | | |
| Depth: | 0/2 | | | 10/12 | | | 0/2 | | | 10/12 | | |
| Matrix: | Soil | | | Soil | | | Soil | | | Soil | | |
| Sampled Date | 11/16/23 | | | 11/16/23 | | | 11/16/23 | | | 11/16/23 | | |
| PARAMETER(Units) | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL |
| **Pesticides (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| alpha-BHC | ND | | 0.000138 | ND | | 0.000132 | ND | | 0.000138 | ND | | 0.000124 |
| beta-BHC | ND | | 0.00018 | ND | | 0.000173 | ND | | 0.00018 | ND | | 0.000162 |
| gamma-BHC (Lindane) | ND | | 0.000172 | ND | | 0.000165 | ND | | 0.000172 | ND | | 0.000155 |
| delta-BHC | ND | | 0.000149 | ND | | 0.000144 | ND | | 0.00015 | ND | | 0.000135 |
| Heptachlor | 0.000768 | J | 0.000183 | ND | | 0.000176 | 0.00288 | | 0.000183 | ND | | 0.000165 |
| Aldrin | ND | | 0.000161 | ND | | 0.000155 | ND | | 0.000162 | ND | | 0.000145 |
| Heptachlor epoxide | 0.00293 | | 0.000167 | ND | | 0.000161 | 0.00404 | | 0.000168 | ND | | 0.000151 |
| Endosulfan I | ND | | 0.000172 | ND | | 0.000166 | ND | | 0.000173 | ND | | 0.000156 |
| 4,4'-DDE | 0.055 | | 0.000157 | 0.000414 | J | 0.000151 | 0.024 | | 0.000158 | ND | | 0.000142 |
| Dieldrin | 0.012 | | 0.000157 | ND | | 0.000151 | ND | | 0.000157 | ND | | 0.000142 |
| Endrin | ND | | 0.000194 | ND | | 0.000187 | ND | | 0.000195 | ND | | 0.000175 |
| Endosulfan II | ND | | 0.000177 | ND | | 0.00017 | ND | | 0.000177 | ND | | 0.000159 |
| 4,4'-DDD | 0.024 | | 0.000206 | ND | | 0.000198 | 0.012 | | 0.000206 | ND | | 0.000185 |
| Endrin aldehyde | ND | | 0.000161 | ND | | 0.000155 | ND | | 0.000162 | ND | | 0.000146 |
| Endosulfan sulfate | ND | | 0.000191 | ND | | 0.000184 | ND | | 0.000191 | ND | | 0.000172 |
| 4,4'-DDT | 0.179 | D | 0.000287 | 0.000402 | J | 0.000138 | 0.097 | | 0.000144 | 0.000265 | J | 0.000129 |
| Endrin ketone | ND | | 0.00015 | ND | | 0.000144 | ND | | 0.00015 | ND | | 0.000135 |
| Methoxychlor | ND | | 0.000206 | ND | | 0.000198 | ND | | 0.000206 | ND | | 0.000186 |
| alpha-Chlordane | 0.027 | | 0.00017 | ND | | 0.000164 | 0.016 | | 0.00017 | ND | | 0.000153 |
| gamma-Chlordane | 0.020 | | 0.000152 | ND | | 0.000146 | 0.019 | | 0.000152 | ND | | 0.000137 |
| Toxaphene | ND | | 0.00386 | ND | | 0.00371 | ND | | 0.00386 | ND | | 0.00348 |
| Endosulfan (I and II) | ND | | 0.000172 | ND | | 0.000166 | ND | | 0.000173 | ND | | 0.000156 |
| Chlordane (alpha and gamma) | 0.046 | | 0.000152 | ND | | 0.000146 | 0.034 | | 0.000152 | ND | | 0.000137 |
| **General Analytical (Units)** | | | | | | | | | | | | |
| Cyanide, Total(mg/Kg) | ND | | 0.231 | ND | | 0.223 | ND | | 0.232 | ND | | 0.209 |

ND = Analyzed for but Not Detected at the MDL
J = Indicates an estimated value either when the concentration in the sample is greater than MDL and less than RL, or for qualification of TICs
D = The compound was reported from the Diluted analysis
+ Subcontracted data for TAL Metals (6020B/7471B) by SGS Dayton is available in the Subcontracted Reports section.

**SUMMARY REPORT**
**Client: HK Engineering & Geology, D.P.C.**
**Project: HK2661.2**
**Lab Case No.: E23-05066**

| Lab ID: | 05066-005 | | | 05066-006 | | | 05066-007 | | | 05066-008 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | SB5 | | | SB3A | | | SB3B | | | SB9A | | |
| Depth: | 0/2 | | | 0/2 | | | 10/12 | | | 0/2 | | |
| Matrix: | Soil | | | Soil | | | Soil | | | Soil | | |
| Sampled Date | 11/16/23 | | | 11/16/23 | | | 11/16/23 | | | 11/17/23 | | |
| PARAMETER(Units) | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL |
| **Volatiles (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| **TOTAL VO's:** | ND | | | ND | | | ND | | | ND | | |
| **TOTAL TIC's:** | ND | | | ND | | | ND | | | ND | | |
| **TOTAL VO's & TIC's:** | ND | | | ND | | | ND | | | ND | | |
| **Semivolatiles - BNA (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| Naphthalene | ND | | 0.00548 | 0.028 | J | 0.00541 | ND | | 0.00512 | 0.554 | D | 0.026 |
| 2-Methylnaphthalene | ND | | 0.013 | ND | | 0.013 | ND | | 0.012 | 0.177 | DJ | 0.064 |
| Acenaphthylene | ND | | 0.00823 | 0.098 | | 0.00812 | ND | | 0.00769 | 2.11 | D | 0.040 |
| Acenaphthene | ND | | 0.00742 | 0.053 | | 0.00732 | ND | | 0.00693 | 0.634 | D | 0.036 |
| Dibenzofuran | ND | | 0.00492 | 0.043 | | 0.00485 | ND | | 0.00459 | 0.400 | D | 0.024 |
| Fluorene | ND | | 0.010 | 0.052 | | 0.00998 | ND | | 0.00945 | 0.626 | D | 0.049 |
| Phenanthrene | 0.188 | | 0.00615 | 1.09 | | 0.00607 | ND | | 0.00574 | 7.99 | D | 0.030 |
| Anthracene | 0.054 | | 0.00383 | 0.201 | | 0.00377 | ND | | 0.00357 | 2.32 | D | 0.018 |
| Carbazole | 0.020 | J | 0.00876 | 0.122 | | 0.00864 | ND | | 0.00818 | 1.15 | D | 0.042 |
| Fluoranthene | 0.379 | | 0.012 | 1.77 | | 0.012 | ND | | 0.011 | 13.1 | D | 0.058 |
| Pyrene | 0.316 | | 0.00874 | 1.46 | | 0.00863 | ND | | 0.00817 | 10.9 | D | 0.042 |
| Benzo[a]anthracene | 0.177 | | 0.014 | 0.693 | | 0.014 | ND | | 0.013 | 6.22 | D | 0.066 |
| Chrysene | 0.163 | | 0.010 | 0.674 | | 0.010 | ND | | 0.00969 | 6.14 | D | 0.050 |
| Bis(2-ethylhexyl) phthalate | 0.073 | | 0.024 | ND | | 0.024 | ND | | 0.023 | ND | | 0.116 |
| Benzo[b]fluoranthene | 0.190 | | 0.019 | 0.616 | | 0.018 | ND | | 0.017 | 6.83 | D | 0.089 |
| Benzo[k]fluoranthene | 0.134 | | 0.026 | 0.656 | | 0.026 | ND | | 0.024 | 6.50 | D | 0.125 |
| Benzo[a]pyrene | 0.168 | | 0.018 | 0.672 | | 0.018 | ND | | 0.017 | 6.90 | D | 0.088 |
| Indeno[1,2,3-cd]pyrene | 0.116 | | 0.024 | 0.467 | | 0.024 | ND | | 0.023 | 4.35 | D | 0.116 |
| Dibenz[a,h]anthracene | 0.057 | | 0.015 | 0.210 | | 0.015 | ND | | 0.014 | 2.10 | D | 0.072 |
| Benzo[g,h,i]perylene | 0.118 | | 0.028 | 0.514 | | 0.028 | ND | | 0.027 | 5.61 | D | 0.136 |
| **TOTAL BNA'S:** | 2.15 | J | | 9.42 | J | | ND | | | 84.6 | DJ | |
| **TOTAL TIC's:** | 0.180 | JN | | 0.189 | J | | 0.204 | JN | | ND | | |
| **TOTAL BNA'S & TIC's:** | 2.33 | JN | | 9.61 | J | | 0.204 | JN | | 84.6 | DJ | |
| **PCB's (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| Aroclor-1016 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1221 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1232 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1242 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1248 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1254 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1260 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1262 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1268 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| PCBs | ND | | 0.00113 | ND | | 0.00111 | ND | | 0.00106 | ND | | 0.00108 |

ND = Analyzed for but Not Detected at the MDL
J = Indicates an estimated value either when the concentration in the sample is greater than MDL and less than RL, or for qualification of TICs
D = The compound was reported from the Diluted analysis
All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.
N = Presumptive evidence of a compound from the use of GC/MS library search.

**SUMMARY REPORT**
**Client: HK Engineering & Geology, D.P.C.**
**Project: HK2661.2**
**Lab Case No.: E23-05066**

| Lab ID: | 05066-005 | | | 05066-006 | | | 05066-007 | | | 05066-008 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | SB5 | | | SB3A | | | SB3B | | | SB9A | | |
| Depth: | 0/2 | | | 0/2 | | | 10/12 | | | 0/2 | | |
| Matrix: | Soil | | | Soil | | | Soil | | | Soil | | |
| Sampled Date | 11/16/23 | | | 11/16/23 | | | 11/16/23 | | | 11/17/23 | | |
| PARAMETER(Units) | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL |
| **Pesticides (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| alpha-BHC | ND | | 0.000134 | ND | | 0.000132 | ND | | 0.000126 | ND | | 0.000129 |
| beta-BHC | ND | | 0.000175 | ND | | 0.000172 | ND | | 0.000165 | ND | | 0.000168 |
| gamma-BHC (Lindane) | ND | | 0.000167 | ND | | 0.000165 | ND | | 0.000157 | ND | | 0.000161 |
| delta-BHC | ND | | 0.000145 | ND | | 0.000143 | ND | | 0.000137 | ND | | 0.00014 |
| Heptachlor | ND | | 0.000178 | ND | | 0.000175 | ND | | 0.000168 | ND | | 0.000171 |
| Aldrin | ND | | 0.000157 | ND | | 0.000154 | ND | | 0.000148 | ND | | 0.000151 |
| Heptachlor epoxide | 0.00122 | | 0.000163 | ND | | 0.00016 | ND | | 0.000153 | ND | | 0.000156 |
| Endosulfan I | ND | | 0.000168 | ND | | 0.000165 | ND | | 0.000158 | ND | | 0.000161 |
| 4,4'-DDE | 0.070 | | 0.000153 | 0.024 | | 0.000151 | ND | | 0.000144 | ND | | 0.000147 |
| Dieldrin | 0.00603 | | 0.000153 | ND | | 0.00015 | ND | | 0.000144 | ND | | 0.000147 |
| Endrin | ND | | 0.000189 | ND | | 0.000186 | ND | | 0.000178 | ND | | 0.000182 |
| Endosulfan II | ND | | 0.000172 | ND | | 0.000169 | ND | | 0.000162 | ND | | 0.000165 |
| 4,4'-DDD | 0.00798 | | 0.0002 | 0.00289 | | 0.000197 | ND | | 0.000188 | ND | | 0.000192 |
| Endrin aldehyde | ND | | 0.000157 | ND | | 0.000154 | ND | | 0.000148 | ND | | 0.000151 |
| Endosulfan sulfate | ND | | 0.000186 | ND | | 0.000183 | ND | | 0.000175 | ND | | 0.000178 |
| 4,4'-DDT | 0.087 | | 0.00014 | 0.050 | | 0.000137 | ND | | 0.000131 | ND | | 0.000134 |
| Endrin ketone | ND | | 0.000146 | ND | | 0.000144 | ND | | 0.000138 | ND | | 0.00014 |
| Methoxychlor | ND | | 0.000201 | ND | | 0.000197 | ND | | 0.000189 | ND | | 0.000193 |
| alpha-Chlordane | 0.00385 | | 0.000166 | 0.023 | | 0.000163 | ND | | 0.000156 | ND | | 0.000159 |
| gamma-Chlordane | 0.00198 | | 0.000147 | 0.022 | | 0.000145 | ND | | 0.000139 | ND | | 0.000142 |
| Toxaphene | ND | | 0.00375 | ND | | 0.00369 | ND | | 0.00353 | ND | | 0.0036 |
| Endosulfan (I and II) | ND | | 0.000168 | ND | | 0.000165 | ND | | 0.000158 | ND | | 0.000161 |
| Chlordane (alpha and gamma) | 0.00583 | | 0.000147 | 0.044 | | 0.000145 | ND | | 0.000139 | ND | | 0.000142 |
| **General Analytical (Units)** | | | | | | | | | | | | |
| Cyanide, Total(mg/Kg) | ND | | 0.225 | ND | | 0.222 | ND | | 0.208 | ND | | 0.217 |

ND = Analyzed for but Not Detected at the MDL
+ Subcontracted data for TAL Metals (6020B/7471B) by SGS Dayton is available in the Subcontracted Reports section.

SUMMARY REPORT
Client: HK Engineering & Geology, D.P.C.
Project: HK2661.2
Lab Case No.: E23-05066

| Lab ID: | 05066-009 | | | 05066-010 | | | 05066-011 | | | 05066-012 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | SB9B | | | SB1A | | | SB1B | | | SB4A | | |
| Depth: | 10/12 | | | 0/2 | | | 10/12 | | | 0/2 | | |
| Matrix: | Soil | | | Soil | | | Soil | | | Soil | | |
| Sampled Date | 11/17/23 | | | 11/17/23 | | | 11/17/23 | | | 11/17/23 | | |
| PARAMETER(Units) | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL |
| **Volatiles (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| Methylene chloride | ND | | 0.00411 | 0.0041 | CJ | 0.00378 | ND | | 0.00414 | ND | | 0.00417 |
| **TOTAL VO's:** | ND | | | 0.0041 | CJ | | ND | | | ND | | |
| **TOTAL TIC's:** | ND | | | ND | | | ND | | | ND | | |
| **TOTAL VO's & TIC's:** | ND | | | 0.0041 | CJ | | ND | | | ND | | |
| **Semivolatiles - BNA (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| Benzaldehyde | ND | | 0.026 | ND | | 0.028 | 0.135 | | 0.028 | ND | | 0.028 |
| Naphthalene | ND | | 0.00507 | 0.029 | J | 0.00535 | 0.026 | J | 0.00538 | 0.108 | | 0.00534 |
| 2-Methylnaphthalene | ND | | 0.012 | ND | | 0.013 | 0.023 | J | 0.013 | 0.051 | | 0.013 |
| Acenaphthylene | ND | | 0.00761 | 0.184 | | 0.00803 | 0.168 | | 0.00807 | 0.117 | | 0.00801 |
| Acenaphthene | ND | | 0.00686 | 0.095 | | 0.00724 | 0.081 | | 0.00728 | 0.339 | | 0.00723 |
| Dibenzofuran | ND | | 0.00455 | ND | | 0.0048 | 0.019 | J | 0.00482 | 0.168 | | 0.00479 |
| Fluorene | ND | | 0.00935 | 0.066 | | 0.00987 | 0.069 | | 0.00993 | 0.284 | | 0.00985 |
| Phenanthrene | ND | | 0.00569 | 1.08 | | 0.006 | 1.61 | | 0.00603 | 2.74 | | 0.00599 |
| Anthracene | ND | | 0.00354 | 0.360 | | 0.00373 | 0.341 | | 0.00375 | 0.738 | | 0.00372 |
| Carbazole | ND | | 0.0081 | 0.125 | | 0.00855 | 0.055 | | 0.00859 | 0.343 | | 0.00853 |
| Fluoranthene | ND | | 0.011 | 2.98 | | 0.012 | 2.26 | | 0.012 | 4.20 | | 0.012 |
| Pyrene | ND | | 0.00809 | 2.72 | | 0.00853 | 3.42 | | 0.00858 | 3.42 | | 0.00851 |
| Benzo[a]anthracene | ND | | 0.013 | 1.65 | | 0.013 | 1.72 | | 0.013 | 1.81 | | 0.013 |
| Chrysene | ND | | 0.00959 | 1.57 | | 0.010 | 1.64 | | 0.010 | 1.64 | | 0.010 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.022 | ND | | 0.024 | ND | | 0.024 | 0.068 | | 0.024 |
| Benzo[b]fluoranthene | ND | | 0.017 | 2.23 | | 0.018 | 1.07 | | 0.018 | 1.76 | | 0.018 |
| Benzo[k]fluoranthene | ND | | 0.024 | 1.21 | | 0.025 | 0.917 | | 0.026 | 1.47 | | 0.025 |
| Benzo[a]pyrene | ND | | 0.017 | 1.84 | | 0.018 | 1.35 | | 0.018 | 1.72 | | 0.018 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.022 | 1.28 | | 0.024 | 0.677 | | 0.024 | 1.14 | | 0.023 |
| Dibenz[a,h]anthracene | ND | | 0.014 | 0.624 | | 0.015 | 0.420 | | 0.015 | 0.601 | | 0.015 |
| Benzo[g,h,i]perylene | ND | | 0.026 | 1.32 | | 0.028 | 0.863 | | 0.028 | 1.15 | | 0.028 |
| **TOTAL BNA'S:** | ND | | | 19.4 | J | | 16.9 | J | | 23.9 | | |
| **TOTAL TIC's:** | ND | | | 0.568 | JN | | 2.76 | JN | | 0.220 | JN | |
| **TOTAL BNA'S & TIC's:** | ND | | | 20.0 | JN | | 19.7 | JN | | 24.1 | JN | |
| **PCB's (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| Aroclor-1016 | ND | | 0.001 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1221 | ND | | 0.001 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1232 | ND | | 0.001 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1242 | ND | | 0.001 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1248 | ND | | 0.001 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1254 | ND | | 0.001 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1260 | ND | | 0.001 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1262 | ND | | 0.001 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1268 | ND | | 0.001 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| PCBs | ND | | 0.00105 | ND | | 0.0011 | ND | | 0.00111 | ND | | 0.0011 |

ND = Analyzed for but Not Detected at the MDL
J = Indicates an estimated value either when the concentration in the sample is greater than MDL and less than RL, or for qualification of TICs
All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.
C = Common Laboratory and/or Bottle Contaminant.
N = Presumptive evidence of a compound from the use of GC/MS library search.

**SUMMARY REPORT**
**Client: HK Engineering & Geology, D.P.C.**
**Project: HK2661.2**
**Lab Case No.: E23-05066**

| Lab ID: | 05066-009 | | | 05066-010 | | | 05066-011 | | | 05066-012 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | SB9B | | | SB1A | | | SB1B | | | SB4A | | |
| Depth: | 10/12 | | | 0/2 | | | 10/12 | | | 0/2 | | |
| Matrix: | Soil | | | Soil | | | Soil | | | Soil | | |
| Sampled Date | 11/17/23 | | | 11/17/23 | | | 11/17/23 | | | 11/17/23 | | |
| PARAMETER(Units) | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL |
| **Pesticides (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| alpha-BHC | ND | | 0.000125 | ND | | 0.00013 | ND | | 0.000132 | ND | | 0.00013 |
| beta-BHC | ND | | 0.000163 | ND | | 0.00017 | ND | | 0.000173 | ND | | 0.00017 |
| gamma-BHC (Lindane) | ND | | 0.000155 | ND | | 0.000163 | ND | | 0.000165 | ND | | 0.000163 |
| delta-BHC | ND | | 0.000135 | ND | | 0.000141 | ND | | 0.000143 | ND | | 0.000141 |
| Heptachlor | ND | | 0.000165 | ND | | 0.000173 | ND | | 0.000176 | ND | | 0.000173 |
| Aldrin | ND | | 0.000146 | ND | | 0.000153 | ND | | 0.000155 | ND | | 0.000153 |
| Heptachlor epoxide | ND | | 0.000151 | 0.00119 | | 0.000158 | 0.000932 | | 0.000161 | ND | | 0.000158 |
| Endosulfan I | ND | | 0.000156 | ND | | 0.000163 | ND | | 0.000165 | ND | | 0.000163 |
| 4,4'-DDE | ND | | 0.000142 | 0.011 | | 0.000149 | 0.00656 | | 0.000151 | 0.052 | | 0.000149 |
| Dieldrin | ND | | 0.000142 | ND | | 0.000149 | ND | | 0.000151 | 0.00707 | | 0.000149 |
| Endrin | ND | | 0.000176 | ND | | 0.000184 | ND | | 0.000187 | ND | | 0.000184 |
| Endosulfan II | ND | | 0.00016 | ND | | 0.000167 | ND | | 0.00017 | ND | | 0.000167 |
| 4,4'-DDD | ND | | 0.000186 | 0.00722 | | 0.000195 | ND | | 0.000197 | ND | | 0.000195 |
| Endrin aldehyde | ND | | 0.000146 | ND | | 0.000153 | ND | | 0.000155 | ND | | 0.000153 |
| Endosulfan sulfate | ND | | 0.000173 | ND | | 0.000181 | ND | | 0.000183 | ND | | 0.000181 |
| 4,4'-DDT | ND | | 0.00013 | 0.019 | | 0.000136 | 0.025 | | 0.000138 | 0.085 | | 0.000136 |
| Endrin ketone | ND | | 0.000136 | ND | | 0.000142 | ND | | 0.000144 | ND | | 0.000142 |
| Methoxychlor | ND | | 0.000186 | ND | | 0.000195 | ND | | 0.000198 | ND | | 0.000195 |
| alpha-Chlordane | ND | | 0.000154 | 0.00473 | | 0.000161 | 0.00266 | | 0.000163 | 0.00577 | | 0.000161 |
| gamma-Chlordane | ND | | 0.000137 | 0.00584 | | 0.000143 | 0.00281 | | 0.000145 | 0.00815 | | 0.000143 |
| Toxaphene | ND | | 0.00349 | ND | | 0.00365 | ND | | 0.0037 | ND | | 0.00365 |
| Endosulfan (I and II) | ND | | 0.000156 | ND | | 0.000163 | ND | | 0.000165 | ND | | 0.000163 |
| Chlordane (alpha and gamma) | ND | | 0.000137 | 0.011 | | 0.000143 | 0.00547 | | 0.000145 | 0.014 | | 0.000143 |
| **General Analytical (Units)** | | | | | | | | | | | | |
| Cyanide, Total(mg/Kg) | ND | | 0.210 | ND | | 0.220 | ND | | 0.223 | ND | | 0.220 |

ND = Analyzed for but Not Detected at the MDL
+ Subcontracted data for TAL Metals (6020B/7471B) by SGS Dayton is available in the Subcontracted Reports section.

**SUMMARY REPORT**
**Client: HK Engineering & Geology, D.P.C.**
**Project: HK2661.2**
**Lab Case No.: E23-05066**

| Lab ID: | 05066-013 | | | 05066-014 | | | 05066-015 | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: | SB4B | | | SB6-419-CS | | | SB8-401-CS | | |
| Depth: | 10/12 | | | 0/0.5 | | | 0/0.5 | | |
| Matrix: | Soil | | | Soil | | | Soil | | |
| Sampled Date | 11/17/23 | | | 11/17/23 | | | 11/17/23 | | |
| **PARAMETER(Units)** | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL |
| **Volatiles (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| Methylene chloride | 0.00464 | CJ | 0.00438 | 0.00487 | CJ | 0.00408 | 0.00449 | CJ | 0.00423 |
| **TOTAL VO's:** | 0.00464 | CJ | | 0.00487 | CJ | | 0.00449 | CJ | |
| **TOTAL TIC's:** | ND | | | ND | | | 0.030 | JN | |
| **TOTAL VO's & TIC's:** | 0.00464 | CJ | | 0.00487 | CJ | | 0.035 | CJN | |
| **Semivolatiles - BNA (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| Naphthalene | 0.037 | | 0.00513 | 0.019 | J | 0.00524 | 0.288 | D | 0.026 |
| 2-Methylnaphthalene | ND | | 0.012 | ND | | 0.013 | 0.245 | D | 0.062 |
| 1,1'-Biphenyl | ND | | 0.00523 | ND | | 0.00534 | 0.112 | DJ | 0.026 |
| Acenaphthylene | 0.190 | | 0.0077 | 0.133 | | 0.00786 | 1.83 | D | 0.039 |
| Acenaphthene | 0.125 | | 0.00694 | 0.024 | J | 0.00709 | 0.284 | D | 0.035 |
| Dibenzofuran | 0.053 | | 0.0046 | ND | | 0.0047 | 0.857 | D | 0.023 |
| Fluorene | 0.099 | | 0.00947 | 0.034 | J | 0.00967 | 1.01 | D | 0.048 |
| Phenanthrene | 1.10 | | 0.00575 | 0.494 | | 0.00587 | 12.0 | D | 0.029 |
| Anthracene | 0.360 | | 0.00358 | 0.115 | | 0.00366 | 2.02 | D | 0.018 |
| Carbazole | 0.154 | | 0.0082 | 0.081 | | 0.00837 | 1.28 | D | 0.041 |
| Fluoranthene | 2.50 | | 0.011 | 0.953 | | 0.012 | 13.6 | D | 0.057 |
| Pyrene | 2.28 | | 0.00818 | 0.835 | | 0.00836 | 9.96 | D | 0.041 |
| Benzo[a]anthracene | 1.35 | | 0.013 | 0.460 | | 0.013 | 4.85 | D | 0.064 |
| Chrysene | 1.29 | | 0.0097 | 0.429 | | 0.00991 | 4.67 | D | 0.049 |
| Bis(2-ethylhexyl) phthalate | 0.040 | | 0.023 | 0.422 | | 0.023 | 0.573 | D | 0.113 |
| Benzo[b]fluoranthene | 1.45 | | 0.017 | 0.534 | | 0.018 | 4.04 | D | 0.087 |
| Benzo[k]fluoranthene | 1.25 | | 0.024 | 0.356 | | 0.025 | 4.29 | D | 0.122 |
| Benzo[a]pyrene | 1.44 | | 0.017 | 0.457 | | 0.017 | 3.93 | D | 0.086 |
| Indeno[1,2,3-cd]pyrene | 0.922 | | 0.023 | 0.353 | | 0.023 | 1.78 | D | 0.113 |
| Dibenz[a,h]anthracene | 0.435 | | 0.014 | 0.168 | | 0.014 | 0.799 | D | 0.071 |
| Benzo[g,h,i]perylene | 0.887 | | 0.027 | 0.378 | | 0.027 | 1.50 | D | 0.133 |
| **TOTAL BNA'S:** | 16.0 | | | 6.25 | J | | 69.9 | DJ | |
| **TOTAL TIC's:** | ND | | | 0.147 | JN | | ND | | |
| **TOTAL BNA'S & TIC's:** | 16.0 | | | 6.40 | JN | | 69.9 | DJ | |
| **PCB's (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| Aroclor-1016 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1221 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1232 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1242 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1248 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1254 | ND | | 0.0011 | 1.95 | D | 0.011 | ND | | 0.0011 |
| Aroclor-1260 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1262 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1268 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| PCBs | ND | | 0.00105 | 1.95 | D | 0.011 | ND | | 0.00106 |

ND = Analyzed for but Not Detected at the MDL

J = Indicates an estimated value either when the concentration in the sample is greater than MDL and less than RL, or for qualification of TICs

D = The compound was reported from the Diluted analysis

All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.

C = Common Laboratory and/or Bottle Contaminant.

N = Presumptive evidence of a compound from the use of GC/MS library search.

**SUMMARY REPORT**
**Client: HK Engineering & Geology, D.P.C.**
**Project: HK2661.2**
**Lab Case No.: E23-05066**

| Lab ID: | 05066-013 | | | 05066-014 | | | 05066-015 | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: | SB4B | | | SB6-419-CS | | | SB8-401-CS | | |
| Depth: | 10/12 | | | 0/0.5 | | | 0/0.5 | | |
| Matrix: | Soil | | | Soil | | | Soil | | |
| Sampled Date | 11/17/23 | | | 11/17/23 | | | 11/17/23 | | |
| **PARAMETER(Units)** | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL |
| **Pesticides (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| alpha-BHC | ND | | 0.000125 | ND | | 0.000129 | ND | | 0.000126 |
| beta-BHC | ND | | 0.000164 | ND | | 0.000168 | ND | | 0.000165 |
| gamma-BHC (Lindane) | ND | | 0.000157 | ND | | 0.000161 | ND | | 0.000158 |
| delta-BHC | ND | | 0.000136 | ND | | 0.00014 | ND | | 0.000137 |
| Heptachlor | ND | | 0.000167 | ND | | 0.000171 | ND | | 0.000168 |
| Aldrin | ND | | 0.000147 | ND | | 0.000151 | ND | | 0.000148 |
| Heptachlor epoxide | ND | | 0.000152 | ND | | 0.000157 | ND | | 0.000154 |
| Endosulfan I | ND | | 0.000157 | ND | | 0.000161 | ND | | 0.000158 |
| 4,4'-DDE | 0.013 | | 0.000143 | 0.555 | D | 0.00294 | 1.34 | D | 0.00722 |
| Dieldrin | 0.00196 | | 0.000143 | ND | | 0.000147 | ND | | 0.000144 |
| Endrin | ND | | 0.000177 | ND | | 0.000182 | ND | | 0.000179 |
| Endosulfan II | ND | | 0.000161 | ND | | 0.000165 | ND | | 0.000162 |
| 4,4'-DDD | ND | | 0.000187 | 0.099 | | 0.000192 | 0.079 | | 0.000189 |
| Endrin aldehyde | ND | | 0.000147 | ND | | 0.000151 | ND | | 0.000148 |
| Endosulfan sulfate | ND | | 0.000174 | ND | | 0.000179 | ND | | 0.000175 |
| 4,4'-DDT | 0.026 | | 0.000131 | 0.529 | D | 0.00268 | 1.58 | D | 0.00658 |
| Endrin ketone | ND | | 0.000137 | ND | | 0.00014 | ND | | 0.000138 |
| Methoxychlor | ND | | 0.000188 | ND | | 0.000193 | ND | | 0.000189 |
| alpha-Chlordane | 0.00185 | | 0.000155 | ND | | 0.000159 | ND | | 0.000156 |
| gamma-Chlordane | 0.00203 | | 0.000138 | ND | | 0.000142 | ND | | 0.000139 |
| Toxaphene | ND | | 0.00351 | ND | | 0.00361 | ND | | 0.00354 |
| Endosulfan (I and II) | ND | | 0.000157 | ND | | 0.000161 | ND | | 0.000158 |
| Chlordane (alpha and gamma) | 0.00388 | | 0.000138 | ND | | 0.000142 | ND | | 0.000139 |
| **General Analytical (Units)** | | | | | | | | | |
| Cyanide, Total(mg/Kg) | ND | | 0.211 | ND | | 0.213 | ND | | 0.213 |

ND = Analyzed for but Not Detected at the MDL
D = The compound was reported from the Diluted analysis
+ Subcontracted data for TAL Metals (6020B/7471B) by SGS Dayton is available in the Subcontracted Reports section.

ANALYTICAL RESULTS

## VOLATILE ORGANICS

Lab ID: E23-05066-001
Client ID: SB10A/0-2
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7709.D 11/21/2023 11:49

GC/MS Column: DB-624
Sample wt/vol: 3.96g
Matrix-Units: Soil-mg/Kg
% Moisture: 13.6
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00146 | 0.000758 |
| Chloromethane | ND | | 0.00292 | 0.000463 |
| Vinyl chloride | ND | | 0.00146 | 0.000473 |
| Bromomethane | ND | | 0.00292 | 0.00127 |
| Chloroethane | ND | | 0.00146 | 0.000434 |
| Trichlorofluoromethane | ND | | 0.00146 | 0.000593 |
| 1,1-Dichloroethene | ND | | 0.00146 | 0.000511 |
| Acetone | ND | | 0.015 | 0.0073 |
| Carbon disulfide | ND | | 0.00146 | 0.000574 |
| Methylene chloride | ND | | 0.0073 | 0.00438 |
| trans-1,2-Dichloroethene | ND | | 0.00292 | 0.000517 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00146 | 0.000318 |
| 1,1-Dichloroethane | ND | | 0.00292 | 0.000372 |
| cis-1,2-Dichloroethene | ND | | 0.00292 | 0.000312 |
| 2-Butanone (MEK) | ND | | 0.015 | 0.00292 |
| Bromochloromethane | ND | | 0.00146 | 0.000371 |
| Chloroform | ND | | 0.00292 | 0.00073 |
| 1,1,1-Trichloroethane | ND | | 0.00146 | 0.000448 |
| Carbon tetrachloride | ND | | 0.00146 | 0.000292 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00146 | 0.000337 |
| Benzene | ND | | 0.00146 | 0.000126 |
| Trichloroethene | ND | | 0.00146 | 0.000218 |
| 1,2-Dichloropropane | ND | | 0.00146 | 0.000146 |
| Bromodichloromethane | ND | | 0.00146 | 0.000174 |
| cis-1,3-Dichloropropene | ND | | 0.00146 | 0.000223 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.015 | 0.000764 |

## VOLATILE ORGANICS

Lab ID: E23-05066-001
Client ID: SB10A/0-2
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7709.D 11/21/2023 11:49

GC/MS Column: DB-624
Sample wt/vol: 3.96g
Matrix-Units: Soil-mg/Kg
% Moisture: 13.6
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00146 | 0.00073 |
| trans-1,3-Dichloropropene | ND | | 0.00146 | 0.000162 |
| 1,1,2-Trichloroethane | ND | | 0.00146 | 0.000312 |
| Tetrachloroethene | ND | | 0.00146 | 0.00015 |
| 2-Hexanone | ND | | 0.015 | 0.00224 |
| Dibromochloromethane | ND | | 0.00146 | 0.000242 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00146 | 0.00027 |
| Chlorobenzene | ND | | 0.00146 | 0.000253 |
| Ethylbenzene | ND | | 0.00146 | 0.000159 |
| Total Xylenes | ND | | 0.00292 | 0.000204 |
| Styrene | ND | | 0.00146 | 0.000314 |
| Bromoform | ND | | 0.00146 | 0.000454 |
| Isopropylbenzene | ND | | 0.00146 | 0.000311 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00146 | 0.000764 |
| 1,3-Dichlorobenzene | ND | | 0.00146 | 0.000387 |
| 1,4-Dichlorobenzene | ND | | 0.00146 | 0.000453 |
| 1,2-Dichlorobenzene | ND | | 0.00146 | 0.000366 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00146 | 0.0012 |
| 1,2,4-Trichlorobenzene | ND | | 0.00146 | 0.000613 |
| 1,2,3-Trichlorobenzene | ND | | 0.00292 | 0.000464 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.00292 | 0.000872 |
| Methyl acetate | ND | | 0.00146 | 0.00118 |
| Cyclohexane | ND | | 0.0073 | 0.000263 |
| Methylcyclohexane | ND | | 0.00292 | 0.000251 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00146 | 0.000162 |

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
## Tentatively Identified Compounds

Lab ID: E23-05066-001
Client ID: SB10A/0-2
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Date File: L7709.D

GC/MS Column: DB-624
Sample wt/vol: 3.96g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 13.6

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|

No peaks detected

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05066-002
Client ID: SB10B/10-12
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7710.D 11/21/2023 12:17

GC/MS Column: DB-624
Sample wt/vol: 5.16g
Matrix-Units: Soil-mg/Kg
% Moisture: 10.4
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00108 | 0.000561 |
| Chloromethane | ND | | 0.00216 | 0.000342 |
| Vinyl chloride | ND | | 0.00108 | 0.00035 |
| Bromomethane | ND | | 0.00216 | 0.000942 |
| Chloroethane | ND | | 0.00108 | 0.000321 |
| Trichlorofluoromethane | ND | | 0.00108 | 0.000438 |
| 1,1-Dichloroethene | ND | | 0.00108 | 0.000378 |
| Acetone | ND | | 0.011 | 0.0054 |
| Carbon disulfide | ND | | 0.00108 | 0.000424 |
| Methylene chloride | ND | | 0.0054 | 0.00324 |
| trans-1,2-Dichloroethene | ND | | 0.00216 | 0.000382 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00108 | 0.000235 |
| 1,1-Dichloroethane | ND | | 0.00216 | 0.000275 |
| cis-1,2-Dichloroethene | ND | | 0.00216 | 0.000231 |
| 2-Butanone (MEK) | ND | | 0.011 | 0.00216 |
| Bromochloromethane | ND | | 0.00108 | 0.000274 |
| Chloroform | ND | | 0.00216 | 0.00054 |
| 1,1,1-Trichloroethane | ND | | 0.00108 | 0.000332 |
| Carbon tetrachloride | ND | | 0.00108 | 0.000216 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00108 | 0.000249 |
| Benzene | ND | | 0.00108 | 0.0000929 |
| Trichloroethene | ND | | 0.00108 | 0.000161 |
| 1,2-Dichloropropane | ND | | 0.00108 | 0.000108 |
| Bromodichloromethane | ND | | 0.00108 | 0.000129 |
| cis-1,3-Dichloropropene | ND | | 0.00108 | 0.000165 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.011 | 0.000565 |

## VOLATILE ORGANICS

Lab ID: E23-05066-002
Client ID: SB10B/10-12
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7710.D 11/21/2023 12:17

GC/MS Column: DB-624
Sample wt/vol: 5.16g
Matrix-Units: Soil-mg/Kg
% Moisture: 10.4
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00108 | 0.00054 |
| trans-1,3-Dichloropropene | ND | | 0.00108 | 0.00012 |
| 1,1,2-Trichloroethane | ND | | 0.00108 | 0.000231 |
| Tetrachloroethene | ND | | 0.00108 | 0.000111 |
| 2-Hexanone | ND | | 0.011 | 0.00165 |
| Dibromochloromethane | ND | | 0.00108 | 0.000179 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00108 | 0.0002 |
| Chlorobenzene | ND | | 0.00108 | 0.000187 |
| Ethylbenzene | ND | | 0.00108 | 0.000118 |
| Total Xylenes | ND | | 0.00216 | 0.000151 |
| Styrene | ND | | 0.00108 | 0.000232 |
| Bromoform | ND | | 0.00108 | 0.000336 |
| Isopropylbenzene | ND | | 0.00108 | 0.00023 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00108 | 0.000565 |
| 1,3-Dichlorobenzene | ND | | 0.00108 | 0.000286 |
| 1,4-Dichlorobenzene | ND | | 0.00108 | 0.000335 |
| 1,2-Dichlorobenzene | ND | | 0.00108 | 0.000271 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00108 | 0.00089 |
| 1,2,4-Trichlorobenzene | ND | | 0.00108 | 0.000454 |
| 1,2,3-Trichlorobenzene | ND | | 0.00216 | 0.000343 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.00216 | 0.000645 |
| Methyl acetate | ND | | 0.00108 | 0.000873 |
| Cyclohexane | ND | | 0.0054 | 0.000194 |
| Methylcyclohexane | ND | | 0.00216 | 0.000186 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00108 | 0.00012 |

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
## Tentatively Identified Compounds

Lab ID: E23-05066-002
Client ID: SB10B/10-12
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Date File: L7710.D

GC/MS Column: DB-624
Sample wt/vol: 5.16g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 10.4

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Column/Septa bleed | 0 | J | 5.38 |

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05066-003
Client ID: SB2A/0-2
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7711.D 11/21/2023 12:44

GC/MS Column: DB-624
Sample wt/vol: 3.64g
Matrix-Units: Soil-mg/Kg
% Moisture: 13.9
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.0016 | 0.00083 |
| Chloromethane | ND | | 0.0032 | 0.000507 |
| Vinyl chloride | ND | | 0.0016 | 0.000518 |
| Bromomethane | ND | | 0.0032 | 0.0014 |
| Chloroethane | ND | | 0.0016 | 0.000475 |
| Trichlorofluoromethane | ND | | 0.0016 | 0.00065 |
| 1,1-Dichloroethene | ND | | 0.0016 | 0.00056 |
| Acetone | ND | | 0.016 | 0.008 |
| Carbon disulfide | ND | | 0.0016 | 0.000629 |
| Methylene chloride | ND | | 0.008 | 0.0048 |
| trans-1,2-Dichloroethene | ND | | 0.0032 | 0.000566 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.0016 | 0.000349 |
| 1,1-Dichloroethane | ND | | 0.0032 | 0.000408 |
| cis-1,2-Dichloroethene | ND | | 0.0032 | 0.000342 |
| 2-Butanone (MEK) | ND | | 0.016 | 0.0032 |
| Bromochloromethane | ND | | 0.0016 | 0.000406 |
| Chloroform | ND | | 0.0032 | 0.0008 |
| 1,1,1-Trichloroethane | ND | | 0.0016 | 0.000491 |
| Carbon tetrachloride | ND | | 0.0016 | 0.00032 |
| 1,2-Dichloroethane (EDC) | ND | | 0.0016 | 0.00037 |
| Benzene | ND | | 0.0016 | 0.000138 |
| Trichloroethene | ND | | 0.0016 | 0.000238 |
| 1,2-Dichloropropane | ND | | 0.0016 | 0.00016 |
| Bromodichloromethane | ND | | 0.0016 | 0.00019 |
| cis-1,3-Dichloropropene | ND | | 0.0016 | 0.000245 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.016 | 0.000837 |

## VOLATILE ORGANICS

Lab ID: E23-05066-003
Client ID: SB2A/0-2
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7711.D 11/21/2023 12:44

GC/MS Column: DB-624
Sample wt/vol: 3.64g
Matrix-Units: Soil-mg/Kg
% Moisture: 13.9
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.0016 | 0.0008 |
| trans-1,3-Dichloropropene | ND | | 0.0016 | 0.000178 |
| 1,1,2-Trichloroethane | ND | | 0.0016 | 0.000342 |
| Tetrachloroethene | ND | | 0.0016 | 0.000165 |
| 2-Hexanone | ND | | 0.016 | 0.00245 |
| Dibromochloromethane | ND | | 0.0016 | 0.000266 |
| 1,2-Dibromoethane (EDB) | ND | | 0.0016 | 0.000296 |
| Chlorobenzene | ND | | 0.0016 | 0.000277 |
| Ethylbenzene | ND | | 0.0016 | 0.000174 |
| Total Xylenes | ND | | 0.0032 | 0.000224 |
| Styrene | ND | | 0.0016 | 0.000344 |
| Bromoform | ND | | 0.0016 | 0.000498 |
| Isopropylbenzene | ND | | 0.0016 | 0.000341 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0016 | 0.000837 |
| 1,3-Dichlorobenzene | ND | | 0.0016 | 0.000424 |
| 1,4-Dichlorobenzene | ND | | 0.0016 | 0.000496 |
| 1,2-Dichlorobenzene | ND | | 0.0016 | 0.000402 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.0016 | 0.00132 |
| 1,2,4-Trichlorobenzene | ND | | 0.0016 | 0.000672 |
| 1,2,3-Trichlorobenzene | ND | | 0.0032 | 0.000509 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.0032 | 0.000955 |
| Methyl acetate | ND | | 0.0016 | 0.00129 |
| Cyclohexane | ND | | 0.008 | 0.000288 |
| Methylcyclohexane | ND | | 0.0032 | 0.000275 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.0016 | 0.000178 |

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05066-003
Client ID: SB2A/0-2
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Date File: L7711.D

GC/MS Column: DB-624
Sample wt/vol: 3.64g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 13.9

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Column/Septa bleed | 0 | J | 16.97 |

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05066-004
Client ID: SB2B/10-12
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7712.D 11/21/2023 13:12

GC/MS Column: DB-624
Sample wt/vol: 4.38g
Matrix-Units: Soil-mg/Kg
% Moisture: 4.50
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.0012 | 0.000623 |
| Chloromethane | ND | | 0.0024 | 0.00038 |
| Vinyl chloride | ND | | 0.0012 | 0.000389 |
| Bromomethane | ND | | 0.0024 | 0.00105 |
| Chloroethane | ND | | 0.0012 | 0.000356 |
| Trichlorofluoromethane | ND | | 0.0012 | 0.000487 |
| 1,1-Dichloroethene | ND | | 0.0012 | 0.00042 |
| Acetone | ND | | 0.012 | 0.006 |
| Carbon disulfide | ND | | 0.0012 | 0.000472 |
| Methylene chloride | ND | | 0.006 | 0.0036 |
| trans-1,2-Dichloroethene | ND | | 0.0024 | 0.000425 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.0012 | 0.000262 |
| 1,1-Dichloroethane | ND | | 0.0024 | 0.000306 |
| cis-1,2-Dichloroethene | ND | | 0.0024 | 0.000257 |
| 2-Butanone (MEK) | ND | | 0.012 | 0.0024 |
| Bromochloromethane | ND | | 0.0012 | 0.000305 |
| Chloroform | ND | | 0.0024 | 0.0006 |
| 1,1,1-Trichloroethane | ND | | 0.0012 | 0.000368 |
| Carbon tetrachloride | ND | | 0.0012 | 0.00024 |
| 1,2-Dichloroethane (EDC) | ND | | 0.0012 | 0.000277 |
| Benzene | ND | | 0.0012 | 0.000103 |
| Trichloroethene | ND | | 0.0012 | 0.000179 |
| 1,2-Dichloropropane | ND | | 0.0012 | 0.00012 |
| Bromodichloromethane | ND | | 0.0012 | 0.000143 |
| cis-1,3-Dichloropropene | ND | | 0.0012 | 0.000184 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.012 | 0.000628 |

## VOLATILE ORGANICS

Lab ID: E23-05066-004
Client ID: SB2B/10-12
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7712.D 11/21/2023 13:12

GC/MS Column: DB-624
Sample wt/vol: 4.38g
Matrix-Units: Soil-mg/Kg
% Moisture: 4.50
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.0012 | 0.0006 |
| trans-1,3-Dichloropropene | ND | | 0.0012 | 0.000133 |
| 1,1,2-Trichloroethane | ND | | 0.0012 | 0.000257 |
| Tetrachloroethene | ND | | 0.0012 | 0.000124 |
| 2-Hexanone | ND | | 0.012 | 0.00184 |
| Dibromochloromethane | ND | | 0.0012 | 0.000199 |
| 1,2-Dibromoethane (EDB) | ND | | 0.0012 | 0.000222 |
| Chlorobenzene | ND | | 0.0012 | 0.000208 |
| Ethylbenzene | ND | | 0.0012 | 0.000131 |
| Total Xylenes | ND | | 0.0024 | 0.000168 |
| Styrene | ND | | 0.0012 | 0.000258 |
| Bromoform | ND | | 0.0012 | 0.000373 |
| Isopropylbenzene | ND | | 0.0012 | 0.000256 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0012 | 0.000628 |
| 1,3-Dichlorobenzene | ND | | 0.0012 | 0.000318 |
| 1,4-Dichlorobenzene | ND | | 0.0012 | 0.000372 |
| 1,2-Dichlorobenzene | ND | | 0.0012 | 0.000301 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.0012 | 0.000989 |
| 1,2,4-Trichlorobenzene | ND | | 0.0012 | 0.000504 |
| 1,2,3-Trichlorobenzene | ND | | 0.0024 | 0.000382 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.0024 | 0.000716 |
| Methyl acetate | ND | | 0.0012 | 0.00097 |
| Cyclohexane | ND | | 0.006 | 0.000216 |
| Methylcyclohexane | ND | | 0.0024 | 0.000206 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.0012 | 0.000133 |

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05066-004
Client ID: SB2B/10-12
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Date File: L7712.D

GC/MS Column: DB-624
Sample wt/vol: 4.38g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 4.50

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Column/Septa bleed | 0 | J | 5.39 |

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05066-005
Client ID: SB5/0-2
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7713.D 11/21/2023 13:40

GC/MS Column: DB-624
Sample wt/vol: 4.27g
Matrix-Units: Soil-mg/Kg
% Moisture: 11.3
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00132 | 0.000685 |
| Chloromethane | ND | | 0.00264 | 0.000418 |
| Vinyl chloride | ND | | 0.00132 | 0.000428 |
| Bromomethane | ND | | 0.00264 | 0.00115 |
| Chloroethane | ND | | 0.00132 | 0.000392 |
| Trichlorofluoromethane | ND | | 0.00132 | 0.000536 |
| 1,1-Dichloroethene | ND | | 0.00132 | 0.000462 |
| Acetone | ND | | 0.013 | 0.0066 |
| Carbon disulfide | ND | | 0.00132 | 0.000519 |
| Methylene chloride | ND | | 0.0066 | 0.00396 |
| trans-1,2-Dichloroethene | ND | | 0.00264 | 0.000467 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00132 | 0.000288 |
| 1,1-Dichloroethane | ND | | 0.00264 | 0.000337 |
| cis-1,2-Dichloroethene | ND | | 0.00264 | 0.000282 |
| 2-Butanone (MEK) | ND | | 0.013 | 0.00264 |
| Bromochloromethane | ND | | 0.00132 | 0.000335 |
| Chloroform | ND | | 0.00264 | 0.00066 |
| 1,1,1-Trichloroethane | ND | | 0.00132 | 0.000405 |
| Carbon tetrachloride | ND | | 0.00132 | 0.000264 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00132 | 0.000305 |
| Benzene | ND | | 0.00132 | 0.000114 |
| Trichloroethene | ND | | 0.00132 | 0.000197 |
| 1,2-Dichloropropane | ND | | 0.00132 | 0.000132 |
| Bromodichloromethane | ND | | 0.00132 | 0.000157 |
| cis-1,3-Dichloropropene | ND | | 0.00132 | 0.000202 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.013 | 0.00069 |

## VOLATILE ORGANICS

Lab ID: E23-05066-005
Client ID: SB5/0-2
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7713.D 11/21/2023 13:40

GC/MS Column: DB-624
Sample wt/vol: 4.27g
Matrix-Units: Soil-mg/Kg
% Moisture: 11.3
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00132 | 0.00066 |
| trans-1,3-Dichloropropene | ND | | 0.00132 | 0.000147 |
| 1,1,2-Trichloroethane | ND | | 0.00132 | 0.000282 |
| Tetrachloroethene | ND | | 0.00132 | 0.000136 |
| 2-Hexanone | ND | | 0.013 | 0.00202 |
| Dibromochloromethane | ND | | 0.00132 | 0.000219 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00132 | 0.000244 |
| Chlorobenzene | ND | | 0.00132 | 0.000228 |
| Ethylbenzene | ND | | 0.00132 | 0.000144 |
| Total Xylenes | ND | | 0.00264 | 0.000185 |
| Styrene | ND | | 0.00132 | 0.000284 |
| Bromoform | ND | | 0.00132 | 0.000411 |
| Isopropylbenzene | ND | | 0.00132 | 0.000281 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00132 | 0.00069 |
| 1,3-Dichlorobenzene | ND | | 0.00132 | 0.00035 |
| 1,4-Dichlorobenzene | ND | | 0.00132 | 0.000409 |
| 1,2-Dichlorobenzene | ND | | 0.00132 | 0.000331 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00132 | 0.00109 |
| 1,2,4-Trichlorobenzene | ND | | 0.00132 | 0.000554 |
| 1,2,3-Trichlorobenzene | ND | | 0.00264 | 0.00042 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.00264 | 0.000788 |
| Methyl acetate | ND | | 0.00132 | 0.00107 |
| Cyclohexane | ND | | 0.0066 | 0.000238 |
| Methylcyclohexane | ND | | 0.00264 | 0.000227 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00132 | 0.000147 |

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
## Tentatively Identified Compounds

Lab ID: E23-05066-005
Client ID: SB5/0-2
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Date File: L7713.D

GC/MS Column: DB-624
Sample wt/vol: 4.27g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 11.3

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | No peaks detected | | | |

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

# VOLATILE ORGANICS

Lab ID: E23-05066-006
Client ID: SB3A/0-2
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7714.D 11/21/2023 14:09

GC/MS Column: DB-624
Sample wt/vol: 4.40g
Matrix-Units: Soil-mg/Kg
% Moisture: 10.1
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00126 | 0.000654 |
| Chloromethane | ND | | 0.00252 | 0.000399 |
| Vinyl chloride | ND | | 0.00126 | 0.000408 |
| Bromomethane | ND | | 0.00252 | 0.0011 |
| Chloroethane | ND | | 0.00126 | 0.000374 |
| Trichlorofluoromethane | ND | | 0.00126 | 0.000512 |
| 1,1-Dichloroethene | ND | | 0.00126 | 0.000441 |
| Acetone | ND | | 0.013 | 0.0063 |
| Carbon disulfide | ND | | 0.00126 | 0.000495 |
| Methylene chloride | ND | | 0.0063 | 0.00378 |
| trans-1,2-Dichloroethene | ND | | 0.00252 | 0.000446 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00126 | 0.000275 |
| 1,1-Dichloroethane | ND | | 0.00252 | 0.000321 |
| cis-1,2-Dichloroethene | ND | | 0.00252 | 0.00027 |
| 2-Butanone (MEK) | ND | | 0.013 | 0.00252 |
| Bromochloromethane | ND | | 0.00126 | 0.00032 |
| Chloroform | ND | | 0.00252 | 0.00063 |
| 1,1,1-Trichloroethane | ND | | 0.00126 | 0.000387 |
| Carbon tetrachloride | ND | | 0.00126 | 0.000252 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00126 | 0.000291 |
| Benzene | ND | | 0.00126 | 0.000108 |
| Trichloroethene | ND | | 0.00126 | 0.000188 |
| 1,2-Dichloropropane | ND | | 0.00126 | 0.000126 |
| Bromodichloromethane | ND | | 0.00126 | 0.00015 |
| cis-1,3-Dichloropropene | ND | | 0.00126 | 0.000193 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.013 | 0.000659 |

## VOLATILE ORGANICS

Lab ID: E23-05066-006
Client ID: SB3A/0-2
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7714.D 11/21/2023 14:09

GC/MS Column: DB-624
Sample wt/vol: 4.40g
Matrix-Units: Soil-mg/Kg
% Moisture: 10.1
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00126 | 0.00063 |
| trans-1,3-Dichloropropene | ND | | 0.00126 | 0.00014 |
| 1,1,2-Trichloroethane | ND | | 0.00126 | 0.00027 |
| Tetrachloroethene | ND | | 0.00126 | 0.00013 |
| 2-Hexanone | ND | | 0.013 | 0.00193 |
| Dibromochloromethane | ND | | 0.00126 | 0.000209 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00126 | 0.000233 |
| Chlorobenzene | ND | | 0.00126 | 0.000218 |
| Ethylbenzene | ND | | 0.00126 | 0.000137 |
| Total Xylenes | ND | | 0.00252 | 0.000176 |
| Styrene | ND | | 0.00126 | 0.000271 |
| Bromoform | ND | | 0.00126 | 0.000392 |
| Isopropylbenzene | ND | | 0.00126 | 0.000268 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00126 | 0.000659 |
| 1,3-Dichlorobenzene | ND | | 0.00126 | 0.000334 |
| 1,4-Dichlorobenzene | ND | | 0.00126 | 0.000391 |
| 1,2-Dichlorobenzene | ND | | 0.00126 | 0.000316 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00126 | 0.00104 |
| 1,2,4-Trichlorobenzene | ND | | 0.00126 | 0.000529 |
| 1,2,3-Trichlorobenzene | ND | | 0.00252 | 0.000401 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.00252 | 0.000752 |
| Methyl acetate | ND | | 0.00126 | 0.00102 |
| Cyclohexane | ND | | 0.0063 | 0.000227 |
| Methylcyclohexane | ND | | 0.00252 | 0.000217 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00126 | 0.00014 |

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05066-006
Client ID: SB3A/0-2
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Date File: L7714.D

GC/MS Column: DB-624
Sample wt/vol: 4.40g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 10.1

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | No peaks detected | | | |

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05066-007
Client ID: SB3B/10-12
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7715.D 11/21/2023 14:38

GC/MS Column: DB-624
Sample wt/vol: 4.66g
Matrix-Units: Soil-mg/Kg
% Moisture: 5.70
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00114 | 0.000592 |
| Chloromethane | ND | | 0.00228 | 0.000361 |
| Vinyl chloride | ND | | 0.00114 | 0.000369 |
| Bromomethane | ND | | 0.00228 | 0.000994 |
| Chloroethane | ND | | 0.00114 | 0.000339 |
| Trichlorofluoromethane | ND | | 0.00114 | 0.000463 |
| 1,1-Dichloroethene | ND | | 0.00114 | 0.000399 |
| Acetone | ND | | 0.011 | 0.0057 |
| Carbon disulfide | ND | | 0.00114 | 0.000448 |
| Methylene chloride | ND | | 0.0057 | 0.00342 |
| trans-1,2-Dichloroethene | ND | | 0.00228 | 0.000404 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00114 | 0.000249 |
| 1,1-Dichloroethane | ND | | 0.00228 | 0.000291 |
| cis-1,2-Dichloroethene | ND | | 0.00228 | 0.000244 |
| 2-Butanone (MEK) | ND | | 0.011 | 0.00228 |
| Bromochloromethane | ND | | 0.00114 | 0.00029 |
| Chloroform | ND | | 0.00228 | 0.00057 |
| 1,1,1-Trichloroethane | ND | | 0.00114 | 0.00035 |
| Carbon tetrachloride | ND | | 0.00114 | 0.000228 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00114 | 0.000263 |
| Benzene | ND | | 0.00114 | 0.000098 |
| Trichloroethene | ND | | 0.00114 | 0.00017 |
| 1,2-Dichloropropane | ND | | 0.00114 | 0.000114 |
| Bromodichloromethane | ND | | 0.00114 | 0.000136 |
| cis-1,3-Dichloropropene | ND | | 0.00114 | 0.000174 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.011 | 0.000596 |

## VOLATILE ORGANICS

Lab ID: E23-05066-007
Client ID: SB3B/10-12
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7715.D 11/21/2023 14:38

GC/MS Column: DB-624
Sample wt/vol: 4.66g
Matrix-Units: Soil-mg/Kg
% Moisture: 5.70
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00114 | 0.00057 |
| trans-1,3-Dichloropropene | ND | | 0.00114 | 0.000127 |
| 1,1,2-Trichloroethane | ND | | 0.00114 | 0.000244 |
| Tetrachloroethene | ND | | 0.00114 | 0.000117 |
| 2-Hexanone | ND | | 0.011 | 0.00175 |
| Dibromochloromethane | ND | | 0.00114 | 0.000189 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00114 | 0.000211 |
| Chlorobenzene | ND | | 0.00114 | 0.000197 |
| Ethylbenzene | ND | | 0.00114 | 0.000124 |
| Total Xylenes | ND | | 0.00228 | 0.00016 |
| Styrene | ND | | 0.00114 | 0.000245 |
| Bromoform | ND | | 0.00114 | 0.000355 |
| Isopropylbenzene | ND | | 0.00114 | 0.000243 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00114 | 0.000596 |
| 1,3-Dichlorobenzene | ND | | 0.00114 | 0.000302 |
| 1,4-Dichlorobenzene | ND | | 0.00114 | 0.000353 |
| 1,2-Dichlorobenzene | ND | | 0.00114 | 0.000286 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00114 | 0.000939 |
| 1,2,4-Trichlorobenzene | ND | | 0.00114 | 0.000479 |
| 1,2,3-Trichlorobenzene | ND | | 0.00228 | 0.000363 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.00228 | 0.000681 |
| Methyl acetate | ND | | 0.00114 | 0.000921 |
| Cyclohexane | ND | | 0.0057 | 0.000205 |
| Methylcyclohexane | ND | | 0.00228 | 0.000196 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00114 | 0.000127 |

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05066-007
Client ID: SB3B/10-12
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Date File: L7715.D

GC/MS Column: DB-624
Sample wt/vol: 4.66g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 5.70

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Column/Septa bleed | 0 | J | 5.38 |

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05066-008
Client ID: SB9A/0-2
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7716.D 11/21/2023 15:06

GC/MS Column: DB-624
Sample wt/vol: 3.45g
Matrix-Units: Soil-mg/Kg
% Moisture: 7.80
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00157 | 0.000815 |
| Chloromethane | ND | | 0.00314 | 0.000498 |
| Vinyl chloride | ND | | 0.00157 | 0.000509 |
| Bromomethane | ND | | 0.00314 | 0.00137 |
| Chloroethane | ND | | 0.00157 | 0.000466 |
| Trichlorofluoromethane | ND | | 0.00157 | 0.000637 |
| 1,1-Dichloroethene | ND | | 0.00157 | 0.00055 |
| Acetone | ND | | 0.016 | 0.00785 |
| Carbon disulfide | ND | | 0.00157 | 0.000617 |
| Methylene chloride | ND | | 0.00785 | 0.00471 |
| trans-1,2-Dichloroethene | ND | | 0.00314 | 0.000556 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00157 | 0.000342 |
| 1,1-Dichloroethane | ND | | 0.00314 | 0.0004 |
| cis-1,2-Dichloroethene | ND | | 0.00314 | 0.000336 |
| 2-Butanone (MEK) | ND | | 0.016 | 0.00314 |
| Bromochloromethane | ND | | 0.00157 | 0.000399 |
| Chloroform | ND | | 0.00314 | 0.000785 |
| 1,1,1-Trichloroethane | ND | | 0.00157 | 0.000482 |
| Carbon tetrachloride | ND | | 0.00157 | 0.000314 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00157 | 0.000363 |
| Benzene | ND | | 0.00157 | 0.000135 |
| Trichloroethene | ND | | 0.00157 | 0.000234 |
| 1,2-Dichloropropane | ND | | 0.00157 | 0.000157 |
| Bromodichloromethane | ND | | 0.00157 | 0.000187 |
| cis-1,3-Dichloropropene | ND | | 0.00157 | 0.00024 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.016 | 0.000821 |

## VOLATILE ORGANICS

Lab ID: E23-05066-008
Client ID: SB9A/0-2
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7716.D 11/21/2023 15:06

GC/MS Column: DB-624
Sample wt/vol: 3.45g
Matrix-Units: Soil-mg/Kg
% Moisture: 7.80
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00157 | 0.000785 |
| trans-1,3-Dichloropropene | ND | | 0.00157 | 0.000174 |
| 1,1,2-Trichloroethane | ND | | 0.00157 | 0.000336 |
| Tetrachloroethene | ND | | 0.00157 | 0.000162 |
| 2-Hexanone | ND | | 0.016 | 0.00241 |
| Dibromochloromethane | ND | | 0.00157 | 0.000261 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00157 | 0.00029 |
| Chlorobenzene | ND | | 0.00157 | 0.000272 |
| Ethylbenzene | ND | | 0.00157 | 0.000171 |
| Total Xylenes | ND | | 0.00314 | 0.00022 |
| Styrene | ND | | 0.00157 | 0.000338 |
| Bromoform | ND | | 0.00157 | 0.000488 |
| Isopropylbenzene | ND | | 0.00157 | 0.000334 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00157 | 0.000821 |
| 1,3-Dichlorobenzene | ND | | 0.00157 | 0.000416 |
| 1,4-Dichlorobenzene | ND | | 0.00157 | 0.000487 |
| 1,2-Dichlorobenzene | ND | | 0.00157 | 0.000394 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00157 | 0.00129 |
| 1,2,4-Trichlorobenzene | ND | | 0.00157 | 0.000659 |
| 1,2,3-Trichlorobenzene | ND | | 0.00314 | 0.000499 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.00314 | 0.000937 |
| Methyl acetate | ND | | 0.00157 | 0.00127 |
| Cyclohexane | ND | | 0.00785 | 0.000283 |
| Methylcyclohexane | ND | | 0.00314 | 0.00027 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00157 | 0.000174 |

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
## Tentatively Identified Compounds

Lab ID: E23-05066-008
Client ID: SB9A/0-2
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Date File: L7716.D

GC/MS Column: DB-624
Sample wt/vol: 3.45g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 7.80

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Column/Septa bleed | 0 | J | 3.36 |

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05066-009
Client ID: SB9B/10-12
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7717.D 11/21/2023 15:35

GC/MS Column: DB-624
Sample wt/vol: 3.82g
Matrix-Units: Soil-mg/Kg
% Moisture: 4.70
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00137 | 0.000711 |
| Chloromethane | ND | | 0.00274 | 0.000434 |
| Vinyl chloride | ND | | 0.00137 | 0.000444 |
| Bromomethane | ND | | 0.00274 | 0.00119 |
| Chloroethane | ND | | 0.00137 | 0.000407 |
| Trichlorofluoromethane | ND | | 0.00137 | 0.000556 |
| 1,1-Dichloroethene | ND | | 0.00137 | 0.00048 |
| Acetone | ND | | 0.014 | 0.00685 |
| Carbon disulfide | ND | | 0.00137 | 0.000538 |
| Methylene chloride | ND | | 0.00685 | 0.00411 |
| trans-1,2-Dichloroethene | ND | | 0.00274 | 0.000485 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00137 | 0.000299 |
| 1,1-Dichloroethane | ND | | 0.00274 | 0.000349 |
| cis-1,2-Dichloroethene | ND | | 0.00274 | 0.000293 |
| 2-Butanone (MEK) | ND | | 0.014 | 0.00274 |
| Bromochloromethane | ND | | 0.00137 | 0.000348 |
| Chloroform | ND | | 0.00274 | 0.000685 |
| 1,1,1-Trichloroethane | ND | | 0.00137 | 0.000421 |
| Carbon tetrachloride | ND | | 0.00137 | 0.000274 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00137 | 0.000316 |
| Benzene | ND | | 0.00137 | 0.000118 |
| Trichloroethene | ND | | 0.00137 | 0.000204 |
| 1,2-Dichloropropane | ND | | 0.00137 | 0.000137 |
| Bromodichloromethane | ND | | 0.00137 | 0.000163 |
| cis-1,3-Dichloropropene | ND | | 0.00137 | 0.00021 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.014 | 0.000717 |

## VOLATILE ORGANICS

Lab ID: E23-05066-009
Client ID: SB9B/10-12
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7717.D 11/21/2023 15:35

GC/MS Column: DB-624
Sample wt/vol: 3.82g
Matrix-Units: Soil-mg/Kg
% Moisture: 4.70
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00137 | 0.000685 |
| trans-1,3-Dichloropropene | ND | | 0.00137 | 0.000152 |
| 1,1,2-Trichloroethane | ND | | 0.00137 | 0.000293 |
| Tetrachloroethene | ND | | 0.00137 | 0.000141 |
| 2-Hexanone | ND | | 0.014 | 0.0021 |
| Dibromochloromethane | ND | | 0.00137 | 0.000227 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00137 | 0.000253 |
| Chlorobenzene | ND | | 0.00137 | 0.000237 |
| Ethylbenzene | ND | | 0.00137 | 0.000149 |
| Total Xylenes | ND | | 0.00274 | 0.000192 |
| Styrene | ND | | 0.00137 | 0.000295 |
| Bromoform | ND | | 0.00137 | 0.000426 |
| Isopropylbenzene | ND | | 0.00137 | 0.000292 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00137 | 0.000717 |
| 1,3-Dichlorobenzene | ND | | 0.00137 | 0.000363 |
| 1,4-Dichlorobenzene | ND | | 0.00137 | 0.000425 |
| 1,2-Dichlorobenzene | ND | | 0.00137 | 0.000344 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00137 | 0.00113 |
| 1,2,4-Trichlorobenzene | ND | | 0.00137 | 0.000575 |
| 1,2,3-Trichlorobenzene | ND | | 0.00274 | 0.000436 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.00274 | 0.000818 |
| Methyl acetate | ND | | 0.00137 | 0.00111 |
| Cyclohexane | ND | | 0.00685 | 0.000247 |
| Methylcyclohexane | ND | | 0.00274 | 0.000236 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00137 | 0.000152 |

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05066-009
Client ID: SB9B/10-12
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Date File: L7717.D

GC/MS Column: DB-624
Sample wt/vol: 3.82g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 4.70

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | No peaks detected | | | |

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05066-010
Client ID: SB1A/0-2
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7718.D 11/21/2023 16:02

GC/MS Column: DB-624
Sample wt/vol: 4.36g
Matrix-Units: Soil-mg/Kg
% Moisture: 9.10
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00126 | 0.000654 |
| Chloromethane | ND | | 0.00252 | 0.000399 |
| Vinyl chloride | ND | | 0.00126 | 0.000408 |
| Bromomethane | ND | | 0.00252 | 0.0011 |
| Chloroethane | ND | | 0.00126 | 0.000374 |
| Trichlorofluoromethane | ND | | 0.00126 | 0.000512 |
| 1,1-Dichloroethene | ND | | 0.00126 | 0.000441 |
| Acetone | ND | | 0.013 | 0.0063 |
| Carbon disulfide | ND | | 0.00126 | 0.000495 |
| Methylene chloride | 0.0041 | CJ | 0.0063 | 0.00378 |
| trans-1,2-Dichloroethene | ND | | 0.00252 | 0.000446 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00126 | 0.000275 |
| 1,1-Dichloroethane | ND | | 0.00252 | 0.000321 |
| cis-1,2-Dichloroethene | ND | | 0.00252 | 0.00027 |
| 2-Butanone (MEK) | ND | | 0.013 | 0.00252 |
| Bromochloromethane | ND | | 0.00126 | 0.00032 |
| Chloroform | ND | | 0.00252 | 0.00063 |
| 1,1,1-Trichloroethane | ND | | 0.00126 | 0.000387 |
| Carbon tetrachloride | ND | | 0.00126 | 0.000252 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00126 | 0.000291 |
| Benzene | ND | | 0.00126 | 0.000108 |
| Trichloroethene | ND | | 0.00126 | 0.000188 |
| 1,2-Dichloropropane | ND | | 0.00126 | 0.000126 |
| Bromodichloromethane | ND | | 0.00126 | 0.00015 |
| cis-1,3-Dichloropropene | ND | | 0.00126 | 0.000193 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.013 | 0.000659 |

## VOLATILE ORGANICS

Lab ID: E23-05066-010
Client ID: SB1A/0-2
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7718.D 11/21/2023 16:02

GC/MS Column: DB-624
Sample wt/vol: 4.36g
Matrix-Units: Soil-mg/Kg
% Moisture: 9.10
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00126 | 0.00063 |
| trans-1,3-Dichloropropene | ND | | 0.00126 | 0.00014 |
| 1,1,2-Trichloroethane | ND | | 0.00126 | 0.00027 |
| Tetrachloroethene | ND | | 0.00126 | 0.00013 |
| 2-Hexanone | ND | | 0.013 | 0.00193 |
| Dibromochloromethane | ND | | 0.00126 | 0.000209 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00126 | 0.000233 |
| Chlorobenzene | ND | | 0.00126 | 0.000218 |
| Ethylbenzene | ND | | 0.00126 | 0.000137 |
| Total Xylenes | ND | | 0.00252 | 0.000176 |
| Styrene | ND | | 0.00126 | 0.000271 |
| Bromoform | ND | | 0.00126 | 0.000392 |
| Isopropylbenzene | ND | | 0.00126 | 0.000268 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00126 | 0.000659 |
| 1,3-Dichlorobenzene | ND | | 0.00126 | 0.000334 |
| 1,4-Dichlorobenzene | ND | | 0.00126 | 0.000391 |
| 1,2-Dichlorobenzene | ND | | 0.00126 | 0.000316 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00126 | 0.00104 |
| 1,2,4-Trichlorobenzene | ND | | 0.00126 | 0.000529 |
| 1,2,3-Trichlorobenzene | ND | | 0.00252 | 0.000401 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.00252 | 0.000752 |
| Methyl acetate | ND | | 0.00126 | 0.00102 |
| Cyclohexane | ND | | 0.0063 | 0.000227 |
| Methylcyclohexane | ND | | 0.00252 | 0.000217 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00126 | 0.00014 |
| Total Target Compounds (51): | 0.0041 | CJ | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
## Tentatively Identified Compounds

Lab ID: E23-05066-010
Client ID: SB1A/0-2
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Date File: L7718.D

GC/MS Column: DB-624
Sample wt/vol: 4.36g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 9.10

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Column/Septa bleed | 0 | J | 5.39 |

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05066-011
Client ID: SB1B/10-12
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7719.D 11/21/2023 16:31

GC/MS Column: DB-624
Sample wt/vol: 4.03g
Matrix-Units: Soil-mg/Kg
% Moisture: 10.2
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00138 | 0.000716 |
| Chloromethane | ND | | 0.00276 | 0.000437 |
| Vinyl chloride | ND | | 0.00138 | 0.000447 |
| Bromomethane | ND | | 0.00276 | 0.0012 |
| Chloroethane | ND | | 0.00138 | 0.00041 |
| Trichlorofluoromethane | ND | | 0.00138 | 0.00056 |
| 1,1-Dichloroethene | ND | | 0.00138 | 0.000483 |
| Acetone | ND | | 0.014 | 0.0069 |
| Carbon disulfide | ND | | 0.00138 | 0.000542 |
| Methylene chloride | ND | | 0.0069 | 0.00414 |
| trans-1,2-Dichloroethene | ND | | 0.00276 | 0.000489 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00138 | 0.000301 |
| 1,1-Dichloroethane | ND | | 0.00276 | 0.000352 |
| cis-1,2-Dichloroethene | ND | | 0.00276 | 0.000295 |
| 2-Butanone (MEK) | ND | | 0.014 | 0.00276 |
| Bromochloromethane | ND | | 0.00138 | 0.000351 |
| Chloroform | ND | | 0.00276 | 0.00069 |
| 1,1,1-Trichloroethane | ND | | 0.00138 | 0.000424 |
| Carbon tetrachloride | ND | | 0.00138 | 0.000276 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00138 | 0.000319 |
| Benzene | ND | | 0.00138 | 0.000119 |
| Trichloroethene | ND | | 0.00138 | 0.000206 |
| 1,2-Dichloropropane | ND | | 0.00138 | 0.000138 |
| Bromodichloromethane | ND | | 0.00138 | 0.000164 |
| cis-1,3-Dichloropropene | ND | | 0.00138 | 0.000211 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.014 | 0.000722 |

## VOLATILE ORGANICS

Lab ID: E23-05066-011
Client ID: SB1B/10-12
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7719.D 11/21/2023 16:31

GC/MS Column: DB-624
Sample wt/vol: 4.03g
Matrix-Units: Soil-mg/Kg
% Moisture: 10.2
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00138 | 0.00069 |
| trans-1,3-Dichloropropene | ND | | 0.00138 | 0.000153 |
| 1,1,2-Trichloroethane | ND | | 0.00138 | 0.000295 |
| Tetrachloroethene | ND | | 0.00138 | 0.000142 |
| 2-Hexanone | ND | | 0.014 | 0.00211 |
| Dibromochloromethane | ND | | 0.00138 | 0.000229 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00138 | 0.000255 |
| Chlorobenzene | ND | | 0.00138 | 0.000239 |
| Ethylbenzene | ND | | 0.00138 | 0.00015 |
| Total Xylenes | ND | | 0.00276 | 0.000193 |
| Styrene | ND | | 0.00138 | 0.000297 |
| Bromoform | ND | | 0.00138 | 0.000429 |
| Isopropylbenzene | ND | | 0.00138 | 0.000294 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00138 | 0.000722 |
| 1,3-Dichlorobenzene | ND | | 0.00138 | 0.000366 |
| 1,4-Dichlorobenzene | ND | | 0.00138 | 0.000428 |
| 1,2-Dichlorobenzene | ND | | 0.00138 | 0.000346 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00138 | 0.00114 |
| 1,2,4-Trichlorobenzene | ND | | 0.00138 | 0.00058 |
| 1,2,3-Trichlorobenzene | ND | | 0.00276 | 0.000439 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.00276 | 0.000824 |
| Methyl acetate | ND | | 0.00138 | 0.00112 |
| Cyclohexane | ND | | 0.0069 | 0.000248 |
| Methylcyclohexane | ND | | 0.00276 | 0.000237 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00138 | 0.000153 |

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05066-011
Client ID: SB1B/10-12
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Date File: L7719.D

GC/MS Column: DB-624
Sample wt/vol: 4.03g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 10.2

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|

No peaks detected

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05066-012
Client ID: SB4A/0-2
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7720.D 11/21/2023 17:00

GC/MS Column: DB-624
Sample wt/vol: 3.96g
Matrix-Units: Soil-mg/Kg
% Moisture: 8.90
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00139 | 0.000721 |
| Chloromethane | ND | | 0.00278 | 0.000441 |
| Vinyl chloride | ND | | 0.00139 | 0.00045 |
| Bromomethane | ND | | 0.00278 | 0.00121 |
| Chloroethane | ND | | 0.00139 | 0.000413 |
| Trichlorofluoromethane | ND | | 0.00139 | 0.000564 |
| 1,1-Dichloroethene | ND | | 0.00139 | 0.000487 |
| Acetone | ND | | 0.014 | 0.00695 |
| Carbon disulfide | ND | | 0.00139 | 0.000546 |
| Methylene chloride | ND | | 0.00695 | 0.00417 |
| trans-1,2-Dichloroethene | ND | | 0.00278 | 0.000492 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00139 | 0.000303 |
| 1,1-Dichloroethane | ND | | 0.00278 | 0.000354 |
| cis-1,2-Dichloroethene | ND | | 0.00278 | 0.000297 |
| 2-Butanone (MEK) | ND | | 0.014 | 0.00278 |
| Bromochloromethane | ND | | 0.00139 | 0.000353 |
| Chloroform | ND | | 0.00278 | 0.000695 |
| 1,1,1-Trichloroethane | ND | | 0.00139 | 0.000427 |
| Carbon tetrachloride | ND | | 0.00139 | 0.000278 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00139 | 0.000321 |
| Benzene | ND | | 0.00139 | 0.00012 |
| Trichloroethene | ND | | 0.00139 | 0.000207 |
| 1,2-Dichloropropane | ND | | 0.00139 | 0.000139 |
| Bromodichloromethane | ND | | 0.00139 | 0.000165 |
| cis-1,3-Dichloropropene | ND | | 0.00139 | 0.000213 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.014 | 0.000727 |

## VOLATILE ORGANICS

Lab ID: E23-05066-012
Client ID: SB4A/0-2
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7720.D 11/21/2023 17:00

GC/MS Column: DB-624
Sample wt/vol: 3.96g
Matrix-Units: Soil-mg/Kg
% Moisture: 8.90
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00139 | 0.000695 |
| trans-1,3-Dichloropropene | ND | | 0.00139 | 0.000154 |
| 1,1,2-Trichloroethane | ND | | 0.00139 | 0.000297 |
| Tetrachloroethene | ND | | 0.00139 | 0.000143 |
| 2-Hexanone | ND | | 0.014 | 0.00213 |
| Dibromochloromethane | ND | | 0.00139 | 0.000231 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00139 | 0.000257 |
| Chlorobenzene | ND | | 0.00139 | 0.00024 |
| Ethylbenzene | ND | | 0.00139 | 0.000152 |
| Total Xylenes | ND | | 0.00278 | 0.000195 |
| Styrene | ND | | 0.00139 | 0.000299 |
| Bromoform | ND | | 0.00139 | 0.000432 |
| Isopropylbenzene | ND | | 0.00139 | 0.000296 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00139 | 0.000727 |
| 1,3-Dichlorobenzene | ND | | 0.00139 | 0.000368 |
| 1,4-Dichlorobenzene | ND | | 0.00139 | 0.000431 |
| 1,2-Dichlorobenzene | ND | | 0.00139 | 0.000349 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00139 | 0.00115 |
| 1,2,4-Trichlorobenzene | ND | | 0.00139 | 0.000584 |
| 1,2,3-Trichlorobenzene | ND | | 0.00278 | 0.000442 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.00278 | 0.00083 |
| Methyl acetate | ND | | 0.00139 | 0.00112 |
| Cyclohexane | ND | | 0.00695 | 0.00025 |
| Methylcyclohexane | ND | | 0.00278 | 0.000239 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00139 | 0.000154 |

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05066-012
Client ID: SB4A/0-2
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Date File: L7720.D

GC/MS Column: DB-624
Sample wt/vol: 3.96g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 8.90

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Column/Septa bleed | 0 | J | 5.38 |

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05066-013
Client ID: SB4B/10-12
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7721.D 11/21/2023 17:27

GC/MS Column: DB-624
Sample wt/vol: 3.62g
Matrix-Units: Soil-mg/Kg
% Moisture: 5.20
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00146 | 0.000758 |
| Chloromethane | ND | | 0.00292 | 0.000463 |
| Vinyl chloride | ND | | 0.00146 | 0.000473 |
| Bromomethane | ND | | 0.00292 | 0.00127 |
| Chloroethane | ND | | 0.00146 | 0.000434 |
| Trichlorofluoromethane | ND | | 0.00146 | 0.000593 |
| 1,1-Dichloroethene | ND | | 0.00146 | 0.000511 |
| Acetone | ND | | 0.015 | 0.0073 |
| Carbon disulfide | ND | | 0.00146 | 0.000574 |
| Methylene chloride | 0.00464 | CJ | 0.0073 | 0.00438 |
| trans-1,2-Dichloroethene | ND | | 0.00292 | 0.000517 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00146 | 0.000318 |
| 1,1-Dichloroethane | ND | | 0.00292 | 0.000372 |
| cis-1,2-Dichloroethene | ND | | 0.00292 | 0.000312 |
| 2-Butanone (MEK) | ND | | 0.015 | 0.00292 |
| Bromochloromethane | ND | | 0.00146 | 0.000371 |
| Chloroform | ND | | 0.00292 | 0.00073 |
| 1,1,1-Trichloroethane | ND | | 0.00146 | 0.000448 |
| Carbon tetrachloride | ND | | 0.00146 | 0.000292 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00146 | 0.000337 |
| Benzene | ND | | 0.00146 | 0.000126 |
| Trichloroethene | ND | | 0.00146 | 0.000218 |
| 1,2-Dichloropropane | ND | | 0.00146 | 0.000146 |
| Bromodichloromethane | ND | | 0.00146 | 0.000174 |
| cis-1,3-Dichloropropene | ND | | 0.00146 | 0.000223 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.015 | 0.000764 |

## VOLATILE ORGANICS

Lab ID: E23-05066-013
Client ID: SB4B/10-12
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7721.D 11/21/2023 17:27

GC/MS Column: DB-624
Sample wt/vol: 3.62g
Matrix-Units: Soil-mg/Kg
% Moisture: 5.20
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00146 | 0.00073 |
| trans-1,3-Dichloropropene | ND | | 0.00146 | 0.000162 |
| 1,1,2-Trichloroethane | ND | | 0.00146 | 0.000312 |
| Tetrachloroethene | ND | | 0.00146 | 0.00015 |
| 2-Hexanone | ND | | 0.015 | 0.00224 |
| Dibromochloromethane | ND | | 0.00146 | 0.000242 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00146 | 0.00027 |
| Chlorobenzene | ND | | 0.00146 | 0.000253 |
| Ethylbenzene | ND | | 0.00146 | 0.000159 |
| Total Xylenes | ND | | 0.00292 | 0.000204 |
| Styrene | ND | | 0.00146 | 0.000314 |
| Bromoform | ND | | 0.00146 | 0.000454 |
| Isopropylbenzene | ND | | 0.00146 | 0.000311 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00146 | 0.000764 |
| 1,3-Dichlorobenzene | ND | | 0.00146 | 0.000387 |
| 1,4-Dichlorobenzene | ND | | 0.00146 | 0.000453 |
| 1,2-Dichlorobenzene | ND | | 0.00146 | 0.000366 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00146 | 0.0012 |
| 1,2,4-Trichlorobenzene | ND | | 0.00146 | 0.000613 |
| 1,2,3-Trichlorobenzene | ND | | 0.00292 | 0.000464 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.00292 | 0.000872 |
| Methyl acetate | ND | | 0.00146 | 0.00118 |
| Cyclohexane | ND | | 0.0073 | 0.000263 |
| Methylcyclohexane | ND | | 0.00292 | 0.000251 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00146 | 0.000162 |
| Total Target Compounds (51): | 0.00464 | CJ | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05066-013
Client ID: SB4B/10-12
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Date File: L7721.D

GC/MS Column: DB-624
Sample wt/vol: 3.62g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 5.20

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | No peaks detected | | | |

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05066-014
Client ID: SB6-419-CS/0
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7722.D 11/21/2023 17:56

GC/MS Column: DB-624
Sample wt/vol: 3.99g
Matrix-Units: Soil-mg/Kg
% Moisture: 7.80
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00136 | 0.000706 |
| Chloromethane | ND | | 0.00272 | 0.000431 |
| Vinyl chloride | ND | | 0.00136 | 0.000441 |
| Bromomethane | ND | | 0.00272 | 0.00119 |
| Chloroethane | ND | | 0.00136 | 0.000404 |
| Trichlorofluoromethane | ND | | 0.00136 | 0.000552 |
| 1,1-Dichloroethene | ND | | 0.00136 | 0.000476 |
| Acetone | ND | | 0.014 | 0.0068 |
| Carbon disulfide | ND | | 0.00136 | 0.000534 |
| Methylene chloride | 0.00487 | CJ | 0.0068 | 0.00408 |
| trans-1,2-Dichloroethene | ND | | 0.00272 | 0.000481 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00136 | 0.000296 |
| 1,1-Dichloroethane | ND | | 0.00272 | 0.000347 |
| cis-1,2-Dichloroethene | ND | | 0.00272 | 0.000291 |
| 2-Butanone (MEK) | ND | | 0.014 | 0.00272 |
| Bromochloromethane | ND | | 0.00136 | 0.000345 |
| Chloroform | ND | | 0.00272 | 0.00068 |
| 1,1,1-Trichloroethane | ND | | 0.00136 | 0.000418 |
| Carbon tetrachloride | ND | | 0.00136 | 0.000272 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00136 | 0.000314 |
| Benzene | ND | | 0.00136 | 0.000117 |
| Trichloroethene | ND | | 0.00136 | 0.000203 |
| 1,2-Dichloropropane | ND | | 0.00136 | 0.000136 |
| Bromodichloromethane | ND | | 0.00136 | 0.000162 |
| cis-1,3-Dichloropropene | ND | | 0.00136 | 0.000208 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.014 | 0.000711 |

## VOLATILE ORGANICS

Lab ID: E23-05066-014
Client ID: SB6-419-CS/0
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7722.D 11/21/2023 17:56

GC/MS Column: DB-624
Sample wt/vol: 3.99g
Matrix-Units: Soil-mg/Kg
% Moisture: 7.80
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00136 | 0.00068 |
| trans-1,3-Dichloropropene | ND | | 0.00136 | 0.000151 |
| 1,1,2-Trichloroethane | ND | | 0.00136 | 0.000291 |
| Tetrachloroethene | ND | | 0.00136 | 0.00014 |
| 2-Hexanone | ND | | 0.014 | 0.00208 |
| Dibromochloromethane | ND | | 0.00136 | 0.000226 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00136 | 0.000252 |
| Chlorobenzene | ND | | 0.00136 | 0.000235 |
| Ethylbenzene | ND | | 0.00136 | 0.000148 |
| Total Xylenes | ND | | 0.00272 | 0.00019 |
| Styrene | ND | | 0.00136 | 0.000292 |
| Bromoform | ND | | 0.00136 | 0.000423 |
| Isopropylbenzene | ND | | 0.00136 | 0.00029 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00136 | 0.000711 |
| 1,3-Dichlorobenzene | ND | | 0.00136 | 0.00036 |
| 1,4-Dichlorobenzene | ND | | 0.00136 | 0.000422 |
| 1,2-Dichlorobenzene | ND | | 0.00136 | 0.000341 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00136 | 0.00112 |
| 1,2,4-Trichlorobenzene | ND | | 0.00136 | 0.000571 |
| 1,2,3-Trichlorobenzene | ND | | 0.00272 | 0.000432 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.00272 | 0.000812 |
| Methyl acetate | ND | | 0.00136 | 0.0011 |
| Cyclohexane | ND | | 0.0068 | 0.000245 |
| Methylcyclohexane | ND | | 0.00272 | 0.000234 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00136 | 0.000151 |
| Total Target Compounds (51): | 0.00487 | CJ | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05066-014
Client ID: SB6-419-CS/0
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Date File: L7722.D

GC/MS Column: DB-624
Sample wt/vol: 3.99g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 7.80

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Column/Septa bleed | 0 | J | 5.38 |

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05066-015
Client ID: SB8-401-CS/0
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7723.D 11/21/2023 18:24

GC/MS Column: DB-624
Sample wt/vol: 3.79g
Matrix-Units: Soil-mg/Kg
% Moisture: 6.20
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00141 | 0.000732 |
| Chloromethane | ND | | 0.00282 | 0.000447 |
| Vinyl chloride | ND | | 0.00141 | 0.000457 |
| Bromomethane | ND | | 0.00282 | 0.00123 |
| Chloroethane | ND | | 0.00141 | 0.000419 |
| Trichlorofluoromethane | ND | | 0.00141 | 0.000572 |
| 1,1-Dichloroethene | ND | | 0.00141 | 0.000494 |
| Acetone | ND | | 0.014 | 0.00705 |
| Carbon disulfide | ND | | 0.00141 | 0.000554 |
| Methylene chloride | 0.00449 | CJ | 0.00705 | 0.00423 |
| trans-1,2-Dichloroethene | ND | | 0.00282 | 0.000499 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00141 | 0.000307 |
| 1,1-Dichloroethane | ND | | 0.00282 | 0.00036 |
| cis-1,2-Dichloroethene | ND | | 0.00282 | 0.000302 |
| 2-Butanone (MEK) | ND | | 0.014 | 0.00282 |
| Bromochloromethane | ND | | 0.00141 | 0.000358 |
| Chloroform | ND | | 0.00282 | 0.000705 |
| 1,1,1-Trichloroethane | ND | | 0.00141 | 0.000433 |
| Carbon tetrachloride | ND | | 0.00141 | 0.000282 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00141 | 0.000326 |
| Benzene | ND | | 0.00141 | 0.000121 |
| Trichloroethene | ND | | 0.00141 | 0.00021 |
| 1,2-Dichloropropane | ND | | 0.00141 | 0.000141 |
| Bromodichloromethane | ND | | 0.00141 | 0.000168 |
| cis-1,3-Dichloropropene | ND | | 0.00141 | 0.000216 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.014 | 0.000737 |

## VOLATILE ORGANICS

Lab ID: E23-05066-015
Client ID: SB8-401-CS/0
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Data file: L7723.D 11/21/2023 18:24

GC/MS Column: DB-624
Sample wt/vol: 3.79g
Matrix-Units: Soil-mg/Kg
% Moisture: 6.20
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00141 | 0.000705 |
| trans-1,3-Dichloropropene | ND | | 0.00141 | 0.000157 |
| 1,1,2-Trichloroethane | ND | | 0.00141 | 0.000302 |
| Tetrachloroethene | ND | | 0.00141 | 0.000145 |
| 2-Hexanone | ND | | 0.014 | 0.00216 |
| Dibromochloromethane | ND | | 0.00141 | 0.000234 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00141 | 0.000261 |
| Chlorobenzene | ND | | 0.00141 | 0.000244 |
| Ethylbenzene | ND | | 0.00141 | 0.000154 |
| Total Xylenes | ND | | 0.00282 | 0.000197 |
| Styrene | ND | | 0.00141 | 0.000303 |
| Bromoform | ND | | 0.00141 | 0.000439 |
| Isopropylbenzene | ND | | 0.00141 | 0.0003 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00141 | 0.000737 |
| 1,3-Dichlorobenzene | ND | | 0.00141 | 0.000374 |
| 1,4-Dichlorobenzene | ND | | 0.00141 | 0.000437 |
| 1,2-Dichlorobenzene | ND | | 0.00141 | 0.000354 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00141 | 0.00116 |
| 1,2,4-Trichlorobenzene | ND | | 0.00141 | 0.000592 |
| 1,2,3-Trichlorobenzene | ND | | 0.00282 | 0.000448 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.00282 | 0.000842 |
| Methyl acetate | ND | | 0.00141 | 0.00114 |
| Cyclohexane | ND | | 0.00705 | 0.000254 |
| Methylcyclohexane | ND | | 0.00282 | 0.000243 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00141 | 0.000157 |
| Total Target Compounds (51): | 0.00449 | CJ | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05066-015
Client ID: SB8-401-CS/0
Date Received: 11/17/2023
Date Analyzed: 11/21/2023
Date File: L7723.D

GC/MS Column: DB-624
Sample wt/vol: 3.79g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 6.20

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| 000091-20-3 | Naphthalene | 0.021 | JN | 15.63 |
| 000090-12-0 | Naphthalene, 1-methyl- | 0.00818 | JN | 16.77 |

Total TICs = 0.030 JN

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: BLKS231121-01
Client ID: BLKS231121-01
Date Received: 11/16/2023
Date Analyzed: 11/21/2023
Data file: L7708.D 11/21/2023 11:21

GC/MS Column: DB-624
Sample wt/vol: 5.00g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.001 | 0.000519 |
| Chloromethane | ND | | 0.002 | 0.000317 |
| Vinyl chloride | ND | | 0.001 | 0.000324 |
| Bromomethane | ND | | 0.002 | 0.000872 |
| Chloroethane | ND | | 0.001 | 0.000297 |
| Trichlorofluoromethane | ND | | 0.001 | 0.000406 |
| 1,1-Dichloroethene | ND | | 0.001 | 0.00035 |
| Acetone | ND | | 0.010 | 0.005 |
| Carbon disulfide | ND | | 0.001 | 0.000393 |
| Methylene chloride | ND | | 0.005 | 0.003 |
| trans-1,2-Dichloroethene | ND | | 0.002 | 0.000354 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.001 | 0.000218 |
| 1,1-Dichloroethane | ND | | 0.002 | 0.000255 |
| cis-1,2-Dichloroethene | ND | | 0.002 | 0.000214 |
| 2-Butanone (MEK) | ND | | 0.010 | 0.002 |
| Bromochloromethane | ND | | 0.001 | 0.000254 |
| Chloroform | ND | | 0.002 | 0.0005 |
| 1,1,1-Trichloroethane | ND | | 0.001 | 0.000307 |
| Carbon tetrachloride | ND | | 0.001 | 0.0002 |
| 1,2-Dichloroethane (EDC) | ND | | 0.001 | 0.000231 |
| Benzene | ND | | 0.001 | 0.000086 |
| Trichloroethene | ND | | 0.001 | 0.000149 |
| 1,2-Dichloropropane | ND | | 0.001 | 0.0001 |
| Bromodichloromethane | ND | | 0.001 | 0.000119 |
| cis-1,3-Dichloropropene | ND | | 0.001 | 0.000153 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.010 | 0.000523 |

## VOLATILE ORGANICS

Lab ID: BLKS231121-01
Client ID: BLKS231121-01
Date Received: 11/16/2023
Date Analyzed: 11/21/2023
Data file: L7708.D 11/21/2023 11:21

GC/MS Column: DB-624
Sample wt/vol: 5.00g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.001 | 0.0005 |
| trans-1,3-Dichloropropene | ND | | 0.001 | 0.000111 |
| 1,1,2-Trichloroethane | ND | | 0.001 | 0.000214 |
| Tetrachloroethene | ND | | 0.001 | 0.000103 |
| 2-Hexanone | ND | | 0.010 | 0.00153 |
| Dibromochloromethane | ND | | 0.001 | 0.000166 |
| 1,2-Dibromoethane (EDB) | ND | | 0.001 | 0.000185 |
| Chlorobenzene | ND | | 0.001 | 0.000173 |
| Ethylbenzene | ND | | 0.001 | 0.000109 |
| Total Xylenes | ND | | 0.002 | 0.00014 |
| Styrene | ND | | 0.001 | 0.000215 |
| Bromoform | ND | | 0.001 | 0.000311 |
| Isopropylbenzene | ND | | 0.001 | 0.000213 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.001 | 0.000523 |
| 1,3-Dichlorobenzene | ND | | 0.001 | 0.000265 |
| 1,4-Dichlorobenzene | ND | | 0.001 | 0.00031 |
| 1,2-Dichlorobenzene | ND | | 0.001 | 0.000251 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.001 | 0.000824 |
| 1,2,4-Trichlorobenzene | ND | | 0.001 | 0.00042 |
| 1,2,3-Trichlorobenzene | ND | | 0.002 | 0.000318 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.002 | 0.000597 |
| Methyl acetate | ND | | 0.001 | 0.000808 |
| Cyclohexane | ND | | 0.005 | 0.00018 |
| Methylcyclohexane | ND | | 0.002 | 0.000172 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.001 | 0.000111 |

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: BLKS231121-01
Client ID: BLKS231121-01
Date Received: 11/16/2023
Date Analyzed: 11/21/2023
Date File: L7708.D

GC/MS Column: DB-624
Sample wt/vol: 5.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: NA

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Column/Septa bleed | 0 | J | 5.38 |

Total TICs = 0

D — Dilution Performed
J — Estimated concentration for TICs
N — Presumptive evidence of a compound from the use of GC/MS NIST library search

# VOLATILE ORGANICS

Lab ID: E23-05066-016
Client ID: TWP1
Date Received: 11/17/2023
Date Analyzed: 11/22/2023
Data file: E5298.D 11/22/2023 09:26
Data file: P5609.D^

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 1.00 | 0.552 |
| Chloromethane | ND | | 0.500 | 0.309 |
| Vinyl chloride | ND | | 0.500 | 0.352 |
| Bromomethane | ND | | 0.500 | 0.386 |
| Chloroethane | ND | | 0.500 | 0.324 |
| Trichlorofluoromethane | ND | | 1.00 | 0.503 |
| 1,1-Dichloroethene | ND | | 0.500 | 0.363 |
| Acetone | ND | | 1.00 | 1.00 |
| Carbon disulfide | ND | | 0.500 | 0.403 |
| Methylene chloride | ND | | 1.00 | 0.500 |
| trans-1,2-Dichloroethene | ND | | 0.500 | 0.372 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.500 | 0.245 |
| 1,1-Dichloroethane | ND | | 0.500 | 0.285 |
| cis-1,2-Dichloroethene | ND | | 0.500 | 0.277 |
| 2-Butanone (MEK) | ND | | 1.00 | 0.802 |
| Bromochloromethane | ND | | 0.500 | 0.379 |
| Chloroform | 1.91 | | 0.500 | 0.285 |
| 1,1,1-Trichloroethane | ND | | 0.500 | 0.381 |
| Carbon tetrachloride | ND | | 0.500 | 0.349 |
| 1,2-Dichloroethane (EDC) | ND | | 0.500 | 0.273 |
| Benzene | ND | | 0.500 | 0.270 |
| Trichloroethene | ND | | 0.500 | 0.347 |
| 1,2-Dichloropropane | ND | | 0.500 | 0.272 |
| Bromodichloromethane | ND | | 0.500 | 0.258 |
| cis-1,3-Dichloropropene | ND | | 0.500 | 0.264 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 1.00 | 0.611 |

## VOLATILE ORGANICS

Lab ID: E23-05066-016
Client ID: TWP1
Date Received: 11/17/2023
Date Analyzed: 11/22/2023
Data file: E5298.D 11/22/2023 09:26
Data file: P5609.D^

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.500 | 0.302 |
| trans-1,3-Dichloropropene | ND | | 0.500 | 0.330 |
| 1,1,2-Trichloroethane | ND | | 0.500 | 0.313 |
| Tetrachloroethene | 0.585 | | 0.500 | 0.365 |
| 2-Hexanone | ND | | 1.00 | 0.818 |
| Dibromochloromethane | ND | | 0.500 | 0.263 |
| 1,2-Dibromoethane (EDB)^ | ND | | 0.0048 | 0.00364 |
| Chlorobenzene | ND | | 0.500 | 0.304 |
| Ethylbenzene | ND | | 0.500 | 0.313 |
| Total Xylenes | ND | | 1.00 | 0.345 |
| Styrene | ND | | 0.500 | 0.317 |
| Bromoform | ND | | 0.500 | 0.328 |
| Isopropylbenzene | ND | | 0.500 | 0.332 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.500 | 0.284 |
| 1,3-Dichlorobenzene | ND | | 0.500 | 0.386 |
| 1,4-Dichlorobenzene | ND | | 0.500 | 0.397 |
| 1,2-Dichlorobenzene | ND | | 0.500 | 0.354 |
| 1,2-Dibromo-3-chloropropane^ | ND | | 0.0048 | 0.00364 |
| 1,2,4-Trichlorobenzene | ND | | 0.500 | 0.358 |
| 1,2,3-Trichlorobenzene | ND | | 0.500 | 0.406 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.00 | 0.538 |
| Methyl acetate | ND | | 0.500 | 0.345 |
| Cyclohexane | ND | | 1.00 | 0.469 |
| Methylcyclohexane | ND | | 0.500 | 0.421 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.500 | 0.264 |
| Total Target Compounds (51): | 2.50 | | | |

^ --- Results reported from SW-846 8011
D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05066-016
Client ID: TWP1
Date Received: 11/17/2023
Date Analyzed: 11/22/2023
Date File: E5298.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|

No peaks detected

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

# VOLATILE ORGANICS

Lab ID: E23-05066-017
Client ID: TWP4
Date Received: 11/17/2023
Date Analyzed: 11/22/2023
Data file: E5299.D 11/22/2023 09:53
Data file: P5610.D^

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | 0.581 | J | 1.00 | 0.552 |
| Chloromethane | ND | | 0.500 | 0.309 |
| Vinyl chloride | ND | | 0.500 | 0.352 |
| Bromomethane | ND | | 0.500 | 0.386 |
| Chloroethane | ND | | 0.500 | 0.324 |
| Trichlorofluoromethane | ND | | 1.00 | 0.503 |
| 1,1-Dichloroethene | ND | | 0.500 | 0.363 |
| Acetone | ND | | 1.00 | 1.00 |
| Carbon disulfide | ND | | 0.500 | 0.403 |
| Methylene chloride | ND | | 1.00 | 0.500 |
| trans-1,2-Dichloroethene | ND | | 0.500 | 0.372 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.500 | 0.245 |
| 1,1-Dichloroethane | ND | | 0.500 | 0.285 |
| cis-1,2-Dichloroethene | ND | | 0.500 | 0.277 |
| 2-Butanone (MEK) | ND | | 1.00 | 0.802 |
| Bromochloromethane | ND | | 0.500 | 0.379 |
| Chloroform | 2.11 | | 0.500 | 0.285 |
| 1,1,1-Trichloroethane | ND | | 0.500 | 0.381 |
| Carbon tetrachloride | ND | | 0.500 | 0.349 |
| 1,2-Dichloroethane (EDC) | ND | | 0.500 | 0.273 |
| Benzene | ND | | 0.500 | 0.270 |
| Trichloroethene | ND | | 0.500 | 0.347 |
| 1,2-Dichloropropane | ND | | 0.500 | 0.272 |
| Bromodichloromethane | ND | | 0.500 | 0.258 |
| cis-1,3-Dichloropropene | ND | | 0.500 | 0.264 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 1.00 | 0.611 |

## VOLATILE ORGANICS

Lab ID: E23-05066-017
Client ID: TWP4
Date Received: 11/17/2023
Date Analyzed: 11/22/2023
Data file: E5299.D 11/22/2023 09:53
Data file: P5610.D^

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.500 | 0.302 |
| trans-1,3-Dichloropropene | ND | | 0.500 | 0.330 |
| 1,1,2-Trichloroethane | ND | | 0.500 | 0.313 |
| Tetrachloroethene | ND | | 0.500 | 0.365 |
| 2-Hexanone | ND | | 1.00 | 0.818 |
| Dibromochloromethane | ND | | 0.500 | 0.263 |
| 1,2-Dibromoethane (EDB)^ | ND | | 0.00476 | 0.00364 |
| Chlorobenzene | ND | | 0.500 | 0.304 |
| Ethylbenzene | ND | | 0.500 | 0.313 |
| Total Xylenes | ND | | 1.00 | 0.345 |
| Styrene | ND | | 0.500 | 0.317 |
| Bromoform | ND | | 0.500 | 0.328 |
| Isopropylbenzene | ND | | 0.500 | 0.332 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.500 | 0.284 |
| 1,3-Dichlorobenzene | ND | | 0.500 | 0.386 |
| 1,4-Dichlorobenzene | ND | | 0.500 | 0.397 |
| 1,2-Dichlorobenzene | ND | | 0.500 | 0.354 |
| 1,2-Dibromo-3-chloropropane^ | ND | | 0.00476 | 0.00364 |
| 1,2,4-Trichlorobenzene | ND | | 0.500 | 0.358 |
| 1,2,3-Trichlorobenzene | ND | | 0.500 | 0.406 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.00 | 0.538 |
| Methyl acetate | ND | | 0.500 | 0.345 |
| Cyclohexane | ND | | 1.00 | 0.469 |
| Methylcyclohexane | ND | | 0.500 | 0.421 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.500 | 0.264 |
| Total Target Compounds (51): | 2.69 | J | | |

^ --- Results reported from SW-846 8011
D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05066-017
Client ID: TWP4
Date Received: 11/17/2023
Date Analyzed: 11/22/2023
Date File: E5299.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | No peaks detected | | | |

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

# VOLATILE ORGANICS

Lab ID: E23-05066-018
Client ID: TWP2
Date Received: 11/17/2023
Date Analyzed: 11/22/2023
Data file: E5300.D 11/22/2023 10:20
Data file: P5611.D^

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 1.00 | 0.552 |
| Chloromethane | ND | | 0.500 | 0.309 |
| Vinyl chloride | ND | | 0.500 | 0.352 |
| Bromomethane | ND | | 0.500 | 0.386 |
| Chloroethane | ND | | 0.500 | 0.324 |
| Trichlorofluoromethane | ND | | 1.00 | 0.503 |
| 1,1-Dichloroethene | ND | | 0.500 | 0.363 |
| Acetone | ND | | 1.00 | 1.00 |
| Carbon disulfide | ND | | 0.500 | 0.403 |
| Methylene chloride | ND | | 1.00 | 0.500 |
| trans-1,2-Dichloroethene | ND | | 0.500 | 0.372 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.500 | 0.245 |
| 1,1-Dichloroethane | ND | | 0.500 | 0.285 |
| cis-1,2-Dichloroethene | ND | | 0.500 | 0.277 |
| 2-Butanone (MEK) | ND | | 1.00 | 0.802 |
| Bromochloromethane | ND | | 0.500 | 0.379 |
| Chloroform | ND | | 0.500 | 0.285 |
| 1,1,1-Trichloroethane | ND | | 0.500 | 0.381 |
| Carbon tetrachloride | ND | | 0.500 | 0.349 |
| 1,2-Dichloroethane (EDC) | ND | | 0.500 | 0.273 |
| Benzene | ND | | 0.500 | 0.270 |
| Trichloroethene | 0.585 | | 0.500 | 0.347 |
| 1,2-Dichloropropane | ND | | 0.500 | 0.272 |
| Bromodichloromethane | ND | | 0.500 | 0.258 |
| cis-1,3-Dichloropropene | ND | | 0.500 | 0.264 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 1.00 | 0.611 |

## VOLATILE ORGANICS

Lab ID: E23-05066-018
Client ID: TWP2
Date Received: 11/17/2023
Date Analyzed: 11/22/2023
Data file: E5300.D 11/22/2023 10:20
Data file: P5611.D^

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.500 | 0.302 |
| trans-1,3-Dichloropropene | ND | | 0.500 | 0.330 |
| 1,1,2-Trichloroethane | ND | | 0.500 | 0.313 |
| Tetrachloroethene | 2.87 | | 0.500 | 0.365 |
| 2-Hexanone | ND | | 1.00 | 0.818 |
| Dibromochloromethane | ND | | 0.500 | 0.263 |
| 1,2-Dibromoethane (EDB)^ | ND | | 0.00474 | 0.00364 |
| Chlorobenzene | ND | | 0.500 | 0.304 |
| Ethylbenzene | ND | | 0.500 | 0.313 |
| Total Xylenes | ND | | 1.00 | 0.345 |
| Styrene | ND | | 0.500 | 0.317 |
| Bromoform | ND | | 0.500 | 0.328 |
| Isopropylbenzene | ND | | 0.500 | 0.332 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.500 | 0.284 |
| 1,3-Dichlorobenzene | ND | | 0.500 | 0.386 |
| 1,4-Dichlorobenzene | ND | | 0.500 | 0.397 |
| 1,2-Dichlorobenzene | ND | | 0.500 | 0.354 |
| 1,2-Dibromo-3-chloropropane^ | ND | | 0.00474 | 0.00364 |
| 1,2,4-Trichlorobenzene | ND | | 0.500 | 0.358 |
| 1,2,3-Trichlorobenzene | ND | | 0.500 | 0.406 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.00 | 0.538 |
| Methyl acetate | ND | | 0.500 | 0.345 |
| Cyclohexane | ND | | 1.00 | 0.469 |
| Methylcyclohexane | ND | | 0.500 | 0.421 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.500 | 0.264 |
| Total Target Compounds (51): | 3.46 | | | |

^ --- Results reported from SW-846 8011
D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05066-018
Client ID: TWP2
Date Received: 11/17/2023
Date Analyzed: 11/22/2023
Date File: E5300.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | No peaks detected | | | |

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05066-019
Client ID: TWP5
Date Received: 11/17/2023
Date Analyzed: 11/22/2023
Data file: E5301.D 11/22/2023 10:48
Data file: P5612.D^

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 1.00 | 0.552 |
| Chloromethane | ND | | 0.500 | 0.309 |
| Vinyl chloride | ND | | 0.500 | 0.352 |
| Bromomethane | ND | | 0.500 | 0.386 |
| Chloroethane | ND | | 0.500 | 0.324 |
| Trichlorofluoromethane | ND | | 1.00 | 0.503 |
| 1,1-Dichloroethene | ND | | 0.500 | 0.363 |
| Acetone | ND | | 1.00 | 1.00 |
| Carbon disulfide | ND | | 0.500 | 0.403 |
| Methylene chloride | ND | | 1.00 | 0.500 |
| trans-1,2-Dichloroethene | ND | | 0.500 | 0.372 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.500 | 0.245 |
| 1,1-Dichloroethane | ND | | 0.500 | 0.285 |
| cis-1,2-Dichloroethene | ND | | 0.500 | 0.277 |
| 2-Butanone (MEK) | ND | | 1.00 | 0.802 |
| Bromochloromethane | ND | | 0.500 | 0.379 |
| Chloroform | ND | | 0.500 | 0.285 |
| 1,1,1-Trichloroethane | ND | | 0.500 | 0.381 |
| Carbon tetrachloride | ND | | 0.500 | 0.349 |
| 1,2-Dichloroethane (EDC) | ND | | 0.500 | 0.273 |
| Benzene | ND | | 0.500 | 0.270 |
| Trichloroethene | 0.364 | J | 0.500 | 0.347 |
| 1,2-Dichloropropane | ND | | 0.500 | 0.272 |
| Bromodichloromethane | ND | | 0.500 | 0.258 |
| cis-1,3-Dichloropropene | ND | | 0.500 | 0.264 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 1.00 | 0.611 |

## VOLATILE ORGANICS

Lab ID: E23-05066-019
Client ID: TWP5
Date Received: 11/17/2023
Date Analyzed: 11/22/2023
Data file: E5301.D 11/22/2023 10:48
Data file: P5612.D^

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.500 | 0.302 |
| trans-1,3-Dichloropropene | ND | | 0.500 | 0.330 |
| 1,1,2-Trichloroethane | ND | | 0.500 | 0.313 |
| Tetrachloroethene | 4.82 | | 0.500 | 0.365 |
| 2-Hexanone | ND | | 1.00 | 0.818 |
| Dibromochloromethane | ND | | 0.500 | 0.263 |
| 1,2-Dibromoethane (EDB)^ | ND | | 0.0048 | 0.00364 |
| Chlorobenzene | ND | | 0.500 | 0.304 |
| Ethylbenzene | ND | | 0.500 | 0.313 |
| Total Xylenes | ND | | 1.00 | 0.345 |
| Styrene | ND | | 0.500 | 0.317 |
| Bromoform | ND | | 0.500 | 0.328 |
| Isopropylbenzene | ND | | 0.500 | 0.332 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.500 | 0.284 |
| 1,3-Dichlorobenzene | ND | | 0.500 | 0.386 |
| 1,4-Dichlorobenzene | ND | | 0.500 | 0.397 |
| 1,2-Dichlorobenzene | ND | | 0.500 | 0.354 |
| 1,2-Dibromo-3-chloropropane^ | ND | | 0.0048 | 0.00364 |
| 1,2,4-Trichlorobenzene | ND | | 0.500 | 0.358 |
| 1,2,3-Trichlorobenzene | ND | | 0.500 | 0.406 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.00 | 0.538 |
| Methyl acetate | ND | | 0.500 | 0.345 |
| Cyclohexane | ND | | 1.00 | 0.469 |
| Methylcyclohexane | ND | | 0.500 | 0.421 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.500 | 0.264 |
| Total Target Compounds (51): | 5.18 | J | | |

^ --- Results reported from SW-846 8011
D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05066-019
Client ID: TWP5
Date Received: 11/17/2023
Date Analyzed: 11/22/2023
Date File: E5301.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | No peaks detected | | | |

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: BLKA231122-01
Client ID: BLKA231122-01
Date Received: NA
Date Analyzed: 11/22/2023
Data file: E5297.D 11/22/2023 08:58

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 1.00 | 0.552 |
| Chloromethane | ND | | 0.500 | 0.309 |
| Vinyl chloride | ND | | 0.500 | 0.352 |
| Bromomethane | ND | | 0.500 | 0.386 |
| Chloroethane | ND | | 0.500 | 0.324 |
| Trichlorofluoromethane | ND | | 1.00 | 0.503 |
| 1,1-Dichloroethene | ND | | 0.500 | 0.363 |
| Acetone | ND | | 1.00 | 1.00 |
| Carbon disulfide | ND | | 0.500 | 0.403 |
| Methylene chloride | ND | | 1.00 | 0.500 |
| trans-1,2-Dichloroethene | ND | | 0.500 | 0.372 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.500 | 0.245 |
| 1,1-Dichloroethane | ND | | 0.500 | 0.285 |
| cis-1,2-Dichloroethene | ND | | 0.500 | 0.277 |
| 2-Butanone (MEK) | ND | | 1.00 | 0.802 |
| Bromochloromethane | ND | | 0.500 | 0.379 |
| Chloroform | ND | | 0.500 | 0.285 |
| 1,1,1-Trichloroethane | ND | | 0.500 | 0.381 |
| Carbon tetrachloride | ND | | 0.500 | 0.349 |
| 1,2-Dichloroethane (EDC) | ND | | 0.500 | 0.273 |
| Benzene | ND | | 0.500 | 0.270 |
| Trichloroethene | ND | | 0.500 | 0.347 |
| 1,2-Dichloropropane | ND | | 0.500 | 0.272 |
| Bromodichloromethane | ND | | 0.500 | 0.258 |
| cis-1,3-Dichloropropene | ND | | 0.500 | 0.264 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 1.00 | 0.611 |

## VOLATILE ORGANICS

Lab ID: BLKA231122-01
Client ID: BLKA231122-01
Date Received: NA
Date Analyzed: 11/22/2023
Data file: E5297.D 11/22/2023 08:58

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.500 | 0.302 |
| trans-1,3-Dichloropropene | ND | | 0.500 | 0.330 |
| 1,1,2-Trichloroethane | ND | | 0.500 | 0.313 |
| Tetrachloroethene | ND | | 0.500 | 0.365 |
| 2-Hexanone | ND | | 1.00 | 0.818 |
| Dibromochloromethane | ND | | 0.500 | 0.263 |
| 1,2-Dibromoethane (EDB) | ND | | 0.500 | 0.289 |
| Chlorobenzene | ND | | 0.500 | 0.304 |
| Ethylbenzene | ND | | 0.500 | 0.313 |
| Total Xylenes | ND | | 1.00 | 0.345 |
| Styrene | ND | | 0.500 | 0.317 |
| Bromoform | ND | | 0.500 | 0.328 |
| Isopropylbenzene | ND | | 0.500 | 0.332 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.500 | 0.284 |
| 1,3-Dichlorobenzene | ND | | 0.500 | 0.386 |
| 1,4-Dichlorobenzene | ND | | 0.500 | 0.397 |
| 1,2-Dichlorobenzene | ND | | 0.500 | 0.354 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.500 | 0.410 |
| 1,2,4-Trichlorobenzene | ND | | 0.500 | 0.358 |
| 1,2,3-Trichlorobenzene | ND | | 0.500 | 0.406 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.00 | 0.538 |
| Methyl acetate | ND | | 0.500 | 0.345 |
| Cyclohexane | ND | | 1.00 | 0.469 |
| Methylcyclohexane | ND | | 0.500 | 0.421 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.500 | 0.264 |

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: BLKA231122-01
Client ID: BLKA231122-01
Date Received: NA
Date Analyzed: 11/22/2023
Data file: E5297.D 11/22/2023 08:58

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | No peaks detected | | | |

Total TICs = 0

## Volatiles (8011)

Lab ID: BLKA231121-01
Client ID: 8011
Date Received: NA
Date Extracted: 11/21/2023
Date Analyzed: 11/21/2023
Data file: P5601.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 35.0ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ND | | 0.00486 | 0.00364 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00486 | 0.00364 |
| 1,2,3-Trichloropropane | ND | | 0.00971 | 0.00729 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-001
Client ID: SB10A/0-
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3865.D 11/22/2023 13:49

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 13.6
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.077 | 0.029 |
| Phenol | ND | | 0.038 | 0.00867 |
| Bis(2-chloroethyl) ether | ND | | 0.038 | 0.014 |
| 2-Chlorophenol | ND | | 0.038 | 0.013 |
| 2-Methylphenol | ND | | 0.038 | 0.017 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.038 | 0.00956 |
| 4-Methylphenol ** | ND | | 0.038 | 0.018 |
| N-Nitrosodi-n-propylamine | ND | | 0.038 | 0.024 |
| Acetophenone | ND | | 0.038 | 0.023 |
| 1,4-Dioxane | ND | | 0.038 | 0.025 |
| Hexachloroethane | ND | | 0.038 | 0.016 |
| Nitrobenzene | ND | | 0.038 | 0.0093 |
| Isophorone | ND | | 0.038 | 0.016 |
| 2-Nitrophenol | ND | | 0.077 | 0.023 |
| 2,4-Dimethylphenol | ND | | 0.038 | 0.011 |
| Bis(2-chloroethoxy) methane | ND | | 0.038 | 0.00854 |
| 2,4-Dichlorophenol | ND | | 0.038 | 0.010 |
| Naphthalene | 0.038 | J | 0.038 | 0.00559 |
| 4-Chloroaniline | ND | | 0.038 | 0.015 |
| Hexachlorobutadiene | ND | | 0.038 | 0.011 |
| Caprolactam | ND | | 0.077 | 0.028 |
| 4-Chloro-3-methylphenol | ND | | 0.038 | 0.015 |
| 2-Methylnaphthalene | ND | | 0.038 | 0.014 |
| Hexachlorocyclopentadiene | ND | | 0.077 | 0.067 |
| 2,4,6-Trichlorophenol | ND | | 0.038 | 0.011 |
| 2,4,5-Trichlorophenol | ND | | 0.038 | 0.029 |
| 1,1'-Biphenyl | ND | | 0.038 | 0.0057 |
| 2-Chloronaphthalene | ND | | 0.038 | 0.00885 |
| 2-Nitroaniline | ND | | 0.038 | 0.020 |
| Dimethyl phthalate | ND | | 0.038 | 0.00879 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-001
Client ID: SB10A/0-
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3865.D 11/22/2023 13:49

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 13.6
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.077 | 0.044 |
| Acenaphthylene | 1.04 | | 0.038 | 0.00839 |
| 3-Nitroaniline | ND | | 0.038 | 0.024 |
| Acenaphthene | ND | | 0.038 | 0.00757 |
| 2,4-Dinitrophenol | ND | | 0.077 | 0.016 |
| 4-Nitrophenol | ND | | 0.077 | 0.039 |
| 2,4-Dinitrotoluene | ND | | 0.077 | 0.043 |
| Dibenzofuran | 0.079 | | 0.038 | 0.00501 |
| Diethyl phthalate | ND | | 0.038 | 0.012 |
| Fluorene | 0.117 | | 0.038 | 0.010 |
| 4-Chlorophenyl phenyl ether | ND | | 0.038 | 0.00842 |
| 4-Nitroaniline | ND | | 0.038 | 0.023 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.038 | 0.013 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.038 | 0.013 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.077 | 0.016 |
| N-Nitrosodiphenylamine | ND | | 0.038 | 0.00786 |
| 4-Bromophenyl phenyl ether | ND | | 0.038 | 0.011 |
| Hexachlorobenzene | ND | | 0.038 | 0.012 |
| Atrazine | ND | | 0.038 | 0.023 |
| Pentachlorophenol | ND | | 0.038 | 0.017 |
| Phenanthrene | 2.06 | | 0.038 | 0.00627 |
| Anthracene | 0.400 | | 0.038 | 0.0039 |
| Carbazole | 0.371 | | 0.038 | 0.00893 |
| Di-n-butyl phthalate | ND | | 0.038 | 0.016 |
| Fluoranthene | 4.03 | | 0.038 | 0.012 |
| Pyrene | 3.16 | | 0.038 | 0.00892 |
| Butyl benzyl phthalate | ND | | 0.038 | 0.017 |
| 3,3'-Dichlorobenzidine | ND | | 0.038 | 0.027 |
| Benzo[a]anthracene | 1.76 | | 0.038 | 0.014 |
| Chrysene | 1.81 | | 0.038 | 0.011 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.038 | 0.025 |
| Di-n-octyl phthalate | ND | | 0.038 | 0.028 |
| Benzo[b]fluoranthene | 3.15 | | 0.038 | 0.019 |
| Benzo[k]fluoranthene | 1.63 | | 0.038 | 0.027 |
| Benzo[a]pyrene | 2.16 | | 0.038 | 0.019 |
| Indeno[1,2,3-cd]pyrene | 2.50 | | 0.038 | 0.025 |
| Dibenz[a,h]anthracene | 0.976 | | 0.038 | 0.015 |
| Benzo[g,h,i]perylene | 3.34 | | 0.038 | 0.029 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.077 | 0.043 |
| Total Target Compounds (69): | 28.6 | J | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05066-001
Client ID: SB10A/0-
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Date File: A3865.D

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 13.6

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Unknown SV | 0.199 | J | 7.26 |
| | Unknown SV | 0.326 | J | 8.28 |

Total TICs = 0.525 J

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search
B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-002
Client ID: SB10B/10
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3857.D 11/22/2023 11:38

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 10.4
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.074 | 0.028 |
| Phenol | ND | | 0.037 | 0.00836 |
| Bis(2-chloroethyl) ether | ND | | 0.037 | 0.013 |
| 2-Chlorophenol | ND | | 0.037 | 0.012 |
| 2-Methylphenol | ND | | 0.037 | 0.017 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.037 | 0.00922 |
| 4-Methylphenol ** | ND | | 0.037 | 0.017 |
| N-Nitrosodi-n-propylamine | ND | | 0.037 | 0.023 |
| Acetophenone | ND | | 0.037 | 0.023 |
| 1,4-Dioxane | ND | | 0.037 | 0.024 |
| Hexachloroethane | ND | | 0.037 | 0.015 |
| Nitrobenzene | ND | | 0.037 | 0.00897 |
| Isophorone | ND | | 0.037 | 0.016 |
| 2-Nitrophenol | ND | | 0.074 | 0.022 |
| 2,4-Dimethylphenol | ND | | 0.037 | 0.011 |
| Bis(2-chloroethoxy) methane | ND | | 0.037 | 0.00824 |
| 2,4-Dichlorophenol | ND | | 0.037 | 0.00983 |
| Naphthalene | ND | | 0.037 | 0.00539 |
| 4-Chloroaniline | ND | | 0.037 | 0.014 |
| Hexachlorobutadiene | ND | | 0.037 | 0.010 |
| Caprolactam | ND | | 0.074 | 0.027 |
| 4-Chloro-3-methylphenol | ND | | 0.037 | 0.014 |
| 2-Methylnaphthalene | ND | | 0.037 | 0.013 |
| Hexachlorocyclopentadiene | ND | | 0.074 | 0.064 |
| 2,4,6-Trichlorophenol | ND | | 0.037 | 0.010 |
| 2,4,5-Trichlorophenol | ND | | 0.037 | 0.028 |
| 1,1'-Biphenyl | ND | | 0.037 | 0.0055 |
| 2-Chloronaphthalene | ND | | 0.037 | 0.00854 |
| 2-Nitroaniline | ND | | 0.037 | 0.020 |
| Dimethyl phthalate | ND | | 0.037 | 0.00848 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-002
Client ID: SB10B/10
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3857.D 11/22/2023 11:38

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 10.4
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.074 | 0.042 |
| Acenaphthylene | ND | | 0.037 | 0.00809 |
| 3-Nitroaniline | ND | | 0.037 | 0.023 |
| Acenaphthene | ND | | 0.037 | 0.0073 |
| 2,4-Dinitrophenol | ND | | 0.074 | 0.015 |
| 4-Nitrophenol | ND | | 0.074 | 0.037 |
| 2,4-Dinitrotoluene | ND | | 0.074 | 0.042 |
| Dibenzofuran | ND | | 0.037 | 0.00483 |
| Diethyl phthalate | ND | | 0.037 | 0.012 |
| Fluorene | ND | | 0.037 | 0.00995 |
| 4-Chlorophenyl phenyl ether | ND | | 0.037 | 0.00812 |
| 4-Nitroaniline | ND | | 0.037 | 0.022 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.037 | 0.012 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.037 | 0.013 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.074 | 0.016 |
| N-Nitrosodiphenylamine | ND | | 0.037 | 0.00758 |
| 4-Bromophenyl phenyl ether | ND | | 0.037 | 0.010 |
| Hexachlorobenzene | ND | | 0.037 | 0.012 |
| Atrazine | ND | | 0.037 | 0.022 |
| Pentachlorophenol | ND | | 0.037 | 0.016 |
| Phenanthrene | ND | | 0.037 | 0.00605 |
| Anthracene | ND | | 0.037 | 0.00376 |
| Carbazole | ND | | 0.037 | 0.00862 |
| Di-n-butyl phthalate | ND | | 0.037 | 0.015 |
| Fluoranthene | ND | | 0.037 | 0.012 |
| Pyrene | ND | | 0.037 | 0.0086 |
| Butyl benzyl phthalate | ND | | 0.037 | 0.016 |
| 3,3'-Dichlorobenzidine | ND | | 0.037 | 0.026 |
| Benzo[a]anthracene | ND | | 0.037 | 0.014 |
| Chrysene | ND | | 0.037 | 0.010 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.037 | 0.024 |
| Di-n-octyl phthalate | ND | | 0.037 | 0.027 |
| Benzo[b]fluoranthene | ND | | 0.037 | 0.018 |
| Benzo[k]fluoranthene | ND | | 0.037 | 0.026 |
| Benzo[a]pyrene | ND | | 0.037 | 0.018 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.037 | 0.024 |
| Dibenz[a,h]anthracene | ND | | 0.037 | 0.015 |
| Benzo[g,h,i]perylene | ND | | 0.037 | 0.028 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.074 | 0.042 |

Total Target Compounds (69): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
## Tentatively Identified Compounds

Lab ID: E23-05066-002
Client ID: SB10B/10
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Date File: A3857.D

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 10.4

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | No peaks detected | | | |

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-003
Client ID: SB2A/0-2
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3869.D 11/22/2023 14:52

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 13.9
Dilution Factor: 10

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.769 | 0.289 |
| Phenol | ND | | 0.385 | 0.087 |
| Bis(2-chloroethyl) ether | ND | | 0.385 | 0.135 |
| 2-Chlorophenol | ND | | 0.385 | 0.125 |
| 2-Methylphenol | ND | | 0.385 | 0.173 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.385 | 0.096 |
| 4-Methylphenol ** | ND | | 0.385 | 0.175 |
| N-Nitrosodi-n-propylamine | ND | | 0.385 | 0.239 |
| Acetophenone | ND | | 0.385 | 0.234 |
| 1,4-Dioxane | ND | | 0.385 | 0.249 |
| Hexachloroethane | ND | | 0.385 | 0.160 |
| Nitrobenzene | ND | | 0.385 | 0.093 |
| Isophorone | ND | | 0.385 | 0.162 |
| 2-Nitrophenol | ND | | 0.769 | 0.229 |
| 2,4-Dimethylphenol | ND | | 0.385 | 0.113 |
| Bis(2-chloroethoxy) methane | ND | | 0.385 | 0.086 |
| 2,4-Dichlorophenol | ND | | 0.385 | 0.102 |
| Naphthalene | 0.424 | D | 0.385 | 0.056 |
| 4-Chloroaniline | ND | | 0.385 | 0.148 |
| Hexachlorobutadiene | ND | | 0.385 | 0.107 |
| Caprolactam | ND | | 0.769 | 0.283 |
| 4-Chloro-3-methylphenol | ND | | 0.385 | 0.149 |
| 2-Methylnaphthalene | 0.197 | DJ | 0.385 | 0.135 |
| Hexachlorocyclopentadiene | ND | | 0.769 | 0.668 |
| 2,4,6-Trichlorophenol | ND | | 0.385 | 0.106 |
| 2,4,5-Trichlorophenol | ND | | 0.385 | 0.292 |
| 1,1'-Biphenyl | ND | | 0.385 | 0.057 |
| 2-Chloronaphthalene | ND | | 0.385 | 0.089 |
| 2-Nitroaniline | ND | | 0.385 | 0.204 |
| Dimethyl phthalate | ND | | 0.385 | 0.088 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-003
Client ID: SB2A/0-2
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3869.D 11/22/2023 14:52

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 13.9
Dilution Factor: 10

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.769 | 0.442 |
| Acenaphthylene | 2.25 | D | 0.385 | 0.084 |
| 3-Nitroaniline | ND | | 0.385 | 0.243 |
| Acenaphthene | 0.788 | D | 0.385 | 0.076 |
| 2,4-Dinitrophenol | ND | | 0.769 | 0.158 |
| 4-Nitrophenol | ND | | 0.769 | 0.388 |
| 2,4-Dinitrotoluene | ND | | 0.769 | 0.435 |
| Dibenzofuran | 0.571 | D | 0.385 | 0.050 |
| Diethyl phthalate | ND | | 0.385 | 0.120 |
| Fluorene | 0.933 | D | 0.385 | 0.104 |
| 4-Chlorophenyl phenyl ether | ND | | 0.385 | 0.085 |
| 4-Nitroaniline | ND | | 0.385 | 0.228 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.385 | 0.129 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.385 | 0.132 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.769 | 0.163 |
| N-Nitrosodiphenylamine | ND | | 0.385 | 0.079 |
| 4-Bromophenyl phenyl ether | ND | | 0.385 | 0.107 |
| Hexachlorobenzene | ND | | 0.385 | 0.120 |
| Atrazine | ND | | 0.385 | 0.229 |
| Pentachlorophenol | ND | | 0.385 | 0.170 |
| Phenanthrene | 14.8 | D | 0.385 | 0.063 |
| Anthracene | 3.27 | D | 0.385 | 0.039 |
| Carbazole | 1.23 | D | 0.385 | 0.090 |
| Di-n-butyl phthalate | ND | | 0.385 | 0.156 |
| Fluoranthene | 24.8 | D | 0.385 | 0.124 |
| Pyrene | 20.5 | D | 0.385 | 0.090 |
| Butyl benzyl phthalate | ND | | 0.385 | 0.171 |
| 3,3'-Dichlorobenzidine | ND | | 0.385 | 0.272 |
| Benzo[a]anthracene | 10.6 | D | 0.385 | 0.140 |
| Chrysene | 9.92 | D | 0.385 | 0.106 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.385 | 0.247 |
| Di-n-octyl phthalate | ND | | 0.385 | 0.282 |
| Benzo[b]fluoranthene | 9.82 | D | 0.385 | 0.190 |
| Benzo[k]fluoranthene | 9.27 | D | 0.385 | 0.266 |
| Benzo[a]pyrene | 9.82 | D | 0.385 | 0.186 |
| Indeno[1,2,3-cd]pyrene | 4.97 | D | 0.385 | 0.246 |
| Dibenz[a,h]anthracene | 2.34 | D | 0.385 | 0.154 |
| Benzo[g,h,i]perylene | 5.20 | D | 0.385 | 0.290 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.769 | 0.435 |
| Total Target Compounds (69): | 132 | DJ | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05066-003
Client ID: SB2A/0-2
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Date File: A3869.D

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 10
% Moisture: 13.9

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| 000192-97-2 | Benzo[e]pyrene | 3.54 | DJN | 8.42 |

Total TICs = 3.54 DJN

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-004
Client ID: SB2B/10-
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3858.D 11/22/2023 11:56

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 4.50
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.070 | 0.026 |
| Phenol | ND | | 0.035 | 0.00789 |
| Bis(2-chloroethyl) ether | ND | | 0.035 | 0.012 |
| 2-Chlorophenol | ND | | 0.035 | 0.011 |
| 2-Methylphenol | ND | | 0.035 | 0.016 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.035 | 0.0087 |
| 4-Methylphenol ** | ND | | 0.035 | 0.016 |
| N-Nitrosodi-n-propylamine | ND | | 0.035 | 0.022 |
| Acetophenone | ND | | 0.035 | 0.021 |
| 1,4-Dioxane | ND | | 0.035 | 0.023 |
| Hexachloroethane | ND | | 0.035 | 0.015 |
| Nitrobenzene | ND | | 0.035 | 0.00847 |
| Isophorone | ND | | 0.035 | 0.015 |
| 2-Nitrophenol | ND | | 0.070 | 0.021 |
| 2,4-Dimethylphenol | ND | | 0.035 | 0.010 |
| Bis(2-chloroethoxy) methane | ND | | 0.035 | 0.00778 |
| 2,4-Dichlorophenol | ND | | 0.035 | 0.00928 |
| Naphthalene | ND | | 0.035 | 0.00509 |
| 4-Chloroaniline | ND | | 0.035 | 0.013 |
| Hexachlorobutadiene | ND | | 0.035 | 0.00968 |
| Caprolactam | ND | | 0.070 | 0.026 |
| 4-Chloro-3-methylphenol | ND | | 0.035 | 0.014 |
| 2-Methylnaphthalene | ND | | 0.035 | 0.012 |
| Hexachlorocyclopentadiene | ND | | 0.070 | 0.061 |
| 2,4,6-Trichlorophenol | ND | | 0.035 | 0.00959 |
| 2,4,5-Trichlorophenol | ND | | 0.035 | 0.027 |
| 1,1'-Biphenyl | ND | | 0.035 | 0.00519 |
| 2-Chloronaphthalene | ND | | 0.035 | 0.00806 |
| 2-Nitroaniline | ND | | 0.035 | 0.019 |
| Dimethyl phthalate | ND | | 0.035 | 0.00801 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-004
Client ID: SB2B/10-
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3858.D 11/22/2023 11:56

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 4.50
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.070 | 0.040 |
| Acenaphthylene | ND | | 0.035 | 0.00764 |
| 3-Nitroaniline | ND | | 0.035 | 0.022 |
| Acenaphthene | ND | | 0.035 | 0.00689 |
| 2,4-Dinitrophenol | ND | | 0.070 | 0.014 |
| 4-Nitrophenol | ND | | 0.070 | 0.035 |
| 2,4-Dinitrotoluene | ND | | 0.070 | 0.040 |
| Dibenzofuran | ND | | 0.035 | 0.00456 |
| Diethyl phthalate | ND | | 0.035 | 0.011 |
| Fluorene | ND | | 0.035 | 0.0094 |
| 4-Chlorophenyl phenyl ether | ND | | 0.035 | 0.00767 |
| 4-Nitroaniline | ND | | 0.035 | 0.021 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.035 | 0.012 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.035 | 0.012 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.070 | 0.015 |
| N-Nitrosodiphenylamine | ND | | 0.035 | 0.00716 |
| 4-Bromophenyl phenyl ether | ND | | 0.035 | 0.00967 |
| Hexachlorobenzene | ND | | 0.035 | 0.011 |
| Atrazine | ND | | 0.035 | 0.021 |
| Pentachlorophenol | ND | | 0.035 | 0.015 |
| Phenanthrene | ND | | 0.035 | 0.00571 |
| Anthracene | ND | | 0.035 | 0.00355 |
| Carbazole | ND | | 0.035 | 0.00814 |
| Di-n-butyl phthalate | ND | | 0.035 | 0.014 |
| Fluoranthene | ND | | 0.035 | 0.011 |
| Pyrene | ND | | 0.035 | 0.00812 |
| Butyl benzyl phthalate | ND | | 0.035 | 0.016 |
| 3,3'-Dichlorobenzidine | ND | | 0.035 | 0.025 |
| Benzo[a]anthracene | ND | | 0.035 | 0.013 |
| Chrysene | ND | | 0.035 | 0.00963 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.035 | 0.022 |
| Di-n-octyl phthalate | ND | | 0.035 | 0.026 |
| Benzo[b]fluoranthene | ND | | 0.035 | 0.017 |
| Benzo[k]fluoranthene | ND | | 0.035 | 0.024 |
| Benzo[a]pyrene | ND | | 0.035 | 0.017 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.035 | 0.022 |
| Dibenz[a,h]anthracene | ND | | 0.035 | 0.014 |
| Benzo[g,h,i]perylene | ND | | 0.035 | 0.026 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.070 | 0.040 |

Total Target Compounds (69): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05066-004
Client ID: SB2B/10-
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Date File: A3858.D

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 4.50

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | No peaks detected | | | |

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-005
Client ID: SB5/0-2
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3860.D 11/22/2023 12:28

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 11.3
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.075 | 0.028 |
| Phenol | ND | | 0.038 | 0.0085 |
| Bis(2-chloroethyl) ether | ND | | 0.038 | 0.013 |
| 2-Chlorophenol | ND | | 0.038 | 0.012 |
| 2-Methylphenol | ND | | 0.038 | 0.017 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.038 | 0.00937 |
| 4-Methylphenol ** | ND | | 0.038 | 0.017 |
| N-Nitrosodi-n-propylamine | ND | | 0.038 | 0.023 |
| Acetophenone | ND | | 0.038 | 0.023 |
| 1,4-Dioxane | ND | | 0.038 | 0.024 |
| Hexachloroethane | ND | | 0.038 | 0.016 |
| Nitrobenzene | ND | | 0.038 | 0.00912 |
| Isophorone | ND | | 0.038 | 0.016 |
| 2-Nitrophenol | ND | | 0.075 | 0.022 |
| 2,4-Dimethylphenol | ND | | 0.038 | 0.011 |
| Bis(2-chloroethoxy) methane | ND | | 0.038 | 0.00838 |
| 2,4-Dichlorophenol | ND | | 0.038 | 0.00999 |
| Naphthalene | ND | | 0.038 | 0.00548 |
| 4-Chloroaniline | ND | | 0.038 | 0.014 |
| Hexachlorobutadiene | ND | | 0.038 | 0.010 |
| Caprolactam | ND | | 0.075 | 0.028 |
| 4-Chloro-3-methylphenol | ND | | 0.038 | 0.015 |
| 2-Methylnaphthalene | ND | | 0.038 | 0.013 |
| Hexachlorocyclopentadiene | ND | | 0.075 | 0.065 |
| 2,4,6-Trichlorophenol | ND | | 0.038 | 0.010 |
| 2,4,5-Trichlorophenol | ND | | 0.038 | 0.029 |
| 1,1'-Biphenyl | ND | | 0.038 | 0.00559 |
| 2-Chloronaphthalene | ND | | 0.038 | 0.00868 |
| 2-Nitroaniline | ND | | 0.038 | 0.020 |
| Dimethyl phthalate | ND | | 0.038 | 0.00862 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-005
Client ID: SB5/0-2
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3860.D 11/22/2023 12:28

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 11.3
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.075 | 0.043 |
| Acenaphthylene | ND | | 0.038 | 0.00823 |
| 3-Nitroaniline | ND | | 0.038 | 0.024 |
| Acenaphthene | ND | | 0.038 | 0.00742 |
| 2,4-Dinitrophenol | ND | | 0.075 | 0.015 |
| 4-Nitrophenol | ND | | 0.075 | 0.038 |
| 2,4-Dinitrotoluene | ND | | 0.075 | 0.043 |
| Dibenzofuran | ND | | 0.038 | 0.00492 |
| Diethyl phthalate | ND | | 0.038 | 0.012 |
| Fluorene | ND | | 0.038 | 0.010 |
| 4-Chlorophenyl phenyl ether | ND | | 0.038 | 0.00826 |
| 4-Nitroaniline | ND | | 0.038 | 0.022 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.038 | 0.013 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.038 | 0.013 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.075 | 0.016 |
| N-Nitrosodiphenylamine | ND | | 0.038 | 0.00771 |
| 4-Bromophenyl phenyl ether | ND | | 0.038 | 0.010 |
| Hexachlorobenzene | ND | | 0.038 | 0.012 |
| Atrazine | ND | | 0.038 | 0.022 |
| Pentachlorophenol | ND | | 0.038 | 0.017 |
| Phenanthrene | 0.188 | | 0.038 | 0.00615 |
| Anthracene | 0.054 | | 0.038 | 0.00383 |
| Carbazole | 0.020 | J | 0.038 | 0.00876 |
| Di-n-butyl phthalate | ND | | 0.038 | 0.015 |
| Fluoranthene | 0.379 | | 0.038 | 0.012 |
| Pyrene | 0.316 | | 0.038 | 0.00874 |
| Butyl benzyl phthalate | ND | | 0.038 | 0.017 |
| 3,3'-Dichlorobenzidine | ND | | 0.038 | 0.027 |
| Benzo[a]anthracene | 0.177 | | 0.038 | 0.014 |
| Chrysene | 0.163 | | 0.038 | 0.010 |
| Bis(2-ethylhexyl) phthalate | 0.073 | | 0.038 | 0.024 |
| Di-n-octyl phthalate | ND | | 0.038 | 0.028 |
| Benzo[b]fluoranthene | 0.190 | | 0.038 | 0.019 |
| Benzo[k]fluoranthene | 0.134 | | 0.038 | 0.026 |
| Benzo[a]pyrene | 0.168 | | 0.038 | 0.018 |
| Indeno[1,2,3-cd]pyrene | 0.116 | | 0.038 | 0.024 |
| Dibenz[a,h]anthracene | 0.057 | | 0.038 | 0.015 |
| Benzo[g,h,i]perylene | 0.118 | | 0.038 | 0.028 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.075 | 0.043 |
| Total Target Compounds (69): | 2.15 | J | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05066-005
Client ID: SB5/0-2
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Date File: A3860.D

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 11.3

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| 001599-67-3 | 1-Docosene | 0.180 | JN | 7.25 |

Total TICs = 0.180 JN

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-006
Client ID: SB3A/0-2
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3862.D 11/22/2023 13:00

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 10.1
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.074 | 0.028 |
| Phenol | ND | | 0.037 | 0.00839 |
| Bis(2-chloroethyl) ether | ND | | 0.037 | 0.013 |
| 2-Chlorophenol | ND | | 0.037 | 0.012 |
| 2-Methylphenol | ND | | 0.037 | 0.017 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.037 | 0.00925 |
| 4-Methylphenol ** | ND | | 0.037 | 0.017 |
| N-Nitrosodi-n-propylamine | ND | | 0.037 | 0.023 |
| Acetophenone | ND | | 0.037 | 0.023 |
| 1,4-Dioxane | ND | | 0.037 | 0.024 |
| Hexachloroethane | ND | | 0.037 | 0.015 |
| Nitrobenzene | ND | | 0.037 | 0.009 |
| Isophorone | ND | | 0.037 | 0.016 |
| 2-Nitrophenol | ND | | 0.074 | 0.022 |
| 2,4-Dimethylphenol | ND | | 0.037 | 0.011 |
| Bis(2-chloroethoxy) methane | ND | | 0.037 | 0.00827 |
| 2,4-Dichlorophenol | ND | | 0.037 | 0.00986 |
| Naphthalene | 0.028 | J | 0.037 | 0.00541 |
| 4-Chloroaniline | ND | | 0.037 | 0.014 |
| Hexachlorobutadiene | ND | | 0.037 | 0.010 |
| Caprolactam | ND | | 0.074 | 0.027 |
| 4-Chloro-3-methylphenol | ND | | 0.037 | 0.014 |
| 2-Methylnaphthalene | ND | | 0.037 | 0.013 |
| Hexachlorocyclopentadiene | ND | | 0.074 | 0.064 |
| 2,4,6-Trichlorophenol | ND | | 0.037 | 0.010 |
| 2,4,5-Trichlorophenol | ND | | 0.037 | 0.028 |
| 1,1'-Biphenyl | ND | | 0.037 | 0.00552 |
| 2-Chloronaphthalene | ND | | 0.037 | 0.00857 |
| 2-Nitroaniline | ND | | 0.037 | 0.020 |
| Dimethyl phthalate | ND | | 0.037 | 0.00851 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-006
Client ID: SB3A/0-2
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3862.D 11/22/2023 13:00

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 10.1
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.074 | 0.043 |
| Acenaphthylene | 0.098 | | 0.037 | 0.00812 |
| 3-Nitroaniline | ND | | 0.037 | 0.024 |
| Acenaphthene | 0.053 | | 0.037 | 0.00732 |
| 2,4-Dinitrophenol | ND | | 0.074 | 0.015 |
| 4-Nitrophenol | ND | | 0.074 | 0.037 |
| 2,4-Dinitrotoluene | ND | | 0.074 | 0.042 |
| Dibenzofuran | 0.043 | | 0.037 | 0.00485 |
| Diethyl phthalate | ND | | 0.037 | 0.012 |
| Fluorene | 0.052 | | 0.037 | 0.00998 |
| 4-Chlorophenyl phenyl ether | ND | | 0.037 | 0.00815 |
| 4-Nitroaniline | ND | | 0.037 | 0.022 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.037 | 0.012 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.037 | 0.013 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.074 | 0.016 |
| N-Nitrosodiphenylamine | ND | | 0.037 | 0.00761 |
| 4-Bromophenyl phenyl ether | ND | | 0.037 | 0.010 |
| Hexachlorobenzene | ND | | 0.037 | 0.012 |
| Atrazine | ND | | 0.037 | 0.022 |
| Pentachlorophenol | ND | | 0.037 | 0.016 |
| Phenanthrene | 1.09 | | 0.037 | 0.00607 |
| Anthracene | 0.201 | | 0.037 | 0.00377 |
| Carbazole | 0.122 | | 0.037 | 0.00864 |
| Di-n-butyl phthalate | ND | | 0.037 | 0.015 |
| Fluoranthene | 1.77 | | 0.037 | 0.012 |
| Pyrene | 1.46 | | 0.037 | 0.00863 |
| Butyl benzyl phthalate | ND | | 0.037 | 0.017 |
| 3,3'-Dichlorobenzidine | ND | | 0.037 | 0.026 |
| Benzo[a]anthracene | 0.693 | | 0.037 | 0.014 |
| Chrysene | 0.674 | | 0.037 | 0.010 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.037 | 0.024 |
| Di-n-octyl phthalate | ND | | 0.037 | 0.027 |
| Benzo[b]fluoranthene | 0.616 | | 0.037 | 0.018 |
| Benzo[k]fluoranthene | 0.656 | | 0.037 | 0.026 |
| Benzo[a]pyrene | 0.672 | | 0.037 | 0.018 |
| Indeno[1,2,3-cd]pyrene | 0.467 | | 0.037 | 0.024 |
| Dibenz[a,h]anthracene | 0.210 | | 0.037 | 0.015 |
| Benzo[g,h,i]perylene | 0.514 | | 0.037 | 0.028 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.074 | 0.042 |
| Total Target Compounds (69): | 9.42 | J | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
## Tentatively Identified Compounds

Lab ID: E23-05066-006
Client ID: SB3A/0-2
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Date File: A3862.D

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 10.1

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Unknown SV | 0.189 | J | 7.26 |

Total TICs = 0.189 J

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

B --- Compound detected in Blank

# SEMIVOLATILE ORGANICS

Lab ID: E23-05066-007
Client ID: SB3B/10-
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3859.D 11/22/2023 12:12

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 5.70
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.070 | 0.026 |
| Phenol | ND | | 0.035 | 0.00794 |
| Bis(2-chloroethyl) ether | ND | | 0.035 | 0.012 |
| 2-Chlorophenol | ND | | 0.035 | 0.011 |
| 2-Methylphenol | ND | | 0.035 | 0.016 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.035 | 0.00876 |
| 4-Methylphenol ** | ND | | 0.035 | 0.016 |
| N-Nitrosodi-n-propylamine | ND | | 0.035 | 0.022 |
| Acetophenone | ND | | 0.035 | 0.021 |
| 1,4-Dioxane | ND | | 0.035 | 0.023 |
| Hexachloroethane | ND | | 0.035 | 0.015 |
| Nitrobenzene | ND | | 0.035 | 0.00852 |
| Isophorone | ND | | 0.035 | 0.015 |
| 2-Nitrophenol | ND | | 0.070 | 0.021 |
| 2,4-Dimethylphenol | ND | | 0.035 | 0.010 |
| Bis(2-chloroethoxy) methane | ND | | 0.035 | 0.00783 |
| 2,4-Dichlorophenol | ND | | 0.035 | 0.00934 |
| Naphthalene | ND | | 0.035 | 0.00512 |
| 4-Chloroaniline | ND | | 0.035 | 0.014 |
| Hexachlorobutadiene | ND | | 0.035 | 0.00974 |
| Caprolactam | ND | | 0.070 | 0.026 |
| 4-Chloro-3-methylphenol | ND | | 0.035 | 0.014 |
| 2-Methylnaphthalene | ND | | 0.035 | 0.012 |
| Hexachlorocyclopentadiene | ND | | 0.070 | 0.061 |
| 2,4,6-Trichlorophenol | ND | | 0.035 | 0.00965 |
| 2,4,5-Trichlorophenol | ND | | 0.035 | 0.027 |
| 1,1'-Biphenyl | ND | | 0.035 | 0.00522 |
| 2-Chloronaphthalene | ND | | 0.035 | 0.00811 |
| 2-Nitroaniline | ND | | 0.035 | 0.019 |
| Dimethyl phthalate | ND | | 0.035 | 0.00806 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-007
Client ID: SB3B/10-
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3859.D 11/22/2023 12:12

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 5.70
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.070 | 0.040 |
| Acenaphthylene | ND | | 0.035 | 0.00769 |
| 3-Nitroaniline | ND | | 0.035 | 0.022 |
| Acenaphthene | ND | | 0.035 | 0.00693 |
| 2,4-Dinitrophenol | ND | | 0.070 | 0.014 |
| 4-Nitrophenol | ND | | 0.070 | 0.035 |
| 2,4-Dinitrotoluene | ND | | 0.070 | 0.040 |
| Dibenzofuran | ND | | 0.035 | 0.00459 |
| Diethyl phthalate | ND | | 0.035 | 0.011 |
| Fluorene | ND | | 0.035 | 0.00945 |
| 4-Chlorophenyl phenyl ether | ND | | 0.035 | 0.00772 |
| 4-Nitroaniline | ND | | 0.035 | 0.021 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.035 | 0.012 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.035 | 0.012 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.070 | 0.015 |
| N-Nitrosodiphenylamine | ND | | 0.035 | 0.0072 |
| 4-Bromophenyl phenyl ether | ND | | 0.035 | 0.00973 |
| Hexachlorobenzene | ND | | 0.035 | 0.011 |
| Atrazine | ND | | 0.035 | 0.021 |
| Pentachlorophenol | ND | | 0.035 | 0.016 |
| Phenanthrene | ND | | 0.035 | 0.00574 |
| Anthracene | ND | | 0.035 | 0.00357 |
| Carbazole | ND | | 0.035 | 0.00818 |
| Di-n-butyl phthalate | ND | | 0.035 | 0.014 |
| Fluoranthene | ND | | 0.035 | 0.011 |
| Pyrene | ND | | 0.035 | 0.00817 |
| Butyl benzyl phthalate | ND | | 0.035 | 0.016 |
| 3,3'-Dichlorobenzidine | ND | | 0.035 | 0.025 |
| Benzo[a]anthracene | ND | | 0.035 | 0.013 |
| Chrysene | ND | | 0.035 | 0.00969 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.035 | 0.023 |
| Di-n-octyl phthalate | ND | | 0.035 | 0.026 |
| Benzo[b]fluoranthene | ND | | 0.035 | 0.017 |
| Benzo[k]fluoranthene | ND | | 0.035 | 0.024 |
| Benzo[a]pyrene | ND | | 0.035 | 0.017 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.035 | 0.023 |
| Dibenz[a,h]anthracene | ND | | 0.035 | 0.014 |
| Benzo[g,h,i]perylene | ND | | 0.035 | 0.027 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.070 | 0.040 |

Total Target Compounds (69): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05066-007
Client ID: SB3B/10-
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Date File: A3859.D

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 5.70

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| 000112-92-5 | 1-Octadecanol | 0.204 | JN | 7.24 |

Total TICs = 0.204 JN

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search
B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-008
Client ID: SB9A/0-2
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3870.D 11/22/2023 15:09

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 7.80
Dilution Factor: 5

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.362 | 0.136 |
| Phenol | ND | | 0.181 | 0.041 |
| Bis(2-chloroethyl) ether | ND | | 0.181 | 0.064 |
| 2-Chlorophenol | ND | | 0.181 | 0.059 |
| 2-Methylphenol | ND | | 0.181 | 0.081 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.181 | 0.045 |
| 4-Methylphenol ** | ND | | 0.181 | 0.082 |
| N-Nitrosodi-n-propylamine | ND | | 0.181 | 0.112 |
| Acetophenone | ND | | 0.181 | 0.110 |
| 1,4-Dioxane | ND | | 0.181 | 0.117 |
| Hexachloroethane | ND | | 0.181 | 0.075 |
| Nitrobenzene | ND | | 0.181 | 0.044 |
| Isophorone | ND | | 0.181 | 0.076 |
| 2-Nitrophenol | ND | | 0.362 | 0.108 |
| 2,4-Dimethylphenol | ND | | 0.181 | 0.053 |
| Bis(2-chloroethoxy) methane | ND | | 0.181 | 0.040 |
| 2,4-Dichlorophenol | ND | | 0.181 | 0.048 |
| Naphthalene | 0.554 | D | 0.181 | 0.026 |
| 4-Chloroaniline | ND | | 0.181 | 0.070 |
| Hexachlorobutadiene | ND | | 0.181 | 0.050 |
| Caprolactam | ND | | 0.362 | 0.133 |
| 4-Chloro-3-methylphenol | ND | | 0.181 | 0.070 |
| 2-Methylnaphthalene | 0.177 | DJ | 0.181 | 0.064 |
| Hexachlorocyclopentadiene | ND | | 0.362 | 0.314 |
| 2,4,6-Trichlorophenol | ND | | 0.181 | 0.050 |
| 2,4,5-Trichlorophenol | ND | | 0.181 | 0.137 |
| 1,1'-Biphenyl | ND | | 0.181 | 0.027 |
| 2-Chloronaphthalene | ND | | 0.181 | 0.042 |
| 2-Nitroaniline | ND | | 0.181 | 0.096 |
| Dimethyl phthalate | ND | | 0.181 | 0.042 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-008
Client ID: SB9A/0-2
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3870.D 11/22/2023 15:09

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 7.80
Dilution Factor: 5

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.362 | 0.208 |
| Acenaphthylene | 2.11 | D | 0.181 | 0.040 |
| 3-Nitroaniline | ND | | 0.181 | 0.114 |
| Acenaphthene | 0.634 | D | 0.181 | 0.036 |
| 2,4-Dinitrophenol | ND | | 0.362 | 0.074 |
| 4-Nitrophenol | ND | | 0.362 | 0.182 |
| 2,4-Dinitrotoluene | ND | | 0.362 | 0.205 |
| Dibenzofuran | 0.400 | D | 0.181 | 0.024 |
| Diethyl phthalate | ND | | 0.181 | 0.056 |
| Fluorene | 0.626 | D | 0.181 | 0.049 |
| 4-Chlorophenyl phenyl ether | ND | | 0.181 | 0.040 |
| 4-Nitroaniline | ND | | 0.181 | 0.107 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.181 | 0.060 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.181 | 0.062 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.362 | 0.076 |
| N-Nitrosodiphenylamine | ND | | 0.181 | 0.037 |
| 4-Bromophenyl phenyl ether | ND | | 0.181 | 0.050 |
| Hexachlorobenzene | ND | | 0.181 | 0.056 |
| Atrazine | ND | | 0.181 | 0.108 |
| Pentachlorophenol | ND | | 0.181 | 0.080 |
| Phenanthrene | 7.99 | D | 0.181 | 0.030 |
| Anthracene | 2.32 | D | 0.181 | 0.018 |
| Carbazole | 1.15 | D | 0.181 | 0.042 |
| Di-n-butyl phthalate | ND | | 0.181 | 0.073 |
| Fluoranthene | 13.1 | D | 0.181 | 0.058 |
| Pyrene | 10.9 | D | 0.181 | 0.042 |
| Butyl benzyl phthalate | ND | | 0.181 | 0.080 |
| 3,3'-Dichlorobenzidine | ND | | 0.181 | 0.128 |
| Benzo[a]anthracene | 6.22 | D | 0.181 | 0.066 |
| Chrysene | 6.14 | D | 0.181 | 0.050 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.181 | 0.116 |
| Di-n-octyl phthalate | ND | | 0.181 | 0.132 |
| Benzo[b]fluoranthene | 6.83 | D | 0.181 | 0.089 |
| Benzo[k]fluoranthene | 6.50 | D | 0.181 | 0.125 |
| Benzo[a]pyrene | 6.90 | D | 0.181 | 0.088 |
| Indeno[1,2,3-cd]pyrene | 4.35 | D | 0.181 | 0.116 |
| Dibenz[a,h]anthracene | 2.10 | D | 0.181 | 0.072 |
| Benzo[g,h,i]perylene | 5.61 | D | 0.181 | 0.136 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.362 | 0.205 |
| Total Target Compounds (69): | 84.6 | DJ | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
## Tentatively Identified Compounds

Lab ID: E23-05066-008
Client ID: SB9A/0-2
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Date File: A3870.D

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 5
% Moisture: 7.80

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|

No peaks detected

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-009
Client ID: SB9B/10-
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3856.D 11/22/2023 11:22

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 4.70
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.070 | 0.026 |
| Phenol | ND | | 0.035 | 0.00786 |
| Bis(2-chloroethyl) ether | ND | | 0.035 | 0.012 |
| 2-Chlorophenol | ND | | 0.035 | 0.011 |
| 2-Methylphenol | ND | | 0.035 | 0.016 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.035 | 0.00867 |
| 4-Methylphenol ** | ND | | 0.035 | 0.016 |
| N-Nitrosodi-n-propylamine | ND | | 0.035 | 0.022 |
| Acetophenone | ND | | 0.035 | 0.021 |
| 1,4-Dioxane | ND | | 0.035 | 0.023 |
| Hexachloroethane | ND | | 0.035 | 0.014 |
| Nitrobenzene | ND | | 0.035 | 0.00844 |
| Isophorone | ND | | 0.035 | 0.015 |
| 2-Nitrophenol | ND | | 0.070 | 0.021 |
| 2,4-Dimethylphenol | ND | | 0.035 | 0.010 |
| Bis(2-chloroethoxy) methane | ND | | 0.035 | 0.00775 |
| 2,4-Dichlorophenol | ND | | 0.035 | 0.00924 |
| Naphthalene | ND | | 0.035 | 0.00507 |
| 4-Chloroaniline | ND | | 0.035 | 0.013 |
| Hexachlorobutadiene | ND | | 0.035 | 0.00964 |
| Caprolactam | ND | | 0.070 | 0.026 |
| 4-Chloro-3-methylphenol | ND | | 0.035 | 0.013 |
| 2-Methylnaphthalene | ND | | 0.035 | 0.012 |
| Hexachlorocyclopentadiene | ND | | 0.070 | 0.060 |
| 2,4,6-Trichlorophenol | ND | | 0.035 | 0.00955 |
| 2,4,5-Trichlorophenol | ND | | 0.035 | 0.026 |
| 1,1'-Biphenyl | ND | | 0.035 | 0.00517 |
| 2-Chloronaphthalene | ND | | 0.035 | 0.00803 |
| 2-Nitroaniline | ND | | 0.035 | 0.019 |
| Dimethyl phthalate | ND | | 0.035 | 0.00798 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-009
Client ID: SB9B/10-
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3856.D 11/22/2023 11:22

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 4.70
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.070 | 0.040 |
| Acenaphthylene | ND | | 0.035 | 0.00761 |
| 3-Nitroaniline | ND | | 0.035 | 0.022 |
| Acenaphthene | ND | | 0.035 | 0.00686 |
| 2,4-Dinitrophenol | ND | | 0.070 | 0.014 |
| 4-Nitrophenol | ND | | 0.070 | 0.035 |
| 2,4-Dinitrotoluene | ND | | 0.070 | 0.039 |
| Dibenzofuran | ND | | 0.035 | 0.00455 |
| Diethyl phthalate | ND | | 0.035 | 0.011 |
| Fluorene | ND | | 0.035 | 0.00935 |
| 4-Chlorophenyl phenyl ether | ND | | 0.035 | 0.00764 |
| 4-Nitroaniline | ND | | 0.035 | 0.021 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.035 | 0.012 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.035 | 0.012 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.070 | 0.015 |
| N-Nitrosodiphenylamine | ND | | 0.035 | 0.00713 |
| 4-Bromophenyl phenyl ether | ND | | 0.035 | 0.00963 |
| Hexachlorobenzene | ND | | 0.035 | 0.011 |
| Atrazine | ND | | 0.035 | 0.021 |
| Pentachlorophenol | ND | | 0.035 | 0.015 |
| Phenanthrene | ND | | 0.035 | 0.00569 |
| Anthracene | ND | | 0.035 | 0.00354 |
| Carbazole | ND | | 0.035 | 0.0081 |
| Di-n-butyl phthalate | ND | | 0.035 | 0.014 |
| Fluoranthene | ND | | 0.035 | 0.011 |
| Pyrene | ND | | 0.035 | 0.00809 |
| Butyl benzyl phthalate | ND | | 0.035 | 0.015 |
| 3,3'-Dichlorobenzidine | ND | | 0.035 | 0.025 |
| Benzo[a]anthracene | ND | | 0.035 | 0.013 |
| Chrysene | ND | | 0.035 | 0.00959 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.035 | 0.022 |
| Di-n-octyl phthalate | ND | | 0.035 | 0.025 |
| Benzo[b]fluoranthene | ND | | 0.035 | 0.017 |
| Benzo[k]fluoranthene | ND | | 0.035 | 0.024 |
| Benzo[a]pyrene | ND | | 0.035 | 0.017 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.035 | 0.022 |
| Dibenz[a,h]anthracene | ND | | 0.035 | 0.014 |
| Benzo[g,h,i]perylene | ND | | 0.035 | 0.026 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.070 | 0.039 |

Total Target Compounds (69): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05066-009
Client ID: SB9B/10-
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Date File: A3856.D

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 4.70

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | No peaks detected | | | |

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-010
Client ID: SB1A/0-2
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3866.D 11/22/2023 14:05

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 9.10
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.073 | 0.028 |
| Phenol | ND | | 0.037 | 0.00829 |
| Bis(2-chloroethyl) ether | ND | | 0.037 | 0.013 |
| 2-Chlorophenol | ND | | 0.037 | 0.012 |
| 2-Methylphenol | ND | | 0.037 | 0.017 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.037 | 0.00915 |
| 4-Methylphenol ** | ND | | 0.037 | 0.017 |
| N-Nitrosodi-n-propylamine | ND | | 0.037 | 0.023 |
| Acetophenone | ND | | 0.037 | 0.022 |
| 1,4-Dioxane | ND | | 0.037 | 0.024 |
| Hexachloroethane | ND | | 0.037 | 0.015 |
| Nitrobenzene | ND | | 0.037 | 0.0089 |
| Isophorone | ND | | 0.037 | 0.015 |
| 2-Nitrophenol | ND | | 0.073 | 0.022 |
| 2,4-Dimethylphenol | ND | | 0.037 | 0.011 |
| Bis(2-chloroethoxy) methane | ND | | 0.037 | 0.00817 |
| 2,4-Dichlorophenol | ND | | 0.037 | 0.00975 |
| Naphthalene | 0.029 | J | 0.037 | 0.00535 |
| 4-Chloroaniline | ND | | 0.037 | 0.014 |
| Hexachlorobutadiene | ND | | 0.037 | 0.010 |
| Caprolactam | ND | | 0.073 | 0.027 |
| 4-Chloro-3-methylphenol | ND | | 0.037 | 0.014 |
| 2-Methylnaphthalene | ND | | 0.037 | 0.013 |
| Hexachlorocyclopentadiene | ND | | 0.073 | 0.064 |
| 2,4,6-Trichlorophenol | ND | | 0.037 | 0.010 |
| 2,4,5-Trichlorophenol | ND | | 0.037 | 0.028 |
| 1,1'-Biphenyl | ND | | 0.037 | 0.00546 |
| 2-Chloronaphthalene | ND | | 0.037 | 0.00847 |
| 2-Nitroaniline | ND | | 0.037 | 0.020 |
| Dimethyl phthalate | ND | | 0.037 | 0.00842 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-010
Client ID: SB1A/0-2
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3866.D 11/22/2023 14:05

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 9.10
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.073 | 0.042 |
| Acenaphthylene | 0.184 | | 0.037 | 0.00803 |
| 3-Nitroaniline | ND | | 0.037 | 0.023 |
| Acenaphthene | 0.095 | | 0.037 | 0.00724 |
| 2,4-Dinitrophenol | ND | | 0.073 | 0.015 |
| 4-Nitrophenol | ND | | 0.073 | 0.037 |
| 2,4-Dinitrotoluene | ND | | 0.073 | 0.042 |
| Dibenzofuran | ND | | 0.037 | 0.0048 |
| Diethyl phthalate | ND | | 0.037 | 0.011 |
| Fluorene | 0.066 | | 0.037 | 0.00987 |
| 4-Chlorophenyl phenyl ether | ND | | 0.037 | 0.00806 |
| 4-Nitroaniline | ND | | 0.037 | 0.022 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.037 | 0.012 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.037 | 0.013 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.073 | 0.016 |
| N-Nitrosodiphenylamine | ND | | 0.037 | 0.00752 |
| 4-Bromophenyl phenyl ether | ND | | 0.037 | 0.010 |
| Hexachlorobenzene | ND | | 0.037 | 0.011 |
| Atrazine | ND | | 0.037 | 0.022 |
| Pentachlorophenol | ND | | 0.037 | 0.016 |
| Phenanthrene | 1.08 | | 0.037 | 0.006 |
| Anthracene | 0.360 | | 0.037 | 0.00373 |
| Carbazole | 0.125 | | 0.037 | 0.00855 |
| Di-n-butyl phthalate | ND | | 0.037 | 0.015 |
| Fluoranthene | 2.98 | | 0.037 | 0.012 |
| Pyrene | 2.72 | | 0.037 | 0.00853 |
| Butyl benzyl phthalate | ND | | 0.037 | 0.016 |
| 3,3'-Dichlorobenzidine | ND | | 0.037 | 0.026 |
| Benzo[a]anthracene | 1.65 | | 0.037 | 0.013 |
| Chrysene | 1.57 | | 0.037 | 0.010 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.037 | 0.024 |
| Di-n-octyl phthalate | ND | | 0.037 | 0.027 |
| Benzo[b]fluoranthene | 2.23 | | 0.037 | 0.018 |
| Benzo[k]fluoranthene | 1.21 | | 0.037 | 0.025 |
| Benzo[a]pyrene | 1.84 | | 0.037 | 0.018 |
| Indeno[1,2,3-cd]pyrene | 1.28 | | 0.037 | 0.024 |
| Dibenz[a,h]anthracene | 0.624 | | 0.037 | 0.015 |
| Benzo[g,h,i]perylene | 1.32 | | 0.037 | 0.028 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.073 | 0.042 |
| Total Target Compounds (69): | 19.4 | J | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
## Tentatively Identified Compounds

Lab ID: E23-05066-010
Client ID: SB1A/0-2
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Date File: A3866.D

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 9.10

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| 000192-97-2 | Benzo[e]pyrene | 0.568 | JN | 8.43 |

Total TICs = 0.568 JN

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search
B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-011
Client ID: SB1B/10-
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3867.D 11/22/2023 14:21

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 10.2
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | 0.135 | | 0.074 | 0.028 |
| Phenol | ND | | 0.037 | 0.00834 |
| Bis(2-chloroethyl) ether | ND | | 0.037 | 0.013 |
| 2-Chlorophenol | ND | | 0.037 | 0.012 |
| 2-Methylphenol | ND | | 0.037 | 0.017 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.037 | 0.0092 |
| 4-Methylphenol ** | ND | | 0.037 | 0.017 |
| N-Nitrosodi-n-propylamine | ND | | 0.037 | 0.023 |
| Acetophenone | ND | | 0.037 | 0.023 |
| 1,4-Dioxane | ND | | 0.037 | 0.024 |
| Hexachloroethane | ND | | 0.037 | 0.015 |
| Nitrobenzene | ND | | 0.037 | 0.00895 |
| Isophorone | ND | | 0.037 | 0.016 |
| 2-Nitrophenol | ND | | 0.074 | 0.022 |
| 2,4-Dimethylphenol | ND | | 0.037 | 0.011 |
| Bis(2-chloroethoxy) methane | ND | | 0.037 | 0.00822 |
| 2,4-Dichlorophenol | ND | | 0.037 | 0.0098 |
| Naphthalene | 0.026 | J | 0.037 | 0.00538 |
| 4-Chloroaniline | ND | | 0.037 | 0.014 |
| Hexachlorobutadiene | ND | | 0.037 | 0.010 |
| Caprolactam | ND | | 0.074 | 0.027 |
| 4-Chloro-3-methylphenol | ND | | 0.037 | 0.014 |
| 2-Methylnaphthalene | 0.023 | J | 0.037 | 0.013 |
| Hexachlorocyclopentadiene | ND | | 0.074 | 0.064 |
| 2,4,6-Trichlorophenol | ND | | 0.037 | 0.010 |
| 2,4,5-Trichlorophenol | ND | | 0.037 | 0.028 |
| 1,1'-Biphenyl | ND | | 0.037 | 0.00549 |
| 2-Chloronaphthalene | ND | | 0.037 | 0.00852 |
| 2-Nitroaniline | ND | | 0.037 | 0.020 |
| Dimethyl phthalate | ND | | 0.037 | 0.00846 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-011
Client ID: SB1B/10-
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3867.D 11/22/2023 14:21

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 10.2
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.074 | 0.042 |
| Acenaphthylene | 0.168 | | 0.037 | 0.00807 |
| 3-Nitroaniline | ND | | 0.037 | 0.023 |
| Acenaphthene | 0.081 | | 0.037 | 0.00728 |
| 2,4-Dinitrophenol | ND | | 0.074 | 0.015 |
| 4-Nitrophenol | ND | | 0.074 | 0.037 |
| 2,4-Dinitrotoluene | ND | | 0.074 | 0.042 |
| Dibenzofuran | 0.019 | J | 0.037 | 0.00482 |
| Diethyl phthalate | ND | | 0.037 | 0.012 |
| Fluorene | 0.069 | | 0.037 | 0.00993 |
| 4-Chlorophenyl phenyl ether | ND | | 0.037 | 0.0081 |
| 4-Nitroaniline | ND | | 0.037 | 0.022 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.037 | 0.012 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.037 | 0.013 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.074 | 0.016 |
| N-Nitrosodiphenylamine | ND | | 0.037 | 0.00757 |
| 4-Bromophenyl phenyl ether | ND | | 0.037 | 0.010 |
| Hexachlorobenzene | ND | | 0.037 | 0.012 |
| Atrazine | ND | | 0.037 | 0.022 |
| Pentachlorophenol | ND | | 0.037 | 0.016 |
| Phenanthrene | 1.61 | | 0.037 | 0.00603 |
| Anthracene | 0.341 | | 0.037 | 0.00375 |
| Carbazole | 0.055 | | 0.037 | 0.00859 |
| Di-n-butyl phthalate | ND | | 0.037 | 0.015 |
| Fluoranthene | 2.26 | | 0.037 | 0.012 |
| Pyrene | 3.42 | | 0.037 | 0.00858 |
| Butyl benzyl phthalate | ND | | 0.037 | 0.016 |
| 3,3'-Dichlorobenzidine | ND | | 0.037 | 0.026 |
| Benzo[a]anthracene | 1.72 | | 0.037 | 0.013 |
| Chrysene | 1.64 | | 0.037 | 0.010 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.037 | 0.024 |
| Di-n-octyl phthalate | ND | | 0.037 | 0.027 |
| Benzo[b]fluoranthene | 1.07 | | 0.037 | 0.018 |
| Benzo[k]fluoranthene | 0.917 | | 0.037 | 0.026 |
| Benzo[a]pyrene | 1.35 | | 0.037 | 0.018 |
| Indeno[1,2,3-cd]pyrene | 0.677 | | 0.037 | 0.024 |
| Dibenz[a,h]anthracene | 0.420 | | 0.037 | 0.015 |
| Benzo[g,h,i]perylene | 0.863 | | 0.037 | 0.028 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.074 | 0.042 |
| Total Target Compounds (69): | 16.9 | J | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05066-011
Client ID: SB1B/10-
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Date File: A3867.D

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 10.2

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| 002531-84-2 | Phenanthrene, 2-methyl- | 0.302 | JN | 6.12 |
| 000832-69-9 | Phenanthrene, 1-methyl- | 0.605 | JN | 6.19 |
| 003674-66-6 | Phenanthrene, 2,5-dimethyl- | 0.354 | JN | 6.45 |
| 002381-21-7 | Pyrene, 1-methyl- | 0.166 | JN | 6.81 |
| 000243-17-4 | 11H-Benzo[b]fluorene | 0.229 | JN | 6.88 |
| | Unknown SV | 0.221 | J | 6.94 |
| 000238-84-6 | 11H-Benzo[a]fluorene | 0.155 | JN | 7.00 |
| 002541-69-7 | Benz[a]anthracene, 7-methyl- | 0.177 | JN | 7.68 |
| 000192-97-2 | Benzo[e]pyrene | 0.553 | JN | 8.42 |

Total TICs = 2.76 JN

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-012
Client ID: SB4A/0-2
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3863.D 11/22/2023 13:16

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 8.90
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.073 | 0.028 |
| Phenol | ND | | 0.037 | 0.00828 |
| Bis(2-chloroethyl) ether | ND | | 0.037 | 0.013 |
| 2-Chlorophenol | ND | | 0.037 | 0.012 |
| 2-Methylphenol | ND | | 0.037 | 0.016 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.037 | 0.00913 |
| 4-Methylphenol ** | ND | | 0.037 | 0.017 |
| N-Nitrosodi-n-propylamine | ND | | 0.037 | 0.023 |
| Acetophenone | ND | | 0.037 | 0.022 |
| 1,4-Dioxane | ND | | 0.037 | 0.024 |
| Hexachloroethane | ND | | 0.037 | 0.015 |
| Nitrobenzene | ND | | 0.037 | 0.00888 |
| Isophorone | ND | | 0.037 | 0.015 |
| 2-Nitrophenol | ND | | 0.073 | 0.022 |
| 2,4-Dimethylphenol | ND | | 0.037 | 0.011 |
| Bis(2-chloroethoxy) methane | ND | | 0.037 | 0.00816 |
| 2,4-Dichlorophenol | ND | | 0.037 | 0.00973 |
| Naphthalene | 0.108 | | 0.037 | 0.00534 |
| 4-Chloroaniline | ND | | 0.037 | 0.014 |
| Hexachlorobutadiene | ND | | 0.037 | 0.010 |
| Caprolactam | ND | | 0.073 | 0.027 |
| 4-Chloro-3-methylphenol | ND | | 0.037 | 0.014 |
| 2-Methylnaphthalene | 0.051 | | 0.037 | 0.013 |
| Hexachlorocyclopentadiene | ND | | 0.073 | 0.064 |
| 2,4,6-Trichlorophenol | ND | | 0.037 | 0.010 |
| 2,4,5-Trichlorophenol | ND | | 0.037 | 0.028 |
| 1,1'-Biphenyl | ND | | 0.037 | 0.00544 |
| 2-Chloronaphthalene | ND | | 0.037 | 0.00845 |
| 2-Nitroaniline | ND | | 0.037 | 0.019 |
| Dimethyl phthalate | ND | | 0.037 | 0.0084 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-012
Client ID: SB4A/0-2
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3863.D 11/22/2023 13:16

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 8.90
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.073 | 0.042 |
| Acenaphthylene | 0.117 | | 0.037 | 0.00801 |
| 3-Nitroaniline | ND | | 0.037 | 0.023 |
| Acenaphthene | 0.339 | | 0.037 | 0.00723 |
| 2,4-Dinitrophenol | ND | | 0.073 | 0.015 |
| 4-Nitrophenol | ND | | 0.073 | 0.037 |
| 2,4-Dinitrotoluene | ND | | 0.073 | 0.041 |
| Dibenzofuran | 0.168 | | 0.037 | 0.00479 |
| Diethyl phthalate | ND | | 0.037 | 0.011 |
| Fluorene | 0.284 | | 0.037 | 0.00985 |
| 4-Chlorophenyl phenyl ether | ND | | 0.037 | 0.00804 |
| 4-Nitroaniline | ND | | 0.037 | 0.022 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.037 | 0.012 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.037 | 0.013 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.073 | 0.016 |
| N-Nitrosodiphenylamine | ND | | 0.037 | 0.00751 |
| 4-Bromophenyl phenyl ether | ND | | 0.037 | 0.010 |
| Hexachlorobenzene | ND | | 0.037 | 0.011 |
| Atrazine | ND | | 0.037 | 0.022 |
| Pentachlorophenol | ND | | 0.037 | 0.016 |
| Phenanthrene | 2.74 | | 0.037 | 0.00599 |
| Anthracene | 0.738 | | 0.037 | 0.00372 |
| Carbazole | 0.343 | | 0.037 | 0.00853 |
| Di-n-butyl phthalate | ND | | 0.037 | 0.015 |
| Fluoranthene | 4.20 | | 0.037 | 0.012 |
| Pyrene | 3.42 | | 0.037 | 0.00851 |
| Butyl benzyl phthalate | ND | | 0.037 | 0.016 |
| 3,3'-Dichlorobenzidine | ND | | 0.037 | 0.026 |
| Benzo[a]anthracene | 1.81 | | 0.037 | 0.013 |
| Chrysene | 1.64 | | 0.037 | 0.010 |
| Bis(2-ethylhexyl) phthalate | 0.068 | | 0.037 | 0.024 |
| Di-n-octyl phthalate | ND | | 0.037 | 0.027 |
| Benzo[b]fluoranthene | 1.76 | | 0.037 | 0.018 |
| Benzo[k]fluoranthene | 1.47 | | 0.037 | 0.025 |
| Benzo[a]pyrene | 1.72 | | 0.037 | 0.018 |
| Indeno[1,2,3-cd]pyrene | 1.14 | | 0.037 | 0.023 |
| Dibenz[a,h]anthracene | 0.601 | | 0.037 | 0.015 |
| Benzo[g,h,i]perylene | 1.15 | | 0.037 | 0.028 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.073 | 0.041 |

Total Target Compounds (69): 23.9

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
## Tentatively Identified Compounds

Lab ID: E23-05066-012
Client ID: SB4A/0-2
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Date File: A3863.D

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 8.90

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| 000203-64-5 | 4H-Cyclopenta[def]phenanthrene | 0.220 | JN | 6.20 |

Total TICs = 0.220 JN

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search
B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-013
Client ID: SB4B/10-
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3861.D 11/22/2023 12:44

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 5.20
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.070 | 0.026 |
| Phenol | ND | | 0.035 | 0.00795 |
| Bis(2-chloroethyl) ether | ND | | 0.035 | 0.012 |
| 2-Chlorophenol | ND | | 0.035 | 0.011 |
| 2-Methylphenol | ND | | 0.035 | 0.016 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.035 | 0.00877 |
| 4-Methylphenol ** | ND | | 0.035 | 0.016 |
| N-Nitrosodi-n-propylamine | ND | | 0.035 | 0.022 |
| Acetophenone | ND | | 0.035 | 0.021 |
| 1,4-Dioxane | ND | | 0.035 | 0.023 |
| Hexachloroethane | ND | | 0.035 | 0.015 |
| Nitrobenzene | ND | | 0.035 | 0.00854 |
| Isophorone | ND | | 0.035 | 0.015 |
| 2-Nitrophenol | ND | | 0.070 | 0.021 |
| 2,4-Dimethylphenol | ND | | 0.035 | 0.010 |
| Bis(2-chloroethoxy) methane | ND | | 0.035 | 0.00784 |
| 2,4-Dichlorophenol | ND | | 0.035 | 0.00935 |
| Naphthalene | 0.037 | | 0.035 | 0.00513 |
| 4-Chloroaniline | ND | | 0.035 | 0.014 |
| Hexachlorobutadiene | ND | | 0.035 | 0.00976 |
| Caprolactam | ND | | 0.070 | 0.026 |
| 4-Chloro-3-methylphenol | ND | | 0.035 | 0.014 |
| 2-Methylnaphthalene | ND | | 0.035 | 0.012 |
| Hexachlorocyclopentadiene | ND | | 0.070 | 0.061 |
| 2,4,6-Trichlorophenol | ND | | 0.035 | 0.00967 |
| 2,4,5-Trichlorophenol | ND | | 0.035 | 0.027 |
| 1,1'-Biphenyl | ND | | 0.035 | 0.00523 |
| 2-Chloronaphthalene | ND | | 0.035 | 0.00812 |
| 2-Nitroaniline | ND | | 0.035 | 0.019 |
| Dimethyl phthalate | ND | | 0.035 | 0.00807 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-013
Client ID: SB4B/10-
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3861.D 11/22/2023 12:44

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 5.20
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.070 | 0.040 |
| Acenaphthylene | 0.190 | | 0.035 | 0.0077 |
| 3-Nitroaniline | ND | | 0.035 | 0.022 |
| Acenaphthene | 0.125 | | 0.035 | 0.00694 |
| 2,4-Dinitrophenol | ND | | 0.070 | 0.015 |
| 4-Nitrophenol | ND | | 0.070 | 0.036 |
| 2,4-Dinitrotoluene | ND | | 0.070 | 0.040 |
| Dibenzofuran | 0.053 | | 0.035 | 0.0046 |
| Diethyl phthalate | ND | | 0.035 | 0.011 |
| Fluorene | 0.099 | | 0.035 | 0.00947 |
| 4-Chlorophenyl phenyl ether | ND | | 0.035 | 0.00773 |
| 4-Nitroaniline | ND | | 0.035 | 0.021 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.035 | 0.012 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.035 | 0.012 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.070 | 0.015 |
| N-Nitrosodiphenylamine | ND | | 0.035 | 0.00721 |
| 4-Bromophenyl phenyl ether | ND | | 0.035 | 0.00974 |
| Hexachlorobenzene | ND | | 0.035 | 0.011 |
| Atrazine | ND | | 0.035 | 0.021 |
| Pentachlorophenol | ND | | 0.035 | 0.016 |
| Phenanthrene | 1.10 | | 0.035 | 0.00575 |
| Anthracene | 0.360 | | 0.035 | 0.00358 |
| Carbazole | 0.154 | | 0.035 | 0.0082 |
| Di-n-butyl phthalate | ND | | 0.035 | 0.014 |
| Fluoranthene | 2.50 | | 0.035 | 0.011 |
| Pyrene | 2.28 | | 0.035 | 0.00818 |
| Butyl benzyl phthalate | ND | | 0.035 | 0.016 |
| 3,3'-Dichlorobenzidine | ND | | 0.035 | 0.025 |
| Benzo[a]anthracene | 1.35 | | 0.035 | 0.013 |
| Chrysene | 1.29 | | 0.035 | 0.0097 |
| Bis(2-ethylhexyl) phthalate | 0.040 | | 0.035 | 0.023 |
| Di-n-octyl phthalate | ND | | 0.035 | 0.026 |
| Benzo[b]fluoranthene | 1.45 | | 0.035 | 0.017 |
| Benzo[k]fluoranthene | 1.25 | | 0.035 | 0.024 |
| Benzo[a]pyrene | 1.44 | | 0.035 | 0.017 |
| Indeno[1,2,3-cd]pyrene | 0.922 | | 0.035 | 0.023 |
| Dibenz[a,h]anthracene | 0.435 | | 0.035 | 0.014 |
| Benzo[g,h,i]perylene | 0.887 | | 0.035 | 0.027 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.070 | 0.040 |

Total Target Compounds (69): 16.0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05066-013
Client ID: SB4B/10-
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Date File: A3861.D

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 5.20

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|

No peaks detected

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-014
Client ID: SB6-419-
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3868.D 11/22/2023 14:37

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 7.80
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.072 | 0.027 |
| Phenol | ND | | 0.036 | 0.00812 |
| Bis(2-chloroethyl) ether | ND | | 0.036 | 0.013 |
| 2-Chlorophenol | ND | | 0.036 | 0.012 |
| 2-Methylphenol | ND | | 0.036 | 0.016 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.036 | 0.00896 |
| 4-Methylphenol ** | ND | | 0.036 | 0.016 |
| N-Nitrosodi-n-propylamine | ND | | 0.036 | 0.022 |
| Acetophenone | ND | | 0.036 | 0.022 |
| 1,4-Dioxane | ND | | 0.036 | 0.023 |
| Hexachloroethane | ND | | 0.036 | 0.015 |
| Nitrobenzene | ND | | 0.036 | 0.00872 |
| Isophorone | ND | | 0.036 | 0.015 |
| 2-Nitrophenol | ND | | 0.072 | 0.021 |
| 2,4-Dimethylphenol | ND | | 0.036 | 0.011 |
| Bis(2-chloroethoxy) methane | ND | | 0.036 | 0.008 |
| 2,4-Dichlorophenol | ND | | 0.036 | 0.00955 |
| Naphthalene | 0.019 | J | 0.036 | 0.00524 |
| 4-Chloroaniline | ND | | 0.036 | 0.014 |
| Hexachlorobutadiene | ND | | 0.036 | 0.00997 |
| Caprolactam | ND | | 0.072 | 0.027 |
| 4-Chloro-3-methylphenol | ND | | 0.036 | 0.014 |
| 2-Methylnaphthalene | ND | | 0.036 | 0.013 |
| Hexachlorocyclopentadiene | ND | | 0.072 | 0.062 |
| 2,4,6-Trichlorophenol | ND | | 0.036 | 0.00987 |
| 2,4,5-Trichlorophenol | ND | | 0.036 | 0.027 |
| 1,1'-Biphenyl | ND | | 0.036 | 0.00534 |
| 2-Chloronaphthalene | ND | | 0.036 | 0.0083 |
| 2-Nitroaniline | ND | | 0.036 | 0.019 |
| Dimethyl phthalate | ND | | 0.036 | 0.00824 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-014
Client ID: SB6-419-
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3868.D 11/22/2023 14:37

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 7.80
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.072 | 0.041 |
| Acenaphthylene | 0.133 | | 0.036 | 0.00786 |
| 3-Nitroaniline | ND | | 0.036 | 0.023 |
| Acenaphthene | 0.024 | J | 0.036 | 0.00709 |
| 2,4-Dinitrophenol | ND | | 0.072 | 0.015 |
| 4-Nitrophenol | ND | | 0.072 | 0.036 |
| 2,4-Dinitrotoluene | ND | | 0.072 | 0.041 |
| Dibenzofuran | ND | | 0.036 | 0.0047 |
| Diethyl phthalate | ND | | 0.036 | 0.011 |
| Fluorene | 0.034 | J | 0.036 | 0.00967 |
| 4-Chlorophenyl phenyl ether | ND | | 0.036 | 0.00789 |
| 4-Nitroaniline | ND | | 0.036 | 0.021 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.036 | 0.012 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.036 | 0.012 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.072 | 0.015 |
| N-Nitrosodiphenylamine | ND | | 0.036 | 0.00737 |
| 4-Bromophenyl phenyl ether | ND | | 0.036 | 0.00995 |
| Hexachlorobenzene | ND | | 0.036 | 0.011 |
| Atrazine | ND | | 0.036 | 0.021 |
| Pentachlorophenol | ND | | 0.036 | 0.016 |
| Phenanthrene | 0.494 | | 0.036 | 0.00587 |
| Anthracene | 0.115 | | 0.036 | 0.00366 |
| Carbazole | 0.081 | | 0.036 | 0.00837 |
| Di-n-butyl phthalate | ND | | 0.036 | 0.015 |
| Fluoranthene | 0.953 | | 0.036 | 0.012 |
| Pyrene | 0.835 | | 0.036 | 0.00836 |
| Butyl benzyl phthalate | ND | | 0.036 | 0.016 |
| 3,3'-Dichlorobenzidine | ND | | 0.036 | 0.025 |
| Benzo[a]anthracene | 0.460 | | 0.036 | 0.013 |
| Chrysene | 0.429 | | 0.036 | 0.00991 |
| Bis(2-ethylhexyl) phthalate | 0.422 | | 0.036 | 0.023 |
| Di-n-octyl phthalate | ND | | 0.036 | 0.026 |
| Benzo[b]fluoranthene | 0.534 | | 0.036 | 0.018 |
| Benzo[k]fluoranthene | 0.356 | | 0.036 | 0.025 |
| Benzo[a]pyrene | 0.457 | | 0.036 | 0.017 |
| Indeno[1,2,3-cd]pyrene | 0.353 | | 0.036 | 0.023 |
| Dibenz[a,h]anthracene | 0.168 | | 0.036 | 0.014 |
| Benzo[g,h,i]perylene | 0.378 | | 0.036 | 0.027 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.072 | 0.041 |
| Total Target Compounds (69): | 6.25 | J | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
## Tentatively Identified Compounds

Lab ID: E23-05066-014
Client ID: SB6-419-
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Date File: A3868.D

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 7.80

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| 1000158-20-4 | 3-Butanone, 1,1-bis(4-chlorophenyl | 0.147 | JN | 7.11 |

Total TICs = 0.147 JN

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-015
Client ID: SB8-401-
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3864.D 11/22/2023 13:34

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 6.20
Dilution Factor: 5

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.353 | 0.133 |
| Phenol | ND | | 0.177 | 0.040 |
| Bis(2-chloroethyl) ether | ND | | 0.177 | 0.062 |
| 2-Chlorophenol | ND | | 0.177 | 0.057 |
| 2-Methylphenol | ND | | 0.177 | 0.079 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.177 | 0.044 |
| 4-Methylphenol ** | ND | | 0.177 | 0.080 |
| N-Nitrosodi-n-propylamine | ND | | 0.177 | 0.109 |
| Acetophenone | ND | | 0.177 | 0.108 |
| 1,4-Dioxane | ND | | 0.177 | 0.114 |
| Hexachloroethane | ND | | 0.177 | 0.073 |
| Nitrobenzene | ND | | 0.177 | 0.043 |
| Isophorone | ND | | 0.177 | 0.074 |
| 2-Nitrophenol | ND | | 0.353 | 0.105 |
| 2,4-Dimethylphenol | ND | | 0.177 | 0.052 |
| Bis(2-chloroethoxy) methane | ND | | 0.177 | 0.039 |
| 2,4-Dichlorophenol | ND | | 0.177 | 0.047 |
| Naphthalene | 0.288 | D | 0.177 | 0.026 |
| 4-Chloroaniline | ND | | 0.177 | 0.068 |
| Hexachlorobutadiene | ND | | 0.177 | 0.049 |
| Caprolactam | ND | | 0.353 | 0.130 |
| 4-Chloro-3-methylphenol | ND | | 0.177 | 0.068 |
| 2-Methylnaphthalene | 0.245 | D | 0.177 | 0.062 |
| Hexachlorocyclopentadiene | ND | | 0.353 | 0.307 |
| 2,4,6-Trichlorophenol | ND | | 0.177 | 0.049 |
| 2,4,5-Trichlorophenol | ND | | 0.177 | 0.134 |
| 1,1'-Biphenyl | 0.112 | DJ | 0.177 | 0.026 |
| 2-Chloronaphthalene | ND | | 0.177 | 0.041 |
| 2-Nitroaniline | ND | | 0.177 | 0.094 |
| Dimethyl phthalate | ND | | 0.177 | 0.041 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-015
Client ID: SB8-401-
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3864.D 11/22/2023 13:34

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 6.20
Dilution Factor: 5

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.353 | 0.203 |
| Acenaphthylene | 1.83 | D | 0.177 | 0.039 |
| 3-Nitroaniline | ND | | 0.177 | 0.112 |
| Acenaphthene | 0.284 | D | 0.177 | 0.035 |
| 2,4-Dinitrophenol | ND | | 0.353 | 0.073 |
| 4-Nitrophenol | ND | | 0.353 | 0.178 |
| 2,4-Dinitrotoluene | ND | | 0.353 | 0.200 |
| Dibenzofuran | 0.857 | D | 0.177 | 0.023 |
| Diethyl phthalate | ND | | 0.177 | 0.055 |
| Fluorene | 1.01 | D | 0.177 | 0.048 |
| 4-Chlorophenyl phenyl ether | ND | | 0.177 | 0.039 |
| 4-Nitroaniline | ND | | 0.177 | 0.105 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.177 | 0.059 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.177 | 0.060 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.353 | 0.075 |
| N-Nitrosodiphenylamine | ND | | 0.177 | 0.036 |
| 4-Bromophenyl phenyl ether | ND | | 0.177 | 0.049 |
| Hexachlorobenzene | ND | | 0.177 | 0.055 |
| Atrazine | ND | | 0.177 | 0.105 |
| Pentachlorophenol | ND | | 0.177 | 0.078 |
| Phenanthrene | 12.0 | D | 0.177 | 0.029 |
| Anthracene | 2.02 | D | 0.177 | 0.018 |
| Carbazole | 1.28 | D | 0.177 | 0.041 |
| Di-n-butyl phthalate | ND | | 0.177 | 0.072 |
| Fluoranthene | 13.6 | D | 0.177 | 0.057 |
| Pyrene | 9.96 | D | 0.177 | 0.041 |
| Butyl benzyl phthalate | ND | | 0.177 | 0.078 |
| 3,3'-Dichlorobenzidine | ND | | 0.177 | 0.125 |
| Benzo[a]anthracene | 4.85 | D | 0.177 | 0.064 |
| Chrysene | 4.67 | D | 0.177 | 0.049 |
| Bis(2-ethylhexyl) phthalate | 0.573 | D | 0.177 | 0.113 |
| Di-n-octyl phthalate | ND | | 0.177 | 0.129 |
| Benzo[b]fluoranthene | 4.04 | D | 0.177 | 0.087 |
| Benzo[k]fluoranthene | 4.29 | D | 0.177 | 0.122 |
| Benzo[a]pyrene | 3.93 | D | 0.177 | 0.086 |
| Indeno[1,2,3-cd]pyrene | 1.78 | D | 0.177 | 0.113 |
| Dibenz[a,h]anthracene | 0.799 | D | 0.177 | 0.071 |
| Benzo[g,h,i]perylene | 1.50 | D | 0.177 | 0.133 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.353 | 0.200 |
| Total Target Compounds (69): | 69.9 | DJ | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
## Tentatively Identified Compounds

Lab ID: E23-05066-015
Client ID: SB8-401-
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Date File: A3864.D

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 5
% Moisture: 6.20

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | No peaks detected | | | |

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

B --- Compound detected in Blank

# SEMIVOLATILE ORGANICS

Lab ID: BLKS231120-02
Client ID: .
Date Received: NA
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3852.D 11/22/2023 10:15

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| N-Nitrosodimethylamine | ND | | 0.033 | 0.00969 |
| Benzaldehyde | ND | | 0.067 | 0.025 |
| Phenol | ND | | 0.033 | 0.00754 |
| Bis(2-chloroethyl) ether | ND | | 0.033 | 0.012 |
| 2-Chlorophenol | ND | | 0.033 | 0.011 |
| 2-Methylphenol | ND | | 0.033 | 0.015 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.033 | 0.00831 |
| 4-Methylphenol ** | ND | | 0.033 | 0.015 |
| N-Nitrosodi-n-propylamine | ND | | 0.033 | 0.021 |
| Acetophenone | ND | | 0.033 | 0.020 |
| 1,4-Dioxane | ND | | 0.033 | 0.022 |
| Hexachloroethane | ND | | 0.033 | 0.014 |
| Nitrobenzene | ND | | 0.033 | 0.00809 |
| Isophorone | ND | | 0.033 | 0.014 |
| 2-Nitrophenol | ND | | 0.067 | 0.020 |
| 2,4-Dimethylphenol | ND | | 0.033 | 0.00981 |
| Bis(2-chloroethoxy) methane | ND | | 0.033 | 0.00743 |
| 2,4-Dichlorophenol | ND | | 0.033 | 0.00886 |
| Naphthalene | ND | | 0.033 | 0.00486 |
| 4-Chloroaniline | ND | | 0.033 | 0.013 |
| Hexachlorobutadiene | ND | | 0.033 | 0.00925 |
| Caprolactam | ND | | 0.067 | 0.025 |
| 4-Chloro-3-methylphenol | ND | | 0.033 | 0.013 |
| 2-Methylnaphthalene | ND | | 0.033 | 0.012 |
| Hexachlorocyclopentadiene | ND | | 0.067 | 0.058 |
| 2,4,6-Trichlorophenol | ND | | 0.033 | 0.00916 |
| 2,4,5-Trichlorophenol | ND | | 0.033 | 0.025 |
| 1,1'-Biphenyl | ND | | 0.033 | 0.00496 |
| 2-Chloronaphthalene | ND | | 0.033 | 0.0077 |
| 2-Nitroaniline | ND | | 0.033 | 0.018 |
| Dimethyl phthalate | ND | | 0.033 | 0.00765 |

## SEMIVOLATILE ORGANICS

Lab ID: BLKS231120-02
Client ID: .
Date Received: NA
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3852.D 11/22/2023 10:15

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.067 | 0.038 |
| Acenaphthylene | ND | | 0.033 | 0.0073 |
| 3-Nitroaniline | ND | | 0.033 | 0.021 |
| Acenaphthene | ND | | 0.033 | 0.00658 |
| 2,4-Dinitrophenol | ND | | 0.067 | 0.014 |
| 4-Nitrophenol | ND | | 0.067 | 0.034 |
| 2,4-Dinitrotoluene | ND | | 0.067 | 0.038 |
| Dibenzofuran | ND | | 0.033 | 0.00436 |
| Diethyl phthalate | ND | | 0.033 | 0.010 |
| Fluorene | ND | | 0.033 | 0.00897 |
| 4-Chlorophenyl phenyl ether | ND | | 0.033 | 0.00733 |
| 4-Nitroaniline | ND | | 0.033 | 0.020 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.033 | 0.011 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.033 | 0.011 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.067 | 0.014 |
| N-Nitrosodiphenylamine | ND | | 0.033 | 0.00684 |
| 1,2-Diphenylhydrazine | ND | | 0.033 | 0.0074 |
| 4-Bromophenyl phenyl ether | ND | | 0.033 | 0.00924 |
| Hexachlorobenzene | ND | | 0.033 | 0.010 |
| Atrazine | ND | | 0.033 | 0.020 |
| Pentachlorophenol | ND | | 0.033 | 0.015 |
| Phenanthrene | ND | | 0.033 | 0.00545 |
| Anthracene | ND | | 0.033 | 0.00339 |
| Carbazole | ND | | 0.033 | 0.00777 |
| Di-n-butyl phthalate | ND | | 0.033 | 0.014 |
| Fluoranthene | ND | | 0.033 | 0.011 |
| Benzidine | ND | | 0.033 | 0.087 |
| Pyrene | ND | | 0.033 | 0.00776 |
| Butyl benzyl phthalate | ND | | 0.033 | 0.015 |
| 3,3'-Dichlorobenzidine | ND | | 0.033 | 0.024 |
| Benzo[a]anthracene | ND | | 0.033 | 0.012 |
| Chrysene | ND | | 0.033 | 0.0092 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.033 | 0.021 |
| Di-n-octyl phthalate | ND | | 0.033 | 0.024 |
| Benzo[b]fluoranthene | ND | | 0.033 | 0.016 |
| Benzo[k]fluoranthene | ND | | 0.033 | 0.023 |
| Benzo[a]pyrene | ND | | 0.033 | 0.016 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.033 | 0.021 |
| Dibenz[a,h]anthracene | ND | | 0.033 | 0.013 |
| Benzo[g,h,i]perylene | ND | | 0.033 | 0.025 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.067 | 0.038 |

Total Target Compounds (72): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
Q --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: BLKS231120-02
Client ID: .
Date Received: NA
Date Extracted: 11/20/2023
Date Analyzed: 11/22/2023
Data file: A3852.D 11/22/2023 10:15

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: NA

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | No peaks detected | | | |

Total TICs = 0

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-016
Client ID: TWP1
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/30/2023
Data file: B6031.D 11/30/2023 15:23
SIM Data file: B6000.D 11/29/2023 18:34

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 2.00 | 0.492 |
| Phenol | ND | | 1.00 | 0.276 |
| Bis(2-chloroethyl) ether | ND | | 1.00 | 0.459 |
| 2-Chlorophenol | ND | | 1.00 | 0.257 |
| 2-Methylphenol | ND | | 1.00 | 0.267 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 1.00 | 0.682 |
| 4-Methylphenol ** | ND | | 1.00 | 0.337 |
| N-Nitrosodi-n-propylamine | ND | | 1.00 | 0.391 |
| Acetophenone | ND | | 1.00 | 0.241 |
| Hexachloroethane | ND | | 1.00 | 0.470 |
| Nitrobenzene | ND | | 1.00 | 0.442 |
| Isophorone | ND | | 1.00 | 0.232 |
| 2-Nitrophenol | ND | | 2.00 | 0.581 |
| 2,4-Dimethylphenol | ND | | 2.00 | 1.06 |
| Bis(2-chloroethoxy) methane | ND | | 1.00 | 0.344 |
| 2,4-Dichlorophenol | ND | | 1.00 | 0.383 |
| Naphthalene | ND | | 1.00 | 0.183 |
| 4-Chloroaniline | ND | | 1.00 | 0.612 |
| Hexachlorobutadiene | ND | | 1.00 | 0.561 |
| Caprolactam | ND | | 3.00 | 1.15 |
| 4-Chloro-3-methylphenol | ND | | 1.00 | 0.336 |
| 2-Methylnaphthalene | ND | | 1.00 | 0.200 |
| Hexachlorocyclopentadiene | ND | | 2.00 | 1.89 |
| 2,4,6-Trichlorophenol | ND | | 1.00 | 0.497 |
| 2,4,5-Trichlorophenol | ND | | 2.00 | 0.505 |
| 1,1'-Biphenyl | ND | | 1.00 | 0.212 |
| 2-Chloronaphthalene | ND | | 1.00 | 0.234 |
| 2-Nitroaniline | ND | | 2.00 | 0.702 |
| Dimethyl phthalate | ND | | 1.00 | 0.197 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-016
Client ID: TWP1
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/30/2023
Data file: B6031.D 11/30/2023 15:23
SIM Data file: B6000.D 11/29/2023 18:34

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 1.00 | 0.996 |
| Acenaphthylene | ND | | 1.00 | 0.268 |
| 3-Nitroaniline | ND | | 3.00 | 0.436 |
| Acenaphthene | ND | | 1.00 | 0.281 |
| 2,4-Dinitrophenol | ND | | 3.00 | 2.35 |
| 4-Nitrophenol | ND | | 3.00 | 2.41 |
| 2,4-Dinitrotoluene | ND | | 1.00 | 0.886 |
| Dibenzofuran | ND | | 1.00 | 0.199 |
| Diethyl phthalate | ND | | 1.00 | 0.239 |
| Fluorene | ND | | 1.00 | 0.367 |
| 4-Chlorophenyl phenyl ether | ND | | 1.00 | 0.396 |
| 4-Nitroaniline | ND | | 2.00 | 0.692 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 1.00 | 0.326 |
| 2,3,4,6-Tetrachlorophenol | ND | | 1.00 | 0.872 |
| 4,6-Dinitro-2-methylphenol * | ND | | 0.100 | 0.033 |
| N-Nitrosodiphenylamine | ND | | 1.00 | 0.196 |
| 4-Bromophenyl phenyl ether | ND | | 1.00 | 0.940 |
| Hexachlorobenzene * | ND | | 0.020 | 0.016 |
| Atrazine | ND | | 1.00 | 0.468 |
| Pentachlorophenol * | ND | | 0.100 | 0.052 |
| Phenanthrene | ND | | 1.00 | 0.263 |
| Anthracene | ND | | 1.00 | 0.560 |
| Carbazole | ND | | 1.00 | 0.594 |
| Di-n-butyl phthalate | ND | | 1.00 | 0.343 |
| Fluoranthene | ND | | 1.00 | 0.482 |
| Pyrene | ND | | 1.00 | 0.555 |
| Butyl benzyl phthalate | ND | | 1.00 | 0.642 |
| 3,3'-Dichlorobenzidine | ND | | 1.00 | 0.524 |
| Benzo[a]anthracene * | 0.098 | J | 0.100 | 0.029 |
| Chrysene | ND | | 1.00 | 0.232 |
| Bis(2-ethylhexyl) phthalate | ND | | 2.00 | 1.38 |
| Di-n-octyl phthalate | ND | | 2.00 | 1.09 |
| Benzo[b]fluoranthene * | 0.187 | | 0.100 | 0.026 |
| Benzo[k]fluoranthene * | 0.142 | | 0.100 | 0.035 |
| Benzo[a]pyrene * | 0.137 | | 0.100 | 0.027 |
| Indeno[1,2,3-cd]pyrene * | 0.291 | | 0.100 | 0.036 |
| Dibenz[a,h]anthracene * | 0.303 | | 0.100 | 0.031 |
| Benzo[g,h,i]perylene | ND | | 2.00 | 1.04 |
| 1,4-Dioxane | ND | | 0.400 | 0.329 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 1.00 | 0.886 |
| Total Target Compounds (69): | 1.16 | J | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

* - RL & MDL from SIM run
** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05066-016
Client ID: TWP1
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/30/2023
Date File: B6031.D

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Unknown SV | 22.1 | J | 2.05 |
| | Unknown SV | 7.60 | J | 2.10 |
| | Unknown SV | 9.10 | J | 2.14 |
| 000057-10-3 | n-Hexadecanoic acid | 5.60 | JN | 4.71 |

Total TICs = 44.4 JN

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search
B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-017
Client ID: TWP4
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/29/2023
Data file: B6012.D 11/29/2023 21:46
SIM Data file: B5992.D 11/29/2023 16:24

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 2.00 | 0.492 |
| Phenol | ND | | 1.00 | 0.276 |
| Bis(2-chloroethyl) ether | ND | | 1.00 | 0.459 |
| 2-Chlorophenol | ND | | 1.00 | 0.257 |
| 2-Methylphenol | ND | | 1.00 | 0.267 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 1.00 | 0.682 |
| 4-Methylphenol ** | ND | | 1.00 | 0.337 |
| N-Nitrosodi-n-propylamine | ND | | 1.00 | 0.391 |
| Acetophenone | ND | | 1.00 | 0.241 |
| Hexachloroethane | ND | | 1.00 | 0.470 |
| Nitrobenzene | ND | | 1.00 | 0.442 |
| Isophorone | ND | | 1.00 | 0.232 |
| 2-Nitrophenol | ND | | 2.00 | 0.581 |
| 2,4-Dimethylphenol | ND | | 2.00 | 1.06 |
| Bis(2-chloroethoxy) methane | ND | | 1.00 | 0.344 |
| 2,4-Dichlorophenol | ND | | 1.00 | 0.383 |
| Naphthalene | ND | | 1.00 | 0.183 |
| 4-Chloroaniline | ND | | 1.00 | 0.612 |
| Hexachlorobutadiene | ND | | 1.00 | 0.561 |
| Caprolactam | ND | | 3.00 | 1.15 |
| 4-Chloro-3-methylphenol | ND | | 1.00 | 0.336 |
| 2-Methylnaphthalene | ND | | 1.00 | 0.200 |
| Hexachlorocyclopentadiene | ND | | 2.00 | 1.89 |
| 2,4,6-Trichlorophenol | ND | | 1.00 | 0.497 |
| 2,4,5-Trichlorophenol | ND | | 2.00 | 0.505 |
| 1,1'-Biphenyl | ND | | 1.00 | 0.212 |
| 2-Chloronaphthalene | ND | | 1.00 | 0.234 |
| 2-Nitroaniline | ND | | 2.00 | 0.702 |
| Dimethyl phthalate | ND | | 1.00 | 0.197 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-017
Client ID: TWP4
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/29/2023
Data file: B6012.D 11/29/2023 21:46
SIM Data file: B5992.D 11/29/2023 16:24

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 1.00 | 0.996 |
| Acenaphthylene | ND | | 1.00 | 0.268 |
| 3-Nitroaniline | ND | | 3.00 | 0.436 |
| Acenaphthene | ND | | 1.00 | 0.281 |
| 2,4-Dinitrophenol | ND | | 3.00 | 2.35 |
| 4-Nitrophenol | ND | | 3.00 | 2.41 |
| 2,4-Dinitrotoluene | ND | | 1.00 | 0.886 |
| Dibenzofuran | ND | | 1.00 | 0.199 |
| Diethyl phthalate | ND | | 1.00 | 0.239 |
| Fluorene | ND | | 1.00 | 0.367 |
| 4-Chlorophenyl phenyl ether | ND | | 1.00 | 0.396 |
| 4-Nitroaniline | ND | | 2.00 | 0.692 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 1.00 | 0.326 |
| 2,3,4,6-Tetrachlorophenol | ND | | 1.00 | 0.872 |
| 4,6-Dinitro-2-methylphenol * | ND | | 0.100 | 0.033 |
| N-Nitrosodiphenylamine | ND | | 1.00 | 0.196 |
| 4-Bromophenyl phenyl ether | ND | | 1.00 | 0.940 |
| Hexachlorobenzene * | ND | | 0.020 | 0.016 |
| Atrazine | ND | | 1.00 | 0.468 |
| Pentachlorophenol * | ND | | 0.100 | 0.052 |
| Phenanthrene | ND | | 1.00 | 0.263 |
| Anthracene | ND | | 1.00 | 0.560 |
| Carbazole | ND | | 1.00 | 0.594 |
| Di-n-butyl phthalate | ND | | 1.00 | 0.343 |
| Fluoranthene | ND | | 1.00 | 0.482 |
| Pyrene | ND | | 1.00 | 0.555 |
| Butyl benzyl phthalate | ND | | 1.00 | 0.642 |
| 3,3'-Dichlorobenzidine | ND | | 1.00 | 0.524 |
| Benzo[a]anthracene * | 0.200 | | 0.100 | 0.029 |
| Chrysene | ND | | 1.00 | 0.232 |
| Bis(2-ethylhexyl) phthalate | ND | | 2.00 | 1.38 |
| Di-n-octyl phthalate | ND | | 2.00 | 1.09 |
| Benzo[b]fluoranthene * | 0.272 | | 0.100 | 0.026 |
| Benzo[k]fluoranthene * | 0.154 | | 0.100 | 0.035 |
| Benzo[a]pyrene * | 0.245 | | 0.100 | 0.027 |
| Indeno[1,2,3-cd]pyrene * | 0.330 | | 0.100 | 0.036 |
| Dibenz[a,h]anthracene * | 0.253 | | 0.100 | 0.031 |
| Benzo[g,h,i]perylene | ND | | 2.00 | 1.04 |
| 1,4-Dioxane | ND | | 0.400 | 0.329 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 1.00 | 0.886 |

Total Target Compounds (69): 1.45

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

* - RL & MDL from SIM run
** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
## Tentatively Identified Compounds

Lab ID: E23-05066-017
Client ID: TWP4
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/29/2023
Date File: B6012.D

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Unknown SV | 11.7 | J | 2.05 |
| | Unknown SV | 4.50 | J | 2.14 |

Total TICs = 16.2 J

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-018
Client ID: TWP2
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/29/2023
Data file: B6013.D 11/29/2023 22:02
SIM Data file: B5993.D 11/29/2023 16:40

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 2.00 | 0.492 |
| Phenol | ND | | 1.00 | 0.276 |
| Bis(2-chloroethyl) ether | ND | | 1.00 | 0.459 |
| 2-Chlorophenol | ND | | 1.00 | 0.257 |
| 2-Methylphenol | ND | | 1.00 | 0.267 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 1.00 | 0.682 |
| 4-Methylphenol ** | ND | | 1.00 | 0.337 |
| N-Nitrosodi-n-propylamine | ND | | 1.00 | 0.391 |
| Acetophenone | ND | | 1.00 | 0.241 |
| Hexachloroethane | ND | | 1.00 | 0.470 |
| Nitrobenzene | ND | | 1.00 | 0.442 |
| Isophorone | ND | | 1.00 | 0.232 |
| 2-Nitrophenol | ND | | 2.00 | 0.581 |
| 2,4-Dimethylphenol | ND | | 2.00 | 1.06 |
| Bis(2-chloroethoxy) methane | ND | | 1.00 | 0.344 |
| 2,4-Dichlorophenol | ND | | 1.00 | 0.383 |
| Naphthalene | ND | | 1.00 | 0.183 |
| 4-Chloroaniline | ND | | 1.00 | 0.612 |
| Hexachlorobutadiene | ND | | 1.00 | 0.561 |
| Caprolactam | ND | | 3.00 | 1.15 |
| 4-Chloro-3-methylphenol | ND | | 1.00 | 0.336 |
| 2-Methylnaphthalene | ND | | 1.00 | 0.200 |
| Hexachlorocyclopentadiene | ND | | 2.00 | 1.89 |
| 2,4,6-Trichlorophenol | ND | | 1.00 | 0.497 |
| 2,4,5-Trichlorophenol | ND | | 2.00 | 0.505 |
| 1,1'-Biphenyl | ND | | 1.00 | 0.212 |
| 2-Chloronaphthalene | ND | | 1.00 | 0.234 |
| 2-Nitroaniline | ND | | 2.00 | 0.702 |
| Dimethyl phthalate | ND | | 1.00 | 0.197 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-018
Client ID: TWP2
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/29/2023
Data file: B6013.D 11/29/2023 22:02
SIM Data file: B5993.D 11/29/2023 16:40

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 1.00 | 0.996 |
| Acenaphthylene | ND | | 1.00 | 0.268 |
| 3-Nitroaniline | ND | | 3.00 | 0.436 |
| Acenaphthene | ND | | 1.00 | 0.281 |
| 2,4-Dinitrophenol | ND | | 3.00 | 2.35 |
| 4-Nitrophenol | ND | | 3.00 | 2.41 |
| 2,4-Dinitrotoluene | ND | | 1.00 | 0.886 |
| Dibenzofuran | ND | | 1.00 | 0.199 |
| Diethyl phthalate | ND | | 1.00 | 0.239 |
| Fluorene | ND | | 1.00 | 0.367 |
| 4-Chlorophenyl phenyl ether | ND | | 1.00 | 0.396 |
| 4-Nitroaniline | ND | | 2.00 | 0.692 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 1.00 | 0.326 |
| 2,3,4,6-Tetrachlorophenol | ND | | 1.00 | 0.872 |
| 4,6-Dinitro-2-methylphenol * | ND | | 0.100 | 0.033 |
| N-Nitrosodiphenylamine | ND | | 1.00 | 0.196 |
| 4-Bromophenyl phenyl ether | ND | | 1.00 | 0.940 |
| Hexachlorobenzene * | ND | | 0.020 | 0.016 |
| Atrazine | ND | | 1.00 | 0.468 |
| Pentachlorophenol * | ND | | 0.100 | 0.052 |
| Phenanthrene | ND | | 1.00 | 0.263 |
| Anthracene | ND | | 1.00 | 0.560 |
| Carbazole | ND | | 1.00 | 0.594 |
| Di-n-butyl phthalate | ND | | 1.00 | 0.343 |
| Fluoranthene | ND | | 1.00 | 0.482 |
| Pyrene | ND | | 1.00 | 0.555 |
| Butyl benzyl phthalate | ND | | 1.00 | 0.642 |
| 3,3'-Dichlorobenzidine | ND | | 1.00 | 0.524 |
| Benzo[a]anthracene * | ND | | 0.100 | 0.029 |
| Chrysene | ND | | 1.00 | 0.232 |
| Bis(2-ethylhexyl) phthalate | ND | | 2.00 | 1.38 |
| Di-n-octyl phthalate | ND | | 2.00 | 1.09 |
| Benzo[b]fluoranthene * | ND | | 0.100 | 0.026 |
| Benzo[k]fluoranthene * | ND | | 0.100 | 0.035 |
| Benzo[a]pyrene * | ND | | 0.100 | 0.027 |
| Indeno[1,2,3-cd]pyrene * | ND | | 0.100 | 0.036 |
| Dibenz[a,h]anthracene * | ND | | 0.100 | 0.031 |
| Benzo[g,h,i]perylene | ND | | 2.00 | 1.04 |
| 1,4-Dioxane | ND | | 0.400 | 0.329 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 1.00 | 0.886 |

Total Target Compounds (69): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

* - RL & MDL from SIM run
** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
## Tentatively Identified Compounds

Lab ID: E23-05066-018
Client ID: TWP2
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/29/2023
Data file: B6013.D 11/29/2023 22:02

GC/MS Column; DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | No peaks detected | | | |

Total TICs = 0

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-019
Client ID: TWP5
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/30/2023
Data file: B6032.D 11/30/2023 16:41
SIM Data file: B5994.D 11/29/2023 16:57

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 2.00 | 0.492 |
| Phenol | ND | | 1.00 | 0.276 |
| Bis(2-chloroethyl) ether | ND | | 1.00 | 0.459 |
| 2-Chlorophenol | ND | | 1.00 | 0.257 |
| 2-Methylphenol | ND | | 1.00 | 0.267 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 1.00 | 0.682 |
| 4-Methylphenol ** | ND | | 1.00 | 0.337 |
| N-Nitrosodi-n-propylamine | ND | | 1.00 | 0.391 |
| Acetophenone | ND | | 1.00 | 0.241 |
| Hexachloroethane | ND | | 1.00 | 0.470 |
| Nitrobenzene | ND | | 1.00 | 0.442 |
| Isophorone | ND | | 1.00 | 0.232 |
| 2-Nitrophenol | ND | | 2.00 | 0.581 |
| 2,4-Dimethylphenol | ND | | 2.00 | 1.06 |
| Bis(2-chloroethoxy) methane | ND | | 1.00 | 0.344 |
| 2,4-Dichlorophenol | ND | | 1.00 | 0.383 |
| Naphthalene | ND | | 1.00 | 0.183 |
| 4-Chloroaniline | ND | | 1.00 | 0.612 |
| Hexachlorobutadiene | ND | | 1.00 | 0.561 |
| Caprolactam | ND | | 3.00 | 1.15 |
| 4-Chloro-3-methylphenol | ND | | 1.00 | 0.336 |
| 2-Methylnaphthalene | ND | | 1.00 | 0.200 |
| Hexachlorocyclopentadiene | ND | | 2.00 | 1.89 |
| 2,4,6-Trichlorophenol | ND | | 1.00 | 0.497 |
| 2,4,5-Trichlorophenol | ND | | 2.00 | 0.505 |
| 1,1'-Biphenyl | ND | | 1.00 | 0.212 |
| 2-Chloronaphthalene | ND | | 1.00 | 0.234 |
| 2-Nitroaniline | ND | | 2.00 | 0.702 |
| Dimethyl phthalate | ND | | 1.00 | 0.197 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05066-019
Client ID: TWP5
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/30/2023
Data file: B6032.D 11/30/2023 16:41
SIM Data file: B5994.D 11/29/2023 16:57

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 1.00 | 0.996 |
| Acenaphthylene | ND | | 1.00 | 0.268 |
| 3-Nitroaniline | ND | | 3.00 | 0.436 |
| Acenaphthene | ND | | 1.00 | 0.281 |
| 2,4-Dinitrophenol | ND | | 3.00 | 2.35 |
| 4-Nitrophenol | ND | | 3.00 | 2.41 |
| 2,4-Dinitrotoluene | ND | | 1.00 | 0.886 |
| Dibenzofuran | ND | | 1.00 | 0.199 |
| Diethyl phthalate | ND | | 1.00 | 0.239 |
| Fluorene | ND | | 1.00 | 0.367 |
| 4-Chlorophenyl phenyl ether | ND | | 1.00 | 0.396 |
| 4-Nitroaniline | ND | | 2.00 | 0.692 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 1.00 | 0.326 |
| 2,3,4,6-Tetrachlorophenol | ND | | 1.00 | 0.872 |
| 4,6-Dinitro-2-methylphenol * | ND | | 0.100 | 0.033 |
| N-Nitrosodiphenylamine | ND | | 1.00 | 0.196 |
| 4-Bromophenyl phenyl ether | ND | | 1.00 | 0.940 |
| Hexachlorobenzene * | ND | | 0.020 | 0.016 |
| Atrazine | ND | | 1.00 | 0.468 |
| Pentachlorophenol * | ND | | 0.100 | 0.052 |
| Phenanthrene | ND | | 1.00 | 0.263 |
| Anthracene | ND | | 1.00 | 0.560 |
| Carbazole | ND | | 1.00 | 0.594 |
| Di-n-butyl phthalate | ND | | 1.00 | 0.343 |
| Fluoranthene | ND | | 1.00 | 0.482 |
| Pyrene | ND | | 1.00 | 0.555 |
| Butyl benzyl phthalate | ND | | 1.00 | 0.642 |
| 3,3'-Dichlorobenzidine | ND | | 1.00 | 0.524 |
| Benzo[a]anthracene * | ND | | 0.100 | 0.029 |
| Chrysene | ND | | 1.00 | 0.232 |
| Bis(2-ethylhexyl) phthalate | ND | | 2.00 | 1.38 |
| Di-n-octyl phthalate | ND | | 2.00 | 1.09 |
| Benzo[b]fluoranthene * | ND | | 0.100 | 0.026 |
| Benzo[k]fluoranthene * | ND | | 0.100 | 0.035 |
| Benzo[a]pyrene * | ND | | 0.100 | 0.027 |
| Indeno[1,2,3-cd]pyrene * | ND | | 0.100 | 0.036 |
| Dibenz[a,h]anthracene * | ND | | 0.100 | 0.031 |
| Benzo[g,h,i]perylene | ND | | 2.00 | 1.04 |
| 1,4-Dioxane | ND | | 0.400 | 0.329 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 1.00 | 0.886 |

Total Target Compounds (69): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

* - RL & MDL from SIM run
** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05066-019
Client ID: TWP5
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/30/2023
Date File: B6032.D

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Unknown SV | 14.1 | J | 2.05 |
| | Unknown SV | 5.40 | J | 2.10 |
| | Unknown SV | 5.70 | J | 2.14 |
| 000057-10-3 | n-Hexadecanoic acid | 4.10 | JN | 4.85 |

Total TICs = 29.3 JN

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search
B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: BLKA231120-04
Client ID: .
Date Received: NA
Date Extracted: 11/20/2023
Date Analyzed: 11/30/2023
Data file: B6026.D 11/30/2023 11:58
SIM Data file: B5984.D 11/29/2023 13:10

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 2.00 | 0.492 |
| Phenol | ND | | 1.00 | 0.276 |
| Bis(2-chloroethyl) ether | ND | | 1.00 | 0.459 |
| 2-Chlorophenol | ND | | 1.00 | 0.257 |
| 2-Methylphenol | ND | | 1.00 | 0.267 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 1.00 | 0.682 |
| 4-Methylphenol ** | ND | | 1.00 | 0.337 |
| N-Nitrosodi-n-propylamine | ND | | 1.00 | 0.391 |
| Acetophenone | ND | | 1.00 | 0.241 |
| Hexachloroethane | ND | | 1.00 | 0.470 |
| Nitrobenzene | ND | | 1.00 | 0.442 |
| Isophorone | ND | | 1.00 | 0.232 |
| 2-Nitrophenol | ND | | 2.00 | 0.581 |
| 2,4-Dimethylphenol | ND | | 2.00 | 1.06 |
| Bis(2-chloroethoxy) methane | ND | | 1.00 | 0.344 |
| 2,4-Dichlorophenol | ND | | 1.00 | 0.383 |
| Naphthalene | ND | | 1.00 | 0.183 |
| 4-Chloroaniline | ND | | 1.00 | 0.612 |
| Hexachlorobutadiene | ND | | 1.00 | 0.561 |
| Caprolactam | ND | | 3.00 | 1.15 |
| 4-Chloro-3-methylphenol | ND | | 1.00 | 0.336 |
| 2-Methylnaphthalene | ND | | 1.00 | 0.200 |
| Hexachlorocyclopentadiene | ND | | 2.00 | 1.89 |
| 2,4,6-Trichlorophenol | ND | | 1.00 | 0.497 |
| 2,4,5-Trichlorophenol | ND | | 2.00 | 0.505 |
| 1,1'-Biphenyl | ND | | 1.00 | 0.212 |
| 2-Chloronaphthalene | ND | | 1.00 | 0.234 |
| 2-Nitroaniline | ND | | 2.00 | 0.702 |
| Dimethyl phthalate | ND | | 1.00 | 0.197 |

## SEMIVOLATILE ORGANICS

Lab ID: BLKA231120-04
Client ID: .
Date Received: NA
Date Extracted: 11/20/2023
Date Analyzed: 11/30/2023
Data file: B6026.D 11/30/2023 11:58
SIM Data file: B5984.D 11/29/2023 13:10

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 1.00 | 0.996 |
| Acenaphthylene | ND | | 1.00 | 0.268 |
| 3-Nitroaniline | ND | | 3.00 | 0.436 |
| Acenaphthene | ND | | 1.00 | 0.281 |
| 2,4-Dinitrophenol | ND | | 3.00 | 2.35 |
| 4-Nitrophenol | ND | | 3.00 | 2.41 |
| 2,4-Dinitrotoluene | ND | | 1.00 | 0.886 |
| Dibenzofuran | ND | | 1.00 | 0.199 |
| Diethyl phthalate | ND | | 1.00 | 0.239 |
| Fluorene | ND | | 1.00 | 0.367 |
| 4-Chlorophenyl phenyl ether | ND | | 1.00 | 0.396 |
| 4-Nitroaniline | ND | | 2.00 | 0.692 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 1.00 | 0.326 |
| 2,3,4,6-Tetrachlorophenol | ND | | 1.00 | 0.872 |
| 4,6-Dinitro-2-methylphenol * | ND | | 0.100 | 0.033 |
| N-Nitrosodiphenylamine | ND | | 1.00 | 0.196 |
| 4-Bromophenyl phenyl ether | ND | | 1.00 | 0.940 |
| Hexachlorobenzene * | ND | | 0.020 | 0.016 |
| Atrazine | ND | | 1.00 | 0.468 |
| Pentachlorophenol * | ND | | 0.100 | 0.052 |
| Phenanthrene | ND | | 1.00 | 0.263 |
| Anthracene | ND | | 1.00 | 0.560 |
| Carbazole | ND | | 1.00 | 0.594 |
| Di-n-butyl phthalate | ND | | 1.00 | 0.343 |
| Fluoranthene | ND | | 1.00 | 0.482 |
| Pyrene | ND | | 1.00 | 0.555 |
| Butyl benzyl phthalate | ND | | 1.00 | 0.642 |
| 3,3'-Dichlorobenzidine | ND | | 1.00 | 0.524 |
| Benzo[a]anthracene * | ND | | 0.100 | 0.029 |
| Chrysene | ND | | 1.00 | 0.232 |
| Bis(2-ethylhexyl) phthalate | ND | | 2.00 | 1.38 |
| Di-n-octyl phthalate | ND | | 2.00 | 1.09 |
| Benzo[b]fluoranthene * | ND | | 0.100 | 0.026 |
| Benzo[k]fluoranthene * | ND | | 0.100 | 0.035 |
| Benzo[a]pyrene * | ND | | 0.100 | 0.027 |
| Indeno[1,2,3-cd]pyrene * | ND | | 0.100 | 0.036 |
| Dibenz[a,h]anthracene * | ND | | 0.100 | 0.031 |
| Benzo[g,h,i]perylene | ND | | 2.00 | 1.04 |
| 1,4-Dioxane | ND | | 0.400 | 0.329 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 1.00 | 0.886 |

Total Target Compounds (69): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

* - RL & MDL from SIM run
** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05066-001
Client ID: SB10A/0-
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/27/2023
Data file: R5461.D 11/27/2023 11:04

GC Column: DB-5/DB1701P
Sample wt/vol: 15.01g
Matrix-Units: Soil-mg/Kg
% Moisture: 13.6
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00386 | 0.0012 |
| Aroclor-1221 | ND | | 0.00386 | 0.0012 |
| Aroclor-1232 | ND | | 0.00386 | 0.0012 |
| Aroclor-1242 | ND | | 0.00386 | 0.0012 |
| Aroclor-1248 | ND | | 0.00386 | 0.0012 |
| Aroclor-1254 | ND | | 0.00386 | 0.0012 |
| Aroclor-1260 | ND | | 0.00386 | 0.0012 |
| Aroclor-1262 | ND | | 0.00386 | 0.0012 |
| Aroclor-1268 | ND | | 0.00386 | 0.0012 |
| PCBs | ND | | 0.00386 | 0.0012 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05066-002
Client ID: SB10B/10
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/27/2023
Data file: R5496.D 11/27/2023 21:43

GC Column: DB-5/DB1701P
Sample wt/vol: 15.05g
Matrix-Units: Soil-mg/Kg
% Moisture: 10.4
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00371 | 0.0011 |
| Aroclor-1221 | ND | | 0.00371 | 0.0011 |
| Aroclor-1232 | ND | | 0.00371 | 0.0011 |
| Aroclor-1242 | ND | | 0.00371 | 0.0011 |
| Aroclor-1248 | ND | | 0.00371 | 0.0011 |
| Aroclor-1254 | ND | | 0.00371 | 0.0011 |
| Aroclor-1260 | ND | | 0.00371 | 0.0011 |
| Aroclor-1262 | ND | | 0.00371 | 0.0011 |
| Aroclor-1268 | ND | | 0.00371 | 0.0011 |
| PCBs | ND | | 0.00371 | 0.0011 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05066-003
Client ID: SB2A/0-2
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/27/2023
Data file: R5463.D 11/27/2023 11:39

GC Column: DB-5/DB1701P
Sample wt/vol: 15.04g
Matrix-Units: Soil-mg/Kg
% Moisture: 13.9
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00386 | 0.0012 |
| Aroclor-1221 | ND | | 0.00386 | 0.0012 |
| Aroclor-1232 | ND | | 0.00386 | 0.0012 |
| Aroclor-1242 | ND | | 0.00386 | 0.0012 |
| Aroclor-1248 | ND | | 0.00386 | 0.0012 |
| Aroclor-1254 | ND | | 0.00386 | 0.0012 |
| Aroclor-1260 | ND | | 0.00386 | 0.0012 |
| Aroclor-1262 | ND | | 0.00386 | 0.0012 |
| Aroclor-1268 | ND | | 0.00386 | 0.0012 |
| PCBs | ND | | 0.00386 | 0.0012 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05066-004
Client ID: SB2B/10-
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/27/2023
Data file: R5497.D 11/27/2023 22:00

GC Column: DB-5/DB1701P
Sample wt/vol: 15.06g
Matrix-Units: Soil-mg/Kg
% Moisture: 4.50
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00348 | 0.001 |
| Aroclor-1221 | ND | | 0.00348 | 0.001 |
| Aroclor-1232 | ND | | 0.00348 | 0.001 |
| Aroclor-1242 | ND | | 0.00348 | 0.001 |
| Aroclor-1248 | ND | | 0.00348 | 0.001 |
| Aroclor-1254 | ND | | 0.00348 | 0.001 |
| Aroclor-1260 | ND | | 0.00348 | 0.001 |
| Aroclor-1262 | ND | | 0.00348 | 0.001 |
| Aroclor-1268 | ND | | 0.00348 | 0.001 |
| PCBs | ND | | 0.00348 | 0.001 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05066-005
Client ID: SB5/0-2
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/27/2023
Data file: R5465.D 11/27/2023 12:13

GC Column: DB-5/DB1701P
Sample wt/vol: 15.02g
Matrix-Units: Soil-mg/Kg
% Moisture: 11.3
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00375 | 0.0011 |
| Aroclor-1221 | ND | | 0.00375 | 0.0011 |
| Aroclor-1232 | ND | | 0.00375 | 0.0011 |
| Aroclor-1242 | ND | | 0.00375 | 0.0011 |
| Aroclor-1248 | ND | | 0.00375 | 0.0011 |
| Aroclor-1254 | ND | | 0.00375 | 0.0011 |
| Aroclor-1260 | ND | | 0.00375 | 0.0011 |
| Aroclor-1262 | ND | | 0.00375 | 0.0011 |
| Aroclor-1268 | ND | | 0.00375 | 0.0011 |
| PCBs | ND | | 0.00375 | 0.0011 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05066-006
Client ID: SB3A/0-2
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/27/2023
Data file: R5466.D 11/27/2023 12:33

GC Column: DB-5/DB1701P
Sample wt/vol: 15.07g
Matrix-Units: Soil-mg/Kg
% Moisture: 10.1
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00369 | 0.0011 |
| Aroclor-1221 | ND | | 0.00369 | 0.0011 |
| Aroclor-1232 | ND | | 0.00369 | 0.0011 |
| Aroclor-1242 | ND | | 0.00369 | 0.0011 |
| Aroclor-1248 | ND | | 0.00369 | 0.0011 |
| Aroclor-1254 | ND | | 0.00369 | 0.0011 |
| Aroclor-1260 | ND | | 0.00369 | 0.0011 |
| Aroclor-1262 | ND | | 0.00369 | 0.0011 |
| Aroclor-1268 | ND | | 0.00369 | 0.0011 |
| PCBs | ND | | 0.00369 | 0.0011 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05066-007
Client ID: SB3B/10-
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/27/2023
Data file: R5467.D 11/27/2023 12:50

GC Column: DB-5/DB1701P
Sample wt/vol: 15.01g
Matrix-Units: Soil-mg/Kg
% Moisture: 5.70
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00353 | 0.0011 |
| Aroclor-1221 | ND | | 0.00353 | 0.0011 |
| Aroclor-1232 | ND | | 0.00353 | 0.0011 |
| Aroclor-1242 | ND | | 0.00353 | 0.0011 |
| Aroclor-1248 | ND | | 0.00353 | 0.0011 |
| Aroclor-1254 | ND | | 0.00353 | 0.0011 |
| Aroclor-1260 | ND | | 0.00353 | 0.0011 |
| Aroclor-1262 | ND | | 0.00353 | 0.0011 |
| Aroclor-1268 | ND | | 0.00353 | 0.0011 |
| PCBs | ND | | 0.00353 | 0.0011 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05066-008
Client ID: SB9A/0-2
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/27/2023
Data file: R5468.D 11/27/2023 13:07

GC Column: DB-5/DB1701P
Sample wt/vol: 15.06g
Matrix-Units: Soil-mg/Kg
% Moisture: 7.80
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.0036 | 0.0011 |
| Aroclor-1221 | ND | | 0.0036 | 0.0011 |
| Aroclor-1232 | ND | | 0.0036 | 0.0011 |
| Aroclor-1242 | ND | | 0.0036 | 0.0011 |
| Aroclor-1248 | ND | | 0.0036 | 0.0011 |
| Aroclor-1254 | ND | | 0.0036 | 0.0011 |
| Aroclor-1260 | ND | | 0.0036 | 0.0011 |
| Aroclor-1262 | ND | | 0.0036 | 0.0011 |
| Aroclor-1268 | ND | | 0.0036 | 0.0011 |
| PCBs | ND | | 0.0036 | 0.0011 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05066-009
Client ID: SB9B/10-
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/27/2023
Data file: R5498.D 11/27/2023 22:18

GC Column: DB-5/DB1701P
Sample wt/vol: 15.05g
Matrix-Units: Soil-mg/Kg
% Moisture: 4.70
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00349 | 0.001 |
| Aroclor-1221 | ND | | 0.00349 | 0.001 |
| Aroclor-1232 | ND | | 0.00349 | 0.001 |
| Aroclor-1242 | ND | | 0.00349 | 0.001 |
| Aroclor-1248 | ND | | 0.00349 | 0.001 |
| Aroclor-1254 | ND | | 0.00349 | 0.001 |
| Aroclor-1260 | ND | | 0.00349 | 0.001 |
| Aroclor-1262 | ND | | 0.00349 | 0.001 |
| Aroclor-1268 | ND | | 0.00349 | 0.001 |
| PCBs | ND | | 0.00349 | 0.001 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05066-010
Client ID: SB1A/0-2
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/27/2023
Data file: R5470.D 11/27/2023 13:42

GC Column: DB-5/DB1701P
Sample wt/vol: 15.07g
Matrix-Units: Soil-mg/Kg
% Moisture: 9.10
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00365 | 0.0011 |
| Aroclor-1221 | ND | | 0.00365 | 0.0011 |
| Aroclor-1232 | ND | | 0.00365 | 0.0011 |
| Aroclor-1242 | ND | | 0.00365 | 0.0011 |
| Aroclor-1248 | ND | | 0.00365 | 0.0011 |
| Aroclor-1254 | ND | | 0.00365 | 0.0011 |
| Aroclor-1260 | ND | | 0.00365 | 0.0011 |
| Aroclor-1262 | ND | | 0.00365 | 0.0011 |
| Aroclor-1268 | ND | | 0.00365 | 0.0011 |
| PCBs | ND | | 0.00365 | 0.0011 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05066-011
Client ID: SB1B/10-
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/27/2023
Data file: R5471.D 11/27/2023 13:59

GC Column: DB-5/DB1701P
Sample wt/vol: 15.05g
Matrix-Units: Soil-mg/Kg
% Moisture: 10.2
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.0037 | 0.0011 |
| Aroclor-1221 | ND | | 0.0037 | 0.0011 |
| Aroclor-1232 | ND | | 0.0037 | 0.0011 |
| Aroclor-1242 | ND | | 0.0037 | 0.0011 |
| Aroclor-1248 | ND | | 0.0037 | 0.0011 |
| Aroclor-1254 | ND | | 0.0037 | 0.0011 |
| Aroclor-1260 | ND | | 0.0037 | 0.0011 |
| Aroclor-1262 | ND | | 0.0037 | 0.0011 |
| Aroclor-1268 | ND | | 0.0037 | 0.0011 |
| PCBs | ND | | 0.0037 | 0.0011 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05066-012
Client ID: SB4A/0-2
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/27/2023
Data file: R5472.D 11/27/2023 14:16

GC Column: DB-5/DB1701P
Sample wt/vol: 15.04g
Matrix-Units: Soil-mg/Kg
% Moisture: 8.90
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00365 | 0.0011 |
| Aroclor-1221 | ND | | 0.00365 | 0.0011 |
| Aroclor-1232 | ND | | 0.00365 | 0.0011 |
| Aroclor-1242 | ND | | 0.00365 | 0.0011 |
| Aroclor-1248 | ND | | 0.00365 | 0.0011 |
| Aroclor-1254 | ND | | 0.00365 | 0.0011 |
| Aroclor-1260 | ND | | 0.00365 | 0.0011 |
| Aroclor-1262 | ND | | 0.00365 | 0.0011 |
| Aroclor-1268 | ND | | 0.00365 | 0.0011 |
| PCBs | ND | | 0.00365 | 0.0011 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05066-013
Client ID: SB4B/10-
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/27/2023
Data file: R5473.D 11/27/2023 14:33

GC Column: DB-5/DB1701P
Sample wt/vol: 15.02g
Matrix-Units: Soil-mg/Kg
% Moisture: 5.20
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00351 | 0.0011 |
| Aroclor-1221 | ND | | 0.00351 | 0.0011 |
| Aroclor-1232 | ND | | 0.00351 | 0.0011 |
| Aroclor-1242 | ND | | 0.00351 | 0.0011 |
| Aroclor-1248 | ND | | 0.00351 | 0.0011 |
| Aroclor-1254 | ND | | 0.00351 | 0.0011 |
| Aroclor-1260 | ND | | 0.00351 | 0.0011 |
| Aroclor-1262 | ND | | 0.00351 | 0.0011 |
| Aroclor-1268 | ND | | 0.00351 | 0.0011 |
| PCBs | ND | | 0.00351 | 0.0011 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05066-014
Client ID: SB6-419-
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/27/2023
Data file: R5474.D 11/27/2023 14:51

GC Column: DB-5/DB1701P
Sample wt/vol: 15.04g
Matrix-Units: Soil-mg/Kg
% Moisture: 7.80
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00361 | 0.0011 |
| Aroclor-1221 | ND | | 0.00361 | 0.0011 |
| Aroclor-1232 | ND | | 0.00361 | 0.0011 |
| Aroclor-1242 | ND | | 0.00361 | 0.0011 |
| Aroclor-1248 | ND | | 0.00361 | 0.0011 |
| Aroclor-1254 | 1.66 | E | 0.00361 | 0.0011 |
| Aroclor-1260 | ND | | 0.00361 | 0.0011 |
| Aroclor-1262 | ND | | 0.00361 | 0.0011 |
| Aroclor-1268 | ND | | 0.00361 | 0.0011 |
| PCBs | 1.66 | E | 0.00361 | 0.0011 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05066-014DL
Client ID: SB6-419-
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: R5501.D 11/28/2023 08:36

GC Column: DB-5/DB1701P
Sample wt/vol: 15.04g
Matrix-Units: Soil-mg/Kg
% Moisture: 7.80
Dilution Factor: 10

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.036 | 0.011 |
| Aroclor-1221 | ND | | 0.036 | 0.011 |
| Aroclor-1232 | ND | | 0.036 | 0.011 |
| Aroclor-1242 | ND | | 0.036 | 0.011 |
| Aroclor-1248 | ND | | 0.036 | 0.011 |
| Aroclor-1254 | 1.95 | D | 0.036 | 0.011 |
| Aroclor-1260 | ND | | 0.036 | 0.011 |
| Aroclor-1262 | ND | | 0.036 | 0.011 |
| Aroclor-1268 | ND | | 0.036 | 0.011 |
| PCBs | 1.95 | D | 0.036 | 0.011 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05066-015
Client ID: SB8-401-
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/27/2023
Data file: R5475.D 11/27/2023 15:08

GC Column: DB-5/DB1701P
Sample wt/vol: 15.06g
Matrix-Units: Soil-mg/Kg
% Moisture: 6.20
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00354 | 0.0011 |
| Aroclor-1221 | ND | | 0.00354 | 0.0011 |
| Aroclor-1232 | ND | | 0.00354 | 0.0011 |
| Aroclor-1242 | ND | | 0.00354 | 0.0011 |
| Aroclor-1248 | ND | | 0.00354 | 0.0011 |
| Aroclor-1254 | ND | | 0.00354 | 0.0011 |
| Aroclor-1260 | ND | | 0.00354 | 0.0011 |
| Aroclor-1262 | ND | | 0.00354 | 0.0011 |
| Aroclor-1268 | ND | | 0.00354 | 0.0011 |
| PCBs | ND | | 0.00354 | 0.0011 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: BLKS231121-02
Client ID: PCB
Date Received: NA
Date Extracted: 11/21/2023
Date Analyzed: 11/27/2023
Data file: R5457.D 11/27/2023 09:38

GC Column: DB-5/DB1701P
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00333 | 0.001 |
| Aroclor-1221 | ND | | 0.00333 | 0.001 |
| Aroclor-1232 | ND | | 0.00333 | 0.001 |
| Aroclor-1242 | ND | | 0.00333 | 0.001 |
| Aroclor-1248 | ND | | 0.00333 | 0.001 |
| Aroclor-1254 | ND | | 0.00333 | 0.001 |
| Aroclor-1260 | ND | | 0.00333 | 0.001 |
| Aroclor-1262 | ND | | 0.00333 | 0.001 |
| Aroclor-1268 | ND | | 0.00333 | 0.001 |
| PCBs | ND | | 0.00333 | 0.001 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05066-016
Client ID: TWP1
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/27/2023
Data file: R5491.D 11/27/2023 20:00

GC Column: DB-5/DB1701P
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.050 | 0.015 |
| Aroclor-1221 | ND | | 0.050 | 0.015 |
| Aroclor-1232 | ND | | 0.050 | 0.015 |
| Aroclor-1242 | ND | | 0.050 | 0.015 |
| Aroclor-1248 | ND | | 0.050 | 0.015 |
| Aroclor-1254 | ND | | 0.050 | 0.015 |
| Aroclor-1260 | ND | | 0.050 | 0.015 |
| Aroclor-1262 | ND | | 0.050 | 0.015 |
| Aroclor-1268 | ND | | 0.050 | 0.015 |
| PCBs | ND | | 0.050 | 0.015 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05066-017
Client ID: TWP4
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/27/2023
Data file: R5492.D 11/27/2023 20:17

GC Column: DB-5/DB1701P
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.050 | 0.015 |
| Aroclor-1221 | ND | | 0.050 | 0.015 |
| Aroclor-1232 | ND | | 0.050 | 0.015 |
| Aroclor-1242 | ND | | 0.050 | 0.015 |
| Aroclor-1248 | ND | | 0.050 | 0.015 |
| Aroclor-1254 | ND | | 0.050 | 0.015 |
| Aroclor-1260 | ND | | 0.050 | 0.015 |
| Aroclor-1262 | ND | | 0.050 | 0.015 |
| Aroclor-1268 | ND | | 0.050 | 0.015 |
| PCBs | ND | | 0.050 | 0.015 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05066-018
Client ID: TWP2
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/27/2023
Data file: R5493.D 11/27/2023 20:34

GC Column: DB-5/DB1701P
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.050 | 0.015 |
| Aroclor-1221 | ND | | 0.050 | 0.015 |
| Aroclor-1232 | ND | | 0.050 | 0.015 |
| Aroclor-1242 | ND | | 0.050 | 0.015 |
| Aroclor-1248 | ND | | 0.050 | 0.015 |
| Aroclor-1254 | ND | | 0.050 | 0.015 |
| Aroclor-1260 | ND | | 0.050 | 0.015 |
| Aroclor-1262 | ND | | 0.050 | 0.015 |
| Aroclor-1268 | ND | | 0.050 | 0.015 |
| PCBs | ND | | 0.050 | 0.015 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05066-019
Client ID: TWP5
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/27/2023
Data file: R5494.D 11/27/2023 20:52

GC Column: DB-5/DB1701P
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.050 | 0.015 |
| Aroclor-1221 | ND | | 0.050 | 0.015 |
| Aroclor-1232 | ND | | 0.050 | 0.015 |
| Aroclor-1242 | ND | | 0.050 | 0.015 |
| Aroclor-1248 | ND | | 0.050 | 0.015 |
| Aroclor-1254 | ND | | 0.050 | 0.015 |
| Aroclor-1260 | ND | | 0.050 | 0.015 |
| Aroclor-1262 | ND | | 0.050 | 0.015 |
| Aroclor-1268 | ND | | 0.050 | 0.015 |
| PCBs | ND | | 0.050 | 0.015 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: BLKA231120-01
Client ID: PCB
Date Received: NA
Date Extracted: 11/20/2023
Date Analyzed: 11/27/2023
Data file: R5482.D 11/27/2023 17:25

GC Column: DB-5/DB1701P
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.050 | 0.015 |
| Aroclor-1221 | ND | | 0.050 | 0.015 |
| Aroclor-1232 | ND | | 0.050 | 0.015 |
| Aroclor-1242 | ND | | 0.050 | 0.015 |
| Aroclor-1248 | ND | | 0.050 | 0.015 |
| Aroclor-1254 | ND | | 0.050 | 0.015 |
| Aroclor-1260 | ND | | 0.050 | 0.015 |
| Aroclor-1262 | ND | | 0.050 | 0.015 |
| Aroclor-1268 | ND | | 0.050 | 0.015 |
| PCBs | ND | | 0.050 | 0.015 |

D — Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C — Common laboratory contamination

## PESTICIDES

Lab ID: E23-05066-001
Client ID: SB10A/0-
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/27/2023
Data file: V1649.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.01g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 13.6

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.000772 | 0.000138 |
| beta-BHC | ND | | 0.000772 | 0.00018 |
| gamma-BHC (Lindane) | ND | | 0.000772 | 0.000172 |
| delta-BHC | ND | | 0.000772 | 0.000149 |
| Heptachlor | 0.000768 | J | 0.000772 | 0.000183 |
| Aldrin | ND | | 0.000772 | 0.000161 |
| Heptachlor epoxide | 0.00293 | | 0.000772 | 0.000167 |
| Endosulfan I | ND | | 0.000772 | 0.000172 |
| 4,4'-DDE | 0.055 | | 0.000772 | 0.000157 |
| Dieldrin | 0.012 | | 0.000772 | 0.000157 |
| Endrin | ND | | 0.000772 | 0.000194 |
| Endosulfan II | ND | | 0.000772 | 0.000177 |
| 4,4'-DDD | 0.024 | | 0.000772 | 0.000206 |
| Endrin aldehyde | ND | | 0.000772 | 0.000161 |
| Endosulfan sulfate | ND | | 0.000772 | 0.000191 |
| 4,4'-DDT | 0.203 | E | 0.000772 | 0.000143 |
| Endrin ketone | ND | | 0.000772 | 0.00015 |
| Methoxychlor | ND | | 0.000772 | 0.000206 |
| alpha-Chlordane | 0.027 | | 0.000772 | 0.00017 |
| gamma-Chlordane | 0.020 | | 0.000772 | 0.000152 |
| Toxaphene | ND | | 0.00965 | 0.00386 |
| Endosulfan (I and II) | ND | | 0.000772 | 0.000172 |
| Chlordane (alpha and gamma) | 0.046 | | 0.000772 | 0.000152 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# PESTICIDES

Lab ID: E23-05066-001DL
Client ID: SB10A/0-
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: V1692.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.01g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 2
% Moisture: 13.6

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.00154 | 0.000275 |
| beta-BHC | ND | | 0.00154 | 0.00036 |
| gamma-BHC (Lindane) | ND | | 0.00154 | 0.000344 |
| delta-BHC | ND | | 0.00154 | 0.000299 |
| Heptachlor | 0.00135 | DJ | 0.00154 | 0.000366 |
| Aldrin | ND | | 0.00154 | 0.000323 |
| Heptachlor epoxide | 0.0018 | D | 0.00154 | 0.000335 |
| Endosulfan I | ND | | 0.00154 | 0.000345 |
| 4,4'-DDE | 0.054 | D | 0.00154 | 0.000315 |
| Dieldrin | 0.013 | D | 0.00154 | 0.000314 |
| Endrin | ND | | 0.00154 | 0.000389 |
| Endosulfan II | ND | | 0.00154 | 0.000353 |
| 4,4'-DDD | 0.024 | D | 0.00154 | 0.000411 |
| Endrin aldehyde | ND | | 0.00154 | 0.000323 |
| Endosulfan sulfate | ND | | 0.00154 | 0.000382 |
| 4,4'-DDT | 0.179 | D | 0.00154 | 0.000287 |
| Endrin ketone | ND | | 0.00154 | 0.0003 |
| Methoxychlor | ND | | 0.00154 | 0.000412 |
| alpha-Chlordane | 0.021 | D | 0.00154 | 0.00034 |
| gamma-Chlordane | 0.020 | D | 0.00154 | 0.000303 |
| Toxaphene | ND | | 0.019 | 0.00771 |
| Endosulfan (I and II) | ND | | 0.00154 | 0.000345 |
| Chlordane (alpha and gamma) | 0.041 | D | 0.00154 | 0.000303 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PESTICIDES

Lab ID: E23-05066-002
Client ID: SB10B/10
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: V1693.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.05g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 10.4

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.000742 | 0.000132 |
| beta-BHC | ND | | 0.000742 | 0.000173 |
| gamma-BHC (Lindane) | ND | | 0.000742 | 0.000165 |
| delta-BHC | ND | | 0.000742 | 0.000144 |
| Heptachlor | ND | | 0.000742 | 0.000176 |
| Aldrin | ND | | 0.000742 | 0.000155 |
| Heptachlor epoxide | ND | | 0.000742 | 0.000161 |
| Endosulfan I | ND | | 0.000742 | 0.000166 |
| 4,4'-DDE | 0.000414 | J | 0.000742 | 0.000151 |
| Dieldrin | ND | | 0.000742 | 0.000151 |
| Endrin | ND | | 0.000742 | 0.000187 |
| Endosulfan II | ND | | 0.000742 | 0.00017 |
| 4,4'-DDD | ND | | 0.000742 | 0.000198 |
| Endrin aldehyde | ND | | 0.000742 | 0.000155 |
| Endosulfan sulfate | ND | | 0.000742 | 0.000184 |
| 4,4'-DDT | 0.000402 | J | 0.000742 | 0.000138 |
| Endrin ketone | ND | | 0.000742 | 0.000144 |
| Methoxychlor | ND | | 0.000742 | 0.000198 |
| alpha-Chlordane | ND | | 0.000742 | 0.000164 |
| gamma-Chlordane | ND | | 0.000742 | 0.000146 |
| Toxaphene | ND | | 0.00928 | 0.00371 |
| Endosulfan (I and II) | ND | | 0.000742 | 0.000166 |
| Chlordane (alpha and gamma) | ND | | 0.000742 | 0.000146 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PESTICIDES

Lab ID: E23-05066-003
Client ID: SB2A/0-2
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/27/2023
Data file: V1651.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.04g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 13.9

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.000772 | 0.000138 |
| beta-BHC | ND | | 0.000772 | 0.00018 |
| gamma-BHC (Lindane) | ND | | 0.000772 | 0.000172 |
| delta-BHC | ND | | 0.000772 | 0.00015 |
| Heptachlor | 0.00288 | | 0.000772 | 0.000183 |
| Aldrin | ND | | 0.000772 | 0.000162 |
| Heptachlor epoxide | 0.00404 | | 0.000772 | 0.000168 |
| Endosulfan I | ND | | 0.000772 | 0.000173 |
| 4,4'-DDE | 0.024 | | 0.000772 | 0.000158 |
| Dieldrin | ND | | 0.000772 | 0.000157 |
| Endrin | ND | | 0.000772 | 0.000195 |
| Endosulfan II | ND | | 0.000772 | 0.000177 |
| 4,4'-DDD | 0.012 | | 0.000772 | 0.000206 |
| Endrin aldehyde | ND | | 0.000772 | 0.000162 |
| Endosulfan sulfate | ND | | 0.000772 | 0.000191 |
| 4,4'-DDT | 0.097 | | 0.000772 | 0.000144 |
| Endrin ketone | ND | | 0.000772 | 0.00015 |
| Methoxychlor | ND | | 0.000772 | 0.000206 |
| alpha-Chlordane | 0.016 | | 0.000772 | 0.00017 |
| gamma-Chlordane | 0.019 | | 0.000772 | 0.000152 |
| Toxaphene | ND | | 0.00965 | 0.00386 |
| Endosulfan (I and II) | ND | | 0.000772 | 0.000173 |
| Chlordane (alpha and gamma) | 0.034 | | 0.000772 | 0.000152 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# PESTICIDES

Lab ID: E23-05066-004
Client ID: SB2B/10-
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: V1694.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.06g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 4.50

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.000696 | 0.000124 |
| beta-BHC | ND | | 0.000696 | 0.000162 |
| gamma-BHC (Lindane) | ND | | 0.000696 | 0.000155 |
| delta-BHC | ND | | 0.000696 | 0.000135 |
| Heptachlor | ND | | 0.000696 | 0.000165 |
| Aldrin | ND | | 0.000696 | 0.000145 |
| Heptachlor epoxide | ND | | 0.000696 | 0.000151 |
| Endosulfan I | ND | | 0.000696 | 0.000156 |
| 4,4'-DDE | ND | | 0.000696 | 0.000142 |
| Dieldrin | ND | | 0.000696 | 0.000142 |
| Endrin | ND | | 0.000696 | 0.000175 |
| Endosulfan II | ND | | 0.000696 | 0.000159 |
| 4,4'-DDD | ND | | 0.000696 | 0.000185 |
| Endrin aldehyde | ND | | 0.000696 | 0.000146 |
| Endosulfan sulfate | ND | | 0.000696 | 0.000172 |
| 4,4'-DDT | 0.000265 | J | 0.000696 | 0.000129 |
| Endrin ketone | ND | | 0.000696 | 0.000135 |
| Methoxychlor | ND | | 0.000696 | 0.000186 |
| alpha-Chlordane | ND | | 0.000696 | 0.000153 |
| gamma-Chlordane | ND | | 0.000696 | 0.000137 |
| Toxaphene | ND | | 0.0087 | 0.00348 |
| Endosulfan (I and II) | ND | | 0.000696 | 0.000156 |
| Chlordane (alpha and gamma) | ND | | 0.000696 | 0.000137 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PESTICIDES

Lab ID: E23-05066-005
Client ID: SB5/0-2
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/27/2023
Data file: V1653.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.02g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 11.3

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.00075 | 0.000134 |
| beta-BHC | ND | | 0.00075 | 0.000175 |
| gamma-BHC (Lindane) | ND | | 0.00075 | 0.000167 |
| delta-BHC | ND | | 0.00075 | 0.000145 |
| Heptachlor | ND | | 0.00075 | 0.000178 |
| Aldrin | ND | | 0.00075 | 0.000157 |
| Heptachlor epoxide | 0.00122 | | 0.00075 | 0.000163 |
| Endosulfan I | ND | | 0.00075 | 0.000168 |
| 4,4'-DDE | 0.070 | | 0.00075 | 0.000153 |
| Dieldrin | 0.00603 | | 0.00075 | 0.000153 |
| Endrin | ND | | 0.00075 | 0.000189 |
| Endosulfan II | ND | | 0.00075 | 0.000172 |
| 4,4'-DDD | 0.00798 | | 0.00075 | 0.0002 |
| Endrin aldehyde | ND | | 0.00075 | 0.000157 |
| Endosulfan sulfate | ND | | 0.00075 | 0.000186 |
| 4,4'-DDT | 0.087 | | 0.00075 | 0.00014 |
| Endrin ketone | ND | | 0.00075 | 0.000146 |
| Methoxychlor | ND | | 0.00075 | 0.000201 |
| alpha-Chlordane | 0.00385 | | 0.00075 | 0.000166 |
| gamma-Chlordane | 0.00198 | | 0.00075 | 0.000147 |
| Toxaphene | ND | | 0.00938 | 0.00375 |
| Endosulfan (I and II) | ND | | 0.00075 | 0.000168 |
| Chlordane (alpha and gamma) | 0.00583 | | 0.00075 | 0.000147 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# PESTICIDES

Lab ID: E23-05066-006
Client ID: SB3A/0-2
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: V1680.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.07g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 10.1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.000738 | 0.000132 |
| beta-BHC | ND | | 0.000738 | 0.000172 |
| gamma-BHC (Lindane) | ND | | 0.000738 | 0.000165 |
| delta-BHC | ND | | 0.000738 | 0.000143 |
| Heptachlor | ND | | 0.000738 | 0.000175 |
| Aldrin | ND | | 0.000738 | 0.000154 |
| Heptachlor epoxide | ND | | 0.000738 | 0.00016 |
| Endosulfan I | ND | | 0.000738 | 0.000165 |
| 4,4'-DDE | 0.024 | | 0.000738 | 0.000151 |
| Dieldrin | ND | | 0.000738 | 0.00015 |
| Endrin | ND | | 0.000738 | 0.000186 |
| Endosulfan II | ND | | 0.000738 | 0.000169 |
| 4,4'-DDD | 0.00289 | | 0.000738 | 0.000197 |
| Endrin aldehyde | ND | | 0.000738 | 0.000154 |
| Endosulfan sulfate | ND | | 0.000738 | 0.000183 |
| 4,4'-DDT | 0.050 | | 0.000738 | 0.000137 |
| Endrin ketone | ND | | 0.000738 | 0.000144 |
| Methoxychlor | ND | | 0.000738 | 0.000197 |
| alpha-Chlordane | 0.023 | | 0.000738 | 0.000163 |
| gamma-Chlordane | 0.022 | | 0.000738 | 0.000145 |
| Toxaphene | ND | | 0.00923 | 0.00369 |
| Endosulfan (I and II) | ND | | 0.000738 | 0.000165 |
| Chlordane (alpha and gamma) | 0.044 | | 0.000738 | 0.000145 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PESTICIDES

Lab ID: E23-05066-007
Client ID: SB3B/10-
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: V1678.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.01g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 5.70

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.000706 | 0.000126 |
| beta-BHC | ND | | 0.000706 | 0.000165 |
| gamma-BHC (Lindane) | ND | | 0.000706 | 0.000157 |
| delta-BHC | ND | | 0.000706 | 0.000137 |
| Heptachlor | ND | | 0.000706 | 0.000168 |
| Aldrin | ND | | 0.000706 | 0.000148 |
| Heptachlor epoxide | ND | | 0.000706 | 0.000153 |
| Endosulfan I | ND | | 0.000706 | 0.000158 |
| 4,4'-DDE | ND | | 0.000706 | 0.000144 |
| Dieldrin | ND | | 0.000706 | 0.000144 |
| Endrin | ND | | 0.000706 | 0.000178 |
| Endosulfan II | ND | | 0.000706 | 0.000162 |
| 4,4'-DDD | ND | | 0.000706 | 0.000188 |
| Endrin aldehyde | ND | | 0.000706 | 0.000148 |
| Endosulfan sulfate | ND | | 0.000706 | 0.000175 |
| 4,4'-DDT | ND | | 0.000706 | 0.000131 |
| Endrin ketone | ND | | 0.000706 | 0.000138 |
| Methoxychlor | ND | | 0.000706 | 0.000189 |
| alpha-Chlordane | ND | | 0.000706 | 0.000156 |
| gamma-Chlordane | ND | | 0.000706 | 0.000139 |
| Toxaphene | ND | | 0.00883 | 0.00353 |
| Endosulfan (I and II) | ND | | 0.000706 | 0.000158 |
| Chlordane (alpha and gamma) | ND | | 0.000706 | 0.000139 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PESTICIDES

Lab ID: E23-05066-008
Client ID: SB9A/0-2
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: V1681.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.06g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 7.80

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.00072 | 0.000129 |
| beta-BHC | ND | | 0.00072 | 0.000168 |
| gamma-BHC (Lindane) | ND | | 0.00072 | 0.000161 |
| delta-BHC | ND | | 0.00072 | 0.00014 |
| Heptachlor | ND | | 0.00072 | 0.000171 |
| Aldrin | ND | | 0.00072 | 0.000151 |
| Heptachlor epoxide | ND | | 0.00072 | 0.000156 |
| Endosulfan I | ND | | 0.00072 | 0.000161 |
| 4,4'-DDE | ND | | 0.00072 | 0.000147 |
| Dieldrin | ND | | 0.00072 | 0.000147 |
| Endrin | ND | | 0.00072 | 0.000182 |
| Endosulfan II | ND | | 0.00072 | 0.000165 |
| 4,4'-DDD | ND | | 0.00072 | 0.000192 |
| Endrin aldehyde | ND | | 0.00072 | 0.000151 |
| Endosulfan sulfate | ND | | 0.00072 | 0.000178 |
| 4,4'-DDT | ND | | 0.00072 | 0.000134 |
| Endrin ketone | ND | | 0.00072 | 0.00014 |
| Methoxychlor | ND | | 0.00072 | 0.000193 |
| alpha-Chlordane | ND | | 0.00072 | 0.000159 |
| gamma-Chlordane | ND | | 0.00072 | 0.000142 |
| Toxaphene | ND | | 0.009 | 0.0036 |
| Endosulfan (I and II) | ND | | 0.00072 | 0.000161 |
| Chlordane (alpha and gamma) | ND | | 0.00072 | 0.000142 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# PESTICIDES

Lab ID: E23-05066-009
Client ID: SB9B/10-
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: V1679.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.05g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 4.70

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.000698 | 0.000125 |
| beta-BHC | ND | | 0.000698 | 0.000163 |
| gamma-BHC (Lindane) | ND | | 0.000698 | 0.000155 |
| delta-BHC | ND | | 0.000698 | 0.000135 |
| Heptachlor | ND | | 0.000698 | 0.000165 |
| Aldrin | ND | | 0.000698 | 0.000146 |
| Heptachlor epoxide | ND | | 0.000698 | 0.000151 |
| Endosulfan I | ND | | 0.000698 | 0.000156 |
| 4,4'-DDE | ND | | 0.000698 | 0.000142 |
| Dieldrin | ND | | 0.000698 | 0.000142 |
| Endrin | ND | | 0.000698 | 0.000176 |
| Endosulfan II | ND | | 0.000698 | 0.00016 |
| 4,4'-DDD | ND | | 0.000698 | 0.000186 |
| Endrin aldehyde | ND | | 0.000698 | 0.000146 |
| Endosulfan sulfate | ND | | 0.000698 | 0.000173 |
| 4,4'-DDT | ND | | 0.000698 | 0.00013 |
| Endrin ketone | ND | | 0.000698 | 0.000136 |
| Methoxychlor | ND | | 0.000698 | 0.000186 |
| alpha-Chlordane | ND | | 0.000698 | 0.000154 |
| gamma-Chlordane | ND | | 0.000698 | 0.000137 |
| Toxaphene | ND | | 0.00873 | 0.00349 |
| Endosulfan (I and II) | ND | | 0.000698 | 0.000156 |
| Chlordane (alpha and gamma) | ND | | 0.000698 | 0.000137 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PESTICIDES

Lab ID: E23-05066-010
Client ID: SB1A/0-2
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: V1682.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.07g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 9.10

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.00073 | 0.00013 |
| beta-BHC | ND | | 0.00073 | 0.00017 |
| gamma-BHC (Lindane) | ND | | 0.00073 | 0.000163 |
| delta-BHC | ND | | 0.00073 | 0.000141 |
| Heptachlor | ND | | 0.00073 | 0.000173 |
| Aldrin | ND | | 0.00073 | 0.000153 |
| Heptachlor epoxide | 0.00119 | | 0.00073 | 0.000158 |
| Endosulfan I | ND | | 0.00073 | 0.000163 |
| 4,4'-DDE | 0.011 | | 0.00073 | 0.000149 |
| Dieldrin | ND | | 0.00073 | 0.000149 |
| Endrin | ND | | 0.00073 | 0.000184 |
| Endosulfan II | ND | | 0.00073 | 0.000167 |
| 4,4'-DDD | 0.00722 | | 0.00073 | 0.000195 |
| Endrin aldehyde | ND | | 0.00073 | 0.000153 |
| Endosulfan sulfate | ND | | 0.00073 | 0.000181 |
| 4,4'-DDT | 0.019 | | 0.00073 | 0.000136 |
| Endrin ketone | ND | | 0.00073 | 0.000142 |
| Methoxychlor | ND | | 0.00073 | 0.000195 |
| alpha-Chlordane | 0.00473 | | 0.00073 | 0.000161 |
| gamma-Chlordane | 0.00584 | | 0.00073 | 0.000143 |
| Toxaphene | ND | | 0.00913 | 0.00365 |
| Endosulfan (I and II) | ND | | 0.00073 | 0.000163 |
| Chlordane (alpha and gamma) | 0.011 | | 0.00073 | 0.000143 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PESTICIDES

Lab ID: E23-05066-011
Client ID: SB1B/10-
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: V1683.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.05g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 10.2

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.00074 | 0.000132 |
| beta-BHC | ND | | 0.00074 | 0.000173 |
| gamma-BHC (Lindane) | ND | | 0.00074 | 0.000165 |
| delta-BHC | ND | | 0.00074 | 0.000143 |
| Heptachlor | ND | | 0.00074 | 0.000176 |
| Aldrin | ND | | 0.00074 | 0.000155 |
| Heptachlor epoxide | 0.000932 | | 0.00074 | 0.000161 |
| Endosulfan I | ND | | 0.00074 | 0.000165 |
| 4,4'-DDE | 0.00656 | | 0.00074 | 0.000151 |
| Dieldrin | ND | | 0.00074 | 0.000151 |
| Endrin | ND | | 0.00074 | 0.000187 |
| Endosulfan II | ND | | 0.00074 | 0.00017 |
| 4,4'-DDD | ND | | 0.00074 | 0.000197 |
| Endrin aldehyde | ND | | 0.00074 | 0.000155 |
| Endosulfan sulfate | ND | | 0.00074 | 0.000183 |
| 4,4'-DDT | 0.025 | | 0.00074 | 0.000138 |
| Endrin ketone | ND | | 0.00074 | 0.000144 |
| Methoxychlor | ND | | 0.00074 | 0.000198 |
| alpha-Chlordane | 0.00266 | | 0.00074 | 0.000163 |
| gamma-Chlordane | 0.00281 | | 0.00074 | 0.000145 |
| Toxaphene | ND | | 0.00925 | 0.0037 |
| Endosulfan (I and II) | ND | | 0.00074 | 0.000165 |
| Chlordane (alpha and gamma) | 0.00547 | | 0.00074 | 0.000145 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# PESTICIDES

Lab ID: E23-05066-012
Client ID: SB4A/0-2
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: V1684.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.04g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 8.90

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.00073 | 0.00013 |
| beta-BHC | ND | | 0.00073 | 0.00017 |
| gamma-BHC (Lindane) | ND | | 0.00073 | 0.000163 |
| delta-BHC | ND | | 0.00073 | 0.000141 |
| Heptachlor | ND | | 0.00073 | 0.000173 |
| Aldrin | ND | | 0.00073 | 0.000153 |
| Heptachlor epoxide | ND | | 0.00073 | 0.000158 |
| Endosulfan I | ND | | 0.00073 | 0.000163 |
| 4,4'-DDE | 0.052 | | 0.00073 | 0.000149 |
| Dieldrin | 0.00707 | | 0.00073 | 0.000149 |
| Endrin | ND | | 0.00073 | 0.000184 |
| Endosulfan II | ND | | 0.00073 | 0.000167 |
| 4,4'-DDD | ND | | 0.00073 | 0.000195 |
| Endrin aldehyde | ND | | 0.00073 | 0.000153 |
| Endosulfan sulfate | ND | | 0.00073 | 0.000181 |
| 4,4'-DDT | 0.085 | | 0.00073 | 0.000136 |
| Endrin ketone | ND | | 0.00073 | 0.000142 |
| Methoxychlor | ND | | 0.00073 | 0.000195 |
| alpha-Chlordane | 0.00577 | | 0.00073 | 0.000161 |
| gamma-Chlordane | 0.00815 | | 0.00073 | 0.000143 |
| Toxaphene | ND | | 0.00913 | 0.00365 |
| Endosulfan (I and II) | ND | | 0.00073 | 0.000163 |
| Chlordane (alpha and gamma) | 0.014 | | 0.00073 | 0.000143 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PESTICIDES

Lab ID: E23-05066-013
Client ID: SB4B/10-
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: V1685.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.02g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 5.20

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.000702 | 0.000125 |
| beta-BHC | ND | | 0.000702 | 0.000164 |
| gamma-BHC (Lindane) | ND | | 0.000702 | 0.000157 |
| delta-BHC | ND | | 0.000702 | 0.000136 |
| Heptachlor | ND | | 0.000702 | 0.000167 |
| Aldrin | ND | | 0.000702 | 0.000147 |
| Heptachlor epoxide | ND | | 0.000702 | 0.000152 |
| Endosulfan I | ND | | 0.000702 | 0.000157 |
| 4,4'-DDE | 0.013 | | 0.000702 | 0.000143 |
| Dieldrin | 0.00196 | | 0.000702 | 0.000143 |
| Endrin | ND | | 0.000702 | 0.000177 |
| Endosulfan II | ND | | 0.000702 | 0.000161 |
| 4,4'-DDD | ND | | 0.000702 | 0.000187 |
| Endrin aldehyde | ND | | 0.000702 | 0.000147 |
| Endosulfan sulfate | ND | | 0.000702 | 0.000174 |
| 4,4'-DDT | 0.026 | | 0.000702 | 0.000131 |
| Endrin ketone | ND | | 0.000702 | 0.000137 |
| Methoxychlor | ND | | 0.000702 | 0.000188 |
| alpha-Chlordane | 0.00185 | | 0.000702 | 0.000155 |
| gamma-Chlordane | 0.00203 | | 0.000702 | 0.000138 |
| Toxaphene | ND | | 0.00878 | 0.00351 |
| Endosulfan (I and II) | ND | | 0.000702 | 0.000157 |
| Chlordane (alpha and gamma) | 0.00388 | | 0.000702 | 0.000138 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PESTICIDES

Lab ID: E23-05066-014
Client ID: SB6-419-
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: V1686.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.04g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 7.80

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.000722 | 0.000129 |
| beta-BHC | ND | | 0.000722 | 0.000168 |
| gamma-BHC (Lindane) | ND | | 0.000722 | 0.000161 |
| delta-BHC | ND | | 0.000722 | 0.00014 |
| Heptachlor | ND | | 0.000722 | 0.000171 |
| Aldrin | ND | | 0.000722 | 0.000151 |
| Heptachlor epoxide | ND | | 0.000722 | 0.000157 |
| Endosulfan I | ND | | 0.000722 | 0.000161 |
| 4,4'-DDE | 0.595 | E | 0.000722 | 0.000147 |
| Dieldrin | ND | | 0.000722 | 0.000147 |
| Endrin | ND | | 0.000722 | 0.000182 |
| Endosulfan II | ND | | 0.000722 | 0.000165 |
| 4,4'-DDD | 0.099 | | 0.000722 | 0.000192 |
| Endrin aldehyde | ND | | 0.000722 | 0.000151 |
| Endosulfan sulfate | ND | | 0.000722 | 0.000179 |
| 4,4'-DDT | 0.873 | E | 0.000722 | 0.000134 |
| Endrin ketone | ND | | 0.000722 | 0.00014 |
| Methoxychlor | ND | | 0.000722 | 0.000193 |
| alpha-Chlordane | ND | | 0.000722 | 0.000159 |
| gamma-Chlordane | ND | | 0.000722 | 0.000142 |
| Toxaphene | ND | | 0.00903 | 0.00361 |
| Endosulfan (I and II) | ND | | 0.000722 | 0.000161 |
| Chlordane (alpha and gamma) | ND | | 0.000722 | 0.000142 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PESTICIDES

Lab ID: E23-05066-014DL
Client ID: SB6-419-
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: V1695.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.04g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 20
% Moisture: 7.80

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.014 | 0.00258 |
| beta-BHC | ND | | 0.014 | 0.00337 |
| gamma-BHC (Lindane) | ND | | 0.014 | 0.00322 |
| delta-BHC | ND | | 0.014 | 0.00279 |
| Heptachlor | ND | | 0.014 | 0.00342 |
| Aldrin | ND | | 0.014 | 0.00302 |
| Heptachlor epoxide | ND | | 0.014 | 0.00313 |
| Endosulfan I | ND | | 0.014 | 0.00323 |
| 4,4'-DDE | 0.555 | D | 0.014 | 0.00294 |
| Dieldrin | ND | | 0.014 | 0.00294 |
| Endrin | ND | | 0.014 | 0.00364 |
| Endosulfan II | ND | | 0.014 | 0.0033 |
| 4,4'-DDD | 0.170 | D | 0.014 | 0.00385 |
| Endrin aldehyde | ND | | 0.014 | 0.00302 |
| Endosulfan sulfate | ND | | 0.014 | 0.00357 |
| 4,4'-DDT | 0.529 | D | 0.014 | 0.00268 |
| Endrin ketone | ND | | 0.014 | 0.00281 |
| Methoxychlor | ND | | 0.014 | 0.00386 |
| alpha-Chlordane | ND | | 0.014 | 0.00318 |
| gamma-Chlordane | ND | | 0.014 | 0.00283 |
| Toxaphene | ND | | 0.180 | 0.072 |
| Endosulfan (I and II) | ND | | 0.014 | 0.00323 |
| Chlordane (alpha and gamma) | ND | | 0.014 | 0.00283 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# PESTICIDES

Lab ID: E23-05066-015
Client ID: SB8-401-
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: V1687.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.06g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 6.20

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.000708 | 0.000126 |
| beta-BHC | ND | | 0.000708 | 0.000165 |
| gamma-BHC (Lindane) | ND | | 0.000708 | 0.000158 |
| delta-BHC | ND | | 0.000708 | 0.000137 |
| Heptachlor | ND | | 0.000708 | 0.000168 |
| Aldrin | ND | | 0.000708 | 0.000148 |
| Heptachlor epoxide | ND | | 0.000708 | 0.000154 |
| Endosulfan I | ND | | 0.000708 | 0.000158 |
| 4,4'-DDE | 1.43 | E | 0.000708 | 0.000144 |
| Dieldrin | ND | | 0.000708 | 0.000144 |
| Endrin | ND | | 0.000708 | 0.000179 |
| Endosulfan II | ND | | 0.000708 | 0.000162 |
| 4,4'-DDD | 0.079 | | 0.000708 | 0.000189 |
| Endrin aldehyde | ND | | 0.000708 | 0.000148 |
| Endosulfan sulfate | ND | | 0.000708 | 0.000175 |
| 4,4'-DDT | 2.67 | E | 0.000708 | 0.000132 |
| Endrin ketone | ND | | 0.000708 | 0.000138 |
| Methoxychlor | ND | | 0.000708 | 0.000189 |
| alpha-Chlordane | ND | | 0.000708 | 0.000156 |
| gamma-Chlordane | ND | | 0.000708 | 0.000139 |
| Toxaphene | ND | | 0.00885 | 0.00354 |
| Endosulfan (I and II) | ND | | 0.000708 | 0.000158 |
| Chlordane (alpha and gamma) | ND | | 0.000708 | 0.000139 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PESTICIDES

Lab ID: E23-05066-015DL
Client ID: SB8-401-
Date Received: 11/17/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: V1696.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.06g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 50
% Moisture: 6.20

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.035 | 0.00632 |
| beta-BHC | ND | | 0.035 | 0.00826 |
| gamma-BHC (Lindane) | ND | | 0.035 | 0.00789 |
| delta-BHC | ND | | 0.035 | 0.00686 |
| Heptachlor | ND | | 0.035 | 0.0084 |
| Aldrin | ND | | 0.035 | 0.0074 |
| Heptachlor epoxide | ND | | 0.035 | 0.00768 |
| Endosulfan I | ND | | 0.035 | 0.00792 |
| 4,4'-DDE | 1.34 | D | 0.035 | 0.00722 |
| Dieldrin | ND | | 0.035 | 0.00721 |
| Endrin | ND | | 0.035 | 0.00893 |
| Endosulfan II | ND | | 0.035 | 0.00811 |
| 4,4'-DDD | 0.374 | D | 0.035 | 0.00944 |
| Endrin aldehyde | ND | | 0.035 | 0.00741 |
| Endosulfan sulfate | ND | | 0.035 | 0.00876 |
| 4,4'-DDT | 1.58 | D | 0.035 | 0.00658 |
| Endrin ketone | ND | | 0.035 | 0.00689 |
| Methoxychlor | ND | | 0.035 | 0.00946 |
| alpha-Chlordane | ND | | 0.035 | 0.00781 |
| gamma-Chlordane | ND | | 0.035 | 0.00695 |
| Toxaphene | ND | | 0.442 | 0.177 |
| Endosulfan (I and II) | ND | | 0.035 | 0.00792 |
| Chlordane (alpha and gamma) | ND | | 0.035 | 0.00695 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# PESTICIDES

Lab ID: BLKS231121-02
Client ID: Pest
Date Received: NA
Date Extracted: 11/21/2023
Date Analyzed: 11/27/2023
Data file: V1645.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: NA

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.000666 | 0.000119 |
| beta-BHC | ND | | 0.000666 | 0.000156 |
| gamma-BHC (Lindane) | ND | | 0.000666 | 0.000149 |
| delta-BHC | ND | | 0.000666 | 0.000129 |
| Heptachlor | ND | | 0.000666 | 0.000158 |
| Aldrin | ND | | 0.000666 | 0.000139 |
| Heptachlor epoxide | ND | | 0.000666 | 0.000145 |
| Endosulfan I | ND | | 0.000666 | 0.000149 |
| 4,4'-DDE | ND | | 0.000666 | 0.000136 |
| Dieldrin | ND | | 0.000666 | 0.000136 |
| Endrin | ND | | 0.000666 | 0.000168 |
| Endosulfan II | ND | | 0.000666 | 0.000153 |
| 4,4'-DDD | ND | | 0.000666 | 0.000178 |
| Endrin aldehyde | ND | | 0.000666 | 0.00014 |
| Endosulfan sulfate | ND | | 0.000666 | 0.000165 |
| 4,4'-DDT | ND | | 0.000666 | 0.000124 |
| Endrin ketone | ND | | 0.000666 | 0.00013 |
| Methoxychlor | ND | | 0.000666 | 0.000178 |
| alpha-Chlordane | ND | | 0.000666 | 0.000147 |
| gamma-Chlordane | ND | | 0.000666 | 0.000131 |
| Toxaphene | ND | | 0.00833 | 0.00333 |
| Endosulfan (I and II) | ND | | 0.000666 | 0.000149 |
| Chlordane (alpha and gamma) | ND | | 0.000666 | 0.000131 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# PESTICIDES

Lab ID: E23-05066-016
Client ID: TWP1
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: O8770.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.010 | 0.00206 |
| beta-BHC | ND | | 0.010 | 0.00303 |
| gamma-BHC (Lindane) | ND | | 0.010 | 0.00201 |
| delta-BHC | ND | | 0.010 | 0.00238 |
| Heptachlor | ND | | 0.010 | 0.00235 |
| Aldrin | ND | | 0.010 | 0.00187 |
| Heptachlor epoxide | ND | | 0.010 | 0.00217 |
| Endosulfan I | ND | | 0.010 | 0.00208 |
| 4,4'-DDE | ND | | 0.010 | 0.00197 |
| Dieldrin | ND | | 0.010 | 0.00237 |
| Endrin | ND | | 0.010 | 0.00289 |
| Endosulfan II | ND | | 0.010 | 0.00258 |
| 4,4'-DDD | ND | | 0.010 | 0.00294 |
| Endrin aldehyde | ND | | 0.010 | 0.0023 |
| Endosulfan sulfate | ND | | 0.010 | 0.00314 |
| 4,4'-DDT | ND | | 0.010 | 0.00202 |
| Endrin ketone | ND | | 0.010 | 0.00323 |
| Methoxychlor | ND | | 0.010 | 0.00337 |
| alpha-Chlordane | ND | | 0.010 | 0.00215 |
| gamma-Chlordane | ND | | 0.010 | 0.00314 |
| Toxaphene | ND | | 0.125 | 0.050 |
| Endosulfan (I and II) | ND | | 0.010 | 0.00208 |
| Chlordane (alpha and gamma) | ND | | 0.010 | 0.00215 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# PESTICIDES

Lab ID: E23-05066-017
Client ID: TWP4
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: O8771.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.010 | 0.00206 |
| beta-BHC | ND | | 0.010 | 0.00303 |
| gamma-BHC (Lindane) | ND | | 0.010 | 0.00201 |
| delta-BHC | ND | | 0.010 | 0.00238 |
| Heptachlor | ND | | 0.010 | 0.00235 |
| Aldrin | ND | | 0.010 | 0.00187 |
| Heptachlor epoxide | ND | | 0.010 | 0.00217 |
| Endosulfan I | ND | | 0.010 | 0.00208 |
| 4,4'-DDE | ND | | 0.010 | 0.00197 |
| Dieldrin | ND | | 0.010 | 0.00237 |
| Endrin | ND | | 0.010 | 0.00289 |
| Endosulfan II | ND | | 0.010 | 0.00258 |
| 4,4'-DDD | ND | | 0.010 | 0.00294 |
| Endrin aldehyde | ND | | 0.010 | 0.0023 |
| Endosulfan sulfate | ND | | 0.010 | 0.00314 |
| 4,4'-DDT | ND | | 0.010 | 0.00202 |
| Endrin ketone | ND | | 0.010 | 0.00323 |
| Methoxychlor | ND | | 0.010 | 0.00337 |
| alpha-Chlordane | ND | | 0.010 | 0.00215 |
| gamma-Chlordane | ND | | 0.010 | 0.00314 |
| Toxaphene | ND | | 0.125 | 0.050 |
| Endosulfan (I and II) | ND | | 0.010 | 0.00208 |
| Chlordane (alpha and gamma) | ND | | 0.010 | 0.00215 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# PESTICIDES

Lab ID: E23-05066-018
Client ID: TWP2
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: O8772.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.010 | 0.00206 |
| beta-BHC | ND | | 0.010 | 0.00303 |
| gamma-BHC (Lindane) | ND | | 0.010 | 0.00201 |
| delta-BHC | ND | | 0.010 | 0.00238 |
| Heptachlor | ND | | 0.010 | 0.00235 |
| Aldrin | ND | | 0.010 | 0.00187 |
| Heptachlor epoxide | ND | | 0.010 | 0.00217 |
| Endosulfan I | ND | | 0.010 | 0.00208 |
| 4,4'-DDE | ND | | 0.010 | 0.00197 |
| Dieldrin | ND | | 0.010 | 0.00237 |
| Endrin | ND | | 0.010 | 0.00289 |
| Endosulfan II | ND | | 0.010 | 0.00258 |
| 4,4'-DDD | ND | | 0.010 | 0.00294 |
| Endrin aldehyde | ND | | 0.010 | 0.0023 |
| Endosulfan sulfate | ND | | 0.010 | 0.00314 |
| 4,4'-DDT | ND | | 0.010 | 0.00202 |
| Endrin ketone | ND | | 0.010 | 0.00323 |
| Methoxychlor | ND | | 0.010 | 0.00337 |
| alpha-Chlordane | ND | | 0.010 | 0.00215 |
| gamma-Chlordane | ND | | 0.010 | 0.00314 |
| Toxaphene | ND | | 0.125 | 0.050 |
| Endosulfan (I and II) | ND | | 0.010 | 0.00208 |
| Chlordane (alpha and gamma) | ND | | 0.010 | 0.00215 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PESTICIDES

Lab ID: E23-05066-019
Client ID: TWP5
Date Received: 11/17/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: O8773.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.010 | 0.00206 |
| beta-BHC | ND | | 0.010 | 0.00303 |
| gamma-BHC (Lindane) | ND | | 0.010 | 0.00201 |
| delta-BHC | ND | | 0.010 | 0.00238 |
| Heptachlor | ND | | 0.010 | 0.00235 |
| Aldrin | ND | | 0.010 | 0.00187 |
| Heptachlor epoxide | ND | | 0.010 | 0.00217 |
| Endosulfan I | ND | | 0.010 | 0.00208 |
| 4,4'-DDE | ND | | 0.010 | 0.00197 |
| Dieldrin | ND | | 0.010 | 0.00237 |
| Endrin | ND | | 0.010 | 0.00289 |
| Endosulfan II | ND | | 0.010 | 0.00258 |
| 4,4'-DDD | ND | | 0.010 | 0.00294 |
| Endrin aldehyde | ND | | 0.010 | 0.0023 |
| Endosulfan sulfate | ND | | 0.010 | 0.00314 |
| 4,4'-DDT | ND | | 0.010 | 0.00202 |
| Endrin ketone | ND | | 0.010 | 0.00323 |
| Methoxychlor | ND | | 0.010 | 0.00337 |
| alpha-Chlordane | ND | | 0.010 | 0.00215 |
| gamma-Chlordane | ND | | 0.010 | 0.00314 |
| Toxaphene | ND | | 0.125 | 0.050 |
| Endosulfan (I and II) | ND | | 0.010 | 0.00208 |
| Chlordane (alpha and gamma) | ND | | 0.010 | 0.00215 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# PESTICIDES

Lab ID: BLKA231120-01
Client ID: Pest
Date Received: NA
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: O8757.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.010 | 0.00206 |
| beta-BHC | ND | | 0.010 | 0.00303 |
| gamma-BHC (Lindane) | ND | | 0.010 | 0.00201 |
| delta-BHC | ND | | 0.010 | 0.00238 |
| Heptachlor | ND | | 0.010 | 0.00235 |
| Aldrin | ND | | 0.010 | 0.00187 |
| Heptachlor epoxide | ND | | 0.010 | 0.00217 |
| Endosulfan I | ND | | 0.010 | 0.00208 |
| 4,4'-DDE | ND | | 0.010 | 0.00197 |
| Dieldrin | ND | | 0.010 | 0.00237 |
| Endrin | ND | | 0.010 | 0.00289 |
| Endosulfan II | ND | | 0.010 | 0.00258 |
| 4,4'-DDD | ND | | 0.010 | 0.00294 |
| Endrin aldehyde | ND | | 0.010 | 0.0023 |
| Endosulfan sulfate | ND | | 0.010 | 0.00314 |
| 4,4'-DDT | ND | | 0.010 | 0.00202 |
| Endrin ketone | ND | | 0.010 | 0.00323 |
| Methoxychlor | ND | | 0.010 | 0.00337 |
| alpha-Chlordane | ND | | 0.010 | 0.00215 |
| gamma-Chlordane | ND | | 0.010 | 0.00314 |
| Toxaphene | ND | | 0.125 | 0.050 |
| Endosulfan (I and II) | ND | | 0.010 | 0.00208 |
| Chlordane (alpha and gamma) | ND | | 0.010 | 0.00215 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## Cyanide, Total

Client/Project: HK Engineering/HK2661.2

Date Received: 11/17/23 16:40
Method: SW 9012B

Analyst: B. Pillsbury

| Lab ID | Client ID | Result | Q | DF | Matrix-Unit | MDL | RL | % Solid | Date Collected | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| E23-05066-001 | SB10A | ND | | 1 | Soil-mg/Kg | 0.231 | 1.16 | 86.4 | 11/16/23 09:30 | 11/27/23 12:10 |
| E23-05066-002 | SB10B | ND | | 1 | Soil-mg/Kg | 0.223 | 1.12 | 89.6 | 11/16/23 09:45 | 11/27/23 12:10 |
| E23-05066-003 | SB2A | ND | | 1 | Soil-mg/Kg | 0.232 | 1.16 | 86.1 | 11/16/23 10:00 | 11/27/23 12:10 |
| E23-05066-004 | SB2B | ND | | 1 | Soil-mg/Kg | 0.209 | 1.05 | 95.5 | 11/16/23 10:20 | 11/27/23 12:10 |
| E23-05066-005 | SB5 | ND | | 1 | Soil-mg/Kg | 0.225 | 1.13 | 88.7 | 11/16/23 13:40 | 11/27/23 12:10 |
| E23-05066-006 | SB3A | ND | | 1 | Soil-mg/Kg | 0.222 | 1.11 | 89.9 | 11/16/23 13:05 | 11/27/23 12:10 |
| E23-05066-007 | SB3B | ND | | 1 | Soil-mg/Kg | 0.208 | 1.04 | 94.3 | 11/16/23 13:10 | 11/27/23 12:10 |
| E23-05066-008 | SB9A | ND | | 1 | Soil-mg/Kg | 0.217 | 1.08 | 92.2 | 11/17/23 08:00 | 11/27/23 12:10 |
| E23-05066-009 | SB9B | ND | | 1 | Soil-mg/Kg | 0.210 | 1.05 | 95.3 | 11/17/23 08:10 | 11/27/23 12:10 |
| E23-05066-010 | SB1A | ND | | 1 | Soil-mg/Kg | 0.220 | 1.10 | 90.9 | 11/17/23 09:00 | 11/27/23 12:10 |
| E23-05066-011 | SB1B | ND | | 1 | Soil-mg/Kg | 0.223 | 1.11 | 89.8 | 11/17/23 09:15 | 11/27/23 12:10 |
| E23-05066-012 | SB4A | ND | | 1 | Soil-mg/Kg | 0.220 | 1.10 | 91.1 | 11/17/23 09:55 | 11/27/23 12:10 |
| E23-05066-013 | SB4B | ND | | 1 | Soil-mg/Kg | 0.211 | 1.05 | 94.8 | 11/17/23 10:05 | 11/27/23 12:10 |
| E23-05066-014 | SB6-419-CS | ND | | 1 | Soil-mg/Kg | 0.213 | 1.06 | 92.2 | 11/17/23 11:30 | 11/27/23 12:10 |
| E23-05066-015 | SB8-401-CS | ND | | 1 | Soil-mg/Kg | 0.213 | 1.07 | 93.8 | 11/17/23 11:40 | 11/27/23 12:10 |

## Cyanide, Total

Client/Project: HK Engineering/HK2661.2

Date Received: 11/17/23 16:40
Method: EPA 335.4

Analyst: B. Pillsbury

| Lab ID | Client ID | Result | Q | DF | Matrix-Unit | MDL | RL | % Solid | Date Collected | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| E23-05066-016 | TWP1 | ND | | 1 | Aqueous-ug/L | 4.00 | 20.0 | 0 | 11/16/23 09:30 | 11/22/23 11:29 |
| E23-05066-017 | TWP4 | ND | | 1 | Aqueous-ug/L | 4.00 | 20.0 | 0 | 11/16/23 10:20 | 11/22/23 11:29 |
| E23-05066-018 | TWP2 | ND | | 1 | Aqueous-ug/L | 4.00 | 20.0 | 0 | 11/16/23 10:00 | 11/22/23 11:29 |
| E23-05066-019 | TWP5 | ND | | 1 | Aqueous-ug/L | 4.00 | 20.0 | 0 | 11/16/23 14:00 | 11/22/23 11:29 |

Certified for NJDEP, NY(DOH)
NJ ID# 14751
NY ID# 11402

General Chemistry Quality Control

## Cyanide, Total

**Matrix: Soil**
**Unit: mg/Kg**

**Batch: AP013-0115**
**Method: SW 9012B**

**Date: 11/27/2023**

| | Sample ID | Result | TrueValue / SpikeAdded | RPD | RPD Limit | % Recovery | %Recovery Limit |
|---|---|---|---|---|---|---|---|
| BLK | BLKS231127 | < 0.200 | NA | NA | NA | NA | NA |
| LCS (ppm) | ICV231127.007_07 | 12.0 | 12.5 | NA | NA | 96 | 85-115 |
| SAMPLE | E23-05066-001 | < 0.231 | NA | NA | NA | NA | NA |
| DUP | E23-05066-001DUP | < 0.231 | NA | NC | 20 | NA | NA |
| MS | E23-05066-001MS | 14.3 | 14.5 | NA | NA | 98.6 | 90-110 |
| MSD | E23-05066-001MSD | 13.8 | 14.5 | 4 | 20 | 95.2 | 90-110 |

The above blank result applies to the follow samples:

E23-05066-001
E23-05058-001
E23-05066-002
E23-05066-003
E23-05066-004
E23-05066-005
E23-05066-006
E23-05066-007
E23-05066-008
E23-05066-009
E23-05066-010
E23-05066-011
E23-05066-012
E23-05066-013
E23-05066-014
E23-05066-015

See "Initial & Continuing Calibration Verification" page for ICV results. The ICV (Initial Calibration Verification) sample doubles as the LCS.

NA - Not Applicable
ND - Not Detected
NC - Non calculable RPD due to value less than the detection limit

INITIAL & CONTINUING CALIBRATION VERIFICATION

## Cyanide, Total

| | |
|---|---|
| Batch: AP013-0115 | Date & Time: 11/27/2023 12:10 |
| Method: SW 9012B | Analyst: Brianna Pillsbury |

| | True Value | Result | % REC | Unit |
|---|---|---|---|---|
| BLKS231127 | | < 0.200 | | mg/Kg |
| ICV231127 | 12.5 | 12.0 | 96.0 | mg/Kg |
| CCV231127.009_09 | 0.250 | 0.254 | 102 | mg/L |
| CCV231127.021_21 | 0.250 | 0.252 | 101 | mg/L |
| CCV231127.033_33 | 0.250 | 0.250 | 100 | mg/L |
| CCV231127.036_36 | 0.250 | 0.261 | 104 | mg/L |
| | | | | |
| | | | | |

The ICV (Initial Calibration Verification) sample doubles as the LCS.

NJDEP FORM M-9A (12/94)

Certified for NJDEP, NY(DOH)
NJ ID# 14751
NY ID# 11402

General Chemistry Quality Control

## Cyanide, Total

**Matrix: Aqueous**
**Unit: ug/L**

**Batch: AP013-0113**
**Method: EPA 335.4**

**Date: 11/22/2023**

| | Sample ID | Result | TrueValue / SpikeAdded | RPD | RPD Limit | % Recovery | %Recovery Limit |
|---|---|---|---|---|---|---|---|
| BLK | BLKA231122 | < 4.00 | NA | NA | NA | NA | NA |
| LCS | ICV231122.007_07 | 251 | 250 | NA | NA | 100 | 90-110 |
| SAMPLE | E23-05046-011 | < 4.00 | NA | NA | NA | NA | NA |
| DUP | E23-05046-011DUP | < 4.00 | NA | NC | 20 | NA | NA |
| MS | E23-05046-011MS | 252 | 250 | NA | NA | 101 | 90-110 |
| MSD | E23-05046-011MSD | 253 | 250 | 0 | 20 | 101 | 90-110 |

The above blank result applies to the follow samples:

E23-05046-011
E23-04990-001
E23-05046-012
E23-05046-013
E23-05046-014
E23-05066-016
E23-05066-017
E23-05066-018
E23-05066-019

See "Initial & Continuing Calibration Verification" page for ICV results. The ICV (Initial Calibration Verification) sample doubles as the LCS.

NA - Not Applicable
ND - Not Detected
NC - Non calculable RPD due to value less than the detection limit

# Summary of Hits



Job Number: JD77365
Account: Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ
Collected: 11/16/23 thru 11/17/23

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| JD77365-1 | E23-05066-001_SB10A | | | | | |
| Aluminum | | 4960 | 55 | | mg/kg | SW846 6010D |
| Arsenic | | 4.6 | 2.2 | | mg/kg | SW846 6010D |
| Barium | | 280 | 22 | | mg/kg | SW846 6010D |
| Beryllium | | 0.35 | 0.22 | | mg/kg | SW846 6010D |
| Calcium | | 24700 | 1100 | | mg/kg | SW846 6010D |
| Chromium | | 12.2 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 11.9 | 2.8 | | mg/kg | SW846 6010D |
| Iron | | 8700 | 55 | | mg/kg | SW846 6010D |
| Lead | | 248 | 2.2 | | mg/kg | SW846 6010D |
| Magnesium | | 2080 | 550 | | mg/kg | SW846 6010D |
| Manganese | | 318 | 1.7 | | mg/kg | SW846 6010D |
| Mercury | | 0.24 | 0.033 | | mg/kg | SW846 7471B |
| Nickel | | 8.6 | 4.4 | | mg/kg | SW846 6010D |
| Silver | | 0.55 | 0.55 | | mg/kg | SW846 6010D |
| Vanadium | | 19.6 | 5.5 | | mg/kg | SW846 6010D |
| Zinc | | 277 | 5.5 | | mg/kg | SW846 6010D |
| JD77365-2 | E23-05066-002_SB10B | | | | | |
| Aluminum | | 5670 | 54 | | mg/kg | SW846 6010D |
| Arsenic | | 2.2 | 2.2 | | mg/kg | SW846 6010D |
| Barium | | 33.5 | 22 | | mg/kg | SW846 6010D |
| Beryllium | | 0.52 | 0.22 | | mg/kg | SW846 6010D |
| Calcium | | 1380 | 540 | | mg/kg | SW846 6010D |
| Chromium | | 11.9 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 9.7 | 2.7 | | mg/kg | SW846 6010D |
| Iron | | 9570 | 54 | | mg/kg | SW846 6010D |
| Lead | | 9.5 | 2.2 | | mg/kg | SW846 6010D |
| Magnesium | | 2050 | 540 | | mg/kg | SW846 6010D |
| Manganese | | 259 | 1.6 | | mg/kg | SW846 6010D |
| Mercury | | 0.064 | 0.033 | | mg/kg | SW846 7471B |
| Nickel | | 11.1 | 4.3 | | mg/kg | SW846 6010D |
| Potassium | | 1430 | 1100 | | mg/kg | SW846 6010D |
| Vanadium | | 16.1 | 5.4 | | mg/kg | SW846 6010D |
| Zinc | | 33.9 | 5.4 | | mg/kg | SW846 6010D |
| JD77365-3 | E23-05066-003_SB2A | | | | | |
| Aluminum | | 6220 | 58 | | mg/kg | SW846 6010D |
| Arsenic | | 5.7 | 2.3 | | mg/kg | SW846 6010D |
| Barium | | 363 | 23 | | mg/kg | SW846 6010D |
| Beryllium | | 0.45 | 0.23 | | mg/kg | SW846 6010D |
| Calcium | | 31500 | 1200 | | mg/kg | SW846 6010D |

## Summary of Hits



Job Number: JD77365
Account: Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ
Collected: 11/16/23 thru 11/17/23

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| Chromium | | 14.2 | 1.2 | | mg/kg | SW846 6010D |
| Copper | | 34.7 | 2.9 | | mg/kg | SW846 6010D |
| Iron | | 9550 | 58 | | mg/kg | SW846 6010D |
| Lead | | 797 | 2.3 | | mg/kg | SW846 6010D |
| Magnesium | | 2970 | 580 | | mg/kg | SW846 6010D |
| Manganese | | 293 | 1.7 | | mg/kg | SW846 6010D |
| Mercury | | 0.70 | 0.033 | | mg/kg | SW846 7471B |
| Nickel | | 11.3 | 4.6 | | mg/kg | SW846 6010D |
| Potassium | | 1240 | 1200 | | mg/kg | SW846 6010D |
| Vanadium | | 22.4 | 5.8 | | mg/kg | SW846 6010D |
| Zinc | | 329 | 5.8 | | mg/kg | SW846 6010D |
| JD77365-4 | E23-05066-004_SB2B | | | | | |
| Aluminum | | 3640 | 53 | | mg/kg | SW846 6010D |
| Barium | | 37.9 | 21 | | mg/kg | SW846 6010D |
| Beryllium | | 0.41 | 0.21 | | mg/kg | SW846 6010D |
| Calcium | | 1980 | 530 | | mg/kg | SW846 6010D |
| Chromium | | 9.9 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 10.9 | 2.6 | | mg/kg | SW846 6010D |
| Iron | | 7770 | 53 | | mg/kg | SW846 6010D |
| Lead | | 8.8 | 2.1 | | mg/kg | SW846 6010D |
| Magnesium | | 1920 | 530 | | mg/kg | SW846 6010D |
| Manganese | | 236 | 1.6 | | mg/kg | SW846 6010D |
| Nickel | | 8.4 | 4.2 | | mg/kg | SW846 6010D |
| Potassium | | 1150 | 1100 | | mg/kg | SW846 6010D |
| Vanadium | | 12.5 | 5.3 | | mg/kg | SW846 6010D |
| Zinc | | 25.4 | 5.3 | | mg/kg | SW846 6010D |
| JD77365-5 | E23-05066-005_SB5 | | | | | |
| Aluminum | | 9790 | 55 | | mg/kg | SW846 6010D |
| Arsenic | | 6.2 | 2.2 | | mg/kg | SW846 6010D |
| Barium | | 96.8 | 22 | | mg/kg | SW846 6010D |
| Beryllium | | 0.51 | 0.22 | | mg/kg | SW846 6010D |
| Calcium | | 3790 | 550 | | mg/kg | SW846 6010D |
| Chromium | | 31.5 | 1.1 | | mg/kg | SW846 6010D |
| Cobalt | | 6.5 | 5.5 | | mg/kg | SW846 6010D |
| Copper | | 25.3 | 2.8 | | mg/kg | SW846 6010D |
| Iron | | 13200 | 55 | | mg/kg | SW846 6010D |
| Lead | | 107 | 2.2 | | mg/kg | SW846 6010D |
| Magnesium | | 5470 | 550 | | mg/kg | SW846 6010D |
| Manganese | | 250 | 1.7 | | mg/kg | SW846 6010D |
| Mercury | | 0.13 | 0.029 | | mg/kg | SW846 7471B |
| Nickel | | 18.1 | 4.4 | | mg/kg | SW846 6010D |

## Summary of Hits



Job Number: JD77365
Account: Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ
Collected: 11/16/23 thru 11/17/23

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| Potassium | | 1180 | 1100 | | mg/kg | SW846 6010D |
| Silver | | 0.65 | 0.55 | | mg/kg | SW846 6010D |
| Vanadium | | 23.9 | 5.5 | | mg/kg | SW846 6010D |
| Zinc | | 105 | 5.5 | | mg/kg | SW846 6010D |
| JD77365-6 | E23-05066-006_SB3A | | | | | |
| Aluminum | | 5880 | 56 | | mg/kg | SW846 6010D |
| Arsenic | | 4.2 | 2.2 | | mg/kg | SW846 6010D |
| Barium | | 206 | 22 | | mg/kg | SW846 6010D |
| Beryllium | | 0.45 | 0.22 | | mg/kg | SW846 6010D |
| Calcium | | 9640 | 560 | | mg/kg | SW846 6010D |
| Chromium | | 12.3 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 16.8 | 2.8 | | mg/kg | SW846 6010D |
| Iron | | 13900 | 56 | | mg/kg | SW846 6010D |
| Lead | | 301 | 2.2 | | mg/kg | SW846 6010D |
| Magnesium | | 3430 | 560 | | mg/kg | SW846 6010D |
| Manganese | | 258 | 1.7 | | mg/kg | SW846 6010D |
| Mercury | | 0.67 | 0.034 | | mg/kg | SW846 7471B |
| Nickel | | 12.6 | 4.5 | | mg/kg | SW846 6010D |
| Potassium | | 1530 | 1100 | | mg/kg | SW846 6010D |
| Silver | | 0.62 | 0.56 | | mg/kg | SW846 6010D |
| Vanadium | | 25.9 | 5.6 | | mg/kg | SW846 6010D |
| Zinc | | 164 | 5.6 | | mg/kg | SW846 6010D |
| JD77365-7 | E23-05066-007_SB3B | | | | | |
| Aluminum | | 4440 | 52 | | mg/kg | SW846 6010D |
| Arsenic | | 2.4 | 2.1 | | mg/kg | SW846 6010D |
| Barium | | 41.1 | 21 | | mg/kg | SW846 6010D |
| Beryllium | | 0.40 | 0.21 | | mg/kg | SW846 6010D |
| Calcium | | 5710 | 520 | | mg/kg | SW846 6010D |
| Chromium | | 10.8 | 1.0 | | mg/kg | SW846 6010D |
| Copper | | 14.0 | 2.6 | | mg/kg | SW846 6010D |
| Iron | | 8580 | 52 | | mg/kg | SW846 6010D |
| Lead | | 26.2 | 2.1 | | mg/kg | SW846 6010D |
| Magnesium | | 2510 | 520 | | mg/kg | SW846 6010D |
| Manganese | | 299 | 1.6 | | mg/kg | SW846 6010D |
| Mercury | | 0.11 | 0.032 | | mg/kg | SW846 7471B |
| Nickel | | 14.0 | 4.2 | | mg/kg | SW846 6010D |
| Vanadium | | 14.9 | 5.2 | | mg/kg | SW846 6010D |
| Zinc | | 42.1 | 5.2 | | mg/kg | SW846 6010D |

## Summary of Hits



Job Number: JD77365
Account: Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ
Collected: 11/16/23 thru 11/17/23

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| JD77365-8 | E23-05066-008_SB9A | | | | | |
| Aluminum | | 6910 | 54 | | mg/kg | SW846 6010D |
| Arsenic | | 5.9 | 2.2 | | mg/kg | SW846 6010D |
| Barium | | 248 | 22 | | mg/kg | SW846 6010D |
| Beryllium | | 0.49 | 0.22 | | mg/kg | SW846 6010D |
| Cadmium | | 1.0 | 0.54 | | mg/kg | SW846 6010D |
| Calcium | | 47900 | 2700 | | mg/kg | SW846 6010D |
| Chromium | | 14.5 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 26.7 | 2.7 | | mg/kg | SW846 6010D |
| Iron | | 8460 | 54 | | mg/kg | SW846 6010D |
| Lead | | 381 | 2.2 | | mg/kg | SW846 6010D |
| Magnesium | | 5830 | 540 | | mg/kg | SW846 6010D |
| Manganese | | 272 | 1.6 | | mg/kg | SW846 6010D |
| Mercury | | 0.70 | 0.032 | | mg/kg | SW846 7471B |
| Nickel | | 10.0 | 4.3 | | mg/kg | SW846 6010D |
| Silver | | 0.63 | 0.54 | | mg/kg | SW846 6010D |
| Vanadium | | 23.2 | 5.4 | | mg/kg | SW846 6010D |
| Zinc | | 219 | 5.4 | | mg/kg | SW846 6010D |
| JD77365-9 | E23-05066-009_SB9B | | | | | |
| Aluminum | | 6010 | 53 | | mg/kg | SW846 6010D |
| Arsenic | | 2.2 | 2.1 | | mg/kg | SW846 6010D |
| Barium | | 60.2 | 21 | | mg/kg | SW846 6010D |
| Beryllium | | 0.52 | 0.21 | | mg/kg | SW846 6010D |
| Calcium | | 7980 | 530 | | mg/kg | SW846 6010D |
| Chromium | | 13.3 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 16.7 | 2.6 | | mg/kg | SW846 6010D |
| Iron | | 9870 | 53 | | mg/kg | SW846 6010D |
| Lead | | 16.6 | 2.1 | | mg/kg | SW846 6010D |
| Magnesium | | 2890 | 530 | | mg/kg | SW846 6010D |
| Manganese | | 370 | 1.6 | | mg/kg | SW846 6010D |
| Mercury | | 0.040 | 0.030 | | mg/kg | SW846 7471B |
| Nickel | | 13.7 | 4.2 | | mg/kg | SW846 6010D |
| Potassium | | 1370 | 1100 | | mg/kg | SW846 6010D |
| Vanadium | | 17.1 | 5.3 | | mg/kg | SW846 6010D |
| Zinc | | 30.9 | 5.3 | | mg/kg | SW846 6010D |
| JD77365-10 | E23-05066-010_SB1A | | | | | |
| Aluminum | | 2040 | 56 | | mg/kg | SW846 6010D |
| Barium | | 84.7 | 22 | | mg/kg | SW846 6010D |
| Beryllium | | 0.26 | 0.22 | | mg/kg | SW846 6010D |
| Calcium | | 17400 | 560 | | mg/kg | SW846 6010D |

## Summary of Hits



Job Number: JD77365
Account: Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ
Collected: 11/16/23 thru 11/17/23

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| Chromium | | 5.0 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 12.6 | 2.8 | | mg/kg | SW846 6010D |
| Iron | | 3370 | 56 | | mg/kg | SW846 6010D |
| Lead | | 130 | 2.2 | | mg/kg | SW846 6010D |
| Magnesium | | 2140 | 560 | | mg/kg | SW846 6010D |
| Manganese | | 97.7 | 1.7 | | mg/kg | SW846 6010D |
| Mercury | | 0.59 | 0.035 | | mg/kg | SW846 7471B |
| Nickel | | 4.5 | 4.5 | | mg/kg | SW846 6010D |
| Silver | | 1.2 | 0.56 | | mg/kg | SW846 6010D |
| Vanadium | | 5.8 | 5.6 | | mg/kg | SW846 6010D |
| Zinc | | 87.4 | 5.6 | | mg/kg | SW846 6010D |
| JD77365-11 | E23-05066-011_SB1B | | | | | |
| Aluminum | | 3770 | 53 | | mg/kg | SW846 6010D |
| Arsenic | | 5.6 | 2.1 | | mg/kg | SW846 6010D |
| Barium | | 408 | 21 | | mg/kg | SW846 6010D |
| Beryllium | | 0.30 | 0.21 | | mg/kg | SW846 6010D |
| Cadmium | | 1.3 | 0.53 | | mg/kg | SW846 6010D |
| Calcium | | 14600 | 530 | | mg/kg | SW846 6010D |
| Chromium | | 12.8 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 19.7 | 2.6 | | mg/kg | SW846 6010D |
| Iron | | 9690 | 53 | | mg/kg | SW846 6010D |
| Lead | | 547 | 2.1 | | mg/kg | SW846 6010D |
| Magnesium | | 3550 | 530 | | mg/kg | SW846 6010D |
| Manganese | | 269 | 1.6 | | mg/kg | SW846 6010D |
| Mercury | | 0.62 | 0.033 | | mg/kg | SW846 7471B |
| Nickel | | 8.6 | 4.2 | | mg/kg | SW846 6010D |
| Silver | | 0.63 | 0.53 | | mg/kg | SW846 6010D |
| Vanadium | | 14.3 | 5.3 | | mg/kg | SW846 6010D |
| Zinc | | 616 | 5.3 | | mg/kg | SW846 6010D |
| JD77365-12 | E23-05066-012_SB4A | | | | | |
| Aluminum | | 7330 | 54 | | mg/kg | SW846 6010D |
| Arsenic | | 12.2 | 2.2 | | mg/kg | SW846 6010D |
| Barium | | 246 | 22 | | mg/kg | SW846 6010D |
| Beryllium | | 0.33 | 0.22 | | mg/kg | SW846 6010D |
| Cadmium | | 0.61 | 0.54 | | mg/kg | SW846 6010D |
| Calcium | | 15500 | 540 | | mg/kg | SW846 6010D |
| Chromium | | 13.6 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 34.9 | 2.7 | | mg/kg | SW846 6010D |
| Iron | | 11600 | 54 | | mg/kg | SW846 6010D |
| Lead | | 500 | 2.2 | | mg/kg | SW846 6010D |
| Magnesium | | 2460 | 540 | | mg/kg | SW846 6010D |

## Summary of Hits



Job Number: JD77365
Account: Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ
Collected: 11/16/23 thru 11/17/23

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| Manganese | | 241 | 1.6 | | mg/kg | SW846 6010D |
| Mercury | | 1.2 | 0.069 | | mg/kg | SW846 7471B |
| Nickel | | 10.6 | 4.3 | | mg/kg | SW846 6010D |
| Silver | | 0.68 | 0.54 | | mg/kg | SW846 6010D |
| Vanadium | | 20.9 | 5.4 | | mg/kg | SW846 6010D |
| Zinc | | 288 | 5.4 | | mg/kg | SW846 6010D |
| JD77365-13 | E23-05066-013_SB4B | | | | | |
| Aluminum | | 6130 | 55 | | mg/kg | SW846 6010D |
| Arsenic | | 6.7 | 2.2 | | mg/kg | SW846 6010D |
| Barium | | 194 | 22 | | mg/kg | SW846 6010D |
| Beryllium | | 0.42 | 0.22 | | mg/kg | SW846 6010D |
| Calcium | | 20000 | 550 | | mg/kg | SW846 6010D |
| Chromium | | 14.9 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 23.8 | 2.7 | | mg/kg | SW846 6010D |
| Iron | | 10300 | 55 | | mg/kg | SW846 6010D |
| Lead | | 353 | 2.2 | | mg/kg | SW846 6010D |
| Magnesium | | 2940 | 550 | | mg/kg | SW846 6010D |
| Manganese | | 337 | 1.6 | | mg/kg | SW846 6010D |
| Mercury | | 0.33 | 0.032 | | mg/kg | SW846 7471B |
| Nickel | | 12.0 | 4.4 | | mg/kg | SW846 6010D |
| Silver | | 0.58 | 0.55 | | mg/kg | SW846 6010D |
| Vanadium | | 16.3 | 5.5 | | mg/kg | SW846 6010D |
| Zinc | | 180 | 5.5 | | mg/kg | SW846 6010D |
| JD77365-14 | E23-05066-014_SB6-419-CS | | | | | |
| Aluminum | | 4840 | 55 | | mg/kg | SW846 6010D |
| Arsenic | | 3.5 | 2.2 | | mg/kg | SW846 6010D |
| Barium | | 517 | 22 | | mg/kg | SW846 6010D |
| Beryllium | | 0.36 | 0.22 | | mg/kg | SW846 6010D |
| Cadmium | | 0.63 | 0.55 | | mg/kg | SW846 6010D |
| Calcium | | 32100 | 1100 | | mg/kg | SW846 6010D |
| Chromium | | 14.0 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 34.8 | 2.8 | | mg/kg | SW846 6010D |
| Iron | | 10200 | 55 | | mg/kg | SW846 6010D |
| Lead | | 1070 | 4.4 | | mg/kg | SW846 6010D |
| Magnesium | | 3800 | 550 | | mg/kg | SW846 6010D |
| Manganese | | 222 | 1.7 | | mg/kg | SW846 6010D |
| Mercury | | 0.37 | 0.032 | | mg/kg | SW846 7471B |
| Nickel | | 13.1 | 4.4 | | mg/kg | SW846 6010D |
| Silver | | 0.75 | 0.55 | | mg/kg | SW846 6010D |
| Vanadium | | 17.3 | 5.5 | | mg/kg | SW846 6010D |
| Zinc | | 405 | 5.5 | | mg/kg | SW846 6010D |

## Summary of Hits



Job Number: JD77365
Account: Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ
Collected: 11/16/23 thru 11/17/23

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| JD77365-15 | E23-05066-015_SB8-401-CS | | | | | |
| Aluminum | | 5230 | 53 | | mg/kg | SW846 6010D |
| Arsenic | | 4.5 | 2.1 | | mg/kg | SW846 6010D |
| Barium | | 341 | 21 | | mg/kg | SW846 6010D |
| Beryllium | | 0.41 | 0.21 | | mg/kg | SW846 6010D |
| Cadmium | | 0.68 | 0.53 | | mg/kg | SW846 6010D |
| Calcium | | 22400 | 1100 | | mg/kg | SW846 6010D |
| Chromium | | 14.5 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 20.8 | 2.6 | | mg/kg | SW846 6010D |
| Iron | | 9740 | 53 | | mg/kg | SW846 6010D |
| Lead | | 684 | 2.1 | | mg/kg | SW846 6010D |
| Magnesium | | 4360 | 530 | | mg/kg | SW846 6010D |
| Manganese | | 241 | 1.6 | | mg/kg | SW846 6010D |
| Mercury | | 0.98 | 0.065 | | mg/kg | SW846 7471B |
| Nickel | | 13.7 | 4.2 | | mg/kg | SW846 6010D |
| Potassium | | 1370 | 1100 | | mg/kg | SW846 6010D |
| Silver | | 0.60 | 0.53 | | mg/kg | SW846 6010D |
| Vanadium | | 16.4 | 5.3 | | mg/kg | SW846 6010D |
| Zinc | | 268 | 5.3 | | mg/kg | SW846 6010D |
| JD77365-16 | E23-05066-016_TWP1 | | | | | |
| Aluminum | | 23600 | 200 | | ug/l | SW846 6010D |
| Arsenic | | 10.6 | 3.0 | | ug/l | SW846 6010D |
| Barium | | 400 | 200 | | ug/l | SW846 6010D |
| Beryllium | | 3.3 | 1.0 | | ug/l | SW846 6010D |
| Calcium | | 94900 | 5000 | | ug/l | SW846 6010D |
| Chromium | | 66.7 | 10 | | ug/l | SW846 6010D |
| Copper | | 90.0 | 10 | | ug/l | SW846 6010D |
| Iron | | 30200 | 100 | | ug/l | SW846 6010D |
| Lead | | 89.7 | 3.0 | | ug/l | SW846 6010D |
| Magnesium | | 26800 | 5000 | | ug/l | SW846 6010D |
| Manganese | | 4020 | 15 | | ug/l | SW846 6010D |
| Nickel | | 99.9 | 10 | | ug/l | SW846 6010D |
| Potassium | | 14800 | 10000 | | ug/l | SW846 6010D |
| Sodium | | 138000 | 10000 | | ug/l | SW846 6010D |
| Vanadium | | 60.8 | 50 | | ug/l | SW846 6010D |
| Zinc | | 174 | 20 | | ug/l | SW846 6010D |
| JD77365-16F | E23-05066-020_TWP1 FILT | | | | | |
| Calcium | | 76700 | 5000 | | ug/l | SW846 6010D |
| Iron | | 165 | 100 | | ug/l | SW846 6010D |

## Summary of Hits



Job Number: JD77365
Account: Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ
Collected: 11/16/23 thru 11/17/23

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| Magnesium | | 13800 | 5000 | | ug/l | SW846 6010D |
| Manganese | | 195 | 15 | | ug/l | SW846 6010D |
| Potassium | | 11000 | 10000 | | ug/l | SW846 6010D |
| Sodium | | 141000 | 10000 | | ug/l | SW846 6010D |
| JD77365-17 | E23-05066-017_TWP4 | | | | | |
| Aluminum | | 3730 | 200 | | ug/l | SW846 6010D |
| Beryllium | | 1.0 | 1.0 | | ug/l | SW846 6010D |
| Calcium | | 51900 | 5000 | | ug/l | SW846 6010D |
| Copper | | 13.7 | 10 | | ug/l | SW846 6010D |
| Iron | | 4370 | 100 | | ug/l | SW846 6010D |
| Lead | | 9.8 | 3.0 | | ug/l | SW846 6010D |
| Magnesium | | 10000 | 5000 | | ug/l | SW846 6010D |
| Manganese | | 423 | 15 | | ug/l | SW846 6010D |
| Nickel | | 11.4 | 10 | | ug/l | SW846 6010D |
| Potassium | | 12000 | 10000 | | ug/l | SW846 6010D |
| Sodium | | 79500 | 10000 | | ug/l | SW846 6010D |
| Zinc | | 21.9 | 20 | | ug/l | SW846 6010D |
| JD77365-17F | E23-05066-021_TWP4 FILT | | | | | |
| Aluminum | | 1330 | 200 | | ug/l | SW846 6010D |
| Calcium | | 52300 | 5000 | | ug/l | SW846 6010D |
| Iron | | 1580 | 100 | | ug/l | SW846 6010D |
| Lead | | 4.6 | 3.0 | | ug/l | SW846 6010D |
| Magnesium | | 9420 | 5000 | | ug/l | SW846 6010D |
| Manganese | | 223 | 15 | | ug/l | SW846 6010D |
| Potassium | | 11500 | 10000 | | ug/l | SW846 6010D |
| Sodium | | 78900 | 10000 | | ug/l | SW846 6010D |
| Zinc | | 74.0 | 20 | | ug/l | SW846 6010D |
| JD77365-18 | E23-05066-018_TWP2 | | | | | |
| Aluminum | | 5200 | 200 | | ug/l | SW846 6010D |
| Arsenic | | 3.8 | 3.0 | | ug/l | SW846 6010D |
| Barium | | 298 | 200 | | ug/l | SW846 6010D |
| Calcium | | 81800 | 5000 | | ug/l | SW846 6010D |
| Chromium | | 15.1 | 10 | | ug/l | SW846 6010D |
| Copper | | 38.6 | 10 | | ug/l | SW846 6010D |
| Iron | | 6370 | 100 | | ug/l | SW846 6010D |
| Lead | | 299 | 3.0 | | ug/l | SW846 6010D |
| Magnesium | | 11900 | 5000 | | ug/l | SW846 6010D |
| Manganese | | 514 | 15 | | ug/l | SW846 6010D |
| Nickel | | 25.3 | 10 | | ug/l | SW846 6010D |

## Summary of Hits



Job Number: JD77365
Account: Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ
Collected: 11/16/23 thru 11/17/23

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| Sodium | | 84700 | 10000 | | ug/l | SW846 6010D |
| Zinc | | 129 | 20 | | ug/l | SW846 6010D |
| JD77365-18F | E23-05066-022_TWP2 FILT | | | | | |
| Aluminum | | 486 | 200 | | ug/l | SW846 6010D |
| Calcium | | 101000 | 5000 | | ug/l | SW846 6010D |
| Iron | | 630 | 100 | | ug/l | SW846 6010D |
| Lead | | 30.9 | 3.0 | | ug/l | SW846 6010D |
| Magnesium | | 12400 | 5000 | | ug/l | SW846 6010D |
| Manganese | | 496 | 15 | | ug/l | SW846 6010D |
| Sodium | | 85700 | 10000 | | ug/l | SW846 6010D |
| Zinc | | 29.9 | 20 | | ug/l | SW846 6010D |
| JD77365-19 | E23-05066-019_TWP5 | | | | | |
| Aluminum | | 22800 | 200 | | ug/l | SW846 6010D |
| Arsenic | | 8.0 | 3.0 | | ug/l | SW846 6010D |
| Barium | | 589 | 200 | | ug/l | SW846 6010D |
| Beryllium | | 3.1 | 1.0 | | ug/l | SW846 6010D |
| Calcium | | 41800 | 5000 | | ug/l | SW846 6010D |
| Chromium | | 64.0 | 10 | | ug/l | SW846 6010D |
| Copper | | 105 | 10 | | ug/l | SW846 6010D |
| Iron | | 29000 | 100 | | ug/l | SW846 6010D |
| Lead | | 30.2 | 3.0 | | ug/l | SW846 6010D |
| Magnesium | | 15600 | 5000 | | ug/l | SW846 6010D |
| Manganese | | 3540 | 15 | | ug/l | SW846 6010D |
| Nickel | | 78.7 | 10 | | ug/l | SW846 6010D |
| Potassium | | 11600 | 10000 | | ug/l | SW846 6010D |
| Sodium | | 67100 | 10000 | | ug/l | SW846 6010D |
| Vanadium | | 62.2 | 50 | | ug/l | SW846 6010D |
| Zinc | | 201 | 20 | | ug/l | SW846 6010D |
| JD77365-19F | E23-05066-023_TWP5 FILT | | | | | |
| Aluminum | | 6060 | 200 | | ug/l | SW846 6010D |
| Barium | | 296 | 200 | | ug/l | SW846 6010D |
| Beryllium | | 1.1 | 1.0 | | ug/l | SW846 6010D |
| Calcium | | 40500 | 5000 | | ug/l | SW846 6010D |
| Chromium | | 16.1 | 10 | | ug/l | SW846 6010D |
| Copper | | 33.7 | 10 | | ug/l | SW846 6010D |
| Iron | | 6950 | 100 | | ug/l | SW846 6010D |
| Lead | | 10.8 | 3.0 | | ug/l | SW846 6010D |
| Magnesium | | 10900 | 5000 | | ug/l | SW846 6010D |
| Manganese | | 1060 | 15 | | ug/l | SW846 6010D |

## Summary of Hits



Job Number: JD77365
Account: Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ
Collected: 11/16/23 thru 11/17/23

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| Nickel | | 25.5 | 10 | | ug/l | SW846 6010D |
| Sodium | | 66000 | 10000 | | ug/l | SW846 6010D |
| Zinc | | 84.5 | 20 | | ug/l | SW846 6010D |

SGS

Dayton, NJ

Section 4

4

## Sample Results

Report of Analysis

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05066-001_SB10A | | |
| Lab Sample ID: | JD77365-1 | Date Sampled: | 11/16/23 |
| Matrix: | SO - Soil | Date Received: | 11/21/23 |
| | | Percent Solids: | 90.9 |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 4960 | 55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | 4.6 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 280 | 22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.35 | 0.22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | < 0.55 | 0.55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Calcium | 24700 | 1100 | mg/kg | 2 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Chromium | 12.2 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | < 5.5 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 11.9 | 2.8 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 8700 | 55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 248 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Magnesium | 2080 | 550 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 318 | 1.7 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | 0.24 | 0.033 | mg/kg | 1 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [5] |
| Nickel | 8.6 | 4.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | 0.55 | 0.55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 19.6 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 277 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Instrument QC Batch: MA55148
(4) Prep QC Batch: MP43322
(5) Prep QC Batch: MP43401

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05066-002_SB10B | | |
| Lab Sample ID: | JD77365-2 | Date Sampled: | 11/16/23 |
| Matrix: | SO - Soil | Date Received: | 11/21/23 |
| | | Percent Solids: | 91.5 |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 5670 | 54 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 33.5 | 22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.52 | 0.22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | < 0.54 | 0.54 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 1380 | 540 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 11.9 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | < 5.4 | 5.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 9.7 | 2.7 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 9570 | 54 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 9.5 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 2050 | 540 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 259 | 1.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.064 | 0.033 | mg/kg | 1 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 11.1 | 4.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | 1430 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | < 0.54 | 0.54 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 16.1 | 5.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 33.9 | 5.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Prep QC Batch: MP43322
(4) Prep QC Batch: MP43401

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05066-003_SB2A | | |
| Lab Sample ID: | JD77365-3 | Date Sampled: | 11/16/23 |
| Matrix: | SO - Soil | Date Received: | 11/21/23 |
| | | Percent Solids: | 86.4 |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6220 | 58 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.3 | 2.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | 5.7 | 2.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 363 | 23 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.45 | 0.23 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | < 0.58 | 0.58 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Calcium | 31500 | 1200 | mg/kg | 2 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Chromium | 14.2 | 1.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | < 5.8 | 5.8 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 34.7 | 2.9 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 9550 | 58 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 797 | 2.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Magnesium | 2970 | 580 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 293 | 1.7 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | 0.70 | 0.033 | mg/kg | 1 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [5] |
| Nickel | 11.3 | 4.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | 1240 | 1200 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.3 | 2.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | < 0.58 | 0.58 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1200 | 1200 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.2 | 1.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 22.4 | 5.8 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 329 | 5.8 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Instrument QC Batch: MA55148
(4) Prep QC Batch: MP43322
(5) Prep QC Batch: MP43401

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05066-004_SB2B | | |
| Lab Sample ID: | JD77365-4 | Date Sampled: | 11/16/23 |
| Matrix: | SO - Soil | Date Received: | 11/21/23 |
| | | Percent Solids: | 95.6 |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 3640 | 53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 37.9 | 21 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.41 | 0.21 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | < 0.53 | 0.53 | mg/kg | 1 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Calcium | 1980 | 530 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Chromium | 9.9 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | < 5.3 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 10.9 | 2.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 7770 | 53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 8.8 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Magnesium | 1920 | 530 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 236 | 1.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | < 0.032 | 0.032 | mg/kg | 1 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [5] |
| Nickel | 8.4 | 4.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | 1150 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | < 0.53 | 0.53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 12.5 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 25.4 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Instrument QC Batch: MA55148
(4) Prep QC Batch: MP43322
(5) Prep QC Batch: MP43401

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05066-005_SB5 | | |
| Lab Sample ID: | JD77365-5 | Date Sampled: | 11/16/23 |
| Matrix: | SO - Soil | Date Received: | 11/21/23 |
| | | Percent Solids: | 92.1 |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 9790 | 55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | 6.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 96.8 | 22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.51 | 0.22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | < 0.55 | 0.55 | mg/kg | 1 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Calcium | 3790 | 550 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Chromium | 31.5 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | 6.5 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 25.3 | 2.8 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 13200 | 55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 107 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Magnesium | 5470 | 550 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 250 | 1.7 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | 0.13 | 0.029 | mg/kg | 1 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [5] |
| Nickel | 18.1 | 4.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | 1180 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | 0.65 | 0.55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 23.9 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 105 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Instrument QC Batch: MA55148
(4) Prep QC Batch: MP43322
(5) Prep QC Batch: MP43401

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05066-006_SB3A | | |
| Lab Sample ID: | JD77365-6 | Date Sampled: | 11/16/23 |
| Matrix: | SO - Soil | Date Received: | 11/21/23 |
| | | Percent Solids: | 91.1 |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 5880 | 56 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | 4.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 206 | 22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.45 | 0.22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | < 0.56 | 0.56 | mg/kg | 1 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Calcium | 9640 | 560 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Chromium | 12.3 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | < 5.6 | 5.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 16.8 | 2.8 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 13900 | 56 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 301 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Magnesium | 3430 | 560 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 258 | 1.7 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | 0.67 | 0.034 | mg/kg | 1 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [5] |
| Nickel | 12.6 | 4.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | 1530 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | 0.62 | 0.56 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 25.9 | 5.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 164 | 5.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Instrument QC Batch: MA55148
(4) Prep QC Batch: MP43322
(5) Prep QC Batch: MP43401

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05066-007_SB3B | | |
| Lab Sample ID: | JD77365-7 | Date Sampled: | 11/16/23 |
| Matrix: | SO - Soil | Date Received: | 11/21/23 |
| | | Percent Solids: | 94.8 |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 4440 | 52 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | 2.4 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 41.1 | 21 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.40 | 0.21 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | < 0.52 | 0.52 | mg/kg | 1 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Calcium | 5710 | 520 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Chromium | 10.8 | 1.0 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | < 5.2 | 5.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 14.0 | 2.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 8580 | 52 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 26.2 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Magnesium | 2510 | 520 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 299 | 1.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | 0.11 | 0.032 | mg/kg | 1 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [5] |
| Nickel | 14.0 | 4.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | < 1000 | 1000 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | < 0.52 | 0.52 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1000 | 1000 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.0 | 1.0 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 14.9 | 5.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 42.1 | 5.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Instrument QC Batch: MA55148
(4) Prep QC Batch: MP43322
(5) Prep QC Batch: MP43401

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05066-008_SB9A | | |
| Lab Sample ID: | JD77365-8 | Date Sampled: | 11/17/23 |
| Matrix: | SO - Soil | Date Received: | 11/21/23 |
| | | Percent Solids: | 92.9 |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6910 | 54 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | 5.9 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 248 | 22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.49 | 0.22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | 1.0 | 0.54 | mg/kg | 1 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Calcium | 47900 | 2700 | mg/kg | 5 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Chromium | 14.5 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | < 5.4 | 5.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 26.7 | 2.7 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 8460 | 54 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 381 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Magnesium | 5830 | 540 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 272 | 1.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | 0.70 | 0.032 | mg/kg | 1 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [5] |
| Nickel | 10.0 | 4.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | 0.63 | 0.54 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 23.2 | 5.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 219 | 5.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Instrument QC Batch: MA55148
(4) Prep QC Batch: MP43322
(5) Prep QC Batch: MP43401

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05066-009_SB9B | | |
| Lab Sample ID: | JD77365-9 | Date Sampled: | 11/17/23 |
| Matrix: | SO - Soil | Date Received: | 11/21/23 |
| | | Percent Solids: | 95.1 |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6010 | 53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | 2.2 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 60.2 | 21 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.52 | 0.21 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | < 0.53 | 0.53 | mg/kg | 1 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Calcium | 7980 | 530 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Chromium | 13.3 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | < 5.3 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 16.7 | 2.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 9870 | 53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 16.6 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Magnesium | 2890 | 530 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 370 | 1.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | 0.040 | 0.030 | mg/kg | 1 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [5] |
| Nickel | 13.7 | 4.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | 1370 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | < 0.53 | 0.53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 17.1 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 30.9 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Instrument QC Batch: MA55148
(4) Prep QC Batch: MP43322
(5) Prep QC Batch: MP43401

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05066-010_SB1A | | |
| Lab Sample ID: | JD77365-10 | Date Sampled: | 11/17/23 |
| Matrix: | SO - Soil | Date Received: | 11/21/23 |
| | | Percent Solids: | 91.0 |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 2040 | 56 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 84.7 | 22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.26 | 0.22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | < 0.56 | 0.56 | mg/kg | 1 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Calcium | 17400 | 560 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Chromium | 5.0 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | < 5.6 | 5.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 12.6 | 2.8 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 3370 | 56 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 130 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Magnesium | 2140 | 560 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 97.7 | 1.7 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | 0.59 | 0.035 | mg/kg | 1 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [5] |
| Nickel | 4.5 | 4.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | 1.2 | 0.56 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 5.8 | 5.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 87.4 | 5.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Instrument QC Batch: MA55148
(4) Prep QC Batch: MP43322
(5) Prep QC Batch: MP43401

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05066-011_SB1B | | |
| Lab Sample ID: | JD77365-11 | Date Sampled: | 11/17/23 |
| Matrix: | SO - Soil | Date Received: | 11/21/23 |
| | | Percent Solids: | 93.8 |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 3770 | 53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | 5.6 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 408 | 21 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.30 | 0.21 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | 1.3 | 0.53 | mg/kg | 1 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Calcium | 14600 | 530 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Chromium | 12.8 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | < 5.3 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 19.7 | 2.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 9690 | 53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 547 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Magnesium | 3550 | 530 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 269 | 1.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | 0.62 | 0.033 | mg/kg | 1 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [5] |
| Nickel | 8.6 | 4.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | 0.63 | 0.53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 14.3 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 616 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Instrument QC Batch: MA55148
(4) Prep QC Batch: MP43322
(5) Prep QC Batch: MP43401

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05066-012_SB4A | | |
| Lab Sample ID: | JD77365-12 | Date Sampled: | 11/17/23 |
| Matrix: | SO - Soil | Date Received: | 11/21/23 |
| | | Percent Solids: | 90.9 |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 7330 | 54 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | 12.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 246 | 22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.33 | 0.22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | 0.61 | 0.54 | mg/kg | 1 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Calcium | 15500 | 540 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Chromium | 13.6 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | < 5.4 | 5.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 34.9 | 2.7 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 11600 | 54 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 500 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Magnesium | 2460 | 540 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 241 | 1.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | 1.2 | 0.069 | mg/kg | 2 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [5] |
| Nickel | 10.6 | 4.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | 0.68 | 0.54 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 20.9 | 5.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 288 | 5.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Instrument QC Batch: MA55148
(4) Prep QC Batch: MP43322
(5) Prep QC Batch: MP43401

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05066-013_SB4B | | |
| Lab Sample ID: | JD77365-13 | Date Sampled: | 11/17/23 |
| Matrix: | SO - Soil | Date Received: | 11/21/23 |
| | | Percent Solids: | 93.2 |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6130 | 55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | 6.7 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 194 | 22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.42 | 0.22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | < 0.55 | 0.55 | mg/kg | 1 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Calcium | 20000 | 550 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Chromium | 14.9 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | < 5.5 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 23.8 | 2.7 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 10300 | 55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 353 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Magnesium | 2940 | 550 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 337 | 1.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | 0.33 | 0.032 | mg/kg | 1 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [5] |
| Nickel | 12.0 | 4.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | 0.58 | 0.55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 16.3 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 180 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Instrument QC Batch: MA55148
(4) Prep QC Batch: MP43322
(5) Prep QC Batch: MP43401

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05066-014_SB6-419-CS | | |
| Lab Sample ID: | JD77365-14 | Date Sampled: | 11/17/23 |
| Matrix: | SO - Soil | Date Received: | 11/21/23 |
| | | Percent Solids: | 92.6 |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 4840 | 55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | 3.5 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 517 | 22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.36 | 0.22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | 0.63 | 0.55 | mg/kg | 1 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Calcium | 32100 | 1100 | mg/kg | 2 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Chromium | 14.0 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | < 5.5 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 34.8 | 2.8 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 10200 | 55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 1070 | 4.4 | mg/kg | 2 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Magnesium | 3800 | 550 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 222 | 1.7 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | 0.37 | 0.032 | mg/kg | 1 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [5] |
| Nickel | 13.1 | 4.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | 0.75 | 0.55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 17.3 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 405 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Instrument QC Batch: MA55148
(4) Prep QC Batch: MP43322
(5) Prep QC Batch: MP43401

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05066-015_SB8-401-CS | | |
| Lab Sample ID: | JD77365-15 | Date Sampled: | 11/17/23 |
| Matrix: | SO - Soil | Date Received: | 11/21/23 |
| | | Percent Solids: | 93.7 |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 5230 | 53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | 4.5 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 341 | 21 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.41 | 0.21 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | 0.68 | 0.53 | mg/kg | 1 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Calcium | 22400 | 1100 | mg/kg | 2 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Chromium | 14.5 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | < 5.3 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 20.8 | 2.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 9740 | 53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 684 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Magnesium | 4360 | 530 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 241 | 1.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | 0.98 | 0.065 | mg/kg | 2 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [5] |
| Nickel | 13.7 | 4.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | 1370 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | 0.60 | 0.53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 16.4 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 268 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Instrument QC Batch: MA55148
(4) Prep QC Batch: MP43322
(5) Prep QC Batch: MP43401

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05066-016_TWP1 | | |
| Lab Sample ID: | JD77365-16 | Date Sampled: | 11/16/23 |
| Matrix: | AQ - Water | Date Received: | 11/21/23 |
| | | Percent Solids: | n/a |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Total Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 23600 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Arsenic | 10.6 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Barium | 400 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Beryllium | 3.3 | 1.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Calcium | 94900 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Chromium | 66.7 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Copper | 90.0 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Iron | 30200 | 100 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Lead | 89.7 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Magnesium | 26800 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Manganese | 4020 | 15 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/30/23 | 11/30/23 | LM | SW846 7470A [2] | SW846 7470A [4] |
| Nickel | 99.9 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Potassium | 14800 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Silver | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Sodium | 138000 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Vanadium | 60.8 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Zinc | 174 | 20 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |

(1) Instrument QC Batch: MA55131
(2) Instrument QC Batch: MA55150
(3) Prep QC Batch: MP43317
(4) Prep QC Batch: MP43408

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05066-020_TWP1 FILT | | |
| Lab Sample ID: | JD77365-16F | Date Sampled: | 11/16/23 |
| Matrix: | AQ - Water Filtered | Date Received: | 11/21/23 |
| | | Percent Solids: | n/a |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Dissolved Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | < 200 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Arsenic | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Barium | < 200 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Beryllium | < 1.0 | 1.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Calcium | 76700 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Chromium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Copper | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Iron | 165 | 100 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Lead | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Magnesium | 13800 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Manganese | 195 | 15 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/29/23 | 11/29/23 | LM | SW846 7470A [2] | SW846 7470A [4] |
| Nickel | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Potassium | 11000 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Silver | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Sodium | 141000 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Zinc | < 20 | 20 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |

(1) Instrument QC Batch: MA55131
(2) Instrument QC Batch: MA55142
(3) Prep QC Batch: MP43317
(4) Prep QC Batch: MP43408

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05066-017_TWP4 | | |
| Lab Sample ID: | JD77365-17 | Date Sampled: | 11/16/23 |
| Matrix: | AQ - Water | Date Received: | 11/21/23 |
| | | Percent Solids: | n/a |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Total Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 3730 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Arsenic | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Barium | < 200 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Beryllium | 1.0 | 1.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Calcium | 51900 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Chromium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Copper | 13.7 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Iron | 4370 | 100 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Lead | 9.8 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Magnesium | 10000 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Manganese | 423 | 15 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/29/23 | 11/29/23 | LM | SW846 7470A [2] | SW846 7470A [4] |
| Nickel | 11.4 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Potassium | 12000 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Silver | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Sodium | 79500 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Zinc | 21.9 | 20 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |

(1) Instrument QC Batch: MA55131
(2) Instrument QC Batch: MA55142
(3) Prep QC Batch: MP43317
(4) Prep QC Batch: MP43408

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05066-021_TWP4 FILT | | |
| Lab Sample ID: | JD77365-17F | Date Sampled: | 11/16/23 |
| Matrix: | AQ - Water Filtered | Date Received: | 11/21/23 |
| | | Percent Solids: | n/a |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Dissolved Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 1330 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Arsenic | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Barium | < 200 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Beryllium | < 1.0 | 1.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Calcium | 52300 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Chromium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Copper | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Iron | 1580 | 100 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Lead | 4.6 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Magnesium | 9420 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Manganese | 223 | 15 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/29/23 | 11/29/23 | LM | SW846 7470A [2] | SW846 7470A [4] |
| Nickel | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Potassium | 11500 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Silver | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Sodium | 78900 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Zinc | 74.0 | 20 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |

(1) Instrument QC Batch: MA55131
(2) Instrument QC Batch: MA55142
(3) Prep QC Batch: MP43317
(4) Prep QC Batch: MP43408

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05066-018_TWP2 | | |
| Lab Sample ID: | JD77365-18 | Date Sampled: | 11/16/23 |
| Matrix: | AQ - Water | Date Received: | 11/21/23 |
| | | Percent Solids: | n/a |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Total Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 5200 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Arsenic | 3.8 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Barium | 298 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Beryllium | < 1.0 | 1.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Calcium | 81800 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Chromium | 15.1 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Copper | 38.6 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Iron | 6370 | 100 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Lead | 299 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Magnesium | 11900 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Manganese | 514 | 15 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/30/23 | 11/30/23 | LM | SW846 7470A [2] | SW846 7470A [4] |
| Nickel | 25.3 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Potassium | < 10000 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Silver | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Sodium | 84700 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Zinc | 129 | 20 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |

(1) Instrument QC Batch: MA55131
(2) Instrument QC Batch: MA55150
(3) Prep QC Batch: MP43317
(4) Prep QC Batch: MP43408

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05066-022_TWP2 FILT | | |
| Lab Sample ID: | JD77365-18F | Date Sampled: | 11/16/23 |
| Matrix: | AQ - Water Filtered | Date Received: | 11/21/23 |
| | | Percent Solids: | n/a |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Dissolved Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 486 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Arsenic | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Barium | < 200 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Beryllium | < 1.0 | 1.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Calcium | 101000 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Chromium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Copper | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Iron | 630 | 100 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Lead | 30.9 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Magnesium | 12400 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Manganese | 496 | 15 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/29/23 | 11/29/23 | LM | SW846 7470A [2] | SW846 7470A [4] |
| Nickel | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Potassium | < 10000 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Silver | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Sodium | 85700 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Zinc | 29.9 | 20 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |

(1) Instrument QC Batch: MA55131
(2) Instrument QC Batch: MA55142
(3) Prep QC Batch: MP43317
(4) Prep QC Batch: MP43408

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05066-019_TWP5 | | |
| Lab Sample ID: | JD77365-19 | Date Sampled: | 11/16/23 |
| Matrix: | AQ - Water | Date Received: | 11/21/23 |
| | | Percent Solids: | n/a |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Total Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 22800 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Arsenic | 8.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Barium | 589 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Beryllium | 3.1 | 1.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Calcium | 41800 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Chromium | 64.0 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Copper | 105 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Iron | 29000 | 100 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Lead | 30.2 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Magnesium | 15600 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Manganese | 3540 | 15 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/29/23 | 11/29/23 | LM | SW846 7470A [2] | SW846 7470A [4] |
| Nickel | 78.7 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Potassium | 11600 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Silver | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Sodium | 67100 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Vanadium | 62.2 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Zinc | 201 | 20 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |

(1) Instrument QC Batch: MA55131
(2) Instrument QC Batch: MA55142
(3) Prep QC Batch: MP43317
(4) Prep QC Batch: MP43408

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05066-023_TWP5 FILT | | |
| Lab Sample ID: | JD77365-19F | Date Sampled: | 11/16/23 |
| Matrix: | AQ - Water Filtered | Date Received: | 11/21/23 |
| | | Percent Solids: | n/a |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Dissolved Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6060 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Arsenic | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Barium | 296 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Beryllium | 1.1 | 1.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Calcium | 40500 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Chromium | 16.1 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Copper | 33.7 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Iron | 6950 | 100 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Lead | 10.8 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Magnesium | 10900 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Manganese | 1060 | 15 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/29/23 | 11/29/23 | LM | SW846 7470A [2] | SW846 7470A [4] |
| Nickel | 25.5 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Potassium | < 10000 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Silver | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Sodium | 66000 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Zinc | 84.5 | 20 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |

(1) Instrument QC Batch: MA55131
(2) Instrument QC Batch: MA55142
(3) Prep QC Batch: MP43317
(4) Prep QC Batch: MP43408

RL = Reporting Limit

SAMPLE TRACKING

FINALIZED 12/05/2023

E23-05066 Page 238

INTEGRATED ANALYTICAL LABORATORIES, LLC

IAL

Integrated Analytical Labs
273 Franklin Rd
Randolph, NJ 07869

# Chain of Custody Record

Contact Us: 973 361-4252
Web: www.ialonline.com

## Customer Information

Company: HK Engineering and Geology D.P.C.
Address: 1600 US 22 East
Union, NJ 07083
Telephone #: 908-688-7800
Project Manager: Chris Hirschmann
Email Address(es): chirschmann@hillmannconsulting.com
Project Name: HK2661.2
Project Location (State): NY
Bottle Order #:
☒ "Report to"/"Invoice To" same as above
Sampled by: D. Aponte

COMPLETED BY IAL:
____ Field Sampling ____ Equipment Rental

## Reporting Information

☒ Check here if same as "Customer Information"
REPORT TO:
Address:
Attn:
INVOICE TO:
Address:
Attn:
PO # ~~G62662~~ HK2661.2
Quote #

## **Rush TAT Charge

24 hr - 100%...
48 hr - 75%....
72 hr - 50%....
96 hr - 35%....
5 day - 25%....
6-9 day - 10%

## Deliverables *Surchage may apply for regulatory

| NJ, CT, PA | NY |
|---|---|
| ☐ Results Only (Level I) | ☒ ASP Category A |
| ☐ Reduced (Level II/III) | ☐ ASP Category B* |
| ☐ Regulatory/ Full* (Level IV) | |

## EDDs

☐ NJ SRP
☐ NYSDEC EQuIS
☐ lab approved custom EDD
☒ NO EDD REQ'D

## Concentrations Expected:

Low Med High

Known Hazard:
☐ YES ☐ NO
Describe:

## Turn-Around Time (TAT)

5 Day TAT Hard Copy and Verbal

Hard Copy: Standard 3 week  Other - call for price

## Petroleum Hydrocarbons - Selection is REQUIRED

☐ NJ EPH-DRO - Category 1
TAT for PHC, if other than 2 weeks:
☐ NJ EPH-C40 - Category 2
☐ CT ETPH
☐ NJ EPH-Fractionated - Cat 2
☐ DRO-8015

## Regulatory Requirement

| New Jersey | New York |
|---|---|
| ☐ GWQS | ☐ AWQS (TOGS Table 1) |
| ☐ 2017 SRS/IGW | ☐ GWEL (TOGS Table 5) |
| ☐ 2021 SRS/MGW | ☒ Part 375-6.8(a) - Unrestricted |
| ☐ Ecological | ☒ Part 375-6.8(b) - Restricted |
| ☐ DW | ☐ CP-51 Table 2 or 3 (selection required) |
| ☐ SPLP | |

Other States / Criteria
☐ Pennsylvania Act 2
☐ CT RCSA 22a-133k1-k3
☐ TSCA PCBs
OTHER Regulatory Requirements - specify in comments
Sample Specific Notes:

## Sample Matrix

DW - Drinking Water
WW - Waste Water
GW - Groundwater
SW - Surface Water
LIQ - Liquid (specify)
M - Multiphasic
OI - Oil
S - Soil
SED - Sediment
SOL - Solid (specify)
SL - Sludge
W - Wipe

## SAMPLE INFORMATION

ANALYTICAL PARAMETERS (please note if contingent)

| Client ID | Depth (ft only) | Sampling Date | Sampling Time | Matrix | # containers | IAL # | TAL/TCL + 30 |
|---|---|---|---|---|---|---|---|
| SB10A | 0-2 | 11/16/2023 | 9:30 | S | 5 | 1 | X |
| SB10B | 10-12' | 11/16/2023 | 9:45 | S | 5 | 2 | X |
| SB2A | 0-2 | 11/16/2023 | 10:00 | S | 5 | 3 | X |
| SB2B | 10-12' | 11/16/2023 | 10:20 | S | 5 | 4 | X |
| SB5 | 0-2 | 11/16/2023 | 13:40 | S | 5 | 5 | X |
| SB3A | 0-2 | 11/16/2023 | 13:05 | S | 5 | 6 | X |
| SB3B | 10-12' | 11/16/2023 | 13:10 | S | 5 | 7 | X |

Samples previously analyzed by IAL? YES / NO

Preservative Code: Container Code:

Preservative (use code)
Container Type (use code)

1 = None, 2 = HCl, 3 = HNO3, 4 = MeOH, 5 = NaOH, 6 = H2SO4, 7 = Other
A = Amber Glass, B = Plastic, C = Vial, D = Glass, E = EnCore, T = Terracore

*Please print legibly and fill out completely. Samples cannot be processed and the turnaround time (TAT) will not start until any ambiguities have been resolved. TAT starts the following day if samples rec'd at lab ≥ 5PM. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY IAL'S TERMS & CONDITIONS (found on rear of pink copy).*

IAL Rev 06/2021

Special Instructions/QC Requirements & Comments:

5 Day TAT Hard Copy and Verbal.

Carrier (check one):
☐ IAL Courier
☐ Client Courier
☐ FedEx/UPS***
***Tracking #:

FOR LAB USE ONLY
SDG #: J066

Cooler Temp: 5 °C

| Relinquished by (Signature and Company) | Date | Time | Received by (Signature and Company) | Date | Time |
|---|---|---|---|---|---|
| [signature] | 11/17/23 | 1500 | [signature] | 11/17/23 | 1502 |
| [signature] | 11-17-23 | 1634 16:40 | [signature] | 11/17/23 | 1638 1640 |

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Certification IDs: TNI (TNI01284); CT (PH-0699); NJ (14751); NY (11402); PA (68-00773).

PAGE: 1 of 1

FINALIZED 12/05/2023

E23-05066 Page 239

INTEGRATED ANALYTICAL LABORATORIES, LLC

Integrated Analytical Labs
273 Franklin Rd
Randolph, NJ 07869

# Chain of Custody Record

Contact Us: 973 361-4252
Web: www.ialonline.com

| Customer Information | Reporting Information |
|---|---|
| Company: HK Engineering and Geology D.P.C. | ☒ Check here if same as "Customer Information" |
| Address: 1600 US 22 East | REPORT TO: |
| Union, NJ 07083 | Address: |
| Telephone #: 908-688-7800 | |
| Project Manager: Chris Hirschmann | Attn: |
| Email Address(es): chirschmann@hillmannconsulting.com | INVOICE TO: |
| | Address: |
| Project Name: HK2661.2 | |
| Project Location (State): NY | Attn: |
| Bottle Order #: | PO # G62662 |
| ☒ "Report to"/"Invoice To" same as above | Quote # |
| Sampled by: D. Aponte | |

**Rush TAT Charge**
24 hr - 100%...
48 hr - 75%....
72 hr - 50%....
96 hr - 35%....
5 day - 25%....
6-9 day - 10%

**Deliverables** *Surchage may apply for regulatory

| NJ, CT, PA | NY |
|---|---|
| ☐ Results Only (Level I) | ☒ ASP Category A |
| ☐ Reduced (Level II/III) | ☐ ASP Category B* |
| ☐ Regulatory/ Full* (Level IV) | |

**EDDs**
☐ NJ SRP
☐ NYSDEC EQuIS
☐ lab approved custom EDD
☒ NO EDD REQ'D

**Concentrations Expected:** Low Med High

Known Hazard: ☐ YES ☐ NO

Describe:

**Turn-Around Time (TAT)**

5 Day TAT Hard Copy and Verbal

Hard Copy: Standard 3 week  Other - call for price

**Petroleum Hydrocarbons - Selection is REQUIRED**

☐ NJ EPH-DRO - Category 1
☐ NJ EPH-C40 - Category 2
☐ NJ EPH-Fractionated - Cat 2
☐ CT ETPH
☐ DRO-8015

TAT for PHC, if other than 2 weeks:

**Regulatory Requirement**

| New Jersey | New York |
|---|---|
| ☐ GWQS | ☐ AWQS (TOGS Table 1) |
| ☐ 2017 SRS/IGW | ☐ GWEL (TOGS Table 5) |
| ☐ 2021 SRS/MGW | ☒ Part 375-6.8(a) - Unrestricted |
| ☐ Ecological | ☒ Part 375-6.8(b) - Restricted |
| ☐ DW | ☐ CP-51 Table 2 or 3 (selection required) |
| ☐ SPLP | Other States / Criteria |
| | ☐ Pennsylvania Act 2 |
| | ☐ CT RCSA 22a-133k1-k3 |
| | ☐ TSCA PCBs |
| | OTHER Regulatory Requirements - specify in comments |

Sample Matrix

DW - Drinking Water; WW - Waste Water; GW - Groundwater; SW - Surface Water; LIQ - Liquid (specify); M - Multiphasic; OI - Oil; S - Soil; SED - Sediment; SOL - Solid (specify); SL - Sludge; W - Wipe

COMPLETED BY IAL: ____ Field Sampling ____ Equipment Rental

## SAMPLE INFORMATION

ANALYTICAL PARAMETERS (please note if contingent)

| Client ID | Depth (ft only) | Sampling Date | Sampling Time | Matrix | # containers | IAL # | TAL/TCL + 30 | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|
| SB9A | 0-2 | 11/17/2023 | 8:00 | S | 5 | 8 | X | |
| SB9B | 10-12' | 11/17/2023 | 8:10 | S | 5 | 9 | X | |
| SB1A | 0-2 | 11/17/2023 | 9:00 | S | 5 | 10 | X | |
| SB1B | 10-12' | 11/17/2023 | 9:15 | S | 5 | 11 | X | |
| SB4A | 0-2 | 11/17/2023 | 9:55 | S | 5 | 12 | X | |
| SB4B | 10-12' | 11/17/2023 | 10:05 | S | 5 | 13 | X | |
| SB6 - 419 - CS | 0-6" | 11/17/2023 | 11:30 | S | 5 | 14 | X | |
| SB8 - 401 - CS | 0-6" | 11/17/2023 | 11:40 | S | 5 | 15 | X | |

Samples previously analyzed by IAL? YES / NO

Preservative Code: 1 = None; 2 = HCl; 3 = HNO3; 4 = MeOH; 5 = NaOH; 6 = H2SO4; 7 = Other

Container Code: A = Amber Glass; B = Plastic; C = Vial; D = Glass; E = EnCore; T = Terracore

Preservative (use code)

Container Type (use code)

*Special Instructions/QC Requirements & Comments:*

5 Day TAT Hard Copy and Verbal.

FOR LAB USE ONLY

SDG #: J066

Cooler Temp: 5 °C

*Please print legibly and fill out completely. Samples cannot be processed and the turnaround time (TAT) will not start until any ambiguities have been resolved. TAT starts the following day if samples rec'd at lab ≥ 5PM. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY IAL'S TERMS & CONDITIONS (found on rear of pink copy).*

Carrier (check one):
☐ IAL Courier
☐ Client Courier
☐ FedEx/UPS***
***Tracking #:

| Relinquished by (Signature and Company) | Date | Time | Received by (Signature and Company) | Date | Time |
|---|---|---|---|---|---|
| HK | 11/17/23 | 15:00 | | 11/17/23 | 1502 |
| | 11/17/23 | 16:40 | | 11/17/23 | 16:40 |

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Certification IDs: TNI (TNI01284); CT (PH-0699); NJ (14751); NY (11402); PA (68-00773).

PAGE: 1 of 1

FINALIZED 12/05/2023

E23-05066 Page 240

INTEGRATED ANALYTICAL LABORATORIES, LLC

IAL

Integrated Analytical Labs
273 Franklin Rd
Randolph, NJ 07869

# Chain of Custody Record

Contact Us: 973 361-4252
Web: www.ialonline.com

| Customer Information | Reporting Information |
|---|---|
| Company: HK Engineering and Geology D.P.C. | ☒ Check here if same as "Customer Information" |
| Address: 1600 US 22 East | REPORT TO: |
| Union, NJ 07083 | Address: |
| Telephone #: 908-688-7800 | |
| Project Manager: Chris Hirschmann | Attn: |
| Email Address(es): chirschmann@hillmannconsulting.com | INVOICE TO: |
| | Address: |
| Project Name: HK2661.2 | |
| Project Location (State): NY | Attn: |
| Bottle Order #: | PO #~~G02662~~ HK2661.2 |
| ☒ "Report to"/"Invoice To" same as above | Quote # |
| Sampled by: D. Aponte | |

COMPLETED BY IAL: ____ Field Sampling ____ Equipment Rental

**Rush TAT Charge**
24 hr - 100%...
48 hr - 75%....
72 hr - 50%....
96 hr - 35%....
5 day - 25%....
6-9 day - 10%

**Deliverables** *Surchage may apply for regulatory

| NJ, CT, PA | NY |
|---|---|
| ☐ Results Only (Level I) | ☒ ASP Category A |
| ☐ Reduced (Level II/III) | ☐ ASP Category B* |
| ☐ Regulatory/ Full* (Level IV) | |

**EDDs**
☐ NJ SRP
☐ NYSDEC EQuIS
☐ lab approved custom EDD
☒ NO EDD REQ'D

**Concentrations Expected:** Low Med High
Known Hazard: ☐ YES ☐ NO
Describe:

**Turn-Around Time (TAT)**
5 Day TAT Hard Copy and Verbal
Hard Copy: Standard 3 week Other - call for price

**Petroleum Hydrocarbons - Selection is REQUIRED**
☐ NJ EPH-DRO - Category 1
☐ NJ EPH-C40 - Category 2
☐ NJ EPH-Fractionated - Cat 2
TAT for PHC, if other than 2 weeks:
☐ CT ETPH
☐ DRO-8015

**Regulatory Requirement**

| New Jersey | New York |
|---|---|
| ☐ GWQS | ☐ AWQS (TOGS Table 1) |
| ☐ 2017 SRS/IGW | ☐ GWEL (TOGS Table 5) |
| ☐ 2021 SRS/MGW | ☒ Part 375-6.8(a) - Unrestricted |
| ☐ Ecological | ☒ Part 375-6.8(b) - Restricted |
| ☐ DW | ☐ CP-51 Table 2 or 3 (selection required) |
| ☐ SPLP | Other States / Criteria |
| | ☐ Pennsylvania Act 2 |
| | ☐ CT RCSA 22a-133k1-k3 |
| | ☐ TSCA PCBs |
| | OTHER Regulatory Requirements - specify in comments |

Sample Matrix
DW - Drinking Water; WW - Waste Water; GW - Groundwater; SW - Surface Water; LIQ - Liquid (specify); M - Multiphasic; OI - Oil; S - Soil; SED - Sediment; SOL - Solid (specify); SL - Sludge; W - Wipe

ANALYTICAL PARAMETERS (please note if contingent)

## SAMPLE INFORMATION

| Client ID | Depth (ft only) | Sampling Date | Sampling Time | Matrix | # containers | IAL # | TAL/TCL + 30 | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|
| TWP1 | | 11/16/2023 | 9:30 | GW | 11 | 16 | X | |
| TWP4 | | 11/16/2023 | 10:20 | GW | 11 | 17 | X | |

Samples previously analyzed by IAL? YES / NO

Preservative Code: 1 = None; 2 = HCl; 3 = HNO3; 4 = MeOH; 5 = NaOH; 6 = H2SO4; 7 = Other
Container Code: A = Amber Glass; B = Plastic; C = Vial; D = Glass; E = EnCore; T = Terracore
Preservative (use code)
Container Type (use code)

*Please print legibly and fill out completely. Samples cannot be processed and the turnaround time (TAT) will not start until any ambiguities have been resolved. TAT starts the following day if samples rec'd at lab ≥ 5PM. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY IAL'S TERMS & CONDITIONS (found on rear of pink copy).*

Carrier (check one):
☐ IAL Courier
☐ Client Courier
☐ FedEx/UPS***
***Tracking #:

*Special Instructions/QC Requirements & Comments:*

5 Day TAT Hard Copy and Verbal.

FOR LAB USE ONLY
SDG #: 5066
Cooler Temp: 5 °C

| Relinquished by (Signature and Company) | Date | Time | Received by (Signature and Company) | Date | Time |
|---|---|---|---|---|---|
| AL | 11/17/23 | 1500 | | 11/17/23 | 1502 |
| Dale Martin | 11/17/23 | 1640 | | 11/17/23 | 1740 |

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Certification IDs: TNI (TNI01284); CT (PH-0699); NJ (14751); NY (11402); PA (68-00773).

FINALIZED 12/05/2023

E23-05066 Page 241

INTEGRATED ANALYTICAL LABORATORIES, LLC

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Integrated Analytical Laboratories LLC

Integrated Analytical Labs
273 Franklin Rd
Randolph, NJ 07869

# Chain of Custody Record

Contact Us: 973 361-4252
Web: www.ialonline.com

| Customer Information | Reporting Information |
|---|---|
| Company: HK Engineering and Geology D.P.C. | ☒ Check here if same as "Customer Information" |
| Address: 1600 US 22 East | REPORT TO: |
| Union, NJ 07083 | Address: |
| Telephone #: 908-688-7800 | |
| Project Manager: Chris Hirschmann | Attn: |
| Email Address(es): chirschmann@hillmannconsulting.com | INVOICE TO: |
| | Address: |
| Project Name: HK2661.2 | |
| Project Location (State): NY | Attn: |
| Bottle Order #: | PO # G62662 |
| ☒ "Report to"/"Invoice To" same as above | Quote # |
| Sampled by: D. Aponte | |

**COMPLETED BY IAL:**

____ Field Sampling ____ Equipment Rental

**SAMPLE INFORMATION**

**Sample Matrix**

| | |
|---|---|
| DW - Drinking Water | OI - Oil |
| WW - Waste Water | S - Soil |
| GW - Groundwater | SED - Sediment |
| SW - Surface Water | SOL - Solid (specify) |
| LIQ - Liquid (specify) | SL - Sludge |
| M - Multiphasic | W - Wipe |

| Client ID | Depth (ft only) | Sampling Date | Sampling Time | Matrix | # containers | IAL # | TAL/TCL + 30 | ANALYTICAL PARAMETERS (please note if contingent) |
|---|---|---|---|---|---|---|---|---|
| TWP2 | | 11/16/2023 | 10:00 | GW | 11 | 18 | X | 255 |
| TWP5 | | 11/16/2023 | 14:00 | GW | 11 | 19 | X | 23 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

****Rush TAT Charge**

24 hr - 100%...
48 hr - 75%....
72 hr - 50%....
96 hr - 35%....
5 day - 25%....
6-9 day - 10%

**Deliverables** **Surchage may apply for regulatory

| NJ, CT, PA | NY |
|---|---|
| ☐ Results Only (Level I) | ☒ ASP Category A |
| ☐ Reduced (Level II/III) | ☐ ASP Category B* |
| ☐ Regulatory/ Full* (Level IV) | |

**EDDs**

- ☐ NJ SRP
- ☐ NYSDEC EQuIS
- ☐ lab approved custom EDD
- ☒ NO EDD REQ'D

**Concentrations Expected:** Low Med High

**Known Hazard:** ☐ YES ☐ NO

Describe:

**Turn-Around Time (TAT)**

5 Day TAT Hard Copy and Verbal

Hard Copy: Standard 3 week Other - call for price

**Petroleum Hydrocarbons - Selection is REQUIRED**

TAT for PHC, if other than 2 weeks:

- ☐ NJ EPH-DRO - Category 1
- ☐ NJ EPH-C40 - Category 2
- ☐ NJ EPH-Fractionated - Cat 2
- ☐ CT ETPH
- ☐ DRO-8015

**Regulatory Requirement**

| New Jersey | New York |
|---|---|
| ☐ GWQS | ☐ AWQS (TOGS Table 1) |
| ☐ 2017 SRS/IGW | ☐ GWEL (TOGS Table 5) |
| ☐ 2021 SRS/MGW | ☒ Part 375-6.8(a) - Unrestricted |
| ☐ Ecological | ☒ Part 375-6.8(b) - Restricted |
| ☐ DW | ☐ CP-51 Table 2 or 3 (selection required) |
| ☐ SPLP | |

**Other States / Criteria**

- ☐ Pennsylvania Act 2
- ☐ CT RCSA 22a-133k1-k3
- ☐ TSCA PCBs

OTHER Regulatory Requirements - specify in comments

*Sample Specific Notes:*

Samples previously analyzed by IAL? YES / NO

| Preservative Code: | Container Code: |
|---|---|
| 1 = None | A = Amber Glass |
| 2 = HCl | B = Plastic |
| 3 = HNO3 | C = Vial |
| 4 = MeOH | D = Glass |
| 5 = NaOH | E = EnCore |
| 6 = H2SO4 | T = Terracore |
| 7 = Other | |

Preservative (use code)

Container Type (use code)

*Please print legibly and fill out completely. Samples cannot be processed and the turnaround time (TAT) will not start until any ambiguities have been resolved. TAT starts the following day if samples rec'd at lab ≥ 5PM. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY IAL'S TERMS & CONDITIONS (found on rear of pink copy).*

IAL Rev 06/2021

Carrier (check one):

- ☐ IAL Courier
- ☐ Client Courier
- ☐ FedEx/UPS***

***Tracking #:

*Special Instructions/QC Requirements & Comments:*

5 Day TAT Hard Copy and Verbal.

| Relinquished by (Signature and Company) | Date | Time | Received by (Signature and Company) | Date | Time |
|---|---|---|---|---|---|
| [signature] HK | 11/17/23 | 1500 | [signature] | 11-17-23 | 1512 |
| [signature] | 11/17/23 | 1634 / 16:40 | [signature] | 11/17/23 | 16:40 |
| | | | | | |
| | | | | | |

*FOR LAB USE ONLY*

SDG #: J066

Cooler Temp: 1 °C

LAB COPIES - WHITE & YELLOW; CLIENT COPY - PINK

Certification IDs: TNI (TNI01284); CT (PH-0699); NJ (14751); NY (11402); PA (68-00773).

Nov 21, 2023 @ 09:25

RUSH

# PROJECT INFORMATION

## E23-05066: HK2661.2

**To:** Chris Hirschmann
HK Engineering & Geology, D.P.C.
Fax: 908-377-8909
EMail: chirschmann@hillmannconsulting.com;rpowell@hillmanngroup.com

**Report To**

HK Engineering & Geology, D.P.C.
1600 Route 22 East
Union, NJ 07083
Attn: Chris Hirschmann

**Bill To**

HK Engineering & Geology, D.P.C.
1600 Route 22 East
Union, NJ 07083
Attn: Chris Hirschmann

| Report Format | P.O. # | Received At Lab | PHC Due | Verbal Due | Hardcopy Due |
|---|---|---|---|---|---|
| Category A | HK2661 | Nov 17, 2023 @ 16:40 | NA | Nov 28, 2023 | Nov 29, 2023 * |

* Any ***Conditional or Hold*** status will delay final hardcopy report sent date.

**Diskette Req.** Not Required

**Criteria Requirement:** NY Part 375-6.8(UUSCO+RUSCO)

| Lab ID | Client Sample ID | Depth | Sampling Time | Matrix | Unit | Field pH/Temp |
|---|---|---|---|---|---|---|
| 05066-001 | SB10A | 0/2 | 11/16/23@09:30 | Soil | mg/Kg (ppm) | |
| 05066-002 | SB10B | 10/12 | 11/16/23@09:45 | Soil | mg/Kg (ppm) | |
| 05066-003 | SB2A | 0/2 | 11/16/23@10:00 | Soil | mg/Kg (ppm) | |
| 05066-004 | SB2B | 10/12 | 11/16/23@10:20 | Soil | mg/Kg (ppm) | |
| 05066-005 | SB5 | 0/2 | 11/16/23@13:40 | Soil | mg/Kg (ppm) | |
| 05066-006 | SB3A | 0/2 | 11/16/23@13:05 | Soil | mg/Kg (ppm) | |
| 05066-007 | SB3B | 10/12 | 11/16/23@13:10 | Soil | mg/Kg (ppm) | |
| 05066-008 | SB9A | 0/2 | 11/17/23@08:00 | Soil | mg/Kg (ppm) | |
| 05066-009 | SB9B | 10/12 | 11/17/23@08:10 | Soil | mg/Kg (ppm) | |
| 05066-010 | SB1A | 0/2 | 11/17/23@09:00 | Soil | mg/Kg (ppm) | |
| 05066-011 | SB1B | 10/12 | 11/17/23@09:15 | Soil | mg/Kg (ppm) | |
| 05066-012 | SB4A | 0/2 | 11/17/23@09:55 | Soil | mg/Kg (ppm) | |
| 05066-013 | SB4B | 10/12 | 11/17/23@10:05 | Soil | mg/Kg (ppm) | |
| 05066-014 | SB6-419-CS | 0/0.5 | 11/17/23@11:30 | Soil | mg/Kg (ppm) | |
| 05066-015 | SB8-401-CS | 0/0.5 | 11/17/23@11:40 | Soil | mg/Kg (ppm) | |
| 05066-016 | TWP1 | NA | 11/16/23@09:30 | Aqueous | ug/L (ppb) | |
| 05066-017 | TWP4 | NA | 11/16/23@10:20 | Aqueous | ug/L (ppb) | |
| 05066-018 | TWP2 | NA | 11/16/23@10:00 | Aqueous | ug/L (ppb) | |
| 05066-019 | TWP5 | NA | 11/16/23@14:00 | Aqueous | ug/L (ppb) | |
| 05066-020 | TWP1 FILT | NA | 11/16/23@09:30 | Aqueous | ug/L (ppb) | |
| 05066-021 | TWP4 FILT | NA | 11/16/23@10:20 | Aqueous | ug/L (ppb) | |
| 05066-022 | TWP2 FILT | NA | 11/16/23@10:00 | Aqueous | ug/L (ppb) | |
| 05066-023 | TWP5 FILT | NA | 11/16/23@14:00 | Aqueous | ug/L (ppb) | |

* No Cert = IAL does not hold certification for this test/method

| Sample # | Test | Status | Analytical Method | TAT | Holding Time Expires |
|---|---|---|---|---|---|
| 001 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 11/30/2023 |



273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
www.ialonline.com

IAL is a NELAP accredited lab (TNI01284) and maintains certification in Connecticut (PH-0699), New Jersey (14751), New York (11402), and Pennsylvania (68-00773).

Nov 21, 2023 @ 09:25

RUSH

# PROJECT INFORMATION

## E23-05066: HK2661.2

| Sample # | Test | Status | Analytical Method | TAT | Holding Time Expires |
|---|---|---|---|---|---|
| 001 | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 11/30/2023 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/30/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/15/2024 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 11/30/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/16/2023 |
| 002 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 11/30/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 11/30/2023 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/30/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/15/2024 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 11/30/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/16/2023 |
| 003 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 11/30/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 11/30/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/15/2024 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/30/2023 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 11/30/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/16/2023 |
| 004 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 11/30/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 11/30/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/15/2024 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/30/2023 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 11/30/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/16/2023 |
| 005 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 11/30/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 11/30/2023 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/30/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/15/2024 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 11/30/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/16/2023 |
| 006 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 11/30/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 11/30/2023 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/30/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/15/2024 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 11/30/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/16/2023 |
| 007 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 11/30/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 11/30/2023 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/30/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/15/2024 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 11/30/2023 |

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# PROJECT INFORMATION

RUSH

## E23-05066: HK2661.2

| Sample # | Test | Status | Analytical Method | TAT | Holding Time Expires |
|---|---|---|---|---|---|
| 007 | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/16/2023 |
| 008 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 12/1/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 12/1/2023 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 12/1/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/16/2024 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 12/1/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/17/2023 |
| 009 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 12/1/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 12/1/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/16/2024 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 12/1/2023 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 12/1/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/17/2023 |
| 010 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 12/1/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 12/1/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/16/2024 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 12/1/2023 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 12/1/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/17/2023 |
| 011 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 12/1/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 12/1/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/16/2024 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 12/1/2023 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 12/1/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/17/2023 |
| 012 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 12/1/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 12/1/2023 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 12/1/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/16/2024 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 12/1/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/17/2023 |
| 013 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 12/1/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 12/1/2023 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 12/1/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/16/2024 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 12/1/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/17/2023 |
| 014 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 12/1/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 12/1/2023 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 12/1/2023 |



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# PROJECT INFORMATION

RUSH

## E23-05066: HK2661.2

| Sample # | Test | Status | Analytical Method | TAT | Holding Time Expires |
|---|---|---|---|---|---|
| 014 | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/16/2024 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 12/1/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/17/2023 |
| 015 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 12/1/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 12/1/2023 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 12/1/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/16/2024 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 12/1/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/17/2023 |
| 016 | Low Level TCL VO for 8260+8011 + 15 | Analyze | 8260D/8011 | RUSH 1 WK | 11/30/2023 |
| | TCL BNA + SIMS + 15 | Analyze | 8270E SIM | RUSH 1 WK | 11/23/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/15/2024 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/23/2023 |
| | Cyanide, Total | Analyze | 335.4 | RUSH 1 WK | 11/30/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/16/2023 |
| 017 | Low Level TCL VO for 8260+8011 + 15 | Analyze | 8260D/8011 | RUSH 1 WK | 11/30/2023 |
| | TCL BNA + SIMS + 15 | Analyze | 8270E SIM | RUSH 1 WK | 11/23/2023 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/23/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/15/2024 |
| | Cyanide, Total | Analyze | 335.4 | RUSH 1 WK | 11/30/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/16/2023 |
| 018 | Low Level TCL VO for 8260+8011 + 15 | Analyze | 8260D/8011 | RUSH 1 WK | 11/30/2023 |
| | TCL BNA + SIMS + 15 | Analyze | 8270E SIM | RUSH 1 WK | 11/23/2023 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/23/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/15/2024 |
| | Cyanide, Total | Analyze | 335.4 | RUSH 1 WK | 11/30/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/16/2023 |
| 019 | Low Level TCL VO for 8260+8011 + 15 | Analyze | 8260D/8011 | RUSH 1 WK | 11/30/2023 |
| | TCL BNA + SIMS + 15 | Analyze | 8270E SIM | RUSH 1 WK | 11/23/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/15/2024 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/23/2023 |
| | Cyanide, Total | Analyze | 335.4 | RUSH 1 WK | 11/30/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/16/2023 |
| 020 | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/16/2023 |
| 021 | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/16/2023 |
| 022 | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/16/2023 |
| 023 | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/16/2023 |

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RUSH

# PROJECT INFORMATION

## E23-05066: HK2661.2

**Project Notes:**

**NOTE 1 taken by kfalconer on 11/20/2023 09:37**
CLIENT WAS NOTIFIED VIA E-MAIL THAT METALS ANALYSES WILL BE SUBCONTRACTED TO SGS DAYTON.

**NOTE 5 taken by kfalconer on 11/20/2023 09:41**
3 ENCORS RECEIVED - 1 INTO MEOH/2 INTO H2O

**NOTE 6 taken by kim on 11/20/2023 11:17**
COMPARE SOIL RESULTS TO NY Part 375-6.8(UUSCO+RUSCO).

COMPARE GW RESULTS TO NY TOGS Tbl1 (AWQS).

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# SAMPLE RECEIPT VERIFICATION

CASE NO: **E 23** **05066** CLIENT: AK Eng. and Geo.

COOLER TEMPERATURE: 2° - 6°C: ✓ ( See Chain of Custody)

COC: (COMPLETE) / INCOMPLETE

**Comments**

**KEY**

✓ = YES/NA

✗ = NO

VOA received: ☒ Encore ☐ IGW - Methanol

(check one) ☐ Terra Core ☐ No Preservative

| | |
|---|---|
| ✓ | Bottles Intact |
| ✓ | no-Missing Bottles |
| ✓ | no-Extra Bottles |
| ✓ | Sufficient Sample Volume |
| ✓ | no-headspace/bubbles in VOs |
| ✓ | Labels intact/correct |
| ✗ | pH Check[1] (refer to Receipt pH Log) |
| ✓ | Correct bottles/preservative |
| ✓ | Sufficient Holding/Prep Time[1] |
| ☐ | Multiphasic Sample |
| ☐ | Sample to be Subcontracted |
| ✓ | **Chain of Custody is Clear** |

[1] All samples with "Analyze Immediately" holding times will be analyzed by this laboratory past the holding time. This includes but is not limited to the following tests: pH, Temperature, Free Residual Chlorine, Total Residual Chlorine, Dissolved Oxygen, Sulfite.

ADDITIONAL COMMENTS:

SAMPLE(S) VERIFIED BY: INITIAL [KJ] DATE 11/17/23

**CORRECTIVE ACTION REQUIRED:** **YES** ☐ (SEE BELOW) **NO** ☒

If COC is **NOT** clear, ***STOP*** until you get client to authorize/clarify work.

CLIENT NOTIFIED: YES ☐ Date/ Time: _____ NO ☐

PROJECT CONTACT:

SUBCONTRACTED LAB:

DATE SHIPPED:

ADDITIONAL COMMENTS:

VERIFIED/TAKEN BY: INITIAL KJ DATE 11/20/23

Rev 2 2/11/2021

# Laboratory Custody Chronicle

*IAL Case No.*
**E23-05066**

*Client* HK Engineering & Geology, D.P.C.

*Project* HK2661.2

*Received On* 11/17/2023@16:40

| Department: Volatiles | | | Prep. Date | Analyst | Analysis Date | Analyst |
|---|---|---|---|---|---|---|
| Low Level TCL VO for 8260+8011 + 15 | 05066-016 | Aqueous | n/a | n/a | 11/22/23 | Sylvia |
| " | -017 | " | n/a | n/a | 11/22/23 | Sylvia |
| " | -018 | " | n/a | n/a | 11/22/23 | Sylvia |
| " | -019 | " | n/a | n/a | 11/22/23 | Sylvia |
| TCL VO + 15 | -001 | Soil | n/a | n/a | 11/22/23 | Mei |
| " | -002 | " | n/a | n/a | 11/22/23 | Mei |
| " | -003 | " | n/a | n/a | 11/22/23 | Mei |
| " | -004 | " | n/a | n/a | 11/22/23 | Mei |
| " | -005 | " | n/a | n/a | 11/22/23 | Mei |
| " | -006 | " | n/a | n/a | 11/22/23 | Mei |
| " | -007 | " | n/a | n/a | 11/22/23 | Mei |
| " | -008 | " | n/a | n/a | 11/22/23 | Mei |
| " | -009 | " | n/a | n/a | 11/22/23 | Mei |
| " | -010 | " | n/a | n/a | 11/22/23 | Mei |
| " | -011 | " | n/a | n/a | 11/22/23 | Mei |
| " | -012 | " | n/a | n/a | 11/22/23 | Mei |
| " | -013 | " | n/a | n/a | 11/22/23 | Mei |
| " | -014 | " | n/a | n/a | 11/22/23 | Mei |
| " | -015 | " | n/a | n/a | 11/22/23 | Mei |

| Department: Semivolatiles | | | Prep. Date | Analyst | Analysis Date | Analyst |
|---|---|---|---|---|---|---|
| TCL BNA + 15 | -001 | Soil | 11/20/23 | Frank L. | 11/28/23 | Thien |
| " | -002 | " | 11/20/23 | Frank L. | 11/28/23 | Thien |
| " | -003 | " | 11/20/23 | Frank L. | 11/28/23 | Thien |
| " | -004 | " | 11/20/23 | Frank L. | 11/28/23 | Thien |
| " | -005 | " | 11/20/23 | Frank L. | 11/28/23 | Thien |
| " | -006 | " | 11/20/23 | Frank L. | 11/28/23 | Thien |
| " | -007 | " | 11/20/23 | Frank L. | 11/28/23 | Thien |
| " | -008 | " | 11/20/23 | Frank L. | 11/28/23 | Thien |
| " | -009 | " | 11/20/23 | Frank L. | 11/28/23 | Thien |
| " | -010 | " | 11/20/23 | Frank L. | 11/28/23 | Thien |
| " | -011 | " | 11/20/23 | Frank L. | 11/28/23 | Thien |
| " | -012 | " | 11/20/23 | Frank L. | 11/28/23 | Thien |
| " | -013 | " | 11/20/23 | Frank L. | 11/28/23 | Thien |
| " | -014 | " | 11/20/23 | Frank L. | 11/28/23 | Thien |
| " | -015 | " | 11/20/23 | Frank L. | 11/28/23 | Thien |
| TCL BNA + SIMS + 15 | -016 | Aqueous | 11/20/23 | Frank L. | 11/30/23 | Dana Tryon |
| " | -017 | " | 11/20/23 | Frank L. | 11/30/23 | Dana Tryon |
| " | -018 | " | 11/20/23 | Frank L. | 11/30/23 | Dana Tryon |
| " | -019 | " | 11/20/23 | Frank L. | 11/30/23 | Dana Tryon |

| Department: GC | | | Prep. Date | Analyst | Analysis Date | Analyst |
|---|---|---|---|---|---|---|
| TCL PCB | -001 | Soil | 11/21/23 | Archimede | 11/28/23 | Iwona |



NOTE: All soil, sediment, sludge, and solid samples are reported on a dry-weight basis.

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# Laboratory Custody Chronicle

*IAL Case No.*
**E23-05066**

*Client* HK Engineering & Geology, D.P.C.

*Project* HK2661.2

*Received On* 11/17/2023@16:40

| | | | | | | |
|---|---|---|---|---|---|---|
| " | -002 | " | 11/21/23 | Archimede | 11/28/23 | Iwona |
| " | -003 | " | 11/21/23 | Archimede | 11/28/23 | Iwona |
| " | -004 | " | 11/21/23 | Archimede | 11/28/23 | Iwona |
| " | -005 | " | 11/21/23 | Archimede | 11/28/23 | Iwona |
| " | -006 | " | 11/21/23 | Archimede | 11/28/23 | Iwona |
| " | -007 | " | 11/21/23 | Archimede | 11/28/23 | Iwona |
| " | -008 | " | 11/21/23 | Archimede | 11/28/23 | Iwona |
| " | -009 | " | 11/21/23 | Archimede | 11/28/23 | Iwona |
| " | -010 | " | 11/21/23 | Archimede | 11/28/23 | Iwona |
| " | -011 | " | 11/21/23 | Archimede | 11/28/23 | Iwona |
| " | -012 | " | 11/21/23 | Archimede | 11/28/23 | Iwona |
| " | -013 | " | 11/21/23 | Archimede | 11/28/23 | Iwona |
| " | -014 | " | 11/21/23 | Archimede | 11/28/23 | Iwona |
| " | -015 | " | 11/21/23 | Archimede | 11/28/23 | Iwona |
| " | -016 | Aqueous | 11/20/23 | Archimede | 11/28/23 | Iwona |
| " | -017 | " | 11/20/23 | Archimede | 11/28/23 | Iwona |
| " | -018 | " | 11/20/23 | Archimede | 11/28/23 | Iwona |
| " | -019 | " | 11/20/23 | Archimede | 11/28/23 | Iwona |
| TCL Pesticides | -001 | Soil | 11/21/23 | Archimede | 11/29/23 | Iwona |
| " | -002 | " | 11/21/23 | Archimede | 11/29/23 | Iwona |
| " | -003 | " | 11/21/23 | Archimede | 11/29/23 | Iwona |
| " | -004 | " | 11/21/23 | Archimede | 11/29/23 | Iwona |
| " | -005 | " | 11/21/23 | Archimede | 11/29/23 | Iwona |
| " | -006 | " | 11/21/23 | Archimede | 11/29/23 | Iwona |
| " | -007 | " | 11/21/23 | Archimede | 11/29/23 | Iwona |
| " | -008 | " | 11/21/23 | Archimede | 11/29/23 | Iwona |
| " | -009 | " | 11/21/23 | Archimede | 11/29/23 | Iwona |
| " | -010 | " | 11/21/23 | Archimede | 11/29/23 | Iwona |
| " | -011 | " | 11/21/23 | Archimede | 11/29/23 | Iwona |
| " | -012 | " | 11/21/23 | Archimede | 11/29/23 | Iwona |
| " | -013 | " | 11/21/23 | Archimede | 11/29/23 | Iwona |
| " | -014 | " | 11/21/23 | Archimede | 11/29/23 | Iwona |
| " | -015 | " | 11/21/23 | Archimede | 11/28/23 | Iwona |
| " | -016 | Aqueous | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -017 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -018 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -019 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |

| **Department: Wet Chemistry** | | | *Prep. Date* | *Analyst* | *Analysis Date* | *Analyst* |
|---|---|---|---|---|---|---|
| Cyanide, Total | -001 | Soil | n/a | n/a | 11/27/23 | Brianna P |
| " | -002 | " | n/a | n/a | 11/27/23 | Brianna P |
| " | -003 | " | n/a | n/a | 11/27/23 | Brianna P |
| " | -004 | " | n/a | n/a | 11/27/23 | Brianna P |
| " | -005 | " | n/a | n/a | 11/27/23 | Brianna P |
| " | -006 | " | n/a | n/a | 11/27/23 | Brianna P |



NOTE: All soil, sediment, sludge, and solid samples are reported on a dry-weight basis.

# *Laboratory Custody Chronicle*

***IAL Case No.***
**E23-05066**

***Client*** HK Engineering & Geology, D.P.C.

***Project*** HK2661.2

***Received On*** 11/17/2023@16:40

| | | | | | | |
|---|---|---|---|---|---|---|
| " | -007 | " | n/a | n/a | 11/27/23 | Brianna P |
| " | -008 | " | n/a | n/a | 11/27/23 | Brianna P |
| " | -009 | " | n/a | n/a | 11/27/23 | Brianna P |
| " | -010 | " | n/a | n/a | 11/27/23 | Brianna P |
| " | -011 | " | n/a | n/a | 11/27/23 | Brianna P |
| " | -012 | " | n/a | n/a | 11/27/23 | Brianna P |
| " | -013 | " | n/a | n/a | 11/27/23 | Brianna P |
| " | -014 | " | n/a | n/a | 11/27/23 | Brianna P |
| " | -015 | " | n/a | n/a | 11/27/23 | Brianna P |
| " | -016 | Aqueous | n/a | n/a | 11/22/23 | Brianna P |
| " | -017 | " | n/a | n/a | 11/22/23 | Brianna P |
| " | -018 | " | n/a | n/a | 11/22/23 | Brianna P |
| " | -019 | " | n/a | n/a | 11/22/23 | Brianna P |

| **Department: Others** | | | ***Prep. Date*** | ***Analyst*** | ***Analysis Date*** | ***Analyst*** |
|---|---|---|---|---|---|---|
| TAL Metals (6020B/7471B) by SGS Dayton | -001 | Soil | 11/20/23 | Rob | n/a | n/a |
| " | -002 | " | 11/20/23 | Rob | n/a | n/a |
| " | -003 | " | 11/20/23 | Rob | n/a | n/a |
| " | -004 | " | 11/20/23 | Rob | n/a | n/a |
| " | -005 | " | 11/20/23 | Rob | n/a | n/a |
| " | -006 | " | 11/20/23 | Rob | n/a | n/a |
| " | -007 | " | 11/20/23 | Rob | n/a | n/a |
| " | -008 | " | 11/20/23 | Rob | n/a | n/a |
| " | -009 | " | 11/20/23 | Rob | n/a | n/a |
| " | -010 | " | 11/20/23 | Rob | n/a | n/a |
| " | -011 | " | 11/20/23 | Rob | n/a | n/a |
| " | -012 | " | 11/20/23 | Rob | n/a | n/a |
| " | -013 | " | 11/20/23 | Rob | n/a | n/a |
| " | -014 | " | 11/20/23 | Rob | n/a | n/a |
| " | -015 | " | 11/20/23 | Rob | n/a | n/a |
| " | -016 | Aqueous | 11/20/23 | Rob | n/a | n/a |
| " | -017 | " | 11/20/23 | Rob | n/a | n/a |
| " | -018 | " | 11/20/23 | Rob | n/a | n/a |
| " | -019 | " | 11/20/23 | Rob | n/a | n/a |
| " | -020 | " | 11/20/23 | Rob | n/a | n/a |
| " | -021 | " | 11/20/23 | Rob | n/a | n/a |
| " | -022 | " | 11/20/23 | Rob | n/a | n/a |
| " | -023 | " | 11/20/23 | Rob | n/a | n/a |



NOTE: All soil, sediment, sludge, and solid samples are reported on a dry-weight basis.

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**LAST PAGE OF DOCUMENT**

The results set forth herein are provided by SGS North America Inc.

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*Automated Report*

Technical Report for

# Integrated Analytical Lab

Integrated Analytical Lab, Randolph, NJ

E23-05066

SGS Job Number: JD77365

Sampling Dates: 11/16/23 - 11/17/23

Report to:

Integrated Analytical Lab
273 Franklin Road
Randolph, NJ 07869
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ATTN: Melissa Simmons

Total number of pages in report: 262

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable unless noted in the narrative, comments or footnotes.

David Chastain
General Manager

Client Service contact: Victoria Pushkova 732-329-0200
Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA(68-00408), RI, SC, TX, UT, VA, WV

# Table of Contents

# Table of Contents

SGS North America Inc.

# Sample Summary

Integrated Analytical Lab

**Job No:** JD77365

Integrated Analytical Lab, Randolph, NJ
Project No: E23-05066

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| JD77365-1 | 11/16/23 | 09:30 | | 11/21/23 | SO | Soil | E23-05066-001_SB10A |
| JD77365-2 | 11/16/23 | 09:45 | | 11/21/23 | SO | Soil | E23-05066-002_SB10B |
| JD77365-3 | 11/16/23 | 10:00 | | 11/21/23 | SO | Soil | E23-05066-003_SB2A |
| JD77365-4 | 11/16/23 | 10:20 | | 11/21/23 | SO | Soil | E23-05066-004_SB2B |
| JD77365-5 | 11/16/23 | 13:40 | | 11/21/23 | SO | Soil | E23-05066-005_SB5 |
| JD77365-6 | 11/16/23 | 13:05 | | 11/21/23 | SO | Soil | E23-05066-006_SB3A |
| JD77365-7 | 11/16/23 | 13:10 | | 11/21/23 | SO | Soil | E23-05066-007_SB3B |
| JD77365-8 | 11/17/23 | 08:00 | | 11/21/23 | SO | Soil | E23-05066-008_SB9A |
| JD77365-9 | 11/17/23 | 08:10 | | 11/21/23 | SO | Soil | E23-05066-009_SB9B |
| JD77365-10 | 11/17/23 | 09:00 | | 11/21/23 | SO | Soil | E23-05066-010_SB1A |
| JD77365-11 | 11/17/23 | 09:15 | | 11/21/23 | SO | Soil | E23-05066-011_SB1B |
| JD77365-12 | 11/17/23 | 09:55 | | 11/21/23 | SO | Soil | E23-05066-012_SB4A |
| JD77365-13 | 11/17/23 | 10:05 | | 11/21/23 | SO | Soil | E23-05066-013_SB4B |

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

# Sample Summary
(continued)

Integrated Analytical Lab

**Job No:** JD77365

Integrated Analytical Lab, Randolph, NJ
Project No: E23-05066

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| JD77365-14 | 11/17/23 | 11:30 | | 11/21/23 | SO | Soil | E23-05066-014_SB6-419-CS |
| JD77365-15 | 11/17/23 | 11:40 | | 11/21/23 | SO | Soil | E23-05066-015_SB8-401-CS |
| JD77365-16 | 11/16/23 | 09:30 | | 11/21/23 | AQ | Water | E23-05066-016_TWP1 |
| JD77365-16F | 11/16/23 | 09:30 | | 11/21/23 | AQ | Water Filtered | E23-05066-020_TWP1 FILT |
| JD77365-17 | 11/16/23 | 10:20 | | 11/21/23 | AQ | Water | E23-05066-017_TWP4 |
| JD77365-17F | 11/16/23 | 10:20 | | 11/21/23 | AQ | Water Filtered | E23-05066-021_TWP4 FILT |
| JD77365-18 | 11/16/23 | 10:00 | | 11/21/23 | AQ | Water | E23-05066-018_TWP2 |
| JD77365-18F | 11/16/23 | 10:00 | | 11/21/23 | AQ | Water Filtered | E23-05066-022_TWP2 FILT |
| JD77365-19 | 11/16/23 | 14:00 | | 11/21/23 | AQ | Water | E23-05066-019_TWP5 |
| JD77365-19F | 11/16/23 | 14:00 | | 11/21/23 | AQ | Water Filtered | E23-05066-023_TWP5 FILT |

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

# CASE NARRATIVE / CONFORMANCE SUMMARY

| | | | |
|---|---|---|---|
| **Client:** | Integrated Analytical Lab | **Job No:** | JD77365 |
| **Site:** | Integrated Analytical Lab, Randolph, NJ | **Report Date** | 12/1/2023 8:11:50 AM |

On 11/21/2023, 19 sample(s), 0 Trip Blank(s), 0 Equip. Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. (SGS) at a temperature of 0.6 °C. The samples were intact and properly preserved, unless noted below. An SGS Job Number of JD77365 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

## Metals Analysis By Method SW846 6010D

**Matrix:** AQ **Batch ID:** MP43317

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD77367-1MS, JD77367-1MSD, JD77367-1SDL were used as the QC samples for the metals analysis.
- The serial dilution RPD(s) for Aluminum, Arsenic, Beryllium, Copper, Selenium, Silver, Vanadium, Zinc are outside control limits for sample MP43317-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP43317-SD1 for Zinc: Serial dilution indicates possible matrix interference.

**Matrix:** SO **Batch ID:** MP43322

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD77365-2MS, JD77365-2MSD, JD77365-2PS, JD77365-2SDL were used as the QC samples for the metals analysis.
- The matrix spike (MS) recovery(s) of Aluminum, Antimony, Potassium are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- The matrix spike duplicate (MSD) recovery(s) of Antimony, Potassium are outside control limits. Probable cause due to matrix interference.
- The serial dilution RPD(s) for Antimony, Arsenic, Beryllium, Cadmium, Silver are outside control limits for sample MP43322-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

## Metals Analysis By Method SW846 7470A

**Matrix:** AQ **Batch ID:** MP43408

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD77458-4FMS, JD77458-4FMSD were used as the QC samples for the metals analysis.

## Metals Analysis By Method SW846 7471B

| Matrix: | SO | Batch ID: | MP43401 |
|---|---|---|---|

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD77365-1MS, JD77365-1MSD were used as the QC samples for the metals analysis.
- The matrix spike (MS) recovery(s) of Mercury are outside control limits. Probable cause due to matrix interference.

## General Chemistry By Method SM2540 G 18TH ED MOD

| Matrix: | SO | Batch ID: | GN48524 |
|---|---|---|---|

- Sample(s) JD77365-1DUP were used as the QC samples for the Solids, Percent analysis.

SGS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting SGS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by SGS indicated via signature on the report cover.

# Summary of Hits

**Job Number:** JD77365
**Account:** Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Collected:** 11/16/23 thru 11/17/23



| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| **JD77365-1** | **E23-05066-001_SB10A** | | | | | |
| Aluminum | | 4960 | 55 | | mg/kg | SW846 6010D |
| Arsenic | | 4.6 | 2.2 | | mg/kg | SW846 6010D |
| Barium | | 280 | 22 | | mg/kg | SW846 6010D |
| Beryllium | | 0.35 | 0.22 | | mg/kg | SW846 6010D |
| Calcium | | 24700 | 1100 | | mg/kg | SW846 6010D |
| Chromium | | 12.2 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 11.9 | 2.8 | | mg/kg | SW846 6010D |
| Iron | | 8700 | 55 | | mg/kg | SW846 6010D |
| Lead | | 248 | 2.2 | | mg/kg | SW846 6010D |
| Magnesium | | 2080 | 550 | | mg/kg | SW846 6010D |
| Manganese | | 318 | 1.7 | | mg/kg | SW846 6010D |
| Mercury | | 0.24 | 0.033 | | mg/kg | SW846 7471B |
| Nickel | | 8.6 | 4.4 | | mg/kg | SW846 6010D |
| Silver | | 0.55 | 0.55 | | mg/kg | SW846 6010D |
| Vanadium | | 19.6 | 5.5 | | mg/kg | SW846 6010D |
| Zinc | | 277 | 5.5 | | mg/kg | SW846 6010D |
| **JD77365-2** | **E23-05066-002_SB10B** | | | | | |
| Aluminum | | 5670 | 54 | | mg/kg | SW846 6010D |
| Arsenic | | 2.2 | 2.2 | | mg/kg | SW846 6010D |
| Barium | | 33.5 | 22 | | mg/kg | SW846 6010D |
| Beryllium | | 0.52 | 0.22 | | mg/kg | SW846 6010D |
| Calcium | | 1380 | 540 | | mg/kg | SW846 6010D |
| Chromium | | 11.9 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 9.7 | 2.7 | | mg/kg | SW846 6010D |
| Iron | | 9570 | 54 | | mg/kg | SW846 6010D |
| Lead | | 9.5 | 2.2 | | mg/kg | SW846 6010D |
| Magnesium | | 2050 | 540 | | mg/kg | SW846 6010D |
| Manganese | | 259 | 1.6 | | mg/kg | SW846 6010D |
| Mercury | | 0.064 | 0.033 | | mg/kg | SW846 7471B |
| Nickel | | 11.1 | 4.3 | | mg/kg | SW846 6010D |
| Potassium | | 1430 | 1100 | | mg/kg | SW846 6010D |
| Vanadium | | 16.1 | 5.4 | | mg/kg | SW846 6010D |
| Zinc | | 33.9 | 5.4 | | mg/kg | SW846 6010D |
| **JD77365-3** | **E23-05066-003_SB2A** | | | | | |
| Aluminum | | 6220 | 58 | | mg/kg | SW846 6010D |
| Arsenic | | 5.7 | 2.3 | | mg/kg | SW846 6010D |
| Barium | | 363 | 23 | | mg/kg | SW846 6010D |
| Beryllium | | 0.45 | 0.23 | | mg/kg | SW846 6010D |
| Calcium | | 31500 | 1200 | | mg/kg | SW846 6010D |

# Summary of Hits

**Job Number:** JD77365
**Account:** Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Collected:** 11/16/23 thru 11/17/23



| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| Chromium | | 14.2 | 1.2 | | mg/kg | SW846 6010D |
| Copper | | 34.7 | 2.9 | | mg/kg | SW846 6010D |
| Iron | | 9550 | 58 | | mg/kg | SW846 6010D |
| Lead | | 797 | 2.3 | | mg/kg | SW846 6010D |
| Magnesium | | 2970 | 580 | | mg/kg | SW846 6010D |
| Manganese | | 293 | 1.7 | | mg/kg | SW846 6010D |
| Mercury | | 0.70 | 0.033 | | mg/kg | SW846 7471B |
| Nickel | | 11.3 | 4.6 | | mg/kg | SW846 6010D |
| Potassium | | 1240 | 1200 | | mg/kg | SW846 6010D |
| Vanadium | | 22.4 | 5.8 | | mg/kg | SW846 6010D |
| Zinc | | 329 | 5.8 | | mg/kg | SW846 6010D |
| **JD77365-4** | **E23-05066-004_SB2B** | | | | | |
| Aluminum | | 3640 | 53 | | mg/kg | SW846 6010D |
| Barium | | 37.9 | 21 | | mg/kg | SW846 6010D |
| Beryllium | | 0.41 | 0.21 | | mg/kg | SW846 6010D |
| Calcium | | 1980 | 530 | | mg/kg | SW846 6010D |
| Chromium | | 9.9 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 10.9 | 2.6 | | mg/kg | SW846 6010D |
| Iron | | 7770 | 53 | | mg/kg | SW846 6010D |
| Lead | | 8.8 | 2.1 | | mg/kg | SW846 6010D |
| Magnesium | | 1920 | 530 | | mg/kg | SW846 6010D |
| Manganese | | 236 | 1.6 | | mg/kg | SW846 6010D |
| Nickel | | 8.4 | 4.2 | | mg/kg | SW846 6010D |
| Potassium | | 1150 | 1100 | | mg/kg | SW846 6010D |
| Vanadium | | 12.5 | 5.3 | | mg/kg | SW846 6010D |
| Zinc | | 25.4 | 5.3 | | mg/kg | SW846 6010D |
| **JD77365-5** | **E23-05066-005_SB5** | | | | | |
| Aluminum | | 9790 | 55 | | mg/kg | SW846 6010D |
| Arsenic | | 6.2 | 2.2 | | mg/kg | SW846 6010D |
| Barium | | 96.8 | 22 | | mg/kg | SW846 6010D |
| Beryllium | | 0.51 | 0.22 | | mg/kg | SW846 6010D |
| Calcium | | 3790 | 550 | | mg/kg | SW846 6010D |
| Chromium | | 31.5 | 1.1 | | mg/kg | SW846 6010D |
| Cobalt | | 6.5 | 5.5 | | mg/kg | SW846 6010D |
| Copper | | 25.3 | 2.8 | | mg/kg | SW846 6010D |
| Iron | | 13200 | 55 | | mg/kg | SW846 6010D |
| Lead | | 107 | 2.2 | | mg/kg | SW846 6010D |
| Magnesium | | 5470 | 550 | | mg/kg | SW846 6010D |
| Manganese | | 250 | 1.7 | | mg/kg | SW846 6010D |
| Mercury | | 0.13 | 0.029 | | mg/kg | SW846 7471B |
| Nickel | | 18.1 | 4.4 | | mg/kg | SW846 6010D |

# Summary of Hits

**Job Number:** JD77365
**Account:** Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Collected:** 11/16/23 thru 11/17/23



| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| Potassium | | 1180 | 1100 | | mg/kg | SW846 6010D |
| Silver | | 0.65 | 0.55 | | mg/kg | SW846 6010D |
| Vanadium | | 23.9 | 5.5 | | mg/kg | SW846 6010D |
| Zinc | | 105 | 5.5 | | mg/kg | SW846 6010D |
| **JD77365-6** | **E23-05066-006_SB3A** | | | | | |
| Aluminum | | 5880 | 56 | | mg/kg | SW846 6010D |
| Arsenic | | 4.2 | 2.2 | | mg/kg | SW846 6010D |
| Barium | | 206 | 22 | | mg/kg | SW846 6010D |
| Beryllium | | 0.45 | 0.22 | | mg/kg | SW846 6010D |
| Calcium | | 9640 | 560 | | mg/kg | SW846 6010D |
| Chromium | | 12.3 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 16.8 | 2.8 | | mg/kg | SW846 6010D |
| Iron | | 13900 | 56 | | mg/kg | SW846 6010D |
| Lead | | 301 | 2.2 | | mg/kg | SW846 6010D |
| Magnesium | | 3430 | 560 | | mg/kg | SW846 6010D |
| Manganese | | 258 | 1.7 | | mg/kg | SW846 6010D |
| Mercury | | 0.67 | 0.034 | | mg/kg | SW846 7471B |
| Nickel | | 12.6 | 4.5 | | mg/kg | SW846 6010D |
| Potassium | | 1530 | 1100 | | mg/kg | SW846 6010D |
| Silver | | 0.62 | 0.56 | | mg/kg | SW846 6010D |
| Vanadium | | 25.9 | 5.6 | | mg/kg | SW846 6010D |
| Zinc | | 164 | 5.6 | | mg/kg | SW846 6010D |
| **JD77365-7** | **E23-05066-007_SB3B** | | | | | |
| Aluminum | | 4440 | 52 | | mg/kg | SW846 6010D |
| Arsenic | | 2.4 | 2.1 | | mg/kg | SW846 6010D |
| Barium | | 41.1 | 21 | | mg/kg | SW846 6010D |
| Beryllium | | 0.40 | 0.21 | | mg/kg | SW846 6010D |
| Calcium | | 5710 | 520 | | mg/kg | SW846 6010D |
| Chromium | | 10.8 | 1.0 | | mg/kg | SW846 6010D |
| Copper | | 14.0 | 2.6 | | mg/kg | SW846 6010D |
| Iron | | 8580 | 52 | | mg/kg | SW846 6010D |
| Lead | | 26.2 | 2.1 | | mg/kg | SW846 6010D |
| Magnesium | | 2510 | 520 | | mg/kg | SW846 6010D |
| Manganese | | 299 | 1.6 | | mg/kg | SW846 6010D |
| Mercury | | 0.11 | 0.032 | | mg/kg | SW846 7471B |
| Nickel | | 14.0 | 4.2 | | mg/kg | SW846 6010D |
| Vanadium | | 14.9 | 5.2 | | mg/kg | SW846 6010D |
| Zinc | | 42.1 | 5.2 | | mg/kg | SW846 6010D |

# Summary of Hits

**Job Number:** JD77365
**Account:** Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Collected:** 11/16/23 thru 11/17/23



| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| **JD77365-8** | **E23-05066-008_SB9A** | | | | | |
| Aluminum | | 6910 | 54 | | mg/kg | SW846 6010D |
| Arsenic | | 5.9 | 2.2 | | mg/kg | SW846 6010D |
| Barium | | 248 | 22 | | mg/kg | SW846 6010D |
| Beryllium | | 0.49 | 0.22 | | mg/kg | SW846 6010D |
| Cadmium | | 1.0 | 0.54 | | mg/kg | SW846 6010D |
| Calcium | | 47900 | 2700 | | mg/kg | SW846 6010D |
| Chromium | | 14.5 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 26.7 | 2.7 | | mg/kg | SW846 6010D |
| Iron | | 8460 | 54 | | mg/kg | SW846 6010D |
| Lead | | 381 | 2.2 | | mg/kg | SW846 6010D |
| Magnesium | | 5830 | 540 | | mg/kg | SW846 6010D |
| Manganese | | 272 | 1.6 | | mg/kg | SW846 6010D |
| Mercury | | 0.70 | 0.032 | | mg/kg | SW846 7471B |
| Nickel | | 10.0 | 4.3 | | mg/kg | SW846 6010D |
| Silver | | 0.63 | 0.54 | | mg/kg | SW846 6010D |
| Vanadium | | 23.2 | 5.4 | | mg/kg | SW846 6010D |
| Zinc | | 219 | 5.4 | | mg/kg | SW846 6010D |
| **JD77365-9** | **E23-05066-009_SB9B** | | | | | |
| Aluminum | | 6010 | 53 | | mg/kg | SW846 6010D |
| Arsenic | | 2.2 | 2.1 | | mg/kg | SW846 6010D |
| Barium | | 60.2 | 21 | | mg/kg | SW846 6010D |
| Beryllium | | 0.52 | 0.21 | | mg/kg | SW846 6010D |
| Calcium | | 7980 | 530 | | mg/kg | SW846 6010D |
| Chromium | | 13.3 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 16.7 | 2.6 | | mg/kg | SW846 6010D |
| Iron | | 9870 | 53 | | mg/kg | SW846 6010D |
| Lead | | 16.6 | 2.1 | | mg/kg | SW846 6010D |
| Magnesium | | 2890 | 530 | | mg/kg | SW846 6010D |
| Manganese | | 370 | 1.6 | | mg/kg | SW846 6010D |
| Mercury | | 0.040 | 0.030 | | mg/kg | SW846 7471B |
| Nickel | | 13.7 | 4.2 | | mg/kg | SW846 6010D |
| Potassium | | 1370 | 1100 | | mg/kg | SW846 6010D |
| Vanadium | | 17.1 | 5.3 | | mg/kg | SW846 6010D |
| Zinc | | 30.9 | 5.3 | | mg/kg | SW846 6010D |
| **JD77365-10** | **E23-05066-010_SB1A** | | | | | |
| Aluminum | | 2040 | 56 | | mg/kg | SW846 6010D |
| Barium | | 84.7 | 22 | | mg/kg | SW846 6010D |
| Beryllium | | 0.26 | 0.22 | | mg/kg | SW846 6010D |
| Calcium | | 17400 | 560 | | mg/kg | SW846 6010D |

# Summary of Hits

**Job Number:** JD77365
**Account:** Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Collected:** 11/16/23 thru 11/17/23



| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| Chromium | | 5.0 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 12.6 | 2.8 | | mg/kg | SW846 6010D |
| Iron | | 3370 | 56 | | mg/kg | SW846 6010D |
| Lead | | 130 | 2.2 | | mg/kg | SW846 6010D |
| Magnesium | | 2140 | 560 | | mg/kg | SW846 6010D |
| Manganese | | 97.7 | 1.7 | | mg/kg | SW846 6010D |
| Mercury | | 0.59 | 0.035 | | mg/kg | SW846 7471B |
| Nickel | | 4.5 | 4.5 | | mg/kg | SW846 6010D |
| Silver | | 1.2 | 0.56 | | mg/kg | SW846 6010D |
| Vanadium | | 5.8 | 5.6 | | mg/kg | SW846 6010D |
| Zinc | | 87.4 | 5.6 | | mg/kg | SW846 6010D |
| **JD77365-11** | **E23-05066-011_SB1B** | | | | | |
| Aluminum | | 3770 | 53 | | mg/kg | SW846 6010D |
| Arsenic | | 5.6 | 2.1 | | mg/kg | SW846 6010D |
| Barium | | 408 | 21 | | mg/kg | SW846 6010D |
| Beryllium | | 0.30 | 0.21 | | mg/kg | SW846 6010D |
| Cadmium | | 1.3 | 0.53 | | mg/kg | SW846 6010D |
| Calcium | | 14600 | 530 | | mg/kg | SW846 6010D |
| Chromium | | 12.8 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 19.7 | 2.6 | | mg/kg | SW846 6010D |
| Iron | | 9690 | 53 | | mg/kg | SW846 6010D |
| Lead | | 547 | 2.1 | | mg/kg | SW846 6010D |
| Magnesium | | 3550 | 530 | | mg/kg | SW846 6010D |
| Manganese | | 269 | 1.6 | | mg/kg | SW846 6010D |
| Mercury | | 0.62 | 0.033 | | mg/kg | SW846 7471B |
| Nickel | | 8.6 | 4.2 | | mg/kg | SW846 6010D |
| Silver | | 0.63 | 0.53 | | mg/kg | SW846 6010D |
| Vanadium | | 14.3 | 5.3 | | mg/kg | SW846 6010D |
| Zinc | | 616 | 5.3 | | mg/kg | SW846 6010D |
| **JD77365-12** | **E23-05066-012_SB4A** | | | | | |
| Aluminum | | 7330 | 54 | | mg/kg | SW846 6010D |
| Arsenic | | 12.2 | 2.2 | | mg/kg | SW846 6010D |
| Barium | | 246 | 22 | | mg/kg | SW846 6010D |
| Beryllium | | 0.33 | 0.22 | | mg/kg | SW846 6010D |
| Cadmium | | 0.61 | 0.54 | | mg/kg | SW846 6010D |
| Calcium | | 15500 | 540 | | mg/kg | SW846 6010D |
| Chromium | | 13.6 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 34.9 | 2.7 | | mg/kg | SW846 6010D |
| Iron | | 11600 | 54 | | mg/kg | SW846 6010D |
| Lead | | 500 | 2.2 | | mg/kg | SW846 6010D |
| Magnesium | | 2460 | 540 | | mg/kg | SW846 6010D |

# Summary of Hits

**Job Number:** JD77365
**Account:** Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Collected:** 11/16/23 thru 11/17/23



| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| Manganese | | 241 | 1.6 | | mg/kg | SW846 6010D |
| Mercury | | 1.2 | 0.069 | | mg/kg | SW846 7471B |
| Nickel | | 10.6 | 4.3 | | mg/kg | SW846 6010D |
| Silver | | 0.68 | 0.54 | | mg/kg | SW846 6010D |
| Vanadium | | 20.9 | 5.4 | | mg/kg | SW846 6010D |
| Zinc | | 288 | 5.4 | | mg/kg | SW846 6010D |
| **JD77365-13** | **E23-05066-013_SB4B** | | | | | |
| Aluminum | | 6130 | 55 | | mg/kg | SW846 6010D |
| Arsenic | | 6.7 | 2.2 | | mg/kg | SW846 6010D |
| Barium | | 194 | 22 | | mg/kg | SW846 6010D |
| Beryllium | | 0.42 | 0.22 | | mg/kg | SW846 6010D |
| Calcium | | 20000 | 550 | | mg/kg | SW846 6010D |
| Chromium | | 14.9 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 23.8 | 2.7 | | mg/kg | SW846 6010D |
| Iron | | 10300 | 55 | | mg/kg | SW846 6010D |
| Lead | | 353 | 2.2 | | mg/kg | SW846 6010D |
| Magnesium | | 2940 | 550 | | mg/kg | SW846 6010D |
| Manganese | | 337 | 1.6 | | mg/kg | SW846 6010D |
| Mercury | | 0.33 | 0.032 | | mg/kg | SW846 7471B |
| Nickel | | 12.0 | 4.4 | | mg/kg | SW846 6010D |
| Silver | | 0.58 | 0.55 | | mg/kg | SW846 6010D |
| Vanadium | | 16.3 | 5.5 | | mg/kg | SW846 6010D |
| Zinc | | 180 | 5.5 | | mg/kg | SW846 6010D |
| **JD77365-14** | **E23-05066-014_SB6-419-CS** | | | | | |
| Aluminum | | 4840 | 55 | | mg/kg | SW846 6010D |
| Arsenic | | 3.5 | 2.2 | | mg/kg | SW846 6010D |
| Barium | | 517 | 22 | | mg/kg | SW846 6010D |
| Beryllium | | 0.36 | 0.22 | | mg/kg | SW846 6010D |
| Cadmium | | 0.63 | 0.55 | | mg/kg | SW846 6010D |
| Calcium | | 32100 | 1100 | | mg/kg | SW846 6010D |
| Chromium | | 14.0 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 34.8 | 2.8 | | mg/kg | SW846 6010D |
| Iron | | 10200 | 55 | | mg/kg | SW846 6010D |
| Lead | | 1070 | 4.4 | | mg/kg | SW846 6010D |
| Magnesium | | 3800 | 550 | | mg/kg | SW846 6010D |
| Manganese | | 222 | 1.7 | | mg/kg | SW846 6010D |
| Mercury | | 0.37 | 0.032 | | mg/kg | SW846 7471B |
| Nickel | | 13.1 | 4.4 | | mg/kg | SW846 6010D |
| Silver | | 0.75 | 0.55 | | mg/kg | SW846 6010D |
| Vanadium | | 17.3 | 5.5 | | mg/kg | SW846 6010D |
| Zinc | | 405 | 5.5 | | mg/kg | SW846 6010D |

# Summary of Hits

**Job Number:** JD77365
**Account:** Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Collected:** 11/16/23 thru 11/17/23



| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| **JD77365-15** | **E23-05066-015_SB8-401-CS** | | | | | |
| Aluminum | | 5230 | 53 | | mg/kg | SW846 6010D |
| Arsenic | | 4.5 | 2.1 | | mg/kg | SW846 6010D |
| Barium | | 341 | 21 | | mg/kg | SW846 6010D |
| Beryllium | | 0.41 | 0.21 | | mg/kg | SW846 6010D |
| Cadmium | | 0.68 | 0.53 | | mg/kg | SW846 6010D |
| Calcium | | 22400 | 1100 | | mg/kg | SW846 6010D |
| Chromium | | 14.5 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 20.8 | 2.6 | | mg/kg | SW846 6010D |
| Iron | | 9740 | 53 | | mg/kg | SW846 6010D |
| Lead | | 684 | 2.1 | | mg/kg | SW846 6010D |
| Magnesium | | 4360 | 530 | | mg/kg | SW846 6010D |
| Manganese | | 241 | 1.6 | | mg/kg | SW846 6010D |
| Mercury | | 0.98 | 0.065 | | mg/kg | SW846 7471B |
| Nickel | | 13.7 | 4.2 | | mg/kg | SW846 6010D |
| Potassium | | 1370 | 1100 | | mg/kg | SW846 6010D |
| Silver | | 0.60 | 0.53 | | mg/kg | SW846 6010D |
| Vanadium | | 16.4 | 5.3 | | mg/kg | SW846 6010D |
| Zinc | | 268 | 5.3 | | mg/kg | SW846 6010D |
| **JD77365-16** | **E23-05066-016_TWP1** | | | | | |
| Aluminum | | 23600 | 200 | | ug/l | SW846 6010D |
| Arsenic | | 10.6 | 3.0 | | ug/l | SW846 6010D |
| Barium | | 400 | 200 | | ug/l | SW846 6010D |
| Beryllium | | 3.3 | 1.0 | | ug/l | SW846 6010D |
| Calcium | | 94900 | 5000 | | ug/l | SW846 6010D |
| Chromium | | 66.7 | 10 | | ug/l | SW846 6010D |
| Copper | | 90.0 | 10 | | ug/l | SW846 6010D |
| Iron | | 30200 | 100 | | ug/l | SW846 6010D |
| Lead | | 89.7 | 3.0 | | ug/l | SW846 6010D |
| Magnesium | | 26800 | 5000 | | ug/l | SW846 6010D |
| Manganese | | 4020 | 15 | | ug/l | SW846 6010D |
| Nickel | | 99.9 | 10 | | ug/l | SW846 6010D |
| Potassium | | 14800 | 10000 | | ug/l | SW846 6010D |
| Sodium | | 138000 | 10000 | | ug/l | SW846 6010D |
| Vanadium | | 60.8 | 50 | | ug/l | SW846 6010D |
| Zinc | | 174 | 20 | | ug/l | SW846 6010D |
| **JD77365-16F** | **E23-05066-020_TWP1 FILT** | | | | | |
| Calcium | | 76700 | 5000 | | ug/l | SW846 6010D |
| Iron | | 165 | 100 | | ug/l | SW846 6010D |

# Summary of Hits

**Job Number:** JD77365
**Account:** Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Collected:** 11/16/23 thru 11/17/23



| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| Magnesium | | 13800 | 5000 | | ug/l | SW846 6010D |
| Manganese | | 195 | 15 | | ug/l | SW846 6010D |
| Potassium | | 11000 | 10000 | | ug/l | SW846 6010D |
| Sodium | | 141000 | 10000 | | ug/l | SW846 6010D |
| **JD77365-17** | **E23-05066-017_TWP4** | | | | | |
| Aluminum | | 3730 | 200 | | ug/l | SW846 6010D |
| Beryllium | | 1.0 | 1.0 | | ug/l | SW846 6010D |
| Calcium | | 51900 | 5000 | | ug/l | SW846 6010D |
| Copper | | 13.7 | 10 | | ug/l | SW846 6010D |
| Iron | | 4370 | 100 | | ug/l | SW846 6010D |
| Lead | | 9.8 | 3.0 | | ug/l | SW846 6010D |
| Magnesium | | 10000 | 5000 | | ug/l | SW846 6010D |
| Manganese | | 423 | 15 | | ug/l | SW846 6010D |
| Nickel | | 11.4 | 10 | | ug/l | SW846 6010D |
| Potassium | | 12000 | 10000 | | ug/l | SW846 6010D |
| Sodium | | 79500 | 10000 | | ug/l | SW846 6010D |
| Zinc | | 21.9 | 20 | | ug/l | SW846 6010D |
| **JD77365-17F** | **E23-05066-021_TWP4 FILT** | | | | | |
| Aluminum | | 1330 | 200 | | ug/l | SW846 6010D |
| Calcium | | 52300 | 5000 | | ug/l | SW846 6010D |
| Iron | | 1580 | 100 | | ug/l | SW846 6010D |
| Lead | | 4.6 | 3.0 | | ug/l | SW846 6010D |
| Magnesium | | 9420 | 5000 | | ug/l | SW846 6010D |
| Manganese | | 223 | 15 | | ug/l | SW846 6010D |
| Potassium | | 11500 | 10000 | | ug/l | SW846 6010D |
| Sodium | | 78900 | 10000 | | ug/l | SW846 6010D |
| Zinc | | 74.0 | 20 | | ug/l | SW846 6010D |
| **JD77365-18** | **E23-05066-018_TWP2** | | | | | |
| Aluminum | | 5200 | 200 | | ug/l | SW846 6010D |
| Arsenic | | 3.8 | 3.0 | | ug/l | SW846 6010D |
| Barium | | 298 | 200 | | ug/l | SW846 6010D |
| Calcium | | 81800 | 5000 | | ug/l | SW846 6010D |
| Chromium | | 15.1 | 10 | | ug/l | SW846 6010D |
| Copper | | 38.6 | 10 | | ug/l | SW846 6010D |
| Iron | | 6370 | 100 | | ug/l | SW846 6010D |
| Lead | | 299 | 3.0 | | ug/l | SW846 6010D |
| Magnesium | | 11900 | 5000 | | ug/l | SW846 6010D |
| Manganese | | 514 | 15 | | ug/l | SW846 6010D |
| Nickel | | 25.3 | 10 | | ug/l | SW846 6010D |

# Summary of Hits

**Job Number:** JD77365
**Account:** Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Collected:** 11/16/23 thru 11/17/23



| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| Sodium | | 84700 | 10000 | | ug/l | SW846 6010D |
| Zinc | | 129 | 20 | | ug/l | SW846 6010D |
| **JD77365-18F** | **E23-05066-022_TWP2 FILT** | | | | | |
| Aluminum | | 486 | 200 | | ug/l | SW846 6010D |
| Calcium | | 101000 | 5000 | | ug/l | SW846 6010D |
| Iron | | 630 | 100 | | ug/l | SW846 6010D |
| Lead | | 30.9 | 3.0 | | ug/l | SW846 6010D |
| Magnesium | | 12400 | 5000 | | ug/l | SW846 6010D |
| Manganese | | 496 | 15 | | ug/l | SW846 6010D |
| Sodium | | 85700 | 10000 | | ug/l | SW846 6010D |
| Zinc | | 29.9 | 20 | | ug/l | SW846 6010D |
| **JD77365-19** | **E23-05066-019_TWP5** | | | | | |
| Aluminum | | 22800 | 200 | | ug/l | SW846 6010D |
| Arsenic | | 8.0 | 3.0 | | ug/l | SW846 6010D |
| Barium | | 589 | 200 | | ug/l | SW846 6010D |
| Beryllium | | 3.1 | 1.0 | | ug/l | SW846 6010D |
| Calcium | | 41800 | 5000 | | ug/l | SW846 6010D |
| Chromium | | 64.0 | 10 | | ug/l | SW846 6010D |
| Copper | | 105 | 10 | | ug/l | SW846 6010D |
| Iron | | 29000 | 100 | | ug/l | SW846 6010D |
| Lead | | 30.2 | 3.0 | | ug/l | SW846 6010D |
| Magnesium | | 15600 | 5000 | | ug/l | SW846 6010D |
| Manganese | | 3540 | 15 | | ug/l | SW846 6010D |
| Nickel | | 78.7 | 10 | | ug/l | SW846 6010D |
| Potassium | | 11600 | 10000 | | ug/l | SW846 6010D |
| Sodium | | 67100 | 10000 | | ug/l | SW846 6010D |
| Vanadium | | 62.2 | 50 | | ug/l | SW846 6010D |
| Zinc | | 201 | 20 | | ug/l | SW846 6010D |
| **JD77365-19F** | **E23-05066-023_TWP5 FILT** | | | | | |
| Aluminum | | 6060 | 200 | | ug/l | SW846 6010D |
| Barium | | 296 | 200 | | ug/l | SW846 6010D |
| Beryllium | | 1.1 | 1.0 | | ug/l | SW846 6010D |
| Calcium | | 40500 | 5000 | | ug/l | SW846 6010D |
| Chromium | | 16.1 | 10 | | ug/l | SW846 6010D |
| Copper | | 33.7 | 10 | | ug/l | SW846 6010D |
| Iron | | 6950 | 100 | | ug/l | SW846 6010D |
| Lead | | 10.8 | 3.0 | | ug/l | SW846 6010D |
| Magnesium | | 10900 | 5000 | | ug/l | SW846 6010D |
| Manganese | | 1060 | 15 | | ug/l | SW846 6010D |

# Summary of Hits

**Job Number:** JD77365
**Account:** Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Collected:** 11/16/23 thru 11/17/23



| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| Nickel | | 25.5 | 10 | | ug/l | SW846 6010D |
| Sodium | | 66000 | 10000 | | ug/l | SW846 6010D |
| Zinc | | 84.5 | 20 | | ug/l | SW846 6010D |

## Sample Results

Report of Analysis

# Report of Analysis





**Client Sample ID:** E23-05066-001_SB10A
**Lab Sample ID:** JD77365-1
**Matrix:** SO - Soil
**Project:** Integrated Analytical Lab, Randolph, NJ

**Date Sampled:** 11/16/23
**Date Received:** 11/21/23
**Percent Solids:** 90.9

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 4960 | 55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | 4.6 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 280 | 22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.35 | 0.22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | < 0.55 | 0.55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Calcium | 24700 | 1100 | mg/kg | 2 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Chromium | 12.2 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | < 5.5 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 11.9 | 2.8 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 8700 | 55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 248 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Magnesium | 2080 | 550 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 318 | 1.7 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | 0.24 | 0.033 | mg/kg | 1 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [5] |
| Nickel | 8.6 | 4.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | 0.55 | 0.55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 19.6 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 277 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Instrument QC Batch: MA55148
(4) Prep QC Batch: MP43322
(5) Prep QC Batch: MP43401

RL = Reporting Limit

# Report of Analysis





**Client Sample ID:** E23-05066-002_SB10B
**Lab Sample ID:** JD77365-2
**Matrix:** SO - Soil
**Project:** Integrated Analytical Lab, Randolph, NJ

**Date Sampled:** 11/16/23
**Date Received:** 11/21/23
**Percent Solids:** 91.5

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 5670 | 54 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 33.5 | 22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.52 | 0.22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | < 0.54 | 0.54 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 1380 | 540 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 11.9 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | < 5.4 | 5.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 9.7 | 2.7 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 9570 | 54 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 9.5 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 2050 | 540 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 259 | 1.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.064 | 0.033 | mg/kg | 1 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 11.1 | 4.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | 1430 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | < 0.54 | 0.54 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 16.1 | 5.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 33.9 | 5.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Prep QC Batch: MP43322
(4) Prep QC Batch: MP43401

RL = Reporting Limit

# Report of Analysis





**Client Sample ID:** E23-05066-003_SB2A
**Lab Sample ID:** JD77365-3
**Matrix:** SO - Soil
**Project:** Integrated Analytical Lab, Randolph, NJ

**Date Sampled:** 11/16/23
**Date Received:** 11/21/23
**Percent Solids:** 86.4

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6220 | 58 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.3 | 2.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | 5.7 | 2.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 363 | 23 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.45 | 0.23 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | < 0.58 | 0.58 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Calcium | 31500 | 1200 | mg/kg | 2 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Chromium | 14.2 | 1.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | < 5.8 | 5.8 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 34.7 | 2.9 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 9550 | 58 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 797 | 2.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Magnesium | 2970 | 580 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 293 | 1.7 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | 0.70 | 0.033 | mg/kg | 1 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [5] |
| Nickel | 11.3 | 4.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | 1240 | 1200 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.3 | 2.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | < 0.58 | 0.58 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1200 | 1200 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.2 | 1.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 22.4 | 5.8 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 329 | 5.8 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Instrument QC Batch: MA55148
(4) Prep QC Batch: MP43322
(5) Prep QC Batch: MP43401

RL = Reporting Limit

# Report of Analysis





**Client Sample ID:** E23-05066-004_SB2B
**Lab Sample ID:** JD77365-4
**Matrix:** SO - Soil
**Project:** Integrated Analytical Lab, Randolph, NJ

**Date Sampled:** 11/16/23
**Date Received:** 11/21/23
**Percent Solids:** 95.6

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 3640 | 53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 37.9 | 21 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.41 | 0.21 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | < 0.53 | 0.53 | mg/kg | 1 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Calcium | 1980 | 530 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Chromium | 9.9 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | < 5.3 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 10.9 | 2.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 7770 | 53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 8.8 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Magnesium | 1920 | 530 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 236 | 1.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | < 0.032 | 0.032 | mg/kg | 1 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [5] |
| Nickel | 8.4 | 4.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | 1150 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | < 0.53 | 0.53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 12.5 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 25.4 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Instrument QC Batch: MA55148
(4) Prep QC Batch: MP43322
(5) Prep QC Batch: MP43401

RL = Reporting Limit

# Report of Analysis





**Client Sample ID:** E23-05066-005_SB5
**Lab Sample ID:** JD77365-5
**Matrix:** SO - Soil
**Project:** Integrated Analytical Lab, Randolph, NJ

**Date Sampled:** 11/16/23
**Date Received:** 11/21/23
**Percent Solids:** 92.1

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 9790 | 55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | 6.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 96.8 | 22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.51 | 0.22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | < 0.55 | 0.55 | mg/kg | 1 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Calcium | 3790 | 550 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Chromium | 31.5 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | 6.5 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 25.3 | 2.8 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 13200 | 55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 107 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Magnesium | 5470 | 550 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 250 | 1.7 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | 0.13 | 0.029 | mg/kg | 1 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [5] |
| Nickel | 18.1 | 4.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | 1180 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | 0.65 | 0.55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 23.9 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 105 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Instrument QC Batch: MA55148
(4) Prep QC Batch: MP43322
(5) Prep QC Batch: MP43401

RL = Reporting Limit

# Report of Analysis





**Client Sample ID:** E23-05066-006_SB3A
**Lab Sample ID:** JD77365-6
**Matrix:** SO - Soil
**Project:** Integrated Analytical Lab, Randolph, NJ

**Date Sampled:** 11/16/23
**Date Received:** 11/21/23
**Percent Solids:** 91.1

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 5880 | 56 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | 4.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 206 | 22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.45 | 0.22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | < 0.56 | 0.56 | mg/kg | 1 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Calcium | 9640 | 560 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Chromium | 12.3 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | < 5.6 | 5.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 16.8 | 2.8 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 13900 | 56 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 301 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Magnesium | 3430 | 560 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 258 | 1.7 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | 0.67 | 0.034 | mg/kg | 1 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [5] |
| Nickel | 12.6 | 4.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | 1530 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | 0.62 | 0.56 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 25.9 | 5.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 164 | 5.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Instrument QC Batch: MA55148
(4) Prep QC Batch: MP43322
(5) Prep QC Batch: MP43401

RL = Reporting Limit

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05066-007_SB3B | | |
| **Lab Sample ID:** | JD77365-7 | **Date Sampled:** | 11/16/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/21/23 |
| | | **Percent Solids:** | 94.8 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 4440 | 52 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | 2.4 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 41.1 | 21 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.40 | 0.21 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | < 0.52 | 0.52 | mg/kg | 1 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Calcium | 5710 | 520 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Chromium | 10.8 | 1.0 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | < 5.2 | 5.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 14.0 | 2.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 8580 | 52 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 26.2 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Magnesium | 2510 | 520 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 299 | 1.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | 0.11 | 0.032 | mg/kg | 1 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [5] |
| Nickel | 14.0 | 4.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | < 1000 | 1000 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | < 0.52 | 0.52 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1000 | 1000 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.0 | 1.0 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 14.9 | 5.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 42.1 | 5.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Instrument QC Batch: MA55148
(4) Prep QC Batch: MP43322
(5) Prep QC Batch: MP43401

RL = Reporting Limit

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05066-008_SB9A | | |
| **Lab Sample ID:** | JD77365-8 | **Date Sampled:** | 11/17/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/21/23 |
| | | **Percent Solids:** | 92.9 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6910 | 54 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | 5.9 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 248 | 22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.49 | 0.22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | 1.0 | 0.54 | mg/kg | 1 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Calcium | 47900 | 2700 | mg/kg | 5 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Chromium | 14.5 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | < 5.4 | 5.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 26.7 | 2.7 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 8460 | 54 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 381 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Magnesium | 5830 | 540 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 272 | 1.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | 0.70 | 0.032 | mg/kg | 1 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [5] |
| Nickel | 10.0 | 4.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | 0.63 | 0.54 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 23.2 | 5.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 219 | 5.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Instrument QC Batch: MA55148
(4) Prep QC Batch: MP43322
(5) Prep QC Batch: MP43401

RL = Reporting Limit

# Report of Analysis





**Client Sample ID:** E23-05066-009_SB9B
**Lab Sample ID:** JD77365-9
**Matrix:** SO - Soil
**Project:** Integrated Analytical Lab, Randolph, NJ

**Date Sampled:** 11/17/23
**Date Received:** 11/21/23
**Percent Solids:** 95.1

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6010 | 53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | 2.2 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 60.2 | 21 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.52 | 0.21 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | < 0.53 | 0.53 | mg/kg | 1 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Calcium | 7980 | 530 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Chromium | 13.3 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | < 5.3 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 16.7 | 2.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 9870 | 53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 16.6 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Magnesium | 2890 | 530 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 370 | 1.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | 0.040 | 0.030 | mg/kg | 1 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [5] |
| Nickel | 13.7 | 4.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | 1370 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | < 0.53 | 0.53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 17.1 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 30.9 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Instrument QC Batch: MA55148
(4) Prep QC Batch: MP43322
(5) Prep QC Batch: MP43401

RL = Reporting Limit

# Report of Analysis





**Client Sample ID:** E23-05066-010_SB1A
**Lab Sample ID:** JD77365-10
**Matrix:** SO - Soil
**Project:** Integrated Analytical Lab, Randolph, NJ

**Date Sampled:** 11/17/23
**Date Received:** 11/21/23
**Percent Solids:** 91.0

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 2040 | 56 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 84.7 | 22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.26 | 0.22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | < 0.56 | 0.56 | mg/kg | 1 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Calcium | 17400 | 560 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Chromium | 5.0 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | < 5.6 | 5.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 12.6 | 2.8 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 3370 | 56 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 130 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Magnesium | 2140 | 560 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 97.7 | 1.7 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | 0.59 | 0.035 | mg/kg | 1 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [5] |
| Nickel | 4.5 | 4.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | 1.2 | 0.56 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 5.8 | 5.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 87.4 | 5.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Instrument QC Batch: MA55148
(4) Prep QC Batch: MP43322
(5) Prep QC Batch: MP43401

RL = Reporting Limit

# Report of Analysis





**Client Sample ID:** E23-05066-011_SB1B
**Lab Sample ID:** JD77365-11
**Matrix:** SO - Soil
**Project:** Integrated Analytical Lab, Randolph, NJ

**Date Sampled:** 11/17/23
**Date Received:** 11/21/23
**Percent Solids:** 93.8

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 3770 | 53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | 5.6 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 408 | 21 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.30 | 0.21 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | 1.3 | 0.53 | mg/kg | 1 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Calcium | 14600 | 530 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Chromium | 12.8 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | < 5.3 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 19.7 | 2.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 9690 | 53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 547 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Magnesium | 3550 | 530 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 269 | 1.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | 0.62 | 0.033 | mg/kg | 1 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [5] |
| Nickel | 8.6 | 4.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | 0.63 | 0.53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 14.3 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 616 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Instrument QC Batch: MA55148
(4) Prep QC Batch: MP43322
(5) Prep QC Batch: MP43401

RL = Reporting Limit

# Report of Analysis





**Client Sample ID:** E23-05066-012_SB4A
**Lab Sample ID:** JD77365-12
**Matrix:** SO - Soil
**Project:** Integrated Analytical Lab, Randolph, NJ

**Date Sampled:** 11/17/23
**Date Received:** 11/21/23
**Percent Solids:** 90.9

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 7330 | 54 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | 12.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 246 | 22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.33 | 0.22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | 0.61 | 0.54 | mg/kg | 1 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Calcium | 15500 | 540 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Chromium | 13.6 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | < 5.4 | 5.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 34.9 | 2.7 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 11600 | 54 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 500 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Magnesium | 2460 | 540 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 241 | 1.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | 1.2 | 0.069 | mg/kg | 2 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [5] |
| Nickel | 10.6 | 4.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | 0.68 | 0.54 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 20.9 | 5.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 288 | 5.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Instrument QC Batch: MA55148
(4) Prep QC Batch: MP43322
(5) Prep QC Batch: MP43401

RL = Reporting Limit

# Report of Analysis





**Client Sample ID:** E23-05066-013_SB4B
**Lab Sample ID:** JD77365-13
**Matrix:** SO - Soil
**Project:** Integrated Analytical Lab, Randolph, NJ

**Date Sampled:** 11/17/23
**Date Received:** 11/21/23
**Percent Solids:** 93.2

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6130 | 55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | 6.7 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 194 | 22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.42 | 0.22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | < 0.55 | 0.55 | mg/kg | 1 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Calcium | 20000 | 550 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Chromium | 14.9 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | < 5.5 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 23.8 | 2.7 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 10300 | 55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 353 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Magnesium | 2940 | 550 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 337 | 1.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | 0.33 | 0.032 | mg/kg | 1 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [5] |
| Nickel | 12.0 | 4.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | 0.58 | 0.55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 16.3 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 180 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Instrument QC Batch: MA55148
(4) Prep QC Batch: MP43322
(5) Prep QC Batch: MP43401

RL = Reporting Limit

# Report of Analysis





**Client Sample ID:** E23-05066-014_SB6-419-CS
**Lab Sample ID:** JD77365-14
**Matrix:** SO - Soil
**Project:** Integrated Analytical Lab, Randolph, NJ

**Date Sampled:** 11/17/23
**Date Received:** 11/21/23
**Percent Solids:** 92.6

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 4840 | 55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | 3.5 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 517 | 22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.36 | 0.22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | 0.63 | 0.55 | mg/kg | 1 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Calcium | 32100 | 1100 | mg/kg | 2 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Chromium | 14.0 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | < 5.5 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 34.8 | 2.8 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 10200 | 55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 1070 | 4.4 | mg/kg | 2 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Magnesium | 3800 | 550 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 222 | 1.7 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | 0.37 | 0.032 | mg/kg | 1 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [5] |
| Nickel | 13.1 | 4.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | 0.75 | 0.55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 17.3 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 405 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Instrument QC Batch: MA55148
(4) Prep QC Batch: MP43322
(5) Prep QC Batch: MP43401

RL = Reporting Limit

# Report of Analysis





**Client Sample ID:** E23-05066-015_SB8-401-CS
**Lab Sample ID:** JD77365-15
**Matrix:** SO - Soil
**Project:** Integrated Analytical Lab, Randolph, NJ

**Date Sampled:** 11/17/23
**Date Received:** 11/21/23
**Percent Solids:** 93.7

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 5230 | 53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | 4.5 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 341 | 21 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.41 | 0.21 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | 0.68 | 0.53 | mg/kg | 1 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Calcium | 22400 | 1100 | mg/kg | 2 | 11/27/23 | 11/29/23 | ND | SW846 6010D [3] | SW846 3050B [4] |
| Chromium | 14.5 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | < 5.3 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 20.8 | 2.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 9740 | 53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 684 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Magnesium | 4360 | 530 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 241 | 1.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | 0.98 | 0.065 | mg/kg | 2 | 11/28/23 | 11/29/23 | LM | SW846 7471B [2] | SW846 7471B [5] |
| Nickel | 13.7 | 4.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | 1370 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | 0.60 | 0.53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 16.4 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 268 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55139
(2) Instrument QC Batch: MA55140
(3) Instrument QC Batch: MA55148
(4) Prep QC Batch: MP43322
(5) Prep QC Batch: MP43401

RL = Reporting Limit

# Report of Analysis





**Client Sample ID:** E23-05066-016_TWP1
**Lab Sample ID:** JD77365-16
**Matrix:** AQ - Water
**Project:** Integrated Analytical Lab, Randolph, NJ

**Date Sampled:** 11/16/23
**Date Received:** 11/21/23
**Percent Solids:** n/a

**Total Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 23600 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Arsenic | 10.6 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Barium | 400 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Beryllium | 3.3 | 1.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Calcium | 94900 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Chromium | 66.7 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Copper | 90.0 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Iron | 30200 | 100 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Lead | 89.7 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Magnesium | 26800 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Manganese | 4020 | 15 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/30/23 | 11/30/23 | LM | SW846 7470A [2] | SW846 7470A [4] |
| Nickel | 99.9 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Potassium | 14800 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Silver | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Sodium | 138000 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Vanadium | 60.8 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Zinc | 174 | 20 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |

(1) Instrument QC Batch: MA55131
(2) Instrument QC Batch: MA55150
(3) Prep QC Batch: MP43317
(4) Prep QC Batch: MP43408

RL = Reporting Limit

# Report of Analysis





**Client Sample ID:** E23-05066-020_TWP1 FILT
**Lab Sample ID:** JD77365-16F
**Matrix:** AQ - Water Filtered
**Project:** Integrated Analytical Lab, Randolph, NJ

**Date Sampled:** 11/16/23
**Date Received:** 11/21/23
**Percent Solids:** n/a

**Dissolved Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | < 200 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Arsenic | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Barium | < 200 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Beryllium | < 1.0 | 1.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Calcium | 76700 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Chromium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Copper | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Iron | 165 | 100 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Lead | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Magnesium | 13800 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Manganese | 195 | 15 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/29/23 | 11/29/23 | LM | SW846 7470A [2] | SW846 7470A [4] |
| Nickel | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Potassium | 11000 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Silver | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Sodium | 141000 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Zinc | < 20 | 20 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |

(1) Instrument QC Batch: MA55131
(2) Instrument QC Batch: MA55142
(3) Prep QC Batch: MP43317
(4) Prep QC Batch: MP43408

RL = Reporting Limit

# Report of Analysis





**Client Sample ID:** E23-05066-017_TWP4
**Lab Sample ID:** JD77365-17
**Matrix:** AQ - Water
**Project:** Integrated Analytical Lab, Randolph, NJ

**Date Sampled:** 11/16/23
**Date Received:** 11/21/23
**Percent Solids:** n/a

**Total Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 3730 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Arsenic | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Barium | < 200 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Beryllium | 1.0 | 1.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Calcium | 51900 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Chromium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Copper | 13.7 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Iron | 4370 | 100 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Lead | 9.8 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Magnesium | 10000 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Manganese | 423 | 15 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/29/23 | 11/29/23 | LM | SW846 7470A [2] | SW846 7470A [4] |
| Nickel | 11.4 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Potassium | 12000 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Silver | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Sodium | 79500 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Zinc | 21.9 | 20 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |

(1) Instrument QC Batch: MA55131
(2) Instrument QC Batch: MA55142
(3) Prep QC Batch: MP43317
(4) Prep QC Batch: MP43408

RL = Reporting Limit

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05066-021_TWP4 FILT | | |
| **Lab Sample ID:** | JD77365-17F | **Date Sampled:** | 11/16/23 |
| **Matrix:** | AQ - Water Filtered | **Date Received:** | 11/21/23 |
| | | **Percent Solids:** | n/a |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Dissolved Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 1330 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Arsenic | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Barium | < 200 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Beryllium | < 1.0 | 1.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Calcium | 52300 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Chromium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Copper | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Iron | 1580 | 100 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Lead | 4.6 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Magnesium | 9420 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Manganese | 223 | 15 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/29/23 | 11/29/23 | LM | SW846 7470A [2] | SW846 7470A [4] |
| Nickel | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Potassium | 11500 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Silver | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Sodium | 78900 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Zinc | 74.0 | 20 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |

(1) Instrument QC Batch: MA55131
(2) Instrument QC Batch: MA55142
(3) Prep QC Batch: MP43317
(4) Prep QC Batch: MP43408

RL = Reporting Limit

# Report of Analysis





**Client Sample ID:** E23-05066-018_TWP2
**Lab Sample ID:** JD77365-18
**Matrix:** AQ - Water
**Project:** Integrated Analytical Lab, Randolph, NJ

**Date Sampled:** 11/16/23
**Date Received:** 11/21/23
**Percent Solids:** n/a

**Total Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 5200 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Arsenic | 3.8 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Barium | 298 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Beryllium | < 1.0 | 1.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Calcium | 81800 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Chromium | 15.1 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Copper | 38.6 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Iron | 6370 | 100 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Lead | 299 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Magnesium | 11900 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Manganese | 514 | 15 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/30/23 | 11/30/23 | LM | SW846 7470A [2] | SW846 7470A [4] |
| Nickel | 25.3 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Potassium | < 10000 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Silver | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Sodium | 84700 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Zinc | 129 | 20 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |

(1) Instrument QC Batch: MA55131
(2) Instrument QC Batch: MA55150
(3) Prep QC Batch: MP43317
(4) Prep QC Batch: MP43408

RL = Reporting Limit

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05066-022_TWP2 FILT | | |
| **Lab Sample ID:** | JD77365-18F | **Date Sampled:** | 11/16/23 |
| **Matrix:** | AQ - Water Filtered | **Date Received:** | 11/21/23 |
| | | **Percent Solids:** | n/a |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Dissolved Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 486 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Arsenic | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Barium | < 200 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Beryllium | < 1.0 | 1.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Calcium | 101000 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Chromium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Copper | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Iron | 630 | 100 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Lead | 30.9 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Magnesium | 12400 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Manganese | 496 | 15 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/29/23 | 11/29/23 | LM | SW846 7470A [2] | SW846 7470A [4] |
| Nickel | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Potassium | < 10000 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Silver | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Sodium | 85700 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Zinc | 29.9 | 20 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |

(1) Instrument QC Batch: MA55131
(2) Instrument QC Batch: MA55142
(3) Prep QC Batch: MP43317
(4) Prep QC Batch: MP43408

RL = Reporting Limit

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05066-019_TWP5 | | |
| **Lab Sample ID:** | JD77365-19 | **Date Sampled:** | 11/16/23 |
| **Matrix:** | AQ - Water | **Date Received:** | 11/21/23 |
| | | **Percent Solids:** | n/a |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Total Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 22800 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Arsenic | 8.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Barium | 589 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Beryllium | 3.1 | 1.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Calcium | 41800 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Chromium | 64.0 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Copper | 105 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Iron | 29000 | 100 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Lead | 30.2 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Magnesium | 15600 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Manganese | 3540 | 15 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/29/23 | 11/29/23 | LM | SW846 7470A [2] | SW846 7470A [4] |
| Nickel | 78.7 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Potassium | 11600 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Silver | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Sodium | 67100 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Vanadium | 62.2 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Zinc | 201 | 20 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |

(1) Instrument QC Batch: MA55131
(2) Instrument QC Batch: MA55142
(3) Prep QC Batch: MP43317
(4) Prep QC Batch: MP43408

RL = Reporting Limit

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05066-023_TWP5 FILT | | |
| **Lab Sample ID:** | JD77365-19F | **Date Sampled:** | 11/16/23 |
| **Matrix:** | AQ - Water Filtered | **Date Received:** | 11/21/23 |
| | | **Percent Solids:** | n/a |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Dissolved Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6060 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Arsenic | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Barium | 296 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Beryllium | 1.1 | 1.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Calcium | 40500 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Chromium | 16.1 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Copper | 33.7 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Iron | 6950 | 100 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Lead | 10.8 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Magnesium | 10900 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Manganese | 1060 | 15 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/29/23 | 11/29/23 | LM | SW846 7470A [2] | SW846 7470A [4] |
| Nickel | 25.5 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Potassium | < 10000 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Silver | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Sodium | 66000 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Zinc | 84.5 | 20 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |

(1) Instrument QC Batch: MA55131
(2) Instrument QC Batch: MA55142
(3) Prep QC Batch: MP43317
(4) Prep QC Batch: MP43408

RL = Reporting Limit

## Misc. Forms

# Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

**SGS Dayton**
**Fresh Ponds Corporate Village, Building B 2235 Route 130, Dayton, NJ 08810**

D/O4945

JD77365

## CLIENT & PROJECT

| | |
|---|---|
| Name: Integrated Analytical Laboratories LLC | |
| Address: | |
| 273 Franklin Road | |
| Randolph, NJ 07869 | |
| Telephone #: 973-361-4252 | |
| Project Name: E23-05066 | |
| Project Location (State): NY | |
| Project Manager: | |
| Reference ID#: PO# | |

## REPORTING & BILLING

| | |
|---|---|
| Contact: | Kim James |
| Fax #: | |
| EMail to: | msimmons@ialonline.com |
| Report to: | Melissa Simmons |
| Address: | |
| Invoice to: | Brenda Barone |
| Address: | |

| Turnaround Time | Report Format |
|---|---|
| Verbal/Fax: 24 hr* 48 hr* 72 hr* 1 wk* 2 wk Other: 1 WEEK | Category A |
| Hard Copy: 72 hr* 1 wk* 2 wk* 3 wk Other: | Special Requirements |
| *Prior to sample arrival, Lab notification is required. | |

Preservative
1 = HCL; 2 = NaOH; 3 = $HNO_3$; 4 = $H_2SO_4$; 5 = MeOH; 6 = Other

## ANALYTICAL PARAMETERS / PRESERVATIVES

## SAMPLE INFORMATION

| | Sample ID | Sample Depth (in Feet) | Sampling Date | Sampling Time | Matrix | # of Containers | TAL Metals (6020B/7471B) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 1 2 3 4 5 6 | 1 2 3 4 5 6 | 1 2 3 4 5 6 | 1 2 3 4 5 6 | 1 2 3 4 5 6 | 1 2 3 4 5 6 | 1 2 3 4 5 6 | 1 2 3 4 5 6 | 1 2 3 4 5 6 | 1 2 3 4 5 6 | 1 2 3 4 5 6 | 1 2 3 4 5 6 | 1 2 3 4 5 6 | 1 2 3 4 5 6 |
| 1 | E23-05066-001_SB10A | | 11/16/23 | 09:30 | Soil | 1 | Run | | | | | | | | | | | | | A7 |
| 2 | E23-05066-002_SB10B | | 11/16/23 | 09:45 | Soil | 1 | Run | | | | | | | | | | | | | D837U |
| 3 | E23-05066-003_SB2A | | 11/16/23 | 10:00 | Soil | 1 | Run | | | | | | | | | | | | | |
| 4 | E23-05066-004_SB2B | | 11/16/23 | 10:20 | Soil | 1 | Run | | | | | | | | | | | | | |
| 5 | E23-05066-005_SB5 | | 11/16/23 | 13:40 | Soil | 1 | Run | | | | | | | | | | | | | |
| 6 | E23-05066-006_SB3A | | 11/16/23 | 13:05 | Soil | 1 | Run | | | | | | | | | | | | | |
| 7 | E23-05066-007_SB3B | | 11/16/23 | 13:10 | Soil | 1 | Run | | | | | | | | | | | | | |
| 8 | E23-05066-008_SB9A | | 11/17/23 | 08:00 | Soil | 1 | Run | | | | | | | | | | | | | |
| 9 | E23-05066-009_SB9B | | 11/17/23 | 08:10 | Soil | 1 | Run | | | | | | | | | | | | | |
| 10 | E23-05066-010_SB1A | | 11/17/23 | 09:00 | Soil | 1 | Run | | | | | | | | | | | | | |

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

COOLER TEMP. 0.6 °C

Concentrations Expected: LOW MED HIGH

Known Hazard: yes no

Describe:

## EMAIL CONFIRMATION REQUIRED

Note: 1 WEEK TAT

Initial Assessment

Label Verification

SAMPLES 020 - 023 ARE FIELD FILTERED VOLUME OF SAMPLES 016 - 019.

## CUSTODY LOG

| Signature/Company | Date | Time | Signature/Company | Date | Time |
|---|---|---|---|---|---|
| Relinquished by: Kim James | 11/21/23 | 8:00AM | Received by: | 11/21/23 | 6:50 |
| Relinquished by: | 11/21/23 | 9:50 | Received by: | | |
| Relinquished by: | | | Received by: | | |

Lab Case #

PAGE: 1 OF 3

COC (001-010)

REV Feb 2013

**SGS Dayton**
**Fresh Ponds Corporate Village, Building B 2235 Route 130, Dayton, NJ 08810**

D/O4945

JD77365

## CLIENT & PROJECT

| | |
|---|---|
| Name: Integrated Analytical Laboratories LLC | |
| | |
| Address: | |
| 273 Franklin Road | |
| Randolph, NJ 07869 | |
| Telephone #: 973-361-4252 | |
| | |
| Project Name: E23-05066 | |
| Project Location (State): NY | |
| Project Manager: | |
| Reference ID#: PO# | |

## REPORTING & BILLING

| | |
|---|---|
| Contact: Kim James | |
| Fax #: | |
| EMail to: msimmons@ialonline.com | |
| Report to: Melissa Simmons | |
| Address: | |
| | |
| Invoice to: Brenda Barone | |
| Address: | |

| Turnaround Time | | | | | | | Report Format |
|---|---|---|---|---|---|---|---|
| Verbal/Fax | | | | | | | Category A |
| 24 hr* | 48 hr* | 72 hr* | 1 wk* | 2 wk | Other: | 1 WEEK | |
| Hard Copy | | | | | | | Special Requirements |
| 72 hr* | 1 wk* | 2 wk* | 3 wk | | Other: | | |
| *Prior to sample arrival, Lab notification is required. | | | | | | | |

Preservative
1 = HCL; 2 = NaOH; 3 = $HNO_3$
4 = $H_2SO_4$; 5 = MeOH; 6 = Other

## ANALYTICAL PARAMETERS / PRESERVATIVES

## SAMPLE INFORMATION

| | Sample ID | Sample Depth (in Feet) | Sampling Date | Sampling Time | Matrix | # of Containers | TAL Metals (6020B/7471B) | 1 2 3 4 5 6 |
|---|---|---|---|---|---|---|---|---|
| 11 | E23-05066-011_SB1B | | 11/17/23 | 09:15 | Soil | 1 | Run | |
| 12 | E23-05066-012_SB4A | | 11/17/23 | 09:55 | Soil | 1 | Run | |
| 13 | E23-05066-013_SB4B | | 11/17/23 | 10:05 | Soil | 1 | Run | |
| 14 | E23-05066-014_SB6-419-CS | | 11/17/23 | 11:30 | Soil | 1 | Run | |
| 15 | E23-05066-015_SB8-401-CS | | 11/17/23 | 11:40 | Soil | 1 | Run | |
| 16 | E23-05066-016_TWP1 | | 11/16/23 | 09:30 | Aqueous | 1 | Run | |
| 17 | E23-05066-017_TWP4 | | 11/16/23 | 10:20 | Aqueous | 1 | Run | |
| 8 | E23-05066-018_TWP2 | | 11/16/23 | 10:00 | Aqueous | 1 | Run | |
| 19 | E23-05066-019_TWP5 | | 11/16/23 | 14:00 | Aqueous | 1 | Run | |
| 10F | E23-05066-020_TWP1 FILT | | 11/16/23 | 09:30 | Aqueous | 1 | Run | |

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

COOLER TEMP. 0.6 °C

Concentrations Expected: LOW MED HIGH

Known Hazard: yes no
Describe:

**EMAIL CONFIRMATION REQUIRED**

IR40

Note: 1 WEEK TAT

## CUSTODY LOG

| Signature/Company | Date | Time | Signature/Company |
|---|---|---|---|
| Relinquished by: Kim James | 11/21/23 | 8:00AM | Received by: George Wand 11/21/23 |
| Relinquished by: George Wand | 11/21/23 | 9:50 | Received by: |
| Relinquished by: | | | Received by: |

SAMPLES 020 - 023 ARE FIELD FILTERED VOLUME OF SAMPLES 016 - 019.

Lab Case #

PAGE: 2 OF 3

COC (011-020)

REV Feb 2013

**SGS Dayton**
**Fresh Ponds Corporate Village, Building B 2235 Route 130, Dayton, NJ 08810**

D/O4945

JD77365

## CHAIN OF CUSTODY RECORD

### CLIENT & PROJECT

| | |
|---|---|
| Name: Integrated Analytical Laboratories LLC | |
| Address: 273 Franklin Road, Randolph, NJ 07869 | |
| Telephone #: 973-361-4252 | |
| Project Name: E23-05066 | |
| Project Location (State): NY | |
| Project Manager: | |
| Reference ID#: PO# | |

### REPORTING & BILLING

| | |
|---|---|
| Contact: | Kim James |
| Fax #: | |
| EMail to: | msimmons@ialonline.com |
| Report to: | Melissa Simmons |
| Address: | |
| Invoice to: | Brenda Barone |
| Address: | |

| Turnaround Time | Report Format |
|---|---|
| Verbal/Fax: 24 hr* 48 hr* 72 hr* 1 wk* 2 wk Other: 1 WEEK | Category A |
| Hard Copy: 72 hr* 1 wk* 2 wk* 3 wk Other: | Special Requirements |
| *Prior to sample arrival, Lab notification is required. | |

### ANALYTICAL PARAMETERS / PRESERVATIVES

Preservative: 1 = HCL; 2 = NaOH; 3 = $HNO_3$; 4 = $H_2SO_4$; 5 = MeOH; 6 = Other

### SAMPLE INFORMATION

| | Sample ID | Sample Depth (in Feet) | Sampling Date | Sampling Time | Matrix | # of Containers | TAL Metals (6020B/7471B) | 123 456 |
|---|---|---|---|---|---|---|---|---|
| 17 | E23-05066-021_TWP4 FILT | | 11/16/23 | 10:20 | Aqueous | 1 | Run | |
| 18 | E23-05066-022_TWP2 FILT | | 11/16/23 | 10:00 | Aqueous | 1 | Run | |
| 19 | E23-05066-023_TWP5 FILT | | 11/16/23 | 14:00 | Aqueous | 1 | Run | |

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

COOLER TEMP. 0.6 °C

Concentrations Expected: LOW MED HIGH

Known Hazard: yes no

Describe:

Note: 1 WEEK TAT

SAMPLES 020 - 023 ARE FIELD FILTERED VOLUME OF SAMPLES 016 - 019.

## EMAIL CONFIRMATION REQUIRED

### CUSTODY LOG

| | Signature/Company | Date | Time | Signature/Company |
|---|---|---|---|---|
| Relinquished by: | | 11/21/23 | 8:00AM | Received by: 11/21/23 |
| Relinquished by: | | 11/21/23 | 9:50 | Received by: |
| Relinquished by: | | | | Received by: |

COC (021-023)

Lab Case #

PAGE: 3 OF 3

REV Feb 2013

# SGS Sample Receipt Summary

**Job Number:** JD77365 **Client:** INTEGRATED ANALYTICAL LABORATOR **Project:** E23-05066

**Date / Time Received:** 11/21/2023 9:50:00 AM **Delivery Method:** CLIENT **Airbill #'s:**

**Cooler Temps (Raw Measured) °C:** Cooler 1: (0.6);

**Cooler Temps (Corrected) °C:** Cooler 1: (0.6);

| **Cooler Security** | Y | or | N | | Y | or | N |
|---|---|---|---|---|---|---|---|
| 1. Custody Seals Present: | ☑ | | ☐ | 3. COC Present: | ☑ | | ☐ |
| 2. Custody Seals Intact: | ☑ | | ☐ | 4. Smpl Dates/Time OK | ☑ | | ☐ |

| **Cooler Temperature** | Y | or | N |
|---|---|---|---|
| 1. Temp criteria achieved: | ☑ | | ☐ |
| 2. Cooler temp verification: | | | |
| 3. Cooler media: | Ice (Bag) | | |
| 4. No. Coolers: | 1 | | |

| **Quality Control Preservatio** | Y | or | N | N/A |
|---|---|---|---|---|
| 1. Trip Blank present / cooler: | ☐ | | ☑ | ☐ |
| 2. Trip Blank listed on COC: | ☐ | | ☑ | ☐ |
| 3. Samples preserved properly: | ☑ | | ☐ | |
| 4. VOCs headspace free: | ☐ | | ☐ | ☑ |

| **Sample Integrity - Documentation** | Y | or | N |
|---|---|---|---|
| 1. Sample labels present on bottles: | ☑ | | ☐ |
| 2. Container labeling complete: | ☑ | | ☐ |
| 3. Sample container label / COC agree: | ☑ | | ☐ |

| **Sample Integrity - Condition** | Y | or | N |
|---|---|---|---|
| 1. Sample recvd within HT: | ☑ | | ☐ |
| 2. All containers accounted for: | ☑ | | ☐ |
| 3. Condition of sample: | Intact | | |

| **Sample Integrity - Instructions** | Y | or | N | N/A |
|---|---|---|---|---|
| 1. Analysis requested is clear: | ☑ | | ☐ | |
| 2. Bottles received for unspecified tests | ☐ | | ☑ | |
| 3. Sufficient volume recvd for analysis: | ☑ | | ☐ | |
| 4. Compositing instructions clear: | ☐ | | ☐ | ☑ |
| 5. Filtering instructions clear: | ☐ | | ☐ | ☑ |

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

# Internal Sample Tracking Chronicle

Integrated Analytical Lab

**Job No:** JD77365

Integrated Analytical Lab, Randolph, NJ
Project No: E23-05066

| Sample Number | Method | Analyzed | By | Prepped | By | Test Codes |
|---|---|---|---|---|---|---|
| JD77365-1 | Collected: 16-NOV-23 09:30 By: E23-05066-001_SB10A | | Received: 21-NOV-23 | | By: HR | |
| JD77365-1 | SM2540 G 18TH ED MOD | 22-NOV-23 15:37 | MP | | | SOL104 |
| JD77365-1 | SW846 6010D | 28-NOV-23 18:24 | ND | 27-NOV-23 | NV | AG,AL,AS,BA,BE,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN |
| JD77365-1 | SW846 7471B | 29-NOV-23 13:04 | LM | 28-NOV-23 | LM | HG |
| JD77365-1 | SW846 6010D | 29-NOV-23 15:06 | ND | 27-NOV-23 | NV | CA |
| JD77365-2 | Collected: 16-NOV-23 09:45 By: E23-05066-002_SB10B | | Received: 21-NOV-23 | | By: HR | |
| JD77365-2 | SM2540 G 18TH ED MOD | 22-NOV-23 15:37 | MP | | | SOL104 |
| JD77365-2 | SW846 6010D | 28-NOV-23 18:04 | ND | 27-NOV-23 | NV | AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN |
| JD77365-2 | SW846 7471B | 29-NOV-23 13:06 | LM | 28-NOV-23 | LM | HG |
| JD77365-3 | Collected: 16-NOV-23 10:00 By: E23-05066-003_SB2A | | Received: 21-NOV-23 | | By: HR | |
| JD77365-3 | SM2540 G 18TH ED MOD | 22-NOV-23 15:37 | MP | | | SOL104 |
| JD77365-3 | SW846 6010D | 28-NOV-23 18:29 | ND | 27-NOV-23 | NV | AG,AL,AS,BA,BE,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN |
| JD77365-3 | SW846 7471B | 29-NOV-23 13:13 | LM | 28-NOV-23 | LM | HG |
| JD77365-3 | SW846 6010D | 29-NOV-23 15:21 | ND | 27-NOV-23 | NV | CA |
| JD77365-4 | Collected: 16-NOV-23 10:20 By: E23-05066-004_SB2B | | Received: 21-NOV-23 | | By: HR | |
| JD77365-4 | SM2540 G 18TH ED MOD | 22-NOV-23 15:37 | MP | | | SOL104 |
| JD77365-4 | SW846 6010D | 28-NOV-23 18:44 | ND | 27-NOV-23 | NV | AG,AL,AS,BA,BE,CA,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN |
| JD77365-4 | SW846 7471B | 29-NOV-23 13:14 | LM | 28-NOV-23 | LM | HG |
| JD77365-4 | SW846 6010D | 29-NOV-23 13:54 | ND | 27-NOV-23 | NV | CD |

# Internal Sample Tracking Chronicle

Integrated Analytical Lab

**Job No:** JD77365

Integrated Analytical Lab, Randolph, NJ
Project No: E23-05066

| Sample Number | Method | Analyzed | By | Prepped | By | Test Codes |
|---|---|---|---|---|---|---|
| JD77365-5 | Collected: 16-NOV-23 13:40 By: E23-05066-005_SB5 | | | Received: 21-NOV-23 | By: HR | |
| JD77365-5 | SM2540 G 18TH ED MOD | 29-NOV-23 15:37 | MP | | | SOL104 |
| JD77365-5 | SW846 6010D | 28-NOV-23 18:50 | ND | 27-NOV-23 | NV | AG,AL,AS,BA,BE,CA,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN |
| JD77365-5 | SW846 7471B | 29-NOV-23 13:17 | LM | 28-NOV-23 | LM | HG |
| JD77365-5 | SW846 6010D | 29-NOV-23 13:59 | ND | 27-NOV-23 | NV | CD |
| JD77365-6 | Collected: 16-NOV-23 13:05 By: E23-05066-006_SB3A | | | Received: 21-NOV-23 | By: HR | |
| JD77365-6 | SM2540 G 18TH ED MOD | 29-NOV-23 15:37 | MP | | | SOL104 |
| JD77365-6 | SW846 6010D | 28-NOV-23 18:55 | ND | 27-NOV-23 | NV | AG,AL,AS,BA,BE,CA,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN |
| JD77365-6 | SW846 7471B | 29-NOV-23 13:18 | LM | 28-NOV-23 | LM | HG |
| JD77365-6 | SW846 6010D | 29-NOV-23 14:05 | ND | 27-NOV-23 | NV | CD |
| JD77365-7 | Collected: 16-NOV-23 13:10 By: E23-05066-007_SB3B | | | Received: 21-NOV-23 | By: HR | |
| JD77365-7 | SM2540 G 18TH ED MOD | 29-NOV-23 15:37 | MP | | | SOL104 |
| JD77365-7 | SW846 6010D | 28-NOV-23 19:00 | ND | 27-NOV-23 | NV | AG,AL,AS,BA,BE,CA,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN |
| JD77365-7 | SW846 7471B | 29-NOV-23 13:20 | LM | 28-NOV-23 | LM | HG |
| JD77365-7 | SW846 6010D | 29-NOV-23 14:20 | ND | 27-NOV-23 | NV | CD |
| JD77365-8 | Collected: 17-NOV-23 08:00 By: E23-05066-008_SB9A | | | Received: 21-NOV-23 | By: HR | |
| JD77365-8 | SM2540 G 18TH ED MOD | 29-NOV-23 15:37 | MP | | | SOL104 |
| JD77365-8 | SW846 6010D | 28-NOV-23 19:05 | ND | 27-NOV-23 | NV | AG,AL,AS,BA,BE,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN |
| JD77365-8 | SW846 7471B | 29-NOV-23 13:23 | LM | 28-NOV-23 | LM | HG |
| JD77365-8 | SW846 6010D | 29-NOV-23 14:25 | ND | 27-NOV-23 | NV | CD |

# Internal Sample Tracking Chronicle

Integrated Analytical Lab

**Job No:** JD77365

Integrated Analytical Lab, Randolph, NJ
Project No: E23-05066

| Sample Number | Method | Analyzed | By | Prepped | By | Test Codes |
|---|---|---|---|---|---|---|
| JD77365-8 | SW846 6010D | 29-NOV-23 15:27 | ND | 27-NOV-23 | NV | CA |
| JD77365-9 | Collected: 17-NOV-23 08:10 By: E23-05066-009_SB9B | | Received: 21-NOV-23 | | By: HR | |
| JD77365-9 | SM2540 G 18TH ED MOD | 29-NOV-23 15:37 | MP | | | SOL104 |
| JD77365-9 | SW846 6010D | 28-NOV-23 19:10 | ND | 27-NOV-23 | NV | AG,AL,AS,BA,BE,CA,CO,CR,CU, FE,K,MG,MN,NA,NI,PB,SB,SE, TL,V,ZN |
| JD77365-9 | SW846 7471B | 29-NOV-23 13:29 | LM | 28-NOV-23 | LM | HG |
| JD77365-9 | SW846 6010D | 29-NOV-23 14:30 | ND | 27-NOV-23 | NV | CD |
| JD77365-10 | Collected: 17-NOV-23 09:00 By: E23-05066-010_SB1A | | Received: 21-NOV-23 | | By: HR | |
| JD77365-10 | SM2540 G 18TH ED MOD | 29-NOV-23 15:37 | MP | | | SOL104 |
| JD77365-10 | SW846 6010D | 28-NOV-23 19:15 | ND | 27-NOV-23 | NV | AG,AL,AS,BA,BE,CA,CO,CR,CU, FE,K,MG,MN,NA,NI,PB,SB,SE, TL,V,ZN |
| JD77365-10 | SW846 7471B | 29-NOV-23 13:31 | LM | 28-NOV-23 | LM | HG |
| JD77365-10 | SW846 6010D | 29-NOV-23 14:35 | ND | 27-NOV-23 | NV | CD |
| JD77365-11 | Collected: 17-NOV-23 09:15 By: E23-05066-011_SB1B | | Received: 21-NOV-23 | | By: HR | |
| JD77365-11 | SM2540 G 18TH ED MOD | 29-NOV-23 15:37 | MP | | | SOL104 |
| JD77365-11 | SW846 6010D | 28-NOV-23 19:20 | ND | 27-NOV-23 | NV | AG,AL,AS,BA,BE,CA,CO,CR,CU, FE,K,MG,MN,NA,NI,PB,SB,SE, TL,V,ZN |
| JD77365-11 | SW846 7471B | 29-NOV-23 13:33 | LM | 28-NOV-23 | LM | HG |
| JD77365-11 | SW846 6010D | 29-NOV-23 14:40 | ND | 27-NOV-23 | NV | CD |
| JD77365-12 | Collected: 17-NOV-23 09:55 By: E23-05066-012_SB4A | | Received: 21-NOV-23 | | By: HR | |
| JD77365-12 | SM2540 G 18TH ED MOD | 29-NOV-23 15:37 | MP | | | SOL104 |
| JD77365-12 | SW846 6010D | 28-NOV-23 19:25 | ND | 27-NOV-23 | NV | AG,AL,AS,BA,BE,CA,CO,CR,CU, FE,K,MG,MN,NA,NI,PB,SB,SE, TL,V,ZN |
| JD77365-12 | SW846 6010D | 29-NOV-23 14:45 | ND | 27-NOV-23 | NV | CD |

# Internal Sample Tracking Chronicle

Integrated Analytical Lab

**Job No:** JD77365

Integrated Analytical Lab, Randolph, NJ
Project No: E23-05066

| Sample Number | Method | Analyzed | By | Prepped | By | Test Codes |
|---|---|---|---|---|---|---|
| JD77365-12 | SW846 7471B | 29-NOV-23 16:48 | LM | 28-NOV-23 | LM | HG |
| JD77365-13 | Collected: 17-NOV-23 10:05 By: E23-05066-013_SB4B | | Received: 21-NOV-23 | | By: HR | |
| JD77365-13 | SM2540 G 18TH ED MOD | 22-NOV-23 15:37 | MP | | | SOL104 |
| JD77365-13 | SW846 6010D | 28-NOV-23 19:30 | ND | 27-NOV-23 | NV | AG,AL,AS,BA,BE,CA,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN |
| JD77365-13 | SW846 7471B | 29-NOV-23 13:37 | LM | 28-NOV-23 | LM | HG |
| JD77365-13 | SW846 6010D | 29-NOV-23 14:51 | ND | 27-NOV-23 | NV | CD |
| JD77365-14 | Collected: 17-NOV-23 11:30 By: E23-05066-014_SB6-419-CS | | Received: 21-NOV-23 | | By: HR | |
| JD77365-14 | SM2540 G 18TH ED MOD | 22-NOV-23 15:37 | MP | | | SOL104 |
| JD77365-14 | SW846 6010D | 28-NOV-23 19:45 | ND | 27-NOV-23 | NV | AG,AL,AS,BA,BE,CO,CR,CU,FE,K,MG,MN,NA,NI,SB,SE,TL,V,ZN |
| JD77365-14 | SW846 7471B | 29-NOV-23 13:40 | LM | 28-NOV-23 | LM | HG |
| JD77365-14 | SW846 6010D | 29-NOV-23 14:56 | ND | 27-NOV-23 | NV | CD |
| JD77365-14 | SW846 6010D | 29-NOV-23 15:32 | ND | 27-NOV-23 | NV | CA,PB |
| JD77365-15 | Collected: 17-NOV-23 11:40 By: E23-05066-015_SB8-401-CS | | Received: 21-NOV-23 | | By: HR | |
| JD77365-15 | SM2540 G 18TH ED MOD | 22-NOV-23 15:37 | MP | | | SOL104 |
| JD77365-15 | SW846 6010D | 28-NOV-23 19:50 | ND | 27-NOV-23 | NV | AG,AL,AS,BA,BE,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN |
| JD77365-15 | SW846 6010D | 29-NOV-23 15:01 | ND | 27-NOV-23 | NV | CD |
| JD77365-15 | SW846 6010D | 29-NOV-23 15:37 | ND | 27-NOV-23 | NV | CA |
| JD77365-15 | SW846 7471B | 29-NOV-23 16:49 | LM | 28-NOV-23 | LM | HG |
| JD77365-16 | Collected: 16-NOV-23 09:30 By: E23-05066-016_TWP1 | | Received: 21-NOV-23 | | By: HR | |
| JD77365-16 | SW846 6010D | 27-NOV-23 09:24 | ND | 22-NOV-23 | RE | AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN |
| JD77365-16 | SW846 7470A | 30-NOV-23 17:22 | LM | 30-NOV-23 | LM | HG |

# Internal Sample Tracking Chronicle

Integrated Analytical Lab

**Job No:** JD77365

Integrated Analytical Lab, Randolph, NJ
Project No: E23-05066

| Sample Number | Method | Analyzed | By | Prepped | By | Test Codes |
|---|---|---|---|---|---|---|
| JD77365-17 | Collected: 16-NOV-23 10:20 By: E23-05066-017_TWP4 | | | Received: 21-NOV-23 | By: HR | |
| JD77365-17 | SW846 6010D | 27-NOV-23 09:29 | ND | 22-NOV-23 | RE | AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN |
| JD77365-17 | SW846 7470A | 29-NOV-23 15:06 | LM | 29-NOV-23 | MET | HG |
| JD77365-18 | Collected: 16-NOV-23 10:00 By: E23-05066-018_TWP2 | | | Received: 21-NOV-23 | By: HR | |
| JD77365-18 | SW846 6010D | 27-NOV-23 09:44 | ND | 22-NOV-23 | RE | AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN |
| JD77365-18 | SW846 7470A | 30-NOV-23 17:23 | LM | 30-NOV-23 | LM | HG |
| JD77365-19 | Collected: 16-NOV-23 14:00 By: E23-05066-019_TWP5 | | | Received: 21-NOV-23 | By: HR | |
| JD77365-19 | SW846 6010D | 27-NOV-23 09:49 | ND | 22-NOV-23 | RE | AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN |
| JD77365-19 | SW846 7470A | 29-NOV-23 15:12 | LM | 29-NOV-23 | MET | HG |
| JD77365-16F | Collected: 16-NOV-23 09:30 By: E23-05066-020_TWP1 FILT | | | Received: 21-NOV-23 | By: HR | |
| JD77365-16F | SW846 6010D | 27-NOV-23 09:54 | ND | 22-NOV-23 | RE | AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN |
| JD77365-16F | SW846 7470A | 29-NOV-23 15:14 | LM | 29-NOV-23 | MET | HG |
| JD77365-17F | Collected: 16-NOV-23 10:20 By: E23-05066-021_TWP4 FILT | | | Received: 21-NOV-23 | By: HR | |
| JD77365-17F | SW846 6010D | 27-NOV-23 09:59 | ND | 22-NOV-23 | RE | AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN |
| JD77365-17F | SW846 7470A | 29-NOV-23 15:15 | LM | 29-NOV-23 | MET | HG |

# Internal Sample Tracking Chronicle

Integrated Analytical Lab

**Job No:** JD77365

Integrated Analytical Lab, Randolph, NJ
Project No: E23-05066



| Sample Number | Method | Analyzed | By | Prepped | By | Test Codes |
|---|---|---|---|---|---|---|
| JD77365-18F | Collected: 16-NOV-23 10:00 By: | | | Received: 21-NOV-23 | By: HR | |
| E23-05066-022_TWP2 FILT | | | | | | |
| JD77365-18E | SW846 6010D | 27-NOV-23 10:04 | ND | 22-NOV-23 | RE | AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN |
| JD77365-18E | SW846 7470A | 29-NOV-23 15:17 | LM | 29-NOV-23 | MET | HG |
| JD77365-19F | Collected: 16-NOV-23 14:00 By: | | | Received: 21-NOV-23 | By: HR | |
| E23-05066-023_TWP5 FILT | | | | | | |
| JD77365-19E | SW846 6010D | 27-NOV-23 10:09 | ND | 22-NOV-23 | RE | AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN |
| JD77365-19E | SW846 7470A | 29-NOV-23 15:18 | LM | 29-NOV-23 | MET | HG |

# SGS Internal Chain of Custody



**Job Number:** JD77365
**Account:** IALNJR Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Received:** 11/21/23



| Sample.Bottle Number | Transfer FROM | Transfer TO | Date/Time | Reason |
|---|---|---|---|---|
| JD77365-1.1 | Haleigh Rosado | Secured Storage | 11/21/23 11:47 | Return to Storage |
| JD77365-1.1 | Secured Storage | Dave Hunkele | 11/22/23 10:48 | Retrieve from Storage |
| JD77365-1.1 | Dave Hunkele | Secured Staging Area | 11/22/23 10:48 | Return to Storage |
| JD77365-1.1 | Secured Staging Area | Mahendra Patel | 11/22/23 13:03 | Retrieve from Storage |
| JD77365-1.1 | Mahendra Patel | Secured Storage | 11/22/23 16:12 | Return to Storage |
| JD77365-1.1 | Secured Storage | Dave Hunkele | 11/25/23 15:13 | Retrieve from Storage |
| JD77365-1.1 | Dave Hunkele | Secured Staging Area | 11/25/23 15:13 | Return to Storage |
| JD77365-1.1 | Secured Storage | Dave Hunkele | 11/28/23 06:09 | Retrieve from Storage |
| Bottle was returned to secure storage, but inadvertently not scanned. | | | | |
| JD77365-1.1 | Dave Hunkele | Secured Staging Area | 11/28/23 06:09 | Return to Storage |
| JD77365-1.1 | Secured Staging Area | Lauren Matthews | 11/28/23 10:13 | Retrieve from Storage |
| JD77365-1.1 | Lauren Matthews | Secured Storage | 11/28/23 18:46 | Return to Storage |
| | | | | |
| JD77365-2.1 | Haleigh Rosado | Secured Storage | 11/21/23 11:47 | Return to Storage |
| JD77365-2.1 | Secured Storage | Dave Hunkele | 11/22/23 10:48 | Retrieve from Storage |
| JD77365-2.1 | Dave Hunkele | Secured Staging Area | 11/22/23 10:48 | Return to Storage |
| JD77365-2.1 | Secured Staging Area | Mahendra Patel | 11/22/23 13:03 | Retrieve from Storage |
| JD77365-2.1 | Mahendra Patel | Secured Storage | 11/22/23 16:12 | Return to Storage |
| JD77365-2.1 | Secured Storage | Dave Hunkele | 11/25/23 15:13 | Retrieve from Storage |
| JD77365-2.1 | Dave Hunkele | Secured Staging Area | 11/25/23 15:13 | Return to Storage |
| JD77365-2.1 | Secured Storage | Dave Hunkele | 11/28/23 06:09 | Retrieve from Storage |
| Bottle was returned to secure storage, but inadvertently not scanned. | | | | |
| JD77365-2.1 | Dave Hunkele | Secured Staging Area | 11/28/23 06:09 | Return to Storage |
| JD77365-2.1 | Secured Staging Area | Lauren Matthews | 11/28/23 10:13 | Retrieve from Storage |
| JD77365-2.1 | Lauren Matthews | Secured Storage | 11/28/23 18:46 | Return to Storage |
| | | | | |
| JD77365-3.1 | Haleigh Rosado | Secured Storage | 11/21/23 11:47 | Return to Storage |
| JD77365-3.1 | Secured Storage | Dave Hunkele | 11/22/23 10:48 | Retrieve from Storage |
| JD77365-3.1 | Dave Hunkele | Secured Staging Area | 11/22/23 10:48 | Return to Storage |
| JD77365-3.1 | Secured Staging Area | Mahendra Patel | 11/22/23 13:03 | Retrieve from Storage |
| JD77365-3.1 | Mahendra Patel | Secured Storage | 11/22/23 16:12 | Return to Storage |
| JD77365-3.1 | Secured Storage | Dave Hunkele | 11/25/23 15:13 | Retrieve from Storage |
| JD77365-3.1 | Dave Hunkele | Secured Staging Area | 11/25/23 15:13 | Return to Storage |
| JD77365-3.1 | Secured Storage | Dave Hunkele | 11/28/23 06:09 | Retrieve from Storage |
| Bottle was returned to secure storage, but inadvertently not scanned. | | | | |
| JD77365-3.1 | Dave Hunkele | Secured Staging Area | 11/28/23 06:09 | Return to Storage |
| JD77365-3.1 | Secured Staging Area | Lauren Matthews | 11/28/23 10:13 | Retrieve from Storage |
| JD77365-3.1 | Lauren Matthews | Secured Storage | 11/28/23 18:46 | Return to Storage |
| | | | | |
| JD77365-4.1 | Haleigh Rosado | Secured Storage | 11/21/23 11:47 | Return to Storage |
| JD77365-4.1 | Secured Storage | Dave Hunkele | 11/22/23 10:48 | Retrieve from Storage |
| JD77365-4.1 | Dave Hunkele | Secured Staging Area | 11/22/23 10:48 | Return to Storage |
| JD77365-4.1 | Secured Staging Area | Mahendra Patel | 11/22/23 13:03 | Retrieve from Storage |
| JD77365-4.1 | Mahendra Patel | Secured Storage | 11/22/23 16:12 | Return to Storage |

# SGS Internal Chain of Custody

**Job Number:** JD77365
**Account:** IALNJR Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Received:** 11/21/23



| Sample.Bottle Number | Transfer FROM | Transfer TO | Date/Time | Reason |
|---|---|---|---|---|
| JD77365-4.1 | Secured Storage | Dave Hunkele | 11/25/23 15:13 | Retrieve from Storage |
| JD77365-4.1 | Dave Hunkele | Secured Staging Area | 11/25/23 15:13 | Return to Storage |
| JD77365-4.1 | Secured Storage | Dave Hunkele | 11/28/23 06:09 | Retrieve from Storage |
| Bottle was returned to secure storage, but inadvertently not scanned. | | | | |
| JD77365-4.1 | Dave Hunkele | Secured Staging Area | 11/28/23 06:09 | Return to Storage |
| JD77365-4.1 | Secured Staging Area | Lauren Matthews | 11/28/23 10:13 | Retrieve from Storage |
| JD77365-4.1 | Lauren Matthews | Secured Storage | 11/28/23 18:46 | Return to Storage |
| | | | | |
| JD77365-5.1 | Haleigh Rosado | Secured Storage | 11/21/23 11:47 | Return to Storage |
| JD77365-5.1 | Secured Storage | Dave Hunkele | 11/22/23 10:48 | Retrieve from Storage |
| JD77365-5.1 | Dave Hunkele | Secured Staging Area | 11/22/23 10:48 | Return to Storage |
| JD77365-5.1 | Secured Staging Area | Mahendra Patel | 11/22/23 13:03 | Retrieve from Storage |
| JD77365-5.1 | Mahendra Patel | Secured Storage | 11/22/23 16:12 | Return to Storage |
| JD77365-5.1 | Secured Storage | Dave Hunkele | 11/25/23 15:13 | Retrieve from Storage |
| JD77365-5.1 | Dave Hunkele | Secured Staging Area | 11/25/23 15:13 | Return to Storage |
| JD77365-5.1 | Secured Storage | Dave Hunkele | 11/28/23 06:09 | Retrieve from Storage |
| Bottle was returned to secure storage, but inadvertently not scanned. | | | | |
| JD77365-5.1 | Dave Hunkele | Secured Staging Area | 11/28/23 06:09 | Return to Storage |
| JD77365-5.1 | Secured Staging Area | Lauren Matthews | 11/28/23 10:13 | Retrieve from Storage |
| JD77365-5.1 | Lauren Matthews | Secured Storage | 11/28/23 18:46 | Return to Storage |
| | | | | |
| JD77365-6.1 | Haleigh Rosado | Secured Storage | 11/21/23 11:47 | Return to Storage |
| JD77365-6.1 | Secured Storage | Dave Hunkele | 11/22/23 10:48 | Retrieve from Storage |
| JD77365-6.1 | Dave Hunkele | Secured Staging Area | 11/22/23 10:48 | Return to Storage |
| JD77365-6.1 | Secured Staging Area | Mahendra Patel | 11/22/23 13:03 | Retrieve from Storage |
| JD77365-6.1 | Mahendra Patel | Secured Storage | 11/22/23 16:12 | Return to Storage |
| JD77365-6.1 | Secured Storage | Dave Hunkele | 11/25/23 15:13 | Retrieve from Storage |
| JD77365-6.1 | Dave Hunkele | Secured Staging Area | 11/25/23 15:13 | Return to Storage |
| JD77365-6.1 | Secured Storage | Dave Hunkele | 11/28/23 06:09 | Retrieve from Storage |
| Bottle was returned to secure storage, but inadvertently not scanned. | | | | |
| JD77365-6.1 | Dave Hunkele | Secured Staging Area | 11/28/23 06:09 | Return to Storage |
| JD77365-6.1 | Secured Staging Area | Lauren Matthews | 11/28/23 10:13 | Retrieve from Storage |
| JD77365-6.1 | Lauren Matthews | Secured Storage | 11/28/23 18:46 | Return to Storage |
| | | | | |
| JD77365-7.1 | Haleigh Rosado | Secured Storage | 11/21/23 11:47 | Return to Storage |
| JD77365-7.1 | Secured Storage | Dave Hunkele | 11/22/23 10:48 | Retrieve from Storage |
| JD77365-7.1 | Dave Hunkele | Secured Staging Area | 11/22/23 10:48 | Return to Storage |
| JD77365-7.1 | Secured Staging Area | Mahendra Patel | 11/22/23 13:03 | Retrieve from Storage |
| JD77365-7.1 | Mahendra Patel | Secured Storage | 11/22/23 16:12 | Return to Storage |
| JD77365-7.1 | Secured Storage | Dave Hunkele | 11/25/23 15:13 | Retrieve from Storage |
| JD77365-7.1 | Dave Hunkele | Secured Staging Area | 11/25/23 15:13 | Return to Storage |
| JD77365-7.1 | Secured Storage | Dave Hunkele | 11/28/23 06:09 | Retrieve from Storage |
| Bottle was returned to secure storage, but inadvertently not scanned. | | | | |
| JD77365-7.1 | Dave Hunkele | Secured Staging Area | 11/28/23 06:09 | Return to Storage |

# SGS Internal Chain of Custody

**Job Number:** JD77365
**Account:** IALNJR Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Received:** 11/21/23



| Sample.Bottle Number | Transfer FROM | Transfer TO | Date/Time | Reason |
|---|---|---|---|---|
| JD77365-7.1 | Secured Staging Area | Lauren Matthews | 11/28/23 10:13 | Retrieve from Storage |
| JD77365-7.1 | Lauren Matthews | Secured Storage | 11/28/23 18:46 | Return to Storage |
| JD77365-8.1 | Haleigh Rosado | Secured Storage | 11/21/23 11:47 | Return to Storage |
| JD77365-8.1 | Secured Storage | Dave Hunkele | 11/22/23 10:48 | Retrieve from Storage |
| JD77365-8.1 | Dave Hunkele | Secured Staging Area | 11/22/23 10:48 | Return to Storage |
| JD77365-8.1 | Secured Staging Area | Mahendra Patel | 11/22/23 13:03 | Retrieve from Storage |
| JD77365-8.1 | Mahendra Patel | Secured Storage | 11/22/23 16:12 | Return to Storage |
| JD77365-8.1 | Secured Storage | Dave Hunkele | 11/25/23 15:13 | Retrieve from Storage |
| JD77365-8.1 | Dave Hunkele | Secured Staging Area | 11/25/23 15:13 | Return to Storage |
| JD77365-8.1 | Secured Storage | Dave Hunkele | 11/28/23 06:09 | Retrieve from Storage |
| Bottle was returned to secure storage, but inadvertently not scanned. | | | | |
| JD77365-8.1 | Dave Hunkele | Secured Staging Area | 11/28/23 06:09 | Return to Storage |
| JD77365-8.1 | Secured Staging Area | Lauren Matthews | 11/28/23 10:13 | Retrieve from Storage |
| JD77365-8.1 | Lauren Matthews | Secured Storage | 11/28/23 18:46 | Return to Storage |
| JD77365-9.1 | Haleigh Rosado | Secured Storage | 11/21/23 11:47 | Return to Storage |
| JD77365-9.1 | Secured Storage | Dave Hunkele | 11/22/23 10:48 | Retrieve from Storage |
| JD77365-9.1 | Dave Hunkele | Secured Staging Area | 11/22/23 10:48 | Return to Storage |
| JD77365-9.1 | Secured Staging Area | Mahendra Patel | 11/22/23 13:03 | Retrieve from Storage |
| JD77365-9.1 | Mahendra Patel | Secured Storage | 11/22/23 16:12 | Return to Storage |
| JD77365-9.1 | Secured Storage | Dave Hunkele | 11/25/23 15:13 | Retrieve from Storage |
| JD77365-9.1 | Dave Hunkele | Secured Staging Area | 11/25/23 15:13 | Return to Storage |
| JD77365-9.1 | Secured Storage | Dave Hunkele | 11/28/23 06:09 | Retrieve from Storage |
| Bottle was returned to secure storage, but inadvertently not scanned. | | | | |
| JD77365-9.1 | Dave Hunkele | Secured Staging Area | 11/28/23 06:09 | Return to Storage |
| JD77365-9.1 | Secured Staging Area | Lauren Matthews | 11/28/23 10:13 | Retrieve from Storage |
| JD77365-9.1 | Lauren Matthews | Secured Storage | 11/28/23 18:46 | Return to Storage |
| JD77365-10.1 | Haleigh Rosado | Secured Storage | 11/21/23 11:47 | Return to Storage |
| JD77365-10.1 | Secured Storage | Dave Hunkele | 11/22/23 10:48 | Retrieve from Storage |
| JD77365-10.1 | Dave Hunkele | Secured Staging Area | 11/22/23 10:48 | Return to Storage |
| JD77365-10.1 | Secured Staging Area | Mahendra Patel | 11/22/23 13:03 | Retrieve from Storage |
| JD77365-10.1 | Mahendra Patel | Secured Storage | 11/22/23 16:12 | Return to Storage |
| JD77365-10.1 | Secured Storage | Dave Hunkele | 11/25/23 15:13 | Retrieve from Storage |
| JD77365-10.1 | Dave Hunkele | Secured Staging Area | 11/25/23 15:13 | Return to Storage |
| JD77365-10.1 | Secured Storage | Dave Hunkele | 11/28/23 06:09 | Retrieve from Storage |
| Bottle was returned to secure storage, but inadvertently not scanned. | | | | |
| JD77365-10.1 | Dave Hunkele | Secured Staging Area | 11/28/23 06:09 | Return to Storage |
| JD77365-10.1 | Secured Staging Area | Lauren Matthews | 11/28/23 10:13 | Retrieve from Storage |
| JD77365-10.1 | Lauren Matthews | Secured Storage | 11/28/23 18:46 | Return to Storage |
| JD77365-11.1 | Haleigh Rosado | Secured Storage | 11/21/23 11:47 | Return to Storage |
| JD77365-11.1 | Secured Storage | Dave Hunkele | 11/22/23 10:48 | Retrieve from Storage |

# SGS Internal Chain of Custody

**Job Number:** JD77365
**Account:** IALNJR Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Received:** 11/21/23



| Sample.Bottle Number | Transfer FROM | Transfer TO | Date/Time | Reason |
|---|---|---|---|---|
| JD77365-11.1 | Dave Hunkele | Secured Staging Area | 11/22/23 10:48 | Return to Storage |
| JD77365-11.1 | Secured Staging Area | Mahendra Patel | 11/22/23 13:03 | Retrieve from Storage |
| JD77365-11.1 | Mahendra Patel | Secured Storage | 11/22/23 16:12 | Return to Storage |
| JD77365-11.1 | Secured Storage | Dave Hunkele | 11/25/23 15:13 | Retrieve from Storage |
| JD77365-11.1 | Dave Hunkele | Secured Staging Area | 11/25/23 15:13 | Return to Storage |
| JD77365-11.1 | Secured Storage | Dave Hunkele | 11/28/23 06:09 | Retrieve from Storage |
| Bottle was returned to secure storage, but inadvertently not scanned. | | | | |
| JD77365-11.1 | Dave Hunkele | Secured Staging Area | 11/28/23 06:09 | Return to Storage |
| JD77365-11.1 | Secured Staging Area | Lauren Matthews | 11/28/23 10:13 | Retrieve from Storage |
| JD77365-11.1 | Lauren Matthews | Secured Storage | 11/28/23 18:46 | Return to Storage |
| | | | | |
| JD77365-12.1 | Haleigh Rosado | Secured Storage | 11/21/23 11:47 | Return to Storage |
| JD77365-12.1 | Secured Storage | Dave Hunkele | 11/22/23 10:48 | Retrieve from Storage |
| JD77365-12.1 | Dave Hunkele | Secured Staging Area | 11/22/23 10:48 | Return to Storage |
| JD77365-12.1 | Secured Staging Area | Mahendra Patel | 11/22/23 13:03 | Retrieve from Storage |
| JD77365-12.1 | Mahendra Patel | Secured Storage | 11/22/23 16:12 | Return to Storage |
| JD77365-12.1 | Secured Storage | Dave Hunkele | 11/25/23 15:13 | Retrieve from Storage |
| JD77365-12.1 | Dave Hunkele | Secured Staging Area | 11/25/23 15:13 | Return to Storage |
| JD77365-12.1 | Secured Storage | Dave Hunkele | 11/28/23 06:09 | Retrieve from Storage |
| Bottle was returned to secure storage, but inadvertently not scanned. | | | | |
| JD77365-12.1 | Dave Hunkele | Secured Staging Area | 11/28/23 06:09 | Return to Storage |
| JD77365-12.1 | Secured Staging Area | Lauren Matthews | 11/28/23 10:13 | Retrieve from Storage |
| JD77365-12.1 | Lauren Matthews | Secured Storage | 11/28/23 18:46 | Return to Storage |
| | | | | |
| JD77365-13.1 | Haleigh Rosado | Secured Storage | 11/21/23 11:47 | Return to Storage |
| JD77365-13.1 | Secured Storage | Dave Hunkele | 11/22/23 10:48 | Retrieve from Storage |
| JD77365-13.1 | Dave Hunkele | Secured Staging Area | 11/22/23 10:48 | Return to Storage |
| JD77365-13.1 | Secured Staging Area | Mahendra Patel | 11/22/23 13:03 | Retrieve from Storage |
| JD77365-13.1 | Mahendra Patel | Secured Storage | 11/22/23 16:12 | Return to Storage |
| JD77365-13.1 | Secured Storage | Dave Hunkele | 11/25/23 15:13 | Retrieve from Storage |
| JD77365-13.1 | Dave Hunkele | Secured Staging Area | 11/25/23 15:13 | Return to Storage |
| JD77365-13.1 | Secured Storage | Dave Hunkele | 11/28/23 06:09 | Retrieve from Storage |
| Bottle was returned to secure storage, but inadvertently not scanned. | | | | |
| JD77365-13.1 | Dave Hunkele | Secured Staging Area | 11/28/23 06:09 | Return to Storage |
| JD77365-13.1 | Secured Staging Area | Lauren Matthews | 11/28/23 10:13 | Retrieve from Storage |
| JD77365-13.1 | Lauren Matthews | Secured Storage | 11/28/23 18:46 | Return to Storage |
| | | | | |
| JD77365-14.1 | Haleigh Rosado | Secured Storage | 11/21/23 11:47 | Return to Storage |
| JD77365-14.1 | Secured Storage | Dave Hunkele | 11/22/23 10:48 | Retrieve from Storage |
| JD77365-14.1 | Dave Hunkele | Secured Staging Area | 11/22/23 10:48 | Return to Storage |
| JD77365-14.1 | Secured Staging Area | Mahendra Patel | 11/22/23 13:03 | Retrieve from Storage |
| JD77365-14.1 | Mahendra Patel | Secured Storage | 11/22/23 16:12 | Return to Storage |
| JD77365-14.1 | Secured Storage | Dave Hunkele | 11/25/23 15:13 | Retrieve from Storage |
| JD77365-14.1 | Dave Hunkele | Secured Staging Area | 11/25/23 15:13 | Return to Storage |

# SGS Internal Chain of Custody

**Job Number:** JD77365
**Account:** IALNJR Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Received:** 11/21/23



| Sample.Bottle Number | Transfer FROM | Transfer TO | Date/Time | Reason |
|---|---|---|---|---|
| JD77365-14.1 | Secured Storage | Dave Hunkele | 11/28/23 06:09 | Retrieve from Storage |
| Bottle was returned to secure storage, but inadvertently not scanned. | | | | |
| JD77365-14.1 | Dave Hunkele | Secured Staging Area | 11/28/23 06:09 | Return to Storage |
| JD77365-14.1 | Secured Staging Area | Lauren Matthews | 11/28/23 10:13 | Retrieve from Storage |
| JD77365-14.1 | Lauren Matthews | Secured Storage | 11/28/23 18:46 | Return to Storage |
| JD77365-15.1 | Haleigh Rosado | Secured Storage | 11/21/23 11:47 | Return to Storage |
| JD77365-15.1 | Secured Storage | Dave Hunkele | 11/22/23 10:48 | Retrieve from Storage |
| JD77365-15.1 | Dave Hunkele | Secured Staging Area | 11/22/23 10:48 | Return to Storage |
| JD77365-15.1 | Secured Staging Area | Mahendra Patel | 11/22/23 13:03 | Retrieve from Storage |
| JD77365-15.1 | Mahendra Patel | Secured Storage | 11/22/23 16:12 | Return to Storage |
| JD77365-15.1 | Secured Storage | Dave Hunkele | 11/25/23 15:13 | Retrieve from Storage |
| JD77365-15.1 | Dave Hunkele | Secured Staging Area | 11/25/23 15:13 | Return to Storage |
| JD77365-15.1 | Secured Storage | Dave Hunkele | 11/28/23 06:09 | Retrieve from Storage |
| Bottle was returned to secure storage, but inadvertently not scanned. | | | | |
| JD77365-15.1 | Dave Hunkele | Secured Staging Area | 11/28/23 06:09 | Return to Storage |
| JD77365-15.1 | Secured Staging Area | Lauren Matthews | 11/28/23 10:13 | Retrieve from Storage |
| JD77365-15.1 | Lauren Matthews | Secured Storage | 11/28/23 18:46 | Return to Storage |
| JD77365-16.1 | Haleigh Rosado | Secured Storage | 11/21/23 11:47 | Return to Storage |
| JD77365-16.1 | Secured Storage | Dave Hunkele | 11/22/23 07:00 | Retrieve from Storage |
| JD77365-16.1 | Dave Hunkele | Secured Staging Area | 11/22/23 07:00 | Return to Storage |
| JD77365-16.1 | Secured Staging Area | Sean Sweeney | 11/22/23 08:16 | Retrieve from Storage |
| JD77365-16.1 | Sean Sweeney | Secured Storage | 11/22/23 14:06 | Return to Storage |
| JD77365-16.1 | Secured Storage | Dave Hunkele | 11/28/23 06:32 | Retrieve from Storage |
| JD77365-16.1 | Dave Hunkele | Secured Staging Area | 11/28/23 06:32 | Return to Storage |
| JD77365-16.1 | Secured Staging Area | Lauren Matthews | 11/28/23 10:14 | Retrieve from Storage |
| JD77365-16.1 | Lauren Matthews | Secured Storage | 11/28/23 18:46 | Return to Storage |
| JD77365-16.1 | Secured Storage | Dave Hunkele | 11/30/23 13:13 | Retrieve from Storage |
| JD77365-16.1 | Dave Hunkele | Secured Staging Area | 11/30/23 13:14 | Return to Storage |
| JD77365-16.1 | Secured Staging Area | Lauren Matthews | 11/30/23 13:18 | Retrieve from Storage |
| JD77365-16.1 | Lauren Matthews | Secured Storage | 11/30/23 19:08 | Return to Storage |
| JD77365-16F.2 | Haleigh Rosado | Secured Storage | 11/21/23 11:47 | Return to Storage |
| JD77365-16F.2 | Secured Storage | Dave Hunkele | 11/22/23 07:00 | Retrieve from Storage |
| JD77365-16F.2 | Dave Hunkele | Secured Staging Area | 11/22/23 07:00 | Return to Storage |
| JD77365-16F.2 | Secured Staging Area | Sean Sweeney | 11/22/23 08:16 | Retrieve from Storage |
| JD77365-16F.2 | Sean Sweeney | Secured Storage | 11/22/23 14:06 | Return to Storage |
| JD77365-16F.2 | Secured Storage | Dave Hunkele | 11/28/23 06:32 | Retrieve from Storage |
| JD77365-16F.2 | Dave Hunkele | Secured Staging Area | 11/28/23 06:32 | Return to Storage |
| JD77365-16F.2 | Secured Staging Area | Lauren Matthews | 11/28/23 10:14 | Retrieve from Storage |
| JD77365-16F.2 | Lauren Matthews | Secured Storage | 11/28/23 18:46 | Return to Storage |
| JD77365-17.1 | Haleigh Rosado | Secured Storage | 11/21/23 11:47 | Return to Storage |

# SGS Internal Chain of Custody

**Job Number:** JD77365
**Account:** IALNJR Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Received:** 11/21/23

| Sample.Bottle Number | Transfer FROM | Transfer TO | Date/Time | Reason |
|---|---|---|---|---|
| JD77365-17.1 | Secured Storage | Dave Hunkele | 11/22/23 07:00 | Retrieve from Storage |
| JD77365-17.1 | Dave Hunkele | Secured Staging Area | 11/22/23 07:00 | Return to Storage |
| JD77365-17.1 | Secured Staging Area | Sean Sweeney | 11/22/23 08:16 | Retrieve from Storage |
| JD77365-17.1 | Sean Sweeney | Secured Storage | 11/22/23 14:06 | Return to Storage |
| JD77365-17.1 | Secured Storage | Dave Hunkele | 11/28/23 06:32 | Retrieve from Storage |
| JD77365-17.1 | Dave Hunkele | Secured Staging Area | 11/28/23 06:32 | Return to Storage |
| JD77365-17.1 | Secured Staging Area | Lauren Matthews | 11/28/23 10:14 | Retrieve from Storage |
| JD77365-17.1 | Lauren Matthews | Secured Storage | 11/28/23 18:46 | Return to Storage |
| JD77365-17F.2 | Haleigh Rosado | Secured Storage | 11/21/23 11:47 | Return to Storage |
| JD77365-17F.2 | Secured Storage | Dave Hunkele | 11/22/23 07:00 | Retrieve from Storage |
| JD77365-17F.2 | Dave Hunkele | Secured Staging Area | 11/22/23 07:00 | Return to Storage |
| JD77365-17F.2 | Secured Staging Area | Sean Sweeney | 11/22/23 08:16 | Retrieve from Storage |
| JD77365-17F.2 | Sean Sweeney | Secured Storage | 11/22/23 14:06 | Return to Storage |
| JD77365-17F.2 | Secured Storage | Dave Hunkele | 11/28/23 06:32 | Retrieve from Storage |
| JD77365-17F.2 | Dave Hunkele | Secured Staging Area | 11/28/23 06:32 | Return to Storage |
| JD77365-17F.2 | Secured Staging Area | Lauren Matthews | 11/28/23 10:14 | Retrieve from Storage |
| JD77365-17F.2 | Lauren Matthews | Secured Storage | 11/28/23 18:46 | Return to Storage |
| JD77365-18.1 | Haleigh Rosado | Secured Storage | 11/21/23 11:47 | Return to Storage |
| JD77365-18.1 | Secured Storage | Dave Hunkele | 11/22/23 07:00 | Retrieve from Storage |
| JD77365-18.1 | Dave Hunkele | Secured Staging Area | 11/22/23 07:00 | Return to Storage |
| JD77365-18.1 | Secured Staging Area | Sean Sweeney | 11/22/23 08:16 | Retrieve from Storage |
| JD77365-18.1 | Sean Sweeney | Secured Storage | 11/22/23 14:06 | Return to Storage |
| JD77365-18.1 | Secured Storage | Dave Hunkele | 11/28/23 06:32 | Retrieve from Storage |
| JD77365-18.1 | Dave Hunkele | Secured Staging Area | 11/28/23 06:32 | Return to Storage |
| JD77365-18.1 | Secured Staging Area | Lauren Matthews | 11/28/23 10:14 | Retrieve from Storage |
| JD77365-18.1 | Lauren Matthews | Secured Storage | 11/28/23 18:46 | Return to Storage |
| JD77365-18.1 | Secured Storage | Dave Hunkele | 11/30/23 13:13 | Retrieve from Storage |
| JD77365-18.1 | Dave Hunkele | Secured Staging Area | 11/30/23 13:14 | Return to Storage |
| JD77365-18.1 | Secured Staging Area | Lauren Matthews | 11/30/23 13:18 | Retrieve from Storage |
| JD77365-18.1 | Lauren Matthews | Secured Storage | 11/30/23 19:08 | Return to Storage |
| JD77365-18F.2 | Haleigh Rosado | Secured Storage | 11/21/23 11:47 | Return to Storage |
| JD77365-18F.2 | Secured Storage | Dave Hunkele | 11/22/23 07:00 | Retrieve from Storage |
| JD77365-18F.2 | Dave Hunkele | Secured Staging Area | 11/22/23 07:00 | Return to Storage |
| JD77365-18F.2 | Secured Staging Area | Sean Sweeney | 11/22/23 08:16 | Retrieve from Storage |
| JD77365-18F.2 | Sean Sweeney | Secured Storage | 11/22/23 14:06 | Return to Storage |
| JD77365-18F.2 | Secured Storage | Dave Hunkele | 11/28/23 06:32 | Retrieve from Storage |
| JD77365-18F.2 | Dave Hunkele | Secured Staging Area | 11/28/23 06:32 | Return to Storage |
| JD77365-18F.2 | Secured Staging Area | Lauren Matthews | 11/28/23 10:14 | Retrieve from Storage |
| JD77365-18F.2 | Lauren Matthews | Secured Storage | 11/28/23 18:46 | Return to Storage |
| JD77365-19.1 | Haleigh Rosado | Secured Storage | 11/21/23 11:47 | Return to Storage |

# SGS Internal Chain of Custody



**Job Number:** JD77365
**Account:** IALNJR Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Received:** 11/21/23

| Sample.Bottle Number | Transfer FROM | Transfer TO | Date/Time | Reason |
|---|---|---|---|---|
| JD77365-19.1 | Secured Storage | Dave Hunkele | 11/22/23 07:00 | Retrieve from Storage |
| JD77365-19.1 | Dave Hunkele | Secured Staging Area | 11/22/23 07:00 | Return to Storage |
| JD77365-19.1 | Secured Staging Area | Sean Sweeney | 11/22/23 08:16 | Retrieve from Storage |
| JD77365-19.1 | Sean Sweeney | Secured Storage | 11/22/23 14:06 | Return to Storage |
| JD77365-19.1 | Secured Storage | Dave Hunkele | 11/28/23 06:32 | Retrieve from Storage |
| JD77365-19.1 | Dave Hunkele | Secured Staging Area | 11/28/23 06:32 | Return to Storage |
| JD77365-19.1 | Secured Staging Area | Lauren Matthews | 11/28/23 10:14 | Retrieve from Storage |
| JD77365-19.1 | Lauren Matthews | Secured Storage | 11/28/23 18:46 | Return to Storage |
| JD77365-19F.2 | Haleigh Rosado | Secured Storage | 11/21/23 11:47 | Return to Storage |
| JD77365-19F.2 | Secured Storage | Dave Hunkele | 11/22/23 07:00 | Retrieve from Storage |
| JD77365-19F.2 | Dave Hunkele | Secured Staging Area | 11/22/23 07:00 | Return to Storage |
| JD77365-19F.2 | Secured Staging Area | Sean Sweeney | 11/22/23 08:16 | Retrieve from Storage |
| JD77365-19F.2 | Sean Sweeney | Secured Storage | 11/22/23 14:06 | Return to Storage |
| JD77365-19F.2 | Secured Storage | Dave Hunkele | 11/28/23 06:32 | Retrieve from Storage |
| JD77365-19F.2 | Dave Hunkele | Secured Staging Area | 11/28/23 06:32 | Return to Storage |
| JD77365-19F.2 | Secured Staging Area | Lauren Matthews | 11/28/23 10:14 | Retrieve from Storage |
| JD77365-19F.2 | Lauren Matthews | Secured Storage | 11/28/23 18:46 | Return to Storage |

## Metals Analysis



### QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP Date Analyzed: 11/27/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55131
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 06:51 | MA55131-STD1 | 1 | | STDA |
| 06:56 | MA55131-STD2 | 1 | | STDB |
| 07:01 | MA55131-ICV1 | 1 | | |
| 07:09 | MA55131-ICV2 | 1 | | |
| 07:17 | MA55131-ICB1 | 1 | | |
| 07:24 | MA55131-ICCV1 | 1 | | |
| 07:32 | MA55131-CCB1 | 1 | | |
| 07:37 | MA55131-CRI1 | 1 | | |
| 07:42 | MA55131-CRID1 | 1 | | |
| 07:47 | MA55131-ICSA1 | 1 | | |
| 07:53 | MA55131-ICSAB1 | 1 | | |
| 07:57 | MA55131-HSTD1 | 1 | | |
| 08:03 | MA55131-HSTD2 | 1 | | |
| 08:08 | ZZZZZZ | 1 | | |
| 08:13 | ZZZZZZ | 1 | | |
| 08:18 | ZZZZZZ | 1 | | |
| 08:23 | MA55131-CCV1 | 1 | | |
| 08:28 | MA55131-CCB2 | 1 | | |
| 08:33 | MA55131-CRID2 | 1 | | |
| 08:54 | MP43317-MB1 | 1 | | |
| 08:59 | MP43317-B1 | 1 | | |
| 09:04 | MP43317-S1 | 1 | | |
| 09:09 | MP43317-S2 | 1 | | |
| 09:14 | JD77367-1 | 1 | | (sample used for QC only; not part of login JD77365) |
| 09:19 | MP43317-SD1 | 5 | | |
| 09:24 | JD77365-16 | 1 | | |
| 09:29 | JD77365-17 | 1 | | check undigested for Zn |
| 09:34 | MA55131-CCV2 | 1 | | |
| 09:39 | MA55131-CCB3 | 1 | | |
| 09:44 | JD77365-18 | 1 | | |
| 09:49 | JD77365-19 | 1 | | |
| 09:54 | JD77365-16F | 1 | | |
| 09:59 | JD77365-17F | 1 | | check undigested for Zn |

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP Date Analyzed: 11/27/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55131
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 10:04 | JD77365-18F | 1 | | |
| 10:09 | JD77365-19F | 1 | | |
| 10:14 | ZZZZZZ | 1 | | |
| 10:19 | ZZZZZZ | 1 | | |
| 10:24 | ZZZZZZ | 1 | | |
| 10:29 | MA55131-CCV3 | 1 | | |
| 10:34 | MA55131-CCB4 | 1 | | |
| 10:39 | ZZZZZZ | 1 | | |
| 10:44 | ZZZZZZ | 1 | | |
| 10:49 | ZZZZZZ | 1 | | |
| 10:54 | ZZZZZZ | 1 | | |
| 10:59 | ZZZZZZ | 1 | | |
| 11:04 | ZZZZZZ | 1 | | |
| 11:09 | ZZZZZZ | 1 | | |
| 11:14 | MA55131-CCV4 | 1 | | |
| 11:19 | MA55131-CCB5 | 1 | | |
| 11:24 | MP43317-S1 | 2 | | |
| 11:29 | MP43317-S2 | 2 | | |
| 11:34 | JD77367-1 | 2 | | (sample used for QC only; not part of login JD77365) |
| 11:39 | MP43317-SD1 | 10 | | |
| ----------> | Last reportable sample/prep for job JD77365 | | | |
| 11:44 | JD77365-16 | 2 | | |
| 11:49 | JD77365-19 | 2 | | |
| 11:54 | ZZZZZZ | 2 | | |
| 11:59 | ZZZZZZ | 2 | | |
| 12:04 | ZZZZZZ | 1 | | |
| 12:09 | MA55131-CCV5 | 1 | | |
| 12:14 | MA55131-CCB6 | 1 | | |
| ----------> | Last reportable CCB for job JD77365 | | | |
| 12:19 | ZZZZZZ | 1 | | |
| 12:24 | MP43315-MB1 | 1 | | |
| 12:29 | MP43315-B1 | 1 | | |
| 12:34 | MP43315-S1 | 1 | | |
| 12:39 | MP43315-S2 | 1 | | |
| 12:44 | JD77362-3 | 1 | | (sample used for QC only; not part of login JD77365) |

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP Date Analyzed: 11/27/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55131
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 12:49 | MP43315-SD1 | 5 | | |
| 12:54 | ZZZZZZ | 1 | | |
| 12:59 | ZZZZZZ | 1 | | |
| 13:04 | MA55131-CCV6 | 1 | | |
| 13:09 | MA55131-CCB7 | 1 | | |
| 13:14 | ZZZZZZ | 1 | | |
| 13:19 | ZZZZZZ | 1 | | |
| 13:24 | ZZZZZZ | 1 | | |
| 13:29 | ZZZZZZ | 1 | | |
| 13:34 | ZZZZZZ | 1 | | |
| 13:39 | ZZZZZZ | 1 | | |
| 13:44 | ZZZZZZ | 1 | | |
| 13:49 | ZZZZZZ | 1 | | |
| 13:54 | ZZZZZZ | 1 | | |
| 13:59 | ZZZZZZ | 1 | | |
| 14:04 | MA55131-CCV7 | 1 | | |
| 14:09 | MA55131-CCB8 | 1 | | |
| 14:14 | ZZZZZZ | 1 | | |
| 14:19 | ZZZZZZ | 1 | | |
| 14:24 | MP43315-S1 | 2 | | |
| 14:29 | MP43315-S2 | 2 | | |
| 14:34 | JD77362-3 | 2 | | (sample used for QC only; not part of login JD77365) |
| 14:39 | MP43315-SD1 | 10 | | |
| 14:44 | ZZZZZZ | 2 | | |
| 14:49 | ZZZZZZ | 2 | | |
| 14:54 | ZZZZZZ | 2 | | |
| 14:59 | ZZZZZZ | 2 | | |
| 15:04 | MA55131-CCV8 | 1 | | |
| 15:09 | MA55131-CCB9 | 1 | | |
| 15:14 | ZZZZZZ | 5 | | |
| 15:19 | ZZZZZZ | 1 | | |
| 15:24 | ZZZZZZ | 1 | | |
| 15:29 | ZZZZZZ | 1 | | |

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP Date Analyzed: 11/27/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55131
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 15:34 | ZZZZZZ | 1 | | |
| 15:40 | ZZZZZZ | 1 | | |
| 15:45 | MA55131-CCV9 | 1 | | |
| 15:50 | MA55131-CCB10 | 1 | | |

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP  Date Analyzed: 11/27/23  Methods: EPA 200.7, SW846 6010D
Analyst: ND  Run ID: MA55131
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Element: Dilution | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Ni | K | Se | Ag | Na | Tl | V | Zn | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07:01 | MA55131-ICV1 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 07:09 | MA55131-ICV2 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 07:17 | MA55131-ICB1 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 07:24 | MA55131-ICCV1 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 07:32 | MA55131-CCB1 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 07:37 | MA55131-CRI1 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 07:42 | MA55131-CRID1 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 07:47 | MA55131-ICSA1 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 07:53 | MA55131-ICSAB1 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 07:57 | MA55131-HSTD1 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 08:03 | MA55131-HSTD2 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 08:08 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 08:13 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 08:18 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 08:23 | MA55131-CCV1 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 08:28 | MA55131-CCB2 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 08:33 | MA55131-CRID2 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 08:54 | MP43317-MB1 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 08:59 | MP43317-B1 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 09:04 | MP43317-S1 | 1 | X | X | | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 09:09 | MP43317-S2 | 1 | X | X | | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 09:14 | JD77367-1 | 1 | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | (a) |
| 09:19 | MP43317-SD1 | 5 | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 09:24 | JD77365-16 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 09:29 | JD77365-17 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 09:34 | MA55131-CCV2 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 09:39 | MA55131-CCB3 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 09:44 | JD77365-18 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 09:49 | JD77365-19 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 09:54 | JD77365-16F | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 09:59 | JD77365-17F | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 10:04 | JD77365-18F | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 10:09 | JD77365-19F | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| | | Element: | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Ni | K | Se | Ag | Na | Tl | V | Zn | |

REPORTED ELEMENTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP Date Analyzed: 11/27/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55131
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Dilution | Element: | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Ni | K | Se | Ag | Na | Tl | V | Zn | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10:14 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 10:19 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 10:24 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 10:29 | MA55131-CCV3 | 1 | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 10:34 | MA55131-CCB4 | 1 | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 10:39 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 10:44 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 10:49 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 10:54 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 10:59 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 11:04 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 11:09 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 11:14 | MA55131-CCV4 | 1 | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 11:19 | MA55131-CCB5 | 1 | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 11:24 | MP43317-S1 | 2 | | | | X | | | | X | | | | | | | | | | | | | | | | |
| 11:29 | MP43317-S2 | 2 | | | | X | | | | X | | | | | | | | | | | | | | | | |
| 11:34 | JD77367-1 | 2 | | | | X | | | | | | | | | | | | | | | | | | | | (a) |
| 11:39 | MP43317-SD1 | 10 | | | | X | | | | | | | | | | | | | | | | | | | | |
| 11:44 | JD77365-16 | 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| 11:49 | JD77365-19 | 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| 11:54 | ZZZZZZ | 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| 11:59 | ZZZZZZ | 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| 12:04 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 12:09 | MA55131-CCV5 | 1 | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 12:14 | MA55131-CCB6 | 1 | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 12:19 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 12:24 | MP43315-MB1 | 1 | | X | | X | X | X | X | | X | X | X | | X | | X | X | | X | X | | | X | X | |
| 12:29 | MP43315-B1 | 1 | | X | | X | X | X | X | | X | X | X | | X | | X | X | | X | X | | | X | X | |
| 12:34 | MP43315-S1 | 1 | | X | | | X | X | X | | X | X | | | X | | X | X | | | | | | X | X | |
| 12:39 | MP43315-S2 | 1 | | X | | | X | X | X | | X | X | | | X | | X | X | | | | | | X | X | |
| 12:44 | JD77362-3 | 1 | | X | | | | X | | | X | X | | | X | | X | X | | | | | | X | X | (a) |
| 12:49 | MP43315-SD1 | 5 | | X | | | X | X | X | | X | X | | | X | | X | X | | | | | | X | X | |
| 12:54 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Element: | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Ni | K | Se | Ag | Na | Tl | V | Zn | |

REPORTED ELEMENTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP Date Analyzed: 11/27/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55131
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Dilution | Element: Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Ni | K | Se | Ag | Na | Tl | V | Zn | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12:59 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 13:04 | MA55131-CCV6 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 13:09 | MA55131-CCB7 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 13:14 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 13:19 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 13:24 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 13:29 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 13:34 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 13:39 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 13:44 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 13:49 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 13:54 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 13:59 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 14:04 | MA55131-CCV7 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 14:09 | MA55131-CCB8 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 14:14 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 14:19 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 14:24 | MP43315-S1 | 2 | | | X | | | | | | | X | | | | | | | | X | X | | | | |
| 14:29 | MP43315-S2 | 2 | | | X | | | | | | | X | | | | | | | | X | X | | | | |
| 14:34 | JD77362-3 | 2 | | | X | | | | | | | X | | | | | | | | X | | | | | (a) |
| 14:39 | MP43315-SD1 | 10 | | | X | | | | | | | X | | | | | | | | X | X | | | | |
| 14:44 | ZZZZZZ | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| 14:49 | ZZZZZZ | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| 14:54 | ZZZZZZ | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| 14:59 | ZZZZZZ | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| 15:04 | MA55131-CCV8 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 15:09 | MA55131-CCB9 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 15:14 | ZZZZZZ | 5 | | | | | | | | | | | | | | | | | | | | | | | |
| 15:19 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 15:24 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 15:29 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 15:34 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 15:40 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| | | Element: | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Ni | K | Se | Ag | Na | Tl | V | Zn | |

REPORTED ELEMENTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP Date Analyzed: 11/27/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55131
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Element: Dilution | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Ni | K | Se | Ag | Na | Tl | V | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15:45 | MA55131-CCV9 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 15:50 | MA55131-CCB10 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |

(a) Sample used for QC only; not part of login JD77365.

Element: Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn

INTERNAL STANDARD SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP Date Analyzed: 11/27/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55131
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Istd#1 | Istd#2 | Istd#3 | Istd#4 |
|---|---|---|---|---|---|
| 06:51 | MA55131-STD1 | 3028 R | 126450 R | 9125 R | 7880 R |
| 06:56 | MA55131-STD2 | 2878 | 120100 | 8969 | 7630 |
| 07:01 | MA55131-ICV1 | 3025 | 126850 | 9323 | 7929 |
| 07:09 | MA55131-ICV2 | 2964 | 123990 | 9162 | 7784 |
| 07:17 | MA55131-ICB1 | 3042 | 127310 | 9269 | 7941 |
| 07:24 | MA55131-ICCV1 | 2941 | 122290 | 9165 | 7756 |
| 07:32 | MA55131-CCB1 | 3021 | 126950 | 9274 | 7882 |
| 07:37 | MA55131-CRI1 | 3003 | 125460 | 9184 | 7856 |
| 07:42 | MA55131-CRID1 | No results reported for the elements associated with this internal standard. | | | |
| 07:47 | MA55131-ICSA1 | 2806 | 117580 | 9101 | 7396 |
| 07:53 | MA55131-ICSAB1 | 2831 | 119210 | 9209 | 7473 |
| 07:57 | MA55131-HSTD1 | 3014 | 126500 | 9440 | 8146 |
| 08:03 | MA55131-HSTD2 | 2870 | 119490 | 9180 | 7495 |
| 08:08 | ZZZZZZ | 3044 | 127310 | 9322 | 8208 |
| 08:13 | ZZZZZZ | 3021 | 130300 | 9477 | 8083 |
| 08:18 | ZZZZZZ | 3125 | 130550 | 9512 | 8137 |
| 08:23 | MA55131-CCV1 | 3041 | 126470 | 9451 | 7988 |
| 08:28 | MA55131-CCB2 | 3120 | 130660 | 9498 | 8124 |
| 08:33 | MA55131-CRID2 | 3107 | 129900 | 9525 | 8113 |
| 08:54 | MP43317-MB1 | 3077 | 129380 | 9507 | 8038 |
| 08:59 | MP43317-B1 | 3025 | 125720 | 9506 | 7996 |
| 09:04 | MP43317-S1 | 2910 | 121480 | 9334 | 7687 |
| 09:09 | MP43317-S2 | 2929 | 121610 | 9374 | 7734 |
| 09:14 | JD77367-1 | 2960 | 122690 | 9383 | 7783 |
| 09:19 | MP43317-SD1 | 2995 | 124690 | 9347 | 7911 |
| 09:24 | JD77365-16 | 3013 | 125230 | 9598 | 7749 |
| 09:29 | JD77365-17 | 3041 | 126410 | 9578 | 7948 |
| 09:34 | MA55131-CCV2 | 2940 | 122610 | 9365 | 7798 |
| 09:39 | MA55131-CCB3 | 3039 | 126690 | 9411 | 7964 |
| 09:44 | JD77365-18 | 2991 | 123400 | 9536 | 7839 |
| 09:49 | JD77365-19 | 3058 | 126840 | 9776 | 7922 |
| 09:54 | JD77365-16F | 2988 | 123570 | 9468 | 7839 |
| 09:59 | JD77365-17F | 2976 | 123060 | 9462 | 7833 |

INTERNAL STANDARD SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP Date Analyzed: 11/27/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55131
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Istd#1 | Istd#2 | Istd#3 | Istd#4 |
|---|---|---|---|---|---|
| 10:04 | JD77365-18F | 2966 | 121590 | 9475 | 7820 |
| 10:09 | JD77365-19F | 3009 | 124820 | 9612 | 7898 |
| 10:14 | ZZZZZZ | 3030 | 125600 | 9745 | 8031 |
| 10:19 | ZZZZZZ | 2997 | 123900 | 9714 | 7957 |
| 10:24 | ZZZZZZ | 2979 | 122850 | 9496 | 7898 |
| 10:29 | MA55131-CCV3 | 2985 | 123200 | 9632 | 7939 |
| 10:34 | MA55131-CCB4 | 3076 | 126970 | 9701 | 8100 |
| 10:39 | ZZZZZZ | 2988 | 123780 | 9682 | 7954 |
| 10:44 | ZZZZZZ | 2989 | 123530 | 9652 | 7940 |
| 10:49 | ZZZZZZ | 2967 | 122920 | 9673 | 7889 |
| 10:54 | ZZZZZZ | 2937 | 121180 | 9599 | 7813 |
| 10:59 | ZZZZZZ | 2967 | 121770 | 9718 | 7841 |
| 11:04 | ZZZZZZ | 2962 | 122610 | 9585 | 7838 |
| 11:09 | ZZZZZZ | 3031 | 126890 | 9618 | 8012 |
| 11:14 | MA55131-CCV4 | 3016 | 125700 | 9551 | 7974 |
| 11:19 | MA55131-CCB5 | 3107 | 130380 | 9625 | 8117 |
| 11:24 | MP43317-S1 | 2988 | 125200 | 9522 | 7877 |
| 11:29 | MP43317-S2 | 2997 | 124680 | 9537 | 7894 |
| 11:34 | JD77367-1 | 3027 | 126020 | 9524 | 7952 |
| 11:39 | MP43317-SD1 | 3074 | 128250 | 9542 | 8077 |
| 11:44 | JD77365-16 | No results reported for the elements associated with this internal standard. | | | |
| 11:49 | JD77365-19 | No results reported for the elements associated with this internal standard. | | | |
| 11:54 | ZZZZZZ | No results reported for the elements associated with this internal standard. | | | |
| 11:59 | ZZZZZZ | 3010 | 125590 | 9399 | 7914 |
| 12:04 | ZZZZZZ | 3042 | 126590 | 9292 | 7975 |
| 12:09 | MA55131-CCV5 | 2955 | 123200 | 9252 | 7793 |
| 12:14 | MA55131-CCB6 | 3107 | 130230 | 9522 | 8096 |
| 12:19 | ZZZZZZ | 3012 | 129860 | 9281 | 7906 |
| 12:24 | MP43315-MB1 | 3116 | 131490 | 9712 | 8118 |
| 12:29 | MP43315-B1 | 3035 | 127820 | 9540 | 7983 |
| 12:34 | MP43315-S1 | 3057 | 128270 | 9803 | 7978 |
| 12:39 | MP43315-S2 | 3040 | 127570 | 9778 | 7918 |
| 12:44 | JD77362-3 | 3084 | 129740 | 9794 | 7982 |

INTERNAL STANDARD SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP Date Analyzed: 11/27/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55131
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Istd#1 | Istd#2 | Istd#3 | Istd#4 |
|---|---|---|---|---|---|
| 12:49 | MP43315-SD1 | 3122 | 131410 | 9643 | 8108 |
| 12:54 | ZZZZZZ | 3115 | 130790 | 9790 | 7980 |
| 12:59 | ZZZZZZ | 3148 | 132880 | 10036 | 7934 |
| 13:04 | MA55131-CCV6 | 2995 | 125220 | 9315 | 7872 |
| 13:09 | MA55131-CCB7 | 3090 | 129020 | 9436 | 8042 |
| 13:14 | ZZZZZZ | 3104 | 130190 | 9780 | 8051 |
| 13:19 | ZZZZZZ | 3083 | 130110 | 9614 | 7947 |
| 13:24 | ZZZZZZ | 3138 | 131980 | 9944 | 8039 |
| 13:29 | ZZZZZZ | 3102 | 130450 | 9816 | 7975 |
| 13:34 | ZZZZZZ | 3118 | 131360 | 9846 | 7923 |
| 13:39 | ZZZZZZ | 3170 | 133300 | 10001 | 8069 |
| 13:44 | ZZZZZZ | 3163 | 133190 | 9976 | 7977 |
| 13:49 | ZZZZZZ | 3103 | 129710 | 9697 | 8054 |
| 13:54 | ZZZZZZ | 3132 | 130670 | 9820 | 8029 |
| 13:59 | ZZZZZZ | 2931 | 124410 | 9315 | 7967 |
| 14:04 | MA55131-CCV7 | 2981 | 124030 | 9190 | 7841 |
| 14:09 | MA55131-CCB8 | 3093 | 128980 | 9383 | 8050 |
| 14:14 | ZZZZZZ | 3094 | 129240 | 9398 | 8057 |
| 14:19 | ZZZZZZ | 3095 | 129930 | 9401 | 8066 |
| 14:24 | MP43315-S1 | 3049 | 127300 | 9527 | 7957 |
| 14:29 | MP43315-S2 | 3052 | 127740 | 9517 | 7957 |
| 14:34 | JD77362-3 | 3047 | 128760 | 9529 | 7927 |
| 14:39 | MP43315-SD1 | 3058 | 129790 | 9444 | 7955 |
| 14:44 | ZZZZZZ | 3055 | 127310 | 9507 | 7971 |
| 14:49 | ZZZZZZ | 3076 | 127840 | 9514 | 7966 |
| 14:54 | ZZZZZZ | 3117 | 130220 | 9697 | 8081 |
| 14:59 | ZZZZZZ | 3136 | 130350 | 9641 | 8084 |
| 15:04 | MA55131-CCV8 | 2984 | 124030 | 9181 | 7856 |
| 15:09 | MA55131-CCB9 | 3049 | 128190 | 9277 | 7961 |
| 15:14 | ZZZZZZ | 3055 | 127310 | 9384 | 8048 |
| 15:19 | ZZZZZZ | 3072 | 128390 | 9277 | 8026 |
| 15:24 | ZZZZZZ | 3091 | 131100 | 9439 | 8040 |
| 15:29 | ZZZZZZ | 3080 | 129940 | 9264 | 8025 |

INTERNAL STANDARD SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP Date Analyzed: 11/27/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55131
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Istd#1 | Istd#2 | Istd#3 | Istd#4 |
|---|---|---|---|---|---|
| 15:34 | ZZZZZZ | 3033 | 127430 | 9161 | 7971 |
| 15:40 | ZZZZZZ | 2914 | 120960 | 8972 | 7578 |
| 15:45 | MA55131-CCV9 | 3003 | 124960 | 9218 | 7902 |
| 15:50 | MA55131-CCB10 | 3083 | 128970 | 9201 | 8027 |

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

| Istd# | Parameter | Limits |
|---|---|---|
| Istd#1 | Yttrium (2243) | 70-130 % |
| Istd#2 | Yttrium (3600) | 70-130 % |
| Istd#3 | Yttrium (3710) | 70-130 % |
| Istd#4 | Indium | 70-130 % |

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP  Date Analyzed: 11/27/23  Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL  Run ID: MA55131  Units: ug/l

| Time: / Sample ID: | | | 07:17 ICB1 | | 07:32 CCB1 | | 08:28 CCB2 | | 09:39 CCB3 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Metal | RL | IDL | raw | final | raw | final | raw | final | raw | final |
| Aluminum | 200 | 9.2 | -4.40 | <200 | -8.50 | <200 | -4.70 | <200 | -7.20 | <200 |
| Antimony | 6.0 | 2.8 | 0.100 | <6.0 | 0.300 | <6.0 | 0.100 | <6.0 | -0.300 | <6.0 |
| Arsenic | 3.0 | 2.6 | 0.00 | <3.0 | 0.300 | <3.0 | -0.300 | <3.0 | 0.00 | <3.0 |
| Barium | 200 | .2 | 0.200 | <200 | 0.200 | <200 | 0.00 | <200 | 0.200 | <200 |
| Beryllium | 1.0 | .2 | 0.100 | <1.0 | 0.100 | <1.0 | 0.100 | <1.0 | 0.100 | <1.0 |
| Bismuth | 20 | 2.5 | | | | | | | | |
| Boron | 100 | 1.8 | | | | | | | | |
| Cadmium | 3.0 | .4 | -0.100 | <3.0 | 0.200 | <3.0 | 0.200 | <3.0 | 0.200 | <3.0 |
| Calcium | 5000 | 13 | -1.00 | <5000 | -2.60 | <5000 | -2.90 | <5000 | -1.40 | <5000 |
| Cerium | 100 | | | | | | | | | |
| Chromium | 10 | .7 | 0.00 | <10 | 0.100 | <10 | 0.100 | <10 | 0.00 | <10 |
| Cobalt | 50 | .6 | 0.100 | <50 | 0.100 | <50 | 0.00 | <50 | 0.100 | <50 |
| Copper | 10 | .7 | -0.200 | <10 | 0.700 | <10 | 0.500 | <10 | 1.30 | <10 |
| Iron | 100 | 3.3 | 1.00 | <100 | 0.500 | <100 | 3.60 | <100 | 0.600 | <100 |
| Lead | 3.0 | 2 | -0.800 | <3.0 | -0.300 | <3.0 | 0.200 | <3.0 | -0.400 | <3.0 |
| Lithium | 50 | 1.5 | | | | | | | | |
| Magnesium | 5000 | 25 | -6.20 | <5000 | -14.5 | <5000 | -23.0 | <5000 | -16.3 | <5000 |
| Manganese | 15 | .1 | 0.100 | <15 | 0.100 | <15 | 0.200 | <15 | 0.200 | <15 |
| Molybdenum | 20 | .6 | | | | | | | | |
| Nickel | 10 | .8 | 0.400 | <10 | 0.300 | <10 | 0.00 | <10 | 0.300 | <10 |
| Phosphorus | 50 | 7 | | | | | | | | |
| Potassium | 10000 | 35 | -12.3 | <10000 | 31.5 | <10000 | 28.7 | <10000 | -9.10 | <10000 |
| Selenium | 10 | 3.6 | 1.30 | <10 | 2.60 | <10 | 0.700 | <10 | 2.90 | <10 |
| Silicon | 200 | 2.2 | | | | | | | | |
| Silver | 10 | .6 | 0.00 | <10 | 0.100 | <10 | 0.00 | <10 | 0.200 | <10 |
| Sodium | 10000 | 14 | -3.30 | <10000 | -2.90 | <10000 | -5.20 | <10000 | -9.40 | <10000 |
| Strontium | 10 | .1 | | | | | | | | |
| Sulfur | 50 | 3.7 | | | | | | | | |
| Thallium | 10 | 5.2 | 0.100 | <10 | -0.700 | <10 | 0.900 | <10 | 0.200 | <10 |
| Tin | 10 | 1.4 | | | | | | | | |
| Titanium | 10 | .8 | | | | | | | | |
| Tungsten | 50 | 1.3 | | | | | | | | |
| Vanadium | 50 | .5 | -0.100 | <50 | 0.00 | <50 | 0.200 | <50 | 0.100 | <50 |

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP  Date Analyzed: 11/27/23  Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL  Run ID: MA55131  Units: ug/l

| Time: | | | 07:17 | | 07:32 | | 08:28 | | 09:39 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | | | ICB1 | | CCB1 | | CCB2 | | CCB3 | |
| Metal | RL | IDL | raw | final | raw | final | raw | final | raw | final |
| Zinc | 20 | .3 | 0.200 | <20 | 0.400 | <20 | 0.300 | <20 | 0.200 | <20 |
| Zirconium | 10 | .5 | | | | | | | | |

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP  Date Analyzed: 11/27/23  Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL  Run ID: MA55131  Units: ug/l

| Time: | | | 10:34 | | 11:19 | | 12:14 | |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | | | CCB4 | | CCB5 | | CCB6 | |
| Metal | RL | IDL | raw | final | raw | final | raw | final |
| Aluminum | 200 | 9.2 | -17.0 | <200 | -6.50 | <200 | -11.1 | <200 |
| Antimony | 6.0 | 2.8 | 0.200 | <6.0 | 0.700 | <6.0 | 0.400 | <6.0 |
| Arsenic | 3.0 | 2.6 | 0.200 | <3.0 | 0.500 | <3.0 | 0.400 | <3.0 |
| Barium | 200 | .2 | -0.300 | <200 | 0.300 | <200 | 0.200 | <200 |
| Beryllium | 1.0 | .2 | 0.100 | <1.0 | 0.100 | <1.0 | 0.200 | <1.0 |
| Bismuth | 20 | 2.5 | | | | | | |
| Boron | 100 | 1.8 | | | | | | |
| Cadmium | 3.0 | .4 | 0.200 | <3.0 | 0.200 | <3.0 | 0.200 | <3.0 |
| Calcium | 5000 | 13 | -2.50 | <5000 | -1.10 | <5000 | -6.40 | <5000 |
| Cerium | 100 | | | | | | | |
| Chromium | 10 | .7 | 0.200 | <10 | 0.200 | <10 | 0.00 | <10 |
| Cobalt | 50 | .6 | -0.100 | <50 | 0.200 | <50 | -0.200 | <50 |
| Copper | 10 | .7 | 1.90 | <10 | 0.600 | <10 | 0.600 | <10 |
| Iron | 100 | 3.3 | 3.00 | <100 | 2.40 | <100 | 5.80 | <100 |
| Lead | 3.0 | 2 | -0.500 | <3.0 | -1.30 | <3.0 | -0.700 | <3.0 |
| Lithium | 50 | 1.5 | | | | | | |
| Magnesium | 5000 | 25 | -21.0 | <5000 | -39.0 | <5000 | -10.9 | <5000 |
| Manganese | 15 | .1 | 0.200 | <15 | 0.200 | <15 | 0.200 | <15 |
| Molybdenum | 20 | .6 | | | | | | |
| Nickel | 10 | .8 | 0.200 | <10 | 0.00 | <10 | 0.100 | <10 |
| Phosphorus | 50 | 7 | | | | | | |
| Potassium | 10000 | 35 | 0.00 | <10000 | 13.2 | <10000 | -14.6 | <10000 |
| Selenium | 10 | 3.6 | 1.10 | <10 | 1.90 | <10 | 2.10 | <10 |
| Silicon | 200 | 2.2 | | | | | | |
| Silver | 10 | .6 | 0.700 | <10 | 0.00 | <10 | -0.100 | <10 |
| Sodium | 10000 | 14 | -3.90 | <10000 | -9.90 | <10000 | -8.60 | <10000 |
| Strontium | 10 | .1 | | | | | | |
| Sulfur | 50 | 3.7 | | | | | | |
| Thallium | 10 | 5.2 | -0.500 | <10 | 0.800 | <10 | 0.900 | <10 |
| Tin | 10 | 1.4 | | | | | | |
| Titanium | 10 | .8 | | | | | | |
| Tungsten | 50 | 1.3 | | | | | | |
| Vanadium | 50 | .5 | 0.200 | <50 | 0.200 | <50 | 0.100 | <50 |

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP  Date Analyzed: 11/27/23  Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL  Run ID: MA55131  Units: ug/l

| Time: | | | 10:34 | | 11:19 | | 12:14 | |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | | | CCB4 | | CCB5 | | CCB6 | |
| Metal | RL | IDL | raw | final | raw | final | raw | final |
| Zinc | 20 | .3 | 0.100 | <20 | 0.100 | <20 | 0.100 | <20 |
| Zirconium | 10 | .5 | | | | | | |

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP  Date Analyzed: 11/27/23  Methods: EPA 200.7, SW846 6010D
QC Limits: to % Recovery  Run ID: MA55131  Units: ug/l

| Time: | | 07:24 | |
|---|---|---|---|
| Sample ID: | ICCV | ICCV1 | |
| Metal | True | Results | % Rec |
| Aluminum | 40000 | 39700 | 99.3 |
| Antimony | 2000 | 2010 | 100.5 |
| Arsenic | 2000 | 2000 | 100.0 |
| Barium | 2000 | 1980 | 99.0 |
| Beryllium | 2000 | 2020 | 101.0 |
| Bismuth | | | |
| Boron | | | |
| Cadmium | 2000 | 2000 | 100.0 |
| Calcium | 40000 | 40000 | 100.0 |
| Cerium | | | |
| Chromium | 2000 | 2040 | 102.0 |
| Cobalt | 2000 | 2010 | 100.5 |
| Copper | 2000 | 2000 | 100.0 |
| Iron | 40000 | 39100 | 97.8 |
| Lead | 2000 | 2030 | 101.5 |
| Lithium | | | |
| Magnesium | 40000 | 39500 | 98.8 |
| Manganese | 2000 | 2090 | 104.5 |
| Molybdenum | | | |
| Nickel | 2000 | 2040 | 102.0 |
| Phosphorus | | | |
| Potassium | 40000 | 39100 | 97.8 |
| Selenium | 2000 | 2010 | 100.5 |
| Silicon | | | |
| Silver | 250 | 248 | 99.2 |
| Sodium | 40000 | 38800 | 97.0 |
| Strontium | | | |
| Sulfur | | | |
| Thallium | 2000 | 2030 | 101.5 |
| Tin | | | |
| Titanium | | | |
| Tungsten | | | |
| Vanadium | 2000 | 2040 | 102.0 |

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP  Date Analyzed: 11/27/23  Methods: EPA 200.7, SW846 6010D
QC Limits:  to  % Recovery  Run ID: MA55131  Units: ug/l

| Time: | | 07:24 | |
|---|---|---|---|
| Sample ID: | ICCV | ICCV1 | |
| Metal | True | Results | % Rec |
| Zinc | 2000 | 2040 | 102.0 |
| Zirconium | | | |

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP  Date Analyzed: 11/27/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery  Run ID: MA55131  Units: ug/l

| Time: | | 07:01 | | | 07:09 | | | 08:23 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | ICV | ICV1 | | ICV | ICV2 | | CCV | CCV1 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Aluminum | 40000 | 38300 | 95.8 | 40000 | 39700 | 99.3 | 40000 | 38500 | 96.3 |
| Antimony | 2000 | 1930 | 96.5 | 2000 | 2000 | 100.0 | 2000 | 1940 | 97.0 |
| Arsenic | 2000 | 1930 | 96.5 | 2000 | 2000 | 100.0 | 2000 | 1940 | 97.0 |
| Barium | 2000 | 1940 | 97.0 | 2000 | 2000 | 100.0 | 2000 | 1920 | 96.0 |
| Beryllium | 2000 | 1960 | 98.0 | 2000 | 2020 | 101.0 | 2000 | 1950 | 97.5 |
| Bismuth | | | | | | | | | |
| Boron | | | | | | | | | |
| Cadmium | 2000 | 1930 | 96.5 | 2000 | 2000 | 100.0 | 2000 | 1930 | 96.5 |
| Calcium | 40000 | 38800 | 97.0 | 40000 | 40100 | 100.3 | 40000 | 38700 | 96.8 |
| Cerium | | | | | | | | | |
| Chromium | 2000 | 1950 | 97.5 | 2000 | 2030 | 101.5 | 2000 | 1970 | 98.5 |
| Cobalt | 2000 | 1950 | 97.5 | 2000 | 2020 | 101.0 | 2000 | 1950 | 97.5 |
| Copper | 2000 | 1910 | 95.5 | 2000 | 1980 | 99.0 | 2000 | 1930 | 96.5 |
| Iron | 40000 | 38700 | 96.8 | 40000 | 39900 | 99.8 | 40000 | 37700 | 94.3 |
| Lead | 2000 | 1970 | 98.5 | 2000 | 2040 | 102.0 | 2000 | 1970 | 98.5 |
| Lithium | | | | | | | | | |
| Magnesium | 40000 | 38600 | 96.5 | 40000 | 39800 | 99.5 | 40000 | 37900 | 94.8 |
| Manganese | 2000 | 1970 | 98.5 | 2000 | 2060 | 103.0 | 2000 | 2010 | 100.5 |
| Molybdenum | | | | | | | | | |
| Nickel | 2000 | 1980 | 99.0 | 2000 | 2050 | 102.5 | 2000 | 1980 | 99.0 |
| Phosphorus | | | | | | | | | |
| Potassium | 40000 | 38100 | 95.3 | 40000 | 39400 | 98.5 | 40000 | 37900 | 94.8 |
| Selenium | 2000 | 1930 | 96.5 | 2000 | 1990 | 99.5 | 2000 | 1940 | 97.0 |
| Silicon | | | | | | | | | |
| Silver | 250 | 238 | 95.2 | 250 | 246 | 98.4 | 250 | 240 | 96.0 |
| Sodium | 40000 | 38300 | 95.8 | 40000 | 39500 | 98.8 | 40000 | 37500 | 93.8 |
| Strontium | | | | | | | | | |
| Sulfur | | | | | | | | | |
| Thallium | 2000 | 1980 | 99.0 | 2000 | 2040 | 102.0 | 2000 | 1980 | 99.0 |
| Tin | | | | | | | | | |
| Titanium | | | | | | | | | |
| Tungsten | | | | | | | | | |
| Vanadium | 2000 | 1940 | 97.0 | 2000 | 2020 | 101.0 | 2000 | 1960 | 98.0 |

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP  Date Analyzed: 11/27/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery  Run ID: MA55131  Units: ug/l

| Time: | | 07:01 | | | 07:09 | | | 08:23 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | ICV | ICV1 | | ICV | ICV2 | | CCV | CCV1 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Zinc | 2000 | 1970 | 98.5 | 2000 | 2040 | 102.0 | 2000 | 1960 | 98.0 |
| Zirconium | | | | | | | | | |

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP  Date Analyzed: 11/27/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery  Run ID: MA55131  Units: ug/l

| Time: | | 09:34 | | | 10:29 | | | 11:14 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | CCV | CCV2 | | CCV | CCV3 | | CCV | CCV4 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Aluminum | 40000 | 39600 | 99.0 | 40000 | 39000 | 97.5 | 40000 | 38500 | 96.3 |
| Antimony | 2000 | 2020 | 101.0 | 2000 | 1990 | 99.5 | 2000 | 1970 | 98.5 |
| Arsenic | 2000 | 2010 | 100.5 | 2000 | 1980 | 99.0 | 2000 | 1950 | 97.5 |
| Barium | 2000 | 1960 | 98.0 | 2000 | 1910 | 95.5 | 2000 | 1920 | 96.0 |
| Beryllium | 2000 | 1980 | 99.0 | 2000 | 1940 | 97.0 | 2000 | 1930 | 96.5 |
| Bismuth | | | | | | | | | |
| Boron | | | | | | | | | |
| Cadmium | 2000 | 1990 | 99.5 | 2000 | 1960 | 98.0 | 2000 | 1950 | 97.5 |
| Calcium | 40000 | 39500 | 98.8 | 40000 | 38700 | 96.8 | 40000 | 38400 | 96.0 |
| Cerium | | | | | | | | | |
| Chromium | 2000 | 2040 | 102.0 | 2000 | 2020 | 101.0 | 2000 | 1980 | 99.0 |
| Cobalt | 2000 | 1990 | 99.5 | 2000 | 1960 | 98.0 | 2000 | 1950 | 97.5 |
| Copper | 2000 | 1990 | 99.5 | 2000 | 1960 | 98.0 | 2000 | 1940 | 97.0 |
| Iron | 40000 | 37900 | 94.8 | 40000 | 36300 | 90.8 | 40000 | 37000 | 92.5 |
| Lead | 2000 | 2010 | 100.5 | 2000 | 1970 | 98.5 | 2000 | 1970 | 98.5 |
| Lithium | | | | | | | | | |
| Magnesium | 40000 | 38400 | 96.0 | 40000 | 37200 | 93.0 | 40000 | 37300 | 93.3 |
| Manganese | 2000 | 2080 | 104.0 | 2000 | 2090 | 104.5 | 2000 | 2020 | 101.0 |
| Molybdenum | | | | | | | | | |
| Nickel | 2000 | 2040 | 102.0 | 2000 | 2010 | 100.5 | 2000 | 1990 | 99.5 |
| Phosphorus | | | | | | | | | |
| Potassium | 40000 | 38500 | 96.3 | 40000 | 37600 | 94.0 | 40000 | 37700 | 94.3 |
| Selenium | 2000 | 2020 | 101.0 | 2000 | 1990 | 99.5 | 2000 | 1960 | 98.0 |
| Silicon | | | | | | | | | |
| Silver | 250 | 247 | 98.8 | 250 | 244 | 97.6 | 250 | 241 | 96.4 |
| Sodium | 40000 | 38000 | 95.0 | 40000 | 36600 | 91.5 | 40000 | 37300 | 93.3 |
| Strontium | | | | | | | | | |
| Sulfur | | | | | | | | | |
| Thallium | 2000 | 2020 | 101.0 | 2000 | 1980 | 99.0 | 2000 | 1980 | 99.0 |
| Tin | | | | | | | | | |
| Titanium | | | | | | | | | |
| Tungsten | | | | | | | | | |
| Vanadium | 2000 | 2040 | 102.0 | 2000 | 2030 | 101.5 | 2000 | 1980 | 99.0 |

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP  Date Analyzed: 11/27/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery  Run ID: MA55131  Units: ug/l

| Time: | | 09:34 | | | 10:29 | | | 11:14 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | CCV | CCV2 | | CCV | CCV3 | | CCV | CCV4 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Zinc | 2000 | 2030 | 101.5 | 2000 | 1980 | 99.0 | 2000 | 1960 | 98.0 |
| Zirconium | | | | | | | | | |

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP  Date Analyzed: 11/27/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery  Run ID: MA55131  Units: ug/l

| Time: | | 12:09 | |
|---|---|---|---|
| Sample ID: | CCV | CCV5 | |
| Metal | True | Results | % Rec |
| Aluminum | 40000 | 39200 | 98.0 |
| Antimony | 2000 | 2000 | 100.0 |
| Arsenic | 2000 | 1990 | 99.5 |
| Barium | 2000 | 1970 | 98.5 |
| Beryllium | 2000 | 1980 | 99.0 |
| Bismuth | | | |
| Boron | | | |
| Cadmium | 2000 | 1990 | 99.5 |
| Calcium | 40000 | 39200 | 98.0 |
| Cerium | | | |
| Chromium | 2000 | 2010 | 100.5 |
| Cobalt | 2000 | 1990 | 99.5 |
| Copper | 2000 | 1980 | 99.0 |
| Iron | 40000 | 38100 | 95.3 |
| Lead | 2000 | 2010 | 100.5 |
| Lithium | | | |
| Magnesium | 40000 | 38300 | 95.8 |
| Manganese | 2000 | 2070 | 103.5 |
| Molybdenum | | | |
| Nickel | 2000 | 2020 | 101.0 |
| Phosphorus | | | |
| Potassium | 40000 | 38600 | 96.5 |
| Selenium | 2000 | 1990 | 99.5 |
| Silicon | | | |
| Silver | 250 | 245 | 98.0 |
| Sodium | 40000 | 38200 | 95.5 |
| Strontium | | | |
| Sulfur | | | |
| Thallium | 2000 | 2030 | 101.5 |
| Tin | | | |
| Titanium | | | |
| Tungsten | | | |
| Vanadium | 2000 | 2020 | 101.0 |

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP  Date Analyzed: 11/27/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery  Run ID: MA55131  Units: ug/l

| | | | |
|---|---|---|---|
| Time: | | 12:09 | |
| Sample ID: | CCV | CCV5 | |
| Metal | True | Results | % Rec |
| Zinc | 2000 | 2000 | 100.0 |
| Zirconium | | | |

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP  Date Analyzed: 11/27/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 90 to 110 % Recovery  Run ID: MA55131  Units: ug/l

| Time: | | 07:57 | | | 08:03 | |
|---|---|---|---|---|---|---|
| Sample ID: | HSTD | HSTD1 | | HSTD | HSTD2 | |
| Metal | True | Results | % Rec | True | Results | % Rec |
| Aluminum | | | | 300000 | 291000 | 97.0 |
| Antimony | 8000 | 7500 | 93.8 | | | |
| Arsenic | 8000 | 7480 | 93.5 | | | |
| Barium | 8000 | 7680 | 96.0 | | | |
| Beryllium | 8000 | 7740 | 96.8 | | | |
| Bismuth | | | | | | |
| Boron | | | | | | |
| Cadmium | 8000 | 7570 | 94.6 | | | |
| Calcium | | | | 200000 | 201000 | 100.5 |
| Cerium | | | | | | |
| Chromium | 8000 | 7970 | 99.6 | | | |
| Cobalt | 8000 | 7830 | 97.9 | | | |
| Copper | 8000 | 7710 | 96.4 | | | |
| Iron | | | | 200000 | 189000 | 94.5 |
| Lead | 8000 | 7850 | 98.1 | | | |
| Lithium | | | | | | |
| Magnesium | | | | 300000 | 282000 | 94.0 |
| Manganese | 8000 | 7910 | 98.9 | | | |
| Molybdenum | | | | | | |
| Nickel | 8000 | 7850 | 98.1 | | | |
| Phosphorus | | | | | | |
| Potassium | | | | 200000 | 197000 | 98.5 |
| Selenium | 8000 | 7680 | 96.0 | | | |
| Silicon | | | | | | |
| Silver | 625 | 590 | 94.4 | | | |
| Sodium | | | | 200000 | 194000 | 97.0 |
| Strontium | | | | | | |
| Sulfur | | | | | | |
| Thallium | 8000 | 7740 | 96.8 | | | |
| Tin | | | | | | |
| Titanium | | | | | | |
| Tungsten | | | | | | |
| Vanadium | 8000 | 7880 | 98.5 | | | |

HIGH STANDARD CHECK SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP  Date Analyzed: 11/27/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 90 to 110 % Recovery  Run ID: MA55131  Units: ug/l

| Time: | | 07:57 | | | 08:03 | |
|---|---|---|---|---|---|---|
| Sample ID: | HSTD | HSTD1 | | HSTD | HSTD2 | |
| Metal | True | Results | % Rec | True | Results | % Rec |
| Zinc | 8000 | 7930 | 99.1 | | | |
| Zirconium | | | | | | |

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP  Date Analyzed: 11/27/23  Methods: EPA 200.7, SW846 6010D
QC Limits: CRI 80-120%  CRIA 80-120%  Run ID: MA55131  Units: ug/l

| Time: | | | | 07:37 | | 08:33 | |
|---|---|---|---|---|---|---|---|
| Sample ID: | CRI | CRIA | CRID | CRI1 | | CRID2 | |
| Metal | True | True | True | Results | % Rec | Results | % Rec |
| Aluminum | 200 | 500 | 100 | 188 | 94.0 | 112 | 112.0 |
| Antimony | 6.0 | 20 | 3.0 | 5.90 | 98.3 | | |
| Arsenic | 8.0 | 20 | 3.0 | 7.60 | 95.0 | 3.30 | 110.0 |
| Barium | 200 | | 4.0 | 197 | 98.5 | 3.60 | 90.0 |
| Beryllium | 2.0 | | 1.0 | 2.20 | 110.0 | 0.900 | 90.0 |
| Bismuth | 20 | | | | | | |
| Boron | 100 | | 10 | | | | |
| Cadmium | 3.0 | | 1.0 | 2.90 | 96.7 | 0.800 | 80.0 |
| Calcium | 5000 | 2000 | 1000 | 5100 | 102.0 | 1000 | 100.0 |
| Cerium | | | | | | | |
| Chromium | 10 | | 2.0 | 10.1 | 101.0 | 2.10 | 105.0 |
| Cobalt | 50 | | 3.0 | 51.1 | 102.2 | 2.90 | 96.7 |
| Copper | 10 | | 2.0 | 10.5 | 105.0 | | |
| Iron | 100 | 500 | | 97.6 | 97.6 | | |
| Lead | 3.0 | 20 | 2.5 | 3.10 | 103.3 | | |
| Lithium | 50 | | | | | | |
| Magnesium | 5000 | 2000 | 100 | 5010 | 100.2 | | |
| Manganese | 15 | | 3.0 | 16.0 | 106.7 | 3.10 | 103.3 |
| Molybdenum | 20 | | | | | | |
| Nickel | 10 | | 4.0 | 10.3 | 103.0 | 4.50 | 112.5 |
| Phosphorus | 50 | | | | | | |
| Potassium | 5000 | | 2000 | 4880 | 97.6 | 1930 | 96.5 |
| Selenium | 10 | 20 | 5.0 | 11.9 | 119.0 | 5.90 | 118.0 |
| Silicon | 200 | | | | | | |
| Silver | 5.0 | | 2.0 | 4.90 | 98.0 | | |
| Sodium | 5000 | | 1000 | 4730 | 94.6 | 928 | 92.8 |
| Strontium | 10 | | | | | | |
| Sulfur | 50 | | | | | | |
| Thallium | 10 | | 2.0 | 8.80 | 88.0 | | |
| Tin | 10 | | | | | | |
| Titanium | 10 | | | | | | |
| Tungsten | 50 | | | | | | |
| Vanadium | 50 | | 2.0 | 50.9 | 101.8 | 2.00 | 100.0 |

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP  Date Analyzed: 11/27/23  Methods: EPA 200.7, SW846 6010D
QC Limits: CRI 80-120%  CRIA 80-120%  Run ID: MA55131  Units: ug/l

| Time: | | | | 07:37 | | 08:33 | |
|---|---|---|---|---|---|---|---|
| Sample ID: | CRI | CRIA | CRID | CRI1 | | CRID2 | |
| Metal | True | True | True | Results | % Rec | Results | % Rec |
| Zinc | 20 | | 10 | 22.4 | 112.0 | 10.2 | 102.0 |
| Zirconium | 10 | | | | | | |

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP  Date Analyzed: 11/27/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 80 to 120 % Recovery  Run ID: MA55131  Units: ug/l

| Time: | | | 07:47 | | 07:53 | |
|---|---|---|---|---|---|---|
| Sample ID: | ICSA | ICSAB | ICSA1 | | ICSAB1 | |
| Metal | True | True | Results | % Rec | Results | % Rec |
| Aluminum | 500000 | 500000 | 474000 | 94.8 | 477000 | 95.4 |
| Antimony | | 1000 | -2.40 | | 959 | 95.9 |
| Arsenic | | 1000 | 0.300 | | 959 | 95.9 |
| Barium | | 500 | -6.50 | | 463 | 92.6 |
| Beryllium | | 500 | 0.100 | | 475 | 95.0 |
| Bismuth | | 500 | 9.60 | | 509 | 101.8 |
| Boron | | 500 | -1.50 | | 490 | 98.0 |
| Cadmium | | 1000 | -0.200 | | 1010 | 101.0 |
| Calcium | 400000 | 400000 | 371000 | 92.8 | 361000 | 90.3 |
| Cerium | | | -23.6 | | 8.80 | |
| Chromium | | 500 | -2.90 | | 450 | 90.0 |
| Cobalt | | 500 | -0.400 | | 461 | 92.2 |
| Copper | | 500 | 0.500 | | 492 | 98.4 |
| Iron | 200000 | 200000 | 174000 | 87.0 | 178000 | 89.0 |
| Lead | | 1000 | -1.10 | | 919 | 91.9 |
| Lithium | | 500 | -10.8 | | 483 | 96.6 |
| Magnesium | 500000 | 500000 | 455000 | 91.0 | 460000 | 92.0 |
| Manganese | | 500 | 2.00 | | 484 | 96.8 |
| Molybdenum | | 500 | -0.700 | | 461 | 92.2 |
| Nickel | | 1000 | 1.40 | | 905 | 90.5 |
| Phosphorus | | 500 | 15.9 | | 507 | 101.4 |
| Potassium | | | 98.5 | | 110 | |
| Selenium | | 1000 | -6.00 | | 951 | 95.1 |
| Silicon | | 500 | -4.80 | | 494 | 98.8 |
| Silver | | 1000 | 1.90 | | 918 | 91.8 |
| Sodium | | | 6.50 | | 28.8 | |
| Strontium | | 500 | 9.10 | | 473 | 94.6 |
| Sulfur | | 500 | -0.400 | | 469 | 93.8 |
| Thallium | | 1000 | 5.00 | | 933 | 93.3 |
| Tin | | 500 | -1.80 | | 461 | 92.2 |
| Titanium | | 500 | -0.200 | | 464 | 92.8 |
| Tungsten | | 500 | 1.30 | | 460 | 92.0 |
| Vanadium | | 500 | -0.200 | | 472 | 94.4 |

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112723M1.ICP  Date Analyzed: 11/27/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 80 to 120 % Recovery  Run ID: MA55131  Units: ug/l

| Time: | | | 07:47 | | 07:53 | |
|---|---|---|---|---|---|---|
| Sample ID: | ICSA | ICSAB | ICSA1 | | ICSAB1 | |
| Metal | True | True | Results | % Rec | Results | % Rec |
| Zinc | | 1000 | 4.60 | | 925 | 92.5 |
| Zirconium | | 500 | 1.40 | | 452 | 90.4 |

(*) Outside of QC limits
(anr) Analyte not requested

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP Date Analyzed: 11/28/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55139
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 06:37 | MA55139-STD1 | 1 | | STDA |
| 06:42 | MA55139-STD2 | 1 | | STDB |
| 06:47 | MA55139-ICV1 | 1 | | |
| 06:55 | MA55139-ICB1 | 1 | | |
| 07:00 | MA55139-CCV1 | 1 | | |
| 07:05 | MA55139-CCB1 | 1 | | |
| 07:10 | MA55139-CRI1 | 1 | | |
| 07:15 | MA55139-CRID1 | 1 | | |
| 07:21 | MA55139-ICSA1 | 1 | | |
| 07:26 | MA55139-ICSAB1 | 1 | | |
| 07:31 | MA55139-HSTD1 | 1 | | |
| 07:36 | MA55139-HSTD2 | 1 | | |
| 07:41 | ZZZZZZ | 1 | | |
| 07:46 | ZZZZZZ | 1 | | |
| 07:52 | ZZZZZZ | 1 | | |
| 07:57 | MA55139-CCV2 | 1 | | |
| 08:02 | MA55139-CCB2 | 1 | | |
| 08:30 | MP43343-MB1 | 1 | | HSTD out |
| 08:35 | MP43343-B1 | 1 | | HSTD out |
| 08:40 | MP43343-S1 | 1 | | HSTD out |
| 08:45 | MP43343-S2 | 1 | | HSTD out |
| 08:50 | JD77539-3 | 1 | | (sample used for QC only; not part of login JD77365) |
| 08:56 | MP43343-SD1 | 5 | | HSTD out |
| 09:01 | MP43343-PS1 | 1 | | |
| 09:06 | ZZZZZZ | 1 | | |
| 09:11 | ZZZZZZ | 1 | | |
| 09:16 | MA55139-CCV3 | 1 | | |
| 09:20 | MA55139-CCB3 | 1 | | |
| 09:25 | ZZZZZZ | 1 | | |
| 09:30 | ZZZZZZ | 1 | | |
| 09:35 | ZZZZZZ | 1 | | |
| 09:40 | ZZZZZZ | 1 | | |
| 09:45 | ZZZZZZ | 1 | | |

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP Date Analyzed: 11/28/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55139
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 09:50 | ZZZZZZ | 1 | | |
| 09:55 | ZZZZZZ | 1 | | |
| 10:00 | ZZZZZZ | 1 | | |
| 10:05 | ZZZZZZ | 1 | | |
| 10:10 | MA55139-CCV4 | 1 | | |
| 10:15 | MA55139-CCB4 | 1 | | |
| 10:20 | ZZZZZZ | 1 | | |
| 10:25 | ZZZZZZ | 1 | | |
| 10:30 | ZZZZZZ | 1 | | |
| 10:35 | ZZZZZZ | 1 | | |
| 10:40 | ZZZZZZ | 1 | | |
| 10:45 | ZZZZZZ | 1 | | |
| 10:50 | ZZZZZZ | 1 | | |
| 10:55 | ZZZZZZ | 1 | | |
| 11:00 | MA55139-CCV5 | 1 | | |
| 11:05 | MA55139-CCB5 | 1 | | |
| 11:10 | ZZZZZZ | 1 | | |
| 11:15 | ZZZZZZ | 5 | | |
| 11:20 | ZZZZZZ | 5 | | |
| 11:25 | ZZZZZZ | 5 | | |
| 11:30 | ZZZZZZ | 5 | | |
| 11:35 | ZZZZZZ | 1 | | |
| 11:40 | ZZZZZZ | 5 | | |
| 11:45 | ZZZZZZ | 1 | | |
| 11:50 | JD77329-4 | 1 | | (sample used for QC only; not part of login JD77365) |
| 11:55 | MP43295-SD1 | 5 | | |
| 12:00 | MA55139-CCV6 | 1 | | |
| 12:05 | MA55139-CCB6 | 1 | | |
| 12:10 | MP43295-S1 | 2 | | |
| 12:15 | MP43295-S2 | 2 | | |
| 12:20 | JD77329-4 | 2 | | (sample used for QC only; not part of login JD77365) |
| 12:25 | MP43295-SD1 | 10 | | |
| 12:30 | ZZZZZZ | 5 | | |

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP Date Analyzed: 11/28/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55139
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 12:35 | ZZZZZZ | 5 | | |
| 12:40 | ZZZZZZ | 2 | | |
| 12:45 | ZZZZZZ | 1 | | |
| 12:50 | ZZZZZZ | 2 | | |
| 12:55 | ZZZZZZ | 5 | | |
| 13:00 | MA55139-CCV7 | 1 | | |
| 13:05 | MA55139-CCB7 | 1 | | |
| 13:10 | ZZZZZZ | 1 | | |
| 13:29 | ZZZZZZ | 1 | | |
| 13:35 | ZZZZZZ | 1 | | |
| 13:39 | ZZZZZZ | 1 | | |
| 13:45 | MA55139-CCV8 | 1 | | |
| 13:54 | MA55139-CCB8 | 1 | | |
| 13:59 | MP43343-S1 | 5 | | |
| 14:04 | MP43343-S2 | 5 | | |
| 14:08 | JD77539-3 | 5 | | (sample used for QC only; not part of login JD77365) |
| 14:13 | MP43343-SD1 | 25 | | |
| 14:18 | MP43343-PS1 | 5 | | |
| 14:23 | ZZZZZZ | 5 | | |
| 14:28 | ZZZZZZ | 1 | | |
| 14:33 | ZZZZZZ | 1 | | |
| 14:38 | MA55139-CCV9 | 1 | | |
| 14:43 | MA55139-CCB9 | 1 | | |
| 14:48 | ZZZZZZ | 1 | | |
| 14:53 | ZZZZZZ | 1 | | |
| 14:59 | ZZZZZZ | 1 | | |
| 15:04 | ZZZZZZ | 1 | | |
| 15:09 | MP43350-B1 | 1 | | |
| 15:14 | MP43350-MB1 | 1 | | |
| 15:19 | MP43350-S1 | 1 | | |
| 15:24 | MP43350-S2 | 1 | | |
| 15:29 | MA55139-CCV10 | 1 | | |
| 15:34 | MA55139-CCB10 | 1 | | |

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP Date Analyzed: 11/28/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55139
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 15:39 | JD77351-4 | 1 | | (sample used for QC only; not part of login JD77365) |
| 15:44 | MP43350-SD1 | 5 | | |
| 15:49 | ZZZZZZ | 1 | | |
| 15:54 | ZZZZZZ | 1 | | |
| 15:59 | ZZZZZZ | 1 | | |
| 16:04 | ZZZZZZ | 1 | | |
| 16:09 | ZZZZZZ | 1 | | |
| 16:14 | ZZZZZZ | 1 | | |
| 16:19 | ZZZZZZ | 1 | | |
| 16:25 | MA55139-CCV11 | 1 | | |
| 16:29 | MA55139-CCB11 | 1 | | |
| 16:34 | ZZZZZZ | 1 | | |
| 16:40 | ZZZZZZ | 1 | | |
| 16:45 | ZZZZZZ | 1 | | |
| 16:50 | ZZZZZZ | 1 | | |
| 16:55 | ZZZZZZ | 1 | | |
| 17:00 | ZZZZZZ | 1 | | |
| 17:05 | ZZZZZZ | 1 | | |
| 17:10 | ZZZZZZ | 1 | | |
| 17:15 | MP43350-S1 | 2 | | |
| 17:20 | MP43350-S2 | 2 | | |
| 17:25 | MA55139-CCV12 | 1 | | |
| 17:30 | MA55139-CCB12 | 1 | | |
| 17:35 | JD77351-4 | 2 | | (sample used for QC only; not part of login JD77365) |
| 17:40 | MP43350-SD1 | 10 | | |
| 17:45 | MP43322-B1 | 1 | | |
| 17:50 | MP43322-MB1 | 1 | | |
| 17:55 | MP43322-S1 | 1 | | |
| 18:00 | MP43322-S2 | 1 | | |
| 18:04 | JD77365-2 | 1 | | |
| 18:10 | MP43322-SD1 | 5 | | |
| 18:15 | MP43322-PS1 | 1 | | |
| 18:19 | ZZZZZZ | 1 | | |

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP Date Analyzed: 11/28/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55139
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 18:24 | JD77365-1 | 1 | | Ca high |
| 18:29 | JD77365-3 | 1 | | Ca high |
| 18:35 | MA55139-CCV13 | 1 | | |
| 18:39 | MA55139-CCB13 | 1 | | |
| 18:44 | JD77365-4 | 1 | | CCV out |
| 18:50 | JD77365-5 | 1 | | CCV out |
| 18:55 | JD77365-6 | 1 | | CCV out |
| 19:00 | JD77365-7 | 1 | | CCV out |
| 19:05 | JD77365-8 | 1 | | Ca high. CCV out |
| 19:10 | JD77365-9 | 1 | | CCV out |
| 19:15 | JD77365-10 | 1 | | CCV out |
| 19:20 | JD77365-11 | 1 | | CCV out |
| 19:25 | JD77365-12 | 1 | | CCV out |
| 19:30 | JD77365-13 | 1 | | CCV out |
| 19:35 | MA55139-CCV14 | 1 | | |
| 19:40 | MA55139-CCB14 | 1 | | |
| 19:45 | JD77365-14 | 1 | | Ca, PB high. CCV out |
| 19:50 | JD77365-15 | 1 | | Ca high. CCV out |
| ----------> | Last reportable sample/prep for job JD77365 | | | |
| 19:55 | MP43324-B1 | 1 | | CCV out |
| 20:00 | MP43324-MB1 | 1 | | CCV out |
| 20:05 | MP43324-S1 | 1 | | CCV out |
| 20:10 | MP43324-S2 | 1 | | CCV out |
| 20:14 | JD77429-33 | 1 | | (sample used for QC only; not part of login JD77365) |
| 20:19 | MP43324-SD1 | 1 | | missing DF |
| 20:24 | MP43324-PS1 | 1 | | CCV out |
| 20:29 | ZZZZZZ | 1 | | |
| 20:34 | MA55139-CCV15 | 1 | | |
| 20:39 | MA55139-CCB15 | 1 | | |
| ----------> | Last reportable CCB for job JD77365 | | | |
| 20:44 | ZZZZZZ | 1 | | |
| 20:49 | ZZZZZZ | 1 | | |
| 20:54 | ZZZZZZ | 1 | | |
| 20:59 | ZZZZZZ | 1 | | |
| 21:04 | ZZZZZZ | 1 | | |

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP Date Analyzed: 11/28/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55139
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 21:09 | ZZZZZZ | 1 | | |
| 21:14 | ZZZZZZ | 1 | | |
| 21:19 | ZZZZZZ | 1 | | |
| 21:24 | ZZZZZZ | 1 | | |
| 21:29 | ZZZZZZ | 1 | | |
| 21:34 | MA55139-CCV16 | 1 | | |
| 21:38 | MA55139-CCB16 | 1 | | |
| 21:44 | ZZZZZZ | 1 | | |
| 21:49 | ZZZZZZ | 1 | | |
| 21:54 | ZZZZZZ | 1 | | |
| 21:59 | ZZZZZZ | 1 | | |
| 22:03 | ZZZZZZ | 1 | | |
| 22:08 | ZZZZZZ | 1 | | |
| 22:13 | ZZZZZZ | 1 | | |
| 22:18 | ZZZZZZ | 1 | | |
| 22:23 | MP43296-MB1 | 1 | | |
| 22:28 | MP43296-B1 | 1 | | |
| 22:33 | MA55139-CCV17 | 1 | | |
| 22:38 | MA55139-CCB17 | 1 | | |
| 22:43 | MP43296-S1 | 1 | | |
| 22:48 | MP43296-S2 | 1 | | |
| 22:53 | JD77223-1 | 1 | | (sample used for QC only; not part of login JD77365) |
| 22:58 | MP43296-SD1 | 5 | | |
| 23:03 | ZZZZZZ | 1 | | |
| 23:09 | ZZZZZZ | 1 | | |
| 23:14 | ZZZZZZ | 1 | | |
| 23:19 | ZZZZZZ | 1 | | |
| 23:24 | ZZZZZZ | 1 | | |
| 23:29 | ZZZZZZ | 1 | | |
| 23:34 | MA55139-CCV18 | 1 | | |
| 23:39 | MA55139-CCB18 | 1 | | |
| 23:44 | ZZZZZZ | 1 | | |
| 23:49 | ZZZZZZ | 1 | | |

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP Date Analyzed: 11/28/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55139
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 23:55 | ZZZZZZ | 1 | | |
| 00:00 | ZZZZZZ | 1 | | |
| 00:05 | ZZZZZZ | 1 | | |
| 00:10 | ZZZZZZ | 1 | | |
| 00:16 | ZZZZZZ | 1 | | |
| 00:21 | MA55139-CCV19 | 1 | | |
| 00:26 | MA55139-CCB19 | 1 | | |
| 00:31 | MP43386-MB1 | 1 | | CCV out |
| 00:36 | MP43386-LB1 | 1 | | CCV out |
| 00:41 | MP43386-B1 | 1 | | CCV out |
| 00:45 | MP43386-LS1 | 1 | | CCV out |
| 00:50 | MP43386-S1 | 1 | | CCV out |
| 00:55 | MP43386-S2 | 1 | | CCV out |
| 01:00 | JD76316-5T | 1 | | (sample used for QC only; not part of login JD77365) |
| 01:05 | MP43386-SD1 | 5 | | CCV out |
| 01:10 | ZZZZZZ | 1 | | |
| 01:15 | ZZZZZZ | 1 | | |
| 01:22 | MA55139-CCV20 | 1 | | |
| 01:27 | MA55139-CCB20 | 1 | | |
| 01:32 | ZZZZZZ | 1 | | |
| 01:37 | ZZZZZZ | 1 | | |
| 01:42 | ZZZZZZ | 1 | | |
| 01:47 | ZZZZZZ | 1 | | |
| 01:52 | ZZZZZZ | 1 | | |
| 01:57 | ZZZZZZ | 1 | | |
| 02:02 | ZZZZZZ | 1 | | |
| 02:07 | ZZZZZZ | 1 | | |
| 02:12 | MP43387-B1 | 1 | | CCV out |
| 02:16 | MP43387-MB1 | 1 | | CCV out |
| 02:23 | MA55139-CCV21 | 1 | | |
| 02:28 | MA55139-CCB21 | 1 | | |
| 02:33 | MP43387-LB1 | 1 | | CCV out |
| 02:39 | MP43387-LS1 | 1 | | CCV out |

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP Date Analyzed: 11/28/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55139
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 02:43 | MP43387-S1 | 1 | | CCV out |
| 02:48 | MP43387-S2 | 1 | | CCV out |
| 02:53 | JD77551-1 | 1 | | (sample used for QC only; not part of login JD77365) |
| 02:59 | MP43387-SD1 | 1 | | no DF |
| 03:04 | ZZZZZZ | 1 | | |
| 03:09 | ZZZZZZ | 1 | | |
| 03:14 | ZZZZZZ | 1 | | |
| 03:19 | ZZZZZZ | 1 | | |
| 03:26 | MA55139-CCV22 | 1 | | |
| 03:31 | MA55139-CCB22 | 1 | | |

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
Analyst: ND  Run ID: MA55139
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Element: Dilution | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Ni | K | Se | Ag | Na | Tl | V | Zn | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 06:47 | MA55139-ICV1 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 06:55 | MA55139-ICB1 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 07:00 | MA55139-CCV1 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 07:05 | MA55139-CCB1 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 07:10 | MA55139-CRI1 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 07:15 | MA55139-CRID1 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 07:21 | MA55139-ICSA1 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 07:26 | MA55139-ICSAB1 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 07:31 | MA55139-HSTD1 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 07:36 | MA55139-HSTD2 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 07:41 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 07:46 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 07:52 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 07:57 | MA55139-CCV2 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 08:02 | MA55139-CCB2 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 08:30 | MP43343-MB1 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 08:35 | MP43343-B1 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 08:40 | MP43343-S1 | 1 | X | X | X | | X | X | | X | X | X | X | | X | X | X | X | X | X | X | X | X | | |
| 08:45 | MP43343-S2 | 1 | X | X | X | | X | X | | X | X | X | X | | X | X | X | X | X | X | X | X | X | | |
| 08:50 | JD77539-3 | 1 | X | X | X | X | X | X | | X | X | X | X | | X | X | X | X | X | X | X | X | X | | (a) |
| 08:56 | MP43343-SD1 | 5 | X | X | X | X | X | X | | X | X | X | X | | X | X | X | X | X | X | X | X | X | | |
| 09:01 | MP43343-PS1 | 1 | | X | | | | | | | | | | | | | | | | | | | | | |
| 09:06 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 09:11 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 09:16 | MA55139-CCV3 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 09:20 | MA55139-CCB3 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 09:25 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 09:30 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 09:35 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 09:40 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 09:45 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 09:50 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 09:55 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| | | Element: | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Ni | K | Se | Ag | Na | Tl | V | Zn | |

REPORTED ELEMENTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
Analyst: ND  Run ID: MA55139
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Element: Dilution | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Ni | K | Se | Ag | Na | Tl | V | Zn | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10:00 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 10:05 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 10:10 | MA55139-CCV4 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 10:15 | MA55139-CCB4 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 10:20 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 10:25 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 10:30 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 10:35 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 10:40 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 10:45 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 10:50 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 10:55 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 11:00 | MA55139-CCV5 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 11:05 | MA55139-CCB5 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 11:10 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 11:15 | ZZZZZZ | 5 | | | | | | | | | | | | | | | | | | | | | | | |
| 11:20 | ZZZZZZ | 5 | | | | | | | | | | | | | | | | | | | | | | | |
| 11:25 | ZZZZZZ | 5 | | | | | | | | | | | | | | | | | | | | | | | |
| 11:30 | ZZZZZZ | 5 | | | | | | | | | | | | | | | | | | | | | | | |
| 11:35 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 11:40 | ZZZZZZ | 5 | | | | | | | | | | | | | | | | | | | | | | | |
| 11:45 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 11:50 | JD77329-4 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 11:55 | MP43295-SD1 | 5 | | | | | | | | | | | | | | | | | | | | | | | |
| 12:00 | MA55139-CCV6 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 12:05 | MA55139-CCB6 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 12:10 | MP43295-S1 | 2 | | | | | X | | | | | | | | | | | | | | | | | | |
| 12:15 | MP43295-S2 | 2 | | | | | X | | | | | | | | | | | | | | | | | | |
| 12:20 | JD77329-4 | 2 | | | | | X | | | | | | | | | | | | | | | | | | (a) |
| 12:25 | MP43295-SD1 | 10 | | | | | X | | | | | | | | | | | | | | | | | | |
| 12:30 | ZZZZZZ | 5 | | | | | | | | | | | | | | | | | | | | | | | |
| 12:35 | ZZZZZZ | 5 | | | | | | | | | | | | | | | | | | | | | | | |
| 12:40 | ZZZZZZ | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| | | Element: | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Ni | K | Se | Ag | Na | Tl | V | Zn | |

REPORTED ELEMENTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
Analyst: ND  Run ID: MA55139
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Element: Dilution | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Ni | K | Se | Ag | Na | Tl | V | Zn | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12:45 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 12:50 | ZZZZZZ | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| 12:55 | ZZZZZZ | 5 | | | | | | | | | | | | | | | | | | | | | | | |
| 13:00 | MA55139-CCV7 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 13:05 | MA55139-CCB7 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 13:10 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 13:29 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 13:35 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 13:39 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 13:45 | MA55139-CCV8 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 13:54 | MA55139-CCB8 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 13:59 | MP43343-S1 | 5 | | | | X | | X | | | | | X | | | | | | | | | | | X | |
| 14:04 | MP43343-S2 | 5 | | | | X | | X | | | | | X | | | | | | | | | | | X | |
| 14:08 | JD77539-3 | 5 | | | | | | X | | | | | X | | | | | | | | | | | X | (a) |
| 14:13 | MP43343-SD1 | 25 | | | | | | X | | | | | X | | | | | | | | | | | X | |
| 14:18 | MP43343-PS1 | 5 | | | | | | | | | | | | | | | | | | | | | | | |
| 14:23 | ZZZZZZ | 5 | | | | | | | | | | | | | | | | | | | | | | | |
| 14:28 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 14:33 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 14:38 | MA55139-CCV9 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 14:43 | MA55139-CCB9 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 14:48 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 14:53 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 14:59 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 15:04 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 15:09 | MP43350-B1 | 1 | | | | | | | X | | | | X | | | X | | | | | X | | | | |
| 15:14 | MP43350-MB1 | 1 | | | | | | | X | | | | X | | | X | | | | | X | | | | |
| 15:19 | MP43350-S1 | 1 | | | | | | | X | | | | X | | | X | | | | | | | | | |
| 15:24 | MP43350-S2 | 1 | | | | | | | X | | | | X | | | X | | | | | | | | | |
| 15:29 | MA55139-CCV10 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 15:34 | MA55139-CCB10 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 15:39 | JD77351-4 | 1 | | | | | | | X | | | | X | | | X | | | | | | | | | (a) |
| 15:44 | MP43350-SD1 | 5 | | | | | | | X | | | | X | | | X | | | | | | | | | |
| | | Element: | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Ni | K | Se | Ag | Na | Tl | V | Zn | |

REPORTED ELEMENTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
Analyst: ND  Run ID: MA55139
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Element: Dilution | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Ni | K | Se | Ag | Na | Tl | V | Zn | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15:49 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 15:54 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 15:59 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 16:04 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 16:09 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 16:14 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 16:19 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 16:25 | MA55139-CCV11 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 16:29 | MA55139-CCB11 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 16:34 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 16:40 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 16:45 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 16:50 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 16:55 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 17:00 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 17:05 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 17:10 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 17:15 | MP43350-S1 | 2 | | | | | | | | | | | | | | | | | | | X | | | | |
| 17:20 | MP43350-S2 | 2 | | | | | | | | | | | | | | | | | | | X | | | | |
| 17:25 | MA55139-CCV12 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 17:30 | MA55139-CCB12 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 17:35 | JD77351-4 | 2 | | | | | | | | | | | | | | | | | | | | | | | (a) |
| 17:40 | MP43350-SD1 | 10 | | | | | | | | | | | | | | | | | | | X | | | | |
| 17:45 | MP43322-B1 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 17:50 | MP43322-MB1 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 17:55 | MP43322-S1 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 18:00 | MP43322-S2 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 18:04 | JD77365-2 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 18:10 | MP43322-SD1 | 5 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 18:15 | MP43322-PS1 | 1 | | X | | | | | | | | | | | | | | X | | | | | | | |
| 18:19 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 18:24 | JD77365-1 | 1 | X | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 18:29 | JD77365-3 | 1 | X | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| | | Element: | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Ni | K | Se | Ag | Na | Tl | V | Zn | |

REPORTED ELEMENTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP Date Analyzed: 11/28/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55139
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Element: Dilution | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Ni | K | Se | Ag | Na | Tl | V | Zn | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18:35 | MA55139-CCV13 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 18:39 | MA55139-CCB13 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 18:44 | JD77365-4 | 1 | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 18:50 | JD77365-5 | 1 | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 18:55 | JD77365-6 | 1 | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 19:00 | JD77365-7 | 1 | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 19:05 | JD77365-8 | 1 | X | X | X | X | X | | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 19:10 | JD77365-9 | 1 | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 19:15 | JD77365-10 | 1 | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 19:20 | JD77365-11 | 1 | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 19:25 | JD77365-12 | 1 | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 19:30 | JD77365-13 | 1 | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 19:35 | MA55139-CCV14 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 19:40 | MA55139-CCB14 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 19:45 | JD77365-14 | 1 | X | X | X | X | X | | | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | |
| 19:50 | JD77365-15 | 1 | X | X | X | X | X | | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 19:55 | MP43324-B1 | 1 | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 20:00 | MP43324-MB1 | 1 | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 20:05 | MP43324-S1 | 1 | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 20:10 | MP43324-S2 | 1 | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 20:14 | JD77429-33 | 1 | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | (a) |
| 20:19 | MP43324-SD1 | 1 | missing | DF | | | | | | | | | | | | | | | | | | | | | |
| 20:24 | MP43324-PS1 | 1 | | X | X | X | X | | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | |
| 20:29 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 20:34 | MA55139-CCV15 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 20:39 | MA55139-CCB15 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 20:44 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 20:49 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 20:54 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 20:59 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 21:04 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 21:09 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 21:14 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| | | Element: | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Ni | K | Se | Ag | Na | Tl | V | Zn | |

REPORTED ELEMENTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP Date Analyzed: 11/28/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55139
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Element: Dilution | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Ni | K | Se | Ag | Na | Tl | V | Zn | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21:19 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 21:24 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 21:29 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 21:34 | MA55139-CCV16 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 21:38 | MA55139-CCB16 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 21:44 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 21:49 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 21:54 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 21:59 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 22:03 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 22:08 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 22:13 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 22:18 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 22:23 | MP43296-MB1 | 1 | | | | | | | | | | | X | | X | | | | | | | | | | |
| 22:28 | MP43296-B1 | 1 | | | | | | | | | | | X | | X | | | | | | | | | | |
| 22:33 | MA55139-CCV17 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 22:38 | MA55139-CCB17 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 22:43 | MP43296-S1 | 1 | | | | | | | | | | | X | | X | | | | | | | | | | |
| 22:48 | MP43296-S2 | 1 | | | | | | | | | | | X | | X | | | | | | | | | | |
| 22:53 | JD77223-1 | 1 | | | | | | | | | | | X | | X | | | | | | | | | | (a) |
| 22:58 | MP43296-SD1 | 5 | | | | | | | | | | | X | | X | | | | | | | | | | |
| 23:03 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 23:09 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 23:14 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 23:19 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 23:24 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 23:29 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 23:34 | MA55139-CCV18 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 23:39 | MA55139-CCB18 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 23:44 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 23:49 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 23:55 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 00:00 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| | | Element: | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Ni | K | Se | Ag | Na | Tl | V | Zn | |

REPORTED ELEMENTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP Date Analyzed: 11/28/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55139
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Element: Dilution | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Ni | K | Se | Ag | Na | Tl | V | Zn | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00:05 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 00:10 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 00:16 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 00:21 | MA55139-CCV19 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 00:26 | MA55139-CCB19 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 00:31 | MP43386-MB1 | 1 | | | X | | X | | | | | | | X | | | | | | | X | | | | |
| 00:36 | MP43386-LB1 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 00:41 | MP43386-B1 | 1 | | | X | | X | | | | | | | X | | | | | | | X | | | | |
| 00:45 | MP43386-LS1 | 1 | | | X | | X | | | | | | | X | | | | | | | X | | | | |
| 00:50 | MP43386-S1 | 1 | | | X | | X | | | | | | | X | | | | | | | X | | | | |
| 00:55 | MP43386-S2 | 1 | | | X | | X | | | | | | | X | | | | | | | X | | | | |
| 01:00 | JD76316-5T | 1 | | | | | X | | | | | | | X | | | | | | | X | | | | (a) |
| 01:05 | MP43386-SD1 | 5 | | | X | | X | | | | | | | X | | | | | | | X | | | | |
| 01:10 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 01:15 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 01:22 | MA55139-CCV20 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 01:27 | MA55139-CCB20 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 01:32 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 01:37 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 01:42 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 01:47 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 01:52 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 01:57 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 02:02 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 02:07 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 02:12 | MP43387-B1 | 1 | | | X | X | | | | X | | | | X | | | | | | X | X | | | | |
| 02:16 | MP43387-MB1 | 1 | | | X | X | | | | X | | | | X | | | | | | X | X | | | | |
| 02:23 | MA55139-CCV21 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 02:28 | MA55139-CCB21 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 02:33 | MP43387-LB1 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 02:39 | MP43387-LS1 | 1 | | | X | X | | | | X | | | | X | | | | | | X | X | | | | |
| 02:43 | MP43387-S1 | 1 | | | X | X | | | | X | | | | X | | | | | | X | X | | | | |
| 02:48 | MP43387-S2 | 1 | | | X | X | | | | X | | | | X | | | | | | X | X | | | | |
| | | Element: | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Ni | K | Se | Ag | Na | Tl | V | Zn | |

REPORTED ELEMENTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP Date Analyzed: 11/28/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55139
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Element: Dilution | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Ni | K | Se | Ag | Na | Tl | V | Zn | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02:53 | JD77551-1 | 1 | | | X | X | | | | X | | | | X | | | | | X | X | | | | | (a) |
| 02:59 | MP43387-SD1 | 1 | no DF | | | | | | | | | | | | | | | | | | | | | | |
| 03:04 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 03:09 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 03:14 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 03:19 | ZZZZZZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 03:26 | MA55139-CCV22 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 03:31 | MA55139-CCB22 | 1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |

(a) Sample used for QC only; not part of login JD77365.

Element: Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn

INTERNAL STANDARD SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP Date Analyzed: 11/28/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55139
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Istd#1 | Istd#2 | Istd#3 | Istd#4 |
|---|---|---|---|---|---|
| 06:37 | MA55139-STD1 | 3085 R | 128130 R | 8450 R | 8068 R |
| 06:42 | MA55139-STD2 | 2907 | 119890 | 8063 | 7777 |
| 06:47 | MA55139-ICV1 | 2982 | 122620 | 8162 | 7890 |
| 06:55 | MA55139-ICB1 | 3054 | 126210 | 8231 | 8025 |
| 07:00 | MA55139-CCV1 | 2972 | 122360 | 8123 | 7873 |
| 07:05 | MA55139-CCB1 | 3056 | 125550 | 8255 | 8026 |
| 07:10 | MA55139-CRI1 | 2998 | 122930 | 8173 | 7901 |
| 07:15 | MA55139-CRID1 | 3024 | 123430 | 8208 | 7955 |
| 07:21 | MA55139-ICSA1 | 2756 | 113590 | 8002 | 7356 |
| 07:26 | MA55139-ICSAB1 | 2779 | 113950 | 8060 | 7434 |
| 07:31 | MA55139-HSTD1 | 2986 | 122600 | 8255 | 8170 |
| 07:36 | MA55139-HSTD2 | 2821 | 114380 | 8067 | 7469 |
| 07:41 | ZZZZZZ | 2996 | 122170 | 8189 | 8150 |
| 07:46 | ZZZZZZ | 2944 | 124470 | 8281 | 7965 |
| 07:52 | ZZZZZZ | 3017 | 123290 | 8196 | 7944 |
| 07:57 | MA55139-CCV2 | 2926 | 119250 | 8096 | 7790 |
| 08:02 | MA55139-CCB2 | 3048 | 124760 | 8227 | 8024 |
| 08:30 | MP43343-MB1 | 3066 | 126320 | 8412 | 8069 |
| 08:35 | MP43343-B1 | 2977 | 122190 | 8320 | 7927 |
| 08:40 | MP43343-S1 | 2879 | 119670 | 8391 | 7640 |
| 08:45 | MP43343-S2 | 2853 | 118730 | 8351 | 7475 |
| 08:50 | JD77539-3 | 2912 | 119220 | 8210 | 7608 |
| 08:56 | MP43343-SD1 | 2988 | 122320 | 8243 | 7908 |
| 09:01 | MP43343-PS1 | 2872 | 118490 | 8245 | 7558 |
| 09:06 | ZZZZZZ | 3113 | 127750 | 8701 | 8132 |
| 09:11 | ZZZZZZ | 3094 | 127240 | 8610 | 8007 |
| 09:16 | MA55139-CCV3 | 2945 | 120820 | 8089 | 7855 |
| 09:20 | MA55139-CCB3 | 3042 | 124810 | 8214 | 8015 |
| 09:25 | ZZZZZZ | 3134 | 128610 | 8704 | 8079 |
| 09:30 | ZZZZZZ | 3105 | 127720 | 8580 | 8015 |
| 09:35 | ZZZZZZ | 3086 | 126370 | 8491 | 8009 |
| 09:40 | ZZZZZZ | 3061 | 125920 | 8496 | 8016 |
| 09:45 | ZZZZZZ | 3074 | 126510 | 8453 | 8037 |

INTERNAL STANDARD SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP Date Analyzed: 11/28/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55139
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Istd#1 | Istd#2 | Istd#3 | Istd#4 |
|---|---|---|---|---|---|
| 09:50 | ZZZZZZ | 3101 | 127200 | 8524 | 8068 |
| 09:55 | ZZZZZZ | 3131 | 129300 | 8706 | 8005 |
| 10:00 | ZZZZZZ | 3125 | 128790 | 8629 | 8123 |
| 10:05 | ZZZZZZ | 3094 | 127030 | 8587 | 8146 |
| 10:10 | MA55139-CCV4 | 2945 | 120900 | 8074 | 7836 |
| 10:15 | MA55139-CCB4 | 3054 | 126110 | 8241 | 8032 |
| 10:20 | ZZZZZZ | 3066 | 127400 | 8645 | 7932 |
| 10:25 | ZZZZZZ | 3108 | 127970 | 8617 | 8044 |
| 10:30 | ZZZZZZ | 3126 | 128180 | 8614 | 8137 |
| 10:35 | ZZZZZZ | 3260 | 133420 | 9053 | 8078 |
| 10:40 | ZZZZZZ | 3111 | 128030 | 8698 | 8025 |
| 10:45 | ZZZZZZ | 3124 | 128520 | 8699 | 7962 |
| 10:50 | ZZZZZZ | 3257 | 133830 | 9026 | 8096 |
| 10:55 | ZZZZZZ | 2905 | 120030 | 8284 | 7532 |
| 11:00 | MA55139-CCV5 | 2963 | 121320 | 8012 | 7846 |
| 11:05 | MA55139-CCB5 | 3047 | 126390 | 8213 | 7983 |
| 11:10 | ZZZZZZ | 3077 | 127280 | 8278 | 8046 |
| 11:15 | ZZZZZZ | 3074 | 125380 | 8341 | 7932 |
| 11:20 | ZZZZZZ | 3087 | 125350 | 8265 | 8002 |
| 11:25 | ZZZZZZ | 3031 | 124430 | 8241 | 7909 |
| 11:30 | ZZZZZZ | 3029 | 124620 | 8208 | 7923 |
| 11:35 | ZZZZZZ | 3045 | 126330 | 8239 | 7960 |
| 11:40 | ZZZZZZ | 3114 | 128540 | 8454 | 7977 |
| 11:45 | ZZZZZZ | 3115 | 128140 | 8346 | 8122 |
| 11:50 | JD77329-4 | No results reported for the elements associated with this internal standard. | | | |
| 11:55 | MP43295-SD1 | No results reported for the elements associated with this internal standard. | | | |
| 12:00 | MA55139-CCV6 | 3018 | 124370 | 8249 | 7942 |
| 12:05 | MA55139-CCB6 | 3092 | 127940 | 8234 | 8057 |
| 12:10 | MP43295-S1 | 3042 | 125350 | 8302 | 7968 |
| 12:15 | MP43295-S2 | 3042 | 122920 | 8311 | 7982 |
| 12:20 | JD77329-4 | 3102 | 127210 | 8322 | 8105 |
| 12:25 | MP43295-SD1 | 3096 | 128230 | 8338 | 8076 |
| 12:30 | ZZZZZZ | 3089 | 126710 | 8352 | 8070 |

INTERNAL STANDARD SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP Date Analyzed: 11/28/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55139
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Istd#1 | Istd#2 | Istd#3 | Istd#4 |
|---|---|---|---|---|---|
| 12:35 | ZZZZZZ | 3094 | 127650 | 8388 | 8093 |
| 12:40 | ZZZZZZ | 3073 | 126130 | 8174 | 8042 |
| 12:45 | ZZZZZZ | 3104 | 128430 | 8385 | 8089 |
| 12:50 | ZZZZZZ | 3140 | 129190 | 8582 | 8070 |
| 12:55 | ZZZZZZ | 3103 | 128020 | 8344 | 8088 |
| 13:00 | MA55139-CCV7 | 2998 | 123560 | 8176 | 7900 |
| 13:05 | MA55139-CCB7 | 3098 | 127130 | 8398 | 8072 |
| 13:10 | ZZZZZZ | 3096 | 128090 | 8374 | 8064 |
| 13:29 | ZZZZZZ | 3178 | 130770 | 8444 | 8306 |
| 13:35 | ZZZZZZ | 3101 | 127730 | 8484 | 8231 |
| 13:39 | ZZZZZZ | 3093 | 127510 | 8572 | 8168 |
| 13:45 | MA55139-CCV8 | 3004 | 122650 | 8193 | 7967 |
| 13:54 | MA55139-CCB8 | 3040 | 125350 | 8154 | 8003 |
| 13:59 | MP43343-S1 | 2985 | 121370 | 8164 | 7904 |
| 14:04 | MP43343-S2 | 2992 | 122900 | 8200 | 7878 |
| 14:08 | JD77539-3 | 3003 | 122500 | 7996 | 7934 |
| 14:13 | MP43343-SD1 | 3058 | 124760 | 8169 | 8079 |
| 14:18 | MP43343-PS1 | 2986 | 121960 | 8116 | 7901 |
| 14:23 | ZZZZZZ | 2976 | 120200 | 8134 | 7877 |
| 14:28 | ZZZZZZ | 3042 | 124440 | 8095 | 8044 |
| 14:33 | ZZZZZZ | 2880 | 117140 | 7902 | 7616 |
| 14:38 | MA55139-CCV9 | 2940 | 119630 | 7974 | 7850 |
| 14:43 | MA55139-CCB9 | 3066 | 125400 | 8182 | 8087 |
| 14:48 | ZZZZZZ | 3047 | 125060 | 8158 | 8053 |
| 14:53 | ZZZZZZ | 2877 | 116530 | 7903 | 7583 |
| 14:59 | ZZZZZZ | 3030 | 123440 | 8125 | 8004 |
| 15:04 | ZZZZZZ | 3047 | 125020 | 8151 | 8050 |
| 15:09 | MP43350-B1 | 3011 | 121470 | 8096 | 8020 |
| 15:14 | MP43350-MB1 | 3062 | 125330 | 8084 | 8099 |
| 15:19 | MP43350-S1 | 2966 | 119310 | 7999 | 7829 |
| 15:24 | MP43350-S2 | 2958 | 117810 | 7973 | 7812 |
| 15:29 | MA55139-CCV10 | 2948 | 119950 | 7746 | 7898 |
| 15:34 | MA55139-CCB10 | 3040 | 123740 | 7979 | 8053 |

INTERNAL STANDARD SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP Date Analyzed: 11/28/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55139
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Istd#1 | Istd#2 | Istd#3 | Istd#4 |
|---|---|---|---|---|---|
| 15:39 | JD77351-4 | 2995 | 120050 | 8018 | 7889 |
| 15:44 | MP43350-SD1 | 3034 | 122770 | 7927 | 8056 |
| 15:49 | ZZZZZZ | 3031 | 119130 | 8186 | 7426 |
| 15:54 | ZZZZZZ | 3032 | 121960 | 8070 | 7994 |
| 15:59 | ZZZZZZ | 2978 | 117830 | 7955 | 7809 |
| 16:04 | ZZZZZZ | 3026 | 122820 | 8100 | 8005 |
| 16:09 | ZZZZZZ | 3011 | 120570 | 7988 | 8069 |
| 16:14 | ZZZZZZ | 3213 | 129210 | 8552 | 7944 |
| 16:19 | ZZZZZZ | 3055 | 118920 | 8236 | 7463 |
| 16:25 | MA55139-CCV11 | 2982 | 121000 | 7863 | 7985 |
| 16:29 | MA55139-CCB11 | 3082 | 125700 | 8000 | 8171 |
| 16:34 | ZZZZZZ | 3014 | 120040 | 7947 | 7954 |
| 16:40 | ZZZZZZ | 3019 | 121600 | 8003 | 7982 |
| 16:45 | ZZZZZZ | 2969 | 118290 | 7951 | 7782 |
| 16:50 | ZZZZZZ | 3024 | 121330 | 8031 | 7962 |
| 16:55 | ZZZZZZ | 3006 | 121930 | 8005 | 7996 |
| 17:00 | ZZZZZZ | 3222 | 128880 | 8483 | 8020 |
| 17:05 | ZZZZZZ | 3047 | 124450 | 8083 | 8060 |
| 17:10 | ZZZZZZ | 3122 | 126950 | 8170 | 8250 |
| 17:15 | MP43350-S1 | 2998 | 120930 | 7898 | 7947 |
| 17:20 | MP43350-S2 | 3035 | 122100 | 7990 | 8036 |
| 17:25 | MA55139-CCV12 | 2978 | 120710 | 7884 | 7986 |
| 17:30 | MA55139-CCB12 | 3104 | 124870 | 8000 | 8238 |
| 17:35 | JD77351-4 | 3054 | 120910 | 7978 | 8092 |
| 17:40 | MP43350-SD1 | 3068 | 124530 | 7986 | 8149 |
| 17:45 | MP43322-B1 | 3021 | 122160 | 8040 | 8099 |
| 17:50 | MP43322-MB1 | 3078 | 125260 | 8045 | 8181 |
| 17:55 | MP43322-S1 | 3123 | 126010 | 8301 | 8165 |
| 18:00 | MP43322-S2 | 3073 | 125200 | 8251 | 8043 |
| 18:04 | JD77365-2 | 3128 | 126670 | 8266 | 8156 |
| 18:10 | MP43322-SD1 | 3044 | 125100 | 8028 | 8061 |
| 18:15 | MP43322-PS1 | 3041 | 122740 | 8136 | 8013 |
| 18:19 | ZZZZZZ | 3137 | 126870 | 8309 | 8223 |

INTERNAL STANDARD SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP Date Analyzed: 11/28/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55139
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Istd#1 | Istd#2 | Istd#3 | Istd#4 |
|---|---|---|---|---|---|
| 18:24 | JD77365-1 | 2974 | 120600 | 7968 | 7860 |
| 18:29 | JD77365-3 | 2989 | 121080 | 8061 | 7848 |
| 18:35 | MA55139-CCV13 | 2969 | 119860 | 7779 | 7992 |
| 18:39 | MA55139-CCB13 | 3080 | 124230 | 7954 | 8200 |
| 18:44 | JD77365-4 | 3130 | 126030 | 8198 | 8250 |
| 18:50 | JD77365-5 | 3139 | 126750 | 8236 | 8135 |
| 18:55 | JD77365-6 | 3051 | 122710 | 8074 | 8074 |
| 19:00 | JD77365-7 | 3104 | 125750 | 8173 | 8149 |
| 19:05 | JD77365-8 | 3056 | 124290 | 8385 | 7774 |
| 19:10 | JD77365-9 | 3072 | 124170 | 8098 | 8053 |
| 19:15 | JD77365-10 | 2970 | 121060 | 7937 | 7935 |
| 19:20 | JD77365-11 | 3010 | 122050 | 8028 | 8033 |
| 19:25 | JD77365-12 | 3008 | 120870 | 7846 | 7999 |
| 19:30 | JD77365-13 | 3023 | 121890 | 8006 | 7957 |
| 19:35 | MA55139-CCV14 | 2989 | 120030 | 7814 | 8051 |
| 19:40 | MA55139-CCB14 | 3059 | 122710 | 7831 | 8166 |
| 19:45 | JD77365-14 | 2964 | 120440 | 7943 | 7854 |
| 19:50 | JD77365-15 | 2959 | 121800 | 8140 | 7860 |
| 19:55 | MP43324-B1 | 2990 | 120310 | 7848 | 8066 |
| 20:00 | MP43324-MB1 | 3086 | 124490 | 7901 | 8213 |
| 20:05 | MP43324-S1 | 3040 | 123390 | 8083 | 8134 |
| 20:10 | MP43324-S2 | 2998 | 122390 | 7998 | 8044 |
| 20:14 | JD77429-33 | 3097 | 126440 | 8192 | 8252 |
| 20:19 | MP43324-SD1 | No results reported for the elements associated with this internal standard. | | | |
| 20:24 | MP43324-PS1 | 2973 | 120540 | 7918 | 8007 |
| 20:29 | ZZZZZZ | 3072 | 124020 | 7970 | 8163 |
| 20:34 | MA55139-CCV15 | 2968 | 119580 | 7713 | 8005 |
| 20:39 | MA55139-CCB15 | 3080 | 124050 | 7877 | 8204 |
| 20:44 | ZZZZZZ | 3177 | 127750 | 8263 | 8176 |
| 20:49 | ZZZZZZ | 3087 | 124470 | 7986 | 8168 |
| 20:54 | ZZZZZZ | 3163 | 127610 | 8344 | 8139 |
| 20:59 | ZZZZZZ | 3103 | 124770 | 8023 | 8221 |
| 21:04 | ZZZZZZ | 3040 | 122810 | 7903 | 8135 |

INTERNAL STANDARD SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP Date Analyzed: 11/28/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55139
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Istd#1 | Istd#2 | Istd#3 | Istd#4 |
|---|---|---|---|---|---|
| 21:09 | ZZZZZZ | 3040 | 122640 | 7956 | 8105 |
| 21:14 | ZZZZZZ | 3059 | 123230 | 7881 | 8140 |
| 21:19 | ZZZZZZ | 3092 | 124400 | 7964 | 8195 |
| 21:24 | ZZZZZZ | 3077 | 126590 | 8139 | 8165 |
| 21:29 | ZZZZZZ | 3099 | 125270 | 8065 | 8232 |
| 21:34 | MA55139-CCV16 | 2969 | 119050 | 7679 | 7999 |
| 21:38 | MA55139-CCB16 | 3074 | 123470 | 7778 | 8188 |
| 21:44 | ZZZZZZ | 3072 | 124460 | 8000 | 8173 |
| 21:49 | ZZZZZZ | 3078 | 123950 | 7930 | 8192 |
| 21:54 | ZZZZZZ | 3055 | 123620 | 7860 | 8129 |
| 21:59 | ZZZZZZ | 3133 | 127170 | 8179 | 8186 |
| 22:03 | ZZZZZZ | 3038 | 122170 | 7805 | 8098 |
| 22:08 | ZZZZZZ | 3138 | 126850 | 8201 | 8148 |
| 22:13 | ZZZZZZ | 3022 | 122580 | 7909 | 8088 |
| 22:18 | ZZZZZZ | 3073 | 124000 | 7936 | 8184 |
| 22:23 | MP43296-MB1 | 3051 | 124010 | 7707 | 8152 |
| 22:28 | MP43296-B1 | 3019 | 121260 | 7796 | 8131 |
| 22:33 | MA55139-CCV17 | 2976 | 119050 | 7613 | 8015 |
| 22:38 | MA55139-CCB17 | 3073 | 123550 | 7725 | 8191 |
| 22:43 | MP43296-S1 | 2957 | 117580 | 7748 | 7875 |
| 22:48 | MP43296-S2 | 2961 | 117190 | 7697 | 7883 |
| 22:53 | JD77223-1 | 3032 | 119910 | 7775 | 8022 |
| 22:58 | MP43296-SD1 | 3063 | 122480 | 7750 | 8176 |
| 23:03 | ZZZZZZ | 2954 | 118660 | 7662 | 7840 |
| 23:09 | ZZZZZZ | 2972 | 118340 | 7710 | 7817 |
| 23:14 | ZZZZZZ | 2967 | 117970 | 7713 | 7883 |
| 23:19 | ZZZZZZ | 3091 | 124080 | 7893 | 8263 |
| 23:24 | ZZZZZZ | 2891 | 112370 | 7600 | 7496 |
| 23:29 | ZZZZZZ | 3055 | 121960 | 7747 | 8162 |
| 23:34 | MA55139-CCV18 | 3039 | 121690 | 7715 | 8171 |
| 23:39 | MA55139-CCB18 | 3086 | 124520 | 7764 | 8224 |
| 23:44 | ZZZZZZ | 2990 | 117880 | 7670 | 7903 |
| 23:49 | ZZZZZZ | 3009 | 119780 | 7727 | 7971 |

INTERNAL STANDARD SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP Date Analyzed: 11/28/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55139
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Istd#1 | Istd#2 | Istd#3 | Istd#4 |
|---|---|---|---|---|---|
| 23:55 | ZZZZZZ | 2986 | 117900 | 7658 | 7868 |
| 00:00 | ZZZZZZ | 2947 | 118870 | 7714 | 7816 |
| 00:05 | ZZZZZZ | 3097 | 124560 | 7859 | 8278 |
| 00:10 | ZZZZZZ | 2875 | 111050 | 7533 | 7454 |
| 00:16 | ZZZZZZ | 3032 | 122440 | 7743 | 8100 |
| 00:21 | MA55139-CCV19 | 3030 | 121410 | 7625 | 8156 |
| 00:26 | MA55139-CCB19 | 3120 | 125460 | 7775 | 8311 |
| 00:31 | MP43386-MB1 | 3110 | 125510 | 7751 | 8297 |
| 00:36 | MP43386-LB1 | 3134 | 125700 | 7810 | 8356 |
| 00:41 | MP43386-B1 | 3075 | 123540 | 7785 | 8261 |
| 00:45 | MP43386-LS1 | 3030 | 123420 | 7783 | 8140 |
| 00:50 | MP43386-S1 | 3101 | 123080 | 7717 | 8314 |
| 00:55 | MP43386-S2 | 3053 | 122900 | 7717 | 8200 |
| 01:00 | JD76316-5T | 3090 | 124620 | 7626 | 8250 |
| 01:05 | MP43386-SD1 | 3110 | 125180 | 7691 | 8307 |
| 01:10 | ZZZZZZ | 3104 | 124680 | 7756 | 8323 |
| 01:15 | ZZZZZZ | 3072 | 124100 | 7494 | 8207 |
| 01:22 | MA55139-CCV20 | 3013 | 120490 | 7548 | 8124 |
| 01:27 | MA55139-CCB20 | 3090 | 124440 | 7644 | 8252 |
| 01:32 | ZZZZZZ | 3051 | 127330 | 7746 | 8174 |
| 01:37 | ZZZZZZ | 3099 | 124310 | 7689 | 8292 |
| 01:42 | ZZZZZZ | 3130 | 125120 | 7756 | 8344 |
| 01:47 | ZZZZZZ | 3126 | 125220 | 7712 | 8346 |
| 01:52 | ZZZZZZ | 3138 | 125780 | 7811 | 8359 |
| 01:57 | ZZZZZZ | 3141 | 126200 | 7764 | 8388 |
| 02:02 | ZZZZZZ | 3103 | 124620 | 7680 | 8302 |
| 02:07 | ZZZZZZ | 3132 | 126000 | 7765 | 8342 |
| 02:12 | MP43387-B1 | 3064 | 122980 | 7725 | 8247 |
| 02:16 | MP43387-MB1 | 3111 | 125290 | 7671 | 8290 |
| 02:23 | MA55139-CCV21 | 2996 | 120010 | 7462 | 8098 |
| 02:28 | MA55139-CCB21 | 3119 | 124730 | 7628 | 8329 |
| 02:33 | MP43387-LB1 | 2973 | 112560 | 7543 | 7666 |
| 02:39 | MP43387-LS1 | 2941 | 113350 | 7496 | 7600 |

INTERNAL STANDARD SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP Date Analyzed: 11/28/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55139
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

| Time | Sample Description | Istd#1 | Istd#2 | Istd#3 | Istd#4 |
|---|---|---|---|---|---|
| 02:43 | MP43387-S1 | 2930 | 112840 | 7495 | 7564 |
| 02:48 | MP43387-S2 | 2955 | 113840 | 7569 | 7620 |
| 02:53 | JD77551-1 | 2963 | 112990 | 7515 | 7637 |
| 02:59 | MP43387-SD1 | No results reported for the elements associated with this internal standard. | | | |
| 03:04 | ZZZZZZ | 2870 | 110500 | 7398 | 7405 |
| 03:09 | ZZZZZZ | 2968 | 113420 | 7515 | 7626 |
| 03:14 | ZZZZZZ | 2951 | 112720 | 7467 | 7570 |
| 03:19 | ZZZZZZ | 2915 | 110950 | 7397 | 7514 |
| 03:26 | MA55139-CCV22 | 3030 | 120620 | 7382 | 8169 |
| 03:31 | MA55139-CCB22 | 3114 | 125520 | 7496 | 8327 |

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

| Istd# | Parameter | Limits |
|---|---|---|
| Istd#1 | Yttrium (2243) | 70-130 % |
| Istd#2 | Yttrium (3600) | 70-130 % |
| Istd#3 | Yttrium (3710) | 70-130 % |
| Istd#4 | Indium | 70-130 % |

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL  Run ID: MA55139  Units: ug/l

| Time: / Sample ID: | | | 06:55 ICB1 | | 07:05 CCB1 | | 08:02 CCB2 | | 09:20 CCB3 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Metal | RL | IDL | raw | final | raw | final | raw | final | raw | final |
| Aluminum | 200 | 9.2 | 8.70 | <200 | -17.5 | <200 | -21.2 | <200 | -21.4 | <200 |
| Antimony | 6.0 | 2.8 | 1.00 | <6.0 | -0.400 | <6.0 | 0.500 | <6.0 | -0.100 | <6.0 |
| Arsenic | 3.0 | 2.6 | 0.00 | <3.0 | -0.100 | <3.0 | -0.200 | <3.0 | -0.900 | <3.0 |
| Barium | 200 | .2 | 0.300 | <200 | 0.00 | <200 | 0.100 | <200 | -0.300 | <200 |
| Beryllium | 1.0 | .2 | 0.200 | <1.0 | 0.00 | <1.0 | -0.100 | <1.0 | 0.00 | <1.0 |
| Bismuth | 20 | 2.5 | | | | | | | | |
| Boron | 100 | 1.8 | anr | | | | | | | |
| Cadmium | 3.0 | .4 | 0.100 | <3.0 | -0.100 | <3.0 | 0.100 | <3.0 | -0.200 | <3.0 |
| Calcium | 5000 | 13 | 2.90 | <5000 | -1.50 | <5000 | -2.00 | <5000 | -0.600 | <5000 |
| Cerium | 100 | | | | | | | | | |
| Chromium | 10 | .7 | 0.00 | <10 | -0.200 | <10 | -0.200 | <10 | -0.300 | <10 |
| Cobalt | 50 | .6 | 0.200 | <50 | -0.400 | <50 | -0.300 | <50 | -0.300 | <50 |
| Copper | 10 | .7 | 0.300 | <10 | 0.600 | <10 | 0.700 | <10 | 0.900 | <10 |
| Iron | 100 | 3.3 | 5.40 | <100 | -0.400 | <100 | -0.300 | <100 | -0.800 | <100 |
| Lead | 3.0 | 2 | 0.300 | <3.0 | 0.400 | <3.0 | -0.500 | <3.0 | 0.100 | <3.0 |
| Lithium | 50 | 1.5 | | | | | | | | |
| Magnesium | 5000 | 25 | 17.9 | <5000 | 2.40 | <5000 | 8.00 | <5000 | 5.60 | <5000 |
| Manganese | 15 | .1 | 0.100 | <15 | -0.100 | <15 | -0.200 | <15 | -0.100 | <15 |
| Molybdenum | 20 | .6 | anr | | | | | | | |
| Nickel | 10 | .8 | 0.400 | <10 | 0.100 | <10 | -0.100 | <10 | -0.200 | <10 |
| Phosphorus | 50 | 7 | | | | | | | | |
| Potassium | 10000 | 35 | 6.90 | <10000 | 13.1 | <10000 | -8.80 | <10000 | -3.40 | <10000 |
| Selenium | 10 | 3.6 | -0.700 | <10 | -0.400 | <10 | -0.600 | <10 | -1.60 | <10 |
| Silicon | 200 | 2.2 | | | | | | | | |
| Silver | 10 | .6 | 0.00 | <10 | 0.00 | <10 | 0.00 | <10 | 0.100 | <10 |
| Sodium | 10000 | 14 | -1.70 | <10000 | 1.60 | <10000 | -8.20 | <10000 | -0.400 | <10000 |
| Strontium | 10 | .1 | anr | | | | | | | |
| Sulfur | 50 | 3.7 | anr | | | | | | | |
| Thallium | 10 | 5.2 | 1.20 | <10 | -0.100 | <10 | 0.00 | <10 | -1.10 | <10 |
| Tin | 10 | 1.4 | | | | | | | | |
| Titanium | 10 | .8 | | | | | | | | |
| Tungsten | 50 | 1.3 | | | | | | | | |
| Vanadium | 50 | .5 | 0.200 | <50 | -0.100 | <50 | -0.100 | <50 | 0.100 | <50 |

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL  Run ID: MA55139  Units: ug/l

| Time: | | | 06:55 | | 07:05 | | 08:02 | | 09:20 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | | | ICB1 | | CCB1 | | CCB2 | | CCB3 | |
| Metal | RL | IDL | raw | final | raw | final | raw | final | raw | final |
| Zinc | 20 | .3 | 0.100 | <20 | -0.400 | <20 | -0.500 | <20 | -0.400 | <20 |
| Zirconium | 10 | .5 | | | | | | | | |

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL  Run ID: MA55139  Units: ug/l

| Time: | | | 10:15 | | 11:05 | | 12:05 | | 13:05 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | | | CCB4 | | CCB5 | | CCB6 | | CCB7 | |
| Metal | RL | IDL | raw | final | raw | final | raw | final | raw | final |
| Aluminum | 200 | 9.2 | 5.00 | <200 | -11.7 | <200 | -26.1 | <200 | -16.0 | <200 |
| Antimony | 6.0 | 2.8 | 0.100 | <6.0 | 0.400 | <6.0 | 0.400 | <6.0 | 0.300 | <6.0 |
| Arsenic | 3.0 | 2.6 | 0.200 | <3.0 | -1.00 | <3.0 | -0.100 | <3.0 | -0.200 | <3.0 |
| Barium | 200 | .2 | 0.00 | <200 | 0.100 | <200 | 0.300 | <200 | -0.100 | <200 |
| Beryllium | 1.0 | .2 | -0.100 | <1.0 | -0.100 | <1.0 | -0.100 | <1.0 | 0.00 | <1.0 |
| Bismuth | 20 | 2.5 | | | | | | | | |
| Boron | 100 | 1.8 | anr | | | | | | | |
| Cadmium | 3.0 | .4 | 0.00 | <3.0 | 0.00 | <3.0 | 0.100 | <3.0 | 0.00 | <3.0 |
| Calcium | 5000 | 13 | -2.10 | <5000 | -2.70 | <5000 | -3.10 | <5000 | -2.20 | <5000 |
| Cerium | 100 | | | | | | | | | |
| Chromium | 10 | .7 | -0.100 | <10 | -0.100 | <10 | 0.00 | <10 | 0.00 | <10 |
| Cobalt | 50 | .6 | -0.400 | <50 | -0.100 | <50 | 0.100 | <50 | -0.300 | <50 |
| Copper | 10 | .7 | 0.600 | <10 | -0.200 | <10 | -0.500 | <10 | -0.300 | <10 |
| Iron | 100 | 3.3 | -3.20 | <100 | -0.100 | <100 | 1.50 | <100 | 2.50 | <100 |
| Lead | 3.0 | 2 | -0.700 | <3.0 | -0.500 | <3.0 | -0.700 | <3.0 | -0.200 | <3.0 |
| Lithium | 50 | 1.5 | | | | | | | | |
| Magnesium | 5000 | 25 | 32.2 | <5000 | 5.60 | <5000 | 2.70 | <5000 | 8.10 | <5000 |
| Manganese | 15 | .1 | -0.100 | <15 | -0.100 | <15 | 0.00 | <15 | 0.00 | <15 |
| Molybdenum | 20 | .6 | anr | | | | | | | |
| Nickel | 10 | .8 | -0.200 | <10 | 0.100 | <10 | 0.100 | <10 | 0.00 | <10 |
| Phosphorus | 50 | 7 | | | | | | | | |
| Potassium | 10000 | 35 | 14.3 | <10000 | 12.6 | <10000 | 25.7 | <10000 | 38.9 | <10000 |
| Selenium | 10 | 3.6 | -0.500 | <10 | -0.500 | <10 | -2.00 | <10 | 0.600 | <10 |
| Silicon | 200 | 2.2 | | | | | | | | |
| Silver | 10 | .6 | 0.100 | <10 | -0.100 | <10 | -0.500 | <10 | -0.600 | <10 |
| Sodium | 10000 | 14 | -5.70 | <10000 | -13.3 | <10000 | -16.1 | <10000 | -10.5 | <10000 |
| Strontium | 10 | .1 | anr | | | | | | | |
| Sulfur | 50 | 3.7 | anr | | | | | | | |
| Thallium | 10 | 5.2 | 0.200 | <10 | 0.100 | <10 | -1.00 | <10 | 0.600 | <10 |
| Tin | 10 | 1.4 | | | | | | | | |
| Titanium | 10 | .8 | | | | | | | | |
| Tungsten | 50 | 1.3 | | | | | | | | |
| Vanadium | 50 | .5 | 0.00 | <50 | -0.100 | <50 | -0.200 | <50 | 0.00 | <50 |

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL  Run ID: MA55139  Units: ug/l

| Time: | | | 10:15 | | 11:05 | | 12:05 | | 13:05 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | | | CCB4 | | CCB5 | | CCB6 | | CCB7 | |
| Metal | RL | IDL | raw | final | raw | final | raw | final | raw | final |
| Zinc | 20 | .3 | -0.400 | <20 | -0.300 | <20 | -0.300 | <20 | -0.200 | <20 |
| Zirconium | 10 | .5 | | | | | | | | |

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL  Run ID: MA55139  Units: ug/l

| Time: / Sample ID: | | | 13:54 CCB8 | | 14:43 CCB9 | | 15:34 CCB10 | | 16:29 CCB11 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Metal | RL | IDL | raw | final | raw | final | raw | final | raw | final |
| Aluminum | 200 | 9.2 | -15.5 | <200 | -12.7 | <200 | -13.0 | <200 | -7.40 | <200 |
| Antimony | 6.0 | 2.8 | -0.500 | <6.0 | -0.100 | <6.0 | 0.100 | <6.0 | -0.500 | <6.0 |
| Arsenic | 3.0 | 2.6 | 0.300 | <3.0 | -0.300 | <3.0 | -0.500 | <3.0 | -0.100 | <3.0 |
| Barium | 200 | .2 | 0.00 | <200 | -0.100 | <200 | 0.00 | <200 | 0.00 | <200 |
| Beryllium | 1.0 | .2 | 0.100 | <1.0 | 0.200 | <1.0 | 0.100 | <1.0 | -0.100 | <1.0 |
| Bismuth | 20 | 2.5 | | | | | | | | |
| Boron | 100 | 1.8 | anr | | | | | | | |
| Cadmium | 3.0 | .4 | 0.200 | <3.0 | 0.100 | <3.0 | 0.200 | <3.0 | -0.100 | <3.0 |
| Calcium | 5000 | 13 | 0.200 | <5000 | 2.30 | <5000 | 2.70 | <5000 | 2.70 | <5000 |
| Cerium | 100 | | | | | | | | | |
| Chromium | 10 | .7 | 0.00 | <10 | -0.100 | <10 | -0.100 | <10 | -0.400 | <10 |
| Cobalt | 50 | .6 | -0.200 | <50 | 0.100 | <50 | -0.200 | <50 | -0.500 | <50 |
| Copper | 10 | .7 | 1.20 | <10 | 1.20 | <10 | 1.60 | <10 | 1.10 | <10 |
| Iron | 100 | 3.3 | 0.900 | <100 | 1.80 | <100 | 1.30 | <100 | -6.20 | <100 |
| Lead | 3.0 | 2 | 0.400 | <3.0 | -0.300 | <3.0 | 0.600 | <3.0 | -0.100 | <3.0 |
| Lithium | 50 | 1.5 | | | | | | | | |
| Magnesium | 5000 | 25 | 4.50 | <5000 | -9.30 | <5000 | 3.10 | <5000 | -0.300 | <5000 |
| Manganese | 15 | .1 | 0.00 | <15 | 0.00 | <15 | 0.00 | <15 | -0.300 | <15 |
| Molybdenum | 20 | .6 | anr | | | | | | | |
| Nickel | 10 | .8 | 0.00 | <10 | -0.100 | <10 | -0.100 | <10 | -0.200 | <10 |
| Phosphorus | 50 | 7 | | | | | | | | |
| Potassium | 10000 | 35 | 34.6 | <10000 | 21.5 | <10000 | 5.10 | <10000 | 46.0 | <10000 |
| Selenium | 10 | 3.6 | 0.200 | <10 | 1.20 | <10 | 1.40 | <10 | 0.400 | <10 |
| Silicon | 200 | 2.2 | | | | | | | | |
| Silver | 10 | .6 | 0.200 | <10 | 0.200 | <10 | 0.600 | <10 | 0.400 | <10 |
| Sodium | 10000 | 14 | -10.8 | <10000 | -9.90 | <10000 | 0.900 | <10000 | 31.1 | <10000 |
| Strontium | 10 | .1 | anr | | | | | | | |
| Sulfur | 50 | 3.7 | anr | | | | | | | |
| Thallium | 10 | 5.2 | -0.100 | <10 | -0.300 | <10 | -0.200 | <10 | 0.300 | <10 |
| Tin | 10 | 1.4 | | | | | | | | |
| Titanium | 10 | .8 | | | | | | | | |
| Tungsten | 50 | 1.3 | | | | | | | | |
| Vanadium | 50 | .5 | 0.00 | <50 | 0.300 | <50 | 0.200 | <50 | -0.300 | <50 |

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL  Run ID: MA55139  Units: ug/l

| Time: | | | 13:54 | | 14:43 | | 15:34 | | 16:29 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | | | CCB8 | | CCB9 | | CCB10 | | CCB11 | |
| Metal | RL | IDL | raw | final | raw | final | raw | final | raw | final |
| Zinc | 20 | .3 | -0.100 | <20 | -0.300 | <20 | -0.100 | <20 | -0.400 | <20 |
| Zirconium | 10 | .5 | | | | | | | | |

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL  Run ID: MA55139  Units: ug/l

| Time: | | | 17:30 | | 18:39 | | 19:40 | | 20:39 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | | | CCB12 | | CCB13 | | CCB14 | | CCB15 | |
| Metal | RL | IDL | raw | final | raw | final | raw | final | raw | final |
| Aluminum | 200 | 9.2 | -14.1 | <200 | -14.1 | <200 | -26.0 | <200 | -24.1 | <200 |
| Antimony | 6.0 | 2.8 | -1.00 | <6.0 | -0.300 | <6.0 | 0.100 | <6.0 | -0.900 | <6.0 |
| Arsenic | 3.0 | 2.6 | -0.200 | <3.0 | -0.700 | <3.0 | -0.600 | <3.0 | -0.400 | <3.0 |
| Barium | 200 | .2 | -0.200 | <200 | -0.200 | <200 | -0.200 | <200 | -0.300 | <200 |
| Beryllium | 1.0 | .2 | -0.100 | <1.0 | -0.200 | <1.0 | -0.100 | <1.0 | -0.100 | <1.0 |
| Bismuth | 20 | 2.5 | | | | | | | | |
| Boron | 100 | 1.8 | anr | | | | | | | |
| Cadmium | 3.0 | .4 | -0.100 | <3.0 | -0.100 | <3.0 | 0.00 | <3.0 | -0.200 | <3.0 |
| Calcium | 5000 | 13 | 3.20 | <5000 | 4.50 | <5000 | 5.90 | <5000 | 3.70 | <5000 |
| Cerium | 100 | | | | | | | | | |
| Chromium | 10 | .7 | -0.100 | <10 | -0.300 | <10 | -0.200 | <10 | -0.100 | <10 |
| Cobalt | 50 | .6 | -0.300 | <50 | -0.300 | <50 | -0.300 | <50 | -0.400 | <50 |
| Copper | 10 | .7 | 1.20 | <10 | 2.00 | <10 | 2.30 | <10 | 2.00 | <10 |
| Iron | 100 | 3.3 | -3.90 | <100 | -1.30 | <100 | -4.10 | <100 | -6.70 | <100 |
| Lead | 3.0 | 2 | -0.600 | <3.0 | -0.800 | <3.0 | -0.900 | <3.0 | -0.600 | <3.0 |
| Lithium | 50 | 1.5 | | | | | | | | |
| Magnesium | 5000 | 25 | -22.2 | <5000 | -19.5 | <5000 | -9.90 | <5000 | -12.9 | <5000 |
| Manganese | 15 | .1 | -0.200 | <15 | -0.200 | <15 | -0.200 | <15 | -0.200 | <15 |
| Molybdenum | 20 | .6 | anr | | | | | | | |
| Nickel | 10 | .8 | -0.100 | <10 | -0.100 | <10 | -0.100 | <10 | -0.100 | <10 |
| Phosphorus | 50 | 7 | | | | | | | | |
| Potassium | 10000 | 35 | 5.40 | <10000 | 12.8 | <10000 | 14.2 | <10000 | 25.0 | <10000 |
| Selenium | 10 | 3.6 | 1.10 | <10 | 0.300 | <10 | -0.200 | <10 | 0.300 | <10 |
| Silicon | 200 | 2.2 | | | | | | | | |
| Silver | 10 | .6 | 0.300 | <10 | 0.800 | <10 | 0.600 | <10 | 0.700 | <10 |
| Sodium | 10000 | 14 | 2.20 | <10000 | 1.10 | <10000 | -0.500 | <10000 | -11.4 | <10000 |
| Strontium | 10 | .1 | anr | | | | | | | |
| Sulfur | 50 | 3.7 | anr | | | | | | | |
| Thallium | 10 | 5.2 | -0.700 | <10 | -0.400 | <10 | -0.400 | <10 | 0.00 | <10 |
| Tin | 10 | 1.4 | | | | | | | | |
| Titanium | 10 | .8 | | | | | | | | |
| Tungsten | 50 | 1.3 | | | | | | | | |
| Vanadium | 50 | .5 | 0.00 | <50 | -0.100 | <50 | -0.200 | <50 | -0.200 | <50 |

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL  Run ID: MA55139  Units: ug/l

| Time: | | | 17:30 | | 18:39 | | 19:40 | | 20:39 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | | | CCB12 | | CCB13 | | CCB14 | | CCB15 | |
| Metal | RL | IDL | raw | final | raw | final | raw | final | raw | final |
| Zinc | 20 | .3 | -0.500 | <20 | -0.500 | <20 | -0.400 | <20 | -0.400 | <20 |
| Zirconium | 10 | .5 | | | | | | | | |

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery  Run ID: MA55139  Units: ug/l

| Time: | | 06:47 | | | 07:00 | | | 07:57 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | ICV | ICV1 | | CCV | CCV1 | | CCV | CCV2 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Aluminum | 40000 | 39700 | 99.3 | 40000 | 39200 | 98.0 | 40000 | 38400 | 96.0 |
| Antimony | 2000 | 1980 | 99.0 | 2000 | 2040 | 102.0 | 2000 | 2080 | 104.0 |
| Arsenic | 2000 | 2010 | 100.5 | 2000 | 2040 | 102.0 | 2000 | 2070 | 103.5 |
| Barium | 2000 | 1880 | 94.0*(a) | 2000 | 1880 | 94.0 | 2000 | 1870 | 93.5 |
| Beryllium | 2000 | 1880 | 94.0*(a) | 2000 | 1900 | 95.0 | 2000 | 1910 | 95.5 |
| Bismuth | | | | | | | | | |
| Boron | anr | | | | | | | | |
| Cadmium | 2000 | 1880 | 94.0*(a) | 2000 | 1880 | 94.0 | 2000 | 1910 | 95.5 |
| Calcium | 40000 | 39200 | 98.0 | 40000 | 40600 | 101.5 | 40000 | 40600 | 101.5 |
| Cerium | | | | | | | | | |
| Chromium | 2000 | 1920 | 96.0 | 2000 | 1930 | 96.5 | 2000 | 1960 | 98.0 |
| Cobalt | 2000 | 1900 | 95.0 | 2000 | 1910 | 95.5 | 2000 | 1930 | 96.5 |
| Copper | 2000 | 1880 | 94.0*(a) | 2000 | 1860 | 93.0 | 2000 | 1900 | 95.0 |
| Iron | 40000 | 39200 | 98.0 | 40000 | 40000 | 100.0 | 40000 | 39200 | 98.0 |
| Lead | 2000 | 1900 | 95.0 | 2000 | 1930 | 96.5 | 2000 | 1940 | 97.0 |
| Lithium | | | | | | | | | |
| Magnesium | 40000 | 39200 | 98.0 | 40000 | 40400 | 101.0 | 40000 | 40000 | 100.0 |
| Manganese | 2000 | 1930 | 96.5 | 2000 | 1940 | 97.0 | 2000 | 2000 | 100.0 |
| Molybdenum | anr | | | | | | | | |
| Nickel | 2000 | 1890 | 94.5*(a) | 2000 | 1930 | 96.5 | 2000 | 1940 | 97.0 |
| Phosphorus | | | | | | | | | |
| Potassium | 40000 | 38600 | 96.5 | 40000 | 39700 | 99.3 | 40000 | 39500 | 98.8 |
| Selenium | 2000 | 1870 | 93.5*(a) | 2000 | 1860 | 93.0 | 2000 | 1900 | 95.0 |
| Silicon | | | | | | | | | |
| Silver | 250 | 245 | 98.0 | 250 | 252 | 100.8 | 250 | 257 | 102.8 |
| Sodium | 40000 | 38700 | 96.8 | 40000 | 39600 | 99.0 | 40000 | 38900 | 97.3 |
| Strontium | anr | | | | | | | | |
| Sulfur | anr | | | | | | | | |
| Thallium | 2000 | 1900 | 95.0 | 2000 | 1930 | 96.5 | 2000 | 1940 | 97.0 |
| Tin | | | | | | | | | |
| Titanium | | | | | | | | | |
| Tungsten | | | | | | | | | |
| Vanadium | 2000 | 1910 | 95.5 | 2000 | 1910 | 95.5 | 2000 | 1950 | 97.5 |

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery  Run ID: MA55139  Units: ug/l

| Time: | | 06:47 | | | 07:00 | | | 07:57 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | ICV | ICV1 | | CCV | CCV1 | | CCV | CCV2 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Zinc | 2000 | 1900 | 95.0 | 2000 | 1920 | 96.0 | 2000 | 1920 | 96.0 |
| Zirconium | | | | | | | | | |

(*) Outside of QC limits
(anr) Analyte not requested
(a) Within 90 to 110 percent limits required for SW846 6010. No EPA 200.7 samples reported for this element in the area bracketed by this QC.

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery  Run ID: MA55139  Units: ug/l

| Time: | | 09:16 | | | 10:10 | | | 11:00 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | CCV | CCV3 | | CCV | CCV4 | | CCV | CCV5 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Aluminum | 40000 | 38200 | 95.5 | 40000 | 38300 | 95.8 | 40000 | 38400 | 96.0 |
| Antimony | 2000 | 2030 | 101.5 | 2000 | 2020 | 101.0 | 2000 | 2010 | 100.5 |
| Arsenic | 2000 | 2020 | 101.0 | 2000 | 2030 | 101.5 | 2000 | 2010 | 100.5 |
| Barium | 2000 | 1850 | 92.5 | 2000 | 1850 | 92.5 | 2000 | 1840 | 92.0 |
| Beryllium | 2000 | 1870 | 93.5 | 2000 | 1870 | 93.5 | 2000 | 1850 | 92.5 |
| Bismuth | | | | | | | | | |
| Boron | anr | | | | | | | | |
| Cadmium | 2000 | 1870 | 93.5 | 2000 | 1860 | 93.0 | 2000 | 1860 | 93.0 |
| Calcium | 40000 | 39900 | 99.8 | 40000 | 39900 | 99.8 | 40000 | 39500 | 98.8 |
| Cerium | | | | | | | | | |
| Chromium | 2000 | 1910 | 95.5 | 2000 | 1910 | 95.5 | 2000 | 1900 | 95.0 |
| Cobalt | 2000 | 1890 | 94.5 | 2000 | 1890 | 94.5 | 2000 | 1860 | 93.0 |
| Copper | 2000 | 1860 | 93.0 | 2000 | 1860 | 93.0 | 2000 | 1860 | 93.0 |
| Iron | 40000 | 38700 | 96.8 | 40000 | 38800 | 97.0 | 40000 | 38900 | 97.3 |
| Lead | 2000 | 1900 | 95.0 | 2000 | 1900 | 95.0 | 2000 | 1870 | 93.5 |
| Lithium | | | | | | | | | |
| Magnesium | 40000 | 39300 | 98.3 | 40000 | 39300 | 98.3 | 40000 | 39200 | 98.0 |
| Manganese | 2000 | 1940 | 97.0 | 2000 | 1940 | 97.0 | 2000 | 1920 | 96.0 |
| Molybdenum | anr | | | | | | | | |
| Nickel | 2000 | 1900 | 95.0 | 2000 | 1900 | 95.0 | 2000 | 1890 | 94.5 |
| Phosphorus | | | | | | | | | |
| Potassium | 40000 | 39000 | 97.5 | 40000 | 39100 | 97.8 | 40000 | 39100 | 97.8 |
| Selenium | 2000 | 1860 | 93.0 | 2000 | 1860 | 93.0 | 2000 | 1840 | 92.0 |
| Silicon | | | | | | | | | |
| Silver | 250 | 251 | 100.4 | 250 | 251 | 100.4 | 250 | 250 | 100.0 |
| Sodium | 40000 | 38700 | 96.8 | 40000 | 38800 | 97.0 | 40000 | 38800 | 97.0 |
| Strontium | anr | | | | | | | | |
| Sulfur | anr | | | | | | | | |
| Thallium | 2000 | 1910 | 95.5 | 2000 | 1900 | 95.0 | 2000 | 1880 | 94.0 |
| Tin | | | | | | | | | |
| Titanium | | | | | | | | | |
| Tungsten | | | | | | | | | |
| Vanadium | 2000 | 1900 | 95.0 | 2000 | 1900 | 95.0 | 2000 | 1890 | 94.5 |

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery  Run ID: MA55139  Units: ug/l

| Time: | | 09:16 | | | 10:10 | | | 11:00 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | CCV | CCV3 | | CCV | CCV4 | | CCV | CCV5 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Zinc | 2000 | 1880 | 94.0 | 2000 | 1890 | 94.5 | 2000 | 1880 | 94.0 |
| Zirconium | | | | | | | | | |

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery  Run ID: MA55139  Units: ug/l

| Time: | | 12:00 | | | 13:00 | | | 13:45 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | CCV | CCV6 | | CCV | CCV7 | | CCV | CCV8 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Aluminum | 40000 | 37600 | 94.0 | 40000 | 37500 | 93.8 | 40000 | 37600 | 94.0 |
| Antimony | 2000 | 1980 | 99.0 | 2000 | 1980 | 99.0 | 2000 | 2010 | 100.5 |
| Arsenic | 2000 | 1990 | 99.5 | 2000 | 1990 | 99.5 | 2000 | 2010 | 100.5 |
| Barium | 2000 | 1800 | 90.0 | 2000 | 1800 | 90.0 | 2000 | 1820 | 91.0 |
| Beryllium | 2000 | 1820 | 91.0 | 2000 | 1810 | 90.5 | 2000 | 1840 | 92.0 |
| Bismuth | | | | | | | | | |
| Boron | anr | | | | | | | | |
| Cadmium | 2000 | 1840 | 92.0 | 2000 | 1840 | 92.0 | 2000 | 1850 | 92.5 |
| Calcium | 40000 | 38500 | 96.3 | 40000 | 38400 | 96.0 | 40000 | 39300 | 98.3 |
| Cerium | | | | | | | | | |
| Chromium | 2000 | 1860 | 93.0 | 2000 | 1860 | 93.0 | 2000 | 1900 | 95.0 |
| Cobalt | 2000 | 1820 | 91.0 | 2000 | 1820 | 91.0 | 2000 | 1870 | 93.5 |
| Copper | 2000 | 1820 | 91.0 | 2000 | 1820 | 91.0 | 2000 | 1830 | 91.5 |
| Iron | 40000 | 38400 | 96.0 | 40000 | 38200 | 95.5 | 40000 | 38000 | 95.0 |
| Lead | 2000 | 1830 | 91.5 | 2000 | 1830 | 91.5 | 2000 | 1880 | 94.0 |
| Lithium | | | | | | | | | |
| Magnesium | 40000 | 38500 | 96.3 | 40000 | 38400 | 96.0 | 40000 | 38700 | 96.8 |
| Manganese | 2000 | 1880 | 94.0 | 2000 | 1880 | 94.0 | 2000 | 1940 | 97.0 |
| Molybdenum | anr | | | | | | | | |
| Nickel | 2000 | 1870 | 93.5 | 2000 | 1870 | 93.5 | 2000 | 1890 | 94.5 |
| Phosphorus | | | | | | | | | |
| Potassium | 40000 | 38300 | 95.8 | 40000 | 38300 | 95.8 | 40000 | 38700 | 96.8 |
| Selenium | 2000 | 1820 | 91.0 | 2000 | 1820 | 91.0 | 2000 | 1840 | 92.0 |
| Silicon | | | | | | | | | |
| Silver | 250 | 245 | 98.0 | 250 | 245 | 98.0 | 250 | 248 | 99.2 |
| Sodium | 40000 | 38000 | 95.0 | 40000 | 37900 | 94.8 | 40000 | 37900 | 94.8 |
| Strontium | anr | | | | | | | | |
| Sulfur | anr | | | | | | | | |
| Thallium | 2000 | 1840 | 92.0 | 2000 | 1840 | 92.0 | 2000 | 1880 | 94.0 |
| Tin | | | | | | | | | |
| Titanium | | | | | | | | | |
| Tungsten | | | | | | | | | |
| Vanadium | 2000 | 1850 | 92.5 | 2000 | 1850 | 92.5 | 2000 | 1890 | 94.5 |

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery  Run ID: MA55139  Units: ug/l

| Time: | | 12:00 | | | 13:00 | | | 13:45 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | CCV | CCV6 | | CCV | CCV7 | | CCV | CCV8 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Zinc | 2000 | 1860 | 93.0 | 2000 | 1860 | 93.0 | 2000 | 1870 | 93.5 |
| Zirconium | | | | | | | | | |

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery  Run ID: MA55139  Units: ug/l

| Time: | | 14:38 | | | 15:29 | | | 16:25 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | CCV | CCV9 | | CCV | CCV10 | | CCV | CCV11 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Aluminum | 40000 | 38200 | 95.5 | 40000 | 38800 | 97.0 | 40000 | 38000 | 95.0 |
| Antimony | 2000 | 2030 | 101.5 | 2000 | 2020 | 101.0 | 2000 | 1980 | 99.0 |
| Arsenic | 2000 | 2030 | 101.5 | 2000 | 2020 | 101.0 | 2000 | 1980 | 99.0 |
| Barium | 2000 | 1850 | 92.5 | 2000 | 1880 | 94.0 | 2000 | 1830 | 91.5 |
| Beryllium | 2000 | 1870 | 93.5 | 2000 | 1890 | 94.5 | 2000 | 1830 | 91.5 |
| Bismuth | | | | | | | | | |
| Boron | anr | | | | | | | | |
| Cadmium | 2000 | 1860 | 93.0 | 2000 | 1850 | 92.5 | 2000 | 1810 | 90.5 |
| Calcium | 40000 | 40100 | 100.3 | 40000 | 41000 | 102.5 | 40000 | 39800 | 99.5 |
| Cerium | | | | | | | | | |
| Chromium | 2000 | 1940 | 97.0 | 2000 | 1930 | 96.5 | 2000 | 1900 | 95.0 |
| Cobalt | 2000 | 1900 | 95.0 | 2000 | 1900 | 95.0 | 2000 | 1880 | 94.0 |
| Copper | 2000 | 1860 | 93.0 | 2000 | 1850 | 92.5 | 2000 | 1810 | 90.5 |
| Iron | 40000 | 38400 | 96.0 | 40000 | 38800 | 97.0 | 40000 | 37700 | 94.3 |
| Lead | 2000 | 1920 | 96.0 | 2000 | 1920 | 96.0 | 2000 | 1910 | 95.5 |
| Lithium | | | | | | | | | |
| Magnesium | 40000 | 39300 | 98.3 | 40000 | 40100 | 100.3 | 40000 | 38800 | 97.0 |
| Manganese | 2000 | 1970 | 98.5 | 2000 | 1960 | 98.0 | 2000 | 1910 | 95.5 |
| Molybdenum | anr | | | | | | | | |
| Nickel | 2000 | 1910 | 95.5 | 2000 | 1890 | 94.5 | 2000 | 1870 | 93.5 |
| Phosphorus | | | | | | | | | |
| Potassium | 40000 | 39300 | 98.3 | 40000 | 40000 | 100.0 | 40000 | 39000 | 97.5 |
| Selenium | 2000 | 1870 | 93.5 | 2000 | 1860 | 93.0 | 2000 | 1820 | 91.0 |
| Silicon | | | | | | | | | |
| Silver | 250 | 252 | 100.8 | 250 | 251 | 100.4 | 250 | 247 | 98.8 |
| Sodium | 40000 | 38600 | 96.5 | 40000 | 39200 | 98.0 | 40000 | 38300 | 95.8 |
| Strontium | anr | | | | | | | | |
| Sulfur | anr | | | | | | | | |
| Thallium | 2000 | 1920 | 96.0 | 2000 | 1920 | 96.0 | 2000 | 1900 | 95.0 |
| Tin | | | | | | | | | |
| Titanium | | | | | | | | | |
| Tungsten | | | | | | | | | |
| Vanadium | 2000 | 1920 | 96.0 | 2000 | 1910 | 95.5 | 2000 | 1870 | 93.5 |

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery  Run ID: MA55139  Units: ug/l

| Time: | | 14:38 | | | 15:29 | | | 16:25 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | CCV | CCV9 | | CCV | CCV10 | | CCV | CCV11 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Zinc | 2000 | 1890 | 94.5 | 2000 | 1890 | 94.5 | 2000 | 1850 | 92.5 |
| Zirconium | | | | | | | | | |

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery  Run ID: MA55139  Units: ug/l

| Time: | | 17:25 | | | 18:35 | | | 19:35 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | CCV | CCV12 | | CCV | CCV13 | | CCV | CCV14 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Aluminum | 40000 | 36300 | 90.8 | 40000 | 38100 | 95.3 | 40000 | 37500 | 93.8 |
| Antimony | 2000 | 1990 | 99.5 | 2000 | 1980 | 99.0 | 2000 | 1960 | 98.0 |
| Arsenic | 2000 | 1990 | 99.5 | 2000 | 1980 | 99.0 | 2000 | 1960 | 98.0 |
| Barium | 2000 | 1820 | 91.0 | 2000 | 1840 | 92.0 | 2000 | 1820 | 91.0 |
| Beryllium | 2000 | 1830 | 91.5 | 2000 | 1840 | 92.0 | 2000 | 1820 | 91.0 |
| Bismuth | | | | | | | | | |
| Boron | anr | | | | | | | | |
| Cadmium | 2000 | 1810 | 90.5 | 2000 | 1810 | 90.5 | 2000 | 1790 | 89.5*(a) |
| Calcium | 40000 | 39800 | 99.5 | 40000 | 40200 | 100.5 | 40000 | 39700 | 99.3 |
| Cerium | | | | | | | | | |
| Chromium | 2000 | 1910 | 95.5 | 2000 | 1920 | 96.0 | 2000 | 1910 | 95.5 |
| Cobalt | 2000 | 1820 | 91.0 | 2000 | 1900 | 95.0 | 2000 | 1890 | 94.5 |
| Copper | 2000 | 1810 | 90.5 | 2000 | 1820 | 91.0 | 2000 | 1800 | 90.0 |
| Iron | 40000 | 37300 | 93.3 | 40000 | 37400 | 93.5 | 40000 | 36700 | 91.8 |
| Lead | 2000 | 1840 | 92.0 | 2000 | 1930 | 96.5 | 2000 | 1920 | 96.0 |
| Lithium | | | | | | | | | |
| Magnesium | 40000 | 38700 | 96.8 | 40000 | 38900 | 97.3 | 40000 | 38400 | 96.0 |
| Manganese | 2000 | 1930 | 96.5 | 2000 | 1930 | 96.5 | 2000 | 1910 | 95.5 |
| Molybdenum | anr | | | | | | | | |
| Nickel | 2000 | 1870 | 93.5 | 2000 | 1870 | 93.5 | 2000 | 1850 | 92.5 |
| Phosphorus | | | | | | | | | |
| Potassium | 40000 | 39000 | 97.5 | 40000 | 39400 | 98.5 | 40000 | 38900 | 97.3 |
| Selenium | 2000 | 1830 | 91.5 | 2000 | 1830 | 91.5 | 2000 | 1810 | 90.5 |
| Silicon | | | | | | | | | |
| Silver | 250 | 247 | 98.8 | 250 | 249 | 99.6 | 250 | 246 | 98.4 |
| Sodium | 40000 | 38100 | 95.3 | 40000 | 38500 | 96.3 | 40000 | 38000 | 95.0 |
| Strontium | anr | | | | | | | | |
| Sulfur | anr | | | | | | | | |
| Thallium | 2000 | 1840 | 92.0 | 2000 | 1920 | 96.0 | 2000 | 1910 | 95.5 |
| Tin | | | | | | | | | |
| Titanium | | | | | | | | | |
| Tungsten | | | | | | | | | |
| Vanadium | 2000 | 1890 | 94.5 | 2000 | 1890 | 94.5 | 2000 | 1880 | 94.0 |

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery  Run ID: MA55139  Units: ug/l

| Time: | | 17:25 | | | 18:35 | | | 19:35 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | CCV | CCV12 | | CCV | CCV13 | | CCV | CCV14 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Zinc | 2000 | 1860 | 93.0 | 2000 | 1850 | 92.5 | 2000 | 1840 | 92.0 |
| Zirconium | | | | | | | | | |

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for this element in the area bracketed by this QC.

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery  Run ID: MA55139  Units: ug/l

| Time: | | 20:34 | |
|---|---|---|---|
| Sample ID: | CCV | CCV15 | |
| Metal | True | Results | % Rec |
| Aluminum | 40000 | 38400 | 96.0 |
| Antimony | 2000 | 1990 | 99.5 |
| Arsenic | 2000 | 1990 | 99.5 |
| Barium | 2000 | 1850 | 92.5 |
| Beryllium | 2000 | 1840 | 92.0 |
| Bismuth | | | |
| Boron | anr | | |
| Cadmium | 2000 | 1810 | 90.5 |
| Calcium | 40000 | 40300 | 100.8 |
| Cerium | | | |
| Chromium | 2000 | 1920 | 96.0 |
| Cobalt | 2000 | 1910 | 95.5 |
| Copper | 2000 | 1820 | 91.0 |
| Iron | 40000 | 37500 | 93.8 |
| Lead | 2000 | 1950 | 97.5 |
| Lithium | | | |
| Magnesium | 40000 | 39000 | 97.5 |
| Manganese | 2000 | 1920 | 96.0 |
| Molybdenum | anr | | |
| Nickel | 2000 | 1870 | 93.5 |
| Phosphorus | | | |
| Potassium | 40000 | 39600 | 99.0 |
| Selenium | 2000 | 1830 | 91.5 |
| Silicon | | | |
| Silver | 250 | 249 | 99.6 |
| Sodium | 40000 | 38900 | 97.3 |
| Strontium | anr | | |
| Sulfur | anr | | |
| Thallium | 2000 | 1940 | 97.0 |
| Tin | | | |
| Titanium | | | |
| Tungsten | | | |
| Vanadium | 2000 | 1890 | 94.5 |

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery  Run ID: MA55139  Units: ug/l

| Time: | | 20:34 | |
|---|---|---|---|
| Sample ID: | CCV | CCV15 | |
| Metal | True | Results | % Rec |
| Zinc | 2000 | 1860 | 93.0 |
| Zirconium | | | |

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 90 to 110 % Recovery  Run ID: MA55139  Units: ug/l

| Time: | | 07:31 | | | 07:36 | |
|---|---|---|---|---|---|---|
| Sample ID: | HSTD | HSTD1 | | HSTD | HSTD2 | |
| Metal | True | Results | % Rec | True | Results | % Rec |
| Aluminum | | | | 300000 | 291000 | 97.0 |
| Antimony | 8000 | 7760 | 97.0 | | | |
| Arsenic | 8000 | 7750 | 96.9 | | | |
| Barium | 8000 | 7280 | 91.0 | | | |
| Beryllium | 8000 | 7390 | 92.4 | | | |
| Bismuth | | | | | | |
| Boron | anr | | | | | |
| Cadmium | 8000 | 7250 | 90.6 | | | |
| Calcium | | | | 200000 | 206000 | 103.0 |
| Cerium | | | | | | |
| Chromium | 8000 | 7720 | 96.5 | | | |
| Cobalt | 8000 | 7480 | 93.5 | | | |
| Copper | 8000 | 7400 | 92.5 | | | |
| Iron | | | | 200000 | 191000 | 95.5 |
| Lead | 8000 | 7480 | 93.5 | | | |
| Lithium | | | | | | |
| Magnesium | | | | 300000 | 288000 | 96.0 |
| Manganese | 8000 | 7660 | 95.8 | | | |
| Molybdenum | anr | | | | | |
| Nickel | 8000 | 7490 | 93.6 | | | |
| Phosphorus | | | | | | |
| Potassium | | | | 200000 | 199000 | 99.5 |
| Selenium | 8000 | 7280 | 91.0 | | | |
| Silicon | | | | | | |
| Silver | 625 | 615 | 98.4 | | | |
| Sodium | | | | 200000 | 196000 | 98.0 |
| Strontium | anr | | | | | |
| Sulfur | anr | | | | | |
| Thallium | 8000 | 7360 | 92.0 | | | |
| Tin | | | | | | |
| Titanium | | | | | | |
| Tungsten | | | | | | |
| Vanadium | 8000 | 7620 | 95.3 | | | |

HIGH STANDARD CHECK SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 90 to 110 % Recovery  Run ID: MA55139  Units: ug/l

| Time: | | 07:31 | | | 07:36 | |
|---|---|---|---|---|---|---|
| Sample ID: | HSTD | HSTD1 | | HSTD | HSTD2 | |
| Metal | True | Results | % Rec | True | Results | % Rec |
| Zinc | 8000 | 7550 | 94.4 | | | |
| Zirconium | | | | | | |

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
QC Limits: CRI 80-120%  CRIA 80-120%  Run ID: MA55139  Units: ug/l

| Time: | | | | 07:10 | | 07:15 | |
|---|---|---|---|---|---|---|---|
| Sample ID: | CRI | CRIA | CRID | CRI1 | | CRID1 | |
| Metal | True | True | True | Results | % Rec | Results | % Rec |
| Aluminum | 200 | 500 | 100 | 184 | 92.0 | 105 | 105.0 |
| Antimony | 6.0 | 20 | 3.0 | 5.60 | 93.3 | | |
| Arsenic | 8.0 | 20 | 3.0 | 7.30 | 91.3 | | |
| Barium | 200 | | 4.0 | 186 | 93.0 | 3.70 | 92.5 |
| Beryllium | 2.0 | | 1.0 | 2.10 | 105.0 | 0.900 | 90.0 |
| Bismuth | 20 | | | | | | |
| Boron | 100 | | 10 | anr | | | |
| Cadmium | 3.0 | | 1.0 | 2.70 | 90.0 | | |
| Calcium | 5000 | 2000 | 1000 | 5180 | 103.6 | 1020 | 102.0 |
| Cerium | | | | | | | |
| Chromium | 10 | | 2.0 | 9.70 | 97.0 | 1.80 | 90.0 |
| Cobalt | 50 | | 3.0 | 48.1 | 96.2 | 2.60 | 86.7 |
| Copper | 10 | | 2.0 | 10.6 | 106.0 | | |
| Iron | 100 | 500 | | 101 | 101.0 | | |
| Lead | 3.0 | 20 | 2.5 | 3.20 | 106.7 | | |
| Lithium | 50 | | | | | | |
| Magnesium | 5000 | 2000 | 100 | 5150 | 103.0 | 101 | 101.0 |
| Manganese | 15 | | 3.0 | 15.1 | 100.7 | 2.80 | 93.3 |
| Molybdenum | 20 | | | anr | | | |
| Nickel | 10 | | 4.0 | 9.80 | 98.0 | 3.90 | 97.5 |
| Phosphorus | 50 | | | | | | |
| Potassium | 5000 | | 2000 | 4980 | 99.6 | 1920 | 96.0 |
| Selenium | 10 | 20 | 5.0 | 10.7 | 107.0 | 4.30 | 86.0 |
| Silicon | 200 | | | | | | |
| Silver | 5.0 | | 2.0 | 4.90 | 98.0 | | |
| Sodium | 5000 | | 1000 | 4820 | 96.4 | 933 | 93.3 |
| Strontium | 10 | | | anr | | | |
| Sulfur | 50 | | | anr | | | |
| Thallium | 10 | | 2.0 | 9.10 | 91.0 | | |
| Tin | 10 | | | | | | |
| Titanium | 10 | | | | | | |
| Tungsten | 50 | | | | | | |
| Vanadium | 50 | | 2.0 | 49.1 | 98.2 | 1.70 | 85.0 |

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
QC Limits: CRI 80-120%  CRIA 80-120%  Run ID: MA55139  Units: ug/l

| Time: | | | | 07:10 | | 07:15 | |
|---|---|---|---|---|---|---|---|
| Sample ID: | CRI | CRIA | CRID | CRI1 | | CRID1 | |
| Metal | True | True | True | Results | % Rec | Results | % Rec |
| Zinc | 20 | | 10 | 21.0 | 105.0 | 9.40 | 94.0 |
| Zirconium | 10 | | | | | | |

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 80 to 120 % Recovery  Run ID: MA55139  Units: ug/l

| Time: | | | 07:21 | | 07:26 | |
|---|---|---|---|---|---|---|
| Sample ID: | ICSA | ICSAB | ICSA1 | | ICSAB1 | |
| Metal | True | True | Results | % Rec | Results | % Rec |
| Aluminum | 500000 | 500000 | 477000 | 95.4 | 483000 | 96.6 |
| Antimony | | 1000 | -2.20 | | 997 | 99.7 |
| Arsenic | | 1000 | 1.80 | | 1010 | 101.0 |
| Barium | | 500 | -6.80 | | 439 | 87.8 |
| Beryllium | | 500 | 0.200 | | 453 | 90.6 |
| Bismuth | | 500 | -2.30 | | 514 | 102.8 |
| Boron | | 500 | -0.500 | | 470 | 94.0 |
| Cadmium | | 1000 | -0.300 | | 968 | 96.8 |
| Calcium | 400000 | 400000 | 379000 | 94.8 | 373000 | 93.3 |
| Cerium | | | -26.6 | | 1.80 | |
| Chromium | | 500 | -3.10 | | 441 | 88.2 |
| Cobalt | | 500 | -1.50 | | 444 | 88.8 |
| Copper | | 500 | 0.600 | | 475 | 95.0 |
| Iron | 200000 | 200000 | 177000 | 88.5 | 181000 | 90.5 |
| Lead | | 1000 | 2.30 | | 887 | 88.7 |
| Lithium | | 500 | -9.30 | | 495 | 99.0 |
| Magnesium | 500000 | 500000 | 464000 | 92.8 | 472000 | 94.4 |
| Manganese | | 500 | 1.80 | | 472 | 94.4 |
| Molybdenum | | 500 | -0.700 | | 483 | 96.6 |
| Nickel | | 1000 | 0.400 | | 867 | 86.7 |
| Phosphorus | | 500 | 11.5 | | 472 | 94.4 |
| Potassium | | | 71.4 | | 106 | |
| Selenium | | 1000 | -6.60 | | 908 | 90.8 |
| Silicon | | 500 | 1.00 | | 515 | 103.0 |
| Silver | | 1000 | 0.500 | | 965 | 96.5 |
| Sodium | | | 0.200 | | 29.7 | |
| Strontium | | 500 | 8.10 | | 447 | 89.4 |
| Sulfur | | 500 | -1.30 | | 479 | 95.8 |
| Thallium | | 1000 | 5.70 | | 899 | 89.9 |
| Tin | | 500 | -2.50 | | 481 | 96.2 |
| Titanium | | 500 | -0.300 | | 487 | 97.4 |
| Tungsten | | 500 | -0.600 | | 483 | 96.6 |
| Vanadium | | 500 | -0.600 | | 462 | 92.4 |

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SF112823M1.ICP  Date Analyzed: 11/28/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 80 to 120 % Recovery  Run ID: MA55139  Units: ug/l

| Time: | | | 07:21 | | 07:26 | |
|---|---|---|---|---|---|---|
| Sample ID: | ICSA | ICSAB | ICSA1 | | ICSAB1 | |
| Metal | True | True | Results | % Rec | Results | % Rec |
| Zinc | | 1000 | 4.20 | | 887 | 88.7 |
| Zirconium | | 500 | 0.500 | | 465 | 93.0 |

(*) Outside of QC limits
(anr) Analyte not requested

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H9112923S1.CSV Date Analyzed: 11/29/23 Methods: SW846 7471B
Analyst: LM Run ID: MA55140
Parameters: Hg

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 12:34 | MA55140-STD1 | 1 | | b=8.7014e-005,c=-3.5400e-003,rho=0.9998660 |
| 12:36 | MA55140-STD2 | 1 | | STDB |
| 12:37 | MA55140-STD3 | 1 | | STDC |
| 12:39 | MA55140-STD4 | 1 | | STDD |
| 12:41 | MA55140-STD5 | 1 | | STDE |
| 12:43 | MA55140-STD6 | 1 | | STDF |
| 12:46 | ZZZZZZ | 1 | | |
| 12:47 | MA55140-ICV1 | 1 | | |
| 12:49 | MA55140-ICB1 | 1 | | |
| 12:51 | MA55140-CCV1 | 1 | | |
| 12:52 | MA55140-CCB1 | 1 | | |
| 12:54 | MA55140-CRI1 | 1 | | |
| 12:56 | MP43401-MB1 | 1 | | |
| 12:58 | MP43401-B1 | 1 | | |
| 12:59 | MP43401-S1 | 1 | | |
| 13:02 | MP43401-S2 | 1 | | |
| 13:04 | JD77365-1 | 1 | | |
| 13:06 | JD77365-2 | 1 | | |
| 13:09 | MA55140-CCV2 | 1 | | |
| 13:11 | MA55140-CCB2 | 1 | | |
| 13:13 | JD77365-3 | 1 | | |
| 13:14 | JD77365-4 | 1 | | |
| 13:17 | JD77365-5 | 1 | | |
| 13:18 | JD77365-6 | 1 | | |
| 13:20 | JD77365-7 | 1 | | |
| 13:23 | JD77365-8 | 1 | | |
| 13:25 | MA55140-CCV3 | 1 | | |
| 13:27 | MA55140-CCB3 | 1 | | |
| 13:29 | JD77365-9 | 1 | | |
| 13:31 | JD77365-10 | 1 | | |
| 13:33 | JD77365-11 | 1 | | |
| 13:35 | JD77365-12 | 1 | | |
| 13:37 | JD77365-13 | 1 | | |

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H9112923S1.CSV Date Analyzed: 11/29/23 Methods: SW846 7471B
Analyst: LM Run ID: MA55140
Parameters: Hg

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 13:40 | JD77365-14 | 1 | | |
| 13:42 | JD77365-15 | 1 | | |
| 13:44 | MA55140-CCV4 | 1 | | |
| 13:47 | MA55140-CCB4 | 1 | | |
| 13:49 | MP43402-MB1 | 1 | | |
| 13:51 | MP43402-B1 | 1 | | |
| 13:52 | MP43402-S1 | 1 | | |
| 13:54 | MP43402-S2 | 1 | | |
| 13:57 | JD77387-1 | 1 | | (sample used for QC only; not part of login JD77365) |
| 13:59 | ZZZZZZ | 1 | | |
| 14:01 | ZZZZZZ | 1 | | |
| 14:03 | ZZZZZZ | 1 | | |
| 14:05 | MA55140-CCV5 | 1 | | |
| 14:07 | MA55140-CCB5 | 1 | | |
| 14:09 | ZZZZZZ | 1 | | |
| 14:11 | ZZZZZZ | 1 | | |
| 14:13 | ZZZZZZ | 1 | | |
| 14:15 | ZZZZZZ | 1 | | |
| 14:17 | ZZZZZZ | 1 | | |
| 14:18 | ZZZZZZ | 1 | | |
| 14:20 | ZZZZZZ | 1 | | |
| 14:22 | ZZZZZZ | 1 | | |
| 14:24 | MA55140-CCV6 | 1 | | |
| 14:26 | MA55140-CCB6 | 1 | | |
| 14:28 | ZZZZZZ | 1 | | |
| 14:31 | ZZZZZZ | 1 | | |
| 14:33 | ZZZZZZ | 1 | | |
| 14:34 | ZZZZZZ | 1 | | |
| 14:36 | ZZZZZZ | 1 | | |
| 14:38 | ZZZZZZ | 1 | | |
| 14:40 | ZZZZZZ | 1 | | |
| 14:42 | ZZZZZZ | 1 | | |
| 14:44 | MA55140-CCV7 | 1 | | |

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H9112923S1.CSV Date Analyzed: 11/29/23 Methods: SW846 7471B
Analyst: LM Run ID: MA55140
Parameters: Hg

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 14:46 | MA55140-CCB7 | 1 | | |
| 14:48 | MP43403-MB1 | 1 | | |
| 14:50 | MP43403-B1 | 1 | | |
| 14:51 | MP43403-S1 | 1 | | |
| 14:53 | MP43403-S2 | 1 | | |
| 14:56 | JD77435-1 | 1 | | (sample used for QC only; not part of login JD77365) |
| 14:58 | ZZZZZZ | 1 | | |
| 15:00 | ZZZZZZ | 1 | | |
| 15:01 | ZZZZZZ | 1 | | |
| 15:03 | MA55140-CCV8 | 1 | | |
| 15:05 | MA55140-CCB8 | 1 | | |
| 15:07 | ZZZZZZ | 1 | | |
| 15:09 | ZZZZZZ | 1 | | |
| 15:10 | ZZZZZZ | 1 | | |
| 15:12 | ZZZZZZ | 1 | | |
| 15:14 | ZZZZZZ | 1 | | |
| 15:16 | ZZZZZZ | 1 | | |
| 15:18 | ZZZZZZ | 1 | | |
| 15:20 | ZZZZZZ | 1 | | |
| 15:22 | MA55140-CCV9 | 1 | | |
| 15:24 | MA55140-CCB9 | 1 | | |
| 15:26 | ZZZZZZ | 1 | | |
| 15:27 | ZZZZZZ | 1 | | |
| 15:29 | ZZZZZZ | 1 | | |
| 15:31 | ZZZZZZ | 1 | | |
| 15:32 | ZZZZZZ | 1 | | |
| 15:34 | ZZZZZZ | 1 | | |
| 15:36 | ZZZZZZ | 1 | | |
| 15:38 | ZZZZZZ | 1 | | |
| 15:40 | MA55140-CCV10 | 1 | | |
| 15:42 | MA55140-CCB10 | 1 | | |
| 15:44 | MP43404-MB1 | 1 | | |
| 15:46 | MP43404-B1 | 1 | | |

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H9112923S1.CSV  Date Analyzed: 11/29/23  Methods: SW846 7471B
Analyst: LM  Run ID: MA55140
Parameters: Hg

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 15:47 | MP43404-S1 | 1 | | |
| 15:50 | MP43404-S2 | 1 | | |
| 15:52 | JD77163-1 | 1 | | (sample used for QC only; not part of login JD77365) |
| 15:54 | ZZZZZZ | 1 | | |
| 15:56 | MA55140-CCV11 | 1 | | |
| 15:58 | MA55140-CCB11 | 1 | | |
| 16:00 | ZZZZZZ | 1 | | |
| 16:02 | ZZZZZZ | 1 | | |
| 16:04 | ZZZZZZ | 1 | | |
| 16:06 | ZZZZZZ | 1 | | |
| 16:08 | ZZZZZZ | 1 | | |
| 16:10 | ZZZZZZ | 1 | | |
| 16:12 | ZZZZZZ | 1 | | |
| 16:14 | MA55140-CCV12 | 1 | | |
| 16:16 | MA55140-CCB12 | 1 | | |
| 16:19 | ZZZZZZ | 1 | | |
| 16:20 | ZZZZZZ | 1 | | |
| 16:22 | ZZZZZZ | 1 | | |
| 16:25 | ZZZZZZ | 1 | | |
| 16:27 | ZZZZZZ | 1 | | |
| 16:30 | ZZZZZZ | 1 | | |
| 16:32 | ZZZZZZ | 1 | | |
| 16:35 | MA55140-CCV13 | 1 | | |
| 16:38 | MA55140-CCB13 | 1 | | |
| 16:48 | JD77365-12 | 2 | | |
| 16:49 | JD77365-15 | 2 | | |
| ----------> | Last reportable sample/prep for job JD77365 | | | |
| 16:57 | ZZZZZZ | 5 | | |
| 16:58 | ZZZZZZ | 2 | | |
| 17:00 | ZZZZZZ | 5 | | |
| 17:02 | MA55140-CCV14 | 1 | | |
| 17:05 | MA55140-CCB14 | 1 | | |
| ----------> | Last reportable CCB for job JD77365 | | | |
| 17:10 | ZZZZZZ | 5 | | |
| 17:12 | ZZZZZZ | 5 | | |

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H9112923S1.CSV  Date Analyzed: 11/29/23  Methods: SW846 7471B
Analyst: LM  Run ID: MA55140
Parameters: Hg

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 17:14 | ZZZZZZ | 5 | | |
| 17:16 | ZZZZZZ | 5 | | |
| 17:18 | ZZZZZZ | 5 | | |
| 17:20 | MA55140-CCV15 | 1 | | |
| 17:23 | MA55140-CCB15 | 1 | | |

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H9112923S1.CSV  Date Analyzed: 11/29/23  Methods: SW846 7471B
Analyst: LM  Run ID: MA55140
Parameters: Hg

| Time | Sample Description | Element: Dilution | Hg |
|---|---|---|---|
| 12:46 | ZZZZZZ | 1 | |
| 12:47 | MA55140-ICV1 | 1 | X |
| 12:49 | MA55140-ICB1 | 1 | X |
| 12:51 | MA55140-CCV1 | 1 | X |
| 12:52 | MA55140-CCB1 | 1 | X |
| 12:54 | MA55140-CRI1 | 1 | X |
| 12:56 | MP43401-MB1 | 1 | X |
| 12:58 | MP43401-B1 | 1 | X |
| 12:59 | MP43401-S1 | 1 | X |
| 13:02 | MP43401-S2 | 1 | X |
| 13:04 | JD77365-1 | 1 | X |
| 13:06 | JD77365-2 | 1 | X |
| 13:09 | MA55140-CCV2 | 1 | X |
| 13:11 | MA55140-CCB2 | 1 | X |
| 13:13 | JD77365-3 | 1 | X |
| 13:14 | JD77365-4 | 1 | X |
| 13:17 | JD77365-5 | 1 | X |
| 13:18 | JD77365-6 | 1 | X |
| 13:20 | JD77365-7 | 1 | X |
| 13:23 | JD77365-8 | 1 | X |
| 13:25 | MA55140-CCV3 | 1 | X |
| 13:27 | MA55140-CCB3 | 1 | X |
| 13:29 | JD77365-9 | 1 | X |
| 13:31 | JD77365-10 | 1 | X |
| 13:33 | JD77365-11 | 1 | X |
| 13:35 | JD77365-12 | 1 | |
| 13:37 | JD77365-13 | 1 | X |
| 13:40 | JD77365-14 | 1 | X |
| 13:42 | JD77365-15 | 1 | |
| 13:44 | MA55140-CCV4 | 1 | X |
| 13:47 | MA55140-CCB4 | 1 | X |
| 13:49 | MP43402-MB1 | 1 | X |
| 13:51 | MP43402-B1 | 1 | X |
| | | Element: | Hg |

REPORTED ELEMENTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H9112923S1.CSV  Date Analyzed: 11/29/23  Methods: SW846 7471B
Analyst: LM  Run ID: MA55140
Parameters: Hg

| Time | Sample Description | Element: Dilution | Hg | |
|---|---|---|---|---|
| 13:52 | MP43402-S1 | 1 | X | |
| 13:54 | MP43402-S2 | 1 | X | |
| 13:57 | JD77387-1 | 1 | X | (a) |
| 13:59 | ZZZZZZ | 1 | | |
| 14:01 | ZZZZZZ | 1 | | |
| 14:03 | ZZZZZZ | 1 | | |
| 14:05 | MA55140-CCV5 | 1 | X | |
| 14:07 | MA55140-CCB5 | 1 | X | |
| 14:09 | ZZZZZZ | 1 | | |
| 14:11 | ZZZZZZ | 1 | | |
| 14:13 | ZZZZZZ | 1 | | |
| 14:15 | ZZZZZZ | 1 | | |
| 14:17 | ZZZZZZ | 1 | | |
| 14:18 | ZZZZZZ | 1 | | |
| 14:20 | ZZZZZZ | 1 | | |
| 14:22 | ZZZZZZ | 1 | | |
| 14:24 | MA55140-CCV6 | 1 | X | |
| 14:26 | MA55140-CCB6 | 1 | X | |
| 14:28 | ZZZZZZ | 1 | | |
| 14:31 | ZZZZZZ | 1 | | |
| 14:33 | ZZZZZZ | 1 | | |
| 14:34 | ZZZZZZ | 1 | | |
| 14:36 | ZZZZZZ | 1 | | |
| 14:38 | ZZZZZZ | 1 | | |
| 14:40 | ZZZZZZ | 1 | | |
| 14:42 | ZZZZZZ | 1 | | |
| 14:44 | MA55140-CCV7 | 1 | X | |
| 14:46 | MA55140-CCB7 | 1 | X | |
| 14:48 | MP43403-MB1 | 1 | X | |
| 14:50 | MP43403-B1 | 1 | X | |
| 14:51 | MP43403-S1 | 1 | X | |
| 14:53 | MP43403-S2 | 1 | X | |
| 14:56 | JD77435-1 | 1 | X | (a) |
| | | Element: | Hg | |

REPORTED ELEMENTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H9112923S1.CSV  Date Analyzed: 11/29/23  Methods: SW846 7471B
Analyst: LM  Run ID: MA55140
Parameters: Hg

| Time | Sample Description | Element: Dilution | Hg | |
|---|---|---|---|---|
| 14:58 | ZZZZZZ | 1 | | |
| 15:00 | ZZZZZZ | 1 | | |
| 15:01 | ZZZZZZ | 1 | | |
| 15:03 | MA55140-CCV8 | 1 | X | |
| 15:05 | MA55140-CCB8 | 1 | X | |
| 15:07 | ZZZZZZ | 1 | | |
| 15:09 | ZZZZZZ | 1 | | |
| 15:10 | ZZZZZZ | 1 | | |
| 15:12 | ZZZZZZ | 1 | | |
| 15:14 | ZZZZZZ | 1 | | |
| 15:16 | ZZZZZZ | 1 | | |
| 15:18 | ZZZZZZ | 1 | | |
| 15:20 | ZZZZZZ | 1 | | |
| 15:22 | MA55140-CCV9 | 1 | X | |
| 15:24 | MA55140-CCB9 | 1 | X | |
| 15:26 | ZZZZZZ | 1 | | |
| 15:27 | ZZZZZZ | 1 | | |
| 15:29 | ZZZZZZ | 1 | | |
| 15:31 | ZZZZZZ | 1 | | |
| 15:32 | ZZZZZZ | 1 | | |
| 15:34 | ZZZZZZ | 1 | | |
| 15:36 | ZZZZZZ | 1 | | |
| 15:38 | ZZZZZZ | 1 | | |
| 15:40 | MA55140-CCV10 | 1 | X | |
| 15:42 | MA55140-CCB10 | 1 | X | |
| 15:44 | MP43404-MB1 | 1 | X | |
| 15:46 | MP43404-B1 | 1 | X | |
| 15:47 | MP43404-S1 | 1 | X | |
| 15:50 | MP43404-S2 | 1 | X | |
| 15:52 | JD77163-1 | 1 | X | (a) |
| 15:54 | ZZZZZZ | 1 | | |
| 15:56 | MA55140-CCV11 | 1 | X | |
| 15:58 | MA55140-CCB11 | 1 | X | |
| | | Element: | Hg | |

REPORTED ELEMENTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H9112923S1.CSV  Date Analyzed: 11/29/23  Methods: SW846 7471B
Analyst: LM  Run ID: MA55140
Parameters: Hg

| Time | Sample Description | Element: Dilution | Hg |
|---|---|---|---|
| 16:00 | ZZZZZZ | 1 | |
| 16:02 | ZZZZZZ | 1 | |
| 16:04 | ZZZZZZ | 1 | |
| 16:06 | ZZZZZZ | 1 | |
| 16:08 | ZZZZZZ | 1 | |
| 16:10 | ZZZZZZ | 1 | |
| 16:12 | ZZZZZZ | 1 | |
| 16:14 | MA55140-CCV12 | 1 | X |
| 16:16 | MA55140-CCB12 | 1 | X |
| 16:19 | ZZZZZZ | 1 | |
| 16:20 | ZZZZZZ | 1 | |
| 16:22 | ZZZZZZ | 1 | |
| 16:25 | ZZZZZZ | 1 | |
| 16:27 | ZZZZZZ | 1 | |
| 16:30 | ZZZZZZ | 1 | |
| 16:32 | ZZZZZZ | 1 | |
| 16:35 | MA55140-CCV13 | 1 | X |
| 16:38 | MA55140-CCB13 | 1 | X |
| 16:48 | JD77365-12 | 2 | X |
| 16:49 | JD77365-15 | 2 | X |
| 16:57 | ZZZZZZ | 5 | |
| 16:58 | ZZZZZZ | 2 | |
| 17:00 | ZZZZZZ | 5 | |
| 17:02 | MA55140-CCV14 | 1 | X |
| 17:05 | MA55140-CCB14 | 1 | X |
| 17:10 | ZZZZZZ | 5 | |
| 17:12 | ZZZZZZ | 5 | |
| 17:14 | ZZZZZZ | 5 | |
| 17:16 | ZZZZZZ | 5 | |
| 17:18 | ZZZZZZ | 5 | |
| 17:20 | MA55140-CCV15 | 1 | X |
| 17:23 | MA55140-CCB15 | 1 | X |

(a) Sample used for QC only; not part of login JD77365.

Element: Hg

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H9112923S1.CSV  Date Analyzed: 11/29/23  Methods: SW846 7471B
QC Limits: result < RL  Run ID: MA55140  Units: ug/l

| Time: | | | 12:49 | | 12:52 | | 13:11 | | 13:27 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | | | ICB1 | | CCB1 | | CCB2 | | CCB3 | |
| Metal | RL | IDL | raw | final | raw | final | raw | final | raw | final |
| Mercury | 0.20 | .034 | 0.000300 | <0.20 | -0.00800 | <0.20 | -0.0343 | <0.20 | -0.0424 | <0.20 |

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H9112923S1.CSV  Date Analyzed: 11/29/23  Methods: SW846 7471B
QC Limits: result < RL  Run ID: MA55140  Units: ug/l

| Time: | | | 13:47 | | 14:07 | | 14:26 | | 14:46 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | | | CCB4 | | CCB5 | | CCB6 | | CCB7 | |
| Metal | RL | IDL | raw | final | raw | final | raw | final | raw | final |
| Mercury | 0.20 | .034 | -0.0243 | <0.20 | -0.0313 | <0.20 | -0.0334 | <0.20 | -0.0277 | <0.20 |

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H9112923S1.CSV  Date Analyzed: 11/29/23  Methods: SW846 7471B
QC Limits: result < RL  Run ID: MA55140  Units: ug/l

| Time: | | | 15:05 | | 15:24 | | 15:42 | | 15:58 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | | | CCB8 | | CCB9 | | CCB10 | | CCB11 | |
| Metal | RL | IDL | raw | final | raw | final | raw | final | raw | final |
| Mercury | 0.20 | .034 | -0.0186 | <0.20 | -0.0144 | <0.20 | -0.0138 | <0.20 | -0.0194 | <0.20 |

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H9112923S1.CSV  Date Analyzed: 11/29/23  Methods: SW846 7471B
QC Limits: result < RL  Run ID: MA55140  Units: ug/l

| Time: | | | 16:16 | | 16:38 | | 17:05 | |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | | | CCB12 | | CCB13 | | CCB14 | |
| Metal | RL | IDL | raw | final | raw | final | raw | final |
| Mercury | 0.20 | .034 | -0.0197 | <0.20 | -0.0376 | <0.20 | -0.00810 | <0.20 |

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H9112923S1.CSV  Date Analyzed: 11/29/23  Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery  Run ID: MA55140  Units: ug/l

| Time: | | 12:47 | | | 12:51 | | | 13:09 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | ICV | ICV1 | | CCV | CCV1 | | CCV | CCV2 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Mercury | 3 | 3.25 | 108.3 | 2.5 | 2.54 | 101.6 | 2.5 | 2.39 | 95.6 |

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H9112923S1.CSV  Date Analyzed: 11/29/23  Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery  Run ID: MA55140  Units: ug/l

| Time: | | 13:25 | | | 13:44 | | | 14:05 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | CCV | CCV3 | | CCV | CCV4 | | CCV | CCV5 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Mercury | 2.5 | 2.38 | 95.2 | 2.5 | 2.35 | 94.0 | 2.5 | 2.42 | 96.8 |

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H9112923S1.CSV Date Analyzed: 11/29/23 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA55140 Units: ug/l

| Time: | | 14:24 | | | 14:44 | | | 15:03 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | CCV | CCV6 | | CCV | CCV7 | | CCV | CCV8 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Mercury | 2.5 | 2.38 | 95.2 | 2.5 | 2.42 | 96.8 | 2.5 | 2.40 | 96.0 |

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H9112923S1.CSV  Date Analyzed: 11/29/23  Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery  Run ID: MA55140  Units: ug/l

| Time: | | 15:22 | | | 15:40 | | | 15:56 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | CCV | CCV9 | | CCV | CCV10 | | CCV | CCV11 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Mercury | 2.5 | 2.42 | 96.8 | 2.5 | 2.35 | 94.0 | 2.5 | 2.42 | 96.8 |

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H9112923S1.CSV  Date Analyzed: 11/29/23  Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery  Run ID: MA55140  Units: ug/l

| Time: | | 16:14 | | | 16:35 | | | 17:02 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | CCV | CCV12 | | CCV | CCV13 | | CCV | CCV14 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Mercury | 2.5 | 2.47 | 98.8 | 2.5 | 2.31 | 92.4 | 2.5 | 2.36 | 94.4 |

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H9112923S1.CSV  Date Analyzed: 11/29/23  Methods: SW846 7471B
QC Limits: 70 to 130 % Recovery  Run ID: MA55140  Units: ug/l

| | | | | |
|---|---|---|---|---|
| Time: | | | 12:54 | |
| Sample ID: | CRI | CRIA | CRI1 | |
| Metal | True | True | Results | % Rec |
| Mercury | 0.20 | | 0.228 | 114.0 |

(*) Outside of QC limits
(anr) Analyte not requested

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8112923W1.CSV  Date Analyzed: 11/29/23  Methods: SW846 7470A
Analyst: LM  Run ID: MA55142
Parameters: Hg

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 13:01 | MA55142-STD1 | 1 | | b=1.8215e-004,c=1.4647e-003,rho=0.9998197 |
| 13:03 | MA55142-STD2 | 1 | | STDB |
| 13:04 | MA55142-STD3 | 1 | | STDC |
| 13:06 | MA55142-STD4 | 1 | | STDD |
| 13:07 | MA55142-STD5 | 1 | | STDE |
| 13:09 | MA55142-STD6 | 1 | | STDF |
| 13:14 | ZZZZZZ | 1 | | |
| 13:16 | MA55142-ICV1 | 1 | | |
| 13:17 | MA55142-ICB1 | 1 | | |
| 13:19 | MA55142-CCV1 | 1 | | |
| 13:20 | MA55142-CCB1 | 1 | | |
| 13:22 | MA55142-CRI1 | 1 | | |
| 13:24 | MP43406-MB1 | 1 | | |
| 13:26 | MP43406-LB1 | 1 | | |
| 13:27 | MP43406-B1 | 1 | | |
| 13:29 | MP43406-LS1 | 1 | | |
| 13:30 | MP43406-S1 | 1 | | |
| 13:32 | MP43406-S2 | 1 | | |
| 13:34 | JD76316-5Q | 1 | | (sample used for QC only; not part of login JD77365) |
| 13:36 | ZZZZZZ | 1 | | |
| 13:37 | MA55142-CCV2 | 1 | | |
| 13:39 | MA55142-CCB2 | 1 | | |
| 13:40 | ZZZZZZ | 1 | | |
| 13:42 | MP43407-MB1 | 1 | | |
| 13:43 | MP43407-LB1 | 1 | | |
| 13:45 | MP43407-B1 | 1 | | |
| 13:46 | MP43407-LS1 | 1 | | |
| 13:48 | MP43407-S1 | 1 | | |
| 13:49 | MP43407-S2 | 1 | | |
| 13:51 | FC11327-1L | 1 | | (sample used for QC only; not part of login JD77365) |
| 13:53 | MA55142-CCV3 | 1 | | |
| 13:54 | MA55142-CCB3 | 1 | | |
| 13:56 | ZZZZZZ | 1 | | |

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8112923W1.CSV Date Analyzed: 11/29/23 Methods: SW846 7470A
Analyst: LM Run ID: MA55142
Parameters: Hg

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 13:57 | ZZZZZZ | 1 | | |
| 13:59 | ZZZZZZ | 1 | | |
| 14:00 | ZZZZZZ | 1 | | |
| 14:02 | ZZZZZZ | 1 | | |
| 14:03 | ZZZZZZ | 1 | | |
| 14:05 | ZZZZZZ | 1 | | |
| 14:06 | MA55142-CCV4 | 1 | | |
| 14:07 | MA55142-CCB4 | 1 | | |
| 14:44 | MP43408-MB1 | 1 | | |
| 14:45 | MP43408-B1 | 1 | | |
| 14:46 | MP43408-S1 | 1 | | |
| 14:48 | MP43408-S2 | 1 | | |
| 14:50 | JD77458-4F | 1 | | (sample used for QC only; not part of login JD77365) |
| 14:52 | ZZZZZZ | 1 | | |
| 14:53 | ZZZZZZ | 1 | | |
| 14:55 | MA55142-CCV5 | 1 | | |
| 14:56 | MA55142-CCB5 | 1 | | |
| 14:58 | ZZZZZZ | 1 | | |
| 14:59 | ZZZZZZ | 1 | | |
| 15:01 | ZZZZZZ | 1 | | |
| 15:02 | ZZZZZZ | 1 | | |
| 15:03 | ZZZZZZ | 1 | | |
| 15:05 | JD77365-16 | 1 | | |
| 15:06 | JD77365-17 | 1 | | |
| 15:08 | MA55142-CCV6 | 1 | | |
| 15:09 | MA55142-CCB6 | 1 | | |
| 15:11 | JD77365-18 | 1 | | |
| 15:12 | JD77365-19 | 1 | | |
| 15:14 | JD77365-16F | 1 | | |
| 15:15 | JD77365-17F | 1 | | |
| 15:17 | JD77365-18F | 1 | | |
| 15:18 | JD77365-19F | 1 | | |
| 15:20 | ZZZZZZ | 1 | | |

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8112923W1.CSV  Date Analyzed: 11/29/23  Methods: SW846 7470A
Analyst: LM  Run ID: MA55142
Parameters: Hg

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 15:21 | MA55142-CCV7 | 1 | | |
| 15:22 | MA55142-CCB7 | 1 | | |
| 15:24 | ZZZZZZ | 1 | | |
| 15:26 | MP43409-B1 | 1 | | |
| 15:27 | MP43409-S1 | 1 | | |
| 15:29 | MP43409-S2 | 1 | | |
| 15:30 | JD77574-1 | 1 | | (sample used for QC only; not part of login JD77365) |
| 15:32 | ZZZZZZ | 1 | | |
| 15:34 | ZZZZZZ | 1 | | |
| 15:35 | MA55142-CCV8 | 1 | | |
| 15:36 | MA55142-CCB8 | 1 | | |
| 15:38 | ZZZZZZ | 1 | | |
| 15:40 | ZZZZZZ | 1 | | |
| 15:41 | ZZZZZZ | 1 | | |
| 15:42 | ZZZZZZ | 1 | | |
| 15:44 | ZZZZZZ | 1 | | |
| 15:45 | MP43408-MB1 | 1 | | |
| ----------> | Last reportable sample/prep for job JD77365 | | | |
| 15:47 | MP43409-MB1 | 1 | | |
| 15:48 | MA55142-CCV9 | 1 | | |
| 15:50 | MA55142-CCB9 | 1 | | |
| ----------> | Last reportable CCB for job JD77365 | | | |

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8112923W1.CSV  Date Analyzed: 11/29/23  Methods: SW846 7470A
Analyst: LM  Run ID: MA55142
Parameters: Hg

| Time | Sample Description | Element: Dilution | Hg | |
|---|---|---|---|---|
| 13:14 | ZZZZZZ | 1 | | |
| 13:16 | MA55142-ICV1 | 1 | X | |
| 13:17 | MA55142-ICB1 | 1 | X | |
| 13:19 | MA55142-CCV1 | 1 | X | |
| 13:20 | MA55142-CCB1 | 1 | X | |
| 13:22 | MA55142-CRI1 | 1 | X | |
| 13:24 | MP43406-MB1 | 1 | X | |
| 13:26 | MP43406-LB1 | 1 | | |
| 13:27 | MP43406-B1 | 1 | X | |
| 13:29 | MP43406-LS1 | 1 | X | |
| 13:30 | MP43406-S1 | 1 | X | |
| 13:32 | MP43406-S2 | 1 | X | |
| 13:34 | JD76316-5Q | 1 | X | (a) |
| 13:36 | ZZZZZZ | 1 | | |
| 13:37 | MA55142-CCV2 | 1 | X | |
| 13:39 | MA55142-CCB2 | 1 | X | |
| 13:40 | ZZZZZZ | 1 | | |
| 13:42 | MP43407-MB1 | 1 | X | |
| 13:43 | MP43407-LB1 | 1 | | |
| 13:45 | MP43407-B1 | 1 | X | |
| 13:46 | MP43407-LS1 | 1 | X | |
| 13:48 | MP43407-S1 | 1 | X | |
| 13:49 | MP43407-S2 | 1 | X | |
| 13:51 | FC11327-1L | 1 | X | (a) |
| 13:53 | MA55142-CCV3 | 1 | X | |
| 13:54 | MA55142-CCB3 | 1 | X | |
| 13:56 | ZZZZZZ | 1 | | |
| 13:57 | ZZZZZZ | 1 | | |
| 13:59 | ZZZZZZ | 1 | | |
| 14:00 | ZZZZZZ | 1 | | |
| 14:02 | ZZZZZZ | 1 | | |
| 14:03 | ZZZZZZ | 1 | | |
| 14:05 | ZZZZZZ | 1 | | |
| | | Element: | Hg | |

REPORTED ELEMENTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8112923W1.CSV  Date Analyzed: 11/29/23  Methods: SW846 7470A
Analyst: LM  Run ID: MA55142
Parameters: Hg

| Time | Sample Description | Element: Dilution | Hg | |
|---|---|---|---|---|
| 14:06 | MA55142-CCV4 | 1 | X | |
| 14:07 | MA55142-CCB4 | 1 | X | |
| 14:44 | MP43408-MB1 | 1 | | |
| 14:45 | MP43408-B1 | 1 | X | |
| 14:46 | MP43408-S1 | 1 | X | |
| 14:48 | MP43408-S2 | 1 | X | |
| 14:50 | JD77458-4F | 1 | X | (a) |
| 14:52 | ZZZZZZ | 1 | | |
| 14:53 | ZZZZZZ | 1 | | |
| 14:55 | MA55142-CCV5 | 1 | X | |
| 14:56 | MA55142-CCB5 | 1 | X | |
| 14:58 | ZZZZZZ | 1 | | |
| 14:59 | ZZZZZZ | 1 | | |
| 15:01 | ZZZZZZ | 1 | | |
| 15:02 | ZZZZZZ | 1 | | |
| 15:03 | ZZZZZZ | 1 | | |
| 15:05 | JD77365-16 | 1 | | |
| 15:06 | JD77365-17 | 1 | X | |
| 15:08 | MA55142-CCV6 | 1 | X | |
| 15:09 | MA55142-CCB6 | 1 | X | |
| 15:11 | JD77365-18 | 1 | | |
| 15:12 | JD77365-19 | 1 | X | |
| 15:14 | JD77365-16F | 1 | X | |
| 15:15 | JD77365-17F | 1 | X | |
| 15:17 | JD77365-18F | 1 | X | |
| 15:18 | JD77365-19F | 1 | X | |
| 15:20 | ZZZZZZ | 1 | | |
| 15:21 | MA55142-CCV7 | 1 | X | |
| 15:22 | MA55142-CCB7 | 1 | X | |
| 15:24 | ZZZZZZ | 1 | | |
| 15:26 | MP43409-B1 | 1 | X | |
| 15:27 | MP43409-S1 | 1 | X | |
| 15:29 | MP43409-S2 | 1 | X | |
| | | Element: | Hg | |

REPORTED ELEMENTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8112923W1.CSV  Date Analyzed: 11/29/23  Methods: SW846 7470A
Analyst: LM  Run ID: MA55142
Parameters: Hg

| Time | Sample Description | Element: Dilution | Hg |
|---|---|---|---|
| 15:30 | JD77574-1 | 1 | X (a) |
| 15:32 | ZZZZZZ | 1 | |
| 15:34 | ZZZZZZ | 1 | |
| 15:35 | MA55142-CCV8 | 1 | X |
| 15:36 | MA55142-CCB8 | 1 | X |
| 15:38 | ZZZZZZ | 1 | |
| 15:40 | ZZZZZZ | 1 | |
| 15:41 | ZZZZZZ | 1 | |
| 15:42 | ZZZZZZ | 1 | |
| 15:44 | ZZZZZZ | 1 | |
| 15:45 | MP43408-MB1 | 1 | X |
| 15:47 | MP43409-MB1 | 1 | X |
| 15:48 | MA55142-CCV9 | 1 | X |
| 15:50 | MA55142-CCB9 | 1 | X |

(a) Sample used for QC only; not part of login JD77365.

Element: Hg

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8112923W1.CSV  Date Analyzed: 11/29/23  Methods: SW846 7470A
QC Limits: result < RL  Run ID: MA55142  Units: ug/l

| Time: | | | 13:17 | | 13:20 | | 13:39 | | 13:54 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | | | ICB1 | | CCB1 | | CCB2 | | CCB3 | |
| Metal | RL | IDL | raw | final | raw | final | raw | final | raw | final |
| Mercury | 0.20 | .024 | -0.0200 | <0.20 | -0.0162 | <0.20 | -0.0140 | <0.20 | -0.0180 | <0.20 |

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8112923W1.CSV  Date Analyzed: 11/29/23  Methods: SW846 7470A
QC Limits: result < RL  Run ID: MA55142  Units: ug/l

| | | | Time: | | 14:07 | | 14:56 | | 15:09 | | 15:22 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample ID: | | CCB4 | | CCB5 | | CCB6 | | CCB7 | |
| Metal | RL | IDL | raw | final | raw | final | raw | final | raw | final | raw | final |
| Mercury | 0.20 | .024 | -0.00840 | <0.20 | -0.00780 | <0.20 | -0.00580 | <0.20 | -0.00910 | <0.20 | | |

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8112923W1.CSV  Date Analyzed: 11/29/23  Methods: SW846 7470A
QC Limits: result < RL  Run ID: MA55142  Units: ug/l

| | | | | | | |
|---|---|---|---|---|---|---|
| Time: | | | 15:36 | | 15:50 | |
| Sample ID: | | | CCB8 | | CCB9 | |
| Metal | RL | IDL | raw | final | raw | final |
| Mercury | 0.20 | .024 | -0.0117 | <0.20 | -0.0100 | <0.20 |

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8112923W1.CSV  Date Analyzed: 11/29/23  Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery  Run ID: MA55142  Units: ug/l

| Time: | | 13:16 | | | 13:19 | | | 13:37 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | ICV | ICV1 | | CCV | CCV1 | | CCV | CCV2 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Mercury | 3 | 3.10 | 103.3 | 2.5 | 2.35 | 94.0 | 2.5 | 2.39 | 95.6 |

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8112923W1.CSV  Date Analyzed: 11/29/23  Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery  Run ID: MA55142  Units: ug/l

| Time: | | 13:53 | | | 14:06 | | | 14:55 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | CCV | CCV3 | | CCV | CCV4 | | CCV | CCV5 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Mercury | 2.5 | 2.40 | 96.0 | 2.5 | 2.39 | 95.6 | 2.5 | 2.37 | 94.8 |

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8112923W1.CSV  Date Analyzed: 11/29/23  Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery  Run ID: MA55142  Units: ug/l

| Time: | | 15:08 | | | 15:21 | | | 15:35 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | CCV | CCV6 | | CCV | CCV7 | | CCV | CCV8 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Mercury | 2.5 | 2.36 | 94.4 | 2.5 | 2.35 | 94.0 | 2.5 | 2.41 | 96.4 |

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8112923W1.CSV  Date Analyzed: 11/29/23  Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery  Run ID: MA55142  Units: ug/l

| | | | |
|---|---|---|---|
| Time: | | 15:48 | |
| Sample ID: | CCV | CCV9 | |
| Metal | True | Results | % Rec |
| Mercury | 2.5 | 2.38 | 95.2 |

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8112923W1.CSV  Date Analyzed: 11/29/23  Methods: SW846 7470A
QC Limits: 70 to 130 % Recovery  Run ID: MA55142  Units: ug/l

| | | | | |
|---|---|---|---|---|
| Time: | | | 13:22 | |
| Sample ID: | CRI | CRIA | CRI1 | |
| Metal | True | True | Results | % Rec |
| Mercury | 0.20 | | 0.203 | 101.5 |

(*) Outside of QC limits
(anr) Analyte not requested

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
Analyst: ND  Run ID: MA55148
Parameters: Cd,Ca,Pb

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 07:49 | MA55148-STD1 | 1 | | STDA |
| 07:54 | MA55148-STD2 | 1 | | STDB |
| 08:00 | MA55148-ICV1 | 1 | | |
| 08:06 | MA55148-ICV2 | 1 | | |
| 08:15 | MA55148-ICB1 | 1 | | |
| 08:22 | MA55148-ICCV1 | 1 | | |
| 08:32 | MA55148-CCB1 | 1 | | |
| 08:36 | MA55148-CRI1 | 1 | | |
| 08:41 | MA55148-CRID1 | 1 | | |
| 08:46 | MA55148-ICSA1 | 1 | | |
| 08:51 | MA55148-ICSAB1 | 1 | | |
| 08:56 | MA55148-CRID2 | 1 | | |
| 09:01 | MA55148-HSTD1 | 1 | | |
| 09:07 | MA55148-HSTD2 | 1 | | |
| 09:13 | ZZZZZZ | 1 | | |
| 09:18 | ZZZZZZ | 1 | | |
| 09:23 | ZZZZZZ | 1 | | |
| 09:28 | MA55148-CCV1 | 1 | | |
| 09:33 | MA55148-CCB2 | 1 | | |
| 09:38 | MP43373-MB1 | 1 | | |
| 09:43 | MP43373-B1 | 1 | | |
| 09:48 | MP43373-S1 | 1 | | |
| 09:53 | MP43373-S2 | 1 | | |
| 09:58 | JD77566-1 | 1 | | (sample used for QC only; not part of login JD77365) |
| 10:03 | MP43373-SD1 | 5 | | |
| 10:08 | ZZZZZZ | 1 | | |
| 10:13 | ZZZZZZ | 1 | | |
| 10:18 | ZZZZZZ | 1 | | |
| 10:23 | MA55148-CCV2 | 1 | | |
| 10:28 | MA55148-CCB3 | 1 | | |
| 10:33 | ZZZZZZ | 1 | | |
| 10:38 | ZZZZZZ | 1 | | |
| 10:43 | ZZZZZZ | 1 | | |

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
Analyst: ND  Run ID: MA55148
Parameters: Cd,Ca,Pb

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 10:48 | ZZZZZZ | 1 | | |
| 10:53 | MP43371-MB1 | 1 | | |
| 10:58 | MP43371-MB2 | 1 | | |
| 11:03 | MP43371-B1 | 1 | | |
| 11:08 | MP43371-B2 | 1 | | |
| 11:13 | MP43371-S1 | 1 | | |
| 11:18 | MA55148-CCV3 | 1 | | |
| 11:23 | MA55148-CCB4 | 1 | | |
| 11:28 | ZZZZZZ | 1 | | |
| 11:33 | ZZZZZZ | 1 | | |
| 11:38 | MP43371-S2 | 1 | | |
| 11:43 | ZZZZZZ | 1 | | |
| 11:48 | MP43371-SD1 | 5 | | wrong sample |
| 11:53 | ZZZZZZ | 1 | | |
| 11:58 | ZZZZZZ | 1 | | |
| 12:04 | ZZZZZZ | 1 | | |
| 12:09 | ZZZZZZ | 1 | | |
| 12:14 | MA55148-CCV4 | 1 | | |
| 12:19 | MA55148-CCB5 | 1 | | |
| 12:24 | ZZZZZZ | 1 | | |
| 12:29 | ZZZZZZ | 1 | | |
| 12:34 | ZZZZZZ | 1 | | |
| 12:40 | ZZZZZZ | 1 | | |
| 12:45 | ZZZZZZ | 1 | | |
| 12:50 | ZZZZZZ | 1 | | |
| 12:55 | ZZZZZZ | 1 | | |
| 13:00 | ZZZZZZ | 1 | | |
| 13:05 | ZZZZZZ | 1 | | |
| 13:10 | MA55148-CCV5 | 1 | | |
| 13:15 | MA55148-CCB6 | 1 | | |
| 13:20 | ZZZZZZ | 1 | | |
| 13:25 | JD77507-2F | 1 | | (sample used for QC only; not part of login JD77365) |
| 13:30 | ZZZZZZ | 1 | | |

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
Analyst: ND  Run ID: MA55148
Parameters: Cd,Ca,Pb

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 13:35 | ZZZZZZ | 1 | | |
| 13:40 | ZZZZZZ | 1 | | |
| 13:45 | ZZZZZZ | 1 | | |
| 13:50 | ZZZZZZ | 1 | | |
| 13:54 | JD77365-4 | 1 | | |
| 13:59 | JD77365-5 | 1 | | |
| 14:05 | JD77365-6 | 1 | | |
| 14:10 | MA55148-CCV6 | 1 | | |
| 14:15 | MA55148-CCB7 | 1 | | |
| 14:20 | JD77365-7 | 1 | | |
| 14:25 | JD77365-8 | 1 | | |
| 14:30 | JD77365-9 | 1 | | |
| 14:35 | JD77365-10 | 1 | | |
| 14:40 | JD77365-11 | 1 | | |
| 14:45 | JD77365-12 | 1 | | |
| 14:51 | JD77365-13 | 1 | | |
| 14:56 | JD77365-14 | 1 | | |
| 15:01 | JD77365-15 | 1 | | |
| 15:06 | JD77365-1 | 2 | | |
| 15:11 | MA55148-CCV7 | 1 | | |
| 15:17 | MA55148-CCB8 | 1 | | |
| 15:21 | JD77365-3 | 2 | | |
| 15:27 | JD77365-8 | 5 | | |
| 15:32 | JD77365-14 | 2 | | |
| 15:37 | JD77365-15 | 2 | | |
| ----------> | Last reportable sample/prep for job JD77365 | | | |
| 15:42 | MP43324-MB1 | 1 | | |
| 15:47 | MP43324-B1 | 1 | | |
| 15:52 | MP43324-S1 | 1 | | |
| 15:57 | MP43324-S2 | 1 | | |
| 16:02 | JD77429-33 | 1 | | (sample used for QC only; not part of login JD77365) |
| 16:07 | MP43324-SD1 | 5 | | |
| 16:12 | MA55148-CCV8 | 1 | | |
| 16:17 | MA55148-CCB9 | 1 | | |
| ----------> | Last reportable CCB for job JD77365 | | | |

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
Analyst: ND  Run ID: MA55148
Parameters: Cd,Ca,Pb

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 16:22 | MP43324-PS1 | 1 | | |
| 16:27 | ZZZZZZ | 1 | | |
| 16:32 | ZZZZZZ | 1 | | |
| 16:37 | ZZZZZZ | 5 | | |
| 16:42 | ZZZZZZ | 5 | | |
| 16:47 | MP43393-MB1 | 1 | | |
| 16:52 | MP43393-B1 | 1 | | |
| 16:57 | MP43393-S1 | 1 | | |
| 17:02 | MP43393-S2 | 1 | | |
| 17:07 | JD77602-1 | 1 | | (sample used for QC only; not part of login JD77365) |
| 17:13 | MA55148-CCV9 | 1 | | |
| 17:18 | MA55148-CCB10 | 1 | | |
| 17:23 | MP43393-SD1 | 5 | | |
| 17:28 | MP43393-S3 | 1 | | |
| 17:33 | MP43393-S4 | 1 | | |
| 17:39 | JD77602-1F | 1 | | (sample used for QC only; not part of login JD77365) |
| 17:44 | MP43393-SD2 | 5 | | |
| 17:49 | ZZZZZZ | 1 | | |
| 17:55 | ZZZZZZ | 1 | | |
| 18:00 | ZZZZZZ | 1 | | |
| 18:05 | ZZZZZZ | 1 | | |
| 18:10 | ZZZZZZ | 1 | | |
| 18:15 | MA55148-CCV10 | 1 | | |
| 18:21 | MA55148-CCB11 | 1 | | |
| 18:26 | ZZZZZZ | 1 | | |
| 18:31 | ZZZZZZ | 1 | | |
| 18:36 | ZZZZZZ | 1 | | |
| 18:41 | ZZZZZZ | 2 | | |
| 18:46 | ZZZZZZ | 2 | | |
| 18:51 | ZZZZZZ | 2 | | |
| 18:57 | ZZZZZZ | 2 | | |
| 19:02 | ZZZZZZ | 2 | | |
| 19:07 | ZZZZZZ | 2 | | |

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
Analyst: ND  Run ID: MA55148
Parameters: Cd,Ca,Pb

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 19:12 | ZZZZZZ | 2 | | |
| 19:17 | MA55148-CCV11 | 1 | | |
| 19:22 | MA55148-CCB12 | 1 | | |
| 19:27 | ZZZZZZ | 2 | | |
| 19:32 | ZZZZZZ | 1 | | |
| 19:37 | ZZZZZZ | 2 | | |
| 19:42 | ZZZZZZ | 2 | | |
| 19:47 | ZZZZZZ | 2 | | |
| 19:52 | ZZZZZZ | 1 | | |
| 19:57 | ZZZZZZ | 1 | | |
| 20:02 | ZZZZZZ | 1 | | |
| 20:07 | ZZZZZZ | 1 | | |
| 20:12 | ZZZZZZ | 1 | | |
| 20:17 | MA55148-CCV12 | 1 | | |
| 20:23 | MA55148-CCB13 | 1 | | |

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
Analyst: ND  Run ID: MA55148
Parameters: Cd,Ca,Pb

| Time | Sample Description | Element: Dilution | C d | C a | P b | |
|---|---|---|---|---|---|---|
| 08:00 | MA55148-ICV1 | 1 | | | | |
| 08:06 | MA55148-ICV2 | 1 | X | X | X | |
| 08:15 | MA55148-ICB1 | 1 | X | X | X | |
| 08:22 | MA55148-ICCV1 | 1 | X | X | X | |
| 08:32 | MA55148-CCB1 | 1 | X | X | X | |
| 08:36 | MA55148-CRI1 | 1 | X | X | X | |
| 08:41 | MA55148-CRID1 | 1 | | | | |
| 08:46 | MA55148-ICSA1 | 1 | X | X | X | |
| 08:51 | MA55148-ICSAB1 | 1 | X | X | X | |
| 08:56 | MA55148-CRID2 | 1 | X | X | X | |
| 09:01 | MA55148-HSTD1 | 1 | X | X | X | |
| 09:07 | MA55148-HSTD2 | 1 | X | X | X | |
| 09:13 | ZZZZZZ | 1 | | | | |
| 09:18 | ZZZZZZ | 1 | | | | |
| 09:23 | ZZZZZZ | 1 | | | | |
| 09:28 | MA55148-CCV1 | 1 | X | X | X | |
| 09:33 | MA55148-CCB2 | 1 | X | X | X | |
| 09:38 | MP43373-MB1 | 1 | X | | X | |
| 09:43 | MP43373-B1 | 1 | X | | X | |
| 09:48 | MP43373-S1 | 1 | X | | X | |
| 09:53 | MP43373-S2 | 1 | X | | X | |
| 09:58 | JD77566-1 | 1 | X | | X | (a) |
| 10:03 | MP43373-SD1 | 5 | X | | X | |
| 10:08 | ZZZZZZ | 1 | | | | |
| 10:13 | ZZZZZZ | 1 | | | | |
| 10:18 | ZZZZZZ | 1 | | | | |
| 10:23 | MA55148-CCV2 | 1 | X | X | X | |
| 10:28 | MA55148-CCB3 | 1 | X | X | X | |
| 10:33 | ZZZZZZ | 1 | | | | |
| 10:38 | ZZZZZZ | 1 | | | | |
| 10:43 | ZZZZZZ | 1 | | | | |
| 10:48 | ZZZZZZ | 1 | | | | |
| 10:53 | MP43371-MB1 | 1 | X | X | X | |
| | | Element: | C d | C a | P b | |

REPORTED ELEMENTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
Analyst: ND  Run ID: MA55148
Parameters: Cd,Ca,Pb

| Time | Sample Description | Dilution | Element: Cd | Ca | Pb | |
|---|---|---|---|---|---|---|
| 10:58 | MP43371-MB2 | 1 | X | X | X | |
| 11:03 | MP43371-B1 | 1 | X | X | X | |
| 11:08 | MP43371-B2 | 1 | X | X | X | |
| 11:13 | MP43371-S1 | 1 | X | X | X | |
| 11:18 | MA55148-CCV3 | 1 | X | X | X | |
| 11:23 | MA55148-CCB4 | 1 | X | X | X | |
| 11:28 | ZZZZZZ | 1 | | | | |
| 11:33 | ZZZZZZ | 1 | | | | |
| 11:38 | MP43371-S2 | 1 | X | X | X | |
| 11:43 | ZZZZZZ | 1 | | | | |
| 11:48 | MP43371-SD1 | 5 | wrong sample | | | |
| 11:53 | ZZZZZZ | 1 | | | | |
| 11:58 | ZZZZZZ | 1 | | | | |
| 12:04 | ZZZZZZ | 1 | | | | |
| 12:09 | ZZZZZZ | 1 | | | | |
| 12:14 | MA55148-CCV4 | 1 | X | X | X | |
| 12:19 | MA55148-CCB5 | 1 | X | X | X | |
| 12:24 | ZZZZZZ | 1 | | | | |
| 12:29 | ZZZZZZ | 1 | | | | |
| 12:34 | ZZZZZZ | 1 | | | | |
| 12:40 | ZZZZZZ | 1 | | | | |
| 12:45 | ZZZZZZ | 1 | | | | |
| 12:50 | ZZZZZZ | 1 | | | | |
| 12:55 | ZZZZZZ | 1 | | | | |
| 13:00 | ZZZZZZ | 1 | | | | |
| 13:05 | ZZZZZZ | 1 | | | | |
| 13:10 | MA55148-CCV5 | 1 | X | X | X | |
| 13:15 | MA55148-CCB6 | 1 | X | X | X | |
| 13:20 | ZZZZZZ | 1 | | | | |
| 13:25 | JD77507-2F | 1 | X | | X | (a) |
| 13:30 | ZZZZZZ | 1 | | | | |
| 13:35 | ZZZZZZ | 1 | | | | |
| 13:40 | ZZZZZZ | 1 | | | | |
| | | Element: | Cd | Ca | Pb | |

REPORTED ELEMENTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
Analyst: ND  Run ID: MA55148
Parameters: Cd,Ca,Pb

| Time | Sample Description | Element: Dilution | C d | C a | P b | |
|---|---|---|---|---|---|---|
| 13:45 | ZZZZZZ | 1 | | | | |
| 13:50 | ZZZZZZ | 1 | | | | |
| 13:54 | JD77365-4 | 1 | X | | | |
| 13:59 | JD77365-5 | 1 | X | | | |
| 14:05 | JD77365-6 | 1 | X | | | |
| 14:10 | MA55148-CCV6 | 1 | X | X | X | |
| 14:15 | MA55148-CCB7 | 1 | X | X | X | |
| 14:20 | JD77365-7 | 1 | X | | | |
| 14:25 | JD77365-8 | 1 | X | | | |
| 14:30 | JD77365-9 | 1 | X | | | |
| 14:35 | JD77365-10 | 1 | X | | | |
| 14:40 | JD77365-11 | 1 | X | | | |
| 14:45 | JD77365-12 | 1 | X | | | |
| 14:51 | JD77365-13 | 1 | X | | | |
| 14:56 | JD77365-14 | 1 | X | | | |
| 15:01 | JD77365-15 | 1 | X | | | |
| 15:06 | JD77365-1 | 2 | | X | | |
| 15:11 | MA55148-CCV7 | 1 | X | X | X | |
| 15:17 | MA55148-CCB8 | 1 | X | X | X | |
| 15:21 | JD77365-3 | 2 | | X | | |
| 15:27 | JD77365-8 | 5 | | X | | |
| 15:32 | JD77365-14 | 2 | | X | X | |
| 15:37 | JD77365-15 | 2 | | X | | |
| 15:42 | MP43324-MB1 | 1 | X | | | |
| 15:47 | MP43324-B1 | 1 | X | | | |
| 15:52 | MP43324-S1 | 1 | X | | | |
| 15:57 | MP43324-S2 | 1 | X | | | |
| 16:02 | JD77429-33 | 1 | X | | | (a) |
| 16:07 | MP43324-SD1 | 5 | X | X | X | |
| 16:12 | MA55148-CCV8 | 1 | X | X | X | |
| 16:17 | MA55148-CCB9 | 1 | X | X | X | |
| 16:22 | MP43324-PS1 | 1 | X | | | |
| 16:27 | ZZZZZZ | 1 | | | | |
| | | Element: | C d | C a | P b | |

REPORTED ELEMENTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
Analyst: ND  Run ID: MA55148
Parameters: Cd,Ca,Pb

| Time | Sample Description | Element: Dilution | C d | C a | P b | |
|---|---|---|---|---|---|---|
| 16:32 | ZZZZZZ | 1 | | | | |
| 16:37 | ZZZZZZ | 5 | | | | |
| 16:42 | ZZZZZZ | 5 | | | | |
| 16:47 | MP43393-MB1 | 1 | | | | |
| 16:52 | MP43393-B1 | 1 | | | | |
| 16:57 | MP43393-S1 | 1 | | | | |
| 17:02 | MP43393-S2 | 1 | | | | |
| 17:07 | JD77602-1 | 1 | | | | (a) |
| 17:13 | MA55148-CCV9 | 1 | X | X | X | |
| 17:18 | MA55148-CCB10 | 1 | X | X | X | |
| 17:23 | MP43393-SD1 | 5 | | | | |
| 17:28 | MP43393-S3 | 1 | | | | |
| 17:33 | MP43393-S4 | 1 | | | | |
| 17:39 | JD77602-1F | 1 | | | | (a) |
| 17:44 | MP43393-SD2 | 5 | | | | |
| 17:49 | ZZZZZZ | 1 | | | | |
| 17:55 | ZZZZZZ | 1 | | | | |
| 18:00 | ZZZZZZ | 1 | | | | |
| 18:05 | ZZZZZZ | 1 | | | | |
| 18:10 | ZZZZZZ | 1 | | | | |
| 18:15 | MA55148-CCV10 | 1 | X | X | X | |
| 18:21 | MA55148-CCB11 | 1 | X | X | X | |
| 18:26 | ZZZZZZ | 1 | | | | |
| 18:31 | ZZZZZZ | 1 | | | | |
| 18:36 | ZZZZZZ | 1 | | | | |
| 18:41 | ZZZZZZ | 2 | | | | |
| 18:46 | ZZZZZZ | 2 | | | | |
| 18:51 | ZZZZZZ | 2 | | | | |
| 18:57 | ZZZZZZ | 2 | | | | |
| 19:02 | ZZZZZZ | 2 | | | | |
| 19:07 | ZZZZZZ | 2 | | | | |
| 19:12 | ZZZZZZ | 2 | | | | |
| 19:17 | MA55148-CCV11 | 1 | X | X | X | |
| | | Element: | C d | C a | P b | |

REPORTED ELEMENTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
Analyst: ND  Run ID: MA55148
Parameters: Cd,Ca,Pb

| Time | Sample Description | Dilution | Element: Cd | Ca | Pb |
|---|---|---|---|---|---|
| 19:22 | MA55148-CCB12 | 1 | X | X | X |
| 19:27 | ZZZZZZ | 2 | | | |
| 19:32 | ZZZZZZ | 1 | | | |
| 19:37 | ZZZZZZ | 2 | | | |
| 19:42 | ZZZZZZ | 2 | | | |
| 19:47 | ZZZZZZ | 2 | | | |
| 19:52 | ZZZZZZ | 1 | | | |
| 19:57 | ZZZZZZ | 1 | | | |
| 20:02 | ZZZZZZ | 1 | | | |
| 20:07 | ZZZZZZ | 1 | | | |
| 20:12 | ZZZZZZ | 1 | | | |
| 20:17 | MA55148-CCV12 | 1 | X | X | X |
| 20:23 | MA55148-CCB13 | 1 | X | X | X |

(a) Sample used for QC only; not part of login JD77365.

| | Element: Cd | Ca | Pb |
|---|---|---|---|

INTERNAL STANDARD SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP Date Analyzed: 11/29/23 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA55148
Parameters: Cd,Ca,Pb

| Time | Sample Description | Istd#1 | Istd#2 | Istd#3 | Istd#4 |
|---|---|---|---|---|---|
| 07:49 | MA55148-STD1 | 7530 R | 166780 R | 20832 R | 14482 R |
| 07:54 | MA55148-STD2 | 7047 | 157810 | 20590 | 13142 |
| 08:00 | MA55148-ICV1 | No results reported for the elements associated with this internal standard. | | | |
| 08:06 | MA55148-ICV2 | 7277 | 161140 | 20701 | 13463 |
| 08:15 | MA55148-ICB1 | 7548 | 165940 | 20924 | 14495 |
| 08:22 | MA55148-ICCV1 | 7277 | 159400 | 20650 | 13445 |
| 08:32 | MA55148-CCB1 | 7560 | 167220 | 20949 | 14515 |
| 08:36 | MA55148-CRI1 | 7500 | 164140 | 21090 | 14268 |
| 08:41 | MA55148-CRID1 | No results reported for the elements associated with this internal standard. | | | |
| 08:46 | MA55148-ICSA1 | 6877 | 151820 | 20377 | 12315 |
| 08:51 | MA55148-ICSAB1 | 6780 | 148450 | 20191 | 12215 |
| 08:56 | MA55148-CRID2 | 7560 | 165710 | 21045 | 14496 |
| 09:01 | MA55148-HSTD1 | 7228 | 160870 | 21070 | 14506 |
| 09:07 | MA55148-HSTD2 | 6849 | 150680 | 20167 | 12263 |
| 09:13 | ZZZZZZ | 7486 | 164540 | 20963 | 14710 |
| 09:18 | ZZZZZZ | 7384 | 166970 | 21108 | 14576 |
| 09:23 | ZZZZZZ | 7659 | 166570 | 21191 | 14720 |
| 09:28 | MA55148-CCV1 | 7341 | 159600 | 20708 | 13595 |
| 09:33 | MA55148-CCB2 | 7619 | 165190 | 21035 | 14649 |
| 09:38 | MP43373-MB1 | 7627 | 165020 | 21000 | 14844 |
| 09:43 | MP43373-B1 | 7363 | 159560 | 20893 | 13886 |
| 09:48 | MP43373-S1 | 7241 | 158330 | 20780 | 13473 |
| 09:53 | MP43373-S2 | 7221 | 156820 | 20724 | 13435 |
| 09:58 | JD77566-1 | 7368 | 159450 | 20912 | 13844 |
| 10:03 | MP43373-SD1 | 7615 | 164270 | 20976 | 14512 |
| 10:08 | ZZZZZZ | 7421 | 160040 | 21231 | 13866 |
| 10:13 | ZZZZZZ | 7469 | 159940 | 20799 | 14198 |
| 10:18 | ZZZZZZ | 7314 | 158060 | 20728 | 13716 |
| 10:23 | MA55148-CCV2 | 7361 | 156870 | 20774 | 13639 |
| 10:28 | MA55148-CCB3 | 7633 | 163260 | 20808 | 14689 |
| 10:33 | ZZZZZZ | 7414 | 160930 | 20922 | 13951 |
| 10:38 | ZZZZZZ | 7397 | 159870 | 20767 | 13868 |
| 10:43 | ZZZZZZ | 7463 | 159900 | 20962 | 14093 |

INTERNAL STANDARD SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
Analyst: ND  Run ID: MA55148
Parameters: Cd,Ca,Pb

| Time | Sample Description | Istd#1 | Istd#2 | Istd#3 | Istd#4 |
|---|---|---|---|---|---|
| 10:48 | ZZZZZZ | 7642 | 164360 | 21197 | 14842 |
| 10:53 | MP43371-MB1 | 7573 | 162340 | 20920 | 14569 |
| 10:58 | MP43371-MB2 | 7589 | 163770 | 20747 | 14625 |
| 11:03 | MP43371-B1 | 7402 | 158250 | 20654 | 13876 |
| 11:08 | MP43371-B2 | 7380 | 156240 | 20582 | 13842 |
| 11:13 | MP43371-S1 | 7397 | 157970 | 21052 | 13506 |
| 11:18 | MA55148-CCV3 | 7372 | 156540 | 20486 | 13679 |
| 11:23 | MA55148-CCB4 | 7675 | 160450 | 20835 | 14785 |
| 11:28 | ZZZZZZ | 7756 | 163340 | 20945 | 15172 |
| 11:33 | ZZZZZZ | 7671 | 162600 | 20886 | 15023 |
| 11:38 | MP43371-S2 | 7434 | 156520 | 20946 | 13555 |
| 11:43 | ZZZZZZ | 7110 | 150720 | 20759 | 12810 |
| 11:48 | MP43371-SD1 | No results reported for the elements associated with this internal standard. | | | |
| 11:53 | ZZZZZZ | 7399 | 156030 | 20595 | 13802 |
| 11:58 | ZZZZZZ | 7434 | 156450 | 20852 | 13872 |
| 12:04 | ZZZZZZ | 7058 | 149180 | 20621 | 12703 |
| 12:09 | ZZZZZZ | 7323 | 153540 | 20967 | 13491 |
| 12:14 | MA55148-CCV4 | 7417 | 155910 | 20703 | 13763 |
| 12:19 | MA55148-CCB5 | 7646 | 161400 | 20976 | 14747 |
| 12:24 | ZZZZZZ | 6867 | 143660 | 20397 | 12211 |
| 12:29 | ZZZZZZ | 7285 | 156080 | 21156 | 13373 |
| 12:34 | ZZZZZZ | 6909 | 147110 | 20895 | 12283 |
| 12:40 | ZZZZZZ | 7345 | 155690 | 21023 | 13089 |
| 12:45 | ZZZZZZ | 7324 | 156550 | 20704 | 13151 |
| 12:50 | ZZZZZZ | 7926 | 167450 | 22096 | 13985 |
| 12:55 | ZZZZZZ | 8102 | 173420 | 22588 | 13839 |
| 13:00 | ZZZZZZ | 8876 | 189290 | 24698 | 14031 |
| 13:05 | ZZZZZZ | 7605 | 161970 | 21038 | 14618 |
| 13:10 | MA55148-CCV5 | 7340 | 159340 | 20835 | 13608 |
| 13:15 | MA55148-CCB6 | 7624 | 162580 | 21024 | 14662 |
| 13:20 | ZZZZZZ | 7525 | 162120 | 20998 | 13926 |
| 13:25 | JD77507-2F | 7595 | 163020 | 21338 | 13830 |
| 13:30 | ZZZZZZ | 7646 | 165570 | 21599 | 13922 |

INTERNAL STANDARD SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
Analyst: ND  Run ID: MA55148
Parameters: Cd,Ca,Pb

| Time | Sample Description | Istd#1 | Istd#2 | Istd#3 | Istd#4 |
|---|---|---|---|---|---|
| 13:35 | ZZZZZZ | 7562 | 164760 | 21056 | 14534 |
| 13:40 | ZZZZZZ | 7391 | 160060 | 21087 | 13731 |
| 13:45 | ZZZZZZ | 7352 | 159360 | 21105 | 13657 |
| 13:50 | ZZZZZZ | 7641 | 164980 | 21388 | 14639 |
| 13:54 | JD77365-4 | 7788 | 168780 | 21939 | 14249 |
| 13:59 | JD77365-5 | 7867 | 169190 | 22533 | 13879 |
| 14:05 | JD77365-6 | 7578 | 163820 | 21983 | 13763 |
| 14:10 | MA55148-CCV6 | 7335 | 157880 | 20899 | 13579 |
| 14:15 | MA55148-CCB7 | 7617 | 165030 | 21027 | 14639 |
| 14:20 | JD77365-7 | 7789 | 167870 | 22100 | 14073 |
| 14:25 | JD77365-8 | 7586 | 164840 | 22298 | 12787 |
| 14:30 | JD77365-9 | 7809 | 168390 | 22157 | 13935 |
| 14:35 | JD77365-10 | 7470 | 162570 | 21278 | 13634 |
| 14:40 | JD77365-11 | 7574 | 164970 | 21818 | 13765 |
| 14:45 | JD77365-12 | 7704 | 166280 | 21960 | 13800 |
| 14:51 | JD77365-13 | 7710 | 166040 | 22083 | 13651 |
| 14:56 | JD77365-14 | 7481 | 160580 | 21660 | 13268 |
| 15:01 | JD77365-15 | 7383 | 162060 | 21599 | 13145 |
| 15:06 | JD77365-1 | 7634 | 165490 | 21604 | 13830 |
| 15:11 | MA55148-CCV7 | 7329 | 159710 | 20694 | 13541 |
| 15:17 | MA55148-CCB8 | 7635 | 165960 | 20867 | 14662 |
| 15:21 | JD77365-3 | 7646 | 166780 | 21471 | 13754 |
| 15:27 | JD77365-8 | 7704 | 168310 | 21480 | 13960 |
| 15:32 | JD77365-14 | 7596 | 165660 | 21566 | 13660 |
| 15:37 | JD77365-15 | 7567 | 166020 | 21621 | 13597 |
| 15:42 | MP43324-MB1 | 7639 | 169700 | 21398 | 14554 |
| 15:47 | MP43324-B1 | 7351 | 162630 | 21073 | 13684 |
| 15:52 | MP43324-S1 | 7449 | 163890 | 21364 | 13704 |
| 15:57 | MP43324-S2 | 7436 | 165220 | 21535 | 13685 |
| 16:02 | JD77429-33 | 7587 | 168090 | 21605 | 14072 |
| 16:07 | MP43324-SD1 | 7772 | 171700 | 21831 | 14579 |
| 16:12 | MA55148-CCV8 | 7366 | 162550 | 21119 | 13524 |
| 16:17 | MA55148-CCB9 | 7642 | 170270 | 21250 | 14572 |

INTERNAL STANDARD SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
Analyst: ND  Run ID: MA55148
Parameters: Cd,Ca,Pb

| Time | Sample Description | Istd#1 | Istd#2 | Istd#3 | Istd#4 |
|---|---|---|---|---|---|
| 16:22 | MP43324-PS1 | 7379 | 163910 | 21616 | 13619 |
| 16:27 | ZZZZZZ | 7674 | 171310 | 21841 | 14072 |
| 16:32 | ZZZZZZ | 7530 | 167940 | 21325 | 14306 |
| 16:37 | ZZZZZZ | 7470 | 167830 | 21274 | 13786 |
| 16:42 | ZZZZZZ | 7465 | 168940 | 21491 | 13788 |
| 16:47 | MP43393-MB1 | 7560 | 166420 | 21063 | 14607 |
| 16:52 | MP43393-B1 | 7326 | 162400 | 20837 | 13729 |
| 16:57 | MP43393-S1 | 6407 | 144380 | 20186 | 11394 |
| 17:02 | MP43393-S2 | 6392 | 143040 | 19954 | 11363 |
| 17:07 | JD77602-1 | 6443 | 145930 | 19964 | 11313 |
| 17:13 | MA55148-CCV9 | 7398 | 163230 | 21070 | 13566 |
| 17:18 | MA55148-CCB10 | 7691 | 169640 | 21438 | 14644 |
| 17:23 | MP43393-SD1 | 7299 | 162230 | 21069 | 13091 |
| 17:28 | MP43393-S3 | 6403 | 144140 | 20004 | 11390 |
| 17:33 | MP43393-S4 | 6410 | 143910 | 19996 | 11390 |
| 17:39 | JD77602-1F | 6447 | 145430 | 20260 | 11289 |
| 17:44 | MP43393-SD2 | 7405 | 167030 | 21498 | 13230 |
| 17:49 | ZZZZZZ | 6153 | 138350 | 20163 | 10727 |
| 17:55 | ZZZZZZ | 6385 | 144820 | 21065 | 11114 |
| 18:00 | ZZZZZZ | 6849 | 153030 | 20893 | 12041 |
| 18:05 | ZZZZZZ | 6298 | 141890 | 20857 | 10909 |
| 18:10 | ZZZZZZ | 6316 | 143330 | 20796 | 10944 |
| 18:15 | MA55148-CCV10 | 7405 | 162730 | 20485 | 13570 |
| 18:21 | MA55148-CCB11 | 7701 | 168980 | 21328 | 14656 |
| 18:26 | ZZZZZZ | 6513 | 147220 | 20742 | 11345 |
| 18:31 | ZZZZZZ | 6937 | 152860 | 21121 | 12222 |
| 18:36 | ZZZZZZ | 6308 | 140920 | 20491 | 10972 |
| 18:41 | ZZZZZZ | 7645 | 166960 | 21024 | 14538 |
| 18:46 | ZZZZZZ | 7648 | 169800 | 21325 | 13617 |
| 18:51 | ZZZZZZ | 7919 | 171700 | 22066 | 13981 |
| 18:57 | ZZZZZZ | 7726 | 169940 | 21294 | 14665 |
| 19:02 | ZZZZZZ | 7910 | 172240 | 21740 | 14607 |
| 19:07 | ZZZZZZ | 7429 | 162140 | 20335 | 14165 |

INTERNAL STANDARD SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
Analyst: ND  Run ID: MA55148
Parameters: Cd,Ca,Pb

| Time | Sample Description | Istd#1 | Istd#2 | Istd#3 | Istd#4 |
|---|---|---|---|---|---|
| 19:12 | ZZZZZZ | 7376 | 163610 | 20513 | 13659 |
| 19:17 | MA55148-CCV11 | 7365 | 161970 | 20676 | 13520 |
| 19:22 | MA55148-CCB12 | 7691 | 167170 | 20995 | 14631 |
| 19:27 | ZZZZZZ | 7510 | 165270 | 20970 | 13896 |
| 19:32 | ZZZZZZ | 7710 | 169680 | 21300 | 14638 |
| 19:37 | ZZZZZZ | 7097 | 157550 | 20172 | 12854 |
| 19:42 | ZZZZZZ | 7217 | 159720 | 20437 | 13073 |
| 19:47 | ZZZZZZ | 7177 | 159140 | 20010 | 13104 |
| 19:52 | ZZZZZZ | 7674 | 167490 | 21020 | 14550 |
| 19:57 | ZZZZZZ | 7729 | 167190 | 21104 | 14664 |
| 20:02 | ZZZZZZ | 7750 | 168600 | 21148 | 15155 |
| 20:07 | ZZZZZZ | 7226 | 159690 | 20717 | 13144 |
| 20:12 | ZZZZZZ | 7852 | 170920 | 21618 | 15012 |
| 20:17 | MA55148-CCV12 | 7395 | 162030 | 20759 | 13570 |
| 20:23 | MA55148-CCB13 | 7689 | 168730 | 20921 | 14632 |

R = Reference for ISTD limits.  ! = Outside limits.

LEGEND:

| Istd# | Parameter | Limits |
|---|---|---|
| Istd#1 | Yttrium (2243) | 70-130 % |
| Istd#2 | Yttrium (3600) | 70-130 % |
| Istd#3 | Yttrium (3710) | 70-130 % |
| Istd#4 | Indium | 70-130 % |

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL  Run ID: MA55148  Units: ug/l

| Time: / Sample ID: | | | 08:15 ICB1 | | 08:32 CCB1 | | 09:33 CCB2 | | 10:28 CCB3 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Metal | RL | IDL | raw | final | raw | final | raw | final | raw | final |
| Aluminum | 200 | 27 | anr | | | | | | | |
| Antimony | 6.0 | 2.2 | anr | | | | | | | |
| Arsenic | 3.0 | 1.3 | anr | | | | | | | |
| Barium | 200 | 1 | anr | | | | | | | |
| Beryllium | 1.0 | .2 | anr | | | | | | | |
| Bismuth | 20 | 2.1 | | | | | | | | |
| Boron | 100 | 1 | | | | | | | | |
| Cadmium | 3.0 | .2 | 0.300 | <3.0 | 0.500 | <3.0 | 0.400 | <3.0 | 0.200 | <3.0 |
| Calcium | 5000 | 7.7 | 4.80 | <5000 | 3.80 | <5000 | 4.30 | <5000 | 4.90 | <5000 |
| Cerium | 100 | | | | | | | | | |
| Chromium | 10 | .5 | anr | | | | | | | |
| Cobalt | 50 | .4 | anr | | | | | | | |
| Copper | 10 | 6.8 | anr | | | | | | | |
| Iron | 100 | 15 | anr | | | | | | | |
| Lead | 3.0 | 1.6 | 0.900 | <3.0 | 1.30 | <3.0 | 0.600 | <3.0 | 1.10 | <3.0 |
| Lithium | 50 | 3.7 | | | | | | | | |
| Magnesium | 5000 | 54 | anr | | | | | | | |
| Manganese | 15 | .1 | anr | | | | | | | |
| Molybdenum | 20 | .5 | | | | | | | | |
| Nickel | 10 | .3 | anr | | | | | | | |
| Phosphorus | 50 | 1.8 | | | | | | | | |
| Potassium | 10000 | 77 | anr | | | | | | | |
| Selenium | 10 | 2 | anr | | | | | | | |
| Silicon | 200 | 1.3 | | | | | | | | |
| Silver | 10 | .9 | anr | | | | | | | |
| Sodium | 10000 | 23 | anr | | | | | | | |
| Strontium | 10 | .4 | | | | | | | | |
| Sulfur | 50 | 4.1 | anr | | | | | | | |
| Thallium | 10 | 1.6 | anr | | | | | | | |
| Tin | 10 | .9 | anr | | | | | | | |
| Titanium | 10 | .9 | | | | | | | | |
| Tungsten | 50 | 2 | | | | | | | | |
| Vanadium | 50 | .8 | anr | | | | | | | |

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL  Run ID: MA55148  Units: ug/l

| Time: | | | 08:15 | | 08:32 | | 09:33 | | 10:28 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | | | ICB1 | | CCB1 | | CCB2 | | CCB3 | |
| Metal | RL | IDL | raw | final | raw | final | raw | final | raw | final |
| Zinc | 20 | .2 | anr | | | | | | | |
| Zirconium | 10 | .5 | | | | | | | | |

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL  Run ID: MA55148  Units: ug/l

| Time: / Sample ID: | | | 11:23 CCB4 | | 12:19 CCB5 | | 13:15 CCB6 | | 14:15 CCB7 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Metal | RL | IDL | raw | final | raw | final | raw | final | raw | final |
| Aluminum | 200 | 27 | anr | | | | | | | |
| Antimony | 6.0 | 2.2 | anr | | | | | | | |
| Arsenic | 3.0 | 1.3 | anr | | | | | | | |
| Barium | 200 | 1 | anr | | | | | | | |
| Beryllium | 1.0 | .2 | anr | | | | | | | |
| Bismuth | 20 | 2.1 | | | | | | | | |
| Boron | 100 | 1 | | | | | | | | |
| Cadmium | 3.0 | .2 | 0.300 | <3.0 | 0.400 | <3.0 | 0.600 | <3.0 | 0.500 | <3.0 |
| Calcium | 5000 | 7.7 | 6.40 | <5000 | 4.10 | <5000 | 7.10 | <5000 | 5.40 | <5000 |
| Cerium | 100 | | | | | | | | | |
| Chromium | 10 | .5 | anr | | | | | | | |
| Cobalt | 50 | .4 | anr | | | | | | | |
| Copper | 10 | 6.8 | anr | | | | | | | |
| Iron | 100 | 15 | anr | | | | | | | |
| Lead | 3.0 | 1.6 | 0.500 | <3.0 | 0.600 | <3.0 | 1.00 | <3.0 | 0.600 | <3.0 |
| Lithium | 50 | 3.7 | | | | | | | | |
| Magnesium | 5000 | 54 | anr | | | | | | | |
| Manganese | 15 | .1 | anr | | | | | | | |
| Molybdenum | 20 | .5 | | | | | | | | |
| Nickel | 10 | .3 | anr | | | | | | | |
| Phosphorus | 50 | 1.8 | | | | | | | | |
| Potassium | 10000 | 77 | anr | | | | | | | |
| Selenium | 10 | 2 | anr | | | | | | | |
| Silicon | 200 | 1.3 | | | | | | | | |
| Silver | 10 | .9 | anr | | | | | | | |
| Sodium | 10000 | 23 | anr | | | | | | | |
| Strontium | 10 | .4 | | | | | | | | |
| Sulfur | 50 | 4.1 | anr | | | | | | | |
| Thallium | 10 | 1.6 | anr | | | | | | | |
| Tin | 10 | .9 | anr | | | | | | | |
| Titanium | 10 | .9 | | | | | | | | |
| Tungsten | 50 | 2 | | | | | | | | |
| Vanadium | 50 | .8 | anr | | | | | | | |

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL  Run ID: MA55148  Units: ug/l

| Time: | | | 11:23 | | 12:19 | | 13:15 | | 14:15 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | | | CCB4 | | CCB5 | | CCB6 | | CCB7 | |
| Metal | RL | IDL | raw | final | raw | final | raw | final | raw | final |
| Zinc | 20 | .2 | anr | | | | | | | |
| Zirconium | 10 | .5 | | | | | | | | |

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL  Run ID: MA55148  Units: ug/l

| Time: / Sample ID: | | | 15:17 CCB8 | | 16:17 CCB9 | |
|---|---|---|---|---|---|---|
| Metal | RL | IDL | raw | final | raw | final |
| Aluminum | 200 | 27 | anr | | | |
| Antimony | 6.0 | 2.2 | anr | | | |
| Arsenic | 3.0 | 1.3 | anr | | | |
| Barium | 200 | 1 | anr | | | |
| Beryllium | 1.0 | .2 | anr | | | |
| Bismuth | 20 | 2.1 | | | | |
| Boron | 100 | 1 | | | | |
| Cadmium | 3.0 | .2 | 0.600 | <3.0 | 0.400 | <3.0 |
| Calcium | 5000 | 7.7 | 8.40 | <5000 | 3.30 | <5000 |
| Cerium | 100 | | | | | |
| Chromium | 10 | .5 | anr | | | |
| Cobalt | 50 | .4 | anr | | | |
| Copper | 10 | 6.8 | anr | | | |
| Iron | 100 | 15 | anr | | | |
| Lead | 3.0 | 1.6 | 0.600 | <3.0 | 0.600 | <3.0 |
| Lithium | 50 | 3.7 | | | | |
| Magnesium | 5000 | 54 | anr | | | |
| Manganese | 15 | .1 | anr | | | |
| Molybdenum | 20 | .5 | | | | |
| Nickel | 10 | .3 | anr | | | |
| Phosphorus | 50 | 1.8 | | | | |
| Potassium | 10000 | 77 | anr | | | |
| Selenium | 10 | 2 | anr | | | |
| Silicon | 200 | 1.3 | | | | |
| Silver | 10 | .9 | anr | | | |
| Sodium | 10000 | 23 | anr | | | |
| Strontium | 10 | .4 | | | | |
| Sulfur | 50 | 4.1 | anr | | | |
| Thallium | 10 | 1.6 | anr | | | |
| Tin | 10 | .9 | anr | | | |
| Titanium | 10 | .9 | | | | |
| Tungsten | 50 | 2 | | | | |
| Vanadium | 50 | .8 | anr | | | |

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL  Run ID: MA55148  Units: ug/l

| Time: | | | 15:17 | | 16:17 | |
|---|---|---|---|---|---|---|
| Sample ID: | | | CCB8 | | CCB9 | |
| Metal | RL | IDL | raw | final | raw | final |
| Zinc | 20 | .2 | anr | | | |
| Zirconium | 10 | .5 | | | | |

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
QC Limits:  to  % Recovery  Run ID: MA55148  Units: ug/l

| Time: | | 08:22 | |
|---|---|---|---|
| Sample ID: | ICCV | ICCV1 | |
| Metal | True | Results | % Rec |
| Aluminum | anr | | |
| Antimony | anr | | |
| Arsenic | anr | | |
| Barium | anr | | |
| Beryllium | anr | | |
| Bismuth | | | |
| Boron | | | |
| Cadmium | 2000 | 1980 | 99.0 |
| Calcium | 40000 | 40800 | 102.0 |
| Cerium | | | |
| Chromium | anr | | |
| Cobalt | anr | | |
| Copper | anr | | |
| Iron | anr | | |
| Lead | 2000 | 1990 | 99.5 |
| Lithium | | | |
| Magnesium | anr | | |
| Manganese | anr | | |
| Molybdenum | | | |
| Nickel | anr | | |
| Phosphorus | | | |
| Potassium | anr | | |
| Selenium | anr | | |
| Silicon | | | |
| Silver | anr | | |
| Sodium | anr | | |
| Strontium | | | |
| Sulfur | anr | | |
| Thallium | anr | | |
| Tin | anr | | |
| Titanium | | | |
| Tungsten | | | |
| Vanadium | anr | | |

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
QC Limits:  to  % Recovery  Run ID: MA55148  Units: ug/l

| | | | |
|---|---|---|---|
| Time: | | 08:22 | |
| Sample ID: | ICCV | ICCV1 | |
| Metal | True | Results | % Rec |
| Zinc | anr | | |
| Zirconium | | | |

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery  Run ID: MA55148  Units: ug/l

| Time: | | 08:06 | | | 09:28 | | | 10:23 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | ICV | ICV2 | | CCV | CCV1 | | CCV | CCV2 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Aluminum | anr | | | | | | | | |
| Antimony | anr | | | | | | | | |
| Arsenic | anr | | | | | | | | |
| Barium | anr | | | | | | | | |
| Beryllium | anr | | | | | | | | |
| Bismuth | | | | | | | | | |
| Boron | | | | | | | | | |
| Cadmium | 2000 | 1980 | 99.0 | 2000 | 1970 | 98.5 | 2000 | 1950 | 97.5 |
| Calcium | 40000 | 40900 | 102.3 | 40000 | 41600 | 104.0 | 40000 | 41700 | 104.3 |
| Cerium | | | | | | | | | |
| Chromium | anr | | | | | | | | |
| Cobalt | anr | | | | | | | | |
| Copper | anr | | | | | | | | |
| Iron | anr | | | | | | | | |
| Lead | 2000 | 1990 | 99.5 | 2000 | 1990 | 99.5 | 2000 | 1990 | 99.5 |
| Lithium | | | | | | | | | |
| Magnesium | anr | | | | | | | | |
| Manganese | anr | | | | | | | | |
| Molybdenum | | | | | | | | | |
| Nickel | anr | | | | | | | | |
| Phosphorus | | | | | | | | | |
| Potassium | anr | | | | | | | | |
| Selenium | anr | | | | | | | | |
| Silicon | | | | | | | | | |
| Silver | anr | | | | | | | | |
| Sodium | anr | | | | | | | | |
| Strontium | | | | | | | | | |
| Sulfur | anr | | | | | | | | |
| Thallium | anr | | | | | | | | |
| Tin | anr | | | | | | | | |
| Titanium | | | | | | | | | |
| Tungsten | | | | | | | | | |
| Vanadium | anr | | | | | | | | |

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery  Run ID: MA55148  Units: ug/l

| Time: | | 08:06 | | | 09:28 | | | 10:23 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | ICV | ICV2 | | CCV | CCV1 | | CCV | CCV2 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Zinc | anr | | | | | | | | |
| Zirconium | | | | | | | | | |

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery  Run ID: MA55148  Units: ug/l

| Time: | | 11:18 | | | 12:14 | | | 13:10 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | CCV | CCV3 | | CCV | CCV4 | | CCV | CCV5 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Aluminum | anr | | | | | | | | |
| Antimony | anr | | | | | | | | |
| Arsenic | anr | | | | | | | | |
| Barium | anr | | | | | | | | |
| Beryllium | anr | | | | | | | | |
| Bismuth | | | | | | | | | |
| Boron | | | | | | | | | |
| Cadmium | 2000 | 1930 | 96.5 | 2000 | 1910 | 95.5 | 2000 | 1970 | 98.5 |
| Calcium | 40000 | 42000 | 105.0 | 40000 | 41900 | 104.8 | 40000 | 41600 | 104.0 |
| Cerium | | | | | | | | | |
| Chromium | anr | | | | | | | | |
| Cobalt | anr | | | | | | | | |
| Copper | anr | | | | | | | | |
| Iron | anr | | | | | | | | |
| Lead | 2000 | 2000 | 100.0 | 2000 | 1990 | 99.5 | 2000 | 2010 | 100.5 |
| Lithium | | | | | | | | | |
| Magnesium | anr | | | | | | | | |
| Manganese | anr | | | | | | | | |
| Molybdenum | | | | | | | | | |
| Nickel | anr | | | | | | | | |
| Phosphorus | | | | | | | | | |
| Potassium | anr | | | | | | | | |
| Selenium | anr | | | | | | | | |
| Silicon | | | | | | | | | |
| Silver | anr | | | | | | | | |
| Sodium | anr | | | | | | | | |
| Strontium | | | | | | | | | |
| Sulfur | anr | | | | | | | | |
| Thallium | anr | | | | | | | | |
| Tin | anr | | | | | | | | |
| Titanium | | | | | | | | | |
| Tungsten | | | | | | | | | |
| Vanadium | anr | | | | | | | | |

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery  Run ID: MA55148  Units: ug/l

| Time: | | 11:18 | | | 12:14 | | | 13:10 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | CCV | CCV3 | | CCV | CCV4 | | CCV | CCV5 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Zinc | anr | | | | | | | | |
| Zirconium | | | | | | | | | |

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery  Run ID: MA55148  Units: ug/l

| Time: | | 14:10 | | | 15:11 | | | 16:12 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | CCV | CCV6 | | CCV | CCV7 | | CCV | CCV8 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Aluminum | anr | | | | | | | | |
| Antimony | anr | | | | | | | | |
| Arsenic | anr | | | | | | | | |
| Barium | anr | | | | | | | | |
| Beryllium | anr | | | | | | | | |
| Bismuth | | | | | | | | | |
| Boron | | | | | | | | | |
| Cadmium | 2000 | 1980 | 99.0 | 2000 | 1980 | 99.0 | 2000 | 2000 | 100.0 |
| Calcium | 40000 | 41400 | 103.5 | 40000 | 41600 | 104.0 | 40000 | 41000 | 102.5 |
| Cerium | | | | | | | | | |
| Chromium | anr | | | | | | | | |
| Cobalt | anr | | | | | | | | |
| Copper | anr | | | | | | | | |
| Iron | anr | | | | | | | | |
| Lead | 2000 | 2010 | 100.5 | 2000 | 2010 | 100.5 | 2000 | 2010 | 100.5 |
| Lithium | | | | | | | | | |
| Magnesium | anr | | | | | | | | |
| Manganese | anr | | | | | | | | |
| Molybdenum | | | | | | | | | |
| Nickel | anr | | | | | | | | |
| Phosphorus | | | | | | | | | |
| Potassium | anr | | | | | | | | |
| Selenium | anr | | | | | | | | |
| Silicon | | | | | | | | | |
| Silver | anr | | | | | | | | |
| Sodium | anr | | | | | | | | |
| Strontium | | | | | | | | | |
| Sulfur | anr | | | | | | | | |
| Thallium | anr | | | | | | | | |
| Tin | anr | | | | | | | | |
| Titanium | | | | | | | | | |
| Tungsten | | | | | | | | | |
| Vanadium | anr | | | | | | | | |

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery  Run ID: MA55148  Units: ug/l

| Time: | | 14:10 | | | 15:11 | | | 16:12 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | CCV | CCV6 | | CCV | CCV7 | | CCV | CCV8 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Zinc | anr | | | | | | | | |
| Zirconium | | | | | | | | | |

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 90 to 110 % Recovery  Run ID: MA55148  Units: ug/l

| Time: | | 09:01 | | | 09:07 | |
|---|---|---|---|---|---|---|
| Sample ID: | HSTD | HSTD1 | | HSTD | HSTD2 | |
| Metal | True | Results | % Rec | True | Results | % Rec |
| Aluminum | | | | | | |
| Antimony | anr | | | | | |
| Arsenic | anr | | | | | |
| Barium | anr | | | | | |
| Beryllium | anr | | | | | |
| Bismuth | | | | | | |
| Boron | | | | | | |
| Cadmium | 8000 | 7660 | 95.8 | | | |
| Calcium | | | | 200000 | 218000 | 109.0 |
| Cerium | | | | | | |
| Chromium | anr | | | | | |
| Cobalt | anr | | | | | |
| Copper | anr | | | | | |
| Iron | | | | | | |
| Lead | 8000 | 7980 | 99.8 | | | |
| Lithium | | | | | | |
| Magnesium | | | | | | |
| Manganese | anr | | | | | |
| Molybdenum | | | | | | |
| Nickel | anr | | | | | |
| Phosphorus | | | | | | |
| Potassium | | | | | | |
| Selenium | anr | | | | | |
| Silicon | | | | | | |
| Silver | anr | | | | | |
| Sodium | | | | | | |
| Strontium | | | | | | |
| Sulfur | anr | | | | | |
| Thallium | anr | | | | | |
| Tin | anr | | | | | |
| Titanium | | | | | | |
| Tungsten | | | | | | |
| Vanadium | anr | | | | | |

HIGH STANDARD CHECK SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 90 to 110 % Recovery  Run ID: MA55148  Units: ug/l

| | | | | | | |
|---|---|---|---|---|---|---|
| Time: | | 09:01 | | | 09:07 | |
| Sample ID: | HSTD | HSTD1 | | HSTD | HSTD2 | |
| Metal | True | Results | % Rec | True | Results | % Rec |
| Zinc | anr | | | | | |
| Zirconium | | | | | | |

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
QC Limits: CRI 80-120%  CRIA 80-120%  Run ID: MA55148  Units: ug/l

| Time: | | | | 08:36 | | 08:56 | |
|---|---|---|---|---|---|---|---|
| Sample ID: | CRI | CRIA | CRID | CRI1 | | CRID2 | |
| Metal | True | True | True | Results | % Rec | Results | % Rec |
| Aluminum | 200 | 500 | 100 | anr | | | |
| Antimony | 6.0 | 20 | 3.0 | anr | | | |
| Arsenic | 8.0 | 20 | 3.0 | anr | | | |
| Barium | 200 | | 4.0 | anr | | | |
| Beryllium | 2.0 | | 1.0 | anr | | | |
| Bismuth | 20 | | | | | | |
| Boron | 100 | | 10 | | | | |
| Cadmium | 3.0 | | 1.0 | 3.00 | 100.0 | 1.10 | 110.0 |
| Calcium | 5000 | 2000 | 1000 | 4960 | 99.2 | 1040 | 104.0 |
| Cerium | | | | | | | |
| Chromium | 10 | | 2.0 | anr | | | |
| Cobalt | 50 | | 3.0 | anr | | | |
| Copper | 10 | | 2.0 | anr | | | |
| Iron | 100 | 500 | | anr | | | |
| Lead | 3.0 | 20 | 2.5 | 3.10 | 103.3 | | |
| Lithium | 50 | | | | | | |
| Magnesium | 5000 | 2000 | 100 | anr | | | |
| Manganese | 15 | | 3.0 | anr | | | |
| Molybdenum | 20 | | | | | | |
| Nickel | 10 | | 4.0 | anr | | | |
| Phosphorus | 50 | | | | | | |
| Potassium | 5000 | | 2000 | anr | | | |
| Selenium | 10 | 20 | 5.0 | anr | | | |
| Silicon | 200 | | | | | | |
| Silver | 5.0 | | 2.0 | anr | | | |
| Sodium | 5000 | | 1000 | anr | | | |
| Strontium | 10 | | | | | | |
| Sulfur | 50 | | | anr | | | |
| Thallium | 10 | | 2.0 | anr | | | |
| Tin | 10 | | | anr | | | |
| Titanium | 10 | | | | | | |
| Tungsten | 50 | | | | | | |
| Vanadium | 50 | | 2.0 | anr | | | |

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
QC Limits: CRI 80-120%  CRIA 80-120%  Run ID: MA55148  Units: ug/l

| Time: | | | | 08:36 | | 08:56 | |
|---|---|---|---|---|---|---|---|
| Sample ID: | CRI | CRIA | CRID | CRI1 | | CRID2 | |
| Metal | True | True | True | Results | % Rec | Results | % Rec |
| Zinc | 20 | | 10 | anr | | | |
| Zirconium | 10 | | | | | | |

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 80 to 120 % Recovery  Run ID: MA55148  Units: ug/l

| Time: | | | 08:46 | | 08:51 | |
|---|---|---|---|---|---|---|
| Sample ID: | ICSA | ICSAB | ICSA1 | | ICSAB1 | |
| Metal | True | True | Results | % Rec | Results | % Rec |
| Aluminum | 500000 | 500000 | 481000 | 96.2 | 496000 | 99.2 |
| Antimony | | 1000 | 2.50 | | 990 | 99.0 |
| Arsenic | | 1000 | 1.90 | | 1000 | 100.0 |
| Barium | | 500 | -2.20 | | 491 | 98.2 |
| Beryllium | | 500 | 0.100 | | 505 | 101.0 |
| Bismuth | | 500 | 5.20 | | 498 | 99.6 |
| Boron | | 500 | 36.3 | | 533 | 106.6 |
| Cadmium | | 1000 | 0.200 | | 1040 | 104.0 |
| Calcium | 400000 | 400000 | 381000 | 95.3 | 385000 | 96.3 |
| Cerium | | | -33.9 | | -48.0 | |
| Chromium | | 500 | 2.50 | | 477 | 95.4 |
| Cobalt | | 500 | 1.10 | | 474 | 94.8 |
| Copper | | 500 | 3.00 | | 549 | 109.8 |
| Iron | 200000 | 200000 | 180000 | 90.0 | 187000 | 93.5 |
| Lead | | 1000 | -1.00 | | 939 | 93.9 |
| Lithium | | 500 | 11.2 | | 531 | 106.2 |
| Magnesium | 500000 | 500000 | 472000 | 94.4 | 488000 | 97.6 |
| Manganese | | 500 | 10.6 | | 514 | 102.8 |
| Molybdenum | | 500 | 0.600 | | 470 | 94.0 |
| Nickel | | 1000 | 0.300 | | 929 | 92.9 |
| Phosphorus | | 500 | -9.10 | | 458 | 91.6 |
| Potassium | | | -113 | | -93.3 | |
| Selenium | | 1000 | 2.40 | | 981 | 98.1 |
| Silicon | | 500 | -11.7 | | 490 | 98.0 |
| Silver | | 1000 | 1.20 | | 999 | 99.9 |
| Sodium | | | -152 | | -124 | |
| Strontium | | 500 | 7.90 | | 520 | 104.0 |
| Sulfur | | 500 | 43.8 | | 522 | 104.4 |
| Thallium | | 1000 | 0.600 | | 962 | 96.2 |
| Tin | | 500 | -3.00 | | 475 | 95.0 |
| Titanium | | 500 | 5.80 | | 502 | 100.4 |
| Tungsten | | 500 | -1.70 | | 460 | 92.0 |
| Vanadium | | 500 | -39.6 | | 449 | 89.8 |

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: SD112923M1.ICP  Date Analyzed: 11/29/23  Methods: EPA 200.7, SW846 6010D
QC Limits: 80 to 120 % Recovery  Run ID: MA55148  Units: ug/l

| Time: | | | 08:46 | | 08:51 | |
|---|---|---|---|---|---|---|
| Sample ID: | ICSA | ICSAB | ICSA1 | | ICSAB1 | |
| Metal | True | True | Results | % Rec | Results | % Rec |
| Zinc | | 1000 | 5.60 | | 946 | 94.6 |
| Zirconium | | 500 | -5.00 | | 461 | 92.2 |

(*) Outside of QC limits
(anr) Analyte not requested

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8113023W1.CSV Date Analyzed: 11/30/23 Methods: SW846 7470A
Analyst: LM Run ID: MA55150
Parameters: Hg

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 13:39 | MA55150-STD1 | 1 | | STDA |
| 13:41 | MA55150-STD2 | 1 | | STDB |
| 13:42 | MA55150-STD3 | 1 | | STDC |
| 13:44 | MA55150-STD4 | 1 | | STDD |
| 13:45 | MA55150-STD5 | 1 | | STDE |
| 13:47 | MA55150-STD6 | 1 | | STDF |
| 13:49 | MA55150-STD7 | 1 | | STDA |
| 13:52 | ZZZZZZ | 1 | | |
| 13:53 | MA55150-ICV1 | 1 | | |
| 13:54 | MA55150-ICB1 | 1 | | |
| 13:56 | MA55150-CCV1 | 1 | | |
| 13:57 | MA55150-CCB1 | 1 | | |
| 13:59 | MA55150-CRI1 | 1 | | |
| 14:01 | MP43432-MB1 | 1 | | |
| 14:02 | MP43432-LB1 | 1 | | |
| 14:03 | MP43432-B1 | 1 | | |
| 14:05 | MP43432-LS1 | 1 | | |
| 14:07 | MP43432-S1 | 1 | | |
| 14:08 | MP43432-S2 | 1 | | |
| 14:10 | FC11327-9L | 1 | | (sample used for QC only; not part of login JD77365) |
| 14:12 | ZZZZZZ | 1 | | |
| 14:13 | MA55150-CCV2 | 1 | | |
| 14:15 | MA55150-CCB2 | 1 | | |
| 14:16 | ZZZZZZ | 1 | | |
| 14:18 | ZZZZZZ | 1 | | |
| 14:19 | ZZZZZZ | 1 | | |
| 14:21 | ZZZZZZ | 1 | | |
| 14:22 | ZZZZZZ | 1 | | |
| 14:23 | ZZZZZZ | 1 | | |
| 14:25 | ZZZZZZ | 1 | | |
| 14:26 | ZZZZZZ | 1 | | |
| 14:28 | ZZZZZZ | 1 | | |
| 14:29 | MA55150-CCV3 | 1 | | |

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8113023W1.CSV  Date Analyzed: 11/30/23  Methods: SW846 7470A
Analyst: LM  Run ID: MA55150
Parameters: Hg

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 14:30 | MA55150-CCB3 | 1 | | |
| 14:32 | ZZZZZZ | 1 | | |
| 14:34 | ZZZZZZ | 1 | | |
| 14:35 | ZZZZZZ | 1 | | |
| 14:36 | ZZZZZZ | 1 | | |
| 14:38 | ZZZZZZ | 1 | | |
| 14:39 | ZZZZZZ | 1 | | |
| 14:41 | ZZZZZZ | 1 | | |
| 14:42 | ZZZZZZ | 1 | | |
| 14:43 | MA55150-CCV4 | 1 | | |
| 14:45 | MA55150-CCB4 | 1 | | |
| 14:47 | MP43433-MB1 | 1 | | |
| 14:48 | MP43433-LB1 | 1 | | |
| 14:49 | MP43433-B1 | 1 | | |
| 14:51 | MP43433-LS1 | 1 | | |
| 14:53 | MP43433-S1 | 1 | | |
| 14:54 | MP43433-S2 | 1 | | |
| 14:56 | JD77594-1A | 1 | | (sample used for QC only; not part of login JD77365) |
| 14:58 | ZZZZZZ | 1 | | |
| 14:59 | MA55150-CCV5 | 1 | | |
| 15:01 | MA55150-CCB5 | 1 | | |
| 15:30 | MP43434-MB1 | 1 | | |
| 15:31 | MP43434-LB1 | 1 | | |
| 15:33 | MP43434-B1 | 1 | | |
| 15:34 | MP43434-LS1 | 1 | | |
| 15:36 | MP43434-S1 | 1 | | |
| 15:37 | MP43434-S2 | 1 | | |
| 15:39 | MA55150-CCV6 | 1 | | |
| 15:41 | MA55150-CCB6 | 1 | | |
| 15:43 | FC11362-1L | 1 | | (sample used for QC only; not part of login JD77365) |
| 15:44 | ZZZZZZ | 1 | | |
| 15:46 | ZZZZZZ | 1 | | |
| 15:47 | ZZZZZZ | 1 | | |

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8113023W1.CSV Date Analyzed: 11/30/23 Methods: SW846 7470A
Analyst: LM Run ID: MA55150
Parameters: Hg

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 15:48 | ZZZZZZ | 1 | | |
| 15:50 | ZZZZZZ | 1 | | |
| 15:51 | ZZZZZZ | 1 | | |
| 15:53 | MA55150-CCV7 | 1 | | |
| 15:54 | MA55150-CCB7 | 1 | | |
| 15:56 | MP43435-MB1 | 1 | | |
| 15:57 | MP43435-B1 | 1 | | |
| 15:59 | MP43435-S1 | 1 | | |
| 16:00 | MP43435-S2 | 1 | | |
| 16:02 | JD77518-3 | 1 | | (sample used for QC only; not part of login JD77365) |
| 16:04 | ZZZZZZ | 1 | | |
| 16:06 | ZZZZZZ | 1 | | |
| 16:07 | MA55150-CCV8 | 1 | | |
| 16:09 | MA55150-CCB8 | 1 | | |
| 16:10 | ZZZZZZ | 1 | | |
| 16:12 | ZZZZZZ | 1 | | |
| 16:13 | ZZZZZZ | 1 | | |
| 16:15 | ZZZZZZ | 1 | | |
| 16:16 | ZZZZZZ | 1 | | |
| 16:18 | ZZZZZZ | 1 | | |
| 16:19 | ZZZZZZ | 1 | | |
| 16:20 | MA55150-CCV9 | 1 | | |
| 16:22 | MA55150-CCB9 | 1 | | |
| 16:24 | ZZZZZZ | 1 | | |
| 16:25 | ZZZZZZ | 1 | | |
| 16:26 | ZZZZZZ | 1 | | |
| 16:28 | ZZZZZZ | 1 | | |
| 16:29 | ZZZZZZ | 1 | | |
| 16:31 | ZZZZZZ | 1 | | |
| 16:32 | ZZZZZZ | 1 | | |
| 16:33 | MA55150-CCV10 | 1 | | |
| 16:35 | MA55150-CCB10 | 1 | | |
| 16:36 | ZZZZZZ | 1 | | |

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8113023W1.CSV Date Analyzed: 11/30/23 Methods: SW846 7470A
Analyst: LM Run ID: MA55150
Parameters: Hg

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 16:38 | ZZZZZZ | 1 | | |
| 16:39 | ZZZZZZ | 1 | | |
| 16:41 | ZZZZZZ | 1 | | |
| 16:42 | ZZZZZZ | 1 | | |
| 16:43 | ZZZZZZ | 1 | | |
| 16:45 | ZZZZZZ | 1 | | |
| 16:46 | MA55150-CCV11 | 1 | | |
| 16:48 | MA55150-CCB11 | 1 | | |
| 16:49 | MP43436-MB1 | 1 | | |
| 16:51 | MP43436-B1 | 1 | | |
| 16:52 | MP43436-S1 | 1 | | |
| 16:54 | MP43436-S2 | 1 | | |
| 16:56 | JD77521-2F | 1 | | (sample used for QC only; not part of login JD77365) |
| 16:57 | ZZZZZZ | 1 | | |
| 16:59 | ZZZZZZ | 1 | | |
| 17:00 | ZZZZZZ | 1 | | |
| 17:01 | MA55150-CCV12 | 1 | | |
| 17:03 | MA55150-CCB12 | 1 | | |
| 17:05 | ZZZZZZ | 1 | | |
| 17:06 | ZZZZZZ | 1 | | |
| 17:07 | ZZZZZZ | 1 | | |
| 17:09 | ZZZZZZ | 1 | | |
| 17:10 | ZZZZZZ | 1 | | |
| 17:12 | ZZZZZZ | 1 | | |
| 17:13 | ZZZZZZ | 1 | | |
| 17:14 | ZZZZZZ | 1 | | |
| 17:16 | MA55150-CCV13 | 1 | | |
| 17:17 | MA55150-CCB13 | 1 | | |
| 17:19 | MP43408-MB2 | 1 | | |
| 17:20 | MP43408-B2 | 1 | | |
| 17:22 | JD77365-16 | 1 | | |
| 17:23 | JD77365-18 | 1 | | |
| ----------> | Last reportable sample/prep for job JD77365 | | | |
| 17:25 | MA55150-CCV14 | 1 | | |

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8113023W1.CSV  Date Analyzed: 11/30/23  Methods: SW846 7470A
Analyst: LM  Run ID: MA55150
Parameters: Hg

| Time | Sample Description | Dilution Factor | PS Recov | Comments |
|---|---|---|---|---|
| 17:26 | MA55150-CCB14 | 1 | | |
| 17:31 | MA55150-CRI2 | 1 | | |
| 17:34 | MA55150-CCV15 | 1 | | |
| 17:35 | MA55150-CCB15 | 1 | | |

----------> Last reportable CCB for job JD77365
Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8113023W1.CSV  Date Analyzed: 11/30/23  Methods: SW846 7470A
Analyst: LM  Run ID: MA55150
Parameters: Hg

| Time | Sample Description | Element: Dilution | Hg | |
|---|---|---|---|---|
| 13:52 | ZZZZZZ | 1 | | |
| 13:53 | MA55150-ICV1 | 1 | X | |
| 13:54 | MA55150-ICB1 | 1 | X | |
| 13:56 | MA55150-CCV1 | 1 | X | |
| 13:57 | MA55150-CCB1 | 1 | X | |
| 13:59 | MA55150-CRI1 | 1 | X | |
| 14:01 | MP43432-MB1 | 1 | X | |
| 14:02 | MP43432-LB1 | 1 | | |
| 14:03 | MP43432-B1 | 1 | X | |
| 14:05 | MP43432-LS1 | 1 | X | |
| 14:07 | MP43432-S1 | 1 | X | |
| 14:08 | MP43432-S2 | 1 | X | |
| 14:10 | FC11327-9L | 1 | X | (a) |
| 14:12 | ZZZZZZ | 1 | | |
| 14:13 | MA55150-CCV2 | 1 | X | |
| 14:15 | MA55150-CCB2 | 1 | X | |
| 14:16 | ZZZZZZ | 1 | | |
| 14:18 | ZZZZZZ | 1 | | |
| 14:19 | ZZZZZZ | 1 | | |
| 14:21 | ZZZZZZ | 1 | | |
| 14:22 | ZZZZZZ | 1 | | |
| 14:23 | ZZZZZZ | 1 | | |
| 14:25 | ZZZZZZ | 1 | | |
| 14:26 | ZZZZZZ | 1 | | |
| 14:28 | ZZZZZZ | 1 | | |
| 14:29 | MA55150-CCV3 | 1 | X | |
| 14:30 | MA55150-CCB3 | 1 | X | |
| 14:32 | ZZZZZZ | 1 | | |
| 14:34 | ZZZZZZ | 1 | | |
| 14:35 | ZZZZZZ | 1 | | |
| 14:36 | ZZZZZZ | 1 | | |
| 14:38 | ZZZZZZ | 1 | | |
| 14:39 | ZZZZZZ | 1 | | |
| | | Element: | Hg | |

REPORTED ELEMENTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8113023W1.CSV  Date Analyzed: 11/30/23  Methods: SW846 7470A
Analyst: LM  Run ID: MA55150
Parameters: Hg

| Time | Sample Description | Element: Dilution | Hg | |
|---|---|---|---|---|
| 14:41 | ZZZZZZ | 1 | | |
| 14:42 | ZZZZZZ | 1 | | |
| 14:43 | MA55150-CCV4 | 1 | X | |
| 14:45 | MA55150-CCB4 | 1 | X | |
| 14:47 | MP43433-MB1 | 1 | X | |
| 14:48 | MP43433-LB1 | 1 | | |
| 14:49 | MP43433-B1 | 1 | X | |
| 14:51 | MP43433-LS1 | 1 | X | |
| 14:53 | MP43433-S1 | 1 | X | |
| 14:54 | MP43433-S2 | 1 | X | |
| 14:56 | JD77594-1A | 1 | X | (a) |
| 14:58 | ZZZZZZ | 1 | | |
| 14:59 | MA55150-CCV5 | 1 | X | |
| 15:01 | MA55150-CCB5 | 1 | X | |
| 15:30 | MP43434-MB1 | 1 | X | |
| 15:31 | MP43434-LB1 | 1 | | |
| 15:33 | MP43434-B1 | 1 | X | |
| 15:34 | MP43434-LS1 | 1 | X | |
| 15:36 | MP43434-S1 | 1 | X | |
| 15:37 | MP43434-S2 | 1 | X | |
| 15:39 | MA55150-CCV6 | 1 | X | |
| 15:41 | MA55150-CCB6 | 1 | X | |
| 15:43 | FC11362-1L | 1 | X | (a) |
| 15:44 | ZZZZZZ | 1 | | |
| 15:46 | ZZZZZZ | 1 | | |
| 15:47 | ZZZZZZ | 1 | | |
| 15:48 | ZZZZZZ | 1 | | |
| 15:50 | ZZZZZZ | 1 | | |
| 15:51 | ZZZZZZ | 1 | | |
| 15:53 | MA55150-CCV7 | 1 | X | |
| 15:54 | MA55150-CCB7 | 1 | X | |
| 15:56 | MP43435-MB1 | 1 | X | |
| 15:57 | MP43435-B1 | 1 | X | |
| | | Element: | Hg | |

REPORTED ELEMENTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8113023W1.CSV  Date Analyzed: 11/30/23  Methods: SW846 7470A
Analyst: LM  Run ID: MA55150
Parameters: Hg

| Time | Sample Description | Element: Dilution | Hg | |
|---|---|---|---|---|
| 15:59 | MP43435-S1 | 1 | X | |
| 16:00 | MP43435-S2 | 1 | X | |
| 16:02 | JD77518-3 | 1 | X | (a) |
| 16:04 | ZZZZZZ | 1 | | |
| 16:06 | ZZZZZZ | 1 | | |
| 16:07 | MA55150-CCV8 | 1 | X | |
| 16:09 | MA55150-CCB8 | 1 | X | |
| 16:10 | ZZZZZZ | 1 | | |
| 16:12 | ZZZZZZ | 1 | | |
| 16:13 | ZZZZZZ | 1 | | |
| 16:15 | ZZZZZZ | 1 | | |
| 16:16 | ZZZZZZ | 1 | | |
| 16:18 | ZZZZZZ | 1 | | |
| 16:19 | ZZZZZZ | 1 | | |
| 16:20 | MA55150-CCV9 | 1 | X | |
| 16:22 | MA55150-CCB9 | 1 | X | |
| 16:24 | ZZZZZZ | 1 | | |
| 16:25 | ZZZZZZ | 1 | | |
| 16:26 | ZZZZZZ | 1 | | |
| 16:28 | ZZZZZZ | 1 | | |
| 16:29 | ZZZZZZ | 1 | | |
| 16:31 | ZZZZZZ | 1 | | |
| 16:32 | ZZZZZZ | 1 | | |
| 16:33 | MA55150-CCV10 | 1 | X | |
| 16:35 | MA55150-CCB10 | 1 | X | |
| 16:36 | ZZZZZZ | 1 | | |
| 16:38 | ZZZZZZ | 1 | | |
| 16:39 | ZZZZZZ | 1 | | |
| 16:41 | ZZZZZZ | 1 | | |
| 16:42 | ZZZZZZ | 1 | | |
| 16:43 | ZZZZZZ | 1 | | |
| 16:45 | ZZZZZZ | 1 | | |
| 16:46 | MA55150-CCV11 | 1 | X | |
| | | Element: | Hg | |

REPORTED ELEMENTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8113023W1.CSV  Date Analyzed: 11/30/23  Methods: SW846 7470A
Analyst: LM  Run ID: MA55150
Parameters: Hg

| Time | Sample Description | Element: Dilution | Hg |
|---|---|---|---|
| 16:48 | MA55150-CCB11 | 1 | X |
| 16:49 | MP43436-MB1 | 1 | X |
| 16:51 | MP43436-B1 | 1 | X |
| 16:52 | MP43436-S1 | 1 | X |
| 16:54 | MP43436-S2 | 1 | X |
| 16:56 | JD77521-2F | 1 | X (a) |
| 16:57 | ZZZZZZ | 1 | |
| 16:59 | ZZZZZZ | 1 | |
| 17:00 | ZZZZZZ | 1 | |
| 17:01 | MA55150-CCV12 | 1 | X |
| 17:03 | MA55150-CCB12 | 1 | X |
| 17:05 | ZZZZZZ | 1 | |
| 17:06 | ZZZZZZ | 1 | |
| 17:07 | ZZZZZZ | 1 | |
| 17:09 | ZZZZZZ | 1 | |
| 17:10 | ZZZZZZ | 1 | |
| 17:12 | ZZZZZZ | 1 | |
| 17:13 | ZZZZZZ | 1 | |
| 17:14 | ZZZZZZ | 1 | |
| 17:16 | MA55150-CCV13 | 1 | X |
| 17:17 | MA55150-CCB13 | 1 | X |
| 17:19 | MP43408-MB2 | 1 | X |
| 17:20 | MP43408-B2 | 1 | X |
| 17:22 | JD77365-16 | 1 | X |
| 17:23 | JD77365-18 | 1 | X |
| 17:25 | MA55150-CCV14 | 1 | X |
| 17:26 | MA55150-CCB14 | 1 | X |
| 17:31 | MA55150-CRI2 | 1 | X |
| 17:34 | MA55150-CCV15 | 1 | X |
| 17:35 | MA55150-CCB15 | 1 | X |

(a) Sample used for QC only; not part of login JD77365.

| Element: | Hg |
|---|---|

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8113023W1.CSV  Date Analyzed: 11/30/23  Methods: SW846 7470A
QC Limits: result < RL  Run ID: MA55150  Units: ug/l

| Time: | | | 13:54 | | 13:57 | | 14:15 | | 14:30 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | | | ICB1 | | CCB1 | | CCB2 | | CCB3 | |
| Metal | RL | IDL | raw | final | raw | final | raw | final | raw | final |
| Mercury | 0.20 | .024 | -0.0306 | <0.20 | -0.0150 | <0.20 | -0.00800 | <0.20 | -0.0114 | <0.20 |

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8113023W1.CSV Date Analyzed: 11/30/23 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA55150 Units: ug/l

| Time: | | | 14:45 | | 15:01 | | 15:41 | | 15:54 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | | | CCB4 | | CCB5 | | CCB6 | | CCB7 | |
| Metal | RL | IDL | raw | final | raw | final | raw | final | raw | final |
| Mercury | 0.20 | .024 | -0.00600 | <0.20 | -0.0161 | <0.20 | -0.0132 | <0.20 | -0.0206 | <0.20 |

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8113023W1.CSV Date Analyzed: 11/30/23 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA55150 Units: ug/l

| Time: | | | 16:09 | | 16:22 | | 16:35 | | 16:48 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | | | CCB8 | | CCB9 | | CCB10 | | CCB11 | |
| Metal | RL | IDL | raw | final | raw | final | raw | final | raw | final |
| Mercury | 0.20 | .024 | -0.00580 | <0.20 | -0.00170 | <0.20 | -0.00400 | <0.20 | -0.00960 | <0.20 |

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8113023W1.CSV  Date Analyzed: 11/30/23  Methods: SW846 7470A
QC Limits: result < RL  Run ID: MA55150  Units: ug/l

| Time: | | | 17:03 | | 17:17 | | 17:26 | | 17:35 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | | | CCB12 | | CCB13 | | CCB14 | | CCB15 | |
| Metal | RL | IDL | raw | final | raw | final | raw | final | raw | final |
| Mercury | 0.20 | .024 | -0.00760 | <0.20 | -0.00110 | <0.20 | -0.00420 | <0.20 | -0.00740 | <0.20 |

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8113023W1.CSV Date Analyzed: 11/30/23 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA55150 Units: ug/l

| Time: | | 13:53 | | | 13:56 | | | 14:13 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | ICV | ICV1 | | CCV | CCV1 | | CCV | CCV2 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Mercury | 3 | 3.22 | 107.3 | 2.5 | 2.43 | 97.2 | 2.5 | 2.38 | 95.2 |

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8113023W1.CSV  Date Analyzed: 11/30/23  Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery  Run ID: MA55150  Units: ug/l

| Time: | | 14:29 | | | 14:43 | | | 14:59 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | CCV | CCV3 | | CCV | CCV4 | | CCV | CCV5 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Mercury | 2.5 | 2.44 | 97.6 | 2.5 | 2.44 | 97.6 | 2.5 | 2.37 | 94.8 |

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8113023W1.CSV  Date Analyzed: 11/30/23  Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery  Run ID: MA55150  Units: ug/l

| Time: | | 15:39 | | | 15:53 | | | 16:07 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | CCV | CCV6 | | CCV | CCV7 | | CCV | CCV8 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Mercury | 2.5 | 2.45 | 98.0 | 2.5 | 2.49 | 99.6 | 2.5 | 2.51 | 100.4 |

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8113023W1.CSV Date Analyzed: 11/30/23 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA55150 Units: ug/l

| Time: | | 16:20 | | | 16:33 | | | 16:46 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | CCV | CCV9 | | CCV | CCV10 | | CCV | CCV11 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Mercury | 2.5 | 2.45 | 98.0 | 2.5 | 2.39 | 95.6 | 2.5 | 2.42 | 96.8 |

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8113023W1.CSV Date Analyzed: 11/30/23 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA55150 Units: ug/l

| Time: | | 17:01 | | | 17:16 | | | 17:25 | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | CCV | CCV12 | | CCV | CCV13 | | CCV | CCV14 | |
| Metal | True | Results | % Rec | True | Results | % Rec | True | Results | % Rec |
| Mercury | 2.5 | 2.39 | 95.6 | 2.5 | 2.40 | 96.0 | 2.5 | 2.39 | 95.6 |

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8113023W1.CSV  Date Analyzed: 11/30/23  Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery  Run ID: MA55150  Units: ug/l

| | | | |
|---|---|---|---|
| Time: | | 17:34 | |
| Sample ID: | CCV | CCV15 | |
| Metal | True | Results | % Rec |
| Mercury | 2.5 | 2.49 | 99.6 |

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

File ID: H8113023W1.CSV  Date Analyzed: 11/30/23  Methods: SW846 7470A
QC Limits: 70 to 130 % Recovery  Run ID: MA55150  Units: ug/l

| Time: | | | 13:59 | | 17:31 | |
|---|---|---|---|---|---|---|
| Sample ID: | CRI | CRIA | CRI1 | | CRI2 | |
| Metal | True | True | Results | % Rec | Results | % Rec |
| Mercury | 0.20 | | 0.163 | 81.5 | 0.206 | 103.0 |

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43317
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 11/22/23

| Metal | RL | IDL | MDL | MB raw | final |
|---|---|---|---|---|---|
| Aluminum | 200 | 9.2 | 150 | 12.2 | <200 |
| Antimony | 6.0 | 2.8 | 4.7 | 0.50 | <6.0 |
| Arsenic | 3.0 | 2.6 | 2.8 | -0.10 | <3.0 |
| Barium | 200 | .2 | 13 | -0.20 | <200 |
| Beryllium | 1.0 | .2 | .5 | -0.20 | <1.0 |
| Bismuth | 20 | 2.5 | 8.6 | | |
| Boron | 100 | 1.8 | 10 | | |
| Cadmium | 3.0 | .4 | 1 | -0.10 | <3.0 |
| Calcium | 5000 | 13 | 99 | -0.50 | <5000 |
| Cerium | 100 | | | | |
| Chromium | 10 | .7 | 2 | -0.10 | <10 |
| Cobalt | 50 | .6 | 2.6 | -0.60 | <50 |
| Copper | 10 | .7 | 5.9 | 0.80 | <10 |
| Iron | 100 | 3.3 | 32 | -1.2 | <100 |
| Lead | 3.0 | 2 | 1.8 | -1.4 | <3.0 |
| Lithium | 50 | 1.5 | 7.3 | | |
| Magnesium | 5000 | 25 | 140 | -34 | <5000 |
| Manganese | 15 | .1 | 1.4 | 0.0 | <15 |
| Molybdenum | 20 | .6 | 3.6 | | |
| Nickel | 10 | .8 | 1.7 | 0.0 | <10 |
| Phosphorus | 50 | 7 | 18 | | |
| Potassium | 10000 | 35 | 200 | -8.2 | <10000 |
| Selenium | 10 | 3.6 | 4.9 | 2.8 | <10 |
| Silicon | 200 | 2.2 | 32 | | |
| Silver | 10 | .6 | 6.1 | 0.20 | <10 |
| Sodium | 10000 | 14 | 570 | -15 | <10000 |
| Strontium | 10 | .1 | 2.7 | | |
| Sulfur | 50 | 3.7 | 45 | | |
| Thallium | 10 | 5.2 | 1.8 | -0.40 | <10 |
| Tin | 10 | 1.4 | 3.7 | | |
| Titanium | 10 | .8 | 2.5 | | |
| Tungsten | 50 | 1.3 | 40 | | |
| Vanadium | 50 | .5 | 1.8 | -0.20 | <50 |

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43317 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 11/22/23

| Metal | RL | IDL | MDL | MB raw | final |
|---|---|---|---|---|---|
| Zinc | 20 | .3 | 6.9 | 3.5 | <20 |
| Zirconium | 10 | .5 | 4.1 | | |

Associated samples MP43317: JD77365-16, JD77365-17, JD77365-18, JD77365-19, JD77365-16F, JD77365-17F, JD77365-18F, JD77365-19F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43317
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 11/22/23

| Metal | JD77367-1 Original | MS | Spikelot MPSPK2 | % Rec | QC Limits |
|---|---|---|---|---|---|
| Aluminum | 22.5 | 24200 | 25000 | 96.7 | 75-125 |
| Antimony | 0.0 | 1910 | 2000 | 95.5 | 75-125 |
| Arsenic | 6.0 | 1910 | 2000 | 95.2 | 75-125 |
| Barium | 66.0 | 1950 | 2000 | 94.2 | 75-125 |
| Beryllium | 1.0 | 1890 | 2000 | 94.5 | 75-125 |
| Bismuth | | | | | |
| Boron | | | | | |
| Cadmium | 0.0 | 1920 | 2000 | 96.0 | 75-125 |
| Calcium | 188000 | 207000 | 25000 | 76.0 | 75-125 |
| Cerium | | | | | |
| Chromium | 0.0 | 1930 | 2000 | 96.5 | 75-125 |
| Cobalt | 0.0 | 1890 | 2000 | 94.5 | 75-125 |
| Copper | 3.8 | 1920 | 2000 | 95.8 | 75-125 |
| Iron | 901 | 24000 | 25000 | 92.4 | 75-125 |
| Lead | 0.0 | 1900 | 2000 | 95.0 | 75-125 |
| Lithium | | | | | |
| Magnesium | 18100 | 40600 | 25000 | 90.0 | 75-125 |
| Manganese | 921 | 2830 | 2000 | 95.5 | 75-125 |
| Molybdenum | | | | | |
| Nickel | 50.1 | 1970 | 2000 | 96.0 | 75-125 |
| Phosphorus | | | | | |
| Potassium | 16100 | 39500 | 25000 | 93.6 | 75-125 |
| Selenium | 5.1 | 1920 | 2000 | 95.7 | 75-125 |
| Silicon | | | | | |
| Silver | 1.0 | 233 | 250 | 92.8 | 75-125 |
| Sodium | 53800 | 76100 | 25000 | 89.2 | 75-125 |
| Strontium | | | | | |
| Thallium | 0.0 | 1920 | 2000 | 96.0 | 75-125 |
| Tin | | | | | |
| Titanium | | | | | |
| Tungsten | | | | | |
| Vanadium | 0.70 | 1940 | 2000 | 97.0 | 75-125 |
| Zinc | 75.3 | 1960 | 2000 | 94.2 | 75-125 |

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43317 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 11/22/23

| Metal | JD77367-1 Original MS | Spikelot MPSPK2 | % Rec | QC Limits |
|---|---|---|---|---|
| Zirconium | | | | |

Associated samples MP43317: JD77365-16, JD77365-17, JD77365-18, JD77365-19, JD77365-16F, JD77365-17F, JD77365-18F, JD77365-19F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43317
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 11/22/23

| Metal | JD77367-1 Original | MSD | Spikelot MPSPK2 | % Rec | MSD RPD | QC Limit |
|---|---|---|---|---|---|---|
| Aluminum | 22.5 | 25300 | 25000 | 101.1 | 4.4 | 20 |
| Antimony | 0.0 | 1990 | 2000 | 99.5 | 4.1 | 20 |
| Arsenic | 6.0 | 2000 | 2000 | 99.7 | 4.6 | 20 |
| Barium | 66.0 | 2050 | 2000 | 99.2 | 5.0 | 20 |
| Beryllium | 1.0 | 1990 | 2000 | 99.5 | 5.2 | 20 |
| Bismuth | | | | | | |
| Boron | | | | | | |
| Cadmium | 0.0 | 2010 | 2000 | 100.5 | 4.6 | 20 |
| Calcium | 188000 | 223000 | 25000 | 140.0(a) | 7.4 | 20 |
| Cerium | | | | | | |
| Chromium | 0.0 | 2020 | 2000 | 101.0 | 4.6 | 20 |
| Cobalt | 0.0 | 1990 | 2000 | 99.5 | 5.2 | 20 |
| Copper | 3.8 | 2020 | 2000 | 100.8 | 5.1 | 20 |
| Iron | 901 | 25000 | 25000 | 96.4 | 4.1 | 20 |
| Lead | 0.0 | 1990 | 2000 | 99.5 | 4.6 | 20 |
| Lithium | | | | | | |
| Magnesium | 18100 | 42700 | 25000 | 98.4 | 5.0 | 20 |
| Manganese | 921 | 2990 | 2000 | 103.5 | 5.5 | 20 |
| Molybdenum | | | | | | |
| Nickel | 50.1 | 2070 | 2000 | 101.0 | 5.0 | 20 |
| Phosphorus | | | | | | |
| Potassium | 16100 | 41600 | 25000 | 102.0 | 5.2 | 20 |
| Selenium | 5.1 | 2010 | 2000 | 100.2 | 4.6 | 20 |
| Silicon | | | | | | |
| Silver | 1.0 | 243 | 250 | 96.8 | 4.2 | 20 |
| Sodium | 53800 | 80500 | 25000 | 106.8 | 5.6 | 20 |
| Strontium | | | | | | |
| Thallium | 0.0 | 2020 | 2000 | 101.0 | 5.1 | 20 |
| Tin | | | | | | |
| Titanium | | | | | | |
| Tungsten | | | | | | |
| Vanadium | 0.70 | 2040 | 2000 | 102.0 | 5.0 | 20 |
| Zinc | 75.3 | 2050 | 2000 | 98.7 | 4.5 | 20 |

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43317 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 11/22/23

| Metal | JD77367-1 Original MSD | Spikelot MPSPK2 | % Rec | MSD RPD | QC Limit |
|---|---|---|---|---|---|
| Zirconium | | | | | |

Associated samples MP43317: JD77365-16, JD77365-17, JD77365-18, JD77365-19, JD77365-16F, JD77365-17F, JD77365-18F, JD77365-19F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43317
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 11/22/23

| Metal | BSP Result | Spikelot MPSPK2 | % Rec | QC Limits |
|---|---|---|---|---|
| Aluminum | 24700 | 25000 | 98.8 | 80-120 |
| Antimony | 1920 | 2000 | 96.0 | 80-120 |
| Arsenic | 1900 | 2000 | 95.0 | 80-120 |
| Barium | 1930 | 2000 | 96.5 | 80-120 |
| Beryllium | 1970 | 2000 | 98.5 | 80-120 |
| Bismuth | | | | |
| Boron | | | | |
| Cadmium | 1950 | 2000 | 97.5 | 80-120 |
| Calcium | 24800 | 25000 | 99.2 | 80-120 |
| Cerium | | | | |
| Chromium | 2020 | 2000 | 101.0 | 80-120 |
| Cobalt | 1980 | 2000 | 99.0 | 80-120 |
| Copper | 1960 | 2000 | 98.0 | 80-120 |
| Iron | 23900 | 25000 | 95.6 | 80-120 |
| Lead | 1990 | 2000 | 99.5 | 80-120 |
| Lithium | | | | |
| Magnesium | 24200 | 25000 | 96.8 | 80-120 |
| Manganese | 2070 | 2000 | 103.5 | 80-120 |
| Molybdenum | | | | |
| Nickel | 2020 | 2000 | 101.0 | 80-120 |
| Phosphorus | | | | |
| Potassium | 23900 | 25000 | 95.6 | 80-120 |
| Selenium | 1940 | 2000 | 97.0 | 80-120 |
| Silicon | | | | |
| Silver | 234 | 250 | 93.6 | 80-120 |
| Sodium | 23700 | 25000 | 94.8 | 80-120 |
| Strontium | | | | |
| Sulfur | | | | |
| Thallium | 2000 | 2000 | 100.0 | 80-120 |
| Tin | | | | |
| Titanium | | | | |
| Tungsten | | | | |
| Vanadium | 2020 | 2000 | 101.0 | 80-120 |

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43317
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 11/22/23

| Metal | BSP Result | Spikelot MPSPK2 | % Rec | QC Limits |
|---|---|---|---|---|
| Zinc | 2000 | 2000 | 100.0 | 80-120 |
| Zirconium | | | | |

Associated samples MP43317: JD77365-16, JD77365-17, JD77365-18, JD77365-19, JD77365-16F, JD77365-17F, JD77365-18F, JD77365-19F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43317
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 11/22/23

| Metal | JD77367-1 Original | SDL 1:5 | %DIF | QC Limits |
|---|---|---|---|---|
| Aluminum | 22.5 | 477 | 2018.2(a | 0-10 |
| Antimony | 0.00 | 0.00 | NC | 0-10 |
| Arsenic | 6.00 | 0.00 | 100.0(a) | 0-10 |
| Barium | 66.0 | 69.0 | 4.5 | 0-10 |
| Beryllium | 1.00 | 0.00 | 100.0(a) | 0-10 |
| Bismuth | | | | |
| Boron | | | | |
| Cadmium | 0.00 | 0.00 | NC | 0-10 |
| Calcium | 188000 | 198000 | 5.0 | 0-10 |
| Cerium | | | | |
| Chromium | 0.00 | 0.00 | NC | 0-10 |
| Cobalt | 0.00 | 0.00 | NC | 0-10 |
| Copper | 3.80 | 7.90 | 107.9(a) | 0-10 |
| Iron | 901 | 956 | 6.0 | 0-10 |
| Lead | 0.00 | 0.00 | NC | 0-10 |
| Lithium | | | | |
| Magnesium | 18100 | 19100 | 5.4 | 0-10 |
| Manganese | 921 | 957 | 3.9 | 0-10 |
| Molybdenum | | | | |
| Nickel | 50.1 | 51.7 | 3.2 | 0-10 |
| Phosphorus | | | | |
| Potassium | 16100 | 16300 | 1.8 | 0-10 |
| Selenium | 5.10 | 0.00 | 100.0(a) | 0-10 |
| Silicon | | | | |
| Silver | 1.00 | 0.00 | 100.0(a) | 0-10 |
| Sodium | 53800 | 55000 | 2.3 | 0-10 |
| Strontium | | | | |
| Sulfur | | | | |
| Thallium | 0.00 | 0.00 | NC | 0-10 |
| Tin | | | | |
| Titanium | | | | |
| Tungsten | | | | |
| Vanadium | 0.700 | 0.00 | 100.0(a) | 0-10 |

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43317
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 11/22/23

| Metal | JD77367-1 Original | SDL 1:5 | %DIF | QC Limits |
|---|---|---|---|---|
| Zinc | 75.3 | 90.5 | 20.2*(b) | 0-10 |
| Zirconium | | | | |

Associated samples MP43317: JD77365-16, JD77365-17, JD77365-18, JD77365-19, JD77365-16F, JD77365-17F, JD77365-18F, JD77365-19F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
(b) Serial dilution indicates possible matrix interference.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43322 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 11/27/23

| Metal | RL | IDL | MDL | MB raw | final |
|---|---|---|---|---|---|
| Aluminum | 50 | .92 | 8.1 | 5.2 | <50 |
| Antimony | 2.0 | .28 | .41 | 0.040 | <2.0 |
| Arsenic | 2.0 | .26 | .28 | -0.050 | <2.0 |
| Barium | 20 | .02 | 1.9 | 0.22 | <20 |
| Beryllium | 0.20 | .02 | .08 | 0.010 | <0.20 |
| Bismuth | 2.0 | .25 | .52 | | |
| Boron | 10 | .18 | 3.7 | | |
| Cadmium | 0.50 | .04 | .07 | 0.010 | <0.50 |
| Calcium | 500 | 1.3 | 21 | 30.2 | <500 |
| Chromium | 1.0 | .07 | .37 | 0.10 | <1.0 |
| Cobalt | 5.0 | .06 | .28 | -0.010 | <5.0 |
| Copper | 2.5 | .07 | .84 | 0.86 | <2.5 |
| Iron | 50 | .33 | 19 | 14.5 | <50 |
| Lead | 2.0 | .2 | .41 | 0.10 | <2.0 |
| Lithium | 5.0 | .15 | .92 | | |
| Magnesium | 500 | 2.5 | 14 | 4.3 | <500 |
| Manganese | 1.5 | .01 | .41 | 0.48 | <1.5 |
| Molybdenum | 2.0 | .06 | .32 | | |
| Nickel | 4.0 | .08 | .35 | 0.030 | <4.0 |
| Phosphorus | 20 | .7 | 3.3 | | |
| Potassium | 1000 | 3.5 | 32 | 4.8 | <1000 |
| Selenium | 2.0 | .36 | .65 | -0.10 | <2.0 |
| Silicon | 20 | .22 | 11 | | |
| Silver | 0.50 | .06 | .17 | 0.050 | <0.50 |
| Sodium | 1000 | 1.4 | 78 | 14.3 | <1000 |
| Strontium | 5.0 | .01 | .18 | | |
| Sulfur | 10 | .37 | 3.9 | | |
| Thallium | 1.0 | .52 | .58 | -0.14 | <1.0 |
| Tin | 20 | .14 | 3.8 | | |
| Titanium | 1.0 | .08 | .34 | | |
| Tungsten | 5.0 | .13 | 1.8 | | |
| Vanadium | 5.0 | .05 | .19 | 0.050 | <5.0 |
| Zinc | 5.0 | .03 | 2.3 | 1.7 | <5.0 |

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43322 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 11/27/23

| Metal | RL | IDL | MDL | MB raw | final |
|---|---|---|---|---|---|
| Zirconium | 2.0 | .05 | .54 | | |

Associated samples MP43322: JD77365-1, JD77365-2, JD77365-3, JD77365-4, JD77365-5, JD77365-6, JD77365-7, JD77365-8, JD77365-9, JD77365-10, JD77365-11, JD77365-12, JD77365-13, JD77365-14, JD77365-15

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43322
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 11/27/23

| Metal | JD77365-2 Original | MS | Spikelot MPSPK2 | % Rec | QC Limits |
|---|---|---|---|---|---|
| Aluminum | 5670 | 12000 | 2730 | 231.7N(a | 75-125 |
| Antimony | 0.77 | 111 | 219 | 50.4N(a) | 75-125 |
| Arsenic | 2.2 | 196 | 219 | 88.7 | 75-125 |
| Barium | 33.5 | 237 | 219 | 93.1 | 75-125 |
| Beryllium | 0.52 | 186 | 219 | 84.9 | 75-125 |
| Bismuth | | | | | |
| Boron | | | | | |
| Cadmium | 0.12 | 183 | 219 | 83.7 | 75-125 |
| Calcium | 1380 | 4320 | 2730 | 107.6 | 75-125 |
| Chromium | 11.9 | 207 | 219 | 89.3 | 75-125 |
| Cobalt | 4.8 | 201 | 219 | 89.8 | 75-125 |
| Copper | 9.7 | 196 | 219 | 85.2 | 75-125 |
| Iron | 9570 | 12700 | 2730 | 114.6 | 75-125 |
| Lead | 9.5 | 210 | 219 | 91.7 | 75-125 |
| Lithium | | | | | |
| Magnesium | 2050 | 5080 | 2730 | 110.9 | 75-125 |
| Manganese | 259 | 500 | 219 | 110.3 | 75-125 |
| Molybdenum | | | | | |
| Nickel | 11.1 | 205 | 219 | 88.7 | 75-125 |
| Phosphorus | | | | | |
| Potassium | 1430 | 5110 | 2730 | 134.7N(a | 75-125 |
| Selenium | 0.0 | 179 | 219 | 81.9 | 75-125 |
| Silicon | | | | | |
| Silver | 0.40 | 24.9 | 27.3 | 89.7 | 75-125 |
| Sodium | 114 | 2670 | 2730 | 93.5 | 75-125 |
| Strontium | | | | | |
| Sulfur | | | | | |
| Thallium | 0.0 | 199 | 219 | 91.0 | 75-125 |
| Tin | | | | | |
| Titanium | | | | | |
| Tungsten | | | | | |
| Vanadium | 16.1 | 206 | 219 | 86.9 | 75-125 |
| Zinc | 33.9 | 224 | 219 | 87.0 | 75-125 |

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43322 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 11/27/23

| Metal | JD77365-2 Original MS | Spikelot MPSPK2 | % Rec | QC Limits |
|---|---|---|---|---|
| Zirconium | | | | |

Associated samples MP43322: JD77365-1, JD77365-2, JD77365-3, JD77365-4, JD77365-5, JD77365-6, JD77365-7, JD77365-8, JD77365-9, JD77365-10, JD77365-11, JD77365-12, JD77365-13, JD77365-14, JD77365-15

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43322
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 11/27/23

| Metal | JD77365-2 Original | MSD | Spikelot MPSPK2 | % Rec | MSD RPD | QC Limit |
|---|---|---|---|---|---|---|
| Aluminum | 5670 | 11900 | 2730 | 228.0N(a | 0.8 | 20 |
| Antimony | 0.77 | 111 | 219 | 50.4N(a) | 0.0 | 20 |
| Arsenic | 2.2 | 198 | 219 | 89.6 | 1.0 | 20 |
| Barium | 33.5 | 231 | 219 | 90.4 | 2.6 | 20 |
| Beryllium | 0.52 | 186 | 219 | 84.9 | 0.0 | 20 |
| Bismuth | | | | | | |
| Boron | | | | | | |
| Cadmium | 0.12 | 185 | 219 | 84.6 | 1.1 | 20 |
| Calcium | 1380 | 4340 | 2730 | 108.3 | 0.5 | 20 |
| Chromium | 11.9 | 208 | 219 | 89.7 | 0.5 | 20 |
| Cobalt | 4.8 | 204 | 219 | 91.1 | 1.5 | 20 |
| Copper | 9.7 | 197 | 219 | 85.7 | 0.5 | 20 |
| Iron | 9570 | 12700 | 2730 | 114.6 | 0.0 | 20 |
| Lead | 9.5 | 212 | 219 | 92.6 | 0.9 | 20 |
| Lithium | | | | | | |
| Magnesium | 2050 | 5110 | 2730 | 112.0 | 0.6 | 20 |
| Manganese | 259 | 458 | 219 | 91.0 | 8.8 | 20 |
| Molybdenum | | | | | | |
| Nickel | 11.1 | 207 | 219 | 89.6 | 1.0 | 20 |
| Phosphorus | | | | | | |
| Potassium | 1430 | 5130 | 2730 | 135.4N(a | 0.4 | 20 |
| Selenium | 0.0 | 182 | 219 | 83.3 | 1.7 | 20 |
| Silicon | | | | | | |
| Silver | 0.40 | 24.9 | 27.3 | 89.7 | 0.0 | 20 |
| Sodium | 114 | 2670 | 2730 | 93.5 | 0.0 | 20 |
| Strontium | | | | | | |
| Sulfur | | | | | | |
| Thallium | 0.0 | 201 | 219 | 92.0 | 1.0 | 20 |
| Tin | | | | | | |
| Titanium | | | | | | |
| Tungsten | | | | | | |
| Vanadium | 16.1 | 207 | 219 | 87.3 | 0.5 | 20 |
| Zinc | 33.9 | 228 | 219 | 88.8 | 1.8 | 20 |

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43322 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 11/27/23

| Metal | JD77365-2 Original MSD | Spikelot MPSPK2 | % Rec | MSD RPD | QC Limit |
|---|---|---|---|---|---|
| Zirconium | | | | | |

Associated samples MP43322: JD77365-1, JD77365-2, JD77365-3, JD77365-4, JD77365-5, JD77365-6, JD77365-7, JD77365-8, JD77365-9, JD77365-10, JD77365-11, JD77365-12, JD77365-13, JD77365-14, JD77365-15

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43322
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 11/27/23

| Metal | BSP Result | Spikelot MPSPK2 | % Rec | QC Limits |
|---|---|---|---|---|
| Aluminum | 2390 | 2500 | 95.6 | 80-120 |
| Antimony | 188 | 200 | 94.0 | 80-120 |
| Arsenic | 189 | 200 | 94.5 | 80-120 |
| Barium | 180 | 200 | 90.0 | 80-120 |
| Beryllium | 180 | 200 | 90.0 | 80-120 |
| Bismuth | | | | |
| Boron | | | | |
| Cadmium | 176 | 200 | 88.0 | 80-120 |
| Calcium | 2520 | 2500 | 100.8 | 80-120 |
| Chromium | 189 | 200 | 94.5 | 80-120 |
| Cobalt | 187 | 200 | 93.5 | 80-120 |
| Copper | 179 | 200 | 89.5 | 80-120 |
| Iron | 2370 | 2500 | 94.8 | 80-120 |
| Lead | 189 | 200 | 94.5 | 80-120 |
| Lithium | | | | |
| Magnesium | 2420 | 2500 | 96.8 | 80-120 |
| Manganese | 191 | 200 | 95.5 | 80-120 |
| Molybdenum | | | | |
| Nickel | 184 | 200 | 92.0 | 80-120 |
| Phosphorus | | | | |
| Potassium | 2440 | 2500 | 97.6 | 80-120 |
| Selenium | 174 | 200 | 87.0 | 80-120 |
| Silicon | | | | |
| Silver | 23.5 | 25 | 94.0 | 80-120 |
| Sodium | 2400 | 2500 | 96.0 | 80-120 |
| Strontium | | | | |
| Sulfur | | | | |
| Thallium | 188 | 200 | 94.0 | 80-120 |
| Tin | | | | |
| Titanium | | | | |
| Tungsten | | | | |
| Vanadium | 185 | 200 | 92.5 | 80-120 |
| Zinc | 187 | 200 | 93.5 | 80-120 |

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43322
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 11/27/23

| Metal | BSP Result | Spikelot MPSPK2 | % Rec | QC Limits |
|---|---|---|---|---|
| Zirconium | | | | |

Associated samples MP43322: JD77365-1, JD77365-2, JD77365-3, JD77365-4, JD77365-5, JD77365-6, JD77365-7, JD77365-8, JD77365-9, JD77365-10, JD77365-11, JD77365-12, JD77365-13, JD77365-14, JD77365-15

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43322
Matrix Type: SOLID

Methods: SW846 6010D
Units: ug/l

Prep Date: 11/27/23

| Metal | JD77365-2 Original | SDL 1:5 | %DIF | QC Limits |
|---|---|---|---|---|
| Aluminum | 52400 | 49400 | 5.7 | 0-10 |
| Antimony | 7.10 | 0.00 | 100.0(a) | 0-10 |
| Arsenic | 20.6 | 14.5 | 29.6 (a) | 0-10 |
| Barium | 310 | 309 | 0.1 | 0-10 |
| Beryllium | 4.80 | 4.20 | 12.5 (a) | 0-10 |
| Bismuth | | | | |
| Boron | | | | |
| Cadmium | 1.10 | 0.00 | 100.0(a) | 0-10 |
| Calcium | 12700 | 12700 | 0.1 | 0-10 |
| Chromium | 110 | 109 | 1.4 | 0-10 |
| Cobalt | 43.9 | 43.3 | 1.4 | 0-10 |
| Copper | 89.3 | 94.5 | 5.8 | 0-10 |
| Iron | 88500 | 89200 | 0.9 | 0-10 |
| Lead | 88.0 | 79.6 | 9.5 | 0-10 |
| Lithium | | | | |
| Magnesium | 18900 | 19100 | 1.0 | 0-10 |
| Manganese | 2400 | 2400 | 0.0 | 0-10 |
| Molybdenum | | | | |
| Nickel | 103 | 104 | 1.6 | 0-10 |
| Phosphorus | | | | |
| Potassium | 13200 | 13000 | 1.1 | 0-10 |
| Selenium | 0.00 | 0.00 | NC | 0-10 |
| Silicon | | | | |
| Silver | 3.70 | 6.40 | 73.0 (a) | 0-10 |
| Sodium | 1050 | 1010 | 3.9 | 0-10 |
| Strontium | | | | |
| Sulfur | | | | |
| Thallium | 0.00 | 0.00 | NC | 0-10 |
| Tin | | | | |
| Titanium | | | | |
| Tungsten | | | | |
| Vanadium | 149 | 147 | 1.3 | 0-10 |
| Zinc | 313 | 326 | 4.1 | 0-10 |

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43322 Methods: SW846 6010D
Matrix Type: SOLID Units: ug/l

Prep Date: 11/27/23

| | JD77365-2 | | QC |
|---|---|---|---|
| Metal | Original SDL 1:5 | %DIF | Limits |

Zirconium

Associated samples MP43322: JD77365-1, JD77365-2, JD77365-3, JD77365-4, JD77365-5, JD77365-6, JD77365-7, JD77365-8, JD77365-9, JD77365-10, JD77365-11, JD77365-12, JD77365-13, JD77365-14, JD77365-15

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

POST DIGESTATE SPIKE SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43322 Methods: SW846 6010D
Matrix Type: SOLID Units: ug/l

Prep Date: 11/27/23

| Metal | Sample ml | Final ml | JD77365-2 Raw | Corr.** | PS ug/l | Spike ml | Spike ug/ml | Spike ug/l | % Rec | QC Limits |
|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | | | | | | | | | | |
| Antimony | 19.25 | 20 | 7.1 | 6.83375 | 1848 | 0.2 | 200 | 2000 | 92.1 | 80-120 |
| Arsenic | | | | | | | | | | |
| Barium | | | | | | | | | | |
| Beryllium | | | | | | | | | | |
| Bismuth | | | | | | | | | | |
| Boron | | | | | | | | | | |
| Cadmium | | | | | | | | | | |
| Calcium | | | | | | | | | | |
| Chromium | | | | | | | | | | |
| Cobalt | | | | | | | | | | |
| Copper | | | | | | | | | | |
| Iron | | | | | | | | | | |
| Lead | | | | | | | | | | |
| Lithium | | | | | | | | | | |
| Magnesium | | | | | | | | | | |
| Manganese | | | | | | | | | | |
| Molybdenum | | | | | | | | | | |
| Nickel | | | | | | | | | | |
| Phosphorus | | | | | | | | | | |
| Potassium | 19.25 | 20 | 13180 | 12685.75 | 36130 | 0.1 | 5000 | 25000 | 93.8 | 80-120 |
| Selenium | | | | | | | | | | |
| Silicon | | | | | | | | | | |
| Silver | | | | | | | | | | |
| Sodium | | | | | | | | | | |
| Strontium | | | | | | | | | | |
| Sulfur | | | | | | | | | | |
| Thallium | | | | | | | | | | |
| Tin | | | | | | | | | | |
| Titanium | | | | | | | | | | |
| Tungsten | | | | | | | | | | |
| Vanadium | | | | | | | | | | |
| Zinc | | | | | | | | | | |

POST DIGESTATE SPIKE SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43322 Methods: SW846 6010D
Matrix Type: SOLID Units: ug/l

Prep Date: 11/27/23

| Metal | Sample ml | Final ml | JD77365-2 Raw | Corr.** | PS ug/l | Spike ml | Spike ug/ml | Spike ug/l | % Rec | QC Limits |
|---|---|---|---|---|---|---|---|---|---|---|
| Zirconium | | | | | | | | | | |

Associated samples MP43322: JD77365-1, JD77365-2, JD77365-3, JD77365-4, JD77365-5, JD77365-6, JD77365-7, JD77365-8, JD77365-9, JD77365-10, JD77365-11, JD77365-12, JD77365-13, JD77365-14, JD77365-15

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43401 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 11/28/23

| Metal | RL | IDL | MDL | MB raw | final |
|---|---|---|---|---|---|
| Mercury | 0.033 | .0057 | .015 | 0.011 | <0.033 |

Associated samples MP43401: JD77365-1, JD77365-2, JD77365-3, JD77365-4, JD77365-5, JD77365-6, JD77365-7, JD77365-8, JD77365-9, JD77365-10, JD77365-11, JD77365-12, JD77365-13, JD77365-14, JD77365-15

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43401 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 11/28/23

| Metal | JD77365-1 Original | MS | Spikelot HGPWS1 | % Rec | QC Limits |
|---|---|---|---|---|---|
| Mercury | 0.24 | 0.59 | 0.275 | 127.1N | 80-120 |

Associated samples MP43401: JD77365-1, JD77365-2, JD77365-3, JD77365-4, JD77365-5, JD77365-6, JD77365-7, JD77365-8, JD77365-9, JD77365-10, JD77365-11, JD77365-12, JD77365-13, JD77365-14, JD77365-15

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43401 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 11/28/23

| Metal | JD77365-1 Original | MSD | Spikelot HGPWS1 | % Rec | MSD RPD | QC Limit |
|---|---|---|---|---|---|---|
| Mercury | 0.24 | 0.58 | 0.327 | 103.8 | 1.7 | 20 |

Associated samples MP43401: JD77365-1, JD77365-2, JD77365-3, JD77365-4, JD77365-5, JD77365-6, JD77365-7, JD77365-8, JD77365-9, JD77365-10, JD77365-11, JD77365-12, JD77365-13, JD77365-14, JD77365-15

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43401
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 11/28/23

| Metal | BSP Result | Spikelot HGPWS1 | % Rec | QC Limits |
|---|---|---|---|---|
| Mercury | 0.36 | 0.333 | 108.0 | 80-120 |

Associated samples MP43401: JD77365-1, JD77365-2, JD77365-3, JD77365-4, JD77365-5, JD77365-6, JD77365-7, JD77365-8, JD77365-9, JD77365-10, JD77365-11, JD77365-12, JD77365-13, JD77365-14, JD77365-15

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43408 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 11/29/23 11/30/23

| Metal | RL | IDL | MDL | MB raw | final | MB raw | final |
|---|---|---|---|---|---|---|---|
| Mercury | 0.20 | .024 | .095 | 0.14 | <0.20 | -0.092 | <0.20 |

Associated samples MP43408: JD77365-16, JD77365-17, JD77365-18, JD77365-19, JD77365-16F, JD77365-17F, JD77365-18F, JD77365-19F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43408
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 11/29/23

| Metal | JD77458-4F Original | MS | Spikelot HGPW3 | % Rec | QC Limits |
|---|---|---|---|---|---|
| Mercury | 0.11 | 2.2 | 2 | 104.5 | 75-125 |

Associated samples MP43408: JD77365-16, JD77365-17, JD77365-18, JD77365-19, JD77365-16F, JD77365-17F, JD77365-18F, JD77365-19F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43408 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 11/29/23

| Metal | JD77458-4F Original | MSD | Spikelot HGPW3 | % Rec | MSD RPD | QC Limit |
|---|---|---|---|---|---|---|
| Mercury | 0.11 | 2.2 | 2 | 104.5 | 0.0 | 20 |

Associated samples MP43408: JD77365-16, JD77365-17, JD77365-18, JD77365-19, JD77365-16F, JD77365-17F, JD77365-18F, JD77365-19F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD77365
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43408
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 11/29/23 11/30/23

| Metal | BSP Result | Spikelot HGPW3 | % Rec | QC Limits | BSP Result | Spikelot HGPW3 | % Rec | QC Limits |
|---|---|---|---|---|---|---|---|---|
| Mercury | 2.2 | 2 | 110.0 | 80-120 | 1.9 | 2 | 95.0 | 80-120 |

Associated samples MP43408: JD77365-16, JD77365-17, JD77365-18, JD77365-19, JD77365-16F, JD77365-17F, JD77365-18F, JD77365-19F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

## General Chemistry

# QC Data Summaries

Includes the following where applicable:

- Percent Solids Raw Data Summary

# Percent Solids Raw Data Summary



**Job Number:** JD77365
**Account:** IALNJR Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ

**Sample:** JD77365-1 **Analyzed:** 22-NOV-23 by MP **Method:** SM2540 G 18TH ED MOD
**ClientID:** E23-05066-001_SB10A

| | | |
|---|---|---|
| Wet Weight (Total) | 39.36 | g |
| Tare Weight | 32.53 | g |
| Dry Weight (Total) | 38.74 | g |
| Solids, Percent | 90.9 | % |

**Sample:** JD77365-2 **Analyzed:** 22-NOV-23 by MP **Method:** SM2540 G 18TH ED MOD
**ClientID:** E23-05066-002_SB10B

| | | |
|---|---|---|
| Wet Weight (Total) | 37.05 | g |
| Tare Weight | 31.97 | g |
| Dry Weight (Total) | 36.62 | g |
| Solids, Percent | 91.5 | % |

**Sample:** JD77365-3 **Analyzed:** 22-NOV-23 by MP **Method:** SM2540 G 18TH ED MOD
**ClientID:** E23-05066-003_SB2A

| | | |
|---|---|---|
| Wet Weight (Total) | 32.35 | g |
| Tare Weight | 26.16 | g |
| Dry Weight (Total) | 31.51 | g |
| Solids, Percent | 86.4 | % |

**Sample:** JD77365-4 **Analyzed:** 22-NOV-23 by MP **Method:** SM2540 G 18TH ED MOD
**ClientID:** E23-05066-004_SB2B

| | | |
|---|---|---|
| Wet Weight (Total) | 38.26 | g |
| Tare Weight | 31.47 | g |
| Dry Weight (Total) | 37.96 | g |
| Solids, Percent | 95.6 | % |

**Sample:** JD77365-5 **Analyzed:** 22-NOV-23 by MP **Method:** SM2540 G 18TH ED MOD
**ClientID:** E23-05066-005_SB5

| | | |
|---|---|---|
| Wet Weight (Total) | 33.73 | g |
| Tare Weight | 27.44 | g |
| Dry Weight (Total) | 33.23 | g |
| Solids, Percent | 92.1 | % |

**Sample:** JD77365-6 **Analyzed:** 22-NOV-23 by MP **Method:** SM2540 G 18TH ED MOD
**ClientID:** E23-05066-006_SB3A

| | | |
|---|---|---|
| Wet Weight (Total) | 34.03 | g |
| Tare Weight | 28.43 | g |
| Dry Weight (Total) | 33.53 | g |
| Solids, Percent | 91.1 | % |

# Percent Solids Raw Data Summary



**Job Number:** JD77365
**Account:** IALNJR Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ

**Sample:** JD77365-7 **Analyzed:** 22-NOV-23 by MP **Method:** SM2540 G 18TH ED MOD
**ClientID:** E23-05066-007_SB3B

| | | |
|---|---|---|
| Wet Weight (Total) | 31.74 | g |
| Tare Weight | 24.86 | g |
| Dry Weight (Total) | 31.38 | g |
| Solids, Percent | 94.8 | % |

**Sample:** JD77365-8 **Analyzed:** 22-NOV-23 by MP **Method:** SM2540 G 18TH ED MOD
**ClientID:** E23-05066-008_SB9A

| | | |
|---|---|---|
| Wet Weight (Total) | 34.6 | g |
| Tare Weight | 30.65 | g |
| Dry Weight (Total) | 34.32 | g |
| Solids, Percent | 92.9 | % |

**Sample:** JD77365-9 **Analyzed:** 22-NOV-23 by MP **Method:** SM2540 G 18TH ED MOD
**ClientID:** E23-05066-009_SB9B

| | | |
|---|---|---|
| Wet Weight (Total) | 39.78 | g |
| Tare Weight | 33.5 | g |
| Dry Weight (Total) | 39.47 | g |
| Solids, Percent | 95.1 | % |

**Sample:** JD77365-10 **Analyzed:** 22-NOV-23 by MP **Method:** SM2540 G 18TH ED MOD
**ClientID:** E23-05066-010_SB1A

| | | |
|---|---|---|
| Wet Weight (Total) | 32.33 | g |
| Tare Weight | 26.52 | g |
| Dry Weight (Total) | 31.81 | g |
| Solids, Percent | 91 | % |

**Sample:** JD77365-11 **Analyzed:** 22-NOV-23 by MP **Method:** SM2540 G 18TH ED MOD
**ClientID:** E23-05066-011_SB1B

| | | |
|---|---|---|
| Wet Weight (Total) | 33.42 | g |
| Tare Weight | 26.34 | g |
| Dry Weight (Total) | 32.98 | g |
| Solids, Percent | 93.8 | % |

**Sample:** JD77365-12 **Analyzed:** 22-NOV-23 by MP **Method:** SM2540 G 18TH ED MOD
**ClientID:** E23-05066-012_SB4A

| | | |
|---|---|---|
| Wet Weight (Total) | 33.97 | g |
| Tare Weight | 28.72 | g |
| Dry Weight (Total) | 33.49 | g |
| Solids, Percent | 90.9 | % |

# Percent Solids Raw Data Summary



**Job Number:** JD77365
**Account:** IALNJR Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ

**Sample:** JD77365-13 **Analyzed:** 22-NOV-23 by MP **Method:** SM2540 G 18TH ED MOD
**ClientID:** E23-05066-013_SB4B

| | | |
|---|---|---|
| Wet Weight (Total) | 39.09 | g |
| Tare Weight | 33.65 | g |
| Dry Weight (Total) | 38.72 | g |
| Solids, Percent | 93.2 | % |

**Sample:** JD77365-14 **Analyzed:** 22-NOV-23 by MP **Method:** SM2540 G 18TH ED MOD
**ClientID:** E23-05066-014_SB6-419-CS

| | | |
|---|---|---|
| Wet Weight (Total) | 32.59 | g |
| Tare Weight | 26.92 | g |
| Dry Weight (Total) | 32.17 | g |
| Solids, Percent | 92.6 | % |

**Sample:** JD77365-15 **Analyzed:** 22-NOV-23 by MP **Method:** SM2540 G 18TH ED MOD
**ClientID:** E23-05066-015_SB8-401-CS

| | | |
|---|---|---|
| Wet Weight (Total) | 34.45 | g |
| Tare Weight | 28.39 | g |
| Dry Weight (Total) | 34.07 | g |
| Solids, Percent | 93.7 | % |

Integrated Analytical Laboratories LLC

# EPA TO-15 DATA PACKAGE

**ANALYTICAL DATA PACKAGE FOR THE**
**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**
**ALBANY NEW YORK 12233**

**Integrated Analytical Laboratories, LLC** — **Randolph, NJ 07869**
**Project#: HK2661** — **NY ELAP Certification#: 11402**
**SDG #: E23-05047** — **NJDEP (Primary AB) Certification#: 14751**
**Date of first sample receipt: 11/16/2023** — **Date of last sample receipt: 11/16/2023**

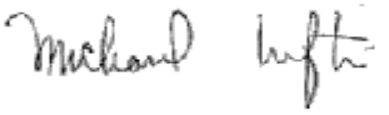
**Client:** HK Engineering+Geology, D.P.C.

**Project/Site:** HK2661/NY

| Client Sample Number | Laboratory Sample | Sample Location | Date/Time of Collection |
|---|---|---|---|
| SV1 | E23-05047-01 | NA | 11/15/2023 10:17 |
| SV2 | E23-05047-02 | NA | 11/15/2023 9:30 |
| SV3 | E23-05047-03 | NA | 11/15/2023 10:40 |
| SV6 | E23-05047-04 | NA | 11/15/2023 12:39 |
| SV7 | E23-05047-05 | NA | 11/16/2023 8:24 |
| SV8 | E23-05047-06 | NA | 11/16/2023 8:30 |

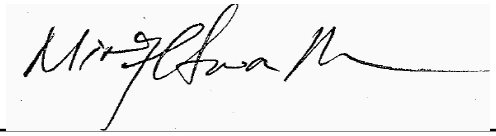


I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of data contained in this hardcopy data package and in the computer-readable data submitted on CD/diskette and by electronic mail has been authorized by the laboratory manager or his designee, as verified by the following signature.



Michael H. Leftin, Ph.D.
Laboratory Director

Date: December 20, 2023



Ming-Hwa Reitan
QA/QC Manager

Date: December 20, 2023

Integrated Analytical Laboratories LLC

# *EPA Method TO-15 Table of Contents*

# Laboratory Acronyms

*The following is a list of laboratory acronyms commonly used in EPA Method TO-15 testing:*

| Acronym | Definition |
|---|---|
| BLK | Blank/Method Blank |
| BFB | 4-Bromofluorobenzene (Tuning Standard) |
| CAS Number | Chemical Abstract Service Registry Number |
| cc | cubic centimeters |
| CCCVS | Closing Calibration Check Verification Standard |
| COC | Chain of Custody |
| DCVS | Daily Calibration Verification Standard |
| DF | Dilution Factor |
| EPA | U. S. Environmental Protection Agency (aka USEPA) |
| "Hg | Inches of Mercury |
| IA | Indoor Air |
| IASL | Indoor Air Screening Level |
| ICAL | Initial Calibration |
| ICVSS | Initial Calibration Verification Standard |
| ISTD | Internal Standard |
| GC | Gas Chromatography |
| GC/MS | Gas Chromatography/Mass Spectrometry |
| LCS | Laboratory Control Sample/Spike |
| LLTO-15 | Low Level TO-15 |
| MDL | Method Detection Limit |
| MDLV | Method Detection Limit Verification |
| ml | milliliters |
| ND | Not Detected (at or above RL) |
| NJDEP | New Jersey Department of Environmental Protection |
| PM | Project Manager |
| ppbv | parts per billion, volume-to-volume ratio |
| PQL | Practical Quantitation Limit - MDLx3 |
| QA | Quality Assurance |
| QC | Quality Control |
| RAL | Rapid Action Limit |
| RL | Reporting Limit |
| RLLCS | Reporting Limit Laboratory Control Sample |
| RPD | Relative Percent Difference |
| RRF | Relative Response Factor |
| RSD | Relative Standard Deviation |
| SDG | Sample Delivery Group |
| SGSL | Soil Gas Screening Levels |
| SS | Sub Slab |
| TAT | Turnaround Time |
| TIC | Tentatively Identified Compound |
| µg/m3 | micrograms per cubic meter |

# Section I: Chain of Custody

# INTEGRATED ANALYTICAL LABORATORIES, LLC

Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

**External Chain of Custody Record/**
**Field Test Data Sheet**
**USEPA Method TO-15**

Contact Us: 973-361-4252
Fax: 973-366-5613
Web: www.ialonline.com

Carrier (check one): ____ IAL Courier ____ Client Courier ____ FedEx/UPS | pg ____ of ____

| Client Contact Information | Project Information | Invoice Information |
|---|---|---|
| Company: HK Eng & Geo | Project Name: HK2661 | |
| Address: 1600 Rt. 22 East | Project Location (State): NJ | Attn: |
| Union NJ 07083 | Project Manager: | Address: |
| Phone: (908) 688-7800 | PM Signature: | |
| Fax: | PM E-Mail: | PO #: HK2661 |
| Report to: | Sampler: | Quote #: |

**Analysis Turnaround Time** - IF NO TAT IS SPECIFIED, 2 WEEK TAT IS ASSUMED

IAL Standard: 2 weeks (10 business days)

Rush (**pre-approved by lab): 24hr** 48hr** 72hr** 96hr** 1wk**

| | Sample Identification | Start DATE & TIME (24hr Clock) | End DATE & TIME (24hr Clock) | Starting Vacuum ("Hg) | Ending Vacuum ("Hg) | Starting Temp. (°F) | Ending Temp. (°F) | Outgoing Vacuum - Lab ("Hg) | Barometric Pressure Start: Incoming Vacuum - Lab ("Hg) | Flow Regulator ID | Barometric Pressure Stop: Canister ID | Canister Size (1L or 6L) | Flow Controller Readout (cc/min) | EPA TO-15 | NJDEP LLTO-15 (Includes 30 TICs) | Library Search (10, 20, or 30 TICs) | Other (Explain in Comments) | Regulatory/ NY Cat B / Full (NJ Required) | Reduced / NY Cat A Data Package | Results Only | Indoor Air | Ambient / Outdoor Air | Sub Slab / Soil Gas / Near Slab (Circle One) | Stack Emission / SVE System | High Concentrations Expected |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ① | SV1 | 11-15-23-1017 | 11-15-23-1300 | -30 | -4 | 45 | 57 | -29.0 | -3.5 | A0098841-9 | 2902 | 6L | 33.5 | X | | | | | | | | | | | |
| ② | SV2 | -0938 | -1220 | -30 | -4 | 49 | 51 | -29.0 | -3.5 | A0113955-9 | 2037 | | 33.2 | X | | | | | | | | | | | |
| ③ | SV3 | -1040 | -1315 | -30 | -5 | 45 | 57 | -29.0 | -5.0 | A0160008-4 | 3811 | | 33.3 | X | | | | | | | | | | | |
| ④ | SV6 | -1239 | -1440 | -30 | -8 | 80 | 80 | -29.0 | -7.5 | A0098643-3 | 3283 | | 34.5 | X | | | | | | | | | | | |
| ⑤ | SV7 | 11-16-23-0824 | 11-16-23-1043 | -29 | -7 | 83 | 73 | -29.0 | -7.0 | A0113955-5 | 2749 | | 34.2 | X | | | | | | | | | | | |
| ⑥ | SV8 | -0830 | -1033 | -30 | -7 | 83 | 76 | -29.0 | -7.0 | 7301021 | 5091 | | 33.3 | X | | | | | | | | | | | |

**Comments/ Special Analysis Instructions / QC Requirements:**

110323aa → #2902 100223aa: 2037
110223a1: 1,3,4,5,6 092223a1: 2

Note: Hold or contingent samples may be designated by writing an "H" or "C" in the appropriate analysis box.

**ALL FIELDS IN RED ARE REQUIRED**

| Shipping Information / Canister Preparation (for laboratory use only) | Laboratory Canister Certification |
|---|---|
| *Individual Preparing Canisters / Title*: ~~R. Jenkins, J. Walukiewicz~~ / Air Department Sample Custodians | GC/MS Analyst Signature: Joseph J Walukiewicz III (IAL) |
| *Lab Affixed Seal Number(s)*: Desmond Flores | IAL SDG#: 05047 |
| *Date/Time Shipping Container Sealed*: 4:15PM 11/13/23 | |

**External Chain of Custody**

| Relinquished | Received | Date / Time | Reason for Change of External Custody |
|---|---|---|---|
| Desmond Flores | R. Kroll | 4:15PM 11/13/23 | shipment from laboratory to client |
| R. Kroll | Dale Mart | 11-16-23 1350 | |
| Dale Mart | Joseph Walukiewicz III (IAL) | 11-16-23 1205 | Received at ie Lab |

Name/Title Resealing Shipping Container Name:

Date/Time Sample Shipping Container Resealed:

Date/Time Sample Shipping Container Opened: 11/16/23 17 05

NJDEP Affixed Seal Number:

Individual Opening Sample Shipping Container: ~~Padraic Jenkins~~ / Joseph Walukiewicz

Date/Time Internal Chain of Custody Initiated: 11/17/23 09 30

White and yellow - lab copies; Pink - client copy

Use appropriate care with IAL sampling equipment when sampling and packing for shipment. The client is responsible for all damage incurred to IAL equipment. Notify IAL if equipment is damaged upon receipt. Holding time before sampling is 15 days, after sampling is 30 days; failure to follow these times may result in data rejection by regulatory agencies. The lab will contact you if your COC is not clear, incomplete, or if discrepancies exist. The use of initials is not permitted on the COC except when correcting errors. 06.2014

# PROJECT INFORMATION

RUSH

## E23-05047: HK2661

**To:** Ryan Powell
HK Engineering & Geology, D.P.C.
Fax: 908-323-4051 cell
EMail: rpowell@hillmanngroup.com;chirschmann@hillmanngroup.com

**Report To**

HK Engineering & Geology, D.P.C.
1600 Route 22 East
Union, NJ 07083
Attn: Ryan Powell

**Bill To**

HK Engineering & Geology, D.P.C.
1600 Route 22 East
Union, NJ 07083
Attn: Chris Hirschmann

| Report Format | P.O. # | Received At Lab | PHC Due | Verbal Due | Hardcopy Due | |
|---|---|---|---|---|---|---|
| Air Regulatory | | Nov 16, 2023 @ 17:05 | NA | Nov 27, 2023 | Nov 28, 2023 | * |

* Any ***Conditional or Hold*** status will delay final hardcopy report sent date.

**Diskette Req.** Not Required

| Lab ID | Client Sample ID | Depth | Sampling Time | Matrix | Unit | Field pH/Temp |
|---|---|---|---|---|---|---|
| 05047-001 | SV1 | NA | 11/15/23@13:00 | Air-Indoor | ppbV | |
| 05047-002 | SV2 | NA | 11/15/23@12:20 | Air-Indoor | ppbV | |
| 05047-003 | SV3 | NA | 11/15/23@13:15 | Air-Indoor | ppbV | |
| 05047-004 | SV6 | NA | 11/15/23@14:40 | Air-Indoor | ppbV | |
| 05047-005 | SV7 | NA | 11/16/23@10:43 | Air-Indoor | ppbV | |
| 05047-006 | SV8 | NA | 11/16/23@10:33 | Air-Indoor | ppbV | |

* No Cert = IAL does not hold certification for this test/method

| Sample # | Test | Status | Analytical Method | TAT | Holding Time Expires |
|---|---|---|---|---|---|
| 001 | EPA TO-15 | Analyze | TO-15 | RUSH 1 WK | 12/15/2023 |
| 002 | EPA TO-15 | Analyze | TO-15 | RUSH 1 WK | 12/15/2023 |
| 003 | EPA TO-15 | Analyze | TO-15 | RUSH 1 WK | 12/15/2023 |
| 004 | EPA TO-15 | Analyze | TO-15 | RUSH 1 WK | 12/15/2023 |
| 005 | EPA TO-15 | Analyze | TO-15 | RUSH 1 WK | 12/16/2023 |
| 006 | EPA TO-15 | Analyze | TO-15 | RUSH 1 WK | 12/16/2023 |



273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
www.ialonline.com

# Internal Chain of Custody

**Instructions:** Use 1 form for each 20 samples of aliquot.

| Laboratory Person Accepting Responsibility for Sample(s) | | | |
|---|---|---|---|
| Laboratory: | Integrated Analytical Laboratories | Location: | 273 Franklin Rd Randolph, NJ 07869 |
| Name: | Joseph Walukiewicz | Title: | Air Department Receiving |
| Case No.: | E23- 05047 | Analytical Parameter/Fraction: (check one) | ____ NJDEP LLTO-15<br>__x__ EPA TO-15 |

| Sample No. | Aliquot/Extract No. |
|---|---|
| SV1 | E23- 05047-01 |
| " 2 | E23- " -02 |
| " 3 | E23- " -03 |
| " 6 | E23- " -04 |
| " 7 | E23- " -05 |
| " 8 | E23 " -06 |
| | E23- |
| | E23- |
| | E23- |
| | E23- |

| Sample No. | Aliquot/Extract No. |
|---|---|
| | E23- |
| | E23- |
| | E23- |
| | E23- |
| | E23- |
| | E23- |
| | E23- |
| | E23- |
| | E23- |
| | E23- |

| Date | Time | Relinquished By | Received By | Purpose of Change of Custody |
|---|---|---|---|---|
| 11 17 23 | 0930 | SIGNATURE<br>PRINTED NAME | SIGNATURE Joseph Walukiewicz<br>PRINTED NAME JOSEPH WALUKIEWICZ | 1. Sample log-in<br>2. Pressure Check<br>3. Pre-analysis storage |
| 11 17 23 | 0940 | SIGNATURE Joseph Walukiewicz<br>PRINTED NAME JOSEPH WALUKIEWICZ | SIGNATURE<br>PRINTED NAME | Placement in TO-15 sample storage area until ready for analysis |
| 12 12 23 | 0947 | SIGNATURE<br>PRINTED NAME | SIGNATURE Joseph Walukiewicz<br>PRINTED NAME JOSEPH WALUKIEWICZ | TO-15 analysis on: 05047-01 to -06 |
| | | | | |
| | | SIGNATURE<br>PRINTED NAME | SIGNATURE Joseph Walukiewicz<br>PRINTED NAME JOSEPH WALUKIEWICZ | TO-15 analysis on: |
| | | SIGNATURE<br>PRINTED NAME | SIGNATURE<br>PRINTED NAME | |
| | | SIGNATURE<br>PRINTED NAME | SIGNATURE<br>PRINTED NAME | |
| | | SIGNATURE<br>PRINTED NAME | SIGNATURE<br>PRINTED NAME | |
| | | SIGNATURE<br>PRINTED NAME | SIGNATURE<br>PRINTED NAME | |

Rev. 12/16

# Section II: Methodology Review

# Methodology Summary for Air Collected from Hazardous Waste Site Contract

| | | | |
|---|---|---|---|
| **Laboratory:** | **Integrated Analytical Lab, LLC** | **Project No:** | **HK2661** |
| **Location:** | **Randolph, NJ** | **SDG No:** | **E23-05047** |

| Name | Required Methodology | Indicate Method |
|---|---|---|
| Volatile Organics | US EPA TO-15 | US EPA Method TO-15 |

# Section III: Case Narrative

# CASE NARRATIVE

**Integrated Analytical Laboratories, LLC** — **Randolph, NJ 07869**
**Project #: HK2661** — **NJDEP (Primary AB) Certification#: 14751**
**SDG #: E23-05047** — **NY ELAP Certification #: 11402**
**CT DPH Certification#: PH-0699**
**Analytical Method: EPA Method TO-15** — **PADEP Certification#: 68-00773**

**Date of first sample receipt: 11/16/2023** — **Date of last sample receipt: 11/16/2023**

**Client: HK Engineering+Geology, D.P.C.**
**Project/Site: HK2661 / NY**

| Client ID | Lab ID | Receipt Date | Analysis Date | DF | Diluted For |
|---|---|---|---|---|---|
| SV1 | E23-05047-01 | 11/16/2023 | 12/08/2023 | 1.0 | NA |
| SV2 | E23-05047-02 | 11/16/2023 | 12/08/2023 | 1.0 | NA |
| SV3 | E23-05047-03 | 11/16/2023 | 12/11/2023 | 10.0 | Ethylbenzene<br>Xylenes (m&p) |
| SV3 | E23-05047-03 | 11/16/2023 | 12/08/2023 | 1.0 | NA |
| SV6 | E23-05047-04 | 11/16/2023 | 12/11/2023 | 5.0 | Acetone |
| SV6 | E23-05047-04 | 11/16/2023 | 12/08/2023 | 1.0 | NA |
| SV7 | E23-05047-05 | 11/16/2023 | 12/08/2023 | 1.0 | NA |
| SV8 | E23-05047-06 | 11/16/2023 | 12/11/2023 | 5.0 | Acetone |
| SV8 | E23-05047-06 | 11/16/2023 | 12/11/2023 | 1.0 | NA |

| IAL Sample ID | Canister ID | Outgoing Pressure ("Hg) | Incoming Pressure ("Hg) | Flow Controller ID | Outgoing Flow Rate (cc/min) | Incoming Flow Rate (cc/min) | Flow Rate RPD* |
|---|---|---|---|---|---|---|---|
| E23-05047-01 | 2902 | -29 | -3.5 | A00988641-9 | 33.50 | 33.00 | 1.50 |
| E23-05047-02 | 2037 | -29 | -3.5 | A0113955-9 | 33.20 | 32.80 | 1.21 |
| E23-05047-03 | 3811 | -29 | -5 | A0160008-4 | 33.30 | 32.70 | 1.82 |
| E23-05047-04 | 3283 | -29 | -7.5 | A0098643-3 | 34.50 | 33.90 | 1.75 |
| E23-05047-05 | 2749 | -29 | -7 | A0113955-5 | 34.20 | 33.60 | 1.77 |
| E23-05047-06 | 5091 | -29 | -7 | 7301021 | 33.30 | 32.60 | 2.12 |

*Pre-sampling and Post-sampling Flow Controller calibration check RPD ≤ 20%

Flow Controller Note: none

***Sample Receipt:*** Samples were received in good condition. Documentation was in order.
Samples were received at IAL by: Joseph Walukiewicz

***Sample Preparation:*** None required.

***Sample Analysis:***
*Hold Time:* All within recommended hold times.
*Instrument Calibration:* Meets method criteria.
*Analysis performed by:* jjw
*SDG Non-Conformances:* none

# CASE NARRATIVE

**Integrated Analytical Laboratories, LLC** — **Randolph, NJ 07869**
**Project #: HK2661** — **NJDEP (Primary AB) Certification#: 14751**
**SDG #: E23-05047** — **NY ELAP Certification #: 11402**
**CT DPH Certification#: PH-0699**
**Analytical Method: EPA Method TO-15** — **PADEP Certification#: 68-00773**

**Date of first sample receipt: 11/16/2023** — **Date of last sample receipt: 11/16/2023**

**Client: HK Engineering+Geology, D.P.C.**
**Project/Site: HK2661 / NY**

*Tentatively Identified Compounds:* Tentatively Identified Compounds (TICs) are determined using a NIST library search. TICs are reported at 10% of the applicable internal standard. Dilution factors are calculated into the final reported result. Since the compounds found are tentatively identified, the conversion from ppbv to ug/m3 may not be made.

*Canister-to-Canister dilutions:* none

*Dilutions:* Dilutions, if necessary, will be conducted directly on the instrument up to a 500x dilution. When dilutions of 1000x or higher are necessary, the laboratory must inject a volume of sample into another certified clean canister and add humidified Z-1 zero air to the remainder of the canister volume. Tedlar bags are not used for dilutions.

If a sample is received with historically high levels of analytes, a 100x can-to-can dilution my be used from the start. A 100x canister-to-canister dilution may be also be used at the analyst's discretion.

*On-instrument dilutions are conducted as follows:*

| Dilution Factor | Sample Volume Injected (cc) |
|---|---|
| 1 | 500 |
| 2.5 | 200 |
| 5 | 100 |
| 10 | 50 |
| 20 | 25 |
| 25 | 20 |
| 50 | 10 |
| 100 | 5 |
| 200 | 2.5 |
| 250 | 2 |
| 500 | 1 |

*Canister-to-canister dilutions are conducted as follows:*

A certified clean canister is obtained and evacuated to approximately -30"Hg. Both the clean/dilution canister and sample canister are fitted with a ¼" Swagelok® nut fitting equipped with septa. Depending on dilution factor necessary, a sample aliquot is removed from the canister and injected into the clean canister using 30cc Multifit gas-tight syringe. Once the correct sample aliquot has been transferred, the dilution canister should be connected to the humidified Z-1 zero air supply and filled to ambient pressure (0"Hg).

| Dilution Factor | Sample Aliquot | Z-1 Make-up Added |
|---|---|---|
| 100 | 60ml | 5940ml |
| 1000 | 6ml | 5994ml |

# CASE NARRATIVE

**Integrated Analytical Laboratories, LLC** — **Randolph, NJ 07869**
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**Project/Site: HK2661 / NY**

If further dilutions need to be made from the dilution canister, they may be made on-instrument. Using a 100x dilution canister, the following on-instrument dilutions can be produced:

| Dilution Factor | Sample Volume Injected |
|---|---|
| 100 | 500ml |
| 250 | 200ml |
| 500 | 100ml |
| 1000 | 50ml |
| 2000 | 25ml |
| 2500 | 20ml |
| 5000 | 10ml |

Using a 1000x dilution canister, the following on-instrument dilutions can be produced:

| Dilution Factor | Sample Volume Injected |
|---|---|
| 1000 | 500ml |
| 2500 | 200ml |
| 5000 | 100ml |
| 10,000 | 50ml |
| 20,000 | 25ml |
| 25,000 | 20ml |
| 50,000 | 10ml |

If further dilutions need to be made from the dilution canister, beyond 50,000x, a subsequent canister-to-canister dilution must be made using the above prescribed protocol.

***GC Column and ID:*** RTX-1 SN 1119138, RTX-VMS SN 1586881, or equivalent

***Calibration Standards:*** Only gas phase standards were used. Primary and second-source standards provided by Scott Specialty Gases or Airgas Specialty Gases/ Air Liquide

***Working Standards:*** Primary source standards* are created from:
- Airgas Specialty Gases #EB0103704, valid 1/18/2021 through 12/30/2024, @ approximately 100ppb per compound, with exception of m&p-xylenes @ 200ppb. Standard is directly introduced into the instrument for all calibration standard concentrations. Dilutions are made accordingly, on instrument. The 10ppbv standard is also used for the Daily Calibration Verification Standard (DCVS), the Laboratory Control Sample (LCS) and Closing Calibration Verification Standard (CCCVS).

The second source standard*, used as the Initial Calibration Verification Standard (ICVSS), is introduced into the instrument in the same manner as the primary source standard, using:

# CASE NARRATIVE

**Integrated Analytical Laboratories, LLC** | **Randolph, NJ 07869**
**Project #: HK2661** | **NJDEP (Primary AB) Certification#: 14751**
**SDG #: E23-05047** | **NY ELAP Certification #: 11402**
**CT DPH Certification#: PH-0699**
**Analytical Method: EPA Method TO-15** | **PADEP Certification#: 68-00773**

**Date of first sample receipt: 11/16/2023** | **Date of last sample receipt: 11/16/2023**

**Client: HK Engineering+Geology, D.P.C.**
**Project/Site: HK2661 / NY**

- Airgas Specialty Gases Cylinder #EB0116272, valid 7/28/2021 through 5/12/2025, @ approximately 100ppb per compound, with exception of m&p-xylenes @ 200ppb.

Internal standards* are created from:
- Airgas Specialty Gases Cylinder #ALM018474, valid 2/24/2022 through 2/24/2025. @ 5ppm per compound. Standard is directly introduced into the instrument to reach the 10ppbv concentrations. 1cc of internal standard is added to every standard, method blank, instrument blank, and sample run.

*Standard may be used past its expiration date provided that concentrations are verified by a current/unexpired second source standard.

**08/15/2023**
- 100 ppbv internal standard mix (AA3401BFB) - prepared in cylinder #ALM018474
  - 10 ppbv per standard/sample - 50 ml injected
- 100 ppbv calibration standard (aa3406std01) - prepared in cylinder #EB0103704
  - 40 ppbv standard - 200 ml injected
  - 20 ppbv standard - 100 ml injected
  - 10 ppbv standard* - 50 ml injected
    - *Standard also used for CCCVS
  - 2 ppbv standard - 10 ml injected
  - 0.20 ppbv standard* - 1 ml injected
    - *Standard also used for RLLCS

**10/02/2023**
- 100 ppbv internal standard mix (AA4101BFB) - prepared in cylinder #ALM018474
  - 10 ppbv per standard/sample - 50 ml injected
- 100 ppbv calibration standard (AA4102DCVS) - prepared in cylinder #EB0103704
  - 10 ppbv standard* - 50 ml injected
    - *Standard also used for DCVS & CCCVS
  - 0.20 ppbv standard* - 1 ml injected
    - *Standard also used for RLLCS
- Method Blank (AA4104BLK) - prepared in canister #1127
  - 500 ml injected

**10/10/2023**
- 100 ppbv internal standard mix (AA4131BFB) - prepared in cylinder #ALM018474
  - 10 ppbv per standard/sample - 50 ml injected
- 100 ppbv calibration standard (aa4136std01) - prepared in cylinder #EB0103704
  - 40 ppbv standard - 200 ml injected
  - 20 ppbv standard - 100 ml injected
  - 10 ppbv standard* - 50 ml injected
    - *Standard also used for CCCVS
  - 2 ppbv standard - 10 ml injected

# CASE NARRATIVE

**Integrated Analytical Laboratories, LLC** — **Randolph, NJ 07869**
**Project #: HK2661** — **NJDEP (Primary AB) Certification#: 14751**
**SDG #: E23-05047** — **NY ELAP Certification #: 11402**
**CT DPH Certification#: PH-0699**
**Analytical Method: EPA Method TO-15** — **PADEP Certification#: 68-00773**

**Date of first sample receipt: 11/16/2023** — **Date of last sample receipt: 11/16/2023**

**Client: HK Engineering+Geology, D.P.C.**
**Project/Site: HK2661 / NY**

**10/10/2023**
0.20 ppbv standard* - 1 ml injected
*Standard also used for RLLCS
0.20 ppbv standard* - 1 ml injected
*Standard also used for RLLCS
Method Blank (AA4139BLK) - prepared in canister #1127
500 ml injected

**11/03/2023**
100 ppbv internal standard mix (AA4527BFB) - prepared in cylinder #ALM018474
10 ppbv per standard/sample - 50 ml injected
100 ppbv calibration standard (AA4528DCVS) - prepared in cylinder #EB0103704
10 ppbv standard* - 50 ml injected
*Standard also used for DCVS & CCCVS
0.20 ppbv standard* - 1 ml injected
*Standard also used for RLLCS
Method Blank (AA4530BLK) - prepared in canister #1127
500 ml injected

**12/08/2023**
100 ppbv internal standard mix (AA4881BFB) - prepared in cylinder #ALM018474
10 ppbv per standard/sample - 50 ml injected
100 ppbv calibration standard (AA4882DCVS) - prepared in cylinder #EB0103704
10 ppbv standard* - 50 ml injected
*Standard also used for DCVS & CCCVS
Method Blank (AA4884BLK) - prepared in canister #1127
500 ml injected
Sample E23-05047-01 (AA4886) - sample taken in canister #2902
500 ml sample volume injected, 1x dilution
Sample E23-05047-02 (AA4887) - sample taken in canister #2037
500 ml sample volume injected, 1x dilution
Sample E23-05047-03 (AA4888) - sample taken in canister #3811
500 ml sample volume injected, 1x dilution
Sample E23-05047-04 (AA4889) - sample taken in canister #3283
500 ml sample volume injected, 1x dilution
Sample E23-05047-05 (AA4890) - sample taken in canister #2749
500 ml sample volume injected, 1x dilution

**12/11/2023**
100 ppbv internal standard mix (AA4901BFB) - prepared in cylinder #ALM018474
10 ppbv per standard/sample - 50 ml injected
100 ppbv calibration standard (AA4902DCVS) - prepared in cylinder #EB0103704
10 ppbv standard* - 50 ml injected
*Standard also used for DCVS & CCCVS
0.20 ppbv standard* - 1 ml injected
*Standard also used for RLLCS

# CASE NARRATIVE

**Integrated Analytical Laboratories, LLC** — **Randolph, NJ 07869**
**Project #: HK2661** — **NJDEP (Primary AB) Certification#: 14751**
**SDG #: E23-05047** — **NY ELAP Certification #: 11402**
**CT DPH Certification#: PH-0699**
**Analytical Method: EPA Method TO-15** — **PADEP Certification#: 68-00773**

**Date of first sample receipt: 11/16/2023** — **Date of last sample receipt: 11/16/2023**

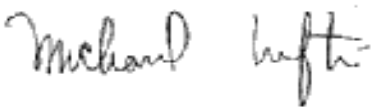
**Client: HK Engineering+Geology, D.P.C.**
**Project/Site: HK2661 / NY**

**12/11/2023**

Method Blank (AA4904BLK) - prepared in canister #1127
500 ml injected
Sample E23-05047-03 (AA4909) - sample taken in canister #3811
50 ml sample volume injected, 10x dilution
Sample E23-05047-04 (AA4910) - sample taken in canister #3283
100 ml sample volume injected, 5x dilution
Sample E23-05047-06 (AA4914) - sample taken in canister #5091
100 ml sample volume injected, 5x dilution
Sample E23-05047-06 (AA4915) - sample taken in canister #5091
500 ml sample volume injected, 1x dilution

All work recorded herein has been done in accordance with normal professional standards using accepted testing methodologies, quality assurance and quality control procedures except where otherwise agreed to by the client and testing company in writing. All conversions are based upon a room temperature of 77°F(25°C) and room pressure of 101.325 kPa (1atm).

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of data contained in this hardcopy data package and in the computer-readable data submitted on CD/diskette and by electronic mail has been authorized by the laboratory manager or his designee, as verified by the following signature.



Michael H. Leftin, Ph.D.
Laboratory Director

December 20, 2023
Date

Integrated Analytical Laboratories LLC

Airgas
an Air Liquide company

R 362

Received 01/06/2023

**Airgas Specialty Gases**
Airgas USA LLC
6141 Easton Road
Plumsteadville, PA 18949
Airgas.com

# CERTIFICATE OF ANALYSIS

## Grade of Product: CERTIFIED HYDROCARBON

| | | | |
|---|---|---|---|
| Customer: | INTEGRATED ANALYTICAL LABS | | |
| Part Number: | X76NI99C15AC001 | | |
| Cylinder Number: | EB0103704 | Reference Number: | 160-402619255-1 |
| Laboratory: | 124 - Plumsteadville - PA | Cylinder Volume: | 101.0 CF |
| Analysis Date: | Dec 30, 2022 | Cylinder Pressure: | 1400 PSIG |
| Lot Number: | 160-402619255-1 | Valve Outlet: | 350SS |
| | | Expiration Date: | Dec 30, 2024 |

Traceability Statement: Hydrocarbon Process standards are NIST traceable either directly by weight or by comparison to Airgas laboratory standards that are directly NIST traceable by weight.

### CERTIFIED CONCENTRATIONS

| Component | Requested Concentration | Reported Mole % | Accuracy |
|---|---|---|---|
| 1,1 DICHLOROETHANE | 100.000 PPB | 107.000 PPB | +/- 10% |
| 1,1 DICHLOROETHYLENE | 100.000 PPB | 104.000 PPB | +/- 10% |
| 1,1,1 TRICHLOROETHANE | 100.000 PPB | 109.000 PPB | +/- 10% |
| 1,1,2 TRICHLORO ETHANE | 100.000 PPB | 108.000 PPB | +/- 10% |
| 1,1,2,2 TETRACHLOROETHANE | 100.000 PPB | 114.000 PPB | +/- 10% |
| 1,2 DIBROMO ETHANE | 100.000 PPB | 108.000 PPB | +/- 10% |
| 1,2 DICHLORO PROPANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| 1,2 DICHLOROBENZENE | 100.000 PPB | 107.000 PPB | +/- 10% |
| 1,2 DICHLOROETHANE | 100.000 PPB | 109.000 PPB | +/- 10% |
| 1,2,4 TRICHLOROBENZENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| 1,2,4 TRIMETHYLBENZENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| 1,3 BUTADIENE | 100.000 PPB | 107.000 PPB | +/- 10% |
| 1,3 DICHLORO BENZENE | 100.000 PPB | 111.000 PPB | +/- 10% |
| 1,3,5 TRIMETHYL BENZENE | 100.000 PPB | 109.000 PPB | +/- 10% |
| 1,4 DICHLOROBENZENE | 100.000 PPB | 107.000 PPB | +/- 10% |
| 1,4 DIOXANE | 100.000 PPB | 117.000 PPB | +/- 10% |
| 2 CHLOROTOLUENE | 100.000 PPB | 109.000 PPB | +/- 10% |
| 3 CHLOROPROPYLENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| 4 ETHYL TOLUENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| ACETONE | 100.000 PPB | 108.000 PPB | +/- 10% |
| ACROLEIN | 100.000 PPB | 100.000 PPB | +/- 10% |
| BENZENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| BENZYL CHLORIDE | 100.000 PPB | 100.000 PPB | +/- 10% |
| BROMO DICHLORO METHANE | 100.000 PPB | 115.000 PPB | +/- 10% |
| BROMOFORM | 100.000 PPB | 113.000 PPB | +/- 10% |
| CARBON DISULFIDE | 100.000 PPB | 107.000 PPB | +/- 10% |
| CARBON TETRACHLORIDE | 100.000 PPB | 110.000 PPB | +/- 10% |
| CHLORO DIBROMO METHANE | 100.000 PPB | 112.000 PPB | +/- 10% |
| CHLOROBENZENE | 100.000 PPB | 111.000 PPB | +/- 10% |
| CHLOROFORM | 100.000 PPB | 108.000 PPB | +/- 10% |
| CIS 1,2 DICHLOROETHYLENE | 100.000 PPB | 109.000 PPB | +/- 10% |
| CIS 1,3 DICHLOROPROPENE | 100.000 PPB | 111.000 PPB | +/- 10% |
| CUMENE | 100.000 PPB | 107.000 PPB | +/- 10% |
| CYCLOHEXANE | 100.000 PPB | 112.000 PPB | +/- 10% |
| ETHANOL | 100.000 PPB | 104.000 PPB | +/- 10% |
| ETHYL ACETATE | 100.000 PPB | 108.000 PPB | +/- 10% |
| ETHYL BENZENE | 100.000 PPB | 111.000 PPB | +/- 10% |
| ETHYL CHLORIDE | 100.000 PPB | 106.000 PPB | +/- 10% |
| HEXACHLORO 1,3 BUTADIENE | 100.000 PPB | 111.000 PPB | +/- 10% |

Approved for Release

Integrated Analytical Laboratories LLC

Airgas
an Air Liquide company

**Airgas Specialty Gases**
Airgas USA LLC
6141 Easton Road
Plumsteadville, PA 18949
Airgas.com

| | | | |
|---|---|---|---|
| HEXANE | 100.000 PPB | 111.000 PPB | +/- 10% |
| ISOOCTANE | 100.000 PPB | 109.000 PPB | +/- 10% |
| ISOPROPYL ALCOHOL | 100.000 PPB | 89.000 PPB | +/- 10% |
| M XYLENE | 100.000 PPB | 112.000 PPB | +/- 10% |
| METHYL BROMIDE | 100.000 PPB | 100.000 PPB | +/- 10% |
| METHYL BUTYL KETONE | 100.000 PPB | 113.000 PPB | +/- 10% |
| METHYL CHLORIDE | 100.000 PPB | 112.000 PPB | +/- 10% |
| METHYL ETHYL KETONE | 100.000 PPB | 110.000 PPB | +/- 10% |
| METHYL ISOBUTYL KETONE | 100.000 PPB | 109.000 PPB | +/- 10% |
| METHYL METHACRYLATE | 100.000 PPB | 110.000 PPB | +/- 10% |
| METHYL TERT BUTYL ETHER | 100.000 PPB | 112.000 PPB | +/- 10% |
| METHYLENE CHLORIDE | 100.000 PPB | 108.000 PPB | +/- 10% |
| N BUTANE | 100.000 PPB | 109.000 PPB | +/- 10% |
| N HEPTANE | 100.000 PPB | 111.000 PPB | +/- 10% |
| N NONANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| N PENTANE | 100.000 PPB | 108.000 PPB | +/- 10% |
| N PROPYL BENZENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| NAPHTHALENE | 100.000 PPB | 100.000 PPB | +/- 10% |
| O XYLENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| P XYLENE | 100.000 PPB | 111.000 PPB | +/- 10% |
| PERCHLOROETHYLENE | 100.000 PPB | 112.000 PPB | +/- 10% |
| PROPYLENE | 100.000 PPB | 109.000 PPB | +/- 10% |
| R11 TRICHLOROFLUOROMETHANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| R113 TRICHLOROTRIFLUOROETHANE | 100.000 PPB | 109.000 PPB | +/- 10% |
| R114 DICHLOROTETRAFLUOROETHANE | 100.000 PPB | 98.000 PPB | +/- 10% |
| R12 DICHLORODIFLUOROMETHANE | 100.000 PPB | 106.000 PPB | +/- 10% |
| STYRENE | 100.000 PPB | 113.000 PPB | +/- 10% |
| TERT BUTANOL | 100.000 PPB | 115.000 PPB | +/- 10% |
| TETRAHYDROFURAN | 100.000 PPB | 110.000 PPB | +/- 10% |
| TOLUENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| TRANS 1,2 DICHLOROETHYLENE | 100.000 PPB | 111.000 PPB | +/- 10% |
| TRANS 1,3 DICHLOROPROPENE | 100.000 PPB | 111.000 PPB | +/- 10% |
| TRICHLOROETHYLENE | 100.000 PPB | 100.000 PPB | +/- 10% |
| VINYL ACETATE | 100.000 PPB | 110.000 PPB | +/- 10% |
| VINYL BROMIDE | 100.000 PPB | 101.000 PPB | +/- 10% |
| VINYL CHLORIDE | 100.000 PPB | 108.000 PPB | +/- 10% |
| NITROGEN | 99.99925 % | 99.999187 % | +/- 10% |

**Permanent Notes:** CUSTOM TO MIX - TO-15/17 MODIFIED NJ STD + NAPHTHALENE

**Notes:** PO number: 22578

Approved for Release

Integrated Analytical Laboratories LLC

Airgas
an Air Liquide company

**Airgas Specialty Gases**
Airgas USA LLC
6141 Easton Road
Plumsteadville, PA 18949
Airgas.com

R 366

# CERTIFICATE OF ANALYSIS

## Grade of Product: CERTIFIED HYDROCARBON

| | | | |
|---|---|---|---|
| Customer: | INTEGRATED ANALYTICAL LABS | | |
| Part Number: | X76NI99C15AC001 | Reference Number: | 160-402744241-1 |
| Cylinder Number: | EB0116272 | Cylinder Volume: | 146.0 CF |
| Laboratory: | 124 - Plumsteadville - PA | Cylinder Pressure: | 2050 PSIG |
| Analysis Date: | May 12, 2023 | Valve Outlet: | 350SS |
| Lot Number: | 160-402744241-1 | Expiration Date: | May 12, 2025 |

Traceability Statement: Hydrocarbon Process standards are NIST traceable either directly by weight or by comparison to Airgas laboratory standards that are directly NIST traceable by weight.

### CERTIFIED CONCENTRATIONS

| Component | Requested Concentration | Reported Mole % | Accuracy |
|---|---|---|---|
| 1,1 DICHLOROETHANE | 100.000 PPB | 100.000 PPB | +/- 10% |
| 1,1 DICHLOROETHYLENE | 100.000 PPB | 100.000 PPB | +/- 10% |
| 1,1,1 TRICHLOROETHANE | 100.000 PPB | 104.000 PPB | +/- 10% |
| 1,1,2 TRICHLORO ETHANE | 100.000 PPB | 101.000 PPB | +/- 10% |
| 1,1,2,2 TETRACHLOROETHANE | 100.000 PPB | 104.000 PPB | +/- 10% |
| 1,2 DIBROMO ETHANE | 100.000 PPB | 103.000 PPB | +/- 10% |
| 1,2 DICHLORO PROPANE | 100.000 PPB | 103.000 PPB | +/- 10% |
| 1,2 DICHLOROBENZENE | 100.000 PPB | 101.000 PPB | +/- 10% |
| 1,2 DICHLOROETHANE | 100.000 PPB | 102.000 PPB | +/- 10% |
| 1,2,4 TRICHLOROBENZENE | 100.000 PPB | 100.000 PPB | +/- 10% |
| 1,2,4 TRIMETHYLBENZENE | 100.000 PPB | 102.000 PPB | +/- 10% |
| 1,3 BUTADIENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| 1,3 DICHLORO BENZENE | 100.000 PPB | 105.000 PPB | +/- 10% |
| 1,3,5 TRIMETHYL BENZENE | 100.000 PPB | 103.000 PPB | +/- 10% |
| 1,4 DICHLOROBENZENE | 100.000 PPB | 100.000 PPB | +/- 10% |
| 1,4 DIOXANE | 100.000 PPB | 113.000 PPB | +/- 10% |
| 2 CHLOROTOLUENE | 100.000 PPB | 107.000 PPB | +/- 10% |
| 3 CHLOROPROPYLENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| 4 ETHYL TOLUENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| ACETONE | 100.000 PPB | 108.000 PPB | +/- 10% |
| ACROLEIN | 100.000 PPB | 105.000 PPB | +/- 10% |
| BENZENE | 100.000 PPB | 103.000 PPB | +/- 10% |
| BENZYL CHLORIDE | 100.000 PPB | 102.000 PPB | +/- 10% |
| BROMO DICHLORO METHANE | 100.000 PPB | 112.000 PPB | +/- 10% |
| BROMOFORM | 100.000 PPB | 113.000 PPB | +/- 10% |
| CARBON DISULFIDE | 100.000 PPB | 95.000 PPB | +/- 10% |
| CARBON TETRACHLORIDE | 100.000 PPB | 107.000 PPB | +/- 10% |
| CHLORO DIBROMO METHANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| CHLOROBENZENE | 100.000 PPB | 104.000 PPB | +/- 10% |
| CHLOROFORM | 100.000 PPB | 106.000 PPB | +/- 10% |
| CIS 1,2 DICHLOROETHYLENE | 100.000 PPB | 102.000 PPB | +/- 10% |
| CIS 1,3 DICHLOROPROPENE | 100.000 PPB | 94.000 PPB | +/- 10% |
| CUMENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| CYCLOHEXANE | 100.000 PPB | 109.000 PPB | +/- 10% |
| ETHANOL | 100.000 PPB | 98.000 PPB | +/- 10% |
| ETHYL ACETATE | 100.000 PPB | 104.000 PPB | +/- 10% |
| ETHYL BENZENE | 100.000 PPB | 105.000 PPB | +/- 10% |
| ETHYL CHLORIDE | 100.000 PPB | 104.000 PPB | +/- 10% |
| HEXACHLORO 1,3 BUTADIENE | 100.000 PPB | 101.000 PPB | +/- 10% |

Approved for Release

Integrated Analytical Laboratories LLC

Airgas
an Air Liquide company

**Airgas Specialty Gases**
Airgas USA LLC
6141 Easton Road
Plumsteadville, PA 18949
Airgas.com

| | | | |
|---|---|---|---|
| HEXANE | 100.000 PPB | 107.000 PPB | +/- 10% |
| ISOOCTANE | 100.000 PPB | 106.000 PPB | +/- 10% |
| ISOPROPYL ALCOHOL | 100.000 PPB | 95.000 PPB | +/- 10% |
| M XYLENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| METHYL BROMIDE | 100.000 PPB | 103.000 PPB | +/- 10% |
| METHYL BUTYL KETONE | 100.000 PPB | 109.000 PPB | +/- 10% |
| METHYL CHLORIDE | 100.000 PPB | 108.000 PPB | +/- 10% |
| METHYL ETHYL KETONE | 100.000 PPB | 105.000 PPB | +/- 10% |
| METHYL ISOBUTYL KETONE | 100.000 PPB | 105.000 PPB | +/- 10% |
| METHYL METHACRYLATE | 100.000 PPB | 106.000 PPB | +/- 10% |
| METHYL TERT BUTYL ETHER | 100.000 PPB | 107.000 PPB | +/- 10% |
| METHYLENE CHLORIDE | 100.000 PPB | 101.000 PPB | +/- 10% |
| N BUTANE | 100.000 PPB | 107.000 PPB | +/- 10% |
| N HEPTANE | 100.000 PPB | 107.000 PPB | +/- 10% |
| N NONANE | 100.000 PPB | 108.000 PPB | +/- 10% |
| N PENTANE | 100.000 PPB | 105.000 PPB | +/- 10% |
| N PROPYL BENZENE | 100.000 PPB | 112.000 PPB | +/- 10% |
| NAPHTHALENE | 100.000 PPB | 101.000 PPB | +/- 10% |
| O XYLENE | 100.000 PPB | 102.000 PPB | +/- 10% |
| P XYLENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| PERCHLOROETHYLENE | 100.000 PPB | 104.000 PPB | +/- 10% |
| PROPYLENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| R11 TRICHLOROFLUOROMETHANE | 100.000 PPB | 106.000 PPB | +/- 10% |
| R113 TRICHLOROTRIFLUOROETHANE | 100.000 PPB | 102.000 PPB | +/- 10% |
| R114 DICHLOROTETRAFLUOROETHANE | 100.000 PPB | 99.000 PPB | +/- 10% |
| R12 DICHLORODIFLUOROMETHANE | 100.000 PPB | 109.000 PPB | +/- 10% |
| STYRENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| TERT BUTANOL | 100.000 PPB | 111.000 PPB | +/- 10% |
| TETRAHYDROFURAN | 100.000 PPB | 106.000 PPB | +/- 10% |
| TOLUENE | 100.000 PPB | 101.000 PPB | +/- 10% |
| TRANS 1,2 DICHLOROETHYLENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| TRANS 1,3 DICHLOROPROPENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| TRICHLOROETHYLENE | 100.000 PPB | 102.000 PPB | +/- 10% |
| VINYL ACETATE | 100.000 PPB | 105.000 PPB | +/- 10% |
| VINYL BROMIDE | 100.000 PPB | 100.000 PPB | +/- 10% |
| VINYL CHLORIDE | 100.000 PPB | 107.000 PPB | +/- 10% |
| NITROGEN | 99.99925 % | 99.999216 % | |

**Permanent Notes:** CUSTOM TO MIX - TO-15/17 MODIFIED NJ STD + NAPHTHALENE

**Notes:** PO Number: 22896

Approved for Release

# Section IV: Method Detection Limit Summary

# INTEGRATED ANALYTICAL LABORATORIES, LLC
# REPORTING METHOD DETECTION LIMIT (MDL) REPORT

Integrated Analytical Laboratories - Randolph, NJ

Matrix: Air
MDL Effective Date: 8/16/2023
Column ID: Restek RtX-VMS, 30 meter, 0.32mm ID, 1.8 um DF
Instrument ID: GC - Agilent 7890A / MS - Agilent 5975C (IAL ID: *Instrument AA* )
Analyst: Joe Waluliewicz
Report Prepared by: Joe Waluliewicz

| Compound Name | CAS # | Molecular Weight | MDL ppbv | MDL µg/m$^3$ | PQL ppbv | RL ppbv | RL µg/m$^3$ | True value/ MDL |
|---|---|---|---|---|---|---|---|---|
| Propene | 115-07-1 | 42.08 | 0.18 | 0.31 | 0.54 | 0.20 | 0.34 | 1 |
| Dichlorodifluoromethane | 75-71-8 | 120.9 | 0.081 | 0.40 | 0.24 | 0.20 | 0.99 | 3 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 170.9 | 0.071 | 0.50 | 0.21 | 0.20 | 1.4 | 3 |
| n-Butane | 106-97-8 | 58 | 0.13 | 0.32 | 0.40 | 0.20 | 0.47 | 2 |
| Chloromethane | 74-87-3 | 50.49 | 0.15 | 0.30 | 0.44 | 0.20 | 0.41 | 1 |
| Vinyl chloride | 75-01-4 | 62.5 | 0.11 | 0.29 | 0.34 | 0.20 | 0.51 | 2 |
| 1,3-Butadiene | 106-99-0 | 54.09 | 0.12 | 0.27 | 0.37 | 0.20 | 0.44 | 2 |
| Bromomethane | 74-83-9 | 94.94 | 0.12 | 0.46 | 0.36 | 0.20 | 0.78 | 2 |
| Chloroethane | 75-00-3 | 64.52 | 0.12 | 0.32 | 0.36 | 0.20 | 0.53 | 2 |
| Vinyl bromide | 593-60-2 | 106.9 | 0.080 | 0.35 | 0.24 | 0.20 | 0.87 | 3 |
| Trichlorofluoromethane | 75-69-4 | 137.4 | 0.068 | 0.38 | 0.20 | 0.20 | 1.1 | 3 |
| Ethanol | 64-17-5 | 46.07 | 0.17 | 0.32 | 0.51 | 0.20 | 0.38 | 1 |
| 1,1-Dichloroethene | 75-35-4 | 96.94 | 0.086 | 0.34 | 0.26 | 0.20 | 0.79 | 3 |
| Carbon disulfide | 75-15-0 | 76.14 | 0.076 | 0.24 | 0.23 | 0.20 | 0.62 | 3 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 187.40 | 0.087 | 0.66 | 0.26 | 0.20 | 1.5 | 3 |
| Acrolein | 107-02-8 | 56.06 | 0.15 | 0.34 | 0.44 | 0.20 | 0.46 | 2 |
| Allyl Chloride | 107-05-1 | 76.53 | 0.088 | 0.27 | 0.26 | 0.20 | 0.63 | 3 |
| Isopropanol | 67-63-0 | 60.1 | 0.10 | 0.25 | 0.30 | 0.20 | 0.49 | 2 |
| Methylene chloride | 75-09-2 | 84.94 | 0.10 | 0.36 | 0.31 | 0.20 | 0.69 | 2 |
| Acetone | 67-64-1 | 58.08 | 0.12 | 0.28 | 0.36 | 0.20 | 0.48 | 2 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 96.94 | 0.080 | 0.32 | 0.24 | 0.20 | 0.79 | 3 |
| n-Pentane | 109-66-0 | 72.15 | 0.16 | 0.48 | 0.49 | 0.20 | 0.59 | 1 |
| n-Hexane | 110-54-3 | 86.17 | 0.087 | 0.31 | 0.26 | 0.20 | 0.70 | 3 |
| Methyl tert-butyl ether | 1634-04-4 | 88.15 | 0.080 | 0.29 | 0.24 | 0.20 | 0.72 | 3 |
| Tert-butyl alcohol | 75-65-0 | 74.12 | 0.14 | 0.44 | 0.43 | 0.20 | 0.61 | 2 |
| 1,1-Dichloroethane | 75-34-3 | 98.96 | 0.079 | 0.32 | 0.24 | 0.20 | 0.81 | 3 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 96.94 | 0.083 | 0.33 | 0.25 | 0.20 | 0.79 | 3 |
| Cyclohexane | 110-82-7 | 84.16 | 0.078 | 0.27 | 0.23 | 0.20 | 0.69 | 3 |
| Chloroform | 67-66-3 | 119.4 | 0.077 | 0.38 | 0.23 | 0.20 | 0.98 | 3 |
| Ethyl acetate | 141-78-6 | 88.11 | 0.11 | 0.40 | 0.33 | 0.20 | 0.72 | 2 |
| Carbon tetrachloride | 56-23-5 | 153.8 | 0.080 | 0.50 | 0.24 | 0.20 | 1.3 | 3 |
| Tetrahydrofuran | 109-99-9 | 72.11 | 0.11 | 0.31 | 0.32 | 0.20 | 0.59 | 2 |
| 1,1,1-Trichloroethane | 71-55-6 | 133.4 | 0.071 | 0.39 | 0.21 | 0.20 | 1.1 | 3 |
| Methyl ethyl ketone | 78-93-3 | 72.11 | 0.11 | 0.31 | 0.32 | 0.20 | 0.59 | 2 |
| n-Heptane | 142-82-5 | 100.2 | 0.090 | 0.37 | 0.27 | 0.20 | 0.82 | 2 |
| Benzene | 71-43-2 | 78.11 | 0.076 | 0.24 | 0.23 | 0.20 | 0.64 | 3 |
| 1,2-Dichloroethane | 107-06-2 | 98.96 | 0.079 | 0.32 | 0.24 | 0.20 | 0.81 | 3 |
| Trichloroethene | 79-01-6 | 131.4 | 0.064 | 0.34 | 0.19 | 0.20 | 1.1 | 3 |
| 2,2,4-Trimethylpentane | 540-84-1 | 114.2 | 0.085 | 0.40 | 0.26 | 0.20 | 0.93 | 3 |
| 1,2-Dichloropropane | 78-87-5 | 113 | 0.085 | 0.39 | 0.25 | 0.20 | 0.92 | 3 |
| Bromodichloromethane | 75-27-4 | 163.8 | 0.066 | 0.44 | 0.20 | 0.20 | 1.3 | 3 |
| Methyl methacrylate | 80-62-6 | 100.12 | 0.079 | 0.32 | 0.24 | 0.20 | 0.82 | 3 |
| 1,4-Dioxane | 123-91-1 | 88.12 | 0.092 | 0.33 | 0.28 | 0.20 | 0.72 | 2 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 111.0 | 0.070 | 0.32 | 0.21 | 0.20 | 0.91 | 3 |
| Toluene | 108-88-3 | 92.14 | 0.064 | 0.24 | 0.19 | 0.20 | 0.75 | 3 |
| Methyl isobutyl ketone | 108-10-1 | 100.2 | 0.11 | 0.43 | 0.32 | 0.20 | 0.82 | 2 |
| Tetrachloroethene | 127-18-4 | 165.8 | 0.063 | 0.43 | 0.19 | 0.20 | 1.4 | 3 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 111 | 0.077 | 0.35 | 0.23 | 0.20 | 0.91 | 3 |
| 1,1,2-Trichloroethane | 79-00-5 | 133.4 | 0.075 | 0.41 | 0.22 | 0.20 | 1.1 | 3 |
| Dibromochloromethane | 124-48-1 | 208.3 | 0.073 | 0.62 | 0.22 | 0.20 | 1.7 | 3 |
| 1,2-Dibromoethane | 106-93-4 | 187.9 | 0.067 | 0.52 | 0.20 | 0.20 | 1.5 | 3 |
| Methyl n-butyl ketone | 591-78-6 | 100.16 | 0.13 | 0.54 | 0.40 | 0.20 | 0.82 | 2 |
| n-Nonane | 111-84-2 | 128.2 | 0.10 | 0.52 | 0.30 | 0.20 | 1.0 | 2 |
| Chlorobenzene | 108-90-7 | 112.6 | 0.073 | 0.34 | 0.22 | 0.20 | 0.92 | 3 |
| Ethylbenzene | 100-41-4 | 106.2 | 0.067 | 0.29 | 0.20 | 0.20 | 0.9 | 3 |
| Xylenes (m&p) | 179601-23-1 | 106.2 | 0.15 | 0.64 | 0.44 | 0.40 | 1.74 | 3 |
| Xylene (o) | 79-34-5 | 167.9 | 0.073 | 0.50 | 0.22 | 0.20 | 1.4 | 3 |
| Styrene | 100-42-5 | 104.1 | 0.072 | 0.31 | 0.22 | 0.20 | 0.85 | 3 |
| Bromoform | 75-25-2 | 252.8 | 0.075 | 0.77 | 0.22 | 0.20 | 2.1 | 3 |
| Cumene (Isopropylbenzene) | 98-82-8 | 120.2 | 0.069 | 0.34 | 0.21 | 0.20 | 0.98 | 3 |
| n-Propyl benzene | 103-65-1 | 120.19 | 0.085 | 0.42 | 0.25 | 0.20 | 0.98 | 3 |
| 1,1,2,2-Tetrachloroethane | 95-47-6 | 106.2 | 0.069 | 0.30 | 0.21 | 0.20 | 0.87 | 3 |
| 4-Ethyltoluene | 622-96-8 | 120.2 | 0.090 | 0.44 | 0.27 | 0.20 | 0.98 | 2 |
| 2-Chlorotoluene | 95-49-8 | 126.6 | 0.077 | 0.40 | 0.23 | 0.20 | 1.0 | 3 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 120.2 | 0.076 | 0.37 | 0.23 | 0.20 | 0.98 | 3 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 120.2 | 0.080 | 0.39 | 0.24 | 0.20 | 0.98 | 3 |

# INTEGRATED ANALYTICAL LABORATORIES, LLC
# REPORTING METHOD DETECTION LIMIT (MDL) REPORT

Integrated Analytical Laboratories - Randolph, NJ

Matrix: Air
MDL Effective Date: 8/16/2023
Column ID: Restek RtX-VMS, 30 meter, 0.32mm ID, 1.8 um DF
Instrument ID: GC - Agilent 7890A / MS - Agilent 5975C (IAL ID: *Instrument AA* )
Analyst: Joe Waluliewicz
Report Prepared by: Joe Waluliewicz

| Compound Name | CAS # | Molecular Weight | MDL ppbv | MDL µg/m$^3$ | PQL ppbv | RL ppbv | RL µg/m$^3$ | True value/ MDL |
|---|---|---|---|---|---|---|---|---|
| 1,3-Dichlorobenzene | 541-73-1 | 147 | 0.086 | 0.52 | 0.26 | 0.20 | 1.2 | 3 |
| 1,4-Dichlorobenzene | 106-46-7 | 147.0 | 0.089 | 0.54 | 0.27 | 0.20 | 1.2 | 2 |
| Benzyl chloride | 100-44-7 | 126.6 | 0.064 | 0.33 | 0.19 | 0.20 | 1.0 | 3 |
| 1,2-Dichlorobenzene | 95-50-1 | 147.0 | 0.083 | 0.50 | 0.25 | 0.20 | 1.2 | 3 |
| 1,3-Hexachlorobutadiene | 87-68-3 | 260.8 | 0.096 | 1.03 | 0.29 | 0.20 | 2.1 | 2 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 181.5 | 0.12 | 0.89 | 0.36 | 0.20 | 1.5 | 2 |
| Naphthalene | 91-20-3 | 128 | 0.15 | 0.79 | 0.45 | 0.20 | 1.0 | 2 |

Where:
MDL is defined as the higher of the MDL Spike and MDL Blank
PQL is MDLx3
RL is defined as the lowest point of the calibration curve
ppbv is parts per billion by volume and is how results come off the instrument
µg/m$^3$ = ppbv x molecular weight / 24.45

Location of this file: P:\PAL Reports\LLTO-15 and TO-15 Common Files\Agilent MDL

Instrument used for Clean Canister Certification Analysis? YES

Michael Leftin, Ph.D.
Laboratory Director

Date: August 16, 2023

# INTEGRATED ANALYTICAL LABORATORIES, LLC
# METHOD DETECTION LIMIT VERIFICATION (MDLV) REPORT

Integrated Analytical Laboratories - Randolph, NJ

| | |
|---|---|
| Analysis Level: | 0.20 ppbv, 0.40 for m&p-xylenes |
| Matrix: | Air |
| Column ID: | RTX-VMS, 30-meter, 0.32 mm ID, 1.8 µm $d_f$ |
| Instrument Identification: | AA |
| Date of Verification Study: | 8/16/2023 |
| Study Identification File #: | aa3415rllcs |
| Analyst: | Joe Walukiewicz |
| Analysis/Processing Method: | C:\MSDCHEM\1\METHODS\230815.M |
| Cylinder ID: | EB0103704 |

Michael Leftin, Ph.D.
Laboratory Director

Date: August 16, 2023

| Compound Name | CAS # | MDLV (ppbv) | RL (ppbv) | RL/MDLV Ratio |
|---|---|---|---|---|
| Propene | 115-07-1 | 0.23 | 0.20 | 1 |
| Dichlorodifluoromethane | 124-48-1 | 0.24 | 0.20 | 1 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.26 | 0.20 | 1 |
| n-Butane | 106-97-8 | 0.23 | 0.20 | 1 |
| Chloromethane | 74-87-3 | 0.24 | 0.20 | 1 |
| Vinyl chloride | 75-01-4 | 0.26 | 0.20 | 1 |
| 1,3-Butadiene | 106-99-0 | 0.23 | 0.20 | 1 |
| Bromomethane | 74-83-9 | 0.23 | 0.20 | 1 |
| Chloroethane | 75-00-3 | 0.22 | 0.20 | 1 |
| Vinyl bromide | 593-60-2 | 0.23 | 0.20 | 1 |
| Trichlorofluoromethane | 75-69-4 | 0.26 | 0.20 | 1 |
| Ethanol | 64-17-5 | 0.30 | 0.20 | 2 |
| 1,1-Dichloroethene | 75-35-4 | 0.22 | 0.20 | 1 |
| Carbon disulfide | 75-15-0 | 0.22 | 0.20 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.27 | 0.20 | 1 |
| Acrolein | 107-02-8 | 0.24 | 0.20 | 1 |
| Allyl Chloride | 107-05-1 | 0.22 | 0.20 | 1 |
| Isopropanol | 67-63-0 | 0.20 | 0.20 | 1 |
| Methylene chloride | 75-09-2 | 0.35 | 0.20 | 2 |
| Acetone | 67-64-1 | 0.27 | 0.20 | 1 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.22 | 0.20 | 1 |
| n-Pentane | 109-66-0 | 0.25 | 0.20 | 1 |
| n-Hexane | 110-54-3 | 0.26 | 0.20 | 1 |
| Methyl tert-butyl ether | 1634-04-4 | 0.25 | 0.20 | 1 |
| Tert-butyl alcohol | 75-65-0 | 0.24 | 0.20 | 1 |
| 1,1-Dichloroethane | 75-34-3 | 0.24 | 0.20 | 1 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.21 | 0.20 | 1 |
| Cyclohexane | 110-82-7 | 0.24 | 0.20 | 1 |
| Chloroform | 67-66-3 | 0.23 | 0.20 | 1 |
| Ethyl acetate | 141-78-6 | 0.23 | 0.20 | 1 |
| Carbon tetrachloride | 56-23-5 | 0.26 | 0.20 | 1 |
| Tetrahydrofuran | 109-99-9 | 0.23 | 0.20 | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | 0.24 | 0.20 | 1 |
| Methyl ethyl ketone | 78-93-3 | 0.24 | 0.20 | 1 |
| n-Heptane | 142-82-5 | 0.23 | 0.20 | 1 |
| Benzene | 71-43-2 | 0.24 | 0.20 | 1 |
| 1,2-Dichloroethane | 106-93-4 | 0.23 | 0.20 | 1 |
| Trichloroethene | 79-01-6 | 0.25 | 0.20 | 1 |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.29 | 0.20 | 1 |
| 1,2-Dichloropropane | 78-87-5 | 0.26 | 0.20 | 1 |
| Bromodichloromethane | 75-27-4 | 0.28 | 0.20 | 1 |
| Methyl methacrylate | 80-62-6 | 0.22 | 0.20 | 1 |
| 1,4-Dioxane | 123-91-1 | 0.28 | 0.20 | 1 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.25 | 0.20 | 1 |
| Toluene | 108-88-3 | 0.24 | 0.20 | 1 |
| Methyl isobutyl ketone | 108-10-1 | 0.22 | 0.20 | 1 |
| Tetrachloroethene | 127-18-4 | 0.26 | 0.20 | 1 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.24 | 0.20 | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | 0.23 | 0.20 | 1 |
| Dibromochloromethane | 75-71-8 | 0.24 | 0.20 | 1 |
| 1,2-Dibromoethane | 107-06-2 | 0.22 | 0.20 | 1 |
| Methyl n-butyl ketone | 591-78-6 | 0.21 | 0.20 | 1 |

# INTEGRATED ANALYTICAL LABORATORIES, LLC
# METHOD DETECTION LIMIT VERIFICATION (MDLV) REPORT

Integrated Analytical Laboratories - Randolph, NJ

| | |
|---|---|
| Analysis Level: | 0.20 ppbv, 0.40 for m&p-xylenes |
| Matrix: | Air |
| Column ID: | RTX-VMS, 30-meter, 0.32 mm ID, 1.8 µm $d_f$ |
| Instrument Identification: | AA |
| Date of Verification Study: | 8/16/2023 |
| Study Identification File #: | aa3415rllcs |
| Analyst: | Joe Walukiewicz |
| Analysis/Processing Method: | C:\MSDCHEM\1\METHODS\230815.M |
| Cylinder ID: | EB0103704 |

Michael Leftin, Ph.D.
Laboratory Director

Date: August 16, 2023

| Compound Name | CAS # | MDLV (ppbv) | RL (ppbv) | RL/MDLV Ratio |
|---|---|---|---|---|
| n-Nonane | 111-84-2 | 0.21 | 0.20 | 1 |
| Chlorobenzene | 108-90-7 | 0.28 | 0.20 | 1 |
| Ethylbenzene | 100-41-4 | 0.26 | 0.20 | 1 |
| Xylenes (m&p) | 179601-23-1 | 0.54 | 0.40 | 1 |
| Xylene (o) | 95-47-6 | 0.26 | 0.20 | 1 |
| Styrene | 100-42-5 | 0.23 | 0.20 | 1 |
| Bromoform | 75-25-2 | 0.26 | 0.20 | 1 |
| Cumene | 98-82-8 | 0.24 | 0.20 | 1 |
| n-Propyl benzene | 103-65-1 | 0.25 | 0.20 | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.25 | 0.20 | 1 |
| 4-Ethyltoluene | 622-96-8 | 0.24 | 0.20 | 1 |
| 2-Chlorotoluene | 95-49-8 | 0.25 | 0.20 | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.24 | 0.20 | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.22 | 0.20 | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | 0.27 | 0.20 | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | 0.24 | 0.20 | 1 |
| Benzyl chloride | 100-44-7 | 0.17 | 0.20 | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | 0.25 | 0.20 | 1 |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.31 | 0.20 | 2 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.25 | 0.20 | 1 |
| Naphthalene | 91-20-3 | 0.28 | 0.20 | 1 |

# Section V: Quality Control Data Summary

**BFB Tune Summary**

**Method Blank**

**Laboratory Control Sample**

**Laboratory Sample Duplicate**

**Internal Standard Area Summary**

# BFB

**Data Path:** C:\DATA\2023\08-2023\08-15-2023\
**Data File:** AA3401BFB.D
**Acq On:** 8/15/2023 10:11:00AM
**Operator:** jls
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\230525.M
**Last Update:** Tue May 30 13:24:12 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 251499 | 18.7 |
| PASS | 75 | 95 | 30 | 66 | 703104 | 52.3 |
| PASS | 95 | 95 | 100 | 100 | 1345024 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 89525 | 6.7 |
| PASS | 173 | 174 | 0.00 | 2 | 8293 | 0.8 |
| PASS | 174 | 95 | 50 | 100 | 1069397 | 79.5 |
| PASS | 175 | 174 | 4 | 9 | 78181 | 7.3 |
| PASS | 176 | 174 | 93 | 101 | 1035413 | 96.8 |
| PASS | 177 | 176 | 5 | 9 | 68613 | 6.6 |

Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA3401BFB | NA | 8/15/2023 10:11:00 AM |
| 0.2 PPBV STD | AA3402STD05 | NA | 8/15/2023 11:15:00 AM |
| 10 PPBV STD | AA3404STD03 | NA | 8/15/2023 1:09:00 PM |
| 2 PPBV STD | AA3403STD04 | NA | 8/15/2023 1:45:00 PM |
| 20 PPBV STD | AA3405STD02 | NA | 8/15/2023 3:12:00 PM |
| 40 PPBV STD | AA3406STD01 | NA | 8/15/2023 4:47:00 PM |
| 10 PPBV ICVSS | AA3407ICVSS | NA | 8/15/2023 6:09:00 PM |

# BFB

**Data Path:** C:\DATA\2023\10-2023\10-02-2023\
**Data File:** AA4101BFB.D
**Acq On:** 10/2/2023 11:11:00AM
**Operator:** jjw
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\230815.M
**Last Update:** Wed Aug 16 10:00:51 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 199211 | 20.1 |
| PASS | 75 | 95 | 30 | 66 | 539733 | 54.5 |
| PASS | 95 | 95 | 100 | 100 | 990848 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 66717 | 6.7 |
| PASS | 173 | 174 | 0.00 | 2 | 6585 | 0.9 |
| PASS | 174 | 95 | 50 | 100 | 748288 | 75.5 |
| PASS | 175 | 174 | 4 | 9 | 56397 | 7.5 |
| PASS | 176 | 174 | 93 | 101 | 739904 | 98.9 |
| PASS | 177 | 176 | 5 | 9 | 48976 | 6.6 |

Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4101BFB | NA | 10/2/2023 11:11:00 AM |
| 10 PPBV DCVS | AA4102DCVS | NA | 10/2/2023 12:19:00 PM |
| 10 PPBV LCS | AA4103LCS | NA | 10/2/2023 12:50:00 PM |
| METHOD BLANK | AA4104BLK | NA | 10/2/2023 1:32:00 PM |
| 02 PPBV RLLCS | AA4105RLLCS | NA | 10/2/2023 2:08:00 PM |
| 3830 | AA4106 | NA | 10/2/2023 2:44:00 PM |
| 5087 | AA4107 | NA | 10/2/2023 3:14:00 PM |
| 2037 | AA4108 | NA | 10/2/2023 3:45:00 PM |
| 10 PPBV CCCVS | AA4125CCCVS | NA | 10/3/2023 12:49:00 AM |

# BFB

**Data Path:** C:\DATA\2023\10-2023\10-10-2023\

**Data File:** AA4131BFB.D

**Acq On:** 10/10/2023 10:13:00AM

**Operator:** jls

**Sample:** BFB

**Misc:** ALM018474

**ALS Vial:** 1 **Multiplier:** 1

**Integration File:** rteint.p

**Method:** C:\msdchem\1\METHODS\231009.M

**Last Update:** Tue Oct 10 09:54:56 2023

**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 65523 | 16.8 |
| PASS | 75 | 95 | 30 | 66 | 182571 | 46.8 |
| PASS | 95 | 95 | 100 | 100 | 389867 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 25643 | 6.6 |
| PASS | 173 | 174 | 0.00 | 2 | 0 | 0.0 |
| PASS | 174 | 95 | 50 | 100 | 293952 | 75.4 |
| PASS | 175 | 174 | 4 | 9 | 22269 | 7.6 |
| PASS | 176 | 174 | 93 | 101 | 282667 | 96.2 |
| PASS | 177 | 176 | 5 | 9 | 18629 | 6.6 |

Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4131BFB | NA | 10/10/2023 10:13:00 AM |
| 0.2 PPBV STD | AA4132STD05 | NA | 10/10/2023 10:40:00 AM |
| 2 PPBV STD | AA4133STD04 | NA | 10/10/2023 11:46:00 AM |
| 10 PPBV STANDARD STD | AA4134STD03 | NA | 10/10/2023 12:21:00 PM |
| 20 PPBV STD | AA4135STD02 | NA | 10/10/2023 12:55:00 PM |
| 40 PPBV STD | AA4136STD01 | NA | 10/10/2023 2:05:00 PM |
| 10 PPBV ICVSS | AA4137ICVSS | NA | 10/10/2023 4:48:00 PM |
| 10 PPBV LCS | AA4138LCS | NA | 10/10/2023 5:39:00 PM |
| METHOD BLANK | AA4139BLK | NA | 10/10/2023 6:07:00 PM |
| 02 PPBV RLLCS | AA4140RLLCS | NA | 10/10/2023 6:35:00 PM |
| 5101 | AA4142 | NA | 10/10/2023 7:36:00 PM |
| 4869 | AA4143 | NA | 10/10/2023 8:06:00 PM |
| 2157 | AA4144 | NA | 10/10/2023 8:36:00 PM |
| 10 PPBV CCCVS | AA4154CCCVS | NA | 10/11/2023 1:53:00 AM |

# BFB

**Data Path:** C:\DATA\2023\11-2023\11-03-2023\
**Data File:** AA4527BFB.D
**Acq On:** 11/3/2023 9:42:00AM
**Operator:** jjw
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\231009.M
**Last Update:** Tue Oct 10 15:12:35 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 181269 | 18.0 |
| PASS | 75 | 95 | 30 | 66 | 495573 | 49.1 |
| PASS | 95 | 95 | 100 | 100 | 1008683 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 66328 | 6.6 |
| PASS | 173 | 174 | 0.00 | 2 | 7271 | 0.9 |
| PASS | 174 | 95 | 50 | 100 | 784213 | 77.7 |
| PASS | 175 | 174 | 4 | 9 | 57285 | 7.3 |
| PASS | 176 | 174 | 93 | 101 | 752875 | 96.0 |
| PASS | 177 | 176 | 5 | 9 | 49968 | 6.6 |

Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4527BFB | NA | 11/3/2023 9:42:00 AM |
| 10 PPBV DCVS | AA4528DCVS | NA | 11/3/2023 10:14:00 AM |
| 10 PPBV LCS | AA4529LCS | NA | 11/3/2023 10:43:00 AM |
| METHOD BLANK | AA4530BLK | NA | 11/3/2023 11:41:00 AM |
| 02 PPBV RLLCS | AA4531RLLCS | NA | 11/3/2023 12:15:00 PM |
| 2902 | AA4532 | NA | 11/3/2023 1:01:00 PM |
| 10 PPBV CCCVS | AA4549CCCVS | NA | 11/3/2023 10:29:00 PM |

# BFB

**Data Path:** C:\DATA\2023\12-2023\12-08-2023\
**Data File:** AA4881BFB.D
**Acq On:** 12/8/2023 10:21:00AM
**Operator:** jjw
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\231009.M
**Last Update:** Tue Oct 10 15:12:35 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 185045 | 18.5 |
| PASS | 75 | 95 | 30 | 66 | 508523 | 50.7 |
| PASS | 95 | 95 | 100 | 100 | 1002688 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 66973 | 6.7 |
| PASS | 173 | 174 | 0.00 | 2 | 4685 | 0.6 |
| PASS | 174 | 95 | 50 | 100 | 744704 | 74.3 |
| PASS | 175 | 174 | 4 | 9 | 56251 | 7.6 |
| PASS | 176 | 174 | 93 | 101 | 716907 | 96.3 |
| PASS | 177 | 176 | 5 | 9 | 46309 | 6.5 |

Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4881BFB | NA | 12/8/2023 10:21:00 AM |
| 10 PPBV DCVS | AA4882DCVS | NA | 12/8/2023 10:50:00 AM |
| 10 PPBV LCS | AA4883LCS | NA | 12/8/2023 11:21:00 AM |
| METHOD BLANK | AA4884BLK | NA | 12/8/2023 12:26:00 PM |
| E23-05047-01 | AA4886 | SV1 | 12/8/2023 2:03:00 PM |
| E23-05047-02 | AA4887 | SV2 | 12/8/2023 2:35:00 PM |
| E23-05047-03 | AA4888 | SV3 | 12/8/2023 3:06:00 PM |
| E23-05047-04 | AA4889 | SV6 | 12/8/2023 3:42:00 PM |
| E23-05047-05 | AA4890 | SV7 | 12/8/2023 4:15:00 PM |

# BFB

**Data Path:** C:\DATA\2023\12-2023\12-11-2023\
**Data File:** AA4901BFB.D
**Acq On:** 12/11/2023 9:24:00AM
**Operator:** jjw
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\231009.M
**Last Update:** Tue Oct 10 15:12:35 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 267904 | 18.4 |
| PASS | 75 | 95 | 30 | 66 | 717035 | 49.1 |
| PASS | 95 | 95 | 100 | 100 | 1459371 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 91040 | 6.2 |
| PASS | 173 | 174 | 0.00 | 2 | 10848 | 1.0 |
| PASS | 174 | 95 | 50 | 100 | 1053269 | 72.2 |
| PASS | 175 | 174 | 4 | 9 | 81547 | 7.7 |
| PASS | 176 | 174 | 93 | 101 | 1021824 | 97.0 |
| PASS | 177 | 176 | 5 | 9 | 65264 | 6.4 |

Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4901BFB | NA | 12/11/2023 9:24:00 AM |
| 10 PPBV DCVS | AA4902DCVS | NA | 12/11/2023 10:26:00 AM |
| 10 PPBV LCS | AA4903LCS | NA | 12/11/2023 10:57:00 AM |
| METHOD BLANK | AA4904BLK | NA | 12/11/2023 11:51:00 AM |
| 02 PPBV RLLCS | AA4905RLLCS | NA | 12/11/2023 12:18:00 PM |
| 1458 | AA4906 | NA | 12/11/2023 12:50:00 PM |
| 1588 | AA4907 | NA | 12/11/2023 1:19:00 PM |
| 3012 | AA4908 | NA | 12/11/2023 1:49:00 PM |
| E23-05047-03 | AA4909 | SV3 | 12/11/2023 2:18:00 PM |
| E23-05047-04 | AA4910 | SV6 | 12/11/2023 2:50:00 PM |
| E23-05047-06 | AA4914 | SV8 | 12/11/2023 4:52:00 PM |
| E23-05047-06 | AA4915 | SV8 | 12/11/2023 5:43:00 PM |
| 10 PPBV CCCVS | AA4931CCCVS | NA | 12/12/2023 1:59:00 AM |

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4104BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **10/2/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4101BFB] | 10/02/2023 11:11 |
| 10 PPBV DCVS [AA4102DCVS] | 10/02/2023 12:19 |
| 10 PPBV LCS [AA4103LCS] | 10/02/2023 12:50 |
| METHOD BLANK [AA4104BLK] | 10/02/2023 13:32 |
| 02 PPBV RLLCS [AA4105RLLCS] | 10/02/2023 14:08 |
| 3830 [AA4106] | 10/02/2023 14:44 |
| 5087 [AA4107] | 10/02/2023 15:14 |
| 2037 [AA4108] | 10/02/2023 15:45 |
| 10 PPBV CCCVS [AA4125CCCVS] | 10/03/2023 0:49 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromodichloromethane | 75-27-4 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| Dibromochloromethane | 124-48-1 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.17 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.19 | ND |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.18 | ND |
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |
| n-Hexane | 110-54-3 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4104BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **10/2/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4101BFB] | 10/02/2023 11:11 |
| 10 PPBV DCVS [AA4102DCVS] | 10/02/2023 12:19 |
| 10 PPBV LCS [AA4103LCS] | 10/02/2023 12:50 |
| METHOD BLANK [AA4104BLK] | 10/02/2023 13:32 |
| 02 PPBV RLLCS [AA4105RLLCS] | 10/02/2023 14:08 |
| 3830 [AA4106] | 10/02/2023 14:44 |
| 5087 [AA4107] | 10/02/2023 15:14 |
| 2037 [AA4108] | 10/02/2023 15:45 |
| 10 PPBV CCCVS [AA4125CCCVS] | 10/03/2023 0:49 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Methylene chloride | 75-09-2 | 0.20 | ND |
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.17 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.17 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.20 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4530BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **11/3/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4527BFB] | 11/03/2023 9:42 |
| 10 PPBV DCVS [AA4528DCVS] | 11/03/2023 10:14 |
| 10 PPBV LCS [AA4529LCS] | 11/03/2023 10:43 |
| METHOD BLANK [AA4530BLK] | 11/03/2023 11:41 |
| 02 PPBV RLLCS [AA4531RLLCS] | 11/03/2023 12:15 |
| 2902 [AA4532] | 11/03/2023 13:01 |
| 10 PPBV CCCVS [AA4549CCCVS] | 11/03/2023 22:29 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromodichloromethane | 75-27-4 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| Dibromochloromethane | 124-48-1 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.17 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.19 | ND |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.18 | ND |
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |
| n-Hexane | 110-54-3 | 0.20 | ND |
| Methylene chloride | 75-09-2 | 0.20 | ND |
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4530BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **11/3/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4527BFB] | 11/03/2023 9:42 |
| 10 PPBV DCVS [AA4528DCVS] | 11/03/2023 10:14 |
| 10 PPBV LCS [AA4529LCS] | 11/03/2023 10:43 |
| METHOD BLANK [AA4530BLK] | 11/03/2023 11:41 |
| 02 PPBV RLLCS [AA4531RLLCS] | 11/03/2023 12:15 |
| 2902 [AA4532] | 11/03/2023 13:01 |
| 10 PPBV CCCVS [AA4549CCCVS] | 11/03/2023 22:29 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.17 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.17 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.20 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4884BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/8/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05047-01 [AA4886] | 12/08/2023 14:03 |
| E23-05047-02 [AA4887] | 12/08/2023 14:35 |
| E23-05047-03 [AA4888] | 12/08/2023 15:06 |
| E23-05047-04 [AA4889] | 12/08/2023 15:42 |
| E23-05047-05 [AA4890] | 12/08/2023 16:15 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.17 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.19 | ND |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.18 | ND |
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |
| n-Hexane | 110-54-3 | 0.20 | ND |
| Methylene chloride | 75-09-2 | 0.20 | ND |
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4884BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/8/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05047-01 [AA4886] | 12/08/2023 14:03 |
| E23-05047-02 [AA4887] | 12/08/2023 14:35 |
| E23-05047-03 [AA4888] | 12/08/2023 15:06 |
| E23-05047-04 [AA4889] | 12/08/2023 15:42 |
| E23-05047-05 [AA4890] | 12/08/2023 16:15 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.17 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.17 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.20 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4904BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/11/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05047-03 [AA4909] | 12/11/2023 14:18 |
| E23-05047-04 [AA4910] | 12/11/2023 14:50 |
| E23-05047-06 [AA4914] | 12/11/2023 16:52 |
| E23-05047-06 [AA4915] | 12/11/2023 17:43 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.17 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.19 | ND |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.18 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4904BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/11/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05047-03 [AA4909] | 12/11/2023 14:18 |
| E23-05047-04 [AA4910] | 12/11/2023 14:50 |
| E23-05047-06 [AA4914] | 12/11/2023 16:52 |
| E23-05047-06 [AA4915] | 12/11/2023 17:43 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |
| n-Hexane | 110-54-3 | 0.20 | ND |
| Methylene chloride | 75-09-2 | 0.20 | ND |
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.17 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.17 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.20 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4103LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 10/2/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4101BFB] | 10/02/2023 11:11 |
| 10 PPBV DCVS [AA4102DCVS] | 10/02/2023 12:19 |
| 10 PPBV LCS [AA4103LCS] | 10/02/2023 12:50 |
| METHOD BLANK [AA4104BLK] | 10/02/2023 13:32 |
| 02 PPBV RLLCS [AA4105RLLCS] | 10/02/2023 14:08 |
| 3830 [AA4106] | 10/02/2023 14:44 |
| 5087 [AA4107] | 10/02/2023 15:14 |
| 2037 [AA4108] | 10/02/2023 15:45 |
| 10 PPBV CCCVS [AA4125CCCVS] | 10/03/2023 0:49 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Acetone | 67-64-1 | 13 | 120 |
| Benzene | 71-43-2 | 11 | 110 |
| Bromodichloromethane | 75-27-4 | 11 | 100 |
| Bromoform | 75-25-2 | 11 | 100 |
| Bromomethane | 74-83-9 | 13 | 120 |
| 1,3-Butadiene | 106-99-0 | 12 | 120 |
| Chlorobenzene | 108-90-7 | 10 | 100 |
| Chloroethane | 75-00-3 | 12 | 120 |
| Chloroform | 67-66-3 | 11 | 110 |
| Chloromethane | 74-87-3 | 15 | 130 |
| Carbon disulfide | 75-15-0 | 14 | 130 |
| Carbon tetrachloride | 56-23-5 | 9.9 | 99 |
| Cyclohexane | 110-82-7 | 11 | 110 |
| Dibromochloromethane | 124-48-1 | 8.9 | 81 |
| 1,2-Dibromoethane | 106-93-4 | 8.6 | 78 |
| 1,2-Dichlorobenzene | 95-50-1 | 9.9 | 90 |
| 1,3-Dichlorobenzene | 541-73-1 | 9.7 | 88 |
| 1,4-Dichlorobenzene | 106-46-7 | 10 | 91 |
| Dichlorodifluoromethane | 75-71-8 | 13 | 120 |
| 1,1-Dichloroethane | 75-34-3 | 12 | 110 |
| 1,2-Dichloroethane | 107-06-2 | 11 | 110 |
| 1,1-Dichloroethene | 75-35-4 | 13 | 120 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 12 | 110 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 13 | 120 |
| 1,2-Dichloropropane | 78-87-5 | 9.6 | 96 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 9.7 | 88 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 9.8 | 99 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 10 | 91 |
| 1,4-Dioxane | 123-91-1 | 9.7 | 81 |
| Ethylbenzene | 100-41-4 | 9.7 | 97 |
| n-Heptane | 142-82-5 | 9.1 | 91 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4103LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 10/2/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4101BFB] | 10/02/2023 11:11 |
| 10 PPBV DCVS [AA4102DCVS] | 10/02/2023 12:19 |
| 10 PPBV LCS [AA4103LCS] | 10/02/2023 12:50 |
| METHOD BLANK [AA4104BLK] | 10/02/2023 13:32 |
| 02 PPBV RLLCS [AA4105RLLCS] | 10/02/2023 14:08 |
| 3830 [AA4106] | 10/02/2023 14:44 |
| 5087 [AA4107] | 10/02/2023 15:14 |
| 2037 [AA4108] | 10/02/2023 15:45 |
| 10 PPBV CCCVS [AA4125CCCVS] | 10/03/2023 0:49 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| 1,3-Hexachlorobutadiene | 87-68-3 | 10 | 88 |
| n-Hexane | 110-54-3 | 11 | 110 |
| Methylene chloride | 75-09-2 | 14 | 130 |
| Methyl ethyl ketone | 78-93-3 | 12 | 100 |
| Methyl isobutyl ketone | 108-10-1 | 8.5 | 77 |
| Methyl tert-butyl ether | 1634-04-4 | 11 | 100 |
| Styrene | 100-42-5 | 10 | 91 |
| Tert-butyl alcohol | 75-65-0 | 11 | 93 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 9.6 | 87 |
| Tetrachloroethene | 127-18-4 | 8.5 | 85 |
| Toluene | 108-88-3 | 8.5 | 85 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 11 | 96 |
| 1,1,1-Trichloroethane | 71-55-6 | 9.6 | 96 |
| 1,1,2-Trichloroethane | 79-00-5 | 8.4 | 76 |
| Trichloroethene | 79-01-6 | 9.3 | 93 |
| Trichlorofluoromethane | 75-69-4 | 12 | 110 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 9.6 | 96 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 9.8 | 89 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 9.7 | 88 |
| 2,2,4-Trimethylpentane | 540-84-1 | 13 | 130 |
| Vinyl bromide | 593-60-2 | 13 | 130 |
| Vinyl chloride | 75-01-4 | 14 | 130 |
| Xylenes (m&p) | 179601-23-1 | 21 | 110 |
| Xylenes (o) | 95-47-6 | 9.5 | 95 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4529LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 11/3/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4527BFB] | 11/03/2023 9:42 |
| 10 PPBV DCVS [AA4528DCVS] | 11/03/2023 10:14 |
| 10 PPBV LCS [AA4529LCS] | 11/03/2023 10:43 |
| METHOD BLANK [AA4530BLK] | 11/03/2023 11:41 |
| 02 PPBV RLLCS [AA4531RLLCS] | 11/03/2023 12:15 |
| 2902 [AA4532] | 11/03/2023 13:01 |
| 10 PPBV CCCVS [AA4549CCCVS] | 11/03/2023 22:29 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Acetone | 67-64-1 | 13 | 120 |
| Benzene | 71-43-2 | 11 | 110 |
| Bromodichloromethane | 75-27-4 | 12 | 110 |
| Bromoform | 75-25-2 | 11 | 100 |
| Bromomethane | 74-83-9 | 12 | 110 |
| 1,3-Butadiene | 106-99-0 | 11 | 110 |
| Chlorobenzene | 108-90-7 | 11 | 110 |
| Chloroethane | 75-00-3 | 13 | 130 |
| Chloroform | 67-66-3 | 12 | 120 |
| Chloromethane | 74-87-3 | 13 | 110 |
| Carbon disulfide | 75-15-0 | 12 | 110 |
| Carbon tetrachloride | 56-23-5 | 11 | 110 |
| Cyclohexane | 110-82-7 | 11 | 110 |
| Dibromochloromethane | 124-48-1 | 12 | 110 |
| 1,2-Dibromoethane | 106-93-4 | 12 | 110 |
| 1,2-Dichlorobenzene | 95-50-1 | 10 | 91 |
| 1,3-Dichlorobenzene | 541-73-1 | 11 | 100 |
| 1,4-Dichlorobenzene | 106-46-7 | 11 | 100 |
| Dichlorodifluoromethane | 75-71-8 | 12 | 110 |
| 1,1-Dichloroethane | 75-34-3 | 12 | 110 |
| 1,2-Dichloroethane | 107-06-2 | 13 | 130 |
| 1,1-Dichloroethene | 75-35-4 | 13 | 120 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 13 | 120 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 13 | 120 |
| 1,2-Dichloropropane | 78-87-5 | 11 | 110 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 11 | 100 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 12 | 120 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 10 | 91 |
| 1,4-Dioxane | 123-91-1 | 12 | 100 |
| Ethylbenzene | 100-41-4 | 10 | 100 |
| n-Heptane | 142-82-5 | 11 | 110 |
| 1,3-Hexachlorobutadiene | 87-68-3 | 10 | 88 |
| n-Hexane | 110-54-3 | 11 | 110 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4529LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 11/3/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4527BFB] | 11/03/2023 9:42 |
| 10 PPBV DCVS [AA4528DCVS] | 11/03/2023 10:14 |
| 10 PPBV LCS [AA4529LCS] | 11/03/2023 10:43 |
| METHOD BLANK [AA4530BLK] | 11/03/2023 11:41 |
| 02 PPBV RLLCS [AA4531RLLCS] | 11/03/2023 12:15 |
| 2902 [AA4532] | 11/03/2023 13:01 |
| 10 PPBV CCCVS [AA4549CCCVS] | 11/03/2023 22:29 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Methylene chloride | 75-09-2 | 10 | 91 |
| Methyl ethyl ketone | 78-93-3 | 12 | 100 |
| Methyl isobutyl ketone | 108-10-1 | 11 | 100 |
| Methyl tert-butyl ether | 1634-04-4 | 11 | 100 |
| Styrene | 100-42-5 | 11 | 100 |
| Tert-butyl alcohol | 75-65-0 | 12 | 100 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 10 | 91 |
| Tetrachloroethene | 127-18-4 | 12 | 120 |
| Toluene | 108-88-3 | 11 | 110 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 11 | 96 |
| 1,1,1-Trichloroethane | 71-55-6 | 11 | 110 |
| 1,1,2-Trichloroethane | 79-00-5 | 11 | 100 |
| Trichloroethene | 79-01-6 | 10 | 100 |
| Trichlorofluoromethane | 75-69-4 | 13 | 120 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 11 | 110 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 10 | 91 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 10.0 | 91 |
| 2,2,4-Trimethylpentane | 540-84-1 | 10.0 | 100 |
| Vinyl bromide | 593-60-2 | 12 | 120 |
| Vinyl chloride | 75-01-4 | 12 | 120 |
| Xylenes (m&p) | 179601-23-1 | 22 | 110 |
| Xylenes (o) | 95-47-6 | 9.9 | 99 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4883LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 12/8/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05047-01 [AA4886] | 12/08/2023 14:03 |
| E23-05047-02 [AA4887] | 12/08/2023 14:35 |
| E23-05047-03 [AA4888] | 12/08/2023 15:06 |
| E23-05047-04 [AA4889] | 12/08/2023 15:42 |
| E23-05047-05 [AA4890] | 12/08/2023 16:15 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Acetone | 67-64-1 | 11 | 100 |
| Benzene | 71-43-2 | 9.3 | 93 |
| Bromoform | 75-25-2 | 11 | 100 |
| Bromomethane | 74-83-9 | 11 | 100 |
| 1,3-Butadiene | 106-99-0 | 9.9 | 99 |
| Chlorobenzene | 108-90-7 | 9.9 | 99 |
| Chloroethane | 75-00-3 | 11 | 110 |
| Chloroform | 67-66-3 | 10.0 | 100 |
| Chloromethane | 74-87-3 | 12 | 100 |
| Carbon disulfide | 75-15-0 | 11 | 100 |
| Carbon tetrachloride | 56-23-5 | 10 | 100 |
| Cyclohexane | 110-82-7 | 10 | 100 |
| 1,2-Dibromoethane | 106-93-4 | 11 | 100 |
| 1,2-Dichlorobenzene | 95-50-1 | 9.7 | 88 |
| 1,3-Dichlorobenzene | 541-73-1 | 9.8 | 89 |
| 1,4-Dichlorobenzene | 106-46-7 | 9.6 | 87 |
| Dichlorodifluoromethane | 75-71-8 | 11 | 100 |
| 1,1-Dichloroethane | 75-34-3 | 9.4 | 85 |
| 1,2-Dichloroethane | 107-06-2 | 11 | 110 |
| 1,1-Dichloroethene | 75-35-4 | 11 | 100 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 10 | 91 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 11 | 100 |
| 1,2-Dichloropropane | 78-87-5 | 11 | 110 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 11 | 100 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 12 | 120 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 9.0 | 82 |
| 1,4-Dioxane | 123-91-1 | 12 | 100 |
| Ethylbenzene | 100-41-4 | 10 | 100 |
| n-Heptane | 142-82-5 | 11 | 110 |
| 1,3-Hexachlorobutadiene | 87-68-3 | 10.0 | 88 |
| n-Hexane | 110-54-3 | 10.0 | 100 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4883LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 12/8/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05047-01 [AA4886] | 12/08/2023 14:03 |
| E23-05047-02 [AA4887] | 12/08/2023 14:35 |
| E23-05047-03 [AA4888] | 12/08/2023 15:06 |
| E23-05047-04 [AA4889] | 12/08/2023 15:42 |
| E23-05047-05 [AA4890] | 12/08/2023 16:15 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Methylene chloride | 75-09-2 | 9.5 | 86 |
| Methyl ethyl ketone | 78-93-3 | 10 | 85 |
| Methyl isobutyl ketone | 108-10-1 | 12 | 110 |
| Methyl tert-butyl ether | 1634-04-4 | 10 | 91 |
| Styrene | 100-42-5 | 10 | 91 |
| Tert-butyl alcohol | 75-65-0 | 11 | 93 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 10 | 91 |
| Tetrachloroethene | 127-18-4 | 11 | 110 |
| Toluene | 108-88-3 | 10 | 100 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 10 | 88 |
| 1,1,1-Trichloroethane | 71-55-6 | 10 | 100 |
| 1,1,2-Trichloroethane | 79-00-5 | 10 | 91 |
| Trichloroethene | 79-01-6 | 9.3 | 93 |
| Trichlorofluoromethane | 75-69-4 | 11 | 100 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 9.2 | 92 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 10.0 | 91 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 10 | 91 |
| 2,2,4-Trimethylpentane | 540-84-1 | 10 | 100 |
| Vinyl bromide | 593-60-2 | 10 | 100 |
| Vinyl chloride | 75-01-4 | 10 | 100 |
| Xylenes (m&p) | 179601-23-1 | 21 | 110 |
| Xylenes (o) | 95-47-6 | 9.9 | 99 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4903LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 12/11/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05047-03 [AA4909] | 12/11/2023 14:18 |
| E23-05047-04 [AA4910] | 12/11/2023 14:50 |
| E23-05047-06 [AA4914] | 12/11/2023 16:52 |
| E23-05047-06 [AA4915] | 12/11/2023 17:43 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Acetone | 67-64-1 | 11 | 100 |
| Benzene | 71-43-2 | 9.5 | 95 |
| Bromoform | 75-25-2 | 11 | 100 |
| Bromomethane | 74-83-9 | 10 | 91 |
| 1,3-Butadiene | 106-99-0 | 10 | 100 |
| Chlorobenzene | 108-90-7 | 10 | 100 |
| Chloroethane | 75-00-3 | 11 | 110 |
| Chloroform | 67-66-3 | 10 | 100 |
| Chloromethane | 74-87-3 | 11 | 96 |
| Carbon disulfide | 75-15-0 | 11 | 100 |
| Carbon tetrachloride | 56-23-5 | 10 | 100 |
| Cyclohexane | 110-82-7 | 10 | 100 |
| 1,2-Dibromoethane | 106-93-4 | 11 | 100 |
| 1,2-Dichlorobenzene | 95-50-1 | 10 | 91 |
| 1,3-Dichlorobenzene | 541-73-1 | 10 | 91 |
| 1,4-Dichlorobenzene | 106-46-7 | 10 | 91 |
| Dichlorodifluoromethane | 75-71-8 | 11 | 100 |
| 1,1-Dichloroethane | 75-34-3 | 9.8 | 89 |
| 1,2-Dichloroethane | 107-06-2 | 11 | 110 |
| 1,1-Dichloroethene | 75-35-4 | 11 | 100 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 10 | 91 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 11 | 100 |
| 1,2-Dichloropropane | 78-87-5 | 10 | 100 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 11 | 100 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 11 | 110 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 8.8 | 80 |
| 1,4-Dioxane | 123-91-1 | 11 | 92 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4903LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 12/11/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05047-03 [AA4909] | 12/11/2023 14:18 |
| E23-05047-04 [AA4910] | 12/11/2023 14:50 |
| E23-05047-06 [AA4914] | 12/11/2023 16:52 |
| E23-05047-06 [AA4915] | 12/11/2023 17:43 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Ethylbenzene | 100-41-4 | 11 | 110 |
| n-Heptane | 142-82-5 | 11 | 110 |
| 1,3-Hexachlorobutadiene | 87-68-3 | 10 | 88 |
| n-Hexane | 110-54-3 | 10 | 100 |
| Methylene chloride | 75-09-2 | 9.6 | 87 |
| Methyl ethyl ketone | 78-93-3 | 11 | 93 |
| Methyl isobutyl ketone | 108-10-1 | 12 | 110 |
| Methyl tert-butyl ether | 1634-04-4 | 11 | 100 |
| Styrene | 100-42-5 | 11 | 100 |
| Tert-butyl alcohol | 75-65-0 | 11 | 93 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 11 | 100 |
| Tetrachloroethene | 127-18-4 | 11 | 110 |
| Toluene | 108-88-3 | 10 | 100 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 11 | 96 |
| 1,1,1-Trichloroethane | 71-55-6 | 10 | 100 |
| 1,1,2-Trichloroethane | 79-00-5 | 10 | 91 |
| Trichloroethene | 79-01-6 | 9.1 | 91 |
| Trichlorofluoromethane | 75-69-4 | 11 | 100 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 9.4 | 94 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 11 | 100 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 11 | 100 |
| 2,2,4-Trimethylpentane | 540-84-1 | 10 | 100 |
| Vinyl bromide | 593-60-2 | 10 | 100 |
| Vinyl chloride | 75-01-4 | 11 | 110 |
| Xylenes (m&p) | 179601-23-1 | 22 | 110 |
| Xylenes (o) | 95-47-6 | 10 | 100 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 9/13/23 |
| SDG Number: | E23-04122 | Date Analyzed: | 9/28/23,9/28/23 |
| IAL Sample ID: | E23-04122-06 | Lab Data File#: | AA4087,AA4088 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 1781 | Injection Volume: | 50ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-04122-06** | | **E23-04122-26** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Acetone | 67-64-1 | **50** | | **54** | | 4.0 | **-7.69%** |
| Allyl Chloride | 107-05-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Benzene | 71-43-2 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| Bromodichloromethane | 75-27-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Bromoform | 75-25-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Bromomethane | 74-83-9 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3-Butadiene | 106-99-0 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chlorobenzene | 108-90-7 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chloroethane | 75-00-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chloroform | 67-66-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chloromethane | 74-87-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Carbon disulfide | 75-15-0 | **10.0** | | **11** | | 4.0 | **-9.52%** |
| Carbon tetrachloride | 56-23-5 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 2-Chlorotoluene | 95-49-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Cyclohexane | 110-82-7 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Dibromochloromethane | 124-48-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dibromoethane | 106-93-4 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,2-Dichlorobenzene | 95-50-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3-Dichlorobenzene | 541-73-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,4-Dichlorobenzene | 106-46-7 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Dichlorodifluoromethane | 75-71-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1-Dichloroethane | 75-34-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloroethane | 107-06-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1-Dichloroethene | 75-35-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloroethene (cis) | 156-59-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloroethene (trans) | 156-60-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloropropane | 78-87-5 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Ethylbenzene | 100-41-4 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 4-Ethyltoluene | 622-96-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| n-Heptane | 142-82-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3-Hexachlorobutadiene | 87-68-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| n-Hexane | 110-54-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Methylene chloride | 75-09-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Methyl ethyl ketone | 78-93-3 | **8.1** | | **10** | | 4.0 | **-20.99%** |
| Methyl isobutyl ketone | 108-10-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 9/13/23 |
| SDG Number: | E23-04122 | Date Analyzed: | 9/28/23,9/28/23 |
| IAL Sample ID: | E23-04122-06 | Lab Data File#: | AA4087,AA4088 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 1781 | Injection Volume: | 50ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-04122-06** | | **E23-04122-26** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Methyl tert-butyl ether | 1634-04-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Styrene | 100-42-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Tert-butyl alcohol | 75-65-0 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Tetrachloroethene | 127-18-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Toluene | 108-88-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2,4-Trichlorobenzene | 120-82-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,1-Trichloroethane | 71-55-6 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,2-Trichloroethane | 79-00-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Trichloroethene | 79-01-6 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| Trichlorofluoromethane | 75-69-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2,4-Trimethylbenzene | 95-63-6 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3,5-Trimethylbenzene | 108-67-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 2,2,4-Trimethylpentane | 540-84-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Vinyl bromide | 593-60-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Vinyl chloride | 75-01-4 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| Xylenes (m&p) | 179601-23-1 | 4.0 | U | **4.2** | | 4.0 | **NC** |
| Xylenes (o) | 95-47-6 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |

**RPD must be <25% for all laboratory duplicate samples. Laboratory duplicate samples are run once daily.**
**NC = The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample.**

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 11/1/23 |
| SDG Number: | E23-04828 | Date Analyzed: | 11/3/23,11/3/23 |
| IAL Sample ID: | E23-04828-06 | Lab Data File#: | AA4537,AA4538 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 2883 | Injection Volume: | 500ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-04828-06** | | **E23-04828-26** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Acetone | 67-64-1 | **16** | | **16** | | 0.40 | **0.00%** |
| Allyl Chloride | 107-05-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Benzene | 71-43-2 | **0.31** | | **0.30** | | 0.20 | **3.28%** |
| Bromodichloromethane | 75-27-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Bromoform | 75-25-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Bromomethane | 74-83-9 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Butadiene | 106-99-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chlorobenzene | 108-90-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloroethane | 75-00-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloroform | 67-66-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloromethane | 74-87-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Carbon disulfide | 75-15-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Carbon tetrachloride | 56-23-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 2-Chlorotoluene | 95-49-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Cyclohexane | 110-82-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Dibromochloromethane | 124-48-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dibromoethane | 106-93-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorobenzene | 95-50-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Dichlorobenzene | 541-73-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,4-Dichlorobenzene | 106-46-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Dichlorodifluoromethane | 75-71-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1-Dichloroethane | 75-34-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethane | 107-06-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1-Dichloroethene | 75-35-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Ethylbenzene | 100-41-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 4-Ethyltoluene | 622-96-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| n-Heptane | 142-82-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| n-Hexane | 110-54-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Methylene chloride | 75-09-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Methyl ethyl ketone | 78-93-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Methyl isobutyl ketone | 108-10-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

SDG Number: E23-04828
IAL Sample ID: E23-04828-06
Matrix: Air
Summa ID: 2883

Date Received: 11/1/23
Date Analyzed: 11/3/23,11/3/23
Lab Data File#: AA4537,AA4538
Dilution Factor: 1
Injection Volume: 500ml
GC/MS Column: RTX-1, 0.32 mmID

| Compound | CAS # | Sample E23-04828-06 Concentration Reported ppbv | Q | Sample Dup E23-04828-26 Concentration Reported ppbv | Q | Reporting Limits ppbv | RPD |
|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | 1634-04-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Styrene | 100-42-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Tert-butyl alcohol | 75-65-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Tetrachloroethene | 127-18-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Toluene | 108-88-3 | **0.47** | | **0.43** | | 0.40 | **8.89%** |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,1-Trichloroethane | 71-55-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2-Trichloroethane | 79-00-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Trichloroethene | 79-01-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Trichlorofluoromethane | 75-69-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | **1.8** | X | **1.3** | X | 0.40 | **32.26%** |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Vinyl bromide | 593-60-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Vinyl chloride | 75-01-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Xylenes (m&p) | 179601-23-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Xylenes (o) | 95-47-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |

**RPD must be <25% for all laboratory duplicate samples. Laboratory duplicate samples are run once daily.**
**NC = The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample.**

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

SDG Number: E23-05061
IAL Sample ID: E23-05061-03
Matrix: Air
Summa ID: 3045a

Date Received: 11/17/23
Date Analyzed: 12/7/23,12/7/23
Lab Data File#: AA4869,AA4870
Dilution Factor: 1
Injection Volume: 500ml
GC/MS Column: RTX-1, 0.32 mmID

| Compound | CAS # | Sample E23-05061-03 Concentration Reported ppbv | Q | Sample Dup E23-05061-23 Concentration Reported ppbv | Q | Reporting Limits ppbv | RPD |
|---|---|---|---|---|---|---|---|
| Acetone | 67-64-1 | **11** | | **11** | | 0.20 | **0.00%** |
| Allyl Chloride | 107-05-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Benzene | 71-43-2 | **2.6** | | **2.3** | | 0.20 | **12.24%** |
| Bromodichloromethane | 75-27-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Bromoform | 75-25-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Bromomethane | 74-83-9 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Butadiene | 106-99-0 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Chlorobenzene | 108-90-7 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Chloroethane | 75-00-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Chloroform | 67-66-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Chloromethane | 74-87-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Carbon disulfide | 75-15-0 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Carbon tetrachloride | 56-23-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 2-Chlorotoluene | 95-49-8 | 0.20 | U | **0.27** | | 0.20 | **NC** |
| Cyclohexane | 110-82-7 | **3.9** | | **3.4** | | 0.20 | **13.70%** |
| Dibromochloromethane | 124-48-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dibromoethane | 106-93-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,4-Dioxane | 123-91-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Ethanol | 64-17-5 | **10** | | 0.20 | U | 0.20 | **NC** |
| Ethylbenzene | 100-41-4 | **1.9** | | **1.6** | | 0.20 | **17.14%** |
| 4-Ethyltoluene | 622-96-8 | **1.9** | X | **1.4** | X | 0.20 | **30.30%** |
| n-Heptane | 142-82-5 | **3.7** | | **3.4** | | 0.20 | **8.45%** |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| n-Hexane | 110-54-3 | **4.4** | | **3.8** | | 0.20 | **14.63%** |
| Isopropanol | 67-63-0 | **2.7** | | 0.20 | U | 0.20 | **NC** |

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**INTEGRATED ANALYTICAL LABORATORIES, LLC**

***Integrated Analytical Laboratories LLC***

**Analysis: Volatile Organic Compounds by EPA Method TO-15**

**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 11/17/23 |
| SDG Number: | E23-05061 | Date Analyzed: | 12/7/23,12/7/23 |
| IAL Sample ID: | E23-05061-03 | Lab Data File#: | AA4869,AA4870 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 3045a | Injection Volume: | 500ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-05061-03** | | **E23-05061-23** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Methylene chloride | 75-09-2 | **2.8** | | 0.20 | U | 0.20 | **NC** |
| Methyl ethyl ketone | 78-93-3 | **0.85** | | **0.83** | | 0.20 | **2.38%** |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | U | **0.24** | | 0.20 | **NC** |
| Methyl methacrylate | 80-62-6 | 0.20 | U | **3.4** | | 0.20 | **NC** |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Styrene | 100-42-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Tert-butyl alcohol | 75-65-0 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Tetrachloroethene | 127-18-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Tetrahydrofuran | 109-99-9 | **0.96** | | **0.90** | | 0.20 | **6.45%** |
| Toluene | 108-88-3 | **7.1** | | **7.1** | | 0.20 | **0.00%** |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1,1-Trichloroethane | 71-55-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Trichloroethene | 79-01-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Trichlorofluoromethane | 75-69-4 | **0.33** | | **0.33** | | 0.20 | **0.00%** |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2,4-Trimethylbenzene | 95-63-6 | **1.9** | | **1.5** | | 0.20 | **23.53%** |
| 1,3,5-Trimethylbenzene | 108-67-8 | **0.53** | | **0.45** | | 0.20 | **16.33%** |
| 2,2,4-Trimethylpentane | 540-84-1 | **6.9** | | **7.0** | | 0.20 | **-1.44%** |
| Vinyl bromide | 593-60-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Vinyl chloride | 75-01-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Xylenes (m&p) | 179601-23-1 | **7.0** | | **5.9** | | 0.40 | **17.05%** |
| Xylenes (o) | 95-47-6 | **2.3** | | **2.0** | | 0.20 | **13.95%** |

**RPD must be <25% for all laboratory duplicate samples. Laboratory duplicate samples are run once daily.**

**NC = The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample.**

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 11/20/23 |
| SDG Number: | E23-05079 | Date Analyzed: | 12/12/23,12/12/23 |
| IAL Sample ID: | E23-05079-03 | Lab Data File#: | AA4929,AA4930 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 3830 | Injection Volume: | 500ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-05079-03** | | **E23-05079-23** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Acetone | 67-64-1 | **6.1** | | **5.9** | | 0.40 | **3.33%** |
| Allyl Chloride | 107-05-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Benzene | 71-43-2 | **0.31** | | **0.32** | | 0.20 | **-3.17%** |
| Bromodichloromethane | 75-27-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Bromoform | 75-25-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Bromomethane | 74-83-9 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Butadiene | 106-99-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chlorobenzene | 108-90-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloroethane | 75-00-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloroform | 67-66-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloromethane | 74-87-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Carbon disulfide | 75-15-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Carbon tetrachloride | 56-23-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 2-Chlorotoluene | 95-49-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Cyclohexane | 110-82-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Dibromochloromethane | 124-48-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dibromoethane | 106-93-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorobenzene | 95-50-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Dichlorobenzene | 541-73-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,4-Dichlorobenzene | 106-46-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Dichlorodifluoromethane | 75-71-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1-Dichloroethane | 75-34-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethane | 107-06-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1-Dichloroethene | 75-35-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Ethylbenzene | 100-41-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 4-Ethyltoluene | 622-96-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| n-Heptane | 142-82-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| n-Hexane | 110-54-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Methylene chloride | 75-09-2 | **3.5** | | **3.4** | | 0.40 | **2.90%** |
| Methyl ethyl ketone | 78-93-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Methyl isobutyl ketone | 108-10-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 11/20/23 |
| SDG Number: | E23-05079 | Date Analyzed: | 12/12/23,12/12/23 |
| IAL Sample ID: | E23-05079-03 | Lab Data File#: | AA4929,AA4930 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 3830 | Injection Volume: | 500ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| Compound | CAS # | Sample E23-05079-03 Concentration Reported ppbv | Q | Sample Dup E23-05079-23 Concentration Reported ppbv | Q | Reporting Limits ppbv | RPD |
|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | 1634-04-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Styrene | 100-42-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Tert-butyl alcohol | 75-65-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Tetrachloroethene | 127-18-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Toluene | 108-88-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,1-Trichloroethane | 71-55-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2-Trichloroethane | 79-00-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Trichloroethene | 79-01-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Trichlorofluoromethane | 75-69-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Vinyl bromide | 593-60-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Vinyl chloride | 75-01-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Xylenes (m&p) | 179601-23-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Xylenes (o) | 95-47-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |

**RPD must be <25% for all laboratory duplicate samples. Laboratory duplicate samples are run once daily.**
**NC = The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample.**

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

## Initial Calibration Curve Internal Standard Area and Retention Time Summary

**Instrument:** AA **ICAL Date:** 8/15/2023

| | | BROMOCHLOROMETHANE | | | | 1,4-DIFLUOROBENZENE | | | | D-5 CHLOROBENZENE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Area # | | RT | | Area # | | RT | | Area # | | RT | |
| AVERAGE OF CALIBRATION STANDARDS | | 520465 | | 4.395 | | 2280663 | | 5.455 | | 2627605 | | 8.318 | |
| UPPER LIMIT | | 728651 | | 4.725 | | 3192928 | | 5.785 | | 3678646 | | 8.648 | |
| LOWER LIMIT | | 312279 | | 4.065 | | 1368398 | | 5.125 | | 1576563 | | 7.988 | |
| Lab ID | | Area # | % | RT | +/- | Area # | % | RT | +/- | Area # | % | RT | +/- |
| 40 PPBV STD | AA 3406 STD01 | 487271 | -6.38 | 4.406 | 0.01 | 2425798 | 6.36 | 5.457 | 0.00 | 2732166 | 3.98 | 8.319 | 0.00 |
| 20 PPBV STD | AA 3405 STD02 | 499473 | -4.03 | 4.399 | 0.00 | 2278768 | -0.08 | 5.457 | 0.00 | 2812211 | 7.03 | 8.319 | 0.00 |
| 10 PPBV STD | AA 3404 STD03 | 530723 | 1.97 | 4.396 | 0.00 | 2268530 | -0.53 | 5.457 | 0.00 | 2737620 | 4.19 | 8.319 | 0.00 |
| 2 PPBV STD | AA 3403 STD04 | 541075 | 3.96 | 4.393 | 0.00 | 2325427 | 1.96 | 5.454 | 0.00 | 2787489 | 6.08 | 8.319 | 0.00 |
| 0.2 PPBV STD | AA 3402 STD05 | 543782 | 4.48 | 4.380 | -0.01 | 2104790 | -7.71 | 5.448 | 0.01 | 2068537 | -21.28 | 8.316 | 0.00 |
| ICVSS | AA 3407 ICVSS | 614925 | 18.15 | 4.396 | 0.00 | 2660514 | 16.66 | 5.454 | 0.00 | 3151139 | 19.92 | 8.319 | 0.00 |

Difference of Internal Area must be within +/- 40%; Retention Times must be within +/- 0.33 minute.

* Values outsite QC limits.

# Internal Standard Area and Retention Time Summary

**Lab File ID (Standard):** AA4102DCVS **Date Analyzed:** 10/2/2023

**Instrument:** AA **ICAL Date:** 8/15/2023

| | | | BROMOCHLOROMETHANE | | | | 1,4-DIFLUOROBENZENE | | | | D-5 CHLOROBENZENE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Area # | | RT | | Area # | | RT | | Area # | | RT | |
| | CALIBRATION STANDARD | | 421448 | | 4.386 | | 1774693 | | 5.447 | | 1689020 | | 8.315 | |
| | UPPER LIMIT | | 590027 | | 4.72 | | 2484570 | | 5.78 | | 2364628 | | 8.65 | |
| | LOWER LIMIT | | 252869 | | 4.06 | | 1064816 | | 5.12 | | 1013412 | | 7.99 | |
| Lab ID | | DF | Area # | % | RT | +/- | Area # | % | RT | +/- | Area # | % | RT | +/- |
| Method Blank | AA4104BLK | 1.0 | 331240 | -21.40 | 4.377 | -0.01 | 1219678 | -31.27 | 5.444 | 0.00 | 1233959 | -26.94 | 8.316 | 0.00 |
| Reporting Limit Laboratory Control Standard | AA4105RLLCS | 1.0 | 418465 | -0.71 | 4.383 | 0.00 | 1618964 | -8.77 | 5.448 | 0.00 | 1530070 | -9.41 | 8.316 | 0.00 |
| 3830 | AA4106 | 1.0 | 388357 | -7.85 | 4.380 | -0.01 | 1396568 | -21.31 | 5.447 | 0.00 | 1337662 | -20.80 | 8.316 | 0.00 |
| 5087 | AA4107 | 1.0 | 509711 | 20.94 | 4.393 | 0.01 | 2144733 | 20.85 | 5.454 | 0.01 | 2201740 | 30.36 | 8.319 | 0.00 |
| 2037 | AA4108 | 1.0 | 333630 | -20.84 | 4.383 | 0.00 | 1375928 | -22.47 | 5.447 | 0.00 | 1301571 | -22.94 | 8.316 | 0.00 |
| Closing Calibration | AA4125CCCVS | 1.0 | 369891 | -12.23 | 4.400 | 0.01 | 1759193 | -0.87 | 5.457 | 0.01 | 2197381 | 30.10 | 8.316 | 0.00 |

Difference of Internal Area must be within +/- 40%; Retention Times must be within +/- 0.33 minute.
* Values outsite QC limits.

## Initial Calibration Curve Internal Standard Area and Retention Time Summary

**Instrument:** AA **ICAL Date:** 10/10/2023

| | | BROMOCHLOROMETHANE | | | | 1,4-DIFLUOROBENZENE | | | | D-5 CHLOROBENZENE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Area # | | RT | | Area # | | RT | | Area # | | RT | |
| AVERAGE OF CALIBRATION STANDARDS | | 343159 | | 4.390 | | 1499624 | | 5.451 | | 1637040 | | 8.316 | |
| UPPER LIMIT | | 480423 | | 4.720 | | 2099474 | | 5.781 | | 2291856 | | 8.646 | |
| LOWER LIMIT | | 205896 | | 4.060 | | 899774 | | 5.121 | | 982224 | | 7.986 | |
| Lab ID | | Area # | % | RT | +/- | Area # | % | RT | +/- | Area # | % | RT | +/- |
| 40 PPBV STD | AA 4136 STD01 | 356266 | 3.82 | 4.400 | 0.01 | 1769398 | 17.99 | 5.458 | -0.01 | 1970985 | 20.40 | 8.319 | 0.00 |
| 20 PPBV STD | AA 4135 STD02 | 363381 | 5.89 | 4.397 | 0.01 | 1661895 | 10.82 | 5.455 | 0.00 | 1933627 | 18.12 | 8.316 | 0.00 |
| 10 PPBV STD | AA 4134 STD03 | 393970 | 14.81 | 4.394 | 0.00 | 1695876 | 13.09 | 5.452 | 0.00 | 1964329 | 19.99 | 8.316 | 0.00 |
| 2 PPBV STD | AA 4133 STD04 | 266219 | -22.42 | 4.378 | -0.01 | 1004403 | -33.02 | 5.445 | 0.01 | 1028709 | -37.16 | 8.313 | 0.00 |
| 0.2 PPBV STD | AA 4132 STD05 | 335961 | -2.10 | 4.380 | -0.01 | 1366548 | -8.87 | 5.444 | 0.01 | 1287551 | -21.35 | 8.316 | 0.00 |
| ICVSS | AA 4137 ICVSS | 450439 | 31.26 | 4.394 | 0.00 | 1936760 | 29.15 | 5.451 | 0.00 | 2279414 | 39.24 | 8.316 | 0.00 |

Difference of Internal Area must be within +/- 40%; Retention Times must be within +/- 0.33 minute.

* Values outsite QC limits.

# Internal Standard Area and Retention Time Summary

**Lab File ID (Standard):** AA4528DCVS **Date Analyzed:** 11/3/2023

**Instrument:** AA **ICAL Date:** 10/10/2023

| | | | BROMOCHLOROMETHANE | | | | 1,4-DIFLUOROBENZENE | | | | D-5 CHLOROBENZENE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Area # | | RT | | Area # | | RT | | Area # | | RT | |
| | CALIBRATION STANDARD | | 402106 | | 4.393 | | 1842775 | | 5.454 | | 2190337 | | 8.316 | |
| | UPPER LIMIT | | 562948 | | 4.72 | | 2579885 | | 5.78 | | 3066472 | | 8.65 | |
| | LOWER LIMIT | | 241264 | | 4.06 | | 1105665 | | 5.12 | | 1314202 | | 7.99 | |
| Lab ID | | DF | Area # | % | RT | +/- | Area # | % | RT | +/- | Area # | % | RT | +/- |
| Method Blank | AA4530BLK | 1.0 | 489033 | 21.62 | 4.391 | 0.00 | 2096750 | 13.78 | 5.448 | -0.01 | 2579796 | 17.78 | 8.316 | 0.00 |
| Reporting Limit Laboratory Control Standard | AA4531RLLCS | 1.0 | 350931 | -12.73 | 4.381 | -0.01 | 1369799 | -25.67 | 5.442 | -0.01 | 1343426 | -38.67 | 8.316 | 0.00 |
| 2902 | AA4532 | 1.0 | 411812 | 2.41 | 4.377 | -0.02 | 1437377 | -22.00 | 5.445 | -0.01 | 1386432 | -36.70 | 8.313 | 0.00 |
| Closing Calibration | AA4549CCCVS | 1.0 | 430912 | 7.16 | 4.393 | 0.00 | 2004860 | 8.80 | 5.454 | 0.00 | 2387866 | 9.02 | 8.316 | 0.00 |

Difference of Internal Area must be within +/- 40%; Retention Times must be within +/- 0.33 minute.
* Values outsite QC limits.

# Internal Standard Area and Retention Time Summary

**Lab File ID (Standard):** AA4882DCVS **Date Analyzed:** 12/8/2023

**Instrument:** AA **ICAL Date:** 10/10/2023

| | | | BROMOCHLOROMETHANE | | | | 1,4-DIFLUOROBENZENE | | | | D-5 CHLOROBENZENE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Area # | | RT | | Area # | | RT | | Area # | | RT | |
| | CALIBRATION STANDARD | | 497428 | | 4.390 | | 1995098 | | 5.451 | | 2342927 | | 8.315 | |
| | UPPER LIMIT | | 696399 | | 4.72 | | 2793137 | | 5.78 | | 3280098 | | 8.65 | |
| | LOWER LIMIT | | 298457 | | 4.06 | | 1197059 | | 5.12 | | 1405756 | | 7.99 | |
| Lab ID | | DF | Area # | % | RT | +/- | Area # | % | RT | +/- | Area # | % | RT | +/- |
| Method Blank | AA4884BLK | 1.0 | 407142 | -18.15 | 4.377 | -0.01 | 1506485 | -24.49 | 5.444 | -0.01 | 1527551 | -34.80 | 8.316 | 0.00 |
| E23-05047-01 | AA4886 | 1.0 | 441127 | -11.32 | 4.406 | 0.02 | 2103111 | 5.41 | 5.454 | 0.00 | 1883278 | -19.62 | 8.322 | 0.01 |
| E23-05047-02 | AA4887 | 1.0 | 463696 | -6.78 | 4.409 | 0.02 | 2102202 | 5.37 | 5.457 | 0.01 | 1902313 | -18.81 | 8.319 | 0.00 |
| E23-05047-03 | AA4888 | 1.0 | 395958 | -20.40 | 4.415 | 0.03 | 2148109 | 7.67 | 5.457 | 0.01 | 1907941 | -18.57 | 8.319 | 0.00 |
| E23-05047-04 | AA4889 | 1.0 | 366574 | -26.31 | 4.409 | 0.02 | 1819787 | -8.79 | 5.451 | 0.00 | 1669922 | -28.72 | 8.322 | 0.01 |
| E23-05047-05 | AA4890 | 1.0 | 419490 | -15.67 | 4.422 | 0.03 | 2159308 | 8.23 | 5.457 | 0.01 | 1909354 | -18.51 | 8.322 | 0.01 |

Difference of Internal Area must be within +/- 40%; Retention Times must be within +/- 0.33 minute.
* Values outsite QC limits.

# Internal Standard Area and Retention Time Summary

**Lab File ID (Standard):** AA4902DCVS **Date Analyzed:** 12/11/2023

**Instrument:** AA **ICAL Date:** 10/10/2023

| | | | BROMOCHLOROMETHANE | | | | 1,4-DIFLUOROBENZENE | | | | D-5 CHLOROBENZENE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Area # | | RT | | Area # | | RT | | Area # | | RT | |
| | CALIBRATION STANDARD | | 596109 | | 4.393 | | 2484518 | | 5.454 | | 2791354 | | 8.319 | |
| | UPPER LIMIT | | 834553 | | 4.72 | | 3478325 | | 5.78 | | 3907896 | | 8.65 | |
| | LOWER LIMIT | | 357665 | | 4.06 | | 1490711 | | 5.12 | | 1674812 | | 7.99 | |
| Lab ID | | DF | Area # | % | RT | +/- | Area # | % | RT | +/- | Area # | % | RT | +/- |
| Method Blank | AA4904BLK | 1.0 | 518939 | -12.95 | 4.377 | -0.02 | 1920464 | -22.70 | 5.444 | -0.01 | 1920350 | -31.20 | 8.315 | 0.00 |
| Reporting Limit Laboratory Control Standard | AA4905RLLCS | 1.0 | 566007 | -5.05 | 4.380 | -0.01 | 2290490 | -7.81 | 5.447 | -0.01 | 2210970 | -20.79 | 8.315 | 0.00 |
| 1458 | AA4906 | 1.0 | 809785 | 35.85 | 4.393 | 0.00 | 3431480 | 38.11 | 5.451 | 0.00 | 3836872 | 37.46 | 8.316 | 0.00 |
| 1588 | AA4907 | 1.0 | 706799 | 18.57 | 4.393 | 0.00 | 3079067 | 23.93 | 5.454 | 0.00 | 3708162 | 32.84 | 8.316 | 0.00 |
| 3012 | AA4908 | 1.0 | 589784 | -1.06 | 4.380 | -0.01 | 2099848 | -15.48 | 5.444 | -0.01 | 2006025 | -28.13 | 8.316 | 0.00 |
| E23-05047-03 | AA4909 | 10.0 | 496847 | -16.65 | 4.386 | -0.01 | 2142143 | -13.78 | 5.451 | 0.00 | 1996652 | -28.47 | 8.316 | 0.00 |
| E23-05047-04 | AA4910 | 5.0 | 523935 | -12.11 | 4.406 | 0.01 | 2718271 | 9.41 | 5.454 | 0.00 | 3097691 | 10.97 | 8.319 | 0.00 |
| E23-05047-06 | AA4914 | 5.0 | 467822 | -21.52 | 4.396 | 0.00 | 2227257 | -10.35 | 5.447 | -0.01 | 2074010 | -25.70 | 8.316 | 0.00 |
| E23-05047-06 | AA4915 | 1.0 | 461164 | -22.64 | 4.419 | 0.03 | 2637042 | 6.14 | 5.457 | 0.00 | 2277752 | -18.40 | 8.319 | 0.00 |
| Closing Calibration | AA4931CCCVS | 1.0 | 737975 | 23.80 | 4.393 | 0.00 | 3126526 | 25.84 | 5.454 | 0.00 | 3543265 | 26.94 | 8.316 | 0.00 |

Difference of Internal Area must be within +/- 40%; Retention Times must be within +/- 0.33 minute.
* Values outsite QC limits.

# Section VI: Sample Data Summary

**Certificate of Analysis**

**Summary of Results**

**Quantitation Reports, Chromatograms,
and Peak Integration Reports**

# CERTIFICATE OF ANALYSIS

**ANALYTICAL DATA PACKAGE FOR THE**
**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**
**ALBANY NEW YORK 12233**

**Integrated Analytical Laboratories, LLC** — **Randolph, NJ 07869**
**Project#: HK2661** — **NY ELAP Certification#: 11402**
**SDG #: E23-05047** — **NJDEP (Primary AB) Certification#: 14751**
**Date of first sample receipt: 11/16/2023** — **Date of last sample receipt: 11/16/2023**

*Client:* HK Engineering+Geology, D.P.C.
1600 US Route 22 East
Union, NJ 07083
*Attention:* Attention: Ryan Powell

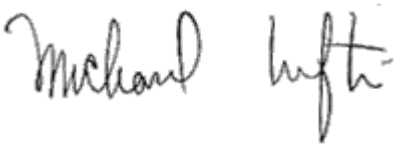
*Project/Site:* HK2661/NY

*Analysis conducted at:* Integrated Analytical Laboratories, LLC
273 Franklin Road
Randolph, NJ 07869
*Contact:* Michael H. Leftin, Ph.D.

*Sample(s):*
E23-05047-01
E23-05047-02
E23-05047-03
E23-05047-04
E23-05047-05
E23-05047-06

Samples for this analysis were received in good condition with a chain of custody.

All work recorded herein has been done in accordance with normal professional standards using accepted testing methodologies, quality assurance and quality control procedures except where otherwise agreed to by the client and testing company in writing. Once analysis has been performed on canisters that meets regulatory criteria, samples are recycled for future use, unless other provisions have been made by the client.



Michael H. Leftin, Ph.D.
Laboratory Director

Date: December 20, 2023

Volatile Organic Compounds by EPA Method TO-15
Summary of Results

| | | | |
|---|---|---|---|
| Lab ID: | E23-05047-01 | Instrument ID: | AA |
| Client ID: | SV1 | GC/MS Column: | RTX-1, 0.32 mmID |
| Date Sampled: | 11/15/2023 10:17 | Injection Volmue: | 500ml |
| Date Received: | 11/16/2023 | Matrix: | Air-Other |
| Date Analyzed: | 12/08/2023 14:03 | % Moisture: | NA |
| Data File: | AA4886 | Dilution Factor: | 1 |
| Summa ID: | 2902 | Analyst: | J. Walukiewicz |

| | | | Concentration Reported | | Reporting Limits | |
|---|---|---|---|---|---|---|
| **Compound** | **CAS #** | **Q** | **ppbv** | **ug/m3** | **ppbv** | **ug/m3** |
| Acetone | 67-64-1 | | 11 | 27 | 0.20 | 0.48 |
| Benzene | 71-43-2 | | 1.2 | 3.9 | 0.20 | 0.64 |
| Bromodichloromethane | 75-27-4 | | ND | ND | 0.20 | 1.3 |
| Bromoform | 75-25-2 | | ND | ND | 0.20 | 2.1 |
| Bromomethane | 74-83-9 | | ND | ND | 0.20 | 0.78 |
| 1,3-Butadiene | 106-99-0 | | ND | ND | 0.20 | 0.44 |
| Chlorobenzene | 108-90-7 | | ND | ND | 0.20 | 0.92 |
| Chloroethane | 75-00-3 | | ND | ND | 0.20 | 0.53 |
| Chloroform | 67-66-3 | | ND | ND | 0.20 | 0.98 |
| Chloromethane | 74-87-3 | | ND | ND | 0.20 | 0.41 |
| Carbon disulfide | 75-15-0 | | 1.4 | 4.4 | 0.20 | 0.62 |
| Carbon tetrachloride | 56-23-5 | | ND | ND | 0.040 | 0.25 |
| Cyclohexane | 110-82-7 | | 3.2 | 11 | 0.20 | 0.69 |
| Dibromochloromethane | 124-48-1 | | ND | ND | 0.20 | 1.7 |
| 1,2-Dibromoethane | 106-93-4 | | ND | ND | 0.20 | 1.5 |
| 1,2-Dichlorobenzene | 95-50-1 | | ND | ND | 0.20 | 1.2 |
| 1,3-Dichlorobenzene | 541-73-1 | | ND | ND | 0.20 | 1.2 |
| 1,4-Dichlorobenzene | 106-46-7 | | ND | ND | 0.20 | 1.2 |
| Dichlorodifluoromethane | 75-71-8 | | ND | ND | 0.20 | 0.99 |
| 1,1-Dichloroethane | 75-34-3 | | ND | ND | 0.20 | 0.81 |
| 1,2-Dichloroethane | 107-06-2 | | ND | ND | 0.20 | 0.81 |
| 1,1-Dichloroethene | 75-35-4 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloroethene (cis) | 156-59-2 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloroethene (trans) | 156-60-5 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloropropane | 78-87-5 | | ND | ND | 0.20 | 0.92 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | | ND | ND | 0.20 | 0.91 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | | ND | ND | 0.20 | 0.91 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | | ND | ND | 0.20 | 1.4 |
| 1,4-Dioxane | 123-91-1 | | ND | ND | 0.20 | 0.72 |
| Ethylbenzene | 100-41-4 | | 14 | 63 | 0.20 | 0.87 |
| n-Heptane | 142-82-5 | | 13 | 51 | 0.20 | 0.82 |
| 1,3-Hexachlorobutadiene | 87-68-3 | | ND | ND | 0.20 | 2.1 |
| n-Hexane | 110-54-3 | | 25 | 87 | 0.20 | 0.70 |
| Methylene chloride | 75-09-2 | | ND | ND | 0.20 | 0.69 |
| Methyl ethyl ketone | 78-93-3 | | ND | ND | 0.20 | 0.59 |
| Methyl isobutyl ketone | 108-10-1 | | ND | ND | 0.20 | 0.82 |
| Methyl tert-butyl ether | 1634-04-4 | | ND | ND | 0.20 | 0.72 |
| Styrene | 100-42-5 | | ND | ND | 0.20 | 0.85 |
| Tert-butyl alcohol | 75-65-0 | | 1.6 | 4.8 | 0.20 | 0.61 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | ND | ND | 0.20 | 1.4 |
| Tetrachloroethene | 127-18-4 | | 1.7 | 11 | 0.20 | 1.4 |
| Toluene | 108-88-3 | | 1.0 | 3.8 | 0.20 | 0.75 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | ND | ND | 0.20 | 1.5 |
| 1,1,1-Trichloroethane | 71-55-6 | | ND | ND | 0.20 | 1.1 |
| 1,1,2-Trichloroethane | 79-00-5 | | ND | ND | 0.20 | 1.1 |

Qualifiers:
D = Dilution required

Volatile Organic Compounds by EPA Method TO-15
Summary of Results

| | | | |
|---|---|---|---|
| Lab ID: | E23-05047-01 | Instrument ID: | AA |
| Client ID: | SV1 | GC/MS Column: | RTX-1, 0.32 mmID |
| Date Sampled: | 11/15/2023 10:17 | Injection Volmue: | 500ml |
| Date Received: | 11/16/2023 | Matrix: | Air-Other |
| Date Analyzed: | 12/08/2023 14:03 | % Moisture: | NA |
| Data File: | AA4886 | Dilution Factor: | 1 |
| Summa ID: | 2902 | Analyst: | J. Walukiewicz |

| | | | Concentration Reported | | Reporting Limits | |
|---|---|---|---|---|---|---|
| **Compound** | **CAS #** | **Q** | **ppbv** | **ug/m3** | **ppbv** | **ug/m3** |
| Trichloroethene | 79-01-6 | | ND | ND | 0.046 | 0.25 |
| Trichlorofluoromethane | 75-69-4 | | 0.31 | 1.8 | 0.20 | 1.1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | | ND | ND | 0.20 | 1.5 |
| 1,2,4-Trimethylbenzene | 95-63-6 | | 0.66 | 3.3 | 0.20 | 0.98 |
| 1,3,5-Trimethylbenzene | 108-67-8 | | 0.22 | 1.1 | 0.20 | 0.98 |
| 2,2,4-Trimethylpentane | 540-84-1 | | ND | ND | 0.20 | 0.93 |
| Vinyl bromide | 593-60-2 | | ND | ND | 0.20 | 0.87 |
| Vinyl chloride | 75-01-4 | | ND | ND | 0.20 | 0.51 |
| Xylenes (m&p) | 179601-23-1 | | 63 | 270 | 0.20 | 0.87 |
| Xylenes (o) | 95-47-6 | | 11 | 46 | 0.20 | 0.87 |

Qualifiers:
D = Dilution required

Quantitation Report (QT Reviewed)

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4886.D
Acq On : 8 Dec 2023 2:03 pm
Operator : jjw
Sample : E23-05047-01
Misc : 2902, 500cc
ALS Vial : 9 Sample Multiplier: 1

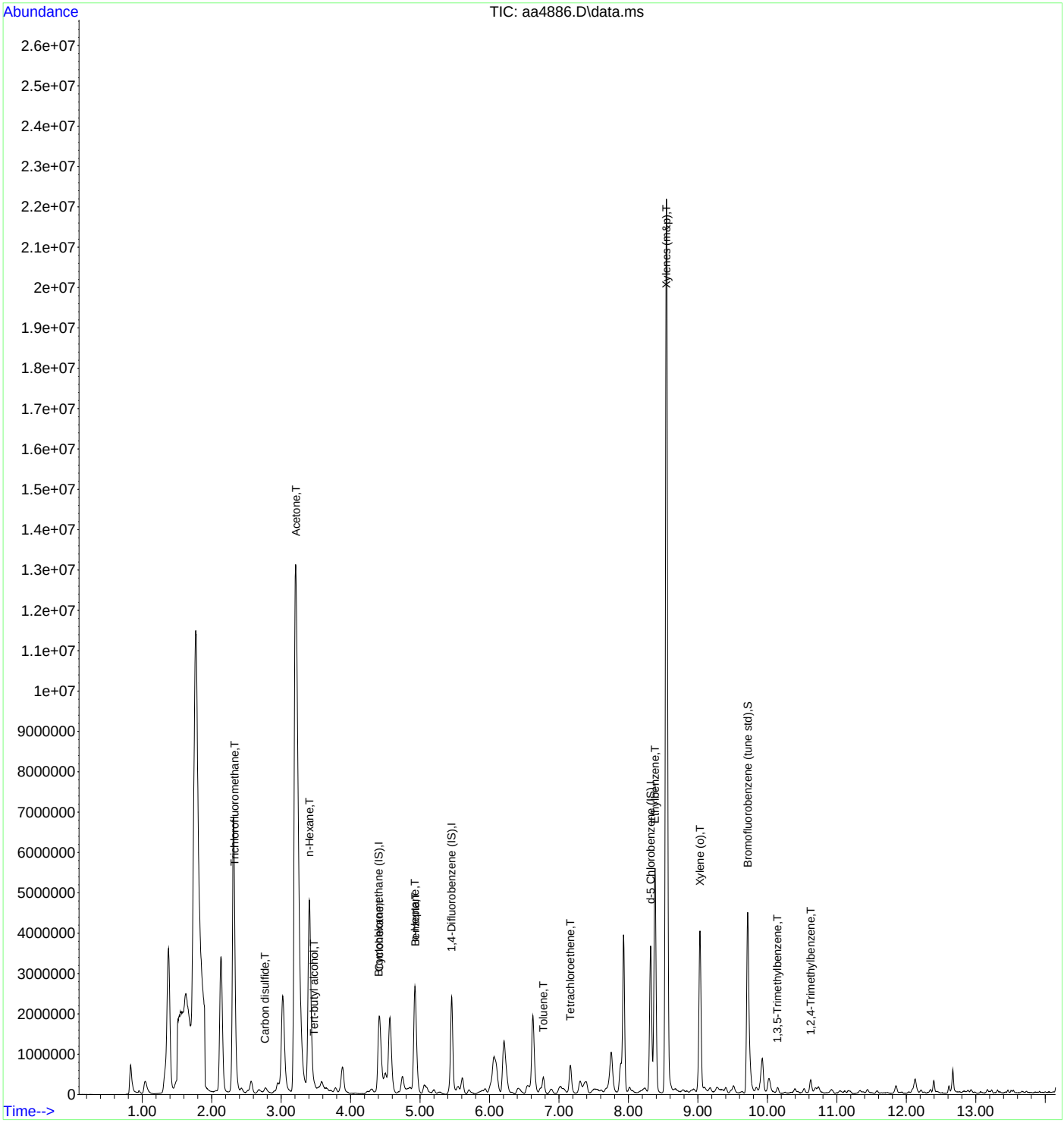
Quant Time: Dec 12 09:47:19 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

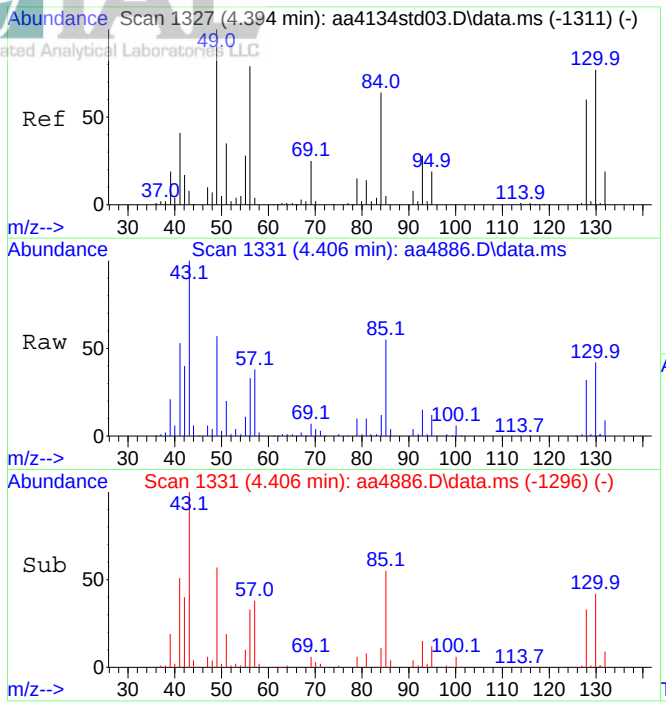
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.406 | 130 | 441127 | 10.00 | ppbV | | 0.012 |
| 39) 1,4-Difluorobenzene (IS) | 5.454 | 114 | 2103111 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.322 | 117 | 1883278 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 1811400 | 11.03 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 12) Trichlorofluoromethane | 2.332 | 101 | 38820 | 0.31 | ppbV | | 99 |
| 15) Carbon disulfide | 2.769 | 76 | 189897 | 1.41 | ppbV | # | 88 |
| 21) Acetone | 3.216 | 43 | 745514 | 11.20 | ppbV | # | 86 |
| 24) n-Hexane | 3.409 | 57 | 3443294 | 24.76 | ppbV | | 88 |
| 26) Tert-butyl alcohol | 3.473 | 59 | 183234 | 1.59 | ppbV | | 100 |
| 29) Cyclohexane | 4.412 | 56 | 310226 | 3.19 | ppbV | # | 42 |
| 36) n-Heptane | 4.926 | 43 | 1529996 | 12.55 | ppbV | | 100 |
| 37) Benzene | 4.933 | 78 | 214812 | 1.23 | ppbV | # | 69 |
| 47) Toluene | 6.775 | 91 | 298006 | 1.01 | ppbV | | 100 |
| 49) Tetrachloroethene | 7.164 | 166 | 212038 | 1.66 | ppbV | | 99 |
| 58) Ethylbenzene | 8.383 | 91 | 5014173 | 14.45 | ppbV | | 99 |
| 59) Xylenes (m&p) | 8.547 | 91 | 16210948 | 63.04 | ppbV | | 100 |
| 60) Xylene (o) | 9.029 | 91 | 2946669 | 10.50 | ppbV | | 98 |
| 69) 1,3,5-Trimethylbenzene | 10.145 | 105 | 71080 | 0.22 | ppbV | | 97 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 216009 | 0.66 | ppbV | | 97 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4886.D
Acq On : 8 Dec 2023 2:03 pm
Operator : jjw
Sample : E23-05047-01
Misc : 2902, 500cc
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 12 09:47:19 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

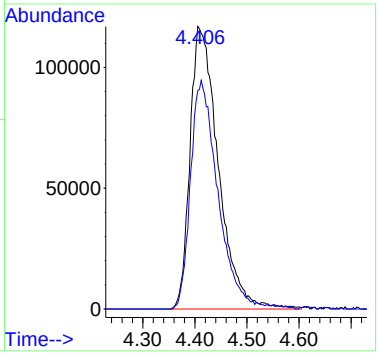


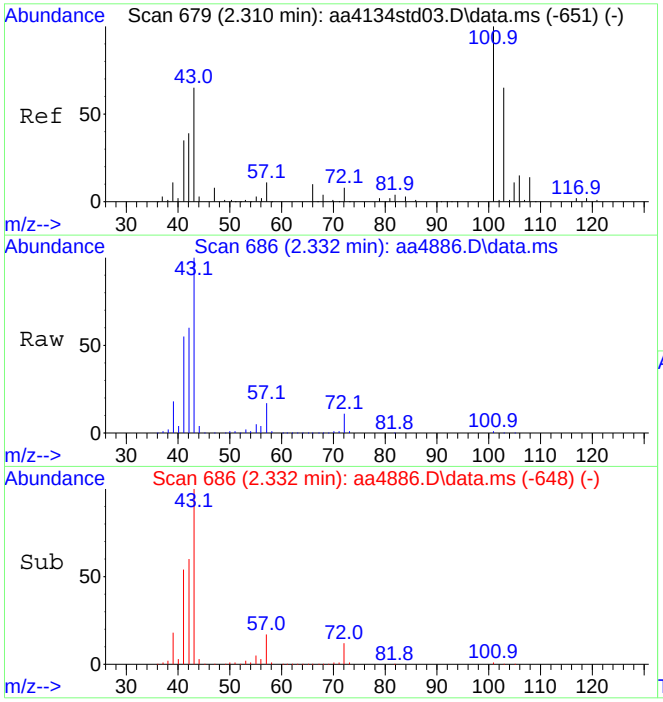



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.406 min Scan# 1331
Delta R.T. 0.012 min
Lab File: aa4886.D
Acq: 8 Dec 2023 2:03 pm

Tgt Ion:130 Resp: 441127

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 78.7 | 62.2 | 93.4 |

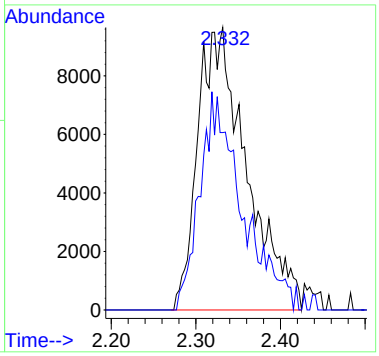


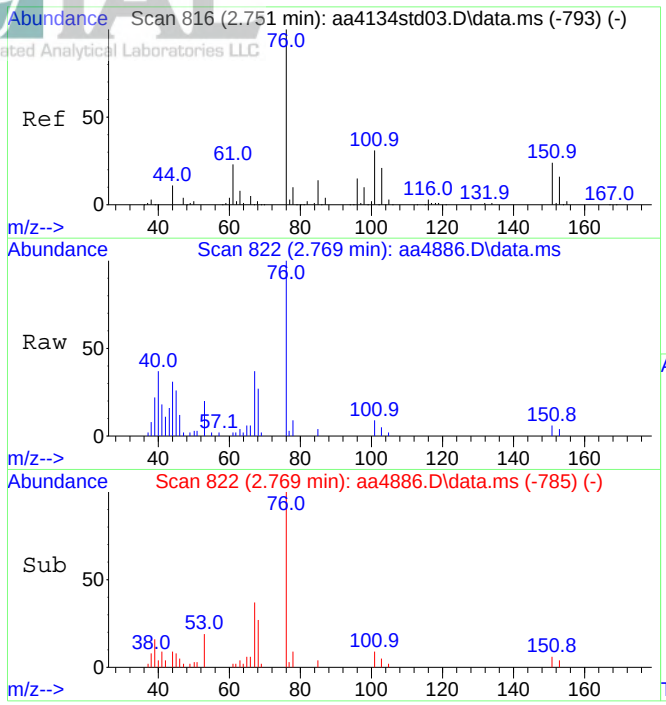




#12
Trichlorofluoromethane
Concen: 0.31 ppbV
RT: 2.332 min Scan# 686
Delta R.T. 0.021 min
Lab File: aa4886.D
Acq: 8 Dec 2023 2:03 pm

Tgt Ion:101 Resp: 38820

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 66.4 | 52.5 | 78.7 |

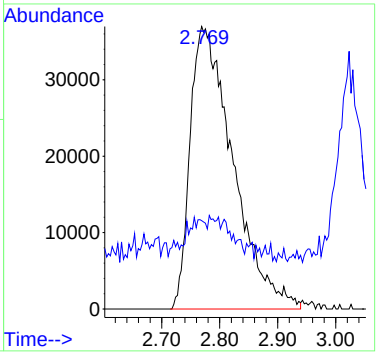


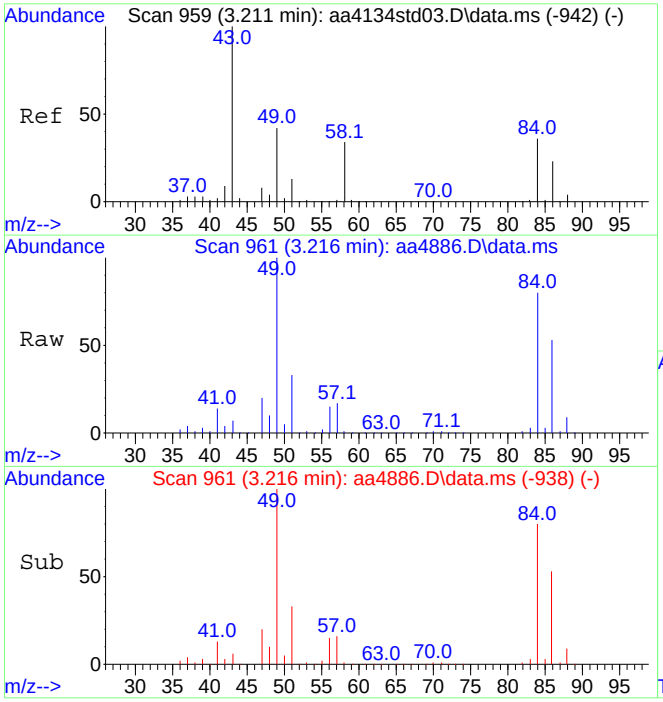



#15
Carbon disulfide
Concen: 1.41 ppbV
RT: 2.769 min Scan# 822
Delta R.T. 0.018 min
Lab File: aa4886.D
Acq: 8 Dec 2023 2:03 pm

Tgt Ion: 76 Resp: 189897

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 6.5 | 9.0 | 13.4# |

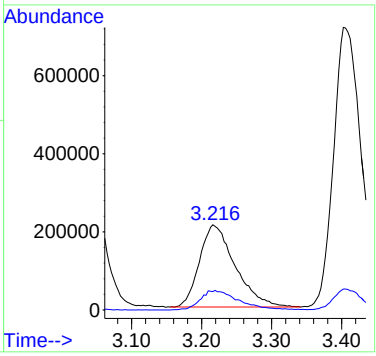


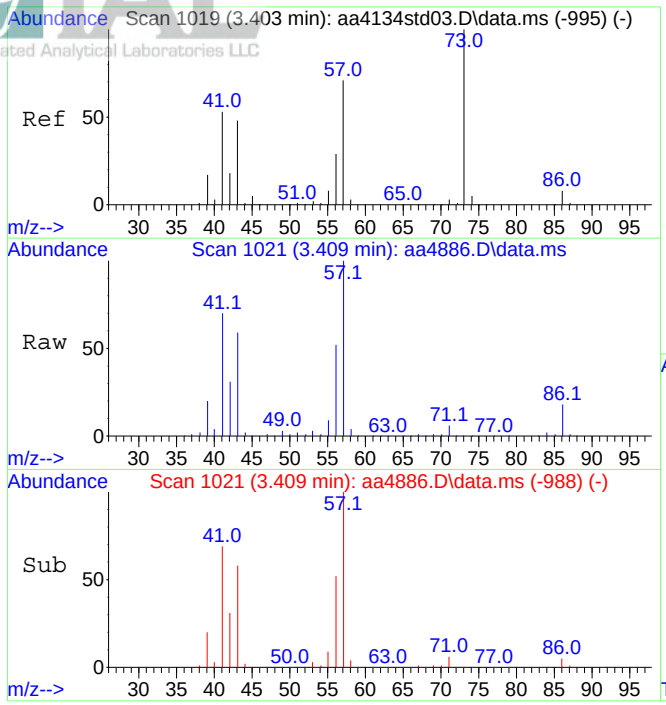




#21
Acetone
Concen: 11.20 ppbV
RT: 3.216 min Scan# 961
Delta R.T. 0.005 min
Lab File: aa4886.D
Acq: 8 Dec 2023 2:03 pm

Tgt Ion: 43 Resp: 745514

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 25.6 | 27.1 | 40.7# |

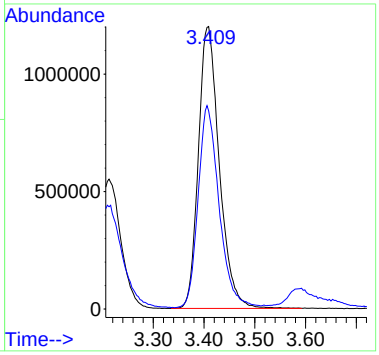


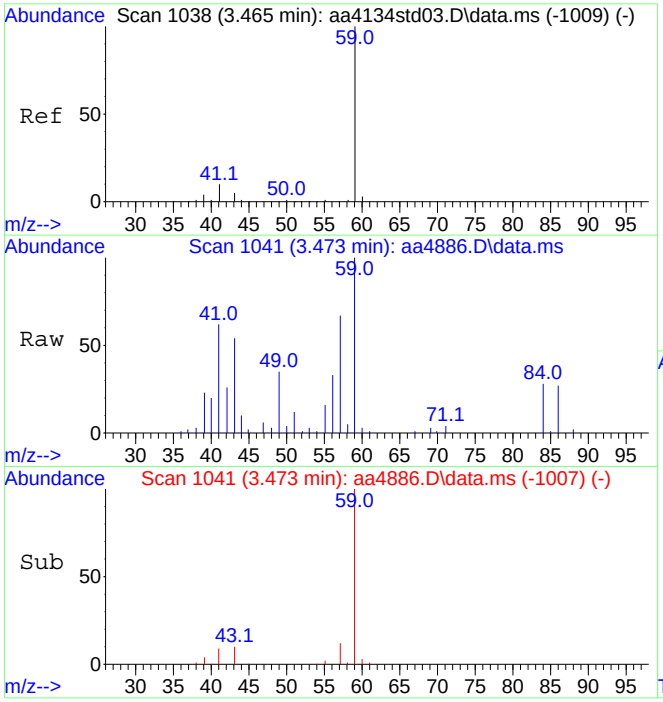



#24
n-Hexane
Concen: 24.76 ppbV
RT: 3.409 min Scan# 1021
Delta R.T. 0.005 min
Lab File: aa4886.D
Acq: 8 Dec 2023 2:03 pm

Tgt Ion: 57 Resp: 3443294

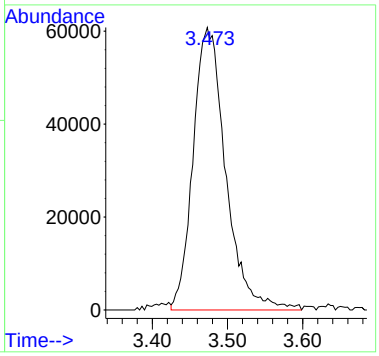
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 41 | 71.9 | 66.4 | 99.6 |

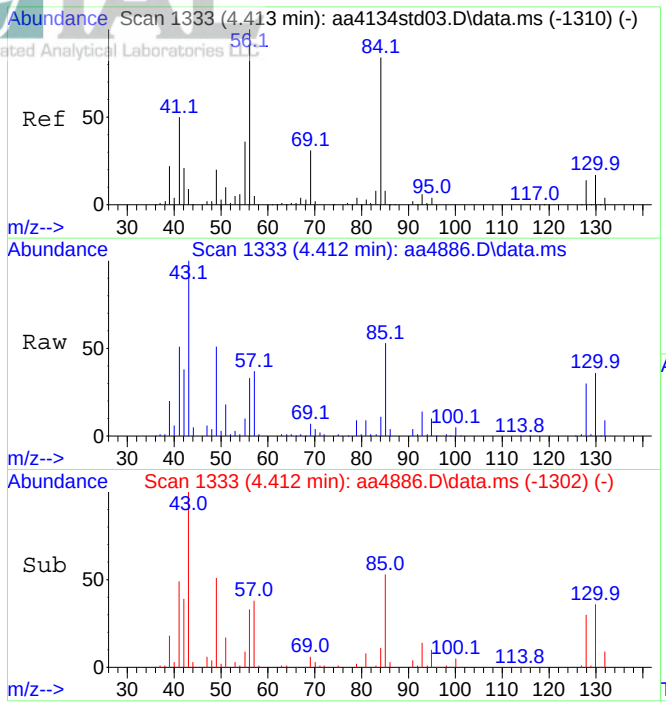



#26
Tert-butyl alcohol
Concen: 1.59 ppbV
RT: 3.473 min Scan# 1041
Delta R.T. 0.009 min
Lab File: aa4886.D
Acq: 8 Dec 2023 2:03 pm

Tgt Ion: 59 Resp: 183234

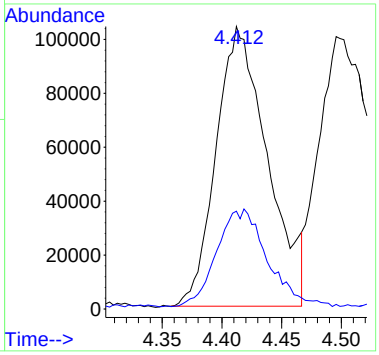


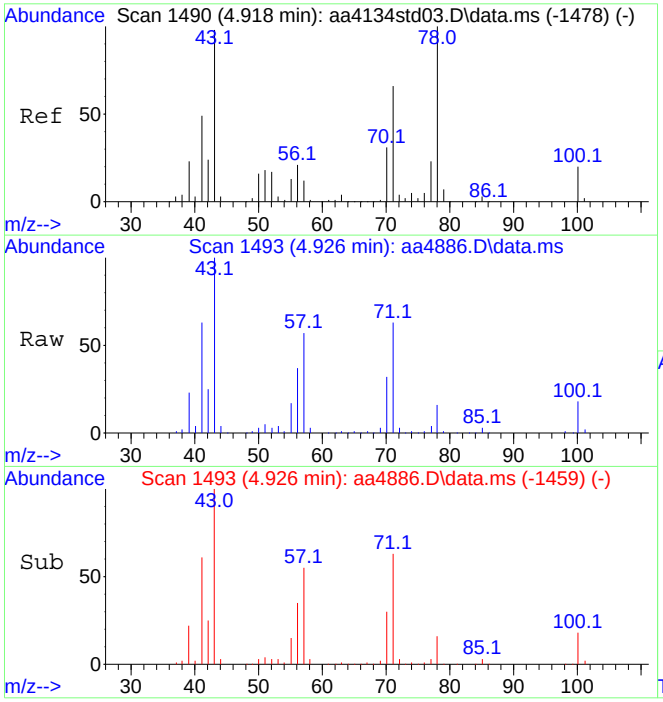



#29
Cyclohexane
Concen: 3.19 ppbV
RT: 4.412 min Scan# 1333
Delta R.T. -0.001 min
Lab File: aa4886.D
Acq: 8 Dec 2023 2:03 pm

Tgt Ion: 56 Resp: 310226

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 34.3 | 71.2 | 106.8# |

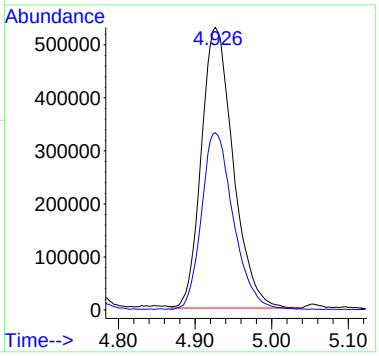


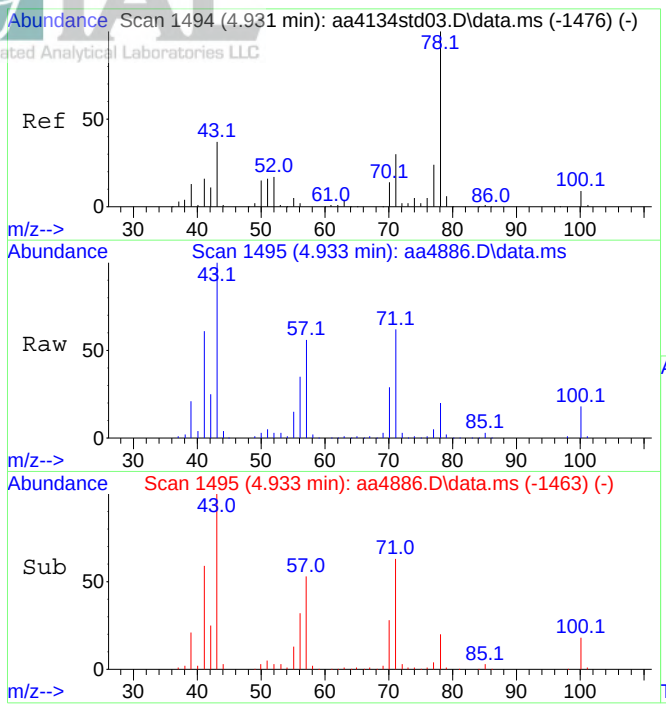




#36
n-Heptane
Concen: 12.55 ppbV
RT: 4.926 min Scan# 1493
Delta R.T. 0.009 min
Lab File: aa4886.D
Acq: 8 Dec 2023 2:03 pm

Tgt Ion: 43 Resp: 1529996

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 71 | 62.9 | 50.5 | 75.7 |

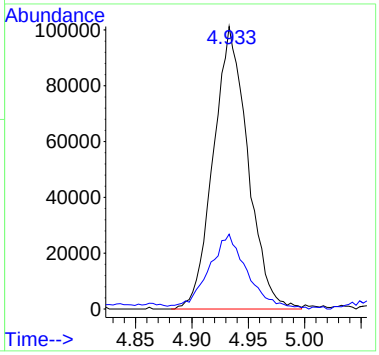


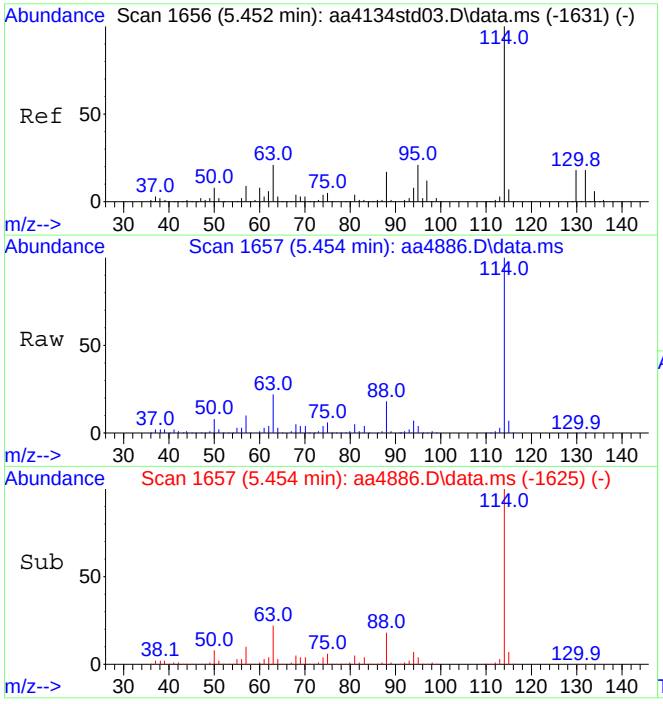



#37
Benzene
Concen: 1.23 ppbV
RT: 4.933 min Scan# 1495
Delta R.T. 0.002 min
Lab File: aa4886.D
Acq: 8 Dec 2023 2:03 pm

Tgt Ion: 78 Resp: 214812

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 29.9 | 13.4 | 20.0# |

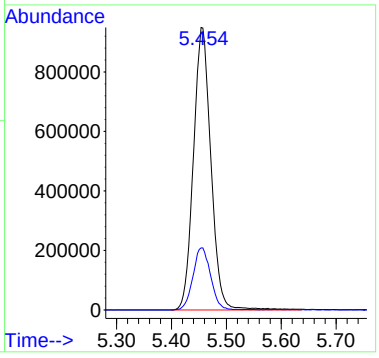


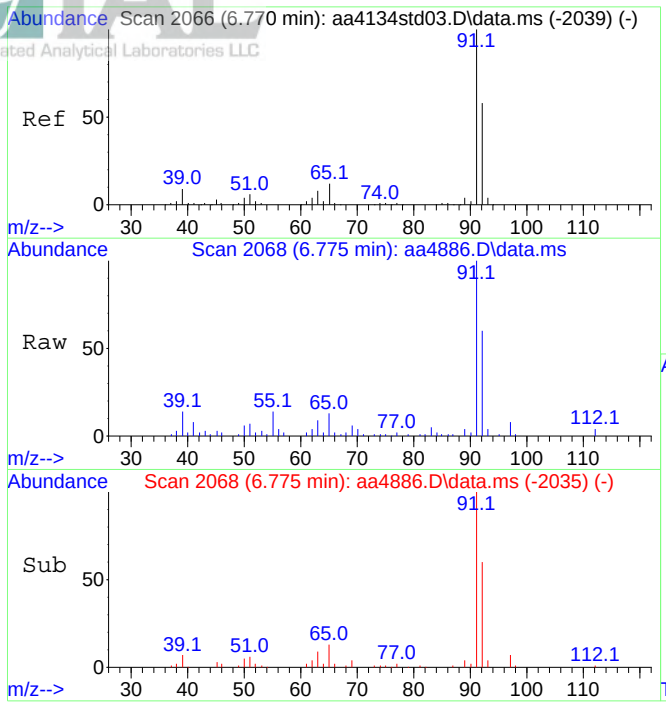




#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.454 min Scan# 1657
Delta R.T. 0.002 min
Lab File: aa4886.D
Acq: 8 Dec 2023 2:03 pm

Tgt Ion:114 Resp: 2103111

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.3 | 17.0 | 25.6 |

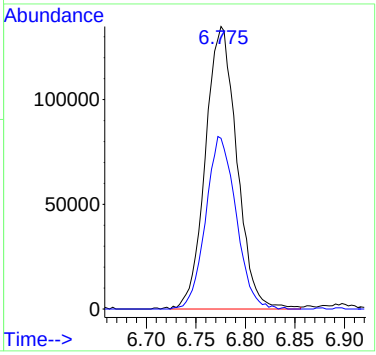


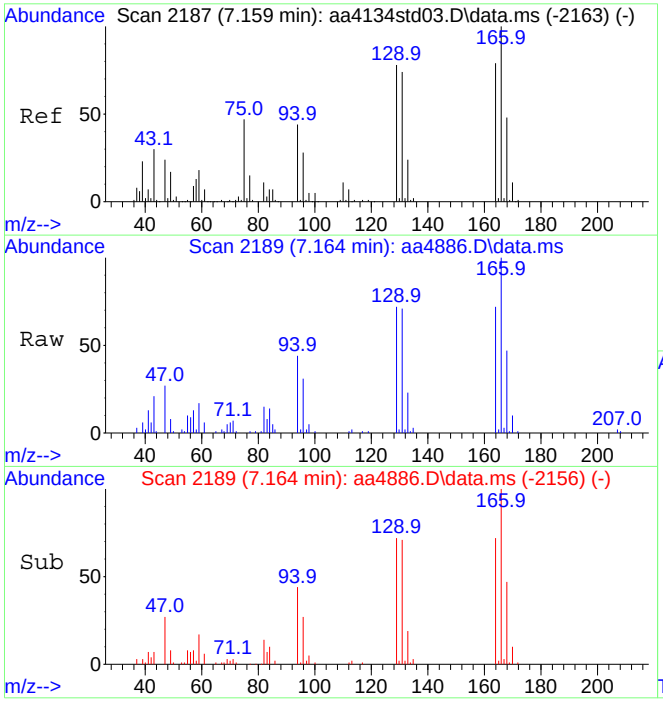



#47
Toluene
Concen: 1.01 ppbV
RT: 6.775 min Scan# 2068
Delta R.T. 0.005 min
Lab File: aa4886.D
Acq: 8 Dec 2023 2:03 pm

Tgt Ion: 91 Resp: 298006

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 58.7 | 47.3 | 70.9 |

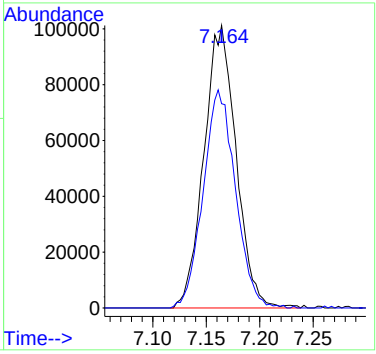


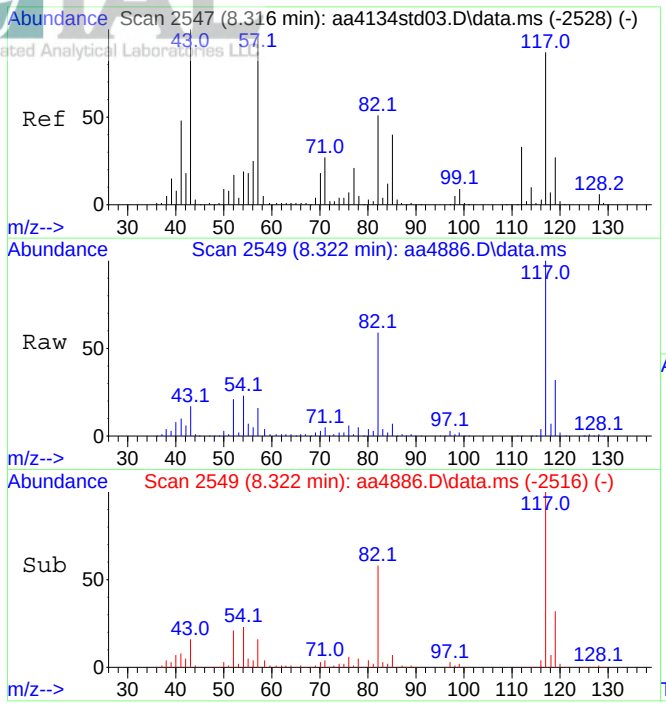




#49
Tetrachloroethene
Concen: 1.66 ppbV
RT: 7.164 min Scan# 2189
Delta R.T. 0.005 min
Lab File: aa4886.D
Acq: 8 Dec 2023 2:03 pm

Tgt Ion:166 Resp: 212038

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 77.5 | 62.3 | 93.5 |

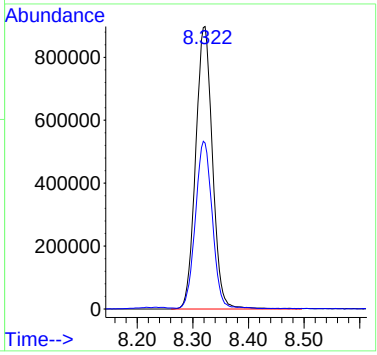


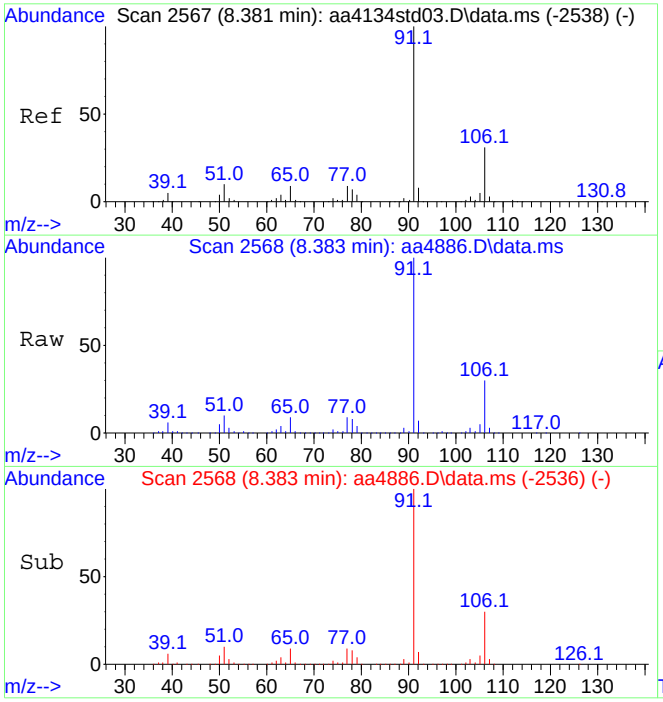



#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.322 min Scan# 2549
Delta R.T. 0.005 min
Lab File: aa4886.D
Acq: 8 Dec 2023 2:03 pm

Tgt Ion:117 Resp: 1883278

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 59.4 | 47.0 | 70.4 |

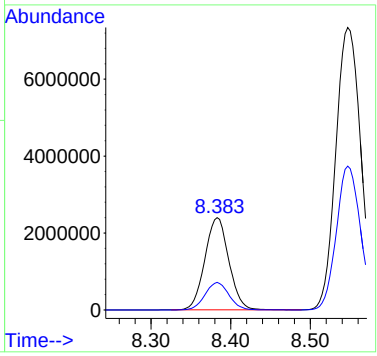


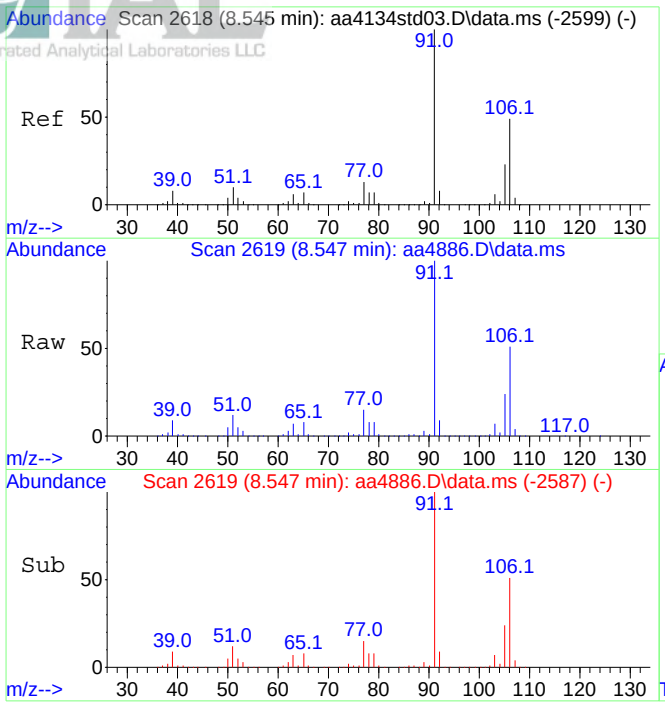




#58
Ethylbenzene
Concen: 14.45 ppbV
RT: 8.383 min Scan# 2568
Delta R.T. 0.002 min
Lab File: aa4886.D
Acq: 8 Dec 2023 2:03 pm

Tgt Ion: 91 Resp: 5014173

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 29.9 | 24.6 | 36.8 |

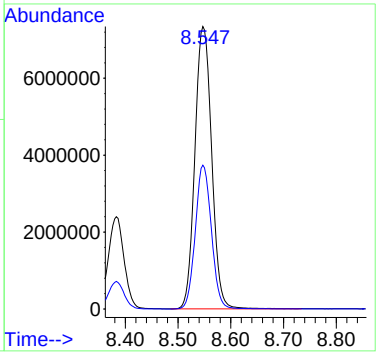


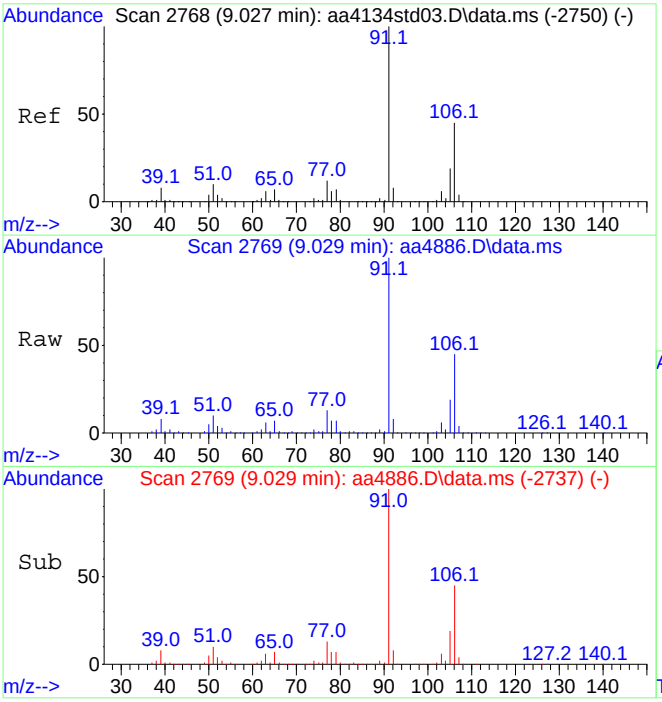



#59
Xylenes (m&p)
Concen: 63.04 ppbV
RT: 8.547 min Scan# 2619
Delta R.T. 0.002 min
Lab File: aa4886.D
Acq: 8 Dec 2023 2:03 pm

Tgt Ion: 91 Resp:16210948

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 49.0 | 39.0 | 58.4 |

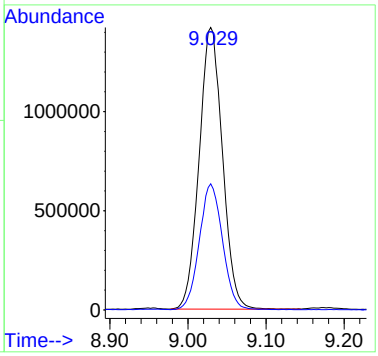


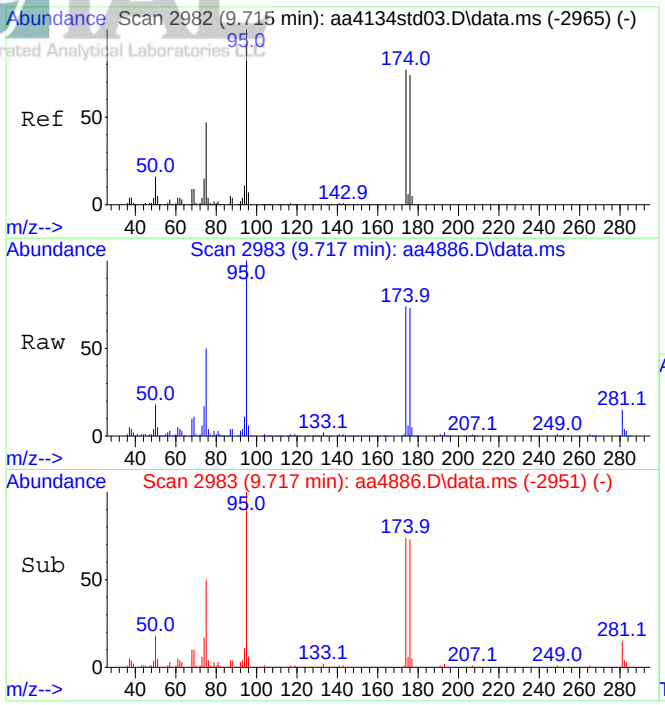




#60
Xylene (o)
Concen: 10.50 ppbV
RT: 9.029 min Scan# 2769
Delta R.T. 0.002 min
Lab File: aa4886.D
Acq: 8 Dec 2023 2:03 pm

Tgt Ion: 91 Resp: 2946669

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 44.5 | 36.8 | 55.2 |

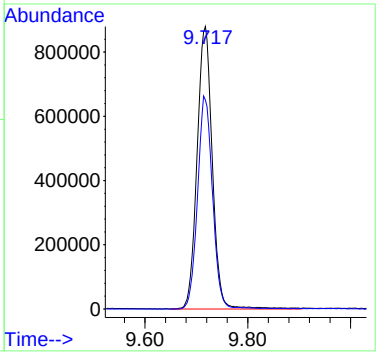


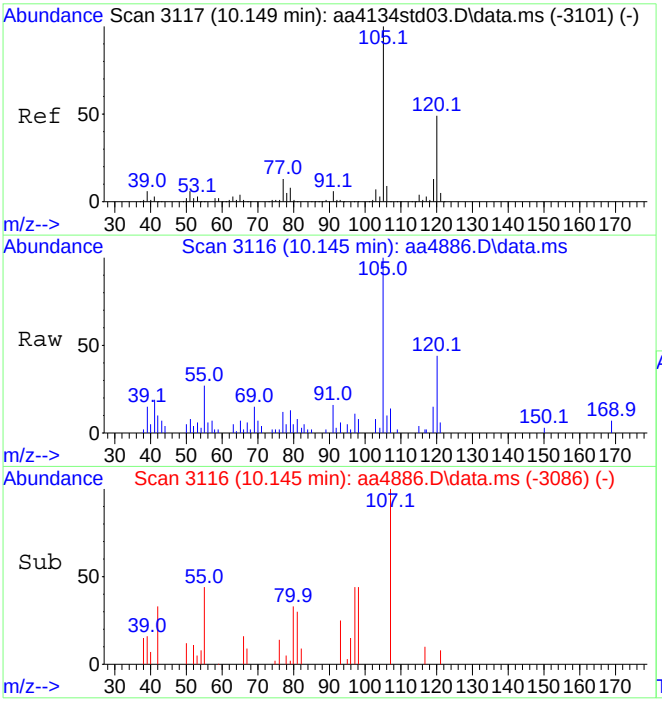



#64
Bromofluorobenzene (tune std)
Concen: 11.03 ppbV
RT: 9.717 min Scan# 2983
Delta R.T. 0.002 min
Lab File: aa4886.D
Acq: 8 Dec 2023 2:03 pm

Tgt Ion: 95 Resp: 1811400

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 74.4 | 61.1 | 91.7 |

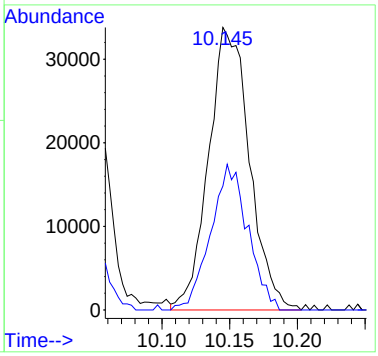


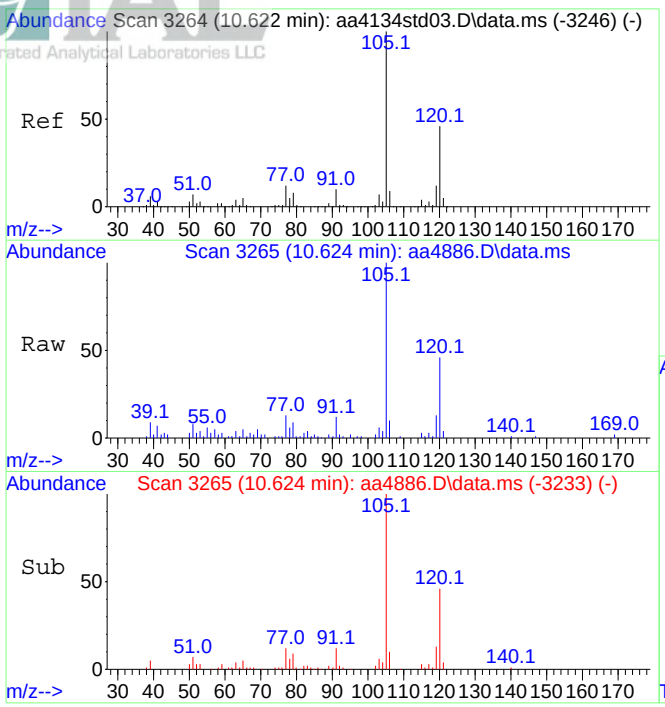




#69
1,3,5-Trimethylbenzene
Concen: 0.22 ppbV
RT: 10.145 min Scan# 3116
Delta R.T. -0.004 min
Lab File: aa4886.D
Acq: 8 Dec 2023 2:03 pm

Tgt Ion:105 Resp: 71080

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 46.7 | 38.9 | 58.3 |

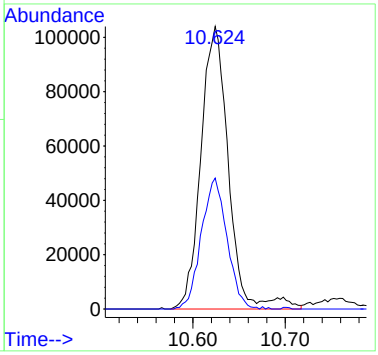





#70
1,2,4-Trimethylbenzene
Concen: 0.66 ppbV
RT: 10.624 min Scan# 3265
Delta R.T. 0.002 min
Lab File: aa4886.D
Acq: 8 Dec 2023 2:03 pm

Tgt Ion:105 Resp: 216009

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 43.1 | 36.3 | 54.5 |



**INTEGRATED ANALYTICAL LABORATORIES, LLC**
***Integrated Analytical Laboratories LLC***

Volatile Organic Compounds by EPA Method TO-15
Summary of Results

| | | | |
|---|---|---|---|
| Lab ID: | E23-05047-02 | Instrument ID: | AA |
| Client ID: | SV2 | GC/MS Column: | RTX-1, 0.32 mmID |
| Date Sampled: | 11/15/2023 09:30 | Injection Volmue: | 500ml |
| Date Received: | 11/16/2023 | Matrix: | Air-Other |
| Date Analyzed: | 12/08/2023 14:35 | % Moisture: | NA |
| Data File: | AA4887 | Dilution Factor: | 1 |
| Summa ID: | 2037 | Analyst: | J. Walukiewicz |

| | | | Concentration Reported | | Reporting Limits | |
|---|---|---|---|---|---|---|
| **Compound** | **CAS #** | **Q** | **ppbv** | **ug/m3** | **ppbv** | **ug/m3** |
| Acetone | 67-64-1 | | 6.3 | 15 | 0.20 | 0.48 |
| Benzene | 71-43-2 | | 0.31 | 1.00 | 0.20 | 0.64 |
| Bromodichloromethane | 75-27-4 | | ND | ND | 0.20 | 1.3 |
| Bromoform | 75-25-2 | | ND | ND | 0.20 | 2.1 |
| Bromomethane | 74-83-9 | | ND | ND | 0.20 | 0.78 |
| 1,3-Butadiene | 106-99-0 | | ND | ND | 0.20 | 0.44 |
| Chlorobenzene | 108-90-7 | | ND | ND | 0.20 | 0.92 |
| Chloroethane | 75-00-3 | | ND | ND | 0.20 | 0.53 |
| Chloroform | 67-66-3 | | ND | ND | 0.20 | 0.98 |
| Chloromethane | 74-87-3 | | ND | ND | 0.20 | 0.41 |
| Carbon disulfide | 75-15-0 | | ND | ND | 0.20 | 0.62 |
| Carbon tetrachloride | 56-23-5 | | ND | ND | 0.040 | 0.25 |
| Cyclohexane | 110-82-7 | | ND | ND | 0.20 | 0.69 |
| Dibromochloromethane | 124-48-1 | | ND | ND | 0.20 | 1.7 |
| 1,2-Dibromoethane | 106-93-4 | | ND | ND | 0.20 | 1.5 |
| 1,2-Dichlorobenzene | 95-50-1 | | ND | ND | 0.20 | 1.2 |
| 1,3-Dichlorobenzene | 541-73-1 | | ND | ND | 0.20 | 1.2 |
| 1,4-Dichlorobenzene | 106-46-7 | | ND | ND | 0.20 | 1.2 |
| Dichlorodifluoromethane | 75-71-8 | | ND | ND | 0.20 | 0.99 |
| 1,1-Dichloroethane | 75-34-3 | | ND | ND | 0.20 | 0.81 |
| 1,2-Dichloroethane | 107-06-2 | | ND | ND | 0.20 | 0.81 |
| 1,1-Dichloroethene | 75-35-4 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloroethene (cis) | 156-59-2 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloroethene (trans) | 156-60-5 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloropropane | 78-87-5 | | ND | ND | 0.20 | 0.92 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | | ND | ND | 0.20 | 0.91 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | | ND | ND | 0.20 | 0.91 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | | ND | ND | 0.20 | 1.4 |
| 1,4-Dioxane | 123-91-1 | | ND | ND | 0.20 | 0.72 |
| Ethylbenzene | 100-41-4 | | 1.1 | 5.0 | 0.20 | 0.87 |
| n-Heptane | 142-82-5 | | ND | ND | 0.20 | 0.82 |
| 1,3-Hexachlorobutadiene | 87-68-3 | | ND | ND | 0.20 | 2.1 |
| n-Hexane | 110-54-3 | | 0.38 | 1.3 | 0.20 | 0.70 |
| Methylene chloride | 75-09-2 | | ND | ND | 0.20 | 0.69 |
| Methyl ethyl ketone | 78-93-3 | | 0.32 | 0.94 | 0.20 | 0.59 |
| Methyl isobutyl ketone | 108-10-1 | | ND | ND | 0.20 | 0.82 |
| Methyl tert-butyl ether | 1634-04-4 | | ND | ND | 0.20 | 0.72 |
| Styrene | 100-42-5 | | ND | ND | 0.20 | 0.85 |
| Tert-butyl alcohol | 75-65-0 | | ND | ND | 0.20 | 0.61 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | ND | ND | 0.20 | 1.4 |
| Tetrachloroethene | 127-18-4 | | ND | ND | 0.20 | 1.4 |
| Toluene | 108-88-3 | | 0.35 | 1.3 | 0.20 | 0.75 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | ND | ND | 0.20 | 1.5 |
| 1,1,1-Trichloroethane | 71-55-6 | | ND | ND | 0.20 | 1.1 |
| 1,1,2-Trichloroethane | 79-00-5 | | ND | ND | 0.20 | 1.1 |

Qualifiers:
D = Dilution required

Volatile Organic Compounds by EPA Method TO-15
Summary of Results

| | | | |
|---|---|---|---|
| Lab ID: | E23-05047-02 | Instrument ID: | AA |
| Client ID: | SV2 | GC/MS Column: | RTX-1, 0.32 mmID |
| Date Sampled: | 11/15/2023 09:30 | Injection Volmue: | 500ml |
| Date Received: | 11/16/2023 | Matrix: | Air-Other |
| Date Analyzed: | 12/08/2023 14:35 | % Moisture: | NA |
| Data File: | AA4887 | Dilution Factor: | 1 |
| Summa ID: | 2037 | Analyst: | J. Walukiewicz |

| | | | Concentration Reported | | Reporting Limits | |
|---|---|---|---|---|---|---|
| **Compound** | **CAS #** | **Q** | **ppbv** | **ug/m3** | **ppbv** | **ug/m3** |
| Trichloroethene | 79-01-6 | | ND | ND | 0.046 | 0.25 |
| Trichlorofluoromethane | 75-69-4 | | 0.34 | 1.9 | 0.20 | 1.1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | | ND | ND | 0.20 | 1.5 |
| 1,2,4-Trimethylbenzene | 95-63-6 | | ND | ND | 0.20 | 0.98 |
| 1,3,5-Trimethylbenzene | 108-67-8 | | ND | ND | 0.20 | 0.98 |
| 2,2,4-Trimethylpentane | 540-84-1 | | ND | ND | 0.20 | 0.93 |
| Vinyl bromide | 593-60-2 | | ND | ND | 0.20 | 0.87 |
| Vinyl chloride | 75-01-4 | | ND | ND | 0.20 | 0.51 |
| Xylenes (m&p) | 179601-23-1 | | 5.3 | 23 | 0.20 | 0.87 |
| Xylenes (o) | 95-47-6 | | 0.89 | 3.9 | 0.20 | 0.87 |

Qualifiers:
D = Dilution required

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4887.D
Acq On : 8 Dec 2023 2:35 pm
Operator : jjw
Sample : E23-05047-02
Misc : 2037, 500cc
ALS Vial : 10 Sample Multiplier: 1

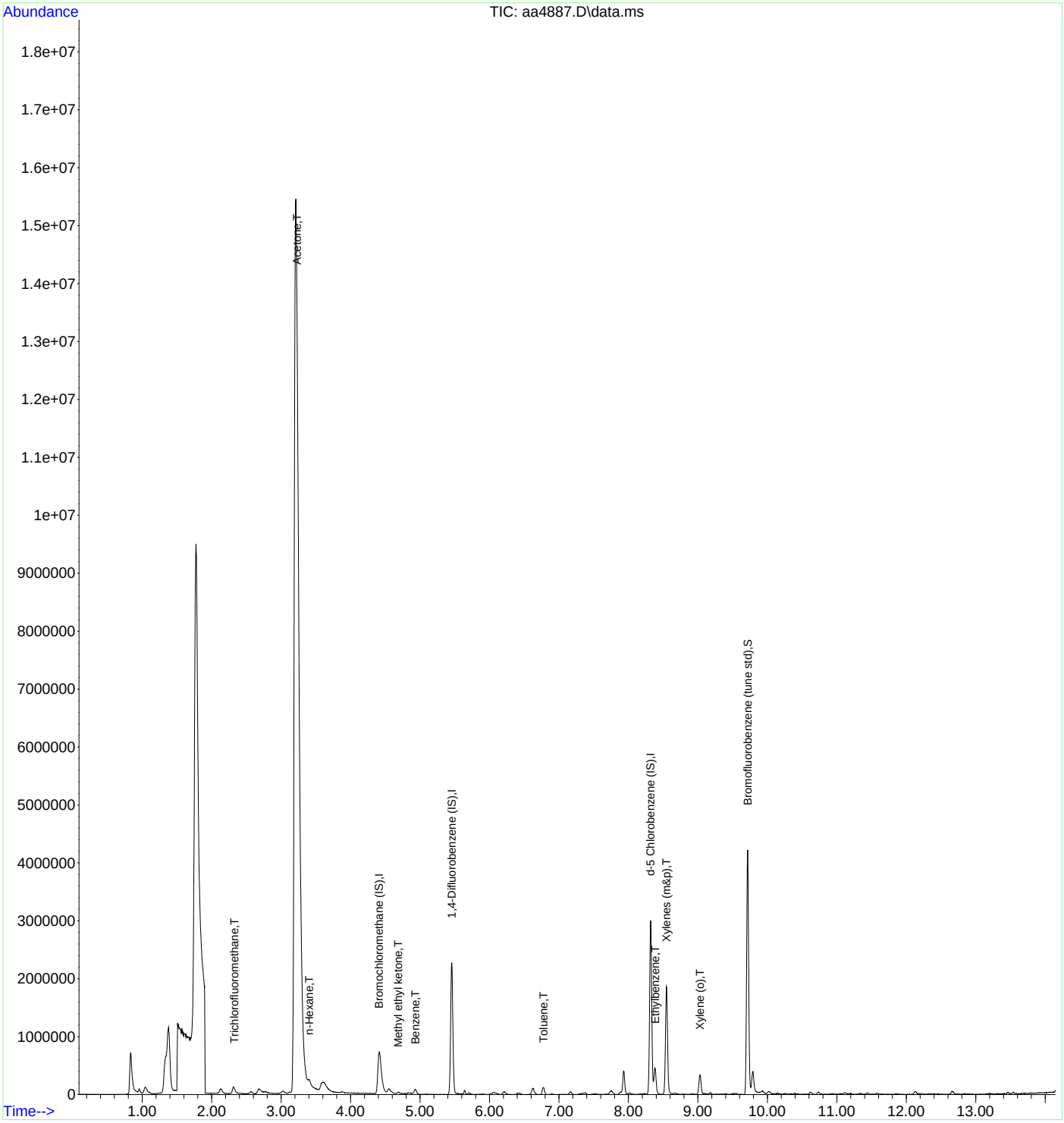
Quant Time: Dec 12 09:50:46 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

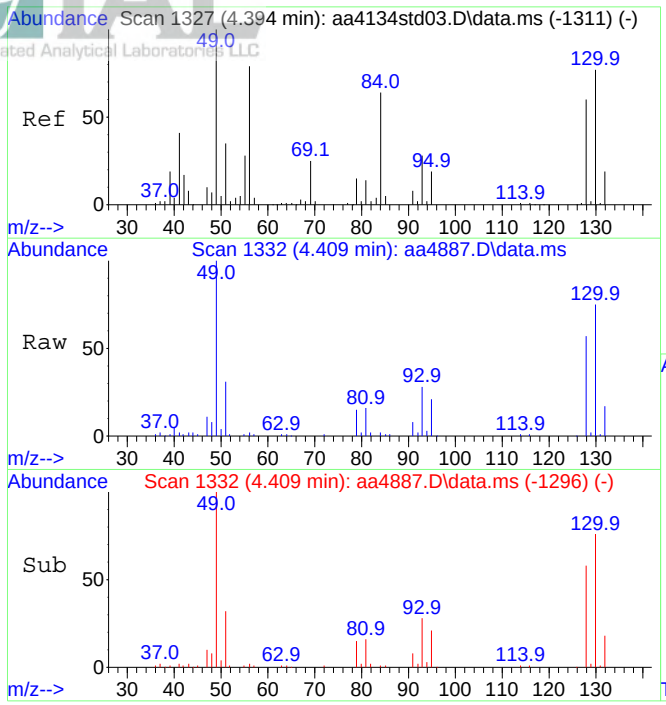
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.409 | 130 | 463696 | 10.00 | ppbV | 0.015 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 2102202 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 1902313 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 1837891 | 11.08 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 12) Trichlorofluoromethane | 2.329 | 101 | 43909 | 0.34 | ppbV | 99 |
| 21) Acetone | 3.229 | 43 | 441196 | 6.31 | ppbV | 90 |
| 24) n-Hexane | 3.406 | 57 | 55844 | 0.38 | ppbV | 91 |
| 35) Methyl ethyl ketone | 4.686 | 43 | 36088 | 0.32 | ppbV | 99 |
| 37) Benzene | 4.933 | 78 | 57578 | 0.31 | ppbV | 93 |
| 47) Toluene | 6.779 | 91 | 104406 | 0.35 | ppbV | 98 |
| 58) Ethylbenzene | 8.386 | 91 | 401239 | 1.14 | ppbV | 98 |
| 59) Xylenes (m&p) | 8.547 | 91 | 1369890 | 5.27 | ppbV | 97 |
| 60) Xylene (o) | 9.029 | 91 | 253611 | 0.89 | ppbV | 97 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4887.D
Acq On : 8 Dec 2023 2:35 pm
Operator : jjw
Sample : E23-05047-02
Misc : 2037, 500cc
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Dec 12 09:50:46 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

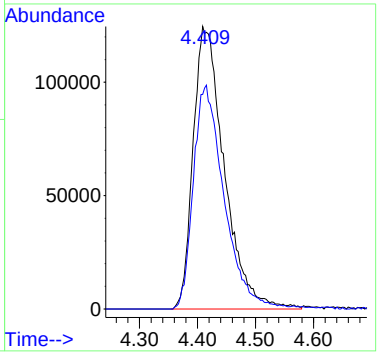


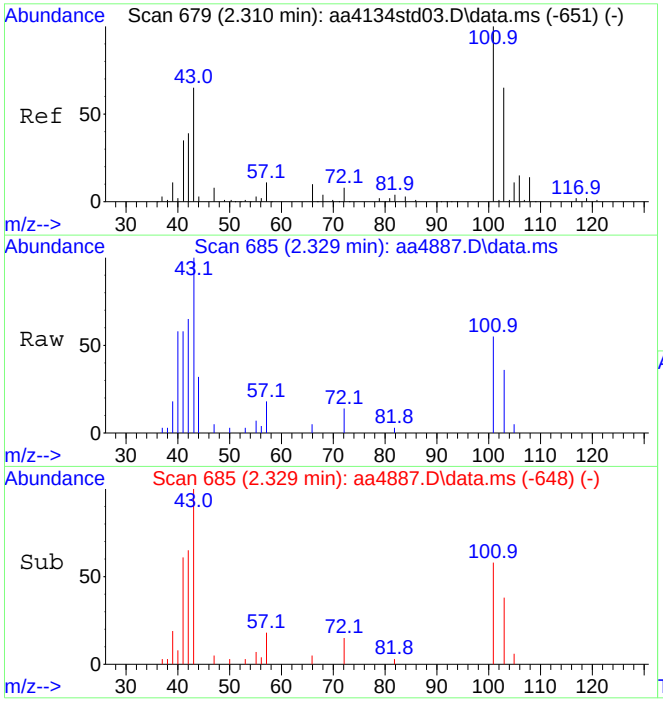



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.409 min Scan# 1332
Delta R.T. 0.015 min
Lab File: aa4887.D
Acq: 8 Dec 2023 2:35 pm

Tgt Ion:130 Resp: 463696

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 78.9 | 62.2 | 93.4 |

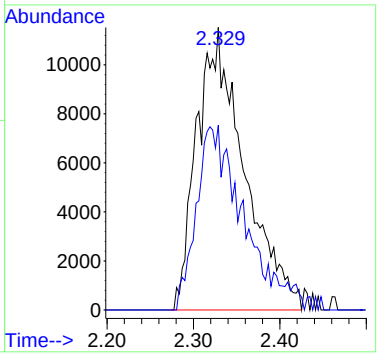


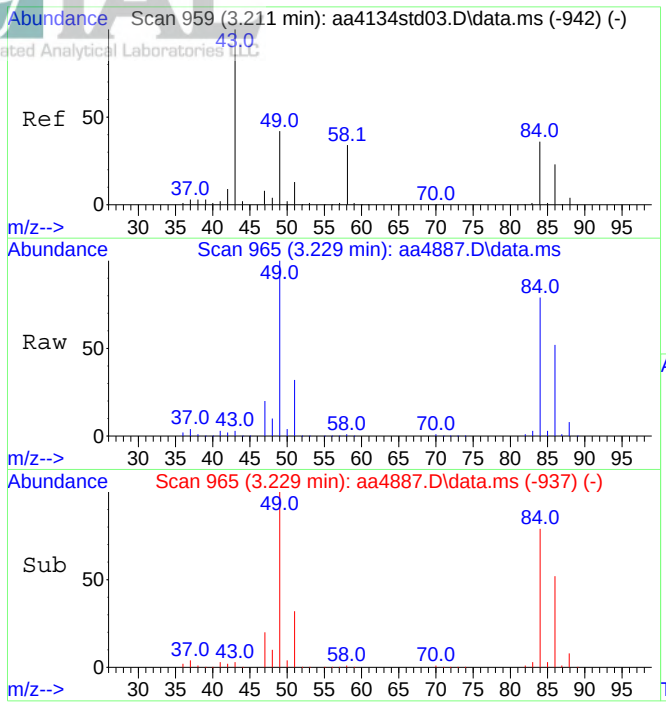




#12
Trichlorofluoromethane
Concen: 0.34 ppbV
RT: 2.329 min Scan# 685
Delta R.T. 0.018 min
Lab File: aa4887.D
Acq: 8 Dec 2023 2:35 pm

Tgt Ion:101 Resp: 43909

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 64.8 | 52.5 | 78.7 |

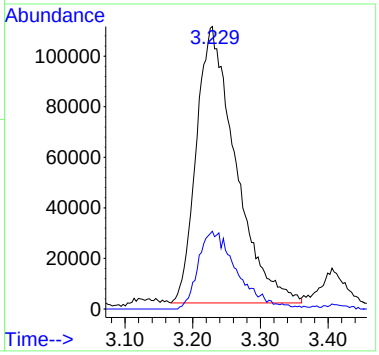


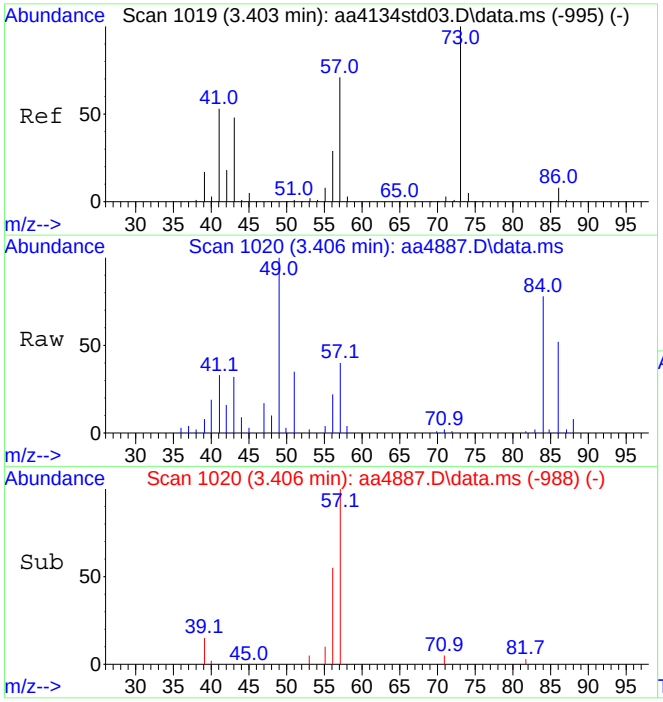



#21
Acetone
Concen: 6.31 ppbV
RT: 3.229 min Scan# 965
Delta R.T. 0.018 min
Lab File: aa4887.D
Acq: 8 Dec 2023 2:35 pm

Tgt Ion: 43 Resp: 441196

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 28.0 | 27.1 | 40.7 |

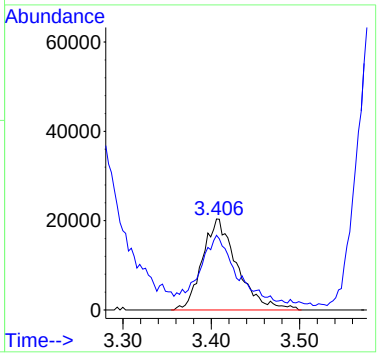


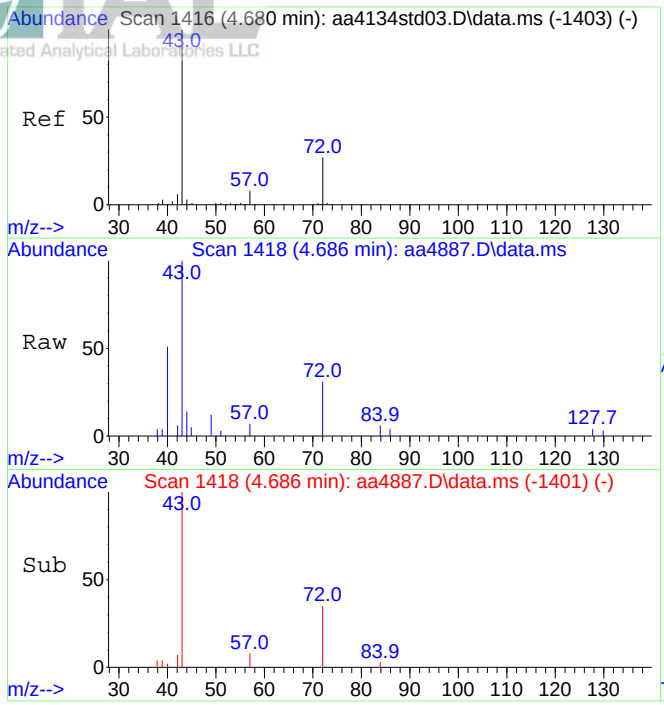




#24
n-Hexane
Concen: 0.38 ppbV
RT: 3.406 min Scan# 1020
Delta R.T. 0.002 min
Lab File: aa4887.D
Acq: 8 Dec 2023 2:35 pm

Tgt Ion: 57 Resp: 55844

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 41 | 74.6 | 66.4 | 99.6 |

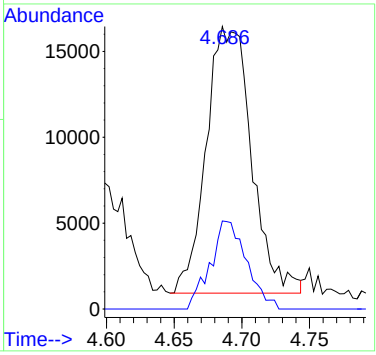


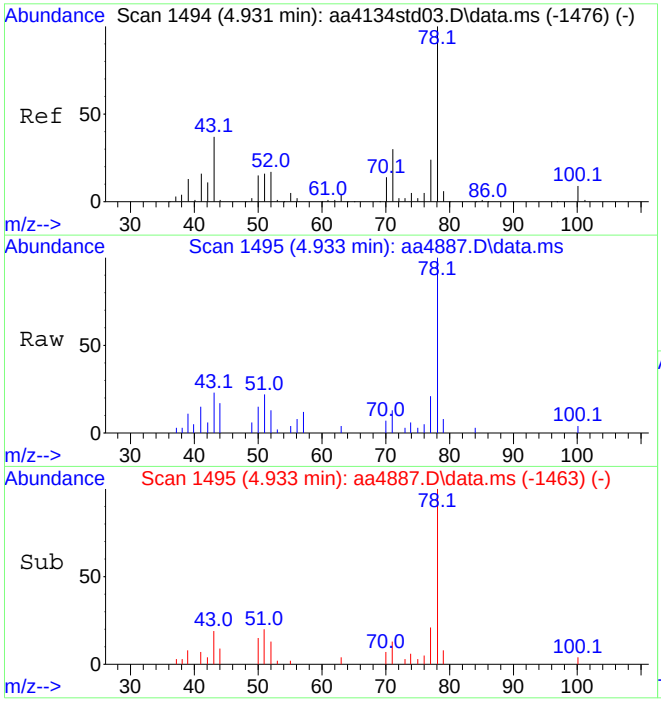



#35
Methyl ethyl ketone
Concen: 0.32 ppbV
RT: 4.686 min Scan# 1418
Delta R.T. 0.006 min
Lab File: aa4887.D
Acq: 8 Dec 2023 2:35 pm

Tgt Ion: 43 Resp: 36088

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 26.4 | 21.6 | 32.4 |

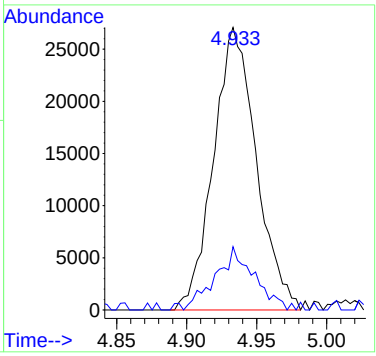


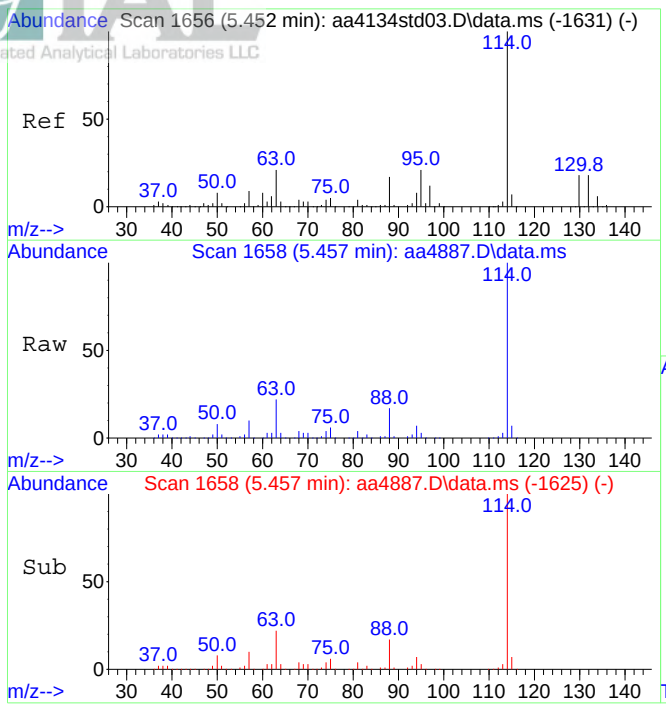




#37
Benzene
Concen: 0.31 ppbV
RT: 4.933 min Scan# 1495
Delta R.T. 0.002 min
Lab File: aa4887.D
Acq: 8 Dec 2023 2:35 pm

Tgt Ion: 78 Resp: 57578

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 19.9 | 13.4 | 20.0 |

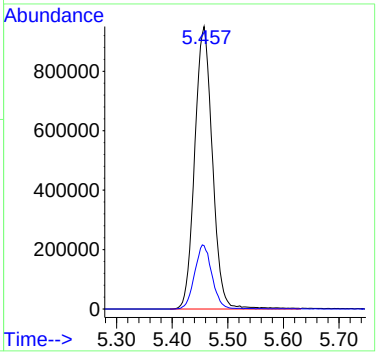


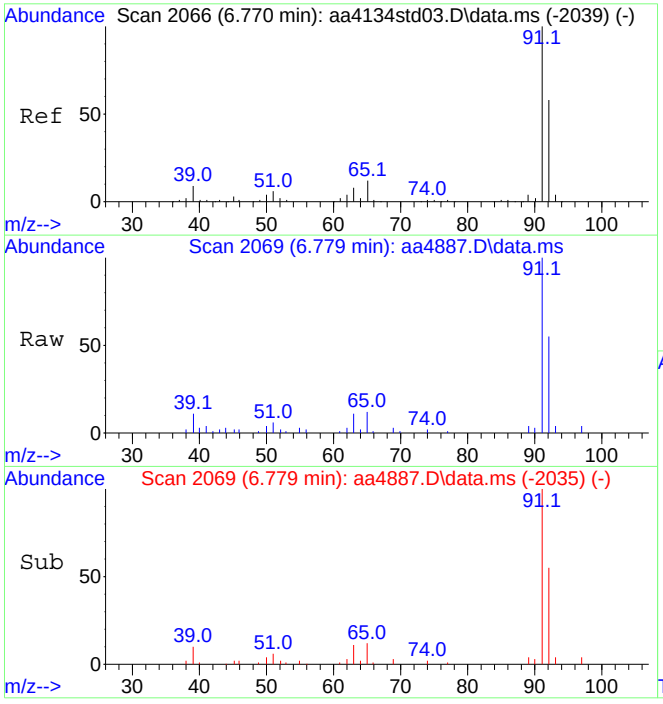



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.457 min Scan# 1658
Delta R.T. 0.005 min
Lab File: aa4887.D
Acq: 8 Dec 2023 2:35 pm

Tgt Ion:114 Resp: 2102202

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.3 | 17.0 | 25.6 |

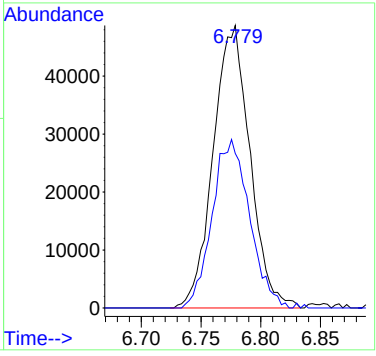


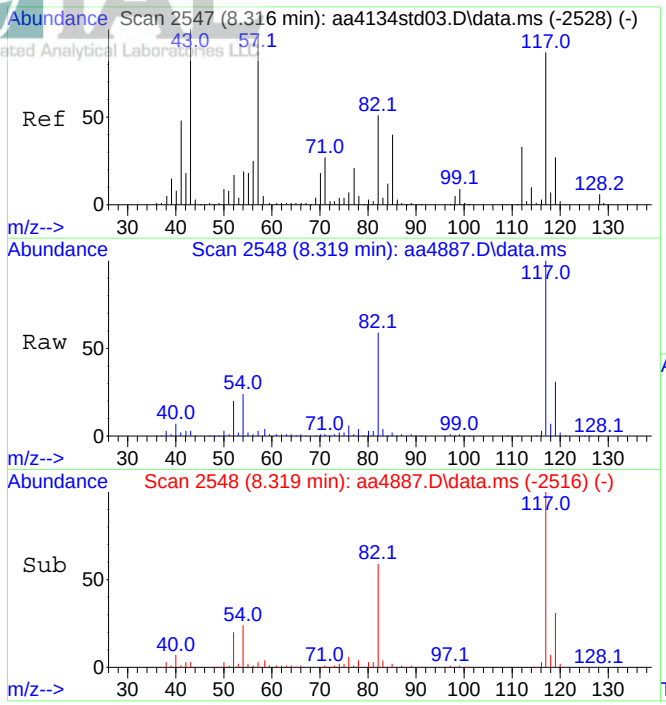




#47
Toluene
Concen: 0.35 ppbV
RT: 6.779 min Scan# 2069
Delta R.T. 0.009 min
Lab File: aa4887.D
Acq: 8 Dec 2023 2:35 pm

Tgt Ion: 91 Resp: 104406

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 60.4 | 47.3 | 70.9 |

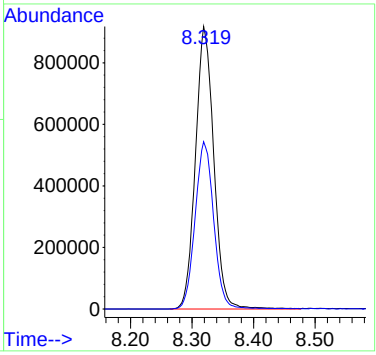


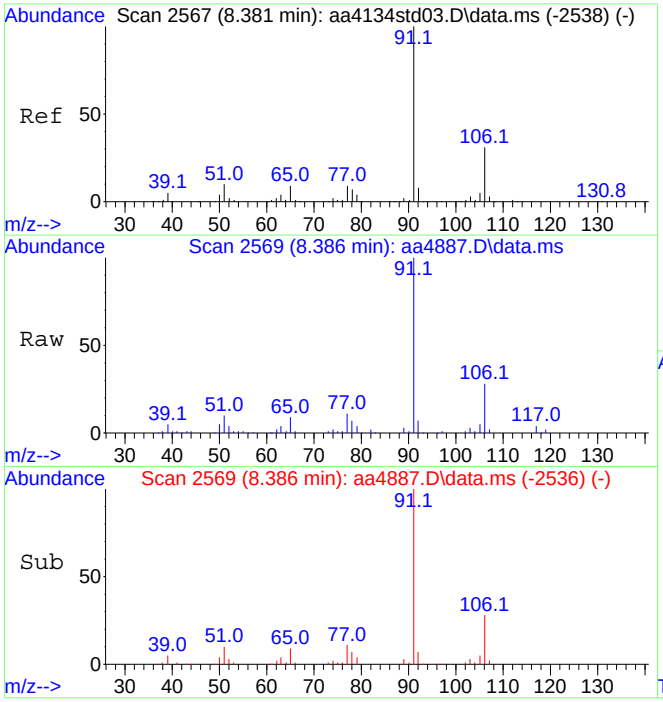



#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.319 min Scan# 2548
Delta R.T. 0.002 min
Lab File: aa4887.D
Acq: 8 Dec 2023 2:35 pm

Tgt Ion:117 Resp: 1902313

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 60.0 | 47.0 | 70.4 |

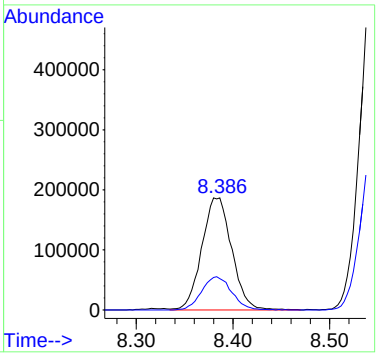


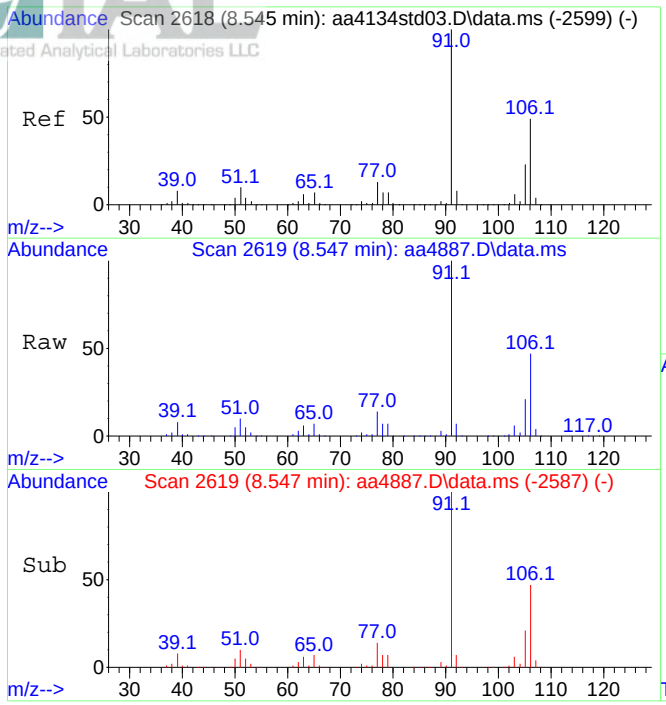




#58
Ethylbenzene
Concen: 1.14 ppbV
RT: 8.386 min Scan# 2569
Delta R.T. 0.006 min
Lab File: aa4887.D
Acq: 8 Dec 2023 2:35 pm

Tgt Ion: 91 Resp: 401239

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 29.7 | 24.6 | 36.8 |

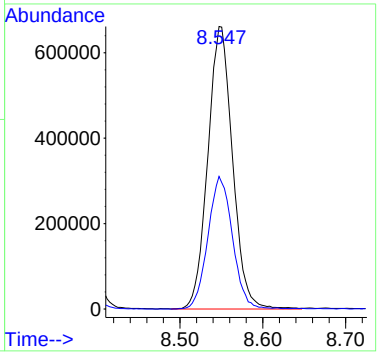


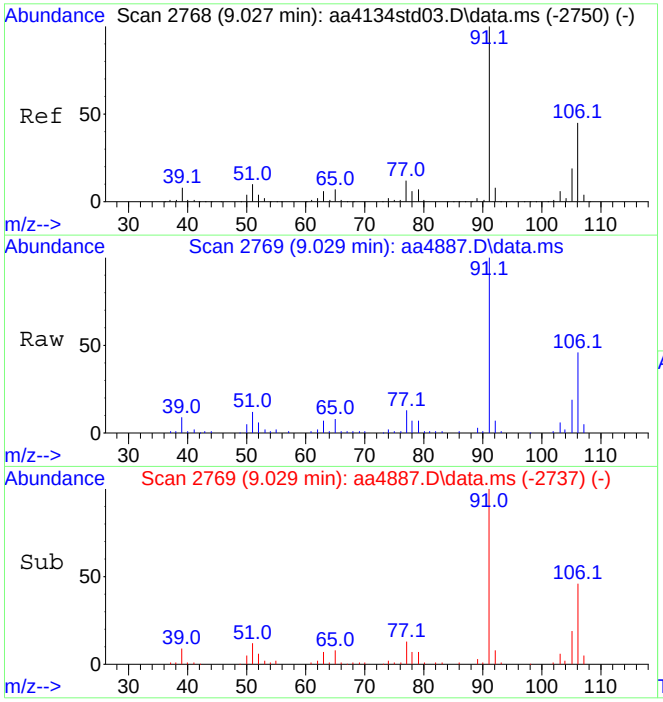



#59
Xylenes (m&p)
Concen: 5.27 ppbV
RT: 8.547 min Scan# 2619
Delta R.T. 0.002 min
Lab File: aa4887.D
Acq: 8 Dec 2023 2:35 pm

Tgt Ion: 91 Resp: 1369890

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 46.6 | 39.0 | 58.4 |

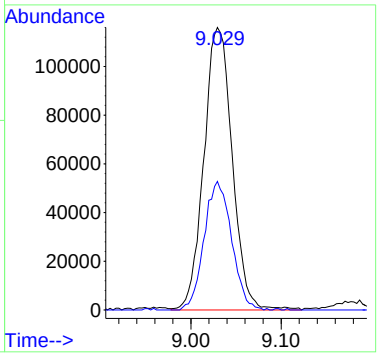


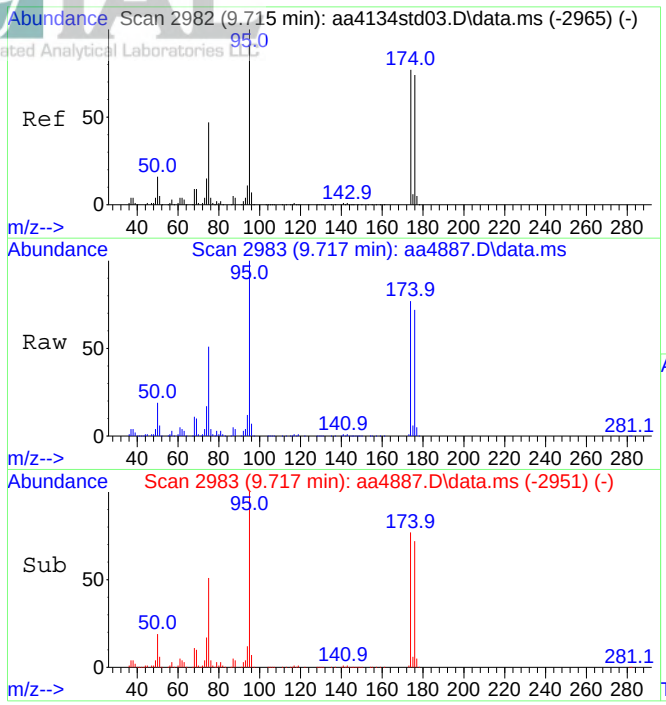




#60
Xylene (o)
Concen: 0.89 ppbV
RT: 9.029 min Scan# 2769
Delta R.T. 0.002 min
Lab File: aa4887.D
Acq: 8 Dec 2023 2:35 pm

Tgt Ion: 91 Resp: 253611

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 44.0 | 36.8 | 55.2 |

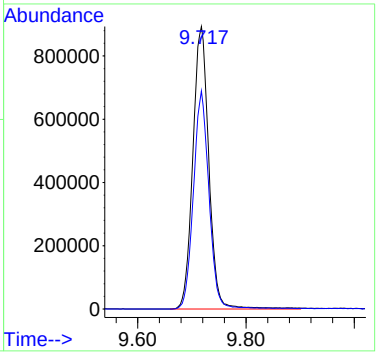





#64
Bromofluorobenzene (tune std)
Concen: 11.08 ppbV
RT: 9.717 min Scan# 2983
Delta R.T. 0.002 min
Lab File: aa4887.D
Acq: 8 Dec 2023 2:35 pm

Tgt Ion: 95 Resp: 1837891

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 74.8 | 61.1 | 91.7 |



Volatile Organic Compounds by EPA Method TO-15
Summary of Results

| | | | |
|---|---|---|---|
| Lab ID: | E23-05047-03 | Instrument ID: | AA |
| Client ID: | SV3 | GC/MS Column: | RTX-1, 0.32 mmID |
| Date Sampled: | 11/15/2023 10:40 | Injection Volmue: | 500ml, 50ml |
| Date Received: | 11/16/2023 | Matrix: | Air-Other |
| Date Analyzed: | 12/08/2023 15:06, 12/11/2023 14:18 | % Moisture: | NA |
| Data File: | AA4888, AA4909 | Dilution Factor: | 1, 10 |
| Summa ID: | 3811 | Analyst: | J. Walukiewicz |

| | | | Concentration Reported | | Reporting Limits | |
|---|---|---|---|---|---|---|
| **Compound** | **CAS #** | **Q** | **ppbv** | **ug/m3** | **ppbv** | **ug/m3** |
| Acetone | 67-64-1 | | 33 | 78 | 0.20 | 0.48 |
| Benzene | 71-43-2 | | 10 | 32 | 0.20 | 0.64 |
| Bromodichloromethane | 75-27-4 | | ND | ND | 0.20 | 1.3 |
| Bromoform | 75-25-2 | | ND | ND | 0.20 | 2.1 |
| Bromomethane | 74-83-9 | | ND | ND | 0.20 | 0.78 |
| 1,3-Butadiene | 106-99-0 | | ND | ND | 0.20 | 0.44 |
| Chlorobenzene | 108-90-7 | | ND | ND | 0.20 | 0.92 |
| Chloroethane | 75-00-3 | | ND | ND | 0.20 | 0.53 |
| Chloroform | 67-66-3 | | ND | ND | 0.20 | 0.98 |
| Chloromethane | 74-87-3 | | ND | ND | 0.20 | 0.41 |
| Carbon disulfide | 75-15-0 | | 25 | 79 | 0.20 | 0.62 |
| Carbon tetrachloride | 56-23-5 | | 2.2 | 14 | 0.040 | 0.25 |
| Cyclohexane | 110-82-7 | | 3.4 | 12 | 0.20 | 0.69 |
| Dibromochloromethane | 124-48-1 | | ND | ND | 0.20 | 1.7 |
| 1,2-Dibromoethane | 106-93-4 | | ND | ND | 0.20 | 1.5 |
| 1,2-Dichlorobenzene | 95-50-1 | | ND | ND | 0.20 | 1.2 |
| 1,3-Dichlorobenzene | 541-73-1 | | ND | ND | 0.20 | 1.2 |
| 1,4-Dichlorobenzene | 106-46-7 | | ND | ND | 0.20 | 1.2 |
| Dichlorodifluoromethane | 75-71-8 | | ND | ND | 0.20 | 0.99 |
| 1,1-Dichloroethane | 75-34-3 | | ND | ND | 0.20 | 0.81 |
| 1,2-Dichloroethane | 107-06-2 | | ND | ND | 0.20 | 0.81 |
| 1,1-Dichloroethene | 75-35-4 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloroethene (cis) | 156-59-2 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloroethene (trans) | 156-60-5 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloropropane | 78-87-5 | | ND | ND | 0.20 | 0.92 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | | ND | ND | 0.20 | 0.91 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | | ND | ND | 0.20 | 0.91 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | | ND | ND | 0.20 | 1.4 |
| 1,4-Dioxane | 123-91-1 | | ND | ND | 0.20 | 0.72 |
| Ethylbenzene | 100-41-4 | D | 40 | 170 | 2.0 | 8.7 |
| n-Heptane | 142-82-5 | | 6.5 | 27 | 0.20 | 0.82 |
| 1,3-Hexachlorobutadiene | 87-68-3 | | ND | ND | 0.20 | 2.1 |
| n-Hexane | 110-54-3 | | 7.4 | 26 | 0.20 | 0.70 |
| Methylene chloride | 75-09-2 | | 4.9 | 17 | 0.20 | 0.69 |
| Methyl ethyl ketone | 78-93-3 | | 3.0 | 8.8 | 0.20 | 0.59 |
| Methyl isobutyl ketone | 108-10-1 | | ND | ND | 0.20 | 0.82 |
| Methyl tert-butyl ether | 1634-04-4 | | ND | ND | 0.20 | 0.72 |
| Styrene | 100-42-5 | | 0.88 | 3.7 | 0.20 | 0.85 |
| Tert-butyl alcohol | 75-65-0 | | 8.8 | 27 | 0.20 | 0.61 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | ND | ND | 0.20 | 1.4 |
| Tetrachloroethene | 127-18-4 | | 6.4 | 44 | 0.20 | 1.4 |
| Toluene | 108-88-3 | | 6.0 | 23 | 0.20 | 0.75 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | ND | ND | 0.20 | 1.5 |
| 1,1,1-Trichloroethane | 71-55-6 | | 0.21 | 1.1 | 0.20 | 1.1 |
| 1,1,2-Trichloroethane | 79-00-5 | | 0.61 | 3.4 | 0.20 | 1.1 |

Qualifiers:
D = Dilution required

Volatile Organic Compounds by EPA Method TO-15
Summary of Results

| | | | |
|---|---|---|---|
| Lab ID: | E23-05047-03 | Instrument ID: | AA |
| Client ID: | SV3 | GC/MS Column: | RTX-1, 0.32 mmID |
| Date Sampled: | 11/15/2023 10:40 | Injection Volmue: | 500ml, 50ml |
| Date Received: | 11/16/2023 | Matrix: | Air-Other |
| Date Analyzed: | 12/08/2023 15:06, 12/11/2023 14:18 | % Moisture: | NA |
| Data File: | AA4888, AA4909 | Dilution Factor: | 1, 10 |
| Summa ID: | 3811 | Analyst: | J. Walukiewicz |

| | | | Concentration Reported | | Reporting Limits | |
|---|---|---|---|---|---|---|
| **Compound** | **CAS #** | **Q** | **ppbv** | **ug/m3** | **ppbv** | **ug/m3** |
| Trichloroethene | 79-01-6 | | ND | ND | 0.046 | 0.25 |
| Trichlorofluoromethane | 75-69-4 | | 0.52 | 2.9 | 0.20 | 1.1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | | ND | ND | 0.20 | 1.5 |
| 1,2,4-Trimethylbenzene | 95-63-6 | | 1.8 | 8.8 | 0.20 | 0.98 |
| 1,3,5-Trimethylbenzene | 108-67-8 | | 0.83 | 4.1 | 0.20 | 0.98 |
| 2,2,4-Trimethylpentane | 540-84-1 | | ND | ND | 0.20 | 0.93 |
| Vinyl bromide | 593-60-2 | | ND | ND | 0.20 | 0.87 |
| Vinyl chloride | 75-01-4 | | ND | ND | 0.20 | 0.51 |
| Xylenes (m&p) | 179601-23-1 | D | 170 | 750 | 2.0 | 8.7 |
| Xylenes (o) | 95-47-6 | | 39 | 170 | 0.20 | 0.87 |

Qualifiers:
D = Dilution required

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4888.D
Acq On : 8 Dec 2023 3:06 pm
Operator : jjw
Sample : E23-05047-03
Misc : 3811, 500cc
ALS Vial : 11 Sample Multiplier: 1

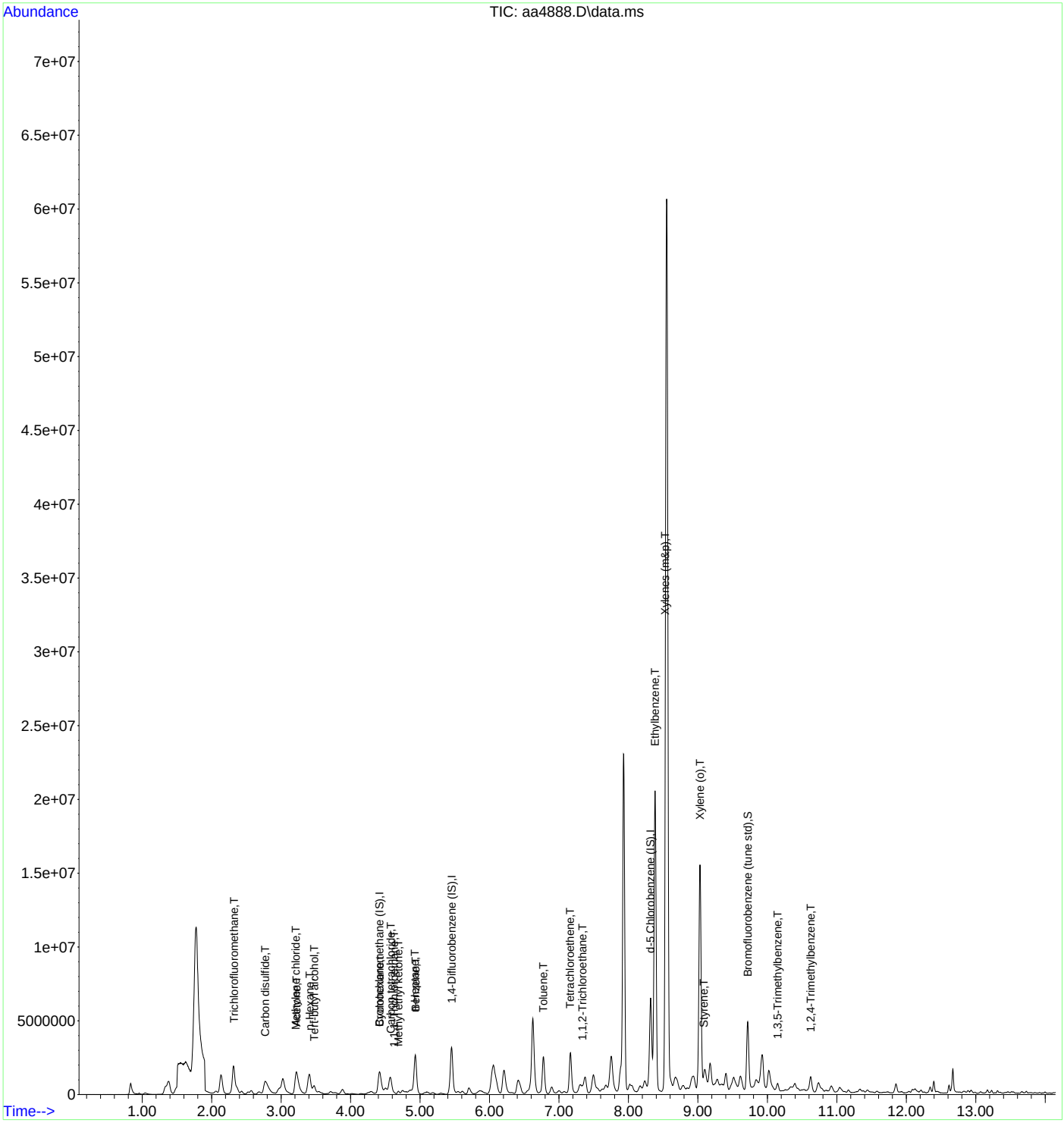
Quant Time: Dec 12 09:52:15 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

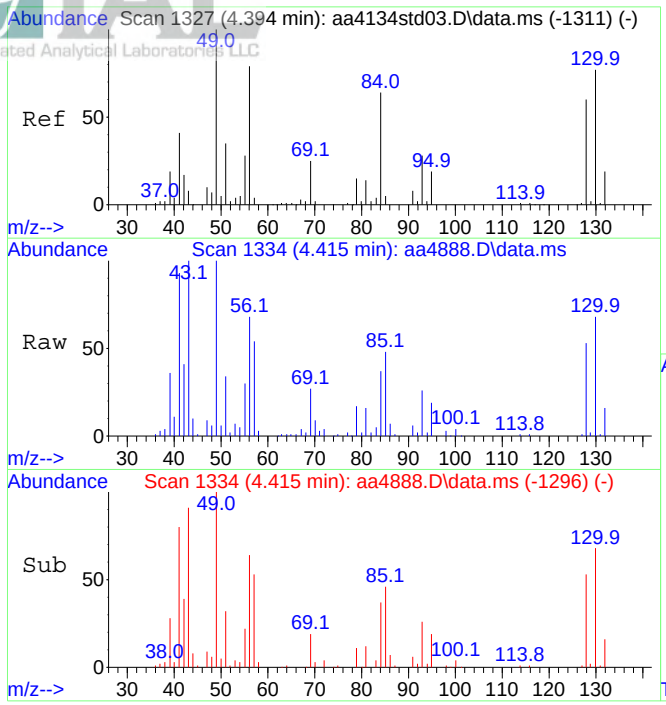
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.415 | 130 | 395958 | 10.00 | ppbV | | 0.021 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 2148109 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 1907941 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 2032578 | 12.22 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 12) Trichlorofluoromethane | 2.322 | 101 | 57174 | 0.52 | ppbV | | 99 |
| 15) Carbon disulfide | 2.772 | 76 | 3076802 | 25.41 | ppbV | | 95 |
| 20) Methylene chloride | 3.210 | 49 | 237038 | 4.87 | ppbV | | 90 |
| 21) Acetone | 3.222 | 43 | 1951192 | 32.67 | ppbV | | 96 |
| 24) n-Hexane | 3.412 | 57 | 925952 | 7.42 | ppbV | # | 72 |
| 26) Tert-butyl alcohol | 3.477 | 59 | 904351 | 8.76 | ppbV | | 100 |
| 29) Cyclohexane | 4.419 | 56 | 296816 | 3.40 | ppbV | # | 59 |
| 32) Carbon tetrachloride | 4.579 | 117 | 272441 | 2.17 | ppbV | | 100 |
| 34) 1,1,1-Trichloroethane | 4.628 | 97 | 23000 | 0.21 | ppbV | | 97 |
| 35) Methyl ethyl ketone | 4.689 | 43 | 287451 | 2.97 | ppbV | | 99 |
| 36) n-Heptane | 4.927 | 43 | 709633 | 6.48 | ppbV | | 99 |
| 37) Benzene | 4.936 | 78 | 1583423 | 10.07 | ppbV | | 98 |
| 47) Toluene | 6.772 | 91 | 1820630 | 6.03 | ppbV | | 99 |
| 49) Tetrachloroethene | 7.161 | 166 | 836083 | 6.42 | ppbV | | 99 |
| 51) 1,1,2-Trichloroethane | 7.338 | 97 | 62558 | 0.61 | ppbV | | 82 |
| 58) Ethylbenzene | 8.383 | 91 | 18127485 | 51.56 | ppbV | | 98 |
| 59) Xylenes (m&p) | 8.531 | 91 | 29204371 | 112.10 | ppbV | # | 57 |
| 60) Xylene (o) | 9.029 | 91 | 11073879 | 38.96 | ppbV | | 99 |
| 61) Styrene | 9.087 | 104 | 171344 | 0.88 | ppbV | | 97 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 272514 | 0.83 | ppbV | | 100 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 591659 | 1.79 | ppbV | | 97 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4888.D
Acq On : 8 Dec 2023 3:06 pm
Operator : jjw
Sample : E23-05047-03
Misc : 3811, 500cc
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Dec 12 09:52:15 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

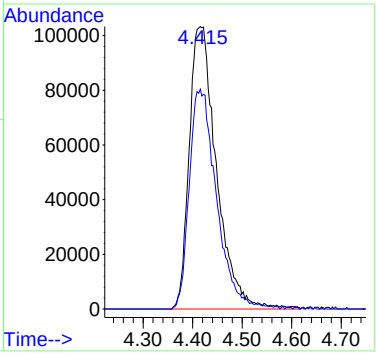


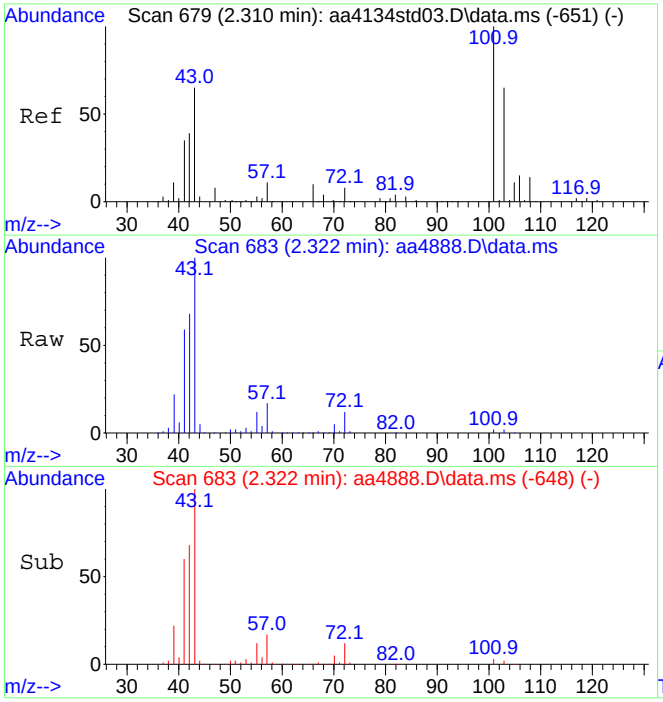



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.415 min Scan# 1334
Delta R.T. 0.021 min
Lab File: aa4888.D
Acq: 8 Dec 2023 3:06 pm

Tgt Ion:130 Resp: 395958

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 77.4 | 62.2 | 93.4 |

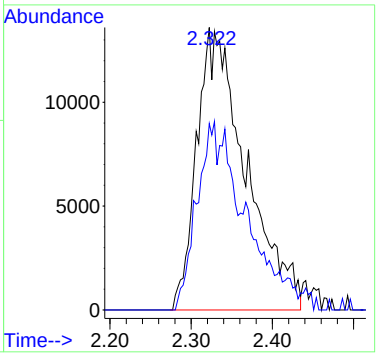


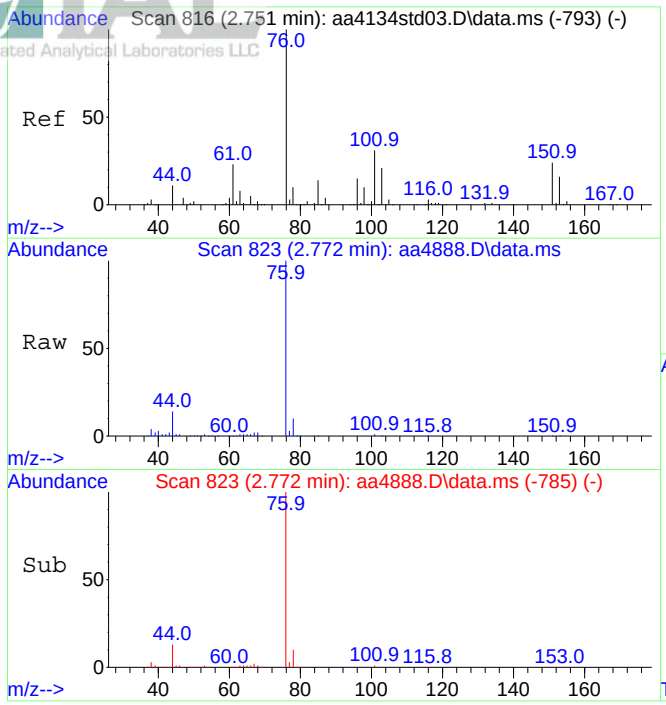




#12
Trichlorofluoromethane
Concen: 0.52 ppbV
RT: 2.322 min Scan# 683
Delta R.T. 0.012 min
Lab File: aa4888.D
Acq: 8 Dec 2023 3:06 pm

Tgt Ion:101 Resp: 57174

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 66.7 | 52.5 | 78.7 |

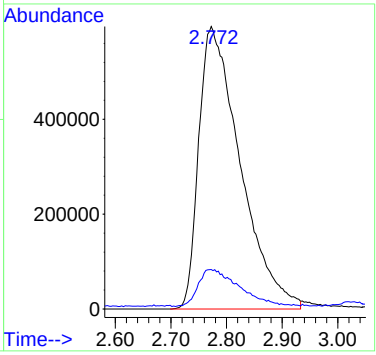


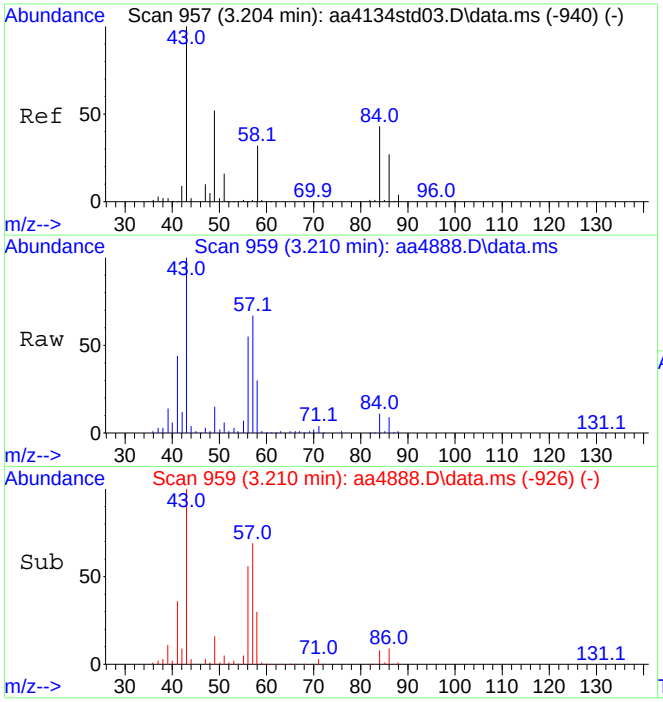



#15
Carbon disulfide
Concen: 25.41 ppbV
RT: 2.772 min Scan# 823
Delta R.T. 0.022 min
Lab File: aa4888.D
Acq: 8 Dec 2023 3:06 pm

Tgt Ion: 76 Resp: 3076802

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 13.2 | 9.0 | 13.4 |

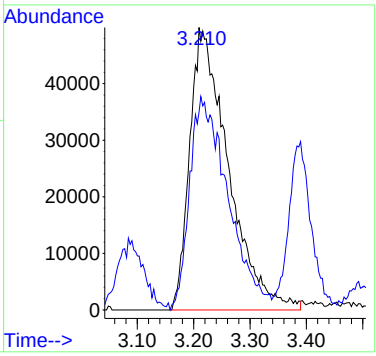


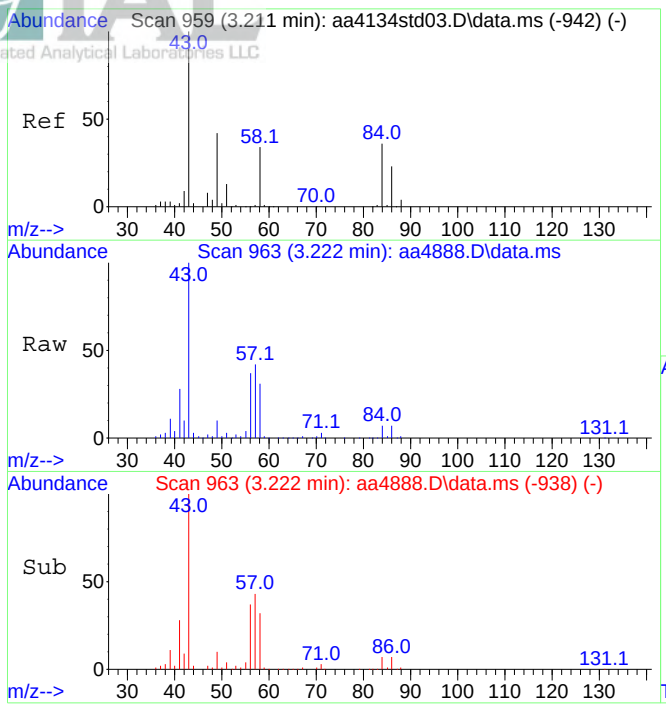




#20
Methylene chloride
Concen: 4.87 ppbV
RT: 3.210 min Scan# 959
Delta R.T. 0.006 min
Lab File: aa4888.D
Acq: 8 Dec 2023 3:06 pm

Tgt Ion: 49 Resp: 237038

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 75.3 | 64.8 | 104.8 |

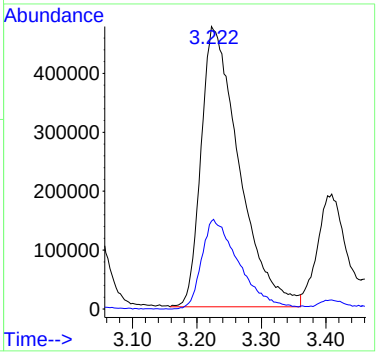


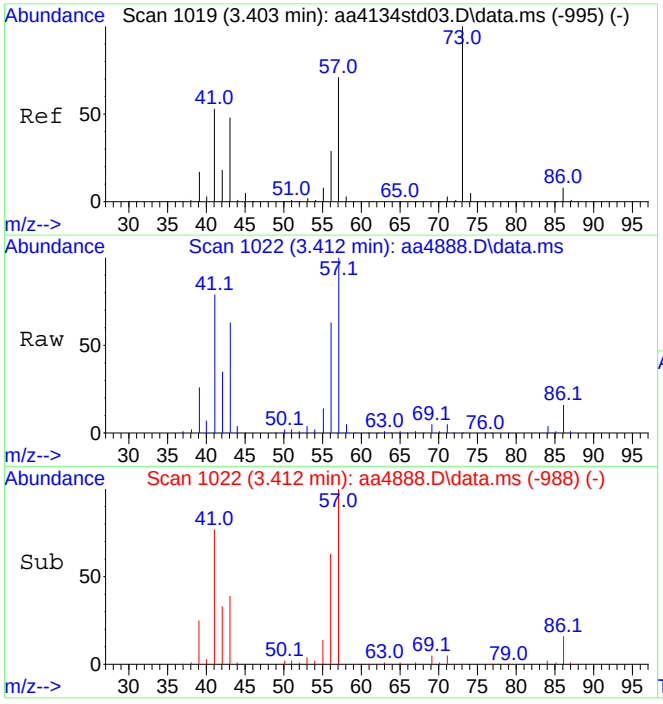



#21
Acetone
Concen: 32.67 ppbV
RT: 3.222 min Scan# 963
Delta R.T. 0.012 min
Lab File: aa4888.D
Acq: 8 Dec 2023 3:06 pm

Tgt Ion: 43 Resp: 1951192

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 31.3 | 27.1 | 40.7 |

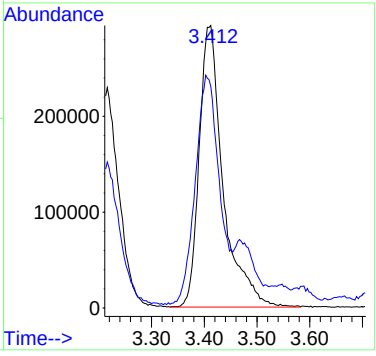


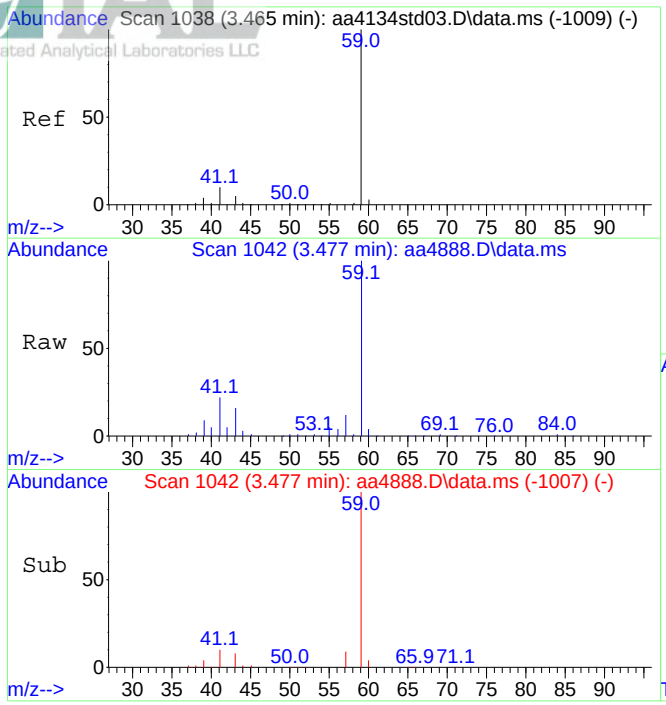




#24
n-Hexane
Concen: 7.42 ppbV
RT: 3.412 min Scan# 1022
Delta R.T. 0.009 min
Lab File: aa4888.D
Acq: 8 Dec 2023 3:06 pm

Tgt Ion: 57 Resp: 925952

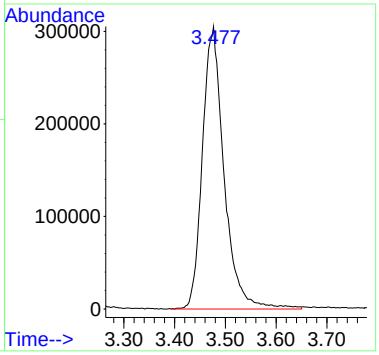
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 41 | 108.6 | 66.4 | 99.6# |

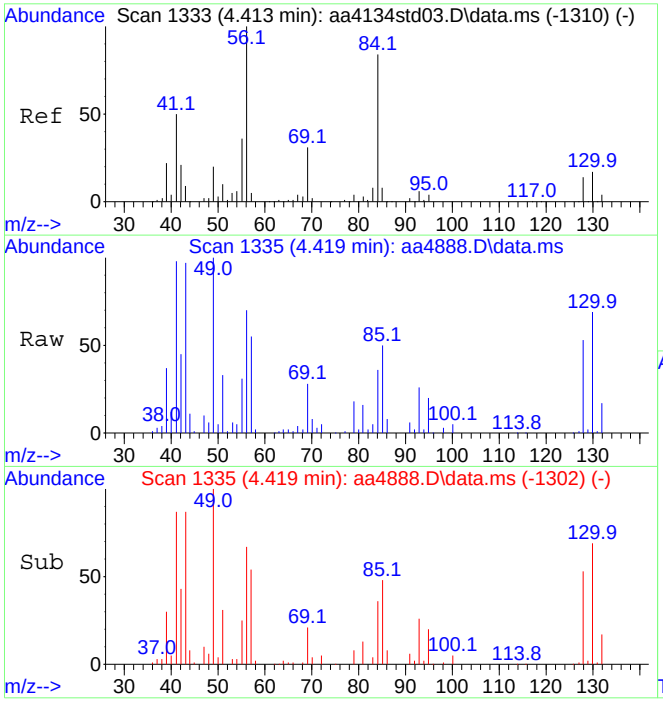





#26
Tert-butyl alcohol
Concen: 8.76 ppbV
RT: 3.477 min Scan# 1042
Delta R.T. 0.012 min
Lab File: aa4888.D
Acq: 8 Dec 2023 3:06 pm

Tgt Ion: 59 Resp: 904351

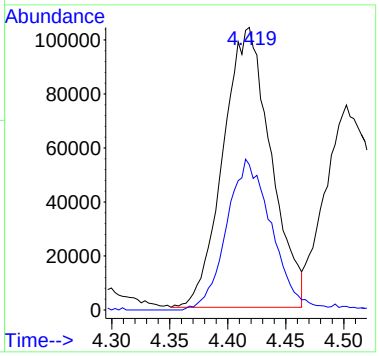


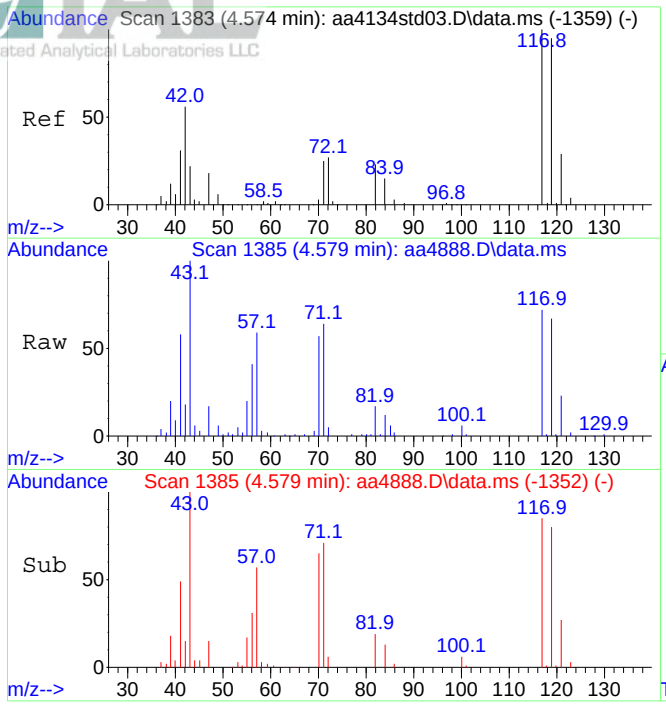




#29
Cyclohexane
Concen: 3.40 ppbV
RT: 4.419 min Scan# 1335
Delta R.T. 0.006 min
Lab File: aa4888.D
Acq: 8 Dec 2023 3:06 pm

Tgt Ion: 56 Resp: 296816

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 50.5 | 71.2 | 106.8# |

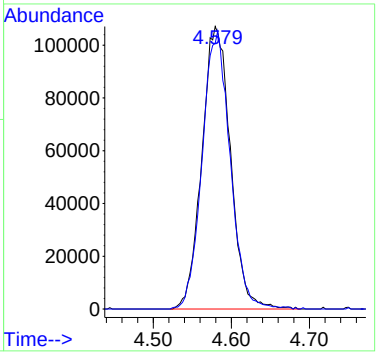


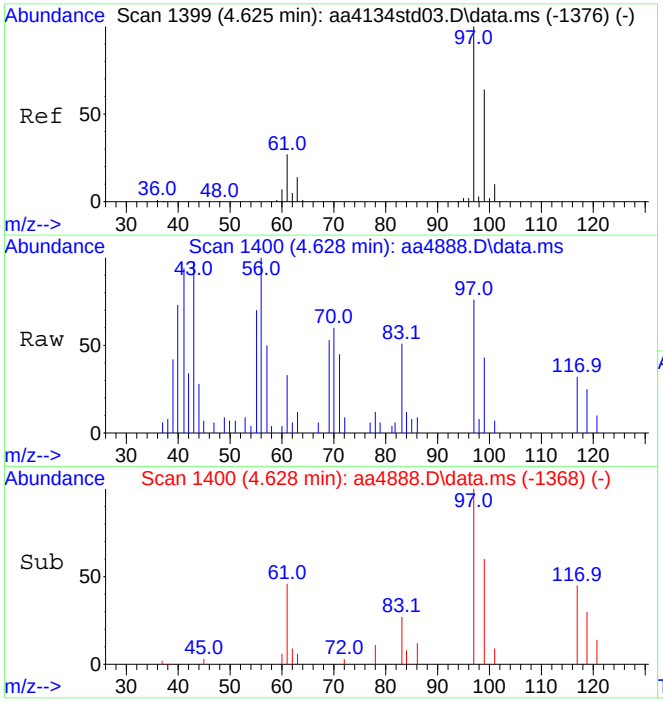



#32
Carbon tetrachloride
Concen: 2.17 ppbV
RT: 4.579 min Scan# 1385
Delta R.T. 0.006 min
Lab File: aa4888.D
Acq: 8 Dec 2023 3:06 pm

Tgt Ion:117 Resp: 272441

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 119 | 96.0 | 76.7 | 115.1 |

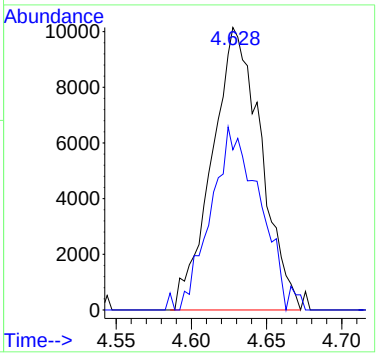


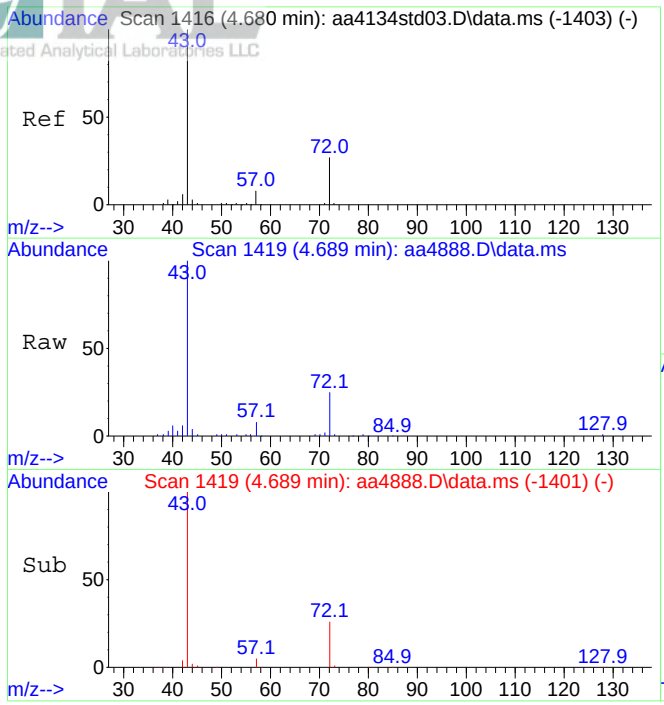




#34
1,1,1-Trichloroethane
Concen: 0.21 ppbV
RT: 4.628 min Scan# 1400
Delta R.T. 0.002 min
Lab File: aa4888.D
Acq: 8 Dec 2023 3:06 pm

Tgt Ion: 97 Resp: 23000

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 63.3 | 52.3 | 78.5 |

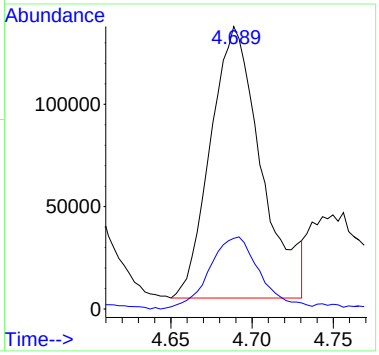


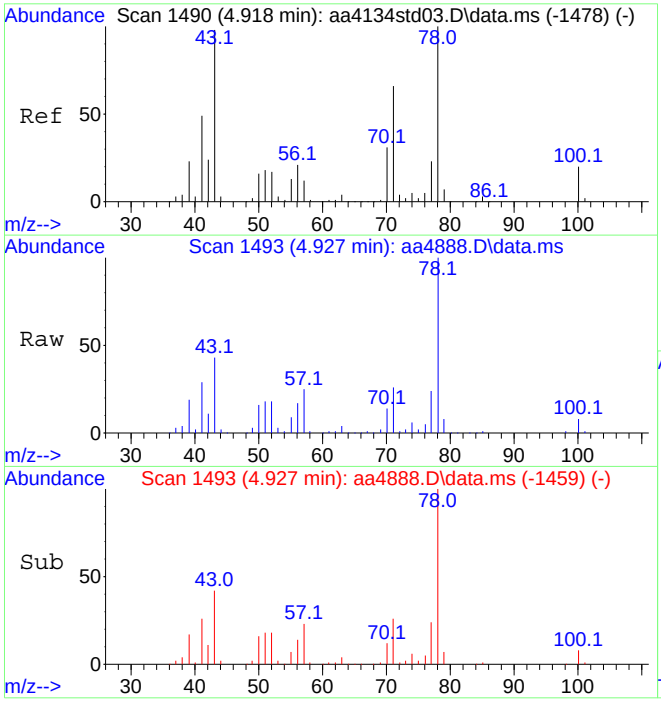



#35
Methyl ethyl ketone
Concen: 2.97 ppbV
RT: 4.689 min Scan# 1419
Delta R.T. 0.009 min
Lab File: aa4888.D
Acq: 8 Dec 2023 3:06 pm

Tgt Ion: 43 Resp: 287451

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 26.5 | 21.6 | 32.4 |

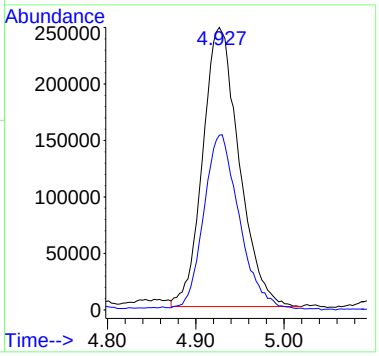


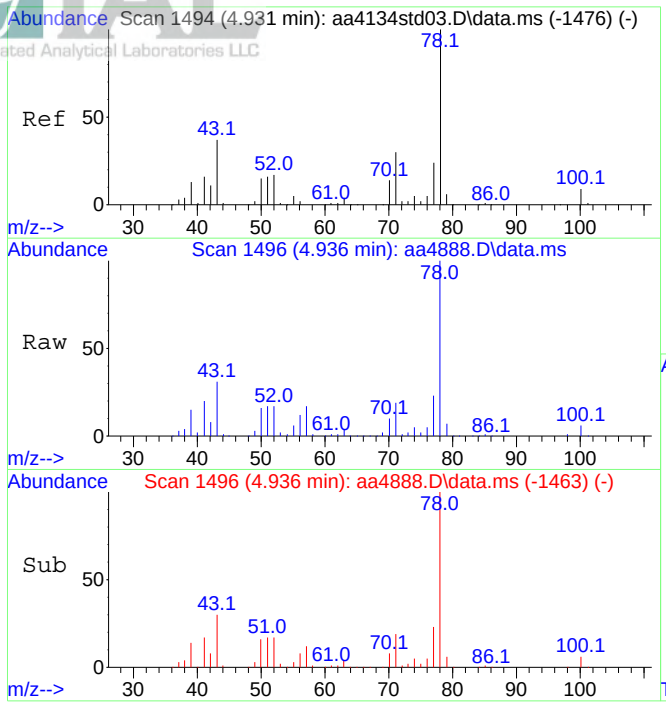




#36
n-Heptane
Concen: 6.48 ppbV
RT: 4.927 min Scan# 1493
Delta R.T. 0.009 min
Lab File: aa4888.D
Acq: 8 Dec 2023 3:06 pm

Tgt Ion: 43 Resp: 709633

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 71 | 62.0 | 50.5 | 75.7 |

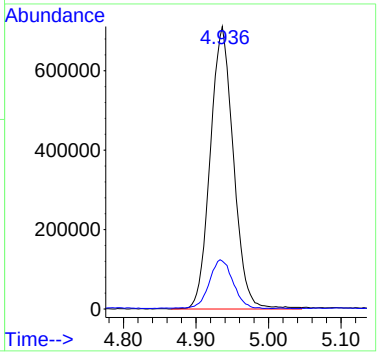


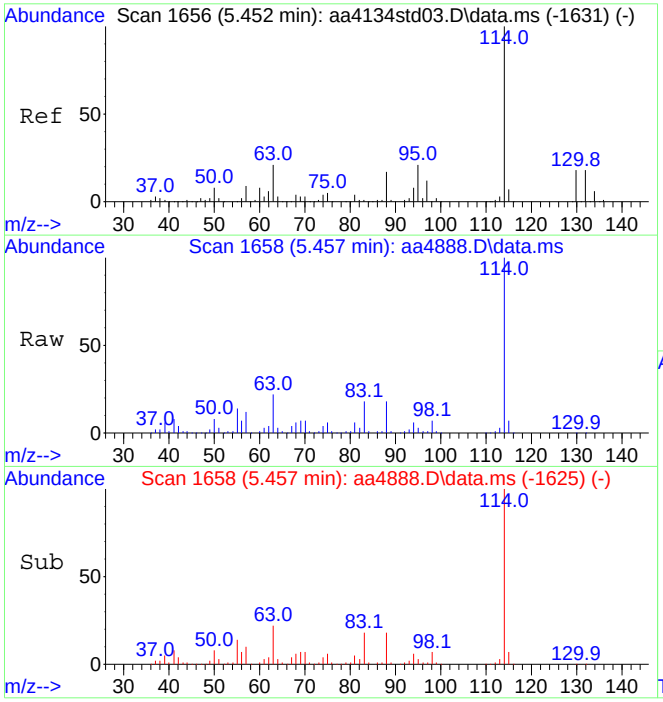



#37
Benzene
Concen: 10.07 ppbV
RT: 4.936 min Scan# 1496
Delta R.T. 0.006 min
Lab File: aa4888.D
Acq: 8 Dec 2023 3:06 pm

Tgt Ion: 78 Resp: 1583423

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 17.8 | 13.4 | 20.0 |

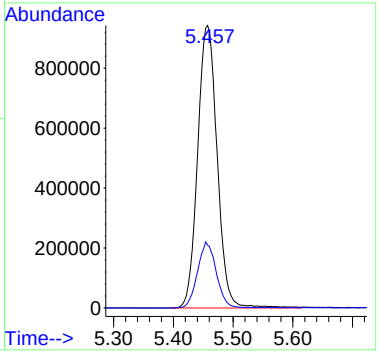


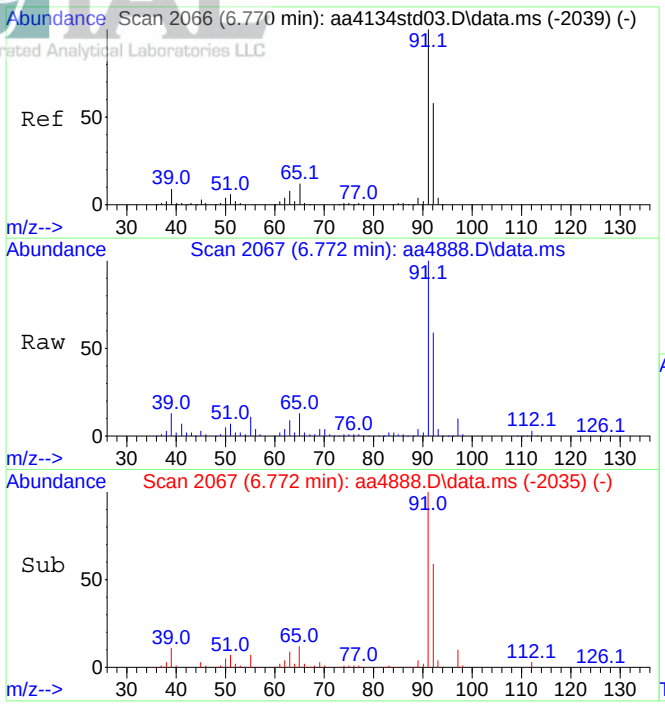




#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.457 min Scan# 1658
Delta R.T. 0.005 min
Lab File: aa4888.D
Acq: 8 Dec 2023 3:06 pm

Tgt Ion:114 Resp: 2148109

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.4 | 17.0 | 25.6 |

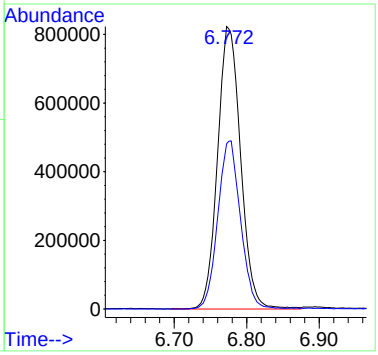


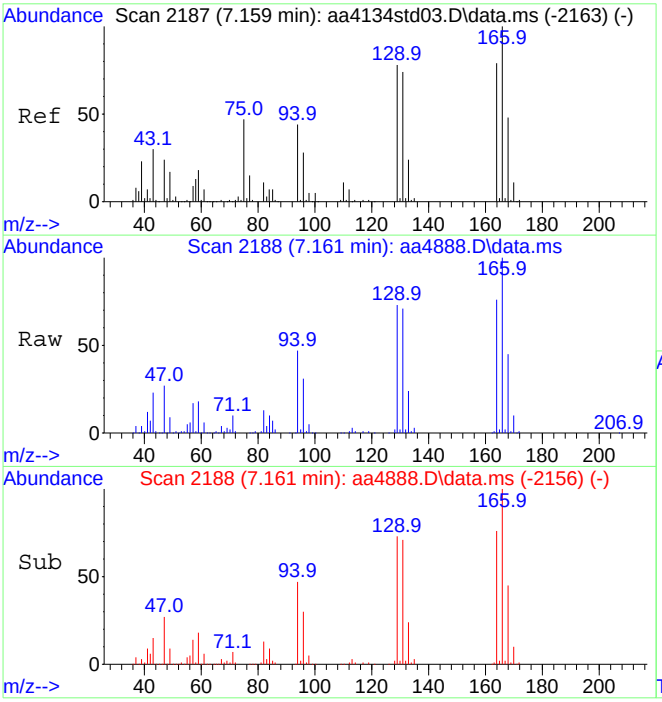



#47
Toluene
Concen: 6.03 ppbV
RT: 6.772 min Scan# 2067
Delta R.T. 0.002 min
Lab File: aa4888.D
Acq: 8 Dec 2023 3:06 pm

Tgt Ion: 91 Resp: 1820630

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 58.7 | 47.3 | 70.9 |

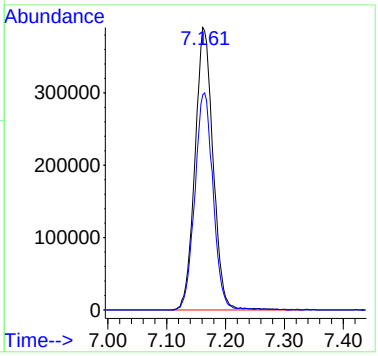


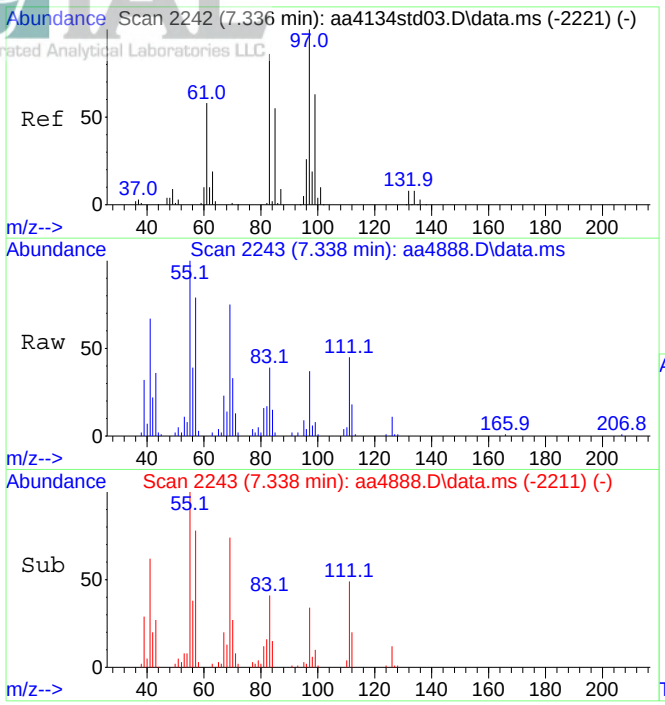




#49
Tetrachloroethene
Concen: 6.42 ppbV
RT: 7.161 min Scan# 2188
Delta R.T. 0.002 min
Lab File: aa4888.D
Acq: 8 Dec 2023 3:06 pm

Tgt Ion:166 Resp: 836083

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 77.3 | 62.3 | 93.5 |

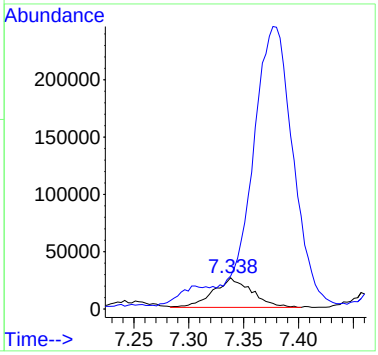


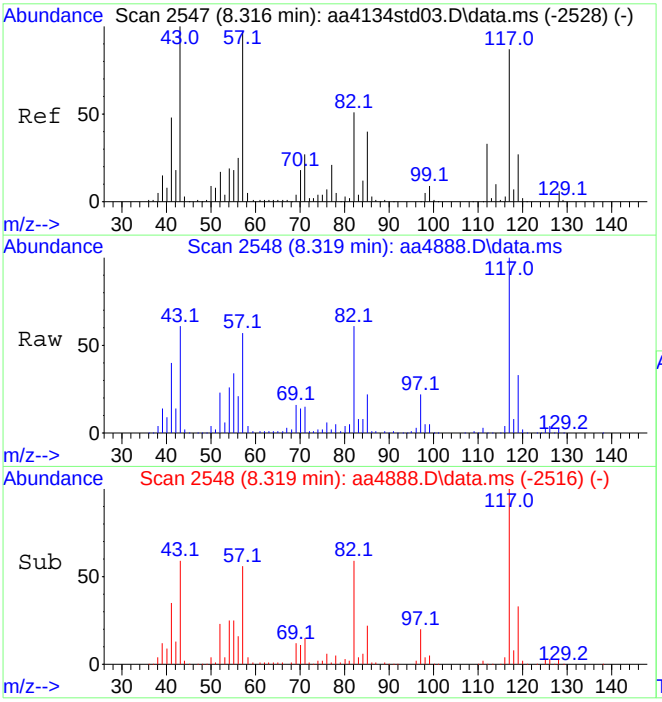



#51
1,1,2-Trichloroethane
Concen: 0.61 ppbV
RT: 7.338 min Scan# 2243
Delta R.T. 0.002 min
Lab File: aa4888.D
Acq: 8 Dec 2023 3:06 pm

Tgt Ion: 97 Resp: 62558

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 83 | 69.4 | 69.0 | 103.4 |

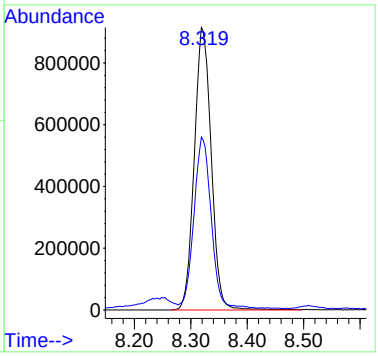


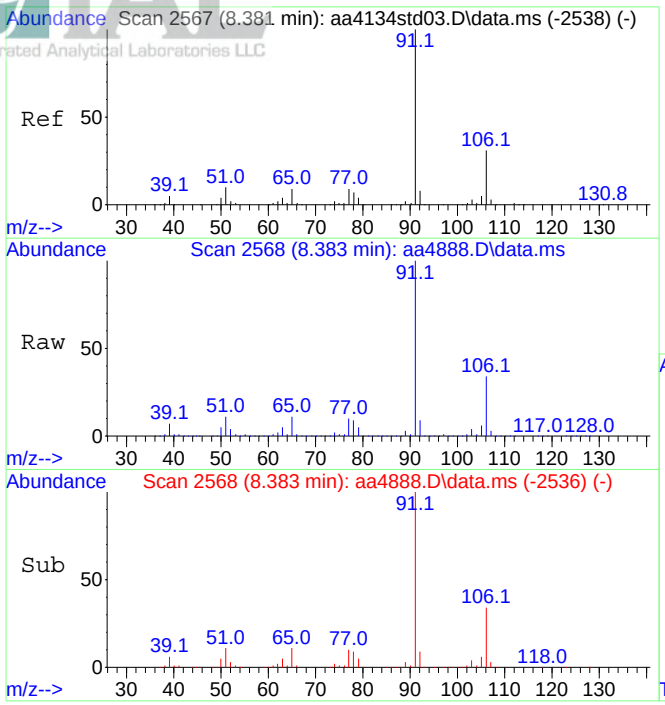




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.319 min Scan# 2548
Delta R.T. 0.002 min
Lab File: aa4888.D
Acq: 8 Dec 2023 3:06 pm

Tgt Ion:117 Resp: 1907941

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 61.5 | 47.0 | 70.4 |

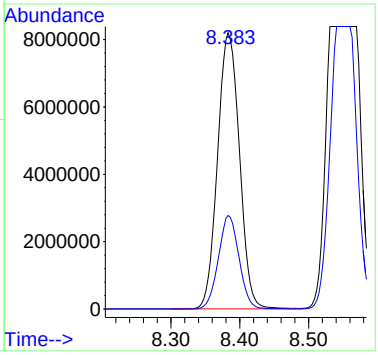


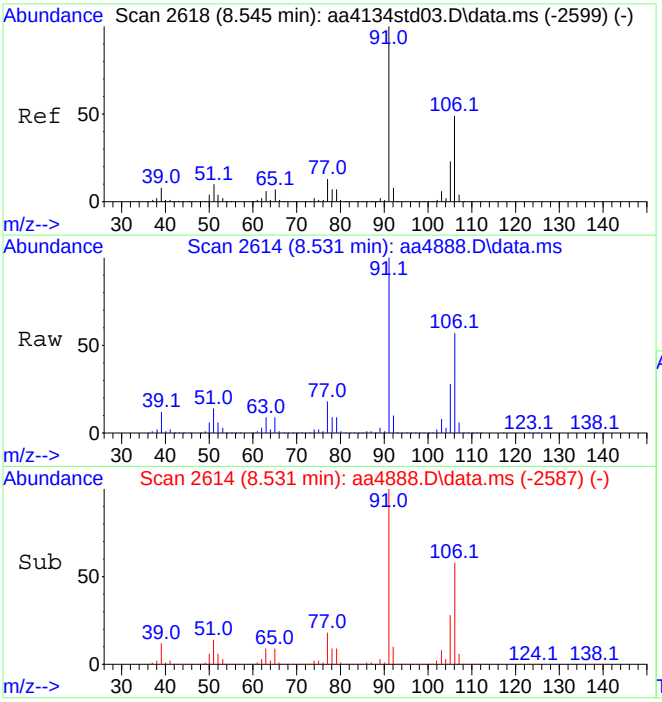



#58
Ethylbenzene
Concen: 51.56 ppbV
RT: 8.383 min Scan# 2568
Delta R.T. 0.002 min
Lab File: aa4888.D
Acq: 8 Dec 2023 3:06 pm

Tgt Ion: 91 Resp:18127485

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 31.9 | 24.6 | 36.8 |

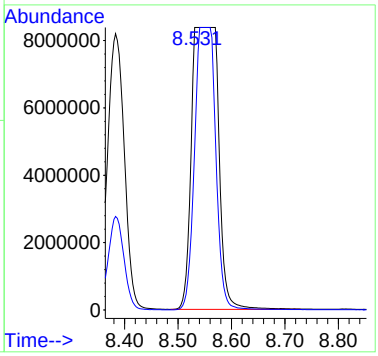


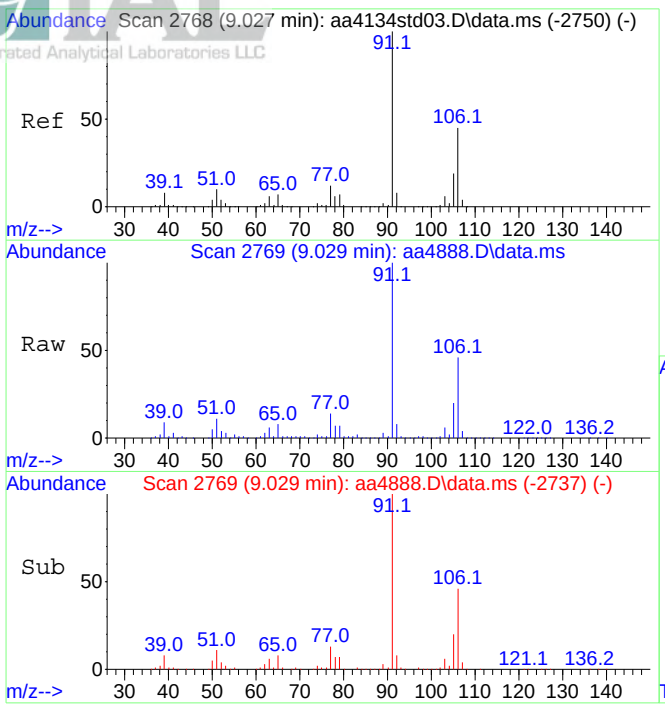




#59
Xylenes (m&p)
Concen: 112.10 ppbV
RT: 8.531 min Scan# 2614
Delta R.T. -0.014 min
Lab File: aa4888.D
Acq: 8 Dec 2023 3:06 pm

Tgt Ion: 91 Resp:29204371

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 78.1 | 39.0 | 58.4# |

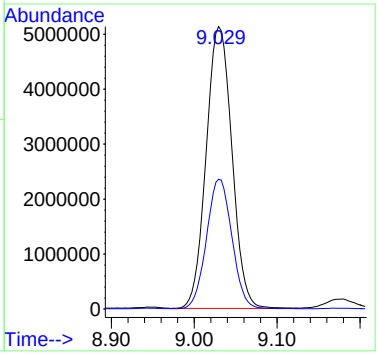


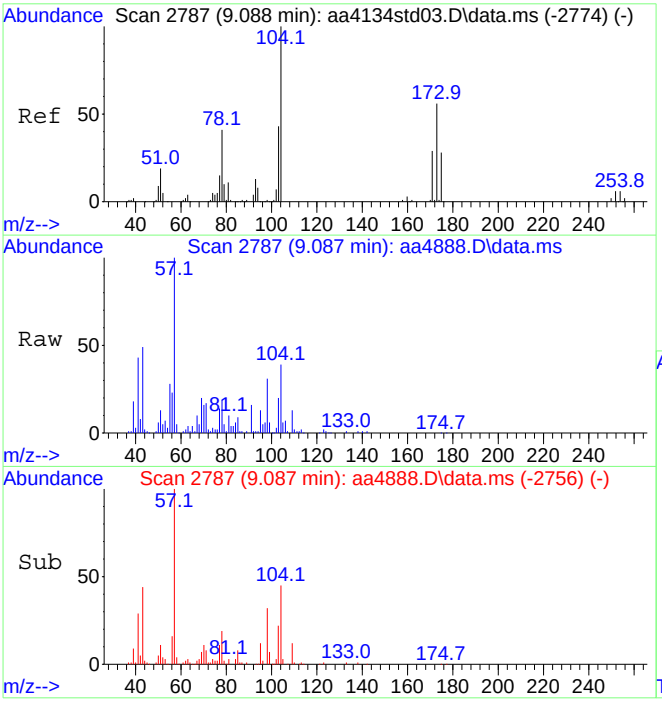



#60
Xylene (o)
Concen: 38.96 ppbV
RT: 9.029 min Scan# 2769
Delta R.T. 0.002 min
Lab File: aa4888.D
Acq: 8 Dec 2023 3:06 pm

Tgt Ion: 91 Resp:11073879

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 45.3 | 36.8 | 55.2 |

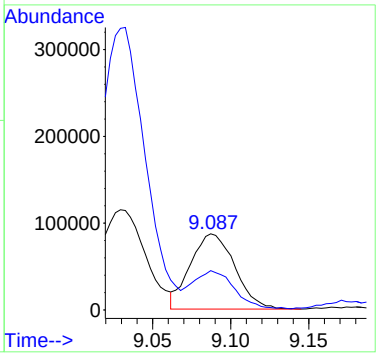


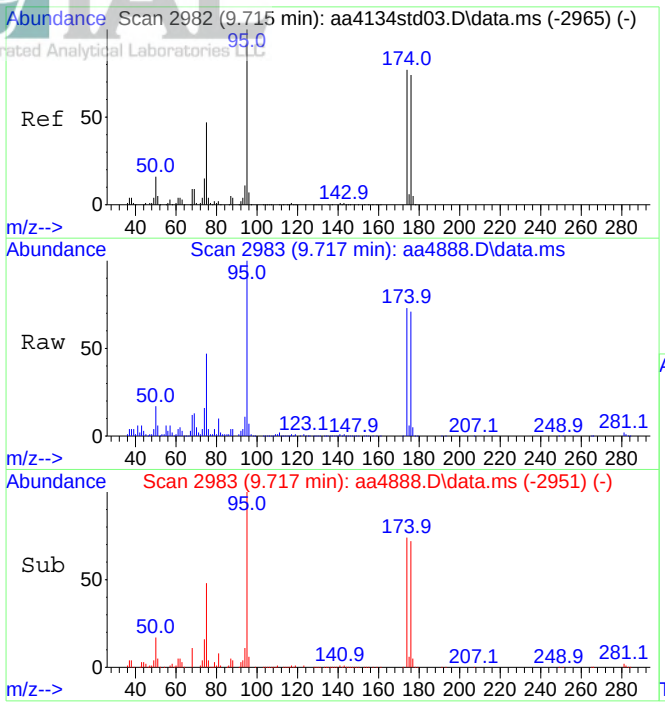




#61
Styrene
Concen: 0.88 ppbV
RT: 9.087 min Scan# 2787
Delta R.T. -0.001 min
Lab File: aa4888.D
Acq: 8 Dec 2023 3:06 pm

Tgt Ion:104 Resp: 171344

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 104 | 100 | | |
| 103 | 45.0 | 37.8 | 56.6 |

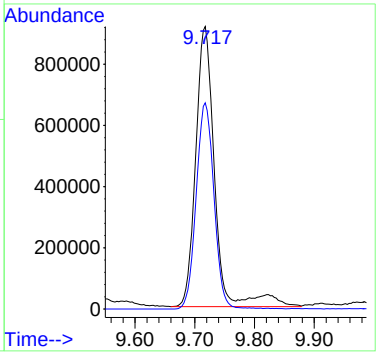


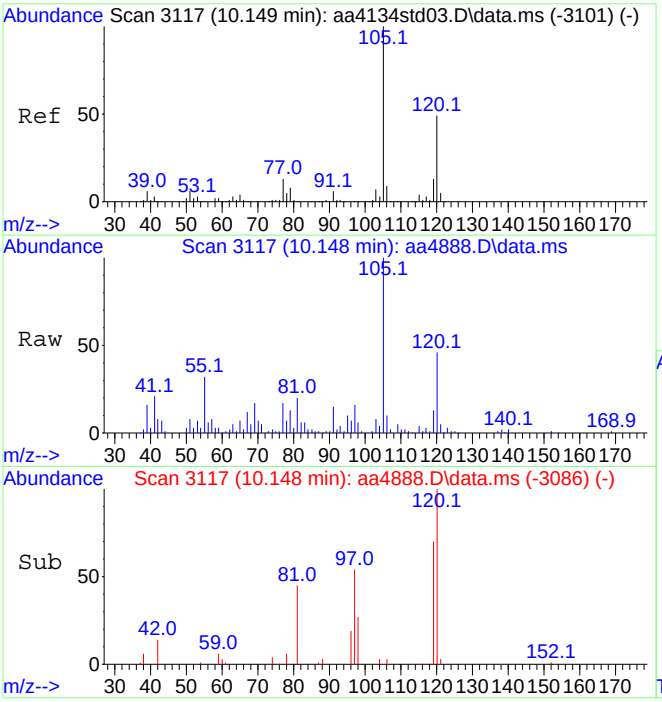



#64
Bromofluorobenzene (tune std)
Concen: 12.22 ppbV
RT: 9.717 min Scan# 2983
Delta R.T. 0.002 min
Lab File: aa4888.D
Acq: 8 Dec 2023 3:06 pm

Tgt Ion: 95 Resp: 2032578

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 68.9 | 61.1 | 91.7 |

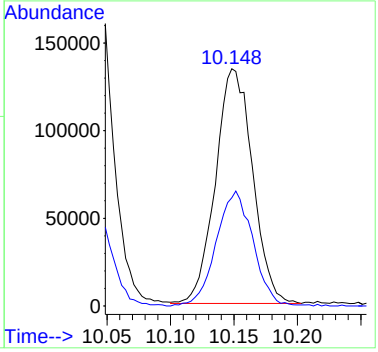


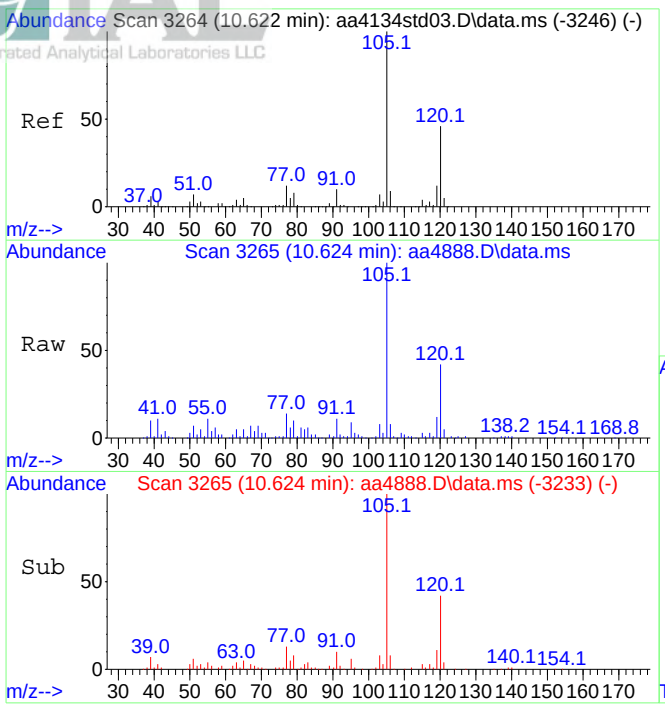




#69
1,3,5-Trimethylbenzene
Concen: 0.83 ppbV
RT: 10.148 min Scan# 3117
Delta R.T. -0.001 min
Lab File: aa4888.D
Acq: 8 Dec 2023 3:06 pm

Tgt Ion:105 Resp: 272514

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 48.5 | 38.9 | 58.3 |

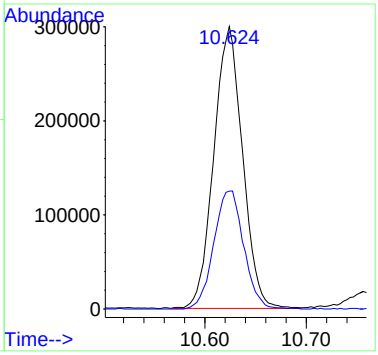





#70
1,2,4-Trimethylbenzene
Concen: 1.79 ppbV
RT: 10.624 min Scan# 3265
Delta R.T. 0.002 min
Lab File: aa4888.D
Acq: 8 Dec 2023 3:06 pm

Tgt Ion:105 Resp: 591659

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 43.5 | 36.3 | 54.5 |



Quantitation Report (QT Reviewed)

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4909.D
Acq On : 11 Dec 2023 2:18 pm
Operator : jjw
Sample : E23-05047-03x10 dil
Misc : 3811, 50cc
ALS Vial : 12 Sample Multiplier: 1

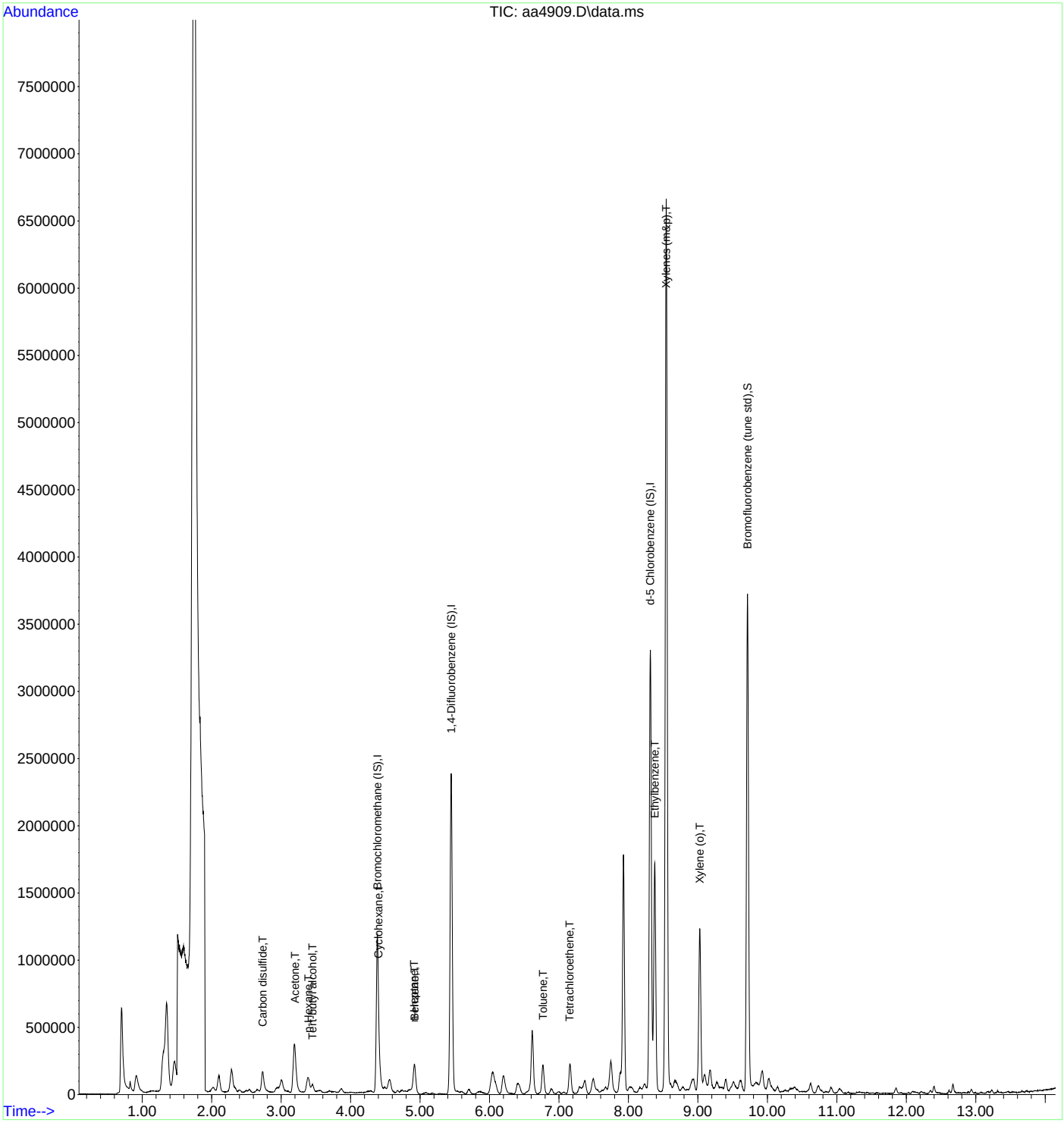
Quant Time: Dec 12 10:32:51 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

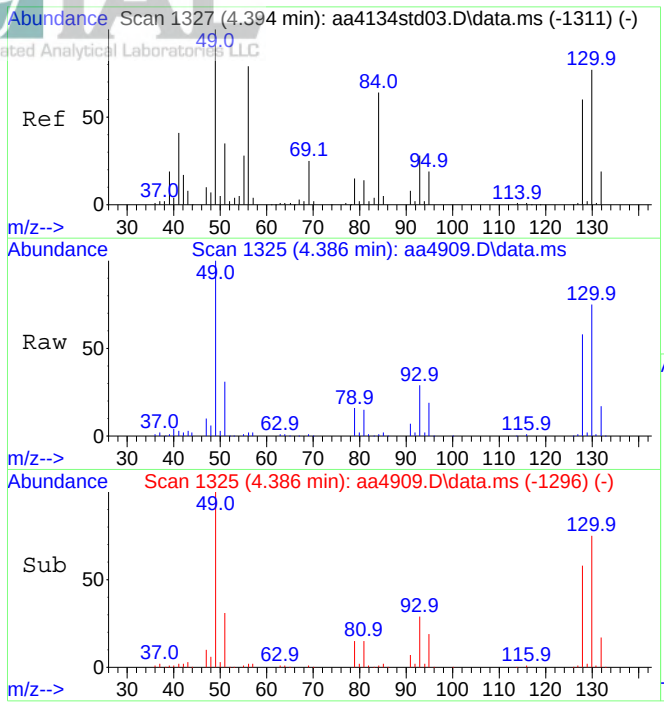
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.386 | 130 | 496847 | 10.00 | ppbV | | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.451 | 114 | 2142143 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 1996652 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1647117 | 9.46 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 15) Carbon disulfide | 2.737 | 76 | 316899 | 2.09 | ppbV | # | 90 |
| 21) Acetone | 3.200 | 43 | 203694 | 2.72 | ppbV | | 96 |
| 24) n-Hexane | 3.393 | 57 | 78009 | 0.50 | ppbV | | 95 |
| 26) Tert-butyl alcohol | 3.451 | 59 | 80564 | 0.62 | ppbV | | 100 |
| 29) Cyclohexane | 4.402 | 56 | 24995 | 0.23 | ppbV | # | 63 |
| 36) n-Heptane | 4.914 | 43 | 59954 | 0.44 | ppbV | | 95 |
| 37) Benzene | 4.923 | 78 | 134689 | 0.68 | ppbV | | 97 |
| 47) Toluene | 6.769 | 91 | 155148 | 0.52 | ppbV | | 98 |
| 49) Tetrachloroethene | 7.152 | 166 | 64939 | 0.50 | ppbV | | 96 |
| 58) Ethylbenzene | 8.380 | 91 | 1467544 | 3.99 | ppbV | | 99 |
| 59) Xylenes (m&p) | 8.544 | 91 | 4731462 | 17.36 | ppbV | | 98 |
| 60) Xylene (o) | 9.026 | 91 | 841179 | 2.83 | ppbV | | 98 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4909.D
Acq On : 11 Dec 2023 2:18 pm
Operator : jjw
Sample : E23-05047-03x10 dil
Misc : 3811, 50cc
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Dec 12 10:32:51 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

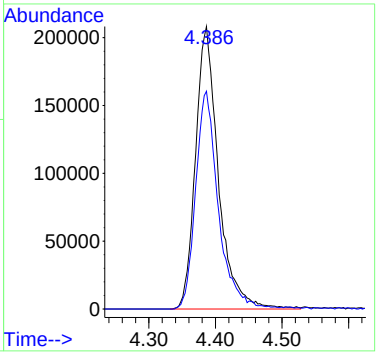


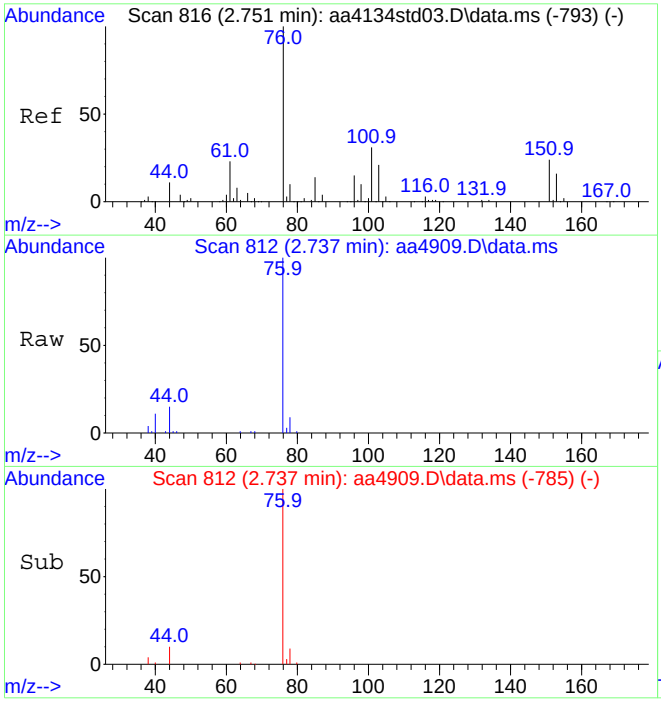



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.386 min Scan# 1325
Delta R.T. -0.008 min
Lab File: aa4909.D
Acq: 11 Dec 2023 2:18 pm

Tgt Ion:130 Resp: 496847

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 76.6 | 62.2 | 93.4 |

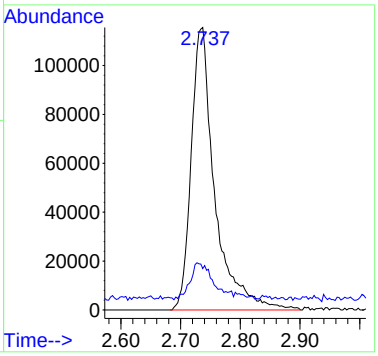


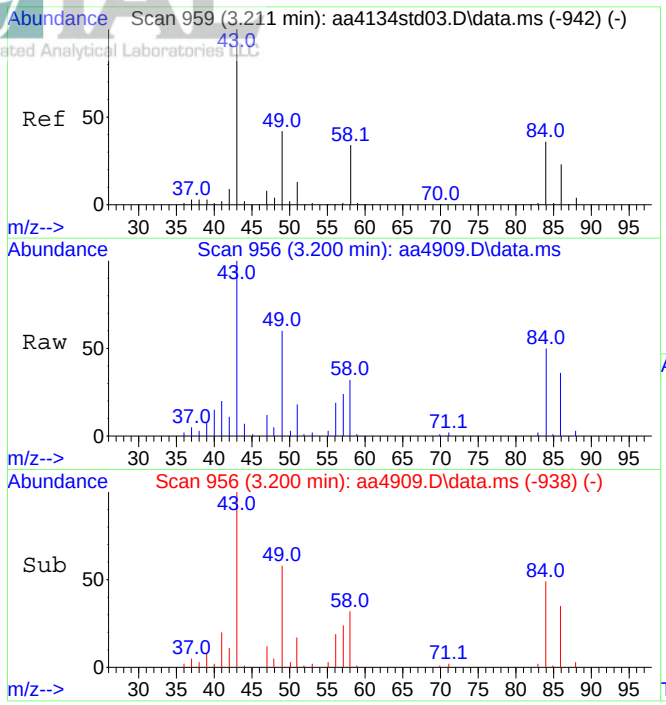




#15
Carbon disulfide
Concen: 2.09 ppbV
RT: 2.737 min Scan# 812
Delta R.T. -0.014 min
Lab File: aa4909.D
Acq: 11 Dec 2023 2:18 pm

Tgt Ion: 76 Resp: 316899

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 14.8 | 9.0 | 13.4# |

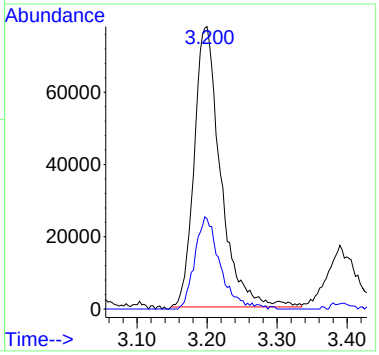


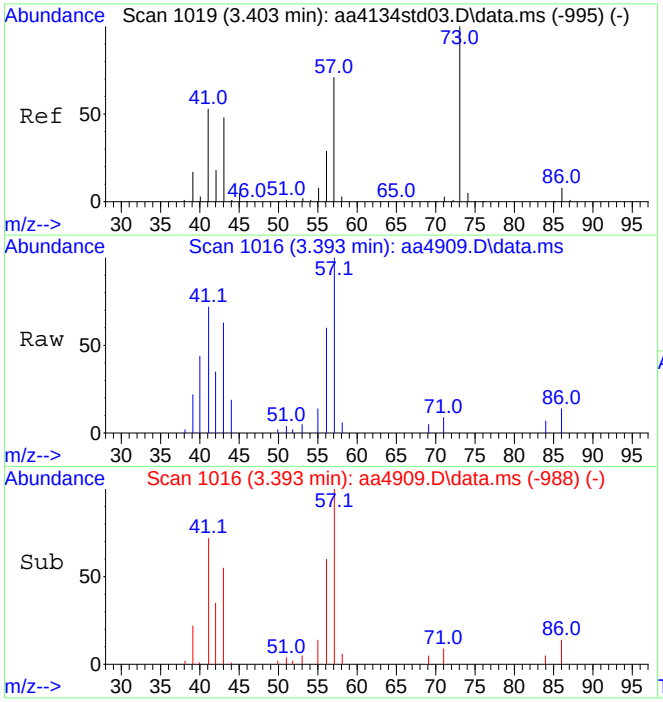



#21
Acetone
Concen: 2.72 ppbV
RT: 3.200 min Scan# 956
Delta R.T. -0.011 min
Lab File: aa4909.D
Acq: 11 Dec 2023 2:18 pm

Tgt Ion: 43 Resp: 203694

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 31.5 | 27.1 | 40.7 |

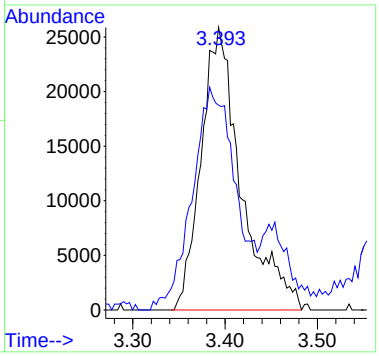


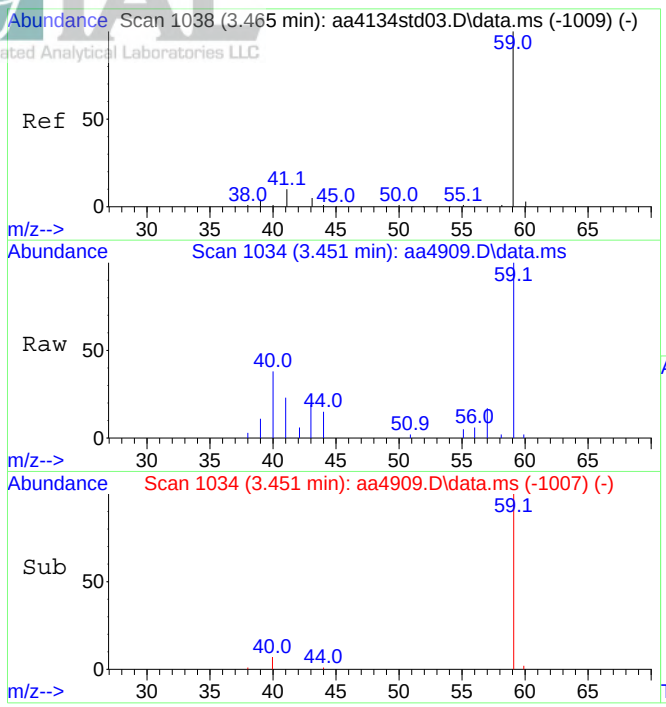




#24
n-Hexane
Concen: 0.50 ppbV
RT: 3.393 min Scan# 1016
Delta R.T. -0.011 min
Lab File: aa4909.D
Acq: 11 Dec 2023 2:18 pm

Tgt Ion: 57 Resp: 78009

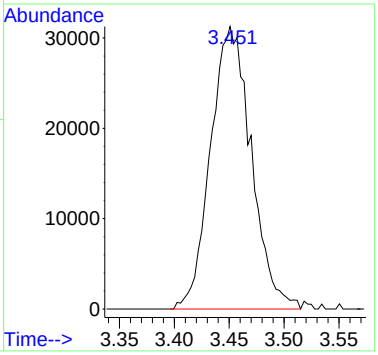
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 41 | 87.5 | 66.4 | 99.6 |

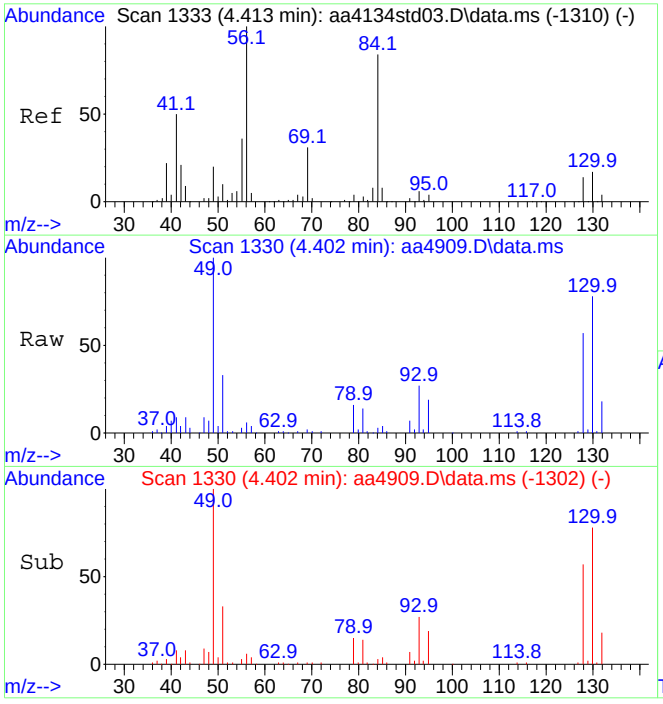





#26
Tert-butyl alcohol
Concen: 0.62 ppbV
RT: 3.451 min Scan# 1034
Delta R.T. -0.014 min
Lab File: aa4909.D
Acq: 11 Dec 2023 2:18 pm

Tgt Ion: 59 Resp: 80564

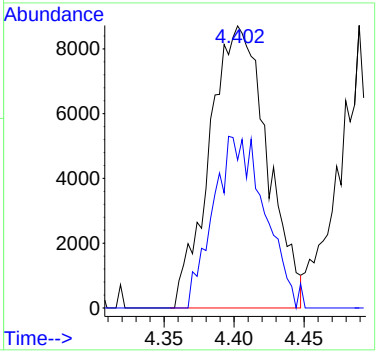


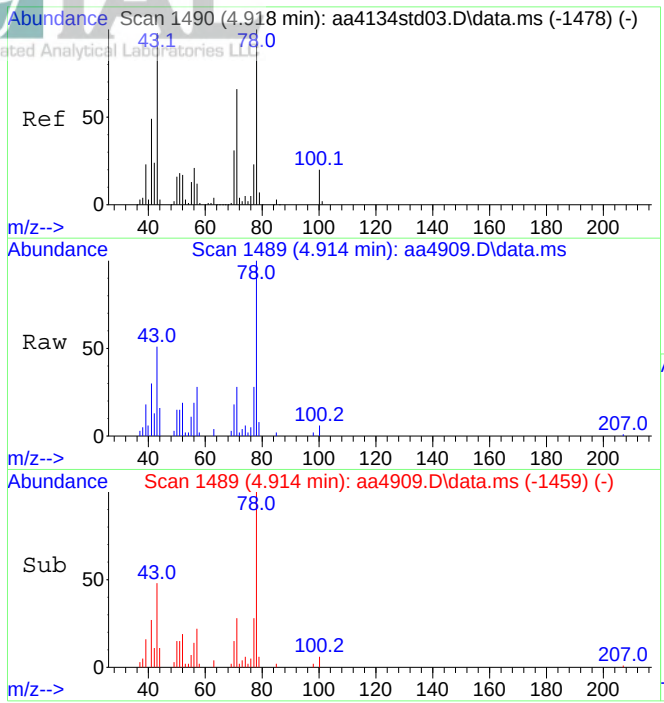




#29
Cyclohexane
Concen: 0.23 ppbV
RT: 4.402 min Scan# 1330
Delta R.T. -0.011 min
Lab File: aa4909.D
Acq: 11 Dec 2023 2:18 pm

Tgt Ion: 56 Resp: 24995

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 54.1 | 71.2 | 106.8# |

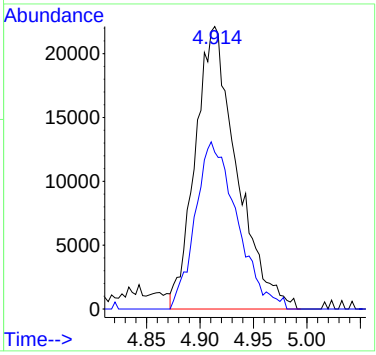


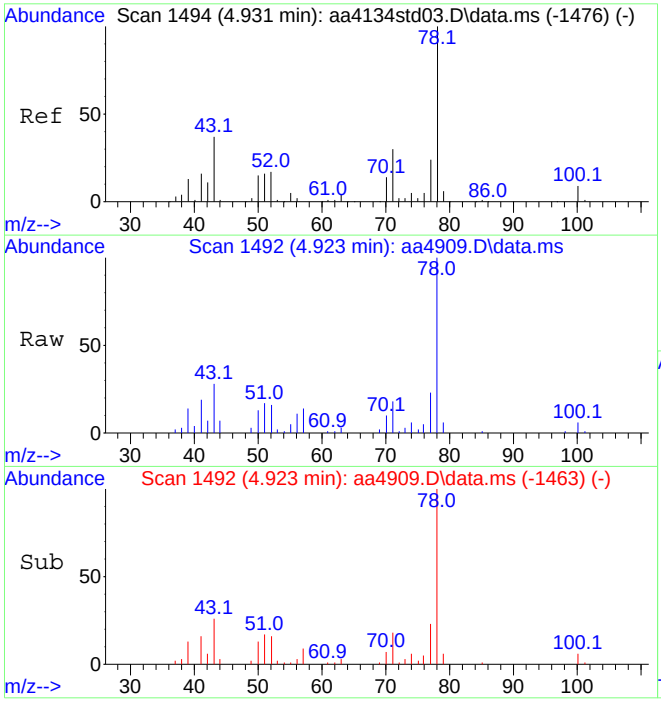



#36
n-Heptane
Concen: 0.44 ppbV
RT: 4.914 min Scan# 1489
Delta R.T. -0.004 min
Lab File: aa4909.D
Acq: 11 Dec 2023 2:18 pm

Tgt Ion: 43 Resp: 59954

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 71 | 59.6 | 50.5 | 75.7 |

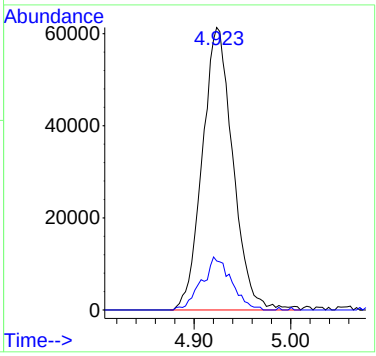


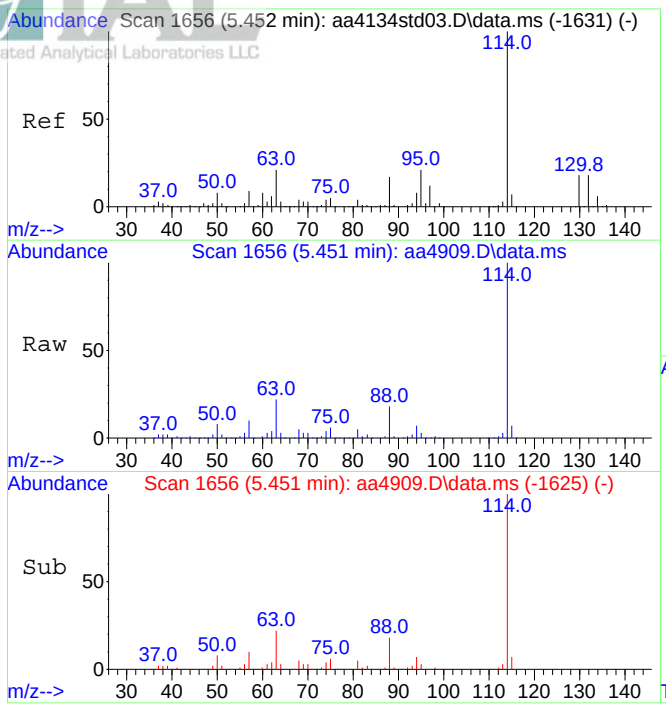




#37
Benzene
Concen: 0.68 ppbV
RT: 4.923 min Scan# 1492
Delta R.T. -0.007 min
Lab File: aa4909.D
Acq: 11 Dec 2023 2:18 pm

Tgt Ion: 78 Resp: 134689

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 18.2 | 13.4 | 20.0 |

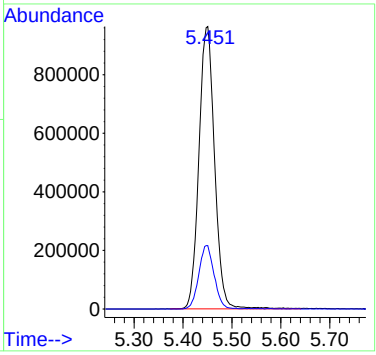


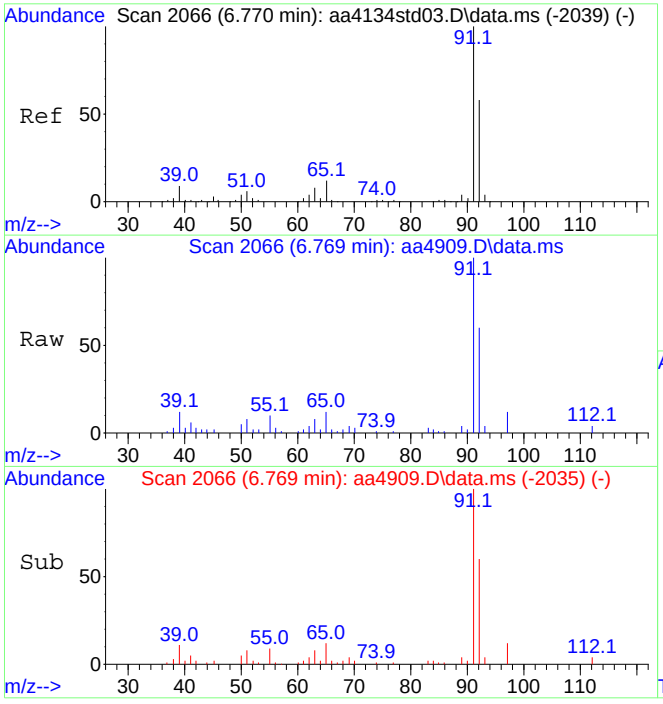



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.451 min Scan# 1656
Delta R.T. -0.001 min
Lab File: aa4909.D
Acq: 11 Dec 2023 2:18 pm

Tgt Ion:114 Resp: 2142143

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.1 | 17.0 | 25.6 |

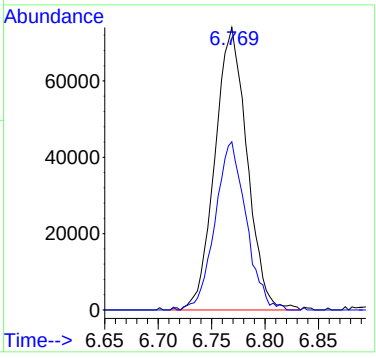


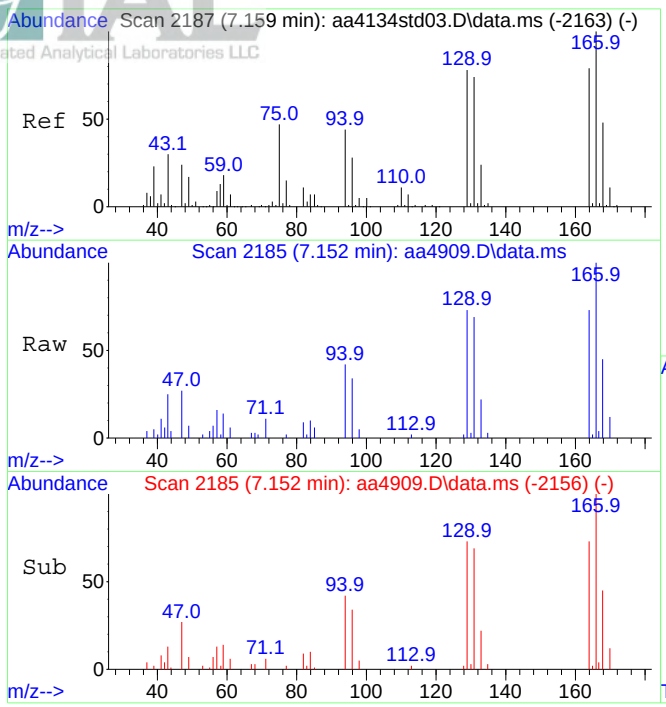




#47
Toluene
Concen: 0.52 ppbV
RT: 6.769 min Scan# 2066
Delta R.T. -0.001 min
Lab File: aa4909.D
Acq: 11 Dec 2023 2:18 pm

Tgt Ion: 91 Resp: 155148

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 57.5 | 47.3 | 70.9 |

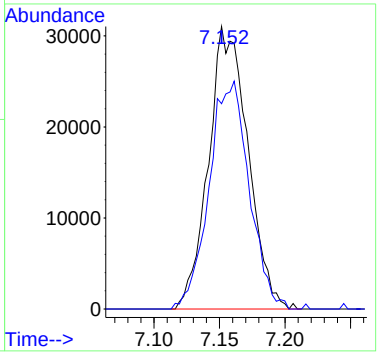


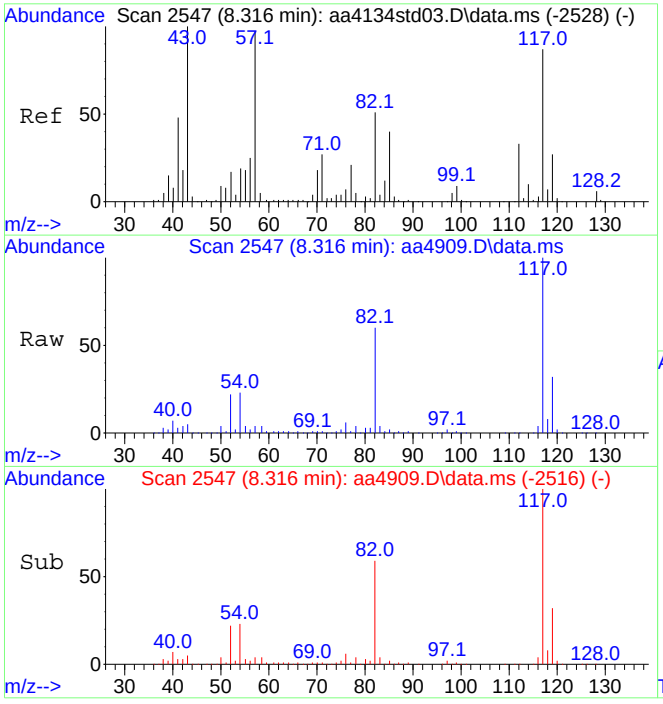



#49
Tetrachloroethene
Concen: 0.50 ppbV
RT: 7.152 min Scan# 2185
Delta R.T. -0.007 min
Lab File: aa4909.D
Acq: 11 Dec 2023 2:18 pm

Tgt Ion:166 Resp: 64939

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 81.7 | 62.3 | 93.5 |

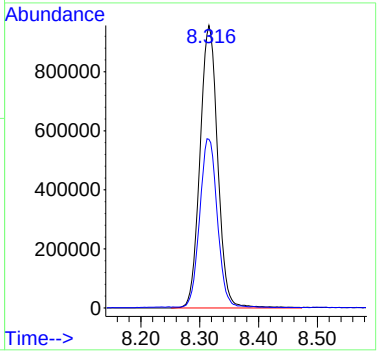


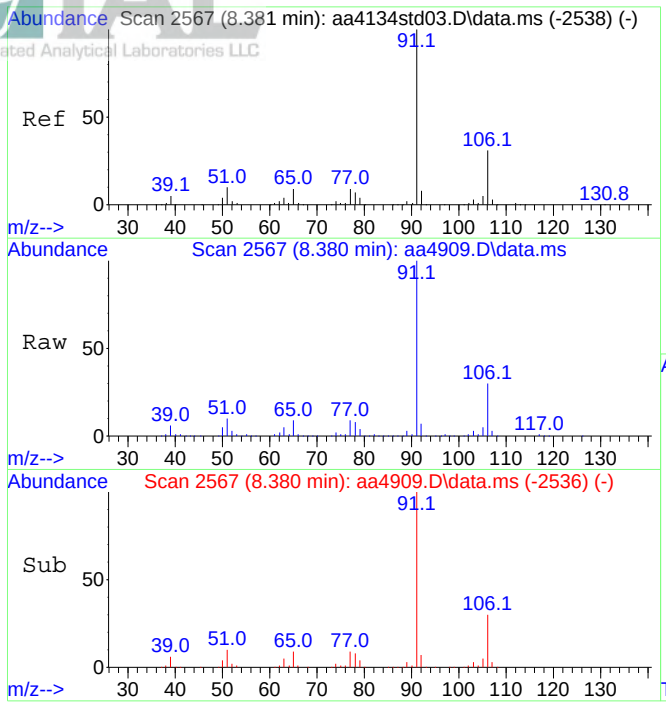




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.316 min Scan# 2547
Delta R.T. -0.001 min
Lab File: aa4909.D
Acq: 11 Dec 2023 2:18 pm

Tgt Ion:117 Resp: 1996652

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 59.4 | 47.0 | 70.4 |

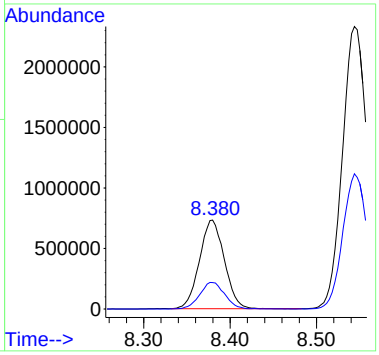


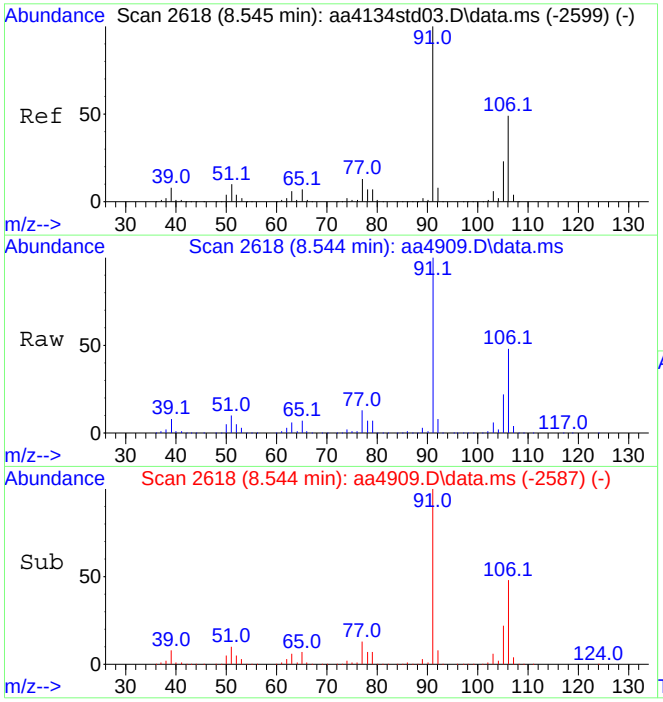



#58
Ethylbenzene
Concen: 3.99 ppbV
RT: 8.380 min Scan# 2567
Delta R.T. -0.001 min
Lab File: aa4909.D
Acq: 11 Dec 2023 2:18 pm

Tgt Ion: 91 Resp: 1467544

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 30.3 | 24.6 | 36.8 |

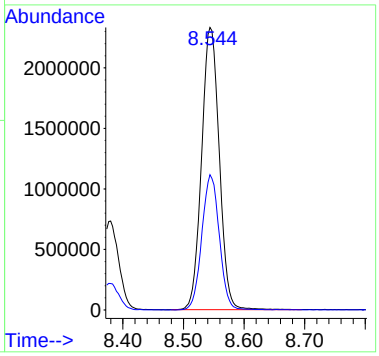


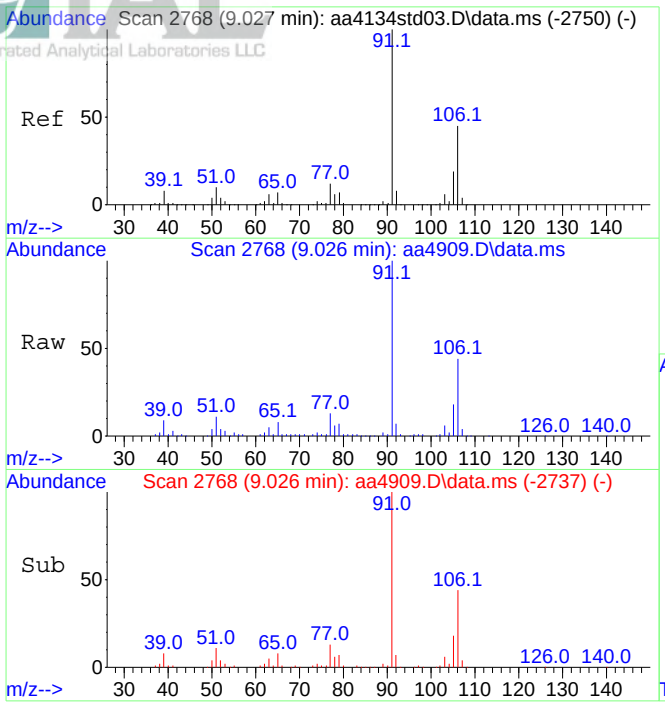




#59
Xylenes (m&p)
Concen: 17.36 ppbV
RT: 8.544 min Scan# 2618
Delta R.T. -0.001 min
Lab File: aa4909.D
Acq: 11 Dec 2023 2:18 pm

Tgt Ion: 91 Resp: 4731462

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 47.4 | 39.0 | 58.4 |

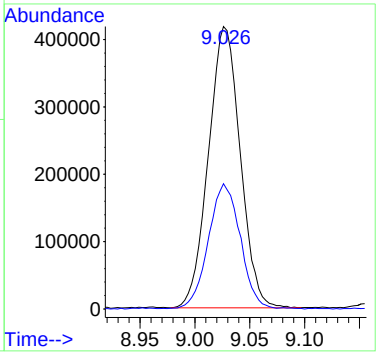


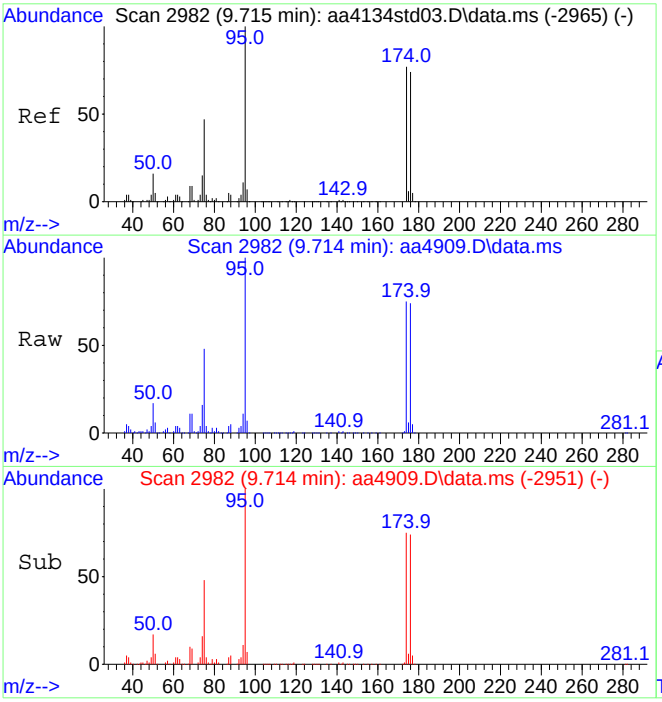



#60
Xylene (o)
Concen: 2.83 ppbV
RT: 9.026 min Scan# 2768
Delta R.T. -0.001 min
Lab File: aa4909.D
Acq: 11 Dec 2023 2:18 pm

Tgt Ion: 91 Resp: 841179

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 45.0 | 36.8 | 55.2 |

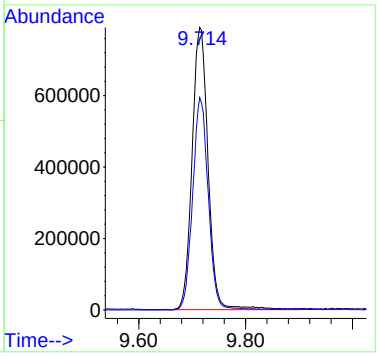



#64
Bromofluorobenzene (tune std)
Concen: 9.46 ppbV
RT: 9.714 min Scan# 2982
Delta R.T. -0.001 min
Lab File: aa4909.D
Acq: 11 Dec 2023 2:18 pm

Tgt Ion: 95 Resp: 1647117

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 73.1 | 61.1 | 91.7 |



**INTEGRATED ANALYTICAL LABORATORIES, LLC**
***Integrated Analytical Laboratories LLC***

Volatile Organic Compounds by EPA Method TO-15
Summary of Results

| | | | |
|---|---|---|---|
| Lab ID: | E23-05047-04 | Instrument ID: | AA |
| Client ID: | SV6 | GC/MS Column: | RTX-1, 0.32 mmID |
| Date Sampled: | 11/15/2023 12:39 | Injection Volmue: | 500ml, 100ml |
| Date Received: | 11/16/2023 | Matrix: | Air-Other |
| Date Analyzed: | 12/08/2023 15:42, 12/11/2023 14:50 | % Moisture: | NA |
| Data File: | AA4889, AA4910 | Dilution Factor: | 1, 5 |
| Summa ID: | 3283 | Analyst: | J. Walukiewicz |

| | | | Concentration Reported | | Reporting Limits | |
|---|---|---|---|---|---|---|
| **Compound** | **CAS #** | **Q** | **ppbv** | **ug/m3** | **ppbv** | **ug/m3** |
| Acetone | 67-64-1 | D | 43 | 100 | 1.0 | 2.4 |
| Benzene | 71-43-2 | | 9.4 | 30 | 0.20 | 0.64 |
| Bromodichloromethane | 75-27-4 | | ND | ND | 0.20 | 1.3 |
| Bromoform | 75-25-2 | | ND | ND | 0.20 | 2.1 |
| Bromomethane | 74-83-9 | | ND | ND | 0.20 | 0.78 |
| 1,3-Butadiene | 106-99-0 | | ND | ND | 0.20 | 0.44 |
| Chlorobenzene | 108-90-7 | | ND | ND | 0.20 | 0.92 |
| Chloroethane | 75-00-3 | | ND | ND | 0.20 | 0.53 |
| Chloroform | 67-66-3 | | ND | ND | 0.20 | 0.98 |
| Chloromethane | 74-87-3 | | ND | ND | 0.20 | 0.41 |
| Carbon disulfide | 75-15-0 | | 15 | 48 | 0.20 | 0.62 |
| Carbon tetrachloride | 56-23-5 | | ND | ND | 0.040 | 0.25 |
| Cyclohexane | 110-82-7 | | 8.1 | 28 | 0.20 | 0.69 |
| Dibromochloromethane | 124-48-1 | | ND | ND | 0.20 | 1.7 |
| 1,2-Dibromoethane | 106-93-4 | | ND | ND | 0.20 | 1.5 |
| 1,2-Dichlorobenzene | 95-50-1 | | ND | ND | 0.20 | 1.2 |
| 1,3-Dichlorobenzene | 541-73-1 | | ND | ND | 0.20 | 1.2 |
| 1,4-Dichlorobenzene | 106-46-7 | | ND | ND | 0.20 | 1.2 |
| Dichlorodifluoromethane | 75-71-8 | | ND | ND | 0.20 | 0.99 |
| 1,1-Dichloroethane | 75-34-3 | | ND | ND | 0.20 | 0.81 |
| 1,2-Dichloroethane | 107-06-2 | | ND | ND | 0.20 | 0.81 |
| 1,1-Dichloroethene | 75-35-4 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloroethene (cis) | 156-59-2 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloroethene (trans) | 156-60-5 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloropropane | 78-87-5 | | ND | ND | 0.20 | 0.92 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | | ND | ND | 0.20 | 0.91 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | | ND | ND | 0.20 | 0.91 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | | ND | ND | 0.20 | 1.4 |
| 1,4-Dioxane | 123-91-1 | | ND | ND | 0.20 | 0.72 |
| Ethylbenzene | 100-41-4 | | 1.8 | 7.9 | 0.20 | 0.87 |
| n-Heptane | 142-82-5 | | 7.0 | 29 | 0.20 | 0.82 |
| 1,3-Hexachlorobutadiene | 87-68-3 | | ND | ND | 0.20 | 2.1 |
| n-Hexane | 110-54-3 | | 10 | 36 | 0.20 | 0.70 |
| Methylene chloride | 75-09-2 | | ND | ND | 0.20 | 0.69 |
| Methyl ethyl ketone | 78-93-3 | | 3.2 | 9.3 | 0.20 | 0.59 |
| Methyl isobutyl ketone | 108-10-1 | | ND | ND | 0.20 | 0.82 |
| Methyl tert-butyl ether | 1634-04-4 | | ND | ND | 0.20 | 0.72 |
| Styrene | 100-42-5 | | 0.79 | 3.4 | 0.20 | 0.85 |
| Tert-butyl alcohol | 75-65-0 | | 14 | 43 | 0.20 | 0.61 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | ND | ND | 0.20 | 1.4 |
| Tetrachloroethene | 127-18-4 | | 11 | 73 | 0.20 | 1.4 |
| Toluene | 108-88-3 | | 6.3 | 24 | 0.20 | 0.75 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | ND | ND | 0.20 | 1.5 |
| 1,1,1-Trichloroethane | 71-55-6 | | ND | ND | 0.20 | 1.1 |
| 1,1,2-Trichloroethane | 79-00-5 | | ND | ND | 0.20 | 1.1 |

Qualifiers:
D = Dilution required

**INTEGRATED ANALYTICAL LABORATORIES, LLC**
***Integrated Analytical Laboratories LLC***

Volatile Organic Compounds by EPA Method TO-15
Summary of Results

| | | | |
|---|---|---|---|
| Lab ID: | E23-05047-04 | Instrument ID: | AA |
| Client ID: | SV6 | GC/MS Column: | RTX-1, 0.32 mmID |
| Date Sampled: | 11/15/2023 12:39 | Injection Volmue: | 500ml, 100ml |
| Date Received: | 11/16/2023 | Matrix: | Air-Other |
| Date Analyzed: | 12/08/2023 15:42, 12/11/2023 14:50 | % Moisture: | NA |
| Data File: | AA4889, AA4910 | Dilution Factor: | 1, 5 |
| Summa ID: | 3283 | Analyst: | J. Walukiewicz |

| | | | Concentration Reported | | Reporting Limits | |
|---|---|---|---|---|---|---|
| **Compound** | **CAS #** | **Q** | **ppbv** | **ug/m3** | **ppbv** | **ug/m3** |
| Trichloroethene | 79-01-6 | | ND | ND | 0.046 | 0.25 |
| Trichlorofluoromethane | 75-69-4 | | 0.32 | 1.8 | 0.20 | 1.1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | | ND | ND | 0.20 | 1.5 |
| 1,2,4-Trimethylbenzene | 95-63-6 | | 1.7 | 8.2 | 0.20 | 0.98 |
| 1,3,5-Trimethylbenzene | 108-67-8 | | 0.54 | 2.6 | 0.20 | 0.98 |
| 2,2,4-Trimethylpentane | 540-84-1 | | ND | ND | 0.20 | 0.93 |
| Vinyl bromide | 593-60-2 | | ND | ND | 0.20 | 0.87 |
| Vinyl chloride | 75-01-4 | | ND | ND | 0.20 | 0.51 |
| Xylenes (m&p) | 179601-23-1 | | 6.6 | 29 | 0.20 | 0.87 |
| Xylenes (o) | 95-47-6 | | 2.6 | 11 | 0.20 | 0.87 |

Qualifiers:
D = Dilution required

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4889.D
Acq On : 8 Dec 2023 3:42 pm
Operator : jjw
Sample : E23-05047-04
Misc : 3283, 500cc
ALS Vial : 12 Sample Multiplier: 1

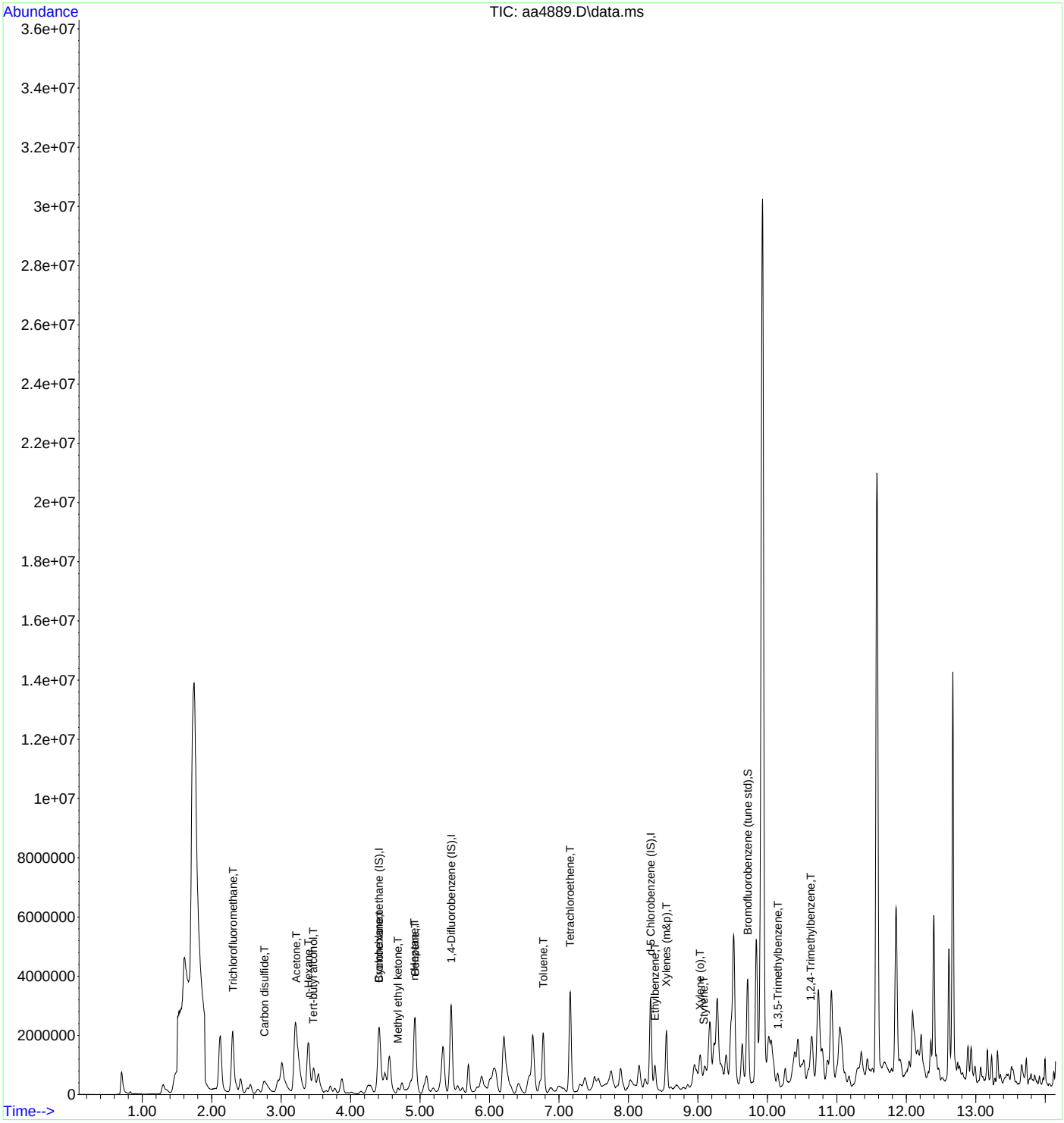
Quant Time: Dec 12 09:56:21 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

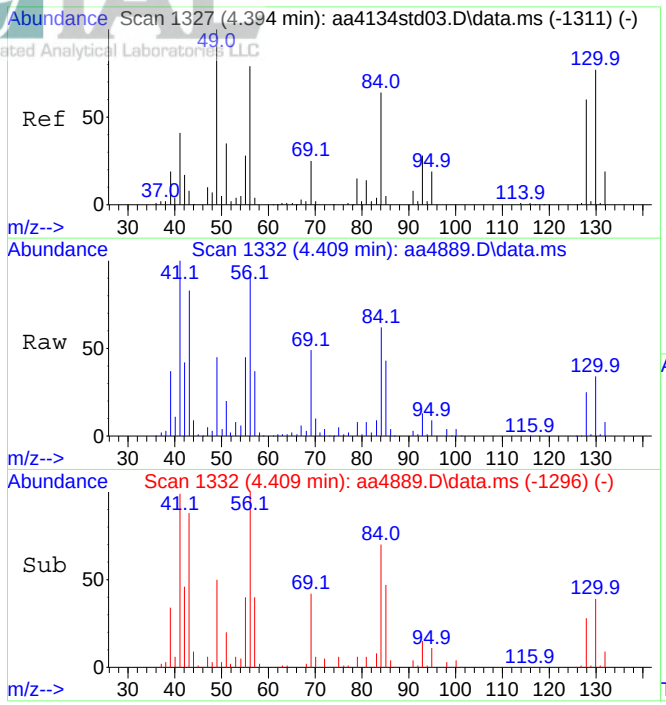
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.409 | 130 | 366574 | 10.00 | ppbV | | 0.015 |
| 39) 1,4-Difluorobenzene (IS) | 5.451 | 114 | 1819787 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.322 | 117 | 1669922 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 1364662 | 9.37 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 12) Trichlorofluoromethane | 2.309 | 101 | 32721 | 0.32 | ppbV | | 84 |
| 15) Carbon disulfide | 2.759 | 76 | 1715653 | 15.31 | ppbV | | 97 |
| 21) Acetone | 3.219 | 43 | 3105449 | 56.16 | ppbV | | 97 |
| 24) n-Hexane | 3.393 | 57 | 1187609 | 10.28 | ppbV | # | 76 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 1365923 | 14.29 | ppbV | | 100 |
| 29) Cyclohexane | 4.409 | 56 | 655655 | 8.12 | ppbV | # | 75 |
| 35) Methyl ethyl ketone | 4.682 | 43 | 283133 | 3.16 | ppbV | | 96 |
| 36) n-Heptane | 4.917 | 43 | 713281 | 7.04 | ppbV | | 95 |
| 37) Benzene | 4.930 | 78 | 1361218 | 9.35 | ppbV | | 96 |
| 47) Toluene | 6.772 | 91 | 1610617 | 6.30 | ppbV | | 100 |
| 49) Tetrachloroethene | 7.161 | 166 | 1192125 | 10.81 | ppbV | | 100 |
| 58) Ethylbenzene | 8.383 | 91 | 562236 | 1.83 | ppbV | | 98 |
| 59) Xylenes (m&p) | 8.547 | 91 | 1512765 | 6.63 | ppbV | | 98 |
| 60) Xylene (o) | 9.029 | 91 | 635844 | 2.56 | ppbV | | 98 |
| 61) Styrene | 9.087 | 104 | 134831 | 0.79 | ppbV | | 98 |
| 69) 1,3,5-Trimethylbenzene | 10.151 | 105 | 155230 | 0.54 | ppbV | | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 481421 | 1.67 | ppbV | | 96 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4889.D
Acq On : 8 Dec 2023 3:42 pm
Operator : jjw
Sample : E23-05047-04
Misc : 3283, 500cc
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Dec 12 09:56:21 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

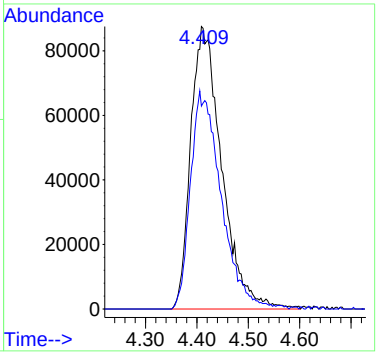


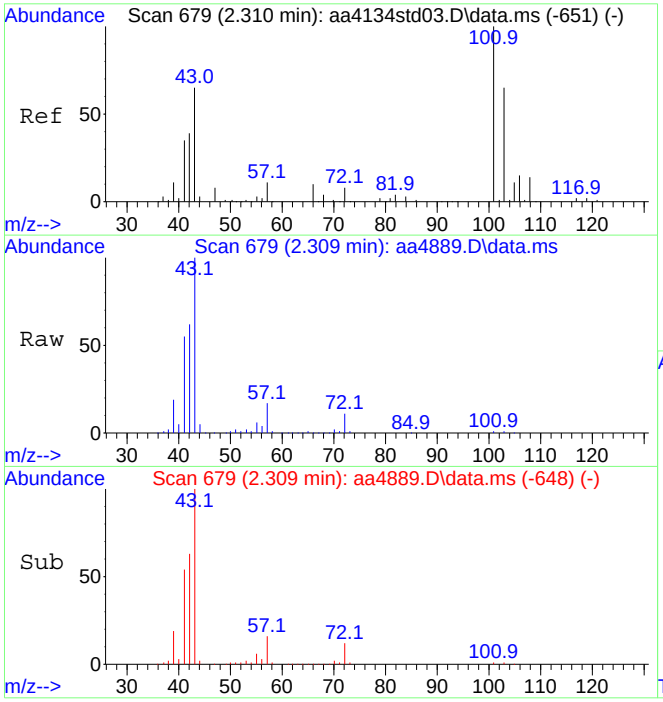



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.409 min Scan# 1332
Delta R.T. 0.015 min
Lab File: aa4889.D
Acq: 8 Dec 2023 3:42 pm

Tgt Ion:130 Resp: 366574

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 76.5 | 62.2 | 93.4 |

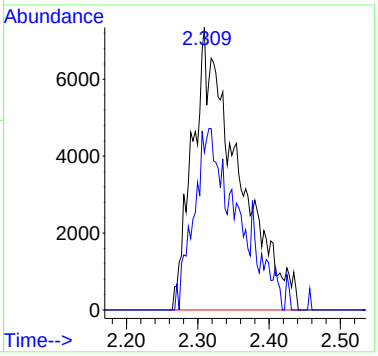


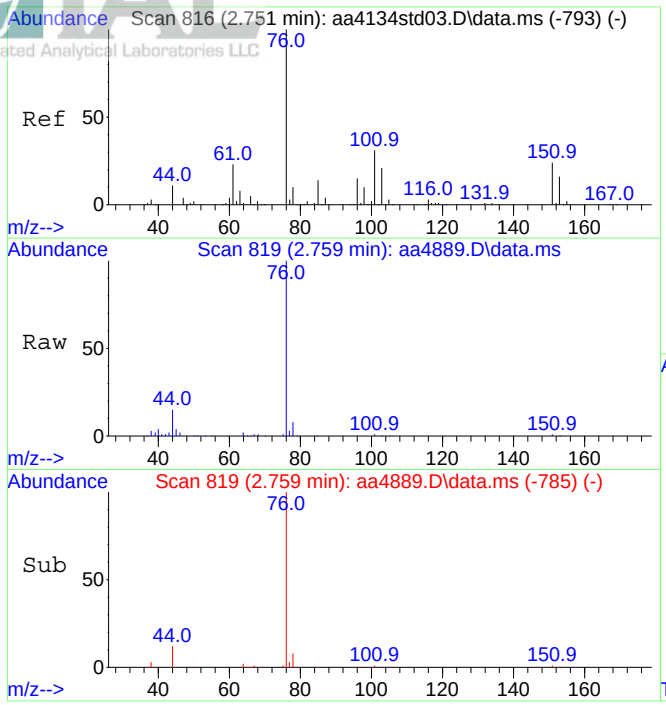




#12
Trichlorofluoromethane
Concen: 0.32 ppbV
RT: 2.309 min Scan# 679
Delta R.T. -0.001 min
Lab File: aa4889.D
Acq: 8 Dec 2023 3:42 pm

Tgt Ion:101 Resp: 32721

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 52.9 | 52.5 | 78.7 |

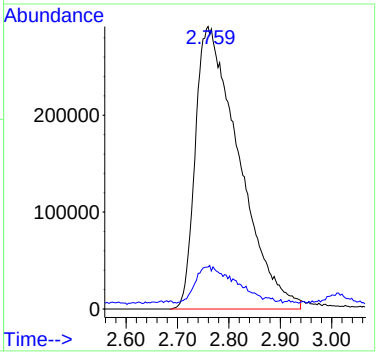


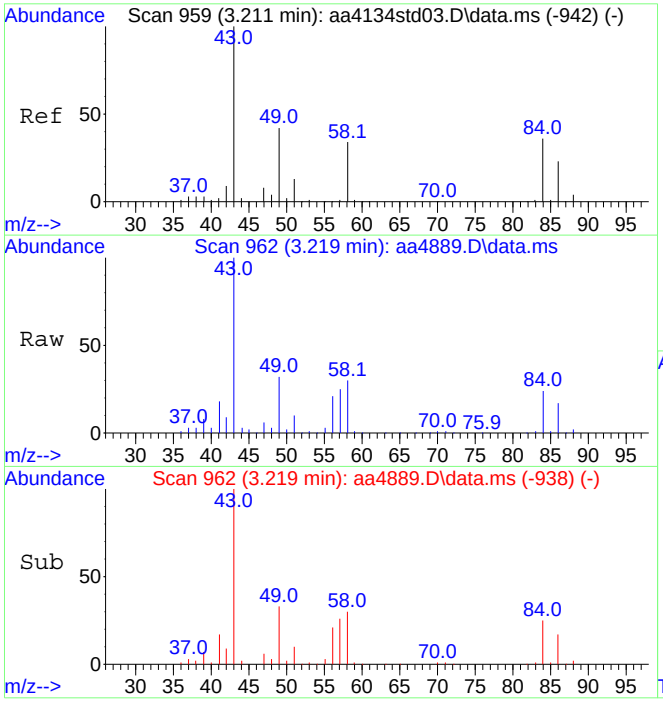



#15
Carbon disulfide
Concen: 15.31 ppbV
RT: 2.759 min Scan# 819
Delta R.T. 0.009 min
Lab File: aa4889.D
Acq: 8 Dec 2023 3:42 pm

Tgt Ion: 76 Resp: 1715653

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 12.4 | 9.0 | 13.4 |

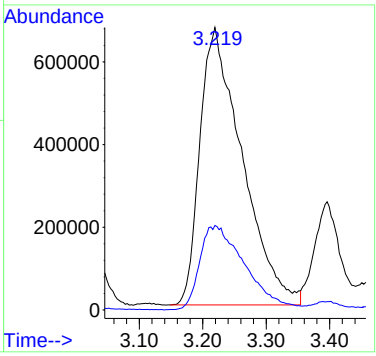


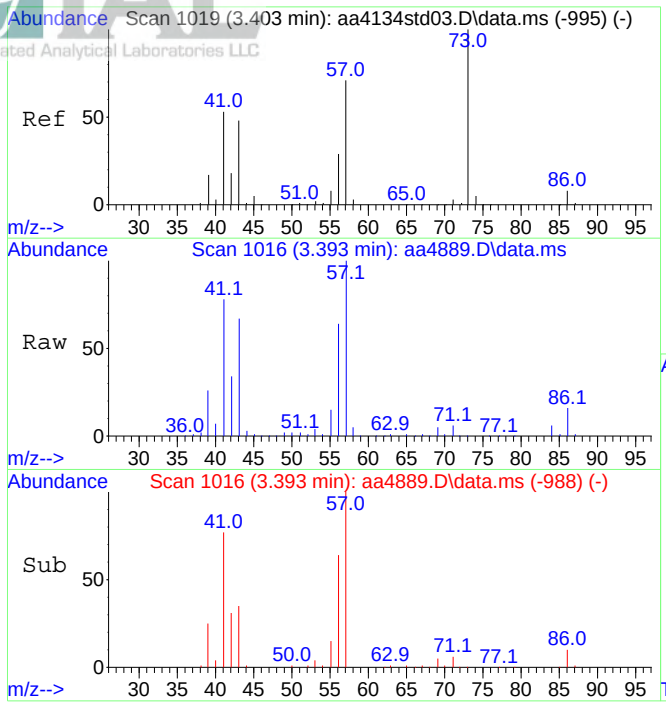




#21
Acetone
Concen: 56.16 ppbV
RT: 3.219 min Scan# 962
Delta R.T. 0.009 min
Lab File: aa4889.D
Acq: 8 Dec 2023 3:42 pm

Tgt Ion: 43 Resp: 3105449

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 32.5 | 27.1 | 40.7 |

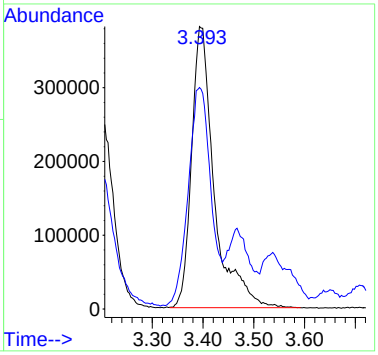


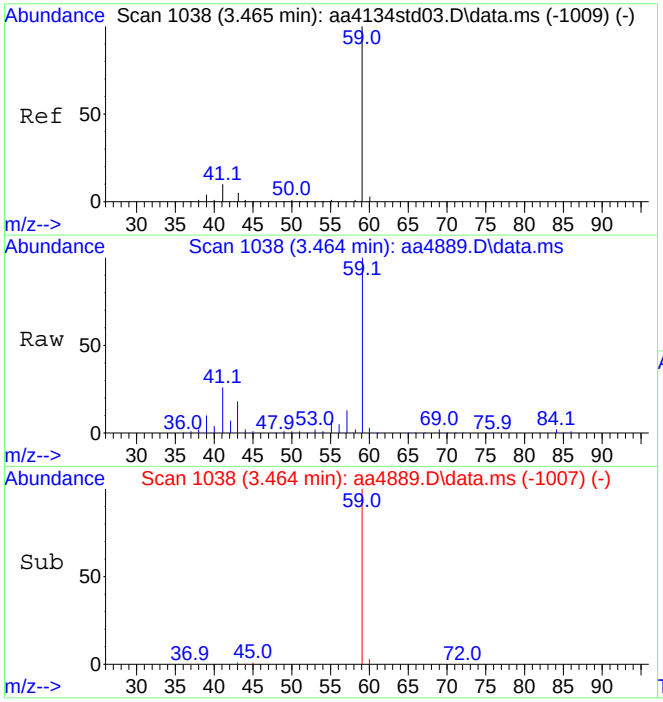



#24
n-Hexane
Concen: 10.28 ppbV
RT: 3.393 min Scan# 1016
Delta R.T. -0.011 min
Lab File: aa4889.D
Acq: 8 Dec 2023 3:42 pm

Tgt Ion: 57 Resp: 1187609

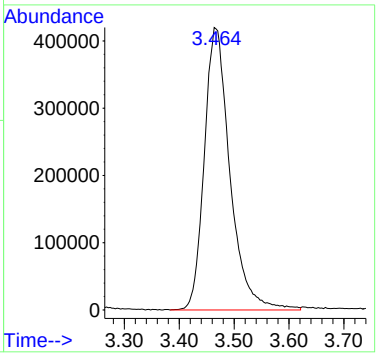
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 41 | 104.5 | 66.4 | 99.6# |

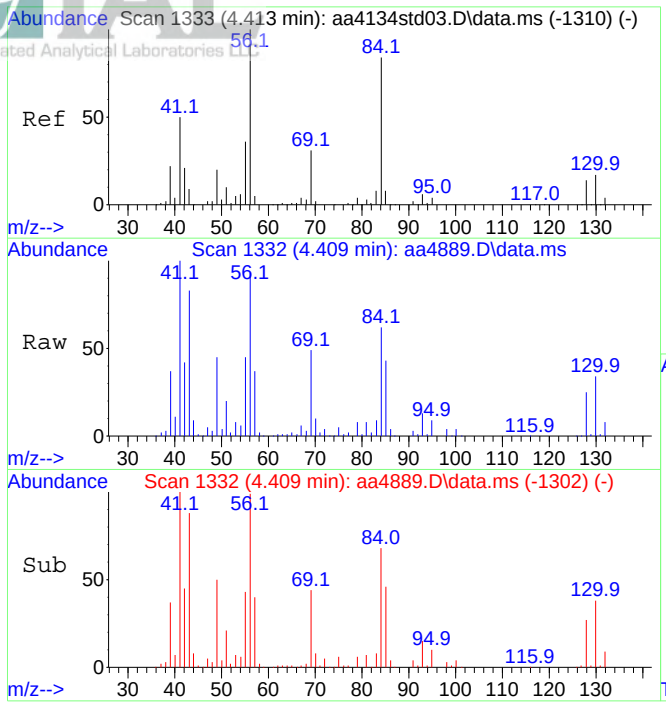



#26
Tert-butyl alcohol
Concen: 14.29 ppbV
RT: 3.464 min Scan# 1038
Delta R.T. -0.001 min
Lab File: aa4889.D
Acq: 8 Dec 2023 3:42 pm

Tgt Ion: 59 Resp: 1365923

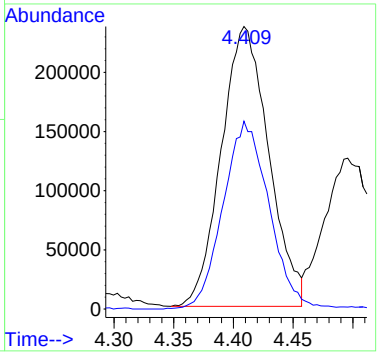


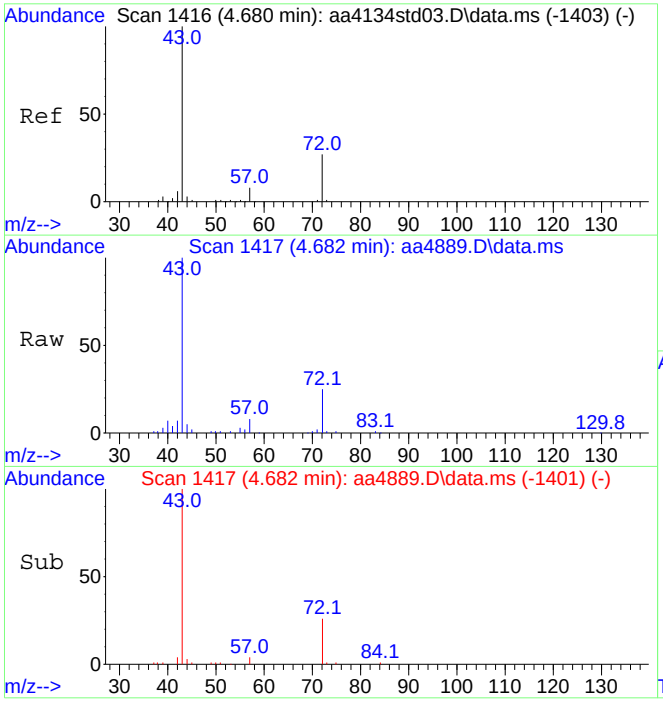



#29
Cyclohexane
Concen: 8.12 ppbV
RT: 4.409 min Scan# 1332
Delta R.T. -0.004 min
Lab File: aa4889.D
Acq: 8 Dec 2023 3:42 pm

Tgt Ion: 56 Resp: 655655

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 65.2 | 71.2 | 106.8# |

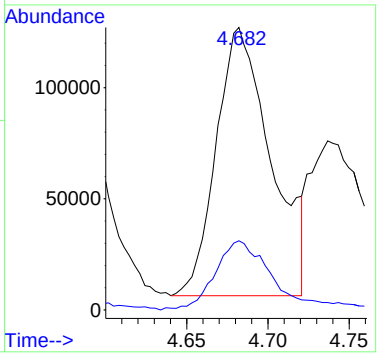


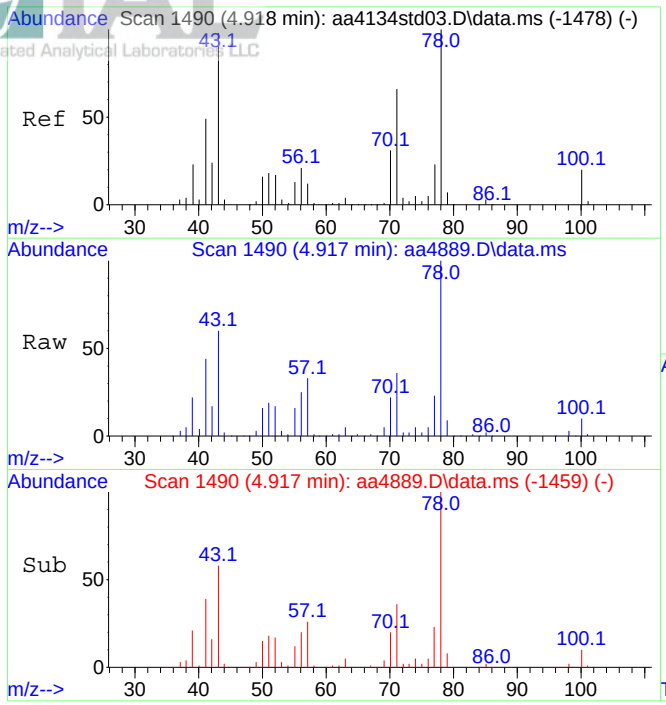




#35
Methyl ethyl ketone
Concen: 3.16 ppbV
RT: 4.682 min Scan# 1417
Delta R.T. 0.002 min
Lab File: aa4889.D
Acq: 8 Dec 2023 3:42 pm

Tgt Ion: 43 Resp: 283133

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 24.9 | 21.6 | 32.4 |

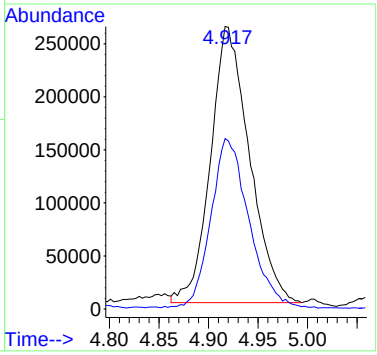


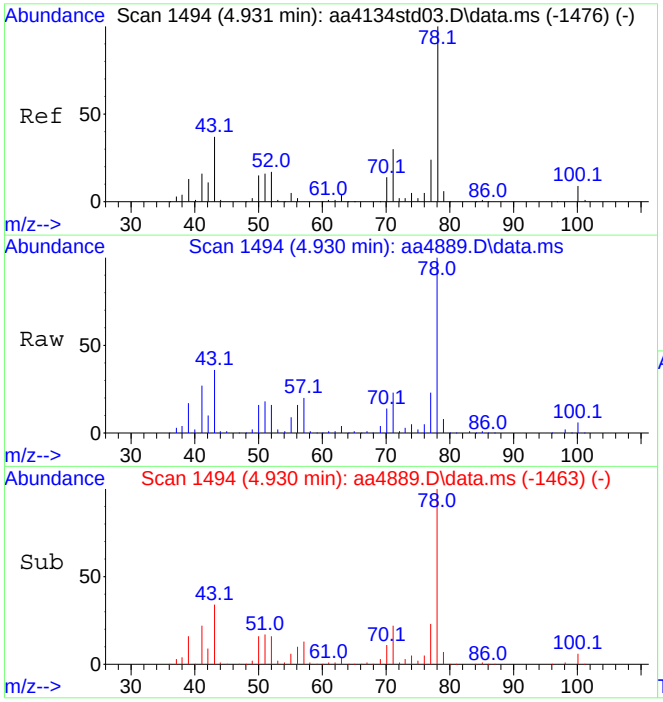



#36
n-Heptane
Concen: 7.04 ppbV
RT: 4.917 min Scan# 1490
Delta R.T. -0.001 min
Lab File: aa4889.D
Acq: 8 Dec 2023 3:42 pm

Tgt Ion: 43 Resp: 713281

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 71 | 59.6 | 50.5 | 75.7 |

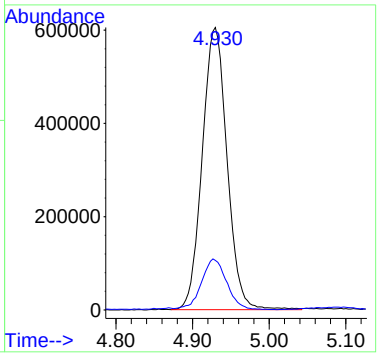


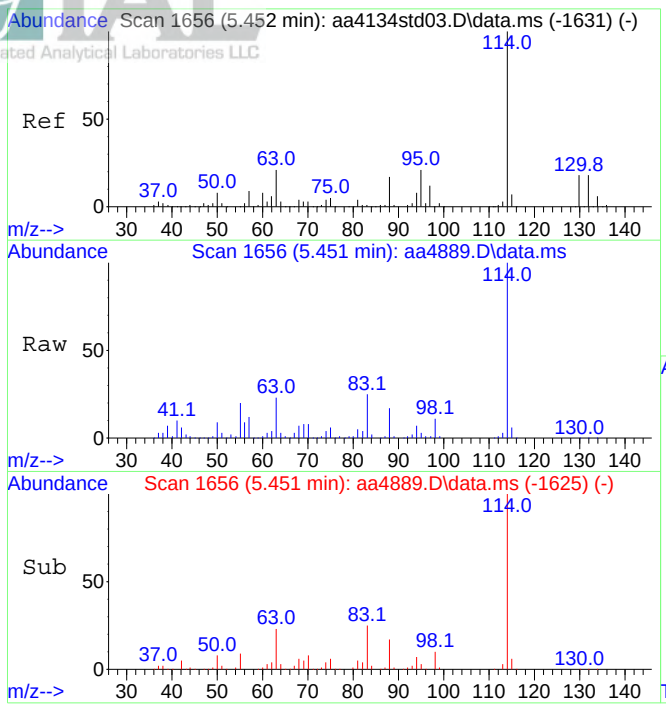




#37
Benzene
Concen: 9.35 ppbV
RT: 4.930 min Scan# 1494
Delta R.T. -0.001 min
Lab File: aa4889.D
Acq: 8 Dec 2023 3:42 pm

Tgt Ion: 78 Resp: 1361218

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 18.3 | 13.4 | 20.0 |

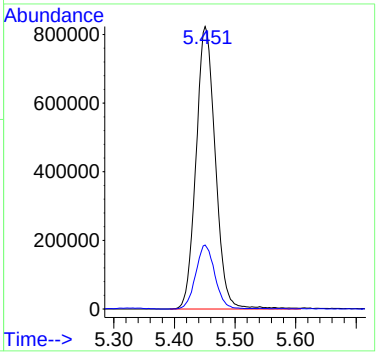


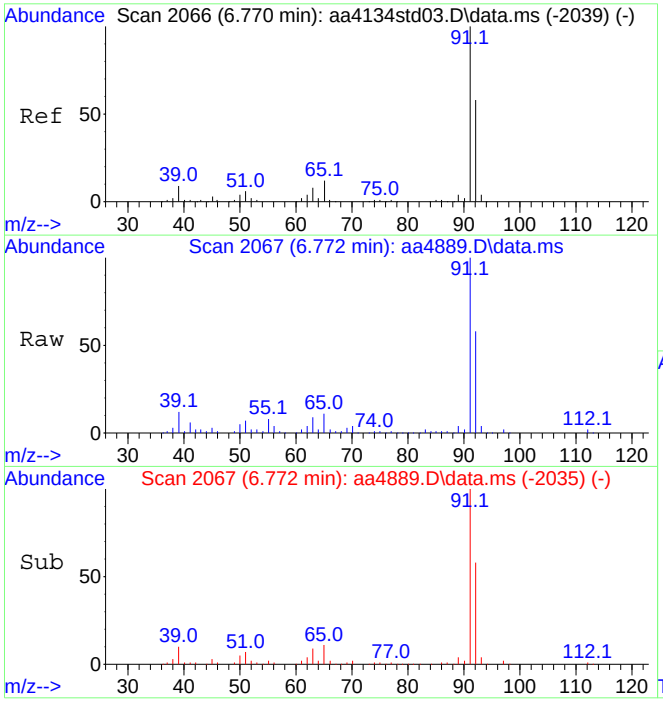



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.451 min Scan# 1656
Delta R.T. -0.001 min
Lab File: aa4889.D
Acq: 8 Dec 2023 3:42 pm

Tgt Ion:114 Resp: 1819787

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.5 | 17.0 | 25.6 |

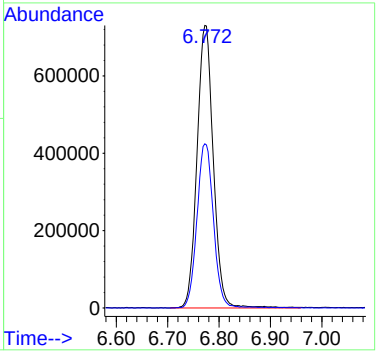


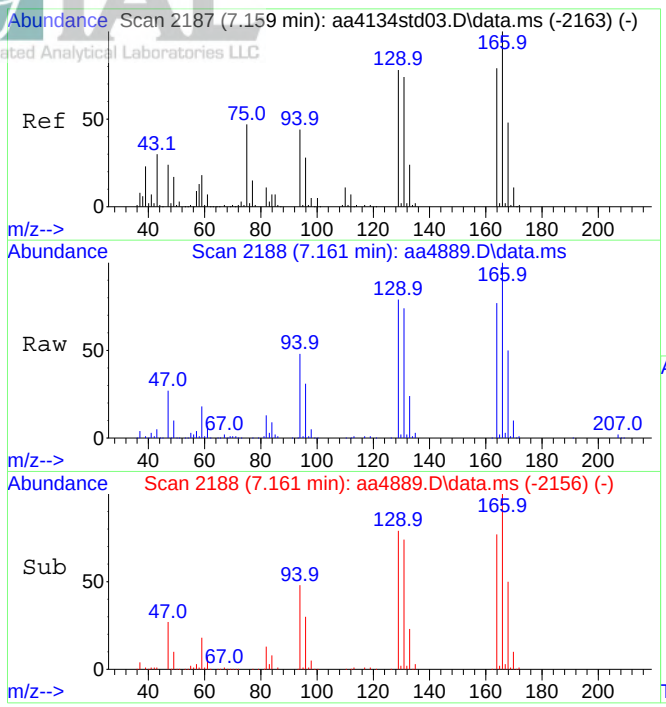




#47
Toluene
Concen: 6.30 ppbV
RT: 6.772 min Scan# 2067
Delta R.T. 0.002 min
Lab File: aa4889.D
Acq: 8 Dec 2023 3:42 pm

Tgt Ion: 91 Resp: 1610617

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 58.9 | 47.3 | 70.9 |

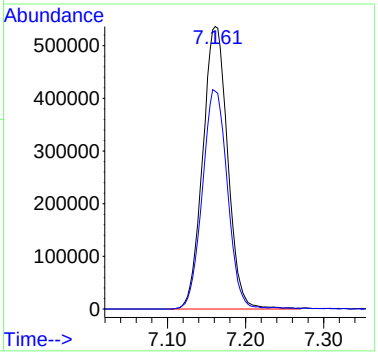


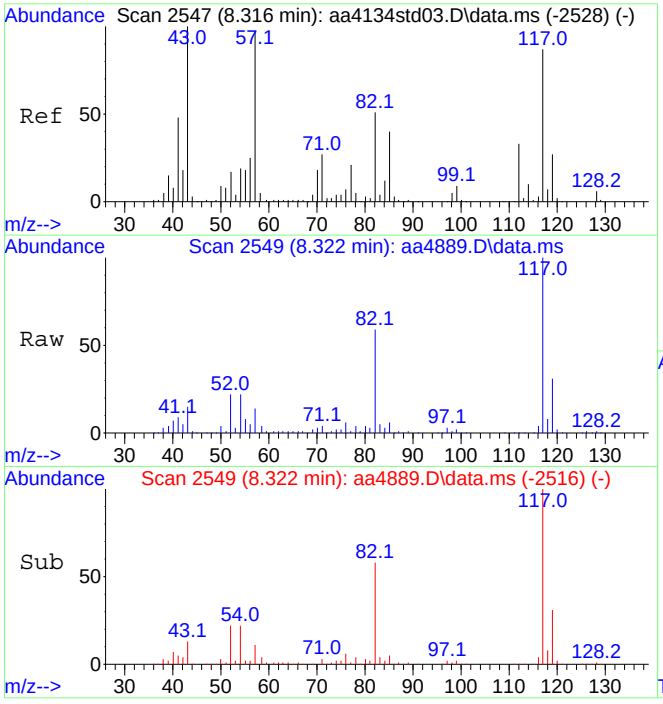



#49
Tetrachloroethene
Concen: 10.81 ppbV
RT: 7.161 min Scan# 2188
Delta R.T. 0.002 min
Lab File: aa4889.D
Acq: 8 Dec 2023 3:42 pm

Tgt Ion:166 Resp: 1192125

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 78.2 | 62.3 | 93.5 |

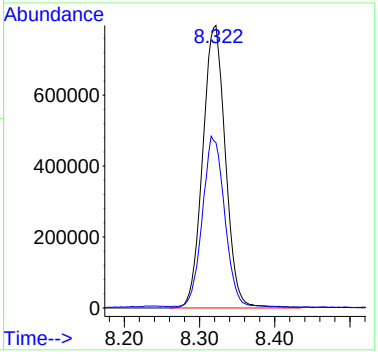


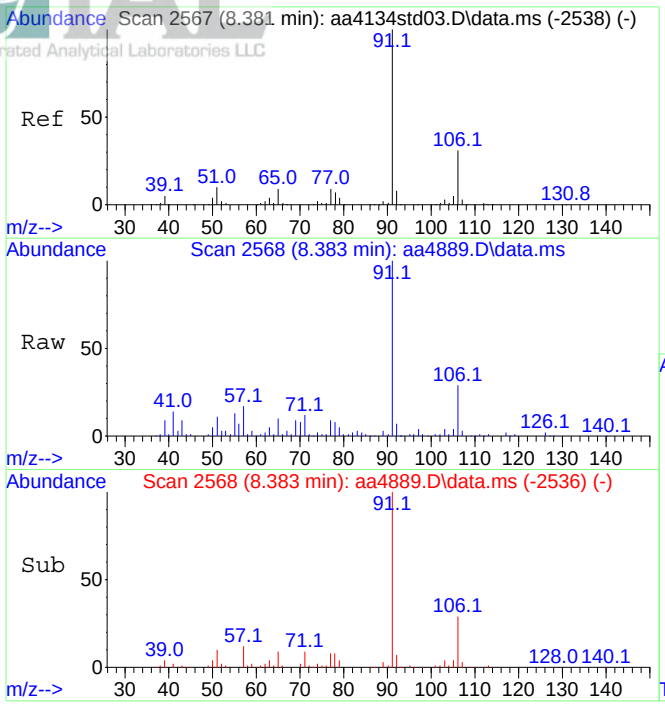




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.322 min Scan# 2549
Delta R.T. 0.005 min
Lab File: aa4889.D
Acq: 8 Dec 2023 3:42 pm

Tgt Ion:117 Resp: 1669922

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 59.6 | 47.0 | 70.4 |

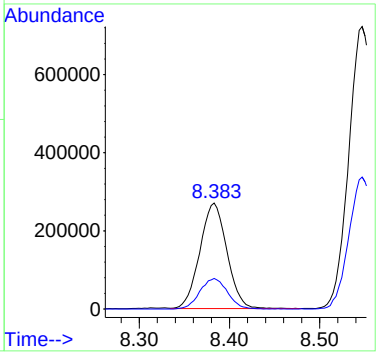


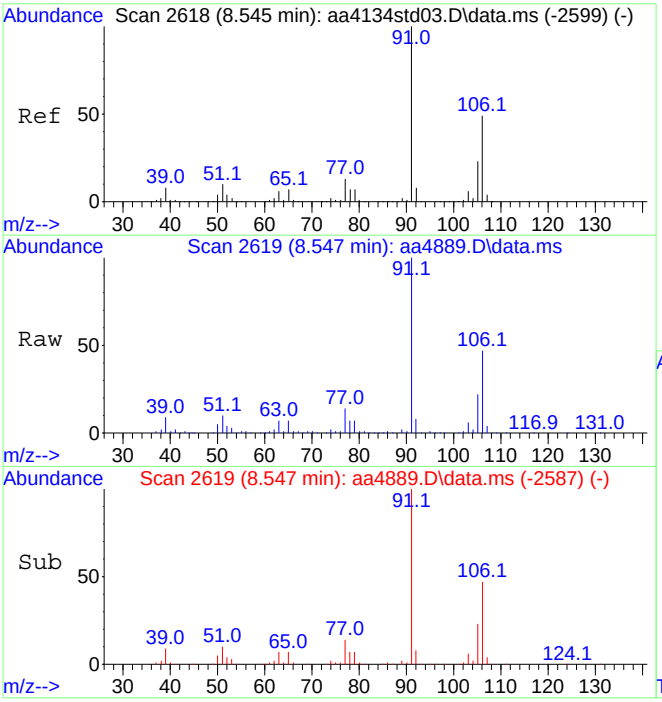



#58
Ethylbenzene
Concen: 1.83 ppbV
RT: 8.383 min Scan# 2568
Delta R.T. 0.002 min
Lab File: aa4889.D
Acq: 8 Dec 2023 3:42 pm

Tgt Ion: 91 Resp: 562236

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 29.4 | 24.6 | 36.8 |

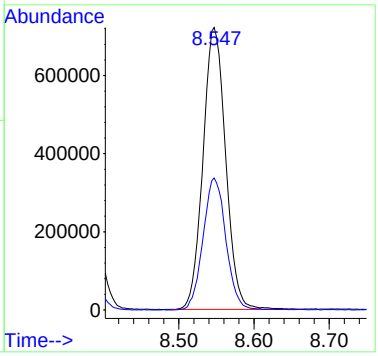


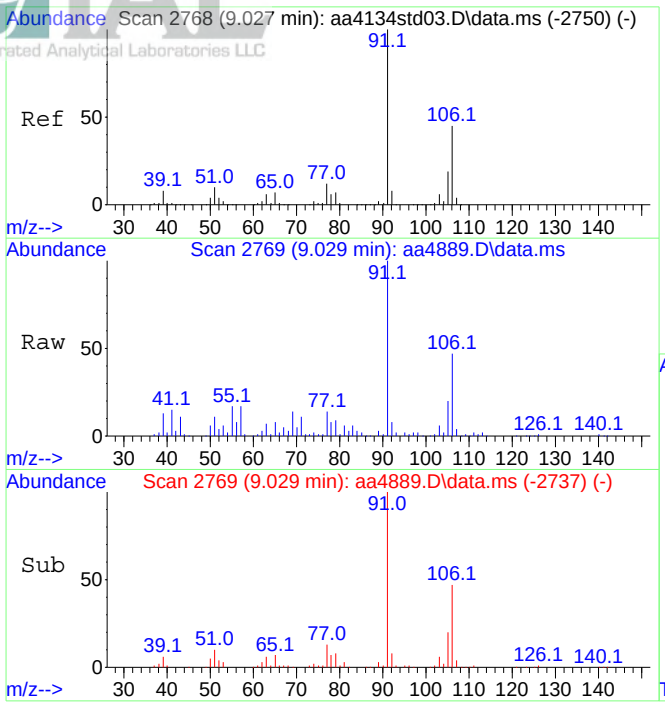




#59
Xylenes (m&p)
Concen: 6.63 ppbV
RT: 8.547 min Scan# 2619
Delta R.T. 0.002 min
Lab File: aa4889.D
Acq: 8 Dec 2023 3:42 pm

Tgt Ion: 91 Resp: 1512765

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 47.3 | 39.0 | 58.4 |

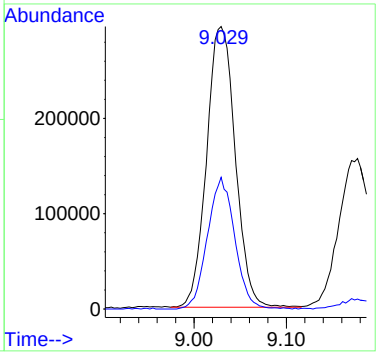


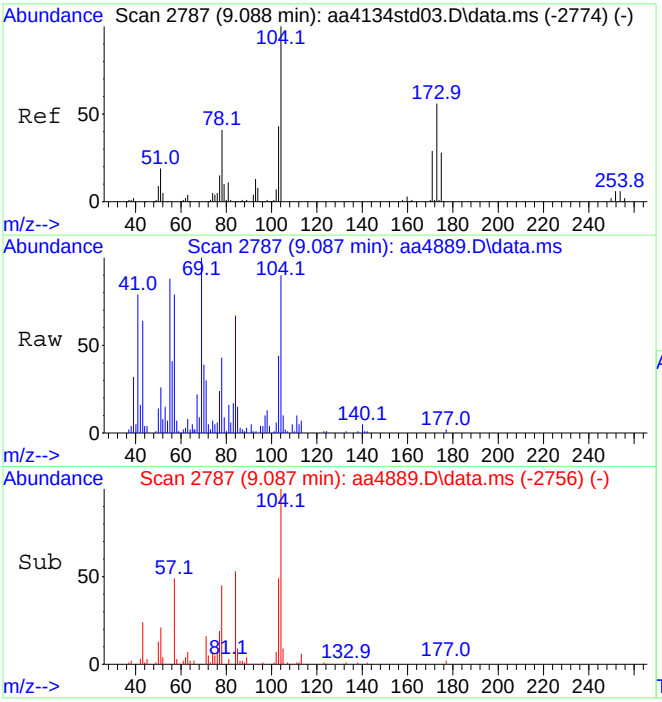



#60
Xylene (o)
Concen: 2.56 ppbV
RT: 9.029 min Scan# 2769
Delta R.T. 0.002 min
Lab File: aa4889.D
Acq: 8 Dec 2023 3:42 pm

Tgt Ion: 91 Resp: 635844

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 44.5 | 36.8 | 55.2 |

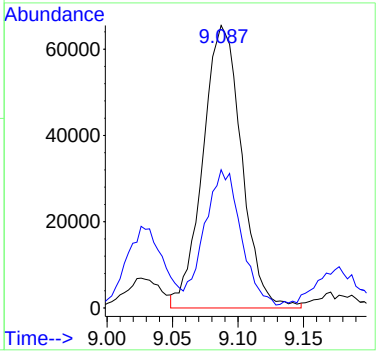


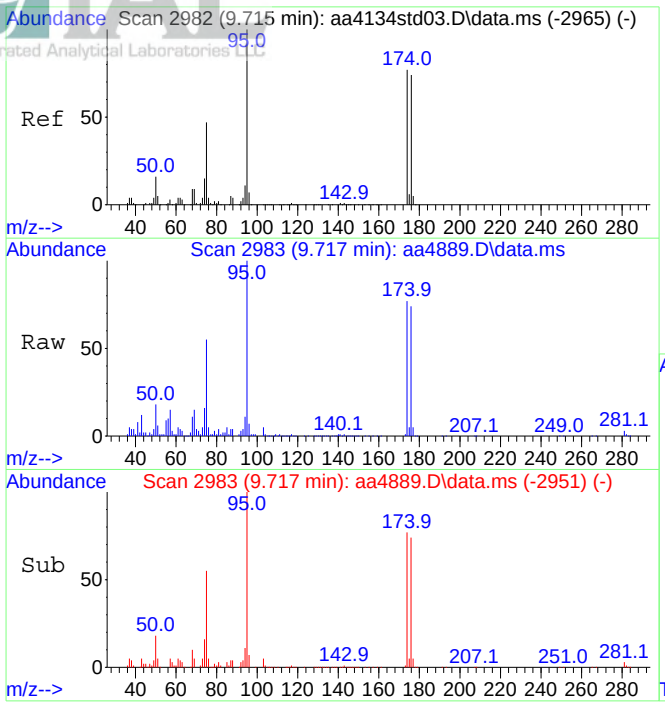




#61
Styrene
Concen: 0.79 ppbV
RT: 9.087 min Scan# 2787
Delta R.T. -0.001 min
Lab File: aa4889.D
Acq: 8 Dec 2023 3:42 pm

Tgt Ion:104 Resp: 134831

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 104 | 100 | | |
| 103 | 45.7 | 37.8 | 56.6 |

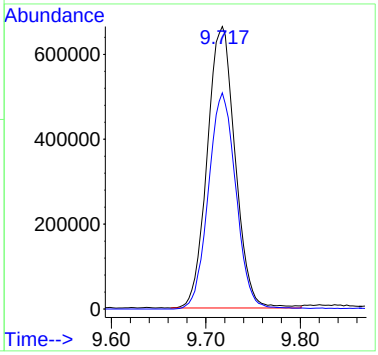


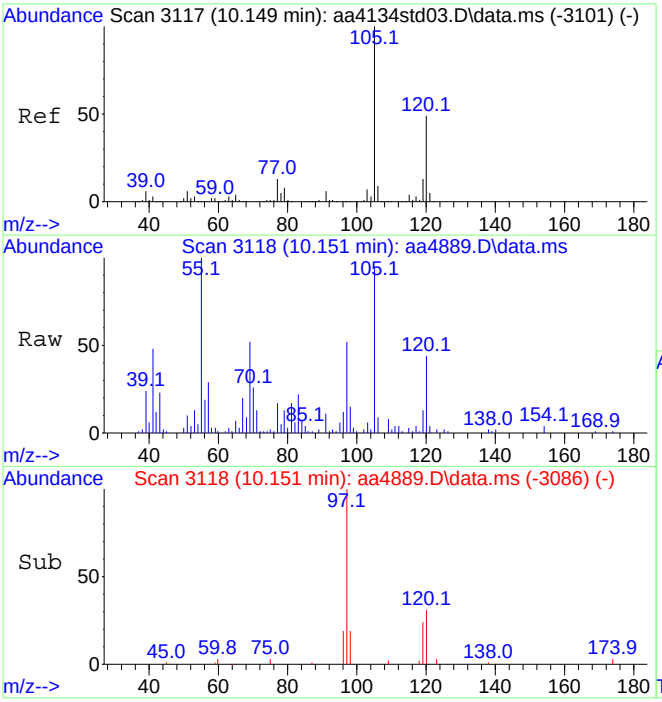



#64
Bromofluorobenzene (tune std)
Concen: 9.37 ppbV
RT: 9.717 min Scan# 2983
Delta R.T. 0.002 min
Lab File: aa4889.D
Acq: 8 Dec 2023 3:42 pm

Tgt Ion: 95 Resp: 1364662

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 75.7 | 61.1 | 91.7 |

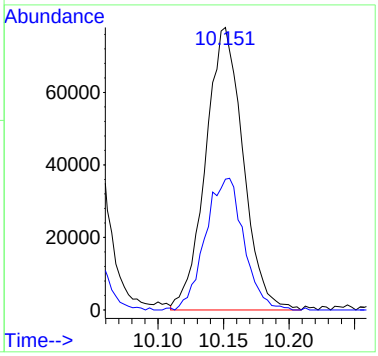


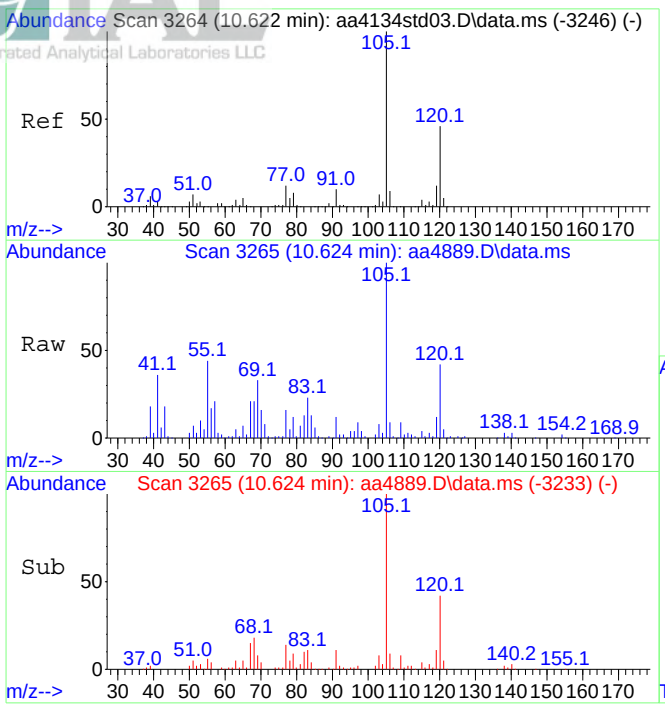




#69
1,3,5-Trimethylbenzene
Concen: 0.54 ppbV
RT: 10.151 min Scan# 3118
Delta R.T. 0.002 min
Lab File: aa4889.D
Acq: 8 Dec 2023 3:42 pm

Tgt Ion:105 Resp: 155230

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 47.8 | 38.9 | 58.3 |

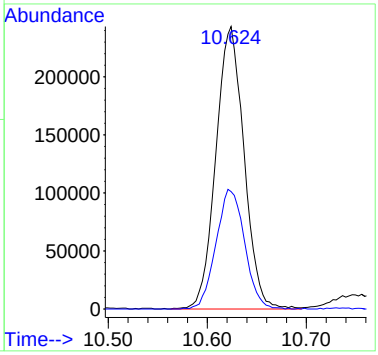





#70
1,2,4-Trimethylbenzene
Concen: 1.67 ppbV
RT: 10.624 min Scan# 3265
Delta R.T. 0.002 min
Lab File: aa4889.D
Acq: 8 Dec 2023 3:42 pm

Tgt Ion:105 Resp: 481421

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 42.9 | 36.3 | 54.5 |



Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4910.D
Acq On : 11 Dec 2023 2:50 pm
Operator : jjw
Sample : E23-05047-04x5 dil
Misc : 3283, 100cc
ALS Vial : 13 Sample Multiplier: 1

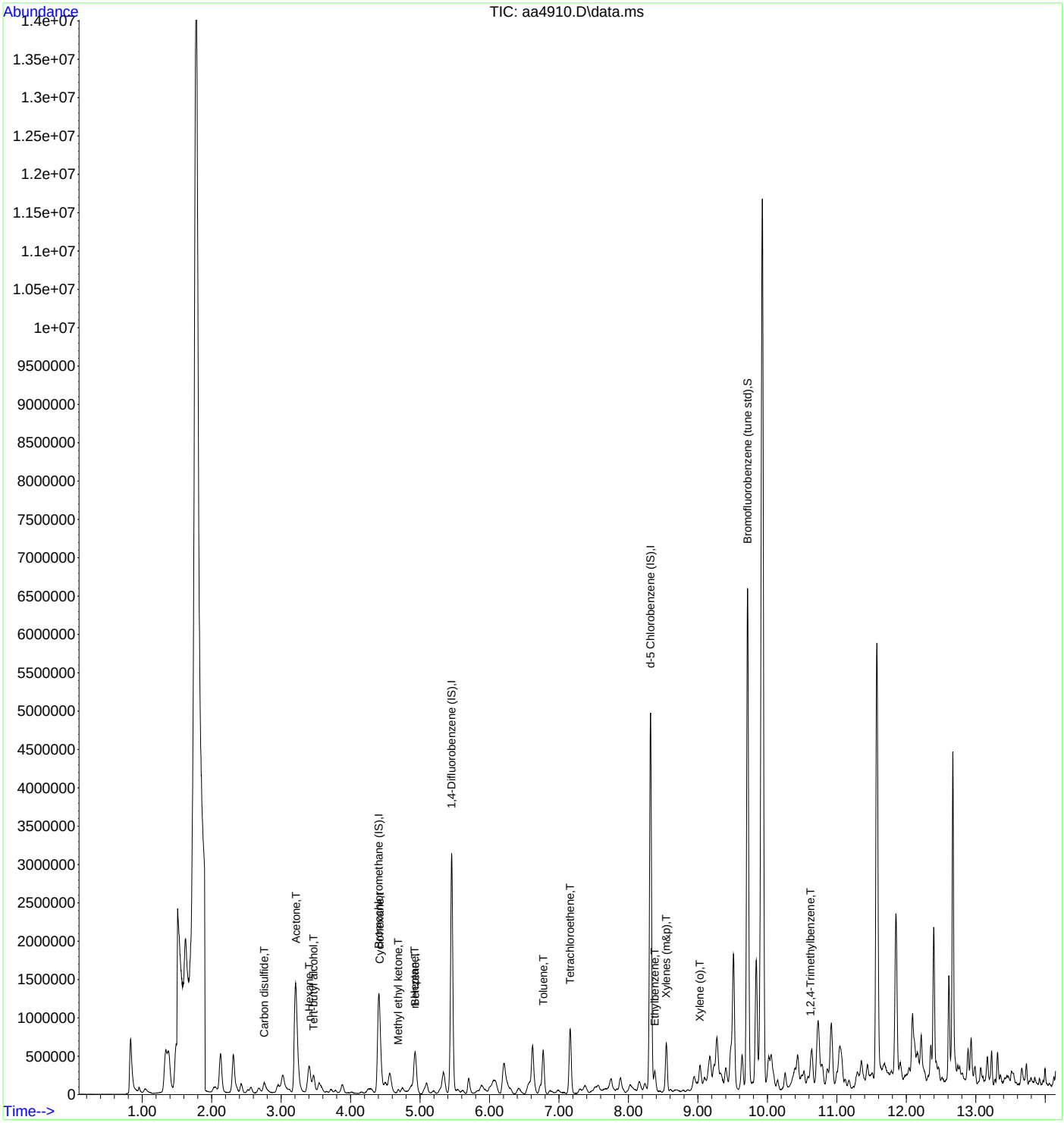
Quant Time: Dec 12 10:38:45 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

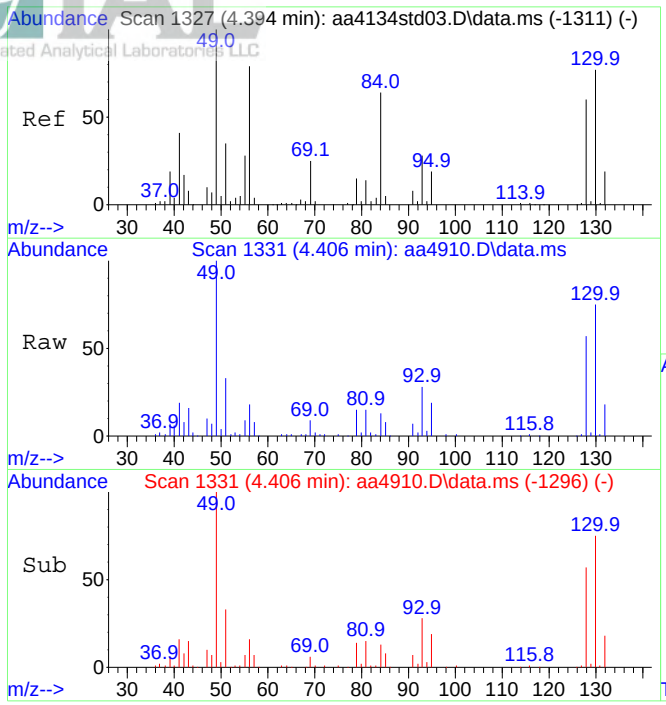
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.406 | 130 | 523935 | 10.00 | ppbV | | 0.012 |
| 39) 1,4-Difluorobenzene (IS) | 5.454 | 114 | 2718271 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 3097691 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 2843915 | 10.53 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 15) Carbon disulfide | 2.756 | 76 | 337797 | 2.11 | ppbV | | 95 |
| 21) Acetone | 3.216 | 43 | 675559 | 8.55 | ppbV | | 97 |
| 24) n-Hexane | 3.406 | 57 | 258354 | 1.56 | ppbV | # | 78 |
| 26) Tert-butyl alcohol | 3.467 | 59 | 298400 | 2.18 | ppbV | | 100 |
| 29) Cyclohexane | 4.419 | 56 | 139491 | 1.21 | ppbV | # | 76 |
| 35) Methyl ethyl ketone | 4.685 | 43 | 70473 | 0.55 | ppbV | | 95 |
| 36) n-Heptane | 4.923 | 43 | 166495 | 1.15 | ppbV | | 96 |
| 37) Benzene | 4.930 | 78 | 292594 | 1.41 | ppbV | | 95 |
| 47) Toluene | 6.772 | 91 | 422471 | 1.11 | ppbV | | 99 |
| 49) Tetrachloroethene | 7.161 | 166 | 290054 | 1.76 | ppbV | | 100 |
| 58) Ethylbenzene | 8.380 | 91 | 174768 | 0.31 | ppbV | | 97 |
| 59) Xylenes (m&p) | 8.544 | 91 | 461126 | 1.09 | ppbV | | 97 |
| 60) Xylene (o) | 9.026 | 91 | 193185 | 0.42 | ppbV | | 94 |
| 70) 1,2,4-Trimethylbenzene | 10.621 | 105 | 140843 | 0.26 | ppbV | | 96 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4910.D
Acq On : 11 Dec 2023 2:50 pm
Operator : jjw
Sample : E23-05047-04x5 dil
Misc : 3283, 100cc
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Dec 12 10:38:45 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

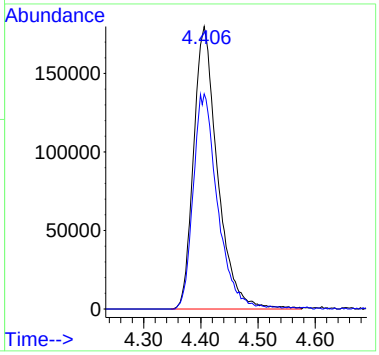


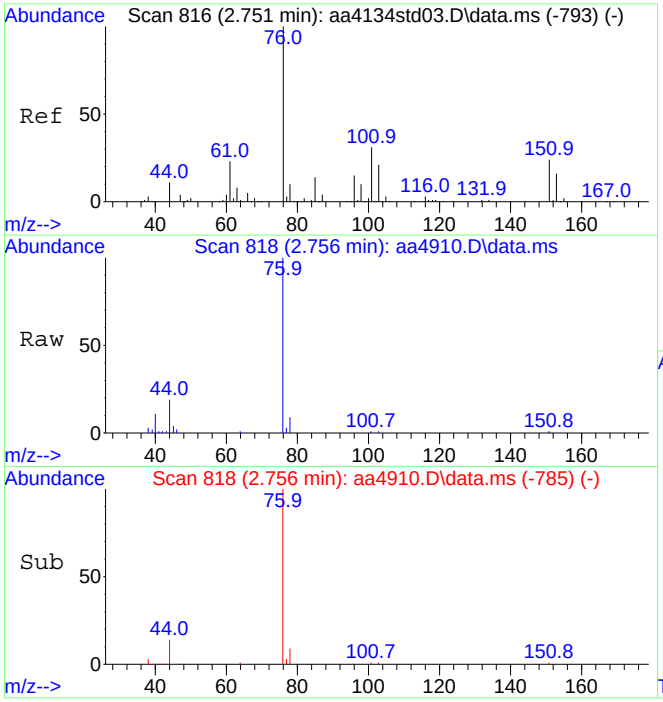



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.406 min Scan# 1331
Delta R.T. 0.012 min
Lab File: aa4910.D
Acq: 11 Dec 2023 2:50 pm

Tgt Ion:130 Resp: 523935

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 77.1 | 62.2 | 93.4 |

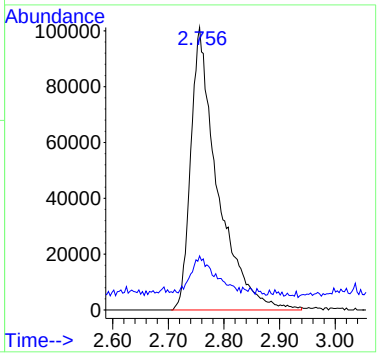


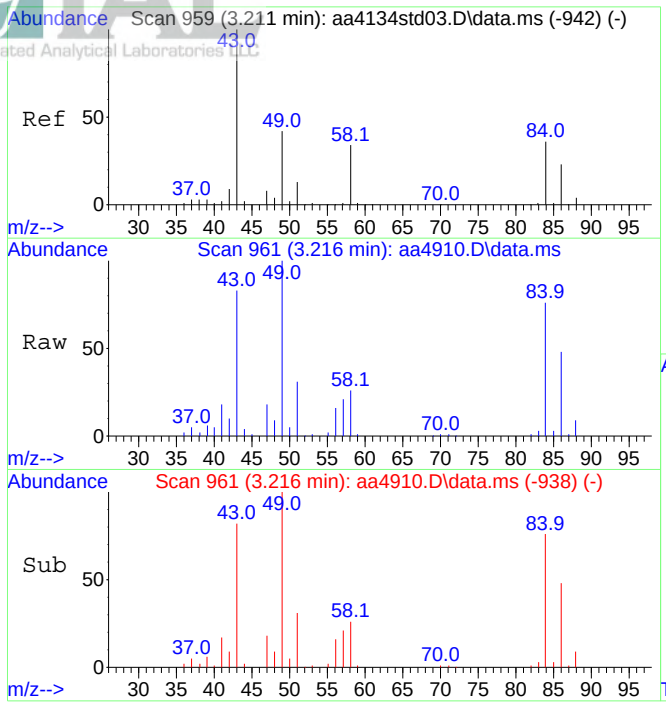




#15
Carbon disulfide
Concen: 2.11 ppbV
RT: 2.756 min Scan# 818
Delta R.T. 0.005 min
Lab File: aa4910.D
Acq: 11 Dec 2023 2:50 pm

Tgt Ion: 76 Resp: 337797

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 13.3 | 9.0 | 13.4 |

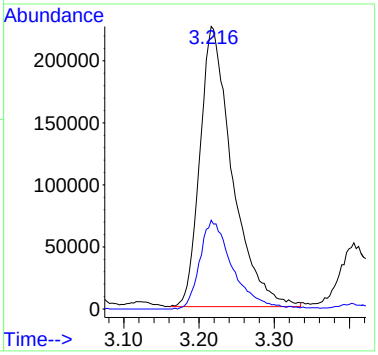


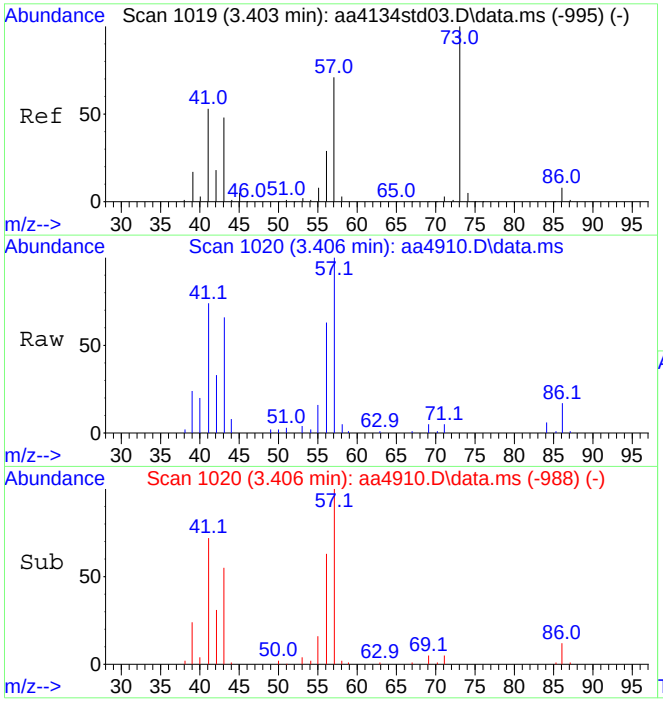



#21
Acetone
Concen: 8.55 ppbV
RT: 3.216 min Scan# 961
Delta R.T. 0.005 min
Lab File: aa4910.D
Acq: 11 Dec 2023 2:50 pm

Tgt Ion: 43 Resp: 675559

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 32.0 | 27.1 | 40.7 |

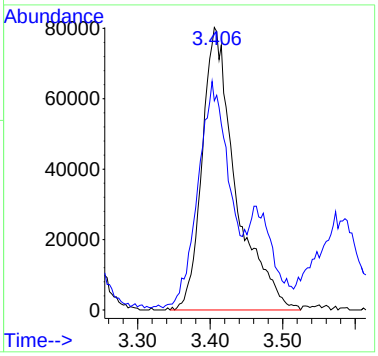


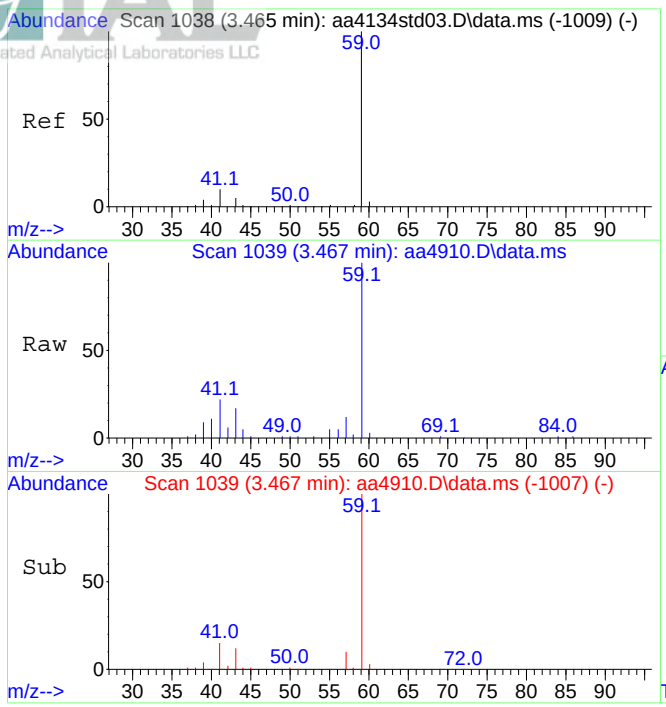




#24
n-Hexane
Concen: 1.56 ppbV
RT: 3.406 min Scan# 1020
Delta R.T. 0.002 min
Lab File: aa4910.D
Acq: 11 Dec 2023 2:50 pm

Tgt Ion: 57 Resp: 258354

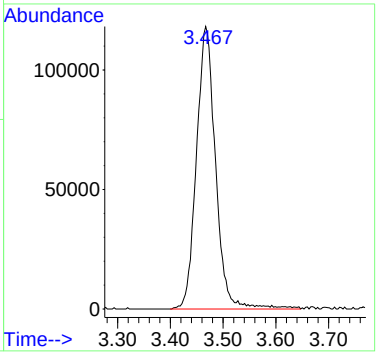
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 41 | 102.5 | 66.4 | 99.6# |

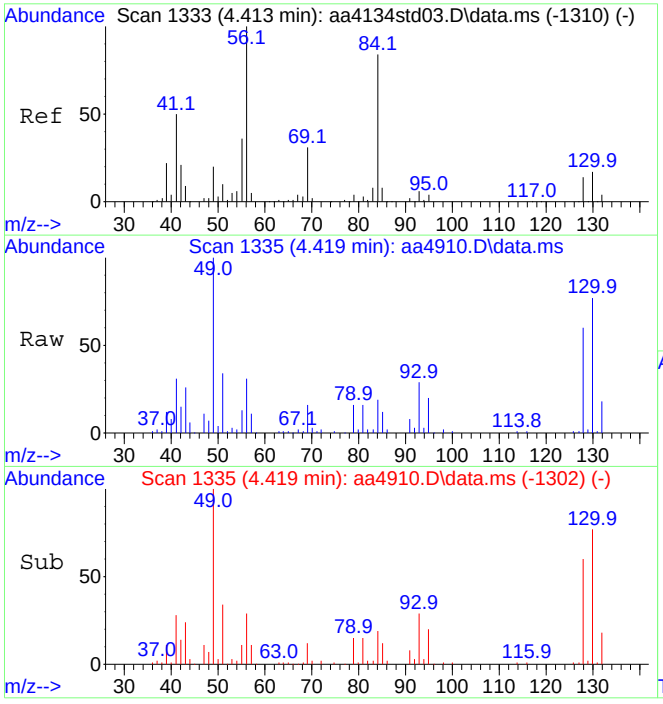





#26
Tert-butyl alcohol
Concen: 2.18 ppbV
RT: 3.467 min Scan# 1039
Delta R.T. 0.002 min
Lab File: aa4910.D
Acq: 11 Dec 2023 2:50 pm

Tgt Ion: 59 Resp: 298400

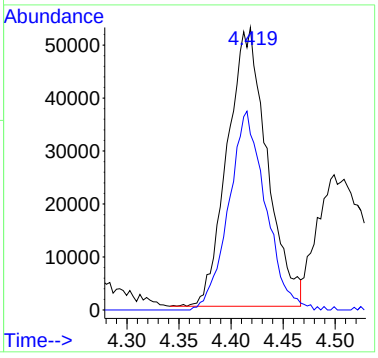


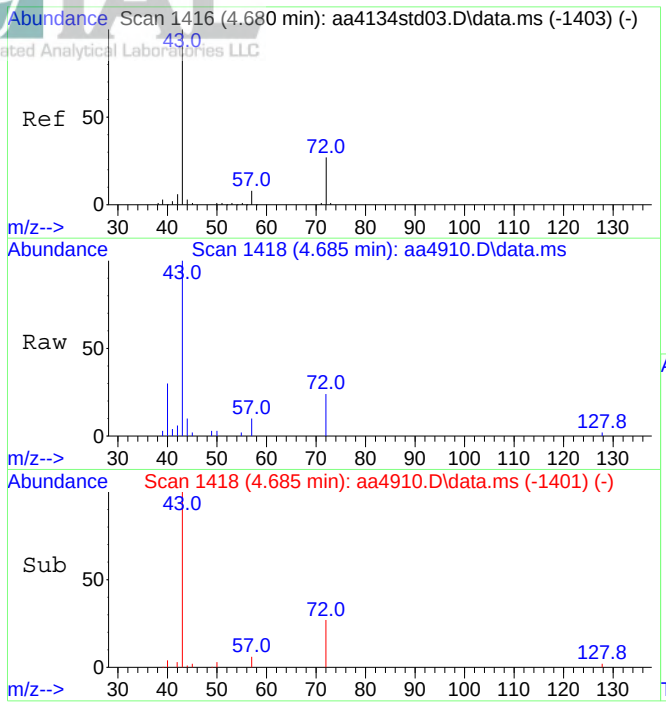




#29
Cyclohexane
Concen: 1.21 ppbV
RT: 4.419 min Scan# 1335
Delta R.T. 0.005 min
Lab File: aa4910.D
Acq: 11 Dec 2023 2:50 pm

Tgt Ion: 56 Resp: 139491

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 66.3 | 71.2 | 106.8# |

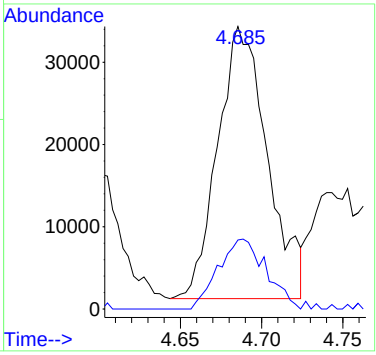


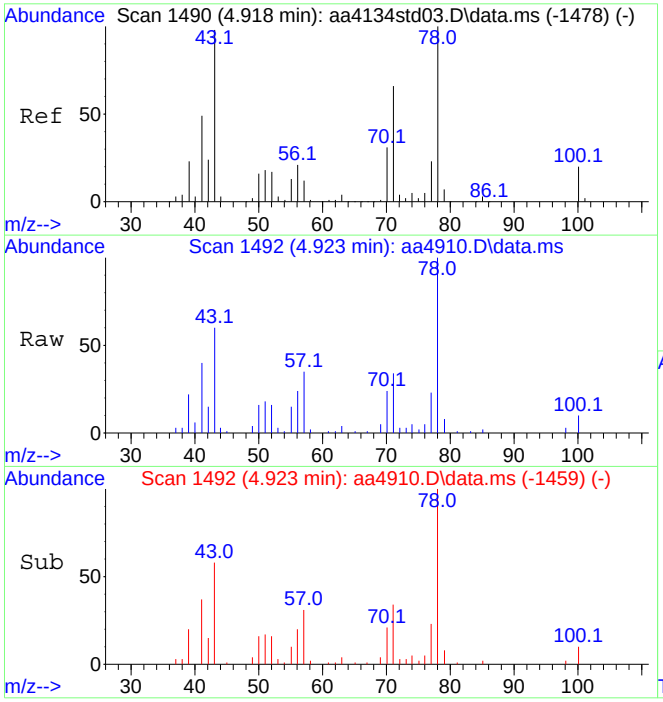



#35
Methyl ethyl ketone
Concen: 0.55 ppbV
RT: 4.685 min Scan# 1418
Delta R.T. 0.005 min
Lab File: aa4910.D
Acq: 11 Dec 2023 2:50 pm

Tgt Ion: 43 Resp: 70473

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 24.6 | 21.6 | 32.4 |

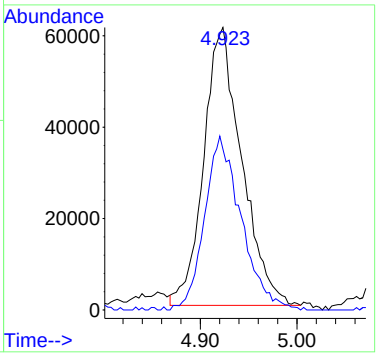


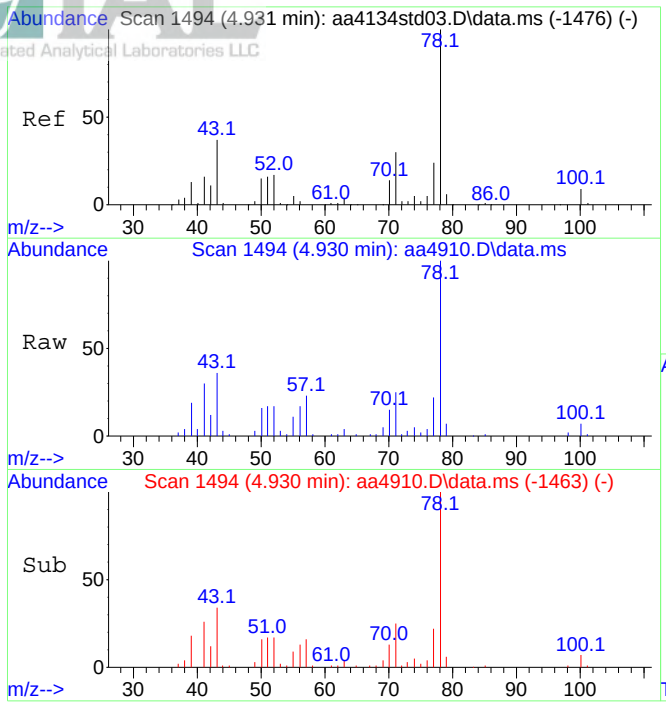




#36
n-Heptane
Concen: 1.15 ppbV
RT: 4.923 min Scan# 1492
Delta R.T. 0.005 min
Lab File: aa4910.D
Acq: 11 Dec 2023 2:50 pm

Tgt Ion: 43 Resp: 166495

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 71 | 60.2 | 50.5 | 75.7 |

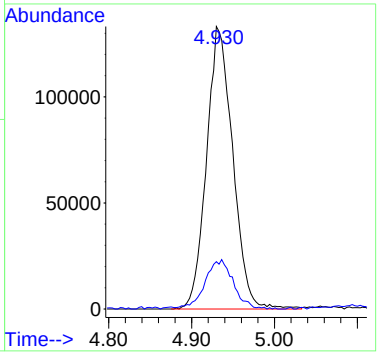


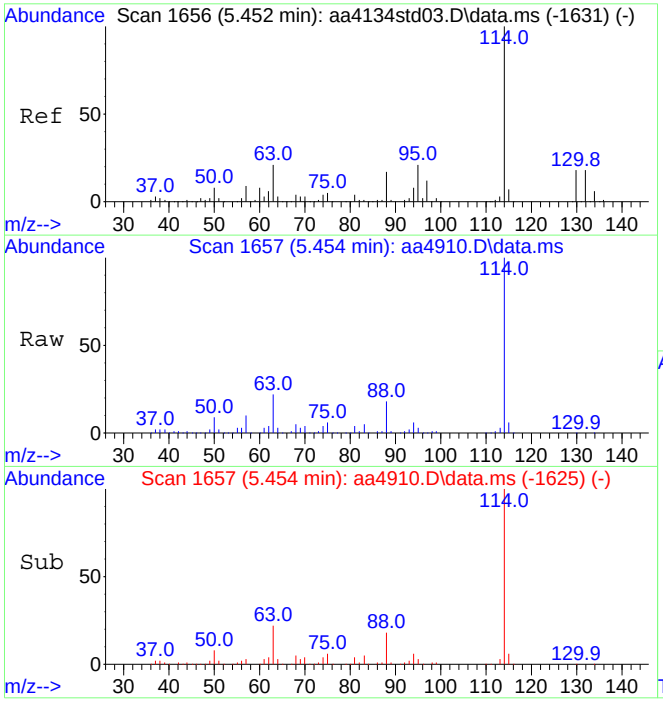



#37
Benzene
Concen: 1.41 ppbV
RT: 4.930 min Scan# 1494
Delta R.T. -0.001 min
Lab File: aa4910.D
Acq: 11 Dec 2023 2:50 pm

Tgt Ion: 78 Resp: 292594

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 18.8 | 13.4 | 20.0 |

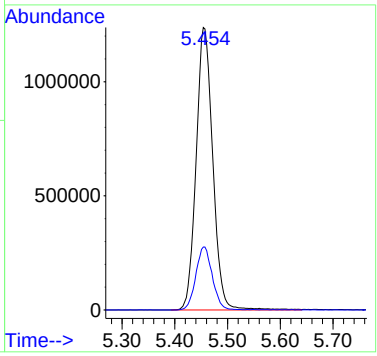


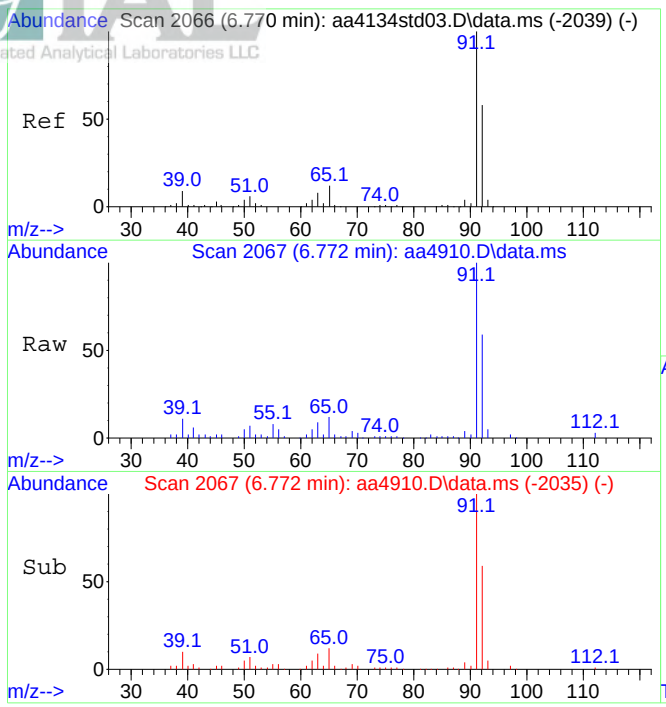




#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.454 min Scan# 1657
Delta R.T. 0.002 min
Lab File: aa4910.D
Acq: 11 Dec 2023 2:50 pm

Tgt Ion:114 Resp: 2718271

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.1 | 17.0 | 25.6 |

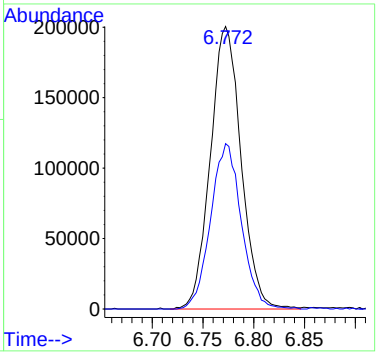


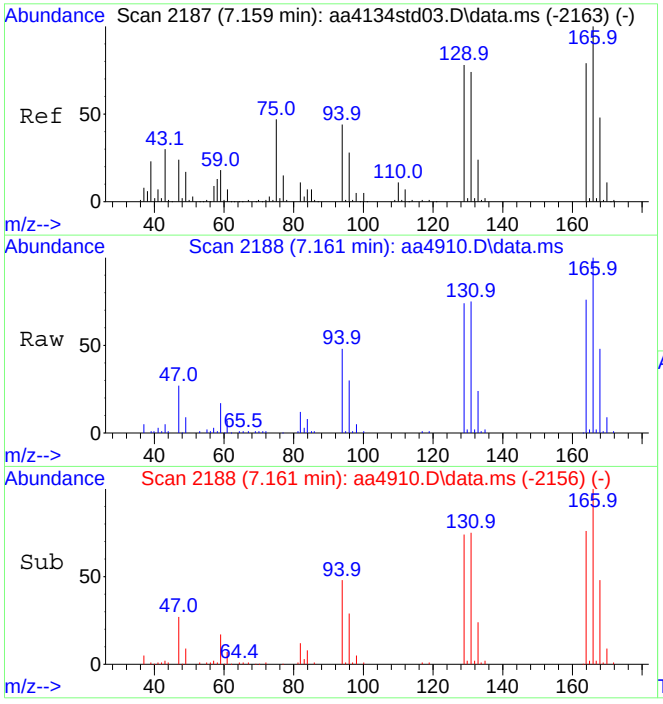



#47
Toluene
Concen: 1.11 ppbV
RT: 6.772 min Scan# 2067
Delta R.T. 0.002 min
Lab File: aa4910.D
Acq: 11 Dec 2023 2:50 pm

Tgt Ion: 91 Resp: 422471

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 58.4 | 47.3 | 70.9 |

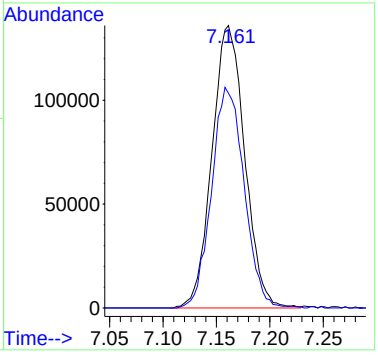


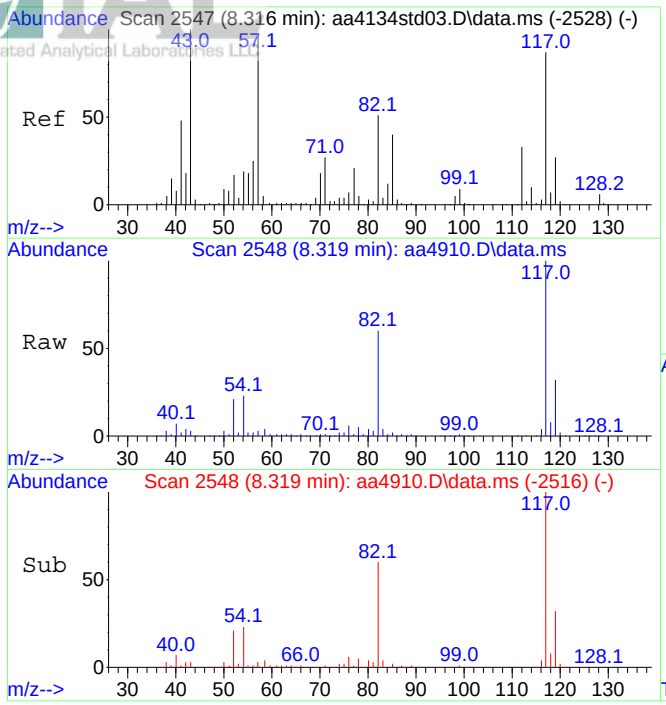




#49
Tetrachloroethene
Concen: 1.76 ppbV
RT: 7.161 min Scan# 2188
Delta R.T. 0.002 min
Lab File: aa4910.D
Acq: 11 Dec 2023 2:50 pm

Tgt Ion:166 Resp: 290054

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 77.6 | 62.3 | 93.5 |

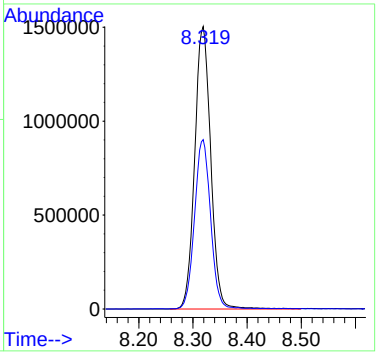


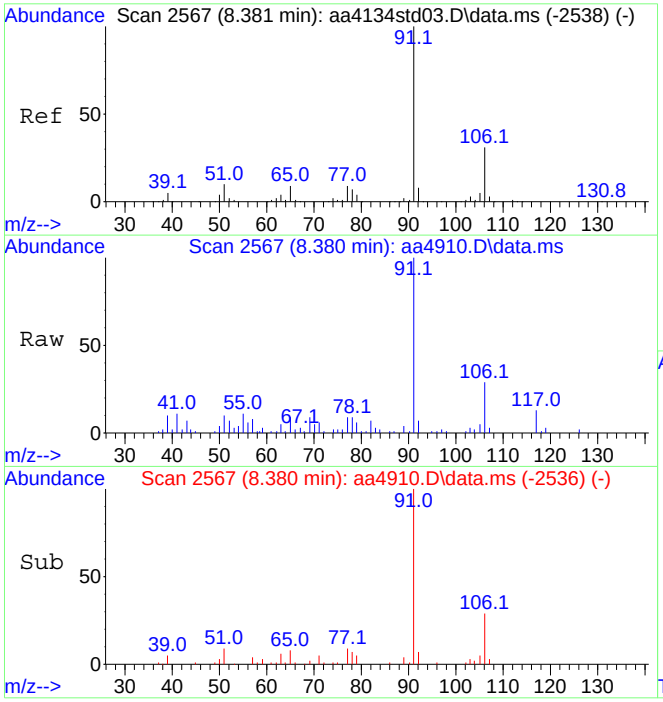



#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.319 min Scan# 2548
Delta R.T. 0.002 min
Lab File: aa4910.D
Acq: 11 Dec 2023 2:50 pm

Tgt Ion:117 Resp: 3097691

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 59.9 | 47.0 | 70.4 |

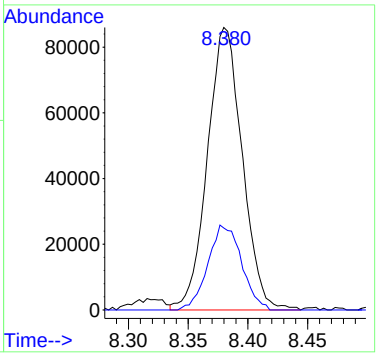


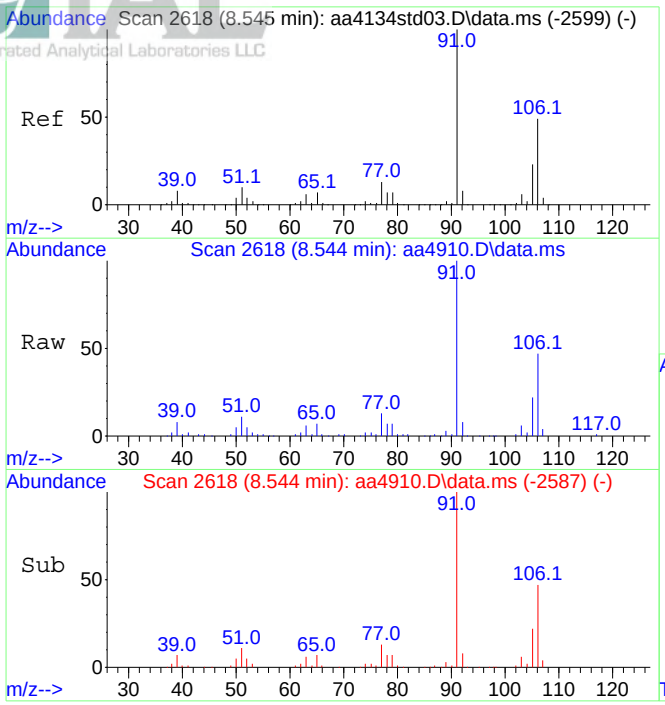




#58
Ethylbenzene
Concen: 0.31 ppbV
RT: 8.380 min Scan# 2567
Delta R.T. -0.001 min
Lab File: aa4910.D
Acq: 11 Dec 2023 2:50 pm

Tgt Ion: 91 Resp: 174768

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 28.9 | 24.6 | 36.8 |

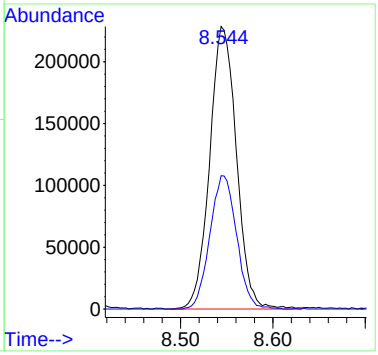


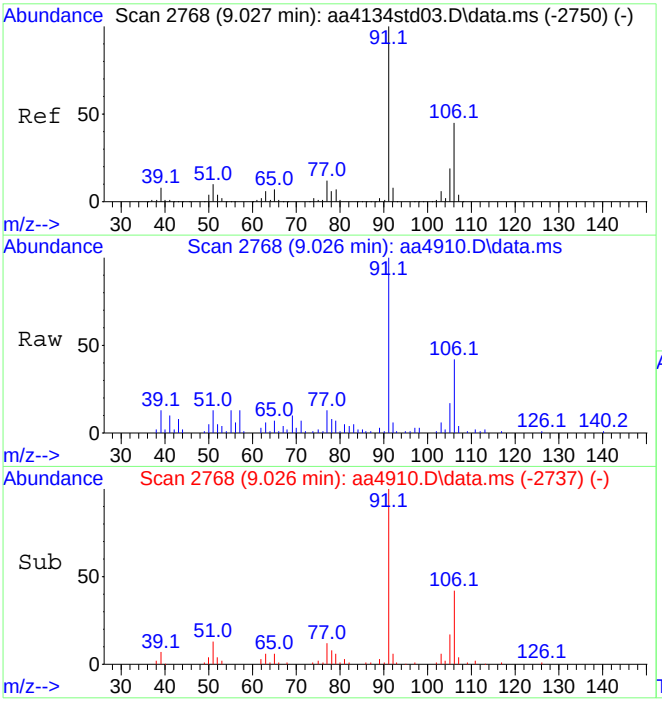



#59
Xylenes (m&p)
Concen: 1.09 ppbV
RT: 8.544 min Scan# 2618
Delta R.T. -0.001 min
Lab File: aa4910.D
Acq: 11 Dec 2023 2:50 pm

Tgt Ion: 91 Resp: 461126

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 47.0 | 39.0 | 58.4 |

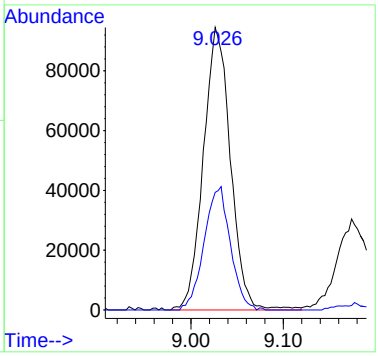


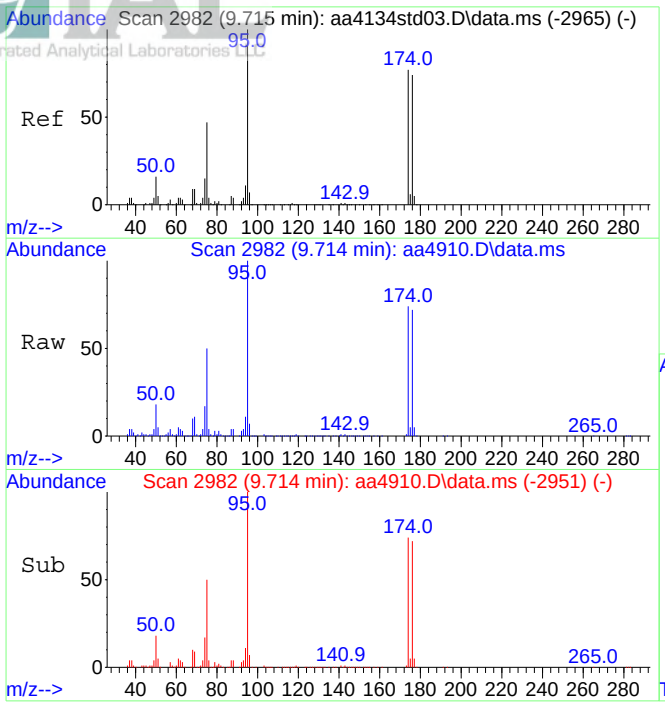




#60
Xylene (o)
Concen: 0.42 ppbV
RT: 9.026 min Scan# 2768
Delta R.T. -0.001 min
Lab File: aa4910.D
Acq: 11 Dec 2023 2:50 pm

Tgt Ion: 91 Resp: 193185

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 42.2 | 36.8 | 55.2 |

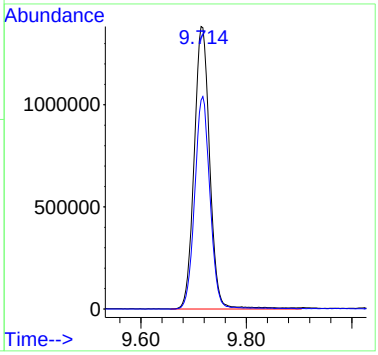


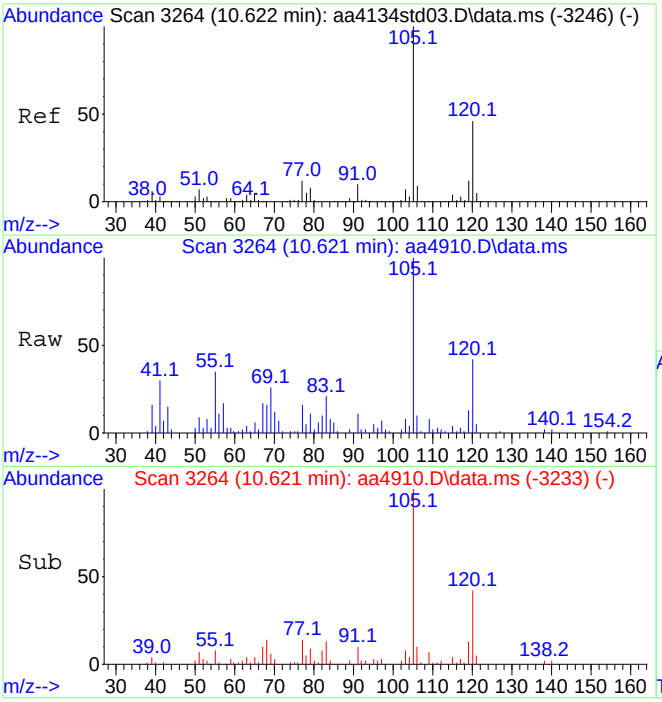



#64
Bromofluorobenzene (tune std)
Concen: 10.53 ppbV
RT: 9.714 min Scan# 2982
Delta R.T. -0.001 min
Lab File: aa4910.D
Acq: 11 Dec 2023 2:50 pm

Tgt Ion: 95 Resp: 2843915

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 73.8 | 61.1 | 91.7 |

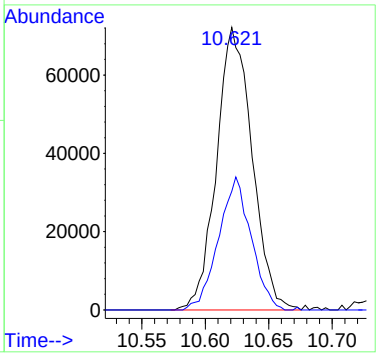



#70
1,2,4-Trimethylbenzene
Concen: 0.26 ppbV
RT: 10.621 min Scan# 3264
Delta R.T. -0.001 min
Lab File: aa4910.D
Acq: 11 Dec 2023 2:50 pm

Tgt Ion:105 Resp: 140843

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 43.1 | 36.3 | 54.5 |



Volatile Organic Compounds by EPA Method TO-15
Summary of Results

| | | | |
|---|---|---|---|
| Lab ID: | E23-05047-05 | Instrument ID: | AA |
| Client ID: | SV7 | GC/MS Column: | RTX-1, 0.32 mmID |
| Date Sampled: | 11/16/2023 08:24 | Injection Volmue: | 500ml |
| Date Received: | 11/16/2023 | Matrix: | Air-Other |
| Date Analyzed: | 12/08/2023 16:15 | % Moisture: | NA |
| Data File: | AA4890 | Dilution Factor: | 1 |
| Summa ID: | 2749 | Analyst: | J. Walukiewicz |

| | | | Concentration Reported | | Reporting Limits | |
|---|---|---|---|---|---|---|
| **Compound** | **CAS #** | **Q** | **ppbv** | **ug/m3** | **ppbv** | **ug/m3** |
| Acetone | 67-64-1 | | 6.2 | 15 | 0.20 | 0.48 |
| Benzene | 71-43-2 | | ND | ND | 0.20 | 0.64 |
| Bromodichloromethane | 75-27-4 | | ND | ND | 0.20 | 1.3 |
| Bromoform | 75-25-2 | | ND | ND | 0.20 | 2.1 |
| Bromomethane | 74-83-9 | | ND | ND | 0.20 | 0.78 |
| 1,3-Butadiene | 106-99-0 | | ND | ND | 0.20 | 0.44 |
| Chlorobenzene | 108-90-7 | | ND | ND | 0.20 | 0.92 |
| Chloroethane | 75-00-3 | | ND | ND | 0.20 | 0.53 |
| Chloroform | 67-66-3 | | 1.1 | 5.5 | 0.20 | 0.98 |
| Chloromethane | 74-87-3 | | ND | ND | 0.20 | 0.41 |
| Carbon disulfide | 75-15-0 | | ND | ND | 0.20 | 0.62 |
| Carbon tetrachloride | 56-23-5 | | ND | ND | 0.040 | 0.25 |
| Cyclohexane | 110-82-7 | | ND | ND | 0.20 | 0.69 |
| Dibromochloromethane | 124-48-1 | | ND | ND | 0.20 | 1.7 |
| 1,2-Dibromoethane | 106-93-4 | | ND | ND | 0.20 | 1.5 |
| 1,2-Dichlorobenzene | 95-50-1 | | ND | ND | 0.20 | 1.2 |
| 1,3-Dichlorobenzene | 541-73-1 | | ND | ND | 0.20 | 1.2 |
| 1,4-Dichlorobenzene | 106-46-7 | | ND | ND | 0.20 | 1.2 |
| Dichlorodifluoromethane | 75-71-8 | | ND | ND | 0.20 | 0.99 |
| 1,1-Dichloroethane | 75-34-3 | | ND | ND | 0.20 | 0.81 |
| 1,2-Dichloroethane | 107-06-2 | | ND | ND | 0.20 | 0.81 |
| 1,1-Dichloroethene | 75-35-4 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloroethene (cis) | 156-59-2 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloroethene (trans) | 156-60-5 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloropropane | 78-87-5 | | ND | ND | 0.20 | 0.92 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | | ND | ND | 0.20 | 0.91 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | | ND | ND | 0.20 | 0.91 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | | ND | ND | 0.20 | 1.4 |
| 1,4-Dioxane | 123-91-1 | | ND | ND | 0.20 | 0.72 |
| Ethylbenzene | 100-41-4 | | 0.26 | 1.1 | 0.20 | 0.87 |
| n-Heptane | 142-82-5 | | ND | ND | 0.20 | 0.82 |
| 1,3-Hexachlorobutadiene | 87-68-3 | | ND | ND | 0.20 | 2.1 |
| n-Hexane | 110-54-3 | | 0.23 | 0.82 | 0.20 | 0.70 |
| Methylene chloride | 75-09-2 | | ND | ND | 0.20 | 0.69 |
| Methyl ethyl ketone | 78-93-3 | | 0.60 | 1.8 | 0.20 | 0.59 |
| Methyl isobutyl ketone | 108-10-1 | | ND | ND | 0.20 | 0.82 |
| Methyl tert-butyl ether | 1634-04-4 | | ND | ND | 0.20 | 0.72 |
| Styrene | 100-42-5 | | ND | ND | 0.20 | 0.85 |
| Tert-butyl alcohol | 75-65-0 | | 1.4 | 4.1 | 0.20 | 0.61 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | ND | ND | 0.20 | 1.4 |
| Tetrachloroethene | 127-18-4 | | 1.7 | 12 | 0.20 | 1.4 |
| Toluene | 108-88-3 | | 0.63 | 2.4 | 0.20 | 0.75 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | ND | ND | 0.20 | 1.5 |
| 1,1,1-Trichloroethane | 71-55-6 | | ND | ND | 0.20 | 1.1 |
| 1,1,2-Trichloroethane | 79-00-5 | | ND | ND | 0.20 | 1.1 |

Qualifiers:
D = Dilution required

**INTEGRATED ANALYTICAL LABORATORIES, LLC**
***Integrated Analytical Laboratories LLC***

Volatile Organic Compounds by EPA Method TO-15
Summary of Results

| | | | |
|---|---|---|---|
| Lab ID: | E23-05047-05 | Instrument ID: | AA |
| Client ID: | SV7 | GC/MS Column: | RTX-1, 0.32 mmID |
| Date Sampled: | 11/16/2023 08:24 | Injection Volmue: | 500ml |
| Date Received: | 11/16/2023 | Matrix: | Air-Other |
| Date Analyzed: | 12/08/2023 16:15 | % Moisture: | NA |
| Data File: | AA4890 | Dilution Factor: | 1 |
| Summa ID: | 2749 | Analyst: | J. Walukiewicz |

| | | | Concentration Reported | | Reporting Limits | |
|---|---|---|---|---|---|---|
| **Compound** | **CAS #** | **Q** | **ppbv** | **ug/m3** | **ppbv** | **ug/m3** |
| Trichloroethene | 79-01-6 | | ND | ND | 0.046 | 0.25 |
| Trichlorofluoromethane | 75-69-4 | | 0.32 | 1.8 | 0.20 | 1.1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | | ND | ND | 0.20 | 1.5 |
| 1,2,4-Trimethylbenzene | 95-63-6 | | 0.20 | 0.99 | 0.20 | 0.98 |
| 1,3,5-Trimethylbenzene | 108-67-8 | | ND | ND | 0.20 | 0.98 |
| 2,2,4-Trimethylpentane | 540-84-1 | | ND | ND | 0.20 | 0.93 |
| Vinyl bromide | 593-60-2 | | ND | ND | 0.20 | 0.87 |
| Vinyl chloride | 75-01-4 | | ND | ND | 0.20 | 0.51 |
| Xylenes (m&p) | 179601-23-1 | | 1.0 | 4.4 | 0.20 | 0.87 |
| Xylenes (o) | 95-47-6 | | 0.41 | 1.8 | 0.20 | 0.87 |

Qualifiers:
D = Dilution required

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4890.D
Acq On : 8 Dec 2023 4:15 pm
Operator : jjw
Sample : E23-05047-05
Misc : 2749, 500cc
ALS Vial : 13 Sample Multiplier: 1

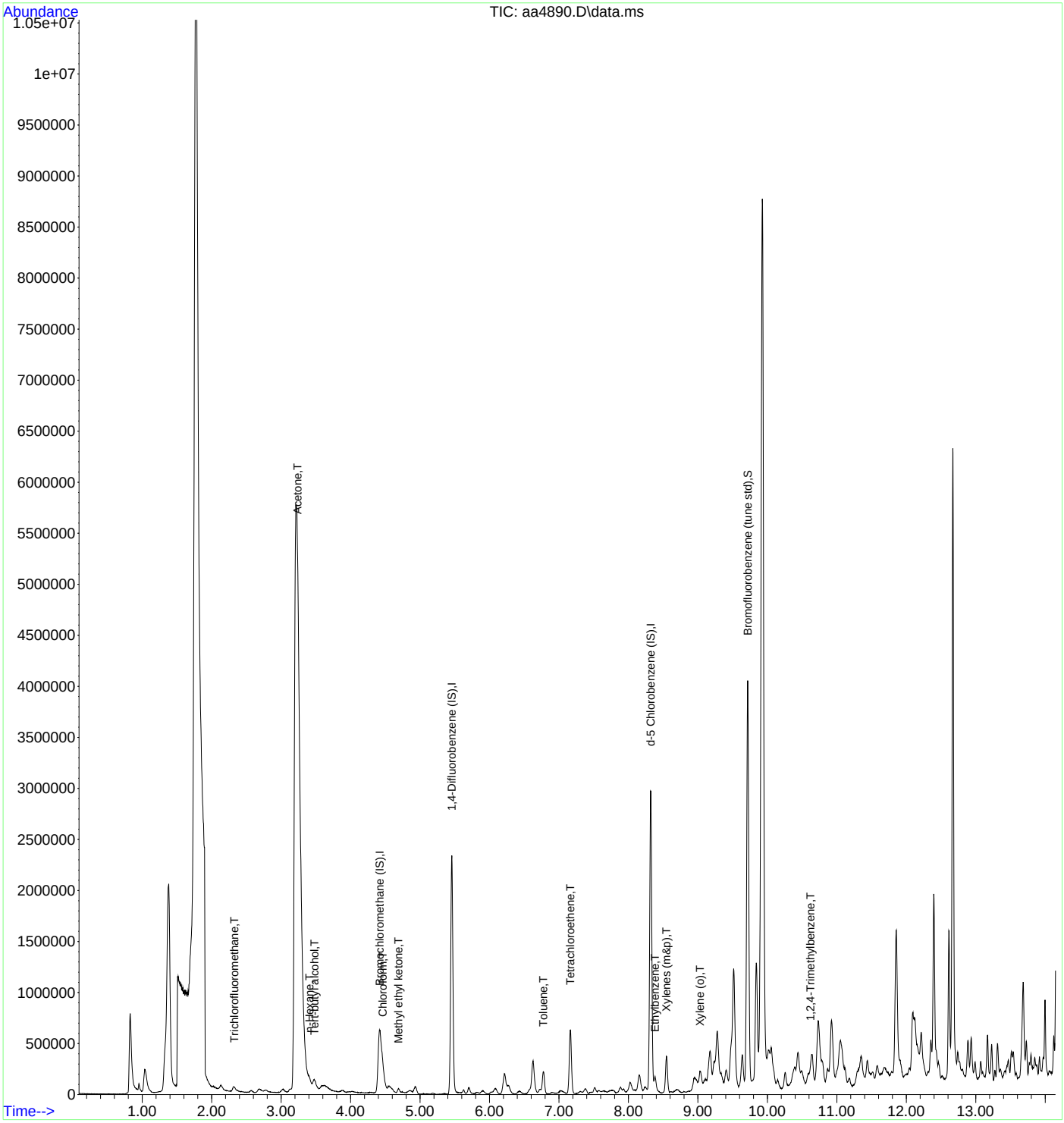
Quant Time: Dec 12 10:00:18 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

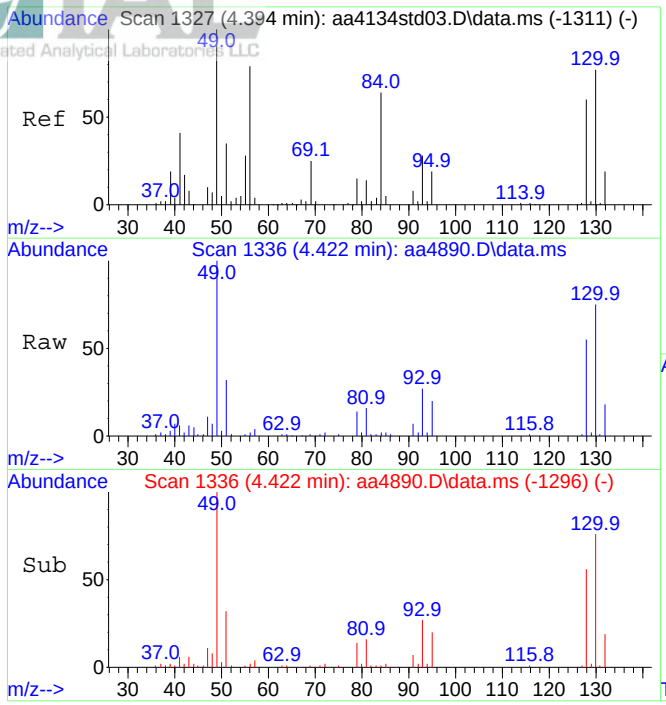
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.422 | 130 | 419490 | 10.00 | ppbV | | 0.028 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 2159308 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.322 | 117 | 1909354 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 1735350 | 10.43 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 12) Trichlorofluoromethane | 2.329 | 101 | 37734 | 0.32 | ppbV | | 99 |
| 21) Acetone | 3.238 | 43 | 390753 | 6.18 | ppbV | | 95 |
| 24) n-Hexane | 3.409 | 57 | 30862 | 0.23 | ppbV | # | 68 |
| 26) Tert-butyl alcohol | 3.480 | 59 | 148890 | 1.36 | ppbV | | 100 |
| 30) Chloroform | 4.464 | 83 | 125490 | 1.12 | ppbV | | 97 |
| 35) Methyl ethyl ketone | 4.692 | 43 | 61297 | 0.60 | ppbV | | 99 |
| 47) Toluene | 6.775 | 91 | 191623 | 0.63 | ppbV | | 100 |
| 49) Tetrachloroethene | 7.164 | 166 | 222151 | 1.70 | ppbV | | 100 |
| 58) Ethylbenzene | 8.383 | 91 | 90057 | 0.26 | ppbV | | 96 |
| 59) Xylenes (m&p) | 8.547 | 91 | 265039 | 1.02 | ppbV | | 97 |
| 60) Xylene (o) | 9.032 | 91 | 117086 | 0.41 | ppbV | | 95 |
| 70) 1,2,4-Trimethylbenzene | 10.621 | 105 | 66452 | 0.20 | ppbV | | 95 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4890.D
Acq On : 8 Dec 2023 4:15 pm
Operator : jjw
Sample : E23-05047-05
Misc : 2749, 500cc
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Dec 12 10:00:18 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

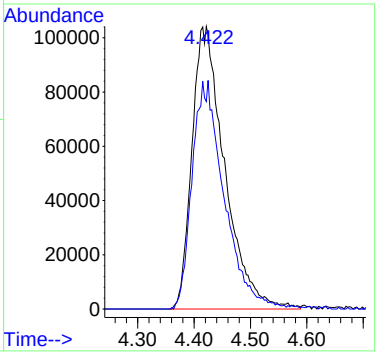


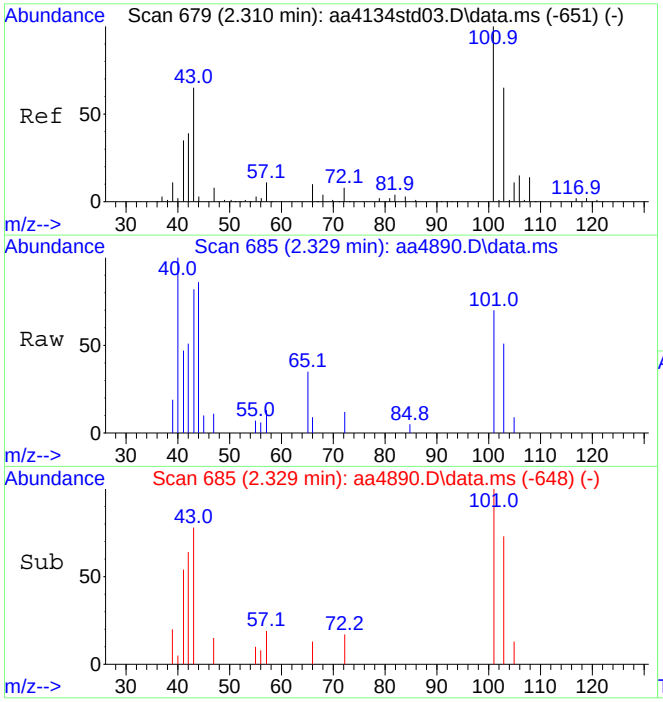



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.422 min Scan# 1336
Delta R.T. 0.028 min
Lab File: aa4890.D
Acq: 8 Dec 2023 4:15 pm

Tgt Ion:130 Resp: 419490

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 78.8 | 62.2 | 93.4 |

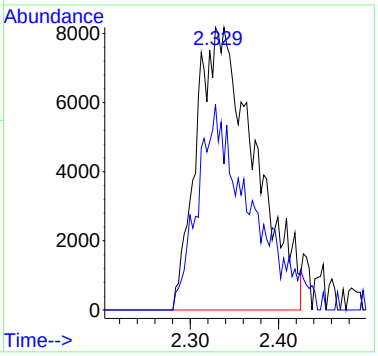


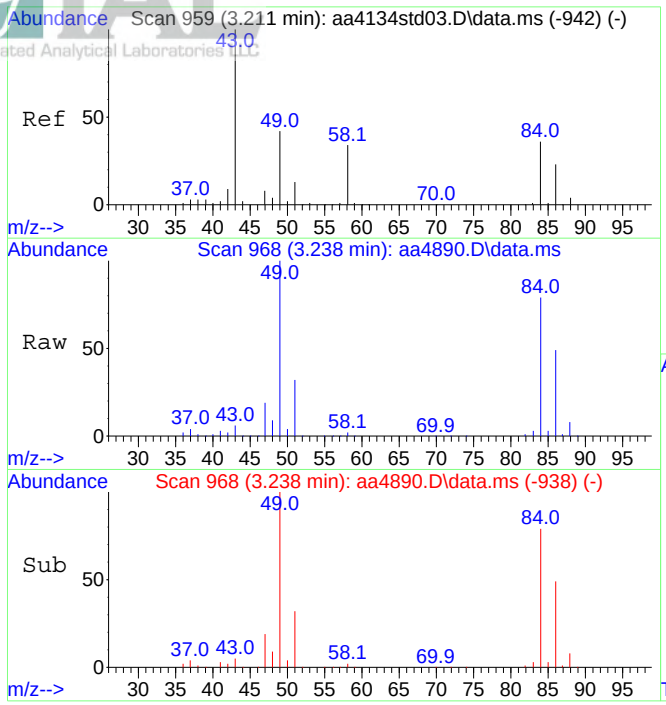




#12
Trichlorofluoromethane
Concen: 0.32 ppbV
RT: 2.329 min Scan# 685
Delta R.T. 0.018 min
Lab File: aa4890.D
Acq: 8 Dec 2023 4:15 pm

Tgt Ion:101 Resp: 37734

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 66.2 | 52.5 | 78.7 |

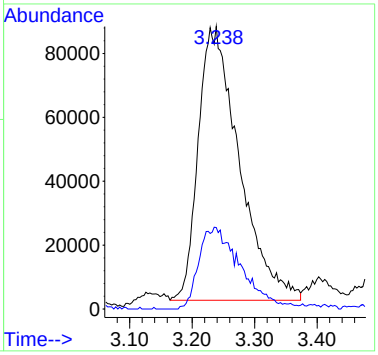


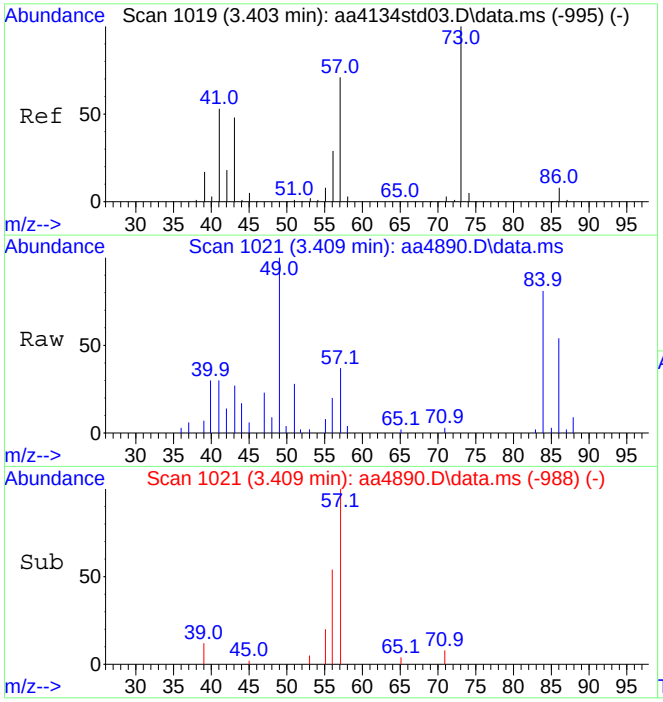



#21
Acetone
Concen: 6.18 ppbV
RT: 3.238 min Scan# 968
Delta R.T. 0.028 min
Lab File: aa4890.D
Acq: 8 Dec 2023 4:15 pm

Tgt Ion: 43 Resp: 390753

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 30.8 | 27.1 | 40.7 |

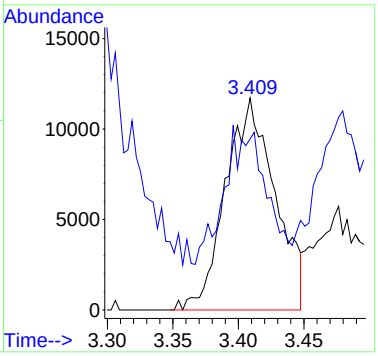


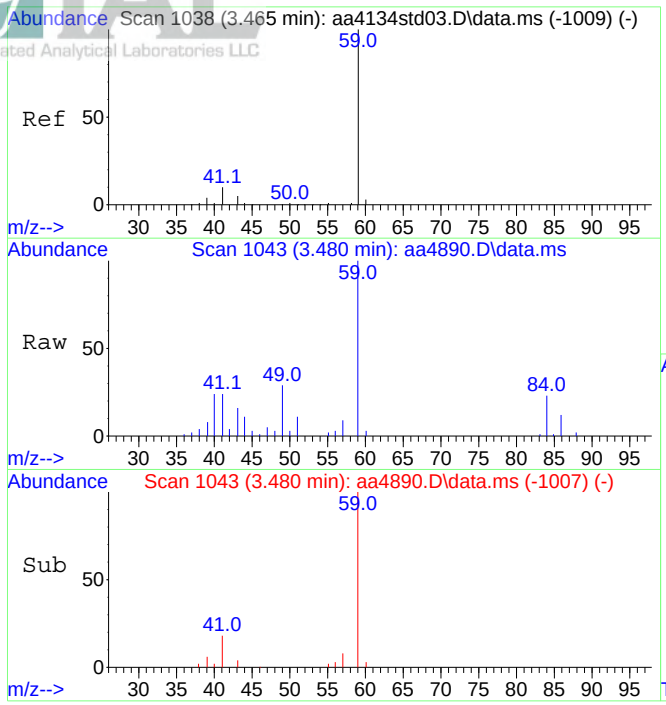




#24
n-Hexane
Concen: 0.23 ppbV
RT: 3.409 min Scan# 1021
Delta R.T. 0.006 min
Lab File: aa4890.D
Acq: 8 Dec 2023 4:15 pm

Tgt Ion: 57 Resp: 30862

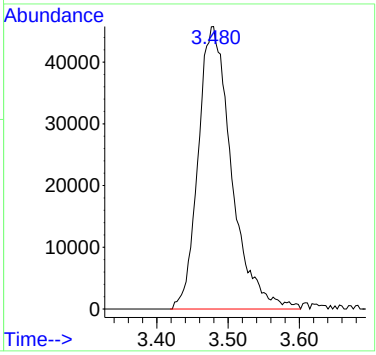
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 41 | 54.1 | 66.4 | 99.6# |

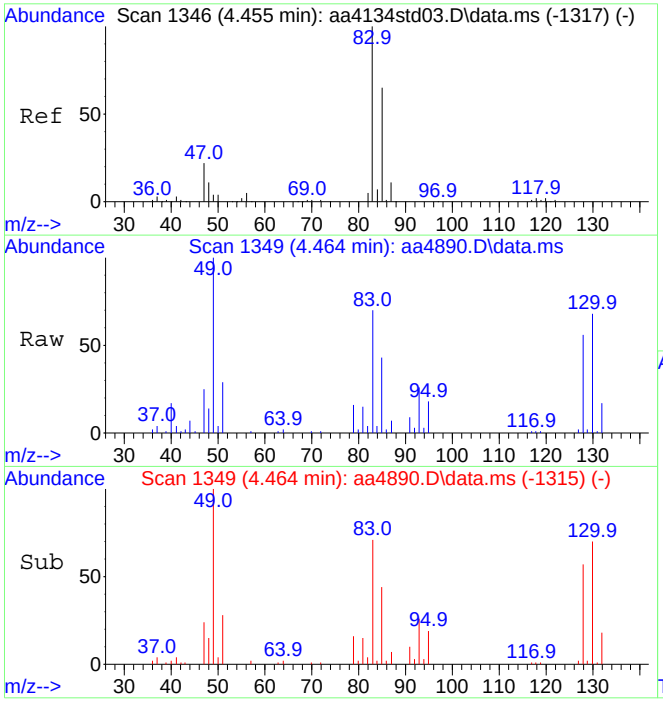





#26
Tert-butyl alcohol
Concen: 1.36 ppbV
RT: 3.480 min Scan# 1043
Delta R.T. 0.015 min
Lab File: aa4890.D
Acq: 8 Dec 2023 4:15 pm

Tgt Ion: 59 Resp: 148890

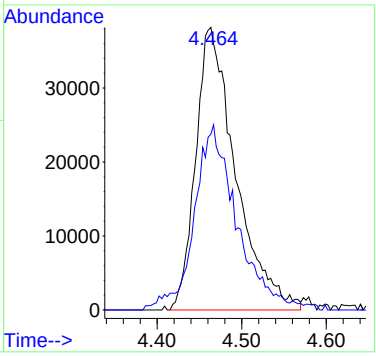


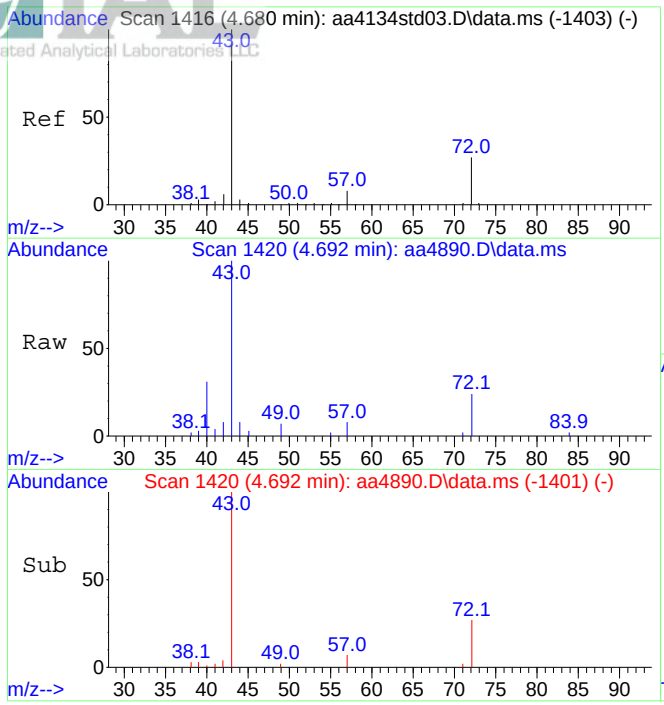




#30
Chloroform
Concen: 1.12 ppbV
RT: 4.464 min Scan# 1349
Delta R.T. 0.009 min
Lab File: aa4890.D
Acq: 8 Dec 2023 4:15 pm

Tgt Ion: 83 Resp: 125490

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 69.9 | 53.9 | 80.9 |

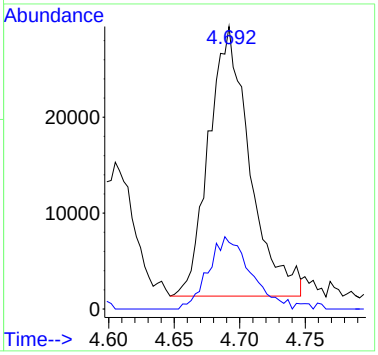


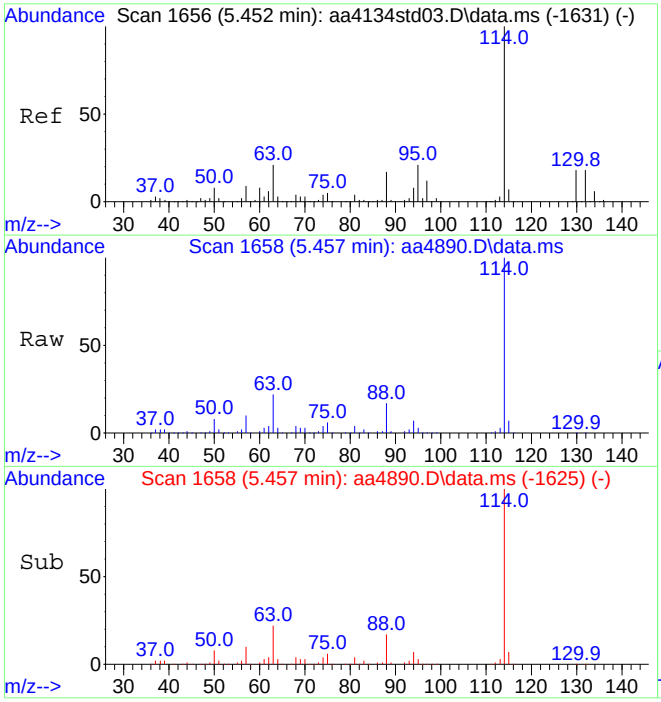



#35
Methyl ethyl ketone
Concen: 0.60 ppbV
RT: 4.692 min Scan# 1420
Delta R.T. 0.012 min
Lab File: aa4890.D
Acq: 8 Dec 2023 4:15 pm

Tgt Ion: 43 Resp: 61297

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 27.3 | 21.6 | 32.4 |

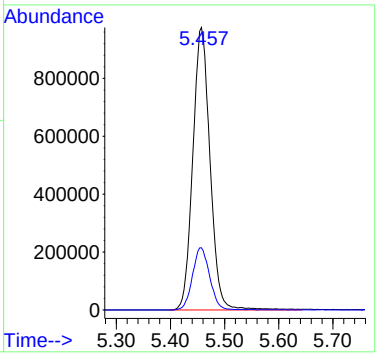


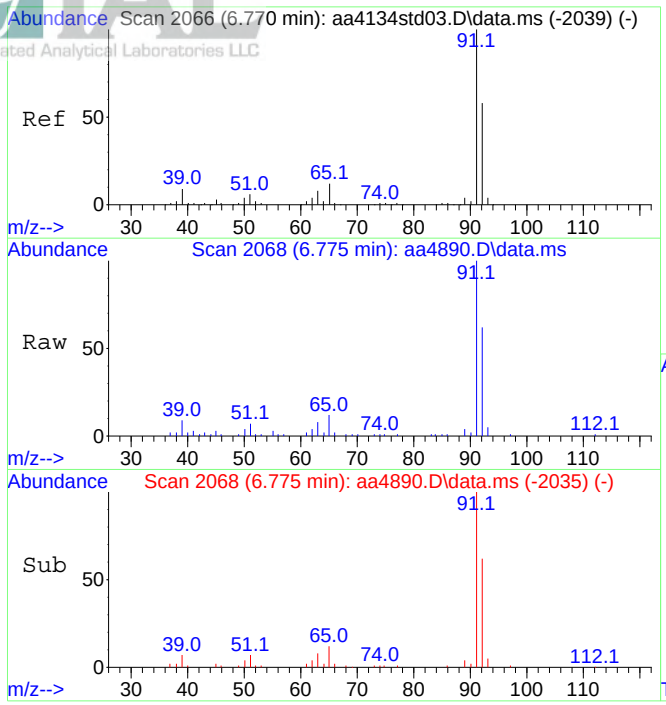




#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.457 min Scan# 1658
Delta R.T. 0.005 min
Lab File: aa4890.D
Acq: 8 Dec 2023 4:15 pm

Tgt Ion:114 Resp: 2159308

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 21.9 | 17.0 | 25.6 |

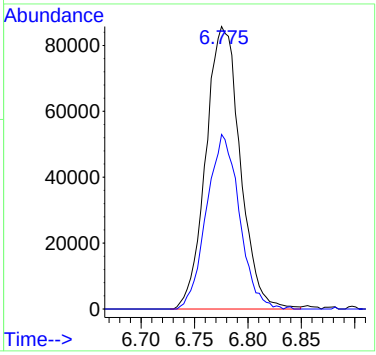


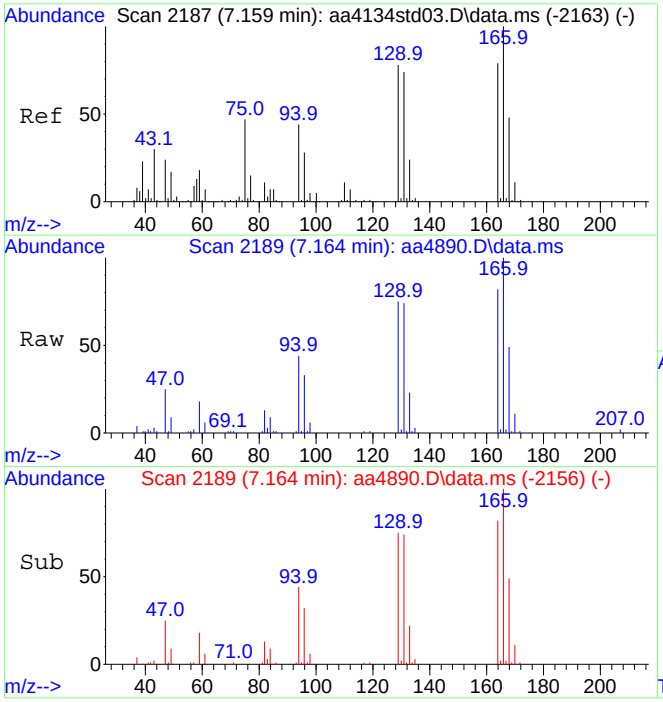



#47
Toluene
Concen: 0.63 ppbV
RT: 6.775 min Scan# 2068
Delta R.T. 0.005 min
Lab File: aa4890.D
Acq: 8 Dec 2023 4:15 pm

Tgt Ion: 91 Resp: 191623

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 59.0 | 47.3 | 70.9 |

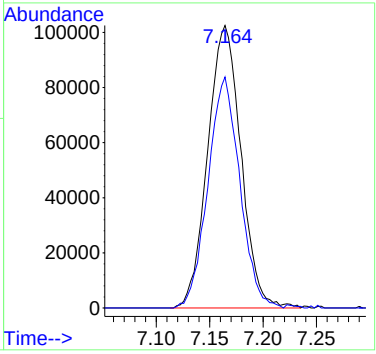


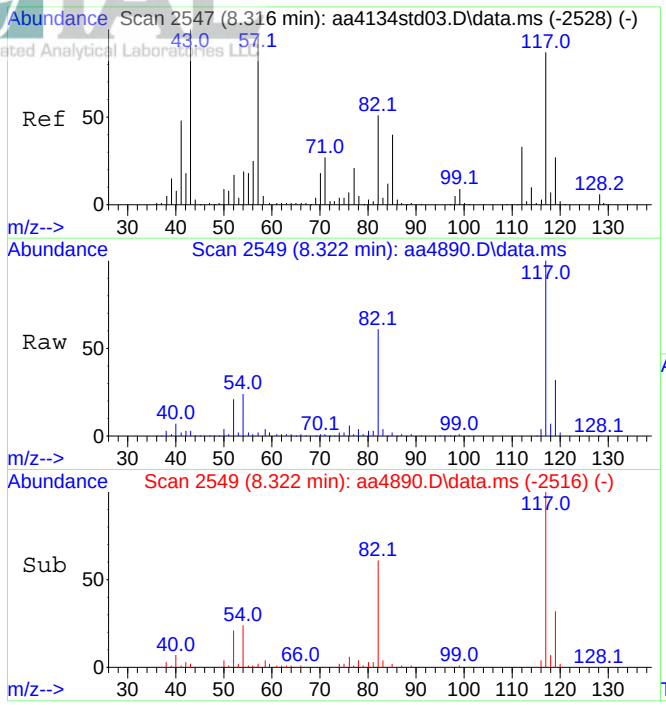




#49
Tetrachloroethene
Concen: 1.70 ppbV
RT: 7.164 min Scan# 2189
Delta R.T. 0.005 min
Lab File: aa4890.D
Acq: 8 Dec 2023 4:15 pm

Tgt Ion:166 Resp: 222151

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 78.1 | 62.3 | 93.5 |

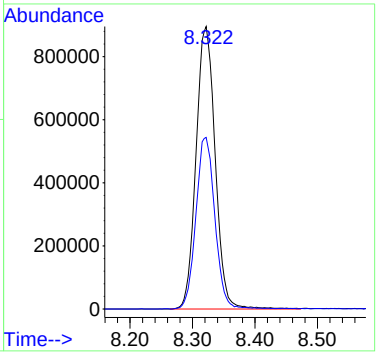


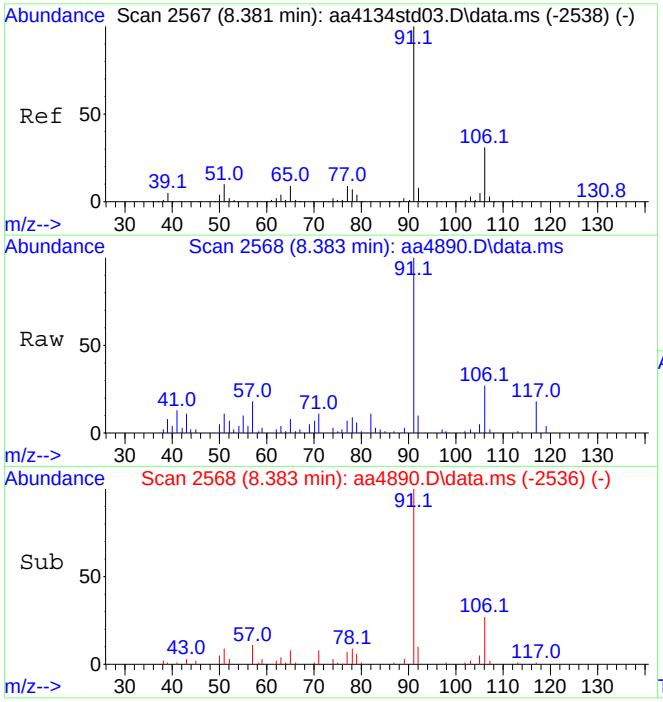



#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.322 min Scan# 2549
Delta R.T. 0.005 min
Lab File: aa4890.D
Acq: 8 Dec 2023 4:15 pm

Tgt Ion:117 Resp: 1909354

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 60.3 | 47.0 | 70.4 |

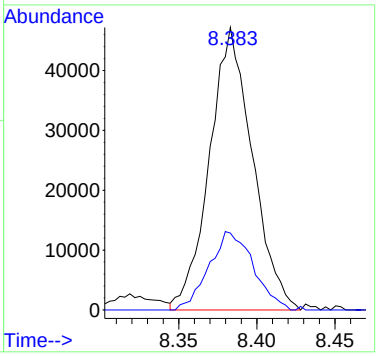


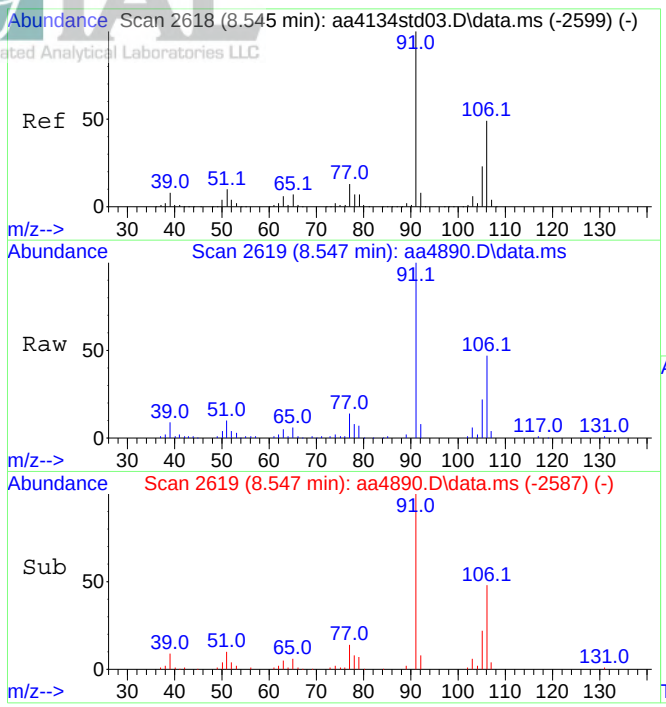




#58
Ethylbenzene
Concen: 0.26 ppbV
RT: 8.383 min Scan# 2568
Delta R.T. 0.002 min
Lab File: aa4890.D
Acq: 8 Dec 2023 4:15 pm

Tgt Ion: 91 Resp: 90057

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 28.6 | 24.6 | 36.8 |

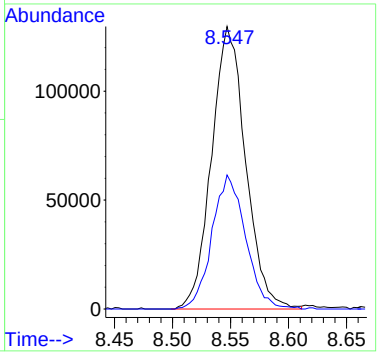


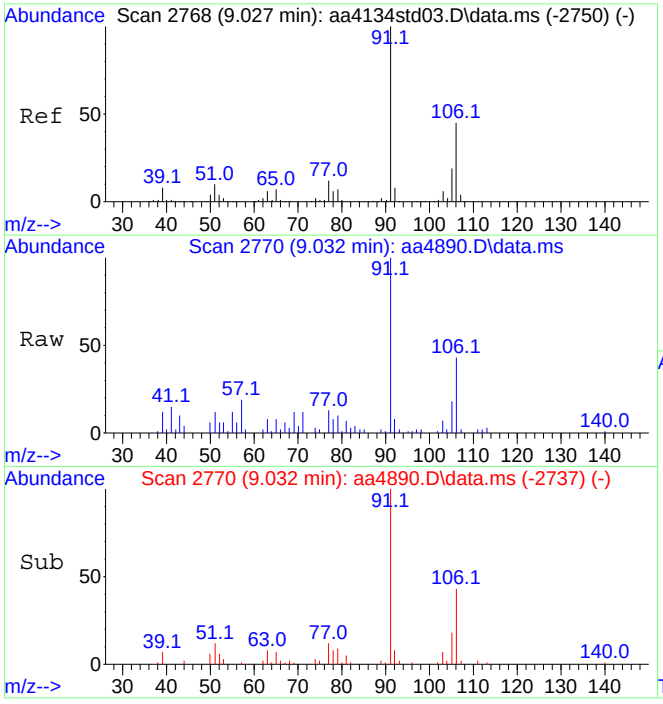



#59
Xylenes (m&p)
Concen: 1.02 ppbV
RT: 8.547 min Scan# 2619
Delta R.T. 0.002 min
Lab File: aa4890.D
Acq: 8 Dec 2023 4:15 pm

Tgt Ion: 91 Resp: 265039

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 46.7 | 39.0 | 58.4 |

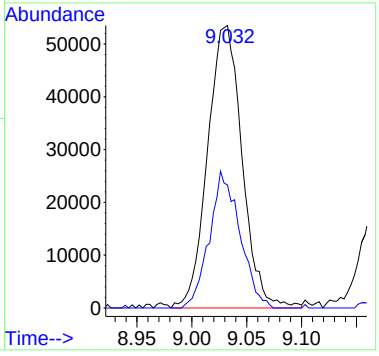


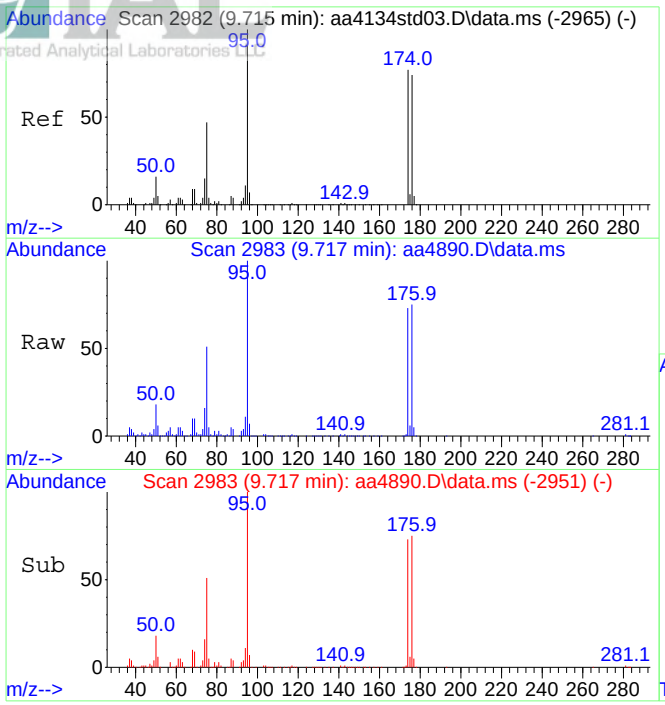




#60
Xylene (o)
Concen: 0.41 ppbV
RT: 9.032 min Scan# 2770
Delta R.T. 0.005 min
Lab File: aa4890.D
Acq: 8 Dec 2023 4:15 pm

Tgt Ion: 91 Resp: 117086

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 42.7 | 36.8 | 55.2 |

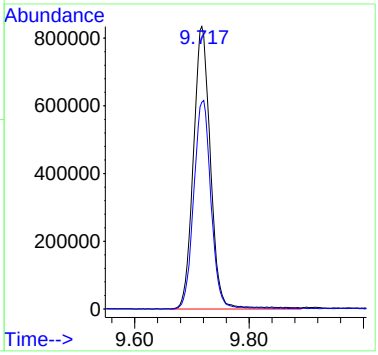


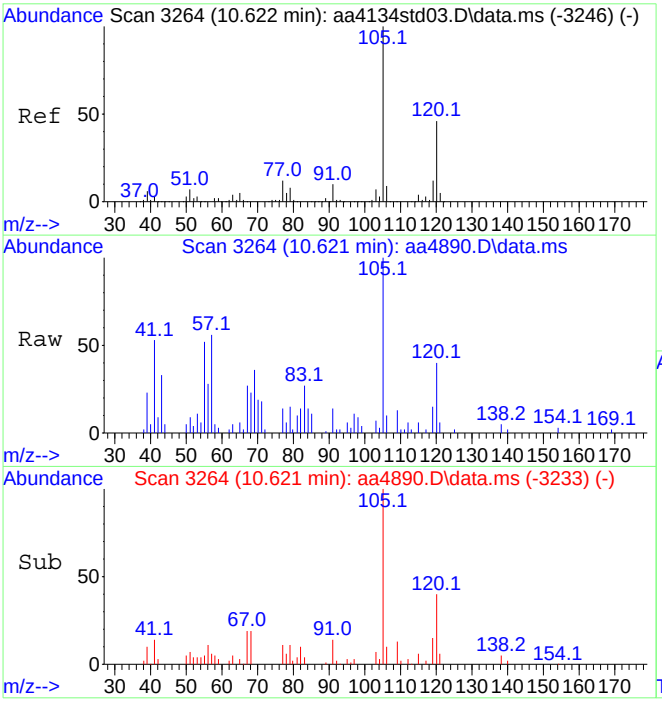



#64
Bromofluorobenzene (tune std)
Concen: 10.43 ppbV
RT: 9.717 min Scan# 2983
Delta R.T. 0.002 min
Lab File: aa4890.D
Acq: 8 Dec 2023 4:15 pm

Tgt Ion: 95 Resp: 1735350

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 74.8 | 61.1 | 91.7 |

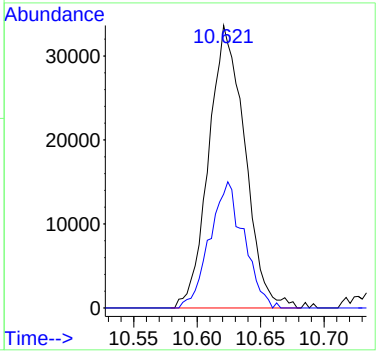



#70
1,2,4-Trimethylbenzene
Concen: 0.20 ppbV
RT: 10.621 min Scan# 3264
Delta R.T. -0.001 min
Lab File: aa4890.D
Acq: 8 Dec 2023 4:15 pm

Tgt Ion:105 Resp: 66452

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 42.3 | 36.3 | 54.5 |



Volatile Organic Compounds by EPA Method TO-15
Summary of Results

| | | | |
|---|---|---|---|
| Lab ID: | E23-05047-06 | Instrument ID: | AA |
| Client ID: | SV8 | GC/MS Column: | RTX-1, 0.32 mmID |
| Date Sampled: | 11/16/2023 08:30 | Injection Volmue: | 500ml, 100ml |
| Date Received: | 11/16/2023 | Matrix: | Air-Other |
| Date Analyzed: | 12/11/2023 17:43, 12/11/2023 16:52 | % Moisture: | NA |
| Data File: | AA4915, AA4914 | Dilution Factor: | 1, 5 |
| Summa ID: | 5091 | Analyst: | J. Walukiewicz |

| | | | Concentration Reported | | Reporting Limits | |
|---|---|---|---|---|---|---|
| **Compound** | **CAS #** | **Q** | **ppbv** | **ug/m3** | **ppbv** | **ug/m3** |
| Acetone | 67-64-1 | D | 99 | 230 | 1.0 | 2.4 |
| Benzene | 71-43-2 | | 1.9 | 6.0 | 0.20 | 0.64 |
| Bromodichloromethane | 75-27-4 | | ND | ND | 0.20 | 1.3 |
| Bromoform | 75-25-2 | | ND | ND | 0.20 | 2.1 |
| Bromomethane | 74-83-9 | | ND | ND | 0.20 | 0.78 |
| 1,3-Butadiene | 106-99-0 | | ND | ND | 0.20 | 0.44 |
| Chlorobenzene | 108-90-7 | | ND | ND | 0.20 | 0.92 |
| Chloroethane | 75-00-3 | | ND | ND | 0.20 | 0.53 |
| Chloroform | 67-66-3 | | 15 | 72 | 0.20 | 0.98 |
| Chloromethane | 74-87-3 | | ND | ND | 0.20 | 0.41 |
| Carbon disulfide | 75-15-0 | | 5.8 | 18 | 0.20 | 0.62 |
| Carbon tetrachloride | 56-23-5 | | ND | ND | 0.040 | 0.25 |
| Cyclohexane | 110-82-7 | | 1.5 | 5.2 | 0.20 | 0.69 |
| Dibromochloromethane | 124-48-1 | | ND | ND | 0.20 | 1.7 |
| 1,2-Dibromoethane | 106-93-4 | | ND | ND | 0.20 | 1.5 |
| 1,2-Dichlorobenzene | 95-50-1 | | ND | ND | 0.20 | 1.2 |
| 1,3-Dichlorobenzene | 541-73-1 | | ND | ND | 0.20 | 1.2 |
| 1,4-Dichlorobenzene | 106-46-7 | | ND | ND | 0.20 | 1.2 |
| Dichlorodifluoromethane | 75-71-8 | | ND | ND | 0.20 | 0.99 |
| 1,1-Dichloroethane | 75-34-3 | | ND | ND | 0.20 | 0.81 |
| 1,2-Dichloroethane | 107-06-2 | | ND | ND | 0.20 | 0.81 |
| 1,1-Dichloroethene | 75-35-4 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloroethene (cis) | 156-59-2 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloroethene (trans) | 156-60-5 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloropropane | 78-87-5 | | ND | ND | 0.20 | 0.92 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | | ND | ND | 0.20 | 0.91 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | | ND | ND | 0.20 | 0.91 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | | ND | ND | 0.20 | 1.4 |
| 1,4-Dioxane | 123-91-1 | | ND | ND | 0.20 | 0.72 |
| Ethylbenzene | 100-41-4 | | 1.4 | 6.0 | 0.20 | 0.87 |
| n-Heptane | 142-82-5 | | 0.59 | 2.4 | 0.20 | 0.82 |
| 1,3-Hexachlorobutadiene | 87-68-3 | | ND | ND | 0.20 | 2.1 |
| n-Hexane | 110-54-3 | | 0.79 | 2.8 | 0.20 | 0.70 |
| Methylene chloride | 75-09-2 | | 4.9 | 17 | 0.20 | 0.69 |
| Methyl ethyl ketone | 78-93-3 | | 9.7 | 29 | 0.20 | 0.59 |
| Methyl isobutyl ketone | 108-10-1 | | ND | ND | 0.20 | 0.82 |
| Methyl tert-butyl ether | 1634-04-4 | | ND | ND | 0.20 | 0.72 |
| Styrene | 100-42-5 | | 0.27 | 1.1 | 0.20 | 0.85 |
| Tert-butyl alcohol | 75-65-0 | | 1.7 | 5.2 | 0.20 | 0.61 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | ND | ND | 0.20 | 1.4 |
| Tetrachloroethene | 127-18-4 | | 5.8 | 39 | 0.20 | 1.4 |
| Toluene | 108-88-3 | | 4.5 | 17 | 0.20 | 0.75 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | ND | ND | 0.20 | 1.5 |
| 1,1,1-Trichloroethane | 71-55-6 | | ND | ND | 0.20 | 1.1 |
| 1,1,2-Trichloroethane | 79-00-5 | | ND | ND | 0.20 | 1.1 |

Qualifiers:
D = Dilution required

Volatile Organic Compounds by EPA Method TO-15
Summary of Results

| | | | |
|---|---|---|---|
| Lab ID: | E23-05047-06 | Instrument ID: | AA |
| Client ID: | SV8 | GC/MS Column: | RTX-1, 0.32 mmID |
| Date Sampled: | 11/16/2023 08:30 | Injection Volmue: | 500ml, 100ml |
| Date Received: | 11/16/2023 | Matrix: | Air-Other |
| Date Analyzed: | 12/11/2023 17:43, 12/11/2023 16:52 | % Moisture: | NA |
| Data File: | AA4915, AA4914 | Dilution Factor: | 1, 5 |
| Summa ID: | 5091 | Analyst: | J. Walukiewicz |

| | | | Concentration Reported | | Reporting Limits | |
|---|---|---|---|---|---|---|
| **Compound** | **CAS #** | **Q** | **ppbv** | **ug/m3** | **ppbv** | **ug/m3** |
| Trichloroethene | 79-01-6 | | ND | ND | 0.046 | 0.25 |
| Trichlorofluoromethane | 75-69-4 | | 0.32 | 1.8 | 0.20 | 1.1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | | ND | ND | 0.20 | 1.5 |
| 1,2,4-Trimethylbenzene | 95-63-6 | | 0.71 | 3.5 | 0.20 | 0.98 |
| 1,3,5-Trimethylbenzene | 108-67-8 | | 0.35 | 1.7 | 0.20 | 0.98 |
| 2,2,4-Trimethylpentane | 540-84-1 | | ND | ND | 0.20 | 0.93 |
| Vinyl bromide | 593-60-2 | | ND | ND | 0.20 | 0.87 |
| Vinyl chloride | 75-01-4 | | ND | ND | 0.20 | 0.51 |
| Xylenes (m&p) | 179601-23-1 | | 4.6 | 20 | 0.20 | 0.87 |
| Xylenes (o) | 95-47-6 | | 2.0 | 8.9 | 0.20 | 0.87 |

Qualifiers:
D = Dilution required

Quantitation Report (QT Reviewed)

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4915.D
Acq On : 11 Dec 2023 5:43 pm
Operator : jjw
Sample : E23-05047-06
Misc : 5091, 500cc
ALS Vial : 18 Sample Multiplier: 1

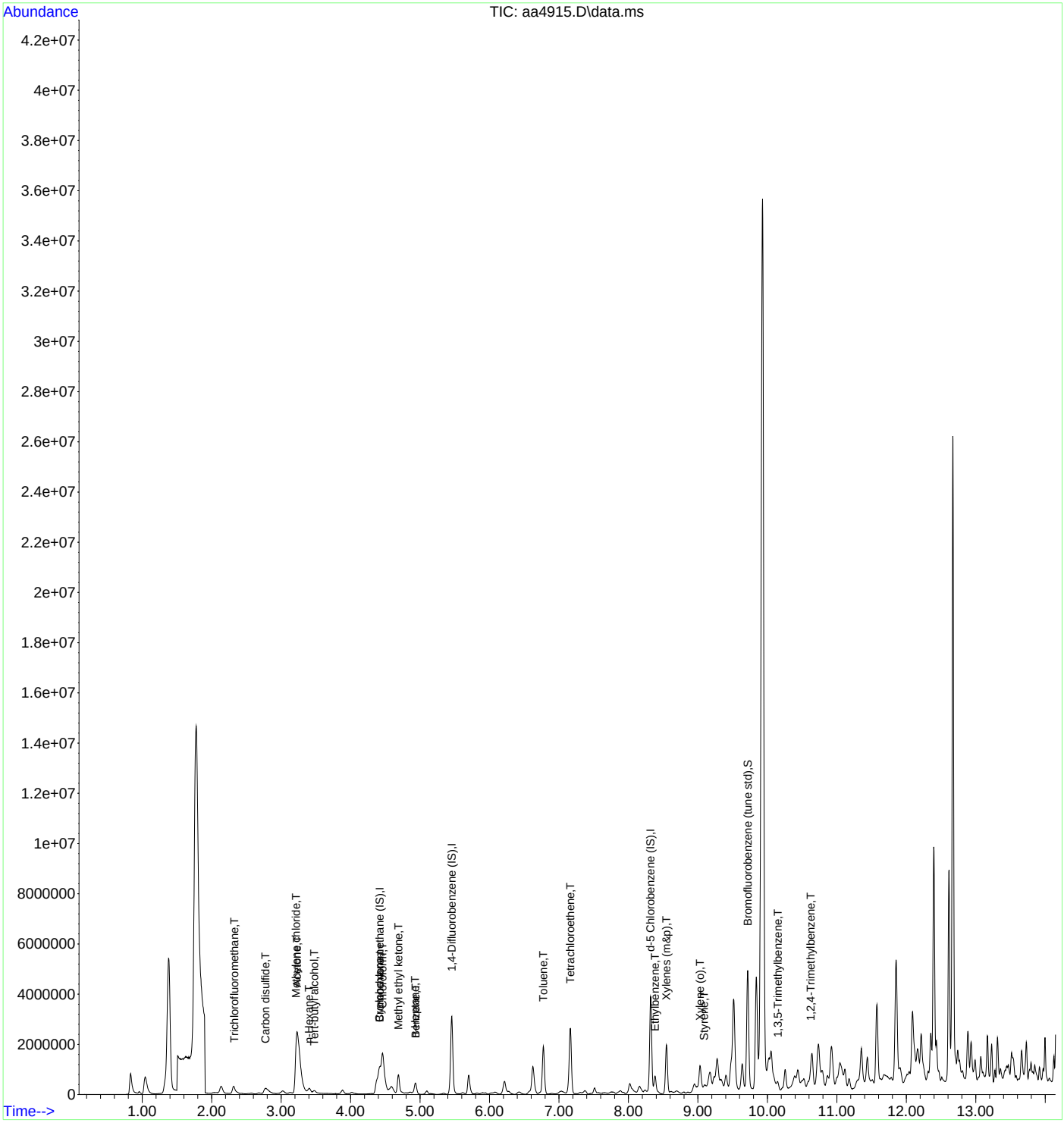
Quant Time: Dec 12 10:46:56 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

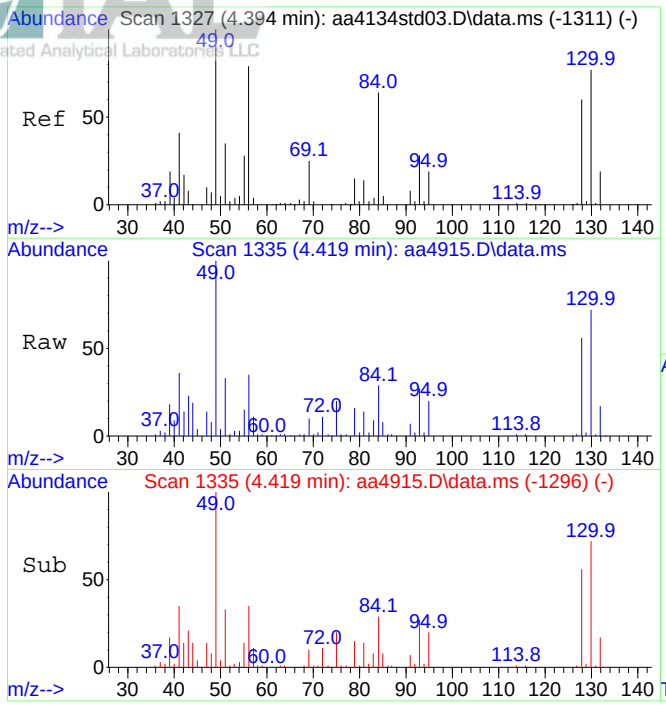
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.419 | 130 | 461164 | 10.00 | ppbV | | 0.025 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 2637042 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 2277752 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 2042254 | 10.29 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 12) Trichlorofluoromethane | 2.329 | 101 | 41506 | 0.32 | ppbV | | 99 |
| 15) Carbon disulfide | 2.776 | 76 | 814375 | 5.78 | ppbV | | 95 |
| 20) Methylene chloride | 3.216 | 49 | 277071 | 4.89 | ppbV | | 93 |
| 21) Acetone | 3.229 | 43 | 6852640 | 98.52 | ppbV | | 97 |
| 24) n-Hexane | 3.403 | 57 | 115089 | 0.79 | ppbV | | 98 |
| 26) Tert-butyl alcohol | 3.477 | 59 | 205448 | 1.71 | ppbV | | 100 |
| 29) Cyclohexane | 4.415 | 56 | 154376 | 1.52 | ppbV | # | 65 |
| 30) Chloroform | 4.460 | 83 | 1829985 | 14.83 | ppbV | | 98 |
| 35) Methyl ethyl ketone | 4.689 | 43 | 1088491 | 9.66 | ppbV | | 95 |
| 36) n-Heptane | 4.930 | 43 | 74759 | 0.59 | ppbV | # | 80 |
| 37) Benzene | 4.936 | 78 | 343896 | 1.88 | ppbV | | 97 |
| 47) Toluene | 6.776 | 91 | 1681160 | 4.54 | ppbV | | 100 |
| 49) Tetrachloroethene | 7.165 | 166 | 920941 | 5.76 | ppbV | | 100 |
| 58) Ethylbenzene | 8.383 | 91 | 575940 | 1.37 | ppbV | | 98 |
| 59) Xylenes (m&p) | 8.547 | 91 | 1431945 | 4.60 | ppbV | | 97 |
| 60) Xylene (o) | 9.029 | 91 | 694972 | 2.05 | ppbV | | 98 |
| 61) Styrene | 9.091 | 104 | 62118 | 0.27 | ppbV | | 98 |
| 69) 1,3,5-Trimethylbenzene | 10.152 | 105 | 138092 | 0.35 | ppbV | | 97 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 279979 | 0.71 | ppbV | | 97 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4915.D
Acq On : 11 Dec 2023 5:43 pm
Operator : jjw
Sample : E23-05047-06
Misc : 5091, 500cc
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Dec 12 10:46:56 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

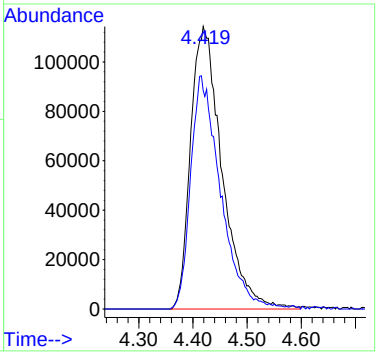


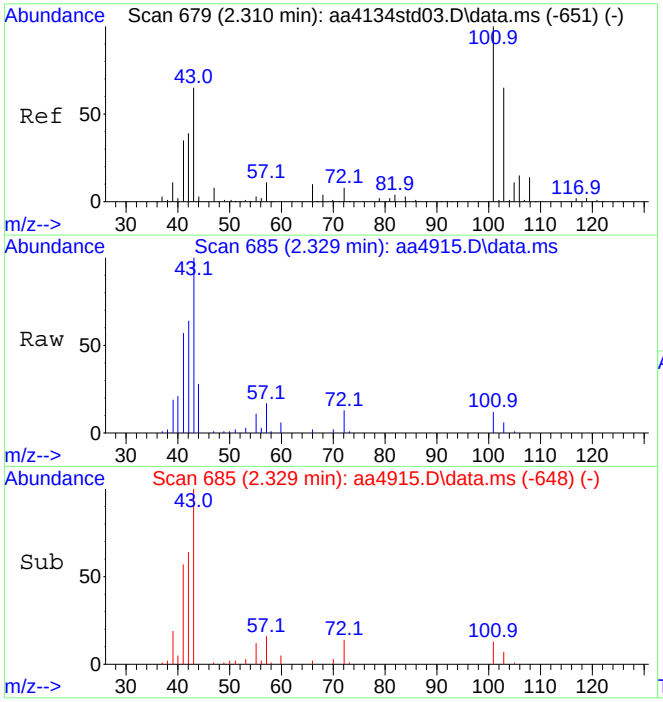



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.419 min Scan# 1335
Delta R.T. 0.025 min
Lab File: aa4915.D
Acq: 11 Dec 2023 5:43 pm

Tgt Ion:130 Resp: 461164

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 78.4 | 62.2 | 93.4 |

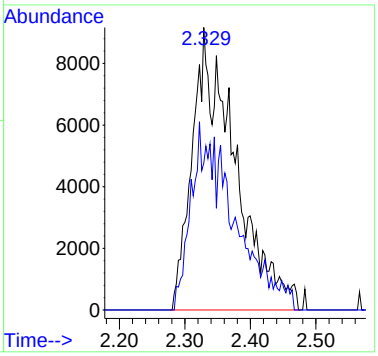


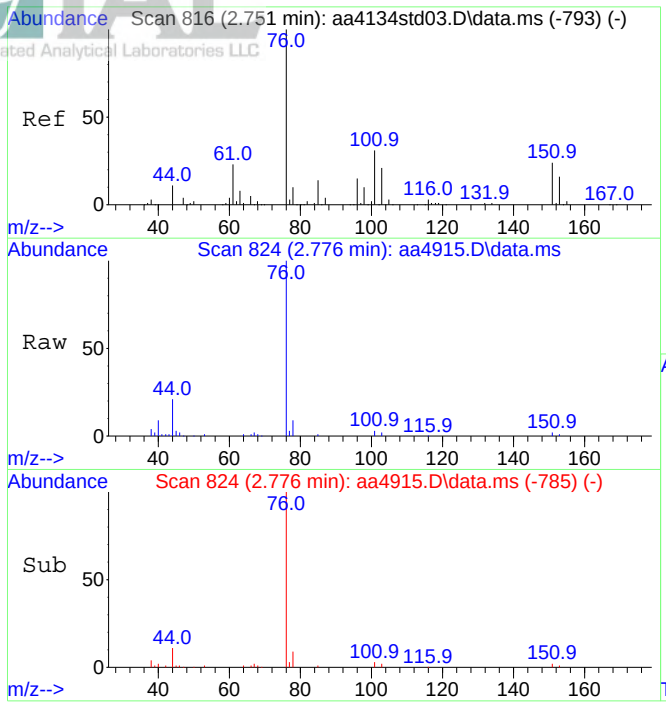




#12
Trichlorofluoromethane
Concen: 0.32 ppbV
RT: 2.329 min Scan# 685
Delta R.T. 0.018 min
Lab File: aa4915.D
Acq: 11 Dec 2023 5:43 pm

Tgt Ion:101 Resp: 41506

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 66.2 | 52.5 | 78.7 |

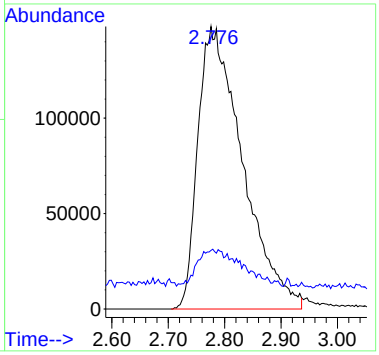


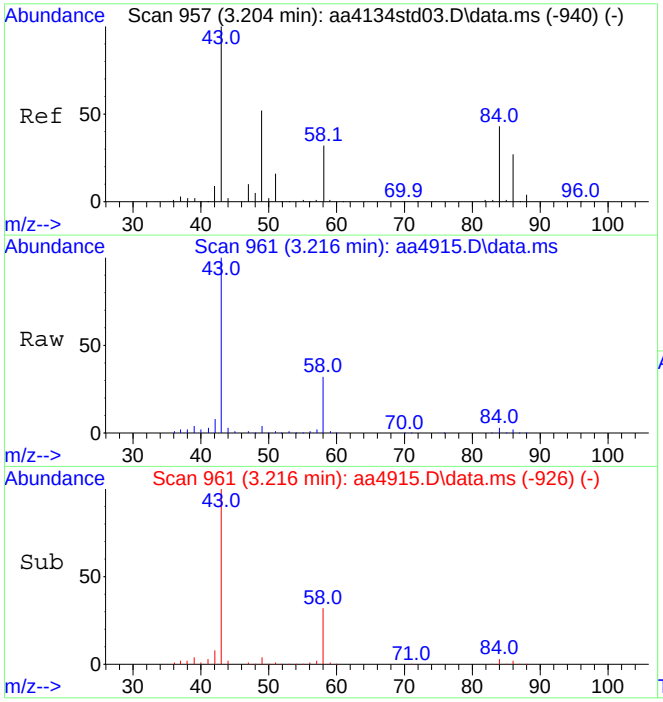



#15
Carbon disulfide
Concen: 5.78 ppbV
RT: 2.776 min Scan# 824
Delta R.T. 0.025 min
Lab File: aa4915.D
Acq: 11 Dec 2023 5:43 pm

Tgt Ion: 76 Resp: 814375

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 13.0 | 9.0 | 13.4 |

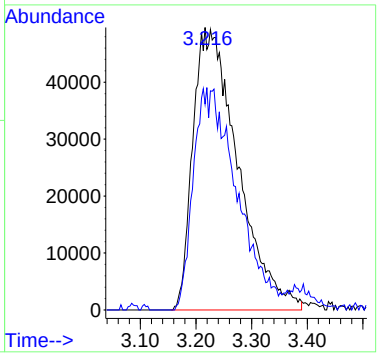


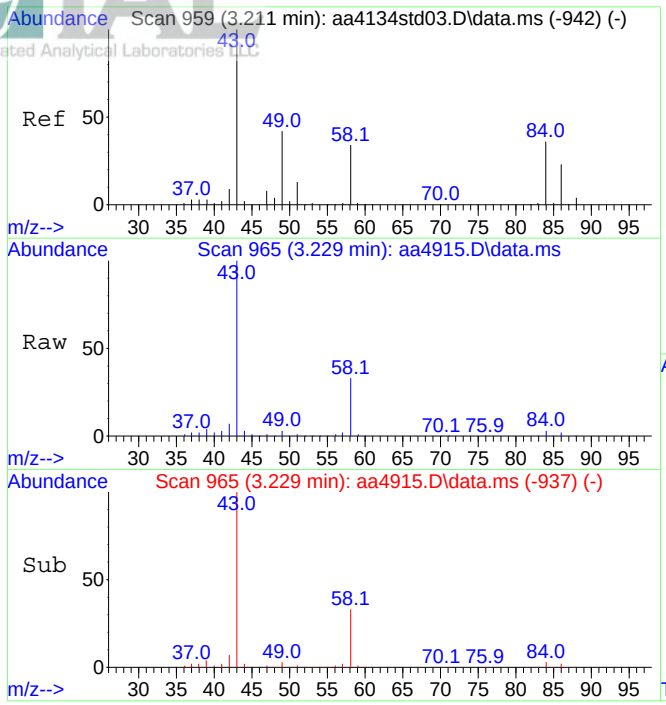




#20
Methylene chloride
Concen: 4.89 ppbV
RT: 3.216 min Scan# 961
Delta R.T. 0.012 min
Lab File: aa4915.D
Acq: 11 Dec 2023 5:43 pm

Tgt Ion: 49 Resp: 277071

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 78.8 | 64.8 | 104.8 |

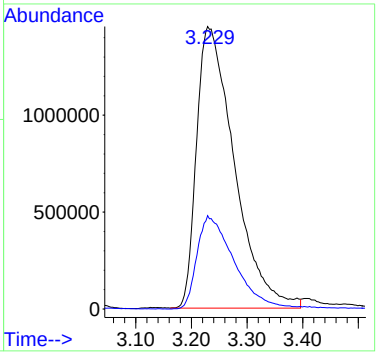


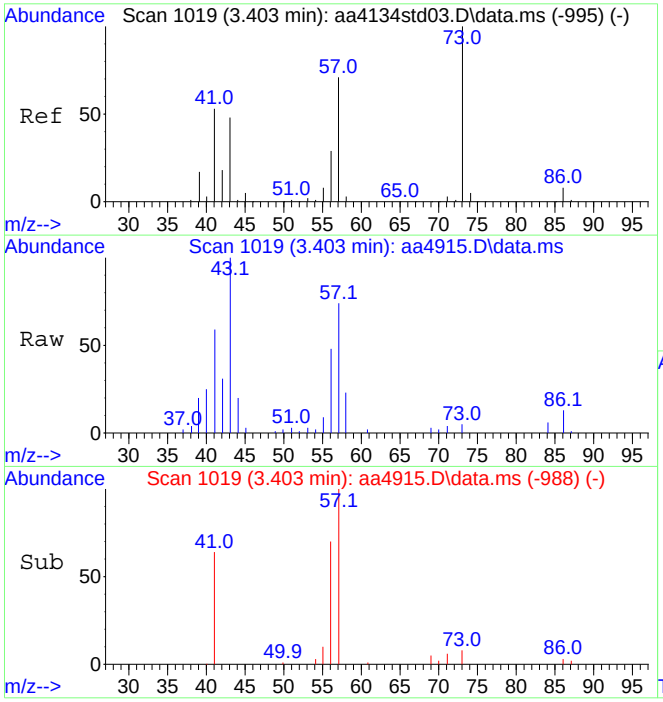



#21
Acetone
Concen: 98.52 ppbV
RT: 3.229 min Scan# 965
Delta R.T. 0.018 min
Lab File: aa4915.D
Acq: 11 Dec 2023 5:43 pm

Tgt Ion: 43 Resp: 6852640

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 32.4 | 27.1 | 40.7 |

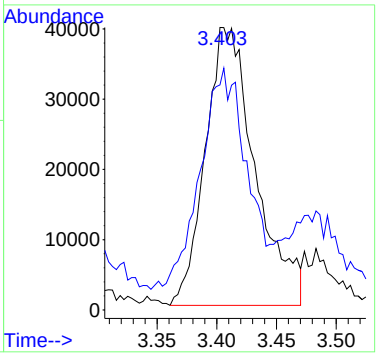


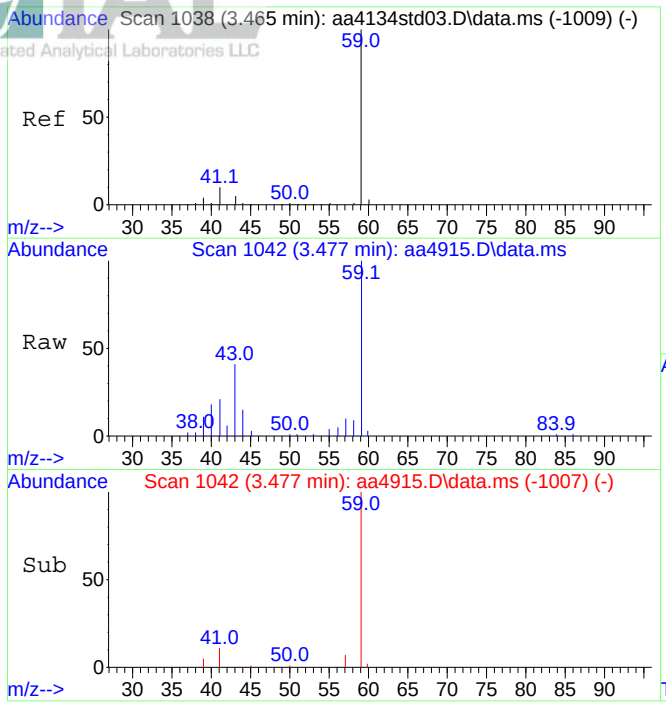




#24
n-Hexane
Concen: 0.79 ppbV
RT: 3.403 min Scan# 1019
Delta R.T. -0.000 min
Lab File: aa4915.D
Acq: 11 Dec 2023 5:43 pm

Tgt Ion: 57 Resp: 115089

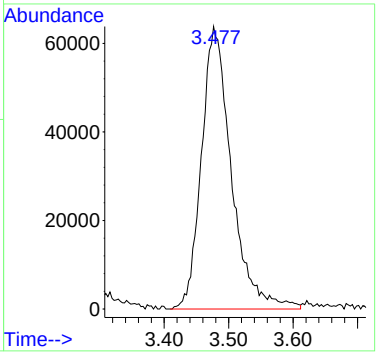
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 41 | 81.2 | 66.4 | 99.6 |

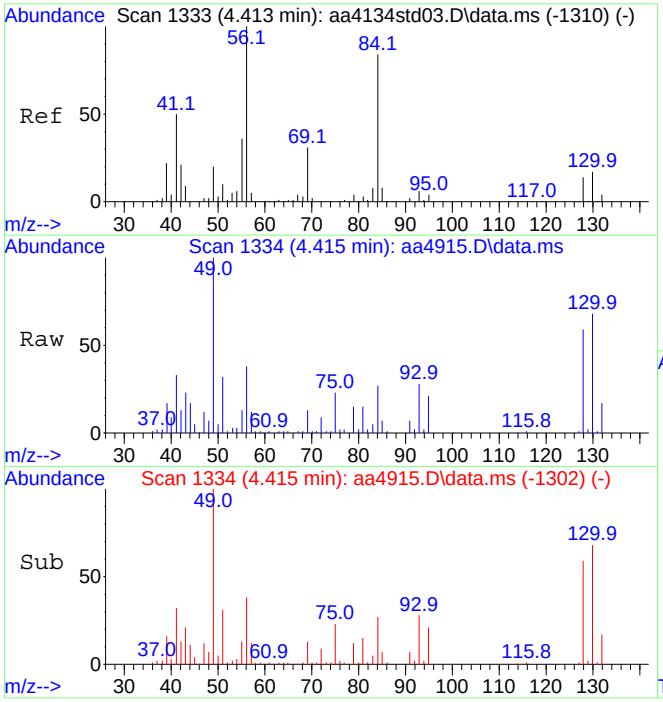





#26
Tert-butyl alcohol
Concen: 1.71 ppbV
RT: 3.477 min Scan# 1042
Delta R.T. 0.012 min
Lab File: aa4915.D
Acq: 11 Dec 2023 5:43 pm

Tgt Ion: 59 Resp: 205448

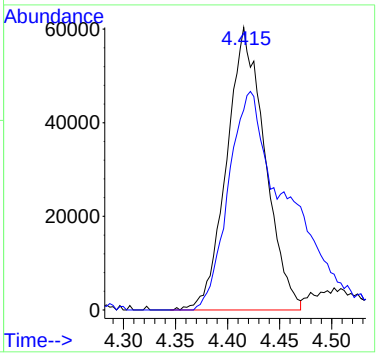


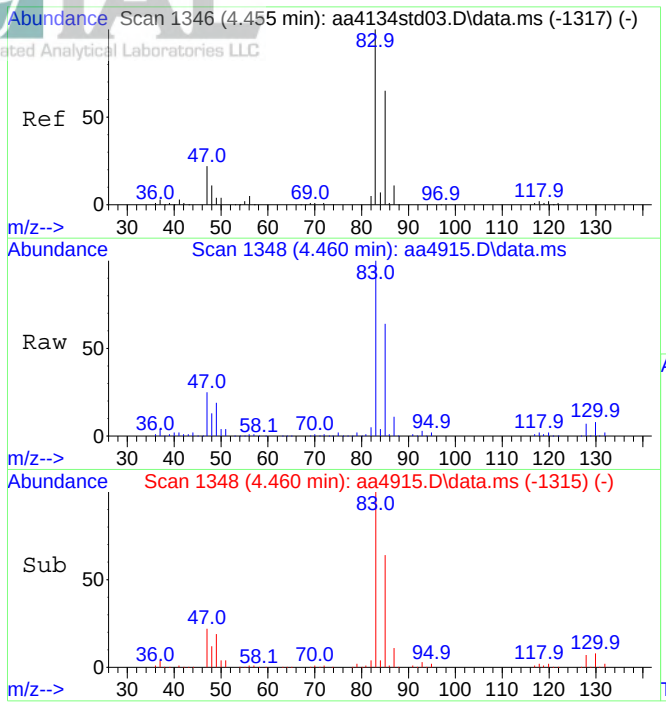




#29
Cyclohexane
Concen: 1.52 ppbV
RT: 4.415 min Scan# 1334
Delta R.T. 0.002 min
Lab File: aa4915.D
Acq: 11 Dec 2023 5:43 pm

Tgt Ion: 56 Resp: 154376

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 122.0 | 71.2 | 106.8# |

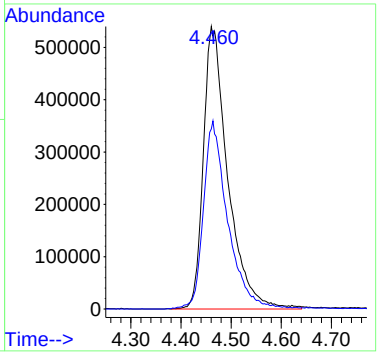


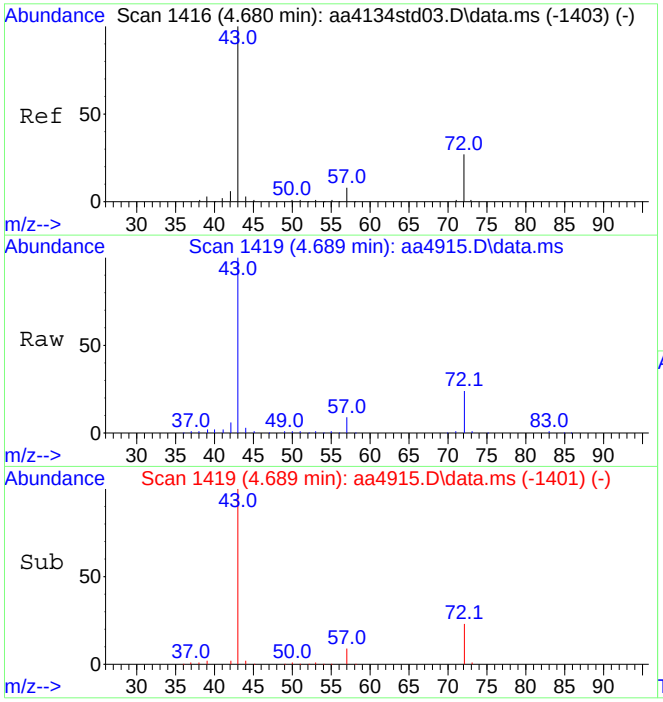



#30
Chloroform
Concen: 14.83 ppbV
RT: 4.460 min Scan# 1348
Delta R.T. 0.006 min
Lab File: aa4915.D
Acq: 11 Dec 2023 5:43 pm

Tgt Ion: 83 Resp: 1829985

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 66.0 | 53.9 | 80.9 |

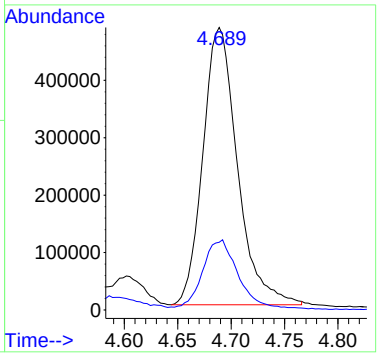


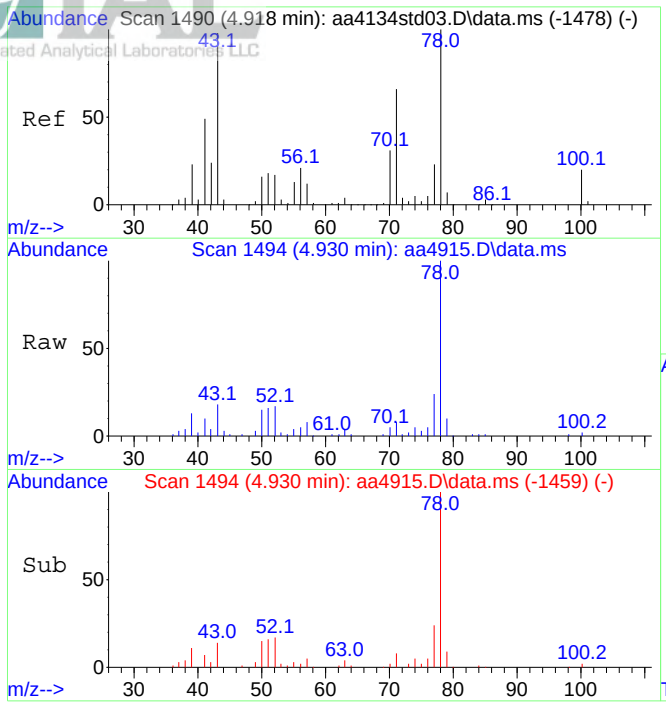




#35
Methyl ethyl ketone
Concen: 9.66 ppbV
RT: 4.689 min Scan# 1419
Delta R.T. 0.009 min
Lab File: aa4915.D
Acq: 11 Dec 2023 5:43 pm

Tgt Ion: 43 Resp: 1088491

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 24.5 | 21.6 | 32.4 |

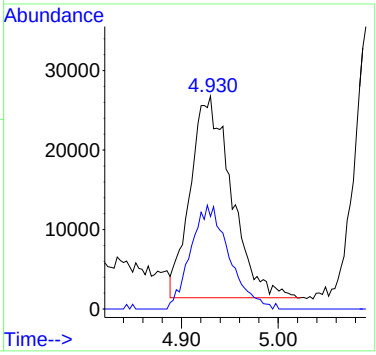


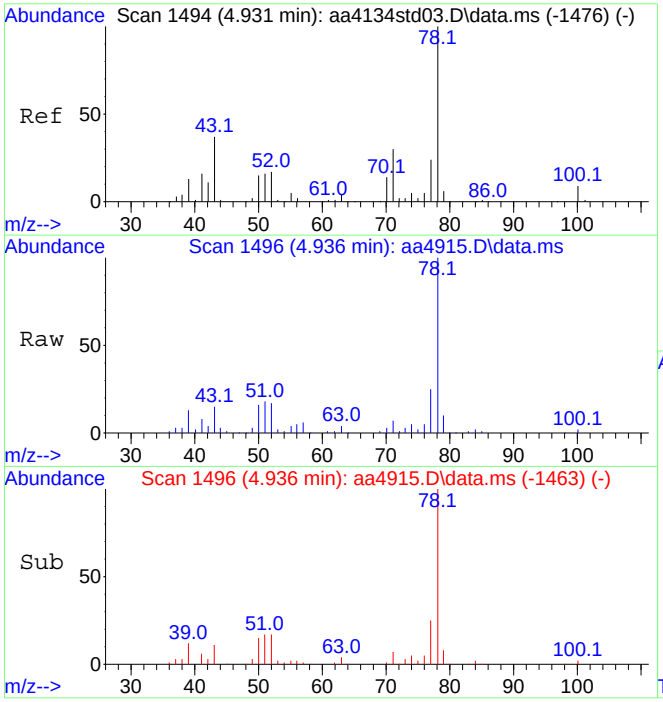



#36
n-Heptane
Concen: 0.59 ppbV
RT: 4.930 min Scan# 1494
Delta R.T. 0.012 min
Lab File: aa4915.D
Acq: 11 Dec 2023 5:43 pm

Tgt Ion: 43 Resp: 74759

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 71 | 47.9 | 50.5 | 75.7# |

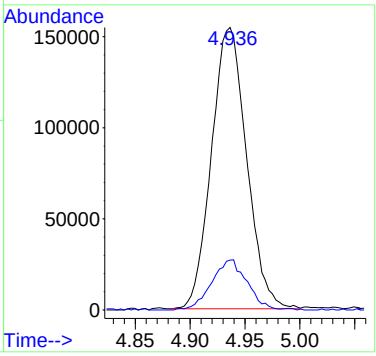


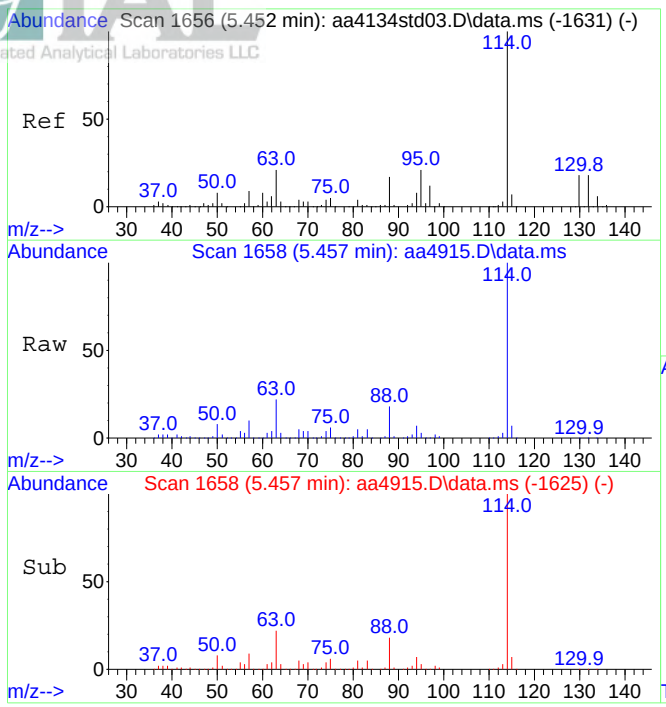




#37
Benzene
Concen: 1.88 ppbV
RT: 4.936 min Scan# 1496
Delta R.T. 0.006 min
Lab File: aa4915.D
Acq: 11 Dec 2023 5:43 pm

Tgt Ion: 78 Resp: 343896

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 17.8 | 13.4 | 20.0 |

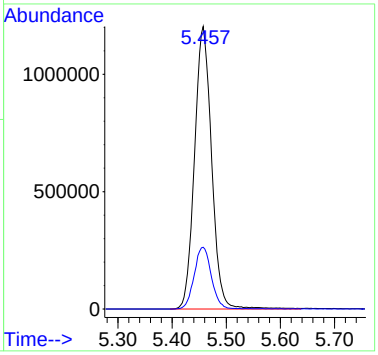


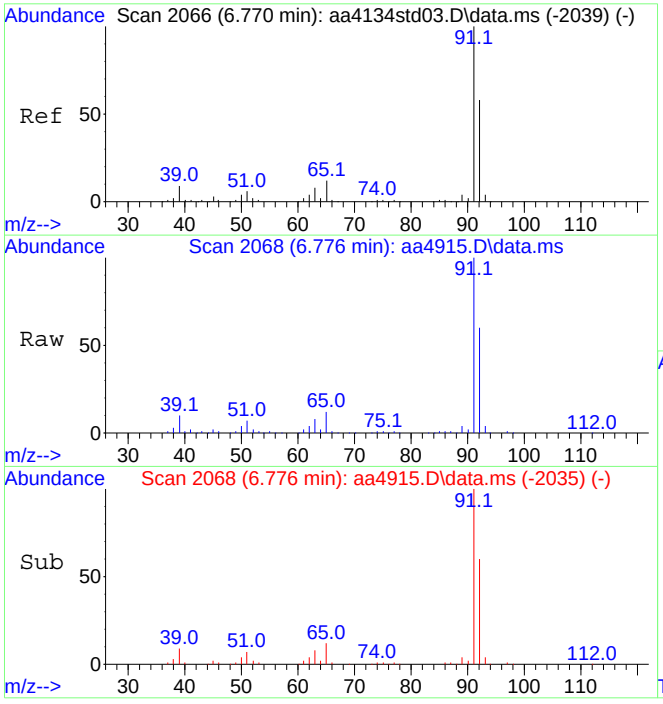



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.457 min Scan# 1658
Delta R.T. 0.005 min
Lab File: aa4915.D
Acq: 11 Dec 2023 5:43 pm

Tgt Ion:114 Resp: 2637042

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.0 | 17.0 | 25.6 |

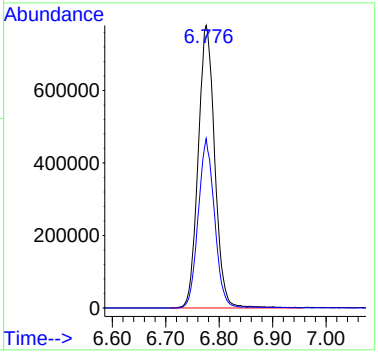


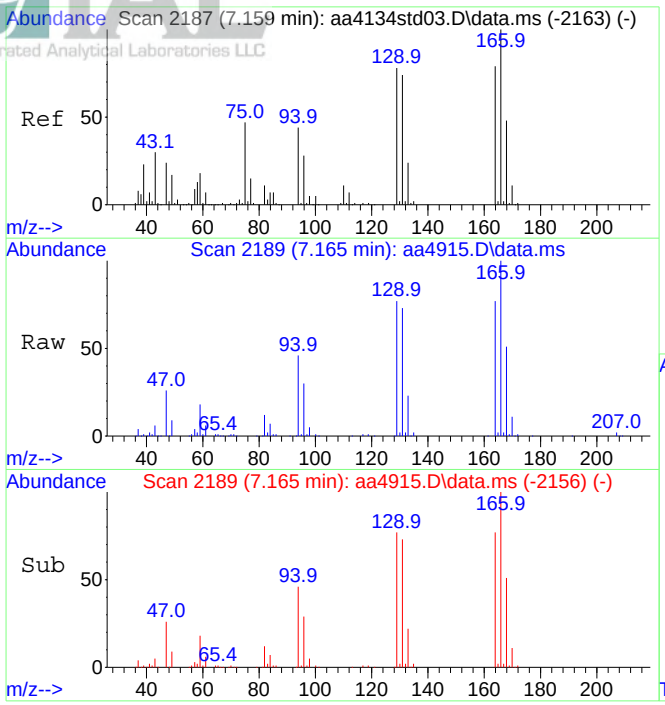




#47
Toluene
Concen: 4.54 ppbV
RT: 6.776 min Scan# 2068
Delta R.T. 0.006 min
Lab File: aa4915.D
Acq: 11 Dec 2023 5:43 pm

Tgt Ion: 91 Resp: 1681160

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 59.2 | 47.3 | 70.9 |

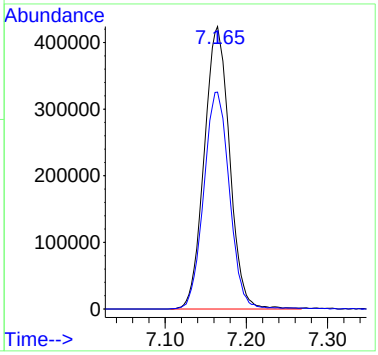


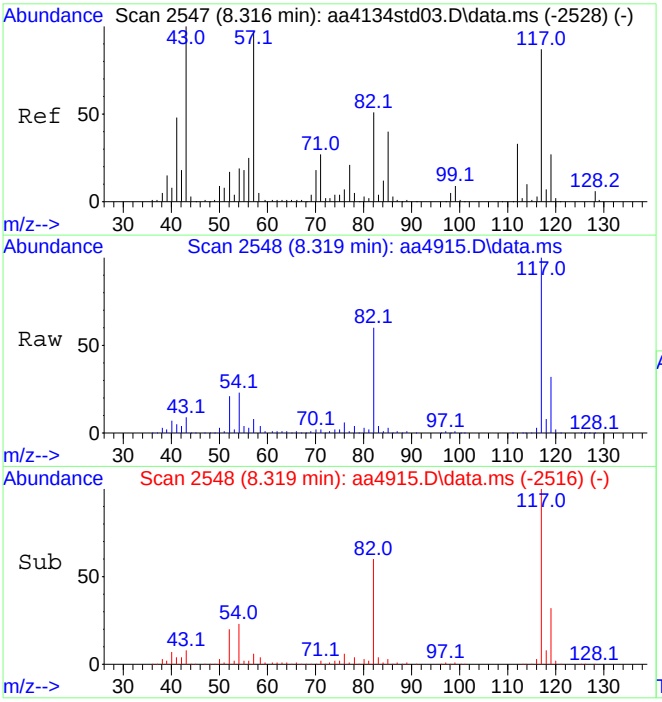



#49
Tetrachloroethene
Concen: 5.76 ppbV
RT: 7.165 min Scan# 2189
Delta R.T. 0.006 min
Lab File: aa4915.D
Acq: 11 Dec 2023 5:43 pm

Tgt Ion:166 Resp: 920941

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 77.8 | 62.3 | 93.5 |

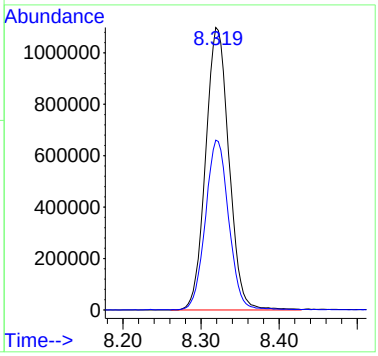


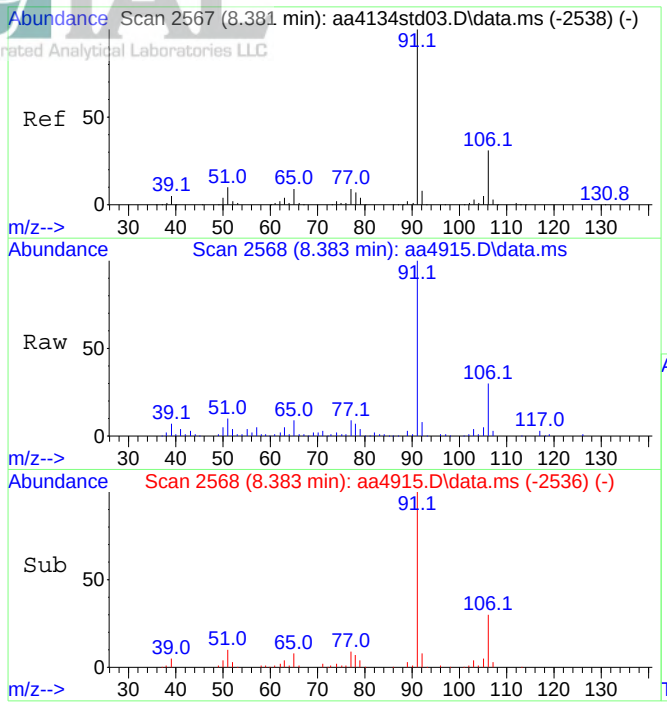




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.319 min Scan# 2548
Delta R.T. 0.002 min
Lab File: aa4915.D
Acq: 11 Dec 2023 5:43 pm

Tgt Ion:117 Resp: 2277752

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 59.9 | 47.0 | 70.4 |

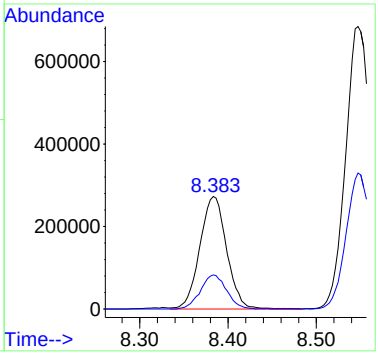


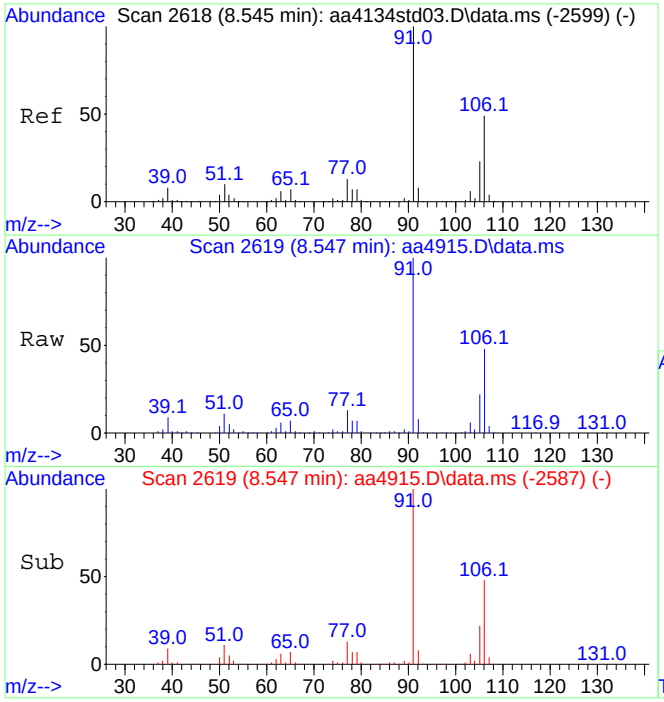



#58
Ethylbenzene
Concen: 1.37 ppbV
RT: 8.383 min Scan# 2568
Delta R.T. 0.002 min
Lab File: aa4915.D
Acq: 11 Dec 2023 5:43 pm

Tgt Ion: 91 Resp: 575940

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 29.5 | 24.6 | 36.8 |

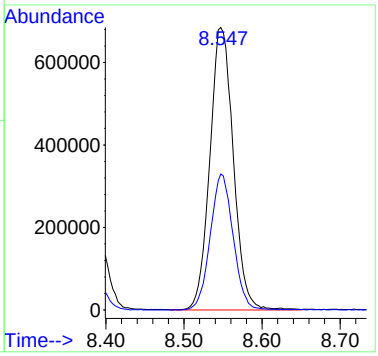


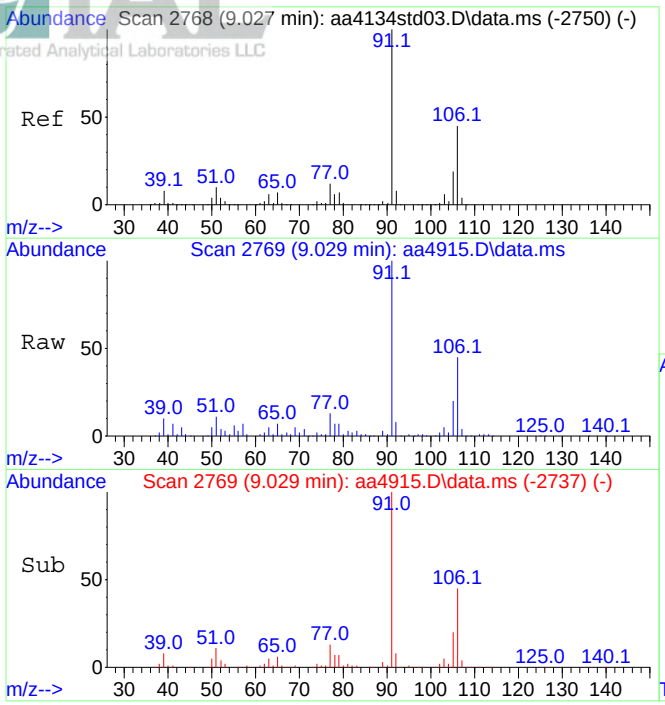




#59
Xylenes (m&p)
Concen: 4.60 ppbV
RT: 8.547 min Scan# 2619
Delta R.T. 0.002 min
Lab File: aa4915.D
Acq: 11 Dec 2023 5:43 pm

Tgt Ion: 91 Resp: 1431945

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 46.8 | 39.0 | 58.4 |

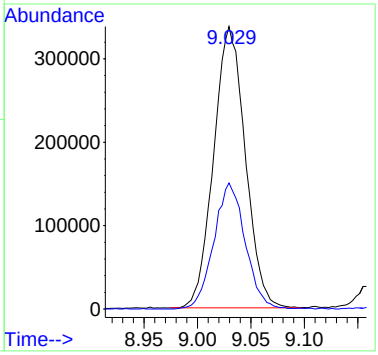


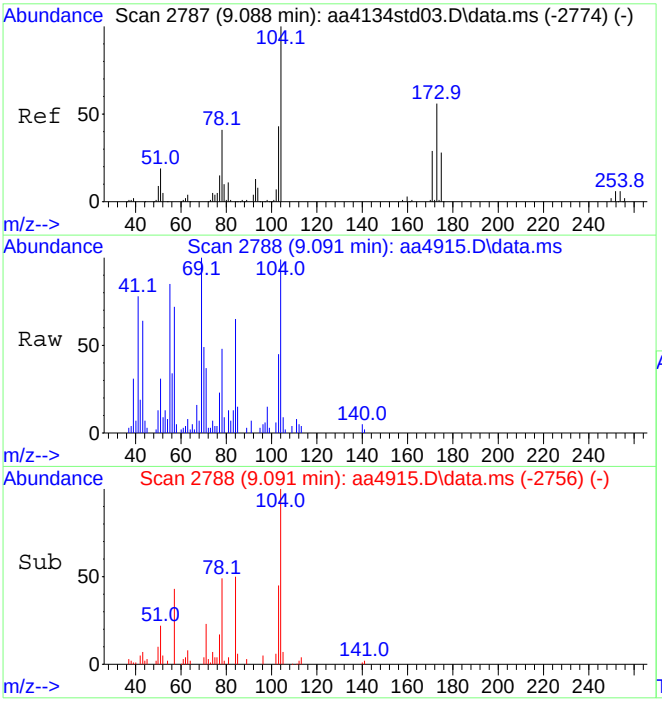



#60
Xylene (o)
Concen: 2.05 ppbV
RT: 9.029 min Scan# 2769
Delta R.T. 0.002 min
Lab File: aa4915.D
Acq: 11 Dec 2023 5:43 pm

Tgt Ion: 91 Resp: 694972

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 44.5 | 36.8 | 55.2 |

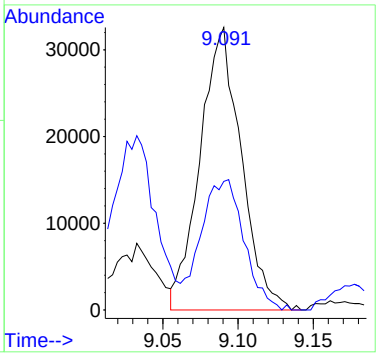


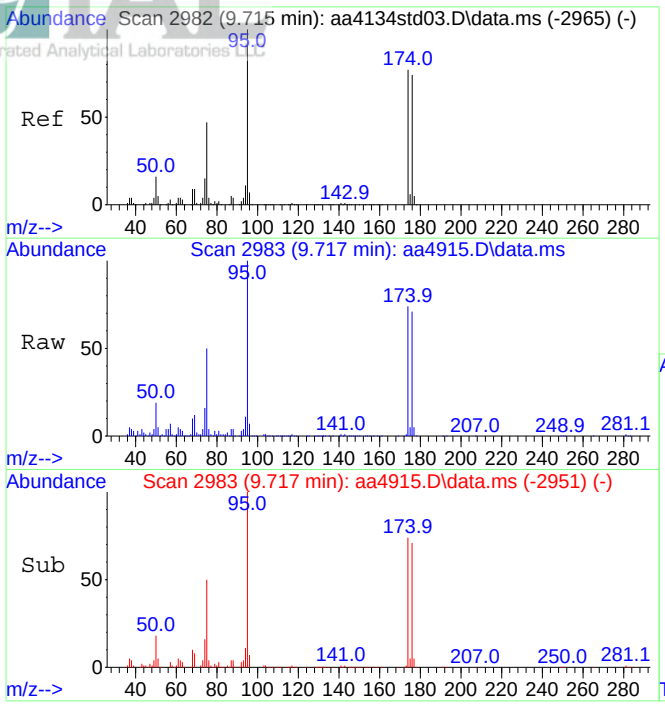




#61
Styrene
Concen: 0.27 ppbV
RT: 9.091 min Scan# 2788
Delta R.T. 0.002 min
Lab File: aa4915.D
Acq: 11 Dec 2023 5:43 pm

Tgt Ion:104 Resp: 62118

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 104 | 100 | | |
| 103 | 48.3 | 37.8 | 56.6 |

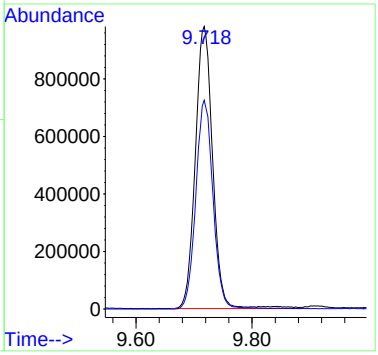


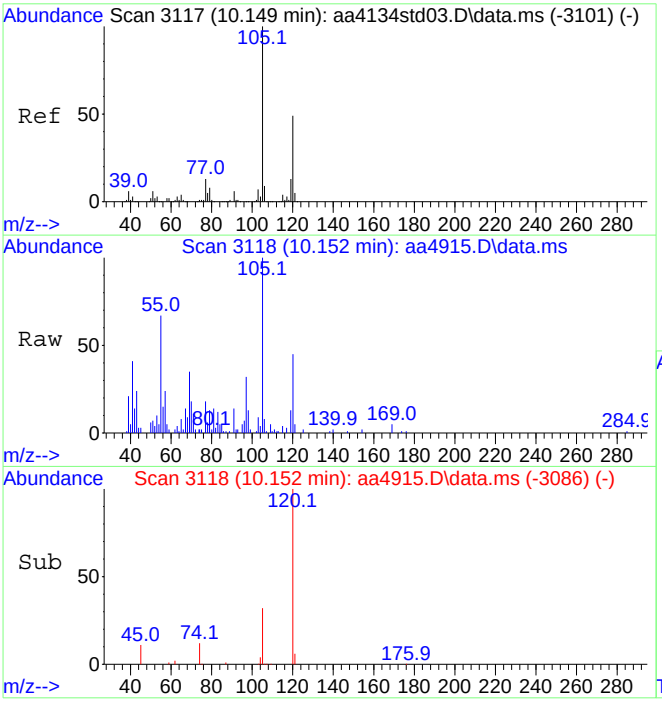



#64
Bromofluorobenzene (tune std)
Concen: 10.29 ppbV
RT: 9.717 min Scan# 2983
Delta R.T. 0.002 min
Lab File: aa4915.D
Acq: 11 Dec 2023 5:43 pm

Tgt Ion: 95 Resp: 2042254

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 73.7 | 61.1 | 91.7 |

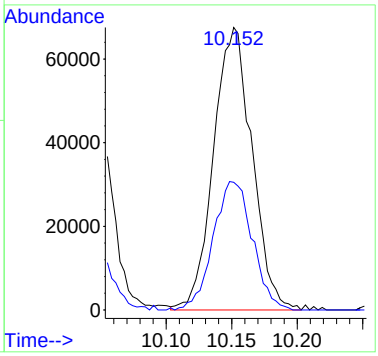


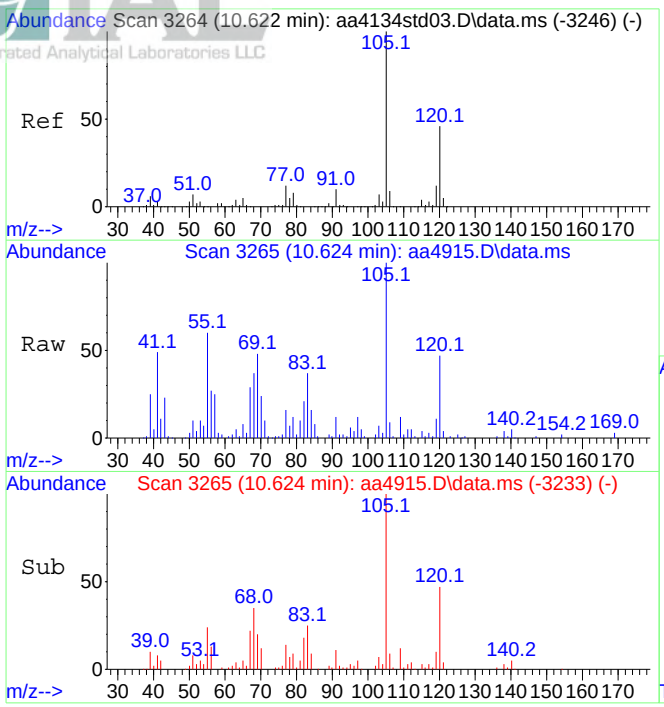




#69
1,3,5-Trimethylbenzene
Concen: 0.35 ppbV
RT: 10.152 min Scan# 3118
Delta R.T. 0.002 min
Lab File: aa4915.D
Acq: 11 Dec 2023 5:43 pm

Tgt Ion:105 Resp: 138092

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 46.2 | 38.9 | 58.3 |

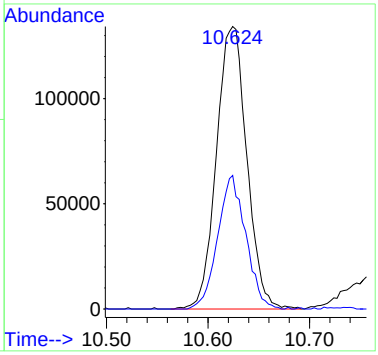





#70
1,2,4-Trimethylbenzene
Concen: 0.71 ppbV
RT: 10.624 min Scan# 3265
Delta R.T. 0.002 min
Lab File: aa4915.D
Acq: 11 Dec 2023 5:43 pm

Tgt Ion:105 Resp: 279979

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 43.6 | 36.3 | 54.5 |



Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4914.D
Acq On : 11 Dec 2023 4:52 pm
Operator : jjw
Sample : E23-05047-06x5 dil
Misc : 5091, 100cc
ALS Vial : 17 Sample Multiplier: 1

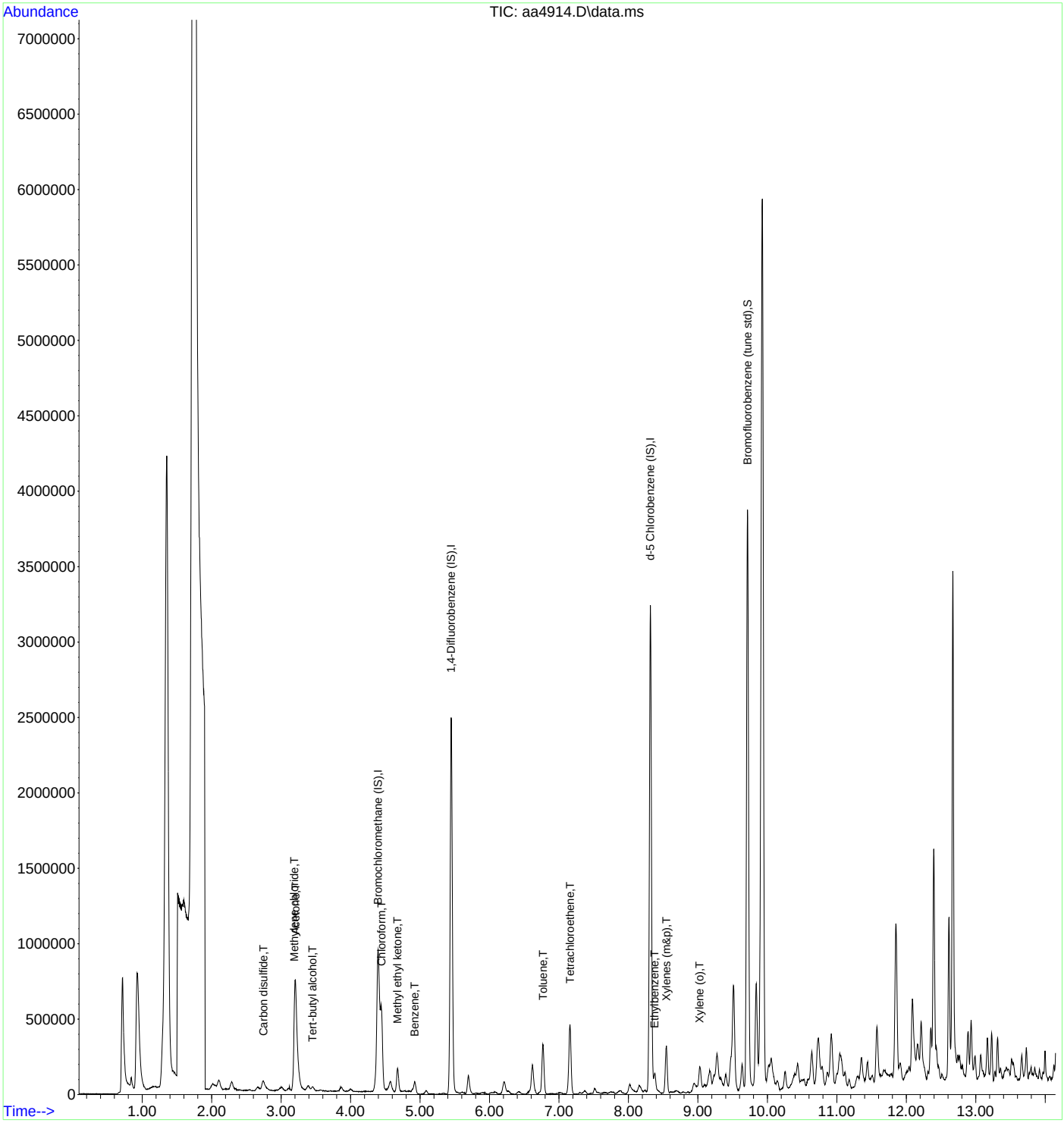
Quant Time: Dec 12 10:40:43 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

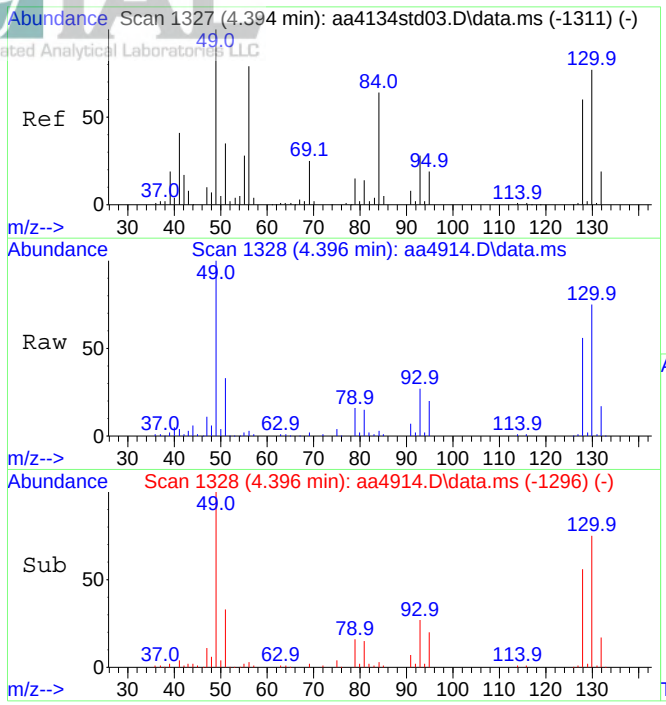
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.396 | 130 | 467822 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.447 | 114 | 2227257 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 2074010 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1708588 | 9.45 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 15) Carbon disulfide | 2.747 | 76 | 167158 | 1.17 | ppbV | # 84 |
| 20) Methylene chloride | 3.190 | 49 | 65854 | 1.15 | ppbV | 93 |
| 21) Acetone | 3.206 | 43 | 1394735 | 19.77 | ppbV | 98 |
| 26) Tert-butyl alcohol | 3.454 | 59 | 38006 | 0.31 | ppbV | 100 |
| 30) Chloroform | 4.447 | 83 | 367540 | 2.94 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.676 | 43 | 201974 | 1.77 | ppbV | 98 |
| 37) Benzene | 4.923 | 78 | 61844 | 0.33 | ppbV | 98 |
| 47) Toluene | 6.772 | 91 | 288540 | 0.92 | ppbV | 99 |
| 49) Tetrachloroethene | 7.161 | 166 | 160244 | 1.19 | ppbV | 98 |
| 58) Ethylbenzene | 8.377 | 91 | 90996 | 0.24 | ppbV | 96 |
| 59) Xylenes (m&p) | 8.547 | 91 | 222215 | 0.78 | ppbV | 98 |
| 60) Xylene (o) | 9.023 | 91 | 111780 | 0.36 | ppbV | 97 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4914.D
Acq On : 11 Dec 2023 4:52 pm
Operator : jjw
Sample : E23-05047-06x5 dil
Misc : 5091, 100cc
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Dec 12 10:40:43 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

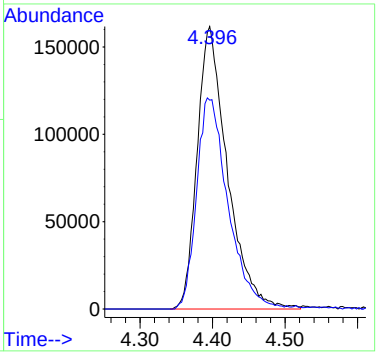


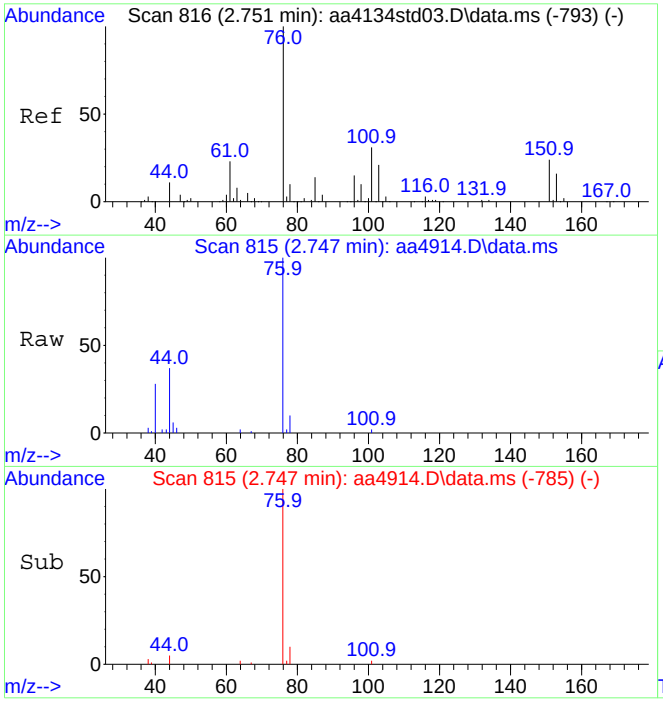



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.396 min Scan# 1328
Delta R.T. 0.002 min
Lab File: aa4914.D
Acq: 11 Dec 2023 4:52 pm

Tgt Ion:130 Resp: 467822

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 77.9 | 62.2 | 93.4 |

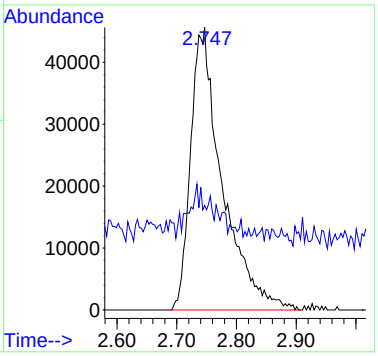


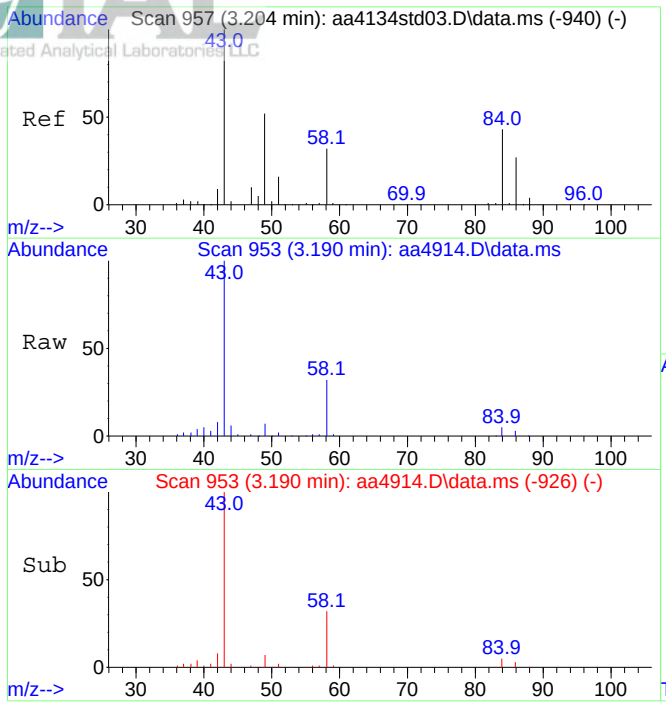




#15
Carbon disulfide
Concen: 1.17 ppbV
RT: 2.747 min Scan# 815
Delta R.T. -0.004 min
Lab File: aa4914.D
Acq: 11 Dec 2023 4:52 pm

Tgt Ion: 76 Resp: 167158

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 17.5 | 9.0 | 13.4# |

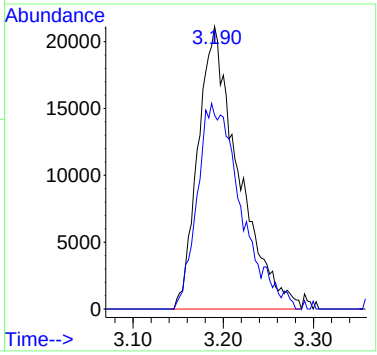


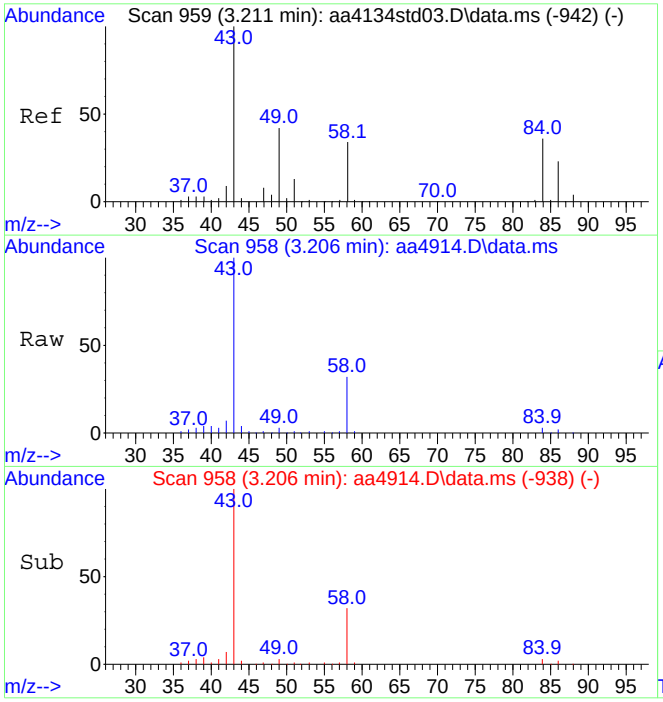



#20
Methylene chloride
Concen: 1.15 ppbV
RT: 3.190 min Scan# 953
Delta R.T. -0.014 min
Lab File: aa4914.D
Acq: 11 Dec 2023 4:52 pm

Tgt Ion: 49 Resp: 65854

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 78.3 | 64.8 | 104.8 |

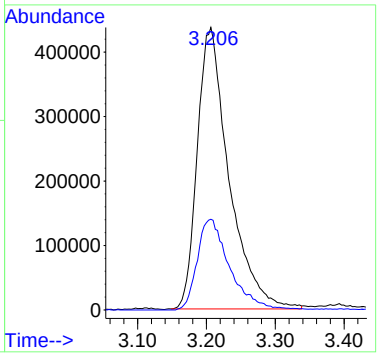


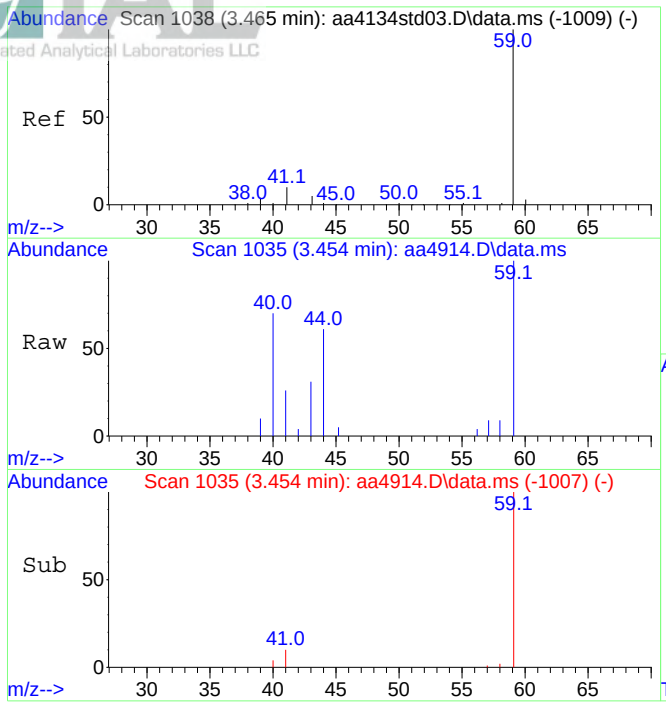




#21
Acetone
Concen: 19.77 ppbV
RT: 3.206 min Scan# 958
Delta R.T. -0.005 min
Lab File: aa4914.D
Acq: 11 Dec 2023 4:52 pm

Tgt Ion: 43 Resp: 1394735

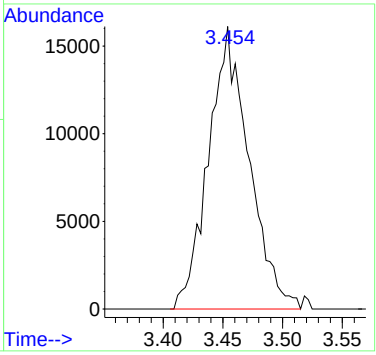
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 33.0 | 27.1 | 40.7 |

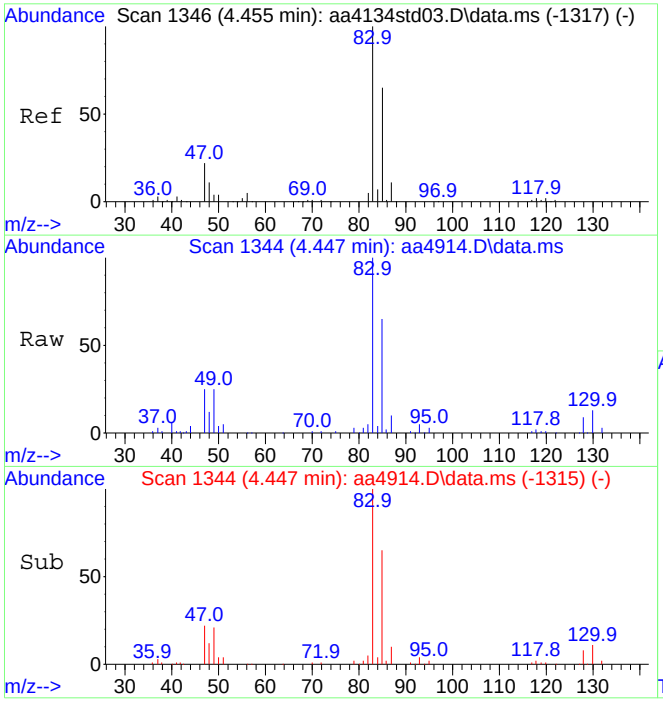





#26
Tert-butyl alcohol
Concen: 0.31 ppbV
RT: 3.454 min Scan# 1035
Delta R.T. -0.011 min
Lab File: aa4914.D
Acq: 11 Dec 2023 4:52 pm

Tgt Ion: 59 Resp: 38006

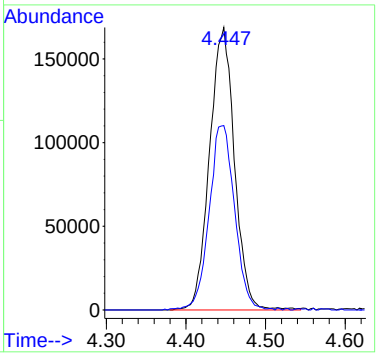


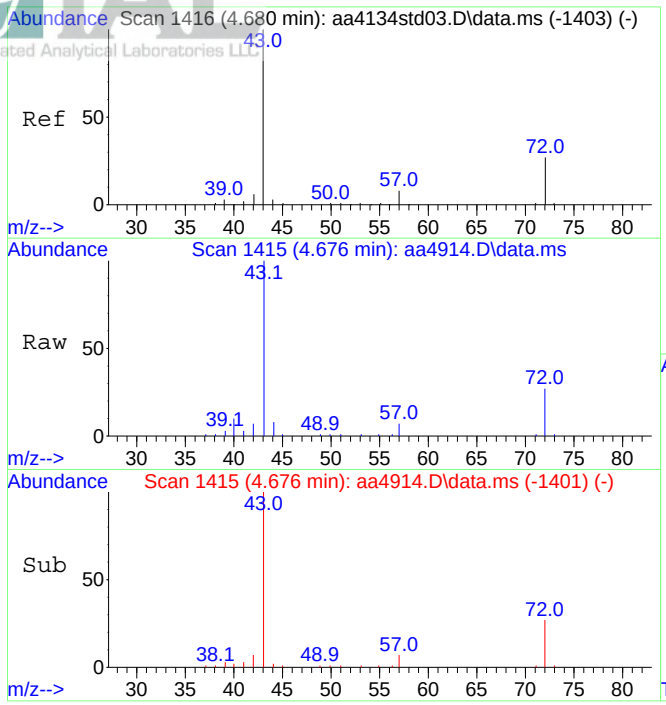




#30
Chloroform
Concen: 2.94 ppbV
RT: 4.447 min Scan# 1344
Delta R.T. -0.007 min
Lab File: aa4914.D
Acq: 11 Dec 2023 4:52 pm

Tgt Ion: 83 Resp: 367540

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 66.7 | 53.9 | 80.9 |

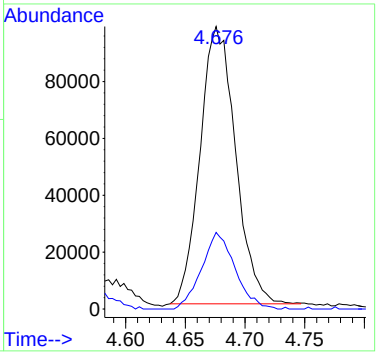


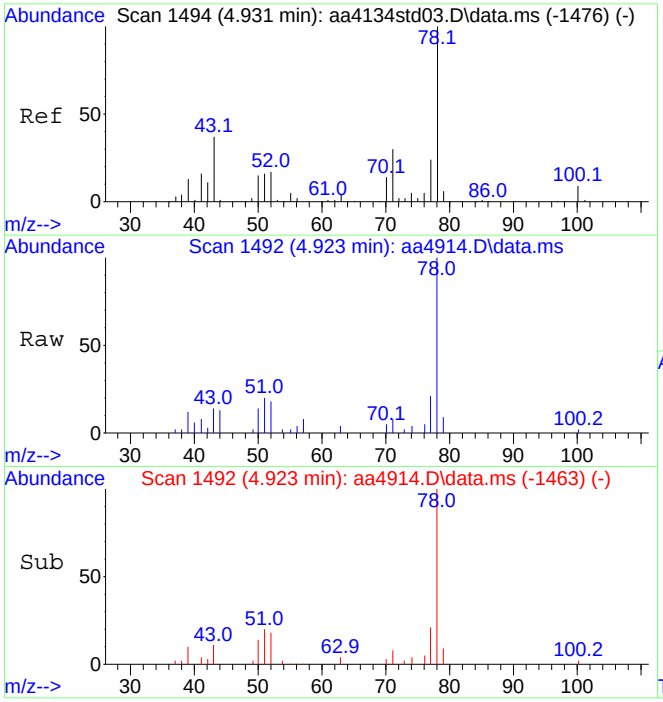



#35
Methyl ethyl ketone
Concen: 1.77 ppbV
RT: 4.676 min Scan# 1415
Delta R.T. -0.004 min
Lab File: aa4914.D
Acq: 11 Dec 2023 4:52 pm

Tgt Ion: 43 Resp: 201974

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 25.9 | 21.6 | 32.4 |

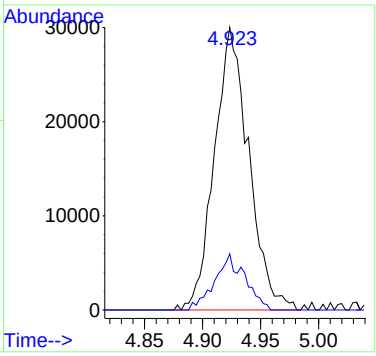


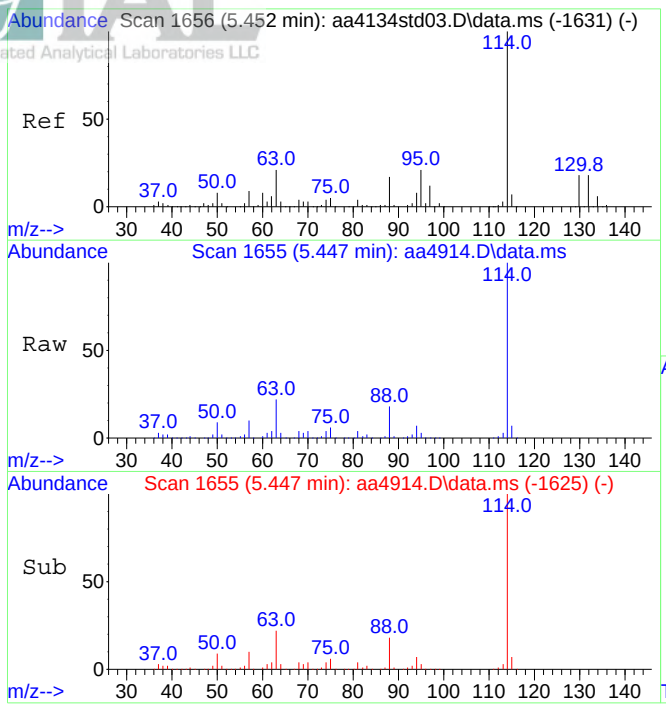




#37
Benzene
Concen: 0.33 ppbV
RT: 4.923 min Scan# 1492
Delta R.T. -0.007 min
Lab File: aa4914.D
Acq: 11 Dec 2023 4:52 pm

Tgt Ion: 78 Resp: 61844

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 17.4 | 13.4 | 20.0 |

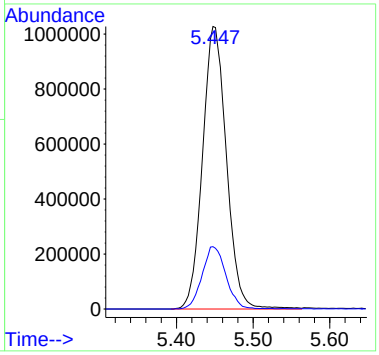


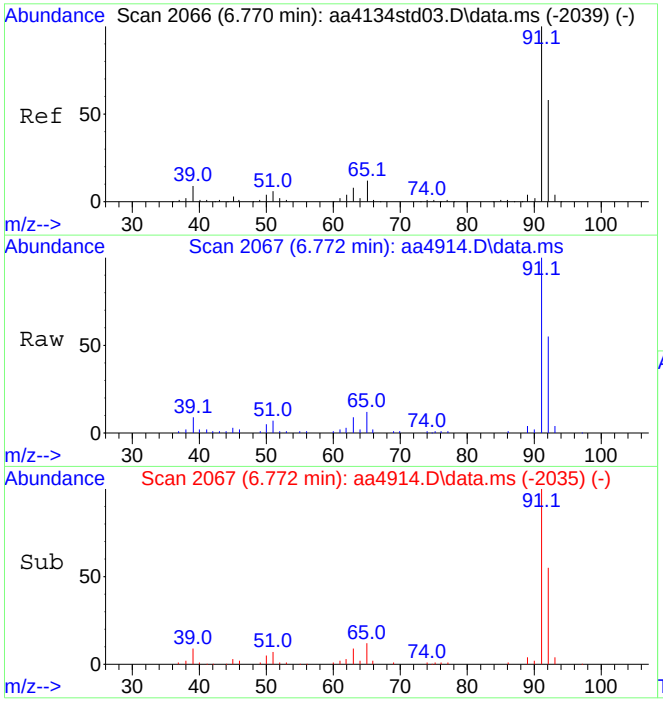



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.447 min Scan# 1655
Delta R.T. -0.005 min
Lab File: aa4914.D
Acq: 11 Dec 2023 4:52 pm

Tgt Ion:114 Resp: 2227257

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.2 | 17.0 | 25.6 |

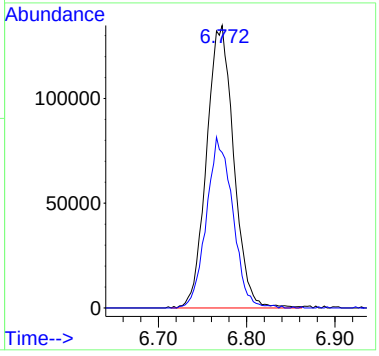


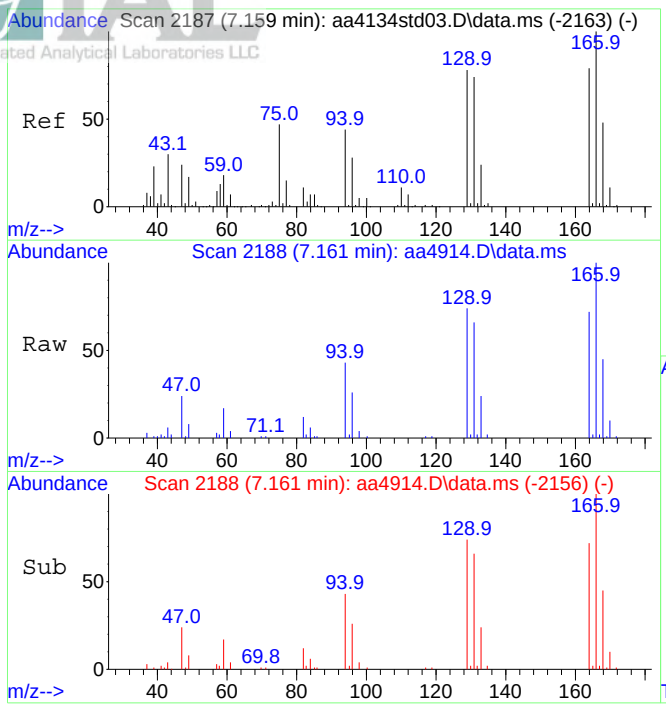




#47
Toluene
Concen: 0.92 ppbV
RT: 6.772 min Scan# 2067
Delta R.T. 0.002 min
Lab File: aa4914.D
Acq: 11 Dec 2023 4:52 pm

Tgt Ion: 91 Resp: 288540

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 58.4 | 47.3 | 70.9 |

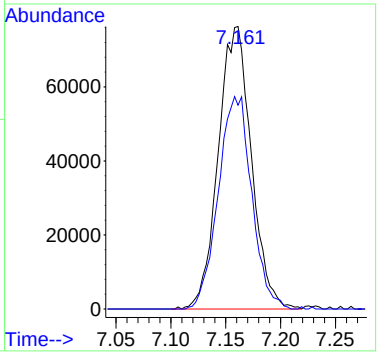


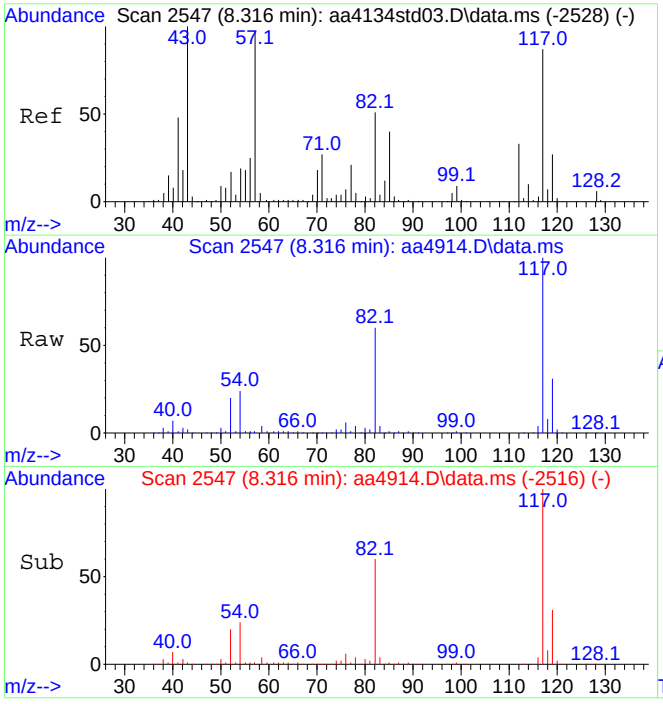



#49
Tetrachloroethene
Concen: 1.19 ppbV
RT: 7.161 min Scan# 2188
Delta R.T. 0.002 min
Lab File: aa4914.D
Acq: 11 Dec 2023 4:52 pm

Tgt Ion:166 Resp: 160244

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 75.9 | 62.3 | 93.5 |

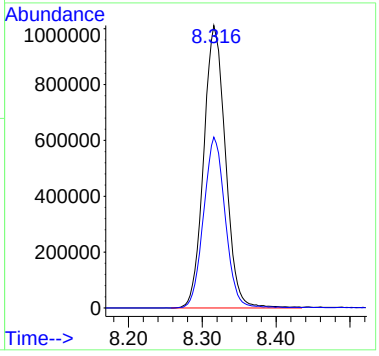


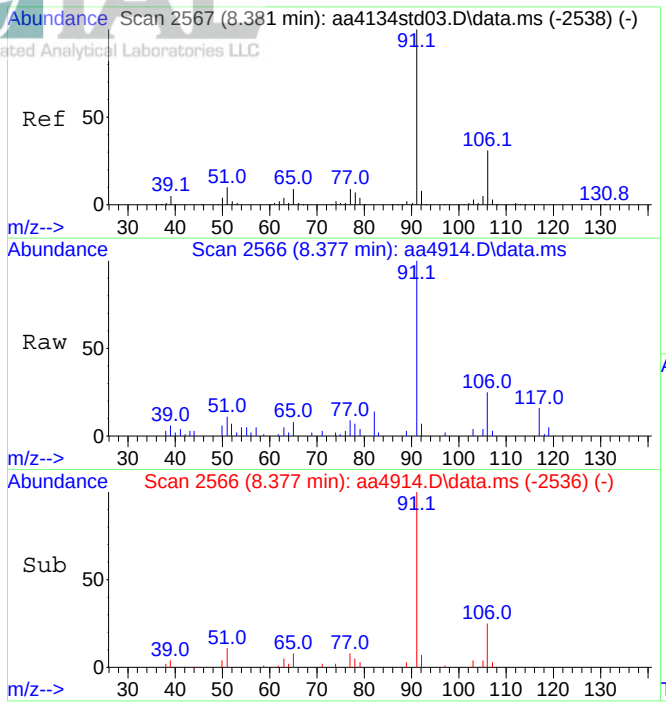




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.316 min Scan# 2547
Delta R.T. -0.001 min
Lab File: aa4914.D
Acq: 11 Dec 2023 4:52 pm

Tgt Ion:117 Resp: 2074010

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 60.1 | 47.0 | 70.4 |

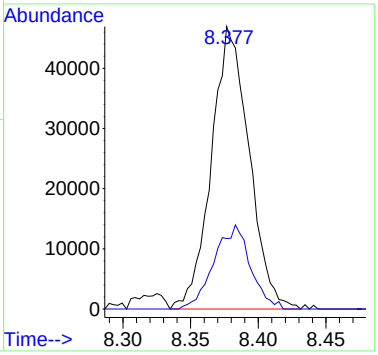


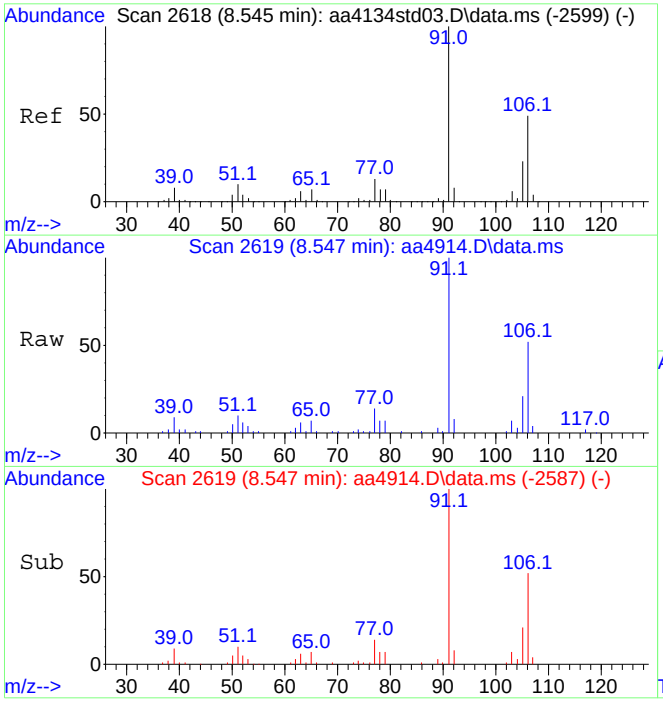



#58
Ethylbenzene
Concen: 0.24 ppbV
RT: 8.377 min Scan# 2566
Delta R.T. -0.004 min
Lab File: aa4914.D
Acq: 11 Dec 2023 4:52 pm

Tgt Ion: 91 Resp: 90996

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 28.6 | 24.6 | 36.8 |

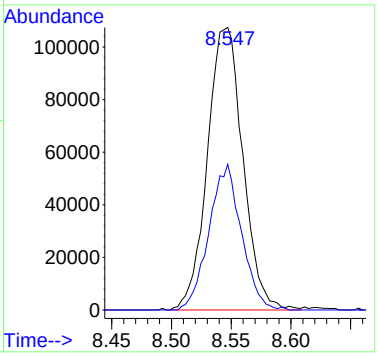


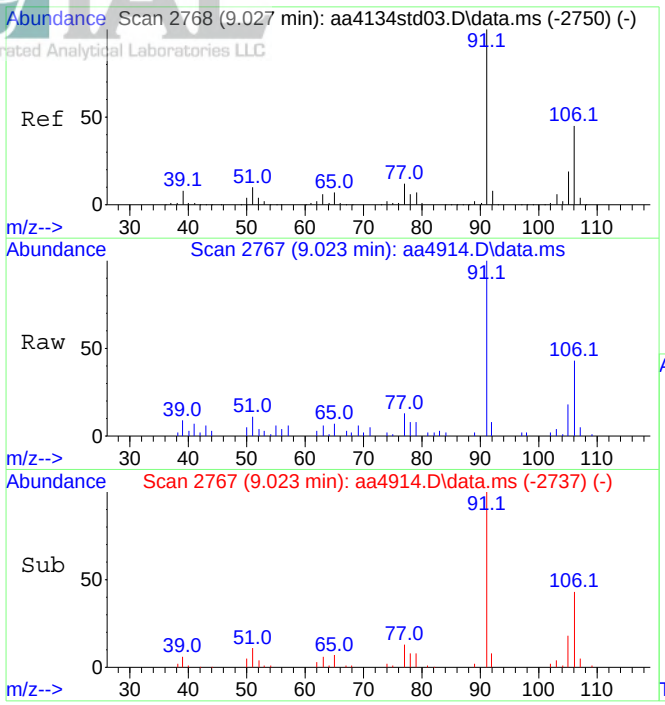




#59
Xylenes (m&p)
Concen: 0.78 ppbV
RT: 8.547 min Scan# 2619
Delta R.T. 0.002 min
Lab File: aa4914.D
Acq: 11 Dec 2023 4:52 pm

Tgt Ion: 91 Resp: 222215

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 47.1 | 39.0 | 58.4 |

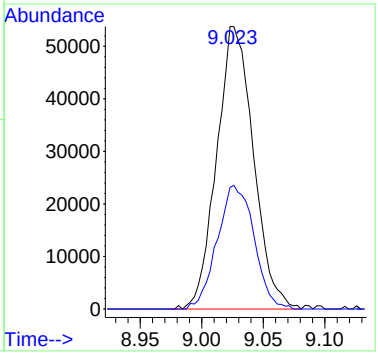


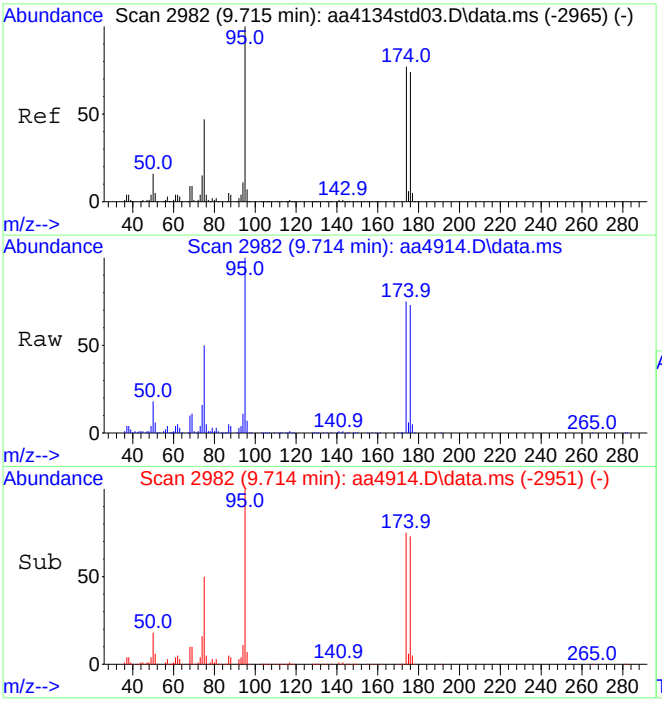



#60
Xylene (o)
Concen: 0.36 ppbV
RT: 9.023 min Scan# 2767
Delta R.T. -0.004 min
Lab File: aa4914.D
Acq: 11 Dec 2023 4:52 pm

Tgt Ion: 91 Resp: 111780

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 43.8 | 36.8 | 55.2 |

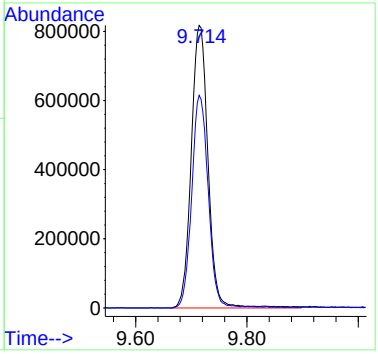



#64
Bromofluorobenzene (tune std)
Concen: 9.45 ppbV
RT: 9.714 min Scan# 2982
Delta R.T. -0.001 min
Lab File: aa4914.D
Acq: 11 Dec 2023 4:52 pm

Tgt Ion: 95 Resp: 1708588

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 74.6 | 61.1 | 91.7 |



# Section VII: Standards Data

## Initial Calibration Data

## Initial Calibration Verification Data

## Continuing Calibration Data

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Initial Calibration Data Summary Report

**Initial Calibration Curve:** 8/15/2023 **Method ID:** 230815.M
**Instrument:** AA

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA3401BFB] | 08/15/2023 10:11 |
| 0.2 PPBV STD [AA3402STD05] | 08/15/2023 11:15 |
| 10 PPBV STD [AA3404STD03] | 08/15/2023 13:09 |
| 2 PPBV STD [AA3403STD04] | 08/15/2023 13:45 |
| 20 PPBV STD [AA3405STD02] | 08/15/2023 15:12 |
| 40 PPBV STD [AA3406STD01] | 08/15/2023 16:47 |
| 10 PPBV ICVSS [AA3407ICVSS] | 08/15/2023 18:09 |

| | Parameter | RRF 0.2ppbv | RRF 2ppbv | RRF 10ppbv | RRF 20ppbv | RRF 40ppbv | Avg ppbv | % RSD |
|---|---|---|---|---|---|---|---|---|
| 1) | Bromochloromethane | ----------ISTD---------- | | | | | | |
| 3) | Dichlorodifluoromethane | 2.6 | 2.1 | 2.4 | 2.6 | 2.9 | 2.5 | 12 |
| 4) | 1,2-Dichlorotetrafluoroethane | 4.7 | 3.4 | 3.2 | 3.3 | 3.6 | 3.6 | 17 |
| 6) | Chloromethane | 0.073 | 0.12 | 0.12 | 0.13 | 0.15 | 0.12 | 23 |
| 7) | Vinyl chloride | 0.87 | 0.81 | 0.94 | 1.0 | 1.1 | 0.95 | 14 |
| 8) | 1,3-Butadiene | 0.94 | 0.96 | 0.93 | 0.99 | 1.0 | 0.97 | 4.6 |
| 9) | Bromomethane | 0.75 | 0.65 | 0.78 | 0.85 | 0.96 | 0.80 | 14 |
| 10) | Chloroethane | 0.44 | 0.40 | 0.52 | 0.57 | 0.65 | 0.52 | 19 |
| 11) | Vinyl bromide | 0.89 | 0.81 | 0.99 | 1.1 | 1.2 | 1.0 | 17 |
| 12) | Trichlorofluoromethane | 3.8 | 3.2 | 3.1 | 3.4 | 3.6 | 3.4 | 8.1 |
| 14) | 1,1-Dichloroethene | 1.8 | 1.7 | 2.1 | 2.3 | 2.5 | 2.1 | 15 |
| 15) | Carbon disulfide | 3.2 | 2.8 | 3.5 | 3.7 | 3.9 | 3.4 | 12 |
| 16) | 1,1,2-Trichloro-1,2,2-trifluoroethane | 4.1 | 3.6 | 2.8 | 3.0 | 3.3 | 3.4 | 16 |
| 17) | Acrolein | 0.45 | 0.34 | 0.43 | 0.45 | 0.49 | 0.43 | 13 |
| 18) | Allyl Chloride | 0.51 | 0.46 | 0.56 | 0.62 | 0.65 | 0.56 | 14 |
| 19) | Isopropanol | 2.2 | 2.0 | 2.3 | 2.5 | 2.6 | 2.3 | 10 |
| 20) | Methylene chloride | 1.9 | 0.89 | 1.1 | 1.2 | 1.3 | 1.3 | 29 |
| 21) | Acetone | 2.2 | 1.5 | 1.8 | 1.9 | 1.9 | 1.9 | 14 |
| 22) | 1,2-Dichloroethene (trans) | 1.6 | 1.5 | 1.9 | 2.1 | 2.3 | 1.9 | 17 |
| 24) | n-Hexane | 3.6 | 3.4 | 3.0 | 3.2 | 3.6 | 3.3 | 7.2 |
| 25) | Methyl tert-butyl ether | 4.7 | 5.1 | 4.0 | 4.3 | 4.7 | 4.6 | 9.5 |
| 26) | Tert-butyl alcohol | 2.9 | 3.2 | 2.6 | 2.8 | 3.2 | 2.9 | 8.1 |
| 27) | 1,1-Dichloroethane | 2.9 | 2.3 | 2.4 | 2.7 | 2.9 | 2.6 | 11 |
| 28) | 1,2-Dichloroethene (cis) | 1.7 | 1.5 | 1.8 | 2.0 | 2.2 | 1.8 | 14 |
| 29) | Cyclohexane | 2.5 | 2.7 | 2.1 | 2.3 | 2.5 | 2.4 | 9.8 |
| 30) | Chloroform | 3.3 | 2.8 | 3.0 | 3.3 | 3.6 | 3.2 | 9.6 |
| 32) | Carbon tetrachloride | 4.2 | 4.4 | 3.4 | 3.5 | 3.9 | 3.9 | 11 |
| 33) | Tetrahydrofuran | 1.8 | 1.6 | 1.7 | 1.9 | 2.0 | 1.8 | 8.7 |
| 34) | 1,1,1-Trichloroethane | 3.8 | 4.0 | 3.0 | 3.2 | 3.5 | 3.5 | 12 |
| 35) | Methyl ethyl ketone | 2.9 | 2.5 | 2.7 | 3.0 | 3.3 | 2.9 | 11 |
| 36) | n-Heptane | 3.0 | 4.0 | 3.2 | 3.3 | 3.3 | 3.4 | 11 |
| 37) | Benzene | 5.1 | 4.3 | 4.2 | 4.6 | 4.9 | 4.6 | 8.4 |
| 38) | 1,2-Dichloroethane | 2.0 | 1.8 | 1.9 | 2.2 | 2.4 | 2.1 | 11 |
| 39) | 1,4-Difluorobenzene | ----------ISTD---------- | | | | | | |
| 40) | Trichloroethene | 0.60 | 0.46 | 0.48 | 0.50 | 0.50 | 0.51 | 11 |
| 41) | 2,2,4-Trimethylpentane | 1.4 | 1.3 | 1.2 | 1.2 | 1.3 | 1.3 | 7.7 |
| 42) | 1,2-Dichloropropane | 0.54 | 0.45 | 0.43 | 0.44 | 0.42 | 0.46 | 11 |
| 43) | Bromodichloromethane | 0.91 | 0.75 | 0.76 | 0.79 | 0.77 | 0.80 | 8.1 |

***% RSD (Relative Standard Deviation) must be within 30%**
****An exception is made for 2 compounds that must be within 40%**
**RRF - Relative Response Factor**

# Initial Calibration Data Summary Report

**Initial Calibration Curve:** 8/15/2023 **Method ID:** 230815.M
**Instrument:** AA

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA3401BFB] | 08/15/2023 10:11 |
| 0.2 PPBV STD [AA3402STD05] | 08/15/2023 11:15 |
| 10 PPBV STD [AA3404STD03] | 08/15/2023 13:09 |
| 2 PPBV STD [AA3403STD04] | 08/15/2023 13:45 |
| 20 PPBV STD [AA3405STD02] | 08/15/2023 15:12 |
| 40 PPBV STD [AA3406STD01] | 08/15/2023 16:47 |
| 10 PPBV ICVSS [AA3407ICVSS] | 08/15/2023 18:09 |

| | Parameter | RRF 0.2ppbv | RRF 2ppbv | RRF 10ppbv | RRF 20ppbv | RRF 40ppbv | Avg ppbv | % RSD |
|---|---|---|---|---|---|---|---|---|
| 44) | Methyl methacrylate | 0.53 | 0.60 | 0.60 | 0.62 | 0.59 | 0.59 | 5.4 |
| 45) | 1,4-Dioxane | 0.30 | 0.29 | 0.27 | 0.28 | 0.27 | 0.28 | 3.5 |
| 46) | 1,3-Dichloropropene (cis) | 0.76 | 0.67 | 0.69 | 0.72 | 0.69 | 0.71 | 4.8 |
| 47) | Toluene | 1.6 | 1.8 | 1.6 | 1.6 | 1.4 | 1.6 | 7.6 |
| 48) | Methyl isobutyl ketone | 1.0 | 1.4 | 1.2 | 1.2 | 1.1 | 1.2 | 11 |
| 49) | Tetrachloroethene | 0.80 | 0.79 | 0.70 | 0.69 | 0.63 | 0.72 | 10 |
| 50) | 1,3-Dichloropropene (trans) | 0.59 | 0.70 | 0.73 | 0.76 | 0.71 | 0.70 | 9.3 |
| 51) | 1,1,2-Trichloroethane | 0.60 | 0.58 | 0.55 | 0.56 | 0.53 | 0.57 | 4.9 |
| 52) | Dibromochloromethane | 0.94 | 0.97 | 0.94 | 0.96 | 0.91 | 0.94 | 2.5 |
| 53) | 1,2-Dibromoethane | 0.77 | 0.84 | 0.84 | 0.87 | 0.82 | 0.83 | 4.3 |
| 54) | Methyl n-butyl ketone | 0.82 | 1.2 | 1.1 | 1.2 | 1.1 | 1.1 | 14 |
| 55) | d-5 Chlorbenzene | ----------ISTD---------- | | | | | | |
| 57) | Chlorobenzene | 1.3 | 1.1 | 1.0 | 1.0 | 1.0 | 1.1 | 11 |
| 58) | Ethylbenzene | 2.3 | 2.4 | 1.9 | 1.8 | 1.7 | 2.0 | 15 |
| 59) | Xylenes (m&p) | 1.7 | 1.8 | 1.5 | 1.3 | 0.99 | 1.5 | 22 |
| 60) | Xylenes (o) | 1.7 | 1.9 | 1.5 | 1.5 | 1.5 | 1.6 | 11 |
| 61) | Styrene | 0.95 | 1.2 | 1.1 | 1.1 | 1.1 | 1.1 | 8.3 |
| 62) | Bromoform | 0.90 | 0.87 | 0.81 | 0.79 | 0.79 | 0.83 | 6.3 |
| 63) | Cumene | 2.2 | 2.6 | 2.0 | 1.9 | 1.8 | 2.1 | 14 |
| 66) | 1,1,2,2-Tetrachloroethane | 1.4 | 1.4 | 1.1 | 1.1 | 1.1 | 1.2 | 11 |
| 67) | 4-Ethyltoluene | 2.4 | 2.7 | 2.3 | 2.1 | 1.8 | 2.3 | 14 |
| 68) | 2-Chlorotoluene | 2.0 | 2.2 | 1.8 | 1.7 | 1.7 | 1.9 | 11 |
| 69) | 1,3,5-Trimethylbenzene | 1.8 | 2.2 | 1.8 | 1.7 | 1.6 | 1.8 | 12 |
| 70) | 1,2,4-Trimethylbenzene | 1.6 | 2.2 | 1.9 | 1.8 | 1.7 | 1.8 | 13 |
| 71) | 1,3-Dichlorobenzene | 1.5 | 1.2 | 1.1 | 1.1 | 1.2 | 1.2 | 12 |
| 72) | 1,4-Dichlorobenzene | 1.2 | 1.2 | 1.2 | 1.1 | 1.2 | 1.2 | 1.4 |
| 73) | Benzyl chloride | 1.2 | 1.6 | 1.7 | 1.7 | 1.8 | 1.6 | 16 |
| 74) | 1,2-Dichlorobenzene | 1.2 | 1.2 | 1.1 | 1.1 | 1.1 | 1.1 | 4.8 |
| 75) | 1,3-Hexachlorobutadiene | 1.2 | 0.86 | 0.73 | 0.67 | 0.63 | 0.82 | 29 |
| 76) | 1,2,4-Trichlorobenzene | 1.2 | 0.85 | 0.86 | 0.82 | 0.78 | 0.90 | 18 |
| 77) | Naphthalene | 2.3 | 1.8 | 1.9 | 1.8 | 1.5 | 1.9 | 16 |

***% RSD (Relative Standard Deviation) must be within 30%**
****An exception is made for 2 compounds that must be within 40%**
**RRF - Relative Response Factor**

Method Path : C:\msdchem\1\METHODS\
Method File : 230815.M
Title : TO-15 on the Agilent 7890A / 5975C
Last Update : Wed Aug 16 10:00:51 2023
Response Via : Initial Calibration

Calibration Files
0.2 =aa3402std05.D 2 =aa3403std04.D 10 =aa3404std03.D 20 =aa3405std02.D 40 =aa3406std01.D

| | | Compound | 0.2 | 2 | 10 | 20 | 40 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|
| 1) | I | Bromochloromethane... | ----------ISTD---------- | | | | | | |
| 2) | T | Propene | 0.693 | 0.590 | 0.649 | 0.708 | 0.804 | 0.689 | 11.46 |
| 3) | T | Dichlorodifluoro... | 2.627 | 2.060 | 2.419 | 2.640 | 2.888 | 2.527 | 12.25 |
| 4) | T | 1,2-Dichlorotetr... | 4.698 | 3.379 | 3.171 | 3.318 | 3.612 | 3.636 | 16.92 |
| 5) | T | n-Butane | 1.529 | 1.686 | 1.607 | 1.650 | 1.703 | 1.635 | 4.27 |
| 6) | T | Chloromethane | 0.073 | 0.121 | 0.116 | 0.128 | 0.147 | 0.117 | 23.33 |
| 7) | T | Vinyl chloride | 0.866 | 0.806 | 0.938 | 1.004 | 1.138 | 0.950 | 13.56 |
| 8) | T | 1,3-Butadiene | 0.939 | 0.962 | 0.929 | 0.985 | 1.043 | 0.972 | 4.66 |
| 9) | T | Bromomethane | 0.754 | 0.650 | 0.781 | 0.852 | 0.955 | 0.798 | 14.26 |
| 10) | T | Chloroethane | 0.437 | 0.404 | 0.524 | 0.567 | 0.652 | 0.517 | 19.32 |
| 11) | T | Vinyl bromide | 0.891 | 0.806 | 0.989 | 1.088 | 1.246 | 1.004 | 17.12 |
| 12) | T | Trichlorofluorom... | 3.753 | 3.179 | 3.089 | 3.381 | 3.599 | 3.400 | 8.19 |
| 13) | T | Ethanol | 0.566 | 0.336 | 0.323 | 0.344 | 0.433 | 0.400 | 25.53 |
| 14) | T | 1,1-Dichloroethene | 1.836 | 1.703 | 2.114 | 2.324 | 2.466 | 2.088 | 15.36 |
| 15) | T | Carbon disulfide | 3.198 | 2.847 | 3.522 | 3.709 | 3.868 | 3.429 | 11.95 |
| 16) | T | 1,1,2-Trichloro-... | 4.138 | 3.589 | 2.807 | 2.990 | 3.274 | 3.360 | 15.67 |
| 17) | T | Acrolein | 0.446 | 0.337 | 0.430 | 0.447 | 0.488 | 0.430 | 13.07 |
| 18) | T | Allyl chloride | 0.510 | 0.458 | 0.563 | 0.616 | 0.651 | 0.559 | 13.89 |
| 19) | T | Isopropanol | 2.218 | 2.002 | 2.266 | 2.475 | 2.597 | 2.312 | 10.02 |
| 20) | T | Methylene chloride | 1.853 | 0.894 | 1.059 | 1.168 | 1.335 | 1.262 | 29.12 |
| 21) | T | Acetone | 2.238 | 1.490 | 1.826 | 1.890 | 1.937 | 1.876 | 14.27 |
| 22) | T | trans-1,2-Dichlo... | 1.626 | 1.515 | 1.873 | 2.082 | 2.300 | 1.879 | 17.14 |
| 23) | T | n-Pentane | 2.737 | 2.398 | 2.021 | 2.278 | 2.555 | 2.398 | 11.35 |
| 24) | T | n-Hexane | 3.560 | 3.405 | 3.010 | 3.196 | 3.573 | 3.349 | 7.26 |
| 25) | T | Methyl tert-buty... | 4.721 | 5.118 | 3.992 | 4.267 | 4.676 | 4.555 | 9.56 |
| 26) | T | Tert-butyl alcohol | 2.872 | 3.165 | 2.601 | 2.846 | 3.159 | 2.929 | 8.11 |
| 27) | T | 1,1-Dichloroethane | 2.886 | 2.279 | 2.406 | 2.680 | 2.935 | 2.637 | 10.96 |
| 28) | T | cis-1,2-Dichloro... | 1.666 | 1.532 | 1.766 | 1.984 | 2.173 | 1.824 | 14.01 |
| 29) | t | Cyclohexane | 2.480 | 2.742 | 2.109 | 2.281 | 2.488 | 2.420 | 9.87 |
| 30) | T | Chloroform | 3.341 | 2.813 | 3.029 | 3.345 | 3.610 | 3.228 | 9.60 |
| 31) | T | Ethyl acetate | 0.519 | 0.459 | 0.476 | 0.532 | 0.583 | 0.514 | 9.56 |
| 32) | T | Carbon tetrachlo... | 4.190 | 4.380 | 3.355 | 3.527 | 3.897 | 3.870 | 11.16 |
| 33) | T | Tetrahydrofuran | 1.813 | 1.612 | 1.725 | 1.883 | 2.033 | 1.813 | 8.79 |
| 34) | T | 1,1,1-Trichloroe... | 3.831 | 3.967 | 2.981 | 3.175 | 3.465 | 3.484 | 12.03 |
| 35) | T | Methyl ethyl ketone | 2.907 | 2.461 | 2.724 | 3.040 | 3.340 | 2.894 | 11.42 |
| 36) | T | n-Heptane | 3.009 | 3.965 | 3.169 | 3.287 | 3.321 | 3.350 | 10.89 |
| 37) | T | Benzene | 5.118 | 4.274 | 4.213 | 4.582 | 4.885 | 4.614 | 8.43 |
| 38) | T | 1,2-Dichloroethane | 2.033 | 1.799 | 1.949 | 2.171 | 2.385 | 2.067 | 10.78 |
| 39) | I | 1,4-Difluorobenzen... | ----------ISTD---------- | | | | | | |
| 40) | T | Trichloroethene | 0.604 | 0.461 | 0.476 | 0.499 | 0.498 | 0.508 | 11.08 |
| 41) | T | 2,2,4-Trimethylp... | 1.422 | 1.283 | 1.173 | 1.194 | 1.261 | 1.267 | 7.75 |
| 42) | T | 1,2-Dichloropropane | 0.544 | 0.451 | 0.428 | 0.436 | 0.423 | 0.456 | 10.95 |
| 43) | T | Bromodichloromet... | 0.909 | 0.753 | 0.759 | 0.786 | 0.768 | 0.795 | 8.19 |
| 44) | T | Methyl methacrylate | 0.533 | 0.595 | 0.599 | 0.618 | 0.589 | 0.587 | 5.41 |
| 45) | T | 1,4-Dioxane | 0.295 | 0.288 | 0.274 | 0.280 | 0.270 | 0.281 | 3.52 |
| 46) | T | cis-1,3-Dichloro... | 0.756 | 0.671 | 0.693 | 0.721 | 0.685 | 0.705 | 4.82 |
| 47) | T | Toluene | 1.603 | 1.770 | 1.615 | 1.607 | 1.423 | 1.603 | 7.69 |
| 48) | T | Methyl isobutyl ... | 1.020 | 1.358 | 1.158 | 1.169 | 1.085 | 1.158 | 10.96 |
| 49) | T | Tetrachloroethene | 0.802 | 0.785 | 0.698 | 0.693 | 0.626 | 0.721 | 10.04 |
| 50) | T | trans-1,3-Dichlo... | 0.586 | 0.696 | 0.728 | 0.757 | 0.709 | 0.695 | 9.37 |
| 51) | T | 1,1,2-Trichloroe... | 0.602 | 0.582 | 0.549 | 0.561 | 0.531 | 0.565 | 4.93 |
| 52) | T | Dibromochloromet... | 0.941 | 0.968 | 0.936 | 0.964 | 0.910 | 0.944 | 2.50 |
| 53) | T | 1,2-Dibromoethane | 0.770 | 0.838 | 0.835 | 0.869 | 0.822 | 0.827 | 4.35 |
| 54) | T | Methyl n-butyl k... | 0.821 | 1.172 | 1.136 | 1.176 | 1.120 | 1.085 | 13.80 |
| 55) | I | d-5 Chlorobenzene ... | ----------ISTD---------- | | | | | | |
| 56) | T | n-Nonane | 1.127 | 1.476 | 1.174 | 1.162 | 1.180 | 1.224 | 11.64 |
| 57) | T | Chlorobenzene | 1.289 | 1.143 | 1.029 | 1.009 | 1.005 | 1.095 | 11.15 |
| 58) | T | Ethylbenzene | 2.334 | 2.354 | 1.930 | 1.830 | 1.678 | 2.025 | 15.04 |
| 59) | T | Xylenes (m&p) | 1.738 | 1.788 | 1.455 | 1.324 | 0.993 | 1.460 | 22.23 |
| 60) | T | Xylene (o) | 1.710 | 1.878 | 1.542 | 1.505 | 1.471 | 1.621 | 10.51 |

Method Path : C:\msdchem\1\METHODS\
Method File : 230815.M

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 61) | T | Styrene | 0.947 | 1.200 | 1.093 | 1.071 | 1.068 | 1.076 | 8.35 |
| 62) | T | Bromoform | 0.903 | 0.872 | 0.806 | 0.789 | 0.786 | 0.831 | 6.38 |
| 63) | T | Cumene | 2.186 | 2.576 | 2.043 | 1.945 | 1.808 | 2.112 | 13.92 |
| 64) | S | Bromofluorobenze... | 0.736 | 0.817 | 0.818 | 0.845 | 0.943 | 0.832 | 8.94 |
| 65) | T | n-Propyl benzene | 2.996 | 3.397 | 2.766 | 2.573 | 2.034 | 2.753 | 18.37 |
| 66) | T | 1,1,2,2-Tetrachl... | 1.381 | 1.376 | 1.137 | 1.117 | 1.132 | 1.228 | 11.16 |
| 67) | T | 4-Ethyltoluene | 2.355 | 2.737 | 2.278 | 2.143 | 1.835 | 2.270 | 14.45 |
| 68) | T | 2-Chlorotoluene | 1.964 | 2.171 | 1.778 | 1.722 | 1.704 | 1.868 | 10.62 |
| 69) | T | 1,3,5-Trimethylb... | 1.800 | 2.225 | 1.792 | 1.719 | 1.648 | 1.837 | 12.28 |
| 70) | T | 1,2,4-Trimethylb... | 1.568 | 2.188 | 1.854 | 1.793 | 1.705 | 1.821 | 12.71 |
| 71) | T | 1,3-Dichlorobenzene | 1.459 | 1.183 | 1.126 | 1.114 | 1.157 | 1.208 | 11.85 |
| 72) | T | 1,4-Dichlorobenzene | 1.161 | 1.161 | 1.153 | 1.142 | 1.187 | 1.161 | 1.43 |
| 73) | T | Benzyl chloride | 1.168 | 1.566 | 1.708 | 1.744 | 1.770 | 1.591 | 15.67 |
| 74) | T | 1,2-Dichlorobenzene | 1.169 | 1.225 | 1.111 | 1.083 | 1.128 | 1.143 | 4.82 |
| 75) | T | 1,3-Hexachlorobu... | 1.209 | 0.857 | 0.729 | 0.674 | 0.629 | 0.820 | 28.53 |
| 76) | T | 1,2,4-Trichlorob... | 1.191 | 0.845 | 0.860 | 0.816 | 0.781 | 0.899 | 18.48 |
| 77) | T | Naphthalene | 2.270 | 1.826 | 1.920 | 1.809 | 1.459 | 1.857 | 15.61 |

(#) = Out of Range

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3402std05.D
Acq On : 15 Aug 2023 11:15 am
Operator : jjw
Sample : 0.2 ppbv standard
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 15 17:16:53 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:15:22 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.380 | 130 | 543782 | 10.00 | ppbV | | -0.016 |
| 39) 1,4-Difluorobenzene (IS) | 5.448 | 114 | 2104790 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 2068537 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1523370 | 8.85 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 1.454 | 41 | 8216 | 0.22 | ppbV | # | 67 |
| 3) Dichlorodifluoromethane | 1.492 | 85 | 30288 | 0.22 | ppbV | | 99 |
| 4) 1,2-Dichlorotetrafluor... | 1.626 | 85 | 50076 | 0.25 | ppbV | | 96 |
| 5) n-Butane | 1.698 | 43 | 18121 | 0.20 | ppbV | | 97 |
| 6) Chloromethane | 1.763 | 52 | 890 | 0.14 | ppbV | | 54 |
| 7) Vinyl chloride | 1.760 | 62 | 10168 | 0.20 | ppbV | | 97 |
| 8) 1,3-Butadiene | 1.767 | 39 | 10931 | 0.21 | ppbV | | 84 |
| 9) Bromomethane | 2.049 | 94 | 8195 | 0.19 | ppbV | | 87 |
| 10) Chloroethane | 2.171 | 64 | 5038 | 0.18 | ppbV | # | 73 |
| 11) Vinyl bromide | 2.271 | 106 | 9786 | 0.18 | ppbV | | 94 |
| 12) Trichlorofluoromethane | 2.287 | 101 | 44897 | 0.24 | ppbV | | 99 |
| 13) Ethanol | 2.650 | 45 | 6400 | 0.29 | ppbV | # | 53 |
| 14) 1,1-Dichloroethene | 2.711 | 61 | 20761 | 0.18 | ppbV | | 99 |
| 15) Carbon disulfide | 2.731 | 76 | 37217 | 0.20 | ppbV | # | 87 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.750 | 101 | 49053 | 0.27 | ppbV | | 100 |
| 17) Acrolein | 2.956 | 56 | 4855 | 0.21 | ppbV | | 84 |
| 18) Allyl chloride | 3.091 | 76 | 5995 | 0.20 | ppbV | | 100 |
| 19) Isopropanol | 3.097 | 45 | 21471 | 0.17 | ppbV | # | 78 |
| 20) Methylene chloride | 3.184 | 49 | 21768 | 0.31 | ppbV | | 94 |
| 21) Acetone | 3.194 | 43 | 26290 | 0.26 | ppbV | # | 87 |
| 22) trans-1,2-Dichloroethene | 3.309 | 61 | 19630 | 0.19 | ppbV | | 99 |
| 23) n-Pentane | 3.393 | 43 | 32143 | 0.25 | ppbV | | 94 |
| 24) n-Hexane | 3.387 | 57 | 42982 | 0.24 | ppbV | | 89 |
| 25) Methyl tert-butyl ether | 3.396 | 73 | 57505 | 0.23 | ppbV | | 99 |
| 26) Tert-butyl alcohol | 3.454 | 59 | 35922 | 0.23 | ppbV | | 100 |
| 27) 1,1-Dichloroethane | 3.798 | 63 | 33581 | 0.23 | ppbV | | 93 |
| 28) cis-1,2-Dichloroethene | 4.223 | 61 | 19745 | 0.20 | ppbV | | 100 |
| 29) Cyclohexane | 4.396 | 56 | 30214 | 0.23 | ppbV | | 97 |
| 30) Chloroform | 4.441 | 83 | 39248 | 0.22 | ppbV | | 97 |
| 31) Ethyl acetate | 4.534 | 61 | 6099 | 0.22 | ppbV | | 99 |
| 32) Carbon tetrachloride | 4.560 | 117 | 50587 | 0.24 | ppbV | | 99 |
| 33) Tetrahydrofuran | 4.567 | 42 | 21884 | 0.22 | ppbV | | 96 |
| 34) 1,1,1-Trichloroethane | 4.608 | 97 | 45414 | 0.24 | ppbV | | 97 |
| 35) Methyl ethyl ketone | 4.676 | 43 | 34778 | 0.22 | ppbV | | 96 |
| 36) n-Heptane | 4.907 | 43 | 36329 | 0.20 | ppbV | | 98 |
| 37) Benzene | 4.923 | 78 | 60118 | 0.24 | ppbV | | 100 |
| 38) 1,2-Dichloroethane | 5.087 | 62 | 24098 | 0.21 | ppbV | | 100 |
| 40) Trichloroethene | 5.425 | 130 | 25424 | 0.24 | ppbV | | 97 |
| 41) 2,2,4-Trimethylpentane | 4.833 | 57 | 65257 | 0.24 | ppbV | | 99 |
| 42) 1,2-Dichloropropane | 5.875 | 63 | 25405 | 0.26 | ppbV | | 97 |
| 43) Bromodichloromethane | 5.943 | 83 | 44017 | 0.26 | ppbV | | 100 |
| 44) Methyl methacrylate | 6.081 | 41 | 24702 | 0.20 | ppbV | | 95 |
| 45) 1,4-Dioxane | 6.116 | 88 | 14508 | 0.25 | ppbV | | 92 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 35333 | 0.24 | ppbV | | 100 |
| 47) Toluene | 6.769 | 91 | 72857 | 0.22 | ppbV | | 97 |
| 48) Methyl isobutyl ketone | 7.132 | 43 | 46816 | 0.19 | ppbV | | 96 |
| 49) Tetrachloroethene | 7.161 | 166 | 37803 | 0.25 | ppbV | | 99 |
| 50) trans-1,3-Dichloropropene | 7.174 | 75 | 27399 | 0.19 | ppbV | | 93 |
| 51) 1,1,2-Trichloroethane | 7.335 | 97 | 27389 | 0.23 | ppbV | | 98 |

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3402std05.D
Acq On : 15 Aug 2023 11:15 am
Operator : jjw
Sample : 0.2 ppbv standard
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

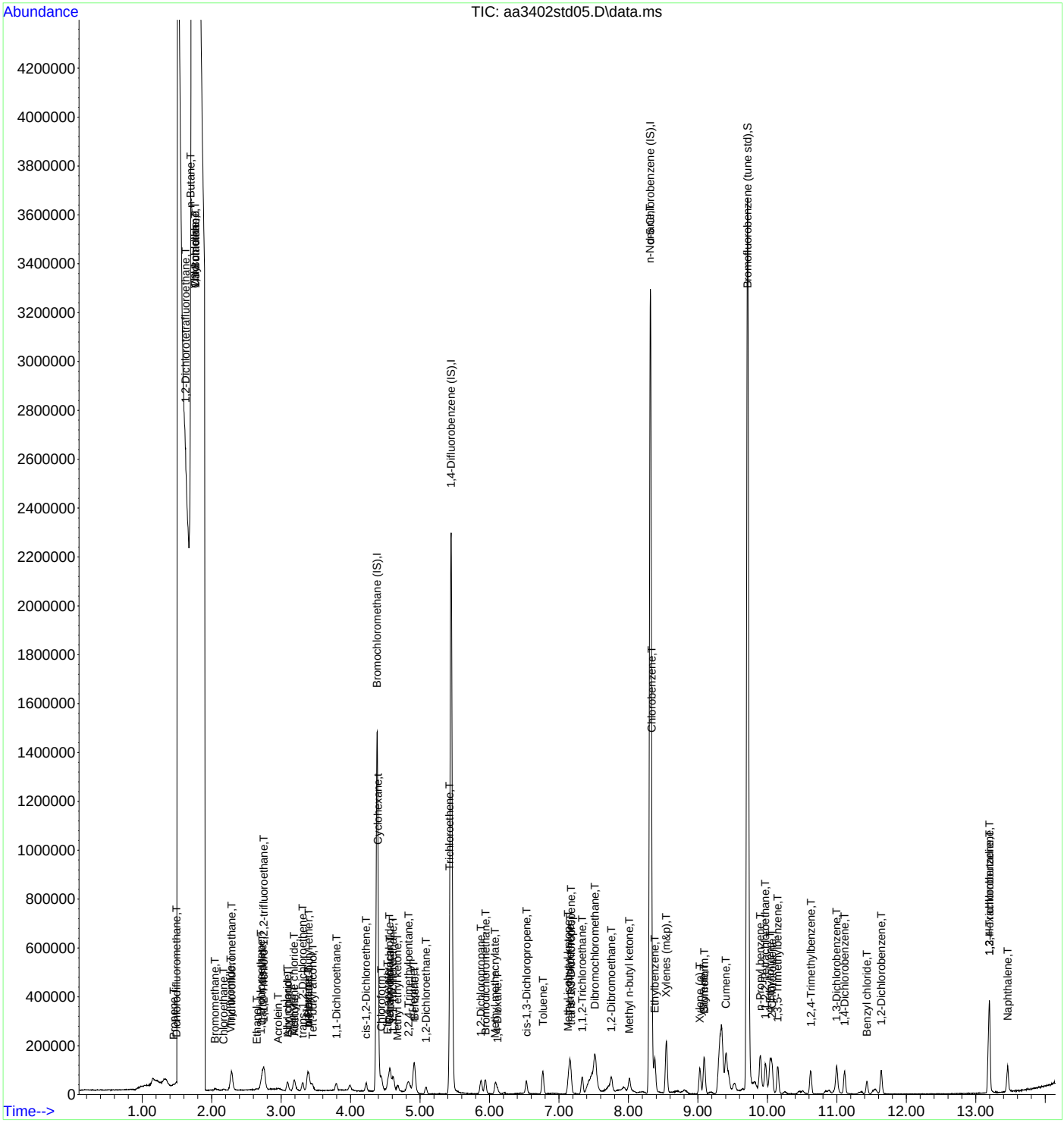
Quant Time: Aug 15 17:16:53 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:15:22 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.518 | 129 | 44365 | 0.22 | ppbV | | 98 |
| 53) 1,2-Dibromoethane | 7.753 | 107 | 35025 | 0.20 | ppbV | | 99 |
| 54) Methyl n-butyl ketone | 8.010 | 43 | 39036 | 0.17 | ppbV | | 94 |
| 56) n-Nonane | 8.312 | 43 | 51740 | 0.20 | ppbV | | 94 |
| 57) Chlorobenzene | 8.335 | 112 | 59186 | 0.26 | ppbV | # | 57 |
| 58) Ethylbenzene | 8.380 | 91 | 107190 | 0.26 | ppbV | | 98 |
| 59) Xylenes (m&p) | 8.544 | 91 | 160319 | 0.53 | ppbV | | 96 |
| 60) Xylene (o) | 9.026 | 91 | 77796 | 0.23 | ppbV | | 100 |
| 61) Styrene | 9.087 | 104 | 44277 | 0.20 | ppbV | | 97 |
| 62) Bromoform | 9.094 | 173 | 42204 | 0.25 | ppbV | | 99 |
| 63) Cumene | 9.402 | 105 | 96781 | 0.22 | ppbV | | 99 |
| 65) n-Propyl benzene | 9.898 | 91 | 133875 | 0.24 | ppbV | | 91 |
| 66) 1,1,2,2-Tetrachloroethane | 9.968 | 83 | 65139 | 0.26 | ppbV | | 99 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 105229 | 0.22 | ppbV | | 94 |
| 68) 2-Chlorotoluene | 10.068 | 91 | 88564 | 0.23 | ppbV | | 100 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 81154 | 0.21 | ppbV | | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.627 | 105 | 70043 | 0.19 | ppbV | | 100 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 67007 | 0.27 | ppbV | | 97 |
| 72) 1,4-Dichlorobenzene | 11.113 | 146 | 51408 | 0.21 | ppbV | | 98 |
| 73) Benzyl chloride | 11.431 | 91 | 48312 | 0.15 | ppbV | | 99 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 51755 | 0.22 | ppbV | | 97 |
| 75) 1,3-Hexachlorobutadiene | 13.196 | 225 | 55512 | 0.33 | ppbV | | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.196 | 180 | 54202 | 0.29 | ppbV | | 99 |
| 77) Naphthalene | 13.460 | 128 | 93896 | 0.24 | ppbV | | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3402std05.D
Acq On : 15 Aug 2023 11:15 am
Operator : jjw
Sample : 0.2 ppbv standard
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 15 17:16:53 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:15:22 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3403std04.D
Acq On : 15 Aug 2023 1:45 pm
Operator : jjw
Sample : 2.0 ppbv standard
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 16 09:55:55 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.393 | 130 | 541075 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.454 | 114 | 2325427 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 2787489 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 2277207 | 9.82 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.486 | 41 | 69587 | 1.87 | ppbV | 98 |
| 3) Dichlorodifluoromethane | 1.529 | 85 | 236252 | 1.73 | ppbV | 99 |
| 4) 1,2-Dichlorotetrafluor... | 1.650 | 85 | 358355 | 1.82 | ppbV | 100 |
| 5) n-Butane | 1.729 | 43 | 199054 | 2.26 | ppbV | 98 |
| 6) Chloromethane | 1.791 | 52 | 14658 | 2.32 | ppbV | 76 |
| 7) Vinyl chloride | 1.780 | 62 | 94169 | 1.83 | ppbV | 96 |
| 8) 1,3-Butadiene | 1.794 | 39 | 111420 | 2.12 | ppbV | 99 |
| 9) Bromomethane | 2.081 | 94 | 70289 | 1.63 | ppbV | 99 |
| 10) Chloroethane | 2.190 | 64 | 46371 | 1.66 | ppbV | 96 |
| 11) Vinyl bromide | 2.296 | 106 | 88069 | 1.62 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.313 | 101 | 378425 | 2.06 | ppbV | 100 |
| 13) Ethanol | 2.676 | 45 | 37762 | 1.74 | ppbV | 98 |
| 14) 1,1-Dichloroethene | 2.731 | 61 | 191611 | 1.70 | ppbV | 99 |
| 15) Carbon disulfide | 2.753 | 76 | 329694 | 1.78 | ppbV | 99 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.776 | 101 | 423345 | 2.33 | ppbV | 99 |
| 17) Acrolein | 2.985 | 56 | 36438 | 1.57 | ppbV | 98 |
| 18) Allyl chloride | 3.110 | 76 | 53539 | 1.77 | ppbV | 100 |
| 19) Isopropanol | 3.113 | 45 | 192840 | 1.54 | ppbV | 99 |
| 20) Methylene chloride | 3.203 | 49 | 104527 | 1.53 | ppbV | 97 |
| 21) Acetone | 3.213 | 43 | 174115 | 1.72 | ppbV | 100 |
| 22) trans-1,2-Dichloroethene | 3.325 | 61 | 182032 | 1.79 | ppbV | 100 |
| 23) n-Pentane | 3.406 | 43 | 280301 | 2.16 | ppbV | 97 |
| 24) n-Hexane | 3.403 | 57 | 408984 | 2.26 | ppbV | 97 |
| 25) Methyl tert-butyl ether | 3.409 | 73 | 620249 | 2.52 | ppbV | 91 |
| 26) Tert-butyl alcohol | 3.460 | 59 | 393824 | 2.49 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 246573 | 1.73 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.239 | 61 | 180663 | 1.83 | ppbV | 99 |
| 29) Cyclohexane | 4.409 | 56 | 332356 | 2.54 | ppbV | 100 |
| 30) Chloroform | 4.454 | 83 | 328798 | 1.88 | ppbV | 100 |
| 31) Ethyl acetate | 4.544 | 61 | 53660 | 1.93 | ppbV | 98 |
| 32) Carbon tetrachloride | 4.573 | 117 | 526172 | 2.51 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.576 | 42 | 193630 | 1.97 | ppbV | 100 |
| 34) 1,1,1-Trichloroethane | 4.624 | 97 | 467891 | 2.48 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.685 | 43 | 292932 | 1.87 | ppbV | 98 |
| 36) n-Heptane | 4.917 | 43 | 476323 | 2.63 | ppbV | 99 |
| 37) Benzene | 4.933 | 78 | 499517 | 2.00 | ppbV | 99 |
| 38) 1,2-Dichloroethane | 5.094 | 62 | 212238 | 1.90 | ppbV | 100 |
| 40) Trichloroethene | 5.435 | 130 | 214306 | 1.82 | ppbV | 99 |
| 41) 2,2,4-Trimethylpentane | 4.837 | 57 | 650366 | 2.21 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 232645 | 2.19 | ppbV | 99 |
| 43) Bromodichloromethane | 5.946 | 83 | 402522 | 2.18 | ppbV | 98 |
| 44) Methyl methacrylate | 6.091 | 41 | 304586 | 2.23 | ppbV | 100 |
| 45) 1,4-Dioxane | 6.113 | 88 | 156518 | 2.39 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 346212 | 2.11 | ppbV | 100 |
| 47) Toluene | 6.772 | 91 | 889263 | 2.39 | ppbV | 98 |
| 48) Methyl isobutyl ketone | 7.136 | 43 | 688572 | 2.56 | ppbV | 99 |
| 49) Tetrachloroethene | 7.161 | 166 | 408926 | 2.44 | ppbV | 99 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 359255 | 2.22 | ppbV | 99 |
| 51) 1,1,2-Trichloroethane | 7.338 | 97 | 292415 | 2.23 | ppbV | 99 |

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3403std04.D
Acq On : 15 Aug 2023 1:45 pm
Operator : jjw
Sample : 2.0 ppbv standard
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

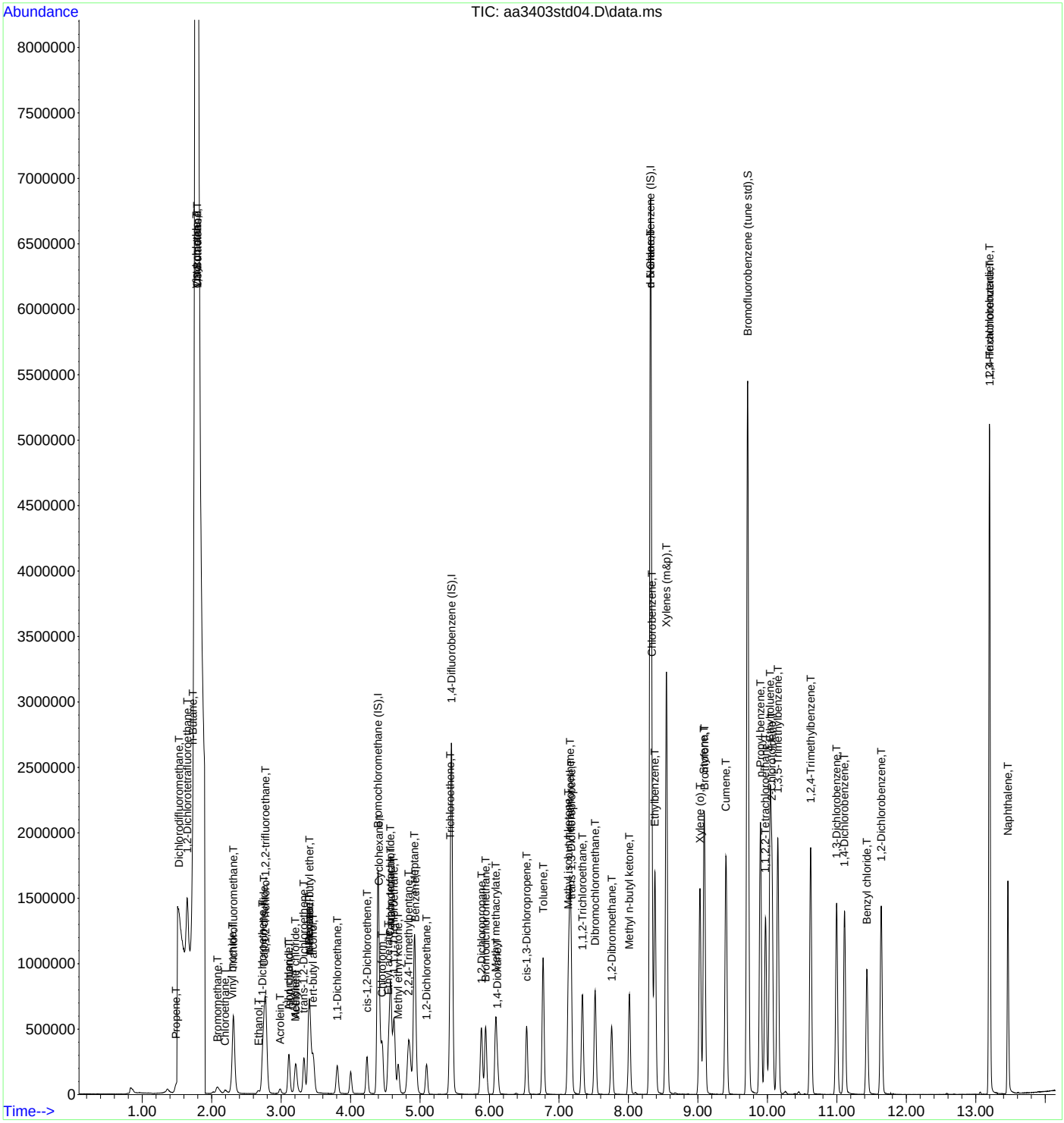
Quant Time: Aug 16 09:55:55 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 504182 | 2.30 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 421042 | 2.19 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.013 | 43 | 615992 | 2.44 | ppbV | 99 |
| 56) n-Nonane | 8.319 | 43 | 913232 | 2.68 | ppbV | 98 |
| 57) Chlorobenzene | 8.338 | 112 | 707397 | 2.32 | ppbV | 96 |
| 58) Ethylbenzene | 8.380 | 91 | 1456927 | 2.58 | ppbV | 100 |
| 59) Xylenes (m&p) | 8.547 | 91 | 2222904 | 5.46 | ppbV | 99 |
| 60) Xylene (o) | 9.029 | 91 | 1151590 | 2.55 | ppbV | 99 |
| 61) Styrene | 9.087 | 104 | 755721 | 2.52 | ppbV | 98 |
| 62) Bromoform | 9.097 | 173 | 549148 | 2.37 | ppbV | 100 |
| 63) Cumene | 9.402 | 105 | 1536381 | 2.61 | ppbV | 99 |
| 65) n-Propyl benzene | 9.901 | 91 | 2045481 | 2.67 | ppbV | 99 |
| 66) 1,1,2,2-Tetrachloroethane | 9.971 | 83 | 874245 | 2.55 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 1647910 | 2.60 | ppbV | 99 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 1319338 | 2.53 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.151 | 105 | 1352228 | 2.64 | ppbV | 100 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 1317527 | 2.59 | ppbV | 99 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 732133 | 2.17 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 692835 | 2.14 | ppbV | 99 |
| 73) Benzyl chloride | 11.431 | 91 | 873022 | 1.97 | ppbV | 99 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 730471 | 2.29 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.196 | 225 | 530064 | 2.32 | ppbV | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 518457 | 2.07 | ppbV | 100 |
| 77) Naphthalene | 13.463 | 128 | 1018158 | 1.97 | ppbV | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3403std04.D
Acq On : 15 Aug 2023 1:45 pm
Operator : jjw
Sample : 2.0 ppbv standard
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 16 09:55:55 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3404std03.D
Acq On : 15 Aug 2023 1:09 pm
Operator : jjw
Sample : 10 ppbv standard
Misc : EB0103704
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 16 09:54:13 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.396 | 130 | 530723 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 2268530 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 2737620 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.718 | 95 | 2240242 | 9.84 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.492 | 41 | 375623 | 10.28 | ppbV | 100 |
| 3) Dichlorodifluoromethane | 1.529 | 85 | 1361127 | 10.15 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.650 | 85 | 1649087 | 8.55 | ppbV | 100 |
| 5) n-Butane | 1.732 | 43 | 929570 | 10.75 | ppbV | 98 |
| 6) Chloromethane | 1.794 | 52 | 69017 | 11.11 | ppbV | 100 |
| 7) Vinyl chloride | 1.784 | 62 | 537570 | 10.66 | ppbV | 100 |
| 8) 1,3-Butadiene | 1.794 | 39 | 527528 | 10.23 | ppbV | 100 |
| 9) Bromomethane | 2.084 | 94 | 414507 | 9.79 | ppbV | 100 |
| 10) Chloroethane | 2.197 | 64 | 294705 | 10.74 | ppbV | 100 |
| 11) Vinyl bromide | 2.297 | 106 | 529947 | 9.94 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.313 | 101 | 1803210 | 9.99 | ppbV | 100 |
| 13) Ethanol | 2.670 | 45 | 178190 | 8.39 | ppbV | 100 |
| 14) 1,1-Dichloroethene | 2.734 | 61 | 1166579 | 10.54 | ppbV | 100 |
| 15) Carbon disulfide | 2.753 | 76 | 2000133 | 10.99 | ppbV | 100 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.779 | 101 | 1623708 | 9.11 | ppbV | 100 |
| 17) Acrolein | 2.988 | 56 | 228259 | 10.01 | ppbV | 100 |
| 18) Allyl chloride | 3.113 | 76 | 322565 | 10.86 | ppbV | 100 |
| 19) Isopropanol | 3.113 | 45 | 1070426 | 8.72 | ppbV | 100 |
| 20) Methylene chloride | 3.203 | 49 | 607018 | 9.06 | ppbV | 100 |
| 21) Acetone | 3.213 | 43 | 1046415 | 10.51 | ppbV | 100 |
| 22) trans-1,2-Dichloroethene | 3.329 | 61 | 1103133 | 11.06 | ppbV | 100 |
| 23) n-Pentane | 3.409 | 43 | 1158219 | 9.10 | ppbV | 100 |
| 24) n-Hexane | 3.406 | 57 | 1757143 | 9.89 | ppbV | 100 |
| 25) Methyl tert-butyl ether | 3.412 | 73 | 2372793 | 9.82 | ppbV | 100 |
| 26) Tert-butyl alcohol | 3.467 | 59 | 1587668 | 10.21 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.811 | 63 | 1366393 | 9.76 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.235 | 61 | 1021823 | 10.55 | ppbV | 100 |
| 29) Cyclohexane | 4.415 | 56 | 1253558 | 9.76 | ppbV | 100 |
| 30) Chloroform | 4.457 | 83 | 1736397 | 10.14 | ppbV | 100 |
| 31) Ethyl acetate | 4.544 | 61 | 272622 | 10.00 | ppbV | 100 |
| 32) Carbon tetrachloride | 4.579 | 117 | 1958808 | 9.54 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.576 | 42 | 1006885 | 10.46 | ppbV | 100 |
| 34) 1,1,1-Trichloroethane | 4.628 | 97 | 1724281 | 9.33 | ppbV | 100 |
| 35) Methyl ethyl ketone | 4.686 | 43 | 1590191 | 10.35 | ppbV | 100 |
| 36) n-Heptane | 4.920 | 43 | 1866612 | 10.50 | ppbV | 100 |
| 37) Benzene | 4.933 | 78 | 2414826 | 9.86 | ppbV | 100 |
| 38) 1,2-Dichloroethane | 5.094 | 62 | 1127298 | 10.27 | ppbV | 100 |
| 40) Trichloroethene | 5.435 | 130 | 1079500 | 9.38 | ppbV | 100 |
| 41) 2,2,4-Trimethylpentane | 4.846 | 57 | 2899901 | 10.09 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 1067336 | 10.31 | ppbV | 100 |
| 43) Bromodichloromethane | 5.946 | 83 | 1979492 | 10.98 | ppbV | 100 |
| 44) Methyl methacrylate | 6.091 | 41 | 1493887 | 11.22 | ppbV | 100 |
| 45) 1,4-Dioxane | 6.113 | 88 | 728333 | 11.41 | ppbV | 100 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 1744754 | 10.91 | ppbV | 100 |
| 47) Toluene | 6.772 | 91 | 3957437 | 10.88 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.136 | 43 | 2863824 | 10.90 | ppbV | 100 |
| 49) Tetrachloroethene | 7.161 | 166 | 1772265 | 10.84 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 1834063 | 11.63 | ppbV | 100 |
| 51) 1,1,2-Trichloroethane | 7.338 | 97 | 1345722 | 10.50 | ppbV | 100 |

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3404std03.D
Acq On : 15 Aug 2023 1:09 pm
Operator : jjw
Sample : 10 ppbv standard
Misc : EB0103704
ALS Vial : 4 Sample Multiplier: 1

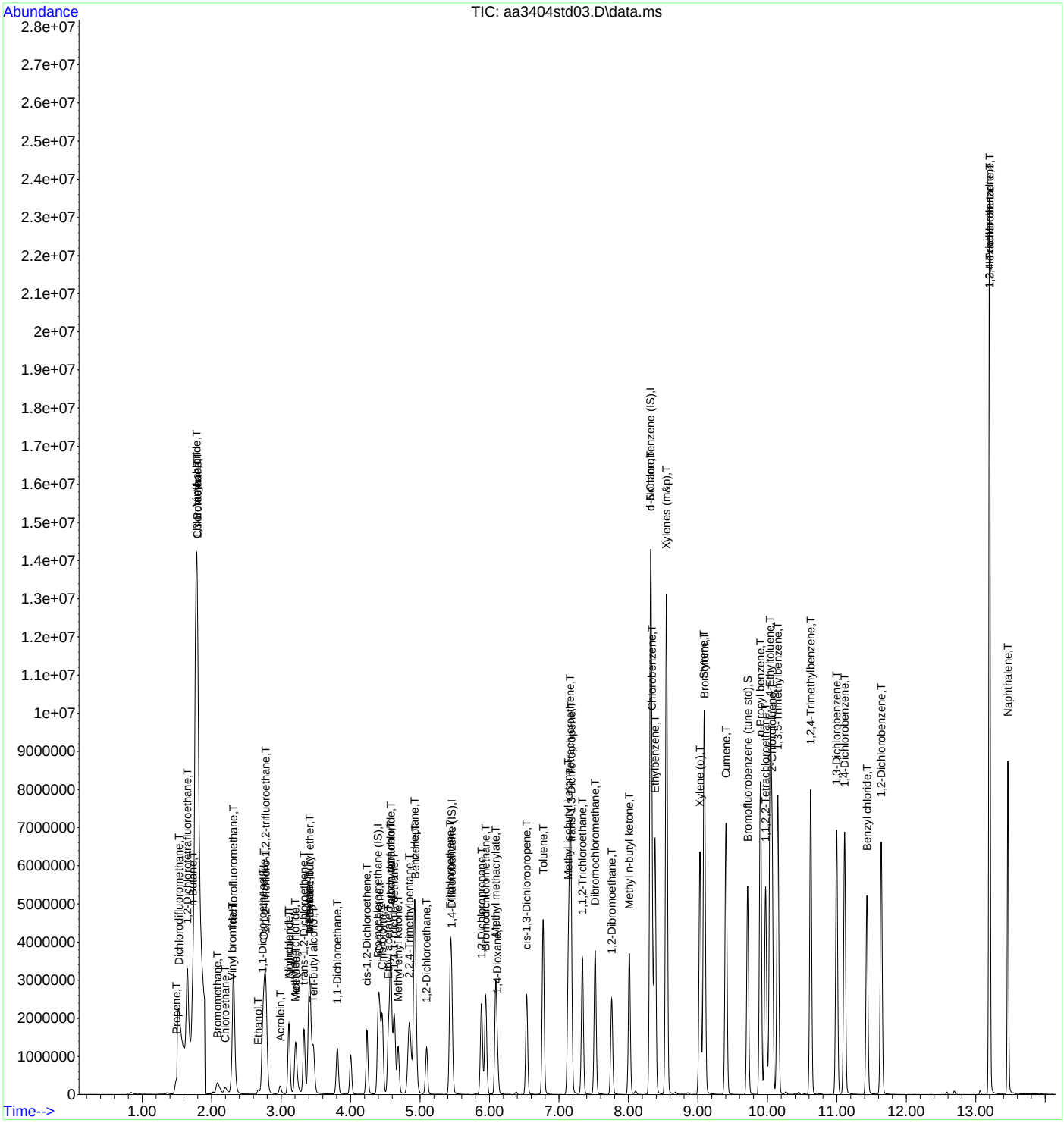
Quant Time: Aug 16 09:54:13 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 2376959 | 11.11 | ppbV | 100 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 2045235 | 10.91 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.013 | 43 | 2912111 | 11.83 | ppbV | 100 |
| 56) n-Nonane | 8.319 | 43 | 3534946 | 10.55 | ppbV | 100 |
| 57) Chlorobenzene | 8.338 | 112 | 3126708 | 10.43 | ppbV | 100 |
| 58) Ethylbenzene | 8.383 | 91 | 5864430 | 10.58 | ppbV | 100 |
| 59) Xylenes (m&p) | 8.547 | 91 | 8881004 | 22.23 | ppbV | 100 |
| 60) Xylene (o) | 9.029 | 91 | 4642943 | 10.46 | ppbV | 100 |
| 61) Styrene | 9.087 | 104 | 3380250 | 11.48 | ppbV | 100 |
| 62) Bromoform | 9.097 | 173 | 2491890 | 10.95 | ppbV | 100 |
| 63) Cumene | 9.406 | 105 | 5984852 | 10.35 | ppbV | 100 |
| 65) n-Propyl benzene | 9.901 | 91 | 8177614 | 10.85 | ppbV | 100 |
| 66) 1,1,2,2-Tetrachloroethane | 9.975 | 83 | 3547036 | 10.55 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 6733965 | 10.84 | ppbV | 100 |
| 68) 2-Chlorotoluene | 10.068 | 91 | 5305123 | 10.37 | ppbV | 100 |
| 69) 1,3,5-Trimethylbenzene | 10.152 | 105 | 5348299 | 10.64 | ppbV | 100 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 5481212 | 10.99 | ppbV | 100 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 3421975 | 10.35 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.113 | 146 | 3376978 | 10.63 | ppbV | 100 |
| 73) Benzyl chloride | 11.434 | 91 | 4675578 | 10.73 | ppbV | 100 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 3254751 | 10.40 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.200 | 225 | 2216471 | 9.88 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 2590387 | 10.53 | ppbV | 100 |
| 77) Naphthalene | 13.463 | 128 | 5257288 | 10.34 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3404std03.D
Acq On : 15 Aug 2023 1:09 pm
Operator : jjw
Sample : 10 ppbv standard
Misc : EB0103704
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 16 09:54:13 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3405std02.D
Acq On : 15 Aug 2023 3:12 pm
Operator : jjw
Sample : 20 ppbv standard
Misc : EB0103704
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 16 09:53:17 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.399 | 130 | 499473 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 2278768 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 2812211 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 2375515 | 10.15 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.499 | 41 | 770871 | 22.41 | ppbV | 99 |
| 3) Dichlorodifluoromethane | 1.533 | 85 | 2795748 | 22.15 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.657 | 85 | 3247750 | 17.89 | ppbV | 100 |
| 5) n-Butane | 1.736 | 43 | 1882829 | 23.14 | ppbV | 99 |
| 6) Chloromethane | 1.798 | 52 | 142733 | 24.42 | ppbV | 98 |
| 7) Vinyl chloride | 1.787 | 62 | 1083251 | 22.82 | ppbV | 99 |
| 8) 1,3-Butadiene | 1.801 | 39 | 1052739 | 21.69 | ppbV | 99 |
| 9) Bromomethane | 2.091 | 94 | 850633 | 21.34 | ppbV | 100 |
| 10) Chloroethane | 2.200 | 64 | 600686 | 23.27 | ppbV | 98 |
| 11) Vinyl bromide | 2.300 | 106 | 1097918 | 21.89 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.319 | 101 | 3715497 | 21.88 | ppbV | 100 |
| 13) Ethanol | 2.673 | 45 | 357760 | 17.89 | ppbV | 99 |
| 14) 1,1-Dichloroethene | 2.737 | 61 | 2414830 | 23.18 | ppbV | 100 |
| 15) Carbon disulfide | 2.756 | 76 | 3964880 | 23.15 | ppbV | 99 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.779 | 101 | 3255314 | 19.40 | ppbV | 100 |
| 17) Acrolein | 2.991 | 56 | 446408 | 20.80 | ppbV | 98 |
| 18) Allyl chloride | 3.113 | 76 | 664077 | 23.76 | ppbV | 100 |
| 19) Isopropanol | 3.113 | 45 | 2200207 | 19.06 | ppbV | 99 |
| 20) Methylene chloride | 3.207 | 49 | 1260244 | 19.99 | ppbV | 100 |
| 21) Acetone | 3.216 | 43 | 2038682 | 21.76 | ppbV | 100 |
| 22) trans-1,2-Dichloroethene | 3.332 | 61 | 2308104 | 24.59 | ppbV | 99 |
| 23) n-Pentane | 3.409 | 43 | 2302426 | 19.23 | ppbV | 99 |
| 24) n-Hexane | 3.412 | 57 | 3543404 | 21.18 | ppbV | 99 |
| 25) Methyl tert-butyl ether | 3.412 | 73 | 4774341 | 20.99 | ppbV | 99 |
| 26) Tert-butyl alcohol | 3.467 | 59 | 3269773 | 22.35 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.811 | 63 | 2864453 | 21.75 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.239 | 61 | 2160622 | 23.71 | ppbV | 100 |
| 29) Cyclohexane | 4.419 | 56 | 2552240 | 21.11 | ppbV | 100 |
| 30) Chloroform | 4.457 | 83 | 3608439 | 22.38 | ppbV | 99 |
| 31) Ethyl acetate | 4.544 | 61 | 573589 | 22.35 | ppbV | 98 |
| 32) Carbon tetrachloride | 4.579 | 117 | 3910518 | 20.23 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.576 | 42 | 2087668 | 23.05 | ppbV | 99 |
| 34) 1,1,1-Trichloroethane | 4.631 | 97 | 3456960 | 19.87 | ppbV | 100 |
| 35) Methyl ethyl ketone | 4.686 | 43 | 3340979 | 23.11 | ppbV | 100 |
| 36) n-Heptane | 4.920 | 43 | 3644916 | 21.78 | ppbV | 99 |
| 37) Benzene | 4.936 | 78 | 4942978 | 21.45 | ppbV | 99 |
| 38) 1,2-Dichloroethane | 5.097 | 62 | 2363649 | 22.89 | ppbV | 99 |
| 40) Trichloroethene | 5.435 | 130 | 2273330 | 19.66 | ppbV | 99 |
| 41) 2,2,4-Trimethylpentane | 4.846 | 57 | 5933707 | 20.56 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 2205432 | 21.21 | ppbV | 99 |
| 43) Bromodichloromethane | 5.946 | 83 | 4121290 | 22.75 | ppbV | 100 |
| 44) Methyl methacrylate | 6.091 | 41 | 3097965 | 23.17 | ppbV | 99 |
| 45) 1,4-Dioxane | 6.113 | 88 | 1493343 | 23.30 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.538 | 75 | 3649298 | 22.71 | ppbV | 100 |
| 47) Toluene | 6.772 | 91 | 7908022 | 21.65 | ppbV | 99 |
| 48) Methyl isobutyl ketone | 7.136 | 43 | 5805171 | 22.00 | ppbV | 99 |
| 49) Tetrachloroethene | 7.161 | 166 | 3535315 | 21.53 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 3830549 | 24.18 | ppbV | 98 |
| 51) 1,1,2-Trichloroethane | 7.338 | 97 | 2762664 | 21.45 | ppbV | 99 |

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3405std02.D
Acq On : 15 Aug 2023 3:12 pm
Operator : jjw
Sample : 20 ppbv standard
Misc : EB0103704
ALS Vial : 7 Sample Multiplier: 1

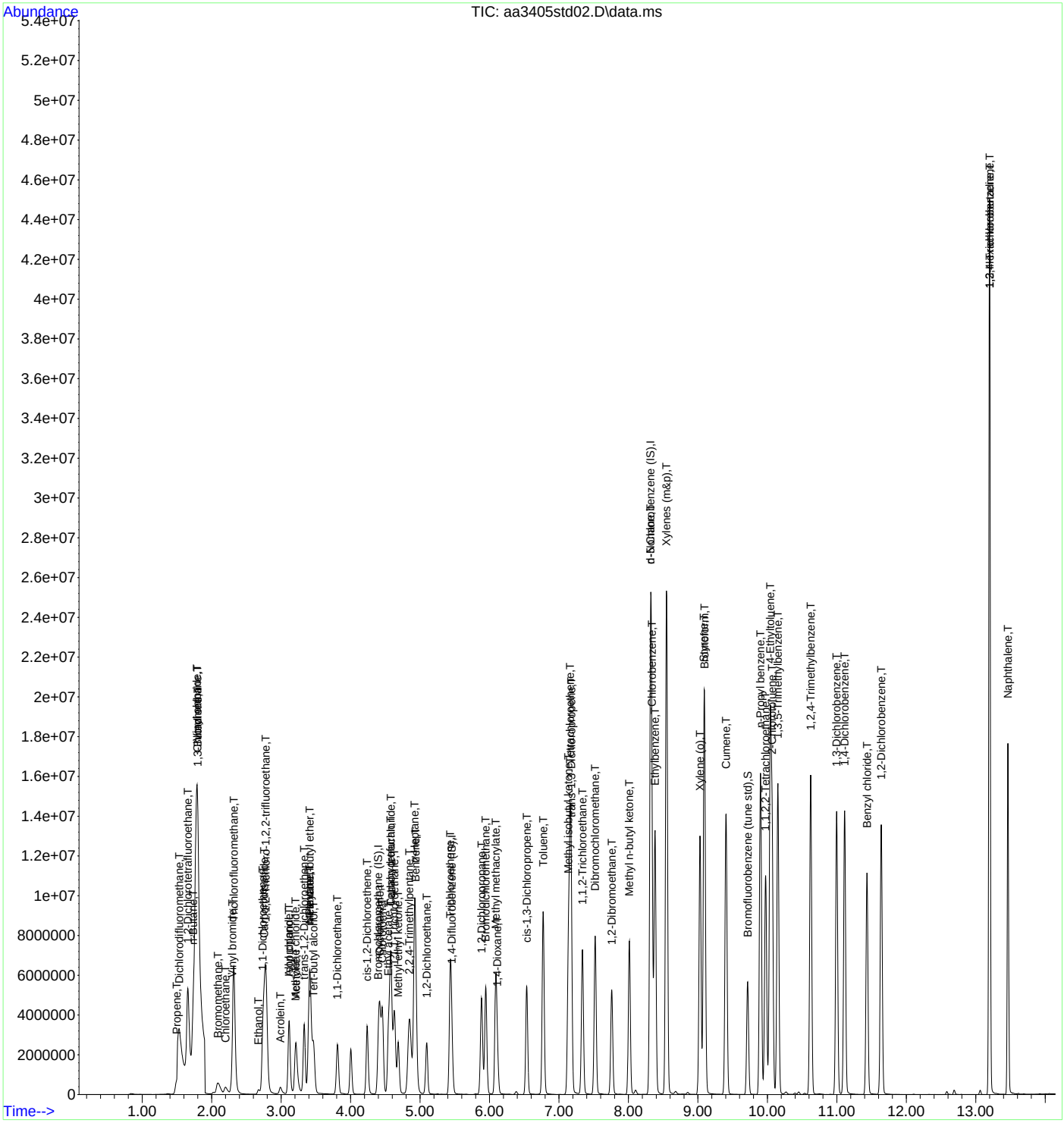
Quant Time: Aug 16 09:53:17 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 4920304 | 22.89 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 4277090 | 22.71 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.013 | 43 | 6056833 | 24.50 | ppbV | 99 |
| 56) n-Nonane | 8.319 | 43 | 7191778 | 20.90 | ppbV | 100 |
| 57) Chlorobenzene | 8.338 | 112 | 6300402 | 20.46 | ppbV | 99 |
| 58) Ethylbenzene | 8.383 | 91 | 11427551 | 20.06 | ppbV | 98 |
| 59) Xylenes (m&p) | 8.547 | 91 | 16612160 | 40.47 | ppbV | 96 |
| 60) Xylene (o) | 9.029 | 91 | 9308971 | 20.42 | ppbV | 99 |
| 61) Styrene | 9.087 | 104 | 6805349 | 22.50 | ppbV | 100 |
| 62) Bromoform | 9.097 | 173 | 5013505 | 21.45 | ppbV | 99 |
| 63) Cumene | 9.406 | 105 | 11708179 | 19.72 | ppbV | 98 |
| 65) n-Propyl benzene | 9.901 | 91 | 15630674 | 20.19 | ppbV | 97 |
| 66) 1,1,2,2-Tetrachloroethane | 9.975 | 83 | 7162257 | 20.73 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.042 | 105 | 13015117 | 20.39 | ppbV | 97 |
| 68) 2-Chlorotoluene | 10.068 | 91 | 10557525 | 20.10 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.152 | 105 | 10540320 | 20.40 | ppbV | 98 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 10891140 | 21.26 | ppbV | 98 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 6954730 | 20.48 | ppbV | 99 |
| 72) 1,4-Dichlorobenzene | 11.113 | 146 | 6870236 | 21.05 | ppbV | 99 |
| 73) Benzyl chloride | 11.434 | 91 | 9809727 | 21.92 | ppbV | 99 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 6519746 | 20.28 | ppbV | 99 |
| 75) 1,3-Hexachlorobutadiene | 13.200 | 225 | 4206699 | 18.25 | ppbV | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 5049468 | 19.98 | ppbV | 100 |
| 77) Naphthalene | 13.463 | 128 | 10176689 | 19.49 | ppbV | 98 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3405std02.D
Acq On : 15 Aug 2023 3:12 pm
Operator : jjw
Sample : 20 ppbv standard
Misc : EB0103704
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 16 09:53:17 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3406std01.D
Acq On : 15 Aug 2023 4:47 pm
Operator : jjw
Sample : 40 ppbv standard
Misc : EB0103704
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 16 09:52:28 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.406 | 130 | 487271 | 10.00 | ppbV | | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 2425798 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 2732166 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 2577792 | 11.34 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 1.512 | 41 | 1707516 | 50.87 | ppbV | | 99 |
| 3) Dichlorodifluoromethane | 1.536 | 85 | 5966633 | 48.46 | ppbV | | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.660 | 85 | 6899713 | 38.95 | ppbV | | 99 |
| 5) n-Butane | 1.739 | 43 | 3778324 | 47.60 | ppbV | | 100 |
| 6) Chloromethane | 1.798 | 52 | 321722 | 56.43 | ppbV | # | 1 |
| 7) Vinyl chloride | 1.791 | 62 | 2395758 | 51.74 | ppbV | | 99 |
| 8) 1,3-Butadiene | 1.801 | 39 | 2174685 | 45.93 | ppbV | | 97 |
| 9) Bromomethane | 2.097 | 94 | 1861404 | 47.86 | ppbV | | 100 |
| 10) Chloroethane | 2.200 | 64 | 1346794 | 53.48 | ppbV | | 100 |
| 11) Vinyl bromide | 2.300 | 106 | 2453541 | 50.15 | ppbV | | 100 |
| 12) Trichlorofluoromethane | 2.319 | 101 | 7717062 | 46.58 | ppbV | | 100 |
| 13) Ethanol | 2.673 | 45 | 877297 | 44.97 | ppbV | # | 88 |
| 14) 1,1-Dichloroethene | 2.737 | 61 | 4997972 | 49.17 | ppbV | | 100 |
| 15) Carbon disulfide | 2.763 | 76 | 8067769 | 48.28 | ppbV | | 99 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.782 | 101 | 6956660 | 42.50 | ppbV | | 100 |
| 17) Acrolein | 2.994 | 56 | 951140 | 45.44 | ppbV | | 98 |
| 18) Allyl chloride | 3.116 | 76 | 1369570 | 50.24 | ppbV | | 100 |
| 19) Isopropanol | 3.116 | 45 | 4505255 | 40.00 | ppbV | | 98 |
| 20) Methylene chloride | 3.206 | 49 | 2810050 | 45.70 | ppbV | | 100 |
| 21) Acetone | 3.222 | 43 | 4077485 | 44.60 | ppbV | | 100 |
| 22) trans-1,2-Dichloroethene | 3.332 | 61 | 4976980 | 54.35 | ppbV | | 98 |
| 23) n-Pentane | 3.412 | 43 | 5051897 | 43.24 | ppbV | | 99 |
| 24) n-Hexane | 3.412 | 57 | 7730831 | 47.37 | ppbV | | 99 |
| 25) Methyl tert-butyl ether | 3.412 | 73 | 10208419 | 46.00 | ppbV | | 97 |
| 26) Tert-butyl alcohol | 3.467 | 59 | 7080253 | 49.62 | ppbV | | 100 |
| 27) 1,1-Dichloroethane | 3.814 | 63 | 6120009 | 47.63 | ppbV | | 99 |
| 28) cis-1,2-Dichloroethene | 4.238 | 61 | 4615777 | 51.93 | ppbV | | 100 |
| 29) Cyclohexane | 4.419 | 56 | 5431445 | 46.06 | ppbV | | 100 |
| 30) Chloroform | 4.457 | 83 | 7598750 | 48.31 | ppbV | | 100 |
| 31) Ethyl acetate | 4.547 | 61 | 1228122 | 49.05 | ppbV | | 99 |
| 32) Carbon tetrachloride | 4.583 | 117 | 8430867 | 44.71 | ppbV | | 100 |
| 33) Tetrahydrofuran | 4.576 | 42 | 4398645 | 49.79 | ppbV | | 99 |
| 34) 1,1,1-Trichloroethane | 4.631 | 97 | 7362144 | 43.37 | ppbV | | 100 |
| 35) Methyl ethyl ketone | 4.685 | 43 | 7160721 | 50.77 | ppbV | | 99 |
| 36) n-Heptane | 4.920 | 43 | 7185919 | 44.02 | ppbV | | 100 |
| 37) Benzene | 4.936 | 78 | 10281932 | 45.73 | ppbV | | 98 |
| 38) 1,2-Dichloroethane | 5.097 | 62 | 5067261 | 50.30 | ppbV | | 99 |
| 40) Trichloroethene | 5.438 | 130 | 4836394 | 39.29 | ppbV | | 100 |
| 41) 2,2,4-Trimethylpentane | 4.849 | 57 | 13336894 | 43.41 | ppbV | | 98 |
| 42) 1,2-Dichloropropane | 5.888 | 63 | 4560844 | 41.21 | ppbV | | 99 |
| 43) Bromodichloromethane | 5.949 | 83 | 8574056 | 44.47 | ppbV | | 99 |
| 44) Methyl methacrylate | 6.090 | 41 | 6283616 | 44.15 | ppbV | | 100 |
| 45) 1,4-Dioxane | 6.116 | 88 | 3065935 | 44.93 | ppbV | | 99 |
| 46) cis-1,3-Dichloropropene | 6.537 | 75 | 7375814 | 43.13 | ppbV | | 99 |
| 47) Toluene | 6.772 | 91 | 14907224 | 38.33 | ppbV | | 96 |
| 48) Methyl isobutyl ketone | 7.135 | 43 | 11479037 | 40.87 | ppbV | | 98 |
| 49) Tetrachloroethene | 7.164 | 166 | 6808224 | 38.95 | ppbV | | 100 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 7633904 | 45.27 | ppbV | | 99 |
| 51) 1,1,2-Trichloroethane | 7.338 | 97 | 5566488 | 40.60 | ppbV | | 99 |

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3406std01.D
Acq On : 15 Aug 2023 4:47 pm
Operator : jjw
Sample : 40 ppbv standard
Misc : EB0103704
ALS Vial : 8 Sample Multiplier: 1

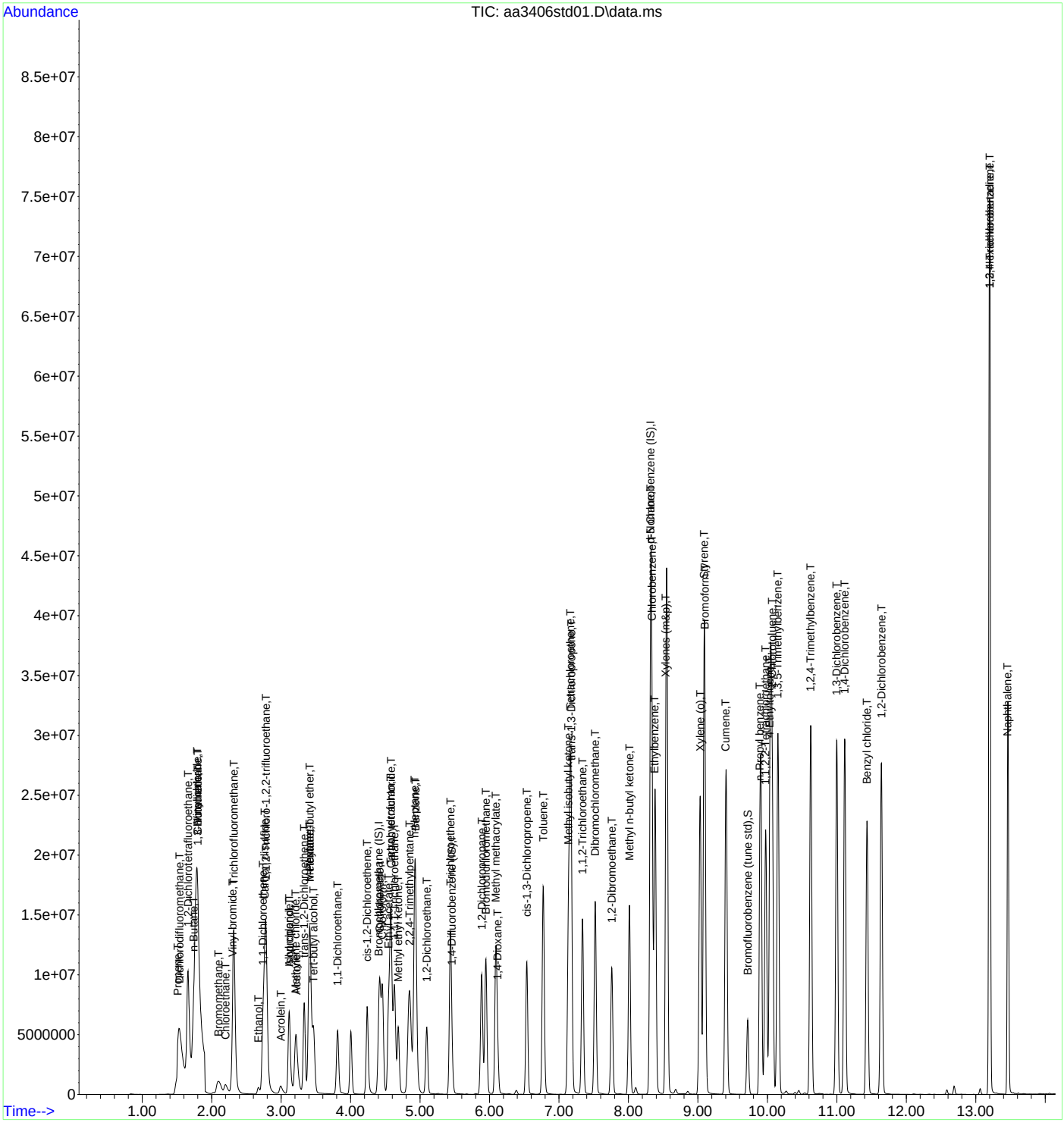
Quant Time: Aug 16 09:52:28 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 9886675 | 43.20 | ppbV | | 99 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 8609104 | 42.93 | ppbV | | 100 |
| 54) Methyl n-butyl ketone | 8.013 | 43 | 12284613 | 46.68 | ppbV | | 97 |
| 56) n-Nonane | 8.319 | 43 | 14182361 | 42.42 | ppbV | | 98 |
| 57) Chlorobenzene | 8.338 | 112 | 12196934 | 40.77 | ppbV | | 96 |
| 58) Ethylbenzene | 8.377 | 91 | 20355846 | 36.79 | ppbV | | 90 |
| 59) Xylenes (m&p) | 8.537 | 91 | 24199756 | 60.68 | ppbV | # | 74 |
| 60) Xylene (o) | 9.033 | 91 | 17688374 | 39.94 | ppbV | | 95 |
| 61) Styrene | 9.090 | 104 | 13186398 | 44.87 | ppbV | | 97 |
| 62) Bromoform | 9.100 | 173 | 9710978 | 42.77 | ppbV | | 98 |
| 63) Cumene | 9.399 | 105 | 21140296 | 36.64 | ppbV | | 91 |
| 65) n-Propyl benzene | 9.891 | 91 | 24008413 | 31.92 | ppbV | # | 80 |
| 66) 1,1,2,2-Tetrachloroethane | 9.975 | 83 | 14100555 | 42.01 | ppbV | | 97 |
| 67) 4-Ethyltoluene | 10.032 | 105 | 21664037 | 34.94 | ppbV | # | 84 |
| 68) 2-Chlorotoluene | 10.068 | 91 | 20299207 | 39.78 | ppbV | | 97 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 19633662 | 39.12 | ppbV | | 92 |
| 70) 1,2,4-Trimethylbenzene | 10.621 | 105 | 20118523 | 40.43 | ppbV | | 91 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 14030394 | 42.52 | ppbV | | 97 |
| 72) 1,4-Dichlorobenzene | 11.113 | 146 | 13876826 | 43.76 | ppbV | | 97 |
| 73) Benzyl chloride | 11.431 | 91 | 19339251 | 44.49 | ppbV | | 93 |
| 74) 1,2-Dichlorobenzene | 11.643 | 146 | 13190929 | 42.23 | ppbV | | 97 |
| 75) 1,3-Hexachlorobutadiene | 13.200 | 225 | 7629643 | 34.08 | ppbV | | 97 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 9392234 | 38.25 | ppbV | | 99 |
| 77) Naphthalene | 13.457 | 128 | 15939992 | 31.42 | ppbV | # | 83 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3406std01.D
Acq On : 15 Aug 2023 4:47 pm
Operator : jjw
Sample : 40 ppbv standard
Misc : EB0103704
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 16 09:52:28 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Initial Calibration Data Summary Report

**Initial Calibration Curve:** 10/10/2023 **Method ID:** 231009.M
**Instrument:** AA

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4131BFB] | 10/10/2023 10:13 |
| 0.2 PPBV STD [AA4132STD05] | 10/10/2023 10:40 |
| 2 PPBV STD [AA4133STD04] | 10/10/2023 11:46 |
| 10 PPBV STD [AA4134STD03] | 10/10/2023 12:21 |
| 20 PPBV STD [AA4135STD02] | 10/10/2023 12:55 |
| 40 PPBV STD [AA4136STD01] | 10/10/2023 14:05 |
| 10 PPBV ICVSS [AA4137ICVSS] | 10/10/2023 16:48 |

| | Parameter | RRF 0.2ppbv | RRF 2ppbv | RRF 10ppbv | RRF 20ppbv | RRF 40ppbv | Avg ppbv | % RSD |
|---|---|---|---|---|---|---|---|---|
| 1) | Bromochloromethane | ----------ISTD---------- | | | | | | |
| 3) | Dichlorodifluoromethane | 1.9 | 2.0 | 2.2 | 2.4 | 2.6 | 2.2 | 13 |
| 4) | 1,2-Dichlorotetrafluoroethane | 3.2 | 3.4 | 2.9 | 3.2 | 3.5 | 3.2 | 6.1 |
| 6) | Chloromethane | 0.085 | 0.098 | 0.11 | 0.12 | 0.14 | 0.11 | 18 |
| 7) | Vinyl chloride | 0.70 | 0.84 | 0.91 | 0.98 | 1.1 | 0.91 | 17 |
| 8) | 1,3-Butadiene | 0.87 | 0.82 | 0.80 | 0.84 | 0.91 | 0.85 | 4.8 |
| 9) | Bromomethane | 0.49 | 0.70 | 0.75 | 0.81 | 0.91 | 0.73 | 22 |
| 10) | Chloroethane | 0.24 | 0.45 | 0.50 | 0.55 | 0.63 | 0.48 | 31 |
| 11) | Vinyl bromide | 0.53 | 0.86 | 0.92 | 1.0 | 1.1 | 0.90 | 26 |
| 12) | Trichlorofluoromethane | 2.6 | 2.6 | 2.7 | 2.9 | 3.2 | 2.8 | 8.9 |
| 14) | 1,1-Dichloroethene | 1.4 | 1.5 | 1.9 | 2.1 | 2.3 | 1.9 | 21 |
| 15) | Carbon disulfide | 2.4 | 2.6 | 3.2 | 3.4 | 3.7 | 3.1 | 18 |
| 16) | 1,1,2-Trichloro-1,2,2-trifluoroethane | 2.8 | 3.0 | 2.5 | 2.7 | 3.0 | 2.8 | 7.4 |
| 17) | Acrolein | 0.39 | 0.33 | 0.43 | 0.45 | 0.49 | 0.42 | 15 |
| 18) | Allyl Chloride | 0.35 | 0.42 | 0.54 | 0.58 | 0.62 | 0.50 | 23 |
| 19) | Isopropanol | 1.6 | 1.7 | 2.1 | 2.3 | 2.4 | 2.0 | 17 |
| 20) | Methylene chloride | 1.7 | 0.97 | 1.0 | 1.1 | 1.3 | 1.2 | 25 |
| 21) | Acetone | 1.5 | 1.2 | 1.5 | 1.6 | 1.7 | 1.5 | 12 |
| 22) | 1,2-Dichloroethene (trans) | 1.4 | 1.3 | 1.8 | 2.0 | 2.2 | 1.7 | 21 |
| 24) | n-Hexane | 3.1 | 3.0 | 3.0 | 3.1 | 3.5 | 3.2 | 7.1 |
| 25) | Methyl tert-butyl ether | 3.5 | 4.1 | 3.6 | 3.9 | 4.3 | 3.9 | 8.5 |
| 26) | Tert-butyl alcohol | 2.3 | 2.5 | 2.5 | 2.7 | 3.0 | 2.6 | 11 |
| 27) | 1,1-Dichloroethane | 2.2 | 2.0 | 2.2 | 2.4 | 2.7 | 2.3 | 12 |
| 28) | 1,2-Dichloroethene (cis) | 1.3 | 1.4 | 1.7 | 1.8 | 2.0 | 1.6 | 18 |
| 29) | Cyclohexane | 2.1 | 2.2 | 2.1 | 2.2 | 2.4 | 2.2 | 6.8 |
| 30) | Chloroform | 2.2 | 2.3 | 2.6 | 2.9 | 3.2 | 2.7 | 15 |
| 32) | Carbon tetrachloride | 3.0 | 3.1 | 3.0 | 3.2 | 3.5 | 3.2 | 6.9 |
| 33) | Tetrahydrofuran | 1.5 | 1.3 | 1.5 | 1.6 | 1.7 | 1.5 | 9.4 |
| 34) | 1,1,1-Trichloroethane | 2.5 | 2.7 | 2.7 | 2.9 | 3.1 | 2.8 | 8.7 |
| 35) | Methyl ethyl ketone | 2.3 | 2.1 | 2.4 | 2.6 | 2.9 | 2.4 | 13 |
| 36) | n-Heptane | 2.6 | 2.6 | 2.9 | 2.9 | 2.9 | 2.8 | 6.9 |
| 37) | Benzene | 3.6 | 3.8 | 3.8 | 4.1 | 4.5 | 4.0 | 9.3 |
| 38) | 1,2-Dichloroethane | 1.3 | 1.5 | 1.7 | 1.8 | 2.0 | 1.7 | 17 |
| 39) | 1,4-Difluorobenzene | ----------ISTD---------- | | | | | | |
| 40) | Trichloroethene | 0.38 | 0.47 | 0.44 | 0.45 | 0.47 | 0.44 | 8.1 |
| 41) | 2,2,4-Trimethylpentane | 1.2 | 1.5 | 1.2 | 1.3 | 1.3 | 1.3 | 9.8 |
| 42) | 1,2-Dichloropropane | 0.38 | 0.40 | 0.39 | 0.39 | 0.39 | 0.39 | 2.1 |
| 43) | Bromodichloromethane | 0.59 | 0.68 | 0.66 | 0.68 | 0.68 | 0.66 | 6.0 |

***% RSD (Relative Standard Deviation) must be within 30%**
****An exception is made for 2 compounds that must be within 40%**
**RRF - Relative Response Factor**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Initial Calibration Data Summary Report

**Initial Calibration Curve:** 10/10/2023 **Method ID:** 231009.M

**Instrument:** AA

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4131BFB] | 10/10/2023 10:13 |
| 0.2 PPBV STD [AA4132STD05] | 10/10/2023 10:40 |
| 2 PPBV STD [AA4133STD04] | 10/10/2023 11:46 |
| 10 PPBV STD [AA4134STD03] | 10/10/2023 12:21 |
| 20 PPBV STD [AA4135STD02] | 10/10/2023 12:55 |
| 40 PPBV STD [AA4136STD01] | 10/10/2023 14:05 |
| 10 PPBV ICVSS [AA4137ICVSS] | 10/10/2023 16:48 |

| | Parameter | RRF 0.2ppbv | RRF 2ppbv | RRF 10ppbv | RRF 20ppbv | RRF 40ppbv | Avg ppbv | % RSD |
|---|---|---|---|---|---|---|---|---|
| 44) | Methyl methacrylate | 0.42 | 0.46 | 0.50 | 0.50 | 0.48 | 0.47 | 6.8 |
| 45) | 1,4-Dioxane | 0.21 | 0.24 | 0.24 | 0.25 | 0.25 | 0.24 | 5.9 |
| 46) | 1,3-Dichloropropene (cis) | 0.55 | 0.59 | 0.63 | 0.63 | 0.62 | 0.60 | 5.6 |
| 47) | Toluene | 1.2 | 1.5 | 1.5 | 1.5 | 1.4 | 1.4 | 7.6 |
| 48) | Methyl isobutyl ketone | 0.76 | 0.92 | 0.95 | 0.93 | 0.86 | 0.88 | 8.6 |
| 49) | Tetrachloroethene | 0.53 | 0.61 | 0.63 | 0.64 | 0.61 | 0.61 | 7.1 |
| 50) | 1,3-Dichloropropene (trans) | 0.46 | 0.57 | 0.63 | 0.65 | 0.62 | 0.59 | 13 |
| 51) | 1,1,2-Trichloroethane | 0.40 | 0.48 | 0.49 | 0.51 | 0.50 | 0.48 | 9.3 |
| 52) | Dibromochloromethane | 0.64 | 0.78 | 0.83 | 0.86 | 0.85 | 0.79 | 12 |
| 53) | 1,2-Dibromoethane | 0.54 | 0.67 | 0.73 | 0.75 | 0.74 | 0.69 | 13 |
| 54) | Methyl n-butyl ketone | 0.70 | 0.78 | 0.93 | 0.93 | 0.90 | 0.85 | 12 |
| 55) | d-5 Chlorbenzene | ----------ISTD---------- | | | | | | |
| 57) | Chlorobenzene | 0.97 | 1.1 | 0.99 | 0.99 | 0.99 | 1.00 | 3.0 |
| 58) | Ethylbenzene | 1.8 | 2.0 | 1.9 | 1.8 | 1.8 | 1.8 | 4.5 |
| 59) | Xylenes (m&p) | 1.3 | 1.5 | 1.4 | 1.4 | 1.2 | 1.4 | 9.3 |
| 60) | Xylenes (o) | 1.4 | 1.6 | 1.5 | 1.5 | 1.5 | 1.5 | 5.0 |
| 61) | Styrene | 0.85 | 1.0 | 1.1 | 1.1 | 1.1 | 1.0 | 9.4 |
| 62) | Bromoform | 0.63 | 0.72 | 0.75 | 0.77 | 0.80 | 0.73 | 8.7 |
| 63) | Cumene | 1.8 | 2.2 | 2.0 | 1.9 | 1.9 | 1.9 | 7.1 |
| 66) | 1,1,2,2-Tetrachloroethane | 0.96 | 1.1 | 1.0 | 1.0 | 1.1 | 1.0 | 5.5 |
| 67) | 4-Ethyltoluene | 2.1 | 2.2 | 2.2 | 2.2 | 2.1 | 2.2 | 3.8 |
| 68) | 2-Chlorotoluene | 1.6 | 1.8 | 1.7 | 1.7 | 1.7 | 1.7 | 4.3 |
| 69) | 1,3,5-Trimethylbenzene | 1.5 | 1.9 | 1.8 | 1.8 | 1.7 | 1.7 | 7.6 |
| 70) | 1,2,4-Trimethylbenzene | 1.4 | 1.9 | 1.8 | 1.8 | 1.8 | 1.7 | 9.6 |
| 71) | 1,3-Dichlorobenzene | 1.0 | 1.0 | 1.1 | 1.1 | 1.1 | 1.1 | 4.2 |
| 72) | 1,4-Dichlorobenzene | 0.94 | 1.0 | 1.1 | 1.1 | 1.2 | 1.1 | 8.6 |
| 73) | Benzyl chloride | 1.2 | 1.4 | 1.6 | 1.7 | 1.7 | 1.5 | 15 |
| 74) | 1,2-Dichlorobenzene | 0.90 | 1.1 | 1.0 | 1.1 | 1.1 | 1.0 | 7.4 |
| 75) | 1,3-Hexachlorobutadiene | 0.73 | 0.78 | 0.70 | 0.69 | 0.66 | 0.71 | 6.1 |
| 76) | 1,2,4-Trichlorobenzene | 0.83 | 0.81 | 0.82 | 0.84 | 0.83 | 0.82 | 1.4 |
| 77) | Naphthalene | 2.0 | 1.9 | 1.9 | 1.9 | 1.7 | 1.9 | 4.8 |

***% RSD (Relative Standard Deviation) must be within 30%**

****An exception is made for 2 compounds that must be within 40%**

**RRF - Relative Response Factor**

Method Path : C:\msdchem\1\METHODS\
Method File : 231009.M
Title : TO-15 on the Agilent 7890A / 5975C
Last Update : Tue Oct 10 15:12:35 2023
Response Via : Initial Calibration

Calibration Files
0.2 =aa4132std05.D 2 =aa4133std04.D 10 =aa4134std03.D 20 =aa4135std02.D 40 =aa4136std01.D

| | | Compound | 0.2 | 2 | 10 | 20 | 40 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|
| 1) | I | Bromochloromethane... | ----------ISTD---------- | | | | | | |
| 2) | T | Propene | 0.779 | 0.688 | 0.601 | 0.651 | 0.751 | 0.694 | 10.44 |
| 3) | T | Dichlorodifluoro... | 1.907 | 1.983 | 2.168 | 2.390 | 2.633 | 2.216 | 13.46 |
| 4) | T | 1,2-Dichlorotetr... | 3.185 | 3.352 | 2.944 | 3.158 | 3.458 | 3.219 | 6.12 |
| 5) | T | n-Butane | 1.490 | 1.596 | 1.532 | 1.649 | 1.719 | 1.597 | 5.69 |
| 6) | T | Chloromethane | 0.085 | 0.098 | 0.113 | 0.121 | 0.137 | 0.111 | 18.16 |
| 7) | T | Vinyl chloride | 0.695 | 0.837 | 0.907 | 0.984 | 1.107 | 0.906 | 17.06 |
| 8) | T | 1,3-Butadiene | 0.868 | 0.820 | 0.800 | 0.839 | 0.905 | 0.846 | 4.88 |
| 9) | T | Bromomethane | 0.486 | 0.695 | 0.751 | 0.814 | 0.911 | 0.731 | 21.71 |
| 10) | T | Chloroethane | 0.242 | 0.451 | 0.502 | 0.547 | 0.634 | 0.475 | 30.85 |
| 11) | T | Vinyl bromide | 0.534 | 0.864 | 0.915 | 1.018 | 1.146 | 0.895 | 25.58 |
| 12) | T | Trichlorofluorom... | 2.621 | 2.609 | 2.656 | 2.932 | 3.178 | 2.799 | 8.92 |
| 13) | T | Ethanol | 0.278 | 0.262 | 0.269 | 0.289 | 0.366 | 0.293 | 14.44 |
| 14) | T | 1,1-Dichloroethene | 1.413 | 1.490 | 1.944 | 2.133 | 2.308 | 1.858 | 21.17 |
| 15) | T | Carbon disulfide | 2.407 | 2.574 | 3.227 | 3.426 | 3.653 | 3.058 | 17.73 |
| 16) | T | 1,1,2-Trichloro-... | 2.836 | 3.030 | 2.523 | 2.712 | 2.994 | 2.819 | 7.42 |
| 17) | T | Acrolein | 0.385 | 0.331 | 0.431 | 0.447 | 0.494 | 0.418 | 14.91 |
| 18) | T | Allyl chloride | 0.345 | 0.421 | 0.535 | 0.582 | 0.624 | 0.501 | 23.11 |
| 19) | T | Isopropanol | 1.617 | 1.677 | 2.082 | 2.254 | 2.397 | 2.005 | 17.28 |
| 20) | T | Methylene chloride | 1.726 | 0.973 | 1.020 | 1.121 | 1.307 | 1.229 | 24.89 |
| 21) | T | Acetone | 1.489 | 1.226 | 1.538 | 1.595 | 1.694 | 1.508 | 11.62 |
| 22) | T | trans-1,2-Dichlo... | 1.377 | 1.330 | 1.784 | 1.951 | 2.181 | 1.724 | 21.29 |
| 23) | T | n-Pentane | 2.223 | 2.305 | 2.173 | 2.308 | 2.616 | 2.325 | 7.41 |
| 24) | T | n-Hexane | 3.143 | 2.995 | 2.967 | 3.122 | 3.534 | 3.152 | 7.19 |
| 25) | T | Methyl tert-buty... | 3.476 | 4.059 | 3.641 | 3.875 | 4.310 | 3.872 | 8.54 |
| 26) | T | Tert-butyl alcohol | 2.280 | 2.528 | 2.502 | 2.698 | 3.027 | 2.607 | 10.66 |
| 27) | T | 1,1-Dichloroethane | 2.208 | 2.008 | 2.236 | 2.445 | 2.714 | 2.322 | 11.56 |
| 28) | T | cis-1,2-Dichloro... | 1.343 | 1.351 | 1.654 | 1.825 | 2.018 | 1.638 | 18.03 |
| 29) | t | Cyclohexane | 2.057 | 2.245 | 2.081 | 2.192 | 2.434 | 2.202 | 6.86 |
| 30) | T | Chloroform | 2.233 | 2.343 | 2.644 | 2.933 | 3.225 | 2.676 | 15.36 |
| 31) | T | Ethyl acetate | 0.310 | 0.390 | 0.450 | 0.493 | 0.533 | 0.435 | 20.09 |
| 32) | T | Carbon tetrachlo... | 2.964 | 3.097 | 3.048 | 3.232 | 3.528 | 3.174 | 6.95 |
| 33) | T | Tetrahydrofuran | 1.456 | 1.307 | 1.488 | 1.591 | 1.681 | 1.504 | 9.42 |
| 34) | T | 1,1,1-Trichloroe... | 2.481 | 2.746 | 2.667 | 2.869 | 3.137 | 2.780 | 8.79 |
| 35) | T | Methyl ethyl ketone | 2.291 | 2.066 | 2.372 | 2.620 | 2.862 | 2.442 | 12.58 |
| 36) | T | n-Heptane | 2.552 | 2.559 | 2.850 | 2.930 | 2.928 | 2.764 | 6.98 |
| 37) | T | Benzene | 3.627 | 3.758 | 3.801 | 4.128 | 4.544 | 3.972 | 9.30 |
| 38) | T | 1,2-Dichloroethane | 1.312 | 1.486 | 1.666 | 1.833 | 2.016 | 1.663 | 16.69 |
| 39) | I | 1,4-Difluorobenzen... | ----------ISTD---------- | | | | | | |
| 40) | T | Trichloroethene | 0.381 | 0.468 | 0.441 | 0.454 | 0.469 | 0.442 | 8.16 |
| 41) | T | 2,2,4-Trimethylp... | 1.199 | 1.522 | 1.226 | 1.268 | 1.298 | 1.303 | 9.87 |
| 42) | T | 1,2-Dichloropropane | 0.377 | 0.399 | 0.391 | 0.393 | 0.385 | 0.389 | 2.16 |
| 43) | T | Bromodichloromet... | 0.586 | 0.682 | 0.655 | 0.678 | 0.675 | 0.655 | 6.09 |
| 44) | T | Methyl methacrylate | 0.419 | 0.464 | 0.497 | 0.498 | 0.481 | 0.472 | 6.88 |
| 45) | T | 1,4-Dioxane | 0.214 | 0.238 | 0.243 | 0.249 | 0.248 | 0.238 | 5.94 |
| 46) | T | cis-1,3-Dichloro... | 0.549 | 0.592 | 0.626 | 0.634 | 0.615 | 0.603 | 5.69 |
| 47) | T | Toluene | 1.225 | 1.453 | 1.484 | 1.478 | 1.387 | 1.405 | 7.68 |
| 48) | T | Methyl isobutyl ... | 0.759 | 0.922 | 0.947 | 0.925 | 0.863 | 0.883 | 8.63 |
| 49) | T | Tetrachloroethene | 0.531 | 0.613 | 0.633 | 0.639 | 0.613 | 0.606 | 7.17 |
| 50) | T | trans-1,3-Dichlo... | 0.459 | 0.568 | 0.633 | 0.647 | 0.618 | 0.585 | 13.11 |
| 51) | T | 1,1,2-Trichloroe... | 0.399 | 0.475 | 0.494 | 0.506 | 0.500 | 0.475 | 9.30 |
| 52) | T | Dibromochloromet... | 0.636 | 0.778 | 0.834 | 0.857 | 0.849 | 0.791 | 11.62 |
| 53) | T | 1,2-Dibromoethane | 0.535 | 0.672 | 0.732 | 0.751 | 0.743 | 0.686 | 13.15 |
| 54) | T | Methyl n-butyl k... | 0.704 | 0.779 | 0.932 | 0.932 | 0.900 | 0.849 | 12.07 |
| 55) | I | d-5 Chlorobenzene ... | ----------ISTD---------- | | | | | | |
| 56) | T | n-Nonane | 0.927 | 1.067 | 1.027 | 0.986 | 0.955 | 0.992 | 5.62 |
| 57) | T | Chlorobenzene | 0.971 | 1.050 | 0.990 | 0.986 | 0.988 | 0.997 | 3.09 |
| 58) | T | Ethylbenzene | 1.789 | 1.981 | 1.852 | 1.820 | 1.771 | 1.843 | 4.51 |
| 59) | T | Xylenes (m&p) | 1.326 | 1.536 | 1.415 | 1.363 | 1.186 | 1.365 | 9.36 |
| 60) | T | Xylene (o) | 1.445 | 1.623 | 1.468 | 1.461 | 1.451 | 1.490 | 5.05 |

Method Path : C:\msdchem\1\METHODS\
Method File : 231009.M

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 61) | T | Styrene | 0.849 | 1.047 | 1.067 | 1.065 | 1.073 | 1.020 | 9.41 |
| 62) | T | Bromoform | 0.629 | 0.724 | 0.745 | 0.767 | 0.797 | 0.732 | 8.70 |
| 63) | T | Cumene | 1.783 | 2.168 | 1.955 | 1.932 | 1.897 | 1.947 | 7.18 |
| 64) | S | Bromofluorobenze... | 0.801 | 0.842 | 0.870 | 0.891 | 0.954 | 0.872 | 6.54 |
| 65) | T | n-Propyl benzene | 2.478 | 2.727 | 2.610 | 2.556 | 2.335 | 2.541 | 5.77 |
| 66) | T | 1,1,2,2-Tetrachl... | 0.959 | 1.120 | 1.040 | 1.040 | 1.055 | 1.043 | 5.50 |
| 67) | T | 4-Ethyltoluene | 2.059 | 2.245 | 2.204 | 2.174 | 2.073 | 2.151 | 3.80 |
| 68) | T | 2-Chlorotoluene | 1.626 | 1.829 | 1.701 | 1.690 | 1.690 | 1.707 | 4.35 |
| 69) | T | 1,3,5-Trimethylb... | 1.513 | 1.880 | 1.755 | 1.754 | 1.747 | 1.730 | 7.69 |
| 70) | T | 1,2,4-Trimethylb... | 1.441 | 1.880 | 1.785 | 1.775 | 1.764 | 1.729 | 9.68 |
| 71) | T | 1,3-Dichlorobenzene | 1.031 | 1.007 | 1.050 | 1.081 | 1.124 | 1.059 | 4.27 |
| 72) | T | 1,4-Dichlorobenzene | 0.943 | 1.005 | 1.082 | 1.123 | 1.174 | 1.065 | 8.65 |
| 73) | T | Benzyl chloride | 1.159 | 1.435 | 1.619 | 1.688 | 1.742 | 1.529 | 15.48 |
| 74) | T | 1,2-Dichlorobenzene | 0.895 | 1.065 | 1.034 | 1.054 | 1.089 | 1.027 | 7.47 |
| 75) | T | 1,3-Hexachlorobu... | 0.731 | 0.778 | 0.703 | 0.687 | 0.664 | 0.713 | 6.17 |
| 76) | T | 1,2,4-Trichlorob... | 0.829 | 0.807 | 0.819 | 0.838 | 0.828 | 0.824 | 1.43 |
| 77) | T | Naphthalene | 1.972 | 1.901 | 1.894 | 1.926 | 1.733 | 1.885 | 4.80 |

(#) = Out of Range

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4132std05.D
Acq On : 10 Oct 2023 10:40 am
Operator : jjw
Sample : 0.2 ppbv standard
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 10 15:08:52 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:03:48 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.380 | 130 | 335961 | 10.00 | ppbV | | -0.014 |
| 39) 1,4-Difluorobenzene (IS) | 5.444 | 114 | 1366548 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 1287551 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1031937 | 9.01 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 1.451 | 41 | 5709 | 0.25 | ppbV | | 95 |
| 3) Dichlorodifluoromethane | 1.499 | 85 | 13581 | 0.18 | ppbV | # | 83 |
| 4) 1,2-Dichlorotetrafluor... | 1.619 | 85 | 20971 | 0.19 | ppbV | | 99 |
| 5) n-Butane | 1.702 | 43 | 10916 | 0.20 | ppbV | # | 85 |
| 6) Chloromethane | 1.684 | 52 | 641 | 0.16 | ppbV | | 65 |
| 7) Vinyl chloride | 1.753 | 62 | 5046 | 0.16 | ppbV | # | 50 |
| 8) 1,3-Butadiene | 1.760 | 39 | 6239 | 0.22 | ppbV | | 75 |
| 9) Bromomethane | 2.059 | 94 | 3266 | 0.12 | ppbV | | 66 |
| 10) Chloroethane | 2.168 | 64 | 1724 | 0.10 | ppbV | | 80 |
| 11) Vinyl bromide | 2.261 | 106 | 3625 | 0.11 | ppbV | | 95 |
| 12) Trichlorofluoromethane | 2.287 | 101 | 19370 | 0.20 | ppbV | | 97 |
| 13) Ethanol | 2.654 | 45 | 1944 | 0.20 | ppbV | # | 47 |
| 14) 1,1-Dichloroethene | 2.708 | 61 | 9877 | 0.15 | ppbV | | 99 |
| 15) Carbon disulfide | 2.728 | 76 | 17305 | 0.16 | ppbV | | 100 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.750 | 101 | 20772 | 0.22 | ppbV | | 98 |
| 17) Acrolein | 2.969 | 56 | 2586 | 0.18 | ppbV | # | 42 |
| 18) Allyl chloride | 3.084 | 76 | 2500 | 0.14 | ppbV | | 100 |
| 19) Isopropanol | 3.094 | 45 | 9669 | 0.14 | ppbV | # | 84 |
| 20) Methylene chloride | 3.178 | 49 | 12526 | 0.34 | ppbV | | 92 |
| 21) Acetone | 3.194 | 43 | 10805 | 0.21 | ppbV | # | 83 |
| 22) trans-1,2-Dichloroethene | 3.306 | 61 | 10268 | 0.17 | ppbV | | 100 |
| 23) n-Pentane | 3.393 | 43 | 16132 | 0.20 | ppbV | | 92 |
| 24) n-Hexane | 3.380 | 57 | 23439 | 0.22 | ppbV | | 95 |
| 25) Methyl tert-butyl ether | 3.393 | 73 | 26157 | 0.20 | ppbV | | 89 |
| 26) Tert-butyl alcohol | 3.445 | 59 | 17620 | 0.20 | ppbV | | 100 |
| 27) 1,1-Dichloroethane | 3.792 | 63 | 15876 | 0.20 | ppbV | | 91 |
| 28) cis-1,2-Dichloroethene | 4.219 | 61 | 9833 | 0.17 | ppbV | | 98 |
| 29) Cyclohexane | 4.396 | 56 | 15483 | 0.21 | ppbV | | 99 |
| 30) Chloroform | 4.445 | 83 | 16203 | 0.17 | ppbV | | 96 |
| 31) Ethyl acetate | 4.535 | 61 | 2253 | 0.14 | ppbV | | 88 |
| 32) Carbon tetrachloride | 4.563 | 117 | 22109 | 0.20 | ppbV | | 100 |
| 33) Tetrahydrofuran | 4.570 | 42 | 10856 | 0.21 | ppbV | | 87 |
| 34) 1,1,1-Trichloroethane | 4.615 | 97 | 18169 | 0.19 | ppbV | | 97 |
| 35) Methyl ethyl ketone | 4.676 | 43 | 16932 | 0.20 | ppbV | | 91 |
| 36) n-Heptane | 4.911 | 43 | 19030 | 0.20 | ppbV | | 92 |
| 37) Benzene | 4.920 | 78 | 26320 | 0.19 | ppbV | | 98 |
| 38) 1,2-Dichloroethane | 5.078 | 62 | 9608 | 0.16 | ppbV | | 97 |
| 40) Trichloroethene | 5.428 | 130 | 10418 | 0.17 | ppbV | | 93 |
| 41) 2,2,4-Trimethylpentane | 4.827 | 57 | 35716 | 0.20 | ppbV | | 97 |
| 42) 1,2-Dichloropropane | 5.882 | 63 | 11430 | 0.21 | ppbV | | 90 |
| 43) Bromodichloromethane | 5.940 | 83 | 18430 | 0.20 | ppbV | | 98 |
| 44) Methyl methacrylate | 6.081 | 41 | 12606 | 0.19 | ppbV | | 96 |
| 45) 1,4-Dioxane | 6.116 | 88 | 6852 | 0.21 | ppbV | | 97 |
| 46) cis-1,3-Dichloropropene | 6.528 | 75 | 16642 | 0.20 | ppbV | | 95 |
| 47) Toluene | 6.766 | 91 | 36156 | 0.18 | ppbV | | 100 |
| 48) Methyl isobutyl ketone | 7.136 | 43 | 22603 | 0.18 | ppbV | | 98 |
| 49) Tetrachloroethene | 7.155 | 166 | 16259 | 0.19 | ppbV | | 100 |
| 50) trans-1,3-Dichloropropene | 7.174 | 75 | 13916 | 0.17 | ppbV | | 98 |
| 51) 1,1,2-Trichloroethane | 7.332 | 97 | 11763 | 0.17 | ppbV | | 94 |

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4132std05.D
Acq On : 10 Oct 2023 10:40 am
Operator : jjw
Sample : 0.2 ppbv standard
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

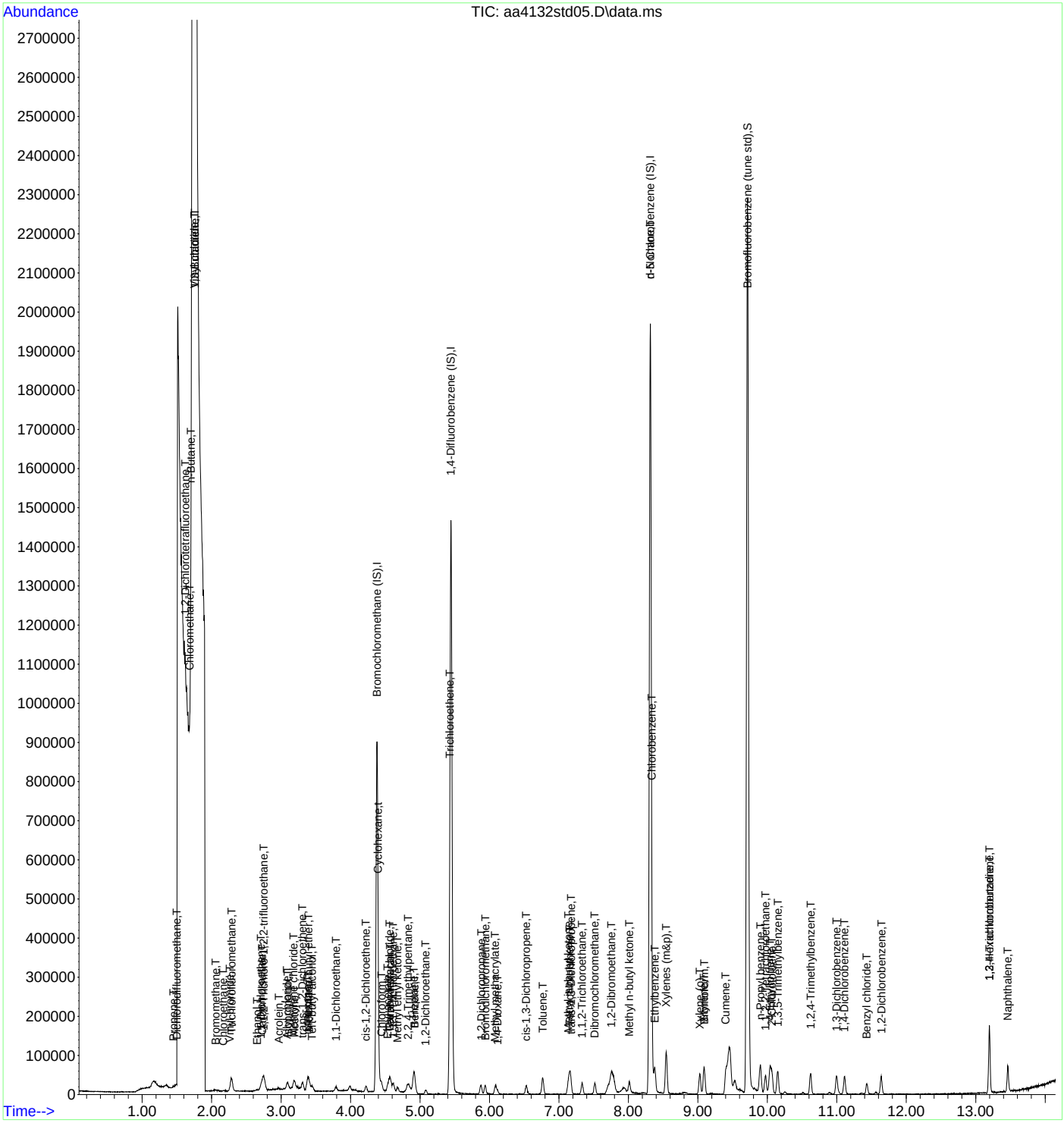
Quant Time: Oct 10 15:08:52 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:03:48 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.515 | 129 | 19465 | 0.17 | ppbV | | 100 |
| 53) 1,2-Dibromoethane | 7.753 | 107 | 15790 | 0.16 | ppbV | | 99 |
| 54) Methyl n-butyl ketone | 8.014 | 43 | 21755 | 0.18 | ppbV | | 91 |
| 56) n-Nonane | 8.316 | 43 | 26498 | 0.20 | ppbV | | 95 |
| 57) Chlorobenzene | 8.335 | 112 | 27757 | 0.21 | ppbV | # | 47 |
| 58) Ethylbenzene | 8.380 | 91 | 51133 | 0.21 | ppbV | | 99 |
| 59) Xylenes (m&p) | 8.544 | 91 | 76173 | 0.43 | ppbV | | 98 |
| 60) Xylene (o) | 9.026 | 91 | 40935 | 0.21 | ppbV | | 95 |
| 61) Styrene | 9.087 | 104 | 24712 | 0.18 | ppbV | | 97 |
| 62) Bromoform | 9.094 | 173 | 18307 | 0.19 | ppbV | | 99 |
| 63) Cumene | 9.399 | 105 | 49138 | 0.19 | ppbV | | 100 |
| 65) n-Propyl benzene | 9.901 | 91 | 68920 | 0.21 | ppbV | | 97 |
| 66) 1,1,2,2-Tetrachloroethane | 9.975 | 83 | 28157 | 0.21 | ppbV | | 96 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 57273 | 0.20 | ppbV | | 99 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 45637 | 0.21 | ppbV | | 98 |
| 69) 1,3,5-Trimethylbenzene | 10.152 | 105 | 42479 | 0.18 | ppbV | | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 40083 | 0.17 | ppbV | | 96 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 29481 | 0.21 | ppbV | | 95 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 25984 | 0.18 | ppbV | | 99 |
| 73) Benzyl chloride | 11.428 | 91 | 29858 | 0.14 | ppbV | | 95 |
| 74) 1,2-Dichlorobenzene | 11.644 | 146 | 24649 | 0.18 | ppbV | | 99 |
| 75) 1,3-Hexachlorobutadiene | 13.197 | 225 | 20901 | 0.23 | ppbV | | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.197 | 180 | 23485 | 0.22 | ppbV | | 97 |
| 77) Naphthalene | 13.460 | 128 | 50770 | 0.21 | ppbV | | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4132std05.D
Acq On : 10 Oct 2023 10:40 am
Operator : jjw
Sample : 0.2 ppbv standard
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 10 15:08:52 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:03:48 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4133std04.D
Acq On : 10 Oct 2023 11:46 am
Operator : jjw
Sample : 2.0 ppbv standard
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 10 15:14:52 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.378 | 130 | 266219 | 10.00 | ppbV | -0.016 |
| 39) 1,4-Difluorobenzene (IS) | 5.445 | 114 | 1004403 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.313 | 117 | 1028709 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.715 | 95 | 866440 | 9.66 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.454 | 41 | 39983 | 2.16 | ppbV | 100 |
| 3) Dichlorodifluoromethane | 1.496 | 85 | 111937 | 1.90 | ppbV | 99 |
| 4) 1,2-Dichlorotetrafluor... | 1.613 | 85 | 174894 | 2.04 | ppbV | 97 |
| 5) n-Butane | 1.699 | 43 | 92630 | 2.18 | ppbV | 97 |
| 6) Chloromethane | 1.767 | 52 | 6226 | 2.11 | ppbV | 99 |
| 7) Vinyl chloride | 1.761 | 62 | 48102 | 1.99 | ppbV | 99 |
| 8) 1,3-Butadiene | 1.764 | 39 | 46700 | 2.07 | ppbV | 98 |
| 9) Bromomethane | 2.046 | 94 | 37014 | 1.90 | ppbV | 98 |
| 10) Chloroethane | 2.172 | 64 | 25446 | 2.01 | ppbV | 97 |
| 11) Vinyl bromide | 2.262 | 106 | 46443 | 1.95 | ppbV | 99 |
| 12) Trichlorofluoromethane | 2.284 | 101 | 152810 | 2.05 | ppbV | 98 |
| 13) Ethanol | 2.641 | 45 | 14500 | 1.86 | ppbV | 99 |
| 14) 1,1-Dichloroethene | 2.706 | 61 | 82725 | 1.67 | ppbV | 100 |
| 15) Carbon disulfide | 2.728 | 76 | 146663 | 1.80 | ppbV | 96 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.747 | 101 | 175871 | 2.34 | ppbV | 99 |
| 17) Acrolein | 2.963 | 56 | 17616 | 1.58 | ppbV | 96 |
| 18) Allyl chloride | 3.091 | 76 | 24227 | 1.82 | ppbV | 100 |
| 19) Isopropanol | 3.088 | 45 | 79453 | 1.49 | ppbV | 96 |
| 20) Methylene chloride | 3.178 | 49 | 55923 | 1.71 | ppbV | 98 |
| 21) Acetone | 3.188 | 43 | 70498 | 1.76 | ppbV | 98 |
| 22) trans-1,2-Dichloroethene | 3.307 | 61 | 78613 | 1.71 | ppbV | 100 |
| 23) n-Pentane | 3.390 | 43 | 132521 | 2.14 | ppbV | 97 |
| 24) n-Hexane | 3.387 | 57 | 176979 | 2.11 | ppbV | 97 |
| 25) Methyl tert-butyl ether | 3.390 | 73 | 242041 | 2.35 | ppbV | 92 |
| 26) Tert-butyl alcohol | 3.442 | 59 | 154807 | 2.23 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.789 | 63 | 106902 | 1.73 | ppbV | 99 |
| 28) cis-1,2-Dichloroethene | 4.217 | 61 | 78716 | 1.80 | ppbV | 98 |
| 29) Cyclohexane | 4.397 | 56 | 133883 | 2.28 | ppbV | 98 |
| 30) Chloroform | 4.439 | 83 | 134737 | 1.89 | ppbV | 98 |
| 31) Ethyl acetate | 4.532 | 61 | 22449 | 1.94 | ppbV | 99 |
| 32) Carbon tetrachloride | 4.561 | 117 | 183055 | 2.17 | ppbV | 99 |
| 33) Tetrahydrofuran | 4.564 | 42 | 77218 | 1.93 | ppbV | 99 |
| 34) 1,1,1-Trichloroethane | 4.612 | 97 | 159351 | 2.15 | ppbV | 97 |
| 35) Methyl ethyl ketone | 4.670 | 43 | 121249 | 1.86 | ppbV | 100 |
| 36) n-Heptane | 4.905 | 43 | 151248 | 2.06 | ppbV | 99 |
| 37) Benzene | 4.921 | 78 | 216088 | 2.04 | ppbV | 99 |
| 38) 1,2-Dichloroethane | 5.079 | 62 | 86250 | 1.95 | ppbV | 100 |
| 40) Trichloroethene | 5.423 | 130 | 93973 | 2.11 | ppbV | 100 |
| 41) 2,2,4-Trimethylpentane | 4.828 | 57 | 337914 | 2.58 | ppbV | 98 |
| 42) 1,2-Dichloropropane | 5.873 | 63 | 89006 | 2.28 | ppbV | 98 |
| 43) Bromodichloromethane | 5.937 | 83 | 157497 | 2.39 | ppbV | 99 |
| 44) Methyl methacrylate | 6.082 | 41 | 102545 | 2.16 | ppbV | 96 |
| 45) 1,4-Dioxane | 6.107 | 88 | 55879 | 2.33 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.529 | 75 | 132030 | 2.18 | ppbV | 98 |
| 47) Toluene | 6.767 | 91 | 315155 | 2.23 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.133 | 43 | 201872 | 2.28 | ppbV | 98 |
| 49) Tetrachloroethene | 7.152 | 166 | 137965 | 2.27 | ppbV | 99 |
| 50) trans-1,3-Dichloropropene | 7.175 | 75 | 126648 | 2.16 | ppbV | 100 |
| 51) 1,1,2-Trichloroethane | 7.336 | 97 | 103047 | 2.16 | ppbV | 99 |

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4133std04.D
Acq On : 10 Oct 2023 11:46 am
Operator : jjw
Sample : 2.0 ppbv standard
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

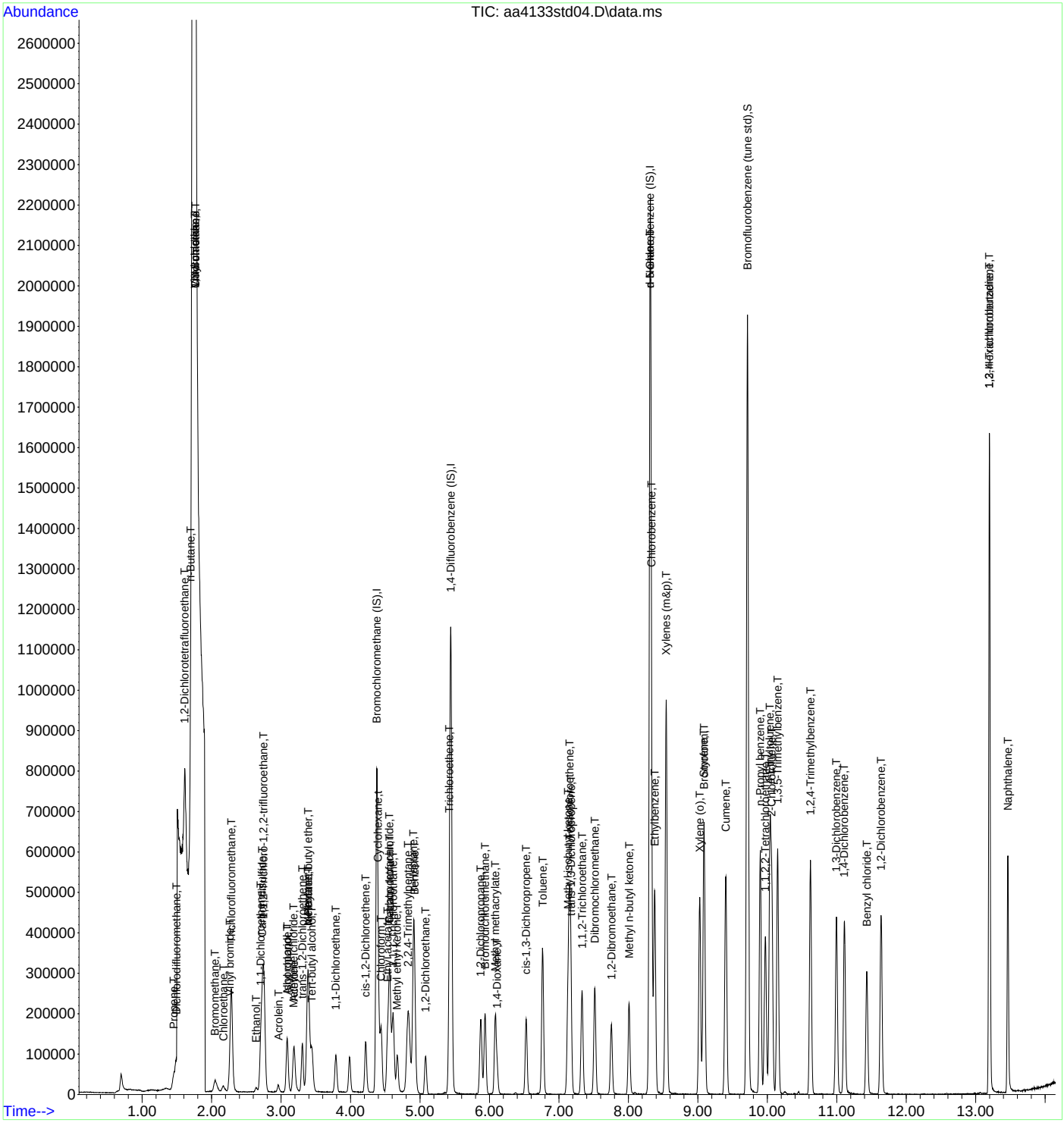
Quant Time: Oct 10 15:14:52 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.516 | 129 | 175087 | 2.20 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.757 | 107 | 145737 | 2.11 | ppbV | 99 |
| 54) Methyl n-butyl ketone | 8.011 | 43 | 176926 | 2.07 | ppbV | 99 |
| 56) n-Nonane | 8.313 | 43 | 243566 | 2.39 | ppbV | 99 |
| 57) Chlorobenzene | 8.332 | 112 | 239887 | 2.34 | ppbV | 96 |
| 58) Ethylbenzene | 8.381 | 91 | 452392 | 2.39 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.545 | 91 | 704842 | 5.02 | ppbV | 98 |
| 60) Xylene (o) | 9.027 | 91 | 367407 | 2.40 | ppbV | 99 |
| 61) Styrene | 9.088 | 104 | 243368 | 2.32 | ppbV | 99 |
| 62) Bromoform | 9.091 | 173 | 168245 | 2.23 | ppbV | 100 |
| 63) Cumene | 9.403 | 105 | 477213 | 2.38 | ppbV | 99 |
| 65) n-Propyl benzene | 9.898 | 91 | 606010 | 2.32 | ppbV | 98 |
| 66) 1,1,2,2-Tetrachloroethane | 9.972 | 83 | 262772 | 2.45 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.037 | 105 | 498880 | 2.25 | ppbV | 98 |
| 68) 2-Chlorotoluene | 10.062 | 91 | 410155 | 2.34 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.149 | 105 | 421510 | 2.37 | ppbV | 100 |
| 70) 1,2,4-Trimethylbenzene | 10.622 | 105 | 417786 | 2.35 | ppbV | 99 |
| 71) 1,3-Dichlorobenzene | 10.995 | 146 | 230016 | 2.11 | ppbV | 99 |
| 72) 1,4-Dichlorobenzene | 11.107 | 146 | 221287 | 2.02 | ppbV | 99 |
| 73) Benzyl chloride | 11.432 | 91 | 295275 | 1.88 | ppbV | 98 |
| 74) 1,2-Dichlorobenzene | 11.638 | 146 | 234385 | 2.22 | ppbV | 99 |
| 75) 1,3-Hexachlorobutadiene | 13.197 | 225 | 177745 | 2.42 | ppbV | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.197 | 180 | 182140 | 2.15 | ppbV | 99 |
| 77) Naphthalene | 13.464 | 128 | 391079 | 2.02 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4133std04.D
Acq On : 10 Oct 2023 11:46 am
Operator : jjw
Sample : 2.0 ppbv standard
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 10 15:14:52 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4134std03.D
Acq On : 10 Oct 2023 12:21 pm
Operator : jjw
Sample : 10 ppbv standard
Misc : EB0103704
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 10 15:20:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.394 | 130 | 393970 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.452 | 114 | 1695876 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 1964329 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.715 | 95 | 1708242 | 9.98 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.487 | 41 | 258254 | 9.44 | ppbV | 100 |
| 3) Dichlorodifluoromethane | 1.523 | 85 | 905524 | 10.37 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.644 | 85 | 1136761 | 8.96 | ppbV | 100 |
| 5) n-Butane | 1.730 | 43 | 657868 | 10.46 | ppbV | 100 |
| 6) Chloromethane | 1.792 | 52 | 50221 | 11.51 | ppbV | 98 |
| 7) Vinyl chloride | 1.781 | 62 | 385978 | 10.81 | ppbV | 100 |
| 8) 1,3-Butadiene | 1.792 | 39 | 337213 | 10.11 | ppbV | 100 |
| 9) Bromomethane | 2.082 | 94 | 295814 | 10.27 | ppbV | 100 |
| 10) Chloroethane | 2.195 | 64 | 209472 | 11.19 | ppbV | 100 |
| 11) Vinyl bromide | 2.288 | 106 | 363736 | 10.31 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.310 | 101 | 1152906 | 10.45 | ppbV | 100 |
| 13) Ethanol | 2.667 | 45 | 110171 | 9.55 | ppbV | 100 |
| 14) 1,1-Dichloroethene | 2.728 | 61 | 796558 | 10.88 | ppbV | 100 |
| 15) Carbon disulfide | 2.751 | 76 | 1360498 | 11.29 | ppbV | 100 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.776 | 101 | 1083429 | 9.75 | ppbV | 100 |
| 17) Acrolein | 2.982 | 56 | 169981 | 10.33 | ppbV | 100 |
| 18) Allyl chloride | 3.111 | 76 | 227552 | 11.52 | ppbV | 100 |
| 19) Isopropanol | 3.108 | 45 | 729204 | 9.23 | ppbV | 100 |
| 20) Methylene chloride | 3.204 | 49 | 433980 | 8.96 | ppbV | 100 |
| 21) Acetone | 3.211 | 43 | 654299 | 11.01 | ppbV | 100 |
| 22) trans-1,2-Dichloroethene | 3.326 | 61 | 780121 | 11.48 | ppbV | 100 |
| 23) n-Pentane | 3.407 | 43 | 924569 | 10.09 | ppbV | 100 |
| 24) n-Hexane | 3.403 | 57 | 1285851 | 10.35 | ppbV | 100 |
| 25) Methyl tert-butyl ether | 3.410 | 73 | 1606753 | 10.53 | ppbV | 100 |
| 26) Tert-butyl alcohol | 3.465 | 59 | 1133398 | 11.03 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.805 | 63 | 942517 | 10.30 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.230 | 61 | 719414 | 11.15 | ppbV | 99 |
| 29) Cyclohexane | 4.413 | 56 | 918448 | 10.59 | ppbV | 100 |
| 30) Chloroform | 4.455 | 83 | 1125163 | 10.67 | ppbV | 100 |
| 31) Ethyl acetate | 4.538 | 61 | 191456 | 11.17 | ppbV | 100 |
| 32) Carbon tetrachloride | 4.574 | 117 | 1320797 | 10.56 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.571 | 42 | 644824 | 10.88 | ppbV | 100 |
| 34) 1,1,1-Trichloroethane | 4.625 | 97 | 1145085 | 10.46 | ppbV | 100 |
| 35) Methyl ethyl ketone | 4.680 | 43 | 1033883 | 10.75 | ppbV | 100 |
| 36) n-Heptane | 4.918 | 43 | 1246184 | 11.45 | ppbV | 100 |
| 37) Benzene | 4.931 | 78 | 1617158 | 10.34 | ppbV | 100 |
| 38) 1,2-Dichloroethane | 5.091 | 62 | 715639 | 10.92 | ppbV | 100 |
| 40) Trichloroethene | 5.432 | 130 | 747440 | 9.96 | ppbV | 100 |
| 41) 2,2,4-Trimethylpentane | 4.844 | 57 | 2224941 | 10.07 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.882 | 63 | 729348 | 11.06 | ppbV | 100 |
| 43) Bromodichloromethane | 5.944 | 83 | 1277100 | 11.49 | ppbV | 100 |
| 44) Methyl methacrylate | 6.088 | 41 | 926458 | 11.58 | ppbV | 100 |
| 45) 1,4-Dioxane | 6.114 | 88 | 481882 | 11.92 | ppbV | 100 |
| 46) cis-1,3-Dichloropropene | 6.532 | 75 | 1178257 | 11.52 | ppbV | 100 |
| 47) Toluene | 6.770 | 91 | 2718261 | 11.40 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.133 | 43 | 1751107 | 11.69 | ppbV | 100 |
| 49) Tetrachloroethene | 7.159 | 166 | 1202779 | 11.70 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.175 | 75 | 1191758 | 12.01 | ppbV | 100 |
| 51) 1,1,2-Trichloroethane | 7.336 | 97 | 904123 | 11.23 | ppbV | 100 |

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4134std03.D
Acq On : 10 Oct 2023 12:21 pm
Operator : jjw
Sample : 10 ppbv standard
Misc : EB0103704
ALS Vial : 4 Sample Multiplier: 1

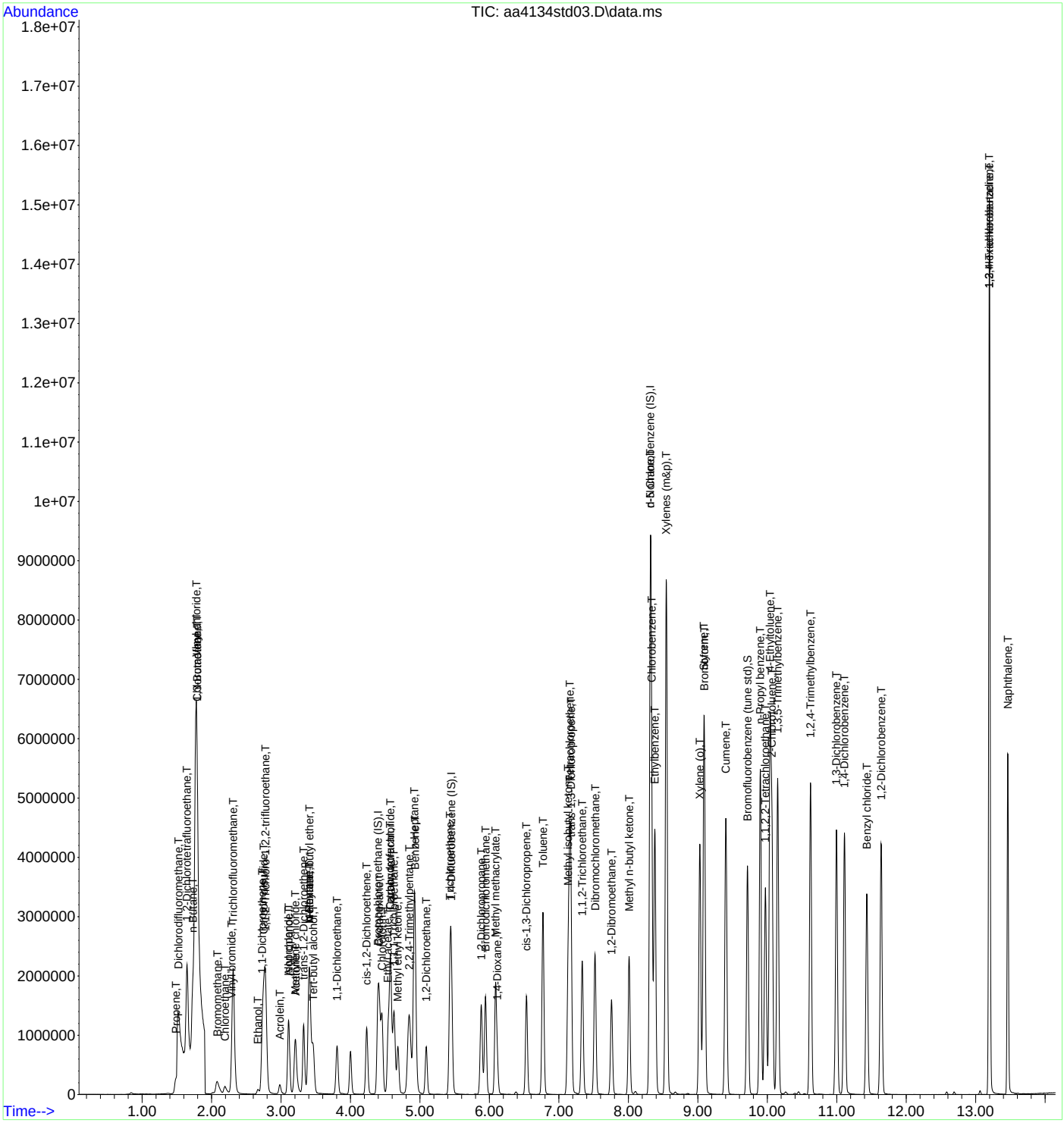
Quant Time: Oct 10 15:20:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.522 | 129 | 1584449 | 11.81 | ppbV | 100 |
| 53) 1,2-Dibromoethane | 7.757 | 107 | 1340384 | 11.51 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.011 | 43 | 1785511 | 12.39 | ppbV | 100 |
| 56) n-Nonane | 8.316 | 43 | 2220175 | 11.39 | ppbV | 100 |
| 57) Chlorobenzene | 8.336 | 112 | 2157593 | 11.02 | ppbV | 100 |
| 58) Ethylbenzene | 8.381 | 91 | 4038783 | 11.16 | ppbV | 100 |
| 59) Xylenes (m&p) | 8.545 | 91 | 6199781 | 23.12 | ppbV | 100 |
| 60) Xylene (o) | 9.027 | 91 | 3172411 | 10.84 | ppbV | 100 |
| 61) Styrene | 9.088 | 104 | 2368407 | 11.82 | ppbV | 100 |
| 62) Bromoform | 9.095 | 173 | 1652936 | 11.49 | ppbV | 100 |
| 63) Cumene | 9.403 | 105 | 4108750 | 10.74 | ppbV | 100 |
| 65) n-Propyl benzene | 9.898 | 91 | 5536013 | 11.09 | ppbV | 100 |
| 66) 1,1,2,2-Tetrachloroethane | 9.972 | 83 | 2329432 | 11.37 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.040 | 105 | 4675293 | 11.06 | ppbV | 100 |
| 68) 2-Chlorotoluene | 10.066 | 91 | 3642460 | 10.86 | ppbV | 100 |
| 69) 1,3,5-Trimethylbenzene | 10.149 | 105 | 3757367 | 11.06 | ppbV | 100 |
| 70) 1,2,4-Trimethylbenzene | 10.622 | 105 | 3786813 | 11.15 | ppbV | 100 |
| 71) 1,3-Dichlorobenzene | 10.995 | 146 | 2289894 | 11.01 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.111 | 146 | 2273891 | 10.87 | ppbV | 100 |
| 73) Benzyl chloride | 11.432 | 91 | 3179639 | 10.59 | ppbV | 100 |
| 74) 1,2-Dichlorobenzene | 11.641 | 146 | 2172244 | 10.77 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.197 | 225 | 1532545 | 10.95 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.197 | 180 | 1768989 | 10.93 | ppbV | 100 |
| 77) Naphthalene | 13.464 | 128 | 3720647 | 10.05 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4134std03.D
Acq On : 10 Oct 2023 12:21 pm
Operator : jjw
Sample : 10 ppbv standard
Misc : EB0103704
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 10 15:20:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4135std02.D
Acq On : 10 Oct 2023 12:55 pm
Operator : jjw
Sample : 20 ppbv standard
Misc : EB0103704
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 10 15:20:48 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.397 | 130 | 363381 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.455 | 114 | 1661895 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 1933627 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.715 | 95 | 1722328 | 10.22 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.490 | 41 | 515568 | 20.44 | ppbV | 98 |
| 3) Dichlorodifluoromethane | 1.530 | 85 | 1841081 | 22.86 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.650 | 85 | 2249237 | 19.23 | ppbV | 99 |
| 5) n-Butane | 1.730 | 43 | 1305900 | 22.50 | ppbV | 99 |
| 6) Chloromethane | 1.788 | 52 | 98143 | 24.39 | ppbV | 93 |
| 7) Vinyl chloride | 1.781 | 62 | 772248 | 23.46 | ppbV | 100 |
| 8) 1,3-Butadiene | 1.795 | 39 | 652429 | 21.21 | ppbV | 98 |
| 9) Bromomethane | 2.085 | 94 | 591691 | 22.26 | ppbV | 98 |
| 10) Chloroethane | 2.194 | 64 | 421571 | 24.42 | ppbV | 99 |
| 11) Vinyl bromide | 2.294 | 106 | 747200 | 22.97 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.313 | 101 | 2343589 | 23.04 | ppbV | 100 |
| 13) Ethanol | 2.667 | 45 | 218329 | 20.52 | ppbV | 96 |
| 14) 1,1-Dichloroethene | 2.735 | 61 | 1612191 | 23.88 | ppbV | 100 |
| 15) Carbon disulfide | 2.754 | 76 | 2664558 | 23.98 | ppbV | 100 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.776 | 101 | 2148248 | 20.97 | ppbV | 100 |
| 17) Acrolein | 2.989 | 56 | 325182 | 21.42 | ppbV | 99 |
| 18) Allyl chloride | 3.111 | 76 | 456662 | 25.07 | ppbV | 100 |
| 19) Isopropanol | 3.111 | 45 | 1457678 | 20.00 | ppbV | 99 |
| 20) Methylene chloride | 3.204 | 49 | 879522 | 19.69 | ppbV | 98 |
| 21) Acetone | 3.214 | 43 | 1252029 | 22.84 | ppbV | 99 |
| 22) trans-1,2-Dichloroethene | 3.326 | 61 | 1573792 | 25.11 | ppbV | 99 |
| 23) n-Pentane | 3.407 | 43 | 1811231 | 21.44 | ppbV | 99 |
| 24) n-Hexane | 3.407 | 57 | 2518540 | 21.99 | ppbV | 100 |
| 25) Methyl tert-butyl ether | 3.410 | 73 | 3154053 | 22.42 | ppbV | 100 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 2254575 | 23.80 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 1901162 | 22.53 | ppbV | 99 |
| 28) cis-1,2-Dichloroethene | 4.236 | 61 | 1445410 | 24.28 | ppbV | 99 |
| 29) Cyclohexane | 4.413 | 56 | 1783891 | 22.29 | ppbV | 99 |
| 30) Chloroform | 4.455 | 83 | 2301846 | 23.67 | ppbV | 99 |
| 31) Ethyl acetate | 4.542 | 61 | 386835 | 24.46 | ppbV | 99 |
| 32) Carbon tetrachloride | 4.577 | 117 | 2607121 | 22.61 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.574 | 42 | 1283380 | 23.48 | ppbV | 99 |
| 34) 1,1,1-Trichloroethane | 4.625 | 97 | 2272798 | 22.50 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.683 | 43 | 2094715 | 23.60 | ppbV | 100 |
| 36) n-Heptane | 4.918 | 43 | 2363613 | 23.53 | ppbV | 100 |
| 37) Benzene | 4.934 | 78 | 3240471 | 22.45 | ppbV | 100 |
| 38) 1,2-Dichloroethane | 5.091 | 62 | 1451918 | 24.03 | ppbV | 100 |
| 40) Trichloroethene | 5.432 | 130 | 1508747 | 20.52 | ppbV | 98 |
| 41) 2,2,4-Trimethylpentane | 4.841 | 57 | 4438426 | 20.50 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.886 | 63 | 1448431 | 22.41 | ppbV | 99 |
| 43) Bromodichloromethane | 5.943 | 83 | 2592041 | 23.80 | ppbV | 99 |
| 44) Methyl methacrylate | 6.088 | 41 | 1821528 | 23.23 | ppbV | 99 |
| 45) 1,4-Dioxane | 6.114 | 88 | 966504 | 24.40 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.535 | 75 | 2338061 | 23.33 | ppbV | 100 |
| 47) Toluene | 6.773 | 91 | 5305706 | 22.72 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.133 | 43 | 3350206 | 22.82 | ppbV | 99 |
| 49) Tetrachloroethene | 7.162 | 166 | 2379736 | 23.63 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.175 | 75 | 2387243 | 24.55 | ppbV | 98 |
| 51) 1,1,2-Trichloroethane | 7.339 | 97 | 1817644 | 23.04 | ppbV | 100 |

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4135std02.D
Acq On : 10 Oct 2023 12:55 pm
Operator : jjw
Sample : 20 ppbv standard
Misc : EB0103704
ALS Vial : 5 Sample Multiplier: 1

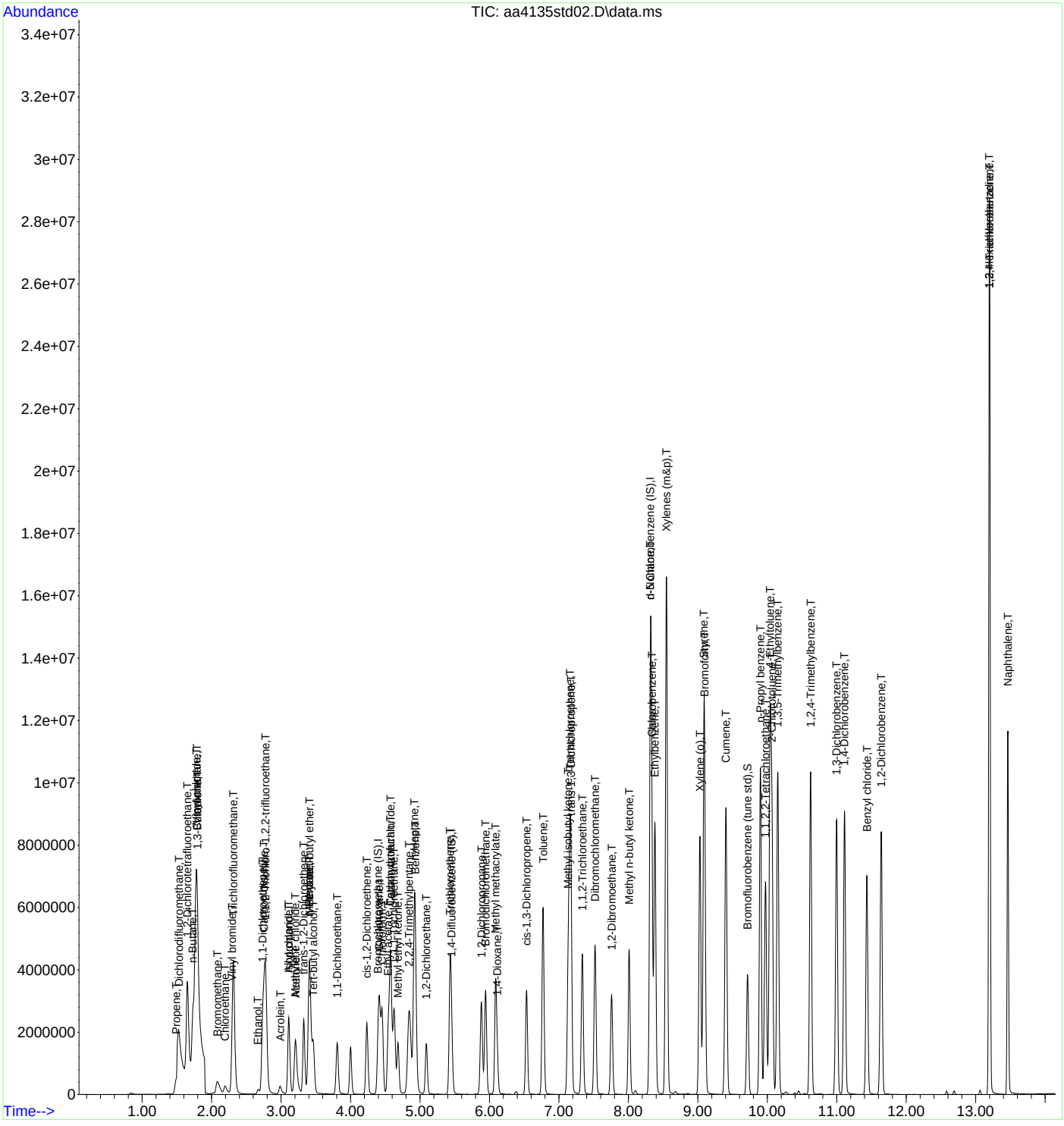
Quant Time: Oct 10 15:20:48 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.522 | 129 | 3189477 | 24.27 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.760 | 107 | 2695314 | 23.62 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.011 | 43 | 3500354 | 24.80 | ppbV | 100 |
| 56) n-Nonane | 8.316 | 43 | 4196367 | 21.87 | ppbV | 99 |
| 57) Chlorobenzene | 8.339 | 112 | 4231170 | 21.95 | ppbV | 100 |
| 58) Ethylbenzene | 8.381 | 91 | 7813775 | 21.93 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.548 | 91 | 11753861 | 44.52 | ppbV | 98 |
| 60) Xylene (o) | 9.030 | 91 | 6215156 | 21.57 | ppbV | 100 |
| 61) Styrene | 9.088 | 104 | 4654583 | 23.60 | ppbV | 99 |
| 62) Bromoform | 9.098 | 173 | 3352006 | 23.67 | ppbV | 99 |
| 63) Cumene | 9.403 | 105 | 7994834 | 21.23 | ppbV | 99 |
| 65) n-Propyl benzene | 9.901 | 91 | 10677156 | 21.73 | ppbV | 99 |
| 66) 1,1,2,2-Tetrachloroethane | 9.975 | 83 | 4583433 | 22.73 | ppbV | 99 |
| 67) 4-Ethyltoluene | 10.040 | 105 | 9079626 | 21.83 | ppbV | 99 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 7122967 | 21.58 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.149 | 105 | 7395052 | 22.11 | ppbV | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.625 | 105 | 7412335 | 22.17 | ppbV | 99 |
| 71) 1,3-Dichlorobenzene | 10.998 | 146 | 4641497 | 22.67 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 4645158 | 22.55 | ppbV | 100 |
| 73) Benzyl chloride | 11.435 | 91 | 6527364 | 22.08 | ppbV | 99 |
| 74) 1,2-Dichlorobenzene | 11.641 | 146 | 4361556 | 21.96 | ppbV | 99 |
| 75) 1,3-Hexachlorobutadiene | 13.197 | 225 | 2950129 | 21.41 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 3565503 | 22.37 | ppbV | 99 |
| 77) Naphthalene | 13.464 | 128 | 7448434 | 20.44 | ppbV | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4135std02.D
Acq On : 10 Oct 2023 12:55 pm
Operator : jjw
Sample : 20 ppbv standard
Misc : EB0103704
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 10 15:20:48 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4136std01.D
Acq On : 10 Oct 2023 2:05 pm
Operator : jjw
Sample : 40 ppbv standard
Misc : EB0103704
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 10 15:21:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.400 | 130 | 356266 | 10.00 | ppbV | | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.458 | 114 | 1769398 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 1970985 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.718 | 95 | 1881267 | 10.95 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 1.493 | 41 | 1166461 | 47.16 | ppbV | | 99 |
| 3) Dichlorodifluoromethane | 1.530 | 85 | 3976819 | 50.37 | ppbV | | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.654 | 85 | 4829984 | 42.11 | ppbV | | 100 |
| 5) n-Butane | 1.733 | 43 | 2669458 | 46.92 | ppbV | | 100 |
| 6) Chloromethane | 1.798 | 52 | 218685 | 55.44 | ppbV | # | 1 |
| 7) Vinyl chloride | 1.788 | 62 | 1703493 | 52.78 | ppbV | | 100 |
| 8) 1,3-Butadiene | 1.798 | 39 | 1380202 | 45.78 | ppbV | | 97 |
| 9) Bromomethane | 2.088 | 94 | 1297810 | 49.81 | ppbV | | 98 |
| 10) Chloroethane | 2.197 | 64 | 957066 | 56.55 | ppbV | | 99 |
| 11) Vinyl bromide | 2.294 | 106 | 1649730 | 51.72 | ppbV | | 99 |
| 12) Trichlorofluoromethane | 2.316 | 101 | 4982088 | 49.96 | ppbV | | 100 |
| 13) Ethanol | 2.670 | 45 | 542733 | 52.03 | ppbV | | 98 |
| 14) 1,1-Dichloroethene | 2.734 | 61 | 3420744 | 51.68 | ppbV | | 100 |
| 15) Carbon disulfide | 2.757 | 76 | 5570013 | 51.13 | ppbV | | 99 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.776 | 101 | 4651123 | 46.31 | ppbV | | 99 |
| 17) Acrolein | 2.991 | 56 | 704002 | 47.31 | ppbV | | 100 |
| 18) Allyl chloride | 3.114 | 76 | 960536 | 53.78 | ppbV | | 100 |
| 19) Isopropanol | 3.114 | 45 | 3040718 | 42.56 | ppbV | | 99 |
| 20) Methylene chloride | 3.204 | 49 | 2011731 | 45.94 | ppbV | | 99 |
| 21) Acetone | 3.217 | 43 | 2606931 | 48.51 | ppbV | | 99 |
| 22) trans-1,2-Dichloroethene | 3.329 | 61 | 3449388 | 56.15 | ppbV | | 99 |
| 23) n-Pentane | 3.409 | 43 | 4025985 | 48.61 | ppbV | | 99 |
| 24) n-Hexane | 3.409 | 57 | 5589811 | 49.78 | ppbV | | 100 |
| 25) Methyl tert-butyl ether | 3.409 | 73 | 6879864 | 49.87 | ppbV | | 99 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 4961423 | 53.42 | ppbV | | 100 |
| 27) 1,1-Dichloroethane | 3.811 | 63 | 4139076 | 50.03 | ppbV | | 98 |
| 28) cis-1,2-Dichloroethene | 4.236 | 61 | 3134852 | 53.71 | ppbV | | 99 |
| 29) Cyclohexane | 4.416 | 56 | 3885234 | 49.53 | ppbV | | 100 |
| 30) Chloroform | 4.454 | 83 | 4963958 | 52.07 | ppbV | | 99 |
| 31) Ethyl acetate | 4.541 | 61 | 819660 | 52.86 | ppbV | | 99 |
| 32) Carbon tetrachloride | 4.580 | 117 | 5580598 | 49.35 | ppbV | | 99 |
| 33) Tetrahydrofuran | 4.573 | 42 | 2658620 | 49.61 | ppbV | | 98 |
| 34) 1,1,1-Trichloroethane | 4.628 | 97 | 4872977 | 49.20 | ppbV | | 99 |
| 35) Methyl ethyl ketone | 4.686 | 43 | 4486611 | 51.57 | ppbV | | 99 |
| 36) n-Heptane | 4.921 | 43 | 4632338 | 47.05 | ppbV | | 99 |
| 37) Benzene | 4.933 | 78 | 6993711 | 49.43 | ppbV | | 100 |
| 38) 1,2-Dichloroethane | 5.094 | 62 | 3131902 | 52.87 | ppbV | | 100 |
| 40) Trichloroethene | 5.435 | 130 | 3316781 | 42.37 | ppbV | | 99 |
| 41) 2,2,4-Trimethylpentane | 4.843 | 57 | 9712768 | 42.14 | ppbV | | 98 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 3027090 | 43.98 | ppbV | | 99 |
| 43) Bromodichloromethane | 5.946 | 83 | 5494302 | 47.39 | ppbV | | 99 |
| 44) Methyl methacrylate | 6.088 | 41 | 3747387 | 44.88 | ppbV | | 99 |
| 45) 1,4-Dioxane | 6.114 | 88 | 2055391 | 48.74 | ppbV | | 98 |
| 46) cis-1,3-Dichloropropene | 6.535 | 75 | 4834720 | 45.30 | ppbV | | 99 |
| 47) Toluene | 6.773 | 91 | 10605745 | 42.65 | ppbV | | 98 |
| 48) Methyl isobutyl ketone | 7.133 | 43 | 6661468 | 42.63 | ppbV | | 99 |
| 49) Tetrachloroethene | 7.162 | 166 | 4858576 | 45.31 | ppbV | | 99 |
| 50) trans-1,3-Dichloropropene | 7.178 | 75 | 4856047 | 46.91 | ppbV | | 100 |
| 51) 1,1,2-Trichloroethane | 7.339 | 97 | 3819106 | 45.48 | ppbV | | 100 |

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4136std01.D
Acq On : 10 Oct 2023 2:05 pm
Operator : jjw
Sample : 40 ppbv standard
Misc : EB0103704
ALS Vial : 6 Sample Multiplier: 1

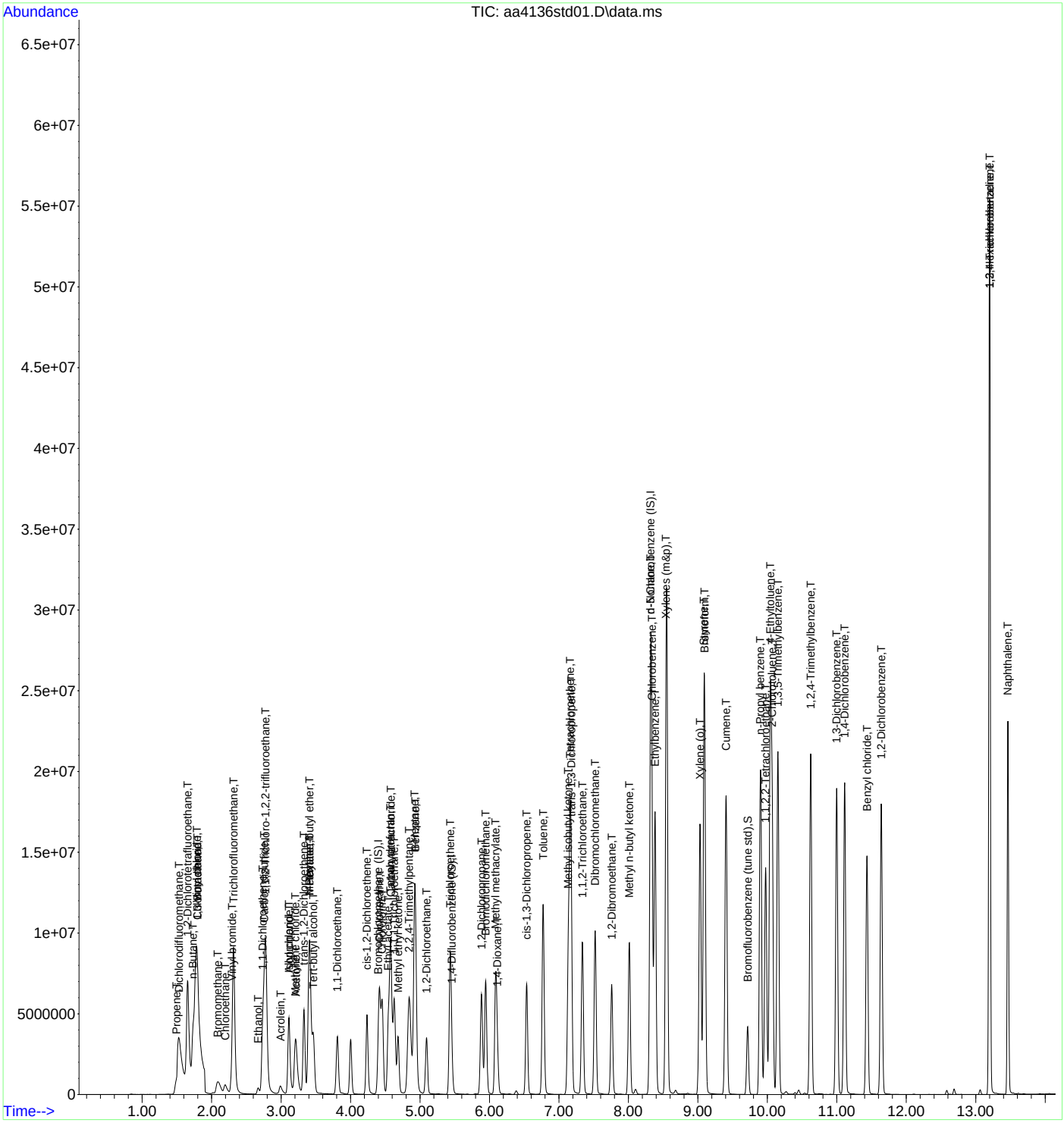
Quant Time: Oct 10 15:21:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.522 | 129 | 6730612 | 48.10 | ppbV | | 99 |
| 53) 1,2-Dibromoethane | 7.760 | 107 | 5679586 | 46.76 | ppbV | | 100 |
| 54) Methyl n-butyl ketone | 8.011 | 43 | 7194438 | 47.87 | ppbV | | 98 |
| 56) n-Nonane | 8.319 | 43 | 8278410 | 42.32 | ppbV | | 98 |
| 57) Chlorobenzene | 8.338 | 112 | 8642594 | 43.99 | ppbV | | 100 |
| 58) Ethylbenzene | 8.384 | 91 | 15502498 | 42.68 | ppbV | | 96 |
| 59) Xylenes (m&p) | 8.541 | 91 | 20852616 | 77.48 | ppbV | | 89 |
| 60) Xylene (o) | 9.030 | 91 | 12586480 | 42.86 | ppbV | | 98 |
| 61) Styrene | 9.088 | 104 | 9555594 | 47.52 | ppbV | | 98 |
| 62) Bromoform | 9.097 | 173 | 7098495 | 49.18 | ppbV | | 99 |
| 63) Cumene | 9.406 | 105 | 16006588 | 41.71 | ppbV | | 96 |
| 65) n-Propyl benzene | 9.898 | 91 | 19885132 | 39.70 | ppbV | | 93 |
| 66) 1,1,2,2-Tetrachloroethane | 9.975 | 83 | 9484025 | 46.14 | ppbV | | 99 |
| 67) 4-Ethyltoluene | 10.043 | 105 | 17650930 | 41.63 | ppbV | | 95 |
| 68) 2-Chlorotoluene | 10.068 | 91 | 14525182 | 43.17 | ppbV | | 97 |
| 69) 1,3,5-Trimethylbenzene | 10.152 | 105 | 15012049 | 44.03 | ppbV | | 96 |
| 70) 1,2,4-Trimethylbenzene | 10.625 | 105 | 15021608 | 44.08 | ppbV | | 97 |
| 71) 1,3-Dichlorobenzene | 10.998 | 146 | 9832383 | 47.12 | ppbV | | 99 |
| 72) 1,4-Dichlorobenzene | 11.113 | 146 | 9906545 | 47.18 | ppbV | | 99 |
| 73) Benzyl chloride | 11.435 | 91 | 13735706 | 45.59 | ppbV | | 96 |
| 74) 1,2-Dichlorobenzene | 11.641 | 146 | 9184158 | 45.37 | ppbV | | 98 |
| 75) 1,3-Hexachlorobutadiene | 13.200 | 225 | 5812342 | 41.37 | ppbV | | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 7183784 | 44.22 | ppbV | | 99 |
| 77) Naphthalene | 13.460 | 128 | 13659104 | 36.76 | ppbV | # | 93 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4136std01.D
Acq On : 10 Oct 2023 2:05 pm
Operator : jjw
Sample : 40 ppbv standard
Misc : EB0103704
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 10 15:21:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Initial Calibration Verification Sample Standard

**Lab Sample Name:** 10 PPBV ICVSS **Data File:** AA3407ICVSS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 8/15/2023

**Amount of standard injected (ml):** 50

Runs with this ICVSS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA3401BFB] | 08/15/2023 10:11 |
| 0.2 PPBV STD [AA3402STD05] | 08/15/2023 11:15 |
| 10 PPBV STANDARD STD [AA3404STD03] | 08/15/2023 13:09 |
| 2 PPBV STD [AA3403STD04] | 08/15/2023 13:45 |
| 20 PPBV STD [AA3405STD02] | 08/15/2023 15:12 |
| 40 PPBV STD [AA3406STD01] | 08/15/2023 16:47 |
| 10 PPBV ICVSS [AA3407ICVSS] | 08/15/2023 18:09 |

| Compound | CAS # | Injected Amount (ppbv) | Recovered Amount (ppbv) | % Recovery | QC Limit |
|---|---|---|---|---|---|
| Acetone | 67-64-1 | 11 | 10 | 95 | |
| Acrolein | 107-02-8 | 9.4 | 10.0 | 110 | |
| Allyl Chloride | 107-05-1 | 11 | 11 | 99 | |
| Benzene | 71-43-2 | 10 | 9.7 | 93 | |
| Benzyl chloride | 100-44-7 | 11 | 11 | 100 | |
| Bromodichloromethane | 75-27-4 | 11 | 11 | 100 | |
| Bromoform | 75-25-2 | 11 | 11 | 96 | |
| Bromomethane | 74-83-9 | 11 | 10 | 92 | |
| 1,3-Butadiene | 106-99-0 | 11 | 10 | 92 | |
| n-Butane | 106-97-8 | 11 | 11 | 100 | |
| Chlorobenzene | 108-90-7 | 10 | 11 | 110 | |
| Chloroethane | 75-00-3 | 9.8 | 11 | 110 | |
| Chloroform | 67-66-3 | 11 | 10 | 92 | |
| Chloromethane | 74-87-3 | 9.9 | 12 | 120 | |
| Carbon disulfide | 75-15-0 | 10 | 11 | 110 | |
| Carbon tetrachloride | 56-23-5 | 11 | 9.7 | 91 | |
| 2-Chlorotoluene | 95-49-8 | 11 | 10 | 91 | |
| Cumene | 98-82-8 | 10 | 10 | 99 | |
| Cyclohexane | 110-82-7 | 11 | 9.7 | 89 | |
| Dibromochloromethane | 124-48-1 | 11 | 11 | 100 | |
| 1,2-Dibromoethane | 106-93-4 | 11 | 11 | 100 | |
| 1,2-Dichlorobenzene | 95-50-1 | 10 | 10 | 97 | |
| 1,3-Dichlorobenzene | 541-73-1 | 10 | 10 | 96 | |
| 1,4-Dichlorobenzene | 106-46-7 | 10 | 11 | 110 | |
| Dichlorodifluoromethane | 75-71-8 | 11 | 10 | 92 | |
| 1,1-Dichloroethane | 75-34-3 | 11 | 9.7 | 92 | |
| 1,2-Dichloroethane | 107-06-2 | 11 | 10 | 95 | |
| 1,1-Dichloroethene | 75-35-4 | 11 | 11 | 100 | |
| 1,2-Dichloroethene (cis) | 156-59-2 | 10 | 11 | 110 | |
| 1,2-Dichloroethene (trans) | 156-60-5 | 11 | 11 | 100 | |
| 1,2-Dichloropropane | 78-87-5 | 11 | 10.0 | 95 | |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 9.9 | 11 | 110 | |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 11 | 11 | 100 | |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 11 | 8.6 | 77 | |
| 1,4-Dioxane | 123-91-1 | 11 | 11 | 98 | |
| Ethanol | 64-17-5 | 9.8 | 8.5 | 87 | |
| Ethyl acetate | 141-78-6 | 10 | 9.9 | 96 | |
| Ethylbenzene | 100-41-4 | 10 | 11 | 110 | |
| 4-Ethyltoluene | 622-96-8 | 11 | 11 | 100 | |
| n-Heptane | 142-82-5 | 11 | 10 | 92 | |

**ICVSS recovery must be within 70-130% of the spiked value for all compounds.**

*** Values outside of QC limits**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Initial Calibration Verification Sample Standard

**Lab Sample Name:** 10 PPBV ICVSS **Data File:** AA3407ICVSS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 8/15/2023

**Amount of standard injected (ml):** 50

Runs with this ICVSS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA3401BFB] | 08/15/2023 10:11 |
| 0.2 PPBV STD [AA3402STD05] | 08/15/2023 11:15 |
| 10 PPBV STANDARD STD [AA3404STD03] | 08/15/2023 13:09 |
| 2 PPBV STD [AA3403STD04] | 08/15/2023 13:45 |
| 20 PPBV STD [AA3405STD02] | 08/15/2023 15:12 |
| 40 PPBV STD [AA3406STD01] | 08/15/2023 16:47 |
| 10 PPBV ICVSS [AA3407ICVSS] | 08/15/2023 18:09 |

| Compound | CAS # | Injected Amount (ppbv) | Recovered Amount (ppbv) | % Recovery | QC Limit |
|---|---|---|---|---|---|
| 1,3-Hexachlorobutadiene | 87-68-3 | 9.8 | 9.8 | 100 | |
| n-Hexane | 110-54-3 | 11 | 9.7 | 90 | |
| Isopropanol | 67-63-0 | 8.1 | 8.8 | 110 | |
| Methylene chloride | 75-09-2 | 11 | 9.1 | 85 | |
| Methyl ethyl ketone | 78-93-3 | 11 | 10 | 92 | |
| Methyl isobutyl ketone | 108-10-1 | 10 | 11 | 110 | |
| Methyl methacrylate | 80-62-6 | 11 | 11 | 100 | |
| Methyl n-butyl ketone | 591-78-6 | 11 | 12 | 110 | |
| Methyl tert-butyl ether | 1634-04-4 | 11 | 9.9 | 91 | |
| Naphthalene | 91-20-3 | 11 | 10 | 93 | |
| n-Nonane | 111-84-2 | 11 | 10 | 89 | |
| n-Pentane | 109-66-0 | 11 | 9.1 | 82 | |
| Propene | 115-07-1 | 11 | 10 | 91 | |
| n-Propyl benzene | 103-65-1 | 11 | 11 | 100 | |
| Styrene | 100-42-5 | 11 | 12 | 110 | |
| Tert-butyl alcohol | 75-65-0 | 12 | 10 | 87 | |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 10 | 10 | 97 | |
| Tetrachloroethene | 127-18-4 | 12 | 11 | 93 | |
| Tetrahydrofuran | 109-99-9 | 11 | 10 | 93 | |
| Toluene | 108-88-3 | 11 | 11 | 100 | |
| 1,2,4-Trichlorobenzene | 120-82-1 | 10 | 10 | 100 | |
| 1,1,1-Trichloroethane | 71-55-6 | 11 | 9.4 | 88 | |
| 1,1,2-Trichloroethane | 79-00-5 | 11 | 10 | 93 | |
| Trichloroethene | 79-01-6 | 10 | 9.5 | 93 | |
| Trichlorofluoromethane | 75-69-4 | 11 | 10 | 94 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 11 | 9.1 | 83 | |
| 1,2,4-Trimethylbenzene | 95-63-6 | 10 | 11 | 100 | |
| 1,3,5-Trimethylbenzene | 108-67-8 | 10 | 11 | 110 | |
| 2,2,4-Trimethylpentane | 540-84-1 | 11 | 10 | 92 | |
| Vinyl bromide | 593-60-2 | 10 | 10 | 100 | |
| Vinyl chloride | 75-01-4 | 11 | 11 | 97 | |
| Xylenes (m&p) | 179601-23-1 | 21 | 22 | 110 | |
| Xylenes (o) | 95-47-6 | 10 | 11 | 110 | |

**ICVSS recovery must be within 70-130% of the spiked value for all compounds.**

*** Values outside of QC limits**

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3407icvss.D
Acq On : 15 Aug 2023 6:09 pm
Operator : jjw
Sample : 10 ppbv icvss
Misc : EB0116272
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 16 10:02:33 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.396 | 130 | 614925 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.454 | 114 | 2660514 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 3151139 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 2639252 | 10.07 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.486 | 41 | 437009 | 10.32 | ppbV | 100 |
| 3) Dichlorodifluoromethane | 1.526 | 85 | 1589571 | 10.23 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.646 | 85 | 1915451 | 8.57 | ppbV | 100 |
| 5) n-Butane | 1.729 | 43 | 1085164 | 10.79 | ppbV | 99 |
| 6) Chloromethane | 1.791 | 52 | 84692 | 11.77 | ppbV | 91 |
| 7) Vinyl chloride | 1.780 | 62 | 624265 | 10.68 | ppbV | 99 |
| 8) 1,3-Butadiene | 1.794 | 39 | 615975 | 10.31 | ppbV | 99 |
| 9) Bromomethane | 2.084 | 94 | 497818 | 10.14 | ppbV | 99 |
| 10) Chloroethane | 2.197 | 64 | 339826 | 10.69 | ppbV | 99 |
| 11) Vinyl bromide | 2.293 | 106 | 630457 | 10.21 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.312 | 101 | 2122221 | 10.15 | ppbV | 100 |
| 13) Ethanol | 2.669 | 45 | 210384 | 8.55 | ppbV | 99 |
| 14) 1,1-Dichloroethene | 2.734 | 61 | 1353018 | 10.54 | ppbV | 100 |
| 15) Carbon disulfide | 2.753 | 76 | 2291667 | 10.87 | ppbV | 99 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.776 | 101 | 1880237 | 9.10 | ppbV | 99 |
| 17) Acrolein | 2.984 | 56 | 263590 | 9.98 | ppbV | 99 |
| 18) Allyl chloride | 3.113 | 76 | 378917 | 11.01 | ppbV | 100 |
| 19) Isopropanol | 3.113 | 45 | 1247145 | 8.77 | ppbV | 99 |
| 20) Methylene chloride | 3.203 | 49 | 707555 | 9.12 | ppbV | 99 |
| 21) Acetone | 3.213 | 43 | 1199665 | 10.40 | ppbV | 99 |
| 22) trans-1,2-Dichloroethene | 3.329 | 61 | 1279551 | 11.07 | ppbV | 99 |
| 23) n-Pentane | 3.409 | 43 | 1345011 | 9.12 | ppbV | 99 |
| 24) n-Hexane | 3.409 | 57 | 2003979 | 9.73 | ppbV | 100 |
| 25) Methyl tert-butyl ether | 3.412 | 73 | 2769119 | 9.89 | ppbV | 99 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 1862648 | 10.34 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 1576537 | 9.72 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.235 | 61 | 1186018 | 10.57 | ppbV | 99 |
| 29) Cyclohexane | 4.415 | 56 | 1446092 | 9.72 | ppbV | 99 |
| 30) Chloroform | 4.454 | 83 | 2014411 | 10.15 | ppbV | 99 |
| 31) Ethyl acetate | 4.541 | 61 | 312517 | 9.89 | ppbV | 100 |
| 32) Carbon tetrachloride | 4.576 | 117 | 2310805 | 9.71 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.576 | 42 | 1135151 | 10.18 | ppbV | 99 |
| 34) 1,1,1-Trichloroethane | 4.631 | 97 | 2017204 | 9.42 | ppbV | 100 |
| 35) Methyl ethyl ketone | 4.685 | 43 | 1824867 | 10.25 | ppbV | 99 |
| 36) n-Heptane | 4.917 | 43 | 2119295 | 10.29 | ppbV | 99 |
| 37) Benzene | 4.933 | 78 | 2760579 | 9.73 | ppbV | 100 |
| 38) 1,2-Dichloroethane | 5.094 | 62 | 1306989 | 10.28 | ppbV | 99 |
| 40) Trichloroethene | 5.435 | 130 | 1277643 | 9.46 | ppbV | 100 |
| 41) 2,2,4-Trimethylpentane | 4.846 | 57 | 3384494 | 10.04 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.881 | 63 | 1210091 | 9.97 | ppbV | 99 |
| 43) Bromodichloromethane | 5.946 | 83 | 2297408 | 10.86 | ppbV | 100 |
| 44) Methyl methacrylate | 6.087 | 41 | 1707517 | 10.94 | ppbV | 100 |
| 45) 1,4-Dioxane | 6.113 | 88 | 839393 | 11.21 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 2028992 | 10.81 | ppbV | 99 |
| 47) Toluene | 6.772 | 91 | 4536523 | 10.63 | ppbV | 99 |
| 48) Methyl isobutyl ketone | 7.135 | 43 | 3266617 | 10.60 | ppbV | 100 |
| 49) Tetrachloroethene | 7.161 | 166 | 2057579 | 10.73 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 2121255 | 11.47 | ppbV | 99 |
| 51) 1,1,2-Trichloroethane | 7.338 | 97 | 1545574 | 10.28 | ppbV | 100 |

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3407icvss.D
Acq On : 15 Aug 2023 6:09 pm
Operator : jjw
Sample : 10 ppbv icvss
Misc : EB0116272
ALS Vial : 10 Sample Multiplier: 1

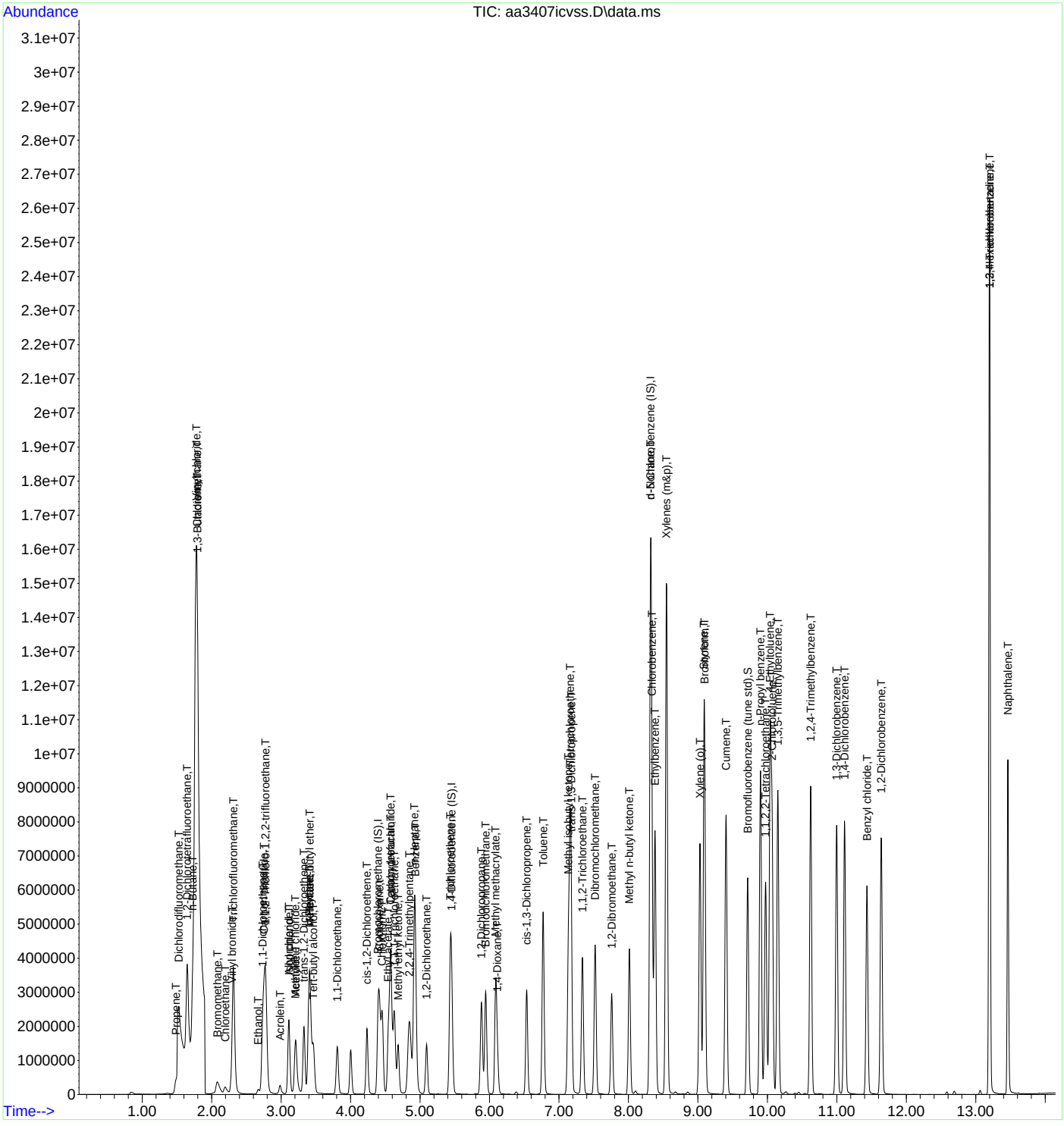
Quant Time: Aug 16 10:02:33 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 2775633 | 11.06 | ppbV | 100 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 2393720 | 10.88 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.013 | 43 | 3342265 | 11.58 | ppbV | 99 |
| 56) n-Nonane | 8.319 | 43 | 3980940 | 10.32 | ppbV | 99 |
| 57) Chlorobenzene | 8.338 | 112 | 3631305 | 10.52 | ppbV | 99 |
| 58) Ethylbenzene | 8.383 | 91 | 6749535 | 10.58 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.547 | 91 | 10243811 | 22.27 | ppbV | 100 |
| 60) Xylene (o) | 9.029 | 91 | 5367160 | 10.51 | ppbV | 100 |
| 61) Styrene | 9.087 | 104 | 3897707 | 11.50 | ppbV | 99 |
| 62) Bromoform | 9.097 | 173 | 2909911 | 11.11 | ppbV | 100 |
| 63) Cumene | 9.405 | 105 | 6858593 | 10.31 | ppbV | 100 |
| 65) n-Propyl benzene | 9.901 | 91 | 9335682 | 10.76 | ppbV | 99 |
| 66) 1,1,2,2-Tetrachloroethane | 9.975 | 83 | 4046668 | 10.45 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 7675301 | 10.73 | ppbV | 100 |
| 68) 2-Chlorotoluene | 10.068 | 91 | 6134373 | 10.42 | ppbV | 100 |
| 69) 1,3,5-Trimethylbenzene | 10.151 | 105 | 6150320 | 10.63 | ppbV | 100 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 6292442 | 10.96 | ppbV | 100 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 3955353 | 10.39 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.113 | 146 | 3900278 | 10.66 | ppbV | 99 |
| 73) Benzyl chloride | 11.434 | 91 | 5411364 | 10.79 | ppbV | 100 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 3729037 | 10.35 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.200 | 225 | 2519603 | 9.76 | ppbV | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 2920155 | 10.31 | ppbV | 100 |
| 77) Naphthalene | 13.463 | 128 | 6029829 | 10.31 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3407icvss.D
Acq On : 15 Aug 2023 6:09 pm
Operator : jjw
Sample : 10 ppbv icvss
Misc : EB0116272
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 16 10:02:33 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Initial Calibration Verification Sample Standard

**Lab Sample Name:** 10 PPBV ICVSS **Data File:** AA4137ICVSS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 10/10/2023

**Amount of standard injected (ml):** 50

Runs with this ICVSS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4131BFB] | 10/10/2023 10:13 |
| 0.2 PPBV STD [AA4132STD05] | 10/10/2023 10:40 |
| 2 PPBV STD [AA4133STD04] | 10/10/2023 11:46 |
| 10 PPBV STD [AA4134STD03] | 10/10/2023 12:21 |
| 20 PPBV STD [AA4135STD02] | 10/10/2023 12:55 |
| 40 PPBV STD [AA4136STD01] | 10/10/2023 14:05 |
| 10 PPBV ICVSS [AA4137ICVSS] | 10/10/2023 16:48 |
| 10 PPBV LCS [AA4138LCS] | 10/10/2023 17:39 |
| METHOD BLANK [AA4139BLK] | 10/10/2023 18:07 |
| 02 PPBV RLLCS [AA4140RLLCS] | 10/10/2023 18:35 |
| 10 PPBV CCCVS [AA4154CCCVS] | 10/11/2023 1:53 |

| Compound | CAS # | Injected Amount (ppbv) | Recovered Amount (ppbv) | % Recovery | QC Limit |
|---|---|---|---|---|---|
| Acetone | 67-64-1 | 11 | 10 | 95 | |
| Acrolein | 107-02-8 | 9.4 | 9.5 | 100 | |
| Allyl Chloride | 107-05-1 | 11 | 11 | 99 | |
| Benzene | 71-43-2 | 10 | 9.7 | 93 | |
| Benzyl chloride | 100-44-7 | 11 | 10 | 93 | |
| Bromodichloromethane | 75-27-4 | 11 | 11 | 100 | |
| Bromoform | 75-25-2 | 11 | 11 | 96 | |
| Bromomethane | 74-83-9 | 11 | 10 | 92 | |
| 1,3-Butadiene | 106-99-0 | 11 | 10 | 92 | |
| n-Butane | 106-97-8 | 11 | 10 | 94 | |
| Chlorobenzene | 108-90-7 | 10 | 10 | 96 | |
| Chloroethane | 75-00-3 | 9.8 | 11 | 110 | |
| Chloroform | 67-66-3 | 11 | 9.9 | 91 | |
| Chloromethane | 74-87-3 | 9.9 | 11 | 110 | |
| Carbon disulfide | 75-15-0 | 10 | 11 | 110 | |
| Carbon tetrachloride | 56-23-5 | 11 | 10 | 93 | |
| 2-Chlorotoluene | 95-49-8 | 11 | 10 | 91 | |
| Cumene | 98-82-8 | 10 | 10 | 99 | |
| Cyclohexane | 110-82-7 | 11 | 10 | 92 | |
| Dibromochloromethane | 124-48-1 | 11 | 12 | 110 | |
| 1,2-Dibromoethane | 106-93-4 | 11 | 11 | 100 | |
| 1,2-Dichlorobenzene | 95-50-1 | 10 | 10.0 | 97 | |
| 1,3-Dichlorobenzene | 541-73-1 | 10 | 10 | 96 | |
| 1,4-Dichlorobenzene | 106-46-7 | 10 | 10.0 | 97 | |
| Dichlorodifluoromethane | 75-71-8 | 11 | 10 | 92 | |
| 1,1-Dichloroethane | 75-34-3 | 11 | 9.4 | 90 | |
| 1,2-Dichloroethane | 107-06-2 | 11 | 10 | 95 | |
| 1,1-Dichloroethene | 75-35-4 | 11 | 10.0 | 93 | |
| 1,2-Dichloroethene (cis) | 156-59-2 | 10 | 10 | 97 | |
| 1,2-Dichloroethene (trans) | 156-60-5 | 11 | 11 | 100 | |
| 1,2-Dichloropropane | 78-87-5 | 11 | 10 | 95 | |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 9.9 | 11 | 110 | |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 11 | 11 | 100 | |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 11 | 9.0 | 80 | |
| 1,4-Dioxane | 123-91-1 | 11 | 11 | 98 | |

**ICVSS recovery must be within 70-130% of the spiked value for all compounds.**

*** Values outside of QC limits**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Initial Calibration Verification Sample Standard

**Lab Sample Name:** 10 PPBV ICVSS **Data File:** AA4137ICVSS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 10/10/2023

**Amount of standard injected (ml):** 50

Runs with this ICVSS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4131BFB] | 10/10/2023 10:13 |
| 0.2 PPBV STD [AA4132STD05] | 10/10/2023 10:40 |
| 2 PPBV STD [AA4133STD04] | 10/10/2023 11:46 |
| 10 PPBV STD [AA4134STD03] | 10/10/2023 12:21 |
| 20 PPBV STD [AA4135STD02] | 10/10/2023 12:55 |
| 40 PPBV STD [AA4136STD01] | 10/10/2023 14:05 |
| 10 PPBV ICVSS [AA4137ICVSS] | 10/10/2023 16:48 |
| 10 PPBV LCS [AA4138LCS] | 10/10/2023 17:39 |
| METHOD BLANK [AA4139BLK] | 10/10/2023 18:07 |
| 02 PPBV RLLCS [AA4140RLLCS] | 10/10/2023 18:35 |
| 10 PPBV CCCVS [AA4154CCCVS] | 10/11/2023 1:53 |

| Compound | CAS # | Injected Amount (ppbv) | Recovered Amount (ppbv) | % Recovery | QC Limit |
|---|---|---|---|---|---|
| Ethanol | 64-17-5 | 9.8 | 7.0 | 71 | |
| Ethyl acetate | 141-78-6 | 10 | 11 | 110 | |
| Ethylbenzene | 100-41-4 | 10 | 10 | 96 | |
| 4-Ethyltoluene | 622-96-8 | 11 | 11 | 100 | |
| n-Heptane | 142-82-5 | 11 | 11 | 100 | |
| 1,3-Hexachlorobutadiene | 87-68-3 | 9.8 | 9.8 | 100 | |
| n-Hexane | 110-54-3 | 11 | 10 | 93 | |
| Isopropanol | 67-63-0 | 8.1 | 8.4 | 100 | |
| Methylene chloride | 75-09-2 | 11 | 8.1 | 76 | |
| Methyl ethyl ketone | 78-93-3 | 11 | 10.0 | 92 | |
| Methyl isobutyl ketone | 108-10-1 | 10 | 11 | 110 | |
| Methyl methacrylate | 80-62-6 | 11 | 11 | 100 | |
| Methyl n-butyl ketone | 591-78-6 | 11 | 11 | 99 | |
| Methyl tert-butyl ether | 1634-04-4 | 11 | 10 | 92 | |
| Naphthalene | 91-20-3 | 11 | 9.7 | 91 | |
| n-Nonane | 111-84-2 | 11 | 11 | 97 | |
| n-Pentane | 109-66-0 | 11 | 9.7 | 87 | |
| Propene | 115-07-1 | 11 | 9.2 | 84 | |
| n-Propyl benzene | 103-65-1 | 11 | 11 | 100 | |
| Styrene | 100-42-5 | 11 | 11 | 100 | |
| Tert-butyl alcohol | 75-65-0 | 12 | 11 | 96 | |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 10 | 11 | 110 | |
| Tetrachloroethene | 127-18-4 | 12 | 11 | 93 | |
| Tetrahydrofuran | 109-99-9 | 11 | 10 | 93 | |
| Toluene | 108-88-3 | 11 | 11 | 100 | |
| 1,2,4-Trichlorobenzene | 120-82-1 | 10 | 9.7 | 97 | |
| 1,1,1-Trichloroethane | 71-55-6 | 11 | 10.0 | 93 | |
| 1,1,2-Trichloroethane | 79-00-5 | 11 | 11 | 100 | |
| Trichloroethene | 79-01-6 | 10 | 9.2 | 90 | |
| Trichlorofluoromethane | 75-69-4 | 11 | 10 | 94 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 11 | 9.3 | 85 | |
| 1,2,4-Trimethylbenzene | 95-63-6 | 10 | 10 | 100 | |
| 1,3,5-Trimethylbenzene | 108-67-8 | 10 | 10 | 96 | |
| 2,2,4-Trimethylpentane | 540-84-1 | 11 | 9.6 | 88 | |
| Vinyl bromide | 593-60-2 | 10 | 10 | 100 | |

**ICVSS recovery must be within 70-130% of the spiked value for all compounds.**

*** Values outside of QC limits**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Initial Calibration Verification Sample Standard

**Lab Sample Name:** **10 PPBV ICVSS** **Data File:** **AA4137ICVSS**

**Spike Amount:** **10 ppbv, except m&p-Xylenes at 20 ppbv** **Date Analyzed:** **10/10/2023**

**Amount of standard injected (ml):** **50**

Runs with this ICVSS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4131BFB] | 10/10/2023 10:13 |
| 0.2 PPBV STD [AA4132STD05] | 10/10/2023 10:40 |
| 2 PPBV STD [AA4133STD04] | 10/10/2023 11:46 |
| 10 PPBV STD [AA4134STD03] | 10/10/2023 12:21 |
| 20 PPBV STD [AA4135STD02] | 10/10/2023 12:55 |
| 40 PPBV STD [AA4136STD01] | 10/10/2023 14:05 |
| 10 PPBV ICVSS [AA4137ICVSS] | 10/10/2023 16:48 |
| 10 PPBV LCS [AA4138LCS] | 10/10/2023 17:39 |
| METHOD BLANK [AA4139BLK] | 10/10/2023 18:07 |
| 02 PPBV RLLCS [AA4140RLLCS] | 10/10/2023 18:35 |
| 10 PPBV CCCVS [AA4154CCCVS] | 10/11/2023 1:53 |

| Compound | CAS # | Injected Amount (ppbv) | Recovered Amount (ppbv) | % Recovery | QC Limit |
|---|---|---|---|---|---|
| Vinyl chloride | 75-01-4 | 11 | 11 | 97 | |
| Xylenes (m&p) | 179601-23-1 | 21 | 22 | 110 | |
| Xylenes (o) | 95-47-6 | 10 | 10 | 96 | |

**ICVSS recovery must be within 70-130% of the spiked value for all compounds.**

*** Values outside of QC limits**

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4137icvss.D
Acq On : 10 Oct 2023 4:48 pm
Operator : jjw
Sample : 10 ppbv icvss
Misc : EB0116272
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 11 12:34:17 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.394 | 130 | 450439 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.451 | 114 | 1936760 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 2279414 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.715 | 95 | 1999577 | 10.06 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.487 | 41 | 289233 | 9.25 | ppbV | 98 |
| 3) Dichlorodifluoromethane | 1.527 | 85 | 1032587 | 10.34 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.647 | 85 | 1304952 | 9.00 | ppbV | 100 |
| 5) n-Butane | 1.730 | 43 | 750417 | 10.43 | ppbV | 99 |
| 6) Chloromethane | 1.792 | 52 | 54388 | 10.90 | ppbV | 98 |
| 7) Vinyl chloride | 1.781 | 62 | 431150 | 10.57 | ppbV | 99 |
| 8) 1,3-Butadiene | 1.795 | 39 | 382252 | 10.03 | ppbV | 97 |
| 9) Bromomethane | 2.079 | 94 | 336675 | 10.22 | ppbV | 97 |
| 10) Chloroethane | 2.191 | 64 | 232639 | 10.87 | ppbV | 99 |
| 11) Vinyl bromide | 2.291 | 106 | 412014 | 10.22 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.313 | 101 | 1310652 | 10.39 | ppbV | 99 |
| 13) Ethanol | 2.664 | 45 | 92719 | 7.03 | ppbV | 99 |
| 14) 1,1-Dichloroethene | 2.731 | 61 | 835358 | 9.98 | ppbV | 99 |
| 15) Carbon disulfide | 2.751 | 76 | 1485573 | 10.79 | ppbV | 99 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.773 | 101 | 1177177 | 9.27 | ppbV | 100 |
| 17) Acrolein | 2.985 | 56 | 178709 | 9.50 | ppbV | 99 |
| 18) Allyl chloride | 3.111 | 76 | 250470 | 11.09 | ppbV | 100 |
| 19) Isopropanol | 3.111 | 45 | 759040 | 8.40 | ppbV | 100 |
| 20) Methylene chloride | 3.204 | 49 | 449695 | 8.12 | ppbV | 99 |
| 21) Acetone | 3.210 | 43 | 693658 | 10.21 | ppbV | 98 |
| 22) trans-1,2-Dichloroethene | 3.329 | 61 | 849185 | 10.93 | ppbV | 100 |
| 23) n-Pentane | 3.403 | 43 | 1018939 | 9.73 | ppbV | 98 |
| 24) n-Hexane | 3.403 | 57 | 1426750 | 10.05 | ppbV | 99 |
| 25) Methyl tert-butyl ether | 3.413 | 73 | 1803139 | 10.34 | ppbV | 99 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 1242393 | 10.58 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 977991 | 9.35 | ppbV | 99 |
| 28) cis-1,2-Dichloroethene | 4.233 | 61 | 755931 | 10.24 | ppbV | 99 |
| 29) Cyclohexane | 4.416 | 56 | 1026465 | 10.35 | ppbV | 99 |
| 30) Chloroform | 4.455 | 83 | 1194486 | 9.91 | ppbV | 99 |
| 31) Ethyl acetate | 4.545 | 61 | 208391 | 10.63 | ppbV | 99 |
| 32) Carbon tetrachloride | 4.577 | 117 | 1452418 | 10.16 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.574 | 42 | 693411 | 10.23 | ppbV | 100 |
| 34) 1,1,1-Trichloroethane | 4.625 | 97 | 1251697 | 10.00 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.683 | 43 | 1099463 | 9.99 | ppbV | 100 |
| 36) n-Heptane | 4.915 | 43 | 1406396 | 11.30 | ppbV | 100 |
| 37) Benzene | 4.934 | 78 | 1734004 | 9.69 | ppbV | 100 |
| 38) 1,2-Dichloroethane | 5.091 | 62 | 756182 | 10.10 | ppbV | 100 |
| 40) Trichloroethene | 5.432 | 130 | 792615 | 9.25 | ppbV | 97 |
| 41) 2,2,4-Trimethylpentane | 4.844 | 57 | 2425296 | 9.61 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.882 | 63 | 788220 | 10.46 | ppbV | 100 |
| 43) Bromodichloromethane | 5.943 | 83 | 1432936 | 11.29 | ppbV | 99 |
| 44) Methyl methacrylate | 6.088 | 41 | 1025399 | 11.22 | ppbV | 100 |
| 45) 1,4-Dioxane | 6.111 | 88 | 520094 | 11.27 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.535 | 75 | 1277949 | 10.94 | ppbV | 99 |
| 47) Toluene | 6.770 | 91 | 2952624 | 10.85 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.133 | 43 | 1919423 | 11.22 | ppbV | 99 |
| 49) Tetrachloroethene | 7.159 | 166 | 1314607 | 11.20 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.178 | 75 | 1281531 | 11.31 | ppbV | 97 |
| 51) 1,1,2-Trichloroethane | 7.336 | 97 | 989955 | 10.77 | ppbV | 99 |

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4137icvss.D
Acq On : 10 Oct 2023 4:48 pm
Operator : jjw
Sample : 10 ppbv icvss
Misc : EB0116272
ALS Vial : 7 Sample Multiplier: 1

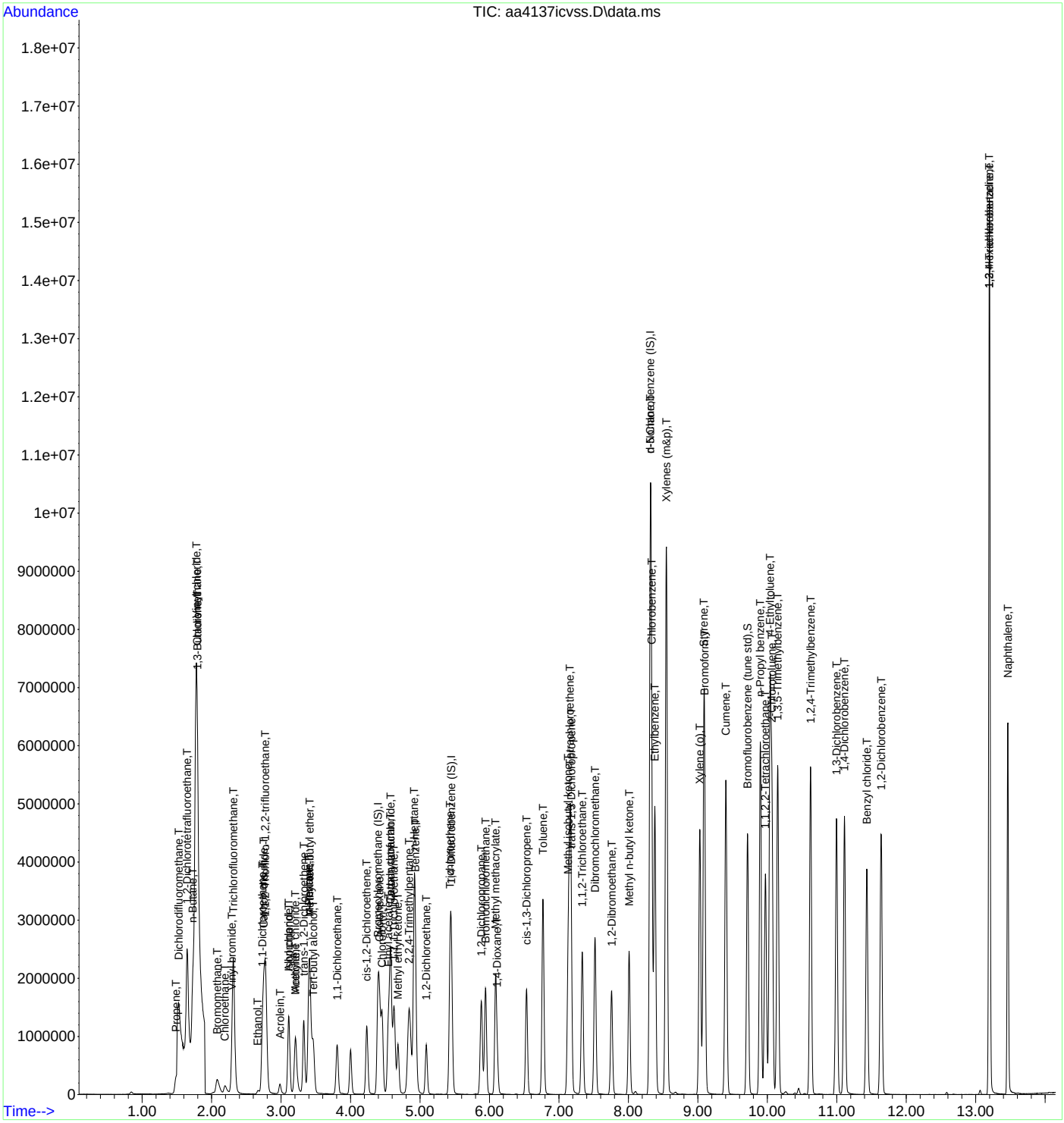
Quant Time: Oct 11 12:34:17 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.519 | 129 | 1775637 | 11.59 | ppbV | 100 |
| 53) 1,2-Dibromoethane | 7.760 | 107 | 1480875 | 11.14 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.011 | 43 | 1847140 | 11.23 | ppbV | 100 |
| 56) n-Nonane | 8.316 | 43 | 2482776 | 10.98 | ppbV | 100 |
| 57) Chlorobenzene | 8.336 | 112 | 2343720 | 10.31 | ppbV | 100 |
| 58) Ethylbenzene | 8.381 | 91 | 4399658 | 10.47 | ppbV | 100 |
| 59) Xylenes (m&p) | 8.548 | 91 | 6725199 | 21.61 | ppbV | 100 |
| 60) Xylene (o) | 9.027 | 91 | 3439926 | 10.13 | ppbV | 100 |
| 61) Styrene | 9.088 | 104 | 2542191 | 10.93 | ppbV | 98 |
| 62) Bromoform | 9.098 | 173 | 1858650 | 11.14 | ppbV | 100 |
| 63) Cumene | 9.403 | 105 | 4624440 | 10.42 | ppbV | 99 |
| 65) n-Propyl benzene | 9.898 | 91 | 6209527 | 10.72 | ppbV | 100 |
| 66) 1,1,2,2-Tetrachloroethane | 9.972 | 83 | 2517951 | 10.59 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.040 | 105 | 5225612 | 10.66 | ppbV | 100 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 4079374 | 10.48 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.149 | 105 | 4048872 | 10.27 | ppbV | 100 |
| 70) 1,2,4-Trimethylbenzene | 10.625 | 105 | 4049729 | 10.28 | ppbV | 100 |
| 71) 1,3-Dichlorobenzene | 10.998 | 146 | 2445218 | 10.13 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 2419709 | 9.96 | ppbV | 99 |
| 73) Benzyl chloride | 11.432 | 91 | 3624814 | 10.40 | ppbV | 100 |
| 74) 1,2-Dichlorobenzene | 11.641 | 146 | 2329520 | 9.95 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.197 | 225 | 1597275 | 9.83 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.197 | 180 | 1825252 | 9.71 | ppbV | 100 |
| 77) Naphthalene | 13.464 | 128 | 4147327 | 9.65 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4137icvss.D
Acq On : 10 Oct 2023 4:48 pm
Operator : jjw
Sample : 10 ppbv icvss
Misc : EB0116272
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 11 12:34:17 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Continuing Calibration Data Summary Report

**Initial Calibration Curve:** 8/15/2023
**Instrument:** AA
**Amount of standard injected (ml):** 50

**Date/Time of Calibration:** 10/2/2023 12:19
**Sample ID:** DCS
**Laboratory ID:** AA4102DCVS

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4101BFB] | 10/02/2023 11:11 |
| 10 PPBV DCVS [AA4102DCVS] | 10/02/2023 12:19 |
| 10 PPBV LCS [AA4103LCS] | 10/02/2023 12:50 |
| METHOD BLANK [AA4104BLK] | 10/02/2023 13:32 |
| 02 PPBV RLLCS [AA4105RLLCS] | 10/02/2023 14:08 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 3830 [AA4106] | 10/02/2023 14:44 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 5087 [AA4107] | 10/02/2023 15:14 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2037 [AA4108] | 10/02/2023 15:45 |
| 10 PPBV CCCVS [AA4125CCCVS] | 10/03/2023 00:49 |

| Compound Name | Average RRF | Standard RRF | % Difference | PassFail | * |
|---|---|---|---|---|---|
| Acetone | 1.9 | 2.2 | -18 | PASS | |
| Benzene | 4.6 | 4.5 | 1.8 | PASS | |
| Bromodichloromethane | 0.80 | 0.76 | 4.4 | PASS | |
| Bromoform | 0.83 | 0.78 | 6.1 | PASS | |
| Bromomethane | 0.80 | 1.0 | -29 | PASS | |
| 1,3-Butadiene | 0.97 | 1.1 | -13 | PASS | |
| Chlorobenzene | 1.1 | 0.99 | 10 | PASS | |
| Chloroethane | 0.52 | 0.60 | -15 | PASS | |
| Chloroform | 3.2 | 3.3 | -2.3 | PASS | |
| Chloromethane | 0.12 | 0.15 | -26 | PASS | |
| Carbon disulfide | 3.4 | 4.3 | -26 | PASS | |
| Carbon tetrachloride | 3.9 | 3.4 | 12 | PASS | |
| Cyclohexane | 2.4 | 2.2 | 9.5 | PASS | |
| Dibromochloromethane | 0.94 | 0.75 | 21 | PASS | |
| 1,2-Dibromoethane | 0.83 | 0.66 | 21 | PASS | |
| 1,2-Dichlorobenzene | 1.1 | 1.0 | 9.1 | PASS | |
| 1,3-Dichlorobenzene | 1.2 | 1.0 | 14 | PASS | |
| 1,4-Dichlorobenzene | 1.2 | 1.1 | 6.9 | PASS | |
| Dichlorodifluoromethane | 2.5 | 3.0 | -17 | PASS | |
| 1,1-Dichloroethane | 2.6 | 2.8 | -5.9 | PASS | |
| 1,2-Dichloroethane | 2.1 | 2.1 | -3.4 | PASS | |
| 1,1-Dichloroethene | 2.1 | 2.5 | -18 | PASS | |
| 1,2-Dichloroethene (cis) | 1.8 | 2.0 | -9.1 | PASS | |
| 1,2-Dichloroethene (trans) | 1.9 | 2.2 | -15 | PASS | |
| 1,2-Dichloropropane | 0.46 | 0.40 | 13 | PASS | |
| 1,3-Dichloropropene (cis) | 0.71 | 0.61 | 14 | PASS | |
| 1,3-Dichloropropene (trans) | 0.70 | 0.61 | 12 | PASS | |
| 1,2-Dichlorotetrafluoroethane | 3.6 | 3.8 | -4.8 | PASS | |
| 1,4-Dioxane | 0.28 | 0.24 | 15 | PASS | |
| Ethylbenzene | 2.0 | 1.7 | 14 | PASS | |
| n-Heptane | 3.4 | 2.7 | 20 | PASS | |
| 1,3-Hexachlorobutadiene | 0.82 | 0.74 | 9.9 | PASS | |
| n-Hexane | 3.3 | 3.3 | 2.4 | PASS | |
| Methylene chloride | 1.3 | 1.6 | -28 | PASS | |
| Methyl ethyl ketone | 2.9 | 3.0 | -5.0 | PASS | |
| Methyl isobutyl ketone | 1.2 | 0.90 | 22 | PASS | |
| Methyl tert-butyl ether | 4.6 | 4.2 | 7.7 | PASS | |
| Styrene | 1.1 | 0.97 | 10 | PASS | |
| Tert-butyl alcohol | 2.9 | 2.7 | 7.2 | PASS | |
| 1,1,2,2-Tetrachloroethane | 1.2 | 1.0 | 17 | PASS | |
| Tetrachloroethene | 0.72 | 0.55 | 24 | PASS | |

***%Difference must be within +/- 30%**
**RRF - Relative Response Factor**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Continuing Calibration Data Summary Report

| | | | |
|---|---|---|---|
| **Initial Calibration Curve:** | **8/15/2023** | **Date/Time of Calibration:** | **10/2/2023 12:19** |
| **Instrument:** | **AA** | **Sample ID:** | **DCS** |
| **Amount of standard injected (ml):** | **50** | **Laboratory ID:** | **AA4102DCVS** |

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4101BFB] | 10/02/2023 11:11 |
| 10 PPBV DCVS [AA4102DCVS] | 10/02/2023 12:19 |
| 10 PPBV LCS [AA4103LCS] | 10/02/2023 12:50 |
| METHOD BLANK [AA4104BLK] | 10/02/2023 13:32 |
| 02 PPBV RLLCS [AA4105RLLCS] | 10/02/2023 14:08 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 3830 [AA4106] | 10/02/2023 14:44 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 5087 [AA4107] | 10/02/2023 15:14 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2037 [AA4108] | 10/02/2023 15:45 |
| 10 PPBV CCCVS [AA4125CCCVS] | 10/03/2023 00:49 |

| Compound Name | Average RRF | Standard RRF | % Difference | PassFail | * |
|---|---|---|---|---|---|
| Toluene | 1.6 | 1.3 | 21 | PASS | |
| 1,2,4-Trichlorobenzene | 0.90 | 0.86 | 4.9 | PASS | |
| 1,1,1-Trichloroethane | 3.5 | 3.0 | 14 | PASS | |
| 1,1,2-Trichloroethane | 0.57 | 0.44 | 22 | PASS | |
| Trichloroethene | 0.51 | 0.48 | 6.5 | PASS | |
| Trichlorofluoromethane | 3.4 | 3.5 | -2.6 | PASS | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 3.4 | 2.9 | 14 | PASS | |
| 1,2,4-Trimethylbenzene | 1.8 | 1.6 | 10 | PASS | |
| 1,3,5-Trimethylbenzene | 1.8 | 1.6 | 13 | PASS | |
| 2,2,4-Trimethylpentane | 1.3 | 1.5 | -22 | PASS | |
| Vinyl bromide | 1.0 | 1.3 | -28 | PASS | |
| Vinyl chloride | 0.95 | 1.2 | -28 | PASS | |
| Xylenes (m&p) | 1.5 | 1.3 | 8.6 | PASS | |
| Xylenes (o) | 1.6 | 1.4 | 15 | PASS | |

***%Difference must be within +/- 30%**
**RRF - Relative Response Factor**

Data Path : C:\DATA\2023\10-2023\10-02-2023\
Data File : aa4102dcvs.D
Acq On : 2 Oct 2023 12:19 pm
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 03 11:26:17 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 0% Max. R.T. Dev 0.40min
Max. RRF Dev : 30% Max. Rel. Area : 500%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Bromochloromethane (IS) | 1.000 | 1.000 | 0.0 | 79 | 0.00 |
| 2 | T | Propene | 0.689 | 0.812 | -17.9 | 99 | -0.02 |
| 3 | T | Dichlorodifluoromethane | 2.527 | 2.954 | -16.9 | 97 | -0.03 |
| 4 | T | 1,2-Dichlorotetrafluoroetha | 3.636 | 3.811 | -4.8 | 95 | -0.03 |
| 5 | T | n-Butane | 1.635 | 1.816 | -11.1 | 90 | -0.03 |
| 6 | T | Chloromethane | 0.117 | 0.147 | -25.6 | 101 | -0.02 |
| 7 | T | Vinyl chloride | 0.950 | 1.216 | -28.0 | 103 | -0.03 |
| 8 | T | 1,3-Butadiene | 0.972 | 1.100 | -13.2 | 94 | -0.02 |
| 9 | T | Bromomethane | 0.798 | 1.031 | -29.2 | 105 | -0.02 |
| 10 | T | Chloroethane | 0.517 | 0.596 | -15.3 | 90 | -0.03 |
| 11 | T | Vinyl bromide | 1.004 | 1.286 | -28.1 | 103 | -0.02 |
| 12 | T | Trichlorofluoromethane | 3.400 | 3.490 | -2.6 | 90 | -0.02 |
| 13 | T | Ethanol | 0.400 | 0.469 | -17.2 | 115 | -0.02 |
| 14 | T | 1,1-Dichloroethene | 2.088 | 2.457 | -17.7 | 92 | -0.02 |
| 15 | T | Carbon disulfide | 3.429 | 4.325 | -26.1 | 98 | -0.02 |
| 16 | T | 1,1,2-Trichloro-1,2,2-trifl | 3.360 | 2.890 | 14.0 | 82 | -0.03 |
| 17 | T | Acrolein | 0.430 | 0.513 | -19.3 | 95 | -0.02 |
| 18 | T | Allyl chloride | 0.559 | 0.662 | -18.4 | 93 | -0.02 |
| 19 | T | Isopropanol | 2.312 | 2.683 | -16.0 | 94 | -0.02 |
| 20 | T | Methylene chloride | 1.262 | 1.612 | -27.7 | 121 | -0.02 |
| 21 | T | Acetone | 1.876 | 2.220 | -18.3 | 97 | -0.02 |
| 22 | T | trans-1,2-Dichloroethene | 1.879 | 2.161 | -15.0 | 92 | -0.02 |
| 23 | T | n-Pentane | 2.398 | 2.548 | -6.3 | 100 | -0.02 |
| 24 | T | n-Hexane | 3.349 | 3.269 | 2.4 | 86 | -0.01 |
| 25 | T | Methyl tert-butyl ether | 4.555 | 4.203 | 7.7 | 84 | -0.02 |
| 26 | T | Tert-butyl alcohol | 2.929 | 2.717 | 7.2 | 83 | -0.02 |
| 27 | T | 1,1-Dichloroethane | 2.637 | 2.792 | -5.9 | 92 | -0.02 |
| 28 | T | cis-1,2-Dichloroethene | 1.824 | 1.990 | -9.1 | 89 | -0.01 |
| 29 | t | Cyclohexane | 2.420 | 2.189 | 9.5 | 82 | 0.00 |
| 30 | T | Chloroform | 3.228 | 3.301 | -2.3 | 87 | -0.01 |
| 31 | T | Ethyl acetate | 0.514 | 0.474 | 7.8 | 79 | -0.01 |
| 32 | T | Carbon tetrachloride | 3.870 | 3.414 | 11.8 | 81 | 0.00 |
| 33 | T | Tetrahydrofuran | 1.813 | 1.931 | -6.5 | 89 | -0.01 |
| 34 | T | 1,1,1-Trichloroethane | 3.484 | 2.998 | 13.9 | 80 | 0.00 |
| 35 | T | Methyl ethyl ketone | 2.894 | 3.038 | -5.0 | 89 | -0.01 |
| 36 | T | n-Heptane | 3.350 | 2.677 | 20.1 | 67 | 0.00 |
| 37 | T | Benzene | 4.614 | 4.532 | 1.8 | 85 | 0.00 |
| 38 | T | 1,2-Dichloroethane | 2.067 | 2.137 | -3.4 | 87 | 0.00 |
| 39 | I | 1,4-Difluorobenzene (IS) | 1.000 | 1.000 | 0.0 | 78 | 0.00 |
| 40 | T | Trichloroethene | 0.508 | 0.475 | 6.5 | 78 | 0.00 |
| 41 | T | 2,2,4-Trimethylpentane | 1.267 | 1.542 | -21.7 | 103 | 0.00 |
| 42 | T | 1,2-Dichloropropane | 0.456 | 0.395 | 13.4 | 72 | 0.00 |
| 43 | T | Bromodichloromethane | 0.795 | 0.760 | 4.4 | 78 | 0.00 |
| 44 | T | Methyl methacrylate | 0.587 | 0.500 | 14.8 | 65 | 0.00 |
| 45 | T | 1,4-Dioxane | 0.281 | 0.240 | 14.6 | 68 | 0.00 |
| 46 | T | cis-1,3-Dichloropropene | 0.705 | 0.610 | 13.5 | 69 | 0.00 |
| 47 | T | Toluene | 1.603 | 1.262 | 21.3 | 61 | 0.00 |
| 48 | T | Methyl isobutyl ketone | 1.158 | 0.902 | 22.1 | 61 | 0.00 |
| 49 | T | Tetrachloroethene | 0.721 | 0.548 | 24.0 | 62 | 0.00 |
| 50 | T | trans-1,3-Dichloropropene | 0.695 | 0.611 | 12.1 | 66 | 0.00 |
| 51 | T | 1,1,2-Trichloroethane | 0.565 | 0.441 | 21.9 | 63 | 0.00 |
| 52 | T | Dibromochloromethane | 0.944 | 0.749 | 20.7 | 63 | 0.00 |
| 53 | T | 1,2-Dibromoethane | 0.827 | 0.655 | 20.8 | 61 | 0.00 |

Data Path : C:\DATA\2023\10-2023\10-02-2023\
Data File : aa4102dcvs.D
Acq On : 2 Oct 2023 12:19 pm
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 03 11:26:17 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 0% Max. R.T. Dev 0.40min
Max. RRF Dev : 30% Max. Rel. Area : 500%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 54 | T | Methyl n-butyl ketone | 1.085 | 0.835 | 23.0 | 58 | 0.00 |
| 55 | I | d-5 Chlorobenzene (IS) | 1.000 | 1.000 | 0.0 | 62 | 0.00 |
| 56 | T | n-Nonane | 1.224 | 0.971 | 20.7 | 51 | 0.00 |
| 57 | T | Chlorobenzene | 1.095 | 0.985 | 10.0 | 59 | 0.00 |
| 58 | T | Ethylbenzene | 2.025 | 1.747 | 13.7 | 56 | 0.00 |
| 59 | T | Xylenes (m&p) | 1.460 | 1.334 | 8.6 | 57 | 0.00 |
| 60 | T | Xylene (o) | 1.621 | 1.386 | 14.5 | 55 | 0.00 |
| 61 | T | Styrene | 1.076 | 0.968 | 10.0 | 55 | 0.00 |
| 62 | T | Bromoform | 0.831 | 0.780 | 6.1 | 60 | 0.00 |
| 63 | T | Cumene | 2.112 | 1.798 | 14.9 | 54 | 0.00 |
| 64 | S | Bromofluorobenzene (tune st | 0.832 | 0.784 | 5.8 | 59 | 0.00 |
| 65 | T | n-Propyl benzene | 2.753 | 2.404 | 12.7 | 54 | 0.00 |
| 66 | T | 1,1,2,2-Tetrachloroethane | 1.228 | 1.021 | 16.9 | 55 | 0.00 |
| 67 | T | 4-Ethyltoluene | 2.270 | 1.976 | 13.0 | 54 | 0.00 |
| 68 | T | 2-Chlorotoluene | 1.868 | 1.627 | 12.9 | 56 | 0.00 |
| 69 | T | 1,3,5-Trimethylbenzene | 1.837 | 1.600 | 12.9 | 55 | 0.00 |
| 70 | T | 1,2,4-Trimethylbenzene | 1.821 | 1.635 | 10.2 | 54 | 0.00 |
| 71 | T | 1,3-Dichlorobenzene | 1.208 | 1.040 | 13.9 | 57 | 0.00 |
| 72 | T | 1,4-Dichlorobenzene | 1.161 | 1.081 | 6.9 | 58 | 0.00 |
| 73 | T | Benzyl chloride | 1.591 | 1.575 | 1.0 | 57 | 0.00 |
| 74 | T | 1,2-Dichlorobenzene | 1.143 | 1.039 | 9.1 | 58 | 0.00 |
| 75 | T | 1,3-Hexachlorobutadiene | 0.820 | 0.739 | 9.9 | 62 | 0.00 |
| 76 | T | 1,2,4-Trichlorobenzene | 0.899 | 0.855 | 4.9 | 61 | 0.00 |
| 77 | T | Naphthalene | 1.857 | 1.932 | -4.0 | 62 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data Path : C:\DATA\2023\10-2023\10-02-2023\
Data File : aa4102dcvs.D
Acq On : 2 Oct 2023 12:19 pm
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 03 11:26:17 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.386 | 130 | 421448 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.447 | 114 | 1774693 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.315 | 117 | 1689020 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1324848 | 9.43 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.470 | 41 | 373018 | 12.85 | ppbV | 98 |
| 3) Dichlorodifluoromethane | 1.499 | 85 | 1319752 | 12.39 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.622 | 85 | 1574176 | 10.27 | ppbV | 95 |
| 5) n-Butane | 1.701 | 43 | 834362 | 12.11 | ppbV | 99 |
| 6) Chloromethane | 1.770 | 52 | 69453 | 14.08 | ppbV | 96 |
| 7) Vinyl chloride | 1.756 | 62 | 553593 | 13.82 | ppbV | 99 |
| 8) 1,3-Butadiene | 1.770 | 39 | 496026 | 12.11 | ppbV | 96 |
| 9) Bromomethane | 2.065 | 94 | 434635 | 12.92 | ppbV | 99 |
| 10) Chloroethane | 2.168 | 64 | 266152 | 12.22 | ppbV | 99 |
| 11) Vinyl bromide | 2.274 | 106 | 547568 | 12.94 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.290 | 101 | 1617886 | 11.29 | ppbV | 100 |
| 13) Ethanol | 2.647 | 45 | 205595 | 12.19 | ppbV | 98 |
| 14) 1,1-Dichloroethene | 2.711 | 61 | 1077127 | 12.24 | ppbV | 97 |
| 15) Carbon disulfide | 2.734 | 76 | 1950525 | 13.50 | ppbV | 99 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.753 | 101 | 1327379 | 9.37 | ppbV | 99 |
| 17) Acrolein | 2.965 | 56 | 216245 | 11.94 | ppbV | 98 |
| 18) Allyl chloride | 3.097 | 76 | 301302 | 12.78 | ppbV | 100 |
| 19) Isopropanol | 3.091 | 45 | 1006533 | 10.33 | ppbV | 99 |
| 20) Methylene chloride | 3.184 | 49 | 733651 | 13.79 | ppbV | 94 |
| 21) Acetone | 3.193 | 43 | 1010271 | 12.78 | ppbV | 98 |
| 22) trans-1,2-Dichloroethene | 3.309 | 61 | 1010752 | 12.76 | ppbV | 94 |
| 23) n-Pentane | 3.393 | 43 | 1159620 | 11.48 | ppbV | 100 |
| 24) n-Hexane | 3.393 | 57 | 1515538 | 10.74 | ppbV | 95 |
| 25) Methyl tert-butyl ether | 3.396 | 73 | 1983720 | 10.33 | ppbV | 97 |
| 26) Tert-butyl alcohol | 3.451 | 59 | 1317010 | 10.67 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.792 | 63 | 1259101 | 11.33 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.222 | 61 | 914228 | 11.89 | ppbV | 96 |
| 29) Cyclohexane | 4.406 | 56 | 1033349 | 10.13 | ppbV | 97 |
| 30) Chloroform | 4.444 | 83 | 1502390 | 11.04 | ppbV | 99 |
| 31) Ethyl acetate | 4.531 | 61 | 215897 | 9.97 | ppbV | 94 |
| 32) Carbon tetrachloride | 4.570 | 117 | 1582589 | 9.70 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.563 | 42 | 895020 | 11.71 | ppbV | 97 |
| 34) 1,1,1-Trichloroethane | 4.618 | 97 | 1377393 | 9.38 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.673 | 43 | 1408564 | 11.55 | ppbV | 98 |
| 36) n-Heptane | 4.914 | 43 | 1252306 | 8.87 | ppbV | 97 |
| 37) Benzene | 4.923 | 78 | 2062981 | 10.61 | ppbV | 100 |
| 38) 1,2-Dichloroethane | 5.084 | 62 | 981849 | 11.27 | ppbV | 100 |
| 40) Trichloroethene | 5.425 | 130 | 842485 | 9.35 | ppbV | 99 |
| 41) 2,2,4-Trimethylpentane | 4.837 | 57 | 2983822 | 13.27 | ppbV | 98 |
| 42) 1,2-Dichloropropane | 5.878 | 63 | 771020 | 9.52 | ppbV | 100 |
| 43) Bromodichloromethane | 5.939 | 83 | 1550446 | 10.99 | ppbV | 99 |
| 44) Methyl methacrylate | 6.084 | 41 | 976227 | 9.37 | ppbV | 99 |
| 45) 1,4-Dioxane | 6.110 | 88 | 497762 | 9.97 | ppbV | 98 |
| 46) cis-1,3-Dichloropropene | 6.531 | 75 | 1200755 | 9.59 | ppbV | 99 |
| 47) Toluene | 6.769 | 91 | 2418760 | 8.50 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.132 | 43 | 1744576 | 8.49 | ppbV | 97 |
| 49) Tetrachloroethene | 7.158 | 166 | 1090171 | 8.52 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.174 | 75 | 1202910 | 9.75 | ppbV | 97 |
| 51) 1,1,2-Trichloroethane | 7.332 | 97 | 845754 | 8.43 | ppbV | 99 |

Data Path : C:\DATA\2023\10-2023\10-02-2023\
Data File : aa4102dcvs.D
Acq On : 2 Oct 2023 12:19 pm
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

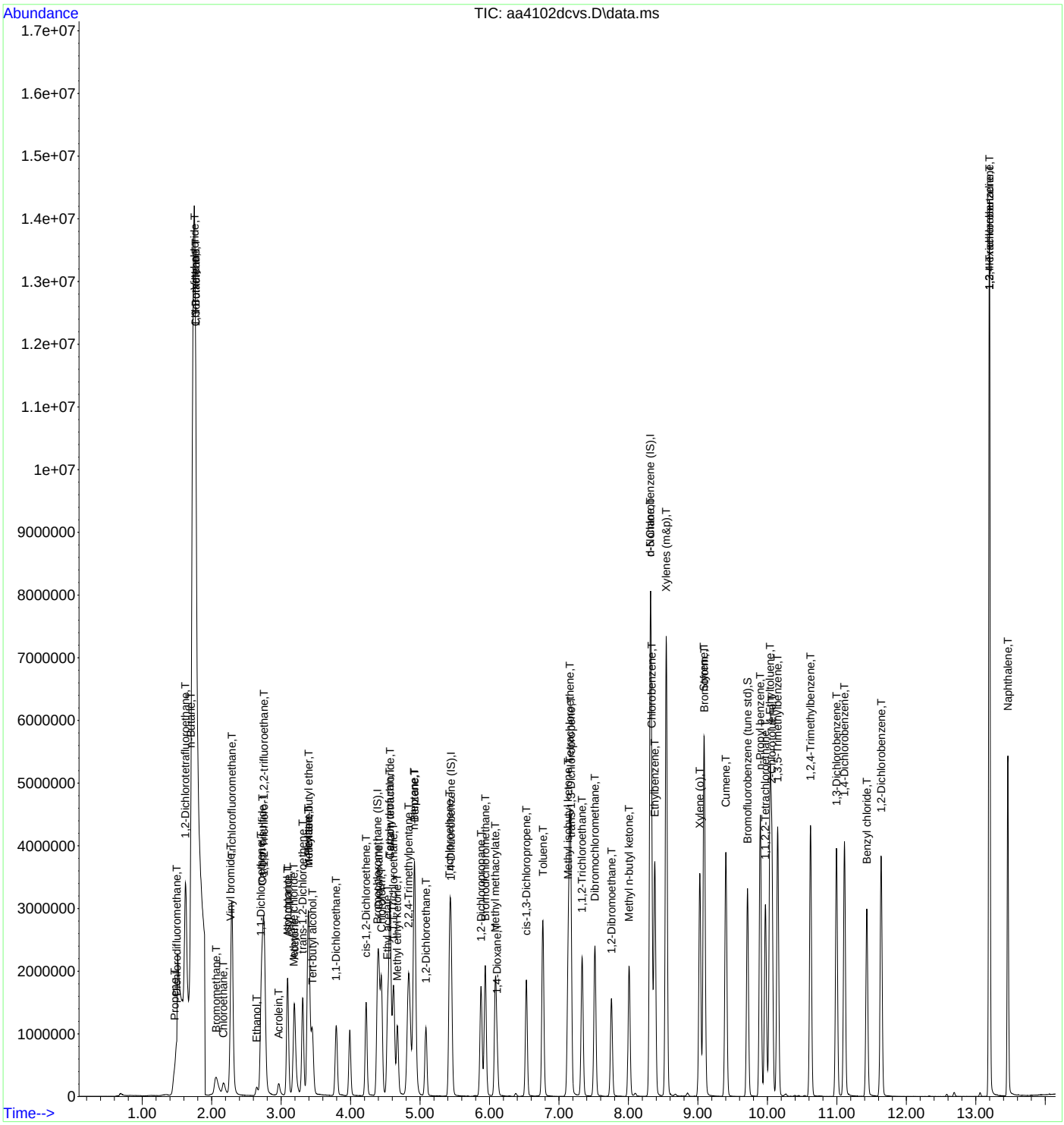
Quant Time: Oct 03 11:26:17 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.518 | 129 | 1489344 | 8.89 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.756 | 107 | 1256251 | 8.56 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.007 | 43 | 1675257 | 8.70 | ppbV | 97 |
| 56) n-Nonane | 8.315 | 43 | 1803781 | 8.73 | ppbV | 96 |
| 57) Chlorobenzene | 8.335 | 112 | 1845812 | 9.98 | ppbV | 99 |
| 58) Ethylbenzene | 8.380 | 91 | 3274773 | 9.57 | ppbV | 98 |
| 59) Xylenes (m&p) | 8.544 | 91 | 5023704 | 20.38 | ppbV | 98 |
| 60) Xylene (o) | 9.026 | 91 | 2575487 | 9.41 | ppbV | 99 |
| 61) Styrene | 9.087 | 104 | 1848267 | 10.17 | ppbV | 99 |
| 62) Bromoform | 9.094 | 173 | 1488294 | 10.60 | ppbV | 100 |
| 63) Cumene | 9.402 | 105 | 3249245 | 9.11 | ppbV | 98 |
| 65) n-Propyl benzene | 9.897 | 91 | 4386123 | 9.43 | ppbV | 98 |
| 66) 1,1,2,2-Tetrachloroethane | 9.971 | 83 | 1966345 | 9.48 | ppbV | 99 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 3604007 | 9.40 | ppbV | 98 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 2995852 | 9.50 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 2945099 | 9.49 | ppbV | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.621 | 105 | 2982260 | 9.69 | ppbV | 97 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 1949852 | 9.56 | ppbV | 99 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 1953237 | 9.96 | ppbV | 99 |
| 73) Benzyl chloride | 11.431 | 91 | 2660662 | 9.90 | ppbV | 98 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 1878582 | 9.73 | ppbV | 99 |
| 75) 1,3-Hexachlorobutadiene | 13.196 | 225 | 1385197 | 10.01 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.196 | 180 | 1588948 | 10.47 | ppbV | 99 |
| 77) Naphthalene | 13.463 | 128 | 3262446 | 10.40 | ppbV | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\10-2023\10-02-2023\
Data File : aa4102dcvs.D
Acq On : 2 Oct 2023 12:19 pm
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 03 11:26:17 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Continuing Calibration Data Summary Report

**Initial Calibration Curve:** 10/10/2023
**Instrument:** AA
**Amount of standard injected (ml):** 50

**Date/Time of Calibration:** 11/3/2023 10:14
**Sample ID:** DCS
**Laboratory ID:** AA4528DCVS

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4527BFB] | 11/03/2023 09:42 |
| 10 PPBV DCVS [AA4528DCVS] | 11/03/2023 10:14 |
| 10 PPBV LCS [AA4529LCS] | 11/03/2023 10:43 |
| METHOD BLANK [AA4530BLK] | 11/03/2023 11:41 |
| 02 PPBV RLLCS [AA4531RLLCS] | 11/03/2023 12:15 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2902 [AA4532] | 11/03/2023 13:01 |
| 10 PPBV CCCVS [AA4549CCCVS] | 11/03/2023 22:29 |

| Compound Name | Average RRF | Standard RRF | % Difference | PassFail | * |
|---|---|---|---|---|---|
| Acetone | 1.5 | 1.8 | -20 | PASS | |
| Benzene | 4.0 | 4.2 | -6.0 | PASS | |
| Bromodichloromethane | 0.66 | 0.71 | -7.9 | PASS | |
| Bromoform | 0.73 | 0.75 | -1.8 | PASS | |
| Bromomethane | 0.73 | 0.83 | -13 | PASS | |
| 1,3-Butadiene | 0.85 | 0.85 | -0.70 | PASS | |
| Chlorobenzene | 1.00 | 0.97 | 3.1 | PASS | |
| Chloroethane | 0.48 | 0.58 | -22 | PASS | |
| Chloroform | 2.7 | 3.1 | -16 | PASS | |
| Chloromethane | 0.11 | 0.13 | -19 | PASS | |
| Carbon disulfide | 3.1 | 3.6 | -18 | PASS | |
| Carbon tetrachloride | 3.2 | 3.3 | -2.9 | PASS | |
| Cyclohexane | 2.2 | 2.2 | 1.5 | PASS | |
| Dibromochloromethane | 0.79 | 0.86 | -8.2 | PASS | |
| 1,2-Dibromoethane | 0.69 | 0.74 | -7.9 | PASS | |
| 1,2-Dichlorobenzene | 1.0 | 1.00 | 2.7 | PASS | |
| 1,3-Dichlorobenzene | 1.1 | 1.0 | 2.5 | PASS | |
| 1,4-Dichlorobenzene | 1.1 | 1.1 | -0.50 | PASS | |
| Dichlorodifluoromethane | 2.2 | 2.6 | -16 | PASS | |
| 1,1-Dichloroethane | 2.3 | 2.6 | -12 | PASS | |
| 1,2-Dichloroethane | 1.7 | 2.0 | -21 | PASS | |
| 1,1-Dichloroethene | 1.9 | 2.3 | -25 | PASS | |
| 1,2-Dichloroethene (cis) | 1.6 | 1.9 | -17 | PASS | |
| 1,2-Dichloroethene (trans) | 1.7 | 2.1 | -20 | PASS | |
| 1,2-Dichloropropane | 0.39 | 0.39 | -0.50 | PASS | |
| 1,3-Dichloropropene (cis) | 0.60 | 0.63 | -4.3 | PASS | |
| 1,3-Dichloropropene (trans) | 0.59 | 0.64 | -10 | PASS | |
| 1,2-Dichlorotetrafluoroethane | 3.2 | 3.4 | -4.1 | PASS | |
| 1,4-Dioxane | 0.24 | 0.24 | -0.80 | PASS | |
| Ethylbenzene | 1.8 | 1.8 | 3.8 | PASS | |
| n-Heptane | 2.8 | 2.8 | -2.1 | PASS | |
| 1,3-Hexachlorobutadiene | 0.71 | 0.69 | 3.1 | PASS | |
| n-Hexane | 3.2 | 3.2 | -2.4 | PASS | |
| Methylene chloride | 1.2 | 1.2 | 3.3 | PASS | |
| Methyl ethyl ketone | 2.4 | 2.6 | -8.2 | PASS | |
| Methyl isobutyl ketone | 0.88 | 0.89 | -1.0 | PASS | |
| Methyl tert-butyl ether | 3.9 | 3.9 | -0.60 | PASS | |
| Styrene | 1.0 | 1.0 | 0.10 | PASS | |
| Tert-butyl alcohol | 2.6 | 2.7 | -2.0 | PASS | |
| 1,1,2,2-Tetrachloroethane | 1.0 | 0.97 | 6.7 | PASS | |
| Tetrachloroethene | 0.61 | 0.64 | -5.4 | PASS | |
| Toluene | 1.4 | 1.5 | -3.6 | PASS | |
| 1,2,4-Trichlorobenzene | 0.82 | 0.81 | 1.6 | PASS | |

***%Difference must be within +/- 30%**
**RRF - Relative Response Factor**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Continuing Calibration Data Summary Report

| | | | |
|---|---|---|---|
| **Initial Calibration Curve:** | **10/10/2023** | **Date/Time of Calibration:** | **11/3/2023 10:14** |
| **Instrument:** | **AA** | **Sample ID:** | **DCS** |
| **Amount of standard injected (ml):** | **50** | **Laboratory ID:** | **AA4528DCVS** |

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4527BFB] | 11/03/2023 09:42 |
| 10 PPBV DCVS [AA4528DCVS] | 11/03/2023 10:14 |
| 10 PPBV LCS [AA4529LCS] | 11/03/2023 10:43 |
| METHOD BLANK [AA4530BLK] | 11/03/2023 11:41 |
| 02 PPBV RLLCS [AA4531RLLCS] | 11/03/2023 12:15 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2902 [AA4532] | 11/03/2023 13:01 |
| 10 PPBV CCCVS [AA4549CCCVS] | 11/03/2023 22:29 |

| Compound Name | Average RRF | Standard RRF | % Difference | PassFail | * |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 2.8 | 2.9 | -5.7 | PASS | |
| 1,1,2-Trichloroethane | 0.48 | 0.50 | -4.6 | PASS | |
| Trichloroethene | 0.44 | 0.46 | -4.3 | PASS | |
| Trichlorofluoromethane | 2.8 | 3.3 | -16 | PASS | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 2.8 | 2.8 | -0.10 | PASS | |
| 1,2,4-Trimethylbenzene | 1.7 | 1.7 | 3.5 | PASS | |
| 1,3,5-Trimethylbenzene | 1.7 | 1.6 | 6.0 | PASS | |
| 2,2,4-Trimethylpentane | 1.3 | 1.2 | 8.3 | PASS | |
| Vinyl bromide | 0.90 | 1.0 | -16 | PASS | |
| Vinyl chloride | 0.91 | 1.00 | -10 | PASS | |
| Xylenes (m&p) | 1.4 | 1.4 | -0.10 | PASS | |
| Xylenes (o) | 1.5 | 1.4 | 7.8 | PASS | |

***%Difference must be within +/- 30%**
**RRF - Relative Response Factor**

Data Path : C:\DATA\2023\11-2023\11-03-2023\
Data File : aa4528dcvs.D
Acq On : 3 Nov 2023 10:14 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 03 10:51:28 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 0% Max. R.T. Dev 0.40min
Max. RRF Dev : 30% Max. Rel. Area : 500%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Bromochloromethane (IS) | 1.000 | 1.000 | 0.0 | 102 | 0.00 |
| 2 | T | Propene | 0.694 | 0.686 | 1.2 | 116 | 0.00 |
| 3 | T | Dichlorodifluoromethane | 2.216 | 2.568 | -15.9 | 121 | 0.00 |
| 4 | T | 1,2-Dichlorotetrafluoroetha | 3.219 | 3.352 | -4.1 | 116 | 0.00 |
| 5 | T | n-Butane | 1.597 | 1.727 | -8.1 | 115 | 0.00 |
| 6 | T | Chloromethane | 0.111 | 0.132 | -18.9 | 119 | 0.00 |
| 7 | T | Vinyl chloride | 0.906 | 0.999 | -10.3 | 112 | 0.00 |
| 8 | T | 1,3-Butadiene | 0.846 | 0.852 | -0.7 | 109 | 0.00 |
| 9 | T | Bromomethane | 0.731 | 0.827 | -13.1 | 112 | 0.00 |
| 10 | T | Chloroethane | 0.475 | 0.577 | -21.5 | 117 | 0.00 |
| 11 | T | Vinyl bromide | 0.895 | 1.042 | -16.4 | 116 | 0.00 |
| 12 | T | Trichlorofluoromethane | 2.799 | 3.258 | -16.4 | 125 | 0.00 |
| 13 | T | Ethanol | 0.293 | 0.337 | -15.0 | 128 | 0.00 |
| 14 | T | 1,1-Dichloroethene | 1.858 | 2.313 | -24.5 | 121 | 0.00 |
| 15 | T | Carbon disulfide | 3.058 | 3.601 | -17.8 | 114 | 0.00 |
| 16 | T | 1,1,2-Trichloro-1,2,2-trifl | 2.819 | 2.821 | -0.1 | 114 | 0.00 |
| 17 | T | Acrolein | 0.418 | 0.479 | -14.6 | 113 | 0.00 |
| 18 | T | Allyl chloride | 0.501 | 0.588 | -17.4 | 112 | 0.00 |
| 19 | T | Isopropanol | 2.005 | 2.225 | -11.0 | 109 | 0.00 |
| 20 | T | Methylene chloride | 1.229 | 1.189 | 3.3 | 119 | 0.00 |
| 21 | T | Acetone | 1.508 | 1.813 | -20.2 | 120 | 0.00 |
| 22 | T | trans-1,2-Dichloroethene | 1.724 | 2.069 | -20.0 | 118 | 0.00 |
| 23 | T | n-Pentane | 2.325 | 2.438 | -4.9 | 115 | 0.00 |
| 24 | T | n-Hexane | 3.152 | 3.229 | -2.4 | 111 | 0.00 |
| 25 | T | Methyl tert-butyl ether | 3.872 | 3.896 | -0.6 | 109 | 0.00 |
| 26 | T | Tert-butyl alcohol | 2.607 | 2.660 | -2.0 | 109 | 0.00 |
| 27 | T | 1,1-Dichloroethane | 2.322 | 2.592 | -11.6 | 118 | 0.00 |
| 28 | T | cis-1,2-Dichloroethene | 1.638 | 1.919 | -17.2 | 118 | 0.00 |
| 29 | t | Cyclohexane | 2.202 | 2.168 | 1.5 | 106 | 0.00 |
| 30 | T | Chloroform | 2.676 | 3.091 | -15.5 | 119 | 0.00 |
| 31 | T | Ethyl acetate | 0.435 | 0.491 | -12.9 | 111 | 0.00 |
| 32 | T | Carbon tetrachloride | 3.174 | 3.266 | -2.9 | 109 | 0.00 |
| 33 | T | Tetrahydrofuran | 1.504 | 1.653 | -9.9 | 113 | 0.00 |
| 34 | T | 1,1,1-Trichloroethane | 2.780 | 2.938 | -5.7 | 112 | 0.00 |
| 35 | T | Methyl ethyl ketone | 2.442 | 2.643 | -8.2 | 114 | 0.00 |
| 36 | T | n-Heptane | 2.764 | 2.823 | -2.1 | 101 | 0.00 |
| 37 | T | Benzene | 3.972 | 4.212 | -6.0 | 113 | 0.00 |
| 38 | T | 1,2-Dichloroethane | 1.663 | 2.017 | -21.3 | 124 | 0.00 |
| 39 | I | 1,4-Difluorobenzene (IS) | 1.000 | 1.000 | 0.0 | 109 | 0.00 |
| 40 | T | Trichloroethene | 0.442 | 0.461 | -4.3 | 114 | 0.00 |
| 41 | T | 2,2,4-Trimethylpentane | 1.303 | 1.195 | 8.3 | 106 | 0.00 |
| 42 | T | 1,2-Dichloropropane | 0.389 | 0.391 | -0.5 | 109 | 0.00 |
| 43 | T | Bromodichloromethane | 0.655 | 0.707 | -7.9 | 117 | 0.00 |
| 44 | T | Methyl methacrylate | 0.472 | 0.496 | -5.1 | 109 | 0.00 |
| 45 | T | 1,4-Dioxane | 0.238 | 0.240 | -0.8 | 107 | 0.00 |
| 46 | T | cis-1,3-Dichloropropene | 0.603 | 0.629 | -4.3 | 109 | 0.00 |
| 47 | T | Toluene | 1.405 | 1.456 | -3.6 | 107 | 0.00 |
| 48 | T | Methyl isobutyl ketone | 0.883 | 0.892 | -1.0 | 102 | 0.00 |
| 49 | T | Tetrachloroethene | 0.606 | 0.639 | -5.4 | 110 | 0.00 |
| 50 | T | trans-1,3-Dichloropropene | 0.585 | 0.644 | -10.1 | 111 | 0.00 |
| 51 | T | 1,1,2-Trichloroethane | 0.475 | 0.497 | -4.6 | 109 | 0.00 |
| 52 | T | Dibromochloromethane | 0.791 | 0.856 | -8.2 | 111 | 0.00 |
| 53 | T | 1,2-Dibromoethane | 0.686 | 0.740 | -7.9 | 110 | 0.00 |

Data Path : C:\DATA\2023\11-2023\11-03-2023\
Data File : aa4528dcvs.D
Acq On : 3 Nov 2023 10:14 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 03 10:51:28 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 0% Max. R.T. Dev 0.40min
Max. RRF Dev : 30% Max. Rel. Area : 500%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 54 | T | Methyl n-butyl ketone | 0.849 | 0.916 | -7.9 | 107 | 0.00 |
| 55 | I | d-5 Chlorobenzene (IS) | 1.000 | 1.000 | 0.0 | 112 | 0.00 |
| 56 | T | n-Nonane | 0.992 | 0.957 | 3.5 | 104 | 0.00 |
| 57 | T | Chlorobenzene | 0.997 | 0.966 | 3.1 | 109 | 0.00 |
| 58 | T | Ethylbenzene | 1.843 | 1.773 | 3.8 | 107 | 0.00 |
| 59 | T | Xylenes (m&p) | 1.365 | 1.366 | -0.1 | 108 | 0.00 |
| 60 | T | Xylene (o) | 1.490 | 1.374 | 7.8 | 104 | 0.00 |
| 61 | T | Styrene | 1.020 | 1.019 | 0.1 | 106 | 0.00 |
| 62 | T | Bromoform | 0.732 | 0.745 | -1.8 | 112 | 0.00 |
| 63 | T | Cumene | 1.947 | 1.800 | 7.6 | 103 | 0.00 |
| 64 | S | Bromofluorobenzene (tune st | 0.872 | 0.864 | 0.9 | 111 | 0.00 |
| 65 | T | n-Propyl benzene | 2.541 | 2.521 | 0.8 | 108 | 0.00 |
| 66 | T | 1,1,2,2-Tetrachloroethane | 1.043 | 0.973 | 6.7 | 104 | 0.00 |
| 67 | T | 4-Ethyltoluene | 2.151 | 2.109 | 2.0 | 107 | 0.00 |
| 68 | T | 2-Chlorotoluene | 1.707 | 1.630 | 4.5 | 107 | 0.00 |
| 69 | T | 1,3,5-Trimethylbenzene | 1.730 | 1.626 | 6.0 | 103 | 0.00 |
| 70 | T | 1,2,4-Trimethylbenzene | 1.729 | 1.669 | 3.5 | 104 | 0.00 |
| 71 | T | 1,3-Dichlorobenzene | 1.059 | 1.032 | 2.5 | 110 | 0.00 |
| 72 | T | 1,4-Dichlorobenzene | 1.065 | 1.070 | -0.5 | 110 | 0.00 |
| 73 | T | Benzyl chloride | 1.529 | 1.527 | 0.1 | 105 | 0.00 |
| 74 | T | 1,2-Dichlorobenzene | 1.027 | 0.999 | 2.7 | 108 | 0.00 |
| 75 | T | 1,3-Hexachlorobutadiene | 0.713 | 0.691 | 3.1 | 110 | 0.00 |
| 76 | T | 1,2,4-Trichlorobenzene | 0.824 | 0.811 | 1.6 | 110 | 0.00 |
| 77 | T | Naphthalene | 1.885 | 1.788 | 5.1 | 105 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data Path : C:\DATA\2023\11-2023\11-03-2023\
Data File : aa4528dcvs.D
Acq On : 3 Nov 2023 10:14 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 03 10:51:28 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.393 | 130 | 402106 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.454 | 114 | 1842775 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 2190337 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1893256 | 9.92 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.489 | 41 | 300839 | 10.78 | ppbV | 99 |
| 3) Dichlorodifluoromethane | 1.530 | 85 | 1094513 | 12.28 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.650 | 85 | 1320758 | 10.20 | ppbV | 99 |
| 5) n-Butane | 1.729 | 43 | 756920 | 11.79 | ppbV | 100 |
| 6) Chloromethane | 1.794 | 52 | 59416 | 13.35 | ppbV | 100 |
| 7) Vinyl chloride | 1.781 | 62 | 433894 | 11.91 | ppbV | 100 |
| 8) 1,3-Butadiene | 1.794 | 39 | 366762 | 10.78 | ppbV | 99 |
| 9) Bromomethane | 2.091 | 94 | 332671 | 11.31 | ppbV | 96 |
| 10) Chloroethane | 2.191 | 64 | 245991 | 12.88 | ppbV | 98 |
| 11) Vinyl bromide | 2.294 | 106 | 423269 | 11.76 | ppbV | 98 |
| 12) Trichlorofluoromethane | 2.313 | 101 | 1441021 | 12.80 | ppbV | 99 |
| 13) Ethanol | 2.670 | 45 | 140968 | 11.97 | ppbV | 98 |
| 14) 1,1-Dichloroethene | 2.731 | 61 | 967376 | 12.95 | ppbV | 98 |
| 15) Carbon disulfide | 2.753 | 76 | 1549237 | 12.60 | ppbV | 97 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.773 | 101 | 1236230 | 10.91 | ppbV | 99 |
| 17) Acrolein | 2.985 | 56 | 192698 | 11.47 | ppbV | 98 |
| 18) Allyl chloride | 3.110 | 76 | 255314 | 12.67 | ppbV | 100 |
| 19) Isopropanol | 3.110 | 45 | 796203 | 9.87 | ppbV | 98 |
| 20) Methylene chloride | 3.200 | 49 | 516193 | 10.44 | ppbV | 98 |
| 21) Acetone | 3.210 | 43 | 787410 | 12.98 | ppbV | 99 |
| 22) trans-1,2-Dichloroethene | 3.326 | 61 | 923680 | 13.32 | ppbV | 99 |
| 23) n-Pentane | 3.406 | 43 | 1058680 | 11.33 | ppbV | 99 |
| 24) n-Hexane | 3.406 | 57 | 1428358 | 11.27 | ppbV | 97 |
| 25) Methyl tert-butyl ether | 3.409 | 73 | 1754542 | 11.27 | ppbV | 98 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 1230051 | 11.73 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 1115249 | 11.94 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.236 | 61 | 841261 | 12.77 | ppbV | 97 |
| 29) Cyclohexane | 4.416 | 56 | 976382 | 11.03 | ppbV | 100 |
| 30) Chloroform | 4.451 | 83 | 1342236 | 12.48 | ppbV | 100 |
| 31) Ethyl acetate | 4.541 | 61 | 213209 | 12.18 | ppbV | 98 |
| 32) Carbon tetrachloride | 4.580 | 117 | 1444676 | 11.32 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.573 | 42 | 730997 | 12.08 | ppbV | 99 |
| 34) 1,1,1-Trichloroethane | 4.628 | 97 | 1287929 | 11.52 | ppbV | 98 |
| 35) Methyl ethyl ketone | 4.683 | 43 | 1168905 | 11.90 | ppbV | 99 |
| 36) n-Heptane | 4.917 | 43 | 1260078 | 11.34 | ppbV | 99 |
| 37) Benzene | 4.930 | 78 | 1829360 | 11.45 | ppbV | 98 |
| 38) 1,2-Dichloroethane | 5.091 | 62 | 883874 | 13.22 | ppbV | 99 |
| 40) Trichloroethene | 5.432 | 130 | 849210 | 10.42 | ppbV | 100 |
| 41) 2,2,4-Trimethylpentane | 4.843 | 57 | 2400454 | 10.00 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.882 | 63 | 792706 | 11.06 | ppbV | 100 |
| 43) Bromodichloromethane | 5.943 | 83 | 1498982 | 12.41 | ppbV | 100 |
| 44) Methyl methacrylate | 6.088 | 41 | 1005449 | 11.56 | ppbV | 98 |
| 45) 1,4-Dioxane | 6.113 | 88 | 517635 | 11.79 | ppbV | 100 |
| 46) cis-1,3-Dichloropropene | 6.531 | 75 | 1287090 | 11.58 | ppbV | 99 |
| 47) Toluene | 6.769 | 91 | 2897365 | 11.19 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.133 | 43 | 1791184 | 11.00 | ppbV | 99 |
| 49) Tetrachloroethene | 7.158 | 166 | 1319653 | 11.82 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.178 | 75 | 1317803 | 12.22 | ppbV | 100 |
| 51) 1,1,2-Trichloroethane | 7.335 | 97 | 989700 | 11.32 | ppbV | 100 |

Data Path : C:\DATA\2023\11-2023\11-03-2023\
Data File : aa4528dcvs.D
Acq On : 3 Nov 2023 10:14 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

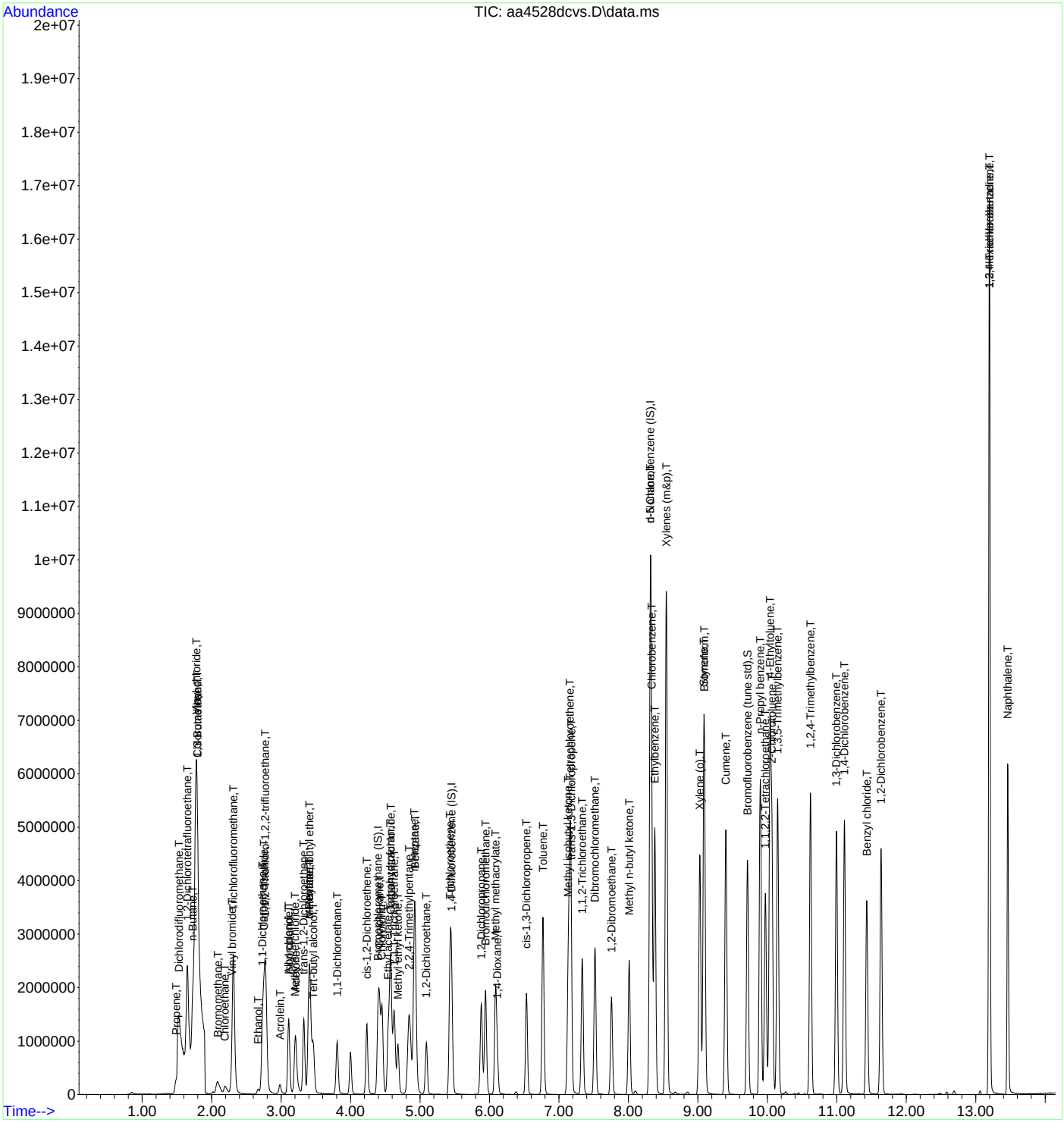
Quant Time: Nov 03 10:51:28 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.518 | 129 | 1766542 | 12.12 | ppbV | 100 |
| 53) 1,2-Dibromoethane | 7.756 | 107 | 1472100 | 11.64 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.010 | 43 | 1908448 | 12.19 | ppbV | 99 |
| 56) n-Nonane | 8.316 | 43 | 2306127 | 10.61 | ppbV | 99 |
| 57) Chlorobenzene | 8.335 | 112 | 2349078 | 10.76 | ppbV | 99 |
| 58) Ethylbenzene | 8.380 | 91 | 4309455 | 10.68 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.547 | 91 | 6672663 | 22.31 | ppbV | 99 |
| 60) Xylene (o) | 9.026 | 91 | 3309649 | 10.14 | ppbV | 99 |
| 61) Styrene | 9.084 | 104 | 2521027 | 11.28 | ppbV | 99 |
| 62) Bromoform | 9.094 | 173 | 1845091 | 11.50 | ppbV | 99 |
| 63) Cumene | 9.403 | 105 | 4219399 | 9.89 | ppbV | 100 |
| 65) n-Propyl benzene | 9.898 | 91 | 5962442 | 10.71 | ppbV | 99 |
| 66) 1,1,2,2-Tetrachloroethane | 9.972 | 83 | 2429495 | 10.64 | ppbV | 99 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 4987827 | 10.59 | ppbV | 100 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 3891125 | 10.41 | ppbV | 100 |
| 69) 1,3,5-Trimethylbenzene | 10.149 | 105 | 3882304 | 10.25 | ppbV | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.621 | 105 | 3948867 | 10.43 | ppbV | 100 |
| 71) 1,3-Dichlorobenzene | 10.994 | 146 | 2509234 | 10.82 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 2506983 | 10.74 | ppbV | 100 |
| 73) Benzyl chloride | 11.431 | 91 | 3344698 | 9.99 | ppbV | 99 |
| 74) 1,2-Dichlorobenzene | 11.637 | 146 | 2341147 | 10.41 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.197 | 225 | 1678816 | 10.75 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.197 | 180 | 1954320 | 10.82 | ppbV | 99 |
| 77) Naphthalene | 13.460 | 128 | 3916989 | 9.49 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\11-2023\11-03-2023\
Data File : aa4528dcvs.D
Acq On : 3 Nov 2023 10:14 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 03 10:51:28 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Continuing Calibration Data Summary Report

**Initial Calibration Curve:** 10/10/2023
**Instrument:** AA
**Amount of standard injected (ml):** 50

**Date/Time of Calibration:** 12/8/2023 10:50
**Sample ID:** DCS
**Laboratory ID:** AA4882DCVS

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05047-01 [AA4886] | 12/08/2023 14:03 |
| E23-05047-02 [AA4887] | 12/08/2023 14:35 |
| E23-05047-03 [AA4888] | 12/08/2023 15:06 |
| E23-05047-04 [AA4889] | 12/08/2023 15:42 |
| E23-05047-05 [AA4890] | 12/08/2023 16:15 |

| Compound Name | Average RRF | Standard RRF | % Difference | PassFail | * |
|---|---|---|---|---|---|
| Acetone | 1.5 | 1.5 | -0.30 | PASS | |
| Benzene | 4.0 | 3.4 | 15 | PASS | |
| Bromoform | 0.73 | 0.73 | 0.70 | PASS | |
| Bromomethane | 0.73 | 0.78 | -6.2 | PASS | |
| 1,3-Butadiene | 0.85 | 0.76 | 9.7 | PASS | |
| Chlorobenzene | 1.00 | 0.90 | 10 | PASS | |
| Chloroethane | 0.48 | 0.50 | -5.7 | PASS | |
| Chloroform | 2.7 | 2.4 | 8.5 | PASS | |
| Chloromethane | 0.11 | 0.11 | 3.6 | PASS | |
| Carbon disulfide | 3.1 | 3.0 | 1.4 | PASS | |
| Carbon tetrachloride | 3.2 | 2.9 | 7.1 | PASS | |
| Cyclohexane | 2.2 | 2.0 | 11 | PASS | |
| 1,2-Dibromoethane | 0.69 | 0.69 | -1.2 | PASS | |
| 1,2-Dichlorobenzene | 1.0 | 0.95 | 7.9 | PASS | |
| 1,3-Dichlorobenzene | 1.1 | 0.95 | 9.9 | PASS | |
| 1,4-Dichlorobenzene | 1.1 | 0.99 | 7.1 | PASS | |
| Dichlorodifluoromethane | 2.2 | 2.2 | 1.0 | PASS | |
| 1,1-Dichloroethane | 2.3 | 2.0 | 13 | PASS | |
| 1,2-Dichloroethane | 1.7 | 1.6 | 2.3 | PASS | |
| 1,1-Dichloroethene | 1.9 | 1.8 | 0.80 | PASS | |
| 1,2-Dichloroethene (cis) | 1.6 | 1.5 | 8.3 | PASS | |
| 1,2-Dichloroethene (trans) | 1.7 | 1.7 | 3.9 | PASS | |
| 1,2-Dichloropropane | 0.39 | 0.37 | 3.9 | PASS | |
| 1,3-Dichloropropene (cis) | 0.60 | 0.59 | 2.3 | PASS | |
| 1,3-Dichloropropene (trans) | 0.59 | 0.61 | -4.4 | PASS | |
| 1,2-Dichlorotetrafluoroethane | 3.2 | 2.9 | 11 | PASS | |
| 1,4-Dioxane | 0.24 | 0.24 | -0.40 | PASS | |
| Ethylbenzene | 1.8 | 1.7 | 7.2 | PASS | |
| n-Heptane | 2.8 | 2.6 | 4.3 | PASS | |
| 1,3-Hexachlorobutadiene | 0.71 | 0.66 | 8.1 | PASS | |
| n-Hexane | 3.2 | 2.8 | 12 | PASS | |
| Methylene chloride | 1.2 | 1.1 | 13 | PASS | |
| Methyl ethyl ketone | 2.4 | 2.2 | 8.0 | PASS | |
| Methyl isobutyl ketone | 0.88 | 0.96 | -8.5 | PASS | |
| Methyl tert-butyl ether | 3.9 | 3.5 | 9.8 | PASS | |
| Styrene | 1.0 | 0.95 | 6.9 | PASS | |
| Tert-butyl alcohol | 2.6 | 2.3 | 11 | PASS | |
| 1,1,2,2-Tetrachloroethane | 1.0 | 0.97 | 7.4 | PASS | |
| Tetrachloroethene | 0.61 | 0.59 | 3.1 | PASS | |
| Toluene | 1.4 | 1.4 | 2.8 | PASS | |
| 1,2,4-Trichlorobenzene | 0.82 | 0.78 | 5.5 | PASS | |

***%Difference must be within +/- 30%**
**RRF - Relative Response Factor**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Continuing Calibration Data Summary Report

| | | | |
|---|---|---|---|
| **Initial Calibration Curve:** | **10/10/2023** | **Date/Time of Calibration:** | **12/8/2023 10:50** |
| **Instrument:** | **AA** | **Sample ID:** | **DCS** |
| **Amount of standard injected (ml):** | **50** | **Laboratory ID:** | **AA4882DCVS** |

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05047-01 [AA4886] | 12/08/2023 14:03 |
| E23-05047-02 [AA4887] | 12/08/2023 14:35 |
| E23-05047-03 [AA4888] | 12/08/2023 15:06 |
| E23-05047-04 [AA4889] | 12/08/2023 15:42 |
| E23-05047-05 [AA4890] | 12/08/2023 16:15 |

| Compound Name | Average RRF | Standard RRF | % Difference | PassFail | * |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 2.8 | 2.6 | 7.2 | PASS | |
| 1,1,2-Trichloroethane | 0.48 | 0.46 | 2.7 | PASS | |
| Trichloroethene | 0.44 | 0.42 | 6.1 | PASS | |
| Trichlorofluoromethane | 2.8 | 2.8 | 1.6 | PASS | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 2.8 | 2.4 | 16 | PASS | |
| 1,2,4-Trimethylbenzene | 1.7 | 1.6 | 5.2 | PASS | |
| 1,3,5-Trimethylbenzene | 1.7 | 1.6 | 7.1 | PASS | |
| 2,2,4-Trimethylpentane | 1.3 | 1.3 | 2.8 | PASS | |
| Vinyl bromide | 0.90 | 0.89 | 0.80 | PASS | |
| Vinyl chloride | 0.91 | 0.87 | 4.1 | PASS | |
| Xylenes (m&p) | 1.4 | 1.3 | 4.2 | PASS | |
| Xylenes (o) | 1.5 | 1.4 | 9.2 | PASS | |

***%Difference must be within +/- 30%**
**RRF - Relative Response Factor**

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4882dcvs.D
Acq On : 8 Dec 2023 10:50 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 12 09:41:42 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 0% Max. R.T. Dev 0.40min
Max. RRF Dev : 30% Max. Rel. Area : 500%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Bromochloromethane (IS) | 1.000 | 1.000 | 0.0 | 126 | 0.00 |
| 2 | T | Propene | 0.694 | 0.600 | 13.5 | 126 | 0.00 |
| 3 | T | Dichlorodifluoromethane | 2.216 | 2.193 | 1.0 | 128 | 0.00 |
| 4 | T | 1,2-Dichlorotetrafluoroetha | 3.219 | 2.869 | 10.9 | 123 | 0.00 |
| 5 | T | n-Butane | 1.597 | 1.500 | 6.1 | 124 | 0.00 |
| 6 | T | Chloromethane | 0.111 | 0.107 | 3.6 | 120 | 0.00 |
| 7 | T | Vinyl chloride | 0.906 | 0.869 | 4.1 | 121 | 0.00 |
| 8 | T | 1,3-Butadiene | 0.846 | 0.764 | 9.7 | 121 | 0.00 |
| 9 | T | Bromomethane | 0.731 | 0.776 | -6.2 | 130 | 0.00 |
| 10 | T | Chloroethane | 0.475 | 0.502 | -5.7 | 126 | 0.00 |
| 11 | T | Vinyl bromide | 0.895 | 0.888 | 0.8 | 123 | 0.00 |
| 12 | T | Trichlorofluoromethane | 2.799 | 2.753 | 1.6 | 131 | 0.00 |
| 13 | T | Ethanol | 0.293 | 0.309 | -5.5 | 145 | 0.00 |
| 14 | T | 1,1-Dichloroethene | 1.858 | 1.844 | 0.8 | 120 | 0.00 |
| 15 | T | Carbon disulfide | 3.058 | 3.016 | 1.4 | 118 | 0.00 |
| 16 | T | 1,1,2-Trichloro-1,2,2-trifl | 2.819 | 2.364 | 16.1 | 118 | 0.00 |
| 17 | T | Acrolein | 0.418 | 0.406 | 2.9 | 119 | 0.00 |
| 18 | T | Allyl chloride | 0.501 | 0.485 | 3.2 | 114 | 0.00 |
| 19 | T | Isopropanol | 2.005 | 1.954 | 2.5 | 118 | 0.00 |
| 20 | T | Methylene chloride | 1.229 | 1.073 | 12.7 | 133 | 0.00 |
| 21 | T | Acetone | 1.508 | 1.512 | -0.3 | 124 | 0.00 |
| 22 | T | trans-1,2-Dichloroethene | 1.724 | 1.657 | 3.9 | 117 | 0.00 |
| 23 | T | n-Pentane | 2.325 | 2.146 | 7.7 | 125 | 0.00 |
| 24 | T | n-Hexane | 3.152 | 2.784 | 11.7 | 118 | 0.00 |
| 25 | T | Methyl tert-butyl ether | 3.872 | 3.493 | 9.8 | 121 | 0.00 |
| 26 | T | Tert-butyl alcohol | 2.607 | 2.316 | 11.2 | 117 | 0.00 |
| 27 | T | 1,1-Dichloroethane | 2.322 | 2.010 | 13.4 | 114 | 0.00 |
| 28 | T | cis-1,2-Dichloroethene | 1.638 | 1.502 | 8.3 | 115 | 0.00 |
| 29 | t | Cyclohexane | 2.202 | 1.965 | 10.8 | 119 | 0.00 |
| 30 | T | Chloroform | 2.676 | 2.449 | 8.5 | 117 | 0.00 |
| 31 | T | Ethyl acetate | 0.435 | 0.410 | 5.7 | 115 | 0.00 |
| 32 | T | Carbon tetrachloride | 3.174 | 2.948 | 7.1 | 122 | 0.00 |
| 33 | T | Tetrahydrofuran | 1.504 | 1.387 | 7.8 | 118 | 0.00 |
| 34 | T | 1,1,1-Trichloroethane | 2.780 | 2.579 | 7.2 | 122 | 0.00 |
| 35 | T | Methyl ethyl ketone | 2.442 | 2.246 | 8.0 | 120 | 0.00 |
| 36 | T | n-Heptane | 2.764 | 2.646 | 4.3 | 117 | 0.00 |
| 37 | T | Benzene | 3.972 | 3.382 | 14.9 | 112 | 0.00 |
| 38 | T | 1,2-Dichloroethane | 1.663 | 1.624 | 2.3 | 123 | 0.00 |
| 39 | I | 1,4-Difluorobenzene (IS) | 1.000 | 1.000 | 0.0 | 118 | 0.00 |
| 40 | T | Trichloroethene | 0.442 | 0.415 | 6.1 | 111 | 0.00 |
| 41 | T | 2,2,4-Trimethylpentane | 1.303 | 1.266 | 2.8 | 122 | 0.00 |
| 42 | T | 1,2-Dichloropropane | 0.389 | 0.374 | 3.9 | 113 | 0.00 |
| 43 | T | Bromodichloromethane | 0.655 | 0.674 | -2.9 | 121 | 0.00 |
| 44 | T | Methyl methacrylate | 0.472 | 0.490 | -3.8 | 116 | 0.00 |
| 45 | T | 1,4-Dioxane | 0.238 | 0.239 | -0.4 | 116 | 0.00 |
| 46 | T | cis-1,3-Dichloropropene | 0.603 | 0.589 | 2.3 | 111 | 0.00 |
| 47 | T | Toluene | 1.405 | 1.366 | 2.8 | 108 | 0.00 |
| 48 | T | Methyl isobutyl ketone | 0.883 | 0.958 | -8.5 | 119 | 0.00 |
| 49 | T | Tetrachloroethene | 0.606 | 0.587 | 3.1 | 109 | 0.00 |
| 50 | T | trans-1,3-Dichloropropene | 0.585 | 0.611 | -4.4 | 114 | 0.00 |
| 51 | T | 1,1,2-Trichloroethane | 0.475 | 0.462 | 2.7 | 110 | 0.00 |
| 52 | T | Dibromochloromethane | 0.791 | 0.812 | -2.7 | 115 | 0.00 |
| 53 | T | 1,2-Dibromoethane | 0.686 | 0.694 | -1.2 | 112 | 0.00 |

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4882dcvs.D
Acq On : 8 Dec 2023 10:50 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 12 09:41:42 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 0% Max. R.T. Dev 0.40min
Max. RRF Dev : 30% Max. Rel. Area : 500%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 54 | T | Methyl n-butyl ketone | 0.849 | 0.929 | -9.4 | 117 | 0.00 |
| 55 | I | d-5 Chlorobenzene (IS) | 1.000 | 1.000 | 0.0 | 119 | 0.00 |
| 56 | T | n-Nonane | 0.992 | 1.014 | -2.2 | 118 | 0.00 |
| 57 | T | Chlorobenzene | 0.997 | 0.897 | 10.0 | 108 | 0.00 |
| 58 | T | Ethylbenzene | 1.843 | 1.711 | 7.2 | 110 | 0.00 |
| 59 | T | Xylenes (m&p) | 1.365 | 1.308 | 4.2 | 110 | 0.00 |
| 60 | T | Xylene (o) | 1.490 | 1.353 | 9.2 | 110 | 0.00 |
| 61 | T | Styrene | 1.020 | 0.950 | 6.9 | 106 | 0.00 |
| 62 | T | Bromoform | 0.732 | 0.727 | 0.7 | 117 | 0.00 |
| 63 | T | Cumene | 1.947 | 1.854 | 4.8 | 113 | 0.00 |
| 64 | S | Bromofluorobenzene (tune st | 0.872 | 0.895 | -2.6 | 123 | 0.00 |
| 65 | T | n-Propyl benzene | 2.541 | 2.507 | 1.3 | 115 | 0.00 |
| 66 | T | 1,1,2,2-Tetrachloroethane | 1.043 | 0.966 | 7.4 | 111 | 0.00 |
| 67 | T | 4-Ethyltoluene | 2.151 | 2.065 | 4.0 | 112 | 0.00 |
| 68 | T | 2-Chlorotoluene | 1.707 | 1.639 | 4.0 | 115 | 0.00 |
| 69 | T | 1,3,5-Trimethylbenzene | 1.730 | 1.608 | 7.1 | 109 | 0.00 |
| 70 | T | 1,2,4-Trimethylbenzene | 1.729 | 1.639 | 5.2 | 109 | 0.00 |
| 71 | T | 1,3-Dichlorobenzene | 1.059 | 0.954 | 9.9 | 108 | 0.00 |
| 72 | T | 1,4-Dichlorobenzene | 1.065 | 0.989 | 7.1 | 109 | 0.00 |
| 73 | T | Benzyl chloride | 1.529 | 1.550 | -1.4 | 114 | 0.00 |
| 74 | T | 1,2-Dichlorobenzene | 1.027 | 0.946 | 7.9 | 109 | 0.00 |
| 75 | T | 1,3-Hexachlorobutadiene | 0.713 | 0.655 | 8.1 | 111 | 0.00 |
| 76 | T | 1,2,4-Trichlorobenzene | 0.824 | 0.779 | 5.5 | 113 | 0.00 |
| 77 | T | Naphthalene | 1.885 | 1.868 | 0.9 | 118 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4882dcvs.D
Acq On : 8 Dec 2023 10:50 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 12 09:41:42 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.390 | 130 | 497428 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.451 | 114 | 1995098 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.315 | 117 | 2342927 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 2097748 | 10.27 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.483 | 41 | 325585 | 9.43 | ppbV | 97 |
| 3) Dichlorodifluoromethane | 1.522 | 85 | 1156523 | 10.49 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.643 | 85 | 1398478 | 8.73 | ppbV | 97 |
| 5) n-Butane | 1.725 | 43 | 813377 | 10.24 | ppbV | 99 |
| 6) Chloromethane | 1.787 | 52 | 59773 | 10.85 | ppbV | 90 |
| 7) Vinyl chloride | 1.777 | 62 | 466932 | 10.36 | ppbV | 100 |
| 8) 1,3-Butadiene | 1.791 | 39 | 406894 | 9.67 | ppbV | 98 |
| 9) Bromomethane | 2.075 | 94 | 385826 | 10.61 | ppbV | 98 |
| 10) Chloroethane | 2.190 | 64 | 264511 | 11.19 | ppbV | 99 |
| 11) Vinyl bromide | 2.287 | 106 | 446119 | 10.02 | ppbV | 99 |
| 12) Trichlorofluoromethane | 2.306 | 101 | 1506447 | 10.82 | ppbV | 100 |
| 13) Ethanol | 2.666 | 45 | 159941 | 10.98 | ppbV | 98 |
| 14) 1,1-Dichloroethene | 2.727 | 61 | 954181 | 10.33 | ppbV | 96 |
| 15) Carbon disulfide | 2.747 | 76 | 1604997 | 10.55 | ppbV | 96 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.769 | 101 | 1281549 | 9.14 | ppbV | 99 |
| 17) Acrolein | 2.981 | 56 | 201838 | 9.71 | ppbV | 99 |
| 18) Allyl chloride | 3.110 | 76 | 260522 | 10.45 | ppbV | 100 |
| 19) Isopropanol | 3.107 | 45 | 865101 | 8.67 | ppbV | 97 |
| 20) Methylene chloride | 3.197 | 49 | 576215 | 9.42 | ppbV | 94 |
| 21) Acetone | 3.210 | 43 | 812442 | 10.83 | ppbV | 98 |
| 22) trans-1,2-Dichloroethene | 3.322 | 61 | 914937 | 10.67 | ppbV | 99 |
| 23) n-Pentane | 3.402 | 43 | 1153103 | 9.97 | ppbV | 98 |
| 24) n-Hexane | 3.402 | 57 | 1523505 | 9.72 | ppbV | 95 |
| 25) Methyl tert-butyl ether | 3.406 | 73 | 1946245 | 10.10 | ppbV | 98 |
| 26) Tert-butyl alcohol | 3.460 | 59 | 1324915 | 10.22 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.804 | 63 | 1070062 | 9.26 | ppbV | 99 |
| 28) cis-1,2-Dichloroethene | 4.232 | 61 | 814529 | 10.00 | ppbV | 97 |
| 29) Cyclohexane | 4.412 | 56 | 1094521 | 9.99 | ppbV | 99 |
| 30) Chloroform | 4.451 | 83 | 1315872 | 9.89 | ppbV | 100 |
| 31) Ethyl acetate | 4.544 | 61 | 220415 | 10.18 | ppbV | 96 |
| 32) Carbon tetrachloride | 4.573 | 117 | 1612899 | 10.22 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.570 | 42 | 759074 | 10.14 | ppbV | 98 |
| 34) 1,1,1-Trichloroethane | 4.624 | 97 | 1398155 | 10.11 | ppbV | 98 |
| 35) Methyl ethyl ketone | 4.682 | 43 | 1229080 | 10.12 | ppbV | 97 |
| 36) n-Heptane | 4.917 | 43 | 1460837 | 10.63 | ppbV | 97 |
| 37) Benzene | 4.930 | 78 | 1816777 | 9.20 | ppbV | 97 |
| 38) 1,2-Dichloroethane | 5.087 | 62 | 880596 | 10.65 | ppbV | 100 |
| 40) Trichloroethene | 5.431 | 130 | 827314 | 9.37 | ppbV | 99 |
| 41) 2,2,4-Trimethylpentane | 4.843 | 57 | 2753707 | 10.60 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.881 | 63 | 821769 | 10.59 | ppbV | 100 |
| 43) Bromodichloromethane | 5.943 | 83 | 1546117 | 11.83 | ppbV | 99 |
| 44) Methyl methacrylate | 6.084 | 41 | 1074952 | 11.42 | ppbV | 96 |
| 45) 1,4-Dioxane | 6.113 | 88 | 556955 | 11.71 | ppbV | 100 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 1304823 | 10.84 | ppbV | 100 |
| 47) Toluene | 6.769 | 91 | 2943669 | 10.50 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.129 | 43 | 2083775 | 11.83 | ppbV | 97 |
| 49) Tetrachloroethene | 7.158 | 166 | 1312474 | 10.86 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.174 | 75 | 1353861 | 11.60 | ppbV | 98 |
| 51) 1,1,2-Trichloroethane | 7.335 | 97 | 994836 | 10.51 | ppbV | 99 |

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4882dcvs.D
Acq On : 8 Dec 2023 10:50 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

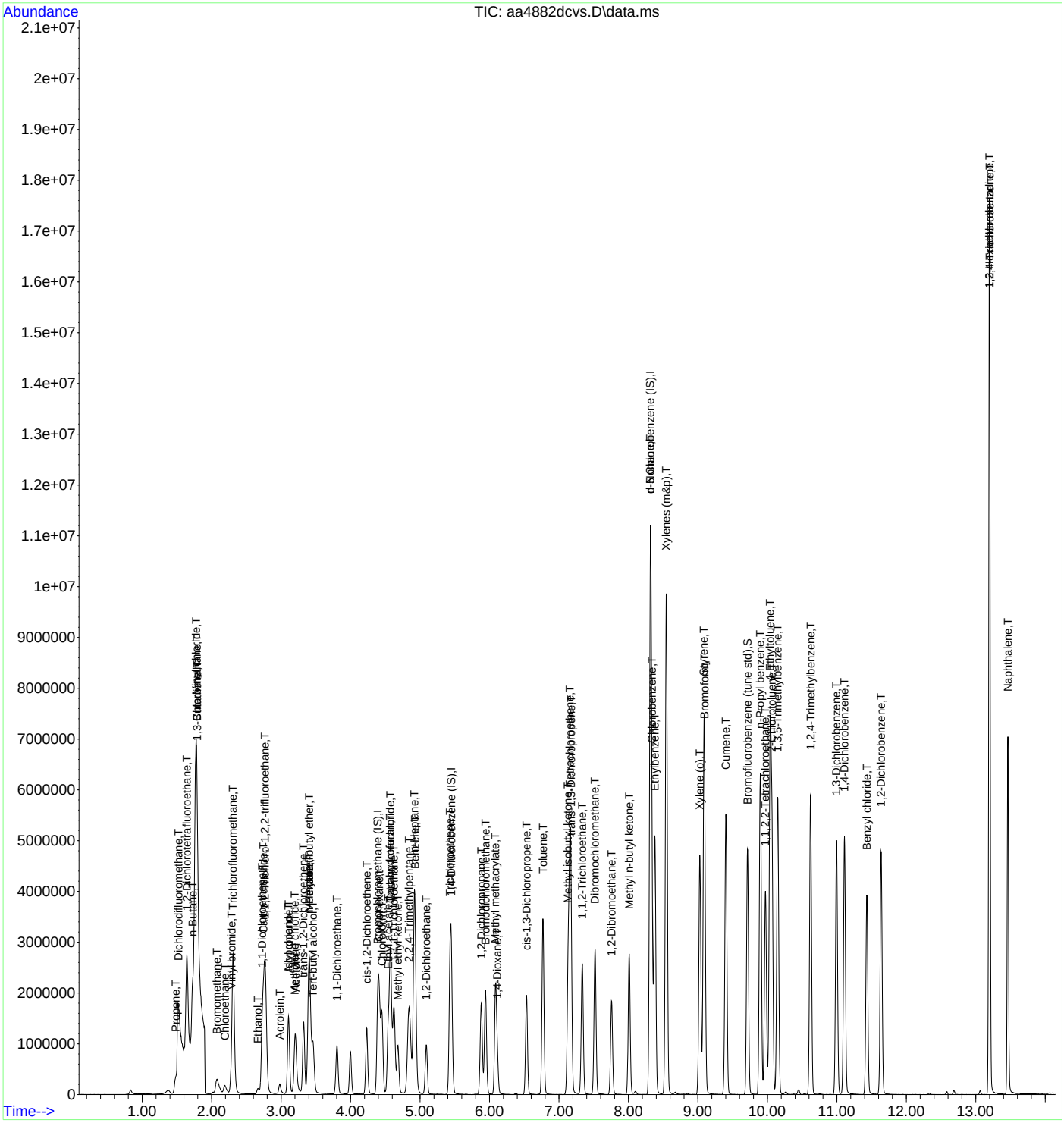
Quant Time: Dec 12 09:41:42 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.518 | 129 | 1815407 | 11.51 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.756 | 107 | 1495380 | 10.92 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.010 | 43 | 2094056 | 12.36 | ppbV | 97 |
| 56) n-Nonane | 8.315 | 43 | 2612956 | 11.24 | ppbV | 97 |
| 57) Chlorobenzene | 8.338 | 112 | 2332552 | 9.99 | ppbV | 97 |
| 58) Ethylbenzene | 8.380 | 91 | 4450991 | 10.31 | ppbV | 98 |
| 59) Xylenes (m&p) | 8.544 | 91 | 6834641 | 21.36 | ppbV | 99 |
| 60) Xylene (o) | 9.026 | 91 | 3488106 | 9.99 | ppbV | 98 |
| 61) Styrene | 9.087 | 104 | 2516387 | 10.53 | ppbV | 98 |
| 62) Bromoform | 9.097 | 173 | 1925681 | 11.22 | ppbV | 100 |
| 63) Cumene | 9.402 | 105 | 4647970 | 10.19 | ppbV | 100 |
| 65) n-Propyl benzene | 9.897 | 91 | 6343495 | 10.65 | ppbV | 98 |
| 66) 1,1,2,2-Tetrachloroethane | 9.971 | 83 | 2579002 | 10.55 | ppbV | 99 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 5223938 | 10.37 | ppbV | 100 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 4185953 | 10.47 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 4107061 | 10.13 | ppbV | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 4146495 | 10.24 | ppbV | 99 |
| 71) 1,3-Dichlorobenzene | 10.994 | 146 | 2479981 | 10.00 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 2478669 | 9.93 | ppbV | 99 |
| 73) Benzyl chloride | 11.431 | 91 | 3632702 | 10.14 | ppbV | 99 |
| 74) 1,2-Dichlorobenzene | 11.637 | 146 | 2370759 | 9.85 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.196 | 225 | 1704319 | 10.21 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.199 | 180 | 2007051 | 10.39 | ppbV | 99 |
| 77) Naphthalene | 13.463 | 128 | 4377391 | 9.91 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4882dcvs.D
Acq On : 8 Dec 2023 10:50 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 12 09:41:42 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Continuing Calibration Data Summary Report

**Initial Calibration Curve:** 10/10/2023
**Instrument:** AA
**Amount of standard injected (ml):** 50

**Date/Time of Calibration:** 12/11/2023 10:26
**Sample ID:** DCS
**Laboratory ID:** AA4902DCVS

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 09:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 1458 [AA4906] | 12/11/2023 12:50 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 1588 [AA4907] | 12/11/2023 13:19 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05047-03 [AA4909] | 12/11/2023 14:18 |
| E23-05047-04 [AA4910] | 12/11/2023 14:50 |
| E23-05047-06 [AA4914] | 12/11/2023 16:52 |
| E23-05047-06 [AA4915] | 12/11/2023 17:43 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 01:59 |

| Compound Name | Average RRF | Standard RRF | % Difference | PassFail | * |
|---|---|---|---|---|---|
| Acetone | 1.5 | 1.6 | -2.9 | PASS | |
| Benzene | 4.0 | 3.4 | 14 | PASS | |
| Bromoform | 0.73 | 0.73 | 0.10 | PASS | |
| Bromomethane | 0.73 | 0.76 | -4.4 | PASS | |
| 1,3-Butadiene | 0.85 | 0.80 | 5.7 | PASS | |
| Chlorobenzene | 1.00 | 0.92 | 7.3 | PASS | |
| Chloroethane | 0.48 | 0.52 | -9.3 | PASS | |
| Chloroform | 2.7 | 2.5 | 8.2 | PASS | |
| Chloromethane | 0.11 | 0.12 | -5.4 | PASS | |
| Carbon disulfide | 3.1 | 3.1 | -0.90 | PASS | |
| Carbon tetrachloride | 3.2 | 2.9 | 9.9 | PASS | |
| Cyclohexane | 2.2 | 2.0 | 7.9 | PASS | |
| 1,2-Dibromoethane | 0.69 | 0.69 | 0.10 | PASS | |
| 1,2-Dichlorobenzene | 1.0 | 0.97 | 5.6 | PASS | |
| 1,3-Dichlorobenzene | 1.1 | 0.98 | 7.4 | PASS | |
| 1,4-Dichlorobenzene | 1.1 | 1.0 | 4.5 | PASS | |
| Dichlorodifluoromethane | 2.2 | 2.2 | 1.3 | PASS | |
| 1,1-Dichloroethane | 2.3 | 2.1 | 10 | PASS | |
| 1,2-Dichloroethane | 1.7 | 1.6 | 3.6 | PASS | |
| 1,1-Dichloroethene | 1.9 | 1.9 | -1.0 | PASS | |
| 1,2-Dichloroethene (cis) | 1.6 | 1.6 | 3.8 | PASS | |
| 1,2-Dichloroethene (trans) | 1.7 | 1.7 | 0.20 | PASS | |
| 1,2-Dichloropropane | 0.39 | 0.37 | 4.6 | PASS | |
| 1,3-Dichloropropene (cis) | 0.60 | 0.59 | 2.7 | PASS | |
| 1,3-Dichloropropene (trans) | 0.59 | 0.60 | -2.6 | PASS | |
| 1,2-Dichlorotetrafluoroethane | 3.2 | 2.9 | 11 | PASS | |
| 1,4-Dioxane | 0.24 | 0.23 | 2.5 | PASS | |
| Ethylbenzene | 1.8 | 1.7 | 5.1 | PASS | |
| n-Heptane | 2.8 | 2.7 | 1.0 | PASS | |
| 1,3-Hexachlorobutadiene | 0.71 | 0.67 | 6.3 | PASS | |
| n-Hexane | 3.2 | 2.9 | 7.9 | PASS | |
| Methylene chloride | 1.2 | 1.1 | 12 | PASS | |
| Methyl ethyl ketone | 2.4 | 2.4 | 3.5 | PASS | |
| Methyl isobutyl ketone | 0.88 | 0.96 | -8.5 | PASS | |
| Methyl tert-butyl ether | 3.9 | 3.6 | 6.7 | PASS | |
| Styrene | 1.0 | 0.98 | 3.7 | PASS | |
| Tert-butyl alcohol | 2.6 | 2.4 | 6.1 | PASS | |

***%Difference must be within +/- 30%**
**RRF - Relative Response Factor**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Continuing Calibration Data Summary Report

**Initial Calibration Curve:** 10/10/2023
**Instrument:** AA
**Amount of standard injected (ml):** 50

**Date/Time of Calibration:** 12/11/2023 10:26
**Sample ID:** DCS
**Laboratory ID:** AA4902DCVS

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 09:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 1458 [AA4906] | 12/11/2023 12:50 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 1588 [AA4907] | 12/11/2023 13:19 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05047-03 [AA4909] | 12/11/2023 14:18 |
| E23-05047-04 [AA4910] | 12/11/2023 14:50 |
| E23-05047-06 [AA4914] | 12/11/2023 16:52 |
| E23-05047-06 [AA4915] | 12/11/2023 17:43 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 01:59 |

| Compound Name | Average RRF | Standard RRF | % Difference | PassFail | * |
|---|---|---|---|---|---|
| 1,1,2,2-Tetrachloroethane | 1.0 | 1.00 | 4.3 | PASS | |
| Tetrachloroethene | 0.61 | 0.57 | 5.4 | PASS | |
| Toluene | 1.4 | 1.3 | 4.0 | PASS | |
| 1,2,4-Trichlorobenzene | 0.82 | 0.79 | 3.9 | PASS | |
| 1,1,1-Trichloroethane | 2.8 | 2.5 | 8.6 | PASS | |
| 1,1,2-Trichloroethane | 0.48 | 0.46 | 4.0 | PASS | |
| Trichloroethene | 0.44 | 0.41 | 8.4 | PASS | |
| Trichlorofluoromethane | 2.8 | 2.7 | 3.1 | PASS | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 2.8 | 2.4 | 15 | PASS | |
| 1,2,4-Trimethylbenzene | 1.7 | 1.7 | 3.1 | PASS | |
| 1,3,5-Trimethylbenzene | 1.7 | 1.7 | 4.2 | PASS | |
| 2,2,4-Trimethylpentane | 1.3 | 1.2 | 4.3 | PASS | |
| Vinyl bromide | 0.90 | 0.91 | -1.8 | PASS | |
| Vinyl chloride | 0.91 | 0.89 | 1.5 | PASS | |
| Xylenes (m&p) | 1.4 | 1.3 | 2.0 | PASS | |
| Xylenes (o) | 1.5 | 1.4 | 6.4 | PASS | |

***%Difference must be within +/- 30%**
**RRF - Relative Response Factor**

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4902dcvs.D
Acq On : 11 Dec 2023 10:26 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 11 10:45:53 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 0% Max. R.T. Dev 0.40min
Max. RRF Dev : 30% Max. Rel. Area : 500%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Bromochloromethane (IS) | 1.000 | 1.000 | 0.0 | 151 | 0.00 |
| 2 | T | Propene | 0.694 | 0.638 | 8.1 | 161 | 0.00 |
| 3 | T | Dichlorodifluoromethane | 2.216 | 2.188 | 1.3 | 153 | 0.00 |
| 4 | T | 1,2-Dichlorotetrafluoroetha | 3.219 | 2.870 | 10.8 | 147 | 0.00 |
| 5 | T | n-Butane | 1.597 | 1.560 | 2.3 | 154 | 0.00 |
| 6 | T | Chloromethane | 0.111 | 0.117 | -5.4 | 157 | 0.00 |
| 7 | T | Vinyl chloride | 0.906 | 0.892 | 1.5 | 149 | 0.00 |
| 8 | T | 1,3-Butadiene | 0.846 | 0.798 | 5.7 | 151 | 0.00 |
| 9 | T | Bromomethane | 0.731 | 0.763 | -4.4 | 154 | 0.00 |
| 10 | T | Chloroethane | 0.475 | 0.519 | -9.3 | 156 | 0.00 |
| 11 | T | Vinyl bromide | 0.895 | 0.911 | -1.8 | 151 | 0.00 |
| 12 | T | Trichlorofluoromethane | 2.799 | 2.713 | 3.1 | 155 | 0.00 |
| 13 | T | Ethanol | 0.293 | 0.325 | -10.9 | 183 | 0.00 |
| 14 | T | 1,1-Dichloroethene | 1.858 | 1.877 | -1.0 | 146 | 0.00 |
| 15 | T | Carbon disulfide | 3.058 | 3.087 | -0.9 | 145 | 0.00 |
| 16 | T | 1,1,2-Trichloro-1,2,2-trifl | 2.819 | 2.390 | 15.2 | 143 | 0.00 |
| 17 | T | Acrolein | 0.418 | 0.423 | -1.2 | 149 | 0.00 |
| 18 | T | Allyl chloride | 0.501 | 0.513 | -2.4 | 145 | 0.00 |
| 19 | T | Isopropanol | 2.005 | 2.110 | -5.2 | 153 | 0.00 |
| 20 | T | Methylene chloride | 1.229 | 1.083 | 11.9 | 161 | 0.00 |
| 21 | T | Acetone | 1.508 | 1.551 | -2.9 | 153 | 0.00 |
| 22 | T | trans-1,2-Dichloroethene | 1.724 | 1.721 | 0.2 | 146 | 0.00 |
| 23 | T | n-Pentane | 2.325 | 2.210 | 4.9 | 154 | 0.00 |
| 24 | T | n-Hexane | 3.152 | 2.903 | 7.9 | 148 | 0.00 |
| 25 | T | Methyl tert-butyl ether | 3.872 | 3.613 | 6.7 | 150 | 0.00 |
| 26 | T | Tert-butyl alcohol | 2.607 | 2.448 | 6.1 | 148 | 0.00 |
| 27 | T | 1,1-Dichloroethane | 2.322 | 2.083 | 10.3 | 141 | 0.00 |
| 28 | T | cis-1,2-Dichloroethene | 1.638 | 1.576 | 3.8 | 144 | 0.00 |
| 29 | t | Cyclohexane | 2.202 | 2.029 | 7.9 | 148 | 0.00 |
| 30 | T | Chloroform | 2.676 | 2.457 | 8.2 | 141 | 0.00 |
| 31 | T | Ethyl acetate | 0.435 | 0.434 | 0.2 | 146 | 0.00 |
| 32 | T | Carbon tetrachloride | 3.174 | 2.860 | 9.9 | 142 | 0.00 |
| 33 | T | Tetrahydrofuran | 1.504 | 1.466 | 2.5 | 149 | 0.00 |
| 34 | T | 1,1,1-Trichloroethane | 2.780 | 2.541 | 8.6 | 144 | 0.00 |
| 35 | T | Methyl ethyl ketone | 2.442 | 2.356 | 3.5 | 150 | 0.00 |
| 36 | T | n-Heptane | 2.764 | 2.735 | 1.0 | 145 | 0.00 |
| 37 | T | Benzene | 3.972 | 3.428 | 13.7 | 136 | 0.00 |
| 38 | T | 1,2-Dichloroethane | 1.663 | 1.603 | 3.6 | 146 | 0.00 |
| 39 | I | 1,4-Difluorobenzene (IS) | 1.000 | 1.000 | 0.0 | 147 | 0.00 |
| 40 | T | Trichloroethene | 0.442 | 0.405 | 8.4 | 135 | 0.00 |
| 41 | T | 2,2,4-Trimethylpentane | 1.303 | 1.247 | 4.3 | 149 | 0.00 |
| 42 | T | 1,2-Dichloropropane | 0.389 | 0.371 | 4.6 | 139 | 0.00 |
| 43 | T | Bromodichloromethane | 0.655 | 0.640 | 2.3 | 143 | 0.00 |
| 44 | T | Methyl methacrylate | 0.472 | 0.494 | -4.7 | 146 | 0.00 |
| 45 | T | 1,4-Dioxane | 0.238 | 0.232 | 2.5 | 140 | 0.00 |
| 46 | T | cis-1,3-Dichloropropene | 0.603 | 0.587 | 2.7 | 137 | 0.00 |
| 47 | T | Toluene | 1.405 | 1.349 | 4.0 | 133 | 0.00 |
| 48 | T | Methyl isobutyl ketone | 0.883 | 0.958 | -8.5 | 148 | 0.00 |
| 49 | T | Tetrachloroethene | 0.606 | 0.573 | 5.4 | 133 | 0.00 |
| 50 | T | trans-1,3-Dichloropropene | 0.585 | 0.600 | -2.6 | 139 | 0.00 |
| 51 | T | 1,1,2-Trichloroethane | 0.475 | 0.456 | 4.0 | 135 | 0.00 |
| 52 | T | Dibromochloromethane | 0.791 | 0.789 | 0.3 | 139 | 0.00 |
| 53 | T | 1,2-Dibromoethane | 0.686 | 0.685 | 0.1 | 137 | 0.00 |

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4902dcvs.D
Acq On : 11 Dec 2023 10:26 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 11 10:45:53 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 0% Max. R.T. Dev 0.40min
Max. RRF Dev : 30% Max. Rel. Area : 500%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 54 | T | Methyl n-butyl ketone | 0.849 | 0.947 | -11.5 | 149 | 0.00 |
| 55 | I | d-5 Chlorobenzene (IS) | 1.000 | 1.000 | 0.0 | 142 | 0.00 |
| 56 | T | n-Nonane | 0.992 | 1.053 | -6.1 | 146 | 0.00 |
| 57 | T | Chlorobenzene | 0.997 | 0.924 | 7.3 | 133 | 0.00 |
| 58 | T | Ethylbenzene | 1.843 | 1.749 | 5.1 | 134 | 0.00 |
| 59 | T | Xylenes (m&p) | 1.365 | 1.338 | 2.0 | 134 | 0.00 |
| 60 | T | Xylene (o) | 1.490 | 1.395 | 6.4 | 135 | 0.00 |
| 61 | T | Styrene | 1.020 | 0.982 | 3.7 | 131 | 0.00 |
| 62 | T | Bromoform | 0.732 | 0.731 | 0.1 | 139 | 0.00 |
| 63 | T | Cumene | 1.947 | 1.907 | 2.1 | 139 | 0.00 |
| 64 | S | Bromofluorobenzene (tune st | 0.872 | 0.871 | 0.1 | 142 | 0.00 |
| 65 | T | n-Propyl benzene | 2.541 | 2.576 | -1.4 | 140 | 0.00 |
| 66 | T | 1,1,2,2-Tetrachloroethane | 1.043 | 0.998 | 4.3 | 136 | 0.00 |
| 67 | T | 4-Ethyltoluene | 2.151 | 2.143 | 0.4 | 138 | 0.00 |
| 68 | T | 2-Chlorotoluene | 1.707 | 1.675 | 1.9 | 140 | 0.00 |
| 69 | T | 1,3,5-Trimethylbenzene | 1.730 | 1.657 | 4.2 | 134 | 0.00 |
| 70 | T | 1,2,4-Trimethylbenzene | 1.729 | 1.675 | 3.1 | 133 | 0.00 |
| 71 | T | 1,3-Dichlorobenzene | 1.059 | 0.981 | 7.4 | 133 | 0.00 |
| 72 | T | 1,4-Dichlorobenzene | 1.065 | 1.017 | 4.5 | 134 | 0.00 |
| 73 | T | Benzyl chloride | 1.529 | 1.639 | -7.2 | 144 | 0.00 |
| 74 | T | 1,2-Dichlorobenzene | 1.027 | 0.970 | 5.6 | 133 | 0.00 |
| 75 | T | 1,3-Hexachlorobutadiene | 0.713 | 0.668 | 6.3 | 135 | 0.00 |
| 76 | T | 1,2,4-Trichlorobenzene | 0.824 | 0.792 | 3.9 | 137 | 0.00 |
| 77 | T | Naphthalene | 1.885 | 1.937 | -2.8 | 145 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4902dcvs.D
Acq On : 11 Dec 2023 10:26 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 11 10:45:53 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.393 | 130 | 596109 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.454 | 114 | 2484518 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 2791354 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 2431677 | 9.99 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.486 | 41 | 414687 | 10.02 | ppbV | 98 |
| 3) Dichlorodifluoromethane | 1.522 | 85 | 1382298 | 10.46 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.646 | 85 | 1676477 | 8.74 | ppbV | 97 |
| 5) n-Butane | 1.729 | 43 | 1013335 | 10.64 | ppbV | 99 |
| 6) Chloromethane | 1.791 | 52 | 78218 | 11.85 | ppbV | 100 |
| 7) Vinyl chloride | 1.784 | 62 | 574429 | 10.64 | ppbV | 100 |
| 8) 1,3-Butadiene | 1.794 | 39 | 509282 | 10.09 | ppbV | 97 |
| 9) Bromomethane | 2.081 | 94 | 454826 | 10.43 | ppbV | 98 |
| 10) Chloroethane | 2.194 | 64 | 327772 | 11.57 | ppbV | 98 |
| 11) Vinyl bromide | 2.293 | 106 | 548259 | 10.27 | ppbV | 99 |
| 12) Trichlorofluoromethane | 2.309 | 101 | 1779124 | 10.66 | ppbV | 99 |
| 13) Ethanol | 2.666 | 45 | 201466 | 11.54 | ppbV | 97 |
| 14) 1,1-Dichloroethene | 2.731 | 61 | 1163954 | 10.51 | ppbV | 96 |
| 15) Carbon disulfide | 2.750 | 76 | 1969223 | 10.80 | ppbV | 97 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.772 | 101 | 1553181 | 9.24 | ppbV | 99 |
| 17) Acrolein | 2.985 | 56 | 252446 | 10.14 | ppbV | 100 |
| 18) Allyl chloride | 3.110 | 76 | 330196 | 11.05 | ppbV | 100 |
| 19) Isopropanol | 3.110 | 45 | 1119255 | 9.36 | ppbV | 100 |
| 20) Methylene chloride | 3.203 | 49 | 696985 | 9.51 | ppbV | 95 |
| 21) Acetone | 3.210 | 43 | 998590 | 11.11 | ppbV | 100 |
| 22) trans-1,2-Dichloroethene | 3.325 | 61 | 1138568 | 11.08 | ppbV | 98 |
| 23) n-Pentane | 3.409 | 43 | 1422770 | 10.27 | ppbV | 98 |
| 24) n-Hexane | 3.406 | 57 | 1903376 | 10.13 | ppbV | 98 |
| 25) Methyl tert-butyl ether | 3.409 | 73 | 2411960 | 10.45 | ppbV | 99 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 1678450 | 10.80 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 1328374 | 9.60 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.232 | 61 | 1023865 | 10.48 | ppbV | 96 |
| 29) Cyclohexane | 4.412 | 56 | 1354780 | 10.32 | ppbV | 97 |
| 30) Chloroform | 4.454 | 83 | 1581616 | 9.92 | ppbV | 99 |
| 31) Ethyl acetate | 4.541 | 61 | 279320 | 10.77 | ppbV | 96 |
| 32) Carbon tetrachloride | 4.576 | 117 | 1875059 | 9.91 | ppbV | 99 |
| 33) Tetrahydrofuran | 4.573 | 42 | 961491 | 10.72 | ppbV | 97 |
| 34) 1,1,1-Trichloroethane | 4.628 | 97 | 1650986 | 9.96 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.682 | 43 | 1545036 | 10.61 | ppbV | 98 |
| 36) n-Heptane | 4.914 | 43 | 1809408 | 10.98 | ppbV | 97 |
| 37) Benzene | 4.930 | 78 | 2206639 | 9.32 | ppbV | 97 |
| 38) 1,2-Dichloroethane | 5.091 | 62 | 1041657 | 10.51 | ppbV | 100 |
| 40) Trichloroethene | 5.431 | 130 | 1006216 | 9.15 | ppbV | 100 |
| 41) 2,2,4-Trimethylpentane | 4.846 | 57 | 3376289 | 10.43 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 1014651 | 10.50 | ppbV | 99 |
| 43) Bromodichloromethane | 5.943 | 83 | 1828286 | 11.23 | ppbV | 100 |
| 44) Methyl methacrylate | 6.087 | 41 | 1350577 | 11.52 | ppbV | 96 |
| 45) 1,4-Dioxane | 6.113 | 88 | 673669 | 11.38 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 1619348 | 10.81 | ppbV | 99 |
| 47) Toluene | 6.772 | 91 | 3618902 | 10.36 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.135 | 43 | 2595670 | 11.83 | ppbV | 98 |
| 49) Tetrachloroethene | 7.161 | 166 | 1595415 | 10.60 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 1655291 | 11.39 | ppbV | 98 |
| 51) 1,1,2-Trichloroethane | 7.335 | 97 | 1222341 | 10.37 | ppbV | 100 |

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4902dcvs.D
Acq On : 11 Dec 2023 10:26 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

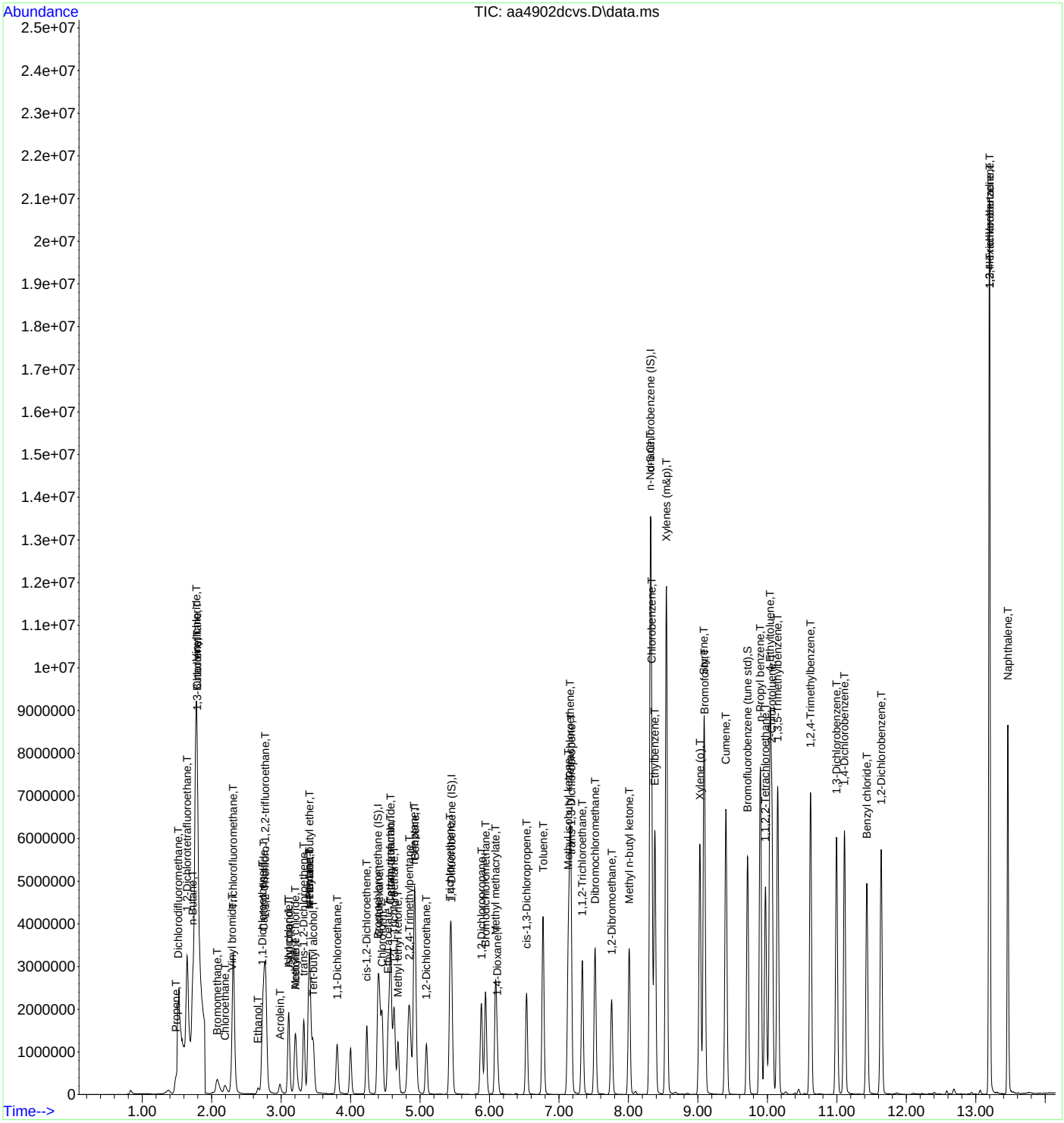
Quant Time: Dec 11 10:45:53 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 2194895 | 11.17 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 1838806 | 10.78 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.010 | 43 | 2657481 | 12.59 | ppbV | 97 |
| 56) n-Nonane | 8.316 | 43 | 3233636 | 11.67 | ppbV | 98 |
| 57) Chlorobenzene | 8.335 | 112 | 2863155 | 10.29 | ppbV | 98 |
| 58) Ethylbenzene | 8.380 | 91 | 5418295 | 10.53 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.547 | 91 | 8329861 | 21.86 | ppbV | 99 |
| 60) Xylene (o) | 9.029 | 91 | 4282583 | 10.30 | ppbV | 98 |
| 61) Styrene | 9.087 | 104 | 3096431 | 10.87 | ppbV | 99 |
| 62) Bromoform | 9.097 | 173 | 2305769 | 11.28 | ppbV | 100 |
| 63) Cumene | 9.402 | 105 | 5696839 | 10.48 | ppbV | 100 |
| 65) n-Propyl benzene | 9.897 | 91 | 7764284 | 10.95 | ppbV | 99 |
| 66) 1,1,2,2-Tetrachloroethane | 9.971 | 83 | 3175462 | 10.91 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 6460729 | 10.76 | ppbV | 99 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 5096400 | 10.69 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 5041969 | 10.44 | ppbV | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.621 | 105 | 5048160 | 10.46 | ppbV | 99 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 3039816 | 10.29 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 3038927 | 10.22 | ppbV | 99 |
| 73) Benzyl chloride | 11.431 | 91 | 4575705 | 10.72 | ppbV | 99 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 2896425 | 10.10 | ppbV | 99 |
| 75) 1,3-Hexachlorobutadiene | 13.200 | 225 | 2068735 | 10.40 | ppbV | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 2432158 | 10.57 | ppbV | 99 |
| 77) Naphthalene | 13.463 | 128 | 5407318 | 10.28 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4902dcvs.D
Acq On : 11 Dec 2023 10:26 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 11 10:45:53 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



# Section VIII: Raw Quality Control Data Package

**BFB Tune Spectra**

**Method Blank**

**Laboratory Control Sample**

**Laboratory Sample Duplicate**

**Instrument Run Logs**

**Pressure Gauge Readings (initial and final)**

**Example Calculations**

**Screening Data**

**Clean Canister Certification**

# BFB

**Data Path:** C:\DATA\2023\08-2023\08-15-2023\
**Data File:** AA3401BFB.D
**Acq On:** 8/15/2023 10:11:00AM
**Operator:** jls
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\230525.M
**Last Update:** Tue May 30 13:24:12 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 251499 | 18.7 |
| PASS | 75 | 95 | 30 | 66 | 703104 | 52.3 |
| PASS | 95 | 95 | 100 | 100 | 1345024 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 89525 | 6.7 |
| PASS | 173 | 174 | 0.00 | 2 | 8293 | 0.8 |
| PASS | 174 | 95 | 50 | 100 | 1069397 | 79.5 |
| PASS | 175 | 174 | 4 | 9 | 78181 | 7.3 |
| PASS | 176 | 174 | 93 | 101 | 1035413 | 96.8 |
| PASS | 177 | 176 | 5 | 9 | 68613 | 6.6 |

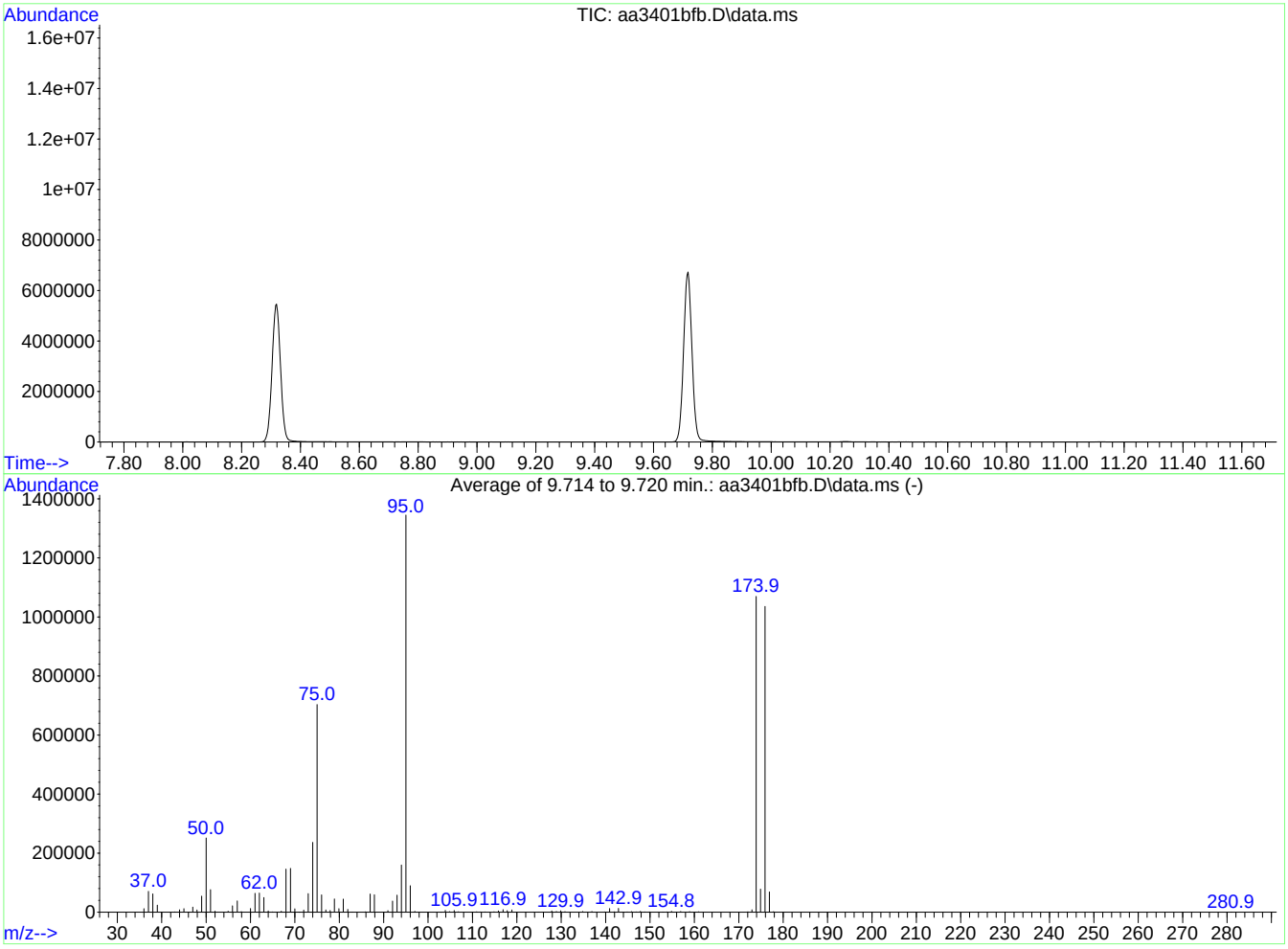
Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA3401BFB | NA | 8/15/2023 10:11:00 AM |
| 0.2 PPBV STD | AA3402STD05 | NA | 8/15/2023 11:15:00 AM |
| 10 PPBV STD | AA3404STD03 | NA | 8/15/2023 1:09:00 PM |
| 2 PPBV STD | AA3403STD04 | NA | 8/15/2023 1:45:00 PM |
| 20 PPBV STD | AA3405STD02 | NA | 8/15/2023 3:12:00 PM |
| 40 PPBV STD | AA3406STD01 | NA | 8/15/2023 4:47:00 PM |
| 10 PPBV ICVSS | AA3407ICVSS | NA | 8/15/2023 6:09:00 PM |

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3401bfb.D
Acq On : 15 Aug 2023 10:11 am
Operator : jjw
Sample : BFB
Misc : ALM018474
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\230525.M
Title : TO-15 on the Agilent 7890A / 5975C
Last Update : Tue May 30 13:24:12 2023




AutoFind: Scans 2982, 2983, 2984; Background Corrected with Scan 2964

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 18.7 | 251499 | PASS |
| 75 | 95 | 30 | 66 | 52.3 | 703104 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 1345024 | PASS |
| 96 | 95 | 5 | 9 | 6.7 | 89525 | PASS |
| 173 | 174 | 0.00 | 2 | 0.8 | 8293 | PASS |
| 174 | 95 | 50 | 100 | 79.5 | 1069397 | PASS |
| 175 | 174 | 4 | 9 | 7.3 | 78181 | PASS |
| 176 | 174 | 93 | 101 | 96.8 | 1035413 | PASS |
| 177 | 176 | 5 | 9 | 6.6 | 68613 | PASS |

# BFB

**Data Path:** C:\DATA\2023\10-2023\10-02-2023\
**Data File:** AA4101BFB.D
**Acq On:** 10/2/2023 11:11:00AM
**Operator:** jjw
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\230815.M
**Last Update:** Wed Aug 16 10:00:51 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 199211 | 20.1 |
| PASS | 75 | 95 | 30 | 66 | 539733 | 54.5 |
| PASS | 95 | 95 | 100 | 100 | 990848 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 66717 | 6.7 |
| PASS | 173 | 174 | 0.00 | 2 | 6585 | 0.9 |
| PASS | 174 | 95 | 50 | 100 | 748288 | 75.5 |
| PASS | 175 | 174 | 4 | 9 | 56397 | 7.5 |
| PASS | 176 | 174 | 93 | 101 | 739904 | 98.9 |
| PASS | 177 | 176 | 5 | 9 | 48976 | 6.6 |

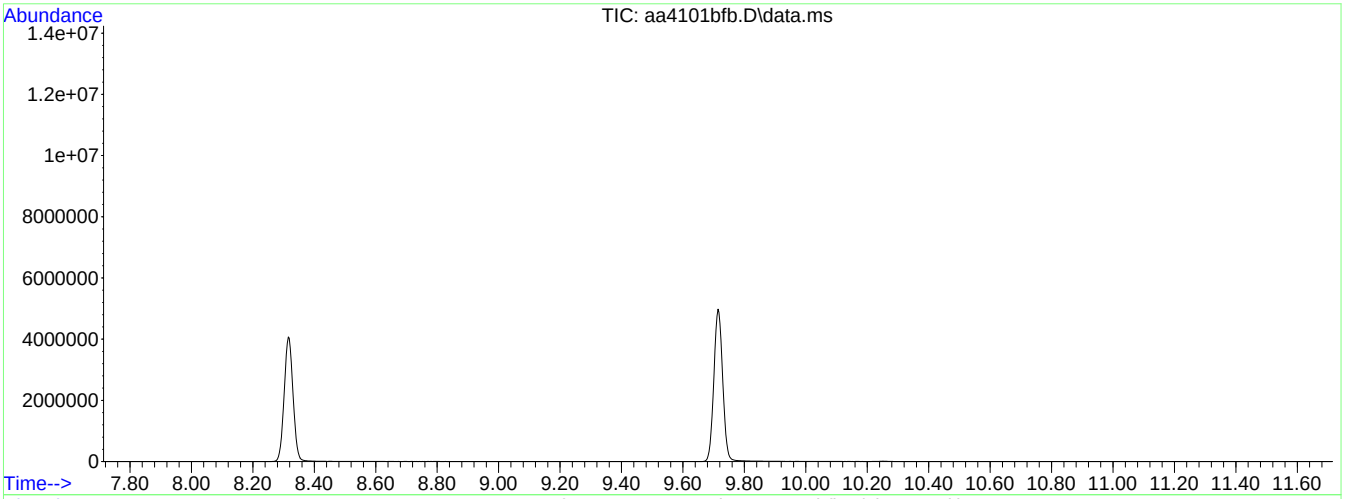
Runs with this BFB:

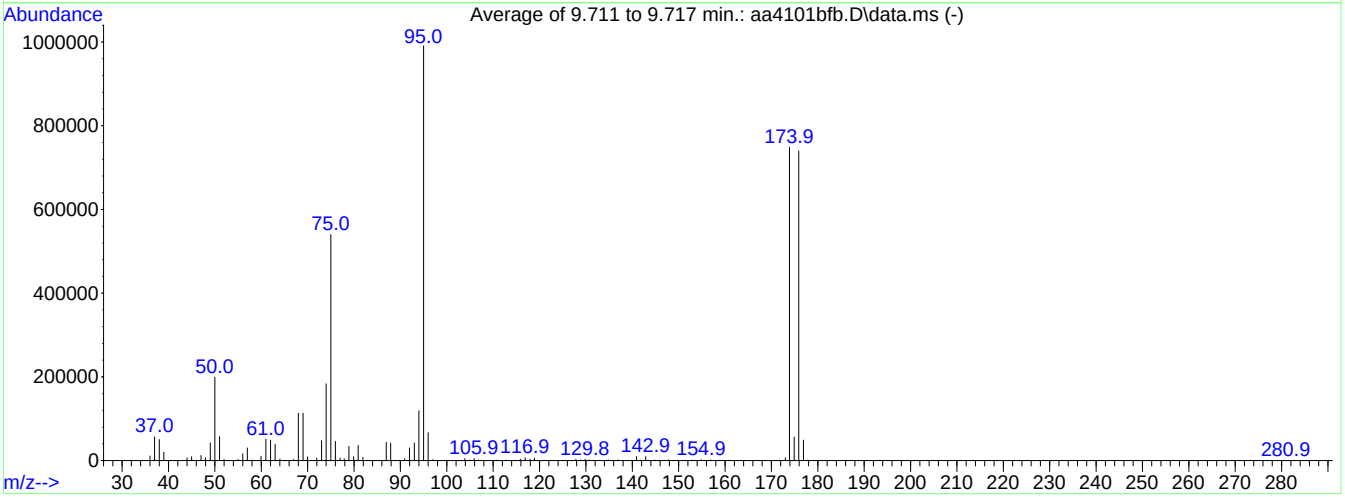
| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4101BFB | NA | 10/2/2023 11:11:00 AM |
| 10 PPBV DCVS | AA4102DCVS | NA | 10/2/2023 12:19:00 PM |
| 10 PPBV LCS | AA4103LCS | NA | 10/2/2023 12:50:00 PM |
| METHOD BLANK | AA4104BLK | NA | 10/2/2023 1:32:00 PM |
| 02 PPBV RLLCS | AA4105RLLCS | NA | 10/2/2023 2:08:00 PM |
| 3830 | AA4106 | NA | 10/2/2023 2:44:00 PM |
| 5087 | AA4107 | NA | 10/2/2023 3:14:00 PM |
| 2037 | AA4108 | NA | 10/2/2023 3:45:00 PM |
| 10 PPBV CCCVS | AA4125CCCVS | NA | 10/3/2023 12:49:00 AM |

Data Path : C:\DATA\2023\10-2023\10-02-2023\
Data File : aa4101bfb.D
Acq On : 2 Oct 2023 11:11 am
Operator : jjw
Sample : BFB
Misc : ALM018474
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\230815.M
Title : TO-15 on the Agilent 7890A / 5975C
Last Update : Wed Aug 16 10:00:51 2023




AutoFind: Scans 2981, 2982, 2983; Background Corrected with Scan 2964

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 20.1 | 199211 | PASS |
| 75 | 95 | 30 | 66 | 54.5 | 539733 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 990848 | PASS |
| 96 | 95 | 5 | 9 | 6.7 | 66717 | PASS |
| 173 | 174 | 0.00 | 2 | 0.9 | 6585 | PASS |
| 174 | 95 | 50 | 100 | 75.5 | 748288 | PASS |
| 175 | 174 | 4 | 9 | 7.5 | 56397 | PASS |
| 176 | 174 | 93 | 101 | 98.9 | 739904 | PASS |
| 177 | 176 | 5 | 9 | 6.6 | 48976 | PASS |

# BFB

**Data Path:** C:\DATA\2023\10-2023\10-10-2023\

**Data File:** AA4131BFB.D

**Acq On:** 10/10/2023 10:13:00AM

**Operator:** jls

**Sample:** BFB

**Misc:** ALM018474

**ALS Vial:** 1 **Multiplier:** 1

**Integration File:** rteint.p

**Method:** C:\msdchem\1\METHODS\231009.M

**Last Update:** Tue Oct 10 09:54:56 2023

**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 65523 | 16.8 |
| PASS | 75 | 95 | 30 | 66 | 182571 | 46.8 |
| PASS | 95 | 95 | 100 | 100 | 389867 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 25643 | 6.6 |
| PASS | 173 | 174 | 0.00 | 2 | 0 | 0.0 |
| PASS | 174 | 95 | 50 | 100 | 293952 | 75.4 |
| PASS | 175 | 174 | 4 | 9 | 22269 | 7.6 |
| PASS | 176 | 174 | 93 | 101 | 282667 | 96.2 |
| PASS | 177 | 176 | 5 | 9 | 18629 | 6.6 |

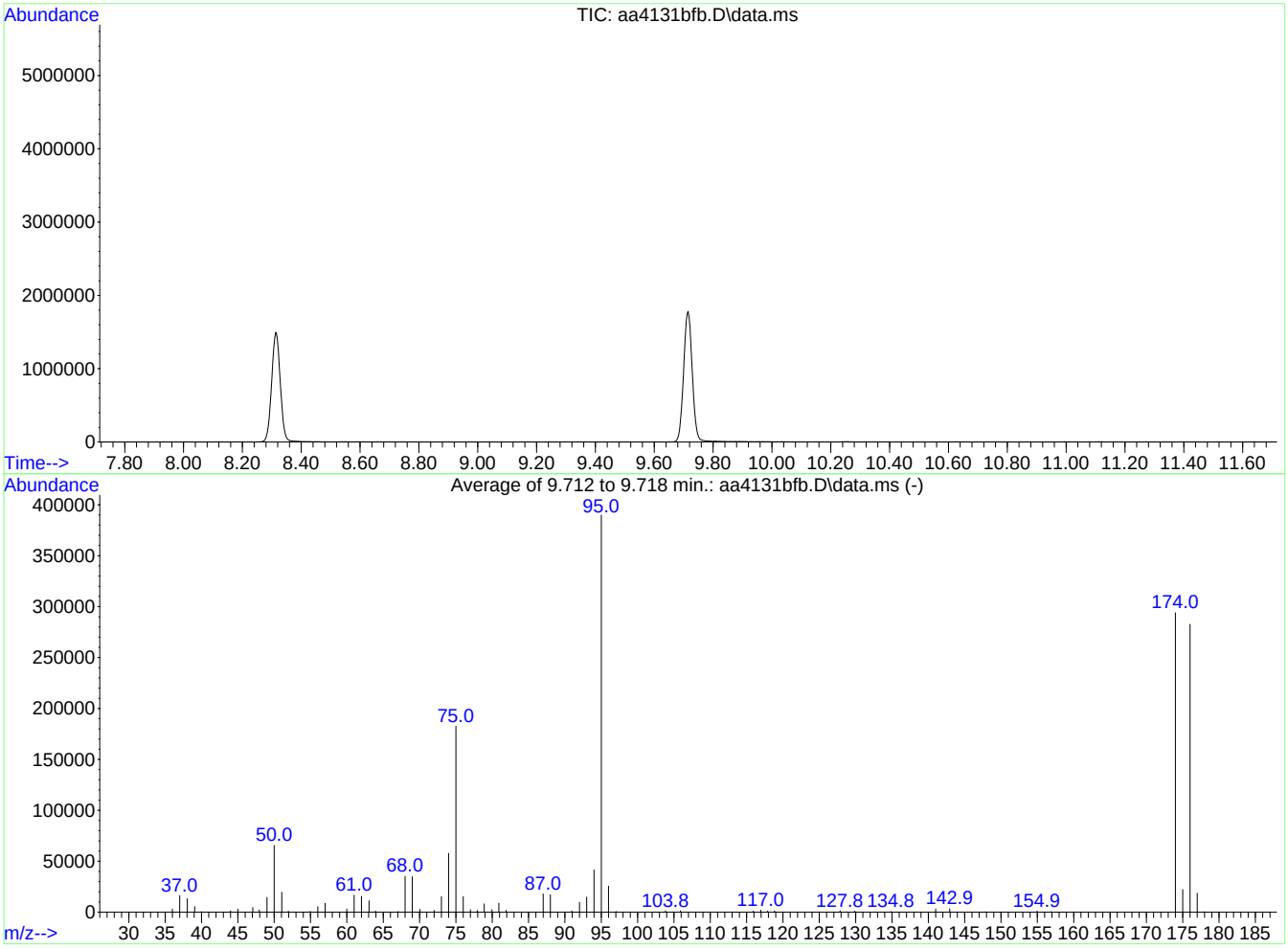
Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4131BFB | NA | 10/10/2023 10:13:00 AM |
| 0.2 PPBV STD | AA4132STD05 | NA | 10/10/2023 10:40:00 AM |
| 2 PPBV STD | AA4133STD04 | NA | 10/10/2023 11:46:00 AM |
| 10 PPBV STANDARD STD | AA4134STD03 | NA | 10/10/2023 12:21:00 PM |
| 20 PPBV STD | AA4135STD02 | NA | 10/10/2023 12:55:00 PM |
| 40 PPBV STD | AA4136STD01 | NA | 10/10/2023 2:05:00 PM |
| 10 PPBV ICVSS | AA4137ICVSS | NA | 10/10/2023 4:48:00 PM |
| 10 PPBV LCS | AA4138LCS | NA | 10/10/2023 5:39:00 PM |
| METHOD BLANK | AA4139BLK | NA | 10/10/2023 6:07:00 PM |
| 02 PPBV RLLCS | AA4140RLLCS | NA | 10/10/2023 6:35:00 PM |
| 5101 | AA4142 | NA | 10/10/2023 7:36:00 PM |
| 4869 | AA4143 | NA | 10/10/2023 8:06:00 PM |
| 2157 | AA4144 | NA | 10/10/2023 8:36:00 PM |
| 10 PPBV CCCVS | AA4154CCCVS | NA | 10/11/2023 1:53:00 AM |

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4131bfb.D
Acq On : 10 Oct 2023 10:13 am
Operator : jjw
Sample : BFB
Misc : ALM018474
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\231009.M
Title : TO-15 on the Agilent 7890A / 5975C
Last Update : Tue Oct 10 09:54:56 2023




AutoFind: Scans 2981, 2982, 2983; Background Corrected with Scan 2964

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 16.8 | 65523 | PASS |
| 75 | 95 | 30 | 66 | 46.8 | 182571 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 389867 | PASS |
| 96 | 95 | 5 | 9 | 6.6 | 25643 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 100 | 75.4 | 293952 | PASS |
| 175 | 174 | 4 | 9 | 7.6 | 22269 | PASS |
| 176 | 174 | 93 | 101 | 96.2 | 282667 | PASS |
| 177 | 176 | 5 | 9 | 6.6 | 18629 | PASS |

# BFB

**Data Path:** C:\DATA\2023\11-2023\11-03-2023\
**Data File:** AA4527BFB.D
**Acq On:** 11/3/2023 9:42:00AM
**Operator:** jjw
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\231009.M
**Last Update:** Tue Oct 10 15:12:35 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 181269 | 18.0 |
| PASS | 75 | 95 | 30 | 66 | 495573 | 49.1 |
| PASS | 95 | 95 | 100 | 100 | 1008683 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 66328 | 6.6 |
| PASS | 173 | 174 | 0.00 | 2 | 7271 | 0.9 |
| PASS | 174 | 95 | 50 | 100 | 784213 | 77.7 |
| PASS | 175 | 174 | 4 | 9 | 57285 | 7.3 |
| PASS | 176 | 174 | 93 | 101 | 752875 | 96.0 |
| PASS | 177 | 176 | 5 | 9 | 49968 | 6.6 |

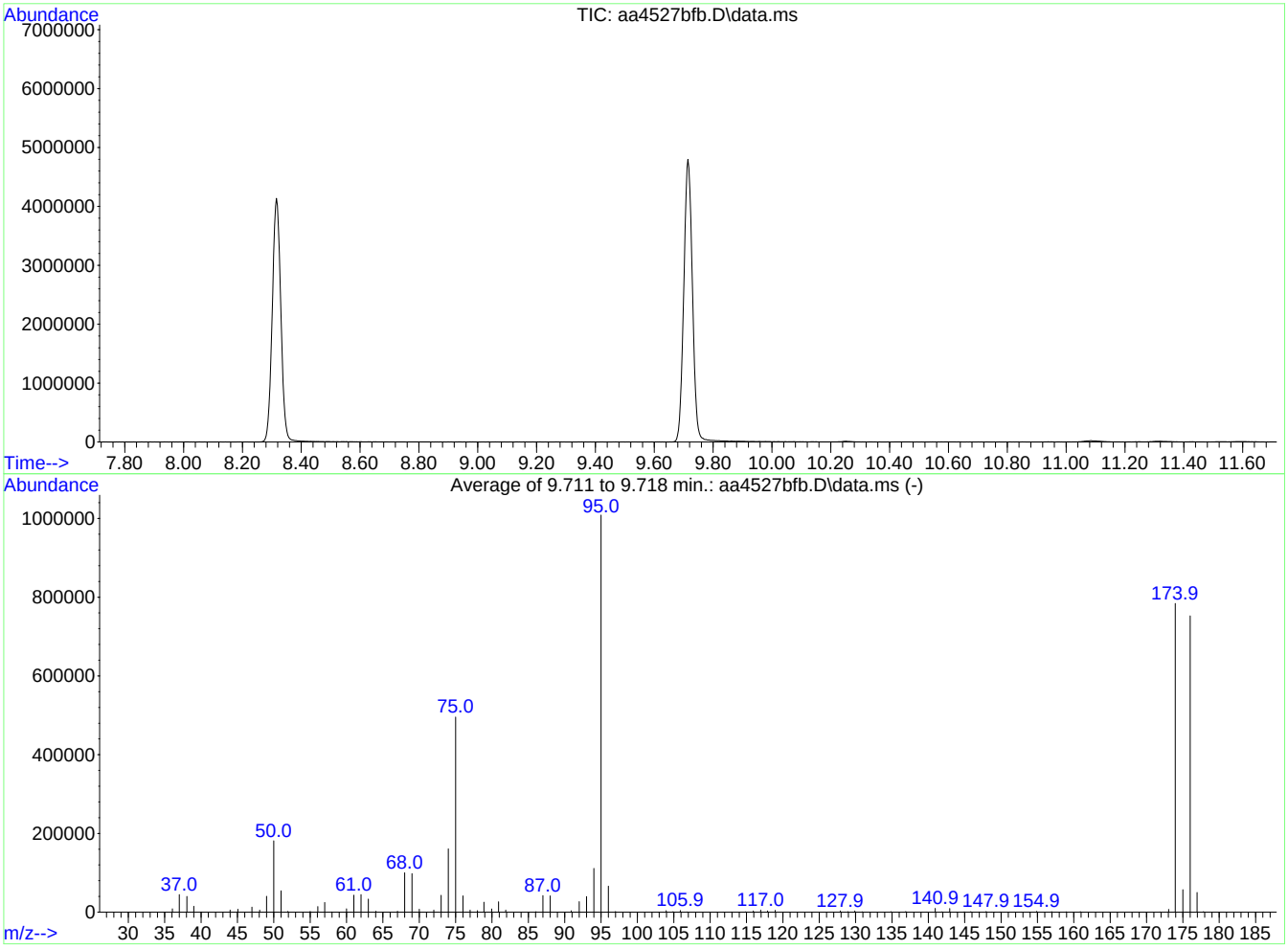
Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4527BFB | NA | 11/3/2023 9:42:00 AM |
| 10 PPBV DCVS | AA4528DCVS | NA | 11/3/2023 10:14:00 AM |
| 10 PPBV LCS | AA4529LCS | NA | 11/3/2023 10:43:00 AM |
| METHOD BLANK | AA4530BLK | NA | 11/3/2023 11:41:00 AM |
| 02 PPBV RLLCS | AA4531RLLCS | NA | 11/3/2023 12:15:00 PM |
| 2902 | AA4532 | NA | 11/3/2023 1:01:00 PM |
| 10 PPBV CCCVS | AA4549CCCVS | NA | 11/3/2023 10:29:00 PM |

Data Path : C:\DATA\2023\11-2023\11-03-2023\
Data File : aa4527bfb.D
Acq On : 3 Nov 2023 9:42 am
Operator : jjw
Sample : BFB
Misc : ALM018474
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\231009.M
Title : TO-15 on the Agilent 7890A / 5975C
Last Update : Tue Oct 10 15:12:35 2023




AutoFind: Scans 2981, 2982, 2983; Background Corrected with Scan 2964

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 18.0 | 181269 | PASS |
| 75 | 95 | 30 | 66 | 49.1 | 495573 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 1008683 | PASS |
| 96 | 95 | 5 | 9 | 6.6 | 66328 | PASS |
| 173 | 174 | 0.00 | 2 | 0.9 | 7271 | PASS |
| 174 | 95 | 50 | 100 | 77.7 | 784213 | PASS |
| 175 | 174 | 4 | 9 | 7.3 | 57285 | PASS |
| 176 | 174 | 93 | 101 | 96.0 | 752875 | PASS |
| 177 | 176 | 5 | 9 | 6.6 | 49968 | PASS |

# BFB

**Data Path:** C:\DATA\2023\12-2023\12-08-2023\
**Data File:** AA4881BFB.D
**Acq On:** 12/8/2023 10:21:00AM
**Operator:** jjw
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\231009.M
**Last Update:** Tue Oct 10 15:12:35 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 185045 | 18.5 |
| PASS | 75 | 95 | 30 | 66 | 508523 | 50.7 |
| PASS | 95 | 95 | 100 | 100 | 1002688 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 66973 | 6.7 |
| PASS | 173 | 174 | 0.00 | 2 | 4685 | 0.6 |
| PASS | 174 | 95 | 50 | 100 | 744704 | 74.3 |
| PASS | 175 | 174 | 4 | 9 | 56251 | 7.6 |
| PASS | 176 | 174 | 93 | 101 | 716907 | 96.3 |
| PASS | 177 | 176 | 5 | 9 | 46309 | 6.5 |

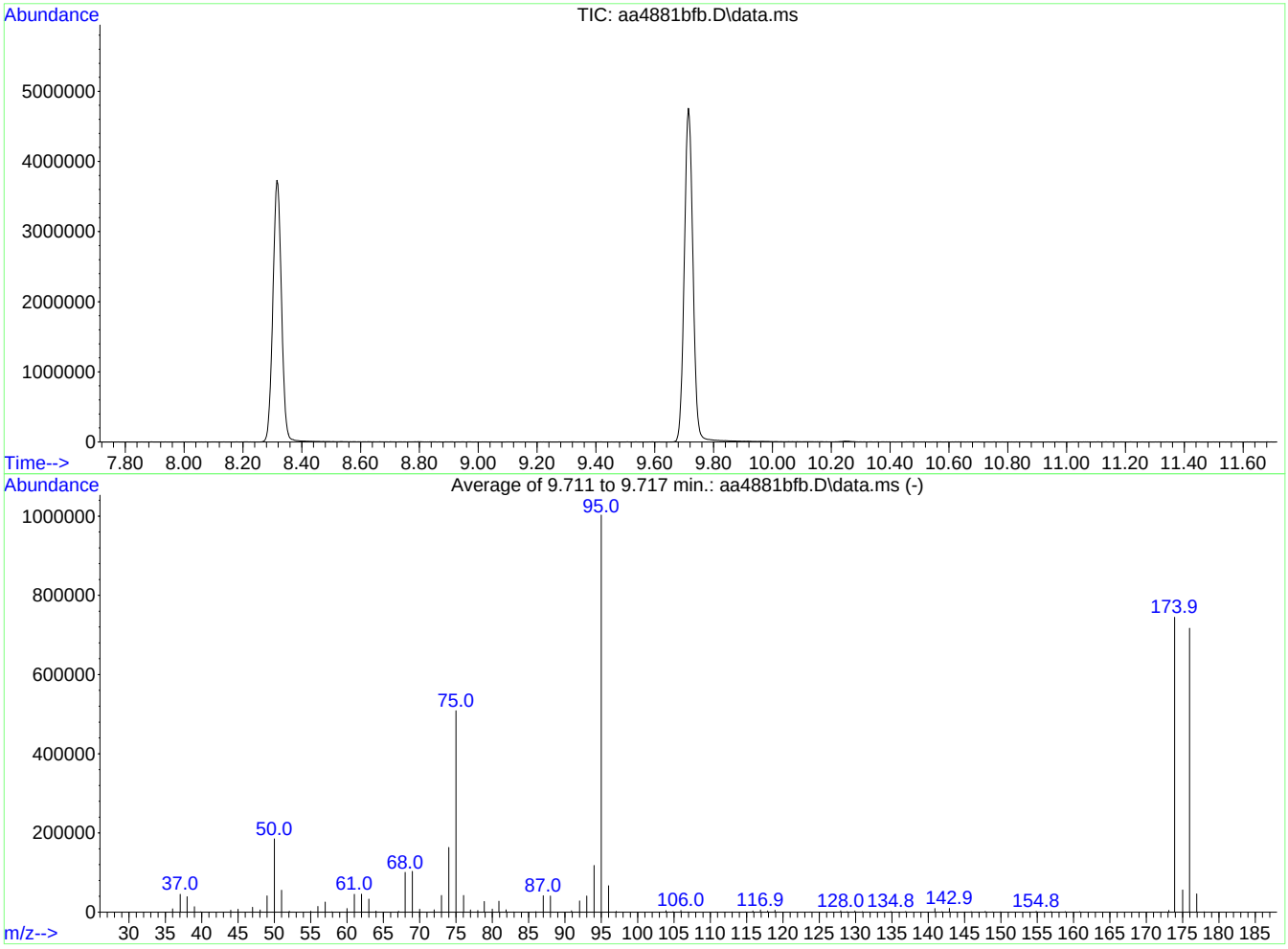
Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4881BFB | NA | 12/8/2023 10:21:00 AM |
| 10 PPBV DCVS | AA4882DCVS | NA | 12/8/2023 10:50:00 AM |
| 10 PPBV LCS | AA4883LCS | NA | 12/8/2023 11:21:00 AM |
| METHOD BLANK | AA4884BLK | NA | 12/8/2023 12:26:00 PM |
| E23-05047-01 | AA4886 | SV1 | 12/8/2023 2:03:00 PM |
| E23-05047-02 | AA4887 | SV2 | 12/8/2023 2:35:00 PM |
| E23-05047-03 | AA4888 | SV3 | 12/8/2023 3:06:00 PM |
| E23-05047-04 | AA4889 | SV6 | 12/8/2023 3:42:00 PM |
| E23-05047-05 | AA4890 | SV7 | 12/8/2023 4:15:00 PM |

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4881bfb.D
Acq On : 8 Dec 2023 10:21 am
Operator : jjw
Sample : BFB
Misc : ALM018474
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\231009.M
Title : TO-15 on the Agilent 7890A / 5975C
Last Update : Tue Oct 10 15:12:35 2023




AutoFind: Scans 2981, 2982, 2983; Background Corrected with Scan 2964

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 18.5 | 185045 | PASS |
| 75 | 95 | 30 | 66 | 50.7 | 508523 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 1002688 | PASS |
| 96 | 95 | 5 | 9 | 6.7 | 66973 | PASS |
| 173 | 174 | 0.00 | 2 | 0.6 | 4685 | PASS |
| 174 | 95 | 50 | 100 | 74.3 | 744704 | PASS |
| 175 | 174 | 4 | 9 | 7.6 | 56251 | PASS |
| 176 | 174 | 93 | 101 | 96.3 | 716907 | PASS |
| 177 | 176 | 5 | 9 | 6.5 | 46309 | PASS |

# BFB

**Data Path:** C:\DATA\2023\12-2023\12-11-2023\
**Data File:** AA4901BFB.D
**Acq On:** 12/11/2023 9:24:00AM
**Operator:** jjw
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\231009.M
**Last Update:** Tue Oct 10 15:12:35 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 267904 | 18.4 |
| PASS | 75 | 95 | 30 | 66 | 717035 | 49.1 |
| PASS | 95 | 95 | 100 | 100 | 1459371 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 91040 | 6.2 |
| PASS | 173 | 174 | 0.00 | 2 | 10848 | 1.0 |
| PASS | 174 | 95 | 50 | 100 | 1053269 | 72.2 |
| PASS | 175 | 174 | 4 | 9 | 81547 | 7.7 |
| PASS | 176 | 174 | 93 | 101 | 1021824 | 97.0 |
| PASS | 177 | 176 | 5 | 9 | 65264 | 6.4 |

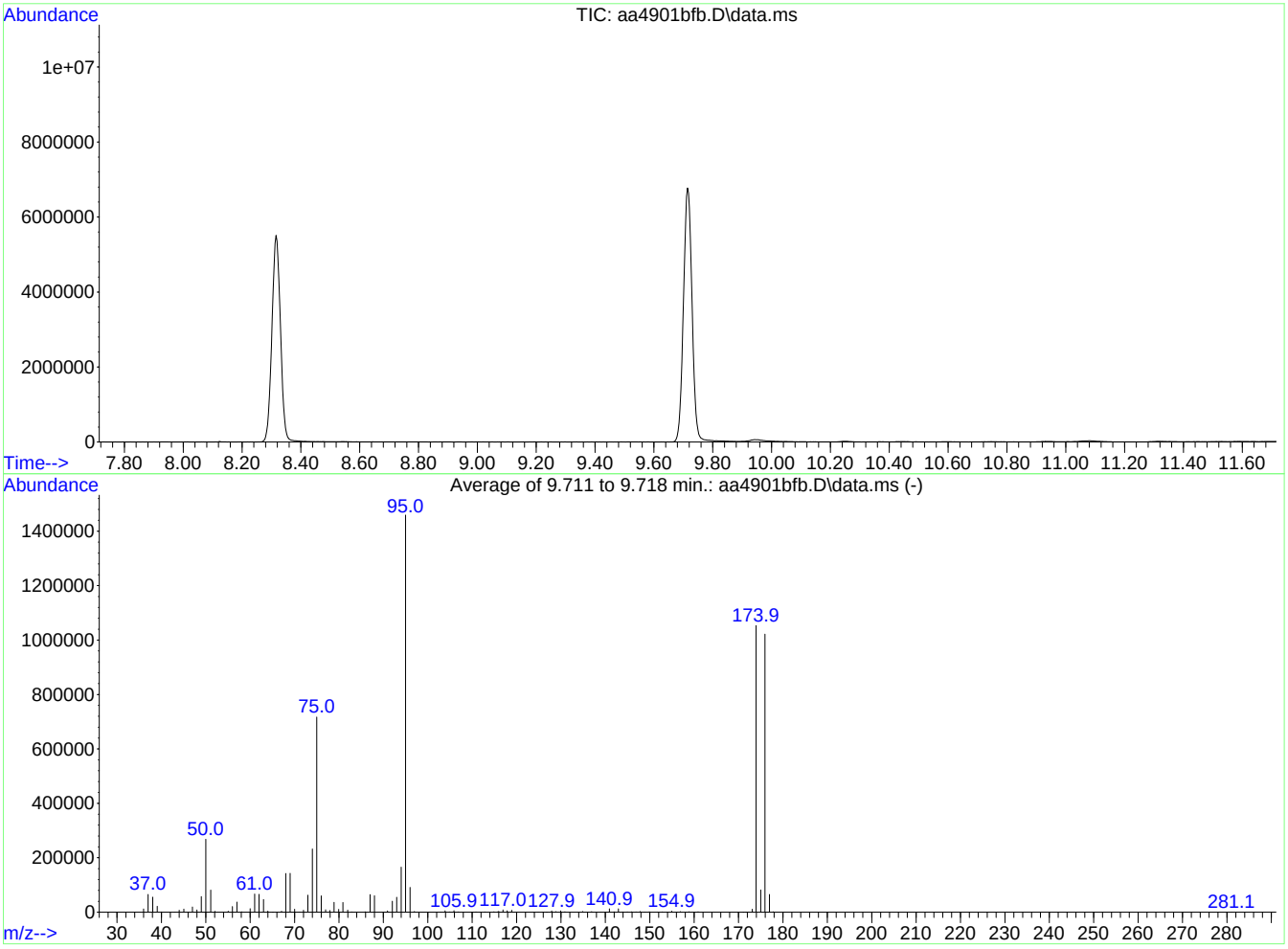
Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4901BFB | NA | 12/11/2023 9:24:00 AM |
| 10 PPBV DCVS | AA4902DCVS | NA | 12/11/2023 10:26:00 AM |
| 10 PPBV LCS | AA4903LCS | NA | 12/11/2023 10:57:00 AM |
| METHOD BLANK | AA4904BLK | NA | 12/11/2023 11:51:00 AM |
| 02 PPBV RLLCS | AA4905RLLCS | NA | 12/11/2023 12:18:00 PM |
| 1458 | AA4906 | NA | 12/11/2023 12:50:00 PM |
| 1588 | AA4907 | NA | 12/11/2023 1:19:00 PM |
| 3012 | AA4908 | NA | 12/11/2023 1:49:00 PM |
| E23-05047-03 | AA4909 | SV3 | 12/11/2023 2:18:00 PM |
| E23-05047-04 | AA4910 | SV6 | 12/11/2023 2:50:00 PM |
| E23-05047-06 | AA4914 | SV8 | 12/11/2023 4:52:00 PM |
| E23-05047-06 | AA4915 | SV8 | 12/11/2023 5:43:00 PM |
| 10 PPBV CCCVS | AA4931CCCVS | NA | 12/12/2023 1:59:00 AM |

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4901bfb.D
Acq On : 11 Dec 2023 9:24 am
Operator : jjw
Sample : BFB
Misc : ALM018474
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\231009.M
Title : TO-15 on the Agilent 7890A / 5975C
Last Update : Tue Oct 10 15:12:35 2023




AutoFind: Scans 2981, 2982, 2983; Background Corrected with Scan 2963

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 18.4 | 267904 | PASS |
| 75 | 95 | 30 | 66 | 49.1 | 717035 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 1459371 | PASS |
| 96 | 95 | 5 | 9 | 6.2 | 91040 | PASS |
| 173 | 174 | 0.00 | 2 | 1.0 | 10848 | PASS |
| 174 | 95 | 50 | 100 | 72.2 | 1053269 | PASS |
| 175 | 174 | 4 | 9 | 7.7 | 81547 | PASS |
| 176 | 174 | 93 | 101 | 97.0 | 1021824 | PASS |
| 177 | 176 | 5 | 9 | 6.4 | 65264 | PASS |

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4104BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **10/2/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4101BFB] | 10/02/2023 11:11 |
| 10 PPBV DCVS [AA4102DCVS] | 10/02/2023 12:19 |
| 10 PPBV LCS [AA4103LCS] | 10/02/2023 12:50 |
| METHOD BLANK [AA4104BLK] | 10/02/2023 13:32 |
| 02 PPBV RLLCS [AA4105RLLCS] | 10/02/2023 14:08 |
| 3830 [AA4106] | 10/02/2023 14:44 |
| 5087 [AA4107] | 10/02/2023 15:14 |
| 2037 [AA4108] | 10/02/2023 15:45 |
| 10 PPBV CCCVS [AA4125CCCVS] | 10/03/2023 0:49 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromodichloromethane | 75-27-4 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| Dibromochloromethane | 124-48-1 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.17 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.19 | ND |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.18 | ND |
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |
| n-Hexane | 110-54-3 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4104BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **10/2/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4101BFB] | 10/02/2023 11:11 |
| 10 PPBV DCVS [AA4102DCVS] | 10/02/2023 12:19 |
| 10 PPBV LCS [AA4103LCS] | 10/02/2023 12:50 |
| METHOD BLANK [AA4104BLK] | 10/02/2023 13:32 |
| 02 PPBV RLLCS [AA4105RLLCS] | 10/02/2023 14:08 |
| 3830 [AA4106] | 10/02/2023 14:44 |
| 5087 [AA4107] | 10/02/2023 15:14 |
| 2037 [AA4108] | 10/02/2023 15:45 |
| 10 PPBV CCCVS [AA4125CCCVS] | 10/03/2023 0:49 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Methylene chloride | 75-09-2 | 0.20 | ND |
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.17 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.17 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.20 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

Data Path : C:\DATA\2023\10-2023\10-02-2023\
Data File : aa4104blk.D
Acq On : 2 Oct 2023 1:32 pm
Operator : jjw
Sample : Method Blank
Misc : 1127
ALS Vial : 4 Sample Multiplier: 1

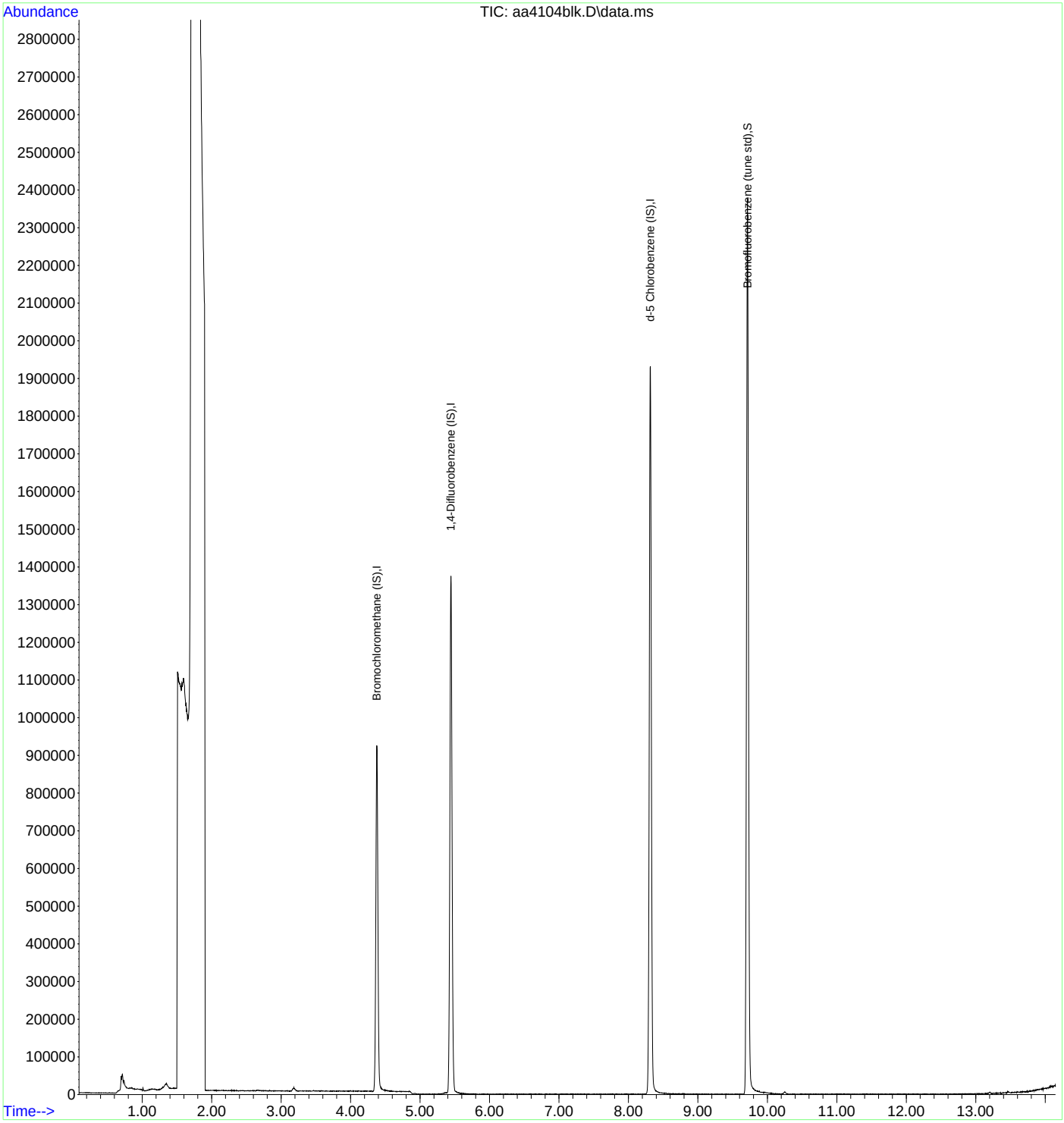
Quant Time: Oct 02 13:47:49 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.377 | 130 | 331240 | 10.00 | ppbV | -0.019 |
| 39) 1,4-Difluorobenzene (IS) | 5.444 | 114 | 1219678 | 10.00 | ppbV | -0.013 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 1233959 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 986736 | 9.61 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\10-2023\10-02-2023\
Data File : aa4104blk.D
Acq On : 2 Oct 2023 1:32 pm
Operator : jjw
Sample : Method Blank
Misc : 1127
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 02 13:47:49 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4530BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **11/3/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4527BFB] | 11/03/2023 9:42 |
| 10 PPBV DCVS [AA4528DCVS] | 11/03/2023 10:14 |
| 10 PPBV LCS [AA4529LCS] | 11/03/2023 10:43 |
| METHOD BLANK [AA4530BLK] | 11/03/2023 11:41 |
| 02 PPBV RLLCS [AA4531RLLCS] | 11/03/2023 12:15 |
| 2902 [AA4532] | 11/03/2023 13:01 |
| 10 PPBV CCCVS [AA4549CCCVS] | 11/03/2023 22:29 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromodichloromethane | 75-27-4 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| Dibromochloromethane | 124-48-1 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.17 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.19 | ND |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.18 | ND |
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |
| n-Hexane | 110-54-3 | 0.20 | ND |
| Methylene chloride | 75-09-2 | 0.20 | ND |
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4530BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **11/3/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4527BFB] | 11/03/2023 9:42 |
| 10 PPBV DCVS [AA4528DCVS] | 11/03/2023 10:14 |
| 10 PPBV LCS [AA4529LCS] | 11/03/2023 10:43 |
| METHOD BLANK [AA4530BLK] | 11/03/2023 11:41 |
| 02 PPBV RLLCS [AA4531RLLCS] | 11/03/2023 12:15 |
| 2902 [AA4532] | 11/03/2023 13:01 |
| 10 PPBV CCCVS [AA4549CCCVS] | 11/03/2023 22:29 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.17 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.17 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.20 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

Data Path : C:\DATA\2023\11-2023\11-03-2023\
Data File : aa4530blk.D
Acq On : 3 Nov 2023 11:41 am
Operator : jjw
Sample : Method Blank
Misc : 1127
ALS Vial : 4 Sample Multiplier: 1

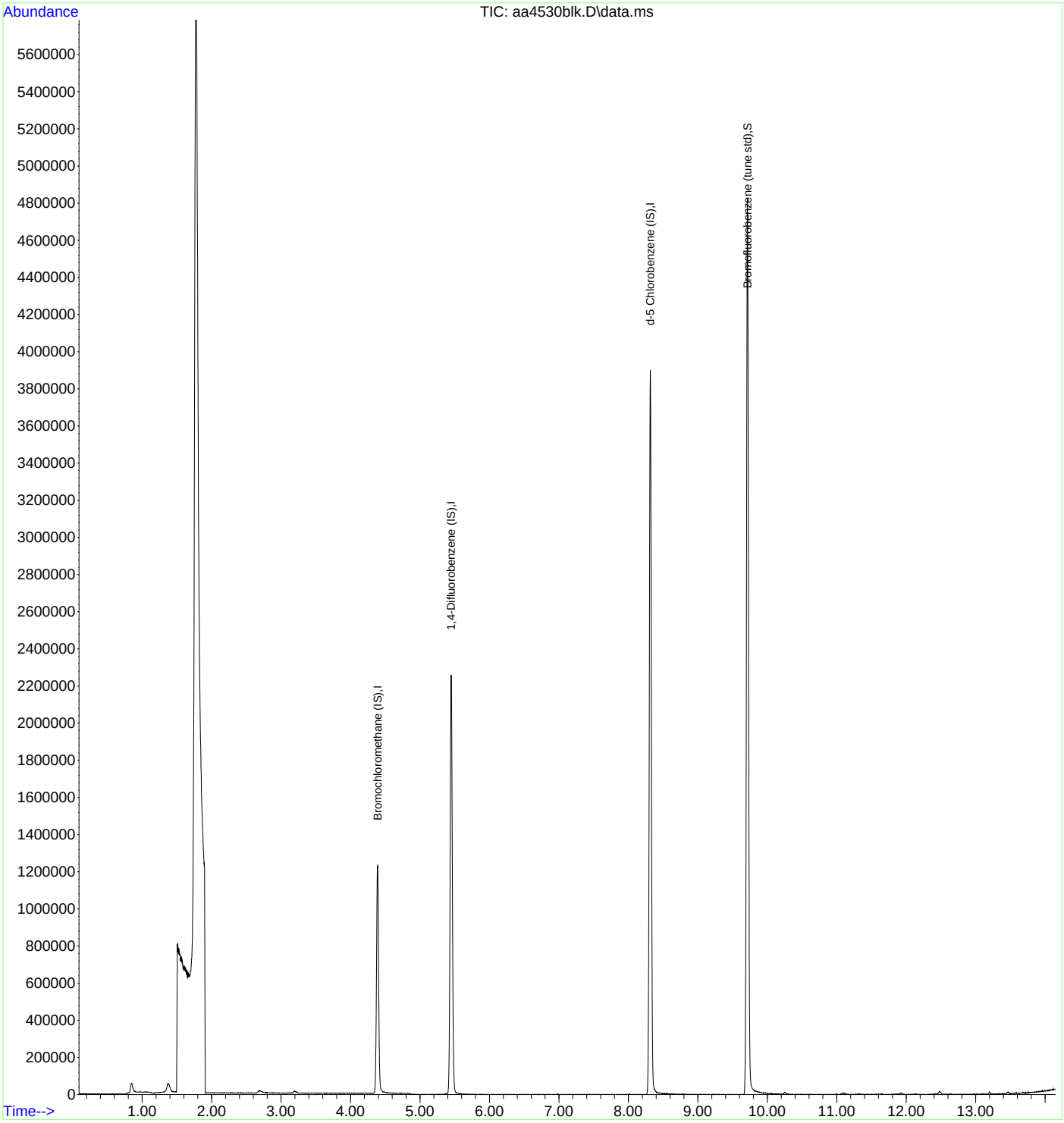
Quant Time: Nov 03 11:57:45 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.391 | 130 | 489033 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.448 | 114 | 2096750 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 2579796 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.715 | 95 | 2133306 | 9.49 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\11-2023\11-03-2023\
Data File : aa4530blk.D
Acq On : 3 Nov 2023 11:41 am
Operator : jjw
Sample : Method Blank
Misc : 1127
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 03 11:57:45 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4884BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/8/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05047-01 [AA4886] | 12/08/2023 14:03 |
| E23-05047-02 [AA4887] | 12/08/2023 14:35 |
| E23-05047-03 [AA4888] | 12/08/2023 15:06 |
| E23-05047-04 [AA4889] | 12/08/2023 15:42 |
| E23-05047-05 [AA4890] | 12/08/2023 16:15 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.17 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.19 | ND |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.18 | ND |
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |
| n-Hexane | 110-54-3 | 0.20 | ND |
| Methylene chloride | 75-09-2 | 0.20 | ND |
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4884BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/8/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05047-01 [AA4886] | 12/08/2023 14:03 |
| E23-05047-02 [AA4887] | 12/08/2023 14:35 |
| E23-05047-03 [AA4888] | 12/08/2023 15:06 |
| E23-05047-04 [AA4889] | 12/08/2023 15:42 |
| E23-05047-05 [AA4890] | 12/08/2023 16:15 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.17 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.17 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.20 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4884blk.D
Acq On : 8 Dec 2023 12:26 pm
Operator : jjw
Sample : Method Blank
Misc : 1127
ALS Vial : 4 Sample Multiplier: 1

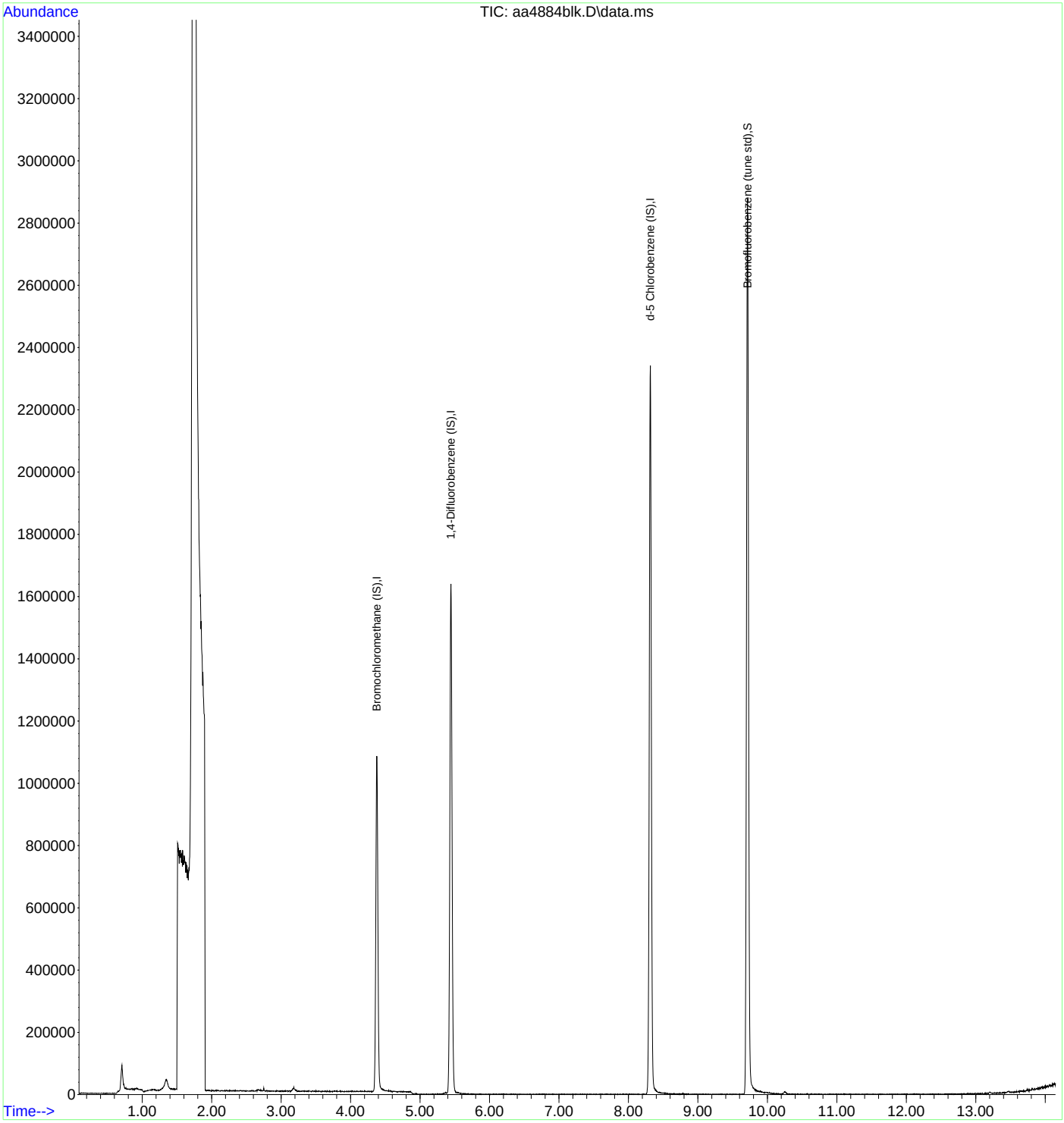
Quant Time: Dec 12 09:46:27 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.377 | 130 | 407142 | 10.00 | ppbV | -0.017 |
| 39) 1,4-Difluorobenzene (IS) | 5.444 | 114 | 1506485 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 1527551 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1276284 | 9.58 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4884blk.D
Acq On : 8 Dec 2023 12:26 pm
Operator : jjw
Sample : Method Blank
Misc : 1127
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 12 09:46:27 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4904BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/11/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05047-03 [AA4909] | 12/11/2023 14:18 |
| E23-05047-04 [AA4910] | 12/11/2023 14:50 |
| E23-05047-06 [AA4914] | 12/11/2023 16:52 |
| E23-05047-06 [AA4915] | 12/11/2023 17:43 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.17 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.19 | ND |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.18 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4904BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/11/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05047-03 [AA4909] | 12/11/2023 14:18 |
| E23-05047-04 [AA4910] | 12/11/2023 14:50 |
| E23-05047-06 [AA4914] | 12/11/2023 16:52 |
| E23-05047-06 [AA4915] | 12/11/2023 17:43 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |
| n-Hexane | 110-54-3 | 0.20 | ND |
| Methylene chloride | 75-09-2 | 0.20 | ND |
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.17 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.17 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.20 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4904blk.D
Acq On : 11 Dec 2023 11:51 am
Operator : jjw
Sample : Method Blank
Misc : 1127
ALS Vial : 4 Sample Multiplier: 1

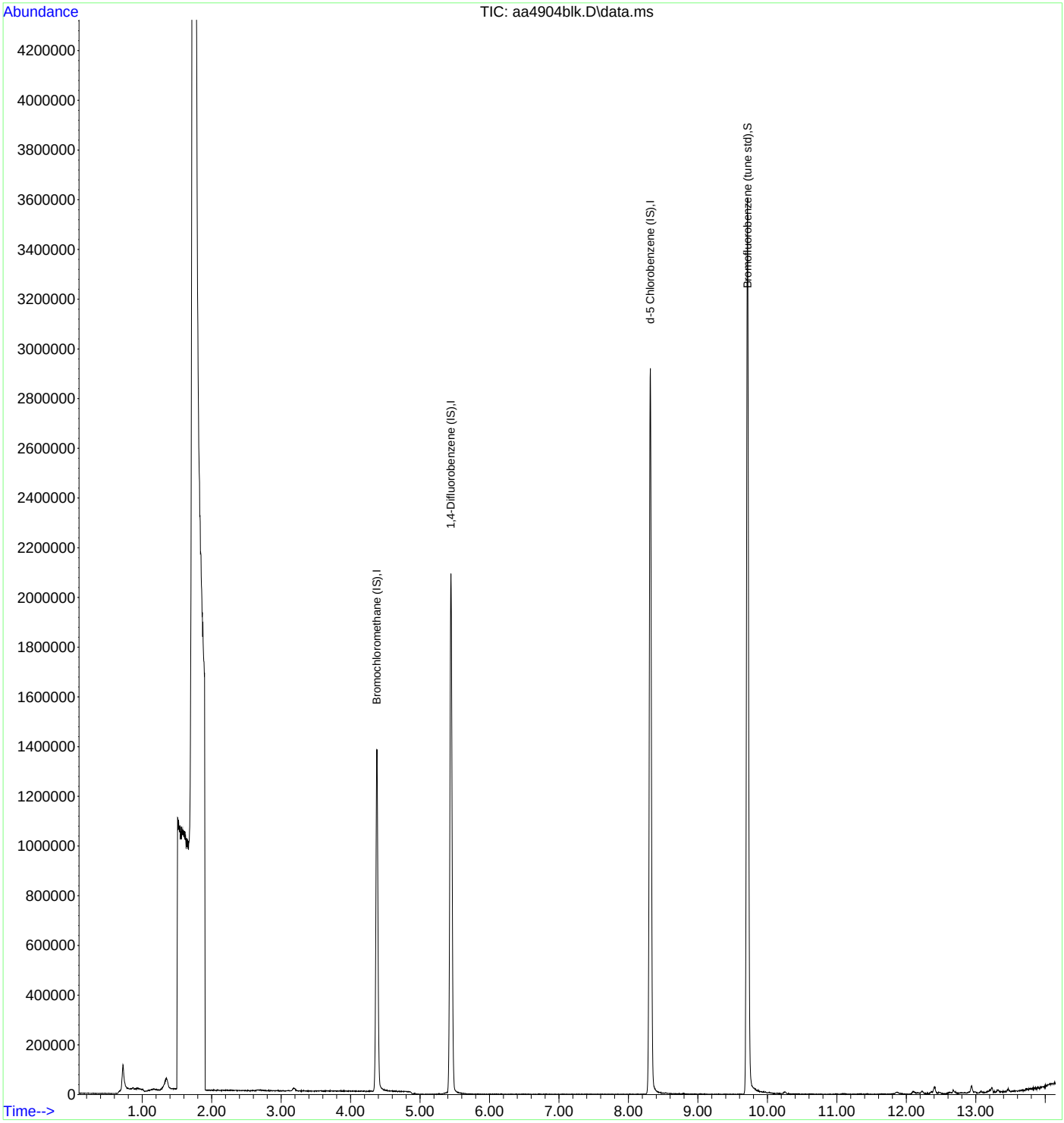
Quant Time: Dec 11 12:06:14 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.377 | 130 | 518939 | 10.00 | ppbV | -0.017 |
| 39) 1,4-Difluorobenzene (IS) | 5.444 | 114 | 1920464 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.315 | 117 | 1920350 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1609305 | 9.61 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4904blk.D
Acq On : 11 Dec 2023 11:51 am
Operator : jjw
Sample : Method Blank
Misc : 1127
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 11 12:06:14 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4103LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 10/2/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4101BFB] | 10/02/2023 11:11 |
| 10 PPBV DCVS [AA4102DCVS] | 10/02/2023 12:19 |
| 10 PPBV LCS [AA4103LCS] | 10/02/2023 12:50 |
| METHOD BLANK [AA4104BLK] | 10/02/2023 13:32 |
| 02 PPBV RLLCS [AA4105RLLCS] | 10/02/2023 14:08 |
| 3830 [AA4106] | 10/02/2023 14:44 |
| 5087 [AA4107] | 10/02/2023 15:14 |
| 2037 [AA4108] | 10/02/2023 15:45 |
| 10 PPBV CCCVS [AA4125CCCVS] | 10/03/2023 0:49 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Acetone | 67-64-1 | 13 | 120 |
| Benzene | 71-43-2 | 11 | 110 |
| Bromodichloromethane | 75-27-4 | 11 | 100 |
| Bromoform | 75-25-2 | 11 | 100 |
| Bromomethane | 74-83-9 | 13 | 120 |
| 1,3-Butadiene | 106-99-0 | 12 | 120 |
| Chlorobenzene | 108-90-7 | 10 | 100 |
| Chloroethane | 75-00-3 | 12 | 120 |
| Chloroform | 67-66-3 | 11 | 110 |
| Chloromethane | 74-87-3 | 15 | 130 |
| Carbon disulfide | 75-15-0 | 14 | 130 |
| Carbon tetrachloride | 56-23-5 | 9.9 | 99 |
| Cyclohexane | 110-82-7 | 11 | 110 |
| Dibromochloromethane | 124-48-1 | 8.9 | 81 |
| 1,2-Dibromoethane | 106-93-4 | 8.6 | 78 |
| 1,2-Dichlorobenzene | 95-50-1 | 9.9 | 90 |
| 1,3-Dichlorobenzene | 541-73-1 | 9.7 | 88 |
| 1,4-Dichlorobenzene | 106-46-7 | 10 | 91 |
| Dichlorodifluoromethane | 75-71-8 | 13 | 120 |
| 1,1-Dichloroethane | 75-34-3 | 12 | 110 |
| 1,2-Dichloroethane | 107-06-2 | 11 | 110 |
| 1,1-Dichloroethene | 75-35-4 | 13 | 120 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 12 | 110 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 13 | 120 |
| 1,2-Dichloropropane | 78-87-5 | 9.6 | 96 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 9.7 | 88 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 9.8 | 99 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 10 | 91 |
| 1,4-Dioxane | 123-91-1 | 9.7 | 81 |
| Ethylbenzene | 100-41-4 | 9.7 | 97 |
| n-Heptane | 142-82-5 | 9.1 | 91 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4103LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 10/2/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4101BFB] | 10/02/2023 11:11 |
| 10 PPBV DCVS [AA4102DCVS] | 10/02/2023 12:19 |
| 10 PPBV LCS [AA4103LCS] | 10/02/2023 12:50 |
| METHOD BLANK [AA4104BLK] | 10/02/2023 13:32 |
| 02 PPBV RLLCS [AA4105RLLCS] | 10/02/2023 14:08 |
| 3830 [AA4106] | 10/02/2023 14:44 |
| 5087 [AA4107] | 10/02/2023 15:14 |
| 2037 [AA4108] | 10/02/2023 15:45 |
| 10 PPBV CCCVS [AA4125CCCVS] | 10/03/2023 0:49 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| 1,3-Hexachlorobutadiene | 87-68-3 | 10 | 88 |
| n-Hexane | 110-54-3 | 11 | 110 |
| Methylene chloride | 75-09-2 | 14 | 130 |
| Methyl ethyl ketone | 78-93-3 | 12 | 100 |
| Methyl isobutyl ketone | 108-10-1 | 8.5 | 77 |
| Methyl tert-butyl ether | 1634-04-4 | 11 | 100 |
| Styrene | 100-42-5 | 10 | 91 |
| Tert-butyl alcohol | 75-65-0 | 11 | 93 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 9.6 | 87 |
| Tetrachloroethene | 127-18-4 | 8.5 | 85 |
| Toluene | 108-88-3 | 8.5 | 85 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 11 | 96 |
| 1,1,1-Trichloroethane | 71-55-6 | 9.6 | 96 |
| 1,1,2-Trichloroethane | 79-00-5 | 8.4 | 76 |
| Trichloroethene | 79-01-6 | 9.3 | 93 |
| Trichlorofluoromethane | 75-69-4 | 12 | 110 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 9.6 | 96 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 9.8 | 89 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 9.7 | 88 |
| 2,2,4-Trimethylpentane | 540-84-1 | 13 | 130 |
| Vinyl bromide | 593-60-2 | 13 | 130 |
| Vinyl chloride | 75-01-4 | 14 | 130 |
| Xylenes (m&p) | 179601-23-1 | 21 | 110 |
| Xylenes (o) | 95-47-6 | 9.5 | 95 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

Data Path : C:\DATA\2023\10-2023\10-02-2023\
Data File : aa4103lcs.D
Acq On : 2 Oct 2023 12:50 pm
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 03 11:32:44 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.383 | 130 | 386186 | 10.00 | ppbV | -0.013 |
| 39) 1,4-Difluorobenzene (IS) | 5.447 | 114 | 1668212 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 1565045 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1234820 | 9.48 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.463 | 41 | 332480 | 12.50 | ppbV | 99 |
| 3) Dichlorodifluoromethane | 1.499 | 85 | 1234244 | 12.65 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.626 | 85 | 1470693 | 10.47 | ppbV | 94 |
| 5) n-Butane | 1.701 | 43 | 786787 | 12.46 | ppbV | 99 |
| 6) Chloromethane | 1.763 | 52 | 65925 | 14.59 | ppbV | 96 |
| 7) Vinyl chloride | 1.760 | 62 | 495439 | 13.50 | ppbV | 99 |
| 8) 1,3-Butadiene | 1.770 | 39 | 465616 | 12.41 | ppbV | 97 |
| 9) Bromomethane | 2.062 | 94 | 394452 | 12.80 | ppbV | 99 |
| 10) Chloroethane | 2.178 | 64 | 240136 | 12.03 | ppbV | 95 |
| 11) Vinyl bromide | 2.271 | 106 | 489128 | 12.62 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.290 | 101 | 1537322 | 11.71 | ppbV | 99 |
| 13) Ethanol | 2.650 | 45 | 193101 | 12.49 | ppbV | 100 |
| 14) 1,1-Dichloroethene | 2.711 | 61 | 1014153 | 12.57 | ppbV | 96 |
| 15) Carbon disulfide | 2.734 | 76 | 1830136 | 13.82 | ppbV | 98 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.753 | 101 | 1246805 | 9.61 | ppbV | 97 |
| 17) Acrolein | 2.965 | 56 | 208067 | 12.54 | ppbV | 99 |
| 18) Allyl chloride | 3.094 | 76 | 294646 | 13.64 | ppbV | 100 |
| 19) Isopropanol | 3.094 | 45 | 960434 | 10.76 | ppbV | 99 |
| 20) Methylene chloride | 3.187 | 49 | 678721 | 13.93 | ppbV | 92 |
| 21) Acetone | 3.194 | 43 | 952353 | 13.14 | ppbV | 98 |
| 22) trans-1,2-Dichloroethene | 3.309 | 61 | 949249 | 13.08 | ppbV | 93 |
| 23) n-Pentane | 3.396 | 43 | 1082894 | 11.70 | ppbV | 99 |
| 24) n-Hexane | 3.393 | 57 | 1444158 | 11.17 | ppbV | 96 |
| 25) Methyl tert-butyl ether | 3.393 | 73 | 1863109 | 10.59 | ppbV | 95 |
| 26) Tert-butyl alcohol | 3.451 | 59 | 1245475 | 11.01 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.795 | 63 | 1180655 | 11.59 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.222 | 61 | 856695 | 12.16 | ppbV | 95 |
| 29) Cyclohexane | 4.403 | 56 | 983570 | 10.52 | ppbV | 96 |
| 30) Chloroform | 4.444 | 83 | 1410664 | 11.32 | ppbV | 98 |
| 31) Ethyl acetate | 4.531 | 61 | 205271 | 10.34 | ppbV | 93 |
| 32) Carbon tetrachloride | 4.570 | 117 | 1475247 | 9.87 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.563 | 42 | 839913 | 12.00 | ppbV | 98 |
| 34) 1,1,1-Trichloroethane | 4.618 | 97 | 1285888 | 9.56 | ppbV | 100 |
| 35) Methyl ethyl ketone | 4.676 | 43 | 1339903 | 11.99 | ppbV | 97 |
| 36) n-Heptane | 4.911 | 43 | 1180319 | 9.12 | ppbV | 96 |
| 37) Benzene | 4.923 | 78 | 1929835 | 10.83 | ppbV | 100 |
| 38) 1,2-Dichloroethane | 5.084 | 62 | 912184 | 11.43 | ppbV | 100 |
| 40) Trichloroethene | 5.425 | 130 | 787139 | 9.30 | ppbV | 100 |
| 41) 2,2,4-Trimethylpentane | 4.837 | 57 | 2800785 | 13.25 | ppbV | 98 |
| 42) 1,2-Dichloropropane | 5.878 | 63 | 728214 | 9.57 | ppbV | 98 |
| 43) Bromodichloromethane | 5.939 | 83 | 1466856 | 11.06 | ppbV | 98 |
| 44) Methyl methacrylate | 6.084 | 41 | 925465 | 9.45 | ppbV | 97 |
| 45) 1,4-Dioxane | 6.110 | 88 | 456357 | 9.72 | ppbV | 96 |
| 46) cis-1,3-Dichloropropene | 6.531 | 75 | 1140290 | 9.69 | ppbV | 99 |
| 47) Toluene | 6.769 | 91 | 2276726 | 8.51 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.132 | 43 | 1646826 | 8.52 | ppbV | 97 |
| 49) Tetrachloroethene | 7.155 | 166 | 1025434 | 8.53 | ppbV | 99 |
| 50) trans-1,3-Dichloropropene | 7.171 | 75 | 1135683 | 9.79 | ppbV | 97 |
| 51) 1,1,2-Trichloroethane | 7.335 | 97 | 790890 | 8.39 | ppbV | 99 |

Data Path : C:\DATA\2023\10-2023\10-02-2023\
Data File : aa4103lcs.D
Acq On : 2 Oct 2023 12:50 pm
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

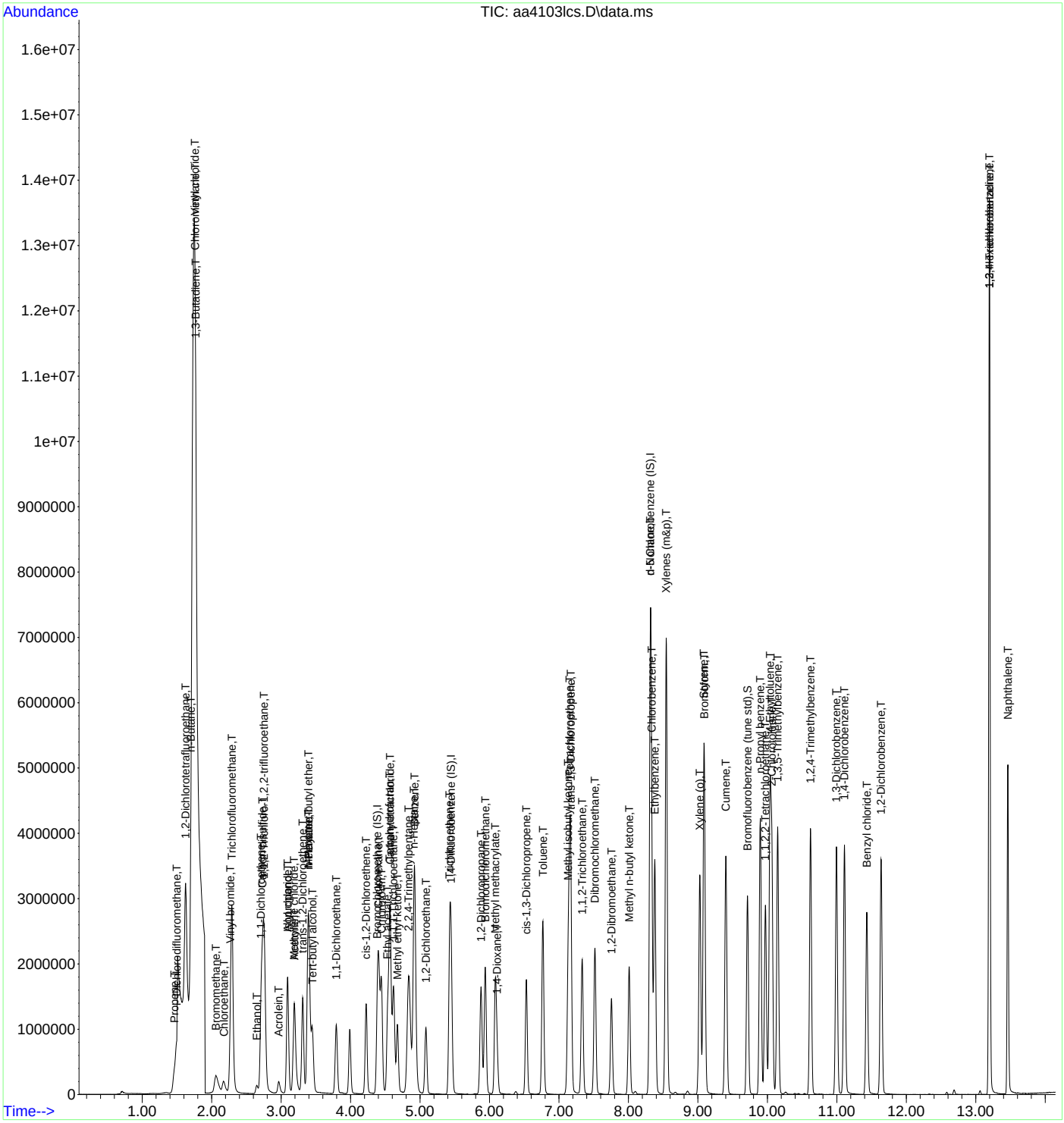
Quant Time: Oct 03 11:32:44 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.518 | 129 | 1399914 | 8.89 | ppbV | 100 |
| 53) 1,2-Dibromoethane | 7.756 | 107 | 1179631 | 8.55 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.010 | 43 | 1578315 | 8.72 | ppbV | 97 |
| 56) n-Nonane | 8.316 | 43 | 1703288 | 8.89 | ppbV | 96 |
| 57) Chlorobenzene | 8.335 | 112 | 1719116 | 10.03 | ppbV | 99 |
| 58) Ethylbenzene | 8.380 | 91 | 3068555 | 9.68 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.544 | 91 | 4712578 | 20.63 | ppbV | 98 |
| 60) Xylene (o) | 9.026 | 91 | 2421061 | 9.54 | ppbV | 99 |
| 61) Styrene | 9.087 | 104 | 1737193 | 10.32 | ppbV | 99 |
| 62) Bromoform | 9.094 | 173 | 1391335 | 10.70 | ppbV | 100 |
| 63) Cumene | 9.402 | 105 | 3049165 | 9.23 | ppbV | 98 |
| 65) n-Propyl benzene | 9.897 | 91 | 4121000 | 9.56 | ppbV | 98 |
| 66) 1,1,2,2-Tetrachloroethane | 9.971 | 83 | 1849747 | 9.62 | ppbV | 99 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 3385481 | 9.53 | ppbV | 98 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 2826291 | 9.67 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 2785543 | 9.69 | ppbV | 98 |
| 70) 1,2,4-Trimethylbenzene | 10.621 | 105 | 2793536 | 9.80 | ppbV | 97 |
| 71) 1,3-Dichlorobenzene | 10.994 | 146 | 1831435 | 9.69 | ppbV | 99 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 1837098 | 10.11 | ppbV | 100 |
| 73) Benzyl chloride | 11.431 | 91 | 2506674 | 10.07 | ppbV | 98 |
| 74) 1,2-Dichlorobenzene | 11.637 | 146 | 1767351 | 9.88 | ppbV | 99 |
| 75) 1,3-Hexachlorobutadiene | 13.196 | 225 | 1302827 | 10.16 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.196 | 180 | 1497882 | 10.65 | ppbV | 99 |
| 77) Naphthalene | 13.463 | 128 | 3095756 | 10.65 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\10-2023\10-02-2023\
Data File : aa4103lcs.D
Acq On : 2 Oct 2023 12:50 pm
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 03 11:32:44 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration



# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4529LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 11/3/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4527BFB] | 11/03/2023 9:42 |
| 10 PPBV DCVS [AA4528DCVS] | 11/03/2023 10:14 |
| 10 PPBV LCS [AA4529LCS] | 11/03/2023 10:43 |
| METHOD BLANK [AA4530BLK] | 11/03/2023 11:41 |
| 02 PPBV RLLCS [AA4531RLLCS] | 11/03/2023 12:15 |
| 2902 [AA4532] | 11/03/2023 13:01 |
| 10 PPBV CCCVS [AA4549CCCVS] | 11/03/2023 22:29 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Acetone | 67-64-1 | 13 | 120 |
| Benzene | 71-43-2 | 11 | 110 |
| Bromodichloromethane | 75-27-4 | 12 | 110 |
| Bromoform | 75-25-2 | 11 | 100 |
| Bromomethane | 74-83-9 | 12 | 110 |
| 1,3-Butadiene | 106-99-0 | 11 | 110 |
| Chlorobenzene | 108-90-7 | 11 | 110 |
| Chloroethane | 75-00-3 | 13 | 130 |
| Chloroform | 67-66-3 | 12 | 120 |
| Chloromethane | 74-87-3 | 13 | 110 |
| Carbon disulfide | 75-15-0 | 12 | 110 |
| Carbon tetrachloride | 56-23-5 | 11 | 110 |
| Cyclohexane | 110-82-7 | 11 | 110 |
| Dibromochloromethane | 124-48-1 | 12 | 110 |
| 1,2-Dibromoethane | 106-93-4 | 12 | 110 |
| 1,2-Dichlorobenzene | 95-50-1 | 10 | 91 |
| 1,3-Dichlorobenzene | 541-73-1 | 11 | 100 |
| 1,4-Dichlorobenzene | 106-46-7 | 11 | 100 |
| Dichlorodifluoromethane | 75-71-8 | 12 | 110 |
| 1,1-Dichloroethane | 75-34-3 | 12 | 110 |
| 1,2-Dichloroethane | 107-06-2 | 13 | 130 |
| 1,1-Dichloroethene | 75-35-4 | 13 | 120 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 13 | 120 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 13 | 120 |
| 1,2-Dichloropropane | 78-87-5 | 11 | 110 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 11 | 100 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 12 | 120 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 10 | 91 |
| 1,4-Dioxane | 123-91-1 | 12 | 100 |
| Ethylbenzene | 100-41-4 | 10 | 100 |
| n-Heptane | 142-82-5 | 11 | 110 |
| 1,3-Hexachlorobutadiene | 87-68-3 | 10 | 88 |
| n-Hexane | 110-54-3 | 11 | 110 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4529LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 11/3/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4527BFB] | 11/03/2023 9:42 |
| 10 PPBV DCVS [AA4528DCVS] | 11/03/2023 10:14 |
| 10 PPBV LCS [AA4529LCS] | 11/03/2023 10:43 |
| METHOD BLANK [AA4530BLK] | 11/03/2023 11:41 |
| 02 PPBV RLLCS [AA4531RLLCS] | 11/03/2023 12:15 |
| 2902 [AA4532] | 11/03/2023 13:01 |
| 10 PPBV CCCVS [AA4549CCCVS] | 11/03/2023 22:29 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Methylene chloride | 75-09-2 | 10 | 91 |
| Methyl ethyl ketone | 78-93-3 | 12 | 100 |
| Methyl isobutyl ketone | 108-10-1 | 11 | 100 |
| Methyl tert-butyl ether | 1634-04-4 | 11 | 100 |
| Styrene | 100-42-5 | 11 | 100 |
| Tert-butyl alcohol | 75-65-0 | 12 | 100 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 10 | 91 |
| Tetrachloroethene | 127-18-4 | 12 | 120 |
| Toluene | 108-88-3 | 11 | 110 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 11 | 96 |
| 1,1,1-Trichloroethane | 71-55-6 | 11 | 110 |
| 1,1,2-Trichloroethane | 79-00-5 | 11 | 100 |
| Trichloroethene | 79-01-6 | 10 | 100 |
| Trichlorofluoromethane | 75-69-4 | 13 | 120 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 11 | 110 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 10 | 91 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 10.0 | 91 |
| 2,2,4-Trimethylpentane | 540-84-1 | 10.0 | 100 |
| Vinyl bromide | 593-60-2 | 12 | 120 |
| Vinyl chloride | 75-01-4 | 12 | 120 |
| Xylenes (m&p) | 179601-23-1 | 22 | 110 |
| Xylenes (o) | 95-47-6 | 9.9 | 99 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

Data Path : C:\DATA\2023\11-2023\11-03-2023\
Data File : aa4529lcs.D
Acq On : 3 Nov 2023 10:43 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 03 10:59:59 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.393 | 130 | 413938 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.451 | 114 | 1886379 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 2273352 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.715 | 95 | 1959253 | 9.89 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.486 | 41 | 301523 | 10.49 | ppbV | 97 |
| 3) Dichlorodifluoromethane | 1.530 | 85 | 1105693 | 12.05 | ppbV | 99 |
| 4) 1,2-Dichlorotetrafluor... | 1.650 | 85 | 1374956 | 10.32 | ppbV | 98 |
| 5) n-Butane | 1.726 | 43 | 745609 | 11.28 | ppbV | 95 |
| 6) Chloromethane | 1.795 | 52 | 60841 | 13.27 | ppbV | 90 |
| 7) Vinyl chloride | 1.784 | 62 | 442207 | 11.79 | ppbV | 100 |
| 8) 1,3-Butadiene | 1.795 | 39 | 369243 | 10.54 | ppbV | 99 |
| 9) Bromomethane | 2.082 | 94 | 356701 | 11.78 | ppbV | 97 |
| 10) Chloroethane | 2.194 | 64 | 250658 | 12.75 | ppbV | 100 |
| 11) Vinyl bromide | 2.291 | 106 | 443135 | 11.96 | ppbV | 99 |
| 12) Trichlorofluoromethane | 2.313 | 101 | 1471169 | 12.70 | ppbV | 100 |
| 13) Ethanol | 2.664 | 45 | 149890 | 12.37 | ppbV | 99 |
| 14) 1,1-Dichloroethene | 2.731 | 61 | 975292 | 12.68 | ppbV | 97 |
| 15) Carbon disulfide | 2.750 | 76 | 1573732 | 12.43 | ppbV | 98 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.773 | 101 | 1263504 | 10.83 | ppbV | 98 |
| 17) Acrolein | 2.985 | 56 | 193430 | 11.19 | ppbV | 99 |
| 18) Allyl chloride | 3.107 | 76 | 257726 | 12.42 | ppbV | 100 |
| 19) Isopropanol | 3.110 | 45 | 802103 | 9.66 | ppbV | 98 |
| 20) Methylene chloride | 3.200 | 49 | 529989 | 10.42 | ppbV | 98 |
| 21) Acetone | 3.210 | 43 | 791795 | 12.68 | ppbV | 99 |
| 22) trans-1,2-Dichloroethene | 3.323 | 61 | 932569 | 13.06 | ppbV | 100 |
| 23) n-Pentane | 3.406 | 43 | 1072527 | 11.15 | ppbV | 98 |
| 24) n-Hexane | 3.406 | 57 | 1459500 | 11.19 | ppbV | 98 |
| 25) Methyl tert-butyl ether | 3.409 | 73 | 1784635 | 11.13 | ppbV | 98 |
| 26) Tert-butyl alcohol | 3.461 | 59 | 1258149 | 11.66 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.805 | 63 | 1128475 | 11.74 | ppbV | 99 |
| 28) cis-1,2-Dichloroethene | 4.233 | 61 | 852708 | 12.57 | ppbV | 99 |
| 29) Cyclohexane | 4.413 | 56 | 984909 | 10.81 | ppbV | 99 |
| 30) Chloroform | 4.454 | 83 | 1369379 | 12.36 | ppbV | 99 |
| 31) Ethyl acetate | 4.541 | 61 | 216935 | 12.04 | ppbV | 98 |
| 32) Carbon tetrachloride | 4.577 | 117 | 1484214 | 11.30 | ppbV | 99 |
| 33) Tetrahydrofuran | 4.570 | 42 | 737395 | 11.84 | ppbV | 98 |
| 34) 1,1,1-Trichloroethane | 4.628 | 97 | 1295709 | 11.26 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.683 | 43 | 1186642 | 11.74 | ppbV | 99 |
| 36) n-Heptane | 4.917 | 43 | 1266938 | 11.07 | ppbV | 99 |
| 37) Benzene | 4.930 | 78 | 1850254 | 11.25 | ppbV | 99 |
| 38) 1,2-Dichloroethane | 5.091 | 62 | 874996 | 12.71 | ppbV | 100 |
| 40) Trichloroethene | 5.432 | 130 | 865530 | 10.37 | ppbV | 100 |
| 41) 2,2,4-Trimethylpentane | 4.847 | 57 | 2456432 | 10.00 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.882 | 63 | 799646 | 10.90 | ppbV | 99 |
| 43) Bromodichloromethane | 5.943 | 83 | 1494594 | 12.09 | ppbV | 99 |
| 44) Methyl methacrylate | 6.088 | 41 | 1021586 | 11.48 | ppbV | 98 |
| 45) 1,4-Dioxane | 6.110 | 88 | 528037 | 11.75 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.535 | 75 | 1305859 | 11.48 | ppbV | 100 |
| 47) Toluene | 6.769 | 91 | 2943811 | 11.10 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.133 | 43 | 1815317 | 10.90 | ppbV | 99 |
| 49) Tetrachloroethene | 7.159 | 166 | 1349018 | 11.80 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.175 | 75 | 1343500 | 12.17 | ppbV | 98 |
| 51) 1,1,2-Trichloroethane | 7.335 | 97 | 1013520 | 11.32 | ppbV | 99 |

Data Path : C:\DATA\2023\11-2023\11-03-2023\
Data File : aa4529lcs.D
Acq On : 3 Nov 2023 10:43 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

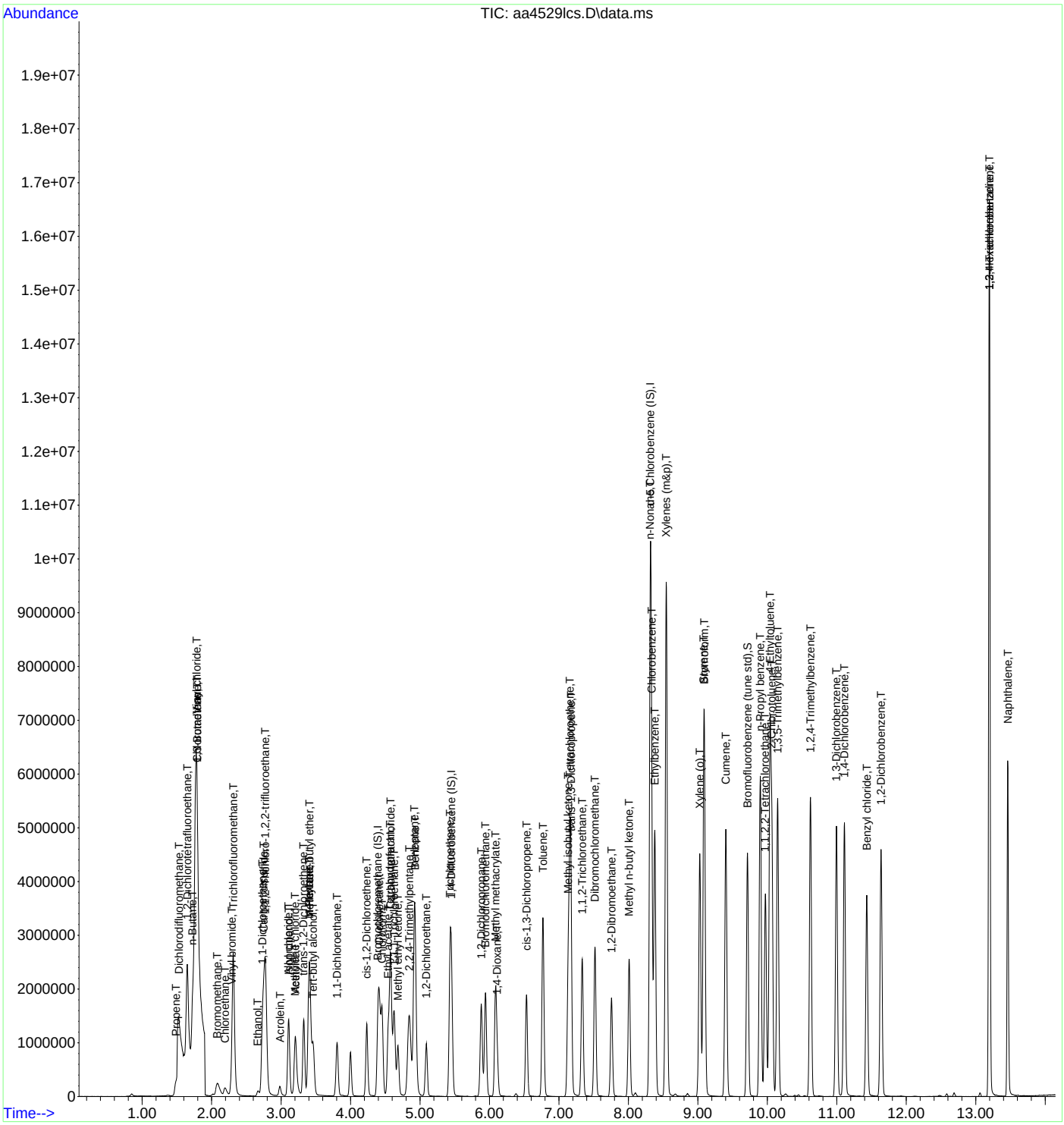
Quant Time: Nov 03 10:59:59 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.519 | 129 | 1799846 | 12.06 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.757 | 107 | 1503561 | 11.61 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.007 | 43 | 1934779 | 12.07 | ppbV | 99 |
| 56) n-Nonane | 8.313 | 43 | 2314591 | 10.26 | ppbV | 99 |
| 57) Chlorobenzene | 8.335 | 112 | 2400145 | 10.59 | ppbV | 100 |
| 58) Ethylbenzene | 8.380 | 91 | 4394992 | 10.49 | ppbV | 100 |
| 59) Xylenes (m&p) | 8.544 | 91 | 6772167 | 21.82 | ppbV | 99 |
| 60) Xylene (o) | 9.027 | 91 | 3358898 | 9.92 | ppbV | 99 |
| 61) Styrene | 9.084 | 104 | 2535586 | 10.93 | ppbV | 99 |
| 62) Bromoform | 9.094 | 173 | 1885582 | 11.33 | ppbV | 100 |
| 63) Cumene | 9.403 | 105 | 4250848 | 9.60 | ppbV | 100 |
| 65) n-Propyl benzene | 9.898 | 91 | 6037566 | 10.45 | ppbV | 99 |
| 66) 1,1,2,2-Tetrachloroethane | 9.969 | 83 | 2464317 | 10.39 | ppbV | 99 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 5062902 | 10.35 | ppbV | 100 |
| 68) 2-Chlorotoluene | 10.062 | 91 | 3942826 | 10.16 | ppbV | 100 |
| 69) 1,3,5-Trimethylbenzene | 10.149 | 105 | 3927296 | 9.99 | ppbV | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.621 | 105 | 3993584 | 10.16 | ppbV | 100 |
| 71) 1,3-Dichlorobenzene | 10.994 | 146 | 2543288 | 10.57 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 2550157 | 10.53 | ppbV | 99 |
| 73) Benzyl chloride | 11.432 | 91 | 3424946 | 9.86 | ppbV | 99 |
| 74) 1,2-Dichlorobenzene | 11.637 | 146 | 2367662 | 10.14 | ppbV | 99 |
| 75) 1,3-Hexachlorobutadiene | 13.197 | 225 | 1693602 | 10.45 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.197 | 180 | 1968588 | 10.51 | ppbV | 99 |
| 77) Naphthalene | 13.464 | 128 | 3946320 | 9.21 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\11-2023\11-03-2023\
Data File : aa4529lcs.D
Acq On : 3 Nov 2023 10:43 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 03 10:59:59 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4883LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 12/8/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05047-01 [AA4886] | 12/08/2023 14:03 |
| E23-05047-02 [AA4887] | 12/08/2023 14:35 |
| E23-05047-03 [AA4888] | 12/08/2023 15:06 |
| E23-05047-04 [AA4889] | 12/08/2023 15:42 |
| E23-05047-05 [AA4890] | 12/08/2023 16:15 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Acetone | 67-64-1 | 11 | 100 |
| Benzene | 71-43-2 | 9.3 | 93 |
| Bromoform | 75-25-2 | 11 | 100 |
| Bromomethane | 74-83-9 | 11 | 100 |
| 1,3-Butadiene | 106-99-0 | 9.9 | 99 |
| Chlorobenzene | 108-90-7 | 9.9 | 99 |
| Chloroethane | 75-00-3 | 11 | 110 |
| Chloroform | 67-66-3 | 10.0 | 100 |
| Chloromethane | 74-87-3 | 12 | 100 |
| Carbon disulfide | 75-15-0 | 11 | 100 |
| Carbon tetrachloride | 56-23-5 | 10 | 100 |
| Cyclohexane | 110-82-7 | 10 | 100 |
| 1,2-Dibromoethane | 106-93-4 | 11 | 100 |
| 1,2-Dichlorobenzene | 95-50-1 | 9.7 | 88 |
| 1,3-Dichlorobenzene | 541-73-1 | 9.8 | 89 |
| 1,4-Dichlorobenzene | 106-46-7 | 9.6 | 87 |
| Dichlorodifluoromethane | 75-71-8 | 11 | 100 |
| 1,1-Dichloroethane | 75-34-3 | 9.4 | 85 |
| 1,2-Dichloroethane | 107-06-2 | 11 | 110 |
| 1,1-Dichloroethene | 75-35-4 | 11 | 100 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 10 | 91 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 11 | 100 |
| 1,2-Dichloropropane | 78-87-5 | 11 | 110 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 11 | 100 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 12 | 120 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 9.0 | 82 |
| 1,4-Dioxane | 123-91-1 | 12 | 100 |
| Ethylbenzene | 100-41-4 | 10 | 100 |
| n-Heptane | 142-82-5 | 11 | 110 |
| 1,3-Hexachlorobutadiene | 87-68-3 | 10.0 | 88 |
| n-Hexane | 110-54-3 | 10.0 | 100 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4883LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 12/8/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05047-01 [AA4886] | 12/08/2023 14:03 |
| E23-05047-02 [AA4887] | 12/08/2023 14:35 |
| E23-05047-03 [AA4888] | 12/08/2023 15:06 |
| E23-05047-04 [AA4889] | 12/08/2023 15:42 |
| E23-05047-05 [AA4890] | 12/08/2023 16:15 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Methylene chloride | 75-09-2 | 9.5 | 86 |
| Methyl ethyl ketone | 78-93-3 | 10 | 85 |
| Methyl isobutyl ketone | 108-10-1 | 12 | 110 |
| Methyl tert-butyl ether | 1634-04-4 | 10 | 91 |
| Styrene | 100-42-5 | 10 | 91 |
| Tert-butyl alcohol | 75-65-0 | 11 | 93 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 10 | 91 |
| Tetrachloroethene | 127-18-4 | 11 | 110 |
| Toluene | 108-88-3 | 10 | 100 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 10 | 88 |
| 1,1,1-Trichloroethane | 71-55-6 | 10 | 100 |
| 1,1,2-Trichloroethane | 79-00-5 | 10 | 91 |
| Trichloroethene | 79-01-6 | 9.3 | 93 |
| Trichlorofluoromethane | 75-69-4 | 11 | 100 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 9.2 | 92 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 10.0 | 91 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 10 | 91 |
| 2,2,4-Trimethylpentane | 540-84-1 | 10 | 100 |
| Vinyl bromide | 593-60-2 | 10 | 100 |
| Vinyl chloride | 75-01-4 | 10 | 100 |
| Xylenes (m&p) | 179601-23-1 | 21 | 110 |
| Xylenes (o) | 95-47-6 | 9.9 | 99 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4883lcs.D
Acq On : 8 Dec 2023 11:21 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 08 11:44:48 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.390 | 130 | 505072 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.451 | 114 | 2076916 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 2432062 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 2156035 | 10.17 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.483 | 41 | 339866 | 9.69 | ppbV | 98 |
| 3) Dichlorodifluoromethane | 1.522 | 85 | 1193354 | 10.66 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.646 | 85 | 1455605 | 8.95 | ppbV | 97 |
| 5) n-Butane | 1.725 | 43 | 845634 | 10.48 | ppbV | 100 |
| 6) Chloromethane | 1.791 | 52 | 65331 | 11.68 | ppbV | 99 |
| 7) Vinyl chloride | 1.777 | 62 | 478632 | 10.46 | ppbV | 99 |
| 8) 1,3-Butadiene | 1.791 | 39 | 422824 | 9.89 | ppbV | 100 |
| 9) Bromomethane | 2.078 | 94 | 388679 | 10.52 | ppbV | 99 |
| 10) Chloroethane | 2.190 | 64 | 273833 | 11.41 | ppbV | 98 |
| 11) Vinyl bromide | 2.293 | 106 | 461478 | 10.21 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.309 | 101 | 1567568 | 11.09 | ppbV | 99 |
| 13) Ethanol | 2.663 | 45 | 169372 | 11.45 | ppbV | 98 |
| 14) 1,1-Dichloroethene | 2.727 | 61 | 987655 | 10.53 | ppbV | 95 |
| 15) Carbon disulfide | 2.750 | 76 | 1643881 | 10.64 | ppbV | 96 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.772 | 101 | 1310794 | 9.21 | ppbV | 99 |
| 17) Acrolein | 2.978 | 56 | 207019 | 9.81 | ppbV | 100 |
| 18) Allyl chloride | 3.110 | 76 | 275622 | 10.89 | ppbV | 100 |
| 19) Isopropanol | 3.107 | 45 | 904477 | 8.93 | ppbV | 98 |
| 20) Methylene chloride | 3.197 | 49 | 591035 | 9.52 | ppbV | 94 |
| 21) Acetone | 3.210 | 43 | 830614 | 10.90 | ppbV | 98 |
| 22) trans-1,2-Dichloroethene | 3.325 | 61 | 938844 | 10.78 | ppbV | 99 |
| 23) n-Pentane | 3.403 | 43 | 1185445 | 10.10 | ppbV | 97 |
| 24) n-Hexane | 3.403 | 57 | 1587921 | 9.97 | ppbV | 96 |
| 25) Methyl tert-butyl ether | 3.409 | 73 | 2034430 | 10.40 | ppbV | 97 |
| 26) Tert-butyl alcohol | 3.460 | 59 | 1390520 | 10.56 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.804 | 63 | 1101260 | 9.39 | ppbV | 98 |
| 28) cis-1,2-Dichloroethene | 4.232 | 61 | 832929 | 10.07 | ppbV | 98 |
| 29) Cyclohexane | 4.412 | 56 | 1127775 | 10.14 | ppbV | 98 |
| 30) Chloroform | 4.451 | 83 | 1346283 | 9.96 | ppbV | 99 |
| 31) Ethyl acetate | 4.541 | 61 | 230413 | 10.48 | ppbV | 97 |
| 32) Carbon tetrachloride | 4.576 | 117 | 1656389 | 10.33 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.570 | 42 | 788257 | 10.37 | ppbV | 98 |
| 34) 1,1,1-Trichloroethane | 4.624 | 97 | 1432554 | 10.20 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.682 | 43 | 1259095 | 10.21 | ppbV | 97 |
| 36) n-Heptane | 4.917 | 43 | 1499293 | 10.74 | ppbV | 98 |
| 37) Benzene | 4.930 | 78 | 1864968 | 9.30 | ppbV | 97 |
| 38) 1,2-Dichloroethane | 5.091 | 62 | 898599 | 10.70 | ppbV | 99 |
| 40) Trichloroethene | 5.431 | 130 | 856754 | 9.32 | ppbV | 99 |
| 41) 2,2,4-Trimethylpentane | 4.840 | 57 | 2788828 | 10.31 | ppbV | 99 |
| 42) 1,2-Dichloropropane | 5.882 | 63 | 862133 | 10.67 | ppbV | 97 |
| 43) Bromodichloromethane | 5.943 | 83 | 1584233 | 11.64 | ppbV | 98 |
| 44) Methyl methacrylate | 6.087 | 41 | 1124187 | 11.47 | ppbV | 97 |
| 45) 1,4-Dioxane | 6.110 | 88 | 569216 | 11.50 | ppbV | 98 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 1357719 | 10.84 | ppbV | 99 |
| 47) Toluene | 6.769 | 91 | 3039671 | 10.41 | ppbV | 99 |
| 48) Methyl isobutyl ketone | 7.132 | 43 | 2139470 | 11.66 | ppbV | 97 |
| 49) Tetrachloroethene | 7.158 | 166 | 1350560 | 10.73 | ppbV | 99 |
| 50) trans-1,3-Dichloropropene | 7.174 | 75 | 1400019 | 11.52 | ppbV | 98 |
| 51) 1,1,2-Trichloroethane | 7.335 | 97 | 1033705 | 10.49 | ppbV | 99 |

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4883lcs.D
Acq On : 8 Dec 2023 11:21 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

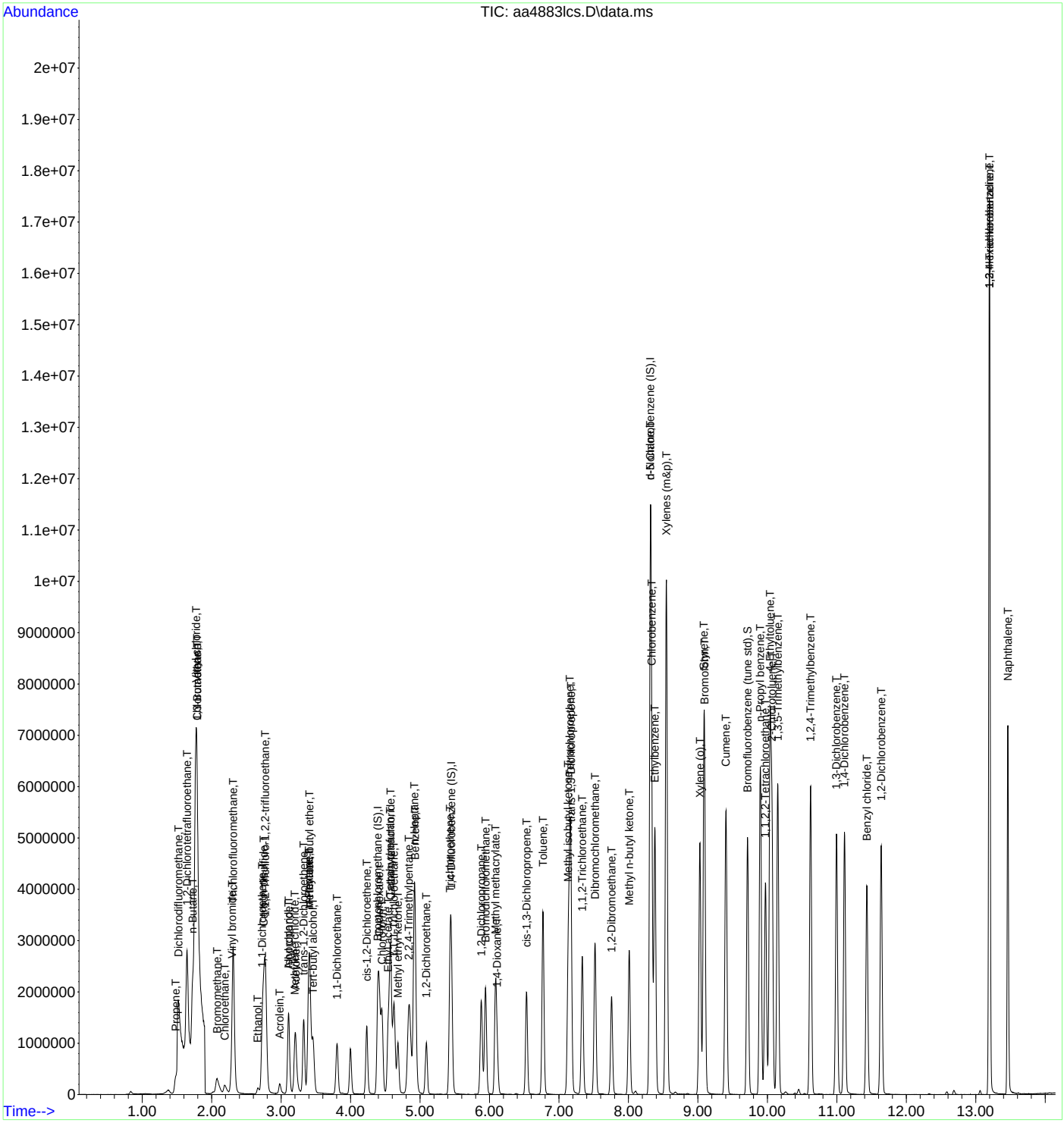
Quant Time: Dec 08 11:44:48 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 1892252 | 11.52 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.756 | 107 | 1547631 | 10.85 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.010 | 43 | 2159034 | 12.24 | ppbV | 97 |
| 56) n-Nonane | 8.316 | 43 | 2654309 | 11.00 | ppbV | 98 |
| 57) Chlorobenzene | 8.335 | 112 | 2403740 | 9.91 | ppbV | 97 |
| 58) Ethylbenzene | 8.380 | 91 | 4537964 | 10.13 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.547 | 91 | 7032687 | 21.18 | ppbV | 98 |
| 60) Xylene (o) | 9.029 | 91 | 3571722 | 9.86 | ppbV | 99 |
| 61) Styrene | 9.087 | 104 | 2552482 | 10.29 | ppbV | 99 |
| 62) Bromoform | 9.097 | 173 | 1990020 | 11.17 | ppbV | 100 |
| 63) Cumene | 9.402 | 105 | 4737625 | 10.00 | ppbV | 100 |
| 65) n-Propyl benzene | 9.897 | 91 | 6446429 | 10.43 | ppbV | 98 |
| 66) 1,1,2,2-Tetrachloroethane | 9.971 | 83 | 2658446 | 10.48 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 5335012 | 10.20 | ppbV | 99 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 4272712 | 10.29 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.152 | 105 | 4211249 | 10.01 | ppbV | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.621 | 105 | 4189424 | 9.96 | ppbV | 99 |
| 71) 1,3-Dichlorobenzene | 10.994 | 146 | 2515699 | 9.77 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 2495448 | 9.63 | ppbV | 100 |
| 73) Benzyl chloride | 11.431 | 91 | 3717594 | 10.00 | ppbV | 98 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 2414336 | 9.67 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.196 | 225 | 1728324 | 9.97 | ppbV | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.196 | 180 | 2026696 | 10.11 | ppbV | 99 |
| 77) Naphthalene | 13.463 | 128 | 4433251 | 9.67 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4883lcs.D
Acq On : 8 Dec 2023 11:21 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 08 11:44:48 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



**INTEGRATED ANALYTICAL LABORATORIES, LLC**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4903LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 12/11/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05047-03 [AA4909] | 12/11/2023 14:18 |
| E23-05047-04 [AA4910] | 12/11/2023 14:50 |
| E23-05047-06 [AA4914] | 12/11/2023 16:52 |
| E23-05047-06 [AA4915] | 12/11/2023 17:43 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Acetone | 67-64-1 | 11 | 100 |
| Benzene | 71-43-2 | 9.5 | 95 |
| Bromoform | 75-25-2 | 11 | 100 |
| Bromomethane | 74-83-9 | 10 | 91 |
| 1,3-Butadiene | 106-99-0 | 10 | 100 |
| Chlorobenzene | 108-90-7 | 10 | 100 |
| Chloroethane | 75-00-3 | 11 | 110 |
| Chloroform | 67-66-3 | 10 | 100 |
| Chloromethane | 74-87-3 | 11 | 96 |
| Carbon disulfide | 75-15-0 | 11 | 100 |
| Carbon tetrachloride | 56-23-5 | 10 | 100 |
| Cyclohexane | 110-82-7 | 10 | 100 |
| 1,2-Dibromoethane | 106-93-4 | 11 | 100 |
| 1,2-Dichlorobenzene | 95-50-1 | 10 | 91 |
| 1,3-Dichlorobenzene | 541-73-1 | 10 | 91 |
| 1,4-Dichlorobenzene | 106-46-7 | 10 | 91 |
| Dichlorodifluoromethane | 75-71-8 | 11 | 100 |
| 1,1-Dichloroethane | 75-34-3 | 9.8 | 89 |
| 1,2-Dichloroethane | 107-06-2 | 11 | 110 |
| 1,1-Dichloroethene | 75-35-4 | 11 | 100 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 10 | 91 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 11 | 100 |
| 1,2-Dichloropropane | 78-87-5 | 10 | 100 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 11 | 100 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 11 | 110 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 8.8 | 80 |
| 1,4-Dioxane | 123-91-1 | 11 | 92 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4903LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 12/11/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05047-03 [AA4909] | 12/11/2023 14:18 |
| E23-05047-04 [AA4910] | 12/11/2023 14:50 |
| E23-05047-06 [AA4914] | 12/11/2023 16:52 |
| E23-05047-06 [AA4915] | 12/11/2023 17:43 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Ethylbenzene | 100-41-4 | 11 | 110 |
| n-Heptane | 142-82-5 | 11 | 110 |
| 1,3-Hexachlorobutadiene | 87-68-3 | 10 | 88 |
| n-Hexane | 110-54-3 | 10 | 100 |
| Methylene chloride | 75-09-2 | 9.6 | 87 |
| Methyl ethyl ketone | 78-93-3 | 11 | 93 |
| Methyl isobutyl ketone | 108-10-1 | 12 | 110 |
| Methyl tert-butyl ether | 1634-04-4 | 11 | 100 |
| Styrene | 100-42-5 | 11 | 100 |
| Tert-butyl alcohol | 75-65-0 | 11 | 93 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 11 | 100 |
| Tetrachloroethene | 127-18-4 | 11 | 110 |
| Toluene | 108-88-3 | 10 | 100 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 11 | 96 |
| 1,1,1-Trichloroethane | 71-55-6 | 10 | 100 |
| 1,1,2-Trichloroethane | 79-00-5 | 10 | 91 |
| Trichloroethene | 79-01-6 | 9.1 | 91 |
| Trichlorofluoromethane | 75-69-4 | 11 | 100 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 9.4 | 94 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 11 | 100 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 11 | 100 |
| 2,2,4-Trimethylpentane | 540-84-1 | 10 | 100 |
| Vinyl bromide | 593-60-2 | 10 | 100 |
| Vinyl chloride | 75-01-4 | 11 | 110 |
| Xylenes (m&p) | 179601-23-1 | 22 | 110 |
| Xylenes (o) | 95-47-6 | 10 | 100 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4903lcs.D
Acq On : 11 Dec 2023 10:57 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 11 11:13:35 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.390 | 130 | 647607 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.454 | 114 | 2729004 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.315 | 117 | 3090532 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 2704486 | 10.04 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.486 | 41 | 448674 | 9.98 | ppbV | 100 |
| 3) Dichlorodifluoromethane | 1.522 | 85 | 1540061 | 10.73 | ppbV | 99 |
| 4) 1,2-Dichlorotetrafluor... | 1.650 | 85 | 1837270 | 8.81 | ppbV | 99 |
| 5) n-Butane | 1.729 | 43 | 1071383 | 10.36 | ppbV | 100 |
| 6) Chloromethane | 1.794 | 52 | 79721 | 11.12 | ppbV | 100 |
| 7) Vinyl chloride | 1.784 | 62 | 624707 | 10.65 | ppbV | 99 |
| 8) 1,3-Butadiene | 1.794 | 39 | 556597 | 10.16 | ppbV | 97 |
| 9) Bromomethane | 2.081 | 94 | 492205 | 10.39 | ppbV | 96 |
| 10) Chloroethane | 2.190 | 64 | 343138 | 11.15 | ppbV | 98 |
| 11) Vinyl bromide | 2.296 | 106 | 601925 | 10.38 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.309 | 101 | 1958992 | 10.81 | ppbV | 99 |
| 13) Ethanol | 2.669 | 45 | 223820 | 11.80 | ppbV | 98 |
| 14) 1,1-Dichloroethene | 2.730 | 61 | 1287938 | 10.71 | ppbV | 96 |
| 15) Carbon disulfide | 2.753 | 76 | 2170829 | 10.96 | ppbV | 98 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.775 | 101 | 1721921 | 9.43 | ppbV | 99 |
| 17) Acrolein | 2.981 | 56 | 275902 | 10.20 | ppbV | 98 |
| 18) Allyl chloride | 3.110 | 76 | 363800 | 11.21 | ppbV | 100 |
| 19) Isopropanol | 3.107 | 45 | 1249280 | 9.62 | ppbV | 99 |
| 20) Methylene chloride | 3.203 | 49 | 760938 | 9.56 | ppbV | 96 |
| 21) Acetone | 3.209 | 43 | 1102830 | 11.29 | ppbV | 100 |
| 22) trans-1,2-Dichloroethene | 3.325 | 61 | 1261504 | 11.30 | ppbV | 98 |
| 23) n-Pentane | 3.409 | 43 | 1563342 | 10.38 | ppbV | 98 |
| 24) n-Hexane | 3.409 | 57 | 2086837 | 10.22 | ppbV | 98 |
| 25) Methyl tert-butyl ether | 3.409 | 73 | 2641389 | 10.53 | ppbV | 99 |
| 26) Tert-butyl alcohol | 3.460 | 59 | 1870916 | 11.08 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 1473126 | 9.80 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.232 | 61 | 1109173 | 10.46 | ppbV | 97 |
| 29) Cyclohexane | 4.415 | 56 | 1494221 | 10.48 | ppbV | 98 |
| 30) Chloroform | 4.454 | 83 | 1763283 | 10.18 | ppbV | 99 |
| 31) Ethyl acetate | 4.544 | 61 | 310143 | 11.00 | ppbV | 98 |
| 32) Carbon tetrachloride | 4.576 | 117 | 2075194 | 10.10 | ppbV | 99 |
| 33) Tetrahydrofuran | 4.573 | 42 | 1055760 | 10.84 | ppbV | 98 |
| 34) 1,1,1-Trichloroethane | 4.627 | 97 | 1829339 | 10.16 | ppbV | 98 |
| 35) Methyl ethyl ketone | 4.682 | 43 | 1694596 | 10.71 | ppbV | 98 |
| 36) n-Heptane | 4.917 | 43 | 1984236 | 11.09 | ppbV | 98 |
| 37) Benzene | 4.933 | 78 | 2436463 | 9.47 | ppbV | 98 |
| 38) 1,2-Dichloroethane | 5.090 | 62 | 1158367 | 10.76 | ppbV | 100 |
| 40) Trichloroethene | 5.431 | 130 | 1104206 | 9.14 | ppbV | 98 |
| 41) 2,2,4-Trimethylpentane | 4.843 | 57 | 3701197 | 10.41 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 1110425 | 10.46 | ppbV | 100 |
| 43) Bromodichloromethane | 5.946 | 83 | 2026843 | 11.34 | ppbV | 100 |
| 44) Methyl methacrylate | 6.087 | 41 | 1477655 | 11.47 | ppbV | 97 |
| 45) 1,4-Dioxane | 6.113 | 88 | 746186 | 11.47 | ppbV | 98 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 1788041 | 10.86 | ppbV | 99 |
| 47) Toluene | 6.772 | 91 | 4000386 | 10.43 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.132 | 43 | 2867635 | 11.90 | ppbV | 98 |
| 49) Tetrachloroethene | 7.161 | 166 | 1771569 | 10.71 | ppbV | 99 |
| 50) trans-1,3-Dichloropropene | 7.174 | 75 | 1825213 | 11.43 | ppbV | 98 |
| 51) 1,1,2-Trichloroethane | 7.335 | 97 | 1347280 | 10.40 | ppbV | 99 |

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4903lcs.D
Acq On : 11 Dec 2023 10:57 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

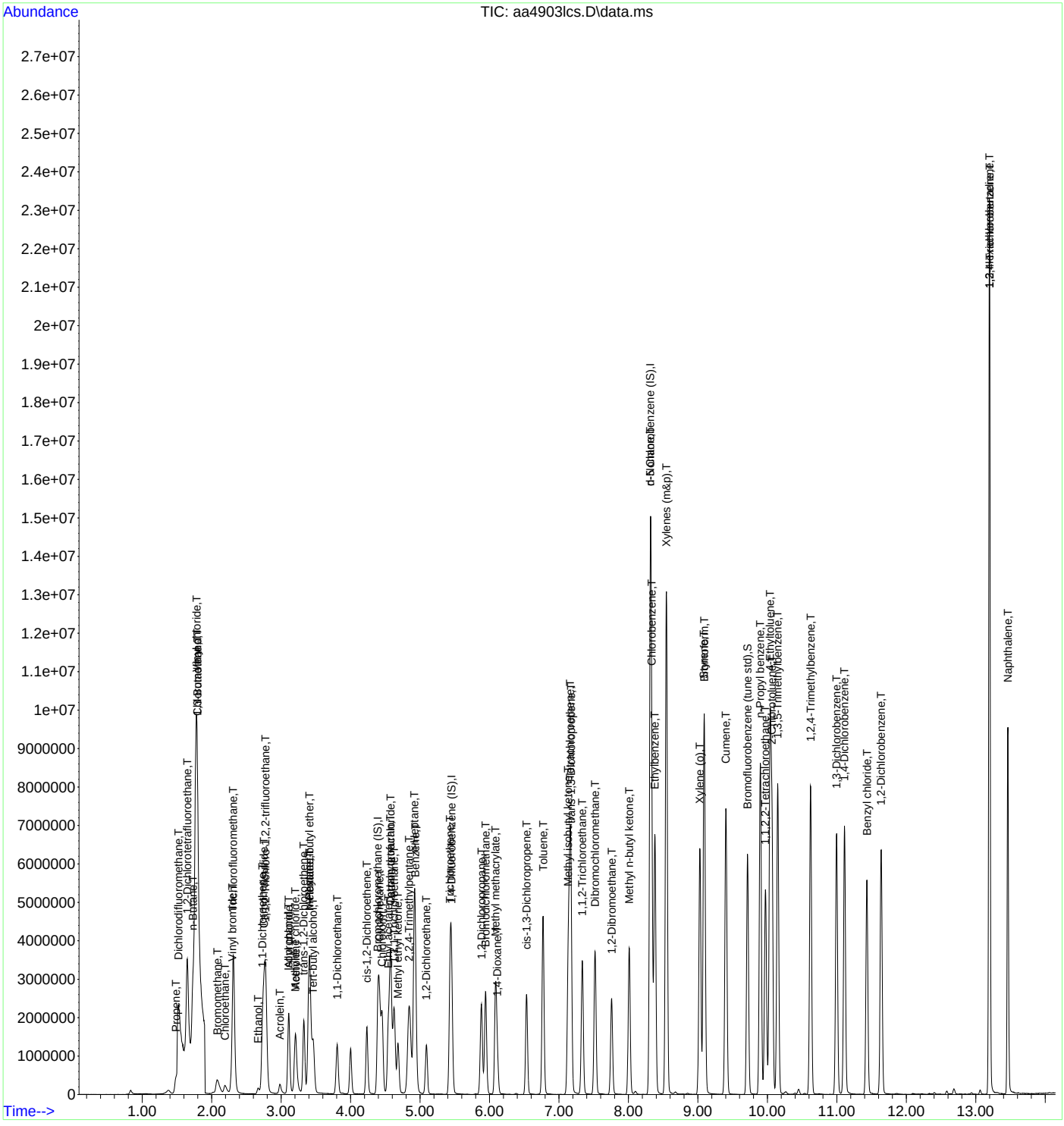
Quant Time: Dec 11 11:13:35 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 2436418 | 11.29 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 2033372 | 10.85 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.013 | 43 | 2915562 | 12.58 | ppbV | 98 |
| 56) n-Nonane | 8.315 | 43 | 3624209 | 11.82 | ppbV | 98 |
| 57) Chlorobenzene | 8.335 | 112 | 3170809 | 10.29 | ppbV | 98 |
| 58) Ethylbenzene | 8.380 | 91 | 6016260 | 10.56 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.547 | 91 | 9208112 | 21.82 | ppbV | 99 |
| 60) Xylene (o) | 9.026 | 91 | 4740095 | 10.29 | ppbV | 99 |
| 61) Styrene | 9.087 | 104 | 3439384 | 10.91 | ppbV | 100 |
| 62) Bromoform | 9.094 | 173 | 2568104 | 11.35 | ppbV | 100 |
| 63) Cumene | 9.402 | 105 | 6358038 | 10.57 | ppbV | 100 |
| 65) n-Propyl benzene | 9.897 | 91 | 8673958 | 11.04 | ppbV | 99 |
| 66) 1,1,2,2-Tetrachloroethane | 9.971 | 83 | 3528435 | 10.95 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 7191816 | 10.82 | ppbV | 100 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 5637797 | 10.69 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 5654494 | 10.58 | ppbV | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 5639014 | 10.55 | ppbV | 99 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 3401177 | 10.39 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.109 | 146 | 3376653 | 10.26 | ppbV | 99 |
| 73) Benzyl chloride | 11.434 | 91 | 5116198 | 10.83 | ppbV | 99 |
| 74) 1,2-Dichlorobenzene | 11.637 | 146 | 3236300 | 10.20 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.196 | 225 | 2308103 | 10.48 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.199 | 180 | 2718525 | 10.67 | ppbV | 100 |
| 77) Naphthalene | 13.463 | 128 | 6001329 | 10.30 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4903lcs.D
Acq On : 11 Dec 2023 10:57 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 11 11:13:35 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 9/13/23 |
| SDG Number: | E23-04122 | Date Analyzed: | 9/28/23,9/28/23 |
| IAL Sample ID: | E23-04122-06 | Lab Data File#: | AA4087,AA4088 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 1781 | Injection Volume: | 50ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-04122-06** | | **E23-04122-26** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Acetone | 67-64-1 | **50** | | **54** | | 4.0 | **-7.69%** |
| Allyl Chloride | 107-05-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Benzene | 71-43-2 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| Bromodichloromethane | 75-27-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Bromoform | 75-25-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Bromomethane | 74-83-9 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3-Butadiene | 106-99-0 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chlorobenzene | 108-90-7 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chloroethane | 75-00-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chloroform | 67-66-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chloromethane | 74-87-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Carbon disulfide | 75-15-0 | **10.0** | | **11** | | 4.0 | **-9.52%** |
| Carbon tetrachloride | 56-23-5 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 2-Chlorotoluene | 95-49-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Cyclohexane | 110-82-7 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Dibromochloromethane | 124-48-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dibromoethane | 106-93-4 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,2-Dichlorobenzene | 95-50-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3-Dichlorobenzene | 541-73-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,4-Dichlorobenzene | 106-46-7 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Dichlorodifluoromethane | 75-71-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1-Dichloroethane | 75-34-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloroethane | 107-06-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1-Dichloroethene | 75-35-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloroethene (cis) | 156-59-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloroethene (trans) | 156-60-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloropropane | 78-87-5 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Ethylbenzene | 100-41-4 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 4-Ethyltoluene | 622-96-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| n-Heptane | 142-82-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3-Hexachlorobutadiene | 87-68-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| n-Hexane | 110-54-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Methylene chloride | 75-09-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Methyl ethyl ketone | 78-93-3 | **8.1** | | **10** | | 4.0 | **-20.99%** |
| Methyl isobutyl ketone | 108-10-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 9/13/23 |
| SDG Number: | E23-04122 | Date Analyzed: | 9/28/23,9/28/23 |
| IAL Sample ID: | E23-04122-06 | Lab Data File#: | AA4087,AA4088 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 1781 | Injection Volume: | 50ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-04122-06** | | **E23-04122-26** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Methyl tert-butyl ether | 1634-04-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Styrene | 100-42-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Tert-butyl alcohol | 75-65-0 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Tetrachloroethene | 127-18-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Toluene | 108-88-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2,4-Trichlorobenzene | 120-82-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,1-Trichloroethane | 71-55-6 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,2-Trichloroethane | 79-00-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Trichloroethene | 79-01-6 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| Trichlorofluoromethane | 75-69-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2,4-Trimethylbenzene | 95-63-6 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3,5-Trimethylbenzene | 108-67-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 2,2,4-Trimethylpentane | 540-84-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Vinyl bromide | 593-60-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Vinyl chloride | 75-01-4 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| Xylenes (m&p) | 179601-23-1 | 4.0 | U | **4.2** | | 4.0 | **NC** |
| Xylenes (o) | 95-47-6 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |

**RPD must be <25% for all laboratory duplicate samples. Laboratory duplicate samples are run once daily.**
**NC = The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample.**

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4087.D
Acq On : 28 Sep 2023 9:29 pm
Operator : jjw
Sample : E23-04122-06x10 dil
Misc : 1781, 50cc
ALS Vial : 21 Sample Multiplier: 1

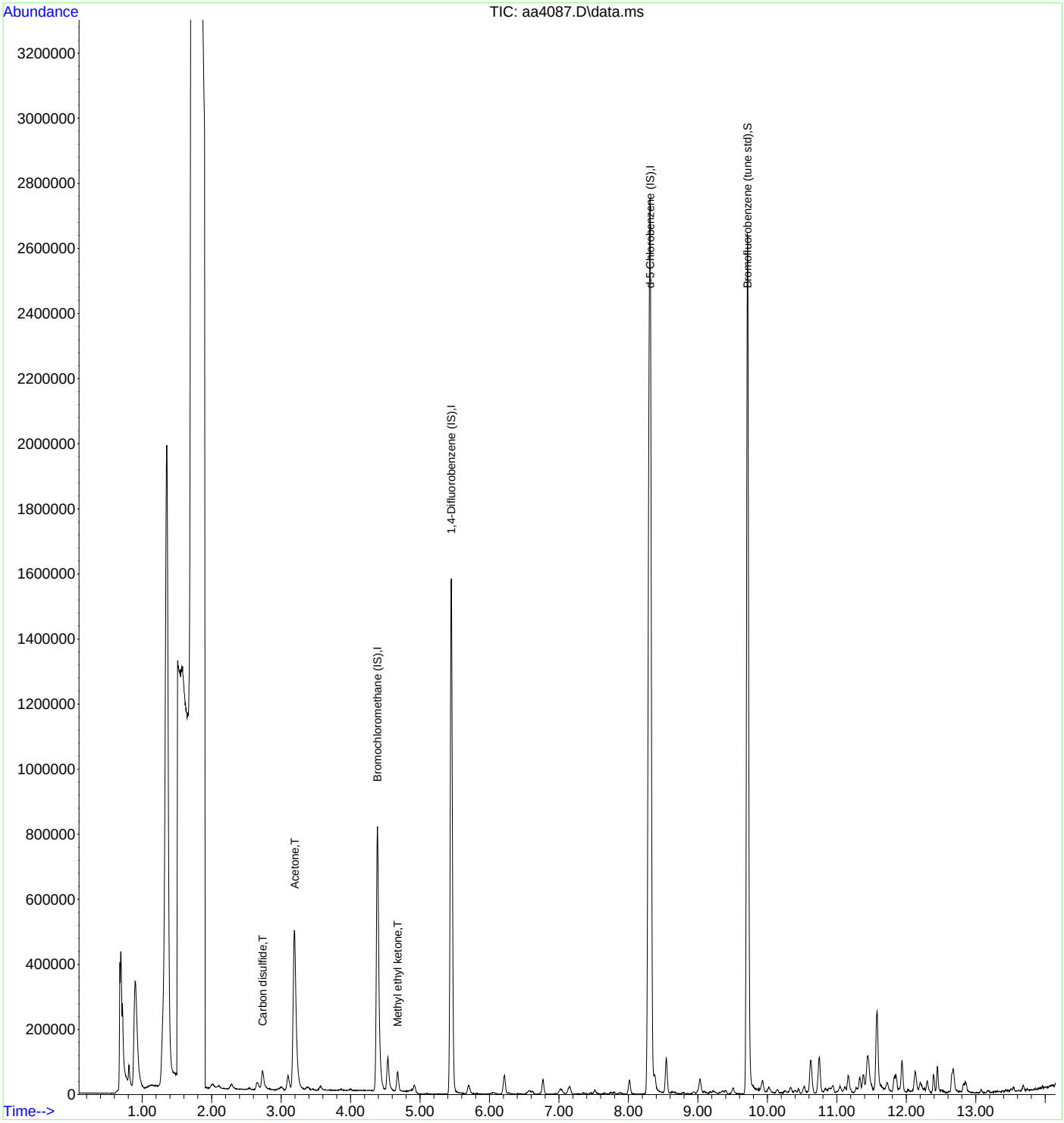
Quant Time: Oct 04 12:38:10 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

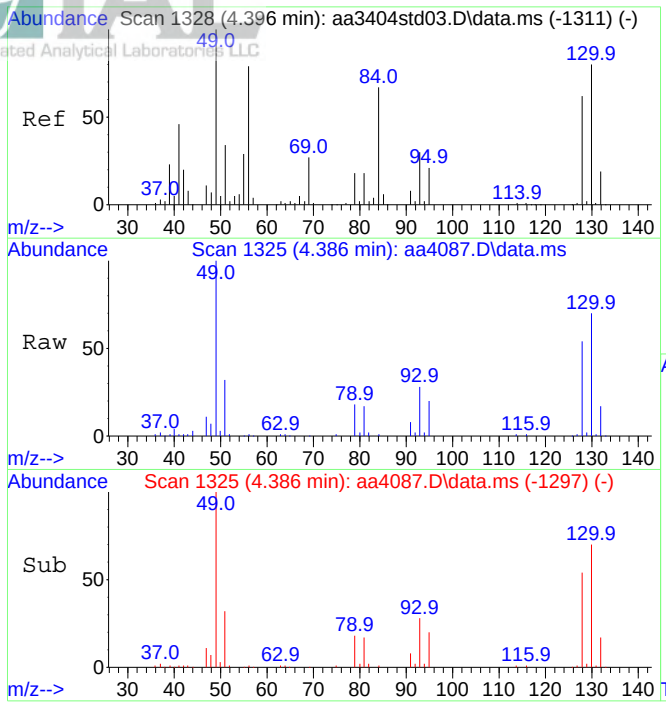
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.386 | 130 | 333645 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.451 | 114 | 1400704 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.315 | 117 | 1383190 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1064307 | 9.25 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 15) Carbon disulfide | 2.734 | 76 | 114195 | 1.00 | ppbV | 97 |
| 21) Acetone | 3.197 | 43 | 311157 | 4.97 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.679 | 43 | 78641 | 0.81 | ppbV | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4087.D
Acq On : 28 Sep 2023 9:29 pm
Operator : jjw
Sample : E23-04122-06x10 dil
Misc : 1781, 50cc
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Oct 04 12:38:10 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

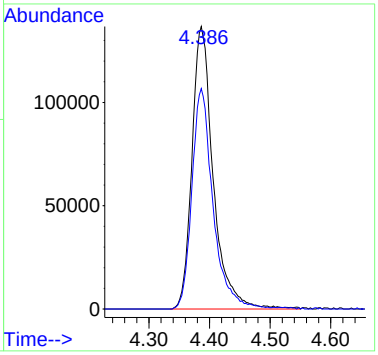


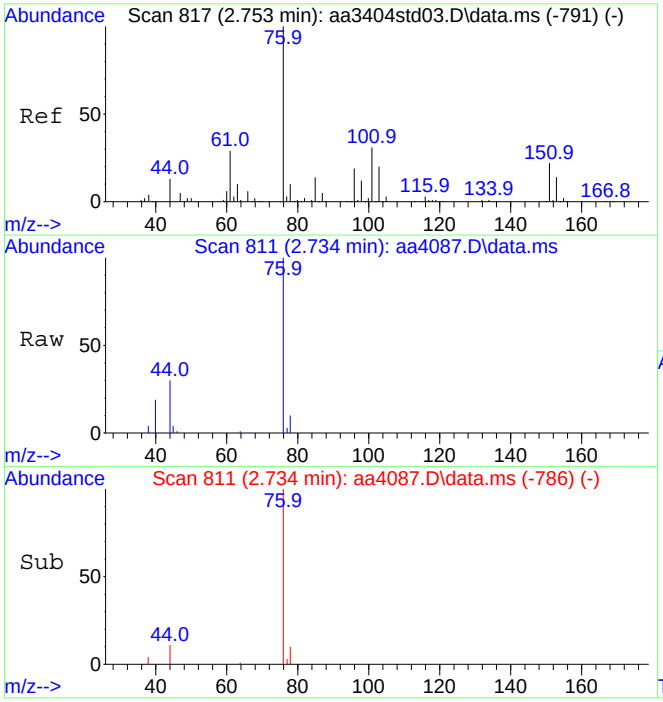



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.386 min Scan# 1325
Delta R.T. -0.010 min
Lab File: aa4087.D
Acq: 28 Sep 2023 9:29 pm

Tgt Ion:130 Resp: 333645

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 78.0 | 61.8 | 92.6 |

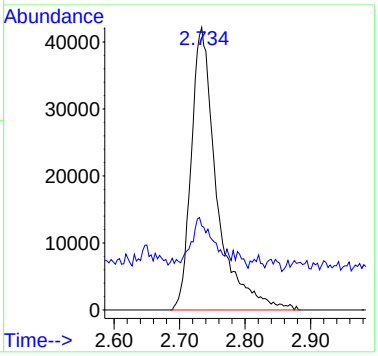


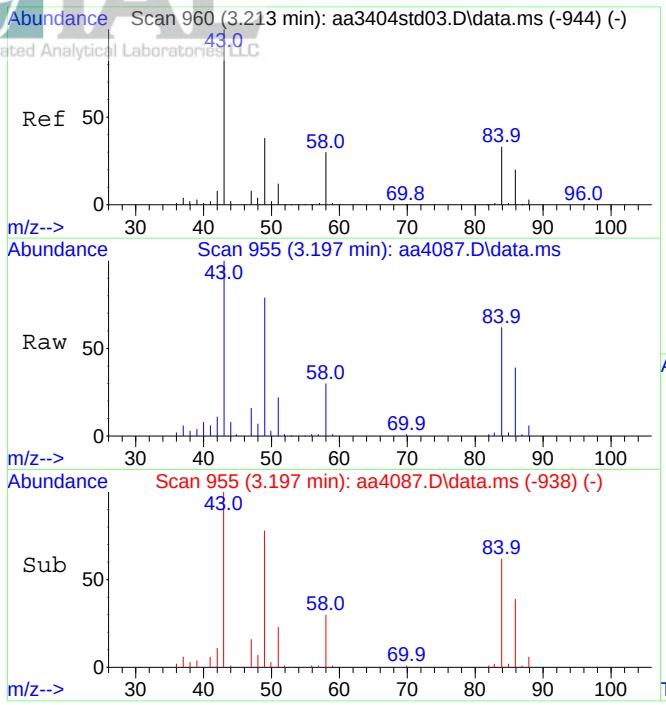




#15
Carbon disulfide
Concen: 1.00 ppbV
RT: 2.734 min Scan# 811
Delta R.T. -0.020 min
Lab File: aa4087.D
Acq: 28 Sep 2023 9:29 pm

Tgt Ion: 76 Resp: 114195

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 14.2 | 10.5 | 15.7 |

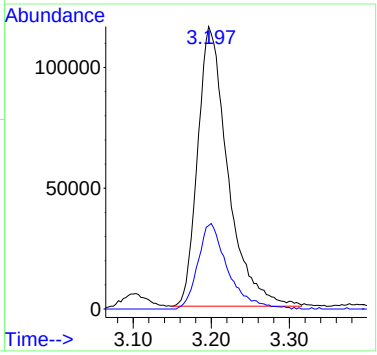


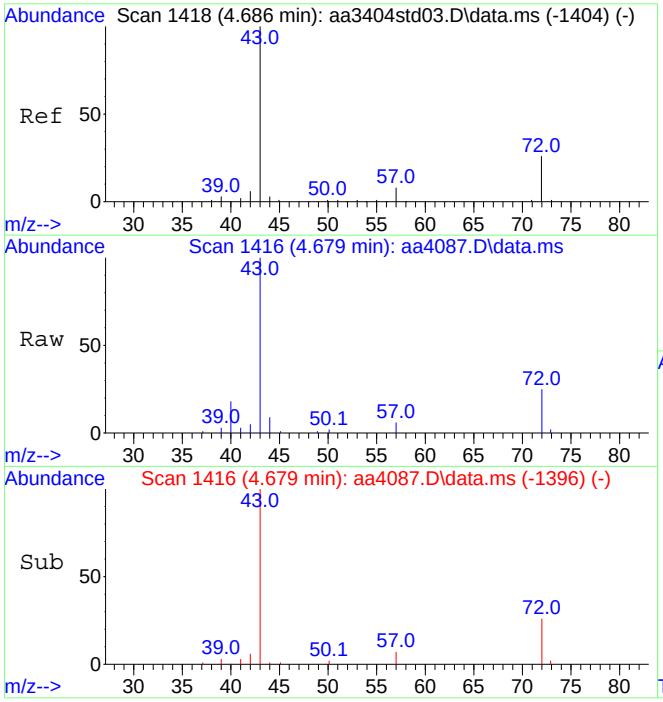



#21
Acetone
Concen: 4.97 ppbV
RT: 3.197 min Scan# 955
Delta R.T. -0.016 min
Lab File: aa4087.D
Acq: 28 Sep 2023 9:29 pm

Tgt Ion: 43 Resp: 311157

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 30.3 | 24.9 | 37.3 |

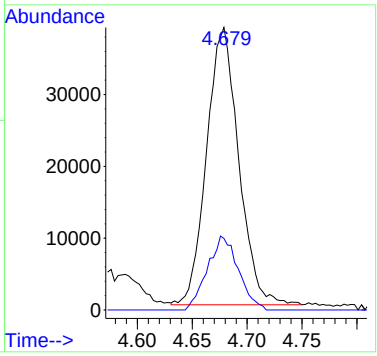


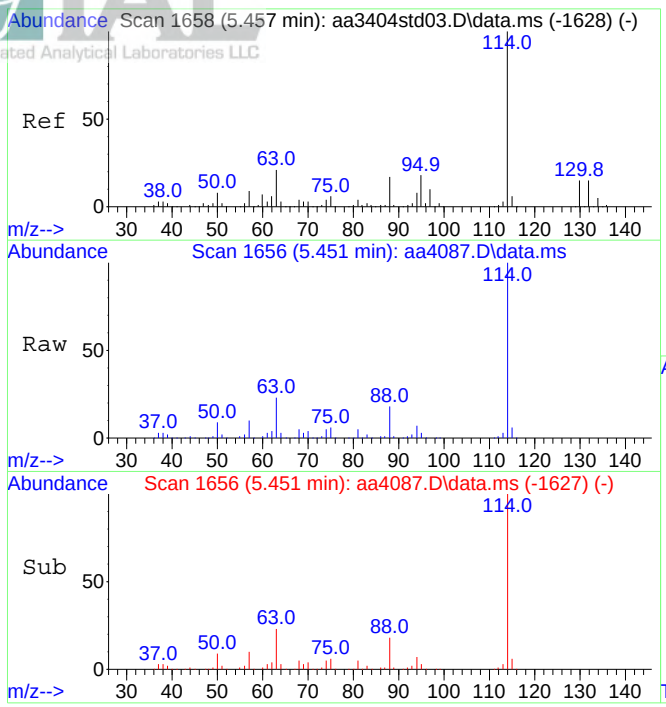




#35
Methyl ethyl ketone
Concen: 0.81 ppbV
RT: 4.679 min Scan# 1416
Delta R.T. -0.007 min
Lab File: aa4087.D
Acq: 28 Sep 2023 9:29 pm

Tgt Ion: 43 Resp: 78641

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 25.5 | 20.8 | 31.2 |

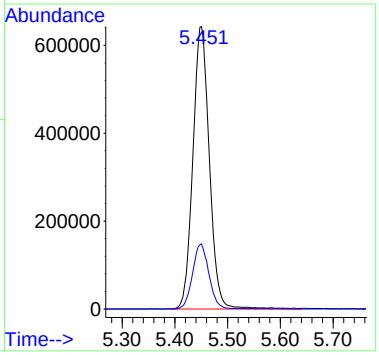


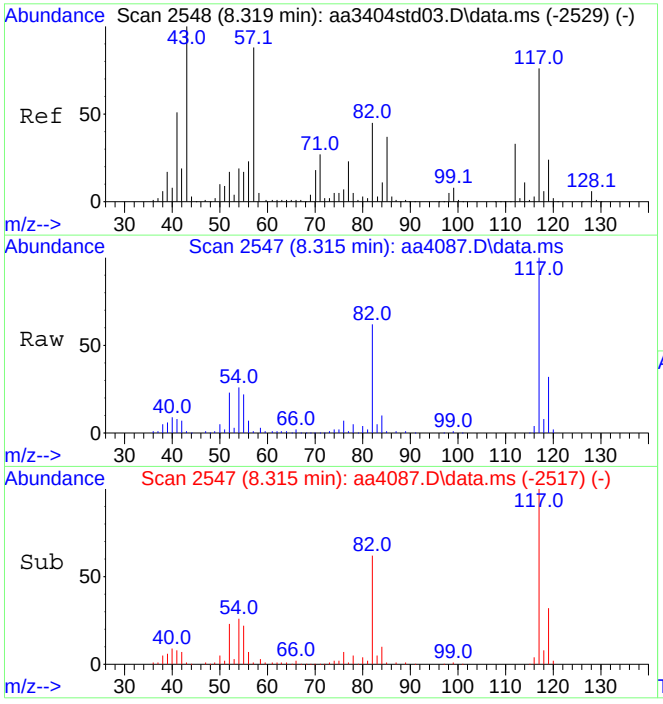



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.451 min Scan# 1656
Delta R.T. -0.006 min
Lab File: aa4087.D
Acq: 28 Sep 2023 9:29 pm

Tgt Ion:114 Resp: 1400704

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 23.0 | 17.4 | 26.2 |

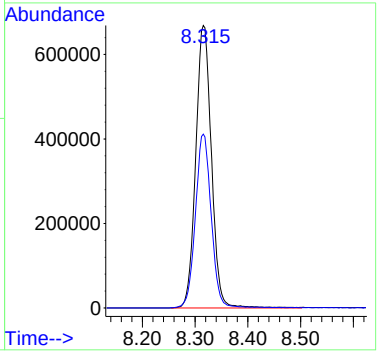


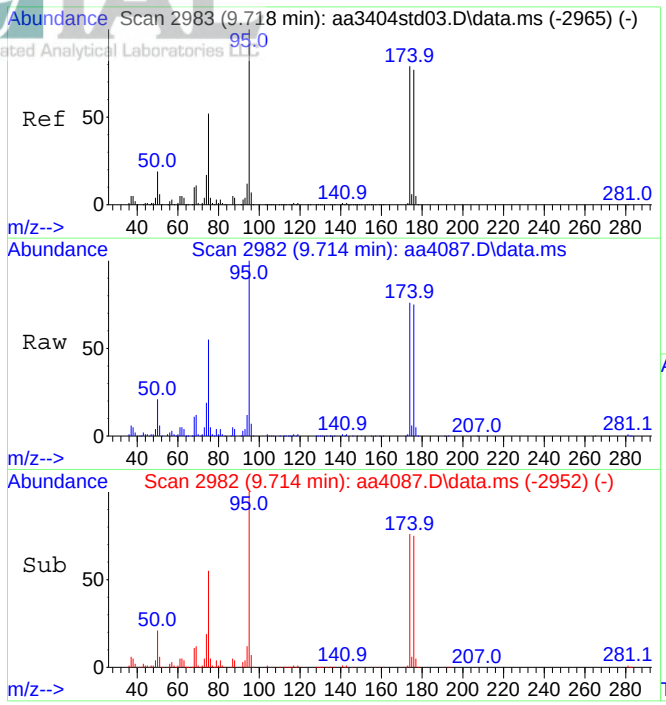




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.315 min Scan# 2547
Delta R.T. -0.004 min
Lab File: aa4087.D
Acq: 28 Sep 2023 9:29 pm

Tgt Ion:117 Resp: 1383190

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 62.2 | 47.4 | 71.0 |

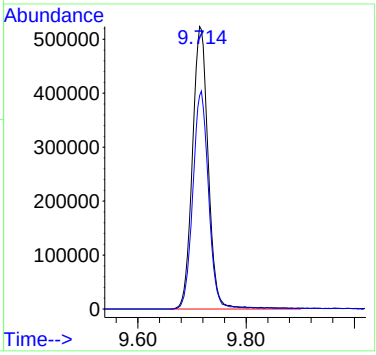





#64
Bromofluorobenzene (tune std)
Concen: 9.25 ppbV
RT: 9.714 min Scan# 2982
Delta R.T. -0.003 min
Lab File: aa4087.D
Acq: 28 Sep 2023 9:29 pm

Tgt Ion: 95 Resp: 1064307

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 77.0 | 62.9 | 94.3 |



Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4088.D
Acq On : 28 Sep 2023 10:00 pm
Operator : jjw
Sample : E23-04122-26x10 dil
Misc : Dup of E23-04122-06x10 dil, Can # 1781
ALS Vial : 22 Sample Multiplier: 1

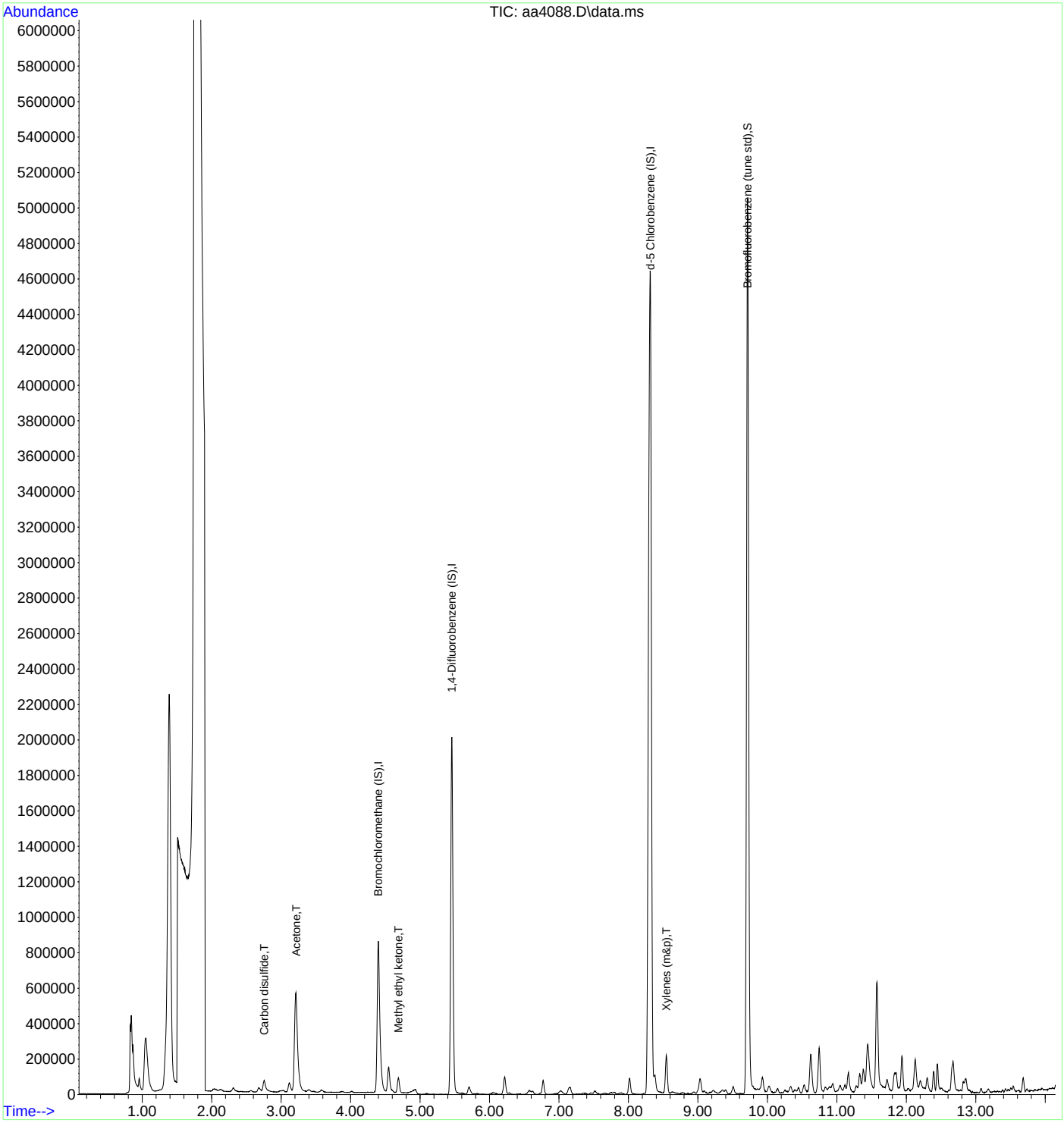
Quant Time: Oct 04 12:49:41 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

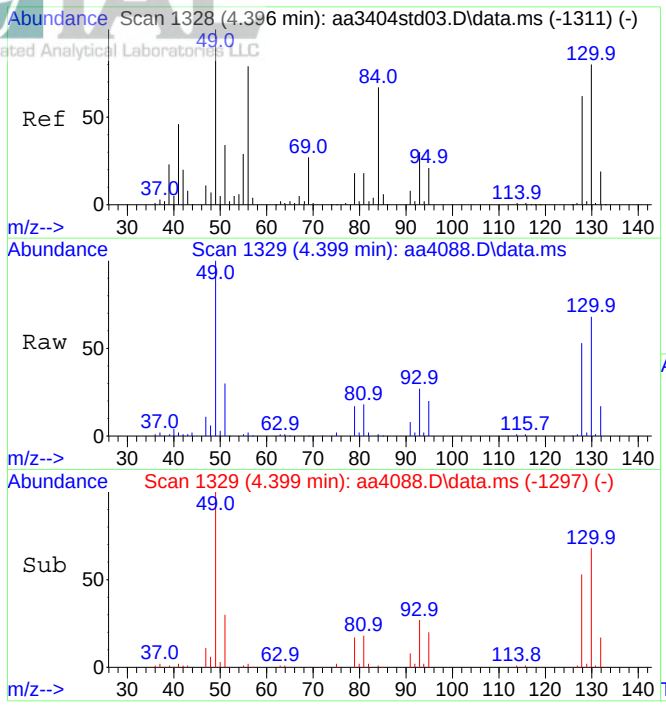
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.399 | 130 | 378421 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 1821981 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 2357353 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 2004719 | 10.22 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 15) Carbon disulfide | 2.756 | 76 | 137474 | 1.06 | ppbV | 97 |
| 21) Acetone | 3.219 | 43 | 384617 | 5.42 | ppbV | 98 |
| 35) Methyl ethyl ketone | 4.689 | 43 | 112963 | 1.03 | ppbV | 98 |
| 59) Xylenes (m&p) | 8.547 | 91 | 145250 | 0.42 | ppbV | 97 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4088.D
Acq On : 28 Sep 2023 10:00 pm
Operator : jjw
Sample : E23-04122-26x10 dil
Misc : Dup of E23-04122-06x10 dil, Can # 1781
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Oct 04 12:49:41 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

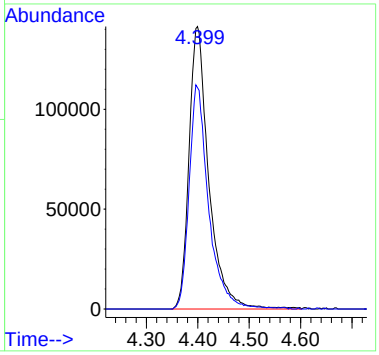


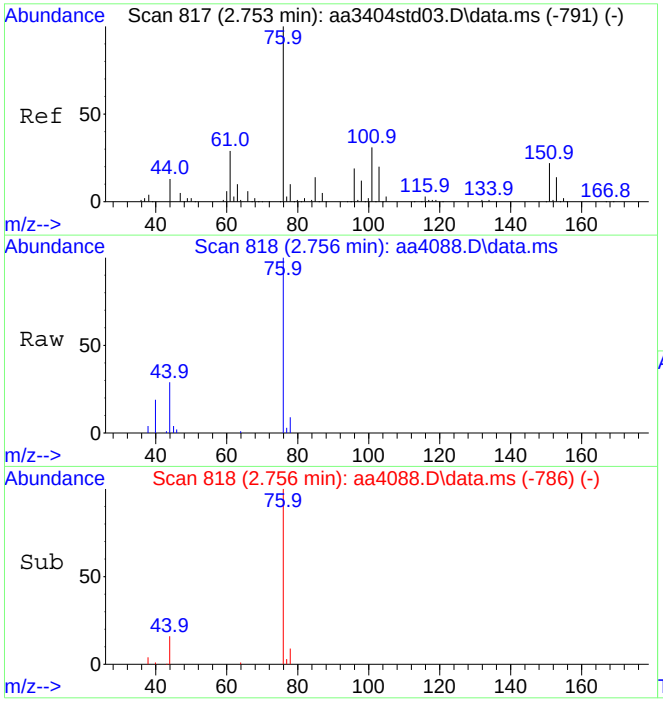



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.399 min Scan# 1329
Delta R.T. 0.003 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion:130 Resp: 378421

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 78.2 | 61.8 | 92.6 |

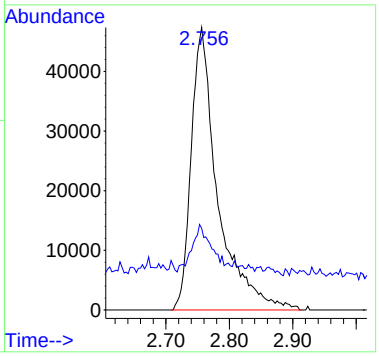


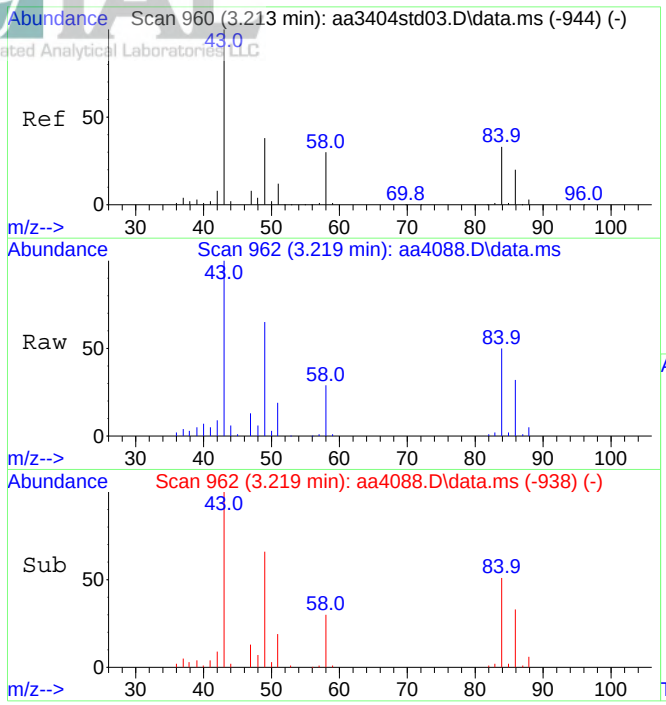




#15
Carbon disulfide
Concen: 1.06 ppbV
RT: 2.756 min Scan# 818
Delta R.T. 0.003 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion: 76 Resp: 137474

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 14.5 | 10.5 | 15.7 |

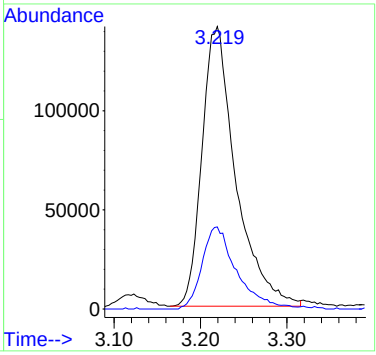


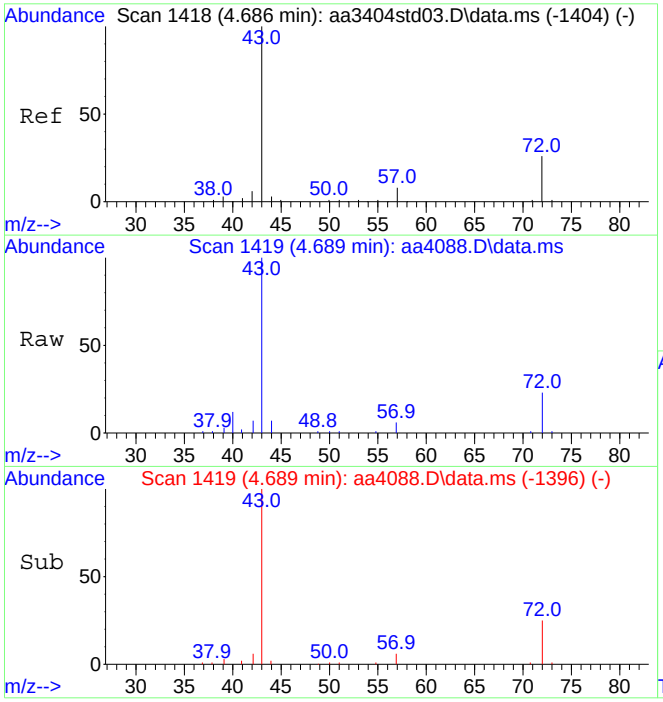



#21
Acetone
Concen: 5.42 ppbV
RT: 3.219 min Scan# 962
Delta R.T. 0.006 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion: 43 Resp: 384617

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 30.0 | 24.9 | 37.3 |

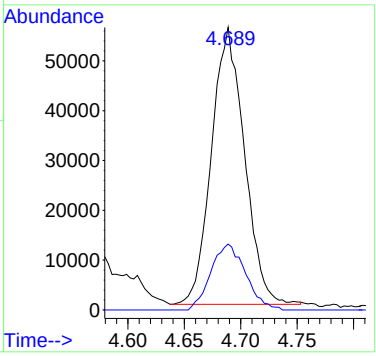


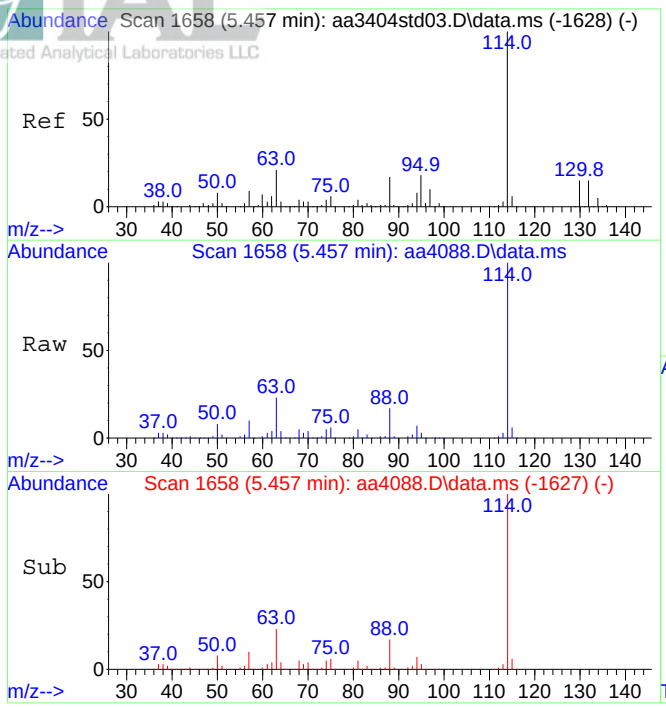




#35
Methyl ethyl ketone
Concen: 1.03 ppbV
RT: 4.689 min Scan# 1419
Delta R.T. 0.003 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion: 43 Resp: 112963

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 25.1 | 20.8 | 31.2 |

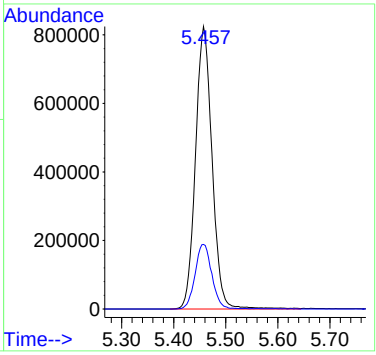


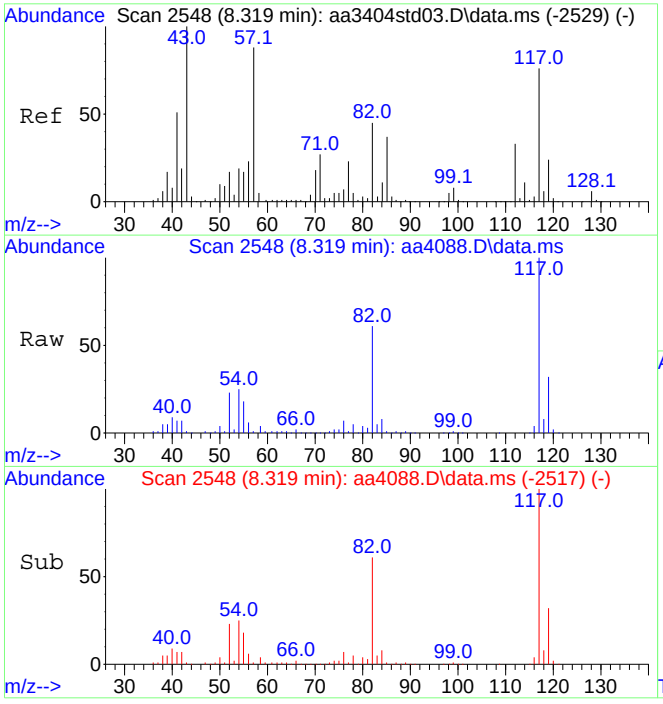



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.457 min Scan# 1658
Delta R.T. 0.000 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion:114 Resp: 1821981

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 23.3 | 17.4 | 26.2 |

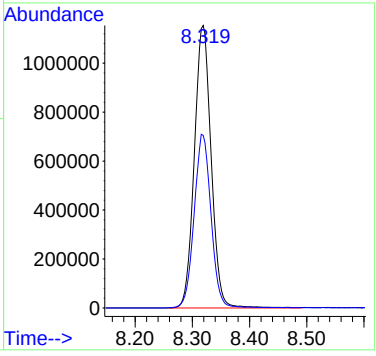


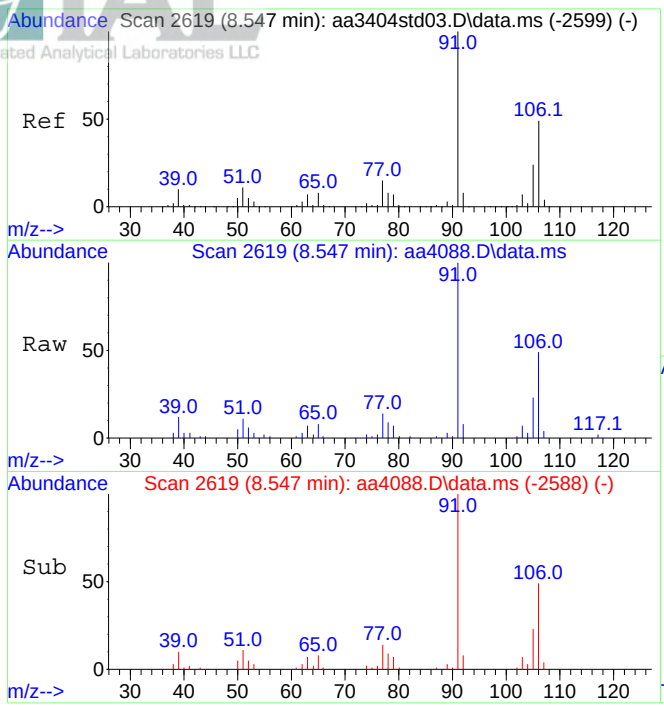




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.319 min Scan# 2548
Delta R.T. -0.000 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion:117 Resp: 2357353

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 61.9 | 47.4 | 71.0 |

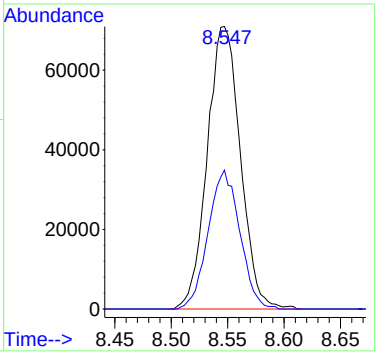


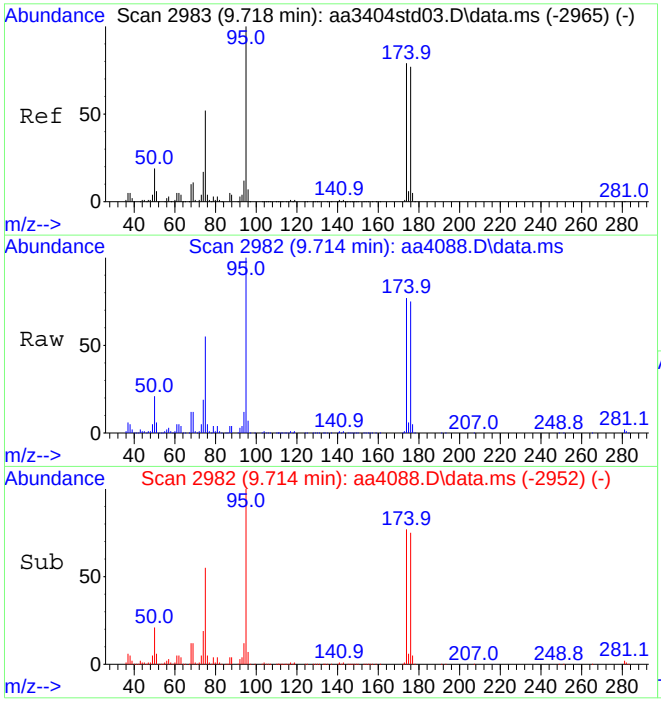



#59
Xylenes (m&p)
Concen: 0.42 ppbV
RT: 8.547 min Scan# 2619
Delta R.T. -0.000 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion: 91 Resp: 145250

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 46.9 | 39.2 | 58.8 |

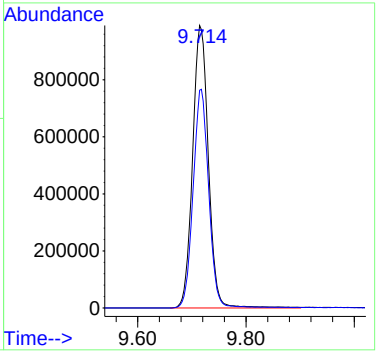



#64
Bromofluorobenzene (tune std)
Concen: 10.22 ppbV
RT: 9.714 min Scan# 2982
Delta R.T. -0.003 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion: 95 Resp: 2004719

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 76.8 | 62.9 | 94.3 |



**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 11/1/23 |
| SDG Number: | E23-04828 | Date Analyzed: | 11/3/23,11/3/23 |
| IAL Sample ID: | E23-04828-06 | Lab Data File#: | AA4537,AA4538 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 2883 | Injection Volume: | 500ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-04828-06** | | **E23-04828-26** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Acetone | 67-64-1 | **16** | | **16** | | 0.40 | **0.00%** |
| Allyl Chloride | 107-05-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Benzene | 71-43-2 | **0.31** | | **0.30** | | 0.20 | **3.28%** |
| Bromodichloromethane | 75-27-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Bromoform | 75-25-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Bromomethane | 74-83-9 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Butadiene | 106-99-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chlorobenzene | 108-90-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloroethane | 75-00-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloroform | 67-66-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloromethane | 74-87-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Carbon disulfide | 75-15-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Carbon tetrachloride | 56-23-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 2-Chlorotoluene | 95-49-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Cyclohexane | 110-82-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Dibromochloromethane | 124-48-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dibromoethane | 106-93-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorobenzene | 95-50-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Dichlorobenzene | 541-73-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,4-Dichlorobenzene | 106-46-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Dichlorodifluoromethane | 75-71-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1-Dichloroethane | 75-34-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethane | 107-06-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1-Dichloroethene | 75-35-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Ethylbenzene | 100-41-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 4-Ethyltoluene | 622-96-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| n-Heptane | 142-82-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| n-Hexane | 110-54-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Methylene chloride | 75-09-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Methyl ethyl ketone | 78-93-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Methyl isobutyl ketone | 108-10-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**INTEGRATED ANALYTICAL LABORATORIES, LLC**

***Integrated Analytical Laboratories LLC***

**Analysis: Volatile Organic Compounds by EPA Method TO-15**

**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 11/1/23 |
| SDG Number: | E23-04828 | Date Analyzed: | 11/3/23,11/3/23 |
| IAL Sample ID: | E23-04828-06 | Lab Data File#: | AA4537,AA4538 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 2883 | Injection Volume: | 500ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-04828-06** | | **E23-04828-26** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Methyl tert-butyl ether | 1634-04-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Styrene | 100-42-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Tert-butyl alcohol | 75-65-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Tetrachloroethene | 127-18-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Toluene | 108-88-3 | **0.47** | | **0.43** | | 0.40 | **8.89%** |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,1-Trichloroethane | 71-55-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2-Trichloroethane | 79-00-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Trichloroethene | 79-01-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Trichlorofluoromethane | 75-69-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | **1.8** | X | **1.3** | X | 0.40 | **32.26%** |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Vinyl bromide | 593-60-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Vinyl chloride | 75-01-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Xylenes (m&p) | 179601-23-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Xylenes (o) | 95-47-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |

**RPD must be <25% for all laboratory duplicate samples. Laboratory duplicate samples are run once daily.**

**NC = The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample.**

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

Quantitation Report (QT Reviewed)

Data Path : C:\DATA\2023\11-2023\11-03-2023\
Data File : aa4537.D
Acq On : 3 Nov 2023 4:28 pm
Operator : jjw
Sample : E23-04828-06
Misc : 2883, 500cc
ALS Vial : 15 Sample Multiplier: 1

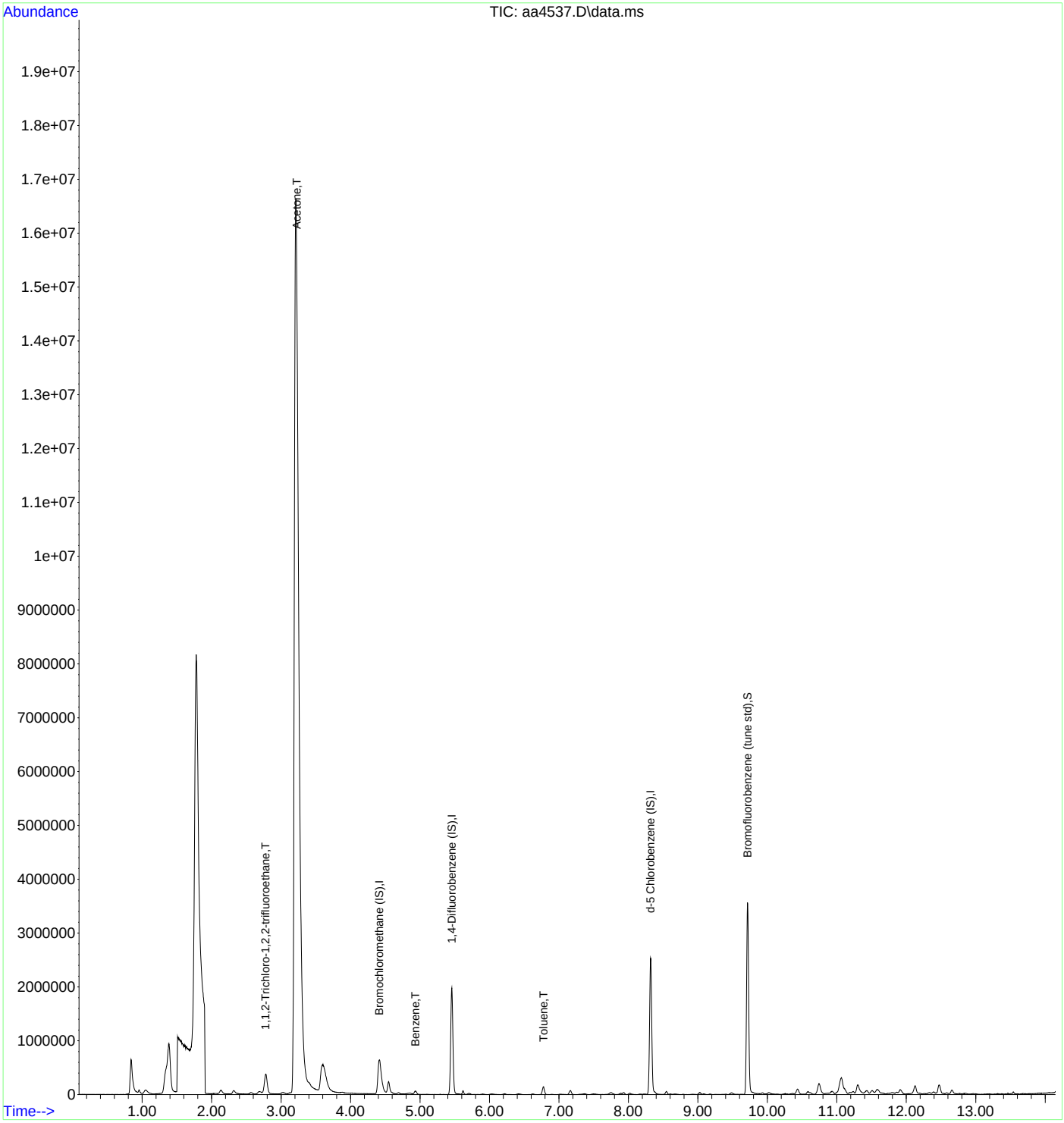
Quant Time: Nov 06 13:31:19 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

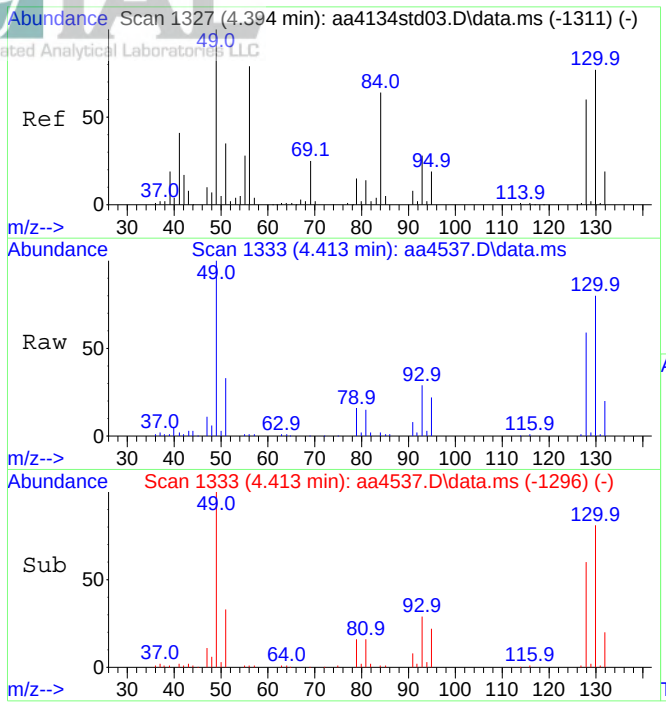
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.413 | 130 | 428021 | 10.00 | ppbV | | 0.019 |
| 39) 1,4-Difluorobenzene (IS) | 5.458 | 114 | 1879222 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 1677425 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.715 | 95 | 1601039 | 10.95 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.776 | 101 | 222466 | 1.84 | ppbV | | 99 |
| 21) Acetone | 3.226 | 43 | 1028001 | 15.92 | ppbV | | 94 |
| 37) Benzene | 4.934 | 78 | 53556 | 0.32 | ppbV | # | 87 |
| 47) Toluene | 6.779 | 91 | 124325 | 0.47 | ppbV | | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\11-2023\11-03-2023\
Data File : aa4537.D
Acq On : 3 Nov 2023 4:28 pm
Operator : jjw
Sample : E23-04828-06
Misc : 2883, 500cc
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Nov 06 13:31:19 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

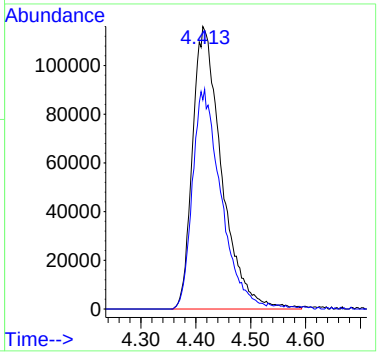


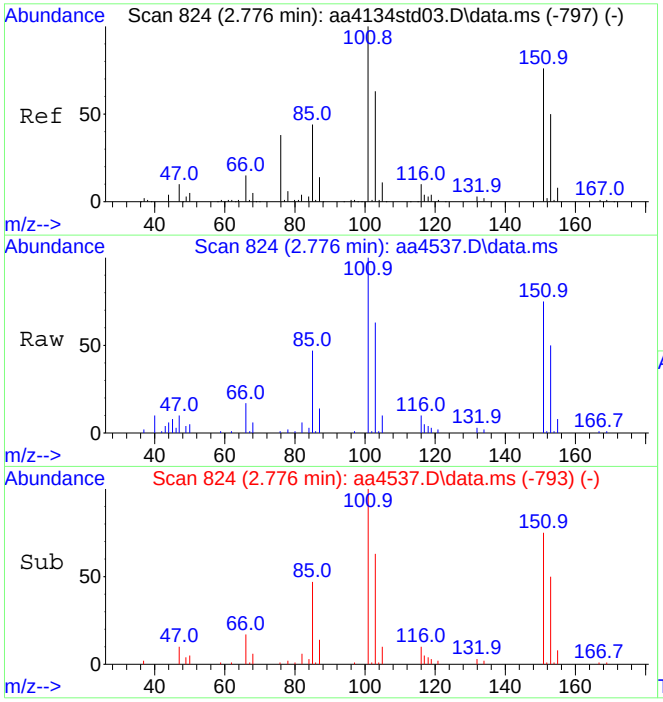



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.413 min Scan# 1333
Delta R.T. 0.019 min
Lab File: aa4537.D
Acq: 3 Nov 2023 4:28 pm

Tgt Ion:130 Resp: 428021

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 76.0 | 62.2 | 93.4 |

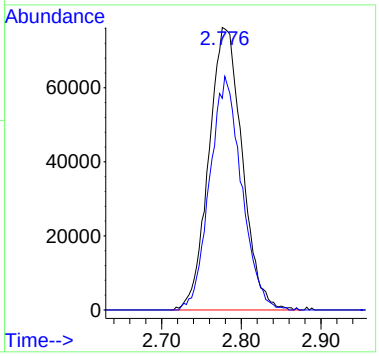


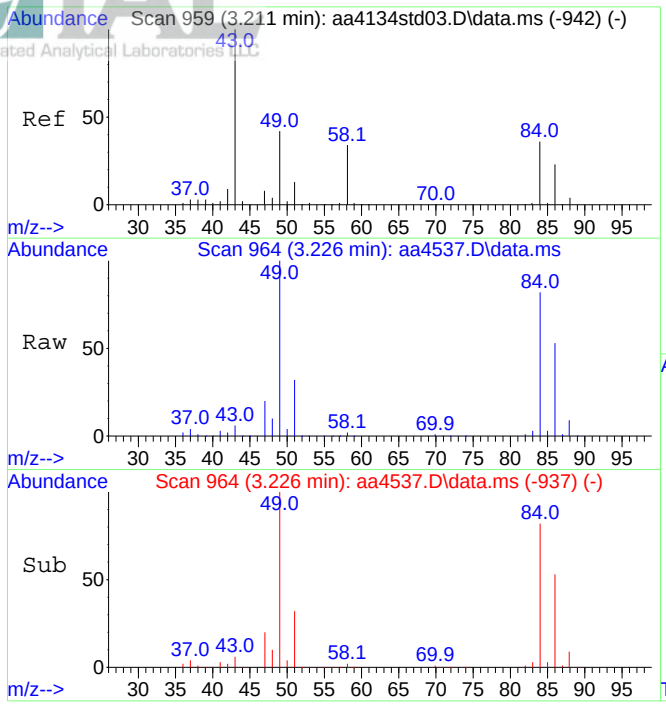




#16
1,1,2-Trichloro-1,2,2-trifluoroethane
Concen: 1.84 ppbV
RT: 2.776 min Scan# 824
Delta R.T. -0.000 min
Lab File: aa4537.D
Acq: 3 Nov 2023 4:28 pm

Tgt Ion:101 Resp: 222466

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 151 | 78.9 | 62.4 | 93.6 |

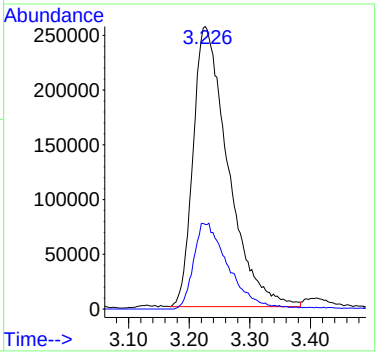


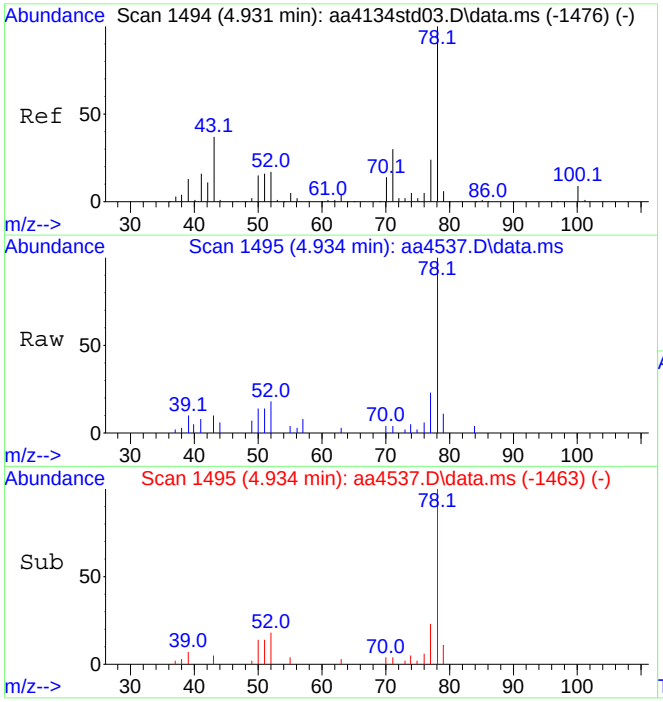



#21
Acetone
Concen: 15.92 ppbV
RT: 3.226 min Scan# 964
Delta R.T. 0.016 min
Lab File: aa4537.D
Acq: 3 Nov 2023 4:28 pm

Tgt Ion: 43 Resp: 1028001

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 30.5 | 27.1 | 40.7 |

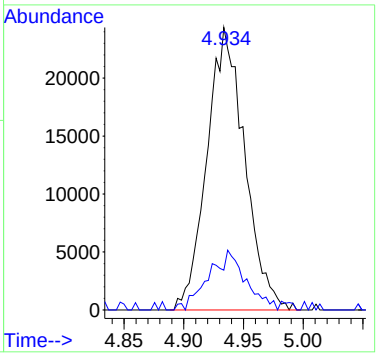


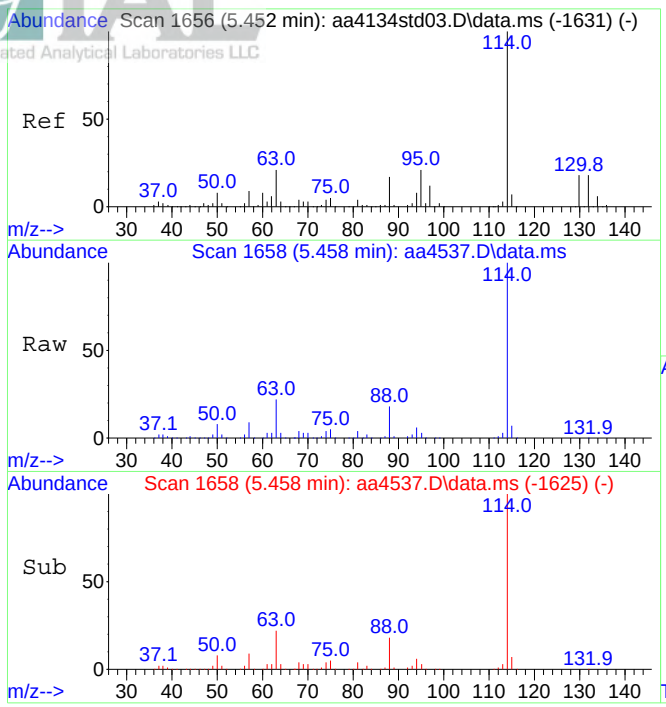




#37
Benzene
Concen: 0.32 ppbV
RT: 4.934 min Scan# 1495
Delta R.T. 0.003 min
Lab File: aa4537.D
Acq: 3 Nov 2023 4:28 pm

Tgt Ion: 78 Resp: 53556

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 11.1 | 13.4 | 20.0# |

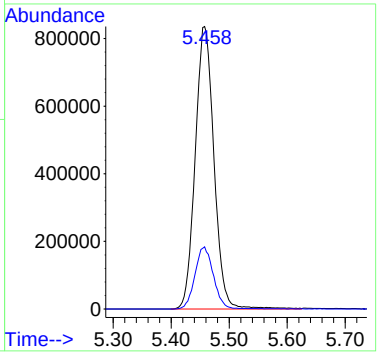


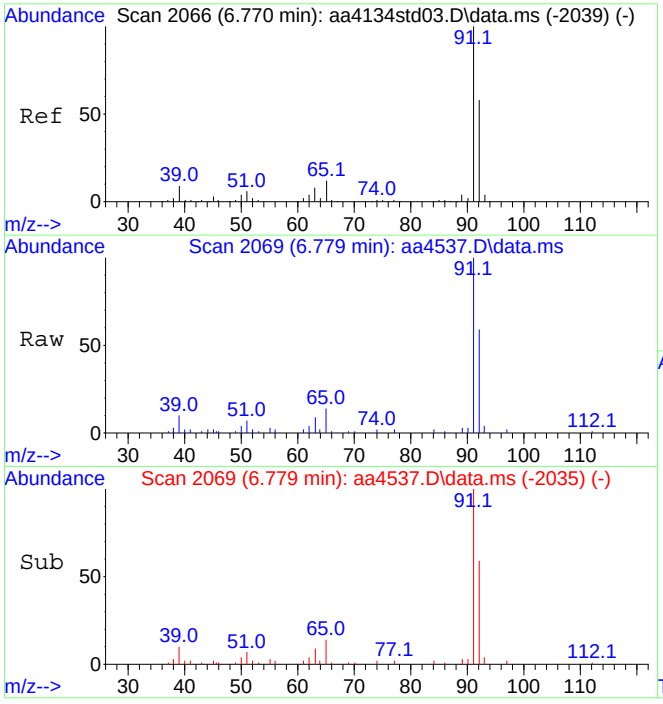



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.458 min Scan# 1658
Delta R.T. 0.006 min
Lab File: aa4537.D
Acq: 3 Nov 2023 4:28 pm

Tgt Ion:114 Resp: 1879222

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 21.7 | 17.0 | 25.6 |

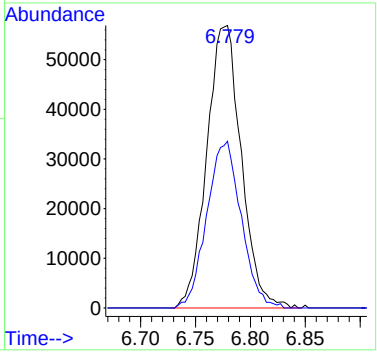


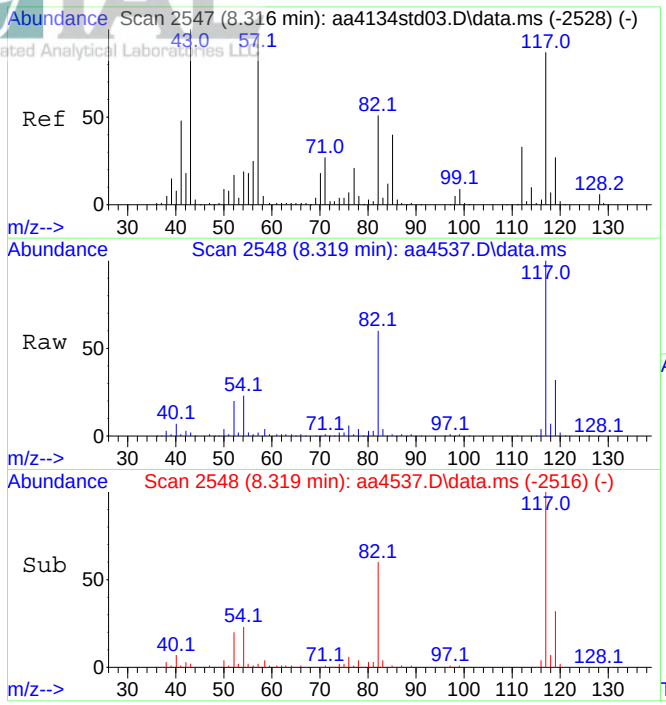




#47
Toluene
Concen: 0.47 ppbV
RT: 6.779 min Scan# 2069
Delta R.T. 0.009 min
Lab File: aa4537.D
Acq: 3 Nov 2023 4:28 pm

Tgt Ion: 91 Resp: 124325

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 58.7 | 47.3 | 70.9 |

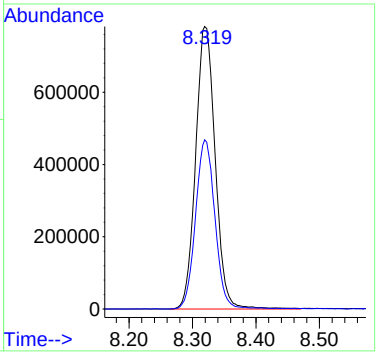


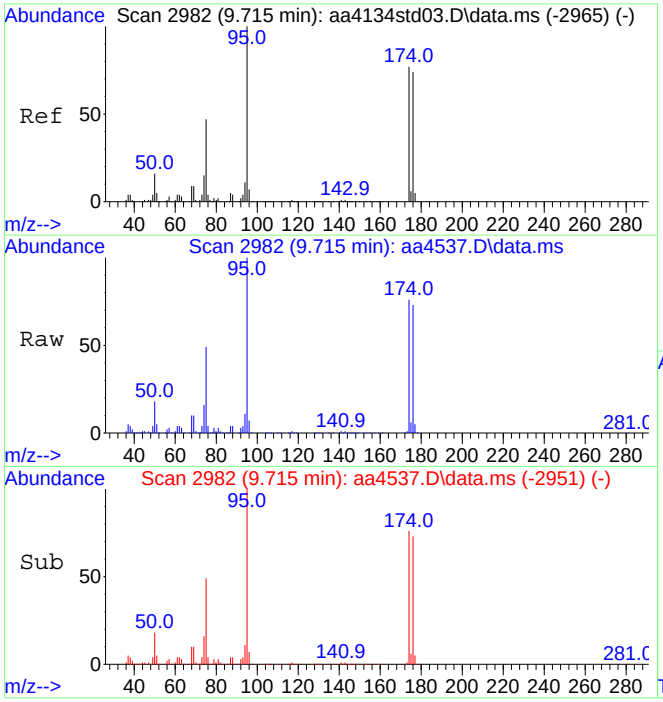



#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.319 min Scan# 2548
Delta R.T. 0.003 min
Lab File: aa4537.D
Acq: 3 Nov 2023 4:28 pm

Tgt Ion:117 Resp: 1677425

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 59.5 | 47.0 | 70.4 |

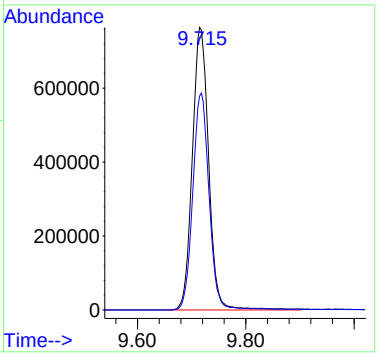



#64
Bromofluorobenzene (tune std)
Concen: 10.95 ppbV
RT: 9.715 min Scan# 2982
Delta R.T. -0.000 min
Lab File: aa4537.D
Acq: 3 Nov 2023 4:28 pm

Tgt Ion: 95 Resp: 1601039

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 76.7 | 61.1 | 91.7 |



Quantitation Report (QT Reviewed)

Data Path : C:\DATA\2023\11-2023\11-03-2023\
Data File : aa4538.D
Acq On : 3 Nov 2023 5:00 pm
Operator : jjw
Sample : E23-04828-26
Misc : Dup of E23-04828-06, Can # 2883
ALS Vial : 16 Sample Multiplier: 1

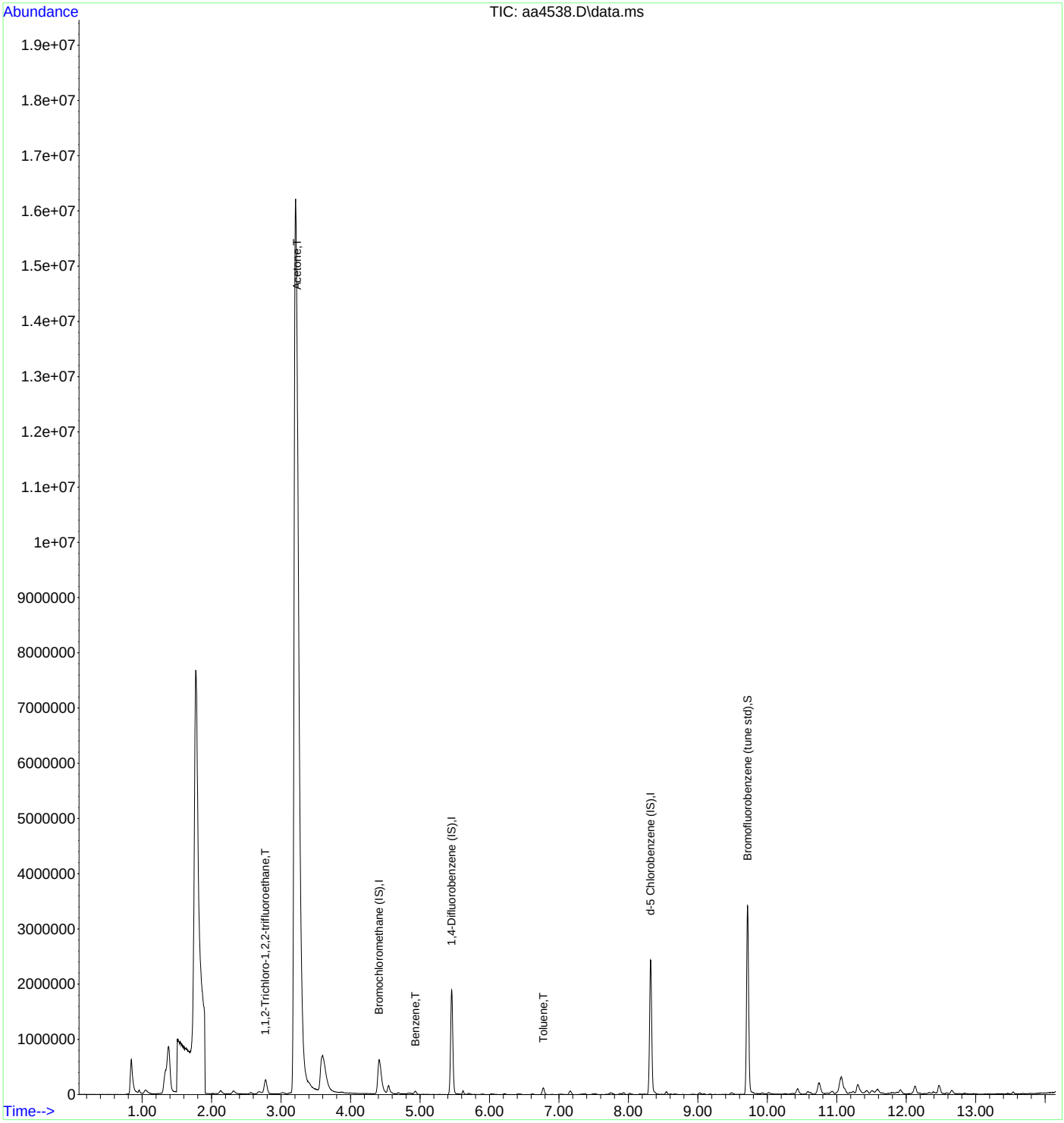
Quant Time: Nov 06 13:32:47 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

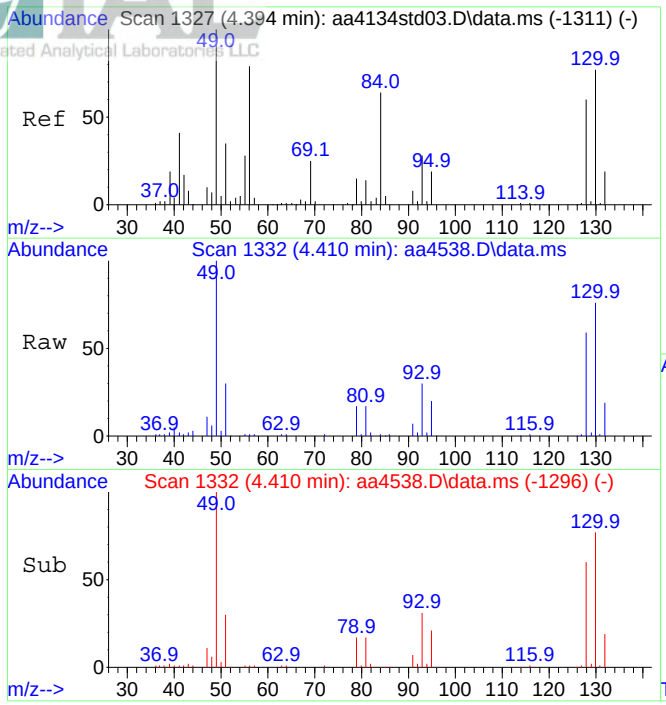
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.410 | 130 | 412173 | 10.00 | ppbV | | 0.016 |
| 39) 1,4-Difluorobenzene (IS) | 5.455 | 114 | 1787711 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.320 | 117 | 1608463 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.715 | 95 | 1519429 | 10.84 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.773 | 101 | 153436 | 1.32 | ppbV | | 100 |
| 21) Acetone | 3.230 | 43 | 1007238 | 16.20 | ppbV | | 93 |
| 37) Benzene | 4.934 | 78 | 48667 | 0.30 | ppbV | # | 91 |
| 47) Toluene | 6.776 | 91 | 108950 | 0.43 | ppbV | | 97 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\11-2023\11-03-2023\
Data File : aa4538.D
Acq On : 3 Nov 2023 5:00 pm
Operator : jjw
Sample : E23-04828-26
Misc : Dup of E23-04828-06, Can # 2883
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 06 13:32:47 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

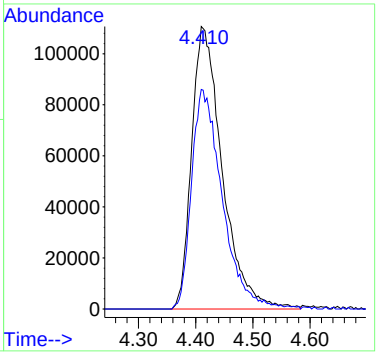


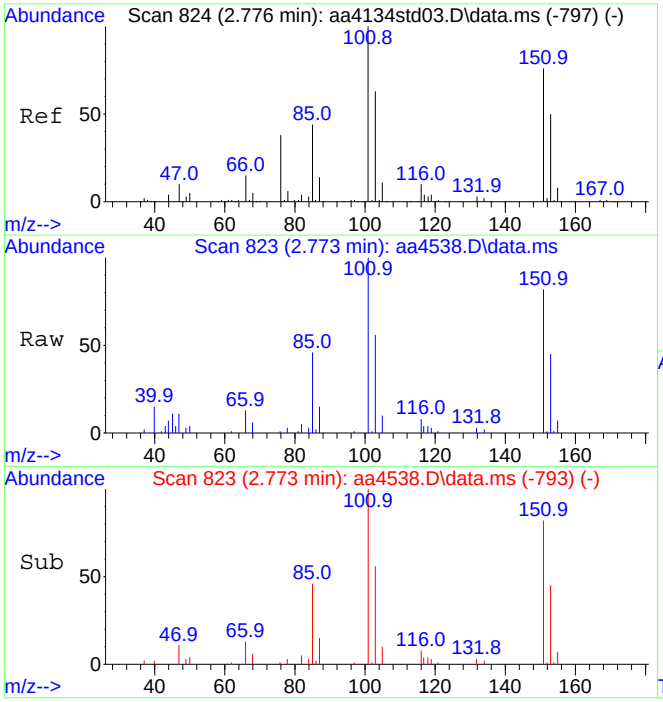



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.410 min Scan# 1332
Delta R.T. 0.016 min
Lab File: aa4538.D
Acq: 3 Nov 2023 5:00 pm

Tgt Ion:130 Resp: 412173

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 78.1 | 62.2 | 93.4 |

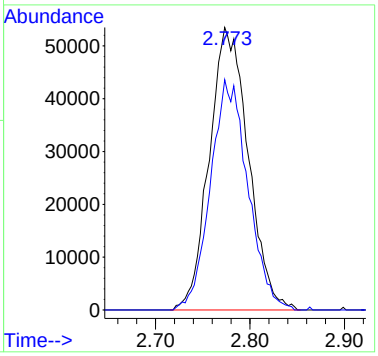


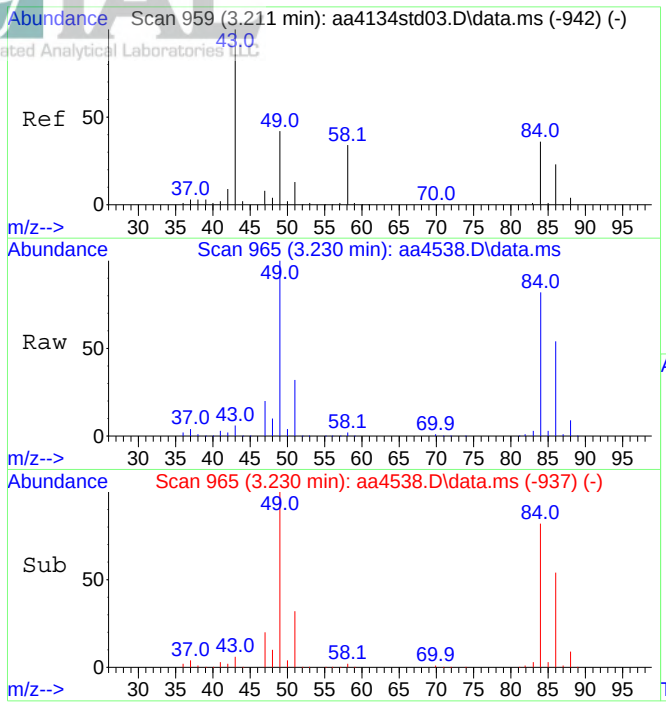




#16
1,1,2-Trichloro-1,2,2-trifluoroethane
Concen: 1.32 ppbV
RT: 2.773 min Scan# 823
Delta R.T. -0.003 min
Lab File: aa4538.D
Acq: 3 Nov 2023 5:00 pm

Tgt Ion:101 Resp: 153436

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 151 | 78.2 | 62.4 | 93.6 |

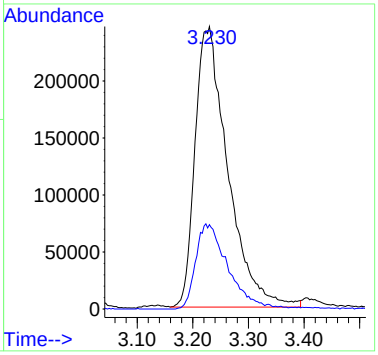


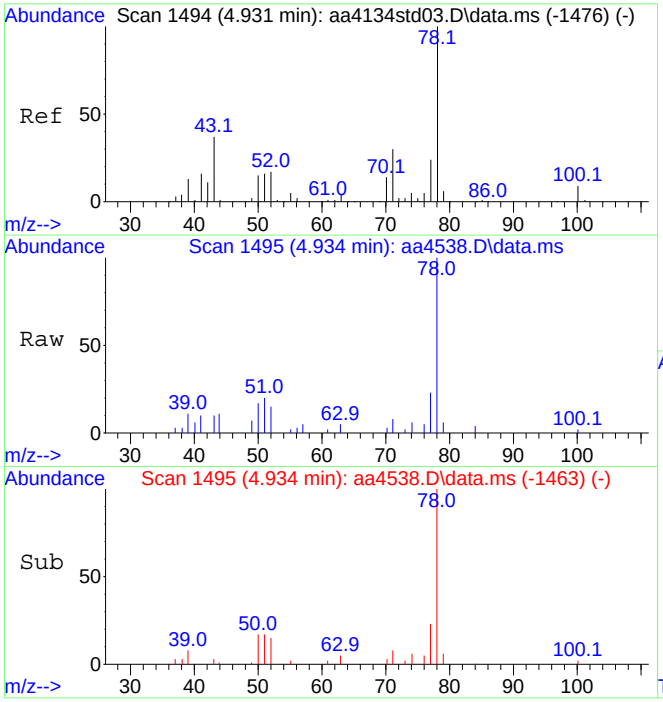



#21
Acetone
Concen: 16.20 ppbV
RT: 3.230 min Scan# 965
Delta R.T. 0.019 min
Lab File: aa4538.D
Acq: 3 Nov 2023 5:00 pm

Tgt Ion: 43 Resp: 1007238

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 30.0 | 27.1 | 40.7 |

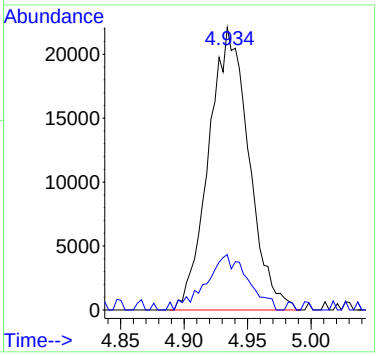


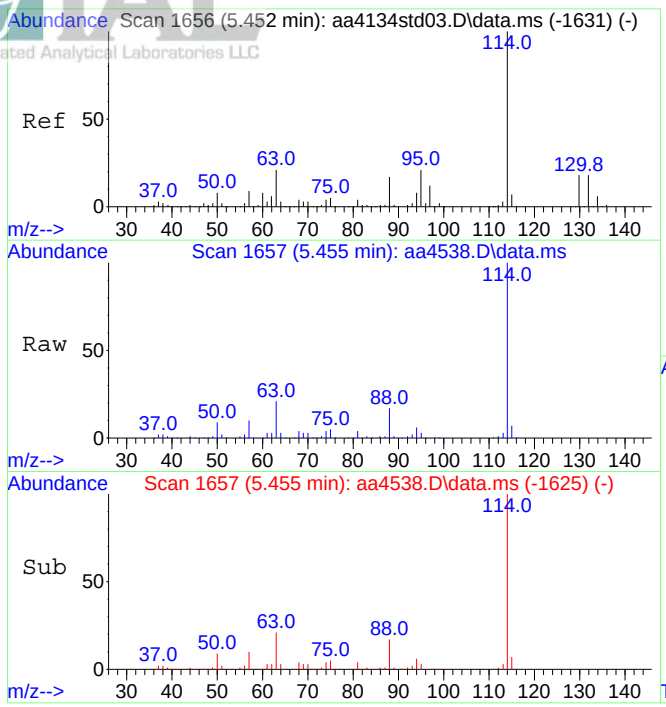




#37
Benzene
Concen: 0.30 ppbV
RT: 4.934 min Scan# 1495
Delta R.T. 0.003 min
Lab File: aa4538.D
Acq: 3 Nov 2023 5:00 pm

Tgt Ion: 78 Resp: 48667

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 20.4 | 13.4 | 20.0# |

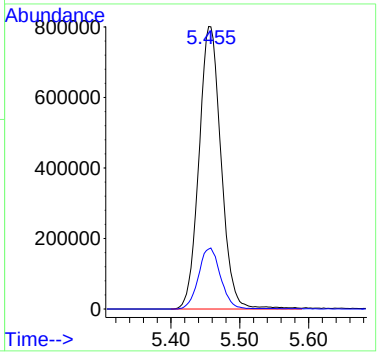


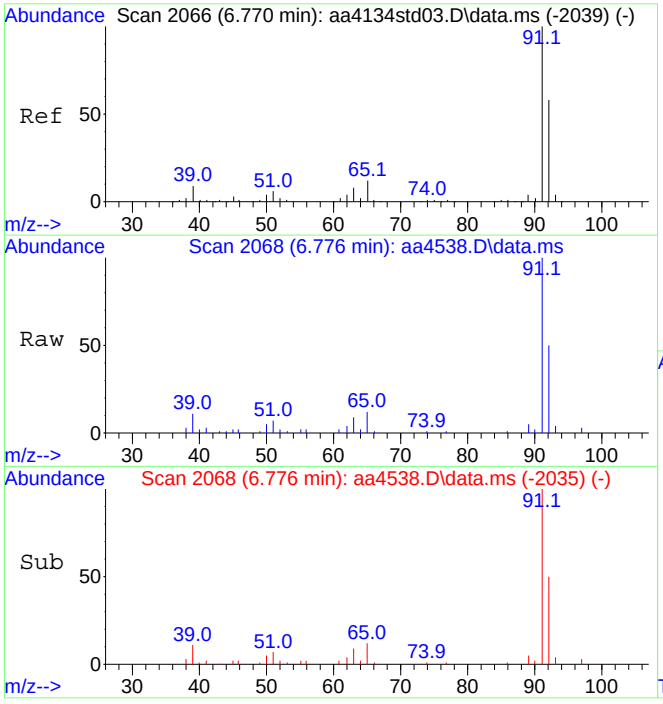



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.455 min Scan# 1657
Delta R.T. 0.003 min
Lab File: aa4538.D
Acq: 3 Nov 2023 5:00 pm

Tgt Ion:114 Resp: 1787711

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 21.7 | 17.0 | 25.6 |

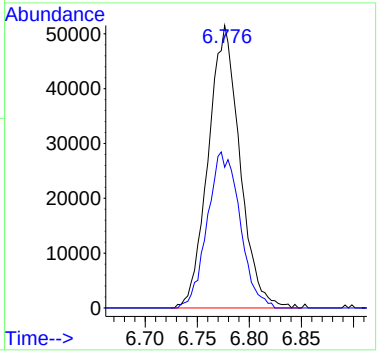


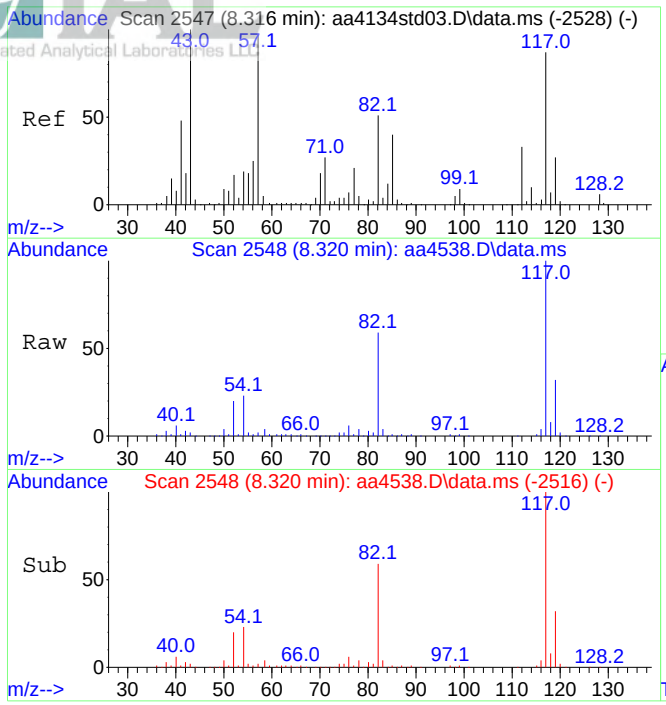




#47
Toluene
Concen: 0.43 ppbV
RT: 6.776 min Scan# 2068
Delta R.T. 0.006 min
Lab File: aa4538.D
Acq: 3 Nov 2023 5:00 pm

Tgt Ion: 91 Resp: 108950

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 56.9 | 47.3 | 70.9 |

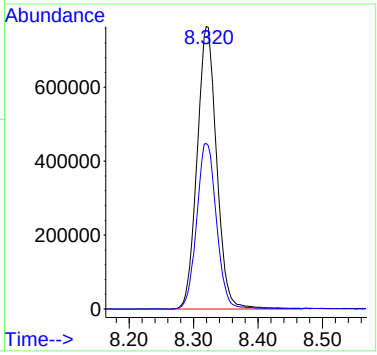


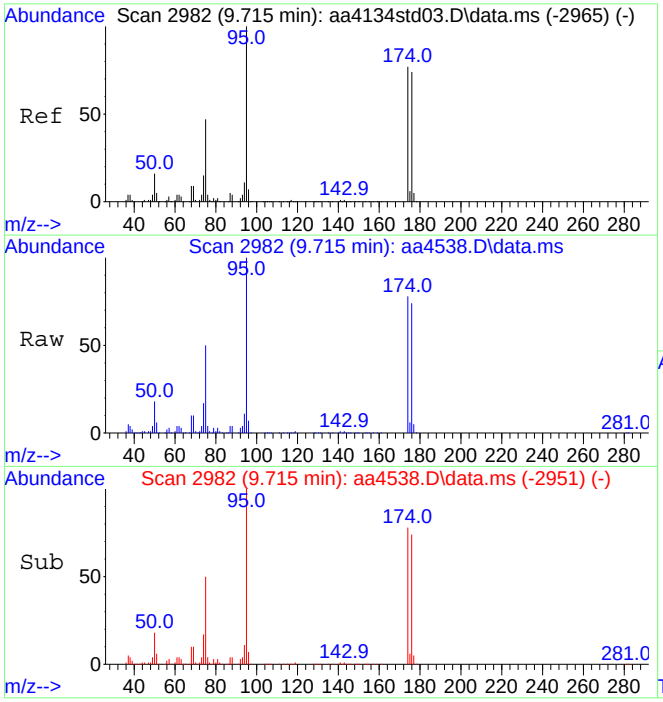



#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.320 min Scan# 2548
Delta R.T. 0.003 min
Lab File: aa4538.D
Acq: 3 Nov 2023 5:00 pm

Tgt Ion:117 Resp: 1608463

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 59.5 | 47.0 | 70.4 |

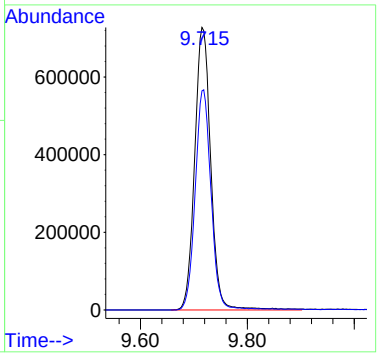



#64
Bromofluorobenzene (tune std)
Concen: 10.84 ppbV
RT: 9.715 min Scan# 2982
Delta R.T. -0.000 min
Lab File: aa4538.D
Acq: 3 Nov 2023 5:00 pm

Tgt Ion: 95 Resp: 1519429

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 77.4 | 61.1 | 91.7 |



**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

SDG Number: E23-05061
IAL Sample ID: E23-05061-03
Matrix: Air
Summa ID: 3045a

Date Received: 11/17/23
Date Analyzed: 12/7/23,12/7/23
Lab Data File#: AA4869,AA4870
Dilution Factor: 1
Injection Volume: 500ml
GC/MS Column: RTX-1, 0.32 mmID

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-05061-03** | | **E23-05061-23** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Acetone | 67-64-1 | **11** | | **11** | | 0.20 | **0.00%** |
| Allyl Chloride | 107-05-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Benzene | 71-43-2 | **2.6** | | **2.3** | | 0.20 | **12.24%** |
| Bromodichloromethane | 75-27-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Bromoform | 75-25-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Bromomethane | 74-83-9 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Butadiene | 106-99-0 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Chlorobenzene | 108-90-7 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Chloroethane | 75-00-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Chloroform | 67-66-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Chloromethane | 74-87-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Carbon disulfide | 75-15-0 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Carbon tetrachloride | 56-23-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 2-Chlorotoluene | 95-49-8 | 0.20 | U | **0.27** | | 0.20 | **NC** |
| Cyclohexane | 110-82-7 | **3.9** | | **3.4** | | 0.20 | **13.70%** |
| Dibromochloromethane | 124-48-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dibromoethane | 106-93-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,4-Dioxane | 123-91-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Ethanol | 64-17-5 | **10** | | 0.20 | U | 0.20 | **NC** |
| Ethylbenzene | 100-41-4 | **1.9** | | **1.6** | | 0.20 | **17.14%** |
| 4-Ethyltoluene | 622-96-8 | **1.9** | X | **1.4** | X | 0.20 | **30.30%** |
| n-Heptane | 142-82-5 | **3.7** | | **3.4** | | 0.20 | **8.45%** |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| n-Hexane | 110-54-3 | **4.4** | | **3.8** | | 0.20 | **14.63%** |
| Isopropanol | 67-63-0 | **2.7** | | 0.20 | U | 0.20 | **NC** |

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**INTEGRATED ANALYTICAL LABORATORIES, LLC**

***Integrated Analytical Laboratories LLC***

**Analysis: Volatile Organic Compounds by EPA Method TO-15**

**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 11/17/23 |
| SDG Number: | E23-05061 | Date Analyzed: | 12/7/23,12/7/23 |
| IAL Sample ID: | E23-05061-03 | Lab Data File#: | AA4869,AA4870 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 3045a | Injection Volume: | 500ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-05061-03** | | **E23-05061-23** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Methylene chloride | 75-09-2 | **2.8** | | 0.20 | U | 0.20 | **NC** |
| Methyl ethyl ketone | 78-93-3 | **0.85** | | **0.83** | | 0.20 | **2.38%** |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | U | **0.24** | | 0.20 | **NC** |
| Methyl methacrylate | 80-62-6 | 0.20 | U | **3.4** | | 0.20 | **NC** |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Styrene | 100-42-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Tert-butyl alcohol | 75-65-0 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Tetrachloroethene | 127-18-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Tetrahydrofuran | 109-99-9 | **0.96** | | **0.90** | | 0.20 | **6.45%** |
| Toluene | 108-88-3 | **7.1** | | **7.1** | | 0.20 | **0.00%** |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1,1-Trichloroethane | 71-55-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Trichloroethene | 79-01-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Trichlorofluoromethane | 75-69-4 | **0.33** | | **0.33** | | 0.20 | **0.00%** |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2,4-Trimethylbenzene | 95-63-6 | **1.9** | | **1.5** | | 0.20 | **23.53%** |
| 1,3,5-Trimethylbenzene | 108-67-8 | **0.53** | | **0.45** | | 0.20 | **16.33%** |
| 2,2,4-Trimethylpentane | 540-84-1 | **6.9** | | **7.0** | | 0.20 | **-1.44%** |
| Vinyl bromide | 593-60-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Vinyl chloride | 75-01-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Xylenes (m&p) | 179601-23-1 | **7.0** | | **5.9** | | 0.40 | **17.05%** |
| Xylenes (o) | 95-47-6 | **2.3** | | **2.0** | | 0.20 | **13.95%** |

**RPD must be <25% for all laboratory duplicate samples. Laboratory duplicate samples are run once daily.**

**NC = The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample.**

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

Quantitation Report (QT Reviewed)

Data Path : C:\DATA\2023\12-2023\12-07-2023\
Data File : aa4869.D
Acq On : 7 Dec 2023 7:50 pm
Operator : jjw
Sample : E23-05061-03
Misc : 3045A, 500cc
ALS Vial : 23 Sample Multiplier: 1

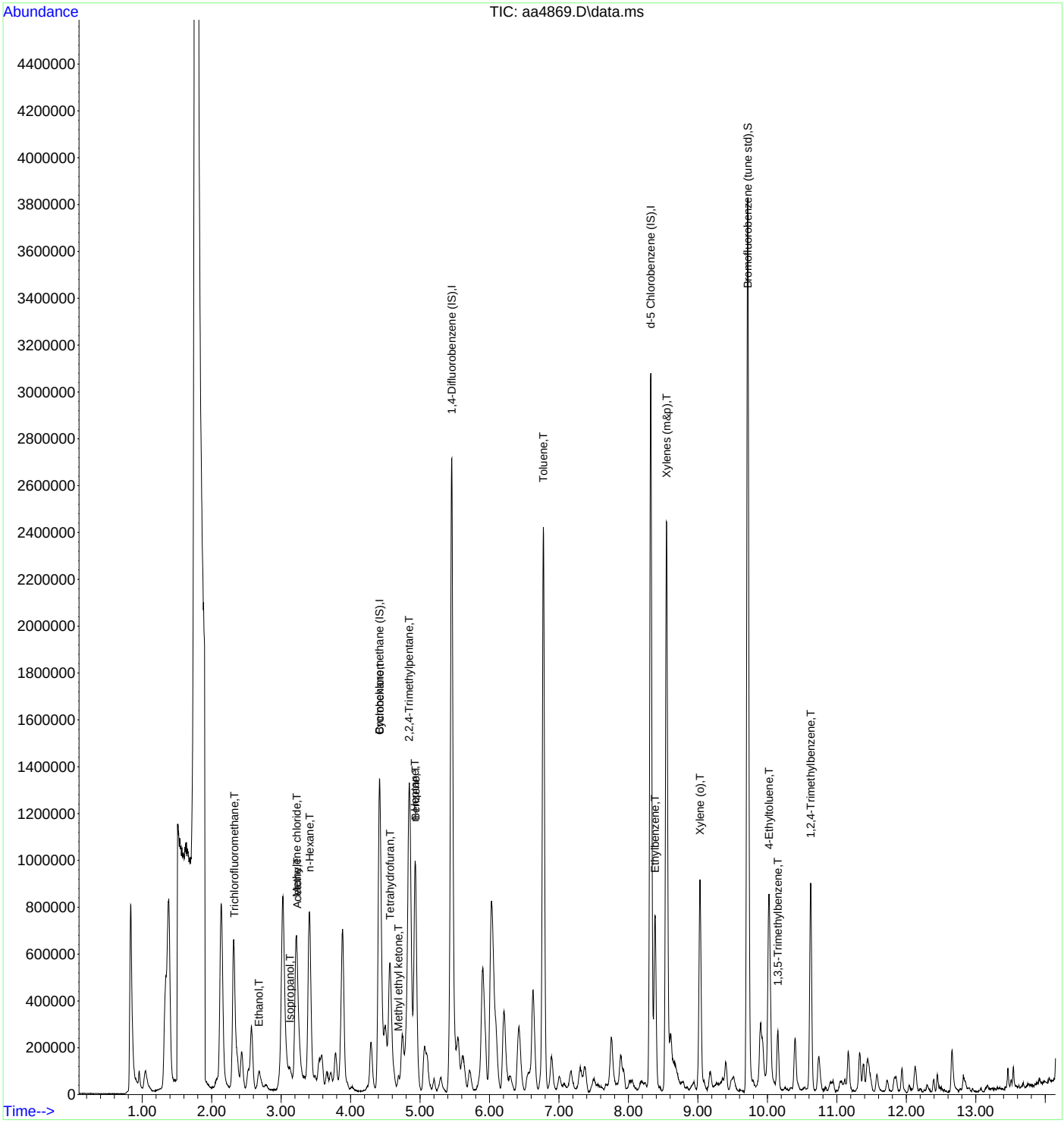
Quant Time: Dec 13 12:49:53 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

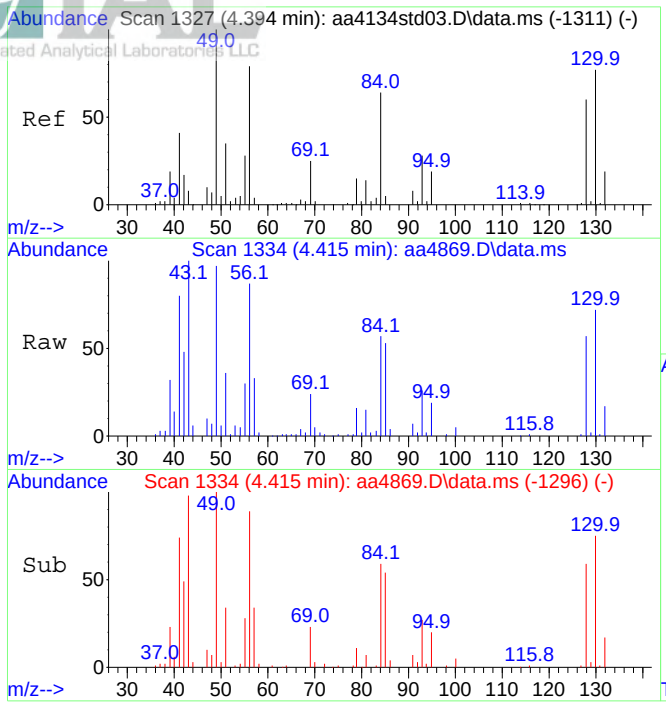
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.415 | 130 | 377969 | 10.00 | ppbV | | 0.021 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 2104054 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.322 | 117 | 1855524 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 1687506 | 10.43 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 12) Trichlorofluoromethane | 2.329 | 101 | 35340 | 0.33 | ppbV | | 84 |
| 13) Ethanol | 2.682 | 45 | 111256 | 10.05 | ppbV | | 96 |
| 19) Isopropanol | 3.129 | 45 | 208140 | 2.75 | ppbV | # | 74 |
| 20) Methylene chloride | 3.226 | 49 | 129701 | 2.79 | ppbV | | 90 |
| 21) Acetone | 3.232 | 43 | 610229 | 10.70 | ppbV | | 96 |
| 24) n-Hexane | 3.412 | 57 | 520146 | 4.37 | ppbV | | 97 |
| 29) Cyclohexane | 4.419 | 56 | 324297 | 3.90 | ppbV | # | 74 |
| 33) Tetrahydrofuran | 4.570 | 42 | 54848 | 0.96 | ppbV | # | 80 |
| 35) Methyl ethyl ketone | 4.689 | 43 | 78559 | 0.85 | ppbV | | 96 |
| 36) n-Heptane | 4.927 | 43 | 386594 | 3.70 | ppbV | | 97 |
| 37) Benzene | 4.936 | 78 | 388496 | 2.59 | ppbV | | 94 |
| 41) 2,2,4-Trimethylpentane | 4.843 | 57 | 1877837 | 6.85 | ppbV | | 96 |
| 47) Toluene | 6.775 | 91 | 2112833 | 7.14 | ppbV | | 100 |
| 58) Ethylbenzene | 8.383 | 91 | 655687 | 1.92 | ppbV | | 98 |
| 59) Xylenes (m&p) | 8.550 | 91 | 1780980 | 7.03 | ppbV | | 97 |
| 60) Xylene (o) | 9.029 | 91 | 648554 | 2.35 | ppbV | | 97 |
| 67) 4-Ethyltoluene | 10.023 | 105 | 762163 | 1.91 | ppbV | | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.151 | 105 | 170234 | 0.53 | ppbV | | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 614979 | 1.92 | ppbV | | 98 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-07-2023\
Data File : aa4869.D
Acq On : 7 Dec 2023 7:50 pm
Operator : jjw
Sample : E23-05061-03
Misc : 3045A, 500cc
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Dec 13 12:49:53 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

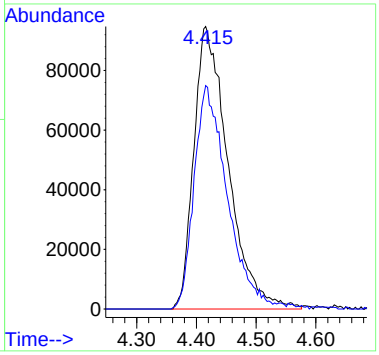


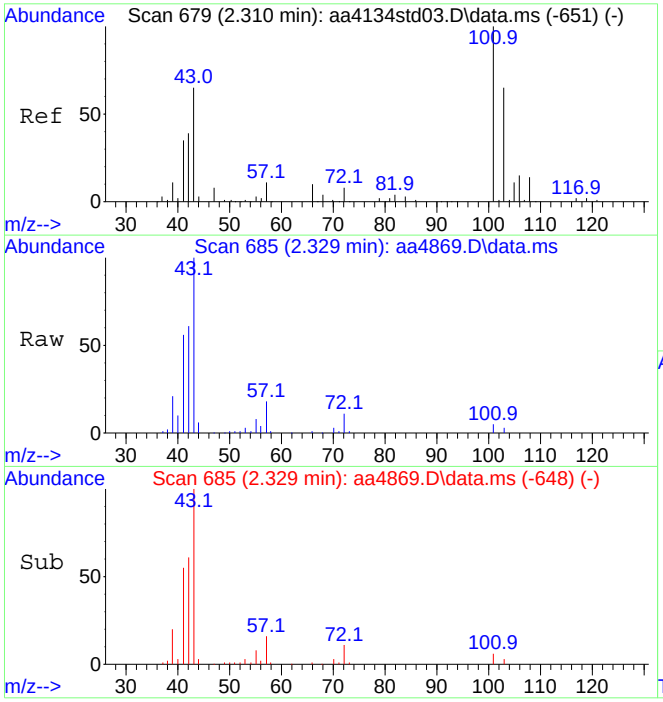



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.415 min Scan# 1334
Delta R.T. 0.021 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion:130 Resp: 377969

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 76.5 | 62.2 | 93.4 |

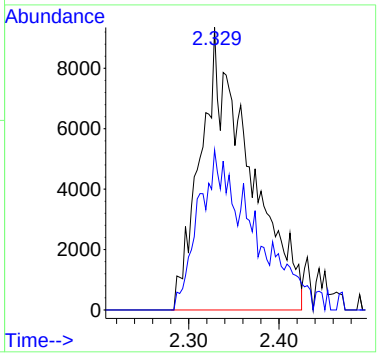


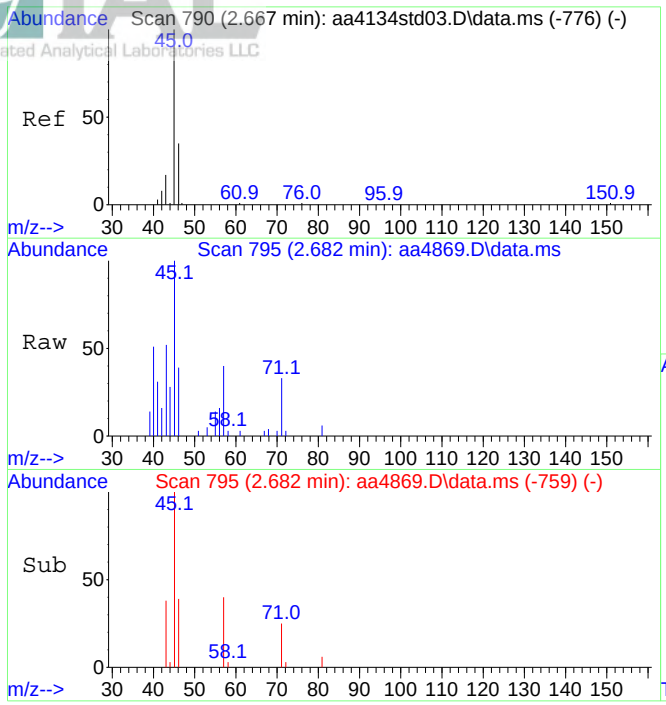




#12
Trichlorofluoromethane
Concen: 0.33 ppbV
RT: 2.329 min Scan# 685
Delta R.T. 0.018 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion:101 Resp: 35340

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 53.1 | 52.5 | 78.7 |

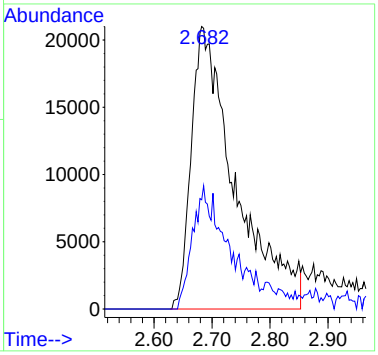


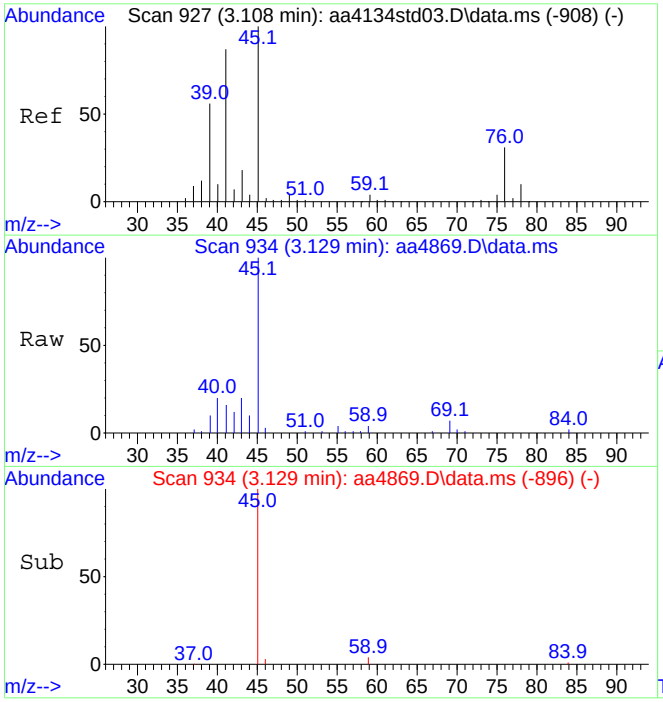



#13
Ethanol
Concen: 10.05 ppbV
RT: 2.682 min Scan# 795
Delta R.T. 0.015 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 45 Resp: 111256

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 46 | 35.3 | 30.0 | 45.0 |

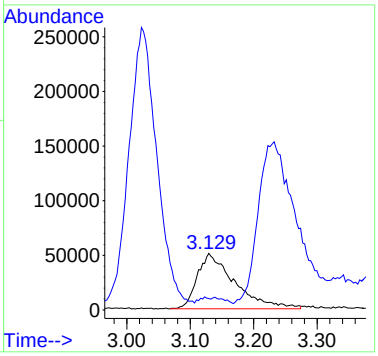


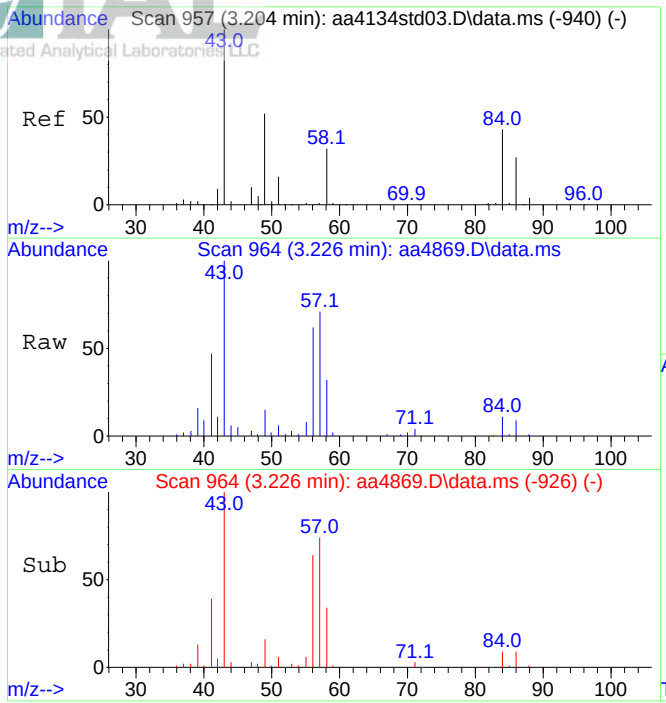




#19
Isopropanol
Concen: 2.75 ppbV
RT: 3.129 min Scan# 934
Delta R.T. 0.021 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 45 Resp: 208140

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 43 | 6.6 | 14.6 | 21.8# |

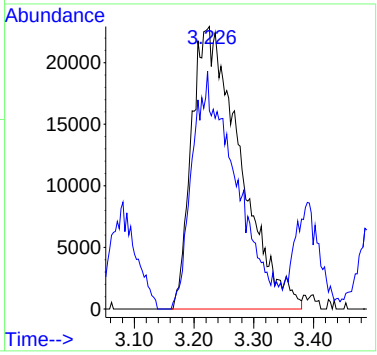


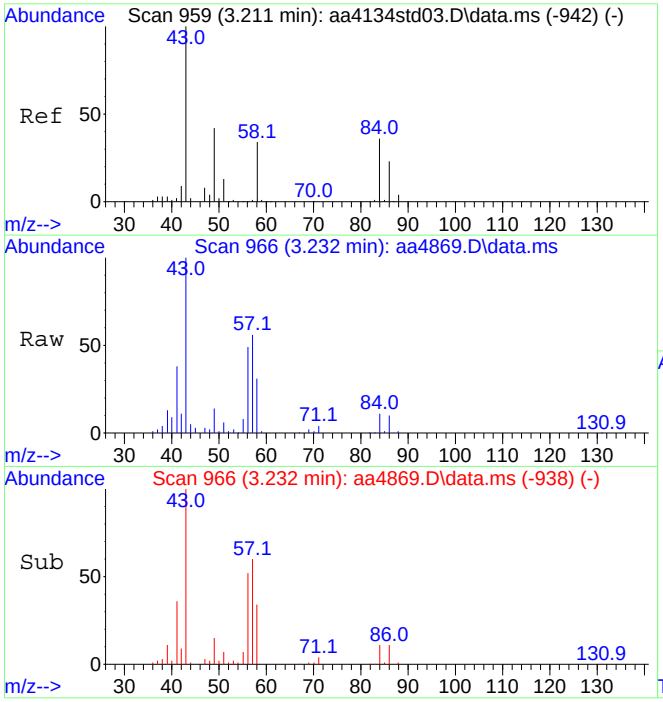



#20
Methylene chloride
Concen: 2.79 ppbV
RT: 3.226 min Scan# 964
Delta R.T. 0.022 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 49 Resp: 129701

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 75.6 | 64.8 | 104.8 |

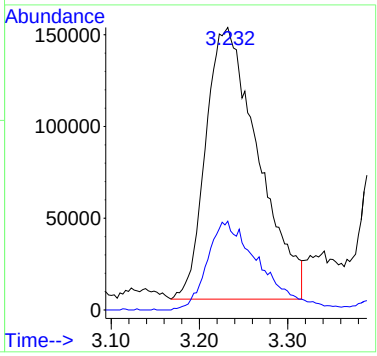


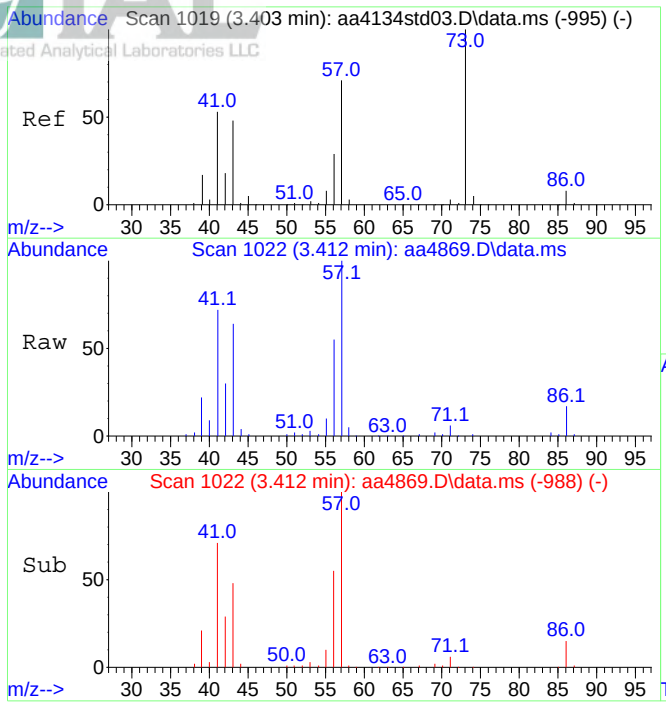




#21
Acetone
Concen: 10.70 ppbV
RT: 3.232 min Scan# 966
Delta R.T. 0.021 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 43 Resp: 610229

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 31.8 | 27.1 | 40.7 |

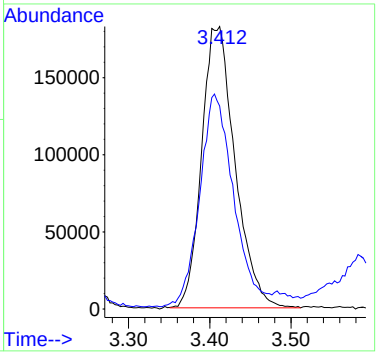


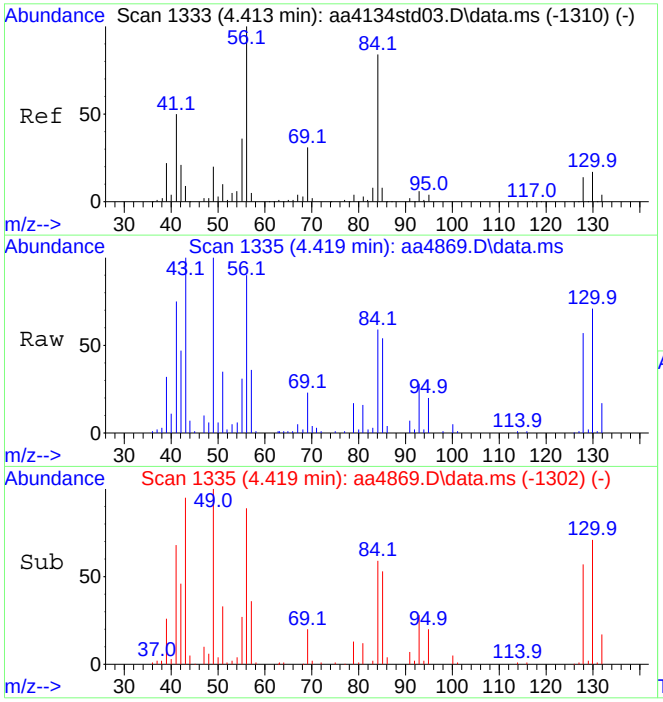



#24
n-Hexane
Concen: 4.37 ppbV
RT: 3.412 min Scan# 1022
Delta R.T. 0.009 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 57 Resp: 520146

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 41 | 80.4 | 66.4 | 99.6 |

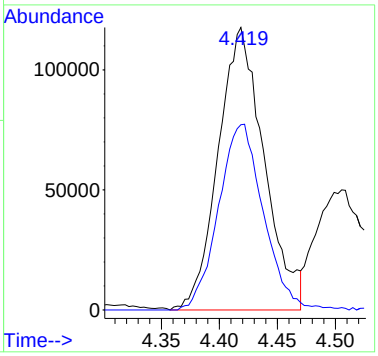


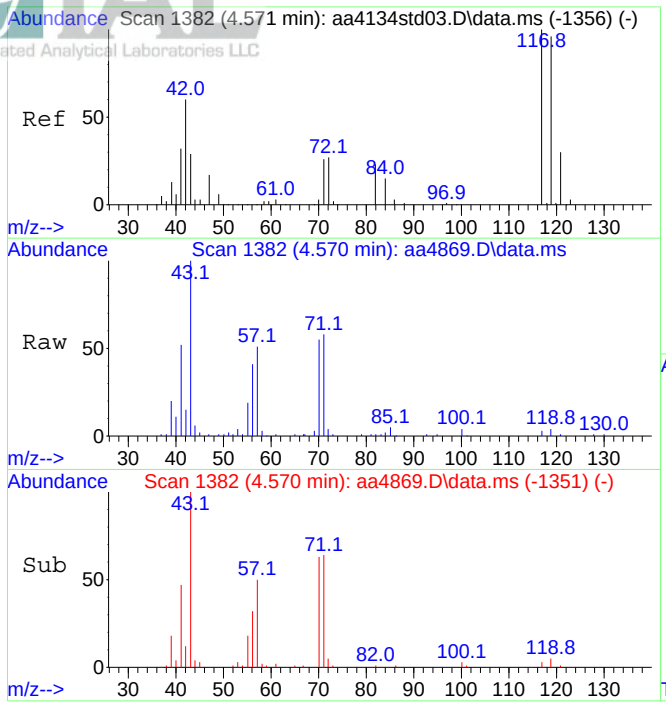




#29
Cyclohexane
Concen: 3.90 ppbV
RT: 4.419 min Scan# 1335
Delta R.T. 0.005 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 56 Resp: 324297

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 64.3 | 71.2 | 106.8# |

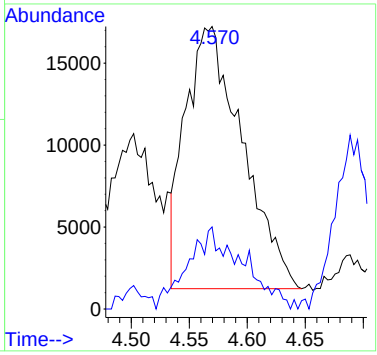


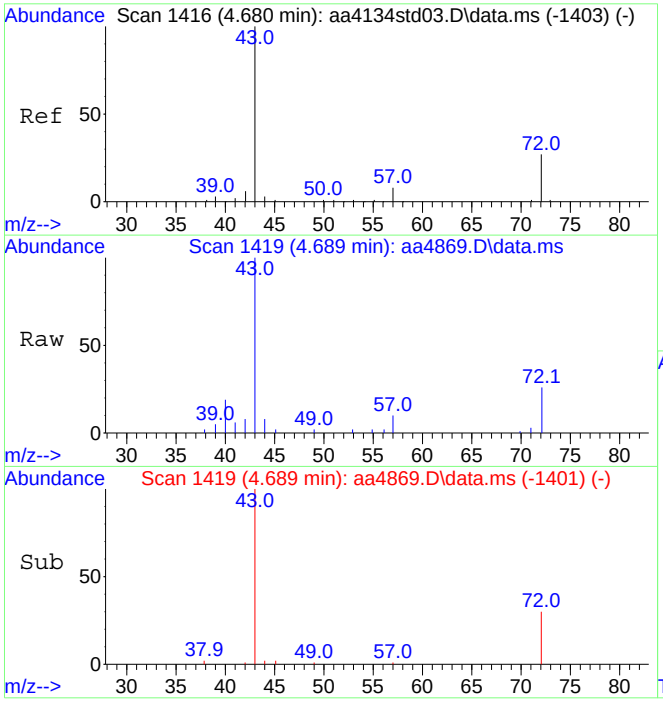



#33
Tetrahydrofuran
Concen: 0.96 ppbV
RT: 4.570 min Scan# 1382
Delta R.T. -0.001 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 42 Resp: 54848

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 42 | 100 | | |
| 72 | 29.9 | 33.8 | 50.8# |

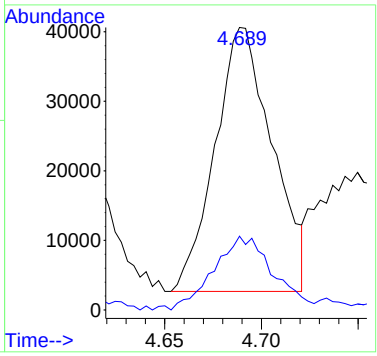


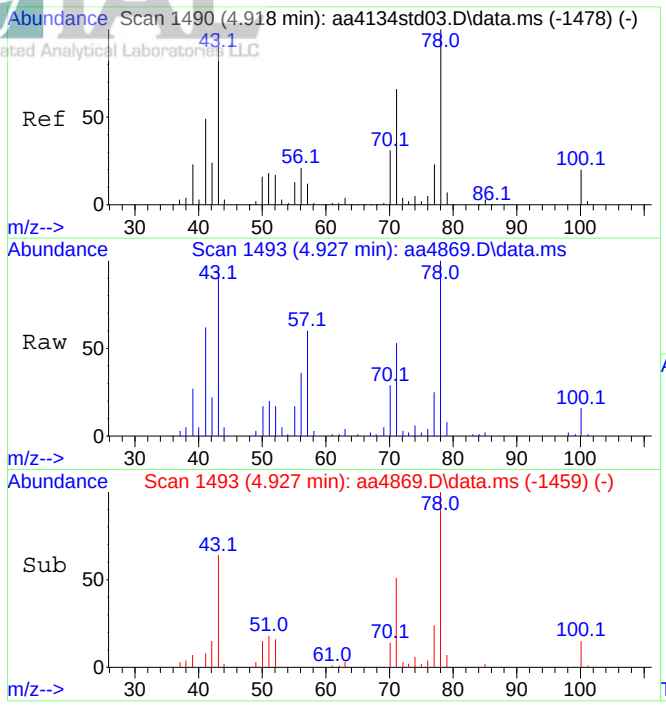




#35
Methyl ethyl ketone
Concen: 0.85 ppbV
RT: 4.689 min Scan# 1419
Delta R.T. 0.009 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 43 Resp: 78559

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 29.0 | 21.6 | 32.4 |

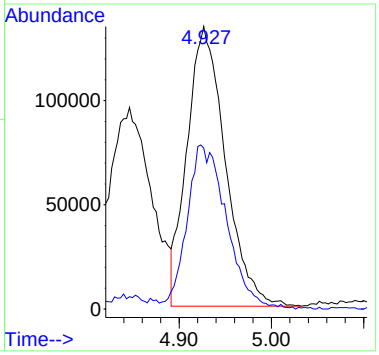


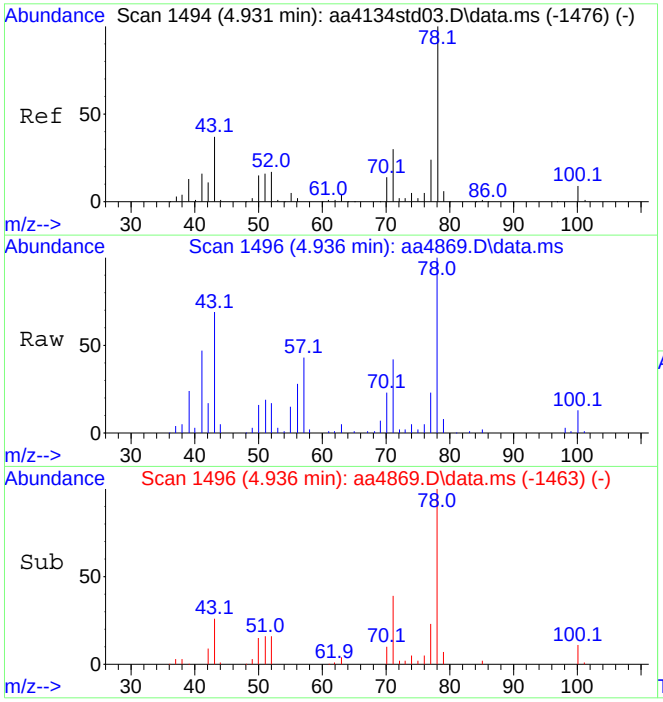



#36
n-Heptane
Concen: 3.70 ppbV
RT: 4.927 min Scan# 1493
Delta R.T. 0.009 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 43 Resp: 386594

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 71 | 60.7 | 50.5 | 75.7 |

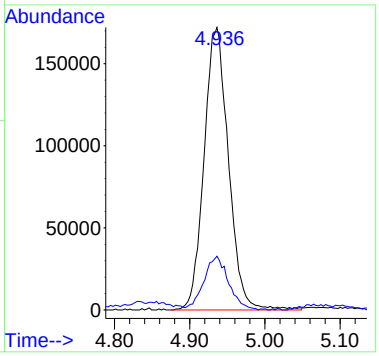


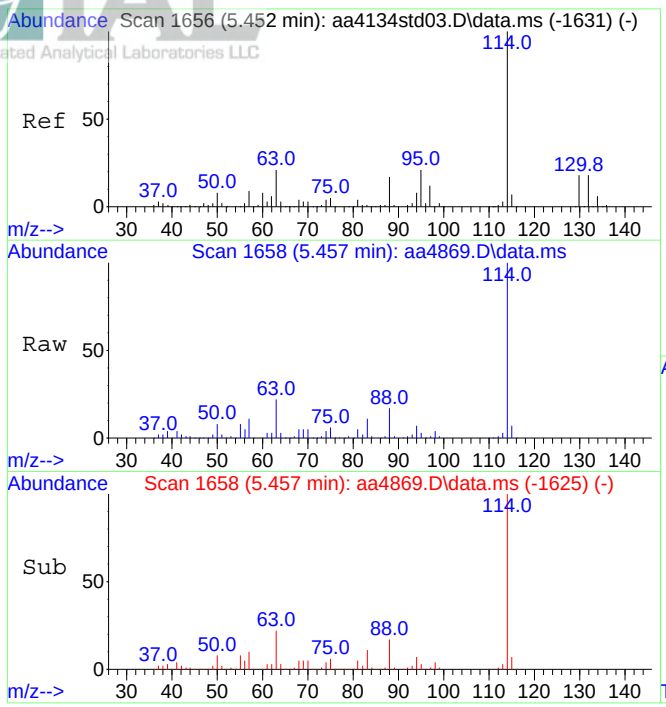




#37
Benzene
Concen: 2.59 ppbV
RT: 4.936 min Scan# 1496
Delta R.T. 0.005 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 78 Resp: 388496

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 19.2 | 13.4 | 20.0 |

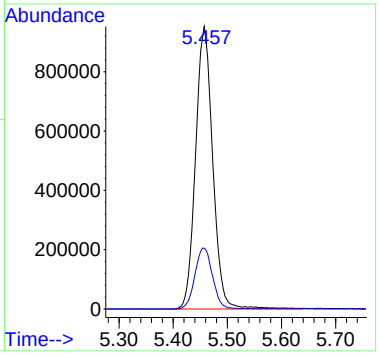


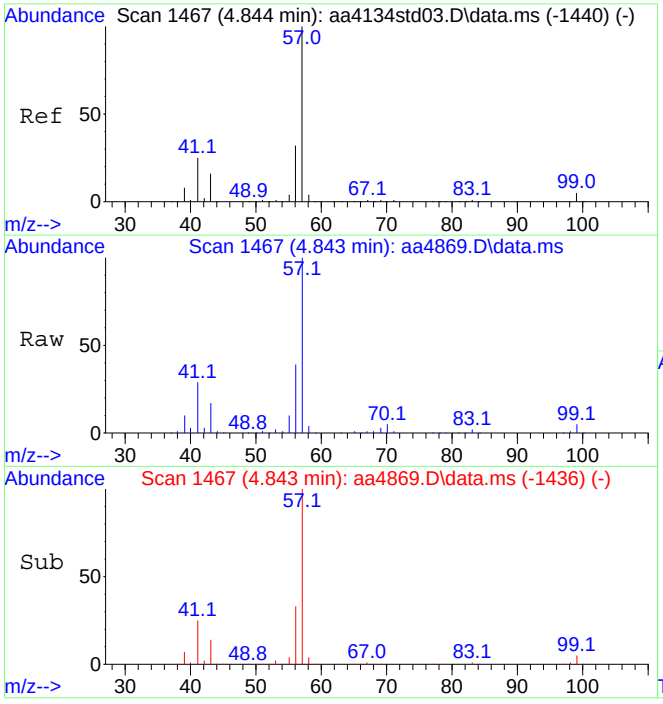



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.457 min Scan# 1658
Delta R.T. 0.005 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion:114 Resp: 2104054

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.1 | 17.0 | 25.6 |

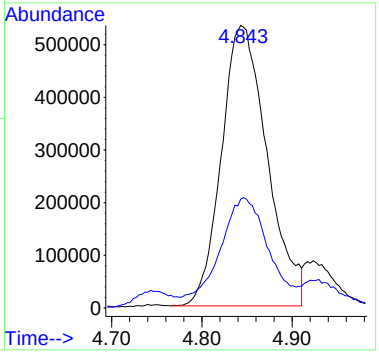


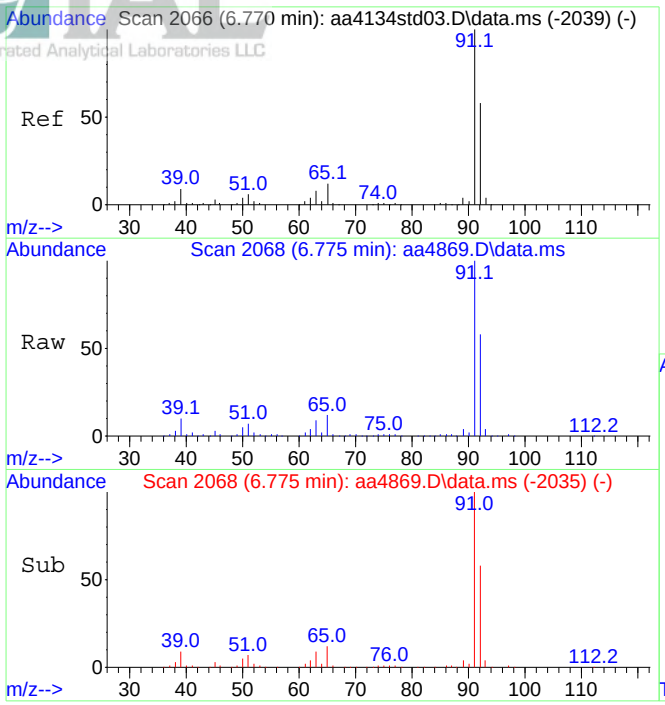




#41
2,2,4-Trimethylpentane
Concen: 6.85 ppbV
RT: 4.843 min Scan# 1467
Delta R.T. -0.001 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 57 Resp: 1877837

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 56 | 34.6 | 25.7 | 38.5 |

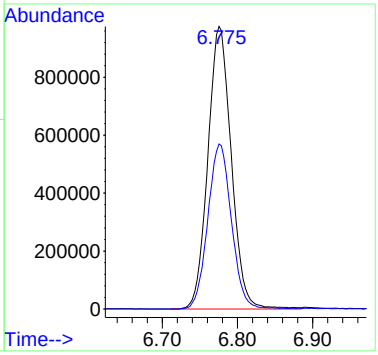


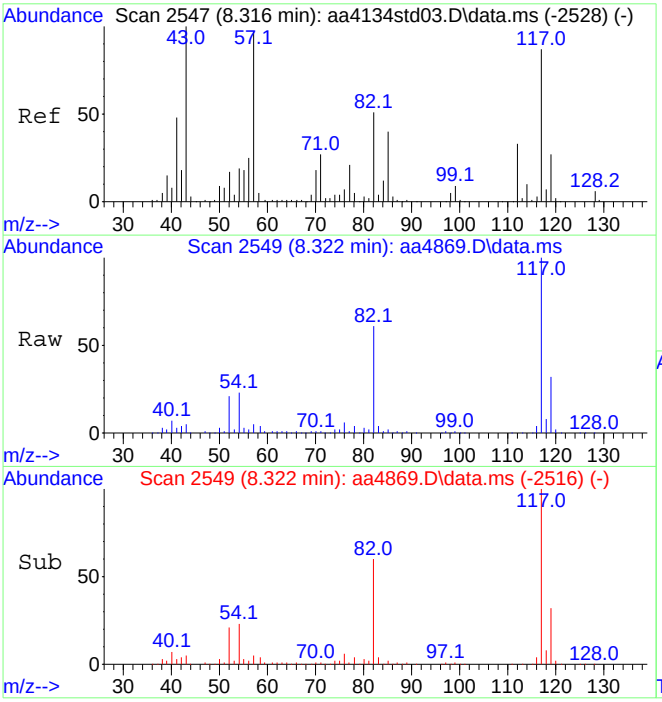



#47
Toluene
Concen: 7.14 ppbV
RT: 6.775 min Scan# 2068
Delta R.T. 0.005 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 91 Resp: 2112833

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 59.0 | 47.3 | 70.9 |

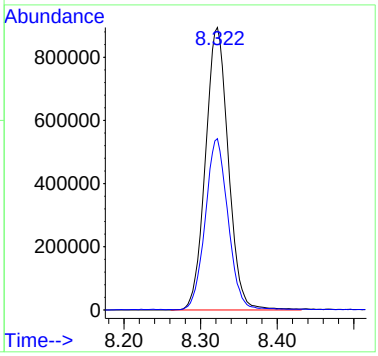


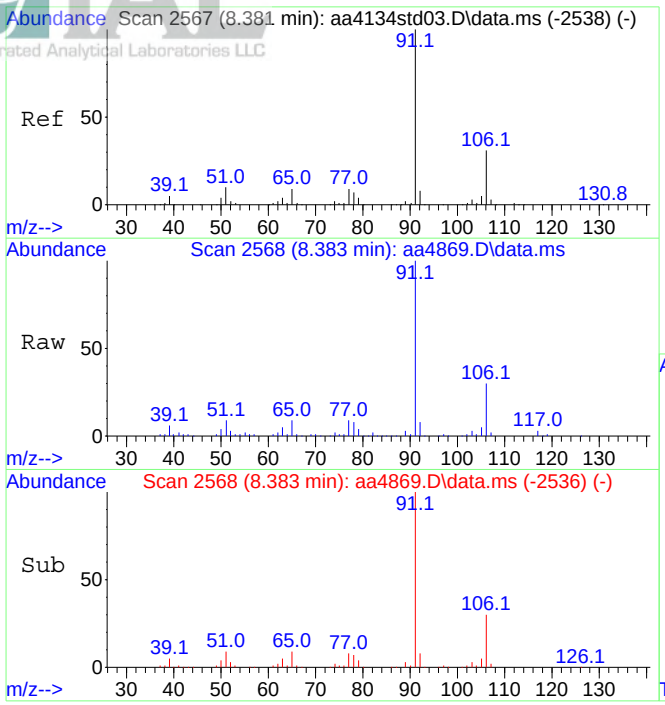




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.322 min Scan# 2549
Delta R.T. 0.005 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion:117 Resp: 1855524

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 60.2 | 47.0 | 70.4 |

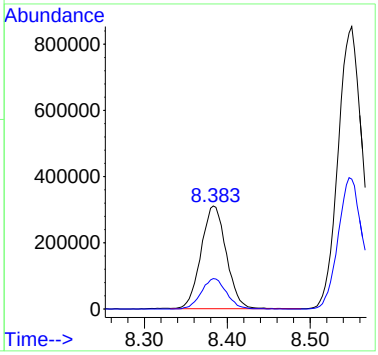


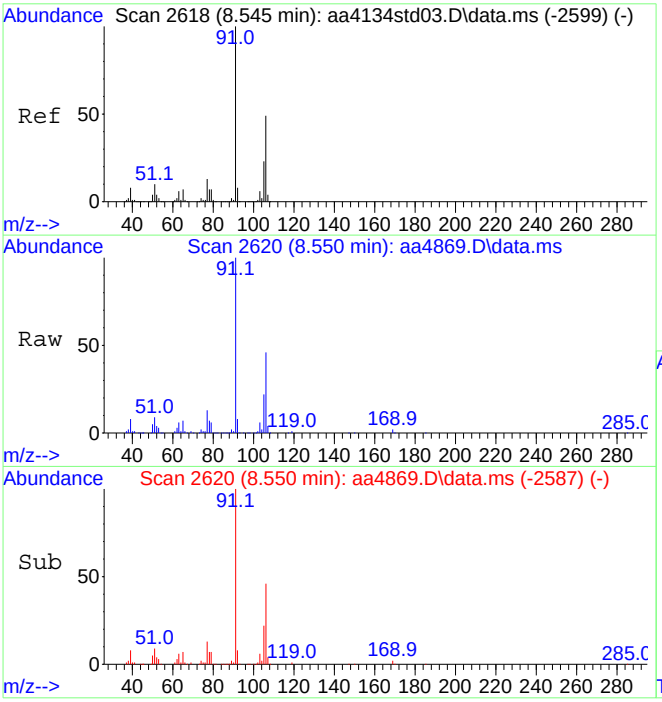



#58
Ethylbenzene
Concen: 1.92 ppbV
RT: 8.383 min Scan# 2568
Delta R.T. 0.002 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 91 Resp: 655687

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 29.4 | 24.6 | 36.8 |

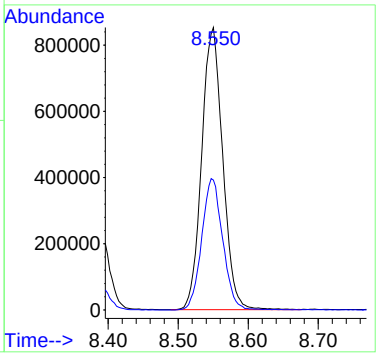


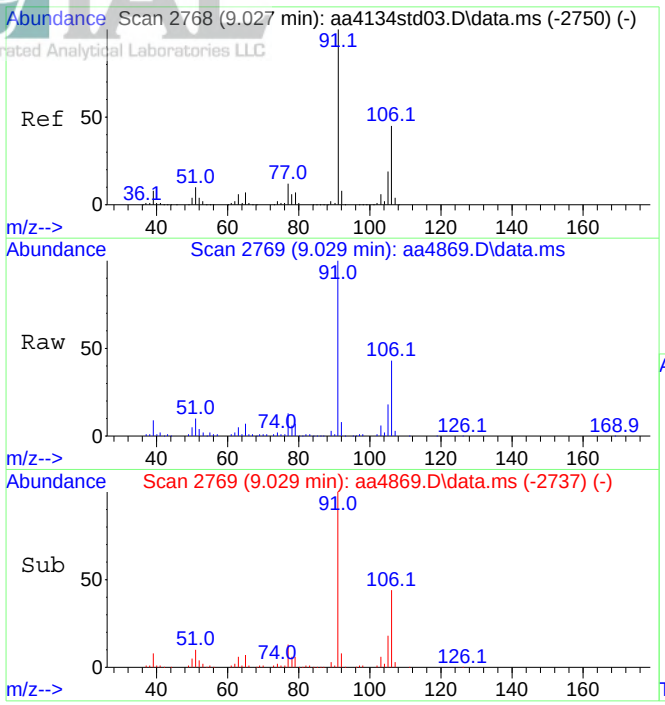




#59
Xylenes (m&p)
Concen: 7.03 ppbV
RT: 8.550 min Scan# 2620
Delta R.T. 0.005 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 91 Resp: 1780980

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 46.5 | 39.0 | 58.4 |

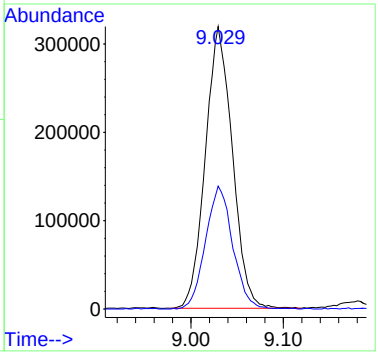


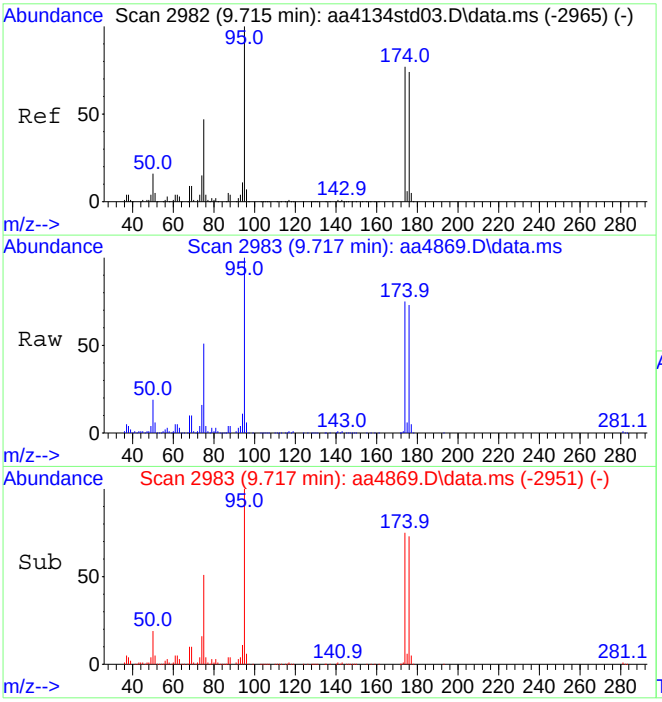



#60
Xylene (o)
Concen: 2.35 ppbV
RT: 9.029 min Scan# 2769
Delta R.T. 0.002 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 91 Resp: 648554

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 44.0 | 36.8 | 55.2 |

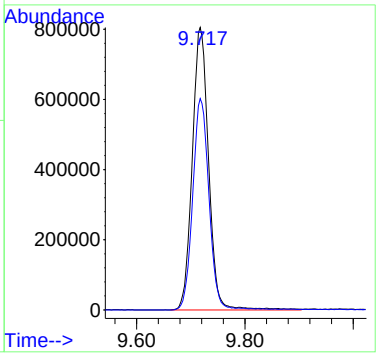


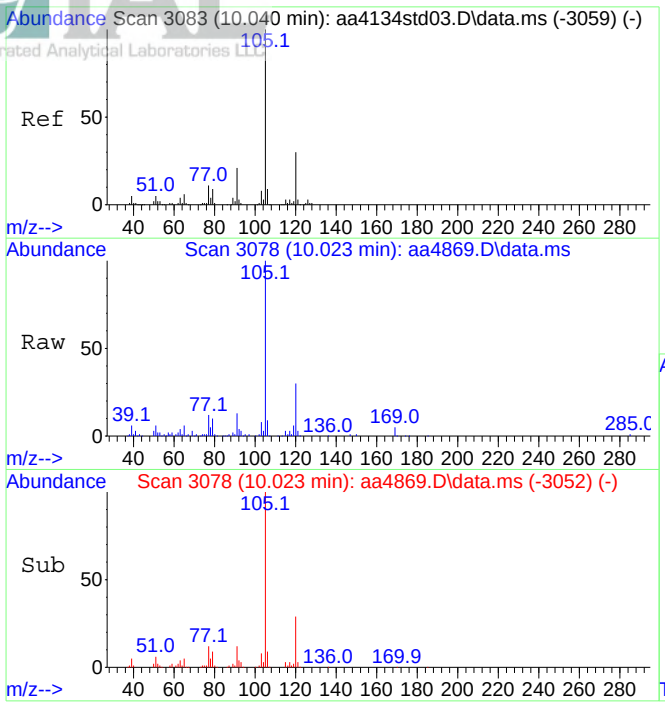




#64
Bromofluorobenzene (tune std)
Concen: 10.43 ppbV
RT: 9.717 min Scan# 2983
Delta R.T. 0.002 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 95 Resp: 1687506

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 75.1 | 61.1 | 91.7 |

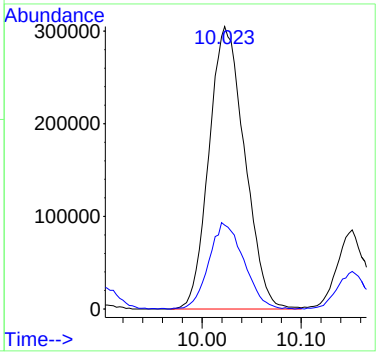


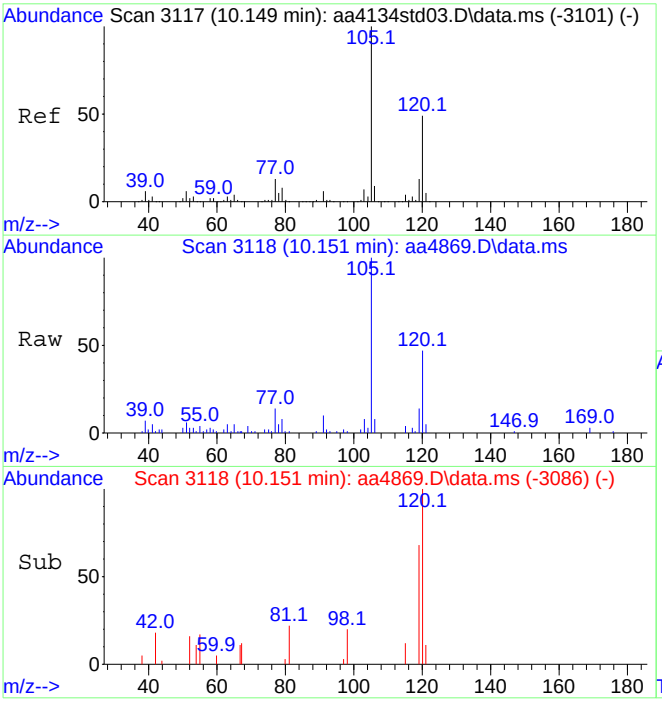



#67
4-Ethyltoluene
Concen: 1.91 ppbV
RT: 10.023 min Scan# 3078
Delta R.T. -0.017 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion:105 Resp: 762163

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 30.0 | 23.4 | 35.2 |

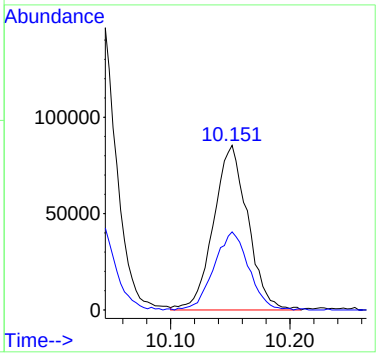


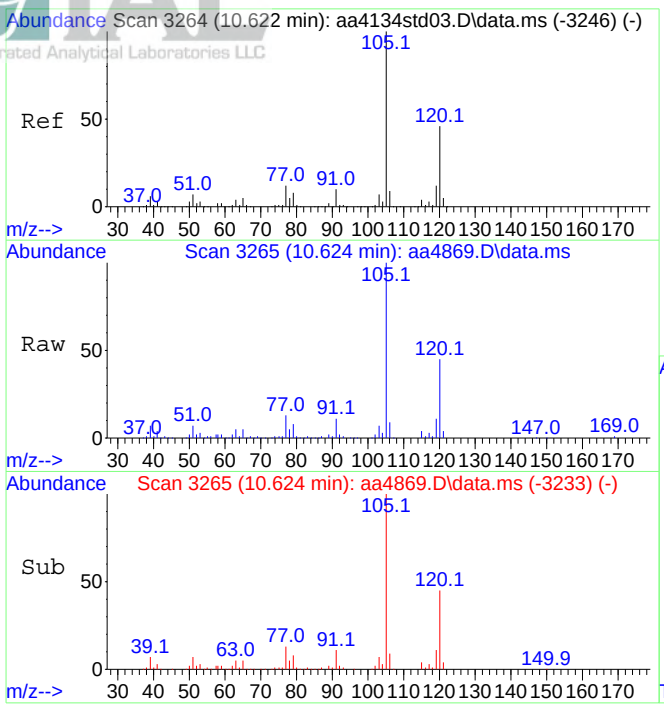




#69
1,3,5-Trimethylbenzene
Concen: 0.53 ppbV
RT: 10.151 min Scan# 3118
Delta R.T. 0.002 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion:105 Resp: 170234

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 48.2 | 38.9 | 58.3 |

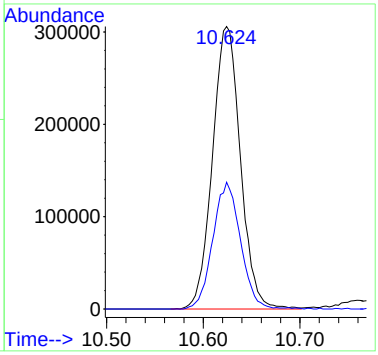





#70
1,2,4-Trimethylbenzene
Concen: 1.92 ppbV
RT: 10.624 min Scan# 3265
Delta R.T. 0.002 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion:105 Resp: 614979

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 44.4 | 36.3 | 54.5 |



Data Path : C:\DATA\2023\12-2023\12-07-2023\
Data File : aa4870.D
Acq On : 7 Dec 2023 8:30 pm
Operator : jjw
Sample : E23-05061-23
Misc : Dup of E23-05061-03, Can # 3045A
ALS Vial : 24 Sample Multiplier: 1

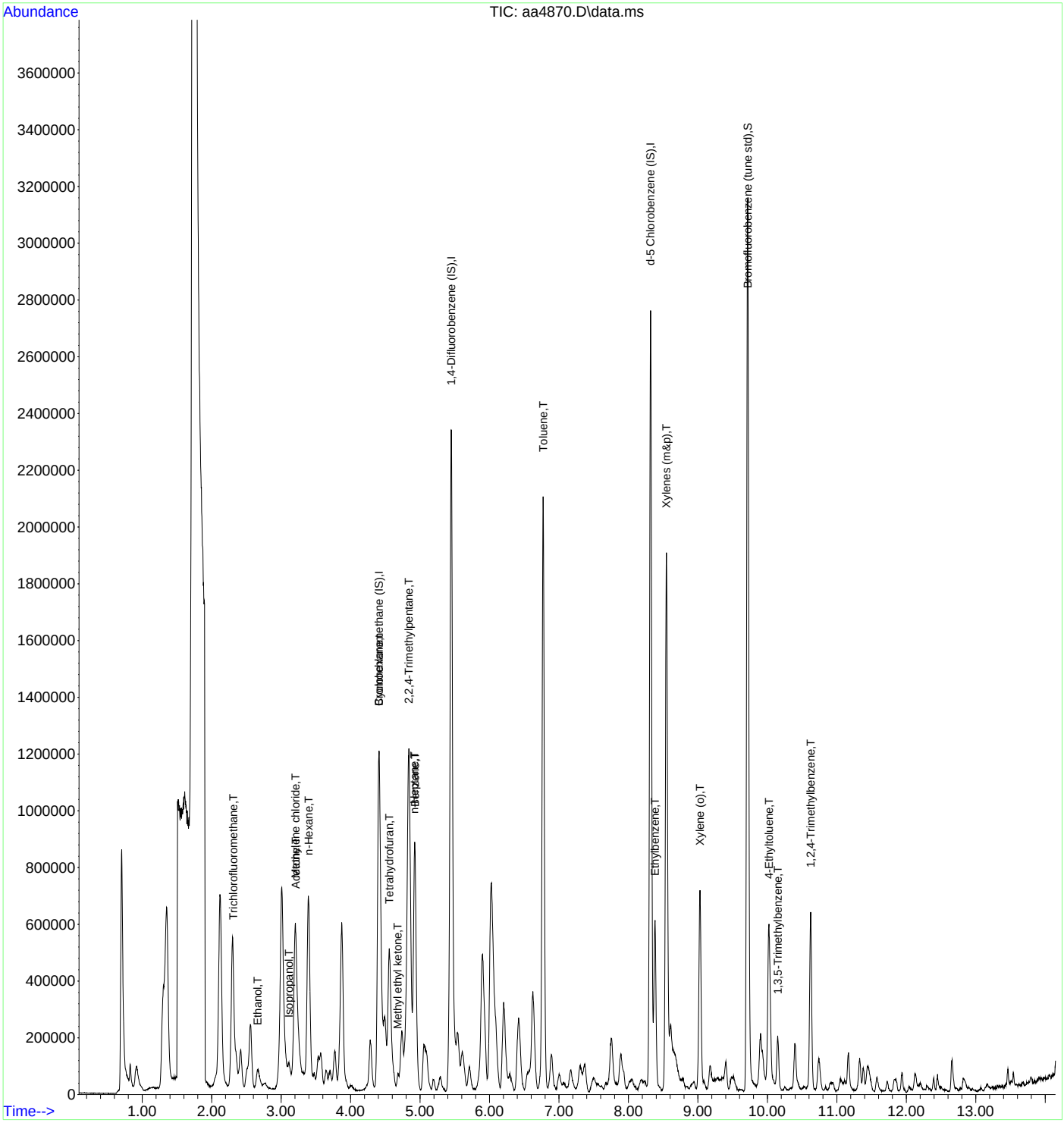
Quant Time: Dec 13 12:53:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

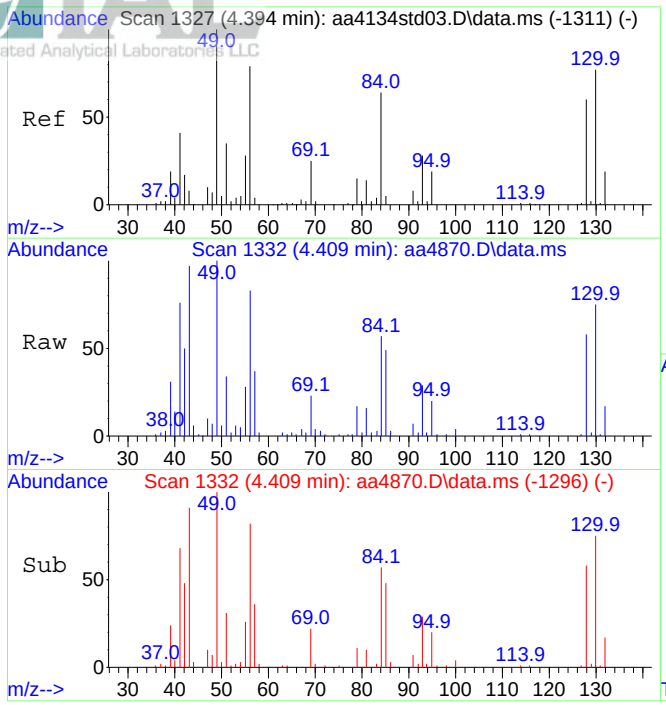
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.409 | 130 | 368396 | 10.00 | ppbV | | 0.015 |
| 39) 1,4-Difluorobenzene (IS) | 5.451 | 114 | 1818981 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 1692684 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 1387863 | 9.41 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 12) Trichlorofluoromethane | 2.313 | 101 | 33879 | 0.33 | ppbV | | 90 |
| 13) Ethanol | 2.663 | 45 | 109072 | 10.11 | ppbV | | 99 |
| 19) Isopropanol | 3.113 | 45 | 208075 | 2.82 | ppbV | # | 70 |
| 20) Methylene chloride | 3.206 | 49 | 125882 | 2.78 | ppbV | # | 7 |
| 21) Acetone | 3.213 | 43 | 562689 | 10.13 | ppbV | | 99 |
| 24) n-Hexane | 3.396 | 57 | 444919 | 3.83 | ppbV | | 97 |
| 29) Cyclohexane | 4.409 | 56 | 279096 | 3.44 | ppbV | # | 74 |
| 33) Tetrahydrofuran | 4.557 | 42 | 49663 | 0.90 | ppbV | # | 75 |
| 35) Methyl ethyl ketone | 4.679 | 43 | 75094 | 0.83 | ppbV | | 98 |
| 36) n-Heptane | 4.917 | 43 | 341229 | 3.35 | ppbV | | 97 |
| 37) Benzene | 4.930 | 78 | 338080 | 2.31 | ppbV | | 95 |
| 41) 2,2,4-Trimethylpentane | 4.840 | 57 | 1725941 | 7.28 | ppbV | | 95 |
| 47) Toluene | 6.772 | 91 | 1825367 | 7.14 | ppbV | | 100 |
| 58) Ethylbenzene | 8.383 | 91 | 499733 | 1.60 | ppbV | | 99 |
| 59) Xylenes (m&p) | 8.547 | 91 | 1368186 | 5.92 | ppbV | | 97 |
| 60) Xylene (o) | 9.029 | 91 | 512360 | 2.03 | ppbV | | 97 |
| 67) 4-Ethyltoluene | 10.023 | 105 | 521383 | 1.43 | ppbV | | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.151 | 105 | 130813 | 0.45 | ppbV | | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 434326 | 1.48 | ppbV | | 98 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-07-2023\
Data File : aa4870.D
Acq On : 7 Dec 2023 8:30 pm
Operator : jjw
Sample : E23-05061-23
Misc : Dup of E23-05061-03, Can # 3045A
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Dec 13 12:53:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

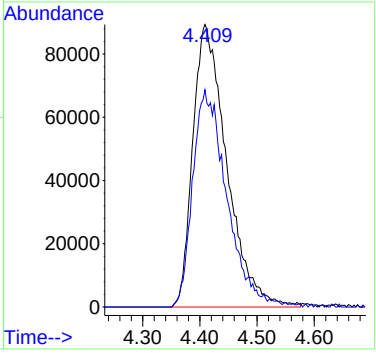


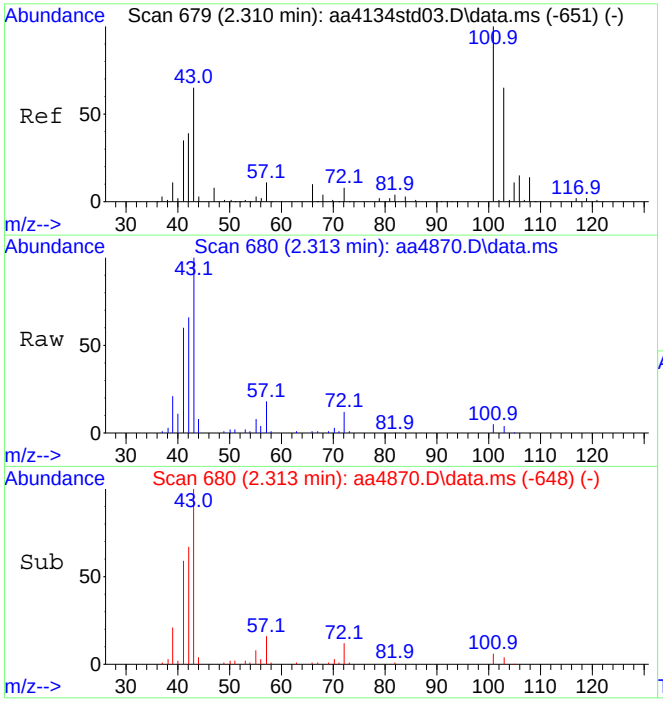



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.409 min Scan# 1332
Delta R.T. 0.015 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion:130 Resp: 368396

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 76.6 | 62.2 | 93.4 |

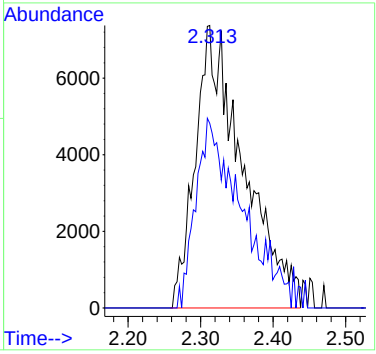


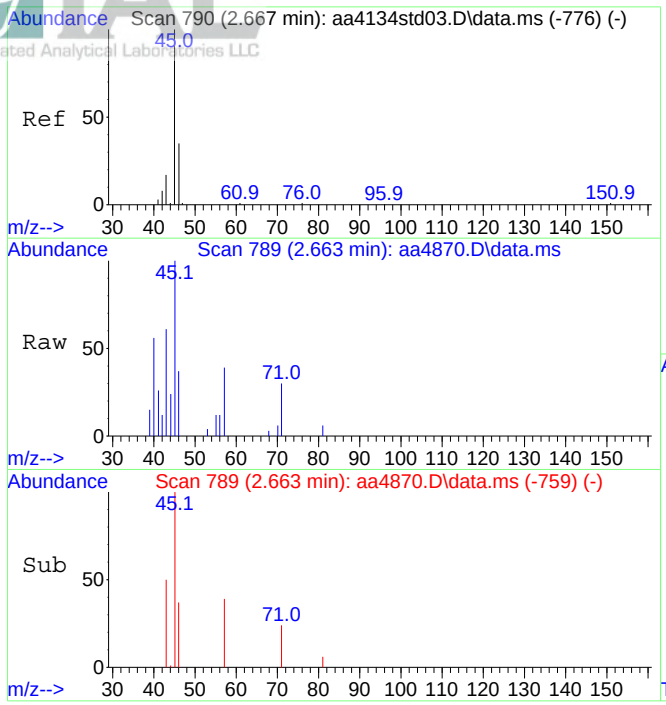




#12
Trichlorofluoromethane
Concen: 0.33 ppbV
RT: 2.313 min Scan# 680
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion:101 Resp: 33879

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 57.5 | 52.5 | 78.7 |

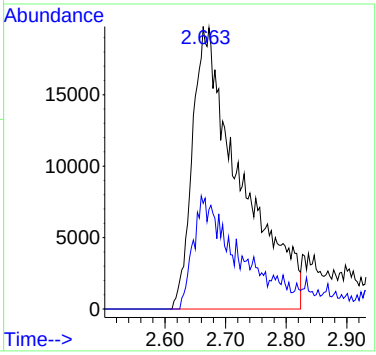


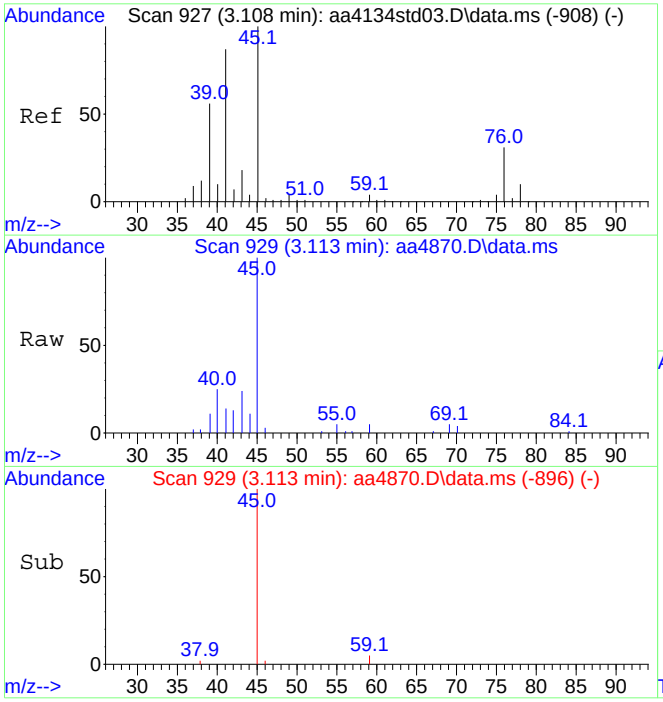



#13
Ethanol
Concen: 10.11 ppbV
RT: 2.663 min Scan# 789
Delta R.T. -0.004 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 45 Resp: 109072

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 46 | 37.9 | 30.0 | 45.0 |

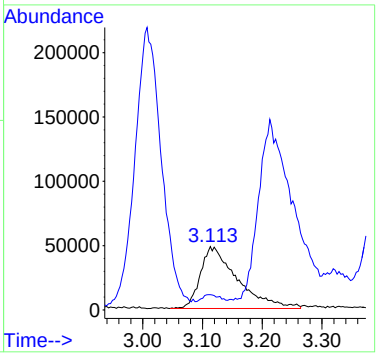


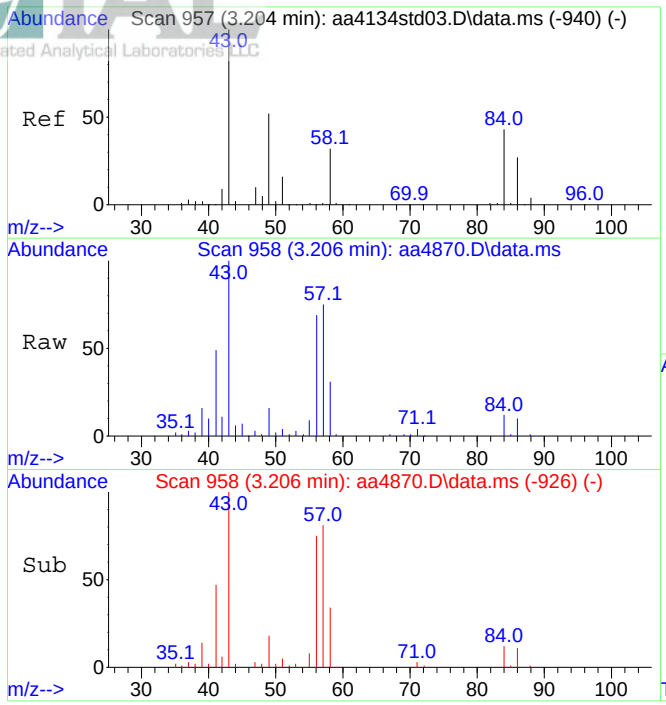




#19
Isopropanol
Concen: 2.82 ppbV
RT: 3.113 min Scan# 929
Delta R.T. 0.005 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 45 Resp: 208075

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 43 | 5.0 | 14.6 | 21.8# |

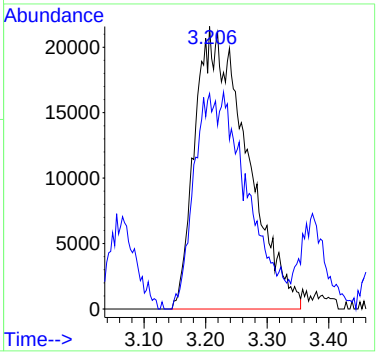


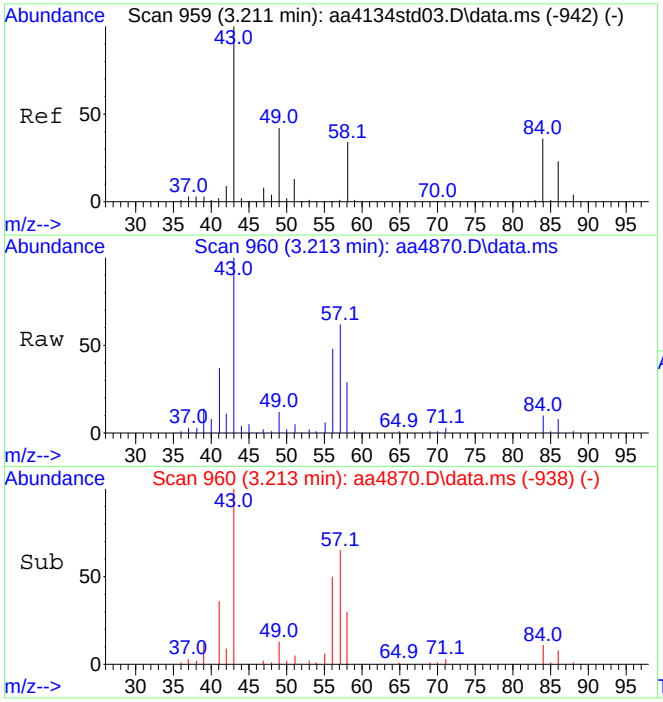



#20
Methylene chloride
Concen: 2.78 ppbV
RT: 3.206 min Scan# 958
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 49 Resp: 125882

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 0.0 | 64.8 | 104.8# |

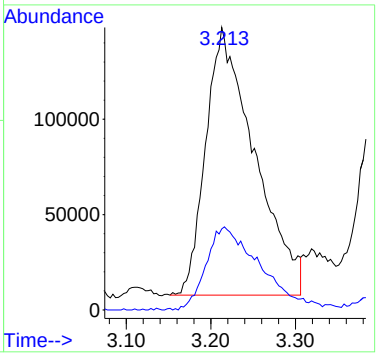


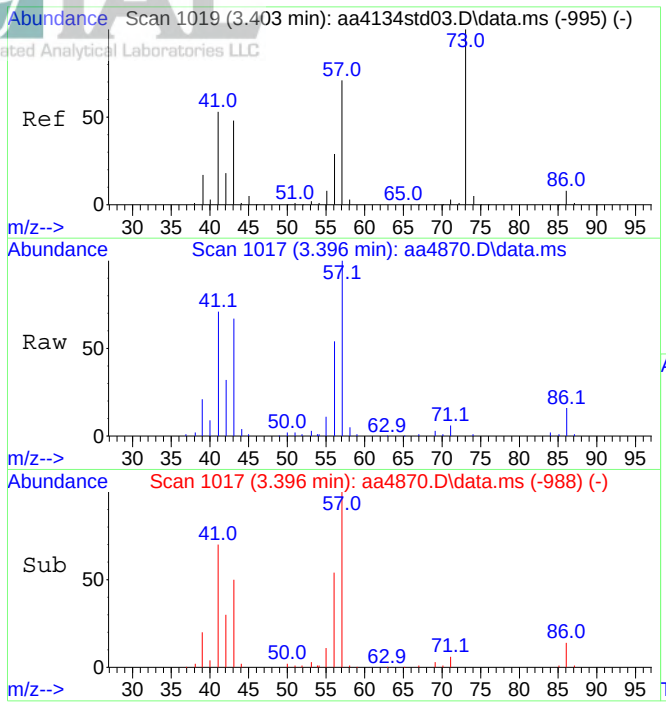




#21
Acetone
Concen: 10.13 ppbV
RT: 3.213 min Scan# 960
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 43 Resp: 562689

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 33.1 | 27.1 | 40.7 |

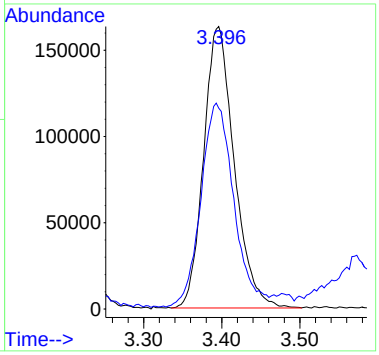


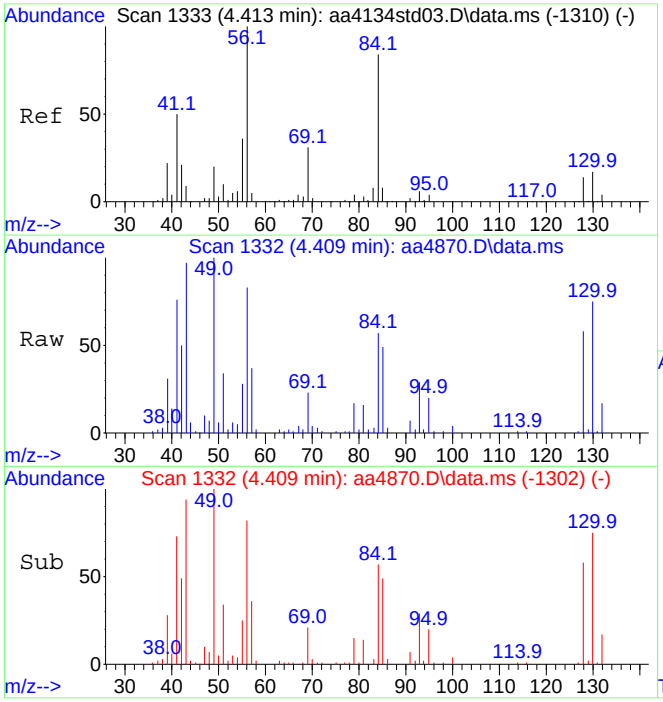



#24
n-Hexane
Concen: 3.83 ppbV
RT: 3.396 min Scan# 1017
Delta R.T. -0.007 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 57 Resp: 444919

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 41 | 80.6 | 66.4 | 99.6 |

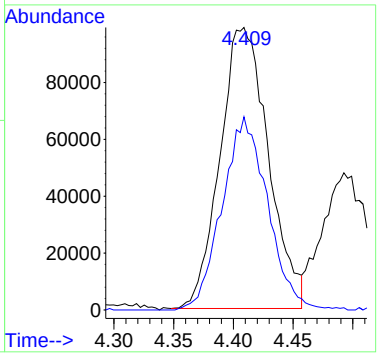


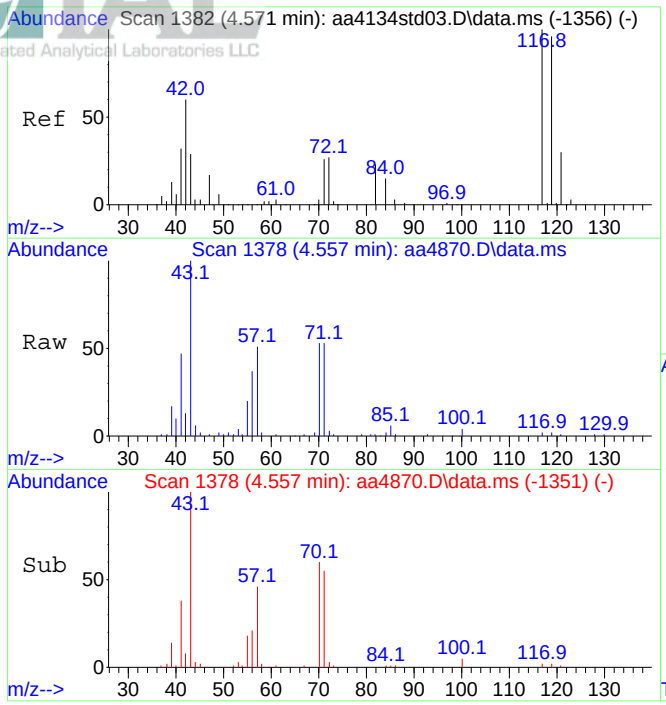




#29
Cyclohexane
Concen: 3.44 ppbV
RT: 4.409 min Scan# 1332
Delta R.T. -0.004 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 56 Resp: 279096

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 64.4 | 71.2 | 106.8# |

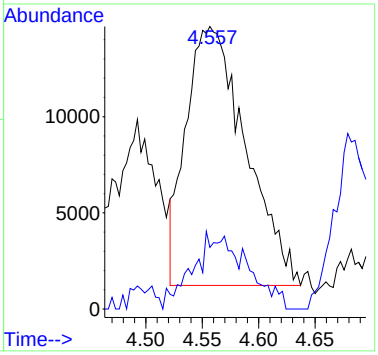


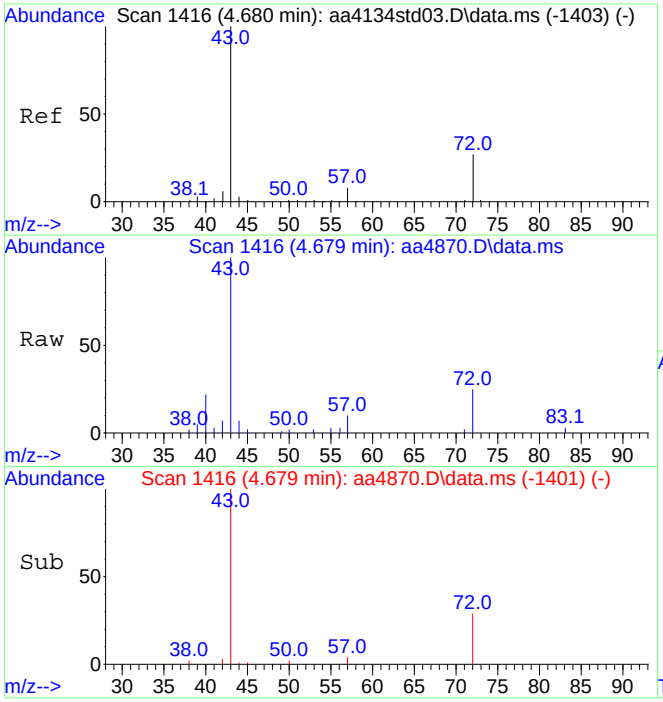



#33
Tetrahydrofuran
Concen: 0.90 ppbV
RT: 4.557 min Scan# 1378
Delta R.T. -0.014 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 42 Resp: 49663

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 42 | 100 | | |
| 72 | 26.4 | 33.8 | 50.8# |

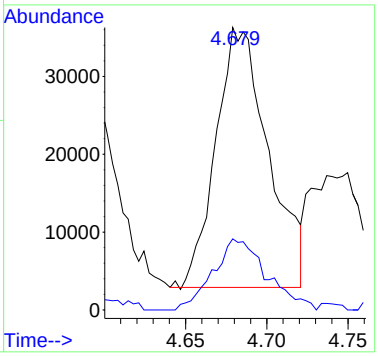


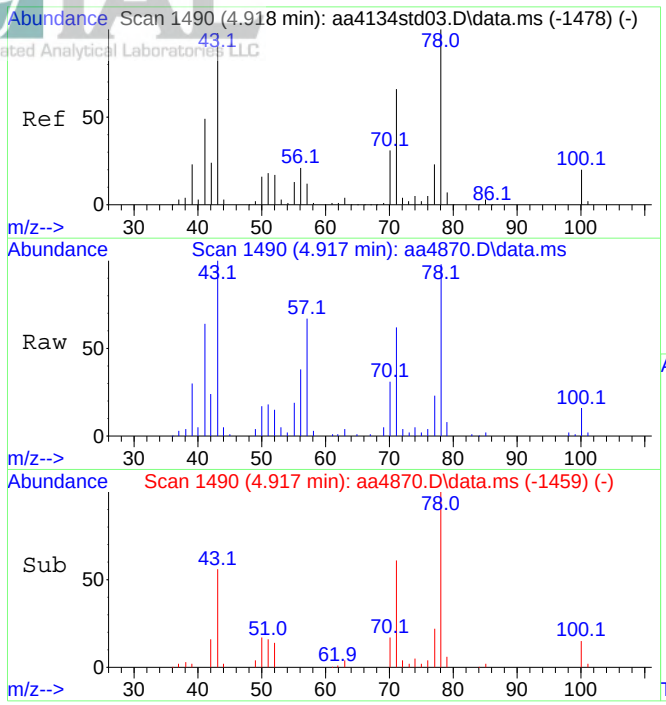




#35
Methyl ethyl ketone
Concen: 0.83 ppbV
RT: 4.679 min Scan# 1416
Delta R.T. -0.001 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 43 Resp: 75094

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 27.9 | 21.6 | 32.4 |

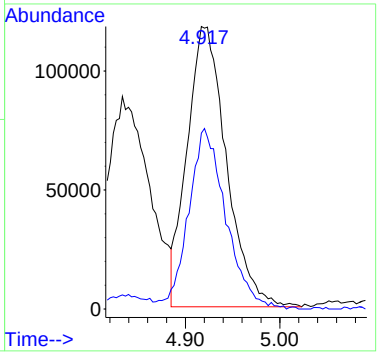


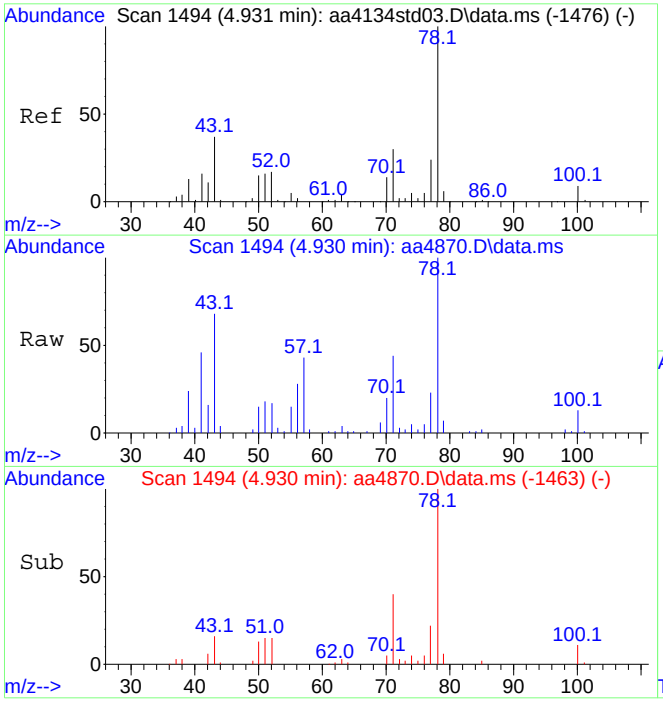



#36
n-Heptane
Concen: 3.35 ppbV
RT: 4.917 min Scan# 1490
Delta R.T. -0.001 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 43 Resp: 341229

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 71 | 61.1 | 50.5 | 75.7 |

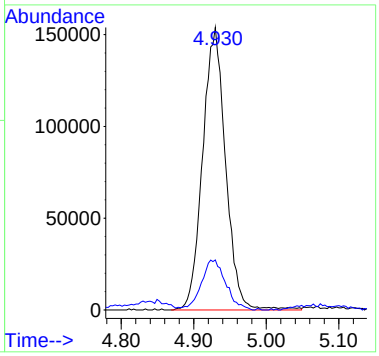


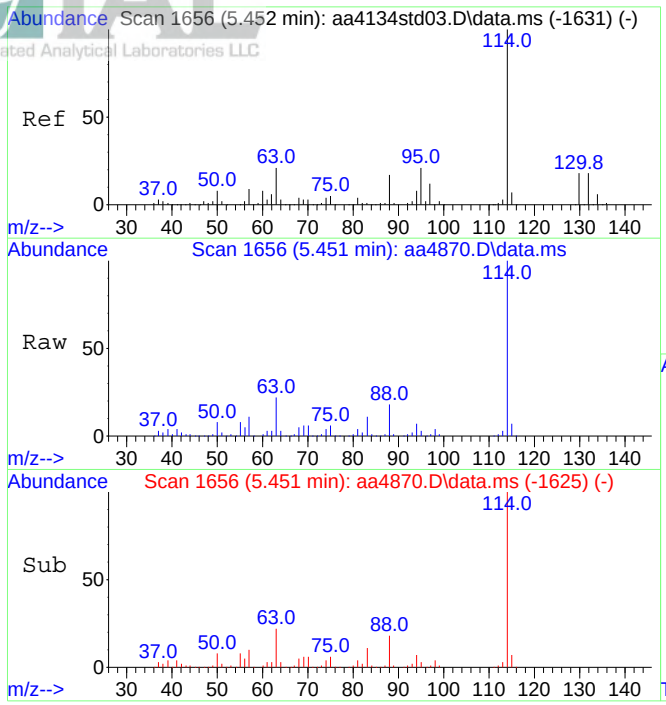




#37
Benzene
Concen: 2.31 ppbV
RT: 4.930 min Scan# 1494
Delta R.T. -0.001 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 78 Resp: 338080

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 18.8 | 13.4 | 20.0 |

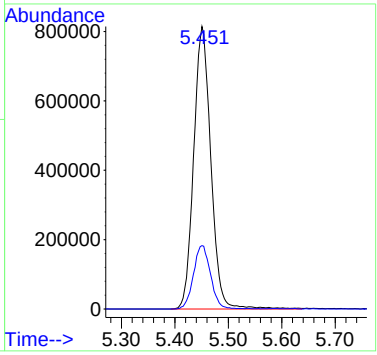


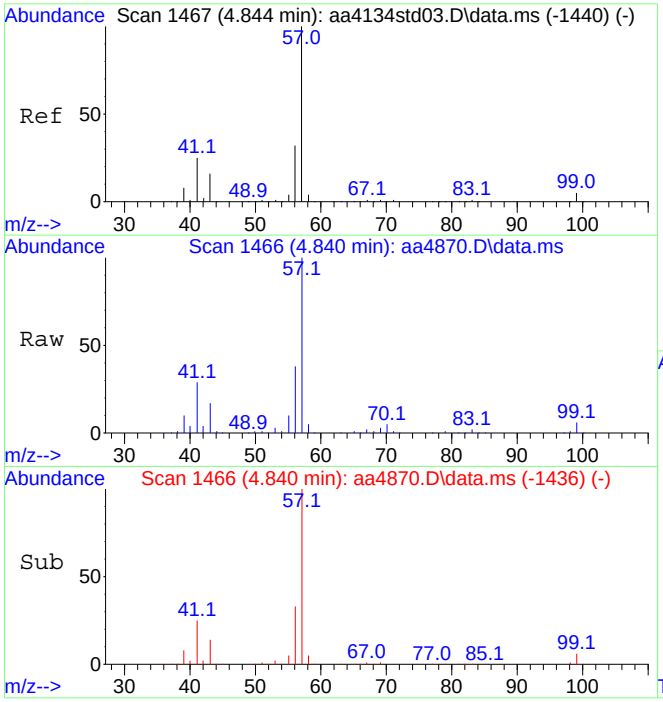



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.451 min Scan# 1656
Delta R.T. -0.001 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion:114 Resp: 1818981

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.3 | 17.0 | 25.6 |

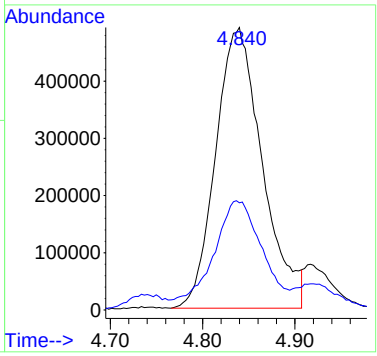


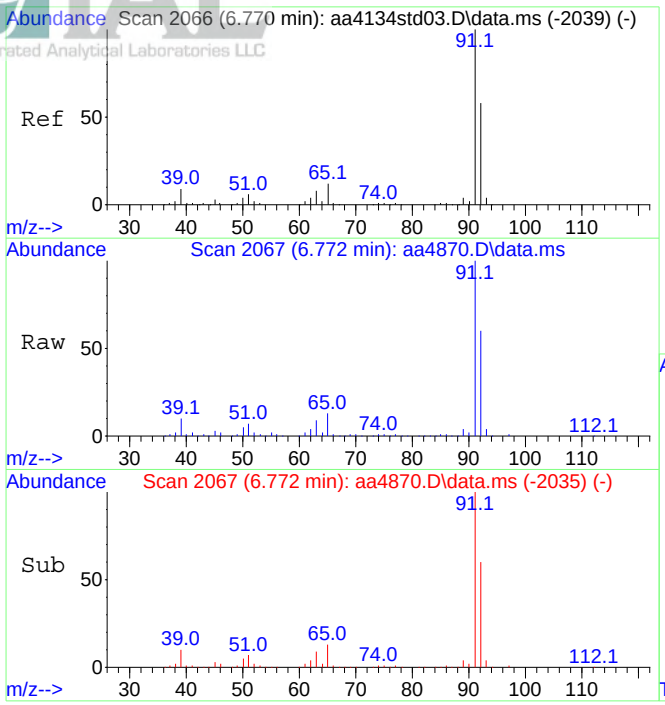




#41
2,2,4-Trimethylpentane
Concen: 7.28 ppbV
RT: 4.840 min Scan# 1466
Delta R.T. -0.004 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 57 Resp: 1725941

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 56 | 34.7 | 25.7 | 38.5 |

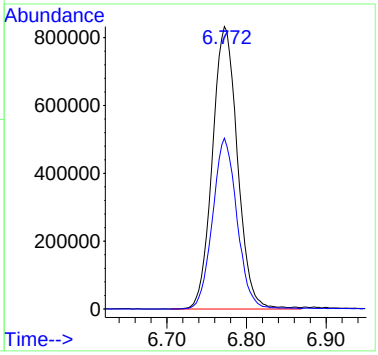


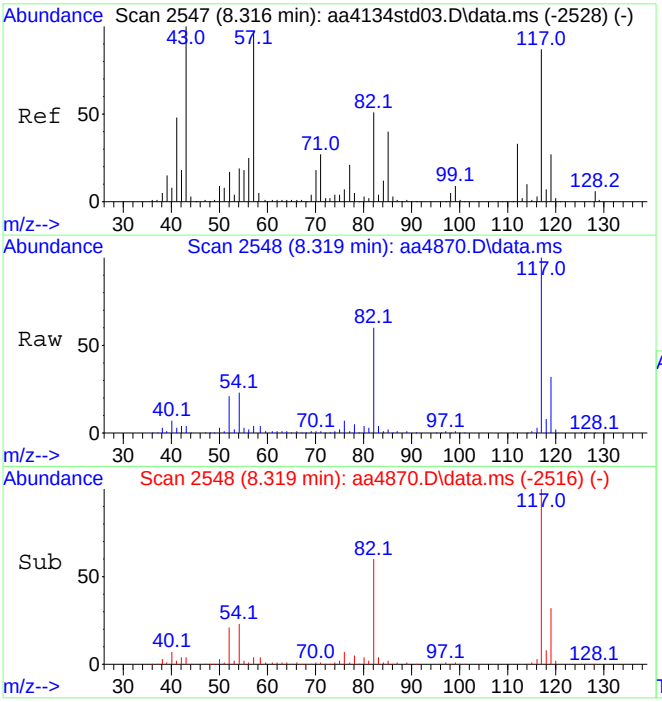



#47
Toluene
Concen: 7.14 ppbV
RT: 6.772 min Scan# 2067
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 91 Resp: 1825367

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 59.2 | 47.3 | 70.9 |

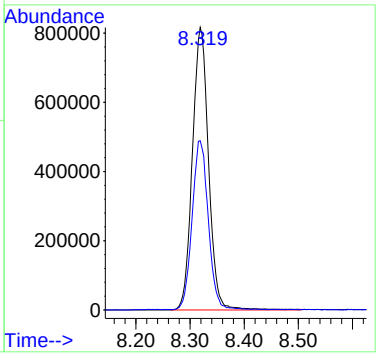


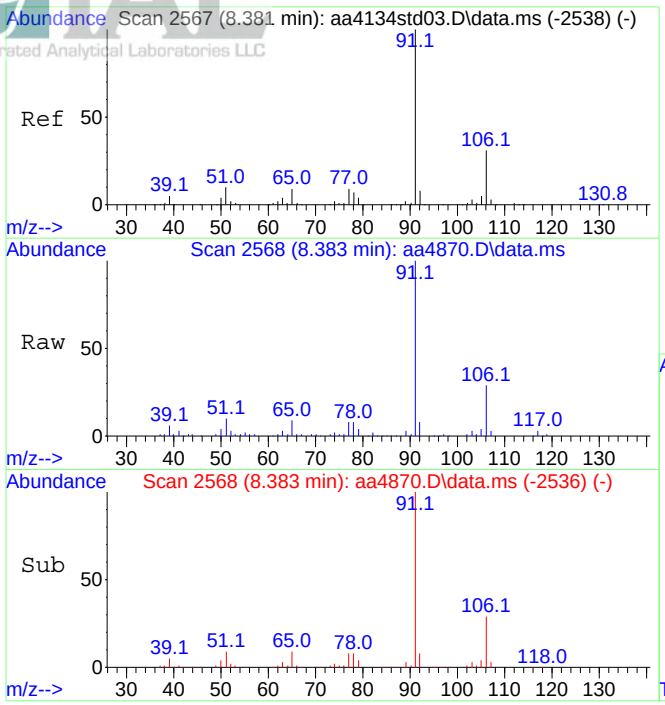




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.319 min Scan# 2548
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion:117 Resp: 1692684

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 59.7 | 47.0 | 70.4 |

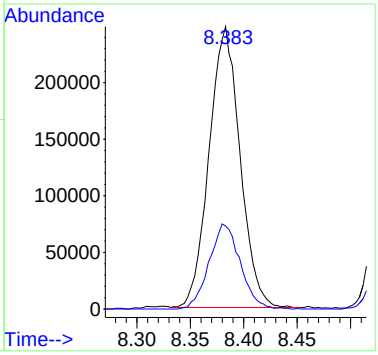


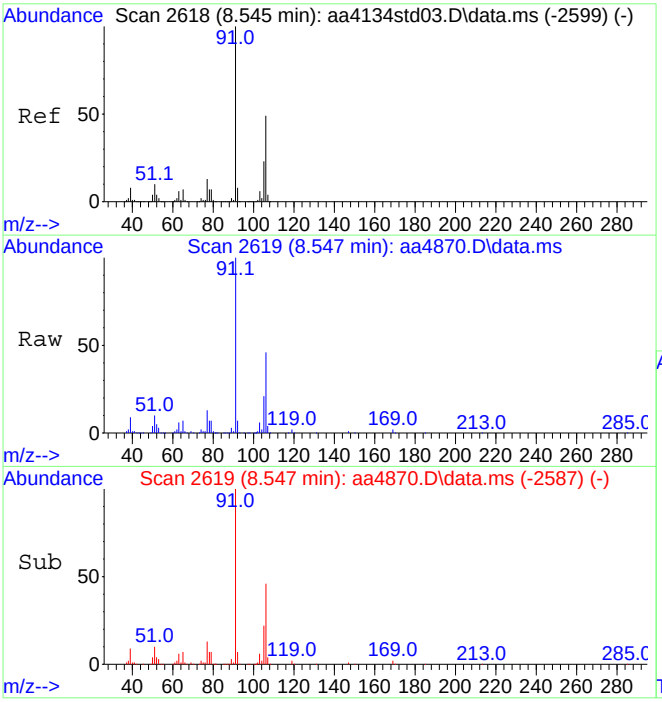



#58
Ethylbenzene
Concen: 1.60 ppbV
RT: 8.383 min Scan# 2568
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 91 Resp: 499733

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 30.4 | 24.6 | 36.8 |

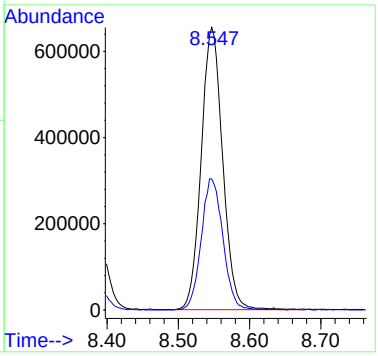


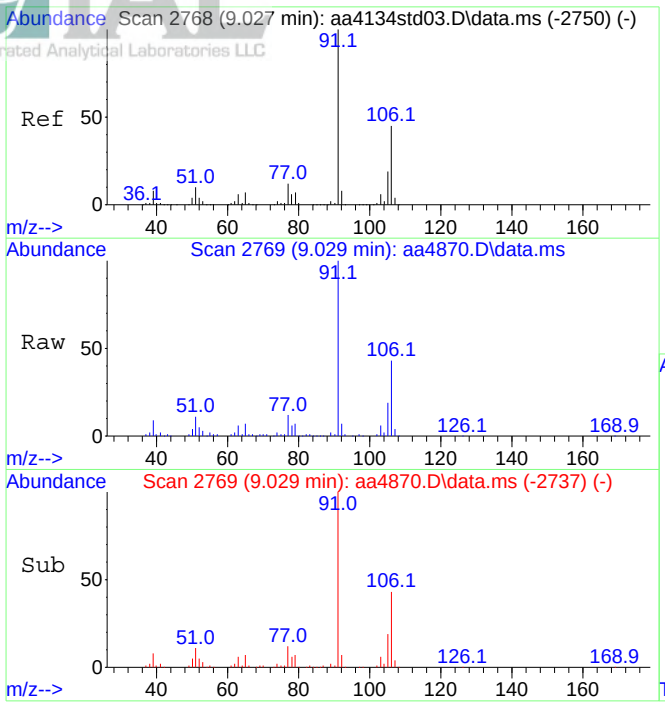




#59
Xylenes (m&p)
Concen: 5.92 ppbV
RT: 8.547 min Scan# 2619
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 91 Resp: 1368186

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 47.0 | 39.0 | 58.4 |

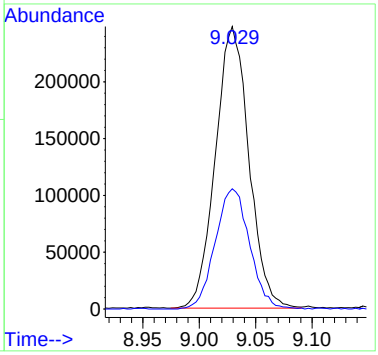


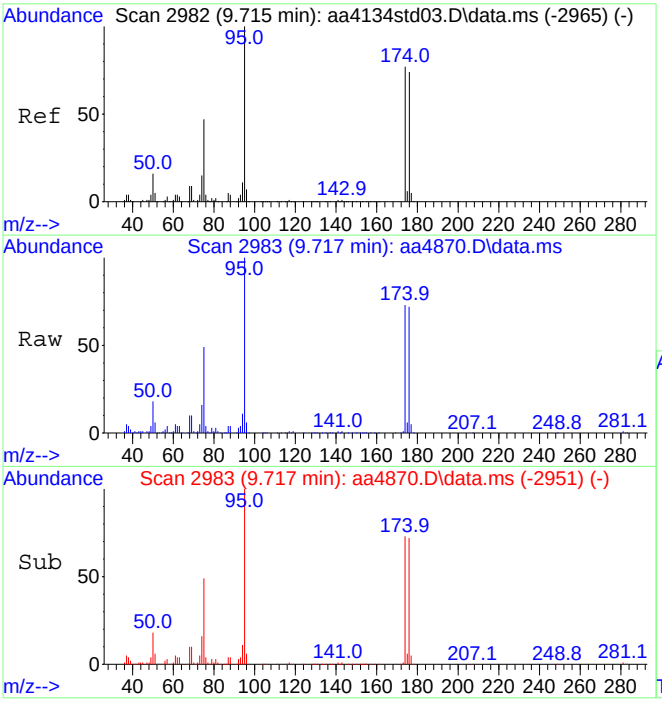



#60
Xylene (o)
Concen: 2.03 ppbV
RT: 9.029 min Scan# 2769
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 91 Resp: 512360

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 43.7 | 36.8 | 55.2 |

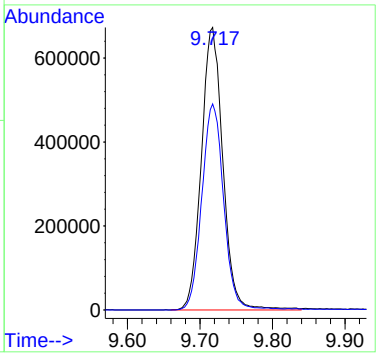


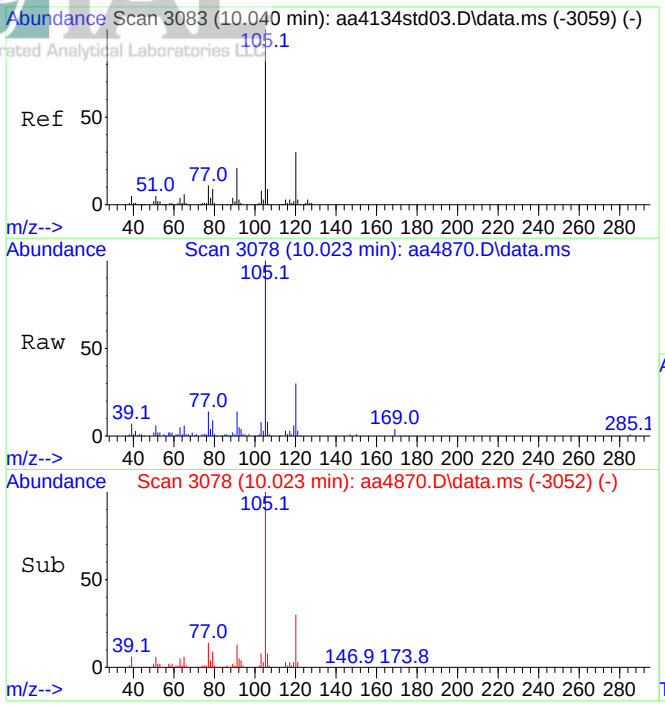




#64
Bromofluorobenzene (tune std)
Concen: 9.41 ppbV
RT: 9.717 min Scan# 2983
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 95 Resp: 1387863

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 74.3 | 61.1 | 91.7 |

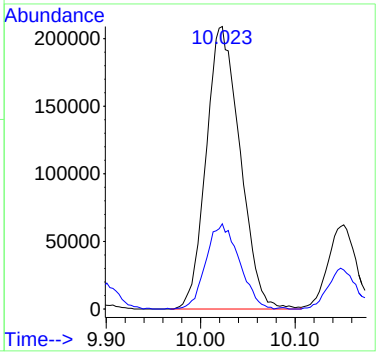


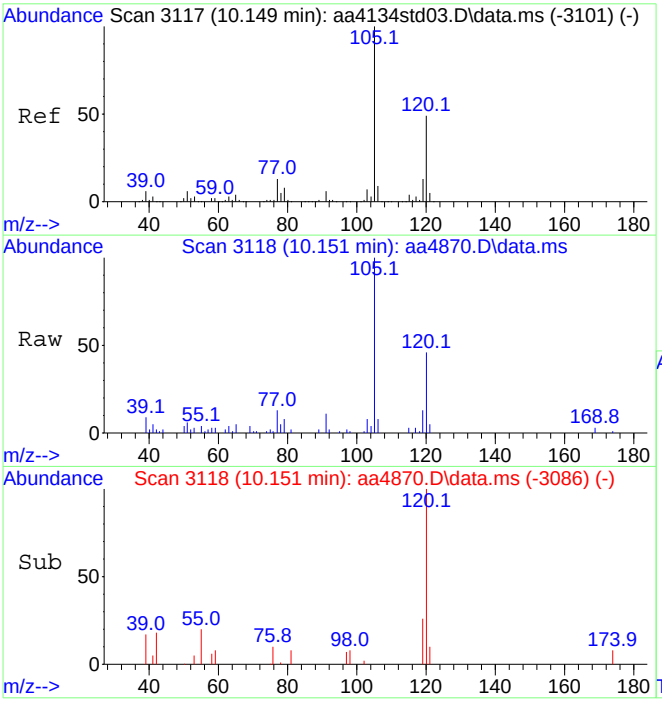



#67
4-Ethyltoluene
Concen: 1.43 ppbV
RT: 10.023 min Scan# 3078
Delta R.T. -0.017 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion:105 Resp: 521383

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 29.6 | 23.4 | 35.2 |

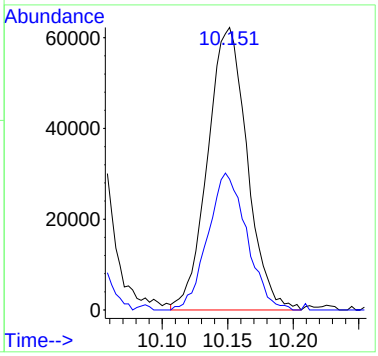


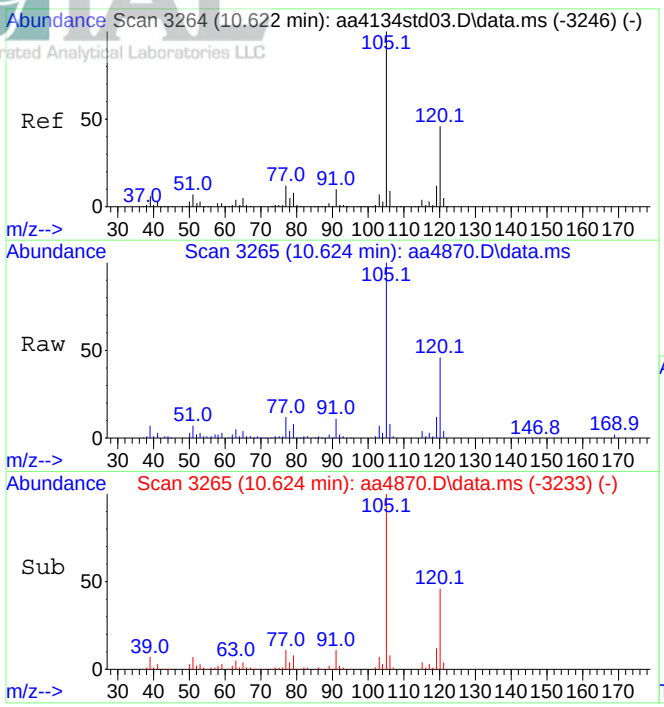




#69
1,3,5-Trimethylbenzene
Concen: 0.45 ppbV
RT: 10.151 min Scan# 3118
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion:105 Resp: 130813

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 47.7 | 38.9 | 58.3 |

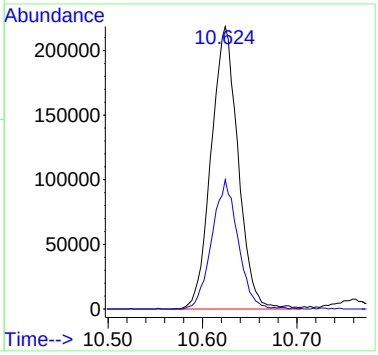





#70
1,2,4-Trimethylbenzene
Concen: 1.48 ppbV
RT: 10.624 min Scan# 3265
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion:105 Resp: 434326

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 44.2 | 36.3 | 54.5 |



**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

SDG Number: E23-05079
IAL Sample ID: E23-05079-03
Matrix: Air
Summa ID: 3830

Date Received: 11/20/23
Date Analyzed: 12/12/23,12/12/23
Lab Data File#: AA4929,AA4930
Dilution Factor: 1
Injection Volume: 500ml
GC/MS Column: RTX-1, 0.32 mmID

| Compound | CAS # | Sample E23-05079-03 Concentration Reported ppbv | Q | Sample Dup E23-05079-23 Concentration Reported ppbv | Q | Reporting Limits ppbv | RPD |
|---|---|---|---|---|---|---|---|
| Acetone | 67-64-1 | **6.1** | | **5.9** | | 0.40 | **3.33%** |
| Allyl Chloride | 107-05-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Benzene | 71-43-2 | **0.31** | | **0.32** | | 0.20 | **-3.17%** |
| Bromodichloromethane | 75-27-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Bromoform | 75-25-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Bromomethane | 74-83-9 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Butadiene | 106-99-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chlorobenzene | 108-90-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloroethane | 75-00-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloroform | 67-66-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloromethane | 74-87-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Carbon disulfide | 75-15-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Carbon tetrachloride | 56-23-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 2-Chlorotoluene | 95-49-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Cyclohexane | 110-82-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Dibromochloromethane | 124-48-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dibromoethane | 106-93-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorobenzene | 95-50-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Dichlorobenzene | 541-73-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,4-Dichlorobenzene | 106-46-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Dichlorodifluoromethane | 75-71-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1-Dichloroethane | 75-34-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethane | 107-06-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1-Dichloroethene | 75-35-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Ethylbenzene | 100-41-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 4-Ethyltoluene | 622-96-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| n-Heptane | 142-82-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| n-Hexane | 110-54-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Methylene chloride | 75-09-2 | **3.5** | | **3.4** | | 0.40 | **2.90%** |
| Methyl ethyl ketone | 78-93-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Methyl isobutyl ketone | 108-10-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

SDG Number: E23-05079
IAL Sample ID: E23-05079-03
Matrix: Air
Summa ID: 3830

Date Received: 11/20/23
Date Analyzed: 12/12/23,12/12/23
Lab Data File#: AA4929,AA4930
Dilution Factor: 1
Injection Volume: 500ml
GC/MS Column: RTX-1, 0.32 mmID

| Compound | CAS # | Sample E23-05079-03 Concentration Reported ppbv | Q | Sample Dup E23-05079-23 Concentration Reported ppbv | Q | Reporting Limits ppbv | RPD |
|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | 1634-04-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Styrene | 100-42-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Tert-butyl alcohol | 75-65-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Tetrachloroethene | 127-18-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Toluene | 108-88-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,1-Trichloroethane | 71-55-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2-Trichloroethane | 79-00-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Trichloroethene | 79-01-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Trichlorofluoromethane | 75-69-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Vinyl bromide | 593-60-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Vinyl chloride | 75-01-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Xylenes (m&p) | 179601-23-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Xylenes (o) | 95-47-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |

**RPD must be <25% for all laboratory duplicate samples. Laboratory duplicate samples are run once daily.**
**NC = The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample.**

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4929.D
Acq On : 12 Dec 2023 12:58 am
Operator : jjw
Sample : E23-05079-03
Misc : 3830, 500cc
ALS Vial : 32 Sample Multiplier: 1

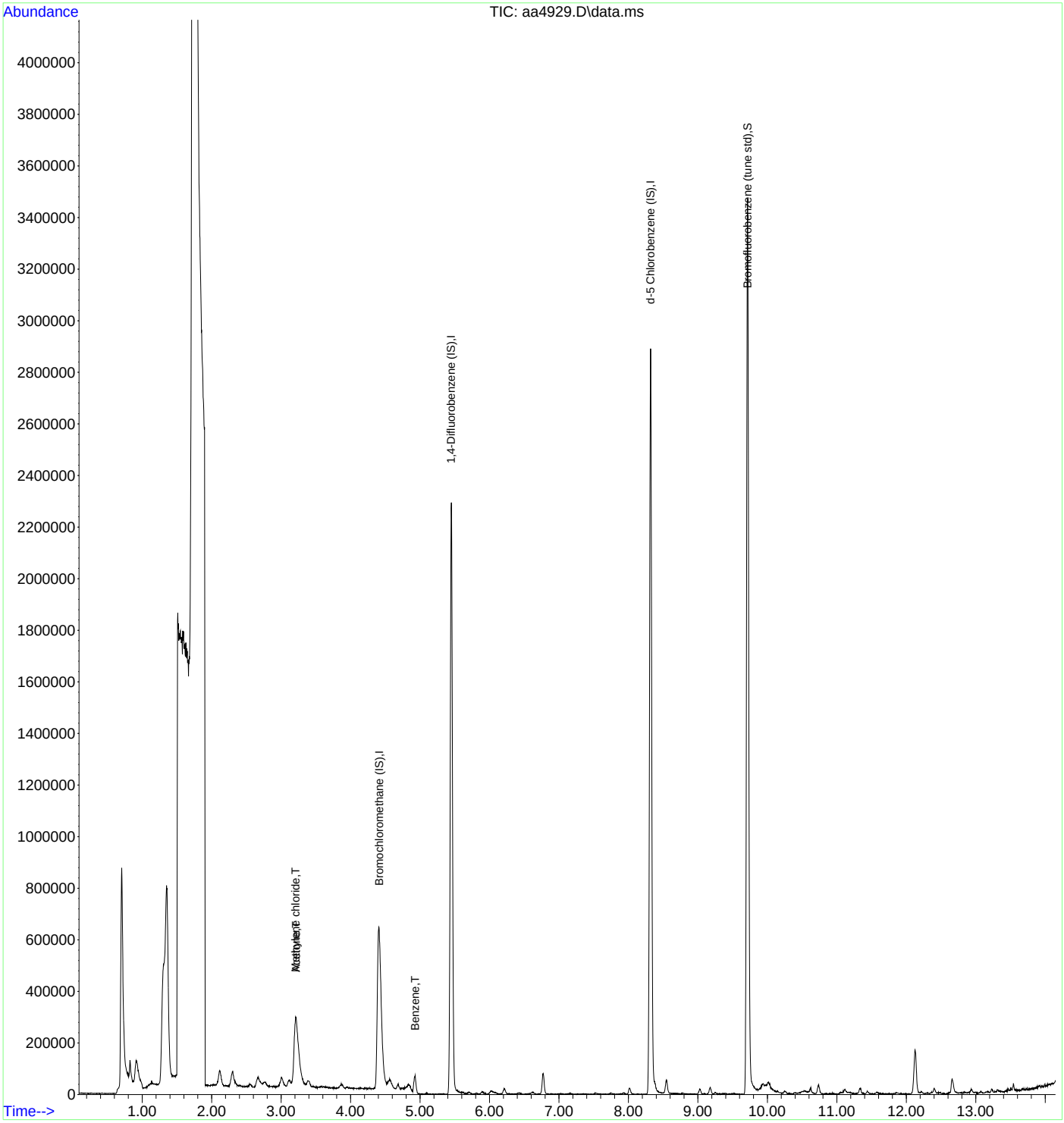
Quant Time: Dec 13 11:23:02 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

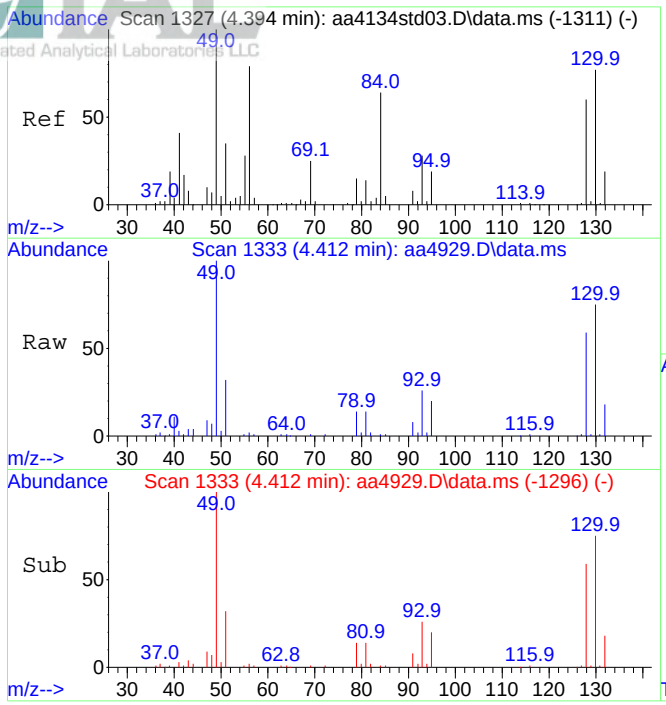
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.412 | 130 | 441232 | 10.00 | ppbV | 0.018 |
| 39) 1,4-Difluorobenzene (IS) | 5.448 | 114 | 2147334 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 1948898 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1597112 | 9.40 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 20) Methylene chloride | 3.210 | 49 | 190775 | 3.52 | ppbV | 93 |
| 21) Acetone | 3.216 | 43 | 404473 | 6.08 | ppbV | 99 |
| 37) Benzene | 4.930 | 78 | 54291 | 0.31 | ppbV | 97 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4929.D
Acq On : 12 Dec 2023 12:58 am
Operator : jjw
Sample : E23-05079-03
Misc : 3830, 500cc
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Dec 13 11:23:02 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

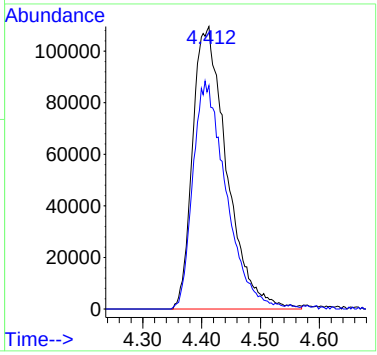


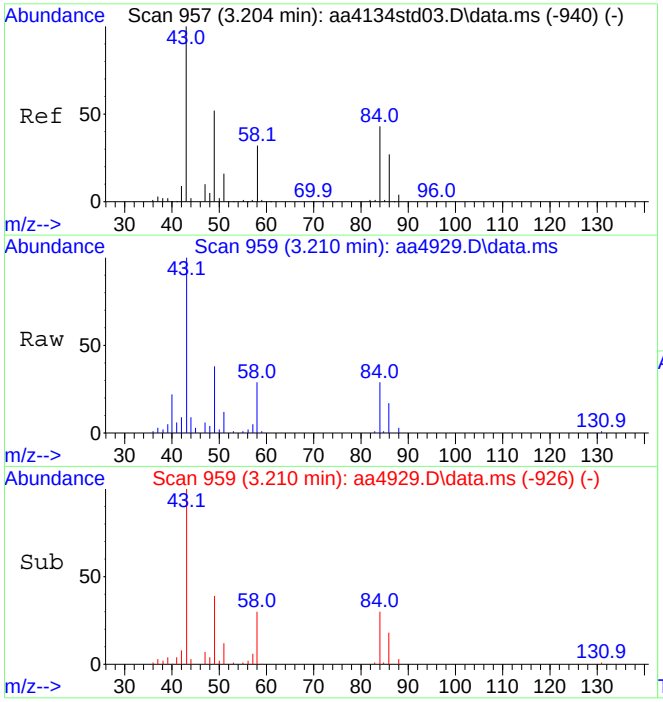



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.412 min Scan# 1333
Delta R.T. 0.018 min
Lab File: aa4929.D
Acq: 12 Dec 2023 12:58 am

Tgt Ion:130 Resp: 441232

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 78.4 | 62.2 | 93.4 |

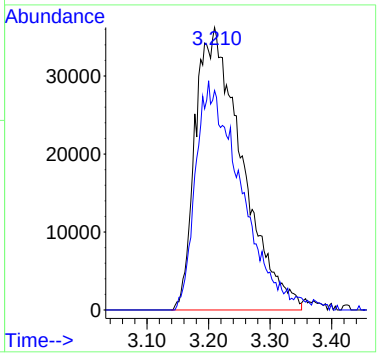


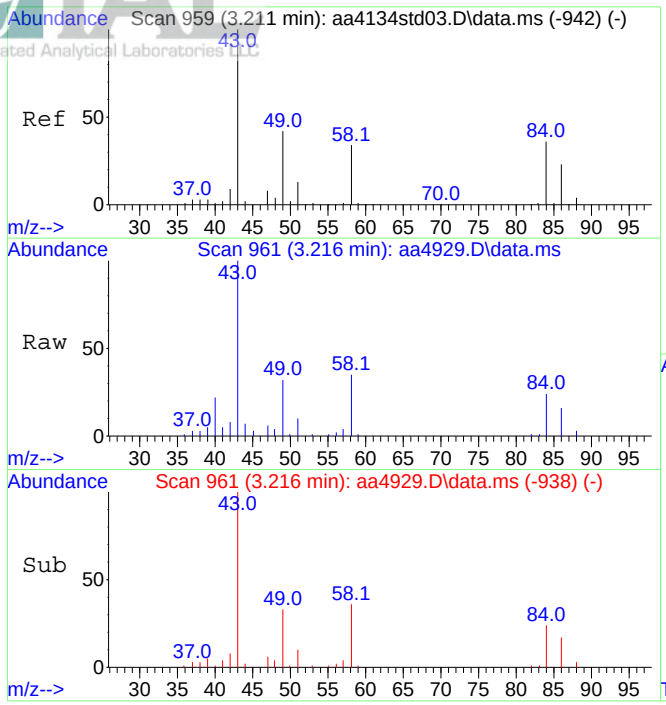




#20
Methylene chloride
Concen: 3.52 ppbV
RT: 3.210 min Scan# 959
Delta R.T. 0.006 min
Lab File: aa4929.D
Acq: 12 Dec 2023 12:58 am

Tgt Ion: 49 Resp: 190775

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 78.6 | 64.8 | 104.8 |

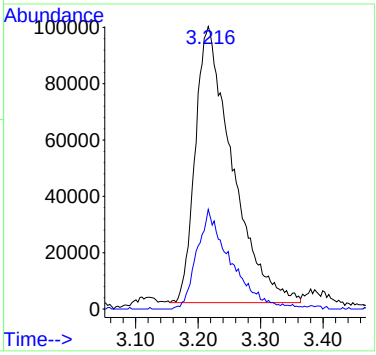


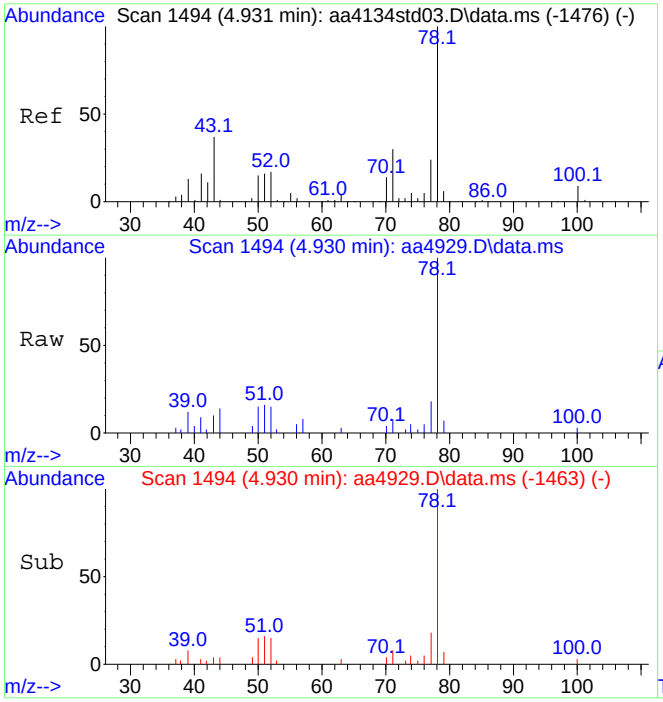



#21
Acetone
Concen: 6.08 ppbV
RT: 3.216 min Scan# 961
Delta R.T. 0.006 min
Lab File: aa4929.D
Acq: 12 Dec 2023 12:58 am

Tgt Ion: 43 Resp: 404473

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 33.2 | 27.1 | 40.7 |

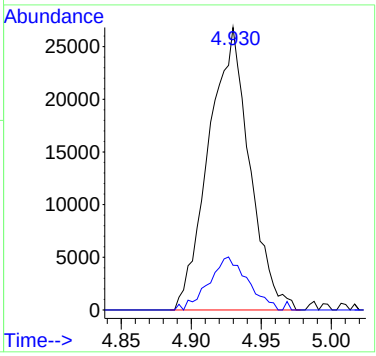


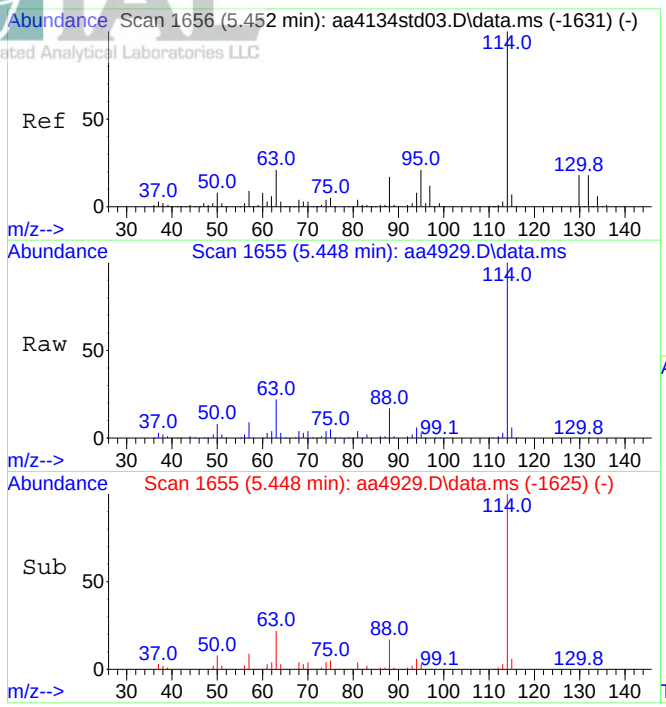




#37
Benzene
Concen: 0.31 ppbV
RT: 4.930 min Scan# 1494
Delta R.T. -0.001 min
Lab File: aa4929.D
Acq: 12 Dec 2023 12:58 am

Tgt Ion: 78 Resp: 54291

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 17.9 | 13.4 | 20.0 |

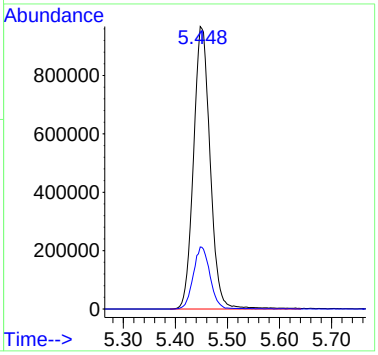


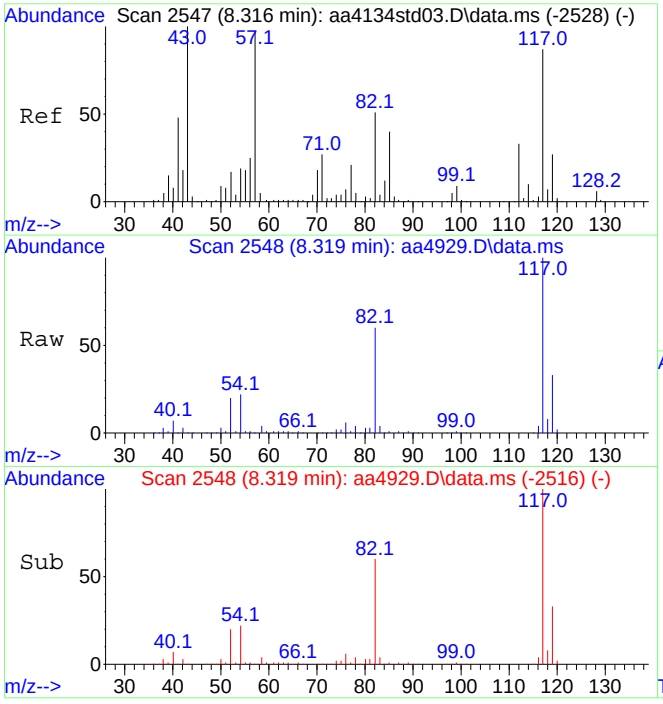



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.448 min Scan# 1655
Delta R.T. -0.004 min
Lab File: aa4929.D
Acq: 12 Dec 2023 12:58 am

Tgt Ion:114 Resp: 2147334

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.0 | 17.0 | 25.6 |

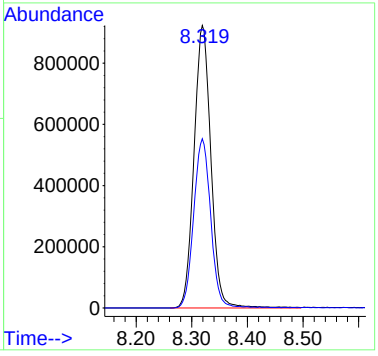


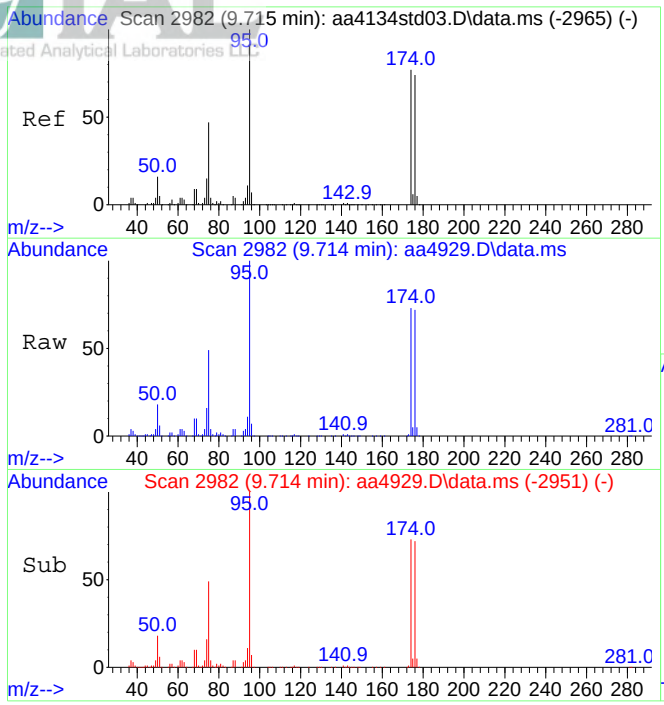




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.319 min Scan# 2548
Delta R.T. 0.002 min
Lab File: aa4929.D
Acq: 12 Dec 2023 12:58 am

Tgt Ion:117 Resp: 1948898

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 60.3 | 47.0 | 70.4 |

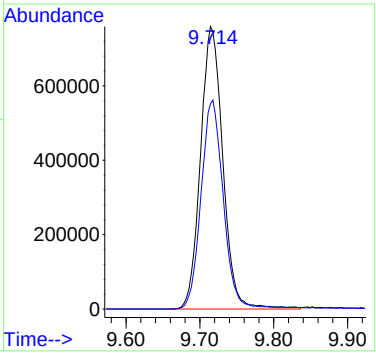





#64
Bromofluorobenzene (tune std)
Concen: 9.40 ppbV
RT: 9.714 min Scan# 2982
Delta R.T. -0.001 min
Lab File: aa4929.D
Acq: 12 Dec 2023 12:58 am

Tgt Ion: 95 Resp: 1597112

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 74.1 | 61.1 | 91.7 |



Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4930.D
Acq On : 12 Dec 2023 1:31 am
Operator : jjw
Sample : E23-05079-23
Misc : Dup of E23-05079-03, Can # 3830
ALS Vial : 33 Sample Multiplier: 1

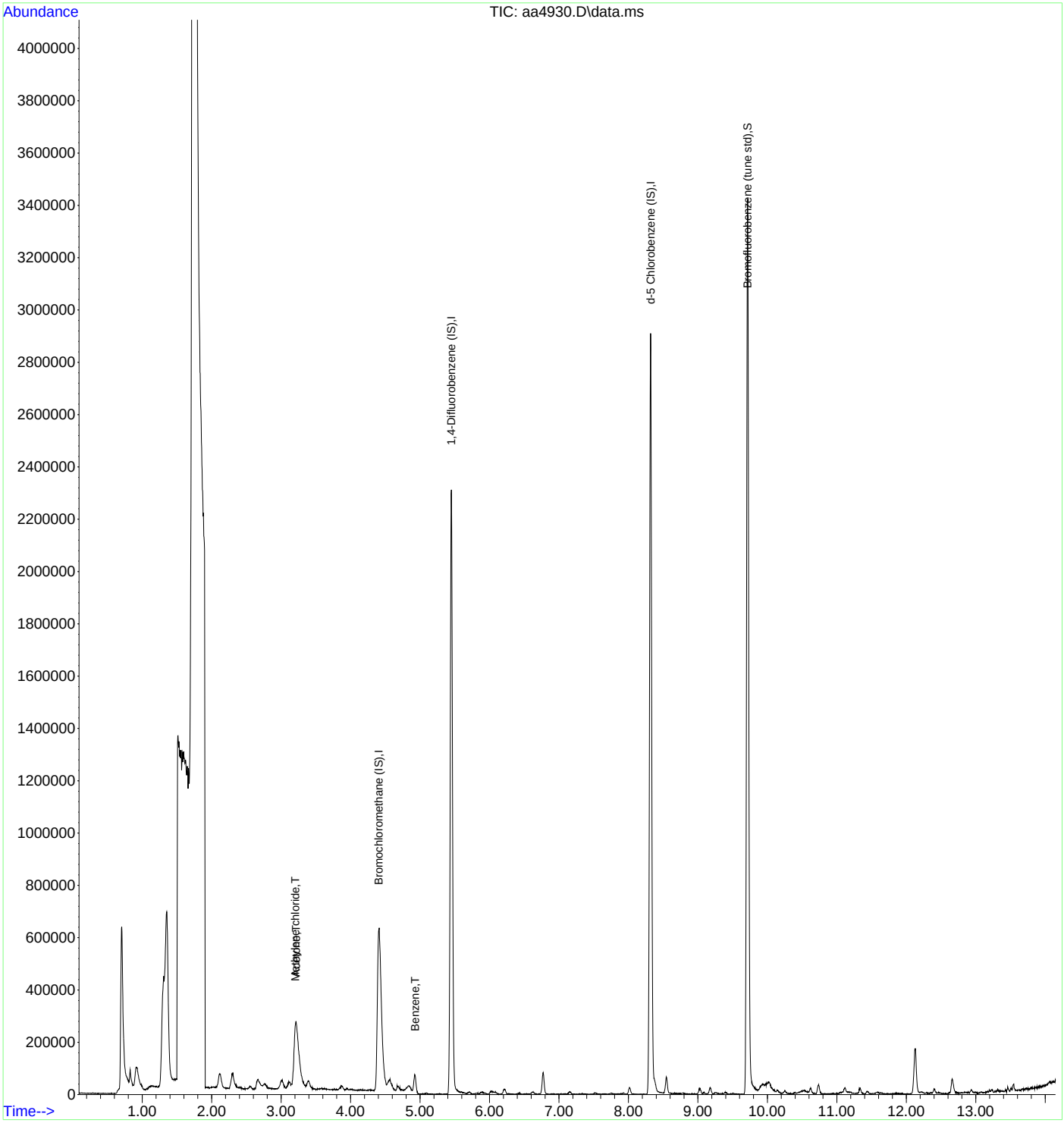
Quant Time: Dec 13 11:24:13 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

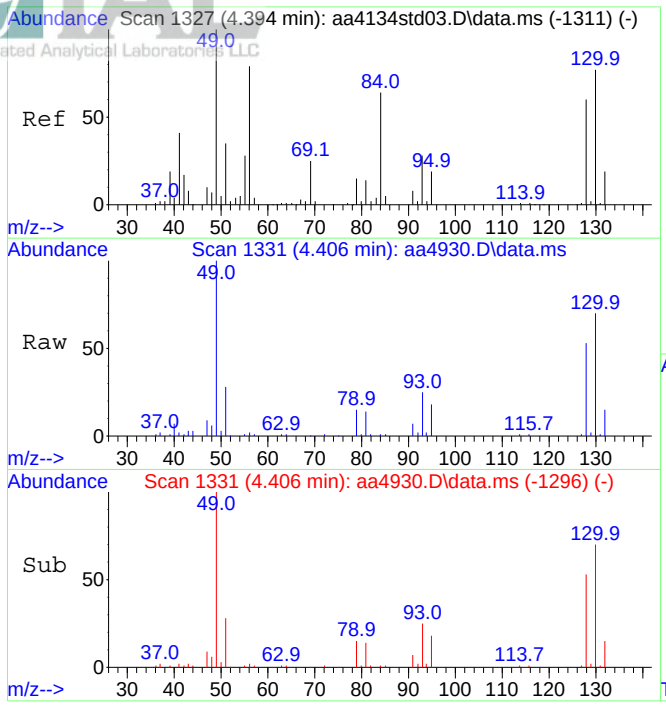
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.406 | 130 | 452291 | 10.00 | ppbV | 0.012 |
| 39) 1,4-Difluorobenzene (IS) | 5.451 | 114 | 2167232 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.322 | 117 | 1931386 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1574669 | 9.35 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 20) Methylene chloride | 3.203 | 49 | 191374 | 3.44 | ppbV | 90 |
| 21) Acetone | 3.216 | 43 | 399825 | 5.86 | ppbV | 99 |
| 37) Benzene | 4.930 | 78 | 56929 | 0.32 | ppbV | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4930.D
Acq On : 12 Dec 2023 1:31 am
Operator : jjw
Sample : E23-05079-23
Misc : Dup of E23-05079-03, Can # 3830
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Dec 13 11:24:13 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

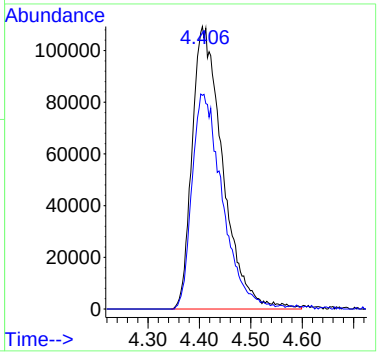


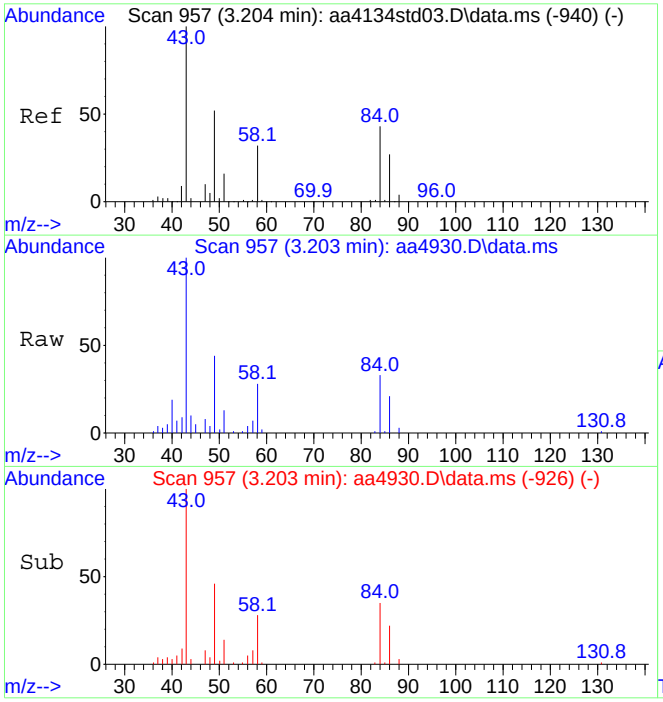



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.406 min Scan# 1331
Delta R.T. 0.012 min
Lab File: aa4930.D
Acq: 12 Dec 2023 1:31 am

Tgt Ion:130 Resp: 452291

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 75.9 | 62.2 | 93.4 |

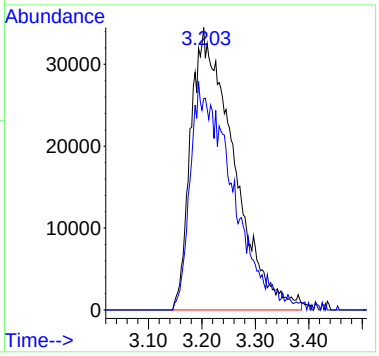


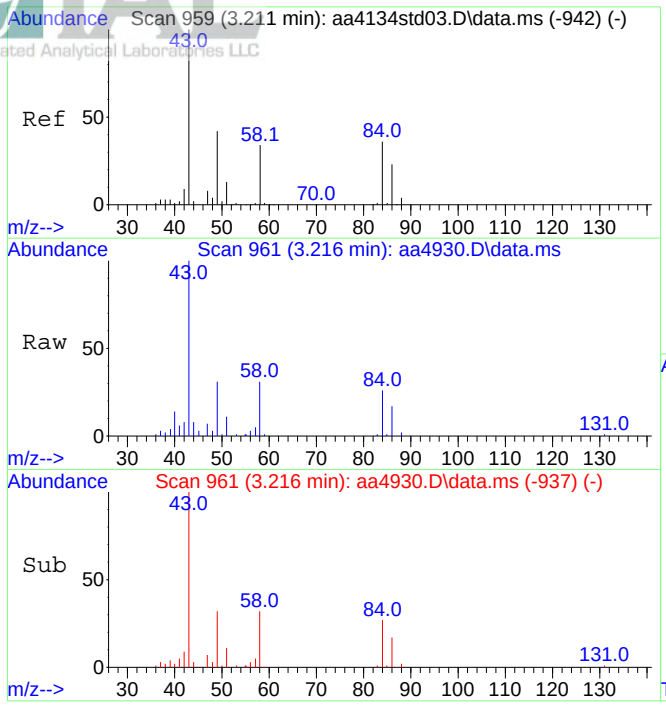




#20
Methylene chloride
Concen: 3.44 ppbV
RT: 3.203 min Scan# 957
Delta R.T. -0.001 min
Lab File: aa4930.D
Acq: 12 Dec 2023 1:31 am

Tgt Ion: 49 Resp: 191374

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 76.0 | 64.8 | 104.8 |

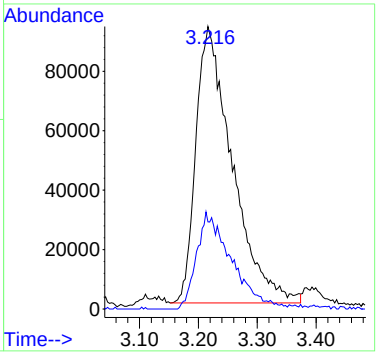


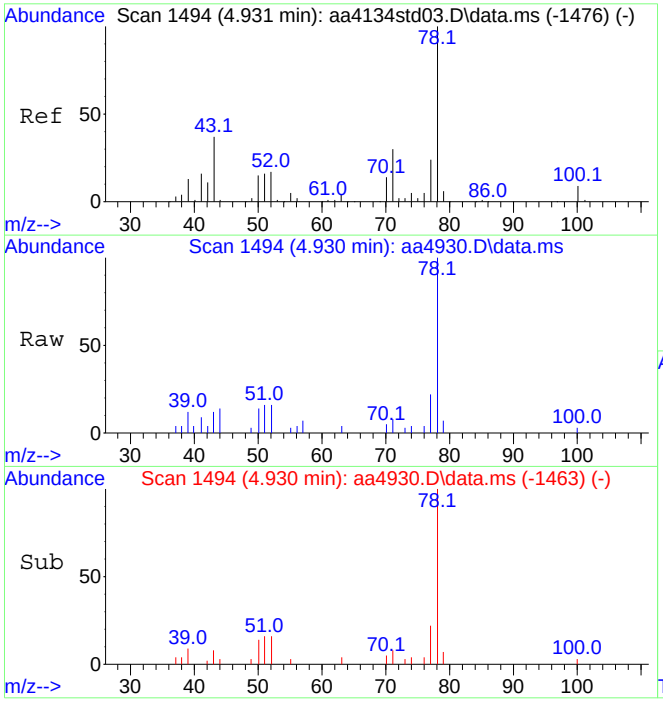



#21
Acetone
Concen: 5.86 ppbV
RT: 3.216 min Scan# 961
Delta R.T. 0.006 min
Lab File: aa4930.D
Acq: 12 Dec 2023 1:31 am

Tgt Ion: 43 Resp: 399825

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 33.3 | 27.1 | 40.7 |

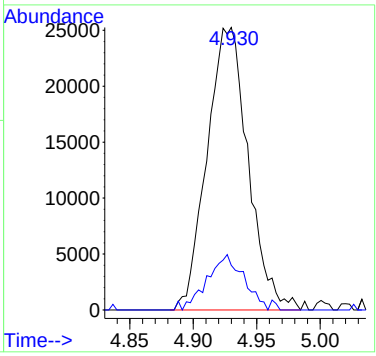


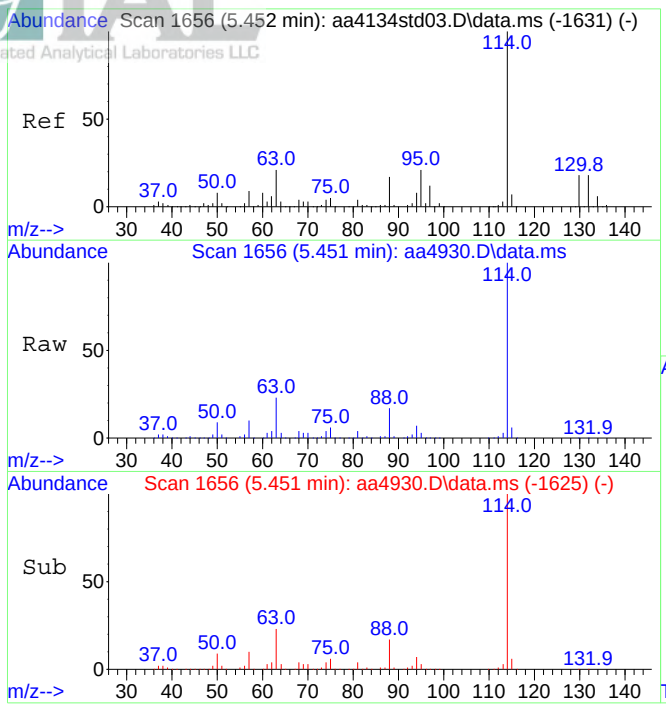




#37
Benzene
Concen: 0.32 ppbV
RT: 4.930 min Scan# 1494
Delta R.T. -0.001 min
Lab File: aa4930.D
Acq: 12 Dec 2023 1:31 am

Tgt Ion: 78 Resp: 56929

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 17.1 | 13.4 | 20.0 |

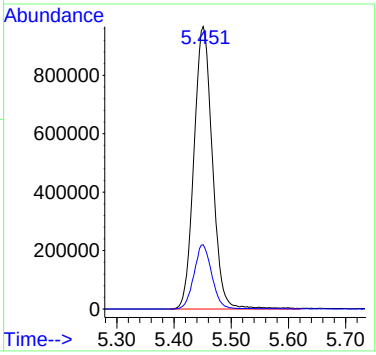


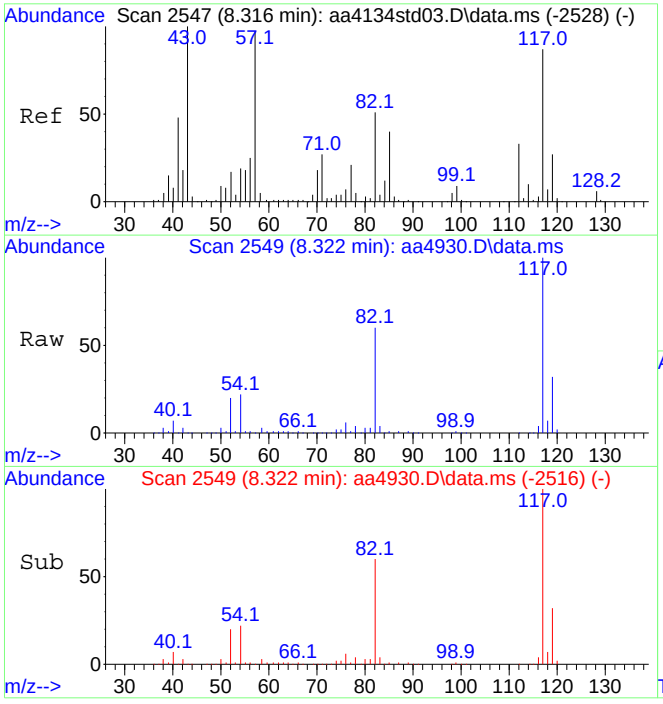



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.451 min Scan# 1656
Delta R.T. -0.001 min
Lab File: aa4930.D
Acq: 12 Dec 2023 1:31 am

Tgt Ion:114 Resp: 2167232

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.0 | 17.0 | 25.6 |

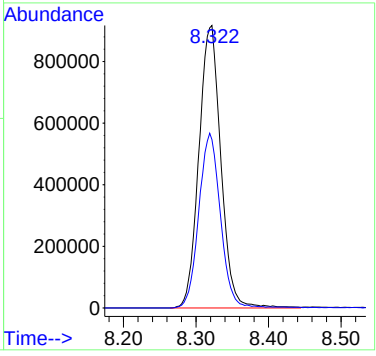


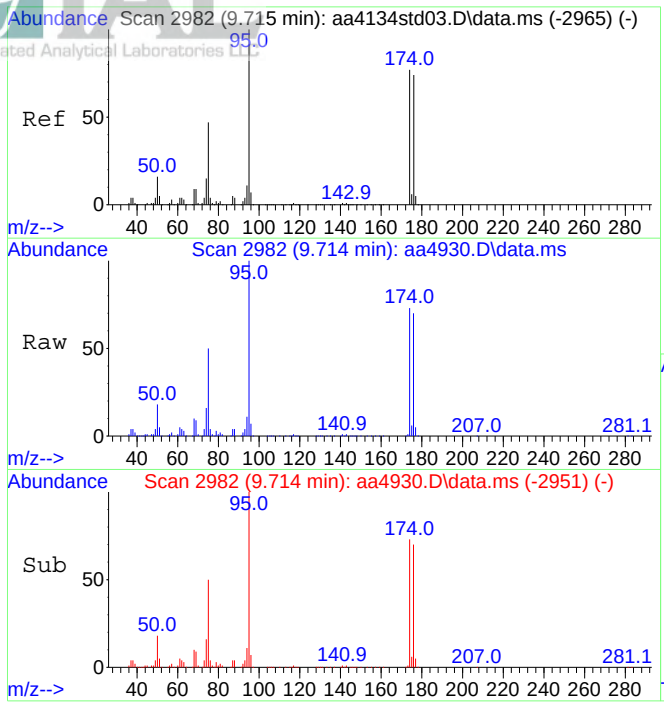




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.322 min Scan# 2549
Delta R.T. 0.006 min
Lab File: aa4930.D
Acq: 12 Dec 2023 1:31 am

Tgt Ion:117 Resp: 1931386

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 61.0 | 47.0 | 70.4 |

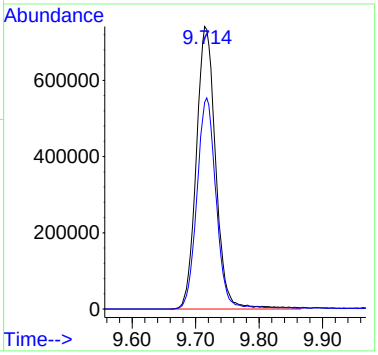





#64
Bromofluorobenzene (tune std)
Concen: 9.35 ppbV
RT: 9.714 min Scan# 2982
Delta R.T. -0.001 min
Lab File: aa4930.D
Acq: 12 Dec 2023 1:31 am

Tgt Ion: 95 Resp: 1574669

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 74.6 | 61.1 | 91.7 |



# INTEGRATED ANALYTICAL LABORATORIES, LLC

**Integrated Analytical Laboratories**

**GC/MS Run Log**

Instrument ID: Agilent 7890A / 5975C
Column: Restek RTX-1 SN 992567

Target Directory: D:\Agilent GCMS\

**Date of Analysis:** 12/8, 11/2023
**Date of Initial Calibration:** 8/15/2023, 10/10/2023
**SDG #:** E23-05047

| File # | Laboratory Sample ID | QC Check | Dilution Factor | Can # | Analyst | Injection Volume (cc) | Comments | *Make-up Air* | | *Acquisition* | | *Room* | | *TO-15 Standard* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Added to canister (cc) | Added for dilution | Date | Time | Temp | BP "Hg | Working ID | Vendor ID (Lot#) |
| aa3401bfb | BFB | ✓ | | ALM018474 | JJW | 0.5 | | | | **8/15/2023** | 10:11 | 70 | 30.30 | | 160-402352677-1 |
| aa3402std05 | 0.2 ppbv Std | ✓ | | EB0103704 | JJW | 1 | | | | | | | | 8/15/2023 | 160-402619255-1 |
| aa3403std04 | 2 ppbv Std | ✓ | | EB0103704 | JJW | 10 | | | | | | | | 8/15/2023 | 160-402619255-1 |
| aa3404std03 | 10 ppbv Std | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 8/15/2023 | 160-402619255-1 |
| aa3405std02 | 20 ppbv Std | ✓ | | EB0103704 | JJW | 100 | | | | | | | | 8/15/2023 | 160-402619255-1 |
| aa3406std01 | 40 ppbv Std | ✓ | | EB0103704 | JJW | 200 | | | | | | | | 8/15/2023 | 160-402619255-1 |
| aa3407icvss | 10 ppbv ICVSS | ✓ | | EB0116272 | JJW | 50 | | | | | | | | 8/15/2023 | 160-402744241-1 |

Analyst Name: J Walukiewicz

Signature: Joseph Walukiewicz

# INTEGRATED ANALYTICAL LABORATORIES, LLC

**Integrated Analytical Laboratories**
**GC/MS Run Log**

Instrument ID: Agilent 7890A / 5975C
Column: Restek RTX-1 SN 992567

Target Directory: D:\Agilent GCMS\

**Date of Analysis:** 12/8, 11/2023
**Date of Initial Calibration:** 8/15/2023, 10/10/2023
**SDG #:** E23-05047

| File # | Laboratory Sample ID | QC Check | Dilution Factor | Can # | Analyst | Injection Volume (cc) | Comments | *Make-up Air* | | *Acquisition* | | *Room* | | *TO-15 Standard* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Added to canister (cc) | Added for dilution | Date | Time | Temp | BP "Hg | Working ID | Vendor ID (Lot#) |
| aa4101bfb | BFB | ✓ | | ALM018474 | JJW | 0.5 | | | | **10/2/2023** | 11:11 | 70 | 30.46 | | 160-402352677-1 |
| aa4102dcvs | 10 ppbv DCVS | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 8/15/2023 | 160-401980152-1 |
| aa4103lcs | 10 ppbv LCS | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 8/15/2023 | 160-401980152-1 |
| aa4104blk | Method Blank | ✓ | | 1127 | JJW | 500 | | | | | | | | | |
| aa4105rllcs | 0.2 ppbv RLLCS | ✓ | | EB0103704 | JJW | 1 | | | | | | | | 8/15/2023 | 160-401980152-1 |
| aa4106 | 3830 | ✓ | | 9122301 | JJW | 500 | | | | | | | | | |
| aa4107 | 5087 | ✓ | | 9182301 | JJW | 500 | | | | | | | | | |
| aa4108 | 2037 | ✓ | | 9232301 | JJW | 500 | | | | | | | | | |
| aa4109 | E23-04100-01 x 10 | ✓ | 10 | 3001 | JJW | 50 | | | | | | | | | |
| aa4110 | E23-04251-01 x 10 | ✓ | 10 | 1773 | JJW | 50 | | | | | | | | | |
| aa4111 | E23-04251-21 x 10 | ✓ | 10 | )4251-01 x 1( | JJW | 50 | | | | | | | | | |
| aa4112 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4113 | E23-04251-02 x 10 | ✓ | 10 | 1771 | JJW | 50 | | | | | | | | | |
| aa4114 | E23-04251-03 x 10 | ✓ | 10 | 1399 | JJW | 50 | | | | | | | | | |
| aa4115 | E23-04251-04 x 10 | ✓ | 10 | 1568 | JJW | 50 | | | | | | | | | |
| aa4116 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4117 | E23-04251-05 x 10 | ✓ | 10 | 1526 | JJW | 50 | | | | | | | | | |
| aa4118 | E23-04251-06 x 10 | ✓ | 10 | 1601 | JJW | 50 | | | | | | | | | |
| aa4119 | E23-04251-07 x 10 | ✓ | 10 | 1597 | JJW | 50 | | | | | | | | | |
| aa4120 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4121 | E23-04251-08 x 10 | ✓ | 10 | 1520 | JJW | 50 | | | | | | | | | |
| aa4122 | E23-04154-06 x 20 | ✓ | 20 | 1565 | JJW | 25 | | | | | | | | | |
| aa4123 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4124 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4125cccvs | 10 ppbv CCCVS | ✓ | | EB0103704 | JJW | 50 | | | | 10/3/2023 | 0:49 | | | 8/15/2023 | 160-402619255-1 |

Analyst Name: J Walukiewicz

Signature: Joseph Walukiewicz

# INTEGRATED ANALYTICAL LABORATORIES, LLC

**Integrated Analytical Laboratories**
**GC/MS Run Log**

Instrument ID: Agilent 7890A / 5975C
Column: Restek RTX-1 SN 992567

Target Directory: D:\Agilent GCMS\

**Date of Analysis:** 12/8, 11/2023
**Date of Initial Calibration:** 8/15/2023, 10/10/2023
**SDG #:** E23-05047

| File # | Laboratory Sample ID | QC Check | Dilution Factor | Can # | Analyst | Injection Volume (cc) | Comments | *Make-up Air* | | *Acquisition* | | *Room* | | *TO-15 Standard* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Added to canister (cc) | Added for dilution | Date | Time | Temp | BP "Hg | Working ID | Vendor ID (Lot#) |
| aa4131bfb | BFB | ✓ | | ALM018474 | JJW | 0.5 | | | | **10/10/2023** | 10:13 | 70 | 30.10 | | 160-402352677-1 |
| aa4132std05 | 0.2 ppbv Std | ✓ | | EB0103704 | JJW | 1 | | | | | | | | 10/10/2023 | 160-402619255-1 |
| aa4133std04 | 2 ppbv Std | ✓ | | EB0103704 | JJW | 10 | | | | | | | | 10/10/2023 | 160-402619255-1 |
| aa4134std03 | 10 ppbv Std | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 10/10/2023 | 160-402619255-1 |
| aa4135std02 | 20 ppbv Std | ✓ | | EB0103704 | JJW | 100 | | | | | | | | 10/10/2023 | 160-402619255-1 |
| aa4136std01 | 40 ppbv Std | ✓ | | EB0103704 | JJW | 200 | | | | | | | | 10/10/2023 | 160-402619255-1 |
| aa4137icvss | 10 ppbv ICVSS | ✓ | | EB0116272 | JJW | 50 | | | | | | | | 10/10/2023 | 160-402744241-1 |
| aa4138lcs | 10 ppbv LCS | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4139blk | Method Blank | ✓ | | 1127 | JJW | 500 | | | | | | | | | |
| aa4140rllcs | 0.2 ppbv RLLCS | ✓ | | EB0103704 | JJW | 1 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4141 | 5078 | ✓ | | 9252301 | JJW | 500 | | | | | | | | | |
| aa4142 | 5101 | ✓ | | 9262301 | JJW | 500 | | | | | | | | | |
| aa4143 | 4869 | ✓ | | 9272301 | JJW | 500 | | | | | | | | | |
| aa4144 | 2157 | ✓ | | 10022301 | JJW | 500 | | | | | | | | | |
| aa4145 | E23-04192-01 | ✓ | | 5100 | JJW | 500 | | | | | | | | | |
| aa4146 | E23-04192-02 | ✓ | | 2072 | JJW | 500 | | | | | | | | | |
| aa4147 | blank | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4148 | E23-04378-01 | ✓ | | 2033 | JJW | 500 | | | | | | | | | |
| aa4149 | E23-04378-02 | ✓ | | 5080 | JJW | 500 | | | | | | | | | |
| aa4150 | E23-04378-22 | ✓ | Dup of E23-04378-02, C | | JJW | 500 | | | | | | | | | |
| aa4151 | E23-04513-01 | ✓ | | 3814 | JJW | 500 | | | | | | | | | |
| aa4152 | blank | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4153 | blank | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4154cccvs | 10 ppbv CCCVS | ✓ | | EB0103704 | JJW | 50 | | | | 10/11/2023 | 1:53 | | | 10/10/2023 | 160-402619255-1 |

Analyst Name: J Walukiewicz

Signature: Joseph Walukiewicz

# INTEGRATED ANALYTICAL LABORATORIES, LLC

**Integrated Analytical Laboratories**
**GC/MS Run Log**

Instrument ID: Agilent 7890A / 5975C
Column: Restek RTX-1 SN 992567

Target Directory: D:\Agilent GCMS\

**Date of Analysis:** 12/8, 11/2023
**Date of Initial Calibration:** 8/15/2023, 10/10/2023
**SDG #:** E23-05047

| File # | Laboratory Sample ID | QC Check | Dilution Factor | Can # | Analyst | Injection Volume (cc) | Comments | *Make-up Air* | | *Acquisition* | | *Room* | | *TO-15 Standard* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Added to canister (cc) | Added for dilution | Date | Time | Temp | BP "Hg | Working ID | Vendor ID (Lot#) |
| aa4527bfb | BFB | ✓ | | ALM018474 | JJW | 0.5 | | | | **11/3/2023** | 9:42 | 70 | 30.43 | | 160-402352677-1 |
| aa4528dcvs | 10 ppbv DCVS | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4529lcs | 10 ppbv LCS | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4530blk | Method Blank | ✓ | | 1127 | JJW | 500 | | | | | | | | | |
| aa4531rllcs | 0.2 ppbv RLLCS | ✓ | | EB0103704 | JJW | 1 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4532 | 2902 | ✓ | | 11022301 | JJW | 500 | | | | | | | | | |
| aa4533 | E23-04828-04 x 2 | ✓ | 2 | 5100 | JJW | 250 | | | | | | | | | |
| aa4534 | E23-04828-07 x 10 | ✓ | 10 | 1406 | JJW | 50 | | | | | | | | | |
| aa4535 | E23-04828-08 x 10 | ✓ | 10 | 1772 | JJW | 50 | | | | | | | | | |
| aa4536 | E23-04828-09 x 10 | ✓ | 10 | 1770 | JJW | 50 | | | | | | | | | |
| aa4537 | E23-04828-06 | ✓ | | 2883 | JJW | 500 | | | | | | | | | |
| aa4538 | E23-04828-26 | ✓ | dup of E23-04828-06, ( | | JJW | 500 | | | | | | | | | |
| aa4539 | E23-04828-11 | ✓ | | 3285 | JJW | 500 | | | | | | | | | |
| aa4540 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4541 | E23-04828-12 | ✓ | | 5078 | JJW | 500 | | | | | | | | | |
| aa4542 | E23-04828-13 | ✓ | | 2029 | JJW | 500 | | | | | | | | | |
| aa4543 | E23-04828-14 | ✓ | | 3426 | JJW | 500 | | | | | | | | | |
| aa4544 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4545 | E23-04828-10 x 10 | ✓ | 10 | 1778 | JJW | 50 | | | | | | | | | |
| aa4546 | E23-04830-01 x 10 | ✓ | 10 | 1199 | JJW | 50 | | | | | | | | | |
| aa4547 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4548 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4549cccvs | 10 ppbv CCCVS | ✓ | | EB0103704 | JJW | 50 | | | | 11/3/2023 | 22:29 | | | 10/10/2023 | 160-402619255-1 |

Analyst Name: J Walukiewicz

Signature: Joseph Walukiewicz

# INTEGRATED ANALYTICAL LABORATORIES, LLC

**Integrated Analytical Laboratories**
**GC/MS Run Log**

Instrument ID: Agilent 7890A / 5975C
Column: Restek RTX-1 SN 992567

Target Directory: D:\Agilent GCMS\

**Date of Analysis:** 12/8, 11/2023
**Date of Initial Calibration:** 8/15/2023, 10/10/2023
**SDG #:** E23-05047

| File # | Laboratory Sample ID | QC Check | Dilution Factor | Can # | Analyst | Injection Volume (cc) | Comments | *Make-up Air* | | *Acquisition* | | *Room* | | *TO-15 Standard* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Added to canister (cc) | Added for dilution | Date | Time | Temp | BP "Hg | Working ID | Vendor ID (Lot#) |
| aa4881bfb | BFB | ✓ | | ALM018474 | JJW | 0.5 | | | | **12/8/2023** | 10:21 | 68 | 30.46 | | 160-402352677-1 |
| aa4882dcvs | 10 ppbv DCVS | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4883lcs | 10 ppbv LCS | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4884blk | Method Blank | ✓ | | 1127 | JJW | 500 | | | | | | | | | |
| aa4885rllcs | 0.2 ppbv RLLCS | ✓ | | EB0103704 | JJW | 1 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4886 | E23-05047-01 | ✓ | | 2902 | JJW | 500 | | | | | | | | | |
| aa4887 | E23-05047-02 | ✓ | | 2037 | JJW | 500 | | | | | | | | | |
| aa4888 | E23-05047-03 | ✓ | | 3811 | JJW | 500 | | | | | | | | | |
| aa4889 | E23-05047-04 | ✓ | | 3283 | JJW | 500 | | | | | | | | | |
| aa4890 | E23-05047-05 | ✓ | | 2749 | JJW | 500 | | | | | | | | | |
| aa4891 | E23-05047-06 | ✓ | | 5091 | JJW | 500 | | | | | | | | | |
| aa4892 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4893 | E23-05080-01 | ✓ | | 3006 | JJW | 500 | | | | | | | | | |
| aa4894 | E23-05080-02 | ✓ | | 2155 | JJW | 500 | | | | | | | | | |
| aa4895 | E23-05093-01 | ✓ | | 3044A | JJW | 500 | | | | | | | | | |
| aa4896 | E23-05047-01x10 dil | ✓ | 10 | 2902 | JJW | 50 | | | | | | | | | |
| aa4897 | E23-05047-03x10 dil | ✓ | 10 | 3811 | JJW | 50 | | | | | | | | | |
| aa4898 | E23-05047-04x10 dil | ✓ | 10 | 3283 | JJW | 50 | | | | | | | | | |

Analyst Name: J Walukiewicz

Signature: Joseph Walukiewicz

# INTEGRATED ANALYTICAL LABORATORIES, LLC

**Integrated Analytical Laboratories**
**GC/MS Run Log**

Instrument ID: Agilent 7890A / 5975C
Column: Restek RTX-1 SN 992567

Target Directory: D:\Agilent GCMS\

**Date of Analysis:** 12/8, 11/2023
**Date of Initial Calibration:** 8/15/2023, 10/10/2023
**SDG #:** E23-05047

| File # | Laboratory Sample ID | QC Check | Dilution Factor | Can # | Analyst | Injection Volume (cc) | Comments | *Make-up Air* | | *Acquisition* | | *Room* | | *TO-15 Standard* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Added to canister (cc) | Added for dilution | Date | Time | Temp | BP "Hg | Working ID | Vendor ID (Lot#) |
| aa4901bfb | BFB | ✓ | | ALM018474 | JJW | 0.5 | | | | **12/11/2023** | 9:24 | 68 | 30.07 | | 160-402352677-1 |
| aa4902dcvs | 10 ppbv DCVS | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4903lcs | 10 ppbv LCS | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4904blk | Method Blank | ✓ | | 1127 | JJW | 500 | | | | | | | | | |
| aa4905rllcs | 0.2 ppbv RLLCS | ✓ | | EB0103704 | JJW | 1 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4906 | 1458 | ✓ | | 12062301 | JJW | 50 | | | | | | | | | |
| aa4907 | 1588 | ✓ | | 12082301 | JJW | 50 | | | | | | | | | |
| aa4908 | 3012 | ✓ | | 12072301 | JJW | 500 | | | | | | | | | |
| aa4909 | E23-05047-03x10 dil | ✓ | 10 | 3811 | JJW | 50 | | | | | | | | | |
| aa4910 | E23-05047-04x5 dil | ✓ | 5 | 3283 | JJW | 100 | | | | | | | | | |
| aa4911 | E23-05080-01x10 dil | ✓ | 10 | 3006 | JJW | 50 | | | | | | | | | |
| aa4912 | E23-05080-02x10 dil | ✓ | 10 | 2155 | JJW | 50 | | | | | | | | | |
| aa4913 | E23-05093-01x5 dil | ✓ | 5 | 3044Ac | JJW | 100 | | | | | | | | | |
| aa4914 | E23-05047-06x5 dil | ✓ | 5 | 5091 | JJW | 100 | | | | | | | | | |
| aa4915 | E23-05047-06 | ✓ | | 5091 | JJW | 500 | | | | | | | | | |
| aa4916 | E23-05081-01x5 dil | ✓ | 5 | 5073 | JJW | 100 | | | | | | | | | |
| aa4917 | E23-05081-01 | ✓ | | 5073 | JJW | 500 | | | | | | | | | |
| aa4918 | E23-05081-02x5 dil | ✓ | 5 | 2758 | JJW | 100 | | | | | | | | | |
| aa4919 | E23-05081-02 | ✓ | | 2758 | JJW | 500 | | | | | | | | | |
| aa4920 | E23-05081-03x5 dil | ✓ | 5 | 3809 | JJW | 100 | | | | | | | | | |
| aa4921 | E23-05081-03 | ✓ | | 3809 | JJW | 500 | | | | | | | | | |
| aa4922 | E23-05081-04x5 dil | ✓ | 5 | 2896B | JJW | 100 | | | | | | | | | |
| aa4923 | E23-05081-04 | ✓ | | 2896B | JJW | 500 | | | | | | | | | |
| aa4924 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4925 | E23-05007-01x10 dil | ✓ | 10 | 1543 | JJW | 50 | | | | | | | | | |
| aa4926 | E23-05007-02x10 dil | ✓ | 10 | 1601 | JJW | 50 | | | | | | | | | |
| aa4927 | E23-05007-03x10 dil | ✓ | 10 | 1773 | JJW | 50 | | | | | | | | | |
| aa4928 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4929 | E23-05079-03 | ✓ | | 3830 | JJW | 500 | | | | | | | | | |
| aa4930 | E23-05079-23 | ✓ | Dup of E23-05079-03, C | | JJW | 500 | | | | | | | | | |
| aa4931cccvs | 10 ppbv CCCVS | ✓ | | EB0103704 | JJW | 50 | | | | 12/12/2023 | 1:59 | | | 10/10/2023 | 160-401980152-1 |

Analyst Name: J Walukiewicz

Signature: Joseph Walukiewicz

Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

# External Chain of Custody Record/ Field Test Data Sheet USEPA Method TO-15

Contact Us: 973-361-4252
Fax: 973-366-5613
Web: www.ialonline.com

Carrier (check one): ____ IAL Courier ____ Client Courier ____ FedEx/UPS

pg ____ of ____

| Client Contact Information | Project Information | Invoice Information |
|---|---|---|
| Company: HK Eng & Geo | Project Name: HK2661 | |
| Address: 1600 Rt. 22 East | Project Location (State): NJ | Attn: |
| Union NJ 07083 | Project Manager: | Address: |
| Phone: (908) 688-7800 | PM Signature: | |
| Fax: | PM E-Mail: | PO #: HK2661 |
| Report to: | Sampler: | Quote #: |

**Analysis Turnaround Time** - IF NO TAT IS SPECIFIED, 2 WEEK TAT IS ASSUMED

IAL Standard: 2 weeks (10 business days)

Rush (**pre-approved by lab): 24hr** 48hr** 72hr** 96hr** 1wk**

Barometric Pressure: Start / Stop

| | Sample Identification | Start DATE & TIME (24hr Clock) | End DATE & TIME (24hr Clock) | Starting Vacuum ("Hg) | Ending Vacuum ("Hg) | Starting Temp. (°F) | Ending Temp. (°F) | Outgoing Vacuum - Lab ("Hg) | Incoming Vacuum - Lab ("Hg) | Flow Regulator ID | Canister ID | Canister Size (1L or 6L) | Flow Controller Readout (cc/min) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SV1 | 11-15-23-1017 | 11-15-23-1300 | -30 | -4 | 45 | 57 | -29.0 | -3.5 | A0098841-9 | 2902 | 6L | 33.5 |
| 2 | SV2 | -0938 | -1220 | -30 | -4 | 49 | 51 | -29.0 | -3.5 | A0113955-9 | 2037 | | 33.2 |
| 3 | SV3 | -1040 | -1315 | -30 | -5 | 45 | 57 | -29.0 | -5.0 | A0160008-4 | 3811 | | 33.3 |
| 4 | SV6 | -1239 | -1440 | -30 | -8 | 80 | 80 | -29.0 | -7.5 | A0098643-3 | 3283 | | 34.5 |
| 5 | SV7 | 11-16-23-0824 | 11-16-23-1043 | -29 | -7 | 83 | 73 | -29.0 | -7.0 | A0113955-5 | 2749 | | 34.2 |
| 6 | SV8 | -0830 | -1033 | -30 | -7 | 83 | 76 | -29.0 | -7.0 | 7301021 | 5091 | | 33.3 |

| Analysis | | | | Report | | | Matrix | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EPA TO - 15 | NJDEP LLTO-15 (Includes 30 TICs) | Library Search (10, 20, or 30 TICs) | Other (Explain in Comments) | Regulatory/ NY Cat B / Full (NJ Required) | Reduced / NY Cat A Data Package | Results Only | Indoor Air | Ambient / Outdoor Air | Sub Slab / Soil Gas / Near Slab (Circle One) | Stack Emission / SVE System | High Concentrations Expected |
| X | | | | | | | | | | | |
| X | | | | | | | | | | | |
| X | | | | | | | | | | | |
| X | | | | | | | | | | | |
| X | | | | | | | | | | | |
| X | | | | | | | | | | | |

**Comments/ Special Analysis Instructions / QC Requirements:**

110323aa → #2902 100223aa: 2037

110223Q1: 1,3,4,5,6 092223Q1: 2

Note: Hold or contingent samples may be designated by writing an "H" or "C" in the appropriate analysis box.

**ALL FIELDS IN RED ARE REQUIRED**

**Shipping Information / Canister Preparation (for laboratory use only)**

*Individual Preparing Canisters / Title*: ~~P. Jenkins, J. Walukiewicz~~ / Air Department Sample Custodians

*Lab Affixed Seal Number(s)*: Desmond Flores

*Date/Time Shipping Container Sealed*: 4:15PM 11/13/23

**Laboratory Canister Certification**

GC/MS Analyst Signature: Joseph J Walukiewicz III (JJW)

IAL SDG#: 05047

**External Chain of Custody**

| Relinquished | Received | Date / Time | Reason for Change of External Custody |
|---|---|---|---|
| Desmond Flores | R. Kroll | 4:15PM 11/13/23 | shipment from laboratory to client |
| R. Kroll | Dale Mart | 11-16-23 1350 | |
| Dale Mart | Joseph Walukiewicz III (JJW) | 11-16-23 1205 | Received at eie Lab |

Name/Title Resealing Shipping Container Name:

Date/Time Sample Shipping Container Resealed:

Date/Time Sample Shipping Container Opened: 11/16/23 12 05

NJDEP Affixed Seal Number:

Individual Opening Sample Shipping Container: ~~Padraic Jenkins~~ / Joseph Walukiewicz

Date/Time Internal Chain of Custody Initiated: 11/17/23 09 30

White and yellow - lab copies; Pink - client copy

Use appropriate care with IAL sampling equipment when sampling and packing for shipment. The client is responsible for all damage incurred to IAL equipment. Notify IAL if equipment is damaged upon receipt. Holding time before sampling is 15 days, after sampling is 30 days; failure to follow these times may result in data rejection by regulatory agencies. The lab will contact you if your COC is not clear, incomplete, or if discrepancies exist. The use of initials is not permitted on the COC except when correcting errors. 06.2014

# Example Calculation (EPA TO-15)

$$\frac{\text{Area of Compound}}{\text{Area of Internal Standard}} \times \frac{\text{Concentration of Internal Standard (10 ppbv)}}{\text{Response Factor}} = \text{Concentration of Compound (ppbv)}$$

# Conversion from ppbv to µg/m $^3$

$$\frac{\text{Concentration of Compound (ppbv)} \times \text{Molecular Weight of Compound}}{24.45} = \text{Concentration of Compound (µg/m3)}$$

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Clean Canister Certification Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **Clean Canister, Batch Master 2037** | **Data File:** | **AA4108** |
| **Field Sample Name:** | **Canister 2037** | **Date Analyzed:** | **10/2/2023** |
| **Sample Volume:** | **500ml** | **Matrix:** | **Air** |

Canisters associated with this run: 2037 (used for E23-05047-02), 2897, 2750, 4853, 3278, 2885, 3008, 2063

Runs with this Clean Canister Certification:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4101BFB] | 10/02/2023 11:11 |
| 10 PPBV DCVS [AA4102DCVS] | 10/02/2023 12:19 |
| 10 PPBV LCS [AA4103LCS] | 10/02/2023 12:50 |
| METHOD BLANK [AA4104BLK] | 10/02/2023 13:32 |
| 02 PPBV RLLCS [AA4105RLLCS] | 10/02/2023 14:08 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 3830 [AA4106] | 10/02/2023 14:44 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 5087 [AA4107] | 10/02/2023 15:14 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2037 [AA4108] | 10/02/2023 15:45 |
| 10 PPBV CCCVS [AA4125CCCVS] | 10/03/2023 00:49 |

This canister has been certified clean, all compounds are below 0.2 ppbv.

| Compound | CAS # | RL (ppbv) | Calculated Amount (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromodichloromethane | 75-27-4 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| Dibromochloromethane | 124-48-1 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.20 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.20 | ND |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.20 | ND |
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |
| n-Hexane | 110-54-3 | 0.20 | ND |

# Clean Canister Certification Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **Clean Canister, Batch Master 2037** | **Data File:** | **AA4108** |
| **Field Sample Name:** | **Canister 2037** | **Date Analyzed:** | **10/2/2023** |
| **Sample Volume:** | **500ml** | **Matrix:** | **Air** |

Canisters associated with this run: 2037 (used for E23-05047-02), 2897, 2750, 4853, 3278, 2885, 3008, 2063

Runs with this Clean Canister Certification:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4101BFB] | 10/02/2023 11:11 |
| 10 PPBV DCVS [AA4102DCVS] | 10/02/2023 12:19 |
| 10 PPBV LCS [AA4103LCS] | 10/02/2023 12:50 |
| METHOD BLANK [AA4104BLK] | 10/02/2023 13:32 |
| 02 PPBV RLLCS [AA4105RLLCS] | 10/02/2023 14:08 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 3830 [AA4106] | 10/02/2023 14:44 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 5087 [AA4107] | 10/02/2023 15:14 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2037 [AA4108] | 10/02/2023 15:45 |
| 10 PPBV CCCVS [AA4125CCCVS] | 10/03/2023 00:49 |

This canister has been certified clean, all compounds are below 0.2 ppbv.

| Compound | CAS # | RL (ppbv) | Calculated Amount (ppbv) |
|---|---|---|---|
| Methylene chloride | 75-09-2 | 0.20 | ND |
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.20 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.20 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.40 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

Data Path : C:\DATA\2023\10-2023\10-02-2023\
Data File : aa4108.D
Acq On : 2 Oct 2023 3:45 pm
Operator : jjw
Sample : 2037
Misc : 2897, 2750, 4853, 3278, 2885, 3008, 2063
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 05 12:31:19 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.383 | 130 | 333630 | 10.00 | ppbV | -0.013 |
| 39) 1,4-Difluorobenzene (IS) | 5.447 | 114 | 1375928 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 1301571 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1012829 | 9.35 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\10-2023\10-02-2023\
Data File : aa4108.D
Acq On : 2 Oct 2023 3:45 pm
Operator : jjw
Sample : 2037
Misc : 2897, 2750, 4853, 3278, 2885, 3008, 2063
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 05 12:31:19 2023
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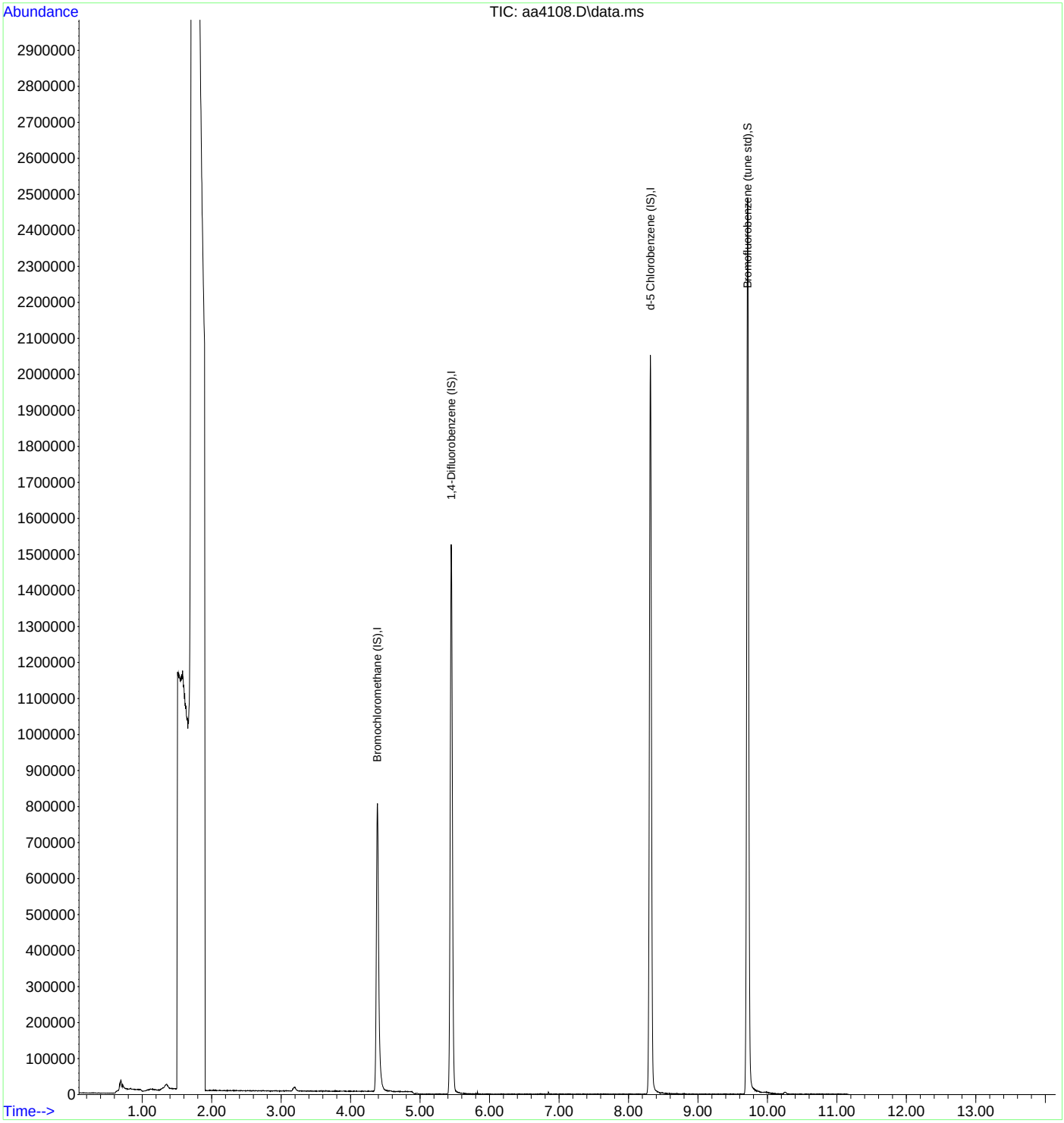
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Clean Canister Certification Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **Clean Canister, Batch Master 2902** | **Data File:** | **AA4532** |
| **Field Sample Name:** | **Canister 2902** | **Date Analyzed:** | **11/3/2023** |
| **Sample Volume:** | **500ml** | **Matrix:** | **Air** |

Canisters associated with this run: 2902 (used for E23-05047-01), 2893, 2749 (used for E23-05047-05), 3100, 3811 (used for E23-05047-03), 3283 (used for E23-05047-04), 5091 (used for E23-05047-06), 2886

Runs with this Clean Canister Certification:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4527BFB] | 11/03/2023 09:42 |
| 10 PPBV DCVS [AA4528DCVS] | 11/03/2023 10:14 |
| 10 PPBV LCS [AA4529LCS] | 11/03/2023 10:43 |
| METHOD BLANK [AA4530BLK] | 11/03/2023 11:41 |
| 02 PPBV RLLCS [AA4531RLLCS] | 11/03/2023 12:15 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2902 [AA4532] | 11/03/2023 13:01 |
| 10 PPBV CCCVS [AA4549CCCVS] | 11/03/2023 22:29 |

This canister has been certified clean, all compounds are below 0.2 ppbv.

| Compound | CAS # | RL (ppbv) | Calculated Amount (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromodichloromethane | 75-27-4 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| Dibromochloromethane | 124-48-1 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.20 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.20 | ND |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.20 | ND |
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |
| n-Hexane | 110-54-3 | 0.20 | ND |
| Methylene chloride | 75-09-2 | 0.20 | ND |

# Clean Canister Certification Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **Clean Canister, Batch Master 2902** | **Data File:** | **AA4532** |
| **Field Sample Name:** | **Canister 2902** | **Date Analyzed:** | **11/3/2023** |
| **Sample Volume:** | **500ml** | **Matrix:** | **Air** |

Canisters associated with this run: 2902 (used for E23-05047-01), 2893, 2749 (used for E23-05047-05), 3100, 3811 (used for E23-05047-03), 3283 (used for E23-05047-04), 5091 (used for E23-05047-06), 2886

Runs with this Clean Canister Certification:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4527BFB] | 11/03/2023 09:42 |
| 10 PPBV DCVS [AA4528DCVS] | 11/03/2023 10:14 |
| 10 PPBV LCS [AA4529LCS] | 11/03/2023 10:43 |
| METHOD BLANK [AA4530BLK] | 11/03/2023 11:41 |
| 02 PPBV RLLCS [AA4531RLLCS] | 11/03/2023 12:15 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2902 [AA4532] | 11/03/2023 13:01 |
| 10 PPBV CCCVS [AA4549CCCVS] | 11/03/2023 22:29 |

This canister has been certified clean, all compounds are below 0.2 ppbv.

| Compound | CAS # | RL (ppbv) | Calculated Amount (ppbv) |
|---|---|---|---|
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.20 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.20 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.40 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

Data Path : C:\DATA\2023\11-2023\11-03-2023\
Data File : aa4532.D
Acq On : 3 Nov 2023 1:01 pm
Operator : jjw
Sample : 2902
Misc : 2893, 2749, 3100, 3811, 3283, 5091, 2886
ALS Vial : 9 Sample Multiplier: 1

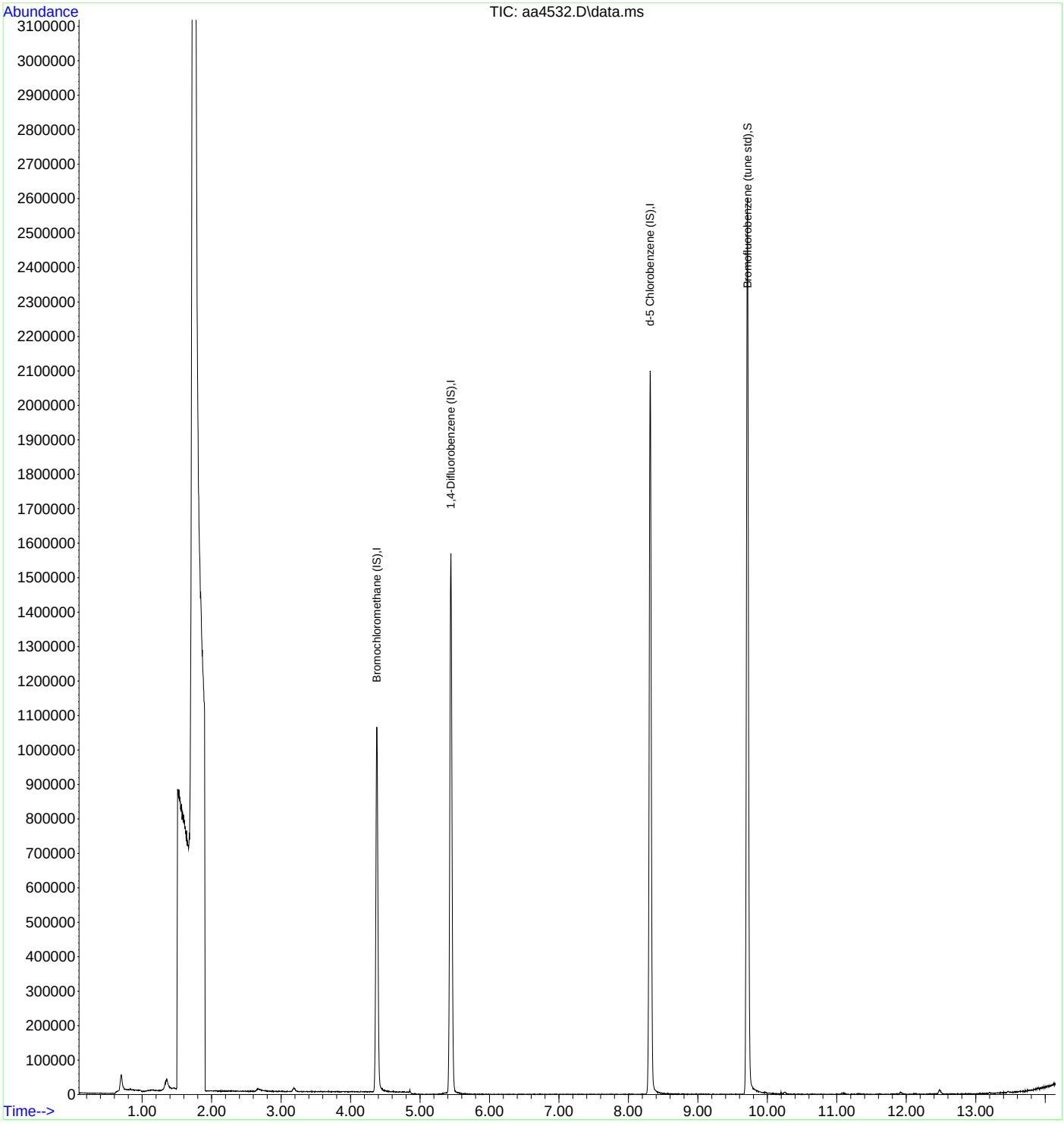
Quant Time: Nov 06 12:35:05 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.377 | 130 | 411812 | 10.00 | ppbV | -0.017 |
| 39) 1,4-Difluorobenzene (IS) | 5.445 | 114 | 1437377 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.313 | 117 | 1386432 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.715 | 95 | 1146616 | 9.49 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\11-2023\11-03-2023\
Data File : aa4532.D
Acq On : 3 Nov 2023 1:01 pm
Operator : jjw
Sample : 2902
Misc : 2893, 2749, 3100, 3811, 3283, 5091, 2886
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 06 12:35:05 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



**LAST PAGE OF DOCUMENT**

# EPA TO-15 DATA PACKAGE

**ANALYTICAL DATA PACKAGE FOR THE**
**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**
**ALBANY NEW YORK 12233**

**Integrated Analytical Laboratories, LLC** — **Randolph, NJ 07869**
**Project#: HK2661.1** — **NY ELAP Certification#: 11402**
**SDG #: E23-05093** — **NJDEP (Primary AB) Certification#: 14751**
**Date of first sample receipt: 11/20/2023** — **Date of last sample receipt: 11/20/2023**

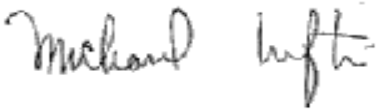
**Client:** HK Engineering+Geology, D.P.C.

**Project/Site:** HK2661.1/NY

| Client Sample Number | Laboratory Sample | Sample Location | Date/Time of Collection |
|---|---|---|---|
| SV9 | E23-05093-01 | NA | 11/20/2023 8:30 |



I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of data contained in this hardcopy data package and in the computer-readable data submitted on CD/diskette and by electronic mail has been authorized by the laboratory manager or his designee, as verified by the following signature.



Michael H. Leftin, Ph.D.
Laboratory Director

Date: December 19, 2023

Ming-Hwa Reitan
QA/QC Manager

Date: December 19, 2023

# EPA Method TO-15 Table of Contents

# Laboratory Acronyms

*The following is a list of laboratory acronyms commonly used in EPA Method TO-15 testing:*

| Acronym | Definition |
|---|---|
| BLK | Blank/Method Blank |
| BFB | 4-Bromofluorobenzene (Tuning Standard) |
| CAS Number | Chemical Abstract Service Registry Number |
| cc | cubic centimeters |
| CCCVS | Closing Calibration Check Verification Standard |
| COC | Chain of Custody |
| DCVS | Daily Calibration Verification Standard |
| DF | Dilution Factor |
| EPA | U. S. Environmental Protection Agency (aka USEPA) |
| "Hg | Inches of Mercury |
| IA | Indoor Air |
| IASL | Indoor Air Screening Level |
| ICAL | Initial Calibration |
| ICVSS | Initial Calibration Verification Standard |
| ISTD | Internal Standard |
| GC | Gas Chromatography |
| GC/MS | Gas Chromatography/Mass Spectrometry |
| LCS | Laboratory Control Sample/Spike |
| LLTO-15 | Low Level TO-15 |
| MDL | Method Detection Limit |
| MDLV | Method Detection Limit Verification |
| ml | milliliters |
| ND | Not Detected (at or above RL) |
| NJDEP | New Jersey Department of Environmental Protection |
| PM | Project Manager |
| ppbv | parts per billion, volume-to-volume ratio |
| PQL | Practical Quantitation Limit - MDLx3 |
| QA | Quality Assurance |
| QC | Quality Control |
| RAL | Rapid Action Limit |
| RL | Reporting Limit |
| RLLCS | Reporting Limit Laboratory Control Sample |
| RPD | Relative Percent Difference |
| RRF | Relative Response Factor |
| RSD | Relative Standard Deviation |
| SDG | Sample Delivery Group |
| SGSL | Soil Gas Screening Levels |
| SS | Sub Slab |
| TAT | Turnaround Time |
| TIC | Tentatively Identified Compound |
| µg/m3 | micrograms per cubic meter |

# Section I: Chain of Custody

Integrated Analytical Labs
273 Franklin Rd
Randolph, NJ 07869

# External Chain of Custody Record/ Field Test Data Sheet USEPA Method TO-15

Contact Us: 973 361-4252
fax: 973 366-5613
Web: www.ialonline.com



| Client Contact Information | Project Information | Invoice Information |
|---|---|---|
| Company: HK Engineering and Geology D.P.C. | Project Name: HK2661.1 | Carrier (check one): ____ IAL Courier ____Client Courier ____FedEx/UPS |
| Address: 1600 US 22 East | Project Location (State): NY | Attn: |
| Union, NJ 07083 | Project Manager: Chris Hirschmann | Address: |
| Phone: 908 -688-7800 | PM Signature: | |
| Fax: | PM E-Mail: chirschmann@hillmannconsulting.com | PO #: HK2661.1 |
| Report to: Chris Hirschmann | Sampler: D. Aponte | Quote #: |

Analysis Turnaround Time - IF NO TAT IS SPECIFIED, 2 WEEK TAT IS ASSUMED

IAL Standard: 2 weeks (10 business days)

Rush (**pre-approved by lab): 24hr** 48hr** 72hr** 96hr** 1wk**

| Sample Identification | Start DATE & TIME (24hr Clock) | End DATE & TIME (24hr Clock) | Starting Vacuum ("Hg) | Ending Vacuum ("Hg) | Starting Temp (°F) | Ending Temp (°F) | Outgoing Vacuum - Lab ("Hg) | Barometric Pressure Start: Incoming Vacuum - Lab ("Hg) | Flow Regulator ID | Barometric Pressure Stop: Canister ID | Canister Size (1L or 6L) | Flow Controller Readout (cc/min) | EPA TO - 15 | NJDEP LLTO-15 (includes 30 TICs) | Library Search (10, 20, or 30 TICs) | Other (Explain in Comments) | Regulatory/ NY Cat B / Full (NJ Required) | Reduced / NY Cat A Data Package | Results Only | Indoor Air | Ambient / Outdoor Air | Sub Slab / Soil Gas / Near Slab (Circle One) | Stack Emission / SVE System | High Concentrations Expected |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SV9 | 11/20/23 - 8:30 | 11/20/23 - 10:56 | -29 | -7 | 38 | 42 | -24.0 | -7.0 | A0224857-7 | 3044A | 6L | 31.80 | X | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |

Comments/ Special Analysis Instructions / QC Requirements:

5 Day TAT Hard Copy and Verbal.

09132301 : 1
100223aa : 3830

Note: Hold or contingent samples may be designated by writing an "H" or "C" in the appropriate analysis box.

ALL FIELDS IN RED ARE REQUIRED

IAL 5093

Shipping Information / Canister Preparation (for laboratory use only)

Individual Preparing Canisters / Title: Desmond Flores / Air Department Sample Custodian

Lab Affixed Seal Number(s):

Date/Time Shipping Container Sealed: 1615 11/13/23

Laboratory Canister Certification

GC/MS Analyst Signature: Joseph J Walukiewicz III (IAL)

External Chain of Custody

| Relinquished | Received | Date / Time | Reason for Change of External Custody |
|---|---|---|---|
| | Joseph J Walukiewicz III (IAL) | 11/20/23 1518 | shipment from laboratory to client |
| | | 11/20/23 1643 | Received at air Lab |

Name/Title Resealing Shipping Container Name:

Date/Time Sample Shipping Container Resealed:

Date/Time Sample Shipping Container Opened: 11/20/23 1643

NJDEP Affixed Seal Number:

Individual Opening Sample Shipping Container: Joseph Walukiewicz/Desmond Flores

Date/Time Internal Chain of Custody Initiated: 11/21/23 09 15

e appropriate care with IAL sampling equipment when sampling and packing for shipment. The client is responsible for all damage incurred to IAL equipment. Notify IAL if equipment is damaged upon receipt. Holding time before sampling is 15 days, er sampling is 30 days; failure to follow these times may result in data rejection by regulatory agencies. The lab will contact you if your COC is not clear, incomplete, or if discrepancies exist. The use of initials is not permitted on the COC except en correcting errors.

White and yellow - lab copies; Pink - client copy

# PROJECT INFORMATION

RUSH

## E23-05093: HK2661.1

**To:** Chris Hirschmann
HK Engineering & Geology, D.P.C.
Fax: 908-377-8909 cell
EMail: chirschmann@hillmannconsulting.com;rpowell@hillmanngroup.com

**Report To**

HK Engineering & Geology, D.P.C.
1600 Route 22 East
Union, NJ 07083
Attn: Chris Hirschmann

**Bill To**

HK Engineering & Geology, D.P.C.
1600 Route 22 East
Union, NJ 07083
Attn: Chris Hirschmann

| Report Format | P.O. # | Received At Lab | PHC Due | Verbal Due | Hardcopy Due | |
|---|---|---|---|---|---|---|
| Air Regulatory | HK2661.1 | Nov 20, 2023 @ 16:43 | NA | Nov 29, 2023 | Nov 30, 2023 | * |

* Any ***Conditional or Hold*** status will delay final hardcopy report sent date.

**Diskette Req.** Not Required

| Lab ID | Client Sample ID | Depth | Sampling Time | Matrix | Unit | Field pH/Temp |
|---|---|---|---|---|---|---|
| 05093-001 | SV9 | NA | 11/20/23@10:56 | Air-Indoor | ppbV | |

* No Cert = IAL does not hold certification for this test/method

| Sample # | Test | Status | Analytical Method | TAT | Holding Time Expires |
|---|---|---|---|---|---|
| 001 | EPA TO-15 | Analyze | TO-15 | RUSH 1 WK | 12/20/2023 |

**Project Notes:**

**NOTE 1 taken by kfalconer on 11/21/2023 09:32**
CLIENT DID NOT RECORD BAROMETRIC PRESSURE.

# Internal Chain of Custody

**Instructions:** Use 1 form for each 20 samples of aliquot.

| Laboratory Person Accepting Responsibility for Sample(s) | | | |
|---|---|---|---|
| Laboratory: | Integrated Analytical Laboratories | Location: | 273 Franklin Rd Randolph, NJ 07869 |
| Name: | Joseph Walukiewicz | Title: | Air Department Receiving |
| Case No.: | E23-05093 | Analytical Parameter/Fraction: (check one) | ____ NJDEP LLTO-15<br>__X__ EPA TO-15 |

| Sample No. | Aliquot/Extract No. |
|---|---|
| 8V9 | E23-05093-01 |
| | E23- |
| | E23- |
| | E23- |
| | E23- |
| | E23 |
| | E23- |
| | E23- |
| | E23- |
| | E23- |

| Sample No. | Aliquot/Extract No. |
|---|---|
| | E23- |
| | E23- |
| | E23- |
| | E23- |
| | E23- |
| | E23- |
| | E23- |
| | E23- |
| | E23- |
| | E23- |

| Date | Time | Relinquished By | Received By | Purpose of Change of Custody |
|---|---|---|---|---|
| 11 21 23 | 09 15 | SIGNATURE<br>PRINTED NAME | SIGNATURE Joseph Walukiewicz<br>PRINTED NAME JOSEPH WALUKIEWICZ | 1. Sample log-in<br>2. Pressure Check<br>3. Pre-analysis storage |
| 11 21 23 | 09 20 | SIGNATURE Joseph Walukiewicz<br>PRINTED NAME JOSEPH WALUKIEWICZ | SIGNATURE<br>PRINTED NAME | Placement in TO-15 sample storage area until ready for analysis |
| 12 19 23 | 10 20 | SIGNATURE<br>PRINTED NAME | SIGNATURE Joseph Walukiewicz<br>PRINTED NAME JOSEPH WALUKIEWICZ | TO-15 analysis on:<br>05093-01 |
| | | SIGNATURE<br>PRINTED NAME | SIGNATURE Joseph Walukiewicz<br>PRINTED NAME JOSEPH WALUKIEWICZ | TO-15 analysis on: |
| | | SIGNATURE<br>PRINTED NAME | SIGNATURE<br>PRINTED NAME | |
| | | SIGNATURE<br>PRINTED NAME | SIGNATURE<br>PRINTED NAME | |
| | | SIGNATURE<br>PRINTED NAME | SIGNATURE<br>PRINTED NAME | |
| | | SIGNATURE<br>PRINTED NAME | SIGNATURE<br>PRINTED NAME | |

Rev. 12/16

# Section II: Methodology Review

# Methodology Summary for Air Collected from Hazardous Waste Site Contract

| | | | |
|---|---|---|---|
| **Laboratory:** | **Integrated Analytical Lab, LLC** | **Project No:** | **HK2661.1** |
| **Location:** | **Randolph, NJ** | **SDG No:** | **E23-05093** |

| Name | Required Methodology | Indicate Method |
|---|---|---|
| Volatile Organics | US EPA TO-15 | US EPA Method TO-15 |

# Section III: Case Narrative

# CASE NARRATIVE

**Integrated Analytical Laboratories, LLC** — **Randolph, NJ 07869**
**Project #: HK2661.1** — **NJDEP (Primary AB) Certification#: 14751**
**SDG #: E23-05093** — **NY ELAP Certification #: 11402**
**CT DPH Certification#: PH-0699**
**Analytical Method: EPA Method TO-15** — **PADEP Certification#: 68-00773**

**Date of first sample receipt: 11/20/2023** — **Date of last sample receipt: 11/20/2023**

**Client: HK Engineering+Geology, D.P.C.**
**Project/Site: HK2661.1 / NY**

| Client ID | Lab ID | Receipt Date | Analysis Date | DF | Diluted For |
|---|---|---|---|---|---|
| SV9 | E23-05093-01 | 11/20/2023 | 12/11/2023 | 5.0 | Acetone<br>Methyl ethyl ketone |
| SV9 | E23-05093-01 | 11/20/2023 | 12/08/2023 | 1.0 | NA |

| IAL Sample ID | Canister ID | Outgoing Pressure ("Hg) | Incoming Pressure ("Hg) | Flow Controller ID | Outgoing Flow Rate (cc/min) | Incoming Flow Rate (cc/min) | Flow Rate RPD* |
|---|---|---|---|---|---|---|---|
| E23-05093-01 | 3044A | -29 | -7 | A0224857-7 | 31.80 | 31.20 | 1.90 |

*Pre-sampling and Post-sampling Flow Controller calibration check RPD ≤ 20%

Flow Controller Note: none

***Sample Receipt:*** Samples were received in good condition. Documentation was in order.
Samples were received at IAL by: Joseph Walukiewicz

***Sample Preparation:*** None required.

***Sample Analysis:***

*Hold Time:* All within recommended hold times.

*Instrument Calibration:* Meets method criteria.

*Analysis performed by:* jjw

*SDG Non-Conformances:* none

*Tentatively Identified Compounds:* Tentatively Identified Compounds (TICs) are determined using a NIST library search. TICs are reported at 10% of the applicable internal standard. Dilution factors are calculated into the final reported result. Since the compounds found are tentatively identified, the conversion from ppbv to ug/m3 may not be made.

*Canister-to-Canister dilutions:* none

*Dilutions:* Dilutions, if necessary, will be conducted directly on the instrument up to a 500x dilution. When dilutions of 1000x or higher are necessary, the laboratory must inject a volume of sample into another certified clean canister and add humidified Z-1 zero air to the remainder of the canister volume. Tedlar bags are not used for dilutions.

If a sample is received with historically high levels of analytes, a 100x can-to-can dilution my be used from the start. A 100x canister-to-canister dilution may be also be used at the analyst's discretion.

*On-instrument dilutions are conducted as follows:*

# CASE NARRATIVE

**Integrated Analytical Laboratories, LLC** — **Randolph, NJ 07869**
**Project #: HK2661.1** — **NJDEP (Primary AB) Certification#: 14751**
**SDG #: E23-05093** — **NY ELAP Certification #: 11402**
**CT DPH Certification#: PH-0699**
**Analytical Method: EPA Method TO-15** — **PADEP Certification#: 68-00773**

**Date of first sample receipt: 11/20/2023** — **Date of last sample receipt: 11/20/2023**

**Client: HK Engineering+Geology, D.P.C.**
**Project/Site: HK2661.1 / NY**

| Dilution Factor | Sample Volume Injected (cc) |
|---|---|
| 1 | 500 |
| 2.5 | 200 |
| 5 | 100 |
| 10 | 50 |
| 20 | 25 |
| 25 | 20 |
| 50 | 10 |
| 100 | 5 |
| 200 | 2.5 |
| 250 | 2 |
| 500 | 1 |

*Canister-to-canister dilutions are conducted as follows:*

A certified clean canister is obtained and evacuated to approximately -30"Hg. Both the clean/dilution canister and sample canister are fitted with a ¼" Swagelok® nut fitting equipped with septa. Depending on dilution factor necessary, a sample aliquot is removed from the canister and injected into the clean canister using 30cc Multifit gas-tight syringe. Once the correct sample aliquot has been transferred, the dilution canister should be connected to the humidified Z-1 zero air supply and filled to ambient pressure (0"Hg).

| Dilution Factor | Sample Aliquot | Z-1 Make-up Added |
|---|---|---|
| 100 | 60ml | 5940ml |
| 1000 | 6ml | 5994ml |

If further dilutions need to be made from the dilution canister, they may be made on-instrument. Using a 100x dilution canister, the following on-instrument dilutions can be produced:

| Dilution Factor | Sample Volume Injected |
|---|---|
| 100 | 500ml |
| 250 | 200ml |
| 500 | 100ml |
| 1000 | 50ml |
| 2000 | 25ml |
| 2500 | 20ml |
| 5000 | 10ml |

Using a 1000x dilution canister, the following on-instrument dilutions can be produced:

# CASE NARRATIVE

**Integrated Analytical Laboratories, LLC** — **Randolph, NJ 07869**
**Project #: HK2661.1** — **NJDEP (Primary AB) Certification#: 14751**
**SDG #: E23-05093** — **NY ELAP Certification #: 11402**
**CT DPH Certification#: PH-0699**
**Analytical Method: EPA Method TO-15** — **PADEP Certification#: 68-00773**

**Date of first sample receipt: 11/20/2023** — **Date of last sample receipt: 11/20/2023**

**Client: HK Engineering+Geology, D.P.C.**
**Project/Site: HK2661.1 / NY**

| Dilution Factor | Sample Volume Injected |
|---|---|
| 1000 | 500ml |
| 2500 | 200ml |
| 5000 | 100ml |
| 10,000 | 50ml |
| 20,000 | 25ml |
| 25,000 | 20ml |
| 50,000 | 10ml |

If further dilutions need to be made from the dilution canister, beyond 50,000x, a subsequent canister-to-canister dilution must be made using the above prescribed protocol.

***GC Column and ID:*** RTX-1 SN 1119138, RTX-VMS SN 1586881, or equivalent

***Calibration Standards:*** Only gas phase standards were used. Primary and second-source standards provided by Scott Specialty Gases or Airgas Specialty Gases/ Air Liquide

***Working Standards:*** Primary source standards* are created from:
- Airgas Specialty Gases #EB0103704, valid 1/18/2021 through 12/30/2024, @ approximately 100ppb per compound, with exception of m&p-xylenes @ 200ppb. Standard is directly introduced into the instrument for all calibration standard concentrations. Dilutions are made accordingly, on instrument. The 10ppbv standard is also used for the Daily Calibration Verification Standard (DCVS), the Laboratory Control Sample (LCS) and Closing Calibration Verification Standard (CCCVS).

The second source standard*, used as the Initial Calibration Verification Standard (ICVSS), is introduced into the instrument in the same manner as the primary source standard, using:
- Airgas Specialty Gases Cylinder #EB0116272, valid 7/28/2021 through 5/12/2025, @ approximately 100ppb per compound, with exception of m&p-xylenes @ 200ppb.

Internal standards* are created from:
- Airgas Specialty Gases Cylinder #ALM018474, valid 2/24/2022 through 2/24/2025. @ 5ppm per compound. Standard is directly introduced into the instrument to reach the 10ppbv concentrations. 1cc of internal standard is added to every standard, method blank, instrument blank, and sample run.

*Standard may be used past its expiration date provided that concentrations are verified by a current/unexpired second source standard.

**08/15/2023**

100 ppbv internal standard mix (AA3401BFB) - prepared in cylinder #ALM018474
10 ppbv per standard/sample - 50 ml injected

# CASE NARRATIVE

**Integrated Analytical Laboratories, LLC** — **Randolph, NJ 07869**
**Project #: HK2661.1** — **NJDEP (Primary AB) Certification#: 14751**
**SDG #: E23-05093** — **NY ELAP Certification #: 11402**
**CT DPH Certification#: PH-0699**
**Analytical Method: EPA Method TO-15** — **PADEP Certification#: 68-00773**

**Date of first sample receipt: 11/20/2023** — **Date of last sample receipt: 11/20/2023**

**Client: HK Engineering+Geology, D.P.C.**
**Project/Site: HK2661.1 / NY**

**08/15/2023**
- 100 ppbv calibration standard (aa3406std01) - prepared in cylinder #EB0103704
  - 40 ppbv standard - 200 ml injected
  - 20 ppbv standard - 100 ml injected
  - 10 ppbv standard* - 50 ml injected
    - *Standard also used for CCCVS
  - 2 ppbv standard - 10 ml injected
  - 0.20 ppbv standard* - 1 ml injected
    - *Standard also used for RLLCS

**09/28/2023**
- 100 ppbv internal standard mix (AA4071BFB) - prepared in cylinder #ALM018474
  - 10 ppbv per standard/sample - 50 ml injected
- 100 ppbv calibration standard (AA4072DCVS) - prepared in cylinder #EB0103704
  - 10 ppbv standard* - 50 ml injected
    - *Standard also used for DCVS & CCCVS
  - 0.20 ppbv standard* - 1 ml injected
    - *Standard also used for RLLCS
- Method Blank (AA4074BLK) - prepared in canister #1127
  - 500 ml injected

**10/10/2023**
- 100 ppbv internal standard mix (AA4131BFB) - prepared in cylinder #ALM018474
  - 10 ppbv per standard/sample - 50 ml injected
- 100 ppbv calibration standard (aa4136std01) - prepared in cylinder #EB0103704
  - 40 ppbv standard - 200 ml injected
  - 20 ppbv standard - 100 ml injected
  - 10 ppbv standard* - 50 ml injected
    - *Standard also used for CCCVS
  - 2 ppbv standard - 10 ml injected
  - 0.20 ppbv standard* - 1 ml injected
    - *Standard also used for RLLCS
  - 0.20 ppbv standard* - 1 ml injected
    - *Standard also used for RLLCS
- Method Blank (AA4139BLK) - prepared in canister #1127
  - 500 ml injected

**12/08/2023**
- 100 ppbv internal standard mix (AA4881BFB) - prepared in cylinder #ALM018474
  - 10 ppbv per standard/sample - 50 ml injected
- 100 ppbv calibration standard (AA4882DCVS) - prepared in cylinder #EB0103704
  - 10 ppbv standard* - 50 ml injected
    - *Standard also used for DCVS & CCCVS
- Method Blank (AA4884BLK) - prepared in canister #1127
  - 500 ml injected
- Sample E23-05093-01 (AA4895) - sample taken in canister #3044A

# CASE NARRATIVE

**Integrated Analytical Laboratories, LLC** — **Randolph, NJ 07869**
**Project #: HK2661.1** — **NJDEP (Primary AB) Certification#: 14751**
**SDG #: E23-05093** — **NY ELAP Certification #: 11402**
**CT DPH Certification#: PH-0699**
**Analytical Method: EPA Method TO-15** — **PADEP Certification#: 68-00773**

**Date of first sample receipt: 11/20/2023** — **Date of last sample receipt: 11/20/2023**

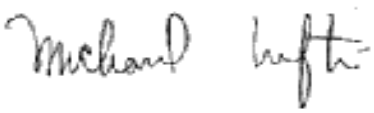
**Client: HK Engineering+Geology, D.P.C.**
**Project/Site: HK2661.1 / NY**

**12/08/2023**
500 ml sample volume injected, 1x dilution

**12/11/2023**
100 ppbv internal standard mix (AA4901BFB) - prepared in cylinder #ALM018474
10 ppbv per standard/sample - 50 ml injected
100 ppbv calibration standard (AA4902DCVS) - prepared in cylinder #EB0103704
10 ppbv standard* - 50 ml injected
*Standard also used for DCVS & CCCVS
0.20 ppbv standard* - 1 ml injected
*Standard also used for RLLCS
Method Blank (AA4904BLK) - prepared in canister #1127
500 ml injected
Sample E23-05093-01 (AA4913) - sample taken in canister #3044A
100 ml sample volume injected, 5x dilution

All work recorded herein has been done in accordance with normal professional standards using accepted testing methodologies, quality assurance and quality control procedures except where otherwise agreed to by the client and testing company in writing. All conversions are based upon a room temperature of 77°F(25°C) and room pressure of 101.325 kPa (1atm).

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of data contained in this hardcopy data package and in the computer-readable data submitted on CD/diskette and by electronic mail has been authorized by the laboratory manager or his designee, as verified by the following signature.



Michael H. Leftin, Ph.D.
Laboratory Director

December 20, 2023
Date

Integrated Analytical Laboratories LLC

Airgas
an Air Liquide company

R 362

Received 01/06/2023

**Airgas Specialty Gases**
Airgas USA LLC
6141 Easton Road
Plumsteadville, PA 18949
Airgas.com

# CERTIFICATE OF ANALYSIS

## Grade of Product: CERTIFIED HYDROCARBON

| | | | |
|---|---|---|---|
| Customer: | INTEGRATED ANALYTICAL LABS | | |
| Part Number: | X76NI99C15AC001 | | |
| Cylinder Number: | EB0103704 | Reference Number: | 160-402619255-1 |
| Laboratory: | 124 - Plumsteadville - PA | Cylinder Volume: | 101.0 CF |
| Analysis Date: | Dec 30, 2022 | Cylinder Pressure: | 1400 PSIG |
| Lot Number: | 160-402619255-1 | Valve Outlet: | 350SS |
| | | Expiration Date: | Dec 30, 2024 |

Traceability Statement: Hydrocarbon Process standards are NIST traceable either directly by weight or by comparison to Airgas laboratory standards that are directly NIST traceable by weight.

### CERTIFIED CONCENTRATIONS

| Component | Requested Concentration | Reported Mole % | Accuracy |
|---|---|---|---|
| 1,1 DICHLOROETHANE | 100.000 PPB | 107.000 PPB | +/- 10% |
| 1,1 DICHLOROETHYLENE | 100.000 PPB | 104.000 PPB | +/- 10% |
| 1,1,1 TRICHLOROETHANE | 100.000 PPB | 109.000 PPB | +/- 10% |
| 1,1,2 TRICHLORO ETHANE | 100.000 PPB | 108.000 PPB | +/- 10% |
| 1,1,2,2 TETRACHLOROETHANE | 100.000 PPB | 114.000 PPB | +/- 10% |
| 1,2 DIBROMO ETHANE | 100.000 PPB | 108.000 PPB | +/- 10% |
| 1,2 DICHLORO PROPANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| 1,2 DICHLOROBENZENE | 100.000 PPB | 107.000 PPB | +/- 10% |
| 1,2 DICHLOROETHANE | 100.000 PPB | 109.000 PPB | +/- 10% |
| 1,2,4 TRICHLOROBENZENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| 1,2,4 TRIMETHYLBENZENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| 1,3 BUTADIENE | 100.000 PPB | 107.000 PPB | +/- 10% |
| 1,3 DICHLORO BENZENE | 100.000 PPB | 111.000 PPB | +/- 10% |
| 1,3,5 TRIMETHYL BENZENE | 100.000 PPB | 109.000 PPB | +/- 10% |
| 1,4 DICHLOROBENZENE | 100.000 PPB | 107.000 PPB | +/- 10% |
| 1,4 DIOXANE | 100.000 PPB | 117.000 PPB | +/- 10% |
| 2 CHLOROTOLUENE | 100.000 PPB | 109.000 PPB | +/- 10% |
| 3 CHLOROPROPYLENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| 4 ETHYL TOLUENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| ACETONE | 100.000 PPB | 108.000 PPB | +/- 10% |
| ACROLEIN | 100.000 PPB | 100.000 PPB | +/- 10% |
| BENZENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| BENZYL CHLORIDE | 100.000 PPB | 100.000 PPB | +/- 10% |
| BROMO DICHLORO METHANE | 100.000 PPB | 115.000 PPB | +/- 10% |
| BROMOFORM | 100.000 PPB | 113.000 PPB | +/- 10% |
| CARBON DISULFIDE | 100.000 PPB | 107.000 PPB | +/- 10% |
| CARBON TETRACHLORIDE | 100.000 PPB | 110.000 PPB | +/- 10% |
| CHLORO DIBROMO METHANE | 100.000 PPB | 112.000 PPB | +/- 10% |
| CHLOROBENZENE | 100.000 PPB | 111.000 PPB | +/- 10% |
| CHLOROFORM | 100.000 PPB | 108.000 PPB | +/- 10% |
| CIS 1,2 DICHLOROETHYLENE | 100.000 PPB | 109.000 PPB | +/- 10% |
| CIS 1,3 DICHLOROPROPENE | 100.000 PPB | 111.000 PPB | +/- 10% |
| CUMENE | 100.000 PPB | 107.000 PPB | +/- 10% |
| CYCLOHEXANE | 100.000 PPB | 112.000 PPB | +/- 10% |
| ETHANOL | 100.000 PPB | 104.000 PPB | +/- 10% |
| ETHYL ACETATE | 100.000 PPB | 108.000 PPB | +/- 10% |
| ETHYL BENZENE | 100.000 PPB | 111.000 PPB | +/- 10% |
| ETHYL CHLORIDE | 100.000 PPB | 106.000 PPB | +/- 10% |
| HEXACHLORO 1,3 BUTADIENE | 100.000 PPB | 111.000 PPB | +/- 10% |

Approved for Release

Integrated Analytical Laboratories LLC

Airgas
an Air Liquide company

**Airgas Specialty Gases**
Airgas USA LLC
6141 Easton Road
Plumsteadville, PA 18949
Airgas.com

| | | | |
|---|---|---|---|
| HEXANE | 100.000 PPB | 111.000 PPB | +/- 10% |
| ISOOCTANE | 100.000 PPB | 109.000 PPB | +/- 10% |
| ISOPROPYL ALCOHOL | 100.000 PPB | 89.000 PPB | +/- 10% |
| M XYLENE | 100.000 PPB | 112.000 PPB | +/- 10% |
| METHYL BROMIDE | 100.000 PPB | 100.000 PPB | +/- 10% |
| METHYL BUTYL KETONE | 100.000 PPB | 113.000 PPB | +/- 10% |
| METHYL CHLORIDE | 100.000 PPB | 112.000 PPB | +/- 10% |
| METHYL ETHYL KETONE | 100.000 PPB | 110.000 PPB | +/- 10% |
| METHYL ISOBUTYL KETONE | 100.000 PPB | 109.000 PPB | +/- 10% |
| METHYL METHACRYLATE | 100.000 PPB | 110.000 PPB | +/- 10% |
| METHYL TERT BUTYL ETHER | 100.000 PPB | 112.000 PPB | +/- 10% |
| METHYLENE CHLORIDE | 100.000 PPB | 108.000 PPB | +/- 10% |
| N BUTANE | 100.000 PPB | 109.000 PPB | +/- 10% |
| N HEPTANE | 100.000 PPB | 111.000 PPB | +/- 10% |
| N NONANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| N PENTANE | 100.000 PPB | 108.000 PPB | +/- 10% |
| N PROPYL BENZENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| NAPHTHALENE | 100.000 PPB | 100.000 PPB | +/- 10% |
| O XYLENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| P XYLENE | 100.000 PPB | 111.000 PPB | +/- 10% |
| PERCHLOROETHYLENE | 100.000 PPB | 112.000 PPB | +/- 10% |
| PROPYLENE | 100.000 PPB | 109.000 PPB | +/- 10% |
| R11 TRICHLOROFLUOROMETHANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| R113 TRICHLOROTRIFLUOROETHANE | 100.000 PPB | 109.000 PPB | +/- 10% |
| R114 DICHLOROTETRAFLUOROETHANE | 100.000 PPB | 98.000 PPB | +/- 10% |
| R12 DICHLORODIFLUOROMETHANE | 100.000 PPB | 106.000 PPB | +/- 10% |
| STYRENE | 100.000 PPB | 113.000 PPB | +/- 10% |
| TERT BUTANOL | 100.000 PPB | 115.000 PPB | +/- 10% |
| TETRAHYDROFURAN | 100.000 PPB | 110.000 PPB | +/- 10% |
| TOLUENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| TRANS 1,2 DICHLOROETHYLENE | 100.000 PPB | 111.000 PPB | +/- 10% |
| TRANS 1,3 DICHLOROPROPENE | 100.000 PPB | 111.000 PPB | +/- 10% |
| TRICHLOROETHYLENE | 100.000 PPB | 100.000 PPB | +/- 10% |
| VINYL ACETATE | 100.000 PPB | 110.000 PPB | +/- 10% |
| VINYL BROMIDE | 100.000 PPB | 101.000 PPB | +/- 10% |
| VINYL CHLORIDE | 100.000 PPB | 108.000 PPB | +/- 10% |
| NITROGEN | 99.99925 % | 99.999187 % | +/- 10% |

**Permanent Notes:**CUSTOM TO MIX - TO-15/17 MODIFIED NJ STD + NAPHTHALENE

**Notes:**PO number: 22578

Approved for Release

Integrated Analytical Laboratories LLC

Airgas
an Air Liquide company

**Airgas Specialty Gases**
Airgas USA LLC
6141 Easton Road
Plumsteadville, PA 18949
Airgas.com

R 366

# CERTIFICATE OF ANALYSIS

## Grade of Product: CERTIFIED HYDROCARBON

| | | | |
|---|---|---|---|
| Customer: | INTEGRATED ANALYTICAL LABS | | |
| Part Number: | X76NI99C15AC001 | Reference Number: | 160-402744241-1 |
| Cylinder Number: | EB0116272 | Cylinder Volume: | 146.0 CF |
| Laboratory: | 124 - Plumsteadville - PA | Cylinder Pressure: | 2050 PSIG |
| Analysis Date: | May 12, 2023 | Valve Outlet: | 350SS |
| Lot Number: | 160-402744241-1 | Expiration Date: | May 12, 2025 |

Traceability Statement: Hydrocarbon Process standards are NIST traceable either directly by weight or by comparison to Airgas laboratory standards that are directly NIST traceable by weight.

### CERTIFIED CONCENTRATIONS

| Component | Requested Concentration | Reported Mole % | Accuracy |
|---|---|---|---|
| 1,1 DICHLOROETHANE | 100.000 PPB | 100.000 PPB | +/- 10% |
| 1,1 DICHLOROETHYLENE | 100.000 PPB | 100.000 PPB | +/- 10% |
| 1,1,1 TRICHLOROETHANE | 100.000 PPB | 104.000 PPB | +/- 10% |
| 1,1,2 TRICHLORO ETHANE | 100.000 PPB | 101.000 PPB | +/- 10% |
| 1,1,2,2 TETRACHLOROETHANE | 100.000 PPB | 104.000 PPB | +/- 10% |
| 1,2 DIBROMO ETHANE | 100.000 PPB | 103.000 PPB | +/- 10% |
| 1,2 DICHLORO PROPANE | 100.000 PPB | 103.000 PPB | +/- 10% |
| 1,2 DICHLOROBENZENE | 100.000 PPB | 101.000 PPB | +/- 10% |
| 1,2 DICHLOROETHANE | 100.000 PPB | 102.000 PPB | +/- 10% |
| 1,2,4 TRICHLOROBENZENE | 100.000 PPB | 100.000 PPB | +/- 10% |
| 1,2,4 TRIMETHYLBENZENE | 100.000 PPB | 102.000 PPB | +/- 10% |
| 1,3 BUTADIENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| 1,3 DICHLORO BENZENE | 100.000 PPB | 105.000 PPB | +/- 10% |
| 1,3,5 TRIMETHYL BENZENE | 100.000 PPB | 103.000 PPB | +/- 10% |
| 1,4 DICHLOROBENZENE | 100.000 PPB | 100.000 PPB | +/- 10% |
| 1,4 DIOXANE | 100.000 PPB | 113.000 PPB | +/- 10% |
| 2 CHLOROTOLUENE | 100.000 PPB | 107.000 PPB | +/- 10% |
| 3 CHLOROPROPYLENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| 4 ETHYL TOLUENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| ACETONE | 100.000 PPB | 108.000 PPB | +/- 10% |
| ACROLEIN | 100.000 PPB | 105.000 PPB | +/- 10% |
| BENZENE | 100.000 PPB | 103.000 PPB | +/- 10% |
| BENZYL CHLORIDE | 100.000 PPB | 102.000 PPB | +/- 10% |
| BROMO DICHLORO METHANE | 100.000 PPB | 112.000 PPB | +/- 10% |
| BROMOFORM | 100.000 PPB | 113.000 PPB | +/- 10% |
| CARBON DISULFIDE | 100.000 PPB | 95.000 PPB | +/- 10% |
| CARBON TETRACHLORIDE | 100.000 PPB | 107.000 PPB | +/- 10% |
| CHLORO DIBROMO METHANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| CHLOROBENZENE | 100.000 PPB | 104.000 PPB | +/- 10% |
| CHLOROFORM | 100.000 PPB | 106.000 PPB | +/- 10% |
| CIS 1,2 DICHLOROETHYLENE | 100.000 PPB | 102.000 PPB | +/- 10% |
| CIS 1,3 DICHLOROPROPENE | 100.000 PPB | 94.000 PPB | +/- 10% |
| CUMENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| CYCLOHEXANE | 100.000 PPB | 109.000 PPB | +/- 10% |
| ETHANOL | 100.000 PPB | 98.000 PPB | +/- 10% |
| ETHYL ACETATE | 100.000 PPB | 104.000 PPB | +/- 10% |
| ETHYL BENZENE | 100.000 PPB | 105.000 PPB | +/- 10% |
| ETHYL CHLORIDE | 100.000 PPB | 104.000 PPB | +/- 10% |
| HEXACHLORO 1,3 BUTADIENE | 100.000 PPB | 101.000 PPB | +/- 10% |

Approved for Release

Integrated Analytical Laboratories LLC

Airgas
an Air Liquide company

**Airgas Specialty Gases**
Airgas USA LLC
6141 Easton Road
Plumsteadville, PA 18949
Airgas.com

| | | | |
|---|---|---|---|
| HEXANE | 100.000 PPB | 107.000 PPB | +/- 10% |
| ISOOCTANE | 100.000 PPB | 106.000 PPB | +/- 10% |
| ISOPROPYL ALCOHOL | 100.000 PPB | 95.000 PPB | +/- 10% |
| M XYLENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| METHYL BROMIDE | 100.000 PPB | 103.000 PPB | +/- 10% |
| METHYL BUTYL KETONE | 100.000 PPB | 109.000 PPB | +/- 10% |
| METHYL CHLORIDE | 100.000 PPB | 108.000 PPB | +/- 10% |
| METHYL ETHYL KETONE | 100.000 PPB | 105.000 PPB | +/- 10% |
| METHYL ISOBUTYL KETONE | 100.000 PPB | 105.000 PPB | +/- 10% |
| METHYL METHACRYLATE | 100.000 PPB | 106.000 PPB | +/- 10% |
| METHYL TERT BUTYL ETHER | 100.000 PPB | 107.000 PPB | +/- 10% |
| METHYLENE CHLORIDE | 100.000 PPB | 101.000 PPB | +/- 10% |
| N BUTANE | 100.000 PPB | 107.000 PPB | +/- 10% |
| N HEPTANE | 100.000 PPB | 107.000 PPB | +/- 10% |
| N NONANE | 100.000 PPB | 108.000 PPB | +/- 10% |
| N PENTANE | 100.000 PPB | 105.000 PPB | +/- 10% |
| N PROPYL BENZENE | 100.000 PPB | 112.000 PPB | +/- 10% |
| NAPHTHALENE | 100.000 PPB | 101.000 PPB | +/- 10% |
| O XYLENE | 100.000 PPB | 102.000 PPB | +/- 10% |
| P XYLENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| PERCHLOROETHYLENE | 100.000 PPB | 104.000 PPB | +/- 10% |
| PROPYLENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| R11 TRICHLOROFLUOROMETHANE | 100.000 PPB | 106.000 PPB | +/- 10% |
| R113 TRICHLOROTRIFLUOROETHANE | 100.000 PPB | 102.000 PPB | +/- 10% |
| R114 DICHLOROTETRAFLUOROETHANE | 100.000 PPB | 99.000 PPB | +/- 10% |
| R12 DICHLORODIFLUOROMETHANE | 100.000 PPB | 109.000 PPB | +/- 10% |
| STYRENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| TERT BUTANOL | 100.000 PPB | 111.000 PPB | +/- 10% |
| TETRAHYDROFURAN | 100.000 PPB | 106.000 PPB | +/- 10% |
| TOLUENE | 100.000 PPB | 101.000 PPB | +/- 10% |
| TRANS 1,2 DICHLOROETHYLENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| TRANS 1,3 DICHLOROPROPENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| TRICHLOROETHYLENE | 100.000 PPB | 102.000 PPB | +/- 10% |
| VINYL ACETATE | 100.000 PPB | 105.000 PPB | +/- 10% |
| VINYL BROMIDE | 100.000 PPB | 100.000 PPB | +/- 10% |
| VINYL CHLORIDE | 100.000 PPB | 107.000 PPB | +/- 10% |
| NITROGEN | 99.99925 % | 99.999216 % | |

**Permanent Notes:** CUSTOM TO MIX - TO-15/17 MODIFIED NJ STD + NAPHTHALENE

**Notes:** PO Number: 22896

Approved for Release

# Section IV: Method Detection Limit Summary

# INTEGRATED ANALYTICAL LABORATORIES, LLC
# REPORTING METHOD DETECTION LIMIT (MDL) REPORT

Integrated Analytical Laboratories - Randolph, NJ

Matrix: Air
MDL Effective Date: 8/16/2023
Column ID: Restek RtX-VMS, 30 meter, 0.32mm ID, 1.8 um DF
Instrument ID: GC - Agilent 7890A / MS - Agilent 5975C (IAL ID: *Instrument AA* )
Analyst: Joe Waluliewicz
Report Prepared by: Joe Waluliewicz

| Compound Name | CAS # | Molecular Weight | MDL ppbv | MDL µg/m$^3$ | PQL ppbv | RL ppbv | RL µg/m$^3$ | True value/ MDL |
|---|---|---|---|---|---|---|---|---|
| Propene | 115-07-1 | 42.08 | 0.18 | 0.31 | 0.54 | 0.20 | 0.34 | 1 |
| Dichlorodifluoromethane | 75-71-8 | 120.9 | 0.081 | 0.40 | 0.24 | 0.20 | 0.99 | 3 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 170.9 | 0.071 | 0.50 | 0.21 | 0.20 | 1.4 | 3 |
| n-Butane | 106-97-8 | 58 | 0.13 | 0.32 | 0.40 | 0.20 | 0.47 | 2 |
| Chloromethane | 74-87-3 | 50.49 | 0.15 | 0.30 | 0.44 | 0.20 | 0.41 | 1 |
| Vinyl chloride | 75-01-4 | 62.5 | 0.11 | 0.29 | 0.34 | 0.20 | 0.51 | 2 |
| 1,3-Butadiene | 106-99-0 | 54.09 | 0.12 | 0.27 | 0.37 | 0.20 | 0.44 | 2 |
| Bromomethane | 74-83-9 | 94.94 | 0.12 | 0.46 | 0.36 | 0.20 | 0.78 | 2 |
| Chloroethane | 75-00-3 | 64.52 | 0.12 | 0.32 | 0.36 | 0.20 | 0.53 | 2 |
| Vinyl bromide | 593-60-2 | 106.9 | 0.080 | 0.35 | 0.24 | 0.20 | 0.87 | 3 |
| Trichlorofluoromethane | 75-69-4 | 137.4 | 0.068 | 0.38 | 0.20 | 0.20 | 1.1 | 3 |
| Ethanol | 64-17-5 | 46.07 | 0.17 | 0.32 | 0.51 | 0.20 | 0.38 | 1 |
| 1,1-Dichloroethene | 75-35-4 | 96.94 | 0.086 | 0.34 | 0.26 | 0.20 | 0.79 | 3 |
| Carbon disulfide | 75-15-0 | 76.14 | 0.076 | 0.24 | 0.23 | 0.20 | 0.62 | 3 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 187.40 | 0.087 | 0.66 | 0.26 | 0.20 | 1.5 | 3 |
| Acrolein | 107-02-8 | 56.06 | 0.15 | 0.34 | 0.44 | 0.20 | 0.46 | 2 |
| Allyl Chloride | 107-05-1 | 76.53 | 0.088 | 0.27 | 0.26 | 0.20 | 0.63 | 3 |
| Isopropanol | 67-63-0 | 60.1 | 0.10 | 0.25 | 0.30 | 0.20 | 0.49 | 2 |
| Methylene chloride | 75-09-2 | 84.94 | 0.10 | 0.36 | 0.31 | 0.20 | 0.69 | 2 |
| Acetone | 67-64-1 | 58.08 | 0.12 | 0.28 | 0.36 | 0.20 | 0.48 | 2 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 96.94 | 0.080 | 0.32 | 0.24 | 0.20 | 0.79 | 3 |
| n-Pentane | 109-66-0 | 72.15 | 0.16 | 0.48 | 0.49 | 0.20 | 0.59 | 1 |
| n-Hexane | 110-54-3 | 86.17 | 0.087 | 0.31 | 0.26 | 0.20 | 0.70 | 3 |
| Methyl tert-butyl ether | 1634-04-4 | 88.15 | 0.080 | 0.29 | 0.24 | 0.20 | 0.72 | 3 |
| Tert-butyl alcohol | 75-65-0 | 74.12 | 0.14 | 0.44 | 0.43 | 0.20 | 0.61 | 2 |
| 1,1-Dichloroethane | 75-34-3 | 98.96 | 0.079 | 0.32 | 0.24 | 0.20 | 0.81 | 3 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 96.94 | 0.083 | 0.33 | 0.25 | 0.20 | 0.79 | 3 |
| Cyclohexane | 110-82-7 | 84.16 | 0.078 | 0.27 | 0.23 | 0.20 | 0.69 | 3 |
| Chloroform | 67-66-3 | 119.4 | 0.077 | 0.38 | 0.23 | 0.20 | 0.98 | 3 |
| Ethyl acetate | 141-78-6 | 88.11 | 0.11 | 0.40 | 0.33 | 0.20 | 0.72 | 2 |
| Carbon tetrachloride | 56-23-5 | 153.8 | 0.080 | 0.50 | 0.24 | 0.20 | 1.3 | 3 |
| Tetrahydrofuran | 109-99-9 | 72.11 | 0.11 | 0.31 | 0.32 | 0.20 | 0.59 | 2 |
| 1,1,1-Trichloroethane | 71-55-6 | 133.4 | 0.071 | 0.39 | 0.21 | 0.20 | 1.1 | 3 |
| Methyl ethyl ketone | 78-93-3 | 72.11 | 0.11 | 0.31 | 0.32 | 0.20 | 0.59 | 2 |
| n-Heptane | 142-82-5 | 100.2 | 0.090 | 0.37 | 0.27 | 0.20 | 0.82 | 2 |
| Benzene | 71-43-2 | 78.11 | 0.076 | 0.24 | 0.23 | 0.20 | 0.64 | 3 |
| 1,2-Dichloroethane | 107-06-2 | 98.96 | 0.079 | 0.32 | 0.24 | 0.20 | 0.81 | 3 |
| Trichloroethene | 79-01-6 | 131.4 | 0.064 | 0.34 | 0.19 | 0.20 | 1.1 | 3 |
| 2,2,4-Trimethylpentane | 540-84-1 | 114.2 | 0.085 | 0.40 | 0.26 | 0.20 | 0.93 | 3 |
| 1,2-Dichloropropane | 78-87-5 | 113 | 0.085 | 0.39 | 0.25 | 0.20 | 0.92 | 3 |
| Bromodichloromethane | 75-27-4 | 163.8 | 0.066 | 0.44 | 0.20 | 0.20 | 1.3 | 3 |
| Methyl methacrylate | 80-62-6 | 100.12 | 0.079 | 0.32 | 0.24 | 0.20 | 0.82 | 3 |
| 1,4-Dioxane | 123-91-1 | 88.12 | 0.092 | 0.33 | 0.28 | 0.20 | 0.72 | 2 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 111.0 | 0.070 | 0.32 | 0.21 | 0.20 | 0.91 | 3 |
| Toluene | 108-88-3 | 92.14 | 0.064 | 0.24 | 0.19 | 0.20 | 0.75 | 3 |
| Methyl isobutyl ketone | 108-10-1 | 100.2 | 0.11 | 0.43 | 0.32 | 0.20 | 0.82 | 2 |
| Tetrachloroethene | 127-18-4 | 165.8 | 0.063 | 0.43 | 0.19 | 0.20 | 1.4 | 3 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 111 | 0.077 | 0.35 | 0.23 | 0.20 | 0.91 | 3 |
| 1,1,2-Trichloroethane | 79-00-5 | 133.4 | 0.075 | 0.41 | 0.22 | 0.20 | 1.1 | 3 |
| Dibromochloromethane | 124-48-1 | 208.3 | 0.073 | 0.62 | 0.22 | 0.20 | 1.7 | 3 |
| 1,2-Dibromoethane | 106-93-4 | 187.9 | 0.067 | 0.52 | 0.20 | 0.20 | 1.5 | 3 |
| Methyl n-butyl ketone | 591-78-6 | 100.16 | 0.13 | 0.54 | 0.40 | 0.20 | 0.82 | 2 |
| n-Nonane | 111-84-2 | 128.2 | 0.10 | 0.52 | 0.30 | 0.20 | 1.0 | 2 |
| Chlorobenzene | 108-90-7 | 112.6 | 0.073 | 0.34 | 0.22 | 0.20 | 0.92 | 3 |
| Ethylbenzene | 100-41-4 | 106.2 | 0.067 | 0.29 | 0.20 | 0.20 | 0.9 | 3 |
| Xylenes (m&p) | 179601-23-1 | 106.2 | 0.15 | 0.64 | 0.44 | 0.40 | 1.74 | 3 |
| Xylene (o) | 79-34-5 | 167.9 | 0.073 | 0.50 | 0.22 | 0.20 | 1.4 | 3 |
| Styrene | 100-42-5 | 104.1 | 0.072 | 0.31 | 0.22 | 0.20 | 0.85 | 3 |
| Bromoform | 75-25-2 | 252.8 | 0.075 | 0.77 | 0.22 | 0.20 | 2.1 | 3 |
| Cumene (Isopropylbenzene) | 98-82-8 | 120.2 | 0.069 | 0.34 | 0.21 | 0.20 | 0.98 | 3 |
| n-Propyl benzene | 103-65-1 | 120.19 | 0.085 | 0.42 | 0.25 | 0.20 | 0.98 | 3 |
| 1,1,2,2-Tetrachloroethane | 95-47-6 | 106.2 | 0.069 | 0.30 | 0.21 | 0.20 | 0.87 | 3 |
| 4-Ethyltoluene | 622-96-8 | 120.2 | 0.090 | 0.44 | 0.27 | 0.20 | 0.98 | 2 |
| 2-Chlorotoluene | 95-49-8 | 126.6 | 0.077 | 0.40 | 0.23 | 0.20 | 1.0 | 3 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 120.2 | 0.076 | 0.37 | 0.23 | 0.20 | 0.98 | 3 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 120.2 | 0.080 | 0.39 | 0.24 | 0.20 | 0.98 | 3 |

# INTEGRATED ANALYTICAL LABORATORIES, LLC
# REPORTING METHOD DETECTION LIMIT (MDL) REPORT

Integrated Analytical Laboratories - Randolph, NJ

Matrix: Air
MDL Effective Date: 8/16/2023
Column ID: Restek RtX-VMS, 30 meter, 0.32mm ID, 1.8 um DF
Instrument ID: GC - Agilent 7890A / MS - Agilent 5975C (IAL ID: *Instrument AA* )
Analyst: Joe Waluliewicz
Report Prepared by: Joe Waluliewicz

| Compound Name | CAS # | Molecular Weight | MDL ppbv | MDL µg/m$^3$ | PQL ppbv | RL ppbv | RL µg/m$^3$ | True value/ MDL |
|---|---|---|---|---|---|---|---|---|
| 1,3-Dichlorobenzene | 541-73-1 | 147 | 0.086 | 0.52 | 0.26 | 0.20 | 1.2 | 3 |
| 1,4-Dichlorobenzene | 106-46-7 | 147.0 | 0.089 | 0.54 | 0.27 | 0.20 | 1.2 | 2 |
| Benzyl chloride | 100-44-7 | 126.6 | 0.064 | 0.33 | 0.19 | 0.20 | 1.0 | 3 |
| 1,2-Dichlorobenzene | 95-50-1 | 147.0 | 0.083 | 0.50 | 0.25 | 0.20 | 1.2 | 3 |
| 1,3-Hexachlorobutadiene | 87-68-3 | 260.8 | 0.096 | 1.03 | 0.29 | 0.20 | 2.1 | 2 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 181.5 | 0.12 | 0.89 | 0.36 | 0.20 | 1.5 | 2 |
| Naphthalene | 91-20-3 | 128 | 0.15 | 0.79 | 0.45 | 0.20 | 1.0 | 2 |

Where:
MDL is defined as the higher of the MDL Spike and MDL Blank
PQL is MDLx3
RL is defined as the lowest point of the calibration curve
ppbv is parts per billion by volume and is how results come off the instrument
µg/m$^3$ = ppbv x molecular weight / 24.45

Location of this file: P:\PAL Reports\LLTO-15 and TO-15 Common Files\Agilent MDL

Instrument used for Clean Canister Certification Analysis? YES

Michael Leftin, Ph.D.
Laboratory Director

Date: August 16, 2023

# INTEGRATED ANALYTICAL LABORATORIES, LLC
# METHOD DETECTION LIMIT VERIFICATION (MDLV) REPORT

Integrated Analytical Laboratories - Randolph, NJ

| | |
|---|---|
| Analysis Level: | 0.20 ppbv, 0.40 for m&p-xylenes |
| Matrix: | Air |
| Column ID: | RTX-VMS, 30-meter, 0.32 mm ID, 1.8 µm $d_f$ |
| Instrument Identification: | AA |
| Date of Verification Study: | 8/16/2023 |
| Study Identification File #: | aa3415rllcs |
| Analyst: | Joe Walukiewicz |
| Analysis/Processing Method: | C:\MSDCHEM\1\METHODS\230815.M |
| Cylinder ID: | EB0103704 |

Michael Leftin, Ph.D.
Laboratory Director

Date: August 16, 2023

| Compound Name | CAS # | MDLV (ppbv) | RL (ppbv) | RL/MDLV Ratio |
|---|---|---|---|---|
| Propene | 115-07-1 | 0.23 | 0.20 | 1 |
| Dichlorodifluoromethane | 124-48-1 | 0.24 | 0.20 | 1 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.26 | 0.20 | 1 |
| n-Butane | 106-97-8 | 0.23 | 0.20 | 1 |
| Chloromethane | 74-87-3 | 0.24 | 0.20 | 1 |
| Vinyl chloride | 75-01-4 | 0.26 | 0.20 | 1 |
| 1,3-Butadiene | 106-99-0 | 0.23 | 0.20 | 1 |
| Bromomethane | 74-83-9 | 0.23 | 0.20 | 1 |
| Chloroethane | 75-00-3 | 0.22 | 0.20 | 1 |
| Vinyl bromide | 593-60-2 | 0.23 | 0.20 | 1 |
| Trichlorofluoromethane | 75-69-4 | 0.26 | 0.20 | 1 |
| Ethanol | 64-17-5 | 0.30 | 0.20 | 2 |
| 1,1-Dichloroethene | 75-35-4 | 0.22 | 0.20 | 1 |
| Carbon disulfide | 75-15-0 | 0.22 | 0.20 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.27 | 0.20 | 1 |
| Acrolein | 107-02-8 | 0.24 | 0.20 | 1 |
| Allyl Chloride | 107-05-1 | 0.22 | 0.20 | 1 |
| Isopropanol | 67-63-0 | 0.20 | 0.20 | 1 |
| Methylene chloride | 75-09-2 | 0.35 | 0.20 | 2 |
| Acetone | 67-64-1 | 0.27 | 0.20 | 1 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.22 | 0.20 | 1 |
| n-Pentane | 109-66-0 | 0.25 | 0.20 | 1 |
| n-Hexane | 110-54-3 | 0.26 | 0.20 | 1 |
| Methyl tert-butyl ether | 1634-04-4 | 0.25 | 0.20 | 1 |
| Tert-butyl alcohol | 75-65-0 | 0.24 | 0.20 | 1 |
| 1,1-Dichloroethane | 75-34-3 | 0.24 | 0.20 | 1 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.21 | 0.20 | 1 |
| Cyclohexane | 110-82-7 | 0.24 | 0.20 | 1 |
| Chloroform | 67-66-3 | 0.23 | 0.20 | 1 |
| Ethyl acetate | 141-78-6 | 0.23 | 0.20 | 1 |
| Carbon tetrachloride | 56-23-5 | 0.26 | 0.20 | 1 |
| Tetrahydrofuran | 109-99-9 | 0.23 | 0.20 | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | 0.24 | 0.20 | 1 |
| Methyl ethyl ketone | 78-93-3 | 0.24 | 0.20 | 1 |
| n-Heptane | 142-82-5 | 0.23 | 0.20 | 1 |
| Benzene | 71-43-2 | 0.24 | 0.20 | 1 |
| 1,2-Dichloroethane | 106-93-4 | 0.23 | 0.20 | 1 |
| Trichloroethene | 79-01-6 | 0.25 | 0.20 | 1 |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.29 | 0.20 | 1 |
| 1,2-Dichloropropane | 78-87-5 | 0.26 | 0.20 | 1 |
| Bromodichloromethane | 75-27-4 | 0.28 | 0.20 | 1 |
| Methyl methacrylate | 80-62-6 | 0.22 | 0.20 | 1 |
| 1,4-Dioxane | 123-91-1 | 0.28 | 0.20 | 1 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.25 | 0.20 | 1 |
| Toluene | 108-88-3 | 0.24 | 0.20 | 1 |
| Methyl isobutyl ketone | 108-10-1 | 0.22 | 0.20 | 1 |
| Tetrachloroethene | 127-18-4 | 0.26 | 0.20 | 1 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.24 | 0.20 | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | 0.23 | 0.20 | 1 |
| Dibromochloromethane | 75-71-8 | 0.24 | 0.20 | 1 |
| 1,2-Dibromoethane | 107-06-2 | 0.22 | 0.20 | 1 |
| Methyl n-butyl ketone | 591-78-6 | 0.21 | 0.20 | 1 |

# INTEGRATED ANALYTICAL LABORATORIES, LLC
# METHOD DETECTION LIMIT VERIFICATION (MDLV) REPORT

Integrated Analytical Laboratories - Randolph, NJ

| | |
|---|---|
| Analysis Level: | 0.20 ppbv, 0.40 for m&p-xylenes |
| Matrix: | Air |
| Column ID: | RTX-VMS, 30-meter, 0.32 mm ID, 1.8 µm $d_f$ |
| Instrument Identification: | AA |
| Date of Verification Study: | 8/16/2023 |
| Study Identification File #: | aa3415rllcs |
| Analyst: | Joe Walukiewicz |
| Analysis/Processing Method: | C:\MSDCHEM\1\METHODS\230815.M |
| Cylinder ID: | EB0103704 |

Michael Leftin, Ph.D.
Laboratory Director

Date: August 16, 2023

| Compound Name | CAS # | MDLV (ppbv) | RL (ppbv) | RL/MDLV Ratio |
|---|---|---|---|---|
| n-Nonane | 111-84-2 | 0.21 | 0.20 | 1 |
| Chlorobenzene | 108-90-7 | 0.28 | 0.20 | 1 |
| Ethylbenzene | 100-41-4 | 0.26 | 0.20 | 1 |
| Xylenes (m&p) | 179601-23-1 | 0.54 | 0.40 | 1 |
| Xylene (o) | 95-47-6 | 0.26 | 0.20 | 1 |
| Styrene | 100-42-5 | 0.23 | 0.20 | 1 |
| Bromoform | 75-25-2 | 0.26 | 0.20 | 1 |
| Cumene | 98-82-8 | 0.24 | 0.20 | 1 |
| n-Propyl benzene | 103-65-1 | 0.25 | 0.20 | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.25 | 0.20 | 1 |
| 4-Ethyltoluene | 622-96-8 | 0.24 | 0.20 | 1 |
| 2-Chlorotoluene | 95-49-8 | 0.25 | 0.20 | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.24 | 0.20 | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.22 | 0.20 | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | 0.27 | 0.20 | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | 0.24 | 0.20 | 1 |
| Benzyl chloride | 100-44-7 | 0.17 | 0.20 | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | 0.25 | 0.20 | 1 |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.31 | 0.20 | 2 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.25 | 0.20 | 1 |
| Naphthalene | 91-20-3 | 0.28 | 0.20 | 1 |

# Section V: Quality Control Data Summary

**BFB Tune Summary**

**Method Blank**

**Laboratory Control Sample**

**Laboratory Sample Duplicate**

**Internal Standard Area Summary**

# BFB

**Data Path:** C:\DATA\2023\08-2023\08-15-2023\
**Data File:** AA3401BFB.D
**Acq On:** 8/15/2023 10:11:00AM
**Operator:** jls
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\230525.M
**Last Update:** Tue May 30 13:24:12 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 251499 | 18.7 |
| PASS | 75 | 95 | 30 | 66 | 703104 | 52.3 |
| PASS | 95 | 95 | 100 | 100 | 1345024 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 89525 | 6.7 |
| PASS | 173 | 174 | 0.00 | 2 | 8293 | 0.8 |
| PASS | 174 | 95 | 50 | 100 | 1069397 | 79.5 |
| PASS | 175 | 174 | 4 | 9 | 78181 | 7.3 |
| PASS | 176 | 174 | 93 | 101 | 1035413 | 96.8 |
| PASS | 177 | 176 | 5 | 9 | 68613 | 6.6 |

Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA3401BFB | NA | 8/15/2023 10:11:00 AM |
| 0.2 PPBV STD | AA3402STD05 | NA | 8/15/2023 11:15:00 AM |
| 10 PPBV STD | AA3404STD03 | NA | 8/15/2023 1:09:00 PM |
| 2 PPBV STD | AA3403STD04 | NA | 8/15/2023 1:45:00 PM |
| 20 PPBV STD | AA3405STD02 | NA | 8/15/2023 3:12:00 PM |
| 40 PPBV STD | AA3406STD01 | NA | 8/15/2023 4:47:00 PM |
| 10 PPBV ICVSS | AA3407ICVSS | NA | 8/15/2023 6:09:00 PM |

# BFB

**Data Path:** C:\DATA\2023\09-2023\09-28-2023\
**Data File:** AA4071BFB.D
**Acq On:** 9/28/2023 10:01:00AM
**Operator:** jjw
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\230815.M
**Last Update:** Wed Aug 16 10:00:51 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 96931 | 19.9 |
| PASS | 75 | 95 | 30 | 66 | 265259 | 54.6 |
| PASS | 95 | 95 | 100 | 100 | 485931 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 33264 | 6.8 |
| PASS | 173 | 174 | 0.00 | 2 | 3017 | 0.8 |
| PASS | 174 | 95 | 50 | 100 | 366187 | 75.4 |
| PASS | 175 | 174 | 4 | 9 | 27080 | 7.4 |
| PASS | 176 | 174 | 93 | 101 | 360832 | 98.5 |
| PASS | 177 | 176 | 5 | 9 | 23088 | 6.4 |

Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4071BFB | NA | 9/28/2023 10:01:00 AM |
| 10 PPBV DCVS | AA4072DCVS | NA | 9/28/2023 10:31:00 AM |
| 10 PPBV LCS | AA4073LCS | NA | 9/28/2023 11:19:00 AM |
| METHOD BLANK | AA4074BLK | NA | 9/28/2023 11:47:00 AM |
| 02 PPBV RLLCS | AA4075RLLCS | NA | 9/28/2023 1:22:00 PM |
| 2164 | AA4076 | NA | 9/28/2023 3:00:00 PM |
| 4870 | AA4077 | NA | 9/28/2023 3:30:00 PM |
| 2160 | AA4078 | NA | 9/28/2023 4:00:00 PM |
| 10 PPBV CCCVS | AA4093CCCVS | NA | 9/29/2023 12:28:00 AM |

# BFB

**Data Path:** C:\DATA\2023\10-2023\10-10-2023\

**Data File:** AA4131BFB.D

**Acq On:** 10/10/2023 10:13:00AM

**Operator:** jls

**Sample:** BFB

**Misc:** ALM018474

**ALS Vial:** 1 **Multiplier:** 1

**Integration File:** rteint.p

**Method:** C:\msdchem\1\METHODS\231009.M

**Last Update:** Tue Oct 10 09:54:56 2023

**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 65523 | 16.8 |
| PASS | 75 | 95 | 30 | 66 | 182571 | 46.8 |
| PASS | 95 | 95 | 100 | 100 | 389867 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 25643 | 6.6 |
| PASS | 173 | 174 | 0.00 | 2 | 0 | 0.0 |
| PASS | 174 | 95 | 50 | 100 | 293952 | 75.4 |
| PASS | 175 | 174 | 4 | 9 | 22269 | 7.6 |
| PASS | 176 | 174 | 93 | 101 | 282667 | 96.2 |
| PASS | 177 | 176 | 5 | 9 | 18629 | 6.6 |

Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4131BFB | NA | 10/10/2023 10:13:00 AM |
| 0.2 PPBV STD | AA4132STD05 | NA | 10/10/2023 10:40:00 AM |
| 2 PPBV STD | AA4133STD04 | NA | 10/10/2023 11:46:00 AM |
| 10 PPBV STANDARD STD | AA4134STD03 | NA | 10/10/2023 12:21:00 PM |
| 20 PPBV STD | AA4135STD02 | NA | 10/10/2023 12:55:00 PM |
| 40 PPBV STD | AA4136STD01 | NA | 10/10/2023 2:05:00 PM |
| 10 PPBV ICVSS | AA4137ICVSS | NA | 10/10/2023 4:48:00 PM |
| 10 PPBV LCS | AA4138LCS | NA | 10/10/2023 5:39:00 PM |
| METHOD BLANK | AA4139BLK | NA | 10/10/2023 6:07:00 PM |
| 02 PPBV RLLCS | AA4140RLLCS | NA | 10/10/2023 6:35:00 PM |
| 5101 | AA4142 | NA | 10/10/2023 7:36:00 PM |
| 4869 | AA4143 | NA | 10/10/2023 8:06:00 PM |
| 2157 | AA4144 | NA | 10/10/2023 8:36:00 PM |
| 10 PPBV CCCVS | AA4154CCCVS | NA | 10/11/2023 1:53:00 AM |

# BFB

**Data Path:** C:\DATA\2023\12-2023\12-08-2023\

**Data File:** AA4881BFB.D

**Acq On:** 12/8/2023 10:21:00AM

**Operator:** jjw

**Sample:** BFB

**Misc:** ALM018474

**ALS Vial:** 1 **Multiplier:** 1

**Integration File:** rteint.p

**Method:** C:\msdchem\1\METHODS\231009.M

**Last Update:** Tue Oct 10 15:12:35 2023

**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 185045 | 18.5 |
| PASS | 75 | 95 | 30 | 66 | 508523 | 50.7 |
| PASS | 95 | 95 | 100 | 100 | 1002688 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 66973 | 6.7 |
| PASS | 173 | 174 | 0.00 | 2 | 4685 | 0.6 |
| PASS | 174 | 95 | 50 | 100 | 744704 | 74.3 |
| PASS | 175 | 174 | 4 | 9 | 56251 | 7.6 |
| PASS | 176 | 174 | 93 | 101 | 716907 | 96.3 |
| PASS | 177 | 176 | 5 | 9 | 46309 | 6.5 |

Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4881BFB | NA | 12/8/2023 10:21:00 AM |
| 10 PPBV DCVS | AA4882DCVS | NA | 12/8/2023 10:50:00 AM |
| 10 PPBV LCS | AA4883LCS | NA | 12/8/2023 11:21:00 AM |
| METHOD BLANK | AA4884BLK | NA | 12/8/2023 12:26:00 PM |
| E23-05093-01 | AA4895 | SV9 | 12/8/2023 7:11:00 PM |

# BFB

**Data Path:** C:\DATA\2023\12-2023\12-11-2023\
**Data File:** AA4901BFB.D
**Acq On:** 12/11/2023 9:24:00AM
**Operator:** jjw
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\231009.M
**Last Update:** Tue Oct 10 15:12:35 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 267904 | 18.4 |
| PASS | 75 | 95 | 30 | 66 | 717035 | 49.1 |
| PASS | 95 | 95 | 100 | 100 | 1459371 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 91040 | 6.2 |
| PASS | 173 | 174 | 0.00 | 2 | 10848 | 1.0 |
| PASS | 174 | 95 | 50 | 100 | 1053269 | 72.2 |
| PASS | 175 | 174 | 4 | 9 | 81547 | 7.7 |
| PASS | 176 | 174 | 93 | 101 | 1021824 | 97.0 |
| PASS | 177 | 176 | 5 | 9 | 65264 | 6.4 |

Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4901BFB | NA | 12/11/2023 9:24:00 AM |
| 10 PPBV DCVS | AA4902DCVS | NA | 12/11/2023 10:26:00 AM |
| 10 PPBV LCS | AA4903LCS | NA | 12/11/2023 10:57:00 AM |
| METHOD BLANK | AA4904BLK | NA | 12/11/2023 11:51:00 AM |
| 02 PPBV RLLCS | AA4905RLLCS | NA | 12/11/2023 12:18:00 PM |
| 1458 | AA4906 | NA | 12/11/2023 12:50:00 PM |
| 1588 | AA4907 | NA | 12/11/2023 1:19:00 PM |
| 3012 | AA4908 | NA | 12/11/2023 1:49:00 PM |
| E23-05093-01 | AA4913 | SV9 | 12/11/2023 4:20:00 PM |
| 10 PPBV CCCVS | AA4931CCCVS | NA | 12/12/2023 1:59:00 AM |

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4074BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **9/28/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| 2164 [AA4076] | 09/28/2023 15:00 |
| 4870 [AA4077] | 09/28/2023 15:30 |
| 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 0:28 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromodichloromethane | 75-27-4 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| Dibromochloromethane | 124-48-1 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.17 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.19 | ND |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.18 | ND |
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |
| n-Hexane | 110-54-3 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4074BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **9/28/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| 2164 [AA4076] | 09/28/2023 15:00 |
| 4870 [AA4077] | 09/28/2023 15:30 |
| 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 0:28 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Methylene chloride | 75-09-2 | 0.20 | ND |
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.17 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.17 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.20 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4884BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/8/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05093-01 [AA4895] | 12/08/2023 19:11 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.17 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.19 | ND |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.18 | ND |
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |
| n-Hexane | 110-54-3 | 0.20 | ND |
| Methylene chloride | 75-09-2 | 0.20 | ND |
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4884BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/8/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05093-01 [AA4895] | 12/08/2023 19:11 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.17 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.17 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.20 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4904BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/11/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05093-01 [AA4913] | 12/11/2023 16:20 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.17 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.19 | ND |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.18 | ND |
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |
| n-Hexane | 110-54-3 | 0.20 | ND |
| Methylene chloride | 75-09-2 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4904BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/11/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05093-01 [AA4913] | 12/11/2023 16:20 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.17 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.17 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.20 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4073LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 9/28/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| 2164 [AA4076] | 09/28/2023 15:00 |
| 4870 [AA4077] | 09/28/2023 15:30 |
| 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 0:28 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Acetone | 67-64-1 | 13 | 120 |
| Benzene | 71-43-2 | 12 | 120 |
| Bromodichloromethane | 75-27-4 | 12 | 110 |
| Bromoform | 75-25-2 | 11 | 100 |
| Bromomethane | 74-83-9 | 12 | 110 |
| 1,3-Butadiene | 106-99-0 | 14 | 130 |
| Chlorobenzene | 108-90-7 | 10 | 100 |
| Chloroethane | 75-00-3 | 13 | 130 |
| Chloroform | 67-66-3 | 13 | 130 |
| Chloromethane | 74-87-3 | 14 | 120 |
| Carbon disulfide | 75-15-0 | 14 | 130 |
| Carbon tetrachloride | 56-23-5 | 11 | 110 |
| Cyclohexane | 110-82-7 | 12 | 120 |
| Dibromochloromethane | 124-48-1 | 11 | 100 |
| 1,2-Dibromoethane | 106-93-4 | 11 | 100 |
| 1,2-Dichlorobenzene | 95-50-1 | 10 | 91 |
| 1,3-Dichlorobenzene | 541-73-1 | 10 | 91 |
| 1,4-Dichlorobenzene | 106-46-7 | 11 | 100 |
| Dichlorodifluoromethane | 75-71-8 | 13 | 120 |
| 1,1-Dichloroethane | 75-34-3 | 13 | 120 |
| 1,2-Dichloroethane | 107-06-2 | 13 | 130 |
| 1,1-Dichloroethene | 75-35-4 | 13 | 120 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 14 | 130 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 14 | 130 |
| 1,2-Dichloropropane | 78-87-5 | 11 | 110 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 12 | 110 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 13 | 130 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 11 | 100 |
| 1,4-Dioxane | 123-91-1 | 12 | 100 |
| Ethylbenzene | 100-41-4 | 11 | 110 |
| n-Heptane | 142-82-5 | 12 | 120 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4073LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 9/28/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| 2164 [AA4076] | 09/28/2023 15:00 |
| 4870 [AA4077] | 09/28/2023 15:30 |
| 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 0:28 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| 1,3-Hexachlorobutadiene | 87-68-3 | 9.6 | 84 |
| n-Hexane | 110-54-3 | 13 | 130 |
| Methylene chloride | 75-09-2 | 13 | 120 |
| Methyl ethyl ketone | 78-93-3 | 14 | 120 |
| Methyl isobutyl ketone | 108-10-1 | 12 | 110 |
| Methyl tert-butyl ether | 1634-04-4 | 12 | 110 |
| Styrene | 100-42-5 | 11 | 100 |
| Tert-butyl alcohol | 75-65-0 | 13 | 110 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 10 | 91 |
| Tetrachloroethene | 127-18-4 | 11 | 110 |
| Toluene | 108-88-3 | 11 | 110 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 11 | 96 |
| 1,1,1-Trichloroethane | 71-55-6 | 11 | 110 |
| 1,1,2-Trichloroethane | 79-00-5 | 11 | 100 |
| Trichloroethene | 79-01-6 | 9.8 | 98 |
| Trichlorofluoromethane | 75-69-4 | 13 | 120 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 11 | 110 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 11 | 100 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 10 | 91 |
| 2,2,4-Trimethylpentane | 540-84-1 | 12 | 120 |
| Vinyl bromide | 593-60-2 | 12 | 120 |
| Vinyl chloride | 75-01-4 | 14 | 130 |
| Xylenes (m&p) | 179601-23-1 | 22 | 110 |
| Xylenes (o) | 95-47-6 | 10 | 100 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

**INTEGRATED ANALYTICAL LABORATORIES, LLC**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4883LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 12/8/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05093-01 [AA4895] | 12/08/2023 19:11 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Acetone | 67-64-1 | 11 | 100 |
| Benzene | 71-43-2 | 9.3 | 93 |
| Bromoform | 75-25-2 | 11 | 100 |
| Bromomethane | 74-83-9 | 11 | 100 |
| 1,3-Butadiene | 106-99-0 | 9.9 | 99 |
| Chlorobenzene | 108-90-7 | 9.9 | 99 |
| Chloroethane | 75-00-3 | 11 | 110 |
| Chloroform | 67-66-3 | 10.0 | 100 |
| Chloromethane | 74-87-3 | 12 | 100 |
| Carbon disulfide | 75-15-0 | 11 | 100 |
| Carbon tetrachloride | 56-23-5 | 10 | 100 |
| Cyclohexane | 110-82-7 | 10 | 100 |
| 1,2-Dibromoethane | 106-93-4 | 11 | 100 |
| 1,2-Dichlorobenzene | 95-50-1 | 9.7 | 88 |
| 1,3-Dichlorobenzene | 541-73-1 | 9.8 | 89 |
| 1,4-Dichlorobenzene | 106-46-7 | 9.6 | 87 |
| Dichlorodifluoromethane | 75-71-8 | 11 | 100 |
| 1,1-Dichloroethane | 75-34-3 | 9.4 | 85 |
| 1,2-Dichloroethane | 107-06-2 | 11 | 110 |
| 1,1-Dichloroethene | 75-35-4 | 11 | 100 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 10 | 91 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 11 | 100 |
| 1,2-Dichloropropane | 78-87-5 | 11 | 110 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 11 | 100 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 12 | 120 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 9.0 | 82 |
| 1,4-Dioxane | 123-91-1 | 12 | 100 |
| Ethylbenzene | 100-41-4 | 10 | 100 |
| n-Heptane | 142-82-5 | 11 | 110 |
| 1,3-Hexachlorobutadiene | 87-68-3 | 10.0 | 88 |
| n-Hexane | 110-54-3 | 10.0 | 100 |
| Methylene chloride | 75-09-2 | 9.5 | 86 |
| Methyl ethyl ketone | 78-93-3 | 10 | 85 |
| Methyl isobutyl ketone | 108-10-1 | 12 | 110 |
| Methyl tert-butyl ether | 1634-04-4 | 10 | 91 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4883LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 12/8/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05093-01 [AA4895] | 12/08/2023 19:11 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Styrene | 100-42-5 | 10 | 91 |
| Tert-butyl alcohol | 75-65-0 | 11 | 93 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 10 | 91 |
| Tetrachloroethene | 127-18-4 | 11 | 110 |
| Toluene | 108-88-3 | 10 | 100 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 10 | 88 |
| 1,1,1-Trichloroethane | 71-55-6 | 10 | 100 |
| 1,1,2-Trichloroethane | 79-00-5 | 10 | 91 |
| Trichloroethene | 79-01-6 | 9.3 | 93 |
| Trichlorofluoromethane | 75-69-4 | 11 | 100 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 9.2 | 92 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 10.0 | 91 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 10 | 91 |
| 2,2,4-Trimethylpentane | 540-84-1 | 10 | 100 |
| Vinyl bromide | 593-60-2 | 10 | 100 |
| Vinyl chloride | 75-01-4 | 10 | 100 |
| Xylenes (m&p) | 179601-23-1 | 21 | 110 |
| Xylenes (o) | 95-47-6 | 9.9 | 99 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

**INTEGRATED ANALYTICAL LABORATORIES, LLC**

# Laboratory Control Spike

**Lab Sample Name:** **10 PPBV LCS** **Data File:** **AA4903LCS**

**Spike Amount:** **10 ppbv, except m&p-Xylenes at 20 ppbv** **Date Analyzed:** **12/11/2023**

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05093-01 [AA4913] | 12/11/2023 16:20 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Acetone | 67-64-1 | 11 | 100 |
| Benzene | 71-43-2 | 9.5 | 95 |
| Bromoform | 75-25-2 | 11 | 100 |
| Bromomethane | 74-83-9 | 10 | 91 |
| 1,3-Butadiene | 106-99-0 | 10 | 100 |
| Chlorobenzene | 108-90-7 | 10 | 100 |
| Chloroethane | 75-00-3 | 11 | 110 |
| Chloroform | 67-66-3 | 10 | 100 |
| Chloromethane | 74-87-3 | 11 | 96 |
| Carbon disulfide | 75-15-0 | 11 | 100 |
| Carbon tetrachloride | 56-23-5 | 10 | 100 |
| Cyclohexane | 110-82-7 | 10 | 100 |
| 1,2-Dibromoethane | 106-93-4 | 11 | 100 |
| 1,2-Dichlorobenzene | 95-50-1 | 10 | 91 |
| 1,3-Dichlorobenzene | 541-73-1 | 10 | 91 |
| 1,4-Dichlorobenzene | 106-46-7 | 10 | 91 |
| Dichlorodifluoromethane | 75-71-8 | 11 | 100 |
| 1,1-Dichloroethane | 75-34-3 | 9.8 | 89 |
| 1,2-Dichloroethane | 107-06-2 | 11 | 110 |
| 1,1-Dichloroethene | 75-35-4 | 11 | 100 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 10 | 91 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 11 | 100 |
| 1,2-Dichloropropane | 78-87-5 | 10 | 100 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 11 | 100 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 11 | 110 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 8.8 | 80 |
| 1,4-Dioxane | 123-91-1 | 11 | 92 |
| Ethylbenzene | 100-41-4 | 11 | 110 |
| n-Heptane | 142-82-5 | 11 | 110 |
| 1,3-Hexachlorobutadiene | 87-68-3 | 10 | 88 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4903LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 12/11/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05093-01 [AA4913] | 12/11/2023 16:20 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| n-Hexane | 110-54-3 | 10 | 100 |
| Methylene chloride | 75-09-2 | 9.6 | 87 |
| Methyl ethyl ketone | 78-93-3 | 11 | 93 |
| Methyl isobutyl ketone | 108-10-1 | 12 | 110 |
| Methyl tert-butyl ether | 1634-04-4 | 11 | 100 |
| Styrene | 100-42-5 | 11 | 100 |
| Tert-butyl alcohol | 75-65-0 | 11 | 93 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 11 | 100 |
| Tetrachloroethene | 127-18-4 | 11 | 110 |
| Toluene | 108-88-3 | 10 | 100 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 11 | 96 |
| 1,1,1-Trichloroethane | 71-55-6 | 10 | 100 |
| 1,1,2-Trichloroethane | 79-00-5 | 10 | 91 |
| Trichloroethene | 79-01-6 | 9.1 | 91 |
| Trichlorofluoromethane | 75-69-4 | 11 | 100 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 9.4 | 94 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 11 | 100 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 11 | 100 |
| 2,2,4-Trimethylpentane | 540-84-1 | 10 | 100 |
| Vinyl bromide | 593-60-2 | 10 | 100 |
| Vinyl chloride | 75-01-4 | 11 | 110 |
| Xylenes (m&p) | 179601-23-1 | 22 | 110 |
| Xylenes (o) | 95-47-6 | 10 | 100 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

**INTEGRATED ANALYTICAL LABORATORIES, LLC**

***Integrated Analytical Laboratories LLC***

**Analysis: Volatile Organic Compounds by EPA Method TO-15**

**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 9/13/23 |
| SDG Number: | E23-04122 | Date Analyzed: | 9/28/23,9/28/23 |
| IAL Sample ID: | E23-04122-06 | Lab Data File#: | AA4087,AA4088 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 1781 | Injection Volume: | 50ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-04122-06** | | **E23-04122-26** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Acetone | 67-64-1 | **50** | | **54** | | 4.0 | **-7.69%** |
| Allyl Chloride | 107-05-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Benzene | 71-43-2 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| Bromodichloromethane | 75-27-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Bromoform | 75-25-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Bromomethane | 74-83-9 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3-Butadiene | 106-99-0 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chlorobenzene | 108-90-7 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chloroethane | 75-00-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chloroform | 67-66-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chloromethane | 74-87-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Carbon disulfide | 75-15-0 | **10.0** | | **11** | | 4.0 | **-9.52%** |
| Carbon tetrachloride | 56-23-5 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 2-Chlorotoluene | 95-49-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Cyclohexane | 110-82-7 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Dibromochloromethane | 124-48-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dibromoethane | 106-93-4 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,2-Dichlorobenzene | 95-50-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3-Dichlorobenzene | 541-73-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,4-Dichlorobenzene | 106-46-7 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Dichlorodifluoromethane | 75-71-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1-Dichloroethane | 75-34-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloroethane | 107-06-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1-Dichloroethene | 75-35-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloroethene (cis) | 156-59-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloroethene (trans) | 156-60-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloropropane | 78-87-5 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Ethylbenzene | 100-41-4 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 4-Ethyltoluene | 622-96-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| n-Heptane | 142-82-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3-Hexachlorobutadiene | 87-68-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| n-Hexane | 110-54-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Methylene chloride | 75-09-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Methyl ethyl ketone | 78-93-3 | **8.1** | | **10** | | 4.0 | **-20.99%** |
| Methyl isobutyl ketone | 108-10-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 9/13/23 |
| SDG Number: | E23-04122 | Date Analyzed: | 9/28/23,9/28/23 |
| IAL Sample ID: | E23-04122-06 | Lab Data File#: | AA4087,AA4088 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 1781 | Injection Volume: | 50ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-04122-06** | | **E23-04122-26** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Methyl tert-butyl ether | 1634-04-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Styrene | 100-42-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Tert-butyl alcohol | 75-65-0 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Tetrachloroethene | 127-18-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Toluene | 108-88-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2,4-Trichlorobenzene | 120-82-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,1-Trichloroethane | 71-55-6 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,2-Trichloroethane | 79-00-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Trichloroethene | 79-01-6 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| Trichlorofluoromethane | 75-69-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2,4-Trimethylbenzene | 95-63-6 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3,5-Trimethylbenzene | 108-67-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 2,2,4-Trimethylpentane | 540-84-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Vinyl bromide | 593-60-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Vinyl chloride | 75-01-4 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| Xylenes (m&p) | 179601-23-1 | 4.0 | U | **4.2** | | 4.0 | **NC** |
| Xylenes (o) | 95-47-6 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |

**RPD must be <25% for all laboratory duplicate samples. Laboratory duplicate samples are run once daily.**
**NC = The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample.**

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 11/17/23 |
| SDG Number: | E23-05061 | Date Analyzed: | 12/7/23,12/7/23 |
| IAL Sample ID: | E23-05061-03 | Lab Data File#: | AA4869,AA4870 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 3045a | Injection Volume: | 500ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-05061-03** | | **E23-05061-23** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Acetone | 67-64-1 | **11** | | **11** | | 0.20 | **0.00%** |
| Allyl Chloride | 107-05-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Benzene | 71-43-2 | **2.6** | | **2.3** | | 0.20 | **12.24%** |
| Bromodichloromethane | 75-27-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Bromoform | 75-25-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Bromomethane | 74-83-9 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Butadiene | 106-99-0 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Chlorobenzene | 108-90-7 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Chloroethane | 75-00-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Chloroform | 67-66-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Chloromethane | 74-87-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Carbon disulfide | 75-15-0 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Carbon tetrachloride | 56-23-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 2-Chlorotoluene | 95-49-8 | 0.20 | U | **0.27** | | 0.20 | **NC** |
| Cyclohexane | 110-82-7 | **3.9** | | **3.4** | | 0.20 | **13.70%** |
| Dibromochloromethane | 124-48-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dibromoethane | 106-93-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,4-Dioxane | 123-91-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Ethanol | 64-17-5 | **10** | | 0.20 | U | 0.20 | **NC** |
| Ethylbenzene | 100-41-4 | **1.9** | | **1.6** | | 0.20 | **17.14%** |
| 4-Ethyltoluene | 622-96-8 | **1.9** | X | **1.4** | X | 0.20 | **30.30%** |
| n-Heptane | 142-82-5 | **3.7** | | **3.4** | | 0.20 | **8.45%** |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| n-Hexane | 110-54-3 | **4.4** | | **3.8** | | 0.20 | **14.63%** |
| Isopropanol | 67-63-0 | **2.7** | | 0.20 | U | 0.20 | **NC** |

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**INTEGRATED ANALYTICAL LABORATORIES, LLC**

***Integrated Analytical Laboratories LLC***

**Analysis: Volatile Organic Compounds by EPA Method TO-15**

**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 11/17/23 |
| SDG Number: | E23-05061 | Date Analyzed: | 12/7/23,12/7/23 |
| IAL Sample ID: | E23-05061-03 | Lab Data File#: | AA4869,AA4870 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 3045a | Injection Volume: | 500ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-05061-03** | | **E23-05061-23** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Methylene chloride | 75-09-2 | **2.8** | | 0.20 | U | 0.20 | **NC** |
| Methyl ethyl ketone | 78-93-3 | **0.85** | | **0.83** | | 0.20 | **2.38%** |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | U | **0.24** | | 0.20 | **NC** |
| Methyl methacrylate | 80-62-6 | 0.20 | U | **3.4** | | 0.20 | **NC** |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Styrene | 100-42-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Tert-butyl alcohol | 75-65-0 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Tetrachloroethene | 127-18-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Tetrahydrofuran | 109-99-9 | **0.96** | | **0.90** | | 0.20 | **6.45%** |
| Toluene | 108-88-3 | **7.1** | | **7.1** | | 0.20 | **0.00%** |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1,1-Trichloroethane | 71-55-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Trichloroethene | 79-01-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Trichlorofluoromethane | 75-69-4 | **0.33** | | **0.33** | | 0.20 | **0.00%** |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2,4-Trimethylbenzene | 95-63-6 | **1.9** | | **1.5** | | 0.20 | **23.53%** |
| 1,3,5-Trimethylbenzene | 108-67-8 | **0.53** | | **0.45** | | 0.20 | **16.33%** |
| 2,2,4-Trimethylpentane | 540-84-1 | **6.9** | | **7.0** | | 0.20 | **-1.44%** |
| Vinyl bromide | 593-60-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Vinyl chloride | 75-01-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Xylenes (m&p) | 179601-23-1 | **7.0** | | **5.9** | | 0.40 | **17.05%** |
| Xylenes (o) | 95-47-6 | **2.3** | | **2.0** | | 0.20 | **13.95%** |

**RPD must be <25% for all laboratory duplicate samples. Laboratory duplicate samples are run once daily.**

**NC = The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample.**

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 11/20/23 |
| SDG Number: | E23-05079 | Date Analyzed: | 12/12/23,12/12/23 |
| IAL Sample ID: | E23-05079-03 | Lab Data File#: | AA4929,AA4930 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 3830 | Injection Volume: | 500ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| Compound | CAS # | Sample E23-05079-03 Concentration Reported ppbv | Q | Sample Dup E23-05079-23 Concentration Reported ppbv | Q | Reporting Limits ppbv | RPD |
|---|---|---|---|---|---|---|---|
| Acetone | 67-64-1 | **6.1** | | **5.9** | | 0.40 | **3.33%** |
| Allyl Chloride | 107-05-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Benzene | 71-43-2 | **0.31** | | **0.32** | | 0.20 | **-3.17%** |
| Bromodichloromethane | 75-27-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Bromoform | 75-25-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Bromomethane | 74-83-9 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Butadiene | 106-99-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chlorobenzene | 108-90-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloroethane | 75-00-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloroform | 67-66-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloromethane | 74-87-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Carbon disulfide | 75-15-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Carbon tetrachloride | 56-23-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 2-Chlorotoluene | 95-49-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Cyclohexane | 110-82-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Dibromochloromethane | 124-48-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dibromoethane | 106-93-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorobenzene | 95-50-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Dichlorobenzene | 541-73-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,4-Dichlorobenzene | 106-46-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Dichlorodifluoromethane | 75-71-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1-Dichloroethane | 75-34-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethane | 107-06-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1-Dichloroethene | 75-35-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Ethylbenzene | 100-41-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 4-Ethyltoluene | 622-96-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| n-Heptane | 142-82-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| n-Hexane | 110-54-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Methylene chloride | 75-09-2 | **3.5** | | **3.4** | | 0.40 | **2.90%** |
| Methyl ethyl ketone | 78-93-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Methyl isobutyl ketone | 108-10-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

SDG Number: E23-05079
IAL Sample ID: E23-05079-03
Matrix: Air
Summa ID: 3830

Date Received: 11/20/23
Date Analyzed: 12/12/23,12/12/23
Lab Data File#: AA4929,AA4930
Dilution Factor: 1
Injection Volume: 500ml
GC/MS Column: RTX-1, 0.32 mmID

| Compound | CAS # | Sample E23-05079-03 Concentration Reported ppbv | Q | Sample Dup E23-05079-23 Concentration Reported ppbv | Q | Reporting Limits ppbv | RPD |
|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | 1634-04-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Styrene | 100-42-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Tert-butyl alcohol | 75-65-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Tetrachloroethene | 127-18-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Toluene | 108-88-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,1-Trichloroethane | 71-55-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2-Trichloroethane | 79-00-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Trichloroethene | 79-01-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Trichlorofluoromethane | 75-69-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Vinyl bromide | 593-60-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Vinyl chloride | 75-01-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Xylenes (m&p) | 179601-23-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Xylenes (o) | 95-47-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |

**RPD must be <25% for all laboratory duplicate samples. Laboratory duplicate samples are run once daily.**
**NC = The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample.**

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

## Initial Calibration Curve Internal Standard Area and Retention Time Summary

**Instrument:** AA **ICAL Date:** 8/15/2023

| | BROMOCHLOROMETHANE | | 1,4-DIFLUOROBENZENE | | D-5 CHLOROBENZENE | |
|---|---|---|---|---|---|---|
| | Area # | RT | Area # | RT | Area # | RT |
| AVERAGE OF CALIBRATION STANDARDS | 520465 | 4.395 | 2280663 | 5.455 | 2627605 | 8.318 |
| UPPER LIMIT | 728651 | 4.725 | 3192928 | 5.785 | 3678646 | 8.648 |
| LOWER LIMIT | 312279 | 4.065 | 1368398 | 5.125 | 1576563 | 7.988 |

| Lab ID | | BROMOCHLOROMETHANE | | | | 1,4-DIFLUOROBENZENE | | | | D-5 CHLOROBENZENE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Area # | % | RT | +/- | Area # | % | RT | +/- | Area # | % | RT | +/- |
| 40 PPBV STD | AA 3406 STD01 | 487271 | -6.38 | 4.406 | 0.01 | 2425798 | 6.36 | 5.457 | 0.00 | 2732166 | 3.98 | 8.319 | 0.00 |
| 20 PPBV STD | AA 3405 STD02 | 499473 | -4.03 | 4.399 | 0.00 | 2278768 | -0.08 | 5.457 | 0.00 | 2812211 | 7.03 | 8.319 | 0.00 |
| 10 PPBV STD | AA 3404 STD03 | 530723 | 1.97 | 4.396 | 0.00 | 2268530 | -0.53 | 5.457 | 0.00 | 2737620 | 4.19 | 8.319 | 0.00 |
| 2 PPBV STD | AA 3403 STD04 | 541075 | 3.96 | 4.393 | 0.00 | 2325427 | 1.96 | 5.454 | 0.00 | 2787489 | 6.08 | 8.319 | 0.00 |
| 0.2 PPBV STD | AA 3402 STD05 | 543782 | 4.48 | 4.380 | -0.01 | 2104790 | -7.71 | 5.448 | 0.01 | 2068537 | -21.28 | 8.316 | 0.00 |
| ICVSS | AA 3407 ICVSS | 614925 | 18.15 | 4.396 | 0.00 | 2660514 | 16.66 | 5.454 | 0.00 | 3151139 | 19.92 | 8.319 | 0.00 |

Difference of Internal Area must be within +/- 40%; Retention Times must be within +/- 0.33 minute.

* Values outsite QC limits.

# Internal Standard Area and Retention Time Summary

**Lab File ID (Standard):** AA4072DCVS **Date Analyzed:** 9/28/2023

**Instrument:** AA **ICAL Date:** 8/15/2023

| | | | BROMOCHLOROMETHANE | | | | 1,4-DIFLUOROBENZENE | | | | D-5 CHLOROBENZENE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Area # | | RT | | Area # | | RT | | Area # | | RT | |
| | CALIBRATION STANDARD | | 394533 | | 4.399 | | 1846241 | | 5.457 | | 1956014 | | 8.319 | |
| | UPPER LIMIT | | 552346 | | 4.73 | | 2584737 | | 5.79 | | 2738420 | | 8.65 | |
| | LOWER LIMIT | | 236720 | | 4.07 | | 1107745 | | 5.13 | | 1173608 | | 7.99 | |
| Lab ID | | DF | Area # | % | RT | +/- | Area # | % | RT | +/- | Area # | % | RT | +/- |
| Method Blank | AA4074BLK | 1.0 | 502187 | 27.29 | 4.393 | -0.01 | 2139413 | 15.88 | 5.454 | 0.00 | 2500606 | 27.84 | 8.319 | 0.00 |
| Reporting Limit Laboratory Control Standard | AA4075RLLCS | 1.0 | 400577 | 1.53 | 4.380 | -0.02 | 1566223 | -15.17 | 5.447 | -0.01 | 1477412 | -24.47 | 8.316 | 0.00 |
| 2164 | AA4076 | 1.0 | 481338 | 22.00 | 4.393 | -0.01 | 2110781 | 14.33 | 5.454 | 0.00 | 2516144 | 28.64 | 8.319 | 0.00 |
| 4870 | AA4077 | 1.0 | 360790 | -8.55 | 4.383 | -0.02 | 1388747 | -24.78 | 5.447 | -0.01 | 1279774 | -34.57 | 8.316 | 0.00 |
| 2160 | AA4078 | 1.0 | 361668 | -8.33 | 4.380 | -0.02 | 1313235 | -28.87 | 5.448 | -0.01 | 1248229 | -36.19 | 8.316 | 0.00 |
| Closing Calibration | AA4093CCCVS | 1.0 | 393835 | -0.18 | 4.399 | 0.00 | 1857833 | 0.63 | 5.457 | 0.00 | 2315299 | 18.37 | 8.319 | 0.00 |

Difference of Internal Area must be within +/- 40%; Retention Times must be within +/- 0.33 minute.
* Values outsite QC limits.

## Initial Calibration Curve Internal Standard Area and Retention Time Summary

**Instrument:** AA **ICAL Date:** 10/10/2023

| | | BROMOCHLOROMETHANE | | | | 1,4-DIFLUOROBENZENE | | | | D-5 CHLOROBENZENE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Area # | | RT | | Area # | | RT | | Area # | | RT | |
| AVERAGE OF CALIBRATION STANDARDS | | 343159 | | 4.390 | | 1499624 | | 5.451 | | 1637040 | | 8.316 | |
| UPPER LIMIT | | 480423 | | 4.720 | | 2099474 | | 5.781 | | 2291856 | | 8.646 | |
| LOWER LIMIT | | 205896 | | 4.060 | | 899774 | | 5.121 | | 982224 | | 7.986 | |
| Lab ID | | Area # | % | RT | +/- | Area # | % | RT | +/- | Area # | % | RT | +/- |
| 40 PPBV STD | AA 4136 STD01 | 356266 | 3.82 | 4.400 | 0.01 | 1769398 | 17.99 | 5.458 | -0.01 | 1970985 | 20.40 | 8.319 | 0.00 |
| 20 PPBV STD | AA 4135 STD02 | 363381 | 5.89 | 4.397 | 0.01 | 1661895 | 10.82 | 5.455 | 0.00 | 1933627 | 18.12 | 8.316 | 0.00 |
| 10 PPBV STD | AA 4134 STD03 | 393970 | 14.81 | 4.394 | 0.00 | 1695876 | 13.09 | 5.452 | 0.00 | 1964329 | 19.99 | 8.316 | 0.00 |
| 2 PPBV STD | AA 4133 STD04 | 266219 | -22.42 | 4.378 | -0.01 | 1004403 | -33.02 | 5.445 | 0.01 | 1028709 | -37.16 | 8.313 | 0.00 |
| 0.2 PPBV STD | AA 4132 STD05 | 335961 | -2.10 | 4.380 | -0.01 | 1366548 | -8.87 | 5.444 | 0.01 | 1287551 | -21.35 | 8.316 | 0.00 |
| ICVSS | AA 4137 ICVSS | 450439 | 31.26 | 4.394 | 0.00 | 1936760 | 29.15 | 5.451 | 0.00 | 2279414 | 39.24 | 8.316 | 0.00 |

Difference of Internal Area must be within +/- 40%; Retention Times must be within +/- 0.33 minute.

* Values outsite QC limits.

# Internal Standard Area and Retention Time Summary

**Lab File ID (Standard):** AA4882DCVS **Date Analyzed:** 12/8/2023

**Instrument:** AA **ICAL Date:** 10/10/2023

| | | | BROMOCHLOROMETHANE | | | | 1,4-DIFLUOROBENZENE | | | | D-5 CHLOROBENZENE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Area # | | RT | | Area # | | RT | | Area # | | RT | |
| | CALIBRATION STANDARD | | 497428 | | 4.390 | | 1995098 | | 5.451 | | 2342927 | | 8.315 | |
| | UPPER LIMIT | | 696399 | | 4.72 | | 2793137 | | 5.78 | | 3280098 | | 8.65 | |
| | LOWER LIMIT | | 298457 | | 4.06 | | 1197059 | | 5.12 | | 1405756 | | 7.99 | |
| Lab ID | | DF | Area # | % | RT | +/- | Area # | % | RT | +/- | Area # | % | RT | +/- |
| Method Blank | AA4884BLK | 1.0 | 407142 | -18.15 | 4.377 | -0.01 | 1506485 | -24.49 | 5.444 | -0.01 | 1527551 | -34.80 | 8.316 | 0.00 |
| E23-05093-01 | AA4895 | 1.0 | 426865 | -14.19 | 4.406 | 0.02 | 2034478 | 1.97 | 5.448 | 0.00 | 1838071 | -21.55 | 8.319 | 0.00 |

Difference of Internal Area must be within +/- 40%; Retention Times must be within +/- 0.33 minute.
* Values outsite QC limits.

# Internal Standard Area and Retention Time Summary

**Lab File ID (Standard):** AA4902DCVS **Date Analyzed:** 12/11/2023

**Instrument:** AA **ICAL Date:** 10/10/2023

| | | | BROMOCHLOROMETHANE | | | | 1,4-DIFLUOROBENZENE | | | | D-5 CHLOROBENZENE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Area # | | RT | | Area # | | RT | | Area # | | RT | |
| | CALIBRATION STANDARD | | 596109 | | 4.393 | | 2484518 | | 5.454 | | 2791354 | | 8.319 | |
| | UPPER LIMIT | | 834553 | | 4.72 | | 3478325 | | 5.78 | | 3907896 | | 8.65 | |
| | LOWER LIMIT | | 357665 | | 4.06 | | 1490711 | | 5.12 | | 1674812 | | 7.99 | |
| Lab ID | | DF | Area # | % | RT | +/- | Area # | % | RT | +/- | Area # | % | RT | +/- |
| Method Blank | AA4904BLK | 1.0 | 518939 | -12.95 | 4.377 | -0.02 | 1920464 | -22.70 | 5.444 | -0.01 | 1920350 | -31.20 | 8.315 | 0.00 |
| Reporting Limit Laboratory Control Standard | AA4905RLLCS | 1.0 | 566007 | -5.05 | 4.380 | -0.01 | 2290490 | -7.81 | 5.447 | -0.01 | 2210970 | -20.79 | 8.315 | 0.00 |
| 1458 | AA4906 | 1.0 | 809785 | 35.85 | 4.393 | 0.00 | 3431480 | 38.11 | 5.451 | 0.00 | 3836872 | 37.46 | 8.316 | 0.00 |
| 1588 | AA4907 | 1.0 | 706799 | 18.57 | 4.393 | 0.00 | 3079067 | 23.93 | 5.454 | 0.00 | 3708162 | 32.84 | 8.316 | 0.00 |
| 3012 | AA4908 | 1.0 | 589784 | -1.06 | 4.380 | -0.01 | 2099848 | -15.48 | 5.444 | -0.01 | 2006025 | -28.13 | 8.316 | 0.00 |
| E23-05093-01 | AA4913 | 5.0 | 502193 | -15.75 | 4.406 | 0.01 | 2727916 | 9.80 | 5.457 | 0.00 | 3091925 | 10.77 | 8.319 | 0.00 |
| Closing Calibration | AA4931CCCVS | 1.0 | 737975 | 23.80 | 4.393 | 0.00 | 3126526 | 25.84 | 5.454 | 0.00 | 3543265 | 26.94 | 8.316 | 0.00 |

Difference of Internal Area must be within +/- 40%; Retention Times must be within +/- 0.33 minute.
* Values outsite QC limits.

# Section VI: Sample Data Summary

**Certificate of Analysis**

**Summary of Results**

**Quantitation Reports, Chromatograms,
and Peak Integration Reports**

# CERTIFICATE OF ANALYSIS

**ANALYTICAL DATA PACKAGE FOR THE**
**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**
**ALBANY NEW YORK 12233**

**Integrated Analytical Laboratories, LLC** — **Randolph, NJ 07869**
**Project#: HK2661.1** — **NY ELAP Certification#: 11402**
**SDG #: E23-05093** — **NJDEP (Primary AB) Certification#: 14751**
**Date of first sample receipt: 11/20/2023** — **Date of last sample receipt: 11/20/2023**

*Client:* HK Engineering+Geology, D.P.C.
1600 US Route 22 East
Union, NJ 07083
*Attention:* Attention: Chris Hirschmann

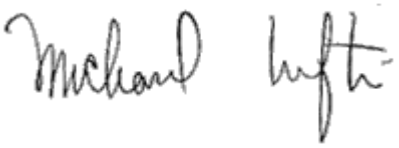
*Project/Site:* HK2661.1/NY

*Analysis conducted at:* Integrated Analytical Laboratories, LLC
273 Franklin Road
Randolph, NJ 07869
*Contact:* Michael H. Leftin, Ph.D.

*Sample(s):*
E23-05093-01

Samples for this analysis were received in good condition with a chain of custody.

All work recorded herein has been done in accordance with normal professional standards using accepted testing methodologies, quality assurance and quality control procedures except where otherwise agreed to by the client and testing company in writing. Once analysis has been performed on canisters that meets regulatory criteria, samples are recycled for future use, unless other provisions have been made by the client.



Michael H. Leftin, Ph.D.
Laboratory Director

Date: December 20, 2023

Volatile Organic Compounds by EPA Method TO-15
Summary of Results

| | | | |
|---|---|---|---|
| Lab ID: | E23-05093-01 | Instrument ID: | AA |
| Client ID: | SV9 | GC/MS Column: | RTX-1, 0.32 mmID |
| Date Sampled: | 11/20/2023 08:30 | Injection Volmue: | 500ml, 100ml |
| Date Received: | 11/20/2023 | Matrix: | Air-Other |
| Date Analyzed: | 12/08/2023 19:11, 12/11/2023 16:20 | % Moisture: | NA |
| Data File: | AA4895, AA4913 | Dilution Factor: | 1, 5 |
| Summa ID: | 3044A | Analyst: | J. Walukiewicz |

| | | | Concentration Reported | | Reporting Limits | |
|---|---|---|---|---|---|---|
| **Compound** | **CAS #** | **Q** | **ppbv** | **ug/m3** | **ppbv** | **ug/m3** |
| Acetone | 67-64-1 | D | 66 | 160 | 1.0 | 2.4 |
| Benzene | 71-43-2 | | 3.3 | 11 | 0.20 | 0.64 |
| Bromodichloromethane | 75-27-4 | | ND | ND | 0.20 | 1.3 |
| Bromoform | 75-25-2 | | ND | ND | 0.20 | 2.1 |
| Bromomethane | 74-83-9 | | ND | ND | 0.20 | 0.78 |
| 1,3-Butadiene | 106-99-0 | | ND | ND | 0.20 | 0.44 |
| Chlorobenzene | 108-90-7 | | ND | ND | 0.20 | 0.92 |
| Chloroethane | 75-00-3 | | ND | ND | 0.20 | 0.53 |
| Chloroform | 67-66-3 | | ND | ND | 0.20 | 0.98 |
| Chloromethane | 74-87-3 | | ND | ND | 0.20 | 0.41 |
| Carbon disulfide | 75-15-0 | | 1.5 | 4.6 | 0.20 | 0.62 |
| Carbon tetrachloride | 56-23-5 | | ND | ND | 0.040 | 0.25 |
| Cyclohexane | 110-82-7 | | 0.77 | 2.6 | 0.20 | 0.69 |
| Dibromochloromethane | 124-48-1 | | ND | ND | 0.20 | 1.7 |
| 1,2-Dibromoethane | 106-93-4 | | ND | ND | 0.20 | 1.5 |
| 1,2-Dichlorobenzene | 95-50-1 | | ND | ND | 0.20 | 1.2 |
| 1,3-Dichlorobenzene | 541-73-1 | | ND | ND | 0.20 | 1.2 |
| 1,4-Dichlorobenzene | 106-46-7 | | ND | ND | 0.20 | 1.2 |
| Dichlorodifluoromethane | 75-71-8 | | ND | ND | 0.20 | 0.99 |
| 1,1-Dichloroethane | 75-34-3 | | ND | ND | 0.20 | 0.81 |
| 1,2-Dichloroethane | 107-06-2 | | ND | ND | 0.20 | 0.81 |
| 1,1-Dichloroethene | 75-35-4 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloroethene (cis) | 156-59-2 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloroethene (trans) | 156-60-5 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloropropane | 78-87-5 | | ND | ND | 0.20 | 0.92 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | | ND | ND | 0.20 | 0.91 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | | ND | ND | 0.20 | 0.91 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | | ND | ND | 0.20 | 1.4 |
| 1,4-Dioxane | 123-91-1 | | ND | ND | 0.20 | 0.72 |
| Ethylbenzene | 100-41-4 | | 0.90 | 3.9 | 0.20 | 0.87 |
| n-Heptane | 142-82-5 | | 1.6 | 6.5 | 0.20 | 0.82 |
| 1,3-Hexachlorobutadiene | 87-68-3 | | ND | ND | 0.20 | 2.1 |
| n-Hexane | 110-54-3 | | ND | ND | 0.20 | 0.70 |
| Methylene chloride | 75-09-2 | | 4.2 | 15 | 0.20 | 0.69 |
| Methyl ethyl ketone | 78-93-3 | D | 76 | 230 | 1.0 | 2.9 |
| Methyl isobutyl ketone | 108-10-1 | | ND | ND | 0.20 | 0.82 |
| Methyl tert-butyl ether | 1634-04-4 | | ND | ND | 0.20 | 0.72 |
| Styrene | 100-42-5 | | 0.33 | 1.4 | 0.20 | 0.85 |
| Tert-butyl alcohol | 75-65-0 | | 5.8 | 18 | 0.20 | 0.61 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | ND | ND | 0.20 | 1.4 |
| Tetrachloroethene | 127-18-4 | | 6.7 | 46 | 0.20 | 1.4 |
| Toluene | 108-88-3 | | 2.7 | 10 | 0.20 | 0.75 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | ND | ND | 0.20 | 1.5 |
| 1,1,1-Trichloroethane | 71-55-6 | | ND | ND | 0.20 | 1.1 |
| 1,1,2-Trichloroethane | 79-00-5 | | ND | ND | 0.20 | 1.1 |

Qualifiers:
D = Dilution required

Volatile Organic Compounds by EPA Method TO-15
Summary of Results

| | | | |
|---|---|---|---|
| Lab ID: | E23-05093-01 | Instrument ID: | AA |
| Client ID: | SV9 | GC/MS Column: | RTX-1, 0.32 mmID |
| Date Sampled: | 11/20/2023 08:30 | Injection Volmue: | 500ml, 100ml |
| Date Received: | 11/20/2023 | Matrix: | Air-Other |
| Date Analyzed: | 12/08/2023 19:11, 12/11/2023 16:20 | % Moisture: | NA |
| Data File: | AA4895, AA4913 | Dilution Factor: | 1, 5 |
| Summa ID: | 3044A | Analyst: | J. Walukiewicz |

| | | | Concentration Reported | | Reporting Limits | |
|---|---|---|---|---|---|---|
| **Compound** | **CAS #** | **Q** | **ppbv** | **ug/m3** | **ppbv** | **ug/m3** |
| Trichloroethene | 79-01-6 | | ND | ND | 0.046 | 0.25 |
| Trichlorofluoromethane | 75-69-4 | | 0.27 | 1.5 | 0.20 | 1.1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | | ND | ND | 0.20 | 1.5 |
| 1,2,4-Trimethylbenzene | 95-63-6 | | 0.23 | 1.1 | 0.20 | 0.98 |
| 1,3,5-Trimethylbenzene | 108-67-8 | | ND | ND | 0.20 | 0.98 |
| 2,2,4-Trimethylpentane | 540-84-1 | | ND | ND | 0.20 | 0.93 |
| Vinyl bromide | 593-60-2 | | ND | ND | 0.20 | 0.87 |
| Vinyl chloride | 75-01-4 | | ND | ND | 0.20 | 0.51 |
| Xylenes (m&p) | 179601-23-1 | | 3.3 | 14 | 0.20 | 0.87 |
| Xylenes (o) | 95-47-6 | | 1.1 | 5.0 | 0.20 | 0.87 |

Qualifiers:
D = Dilution required

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4895.D
Acq On : 8 Dec 2023 7:11 pm
Operator : jjw
Sample : E23-05093-01
Misc : 3044A, 500cc
ALS Vial : 18 Sample Multiplier: 1

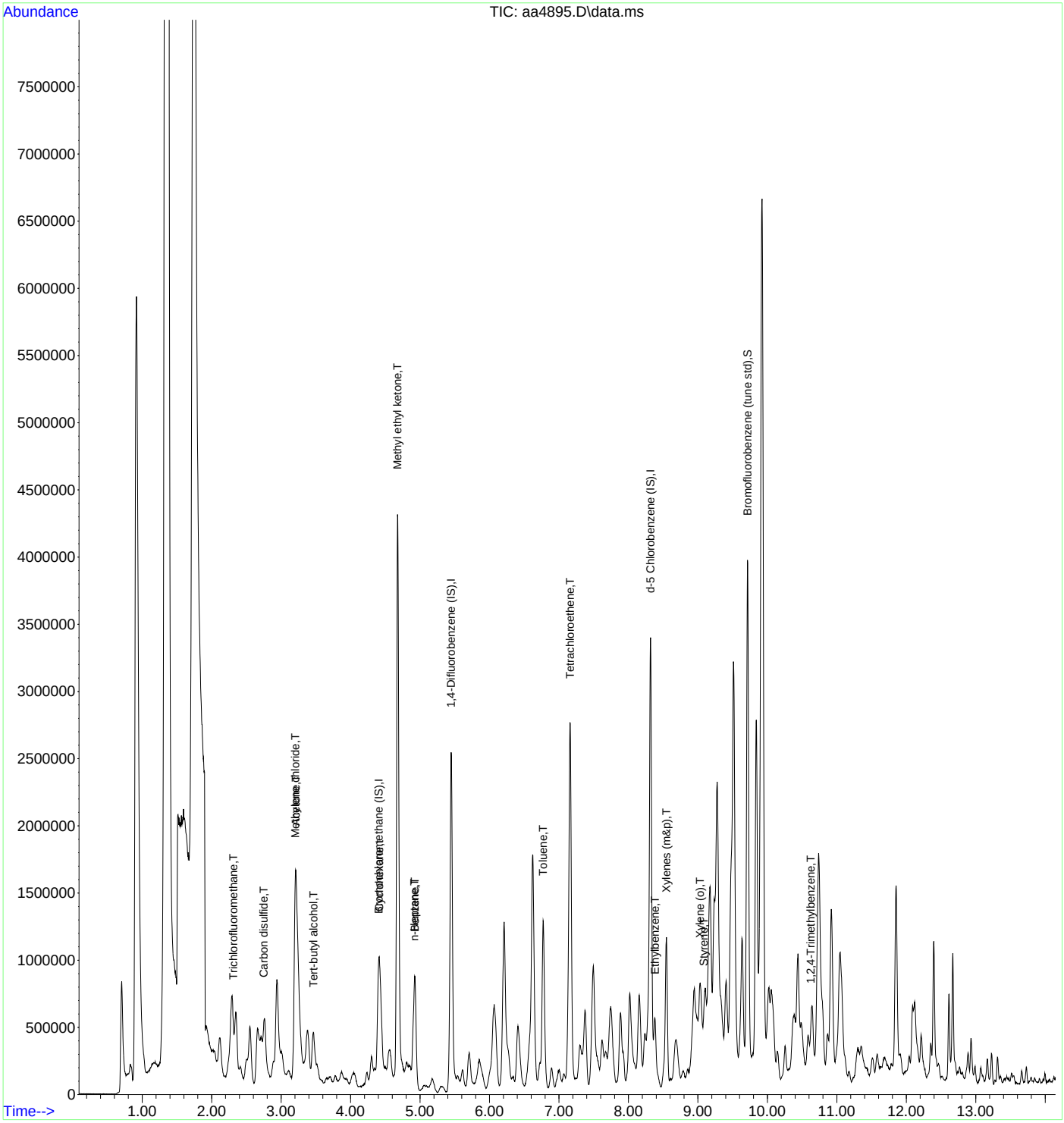
Quant Time: Dec 12 10:19:25 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

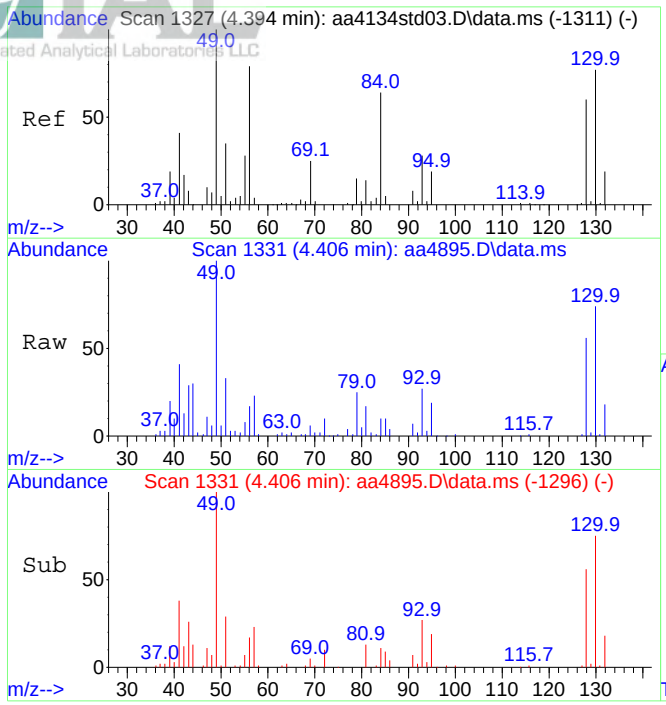
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.406 | 130 | 426865 | 10.00 | ppbV | | 0.012 |
| 39) 1,4-Difluorobenzene (IS) | 5.448 | 114 | 2034478 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 1838071 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1537117 | 9.59 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 12) Trichlorofluoromethane | 2.313 | 101 | 31788 | 0.27 | ppbV | | 92 |
| 15) Carbon disulfide | 2.750 | 76 | 193889 | 1.49 | ppbV | # | 53 |
| 20) Methylene chloride | 3.203 | 49 | 219011 | 4.17 | ppbV | | 89 |
| 21) Acetone | 3.213 | 43 | 3511749 | 54.54 | ppbV | | 98 |
| 26) Tert-butyl alcohol | 3.467 | 59 | 648219 | 5.82 | ppbV | | 100 |
| 29) Cyclohexane | 4.412 | 56 | 72323 | 0.77 | ppbV | # | 64 |
| 35) Methyl ethyl ketone | 4.676 | 43 | 5752987 | 55.18 | ppbV | | 98 |
| 36) n-Heptane | 4.917 | 43 | 186119 | 1.58 | ppbV | | 90 |
| 37) Benzene | 4.927 | 78 | 563920 | 3.33 | ppbV | | 98 |
| 47) Toluene | 6.772 | 91 | 784673 | 2.74 | ppbV | | 100 |
| 49) Tetrachloroethene | 7.161 | 166 | 828009 | 6.72 | ppbV | | 99 |
| 58) Ethylbenzene | 8.383 | 91 | 306101 | 0.90 | ppbV | | 98 |
| 59) Xylenes (m&p) | 8.547 | 91 | 819389 | 3.26 | ppbV | | 97 |
| 60) Xylene (o) | 9.029 | 91 | 312622 | 1.14 | ppbV | | 98 |
| 61) Styrene | 9.084 | 104 | 62448 | 0.33 | ppbV | | 98 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 72604 | 0.23 | ppbV | | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4895.D
Acq On : 8 Dec 2023 7:11 pm
Operator : jjw
Sample : E23-05093-01
Misc : 3044A, 500cc
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Dec 12 10:19:25 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

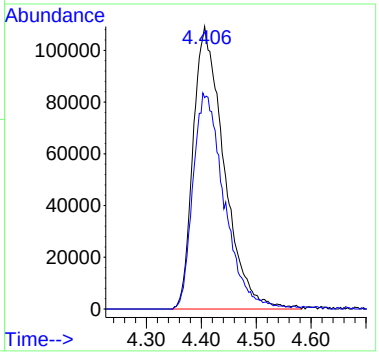


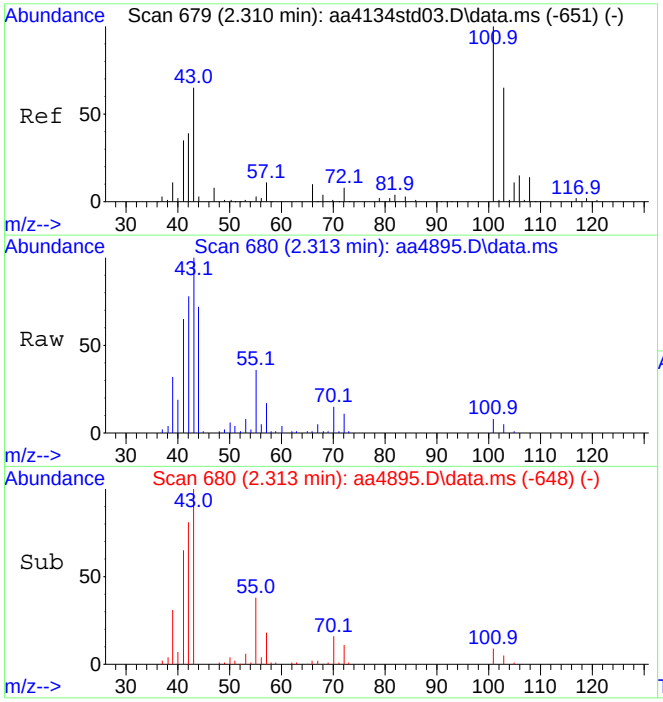



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.406 min Scan# 1331
Delta R.T. 0.012 min
Lab File: aa4895.D
Acq: 8 Dec 2023 7:11 pm

Tgt Ion:130 Resp: 426865

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 77.4 | 62.2 | 93.4 |

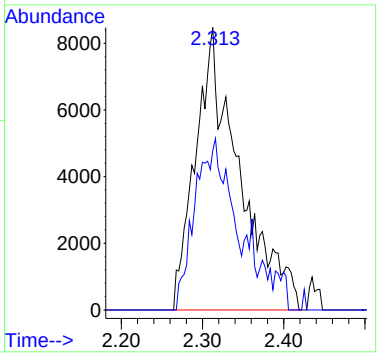


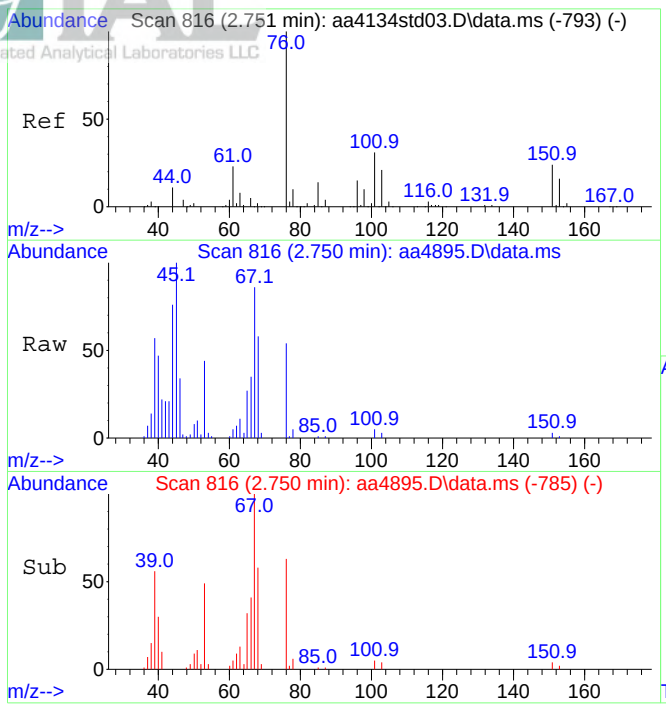




#12
Trichlorofluoromethane
Concen: 0.27 ppbV
RT: 2.313 min Scan# 680
Delta R.T. 0.002 min
Lab File: aa4895.D
Acq: 8 Dec 2023 7:11 pm

Tgt Ion:101 Resp: 31788

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 59.2 | 52.5 | 78.7 |

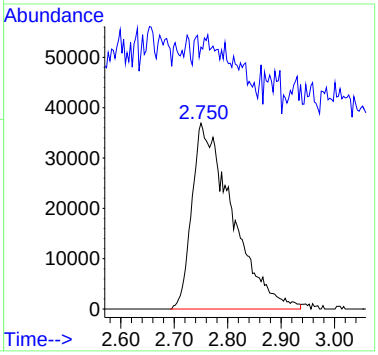


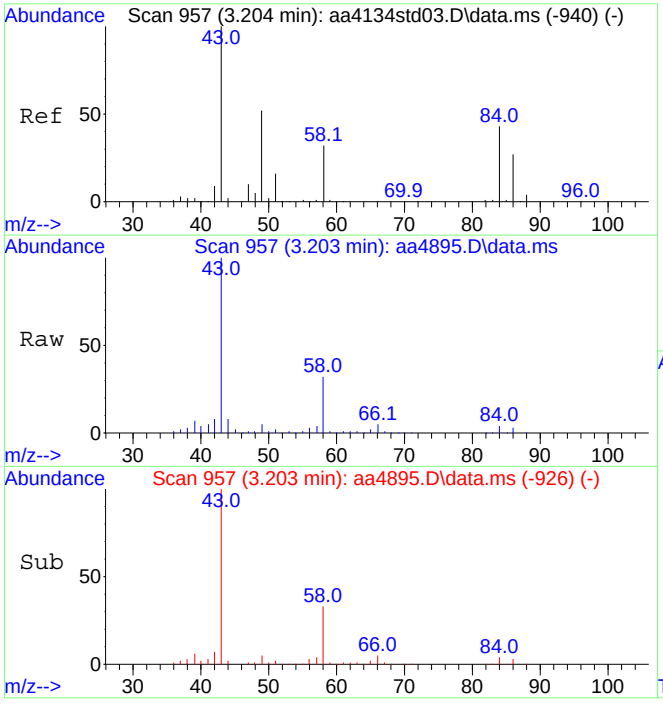



#15
Carbon disulfide
Concen: 1.49 ppbV
RT: 2.750 min Scan# 816
Delta R.T. -0.001 min
Lab File: aa4895.D
Acq: 8 Dec 2023 7:11 pm

Tgt Ion: 76 Resp: 193889

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 29.1 | 9.0 | 13.4# |

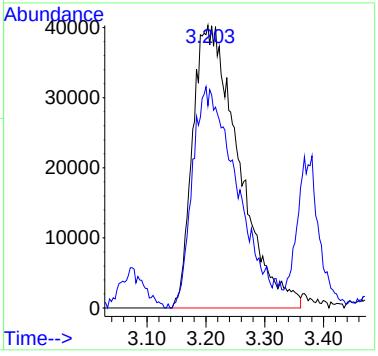


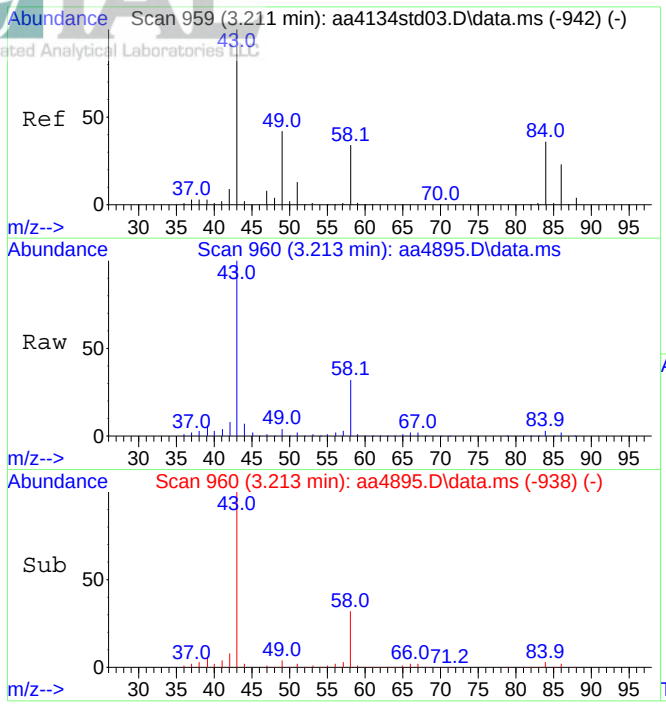




#20
Methylene chloride
Concen: 4.17 ppbV
RT: 3.203 min Scan# 957
Delta R.T. -0.001 min
Lab File: aa4895.D
Acq: 8 Dec 2023 7:11 pm

Tgt Ion: 49 Resp: 219011

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 74.8 | 64.8 | 104.8 |

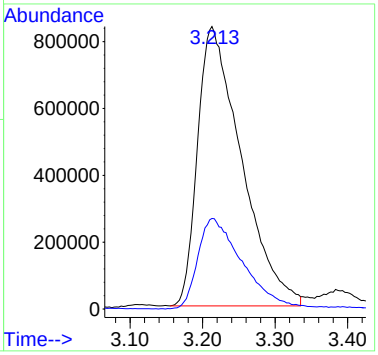


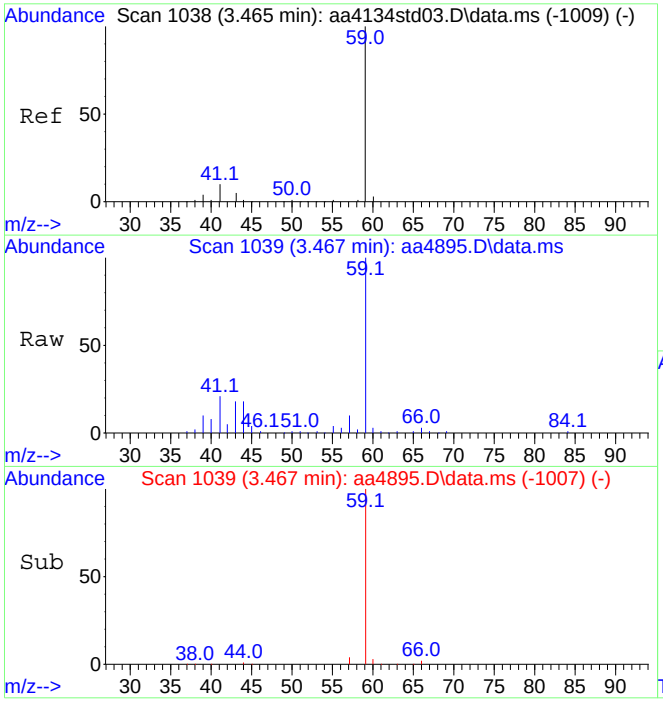



#21
Acetone
Concen: 54.54 ppbV
RT: 3.213 min Scan# 960
Delta R.T. 0.002 min
Lab File: aa4895.D
Acq: 8 Dec 2023 7:11 pm

Tgt Ion: 43 Resp: 3511749

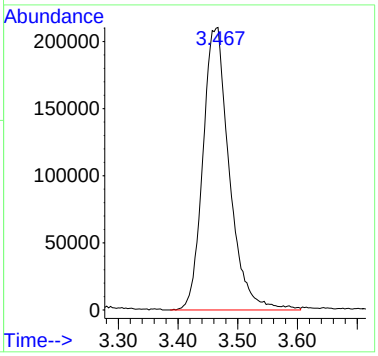
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 32.8 | 27.1 | 40.7 |

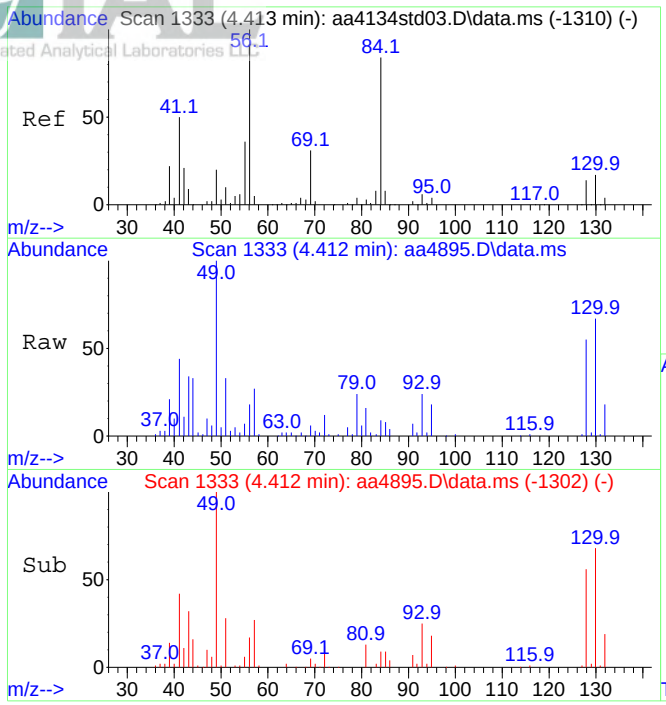



#26
Tert-butyl alcohol
Concen: 5.82 ppbV
RT: 3.467 min Scan# 1039
Delta R.T. 0.002 min
Lab File: aa4895.D
Acq: 8 Dec 2023 7:11 pm

Tgt Ion: 59 Resp: 648219

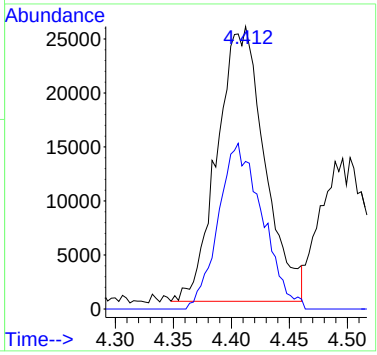


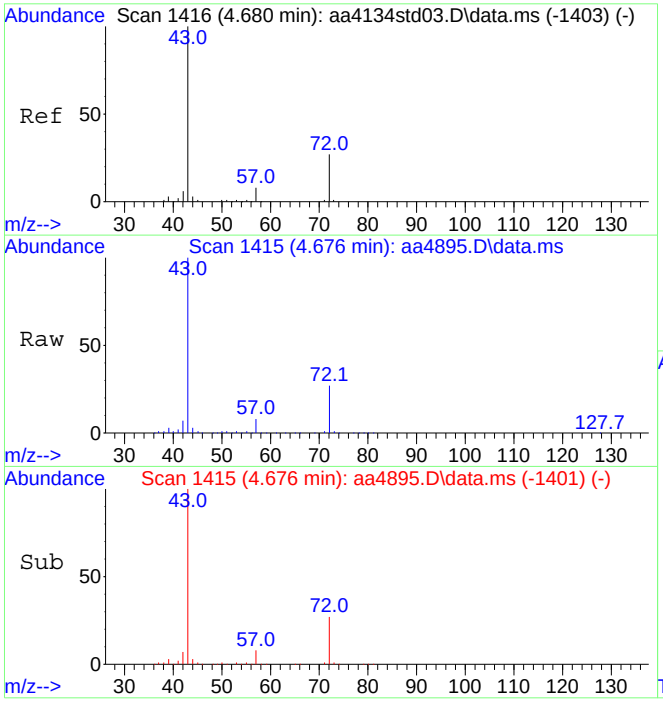



#29
Cyclohexane
Concen: 0.77 ppbV
RT: 4.412 min Scan# 1333
Delta R.T. -0.001 min
Lab File: aa4895.D
Acq: 8 Dec 2023 7:11 pm

Tgt Ion: 56 Resp: 72323

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 55.7 | 71.2 | 106.8# |

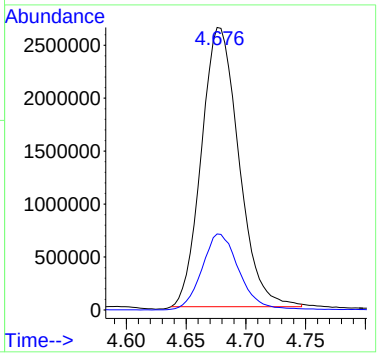


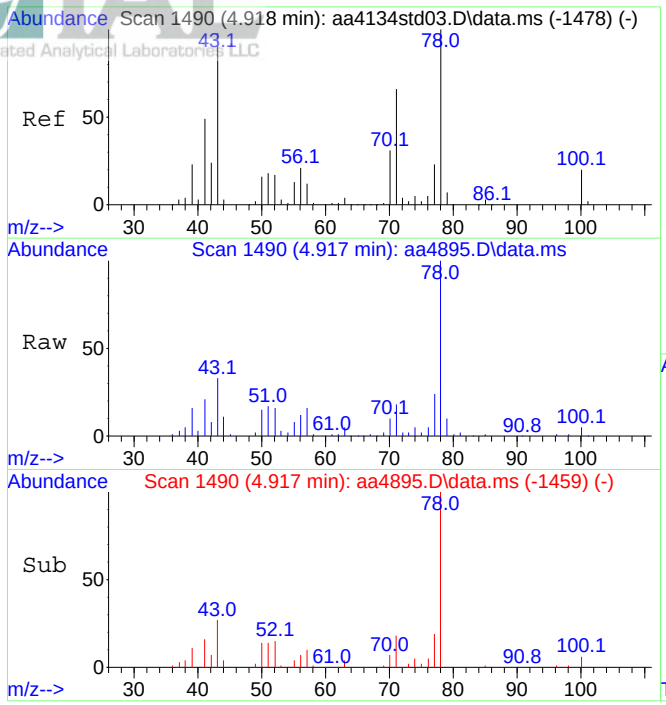




#35
Methyl ethyl ketone
Concen: 55.18 ppbV
RT: 4.676 min Scan# 1415
Delta R.T. -0.004 min
Lab File: aa4895.D
Acq: 8 Dec 2023 7:11 pm

Tgt Ion: 43 Resp: 5752987

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 26.1 | 21.6 | 32.4 |

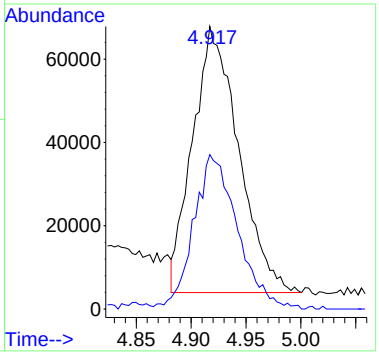


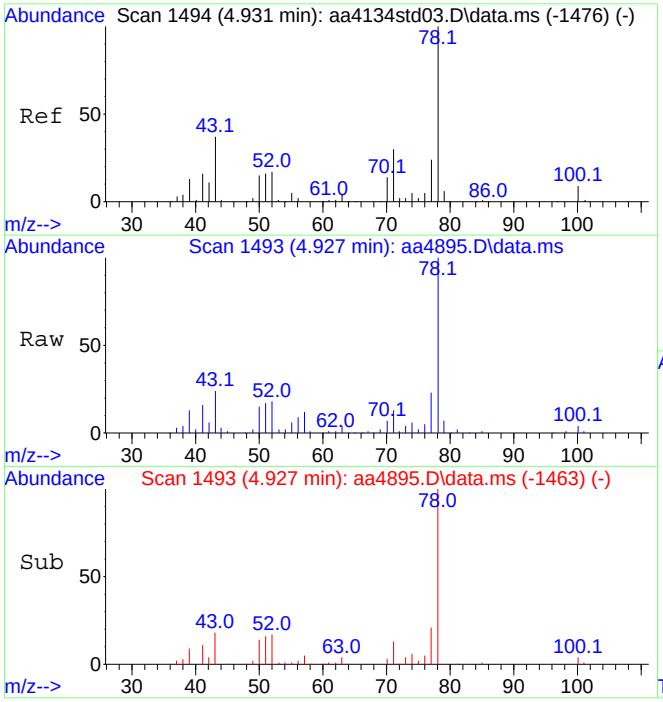



#36
n-Heptane
Concen: 1.58 ppbV
RT: 4.917 min Scan# 1490
Delta R.T. -0.001 min
Lab File: aa4895.D
Acq: 8 Dec 2023 7:11 pm

Tgt Ion: 43 Resp: 186119

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 71 | 55.0 | 50.5 | 75.7 |

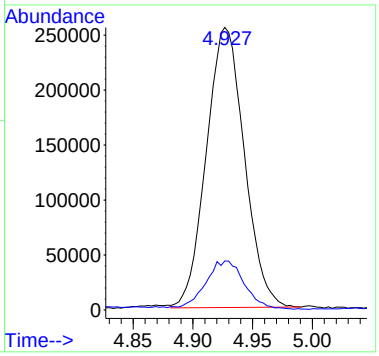


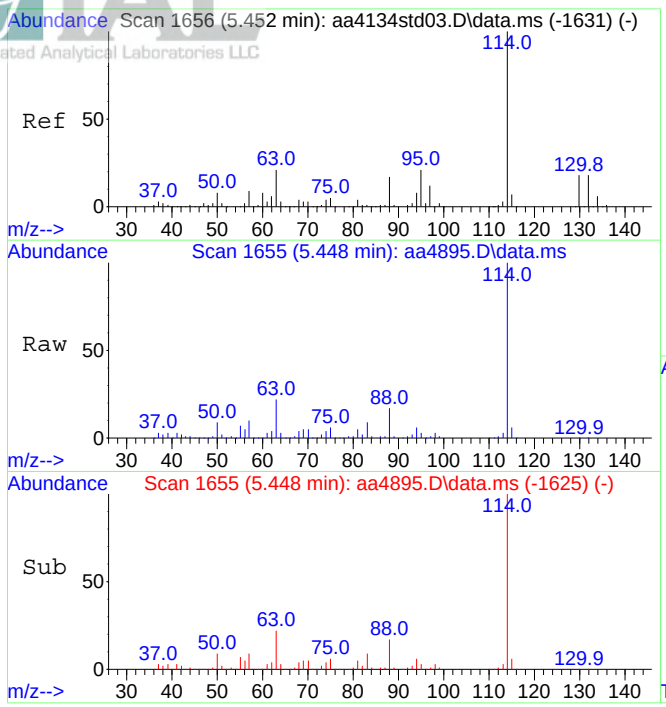




#37
Benzene
Concen: 3.33 ppbV
RT: 4.927 min Scan# 1493
Delta R.T. -0.004 min
Lab File: aa4895.D
Acq: 8 Dec 2023 7:11 pm

Tgt Ion: 78 Resp: 563920

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 17.7 | 13.4 | 20.0 |

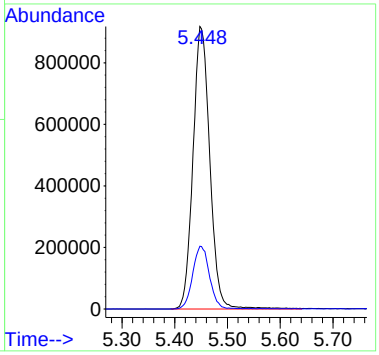


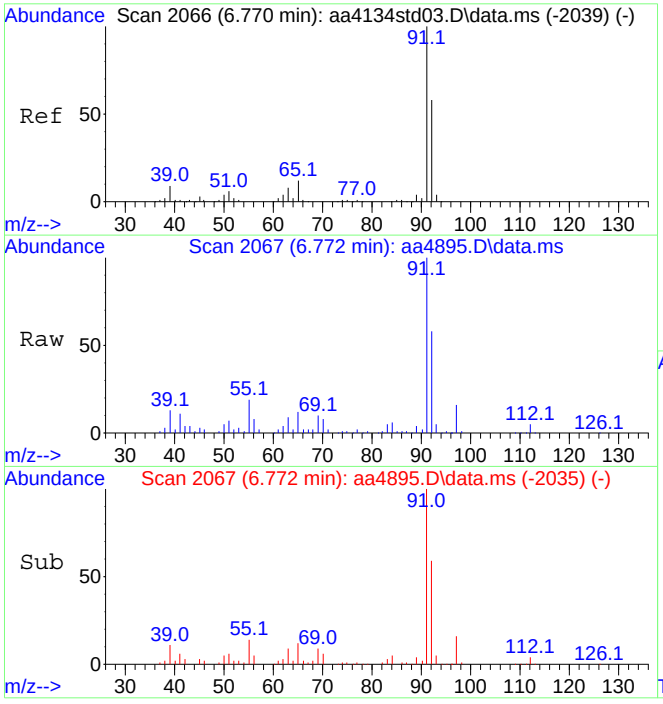



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.448 min Scan# 1655
Delta R.T. -0.004 min
Lab File: aa4895.D
Acq: 8 Dec 2023 7:11 pm

Tgt Ion:114 Resp: 2034478

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.4 | 17.0 | 25.6 |

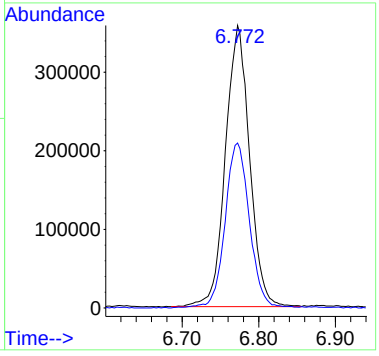


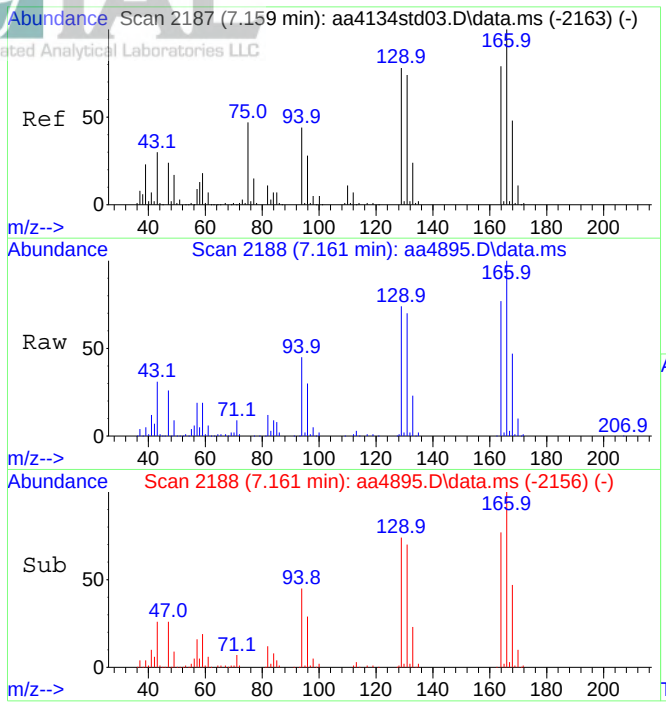




#47
Toluene
Concen: 2.74 ppbV
RT: 6.772 min Scan# 2067
Delta R.T. 0.002 min
Lab File: aa4895.D
Acq: 8 Dec 2023 7:11 pm

Tgt Ion: 91 Resp: 784673

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 59.2 | 47.3 | 70.9 |

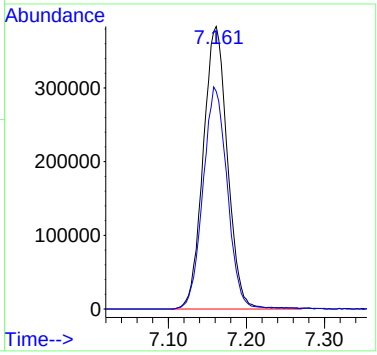


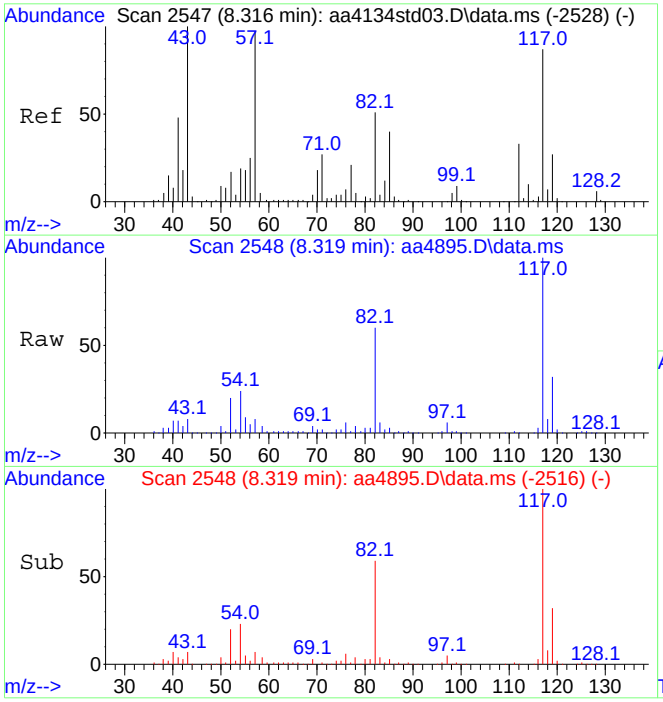



#49
Tetrachloroethene
Concen: 6.72 ppbV
RT: 7.161 min Scan# 2188
Delta R.T. 0.002 min
Lab File: aa4895.D
Acq: 8 Dec 2023 7:11 pm

Tgt Ion:166 Resp: 828009

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 78.5 | 62.3 | 93.5 |

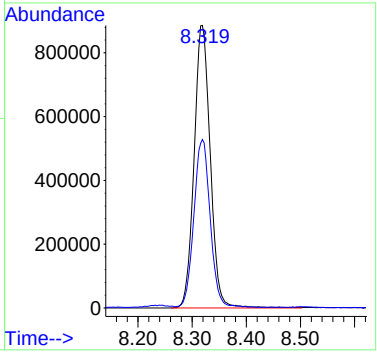


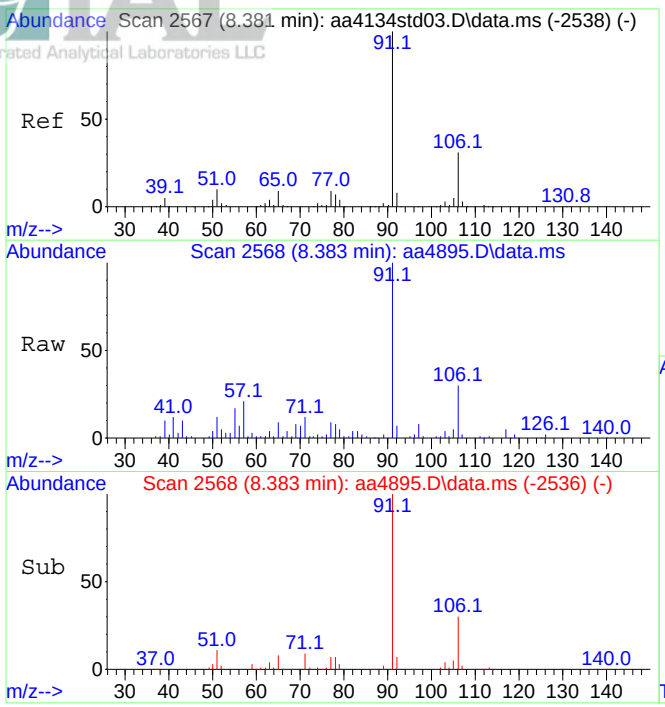




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.319 min Scan# 2548
Delta R.T. 0.002 min
Lab File: aa4895.D
Acq: 8 Dec 2023 7:11 pm

Tgt Ion:117 Resp: 1838071

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 59.9 | 47.0 | 70.4 |

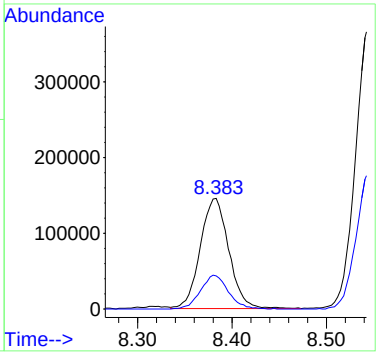


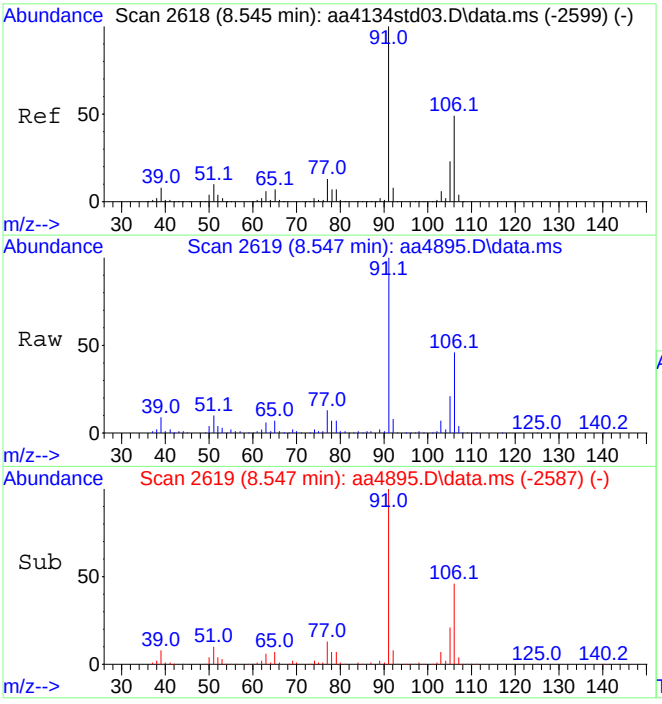



#58
Ethylbenzene
Concen: 0.90 ppbV
RT: 8.383 min Scan# 2568
Delta R.T. 0.002 min
Lab File: aa4895.D
Acq: 8 Dec 2023 7:11 pm

Tgt Ion: 91 Resp: 306101

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 29.8 | 24.6 | 36.8 |

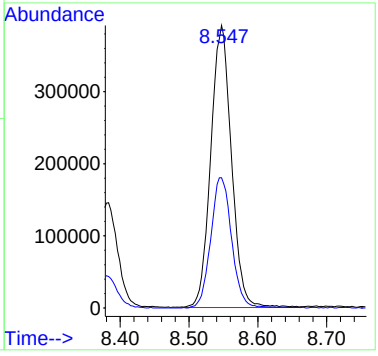


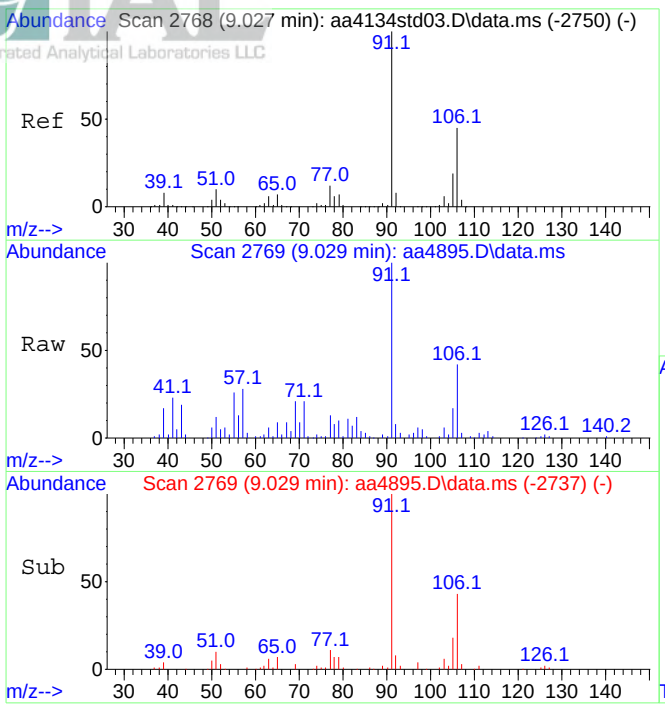




#59
Xylenes (m&p)
Concen: 3.26 ppbV
RT: 8.547 min Scan# 2619
Delta R.T. 0.002 min
Lab File: aa4895.D
Acq: 8 Dec 2023 7:11 pm

Tgt Ion: 91 Resp: 819389

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 46.7 | 39.0 | 58.4 |

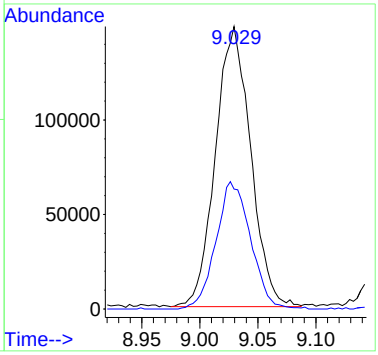


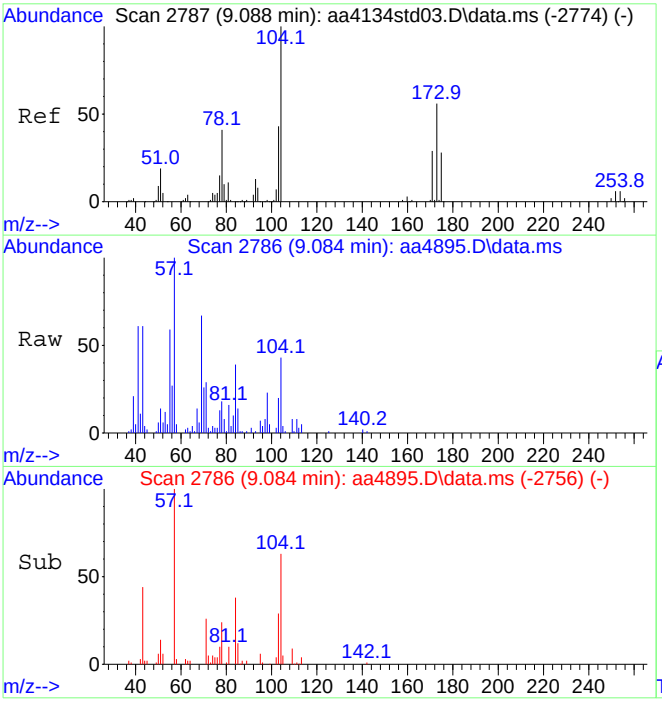



#60
Xylene (o)
Concen: 1.14 ppbV
RT: 9.029 min Scan# 2769
Delta R.T. 0.002 min
Lab File: aa4895.D
Acq: 8 Dec 2023 7:11 pm

Tgt Ion: 91 Resp: 312622

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 44.7 | 36.8 | 55.2 |

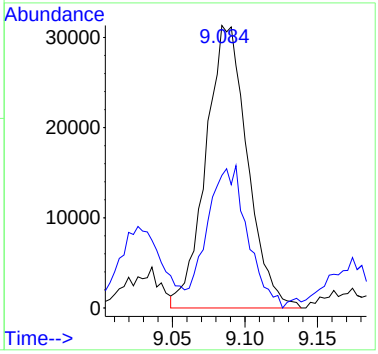


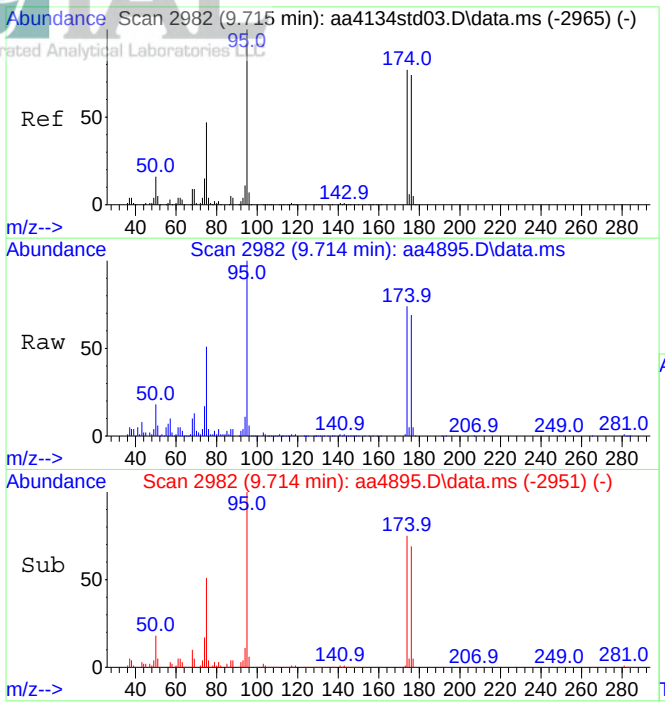




#61
Styrene
Concen: 0.33 ppbV
RT: 9.084 min Scan# 2786
Delta R.T. -0.004 min
Lab File: aa4895.D
Acq: 8 Dec 2023 7:11 pm

Tgt Ion:104 Resp: 62448

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 104 | 100 | | |
| 103 | 48.5 | 37.8 | 56.6 |

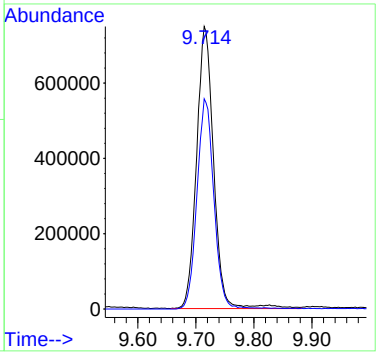


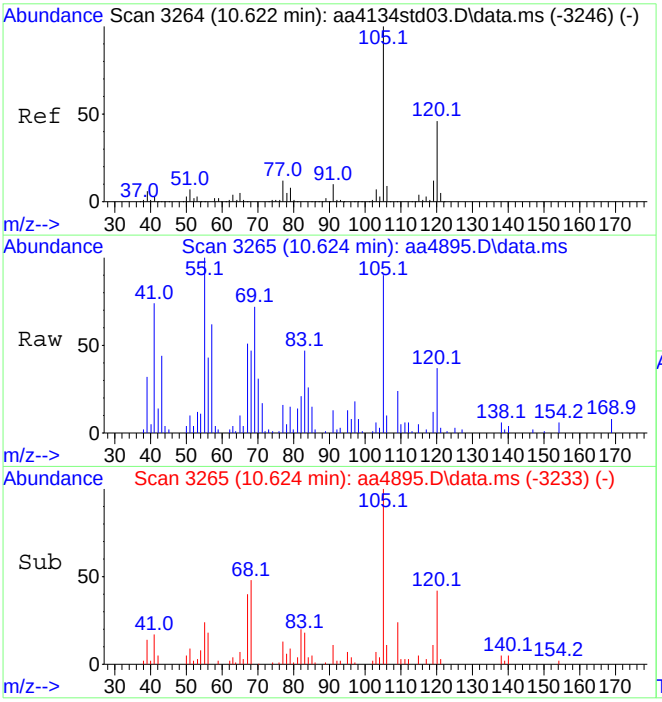



#64
Bromofluorobenzene (tune std)
Concen: 9.59 ppbV
RT: 9.714 min Scan# 2982
Delta R.T. -0.001 min
Lab File: aa4895.D
Acq: 8 Dec 2023 7:11 pm

Tgt Ion: 95 Resp: 1537117

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 73.4 | 61.1 | 91.7 |

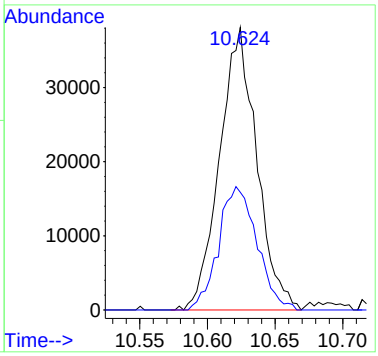



#70
1,2,4-Trimethylbenzene
Concen: 0.23 ppbV
RT: 10.624 min Scan# 3265
Delta R.T. 0.002 min
Lab File: aa4895.D
Acq: 8 Dec 2023 7:11 pm

Tgt Ion:105 Resp: 72604

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 45.2 | 36.3 | 54.5 |



Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4913.D
Acq On : 11 Dec 2023 4:20 pm
Operator : jjw
Sample : E23-05093-01x5 dil
Misc : 3044A, 100cc
ALS Vial : 16 Sample Multiplier: 1

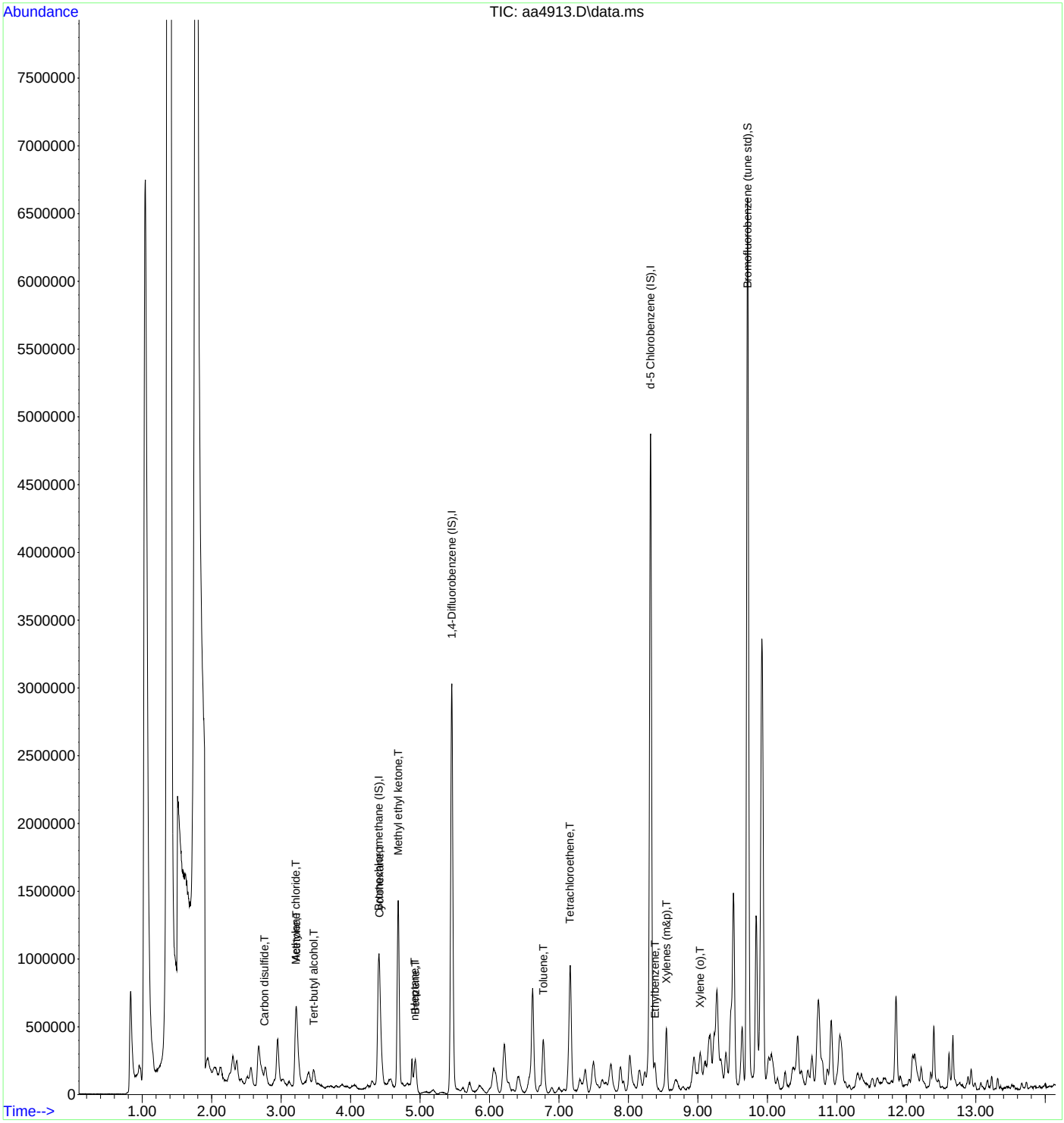
Quant Time: Dec 12 10:22:08 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

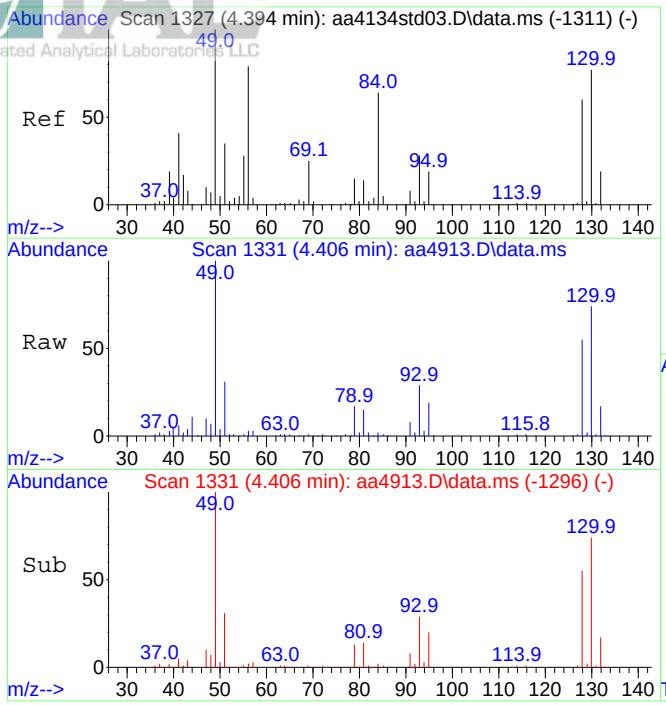
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.406 | 130 | 502193 | 10.00 | ppbV | | 0.012 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 2727916 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 3091925 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 2884453 | 10.70 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 15) Carbon disulfide | 2.759 | 76 | 51119 | 0.33 | ppbV | | 99 |
| 20) Methylene chloride | 3.213 | 49 | 63522 | 1.03 | ppbV | | 86 |
| 21) Acetone | 3.219 | 43 | 991562 | 13.09 | ppbV | | 97 |
| 26) Tert-butyl alcohol | 3.470 | 59 | 193206 | 1.48 | ppbV | | 100 |
| 29) Cyclohexane | 4.415 | 56 | 22578 | 0.20 | ppbV | # | 61 |
| 35) Methyl ethyl ketone | 4.685 | 43 | 1851347 | 15.10 | ppbV | | 97 |
| 36) n-Heptane | 4.920 | 43 | 61652 | 0.44 | ppbV | | 85 |
| 37) Benzene | 4.933 | 78 | 160564 | 0.81 | ppbV | | 93 |
| 47) Toluene | 6.772 | 91 | 271951 | 0.71 | ppbV | | 97 |
| 49) Tetrachloroethene | 7.158 | 166 | 280827 | 1.70 | ppbV | | 99 |
| 58) Ethylbenzene | 8.383 | 91 | 126190 | 0.22 | ppbV | | 97 |
| 59) Xylenes (m&p) | 8.547 | 91 | 331885 | 0.79 | ppbV | | 98 |
| 60) Xylene (o) | 9.033 | 91 | 128513 | 0.28 | ppbV | | 94 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4913.D
Acq On : 11 Dec 2023 4:20 pm
Operator : jjw
Sample : E23-05093-01x5 dil
Misc : 3044A, 100cc
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Dec 12 10:22:08 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

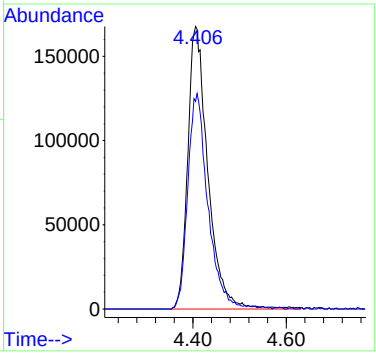


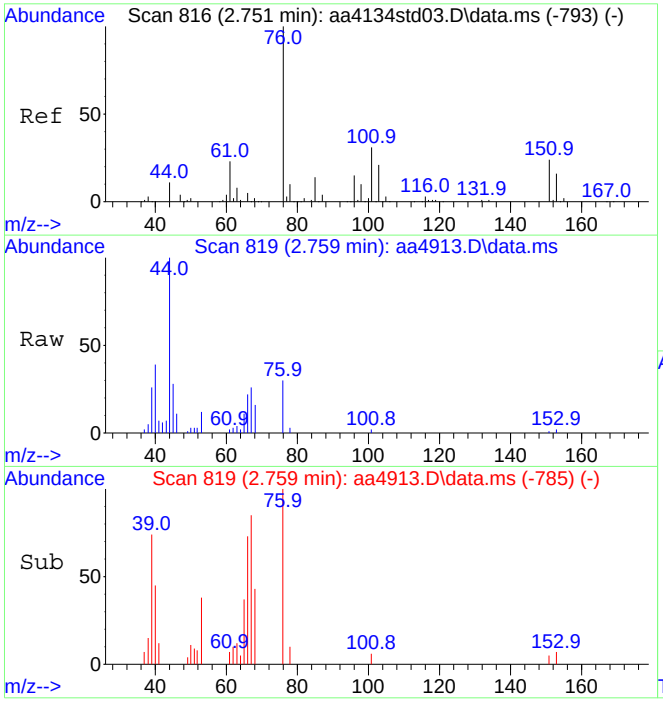



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.406 min Scan# 1331
Delta R.T. 0.012 min
Lab File: aa4913.D
Acq: 11 Dec 2023 4:20 pm

Tgt Ion:130 Resp: 502193

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 76.2 | 62.2 | 93.4 |

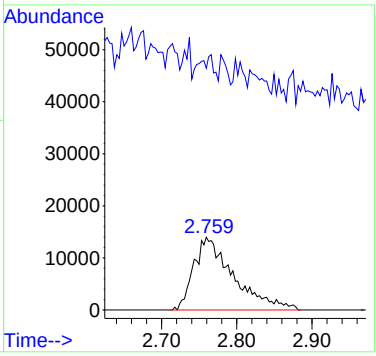


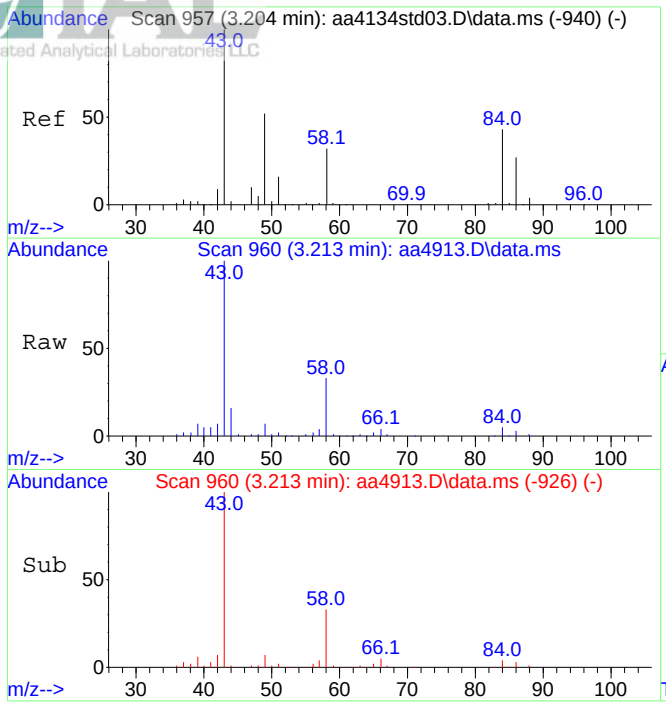




#15
Carbon disulfide
Concen: 0.33 ppbV
RT: 2.759 min Scan# 819
Delta R.T. 0.009 min
Lab File: aa4913.D
Acq: 11 Dec 2023 4:20 pm

Tgt Ion: 76 Resp: 51119

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 11.5 | 9.0 | 13.4 |

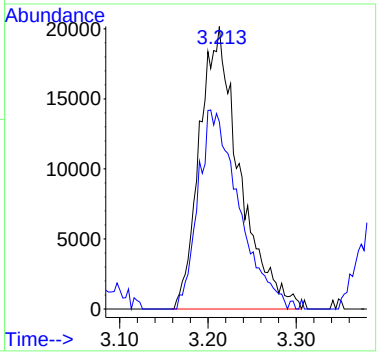


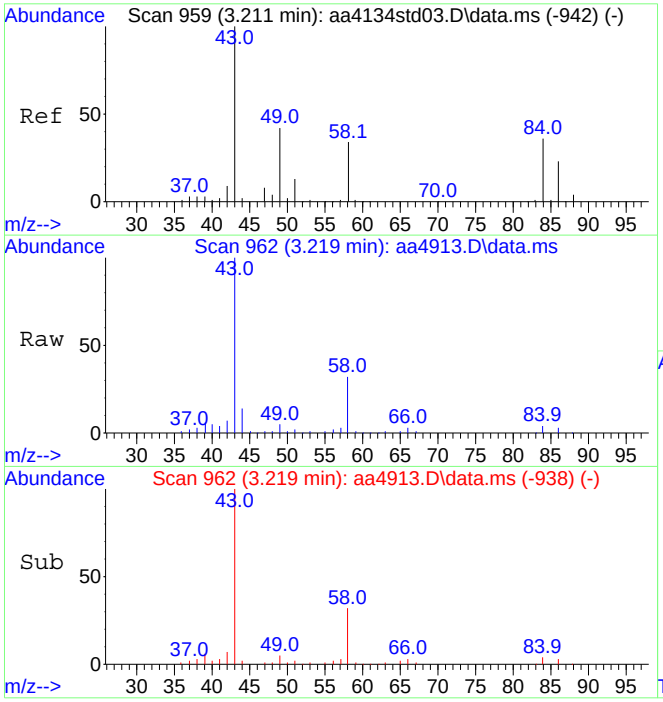



#20
Methylene chloride
Concen: 1.03 ppbV
RT: 3.213 min Scan# 960
Delta R.T. 0.009 min
Lab File: aa4913.D
Acq: 11 Dec 2023 4:20 pm

Tgt Ion: 49 Resp: 63522

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 71.9 | 64.8 | 104.8 |

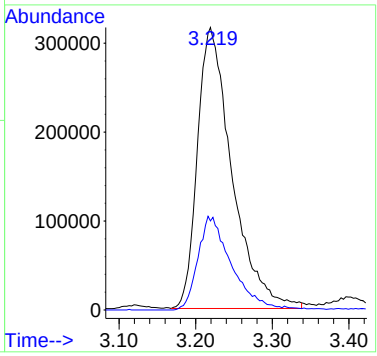


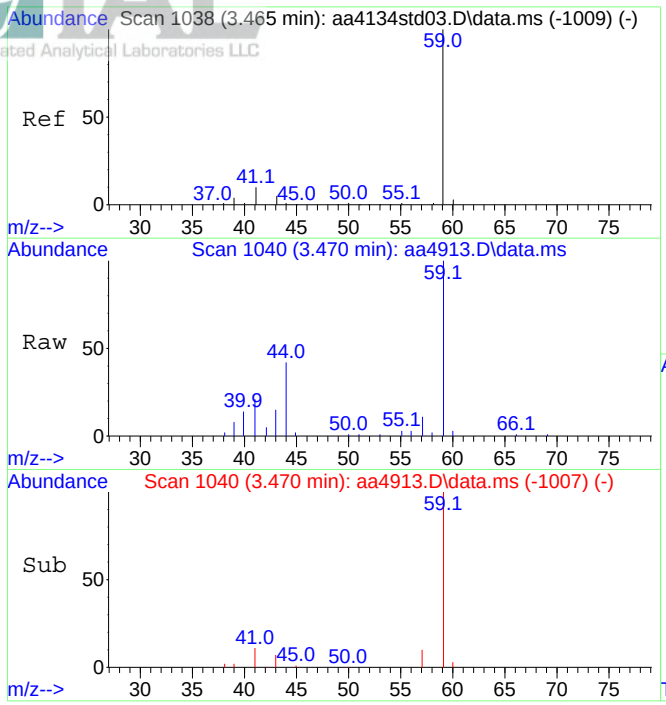




#21
Acetone
Concen: 13.09 ppbV
RT: 3.219 min Scan# 962
Delta R.T. 0.008 min
Lab File: aa4913.D
Acq: 11 Dec 2023 4:20 pm

Tgt Ion: 43 Resp: 991562

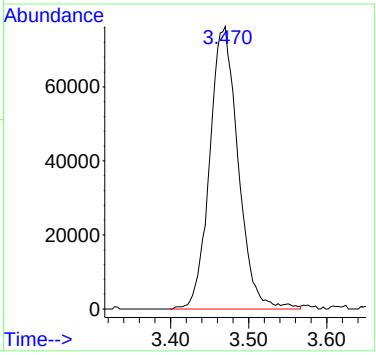
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 32.4 | 27.1 | 40.7 |

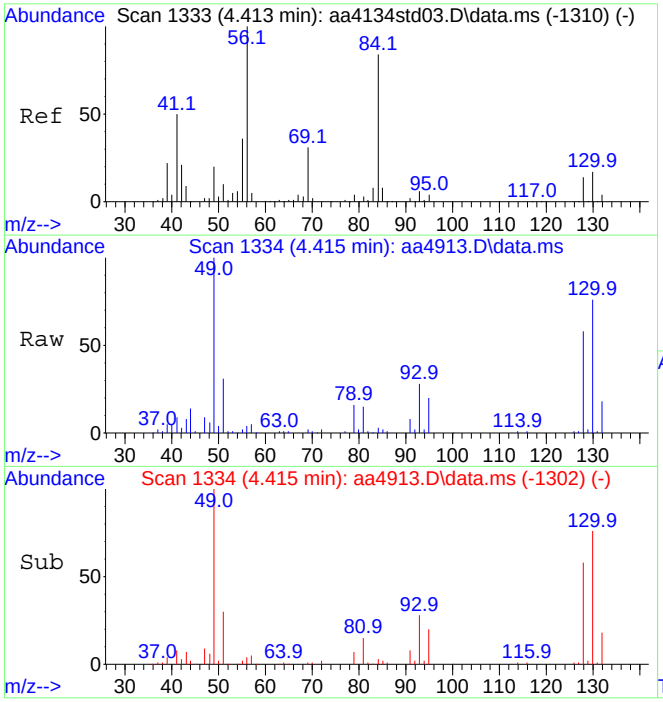





#26
Tert-butyl alcohol
Concen: 1.48 ppbV
RT: 3.470 min Scan# 1040
Delta R.T. 0.005 min
Lab File: aa4913.D
Acq: 11 Dec 2023 4:20 pm

Tgt Ion: 59 Resp: 193206

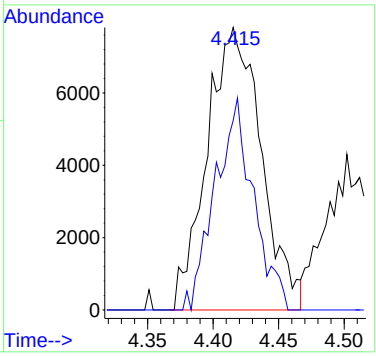


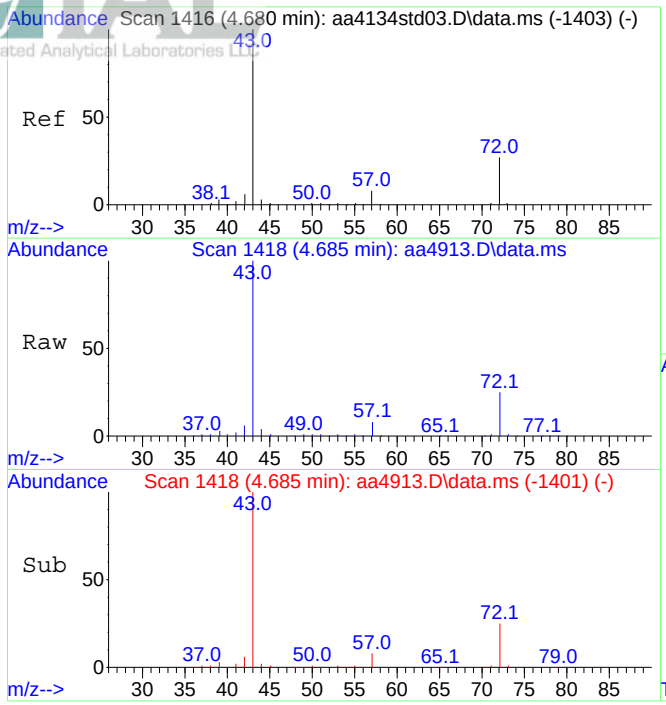




#29
Cyclohexane
Concen: 0.20 ppbV
RT: 4.415 min Scan# 1334
Delta R.T. 0.002 min
Lab File: aa4913.D
Acq: 11 Dec 2023 4:20 pm

Tgt Ion: 56 Resp: 22578

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 52.8 | 71.2 | 106.8# |

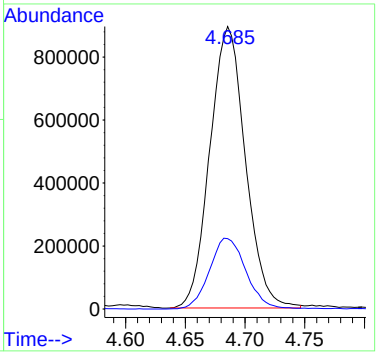


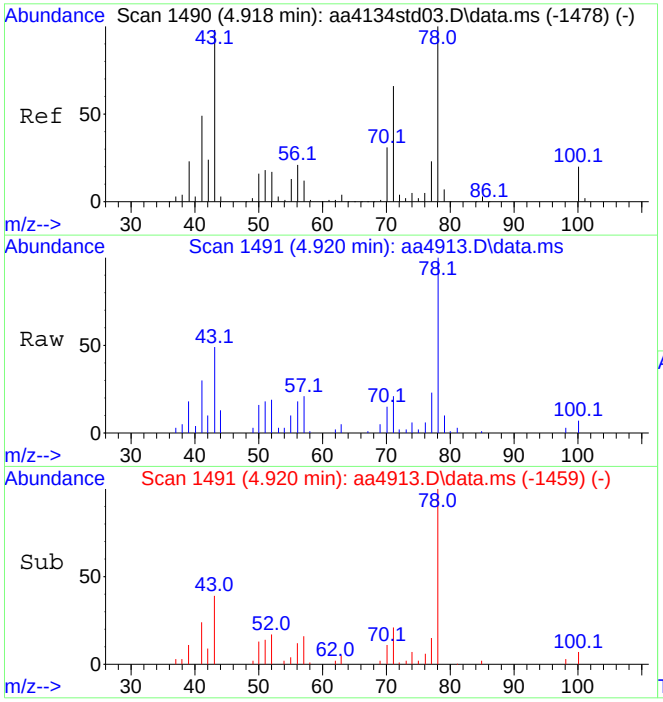



#35
Methyl ethyl ketone
Concen: 15.10 ppbV
RT: 4.685 min Scan# 1418
Delta R.T. 0.005 min
Lab File: aa4913.D
Acq: 11 Dec 2023 4:20 pm

Tgt Ion: 43 Resp: 1851347

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 25.6 | 21.6 | 32.4 |

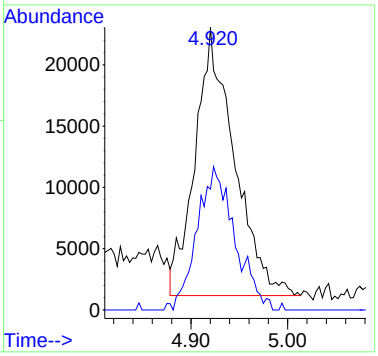


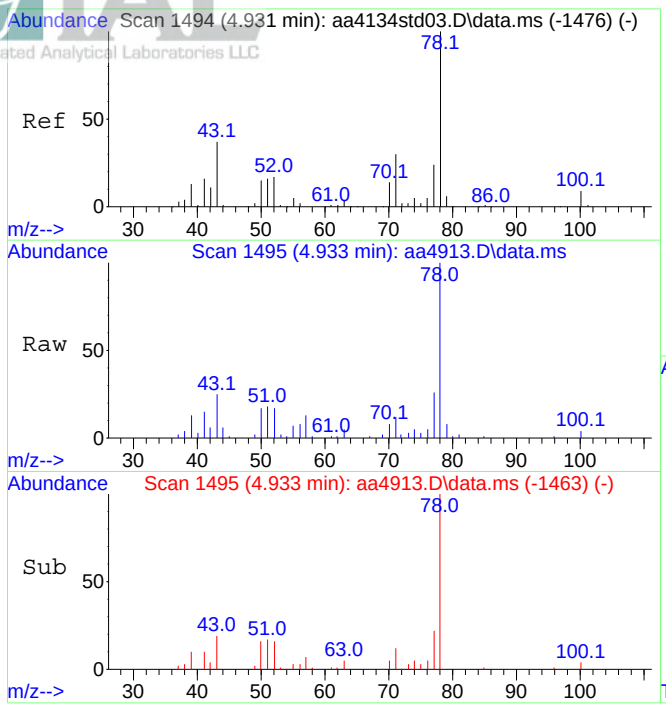




#36
n-Heptane
Concen: 0.44 ppbV
RT: 4.920 min Scan# 1491
Delta R.T. 0.002 min
Lab File: aa4913.D
Acq: 11 Dec 2023 4:20 pm

Tgt Ion: 43 Resp: 61652

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 71 | 51.2 | 50.5 | 75.7 |

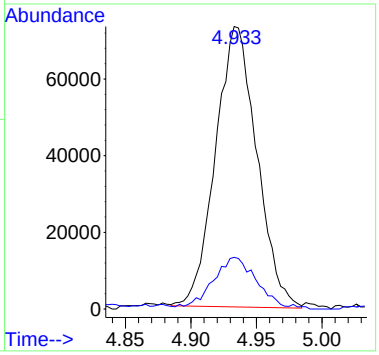


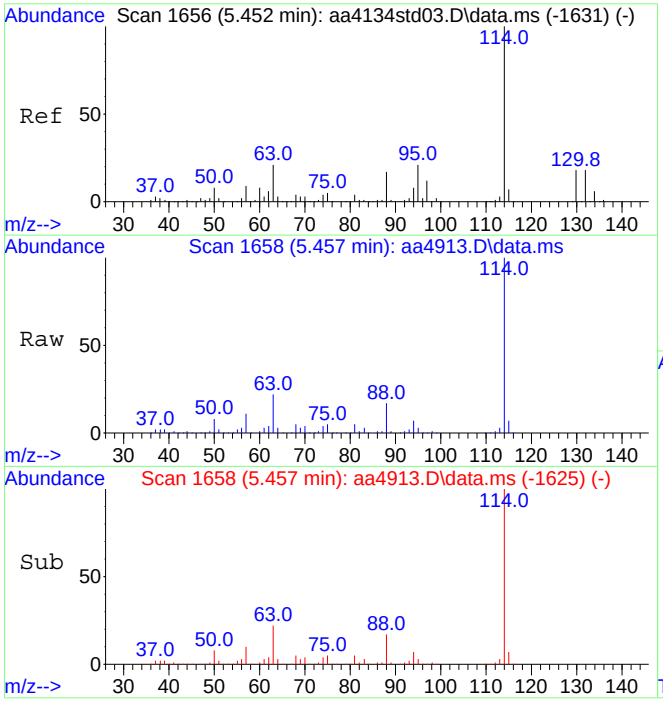



#37
Benzene
Concen: 0.81 ppbV
RT: 4.933 min Scan# 1495
Delta R.T. 0.002 min
Lab File: aa4913.D
Acq: 11 Dec 2023 4:20 pm

Tgt Ion: 78 Resp: 160564

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 19.8 | 13.4 | 20.0 |

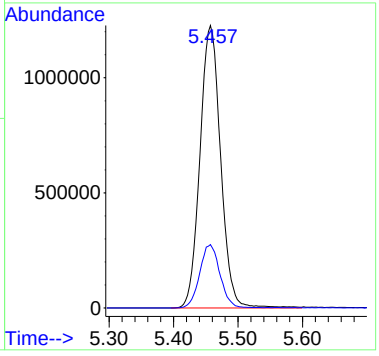


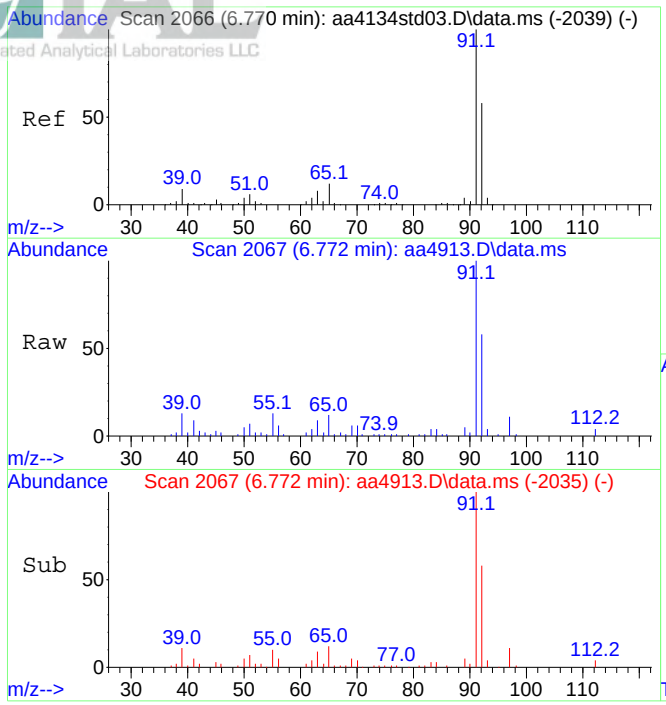




#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.457 min Scan# 1658
Delta R.T. 0.005 min
Lab File: aa4913.D
Acq: 11 Dec 2023 4:20 pm

Tgt Ion:114 Resp: 2727916

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.1 | 17.0 | 25.6 |

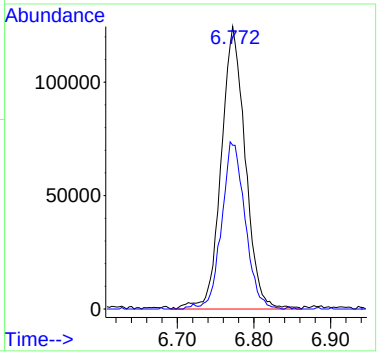


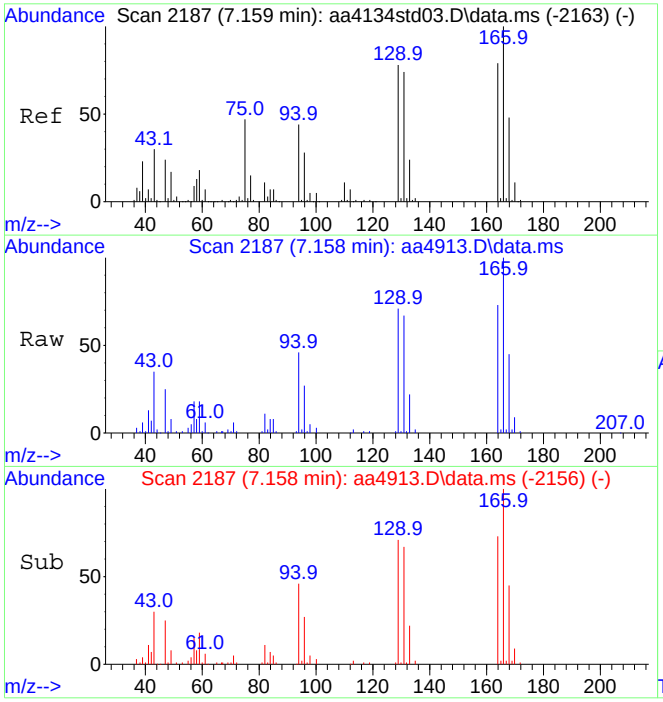



#47
Toluene
Concen: 0.71 ppbV
RT: 6.772 min Scan# 2067
Delta R.T. 0.002 min
Lab File: aa4913.D
Acq: 11 Dec 2023 4:20 pm

Tgt Ion: 91 Resp: 271951

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 57.1 | 47.3 | 70.9 |

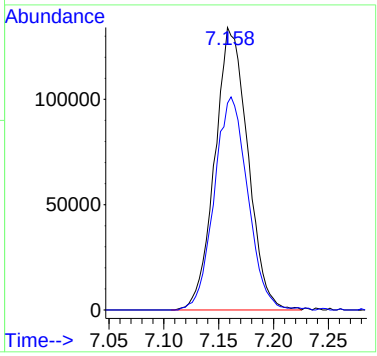


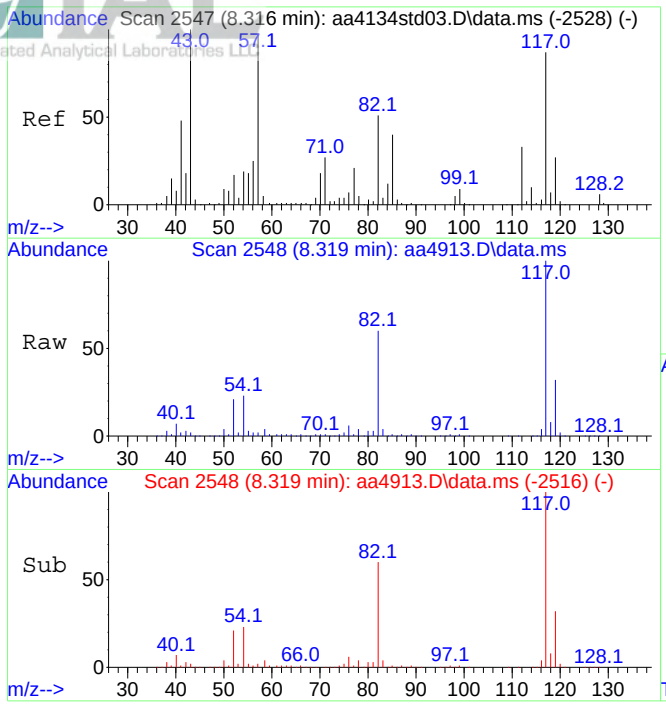




#49
Tetrachloroethene
Concen: 1.70 ppbV
RT: 7.158 min Scan# 2187
Delta R.T. -0.001 min
Lab File: aa4913.D
Acq: 11 Dec 2023 4:20 pm

Tgt Ion:166 Resp: 280827

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 76.7 | 62.3 | 93.5 |

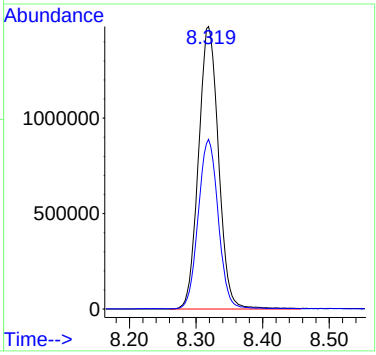


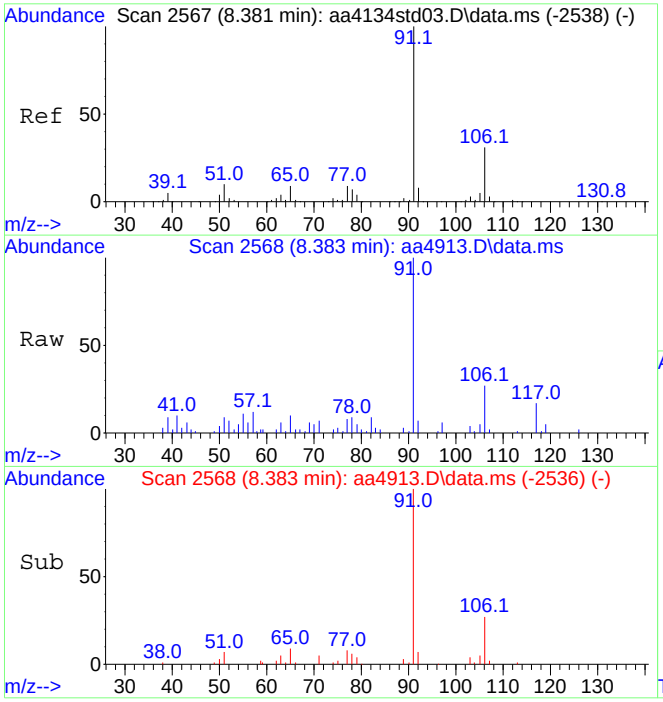



#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.319 min Scan# 2548
Delta R.T. 0.002 min
Lab File: aa4913.D
Acq: 11 Dec 2023 4:20 pm

Tgt Ion:117 Resp: 3091925

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 59.6 | 47.0 | 70.4 |

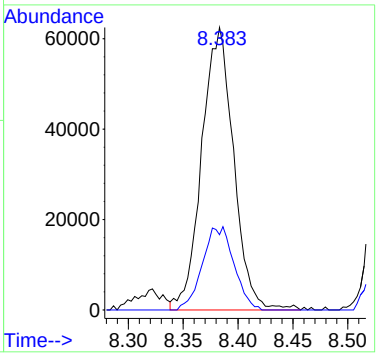


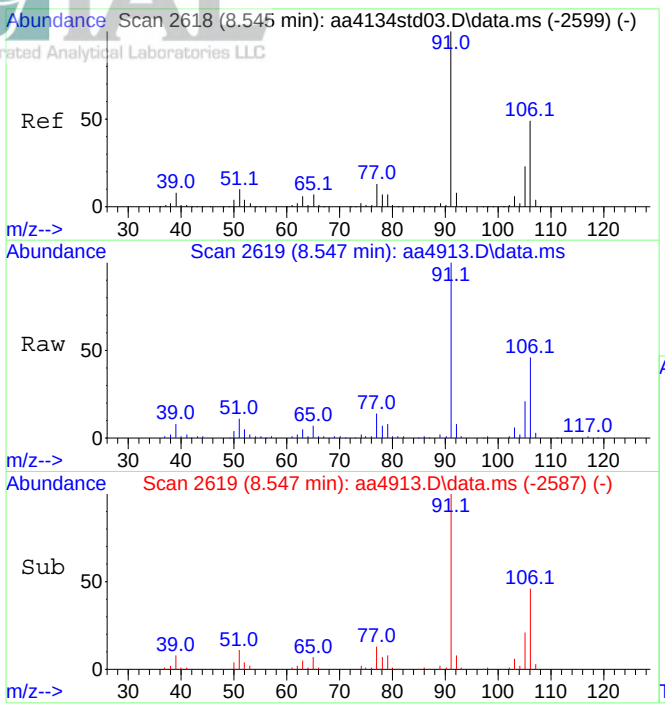




#58
Ethylbenzene
Concen: 0.22 ppbV
RT: 8.383 min Scan# 2568
Delta R.T. 0.002 min
Lab File: aa4913.D
Acq: 11 Dec 2023 4:20 pm

Tgt Ion: 91 Resp: 126190

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 29.1 | 24.6 | 36.8 |

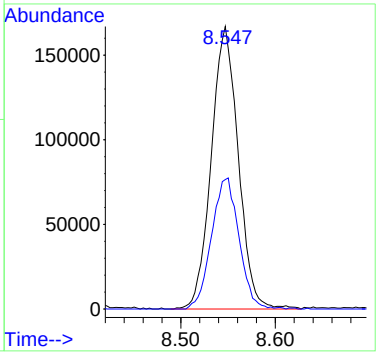


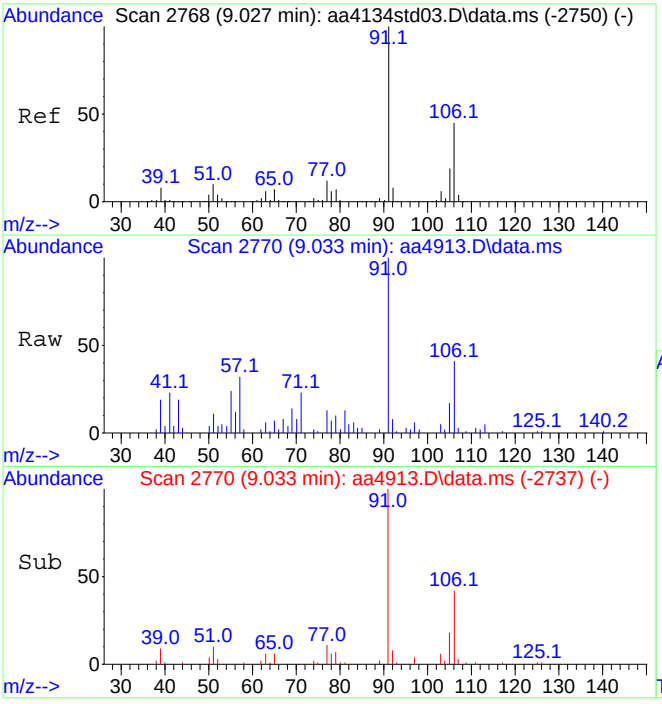



#59
Xylenes (m&p)
Concen: 0.79 ppbV
RT: 8.547 min Scan# 2619
Delta R.T. 0.002 min
Lab File: aa4913.D
Acq: 11 Dec 2023 4:20 pm

Tgt Ion: 91 Resp: 331885

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 47.1 | 39.0 | 58.4 |

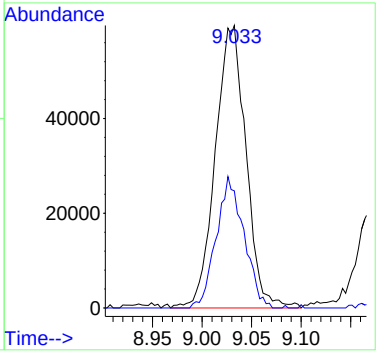


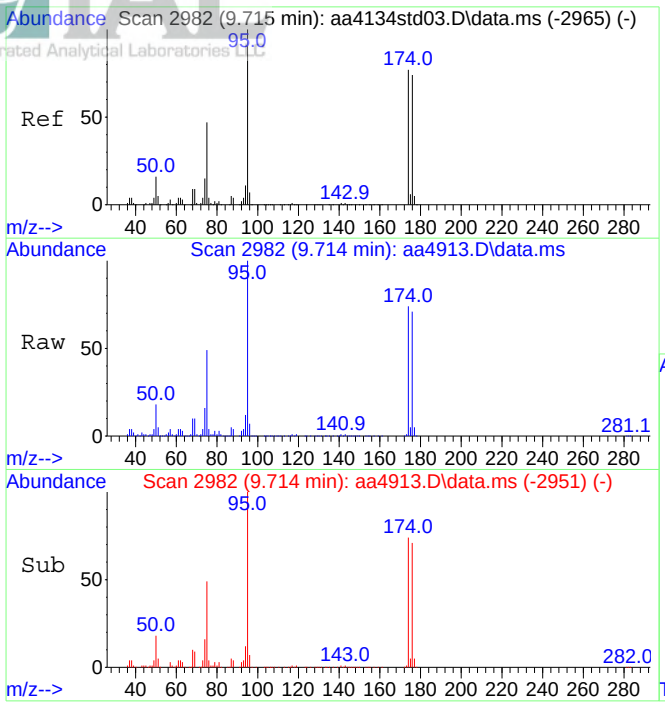




#60
Xylene (o)
Concen: 0.28 ppbV
RT: 9.033 min Scan# 2770
Delta R.T. 0.005 min
Lab File: aa4913.D
Acq: 11 Dec 2023 4:20 pm

Tgt Ion: 91 Resp: 128513

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 41.8 | 36.8 | 55.2 |

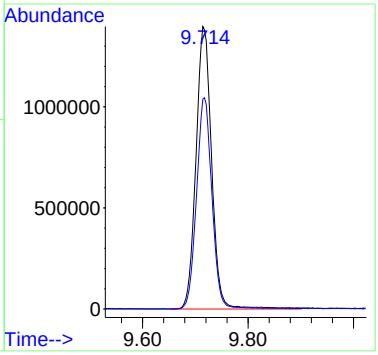





#64
Bromofluorobenzene (tune std)
Concen: 10.70 ppbV
RT: 9.714 min Scan# 2982
Delta R.T. -0.001 min
Lab File: aa4913.D
Acq: 11 Dec 2023 4:20 pm

Tgt Ion: 95 Resp: 2884453

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 74.2 | 61.1 | 91.7 |



# Section VII: Standards Data

## Initial Calibration Data

## Initial Calibration Verification Data

## Continuing Calibration Data

# Initial Calibration Data Summary Report

**Initial Calibration Curve:** 8/15/2023 **Method ID:** 230815.M
**Instrument:** AA

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA3401BFB] | 08/15/2023 10:11 |
| 0.2 PPBV STD [AA3402STD05] | 08/15/2023 11:15 |
| 10 PPBV STD [AA3404STD03] | 08/15/2023 13:09 |
| 2 PPBV STD [AA3403STD04] | 08/15/2023 13:45 |
| 20 PPBV STD [AA3405STD02] | 08/15/2023 15:12 |
| 40 PPBV STD [AA3406STD01] | 08/15/2023 16:47 |
| 10 PPBV ICVSS [AA3407ICVSS] | 08/15/2023 18:09 |

| | Parameter | RRF 0.2ppbv | RRF 2ppbv | RRF 10ppbv | RRF 20ppbv | RRF 40ppbv | Avg ppbv | % RSD |
|---|---|---|---|---|---|---|---|---|
| 1) | Bromochloromethane | ----------ISTD---------- | | | | | | |
| 3) | Dichlorodifluoromethane | 2.6 | 2.1 | 2.4 | 2.6 | 2.9 | 2.5 | 12 |
| 4) | 1,2-Dichlorotetrafluoroethane | 4.7 | 3.4 | 3.2 | 3.3 | 3.6 | 3.6 | 17 |
| 6) | Chloromethane | 0.073 | 0.12 | 0.12 | 0.13 | 0.15 | 0.12 | 23 |
| 7) | Vinyl chloride | 0.87 | 0.81 | 0.94 | 1.0 | 1.1 | 0.95 | 14 |
| 8) | 1,3-Butadiene | 0.94 | 0.96 | 0.93 | 0.99 | 1.0 | 0.97 | 4.6 |
| 9) | Bromomethane | 0.75 | 0.65 | 0.78 | 0.85 | 0.96 | 0.80 | 14 |
| 10) | Chloroethane | 0.44 | 0.40 | 0.52 | 0.57 | 0.65 | 0.52 | 19 |
| 11) | Vinyl bromide | 0.89 | 0.81 | 0.99 | 1.1 | 1.2 | 1.0 | 17 |
| 12) | Trichlorofluoromethane | 3.8 | 3.2 | 3.1 | 3.4 | 3.6 | 3.4 | 8.1 |
| 14) | 1,1-Dichloroethene | 1.8 | 1.7 | 2.1 | 2.3 | 2.5 | 2.1 | 15 |
| 15) | Carbon disulfide | 3.2 | 2.8 | 3.5 | 3.7 | 3.9 | 3.4 | 12 |
| 16) | 1,1,2-Trichloro-1,2,2-trifluoroethane | 4.1 | 3.6 | 2.8 | 3.0 | 3.3 | 3.4 | 16 |
| 17) | Acrolein | 0.45 | 0.34 | 0.43 | 0.45 | 0.49 | 0.43 | 13 |
| 18) | Allyl Chloride | 0.51 | 0.46 | 0.56 | 0.62 | 0.65 | 0.56 | 14 |
| 19) | Isopropanol | 2.2 | 2.0 | 2.3 | 2.5 | 2.6 | 2.3 | 10 |
| 20) | Methylene chloride | 1.9 | 0.89 | 1.1 | 1.2 | 1.3 | 1.3 | 29 |
| 21) | Acetone | 2.2 | 1.5 | 1.8 | 1.9 | 1.9 | 1.9 | 14 |
| 22) | 1,2-Dichloroethene (trans) | 1.6 | 1.5 | 1.9 | 2.1 | 2.3 | 1.9 | 17 |
| 24) | n-Hexane | 3.6 | 3.4 | 3.0 | 3.2 | 3.6 | 3.3 | 7.2 |
| 25) | Methyl tert-butyl ether | 4.7 | 5.1 | 4.0 | 4.3 | 4.7 | 4.6 | 9.5 |
| 26) | Tert-butyl alcohol | 2.9 | 3.2 | 2.6 | 2.8 | 3.2 | 2.9 | 8.1 |
| 27) | 1,1-Dichloroethane | 2.9 | 2.3 | 2.4 | 2.7 | 2.9 | 2.6 | 11 |
| 28) | 1,2-Dichloroethene (cis) | 1.7 | 1.5 | 1.8 | 2.0 | 2.2 | 1.8 | 14 |
| 29) | Cyclohexane | 2.5 | 2.7 | 2.1 | 2.3 | 2.5 | 2.4 | 9.8 |
| 30) | Chloroform | 3.3 | 2.8 | 3.0 | 3.3 | 3.6 | 3.2 | 9.6 |
| 32) | Carbon tetrachloride | 4.2 | 4.4 | 3.4 | 3.5 | 3.9 | 3.9 | 11 |
| 33) | Tetrahydrofuran | 1.8 | 1.6 | 1.7 | 1.9 | 2.0 | 1.8 | 8.7 |
| 34) | 1,1,1-Trichloroethane | 3.8 | 4.0 | 3.0 | 3.2 | 3.5 | 3.5 | 12 |
| 35) | Methyl ethyl ketone | 2.9 | 2.5 | 2.7 | 3.0 | 3.3 | 2.9 | 11 |
| 36) | n-Heptane | 3.0 | 4.0 | 3.2 | 3.3 | 3.3 | 3.4 | 11 |
| 37) | Benzene | 5.1 | 4.3 | 4.2 | 4.6 | 4.9 | 4.6 | 8.4 |
| 38) | 1,2-Dichloroethane | 2.0 | 1.8 | 1.9 | 2.2 | 2.4 | 2.1 | 11 |
| 39) | 1,4-Difluorobenzene | ----------ISTD---------- | | | | | | |
| 40) | Trichloroethene | 0.60 | 0.46 | 0.48 | 0.50 | 0.50 | 0.51 | 11 |
| 41) | 2,2,4-Trimethylpentane | 1.4 | 1.3 | 1.2 | 1.2 | 1.3 | 1.3 | 7.7 |
| 42) | 1,2-Dichloropropane | 0.54 | 0.45 | 0.43 | 0.44 | 0.42 | 0.46 | 11 |
| 43) | Bromodichloromethane | 0.91 | 0.75 | 0.76 | 0.79 | 0.77 | 0.80 | 8.1 |

***% RSD (Relative Standard Deviation) must be within 30%**
****An exception is made for 2 compounds that must be within 40%**
**RRF - Relative Response Factor**

# Initial Calibration Data Summary Report

**Initial Calibration Curve:** 8/15/2023 **Method ID:** 230815.M
**Instrument:** AA

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA3401BFB] | 08/15/2023 10:11 |
| 0.2 PPBV STD [AA3402STD05] | 08/15/2023 11:15 |
| 10 PPBV STD [AA3404STD03] | 08/15/2023 13:09 |
| 2 PPBV STD [AA3403STD04] | 08/15/2023 13:45 |
| 20 PPBV STD [AA3405STD02] | 08/15/2023 15:12 |
| 40 PPBV STD [AA3406STD01] | 08/15/2023 16:47 |
| 10 PPBV ICVSS [AA3407ICVSS] | 08/15/2023 18:09 |

| Parameter | RRF 0.2ppbv | RRF 2ppbv | RRF 10ppbv | RRF 20ppbv | RRF 40ppbv | Avg ppbv | % RSD |
|---|---|---|---|---|---|---|---|
| 44) Methyl methacrylate | 0.53 | 0.60 | 0.60 | 0.62 | 0.59 | 0.59 | 5.4 |
| 45) 1,4-Dioxane | 0.30 | 0.29 | 0.27 | 0.28 | 0.27 | 0.28 | 3.5 |
| 46) 1,3-Dichloropropene (cis) | 0.76 | 0.67 | 0.69 | 0.72 | 0.69 | 0.71 | 4.8 |
| 47) Toluene | 1.6 | 1.8 | 1.6 | 1.6 | 1.4 | 1.6 | 7.6 |
| 48) Methyl isobutyl ketone | 1.0 | 1.4 | 1.2 | 1.2 | 1.1 | 1.2 | 11 |
| 49) Tetrachloroethene | 0.80 | 0.79 | 0.70 | 0.69 | 0.63 | 0.72 | 10 |
| 50) 1,3-Dichloropropene (trans) | 0.59 | 0.70 | 0.73 | 0.76 | 0.71 | 0.70 | 9.3 |
| 51) 1,1,2-Trichloroethane | 0.60 | 0.58 | 0.55 | 0.56 | 0.53 | 0.57 | 4.9 |
| 52) Dibromochloromethane | 0.94 | 0.97 | 0.94 | 0.96 | 0.91 | 0.94 | 2.5 |
| 53) 1,2-Dibromoethane | 0.77 | 0.84 | 0.84 | 0.87 | 0.82 | 0.83 | 4.3 |
| 54) Methyl n-butyl ketone | 0.82 | 1.2 | 1.1 | 1.2 | 1.1 | 1.1 | 14 |
| 55) d-5 Chlorbenzene | ----------ISTD---------- | | | | | | |
| 57) Chlorobenzene | 1.3 | 1.1 | 1.0 | 1.0 | 1.0 | 1.1 | 11 |
| 58) Ethylbenzene | 2.3 | 2.4 | 1.9 | 1.8 | 1.7 | 2.0 | 15 |
| 59) Xylenes (m&p) | 1.7 | 1.8 | 1.5 | 1.3 | 0.99 | 1.5 | 22 |
| 60) Xylenes (o) | 1.7 | 1.9 | 1.5 | 1.5 | 1.5 | 1.6 | 11 |
| 61) Styrene | 0.95 | 1.2 | 1.1 | 1.1 | 1.1 | 1.1 | 8.3 |
| 62) Bromoform | 0.90 | 0.87 | 0.81 | 0.79 | 0.79 | 0.83 | 6.3 |
| 63) Cumene | 2.2 | 2.6 | 2.0 | 1.9 | 1.8 | 2.1 | 14 |
| 66) 1,1,2,2-Tetrachloroethane | 1.4 | 1.4 | 1.1 | 1.1 | 1.1 | 1.2 | 11 |
| 67) 4-Ethyltoluene | 2.4 | 2.7 | 2.3 | 2.1 | 1.8 | 2.3 | 14 |
| 68) 2-Chlorotoluene | 2.0 | 2.2 | 1.8 | 1.7 | 1.7 | 1.9 | 11 |
| 69) 1,3,5-Trimethylbenzene | 1.8 | 2.2 | 1.8 | 1.7 | 1.6 | 1.8 | 12 |
| 70) 1,2,4-Trimethylbenzene | 1.6 | 2.2 | 1.9 | 1.8 | 1.7 | 1.8 | 13 |
| 71) 1,3-Dichlorobenzene | 1.5 | 1.2 | 1.1 | 1.1 | 1.2 | 1.2 | 12 |
| 72) 1,4-Dichlorobenzene | 1.2 | 1.2 | 1.2 | 1.1 | 1.2 | 1.2 | 1.4 |
| 73) Benzyl chloride | 1.2 | 1.6 | 1.7 | 1.7 | 1.8 | 1.6 | 16 |
| 74) 1,2-Dichlorobenzene | 1.2 | 1.2 | 1.1 | 1.1 | 1.1 | 1.1 | 4.8 |
| 75) 1,3-Hexachlorobutadiene | 1.2 | 0.86 | 0.73 | 0.67 | 0.63 | 0.82 | 29 |
| 76) 1,2,4-Trichlorobenzene | 1.2 | 0.85 | 0.86 | 0.82 | 0.78 | 0.90 | 18 |
| 77) Naphthalene | 2.3 | 1.8 | 1.9 | 1.8 | 1.5 | 1.9 | 16 |

***% RSD (Relative Standard Deviation) must be within 30%**
****An exception is made for 2 compounds that must be within 40%**
**RRF - Relative Response Factor**

Method Path : C:\msdchem\1\METHODS\
Method File : 230815.M
Title : TO-15 on the Agilent 7890A / 5975C
Last Update : Wed Aug 16 10:00:51 2023
Response Via : Initial Calibration

Calibration Files
0.2 =aa3402std05.D 2 =aa3403std04.D 10 =aa3404std03.D 20 =aa3405std02.D 40 =aa3406std01.D

| | | Compound | 0.2 | 2 | 10 | 20 | 40 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|
| 1) | I | Bromochloromethane... | ----------ISTD---------- | | | | | | |
| 2) | T | Propene | 0.693 | 0.590 | 0.649 | 0.708 | 0.804 | 0.689 | 11.46 |
| 3) | T | Dichlorodifluoro... | 2.627 | 2.060 | 2.419 | 2.640 | 2.888 | 2.527 | 12.25 |
| 4) | T | 1,2-Dichlorotetr... | 4.698 | 3.379 | 3.171 | 3.318 | 3.612 | 3.636 | 16.92 |
| 5) | T | n-Butane | 1.529 | 1.686 | 1.607 | 1.650 | 1.703 | 1.635 | 4.27 |
| 6) | T | Chloromethane | 0.073 | 0.121 | 0.116 | 0.128 | 0.147 | 0.117 | 23.33 |
| 7) | T | Vinyl chloride | 0.866 | 0.806 | 0.938 | 1.004 | 1.138 | 0.950 | 13.56 |
| 8) | T | 1,3-Butadiene | 0.939 | 0.962 | 0.929 | 0.985 | 1.043 | 0.972 | 4.66 |
| 9) | T | Bromomethane | 0.754 | 0.650 | 0.781 | 0.852 | 0.955 | 0.798 | 14.26 |
| 10) | T | Chloroethane | 0.437 | 0.404 | 0.524 | 0.567 | 0.652 | 0.517 | 19.32 |
| 11) | T | Vinyl bromide | 0.891 | 0.806 | 0.989 | 1.088 | 1.246 | 1.004 | 17.12 |
| 12) | T | Trichlorofluorom... | 3.753 | 3.179 | 3.089 | 3.381 | 3.599 | 3.400 | 8.19 |
| 13) | T | Ethanol | 0.566 | 0.336 | 0.323 | 0.344 | 0.433 | 0.400 | 25.53 |
| 14) | T | 1,1-Dichloroethene | 1.836 | 1.703 | 2.114 | 2.324 | 2.466 | 2.088 | 15.36 |
| 15) | T | Carbon disulfide | 3.198 | 2.847 | 3.522 | 3.709 | 3.868 | 3.429 | 11.95 |
| 16) | T | 1,1,2-Trichloro-... | 4.138 | 3.589 | 2.807 | 2.990 | 3.274 | 3.360 | 15.67 |
| 17) | T | Acrolein | 0.446 | 0.337 | 0.430 | 0.447 | 0.488 | 0.430 | 13.07 |
| 18) | T | Allyl chloride | 0.510 | 0.458 | 0.563 | 0.616 | 0.651 | 0.559 | 13.89 |
| 19) | T | Isopropanol | 2.218 | 2.002 | 2.266 | 2.475 | 2.597 | 2.312 | 10.02 |
| 20) | T | Methylene chloride | 1.853 | 0.894 | 1.059 | 1.168 | 1.335 | 1.262 | 29.12 |
| 21) | T | Acetone | 2.238 | 1.490 | 1.826 | 1.890 | 1.937 | 1.876 | 14.27 |
| 22) | T | trans-1,2-Dichlo... | 1.626 | 1.515 | 1.873 | 2.082 | 2.300 | 1.879 | 17.14 |
| 23) | T | n-Pentane | 2.737 | 2.398 | 2.021 | 2.278 | 2.555 | 2.398 | 11.35 |
| 24) | T | n-Hexane | 3.560 | 3.405 | 3.010 | 3.196 | 3.573 | 3.349 | 7.26 |
| 25) | T | Methyl tert-buty... | 4.721 | 5.118 | 3.992 | 4.267 | 4.676 | 4.555 | 9.56 |
| 26) | T | Tert-butyl alcohol | 2.872 | 3.165 | 2.601 | 2.846 | 3.159 | 2.929 | 8.11 |
| 27) | T | 1,1-Dichloroethane | 2.886 | 2.279 | 2.406 | 2.680 | 2.935 | 2.637 | 10.96 |
| 28) | T | cis-1,2-Dichloro... | 1.666 | 1.532 | 1.766 | 1.984 | 2.173 | 1.824 | 14.01 |
| 29) | t | Cyclohexane | 2.480 | 2.742 | 2.109 | 2.281 | 2.488 | 2.420 | 9.87 |
| 30) | T | Chloroform | 3.341 | 2.813 | 3.029 | 3.345 | 3.610 | 3.228 | 9.60 |
| 31) | T | Ethyl acetate | 0.519 | 0.459 | 0.476 | 0.532 | 0.583 | 0.514 | 9.56 |
| 32) | T | Carbon tetrachlo... | 4.190 | 4.380 | 3.355 | 3.527 | 3.897 | 3.870 | 11.16 |
| 33) | T | Tetrahydrofuran | 1.813 | 1.612 | 1.725 | 1.883 | 2.033 | 1.813 | 8.79 |
| 34) | T | 1,1,1-Trichloroe... | 3.831 | 3.967 | 2.981 | 3.175 | 3.465 | 3.484 | 12.03 |
| 35) | T | Methyl ethyl ketone | 2.907 | 2.461 | 2.724 | 3.040 | 3.340 | 2.894 | 11.42 |
| 36) | T | n-Heptane | 3.009 | 3.965 | 3.169 | 3.287 | 3.321 | 3.350 | 10.89 |
| 37) | T | Benzene | 5.118 | 4.274 | 4.213 | 4.582 | 4.885 | 4.614 | 8.43 |
| 38) | T | 1,2-Dichloroethane | 2.033 | 1.799 | 1.949 | 2.171 | 2.385 | 2.067 | 10.78 |
| 39) | I | 1,4-Difluorobenzen... | ----------ISTD---------- | | | | | | |
| 40) | T | Trichloroethene | 0.604 | 0.461 | 0.476 | 0.499 | 0.498 | 0.508 | 11.08 |
| 41) | T | 2,2,4-Trimethylp... | 1.422 | 1.283 | 1.173 | 1.194 | 1.261 | 1.267 | 7.75 |
| 42) | T | 1,2-Dichloropropane | 0.544 | 0.451 | 0.428 | 0.436 | 0.423 | 0.456 | 10.95 |
| 43) | T | Bromodichloromet... | 0.909 | 0.753 | 0.759 | 0.786 | 0.768 | 0.795 | 8.19 |
| 44) | T | Methyl methacrylate | 0.533 | 0.595 | 0.599 | 0.618 | 0.589 | 0.587 | 5.41 |
| 45) | T | 1,4-Dioxane | 0.295 | 0.288 | 0.274 | 0.280 | 0.270 | 0.281 | 3.52 |
| 46) | T | cis-1,3-Dichloro... | 0.756 | 0.671 | 0.693 | 0.721 | 0.685 | 0.705 | 4.82 |
| 47) | T | Toluene | 1.603 | 1.770 | 1.615 | 1.607 | 1.423 | 1.603 | 7.69 |
| 48) | T | Methyl isobutyl ... | 1.020 | 1.358 | 1.158 | 1.169 | 1.085 | 1.158 | 10.96 |
| 49) | T | Tetrachloroethene | 0.802 | 0.785 | 0.698 | 0.693 | 0.626 | 0.721 | 10.04 |
| 50) | T | trans-1,3-Dichlo... | 0.586 | 0.696 | 0.728 | 0.757 | 0.709 | 0.695 | 9.37 |
| 51) | T | 1,1,2-Trichloroe... | 0.602 | 0.582 | 0.549 | 0.561 | 0.531 | 0.565 | 4.93 |
| 52) | T | Dibromochloromet... | 0.941 | 0.968 | 0.936 | 0.964 | 0.910 | 0.944 | 2.50 |
| 53) | T | 1,2-Dibromoethane | 0.770 | 0.838 | 0.835 | 0.869 | 0.822 | 0.827 | 4.35 |
| 54) | T | Methyl n-butyl k... | 0.821 | 1.172 | 1.136 | 1.176 | 1.120 | 1.085 | 13.80 |
| 55) | I | d-5 Chlorobenzene ... | ----------ISTD---------- | | | | | | |
| 56) | T | n-Nonane | 1.127 | 1.476 | 1.174 | 1.162 | 1.180 | 1.224 | 11.64 |
| 57) | T | Chlorobenzene | 1.289 | 1.143 | 1.029 | 1.009 | 1.005 | 1.095 | 11.15 |
| 58) | T | Ethylbenzene | 2.334 | 2.354 | 1.930 | 1.830 | 1.678 | 2.025 | 15.04 |
| 59) | T | Xylenes (m&p) | 1.738 | 1.788 | 1.455 | 1.324 | 0.993 | 1.460 | 22.23 |
| 60) | T | Xylene (o) | 1.710 | 1.878 | 1.542 | 1.505 | 1.471 | 1.621 | 10.51 |

Method Path : C:\msdchem\1\METHODS\
Method File : 230815.M

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 61) | T | Styrene | 0.947 | 1.200 | 1.093 | 1.071 | 1.068 | 1.076 | 8.35 |
| 62) | T | Bromoform | 0.903 | 0.872 | 0.806 | 0.789 | 0.786 | 0.831 | 6.38 |
| 63) | T | Cumene | 2.186 | 2.576 | 2.043 | 1.945 | 1.808 | 2.112 | 13.92 |
| 64) | S | Bromofluorobenze... | 0.736 | 0.817 | 0.818 | 0.845 | 0.943 | 0.832 | 8.94 |
| 65) | T | n-Propyl benzene | 2.996 | 3.397 | 2.766 | 2.573 | 2.034 | 2.753 | 18.37 |
| 66) | T | 1,1,2,2-Tetrachl... | 1.381 | 1.376 | 1.137 | 1.117 | 1.132 | 1.228 | 11.16 |
| 67) | T | 4-Ethyltoluene | 2.355 | 2.737 | 2.278 | 2.143 | 1.835 | 2.270 | 14.45 |
| 68) | T | 2-Chlorotoluene | 1.964 | 2.171 | 1.778 | 1.722 | 1.704 | 1.868 | 10.62 |
| 69) | T | 1,3,5-Trimethylb... | 1.800 | 2.225 | 1.792 | 1.719 | 1.648 | 1.837 | 12.28 |
| 70) | T | 1,2,4-Trimethylb... | 1.568 | 2.188 | 1.854 | 1.793 | 1.705 | 1.821 | 12.71 |
| 71) | T | 1,3-Dichlorobenzene | 1.459 | 1.183 | 1.126 | 1.114 | 1.157 | 1.208 | 11.85 |
| 72) | T | 1,4-Dichlorobenzene | 1.161 | 1.161 | 1.153 | 1.142 | 1.187 | 1.161 | 1.43 |
| 73) | T | Benzyl chloride | 1.168 | 1.566 | 1.708 | 1.744 | 1.770 | 1.591 | 15.67 |
| 74) | T | 1,2-Dichlorobenzene | 1.169 | 1.225 | 1.111 | 1.083 | 1.128 | 1.143 | 4.82 |
| 75) | T | 1,3-Hexachlorobu... | 1.209 | 0.857 | 0.729 | 0.674 | 0.629 | 0.820 | 28.53 |
| 76) | T | 1,2,4-Trichlorob... | 1.191 | 0.845 | 0.860 | 0.816 | 0.781 | 0.899 | 18.48 |
| 77) | T | Naphthalene | 2.270 | 1.826 | 1.920 | 1.809 | 1.459 | 1.857 | 15.61 |

(#) = Out of Range

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3402std05.D
Acq On : 15 Aug 2023 11:15 am
Operator : jjw
Sample : 0.2 ppbv standard
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 15 17:16:53 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:15:22 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.380 | 130 | 543782 | 10.00 | ppbV | | -0.016 |
| 39) 1,4-Difluorobenzene (IS) | 5.448 | 114 | 2104790 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 2068537 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1523370 | 8.85 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 1.454 | 41 | 8216 | 0.22 | ppbV | # | 67 |
| 3) Dichlorodifluoromethane | 1.492 | 85 | 30288 | 0.22 | ppbV | | 99 |
| 4) 1,2-Dichlorotetrafluor... | 1.626 | 85 | 50076 | 0.25 | ppbV | | 96 |
| 5) n-Butane | 1.698 | 43 | 18121 | 0.20 | ppbV | | 97 |
| 6) Chloromethane | 1.763 | 52 | 890 | 0.14 | ppbV | | 54 |
| 7) Vinyl chloride | 1.760 | 62 | 10168 | 0.20 | ppbV | | 97 |
| 8) 1,3-Butadiene | 1.767 | 39 | 10931 | 0.21 | ppbV | | 84 |
| 9) Bromomethane | 2.049 | 94 | 8195 | 0.19 | ppbV | | 87 |
| 10) Chloroethane | 2.171 | 64 | 5038 | 0.18 | ppbV | # | 73 |
| 11) Vinyl bromide | 2.271 | 106 | 9786 | 0.18 | ppbV | | 94 |
| 12) Trichlorofluoromethane | 2.287 | 101 | 44897 | 0.24 | ppbV | | 99 |
| 13) Ethanol | 2.650 | 45 | 6400 | 0.29 | ppbV | # | 53 |
| 14) 1,1-Dichloroethene | 2.711 | 61 | 20761 | 0.18 | ppbV | | 99 |
| 15) Carbon disulfide | 2.731 | 76 | 37217 | 0.20 | ppbV | # | 87 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.750 | 101 | 49053 | 0.27 | ppbV | | 100 |
| 17) Acrolein | 2.956 | 56 | 4855 | 0.21 | ppbV | | 84 |
| 18) Allyl chloride | 3.091 | 76 | 5995 | 0.20 | ppbV | | 100 |
| 19) Isopropanol | 3.097 | 45 | 21471 | 0.17 | ppbV | # | 78 |
| 20) Methylene chloride | 3.184 | 49 | 21768 | 0.31 | ppbV | | 94 |
| 21) Acetone | 3.194 | 43 | 26290 | 0.26 | ppbV | # | 87 |
| 22) trans-1,2-Dichloroethene | 3.309 | 61 | 19630 | 0.19 | ppbV | | 99 |
| 23) n-Pentane | 3.393 | 43 | 32143 | 0.25 | ppbV | | 94 |
| 24) n-Hexane | 3.387 | 57 | 42982 | 0.24 | ppbV | | 89 |
| 25) Methyl tert-butyl ether | 3.396 | 73 | 57505 | 0.23 | ppbV | | 99 |
| 26) Tert-butyl alcohol | 3.454 | 59 | 35922 | 0.23 | ppbV | | 100 |
| 27) 1,1-Dichloroethane | 3.798 | 63 | 33581 | 0.23 | ppbV | | 93 |
| 28) cis-1,2-Dichloroethene | 4.223 | 61 | 19745 | 0.20 | ppbV | | 100 |
| 29) Cyclohexane | 4.396 | 56 | 30214 | 0.23 | ppbV | | 97 |
| 30) Chloroform | 4.441 | 83 | 39248 | 0.22 | ppbV | | 97 |
| 31) Ethyl acetate | 4.534 | 61 | 6099 | 0.22 | ppbV | | 99 |
| 32) Carbon tetrachloride | 4.560 | 117 | 50587 | 0.24 | ppbV | | 99 |
| 33) Tetrahydrofuran | 4.567 | 42 | 21884 | 0.22 | ppbV | | 96 |
| 34) 1,1,1-Trichloroethane | 4.608 | 97 | 45414 | 0.24 | ppbV | | 97 |
| 35) Methyl ethyl ketone | 4.676 | 43 | 34778 | 0.22 | ppbV | | 96 |
| 36) n-Heptane | 4.907 | 43 | 36329 | 0.20 | ppbV | | 98 |
| 37) Benzene | 4.923 | 78 | 60118 | 0.24 | ppbV | | 100 |
| 38) 1,2-Dichloroethane | 5.087 | 62 | 24098 | 0.21 | ppbV | | 100 |
| 40) Trichloroethene | 5.425 | 130 | 25424 | 0.24 | ppbV | | 97 |
| 41) 2,2,4-Trimethylpentane | 4.833 | 57 | 65257 | 0.24 | ppbV | | 99 |
| 42) 1,2-Dichloropropane | 5.875 | 63 | 25405 | 0.26 | ppbV | | 97 |
| 43) Bromodichloromethane | 5.943 | 83 | 44017 | 0.26 | ppbV | | 100 |
| 44) Methyl methacrylate | 6.081 | 41 | 24702 | 0.20 | ppbV | | 95 |
| 45) 1,4-Dioxane | 6.116 | 88 | 14508 | 0.25 | ppbV | | 92 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 35333 | 0.24 | ppbV | | 100 |
| 47) Toluene | 6.769 | 91 | 72857 | 0.22 | ppbV | | 97 |
| 48) Methyl isobutyl ketone | 7.132 | 43 | 46816 | 0.19 | ppbV | | 96 |
| 49) Tetrachloroethene | 7.161 | 166 | 37803 | 0.25 | ppbV | | 99 |
| 50) trans-1,3-Dichloropropene | 7.174 | 75 | 27399 | 0.19 | ppbV | | 93 |
| 51) 1,1,2-Trichloroethane | 7.335 | 97 | 27389 | 0.23 | ppbV | | 98 |

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3402std05.D
Acq On : 15 Aug 2023 11:15 am
Operator : jjw
Sample : 0.2 ppbv standard
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

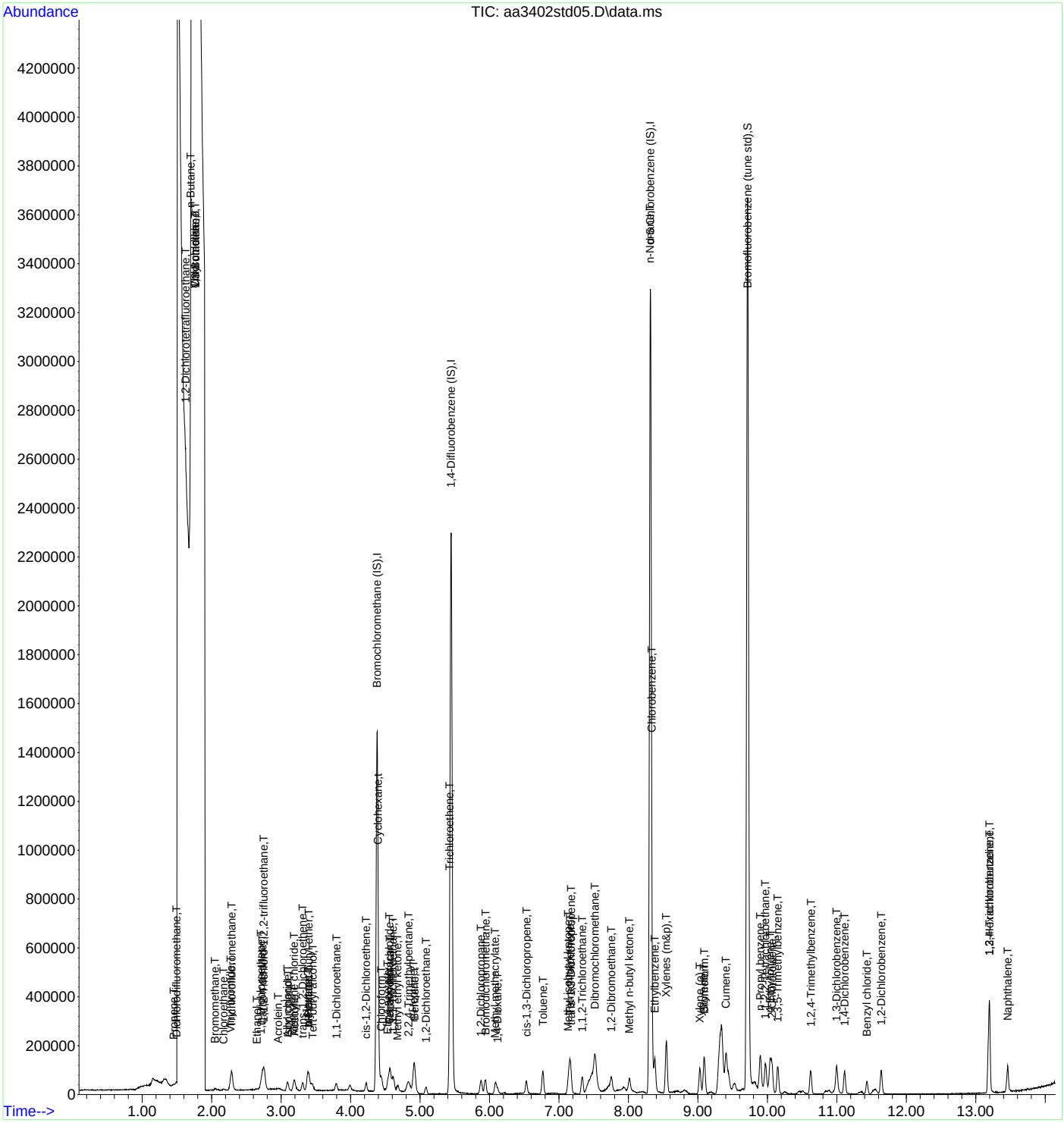
Quant Time: Aug 15 17:16:53 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:15:22 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.518 | 129 | 44365 | 0.22 | ppbV | | 98 |
| 53) 1,2-Dibromoethane | 7.753 | 107 | 35025 | 0.20 | ppbV | | 99 |
| 54) Methyl n-butyl ketone | 8.010 | 43 | 39036 | 0.17 | ppbV | | 94 |
| 56) n-Nonane | 8.312 | 43 | 51740 | 0.20 | ppbV | | 94 |
| 57) Chlorobenzene | 8.335 | 112 | 59186 | 0.26 | ppbV | # | 57 |
| 58) Ethylbenzene | 8.380 | 91 | 107190 | 0.26 | ppbV | | 98 |
| 59) Xylenes (m&p) | 8.544 | 91 | 160319 | 0.53 | ppbV | | 96 |
| 60) Xylene (o) | 9.026 | 91 | 77796 | 0.23 | ppbV | | 100 |
| 61) Styrene | 9.087 | 104 | 44277 | 0.20 | ppbV | | 97 |
| 62) Bromoform | 9.094 | 173 | 42204 | 0.25 | ppbV | | 99 |
| 63) Cumene | 9.402 | 105 | 96781 | 0.22 | ppbV | | 99 |
| 65) n-Propyl benzene | 9.898 | 91 | 133875 | 0.24 | ppbV | | 91 |
| 66) 1,1,2,2-Tetrachloroethane | 9.968 | 83 | 65139 | 0.26 | ppbV | | 99 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 105229 | 0.22 | ppbV | | 94 |
| 68) 2-Chlorotoluene | 10.068 | 91 | 88564 | 0.23 | ppbV | | 100 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 81154 | 0.21 | ppbV | | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.627 | 105 | 70043 | 0.19 | ppbV | | 100 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 67007 | 0.27 | ppbV | | 97 |
| 72) 1,4-Dichlorobenzene | 11.113 | 146 | 51408 | 0.21 | ppbV | | 98 |
| 73) Benzyl chloride | 11.431 | 91 | 48312 | 0.15 | ppbV | | 99 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 51755 | 0.22 | ppbV | | 97 |
| 75) 1,3-Hexachlorobutadiene | 13.196 | 225 | 55512 | 0.33 | ppbV | | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.196 | 180 | 54202 | 0.29 | ppbV | | 99 |
| 77) Naphthalene | 13.460 | 128 | 93896 | 0.24 | ppbV | | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3402std05.D
Acq On : 15 Aug 2023 11:15 am
Operator : jjw
Sample : 0.2 ppbv standard
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 15 17:16:53 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:15:22 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3403std04.D
Acq On : 15 Aug 2023 1:45 pm
Operator : jjw
Sample : 2.0 ppbv standard
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 16 09:55:55 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.393 | 130 | 541075 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.454 | 114 | 2325427 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 2787489 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 2277207 | 9.82 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.486 | 41 | 69587 | 1.87 | ppbV | 98 |
| 3) Dichlorodifluoromethane | 1.529 | 85 | 236252 | 1.73 | ppbV | 99 |
| 4) 1,2-Dichlorotetrafluor... | 1.650 | 85 | 358355 | 1.82 | ppbV | 100 |
| 5) n-Butane | 1.729 | 43 | 199054 | 2.26 | ppbV | 98 |
| 6) Chloromethane | 1.791 | 52 | 14658 | 2.32 | ppbV | 76 |
| 7) Vinyl chloride | 1.780 | 62 | 94169 | 1.83 | ppbV | 96 |
| 8) 1,3-Butadiene | 1.794 | 39 | 111420 | 2.12 | ppbV | 99 |
| 9) Bromomethane | 2.081 | 94 | 70289 | 1.63 | ppbV | 99 |
| 10) Chloroethane | 2.190 | 64 | 46371 | 1.66 | ppbV | 96 |
| 11) Vinyl bromide | 2.296 | 106 | 88069 | 1.62 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.313 | 101 | 378425 | 2.06 | ppbV | 100 |
| 13) Ethanol | 2.676 | 45 | 37762 | 1.74 | ppbV | 98 |
| 14) 1,1-Dichloroethene | 2.731 | 61 | 191611 | 1.70 | ppbV | 99 |
| 15) Carbon disulfide | 2.753 | 76 | 329694 | 1.78 | ppbV | 99 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.776 | 101 | 423345 | 2.33 | ppbV | 99 |
| 17) Acrolein | 2.985 | 56 | 36438 | 1.57 | ppbV | 98 |
| 18) Allyl chloride | 3.110 | 76 | 53539 | 1.77 | ppbV | 100 |
| 19) Isopropanol | 3.113 | 45 | 192840 | 1.54 | ppbV | 99 |
| 20) Methylene chloride | 3.203 | 49 | 104527 | 1.53 | ppbV | 97 |
| 21) Acetone | 3.213 | 43 | 174115 | 1.72 | ppbV | 100 |
| 22) trans-1,2-Dichloroethene | 3.325 | 61 | 182032 | 1.79 | ppbV | 100 |
| 23) n-Pentane | 3.406 | 43 | 280301 | 2.16 | ppbV | 97 |
| 24) n-Hexane | 3.403 | 57 | 408984 | 2.26 | ppbV | 97 |
| 25) Methyl tert-butyl ether | 3.409 | 73 | 620249 | 2.52 | ppbV | 91 |
| 26) Tert-butyl alcohol | 3.460 | 59 | 393824 | 2.49 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 246573 | 1.73 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.239 | 61 | 180663 | 1.83 | ppbV | 99 |
| 29) Cyclohexane | 4.409 | 56 | 332356 | 2.54 | ppbV | 100 |
| 30) Chloroform | 4.454 | 83 | 328798 | 1.88 | ppbV | 100 |
| 31) Ethyl acetate | 4.544 | 61 | 53660 | 1.93 | ppbV | 98 |
| 32) Carbon tetrachloride | 4.573 | 117 | 526172 | 2.51 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.576 | 42 | 193630 | 1.97 | ppbV | 100 |
| 34) 1,1,1-Trichloroethane | 4.624 | 97 | 467891 | 2.48 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.685 | 43 | 292932 | 1.87 | ppbV | 98 |
| 36) n-Heptane | 4.917 | 43 | 476323 | 2.63 | ppbV | 99 |
| 37) Benzene | 4.933 | 78 | 499517 | 2.00 | ppbV | 99 |
| 38) 1,2-Dichloroethane | 5.094 | 62 | 212238 | 1.90 | ppbV | 100 |
| 40) Trichloroethene | 5.435 | 130 | 214306 | 1.82 | ppbV | 99 |
| 41) 2,2,4-Trimethylpentane | 4.837 | 57 | 650366 | 2.21 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 232645 | 2.19 | ppbV | 99 |
| 43) Bromodichloromethane | 5.946 | 83 | 402522 | 2.18 | ppbV | 98 |
| 44) Methyl methacrylate | 6.091 | 41 | 304586 | 2.23 | ppbV | 100 |
| 45) 1,4-Dioxane | 6.113 | 88 | 156518 | 2.39 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 346212 | 2.11 | ppbV | 100 |
| 47) Toluene | 6.772 | 91 | 889263 | 2.39 | ppbV | 98 |
| 48) Methyl isobutyl ketone | 7.136 | 43 | 688572 | 2.56 | ppbV | 99 |
| 49) Tetrachloroethene | 7.161 | 166 | 408926 | 2.44 | ppbV | 99 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 359255 | 2.22 | ppbV | 99 |
| 51) 1,1,2-Trichloroethane | 7.338 | 97 | 292415 | 2.23 | ppbV | 99 |

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3403std04.D
Acq On : 15 Aug 2023 1:45 pm
Operator : jjw
Sample : 2.0 ppbv standard
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

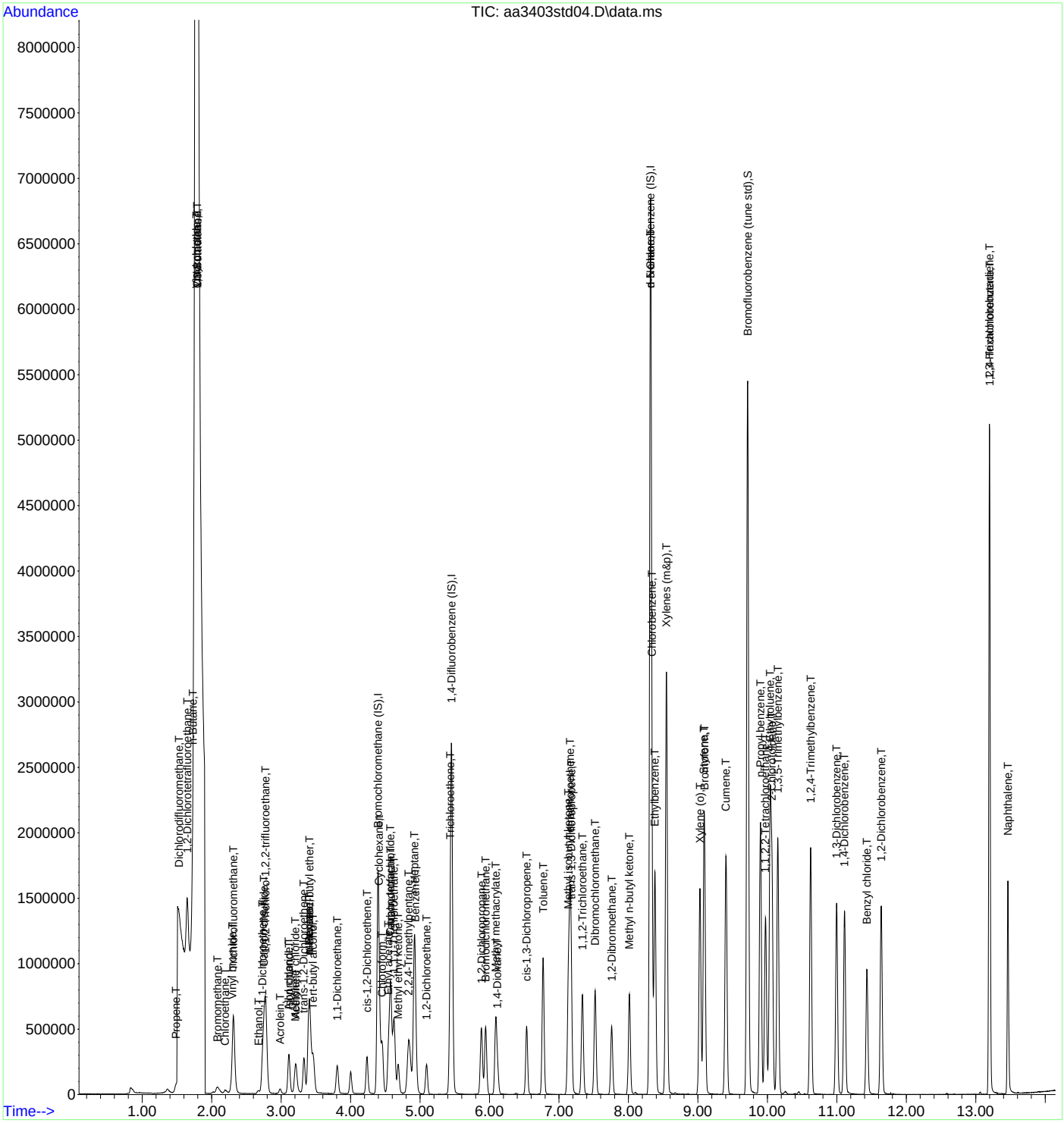
Quant Time: Aug 16 09:55:55 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 504182 | 2.30 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 421042 | 2.19 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.013 | 43 | 615992 | 2.44 | ppbV | 99 |
| 56) n-Nonane | 8.319 | 43 | 913232 | 2.68 | ppbV | 98 |
| 57) Chlorobenzene | 8.338 | 112 | 707397 | 2.32 | ppbV | 96 |
| 58) Ethylbenzene | 8.380 | 91 | 1456927 | 2.58 | ppbV | 100 |
| 59) Xylenes (m&p) | 8.547 | 91 | 2222904 | 5.46 | ppbV | 99 |
| 60) Xylene (o) | 9.029 | 91 | 1151590 | 2.55 | ppbV | 99 |
| 61) Styrene | 9.087 | 104 | 755721 | 2.52 | ppbV | 98 |
| 62) Bromoform | 9.097 | 173 | 549148 | 2.37 | ppbV | 100 |
| 63) Cumene | 9.402 | 105 | 1536381 | 2.61 | ppbV | 99 |
| 65) n-Propyl benzene | 9.901 | 91 | 2045481 | 2.67 | ppbV | 99 |
| 66) 1,1,2,2-Tetrachloroethane | 9.971 | 83 | 874245 | 2.55 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 1647910 | 2.60 | ppbV | 99 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 1319338 | 2.53 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.151 | 105 | 1352228 | 2.64 | ppbV | 100 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 1317527 | 2.59 | ppbV | 99 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 732133 | 2.17 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 692835 | 2.14 | ppbV | 99 |
| 73) Benzyl chloride | 11.431 | 91 | 873022 | 1.97 | ppbV | 99 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 730471 | 2.29 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.196 | 225 | 530064 | 2.32 | ppbV | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 518457 | 2.07 | ppbV | 100 |
| 77) Naphthalene | 13.463 | 128 | 1018158 | 1.97 | ppbV | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3403std04.D
Acq On : 15 Aug 2023 1:45 pm
Operator : jjw
Sample : 2.0 ppbv standard
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 16 09:55:55 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3404std03.D
Acq On : 15 Aug 2023 1:09 pm
Operator : jjw
Sample : 10 ppbv standard
Misc : EB0103704
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 16 09:54:13 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.396 | 130 | 530723 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 2268530 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 2737620 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.718 | 95 | 2240242 | 9.84 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.492 | 41 | 375623 | 10.28 | ppbV | 100 |
| 3) Dichlorodifluoromethane | 1.529 | 85 | 1361127 | 10.15 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.650 | 85 | 1649087 | 8.55 | ppbV | 100 |
| 5) n-Butane | 1.732 | 43 | 929570 | 10.75 | ppbV | 98 |
| 6) Chloromethane | 1.794 | 52 | 69017 | 11.11 | ppbV | 100 |
| 7) Vinyl chloride | 1.784 | 62 | 537570 | 10.66 | ppbV | 100 |
| 8) 1,3-Butadiene | 1.794 | 39 | 527528 | 10.23 | ppbV | 100 |
| 9) Bromomethane | 2.084 | 94 | 414507 | 9.79 | ppbV | 100 |
| 10) Chloroethane | 2.197 | 64 | 294705 | 10.74 | ppbV | 100 |
| 11) Vinyl bromide | 2.297 | 106 | 529947 | 9.94 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.313 | 101 | 1803210 | 9.99 | ppbV | 100 |
| 13) Ethanol | 2.670 | 45 | 178190 | 8.39 | ppbV | 100 |
| 14) 1,1-Dichloroethene | 2.734 | 61 | 1166579 | 10.54 | ppbV | 100 |
| 15) Carbon disulfide | 2.753 | 76 | 2000133 | 10.99 | ppbV | 100 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.779 | 101 | 1623708 | 9.11 | ppbV | 100 |
| 17) Acrolein | 2.988 | 56 | 228259 | 10.01 | ppbV | 100 |
| 18) Allyl chloride | 3.113 | 76 | 322565 | 10.86 | ppbV | 100 |
| 19) Isopropanol | 3.113 | 45 | 1070426 | 8.72 | ppbV | 100 |
| 20) Methylene chloride | 3.203 | 49 | 607018 | 9.06 | ppbV | 100 |
| 21) Acetone | 3.213 | 43 | 1046415 | 10.51 | ppbV | 100 |
| 22) trans-1,2-Dichloroethene | 3.329 | 61 | 1103133 | 11.06 | ppbV | 100 |
| 23) n-Pentane | 3.409 | 43 | 1158219 | 9.10 | ppbV | 100 |
| 24) n-Hexane | 3.406 | 57 | 1757143 | 9.89 | ppbV | 100 |
| 25) Methyl tert-butyl ether | 3.412 | 73 | 2372793 | 9.82 | ppbV | 100 |
| 26) Tert-butyl alcohol | 3.467 | 59 | 1587668 | 10.21 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.811 | 63 | 1366393 | 9.76 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.235 | 61 | 1021823 | 10.55 | ppbV | 100 |
| 29) Cyclohexane | 4.415 | 56 | 1253558 | 9.76 | ppbV | 100 |
| 30) Chloroform | 4.457 | 83 | 1736397 | 10.14 | ppbV | 100 |
| 31) Ethyl acetate | 4.544 | 61 | 272622 | 10.00 | ppbV | 100 |
| 32) Carbon tetrachloride | 4.579 | 117 | 1958808 | 9.54 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.576 | 42 | 1006885 | 10.46 | ppbV | 100 |
| 34) 1,1,1-Trichloroethane | 4.628 | 97 | 1724281 | 9.33 | ppbV | 100 |
| 35) Methyl ethyl ketone | 4.686 | 43 | 1590191 | 10.35 | ppbV | 100 |
| 36) n-Heptane | 4.920 | 43 | 1866612 | 10.50 | ppbV | 100 |
| 37) Benzene | 4.933 | 78 | 2414826 | 9.86 | ppbV | 100 |
| 38) 1,2-Dichloroethane | 5.094 | 62 | 1127298 | 10.27 | ppbV | 100 |
| 40) Trichloroethene | 5.435 | 130 | 1079500 | 9.38 | ppbV | 100 |
| 41) 2,2,4-Trimethylpentane | 4.846 | 57 | 2899901 | 10.09 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 1067336 | 10.31 | ppbV | 100 |
| 43) Bromodichloromethane | 5.946 | 83 | 1979492 | 10.98 | ppbV | 100 |
| 44) Methyl methacrylate | 6.091 | 41 | 1493887 | 11.22 | ppbV | 100 |
| 45) 1,4-Dioxane | 6.113 | 88 | 728333 | 11.41 | ppbV | 100 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 1744754 | 10.91 | ppbV | 100 |
| 47) Toluene | 6.772 | 91 | 3957437 | 10.88 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.136 | 43 | 2863824 | 10.90 | ppbV | 100 |
| 49) Tetrachloroethene | 7.161 | 166 | 1772265 | 10.84 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 1834063 | 11.63 | ppbV | 100 |
| 51) 1,1,2-Trichloroethane | 7.338 | 97 | 1345722 | 10.50 | ppbV | 100 |

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3404std03.D
Acq On : 15 Aug 2023 1:09 pm
Operator : jjw
Sample : 10 ppbv standard
Misc : EB0103704
ALS Vial : 4 Sample Multiplier: 1

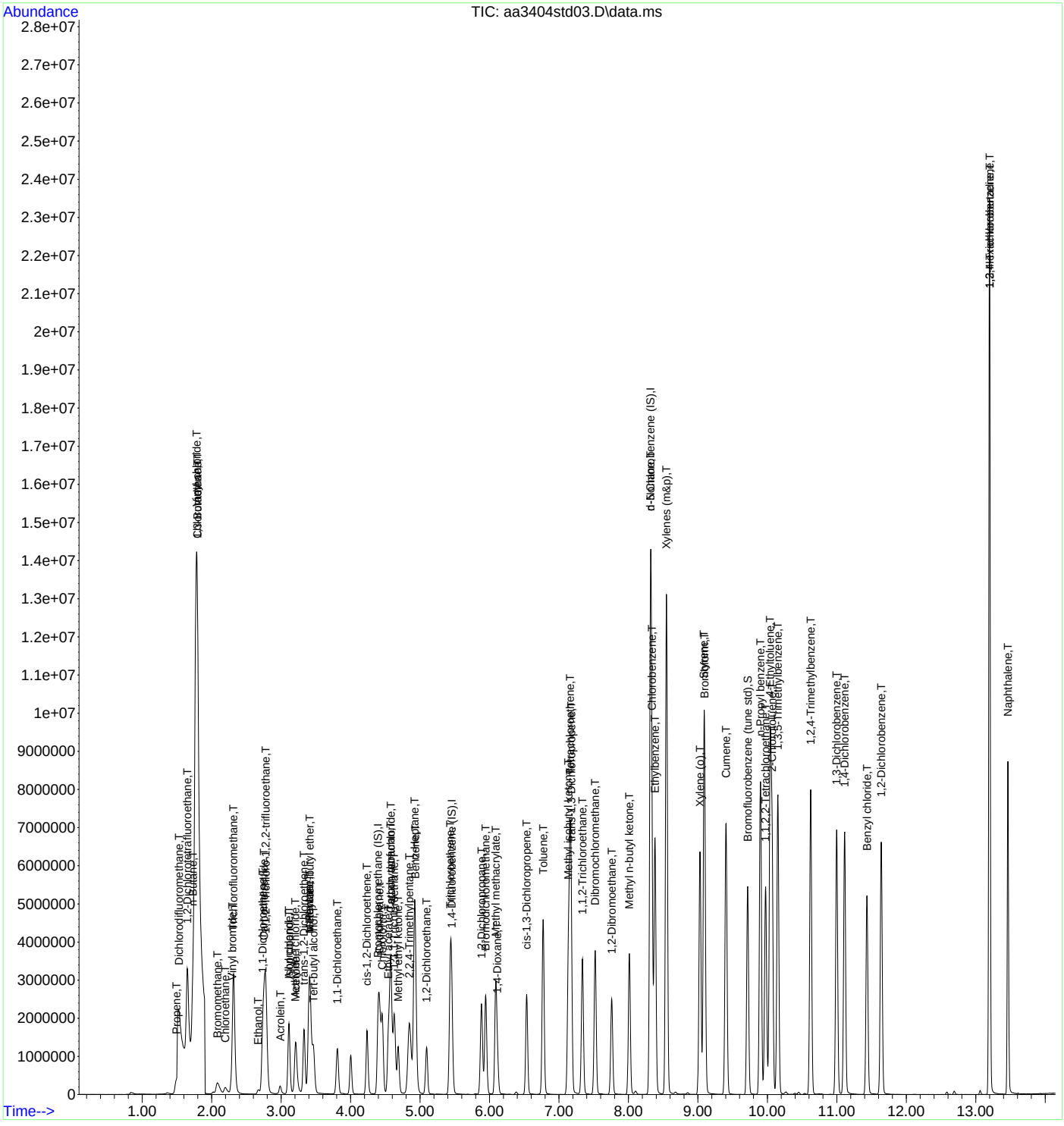
Quant Time: Aug 16 09:54:13 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 2376959 | 11.11 | ppbV | 100 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 2045235 | 10.91 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.013 | 43 | 2912111 | 11.83 | ppbV | 100 |
| 56) n-Nonane | 8.319 | 43 | 3534946 | 10.55 | ppbV | 100 |
| 57) Chlorobenzene | 8.338 | 112 | 3126708 | 10.43 | ppbV | 100 |
| 58) Ethylbenzene | 8.383 | 91 | 5864430 | 10.58 | ppbV | 100 |
| 59) Xylenes (m&p) | 8.547 | 91 | 8881004 | 22.23 | ppbV | 100 |
| 60) Xylene (o) | 9.029 | 91 | 4642943 | 10.46 | ppbV | 100 |
| 61) Styrene | 9.087 | 104 | 3380250 | 11.48 | ppbV | 100 |
| 62) Bromoform | 9.097 | 173 | 2491890 | 10.95 | ppbV | 100 |
| 63) Cumene | 9.406 | 105 | 5984852 | 10.35 | ppbV | 100 |
| 65) n-Propyl benzene | 9.901 | 91 | 8177614 | 10.85 | ppbV | 100 |
| 66) 1,1,2,2-Tetrachloroethane | 9.975 | 83 | 3547036 | 10.55 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 6733965 | 10.84 | ppbV | 100 |
| 68) 2-Chlorotoluene | 10.068 | 91 | 5305123 | 10.37 | ppbV | 100 |
| 69) 1,3,5-Trimethylbenzene | 10.152 | 105 | 5348299 | 10.64 | ppbV | 100 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 5481212 | 10.99 | ppbV | 100 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 3421975 | 10.35 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.113 | 146 | 3376978 | 10.63 | ppbV | 100 |
| 73) Benzyl chloride | 11.434 | 91 | 4675578 | 10.73 | ppbV | 100 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 3254751 | 10.40 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.200 | 225 | 2216471 | 9.88 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 2590387 | 10.53 | ppbV | 100 |
| 77) Naphthalene | 13.463 | 128 | 5257288 | 10.34 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3404std03.D
Acq On : 15 Aug 2023 1:09 pm
Operator : jjw
Sample : 10 ppbv standard
Misc : EB0103704
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 16 09:54:13 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3405std02.D
Acq On : 15 Aug 2023 3:12 pm
Operator : jjw
Sample : 20 ppbv standard
Misc : EB0103704
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 16 09:53:17 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.399 | 130 | 499473 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 2278768 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 2812211 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 2375515 | 10.15 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.499 | 41 | 770871 | 22.41 | ppbV | 99 |
| 3) Dichlorodifluoromethane | 1.533 | 85 | 2795748 | 22.15 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.657 | 85 | 3247750 | 17.89 | ppbV | 100 |
| 5) n-Butane | 1.736 | 43 | 1882829 | 23.14 | ppbV | 99 |
| 6) Chloromethane | 1.798 | 52 | 142733 | 24.42 | ppbV | 98 |
| 7) Vinyl chloride | 1.787 | 62 | 1083251 | 22.82 | ppbV | 99 |
| 8) 1,3-Butadiene | 1.801 | 39 | 1052739 | 21.69 | ppbV | 99 |
| 9) Bromomethane | 2.091 | 94 | 850633 | 21.34 | ppbV | 100 |
| 10) Chloroethane | 2.200 | 64 | 600686 | 23.27 | ppbV | 98 |
| 11) Vinyl bromide | 2.300 | 106 | 1097918 | 21.89 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.319 | 101 | 3715497 | 21.88 | ppbV | 100 |
| 13) Ethanol | 2.673 | 45 | 357760 | 17.89 | ppbV | 99 |
| 14) 1,1-Dichloroethene | 2.737 | 61 | 2414830 | 23.18 | ppbV | 100 |
| 15) Carbon disulfide | 2.756 | 76 | 3964880 | 23.15 | ppbV | 99 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.779 | 101 | 3255314 | 19.40 | ppbV | 100 |
| 17) Acrolein | 2.991 | 56 | 446408 | 20.80 | ppbV | 98 |
| 18) Allyl chloride | 3.113 | 76 | 664077 | 23.76 | ppbV | 100 |
| 19) Isopropanol | 3.113 | 45 | 2200207 | 19.06 | ppbV | 99 |
| 20) Methylene chloride | 3.207 | 49 | 1260244 | 19.99 | ppbV | 100 |
| 21) Acetone | 3.216 | 43 | 2038682 | 21.76 | ppbV | 100 |
| 22) trans-1,2-Dichloroethene | 3.332 | 61 | 2308104 | 24.59 | ppbV | 99 |
| 23) n-Pentane | 3.409 | 43 | 2302426 | 19.23 | ppbV | 99 |
| 24) n-Hexane | 3.412 | 57 | 3543404 | 21.18 | ppbV | 99 |
| 25) Methyl tert-butyl ether | 3.412 | 73 | 4774341 | 20.99 | ppbV | 99 |
| 26) Tert-butyl alcohol | 3.467 | 59 | 3269773 | 22.35 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.811 | 63 | 2864453 | 21.75 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.239 | 61 | 2160622 | 23.71 | ppbV | 100 |
| 29) Cyclohexane | 4.419 | 56 | 2552240 | 21.11 | ppbV | 100 |
| 30) Chloroform | 4.457 | 83 | 3608439 | 22.38 | ppbV | 99 |
| 31) Ethyl acetate | 4.544 | 61 | 573589 | 22.35 | ppbV | 98 |
| 32) Carbon tetrachloride | 4.579 | 117 | 3910518 | 20.23 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.576 | 42 | 2087668 | 23.05 | ppbV | 99 |
| 34) 1,1,1-Trichloroethane | 4.631 | 97 | 3456960 | 19.87 | ppbV | 100 |
| 35) Methyl ethyl ketone | 4.686 | 43 | 3340979 | 23.11 | ppbV | 100 |
| 36) n-Heptane | 4.920 | 43 | 3644916 | 21.78 | ppbV | 99 |
| 37) Benzene | 4.936 | 78 | 4942978 | 21.45 | ppbV | 99 |
| 38) 1,2-Dichloroethane | 5.097 | 62 | 2363649 | 22.89 | ppbV | 99 |
| 40) Trichloroethene | 5.435 | 130 | 2273330 | 19.66 | ppbV | 99 |
| 41) 2,2,4-Trimethylpentane | 4.846 | 57 | 5933707 | 20.56 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 2205432 | 21.21 | ppbV | 99 |
| 43) Bromodichloromethane | 5.946 | 83 | 4121290 | 22.75 | ppbV | 100 |
| 44) Methyl methacrylate | 6.091 | 41 | 3097965 | 23.17 | ppbV | 99 |
| 45) 1,4-Dioxane | 6.113 | 88 | 1493343 | 23.30 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.538 | 75 | 3649298 | 22.71 | ppbV | 100 |
| 47) Toluene | 6.772 | 91 | 7908022 | 21.65 | ppbV | 99 |
| 48) Methyl isobutyl ketone | 7.136 | 43 | 5805171 | 22.00 | ppbV | 99 |
| 49) Tetrachloroethene | 7.161 | 166 | 3535315 | 21.53 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 3830549 | 24.18 | ppbV | 98 |
| 51) 1,1,2-Trichloroethane | 7.338 | 97 | 2762664 | 21.45 | ppbV | 99 |

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3405std02.D
Acq On : 15 Aug 2023 3:12 pm
Operator : jjw
Sample : 20 ppbv standard
Misc : EB0103704
ALS Vial : 7 Sample Multiplier: 1

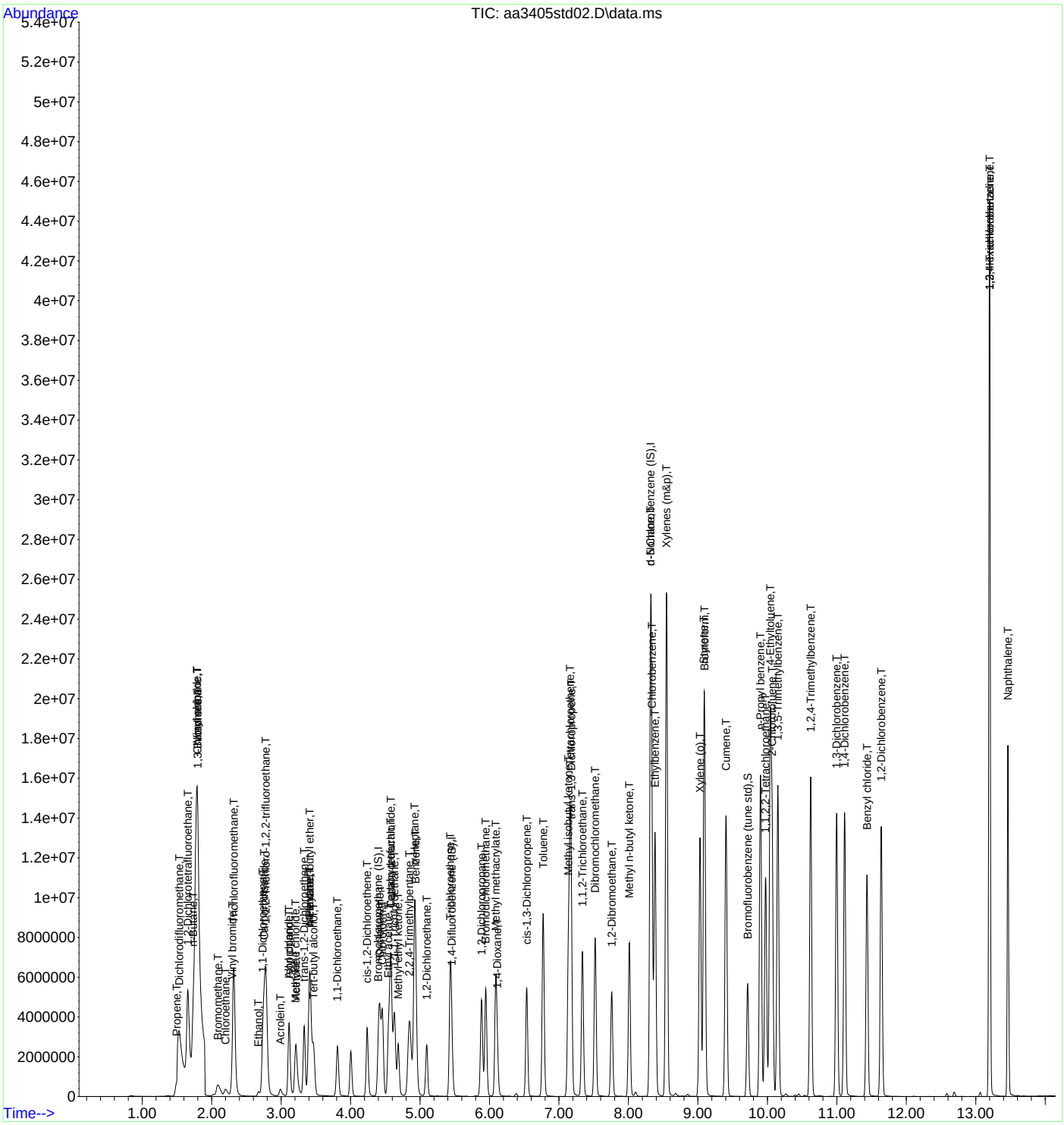
Quant Time: Aug 16 09:53:17 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 4920304 | 22.89 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 4277090 | 22.71 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.013 | 43 | 6056833 | 24.50 | ppbV | 99 |
| 56) n-Nonane | 8.319 | 43 | 7191778 | 20.90 | ppbV | 100 |
| 57) Chlorobenzene | 8.338 | 112 | 6300402 | 20.46 | ppbV | 99 |
| 58) Ethylbenzene | 8.383 | 91 | 11427551 | 20.06 | ppbV | 98 |
| 59) Xylenes (m&p) | 8.547 | 91 | 16612160 | 40.47 | ppbV | 96 |
| 60) Xylene (o) | 9.029 | 91 | 9308971 | 20.42 | ppbV | 99 |
| 61) Styrene | 9.087 | 104 | 6805349 | 22.50 | ppbV | 100 |
| 62) Bromoform | 9.097 | 173 | 5013505 | 21.45 | ppbV | 99 |
| 63) Cumene | 9.406 | 105 | 11708179 | 19.72 | ppbV | 98 |
| 65) n-Propyl benzene | 9.901 | 91 | 15630674 | 20.19 | ppbV | 97 |
| 66) 1,1,2,2-Tetrachloroethane | 9.975 | 83 | 7162257 | 20.73 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.042 | 105 | 13015117 | 20.39 | ppbV | 97 |
| 68) 2-Chlorotoluene | 10.068 | 91 | 10557525 | 20.10 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.152 | 105 | 10540320 | 20.40 | ppbV | 98 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 10891140 | 21.26 | ppbV | 98 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 6954730 | 20.48 | ppbV | 99 |
| 72) 1,4-Dichlorobenzene | 11.113 | 146 | 6870236 | 21.05 | ppbV | 99 |
| 73) Benzyl chloride | 11.434 | 91 | 9809727 | 21.92 | ppbV | 99 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 6519746 | 20.28 | ppbV | 99 |
| 75) 1,3-Hexachlorobutadiene | 13.200 | 225 | 4206699 | 18.25 | ppbV | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 5049468 | 19.98 | ppbV | 100 |
| 77) Naphthalene | 13.463 | 128 | 10176689 | 19.49 | ppbV | 98 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3405std02.D
Acq On : 15 Aug 2023 3:12 pm
Operator : jjw
Sample : 20 ppbv standard
Misc : EB0103704
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 16 09:53:17 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3406std01.D
Acq On : 15 Aug 2023 4:47 pm
Operator : jjw
Sample : 40 ppbv standard
Misc : EB0103704
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 16 09:52:28 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.406 | 130 | 487271 | 10.00 | ppbV | | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 2425798 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 2732166 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 2577792 | 11.34 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 1.512 | 41 | 1707516 | 50.87 | ppbV | | 99 |
| 3) Dichlorodifluoromethane | 1.536 | 85 | 5966633 | 48.46 | ppbV | | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.660 | 85 | 6899713 | 38.95 | ppbV | | 99 |
| 5) n-Butane | 1.739 | 43 | 3778324 | 47.60 | ppbV | | 100 |
| 6) Chloromethane | 1.798 | 52 | 321722 | 56.43 | ppbV | # | 1 |
| 7) Vinyl chloride | 1.791 | 62 | 2395758 | 51.74 | ppbV | | 99 |
| 8) 1,3-Butadiene | 1.801 | 39 | 2174685 | 45.93 | ppbV | | 97 |
| 9) Bromomethane | 2.097 | 94 | 1861404 | 47.86 | ppbV | | 100 |
| 10) Chloroethane | 2.200 | 64 | 1346794 | 53.48 | ppbV | | 100 |
| 11) Vinyl bromide | 2.300 | 106 | 2453541 | 50.15 | ppbV | | 100 |
| 12) Trichlorofluoromethane | 2.319 | 101 | 7717062 | 46.58 | ppbV | | 100 |
| 13) Ethanol | 2.673 | 45 | 877297 | 44.97 | ppbV | # | 88 |
| 14) 1,1-Dichloroethene | 2.737 | 61 | 4997972 | 49.17 | ppbV | | 100 |
| 15) Carbon disulfide | 2.763 | 76 | 8067769 | 48.28 | ppbV | | 99 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.782 | 101 | 6956660 | 42.50 | ppbV | | 100 |
| 17) Acrolein | 2.994 | 56 | 951140 | 45.44 | ppbV | | 98 |
| 18) Allyl chloride | 3.116 | 76 | 1369570 | 50.24 | ppbV | | 100 |
| 19) Isopropanol | 3.116 | 45 | 4505255 | 40.00 | ppbV | | 98 |
| 20) Methylene chloride | 3.206 | 49 | 2810050 | 45.70 | ppbV | | 100 |
| 21) Acetone | 3.222 | 43 | 4077485 | 44.60 | ppbV | | 100 |
| 22) trans-1,2-Dichloroethene | 3.332 | 61 | 4976980 | 54.35 | ppbV | | 98 |
| 23) n-Pentane | 3.412 | 43 | 5051897 | 43.24 | ppbV | | 99 |
| 24) n-Hexane | 3.412 | 57 | 7730831 | 47.37 | ppbV | | 99 |
| 25) Methyl tert-butyl ether | 3.412 | 73 | 10208419 | 46.00 | ppbV | | 97 |
| 26) Tert-butyl alcohol | 3.467 | 59 | 7080253 | 49.62 | ppbV | | 100 |
| 27) 1,1-Dichloroethane | 3.814 | 63 | 6120009 | 47.63 | ppbV | | 99 |
| 28) cis-1,2-Dichloroethene | 4.238 | 61 | 4615777 | 51.93 | ppbV | | 100 |
| 29) Cyclohexane | 4.419 | 56 | 5431445 | 46.06 | ppbV | | 100 |
| 30) Chloroform | 4.457 | 83 | 7598750 | 48.31 | ppbV | | 100 |
| 31) Ethyl acetate | 4.547 | 61 | 1228122 | 49.05 | ppbV | | 99 |
| 32) Carbon tetrachloride | 4.583 | 117 | 8430867 | 44.71 | ppbV | | 100 |
| 33) Tetrahydrofuran | 4.576 | 42 | 4398645 | 49.79 | ppbV | | 99 |
| 34) 1,1,1-Trichloroethane | 4.631 | 97 | 7362144 | 43.37 | ppbV | | 100 |
| 35) Methyl ethyl ketone | 4.685 | 43 | 7160721 | 50.77 | ppbV | | 99 |
| 36) n-Heptane | 4.920 | 43 | 7185919 | 44.02 | ppbV | | 100 |
| 37) Benzene | 4.936 | 78 | 10281932 | 45.73 | ppbV | | 98 |
| 38) 1,2-Dichloroethane | 5.097 | 62 | 5067261 | 50.30 | ppbV | | 99 |
| 40) Trichloroethene | 5.438 | 130 | 4836394 | 39.29 | ppbV | | 100 |
| 41) 2,2,4-Trimethylpentane | 4.849 | 57 | 13336894 | 43.41 | ppbV | | 98 |
| 42) 1,2-Dichloropropane | 5.888 | 63 | 4560844 | 41.21 | ppbV | | 99 |
| 43) Bromodichloromethane | 5.949 | 83 | 8574056 | 44.47 | ppbV | | 99 |
| 44) Methyl methacrylate | 6.090 | 41 | 6283616 | 44.15 | ppbV | | 100 |
| 45) 1,4-Dioxane | 6.116 | 88 | 3065935 | 44.93 | ppbV | | 99 |
| 46) cis-1,3-Dichloropropene | 6.537 | 75 | 7375814 | 43.13 | ppbV | | 99 |
| 47) Toluene | 6.772 | 91 | 14907224 | 38.33 | ppbV | | 96 |
| 48) Methyl isobutyl ketone | 7.135 | 43 | 11479037 | 40.87 | ppbV | | 98 |
| 49) Tetrachloroethene | 7.164 | 166 | 6808224 | 38.95 | ppbV | | 100 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 7633904 | 45.27 | ppbV | | 99 |
| 51) 1,1,2-Trichloroethane | 7.338 | 97 | 5566488 | 40.60 | ppbV | | 99 |

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3406std01.D
Acq On : 15 Aug 2023 4:47 pm
Operator : jjw
Sample : 40 ppbv standard
Misc : EB0103704
ALS Vial : 8 Sample Multiplier: 1

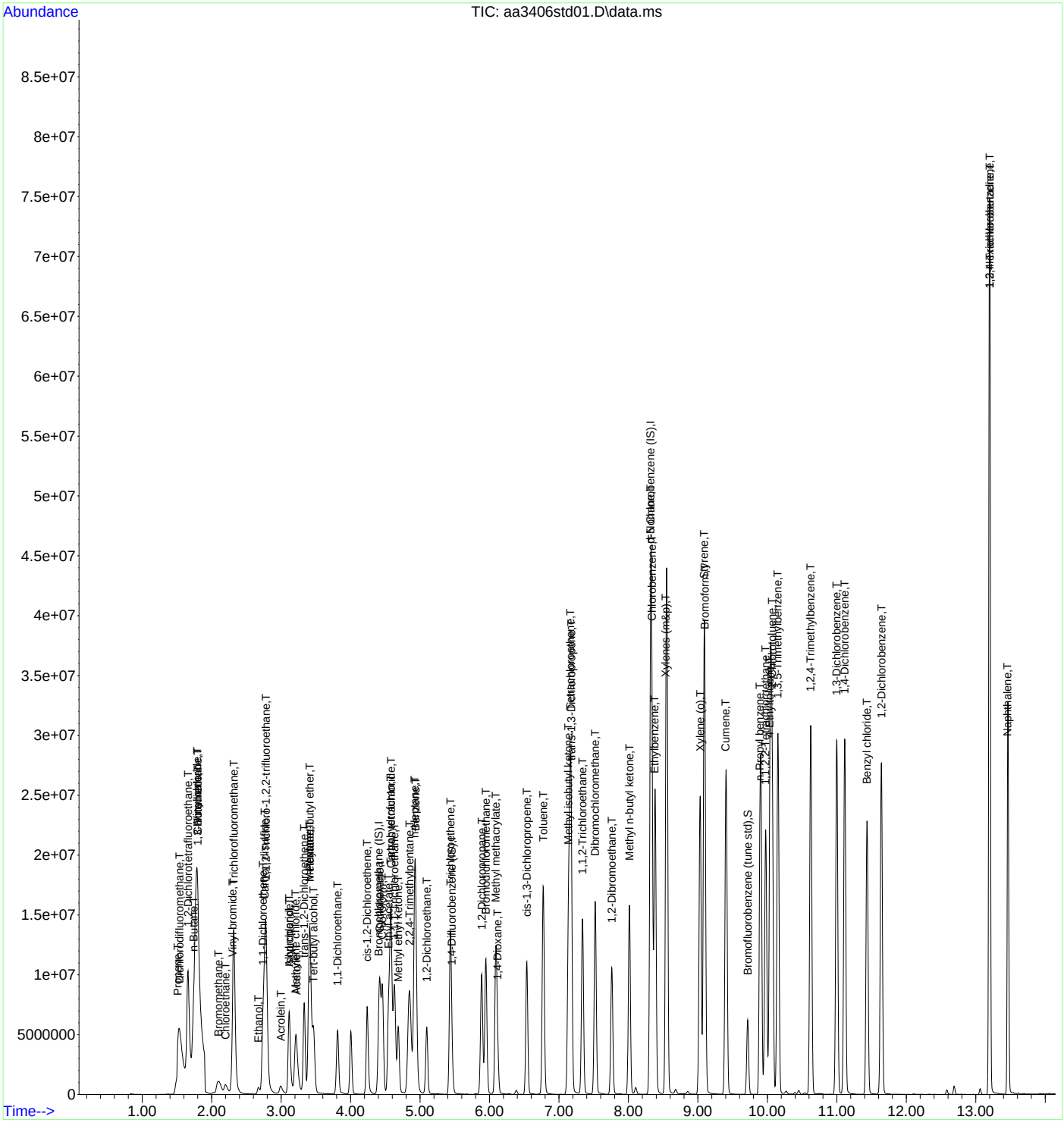
Quant Time: Aug 16 09:52:28 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 9886675 | 43.20 | ppbV | | 99 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 8609104 | 42.93 | ppbV | | 100 |
| 54) Methyl n-butyl ketone | 8.013 | 43 | 12284613 | 46.68 | ppbV | | 97 |
| 56) n-Nonane | 8.319 | 43 | 14182361 | 42.42 | ppbV | | 98 |
| 57) Chlorobenzene | 8.338 | 112 | 12196934 | 40.77 | ppbV | | 96 |
| 58) Ethylbenzene | 8.377 | 91 | 20355846 | 36.79 | ppbV | | 90 |
| 59) Xylenes (m&p) | 8.537 | 91 | 24199756 | 60.68 | ppbV | # | 74 |
| 60) Xylene (o) | 9.033 | 91 | 17688374 | 39.94 | ppbV | | 95 |
| 61) Styrene | 9.090 | 104 | 13186398 | 44.87 | ppbV | | 97 |
| 62) Bromoform | 9.100 | 173 | 9710978 | 42.77 | ppbV | | 98 |
| 63) Cumene | 9.399 | 105 | 21140296 | 36.64 | ppbV | | 91 |
| 65) n-Propyl benzene | 9.891 | 91 | 24008413 | 31.92 | ppbV | # | 80 |
| 66) 1,1,2,2-Tetrachloroethane | 9.975 | 83 | 14100555 | 42.01 | ppbV | | 97 |
| 67) 4-Ethyltoluene | 10.032 | 105 | 21664037 | 34.94 | ppbV | # | 84 |
| 68) 2-Chlorotoluene | 10.068 | 91 | 20299207 | 39.78 | ppbV | | 97 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 19633662 | 39.12 | ppbV | | 92 |
| 70) 1,2,4-Trimethylbenzene | 10.621 | 105 | 20118523 | 40.43 | ppbV | | 91 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 14030394 | 42.52 | ppbV | | 97 |
| 72) 1,4-Dichlorobenzene | 11.113 | 146 | 13876826 | 43.76 | ppbV | | 97 |
| 73) Benzyl chloride | 11.431 | 91 | 19339251 | 44.49 | ppbV | | 93 |
| 74) 1,2-Dichlorobenzene | 11.643 | 146 | 13190929 | 42.23 | ppbV | | 97 |
| 75) 1,3-Hexachlorobutadiene | 13.200 | 225 | 7629643 | 34.08 | ppbV | | 97 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 9392234 | 38.25 | ppbV | | 99 |
| 77) Naphthalene | 13.457 | 128 | 15939992 | 31.42 | ppbV | # | 83 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3406std01.D
Acq On : 15 Aug 2023 4:47 pm
Operator : jjw
Sample : 40 ppbv standard
Misc : EB0103704
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 16 09:52:28 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration



# Initial Calibration Data Summary Report

**Initial Calibration Curve:** 10/10/2023 **Method ID:** 231009.M
**Instrument:** AA

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4131BFB] | 10/10/2023 10:13 |
| 0.2 PPBV STD [AA4132STD05] | 10/10/2023 10:40 |
| 2 PPBV STD [AA4133STD04] | 10/10/2023 11:46 |
| 10 PPBV STD [AA4134STD03] | 10/10/2023 12:21 |
| 20 PPBV STD [AA4135STD02] | 10/10/2023 12:55 |
| 40 PPBV STD [AA4136STD01] | 10/10/2023 14:05 |
| 10 PPBV ICVSS [AA4137ICVSS] | 10/10/2023 16:48 |

| | Parameter | RRF 0.2ppbv | RRF 2ppbv | RRF 10ppbv | RRF 20ppbv | RRF 40ppbv | Avg ppbv | % RSD |
|---|---|---|---|---|---|---|---|---|
| 1) | Bromochloromethane | ----------ISTD---------- | | | | | | |
| 3) | Dichlorodifluoromethane | 1.9 | 2.0 | 2.2 | 2.4 | 2.6 | 2.2 | 13 |
| 4) | 1,2-Dichlorotetrafluoroethane | 3.2 | 3.4 | 2.9 | 3.2 | 3.5 | 3.2 | 6.1 |
| 6) | Chloromethane | 0.085 | 0.098 | 0.11 | 0.12 | 0.14 | 0.11 | 18 |
| 7) | Vinyl chloride | 0.70 | 0.84 | 0.91 | 0.98 | 1.1 | 0.91 | 17 |
| 8) | 1,3-Butadiene | 0.87 | 0.82 | 0.80 | 0.84 | 0.91 | 0.85 | 4.8 |
| 9) | Bromomethane | 0.49 | 0.70 | 0.75 | 0.81 | 0.91 | 0.73 | 22 |
| 10) | Chloroethane | 0.24 | 0.45 | 0.50 | 0.55 | 0.63 | 0.48 | 31 |
| 11) | Vinyl bromide | 0.53 | 0.86 | 0.92 | 1.0 | 1.1 | 0.90 | 26 |
| 12) | Trichlorofluoromethane | 2.6 | 2.6 | 2.7 | 2.9 | 3.2 | 2.8 | 8.9 |
| 14) | 1,1-Dichloroethene | 1.4 | 1.5 | 1.9 | 2.1 | 2.3 | 1.9 | 21 |
| 15) | Carbon disulfide | 2.4 | 2.6 | 3.2 | 3.4 | 3.7 | 3.1 | 18 |
| 16) | 1,1,2-Trichloro-1,2,2-trifluoroethane | 2.8 | 3.0 | 2.5 | 2.7 | 3.0 | 2.8 | 7.4 |
| 17) | Acrolein | 0.39 | 0.33 | 0.43 | 0.45 | 0.49 | 0.42 | 15 |
| 18) | Allyl Chloride | 0.35 | 0.42 | 0.54 | 0.58 | 0.62 | 0.50 | 23 |
| 19) | Isopropanol | 1.6 | 1.7 | 2.1 | 2.3 | 2.4 | 2.0 | 17 |
| 20) | Methylene chloride | 1.7 | 0.97 | 1.0 | 1.1 | 1.3 | 1.2 | 25 |
| 21) | Acetone | 1.5 | 1.2 | 1.5 | 1.6 | 1.7 | 1.5 | 12 |
| 22) | 1,2-Dichloroethene (trans) | 1.4 | 1.3 | 1.8 | 2.0 | 2.2 | 1.7 | 21 |
| 24) | n-Hexane | 3.1 | 3.0 | 3.0 | 3.1 | 3.5 | 3.2 | 7.1 |
| 25) | Methyl tert-butyl ether | 3.5 | 4.1 | 3.6 | 3.9 | 4.3 | 3.9 | 8.5 |
| 26) | Tert-butyl alcohol | 2.3 | 2.5 | 2.5 | 2.7 | 3.0 | 2.6 | 11 |
| 27) | 1,1-Dichloroethane | 2.2 | 2.0 | 2.2 | 2.4 | 2.7 | 2.3 | 12 |
| 28) | 1,2-Dichloroethene (cis) | 1.3 | 1.4 | 1.7 | 1.8 | 2.0 | 1.6 | 18 |
| 29) | Cyclohexane | 2.1 | 2.2 | 2.1 | 2.2 | 2.4 | 2.2 | 6.8 |
| 30) | Chloroform | 2.2 | 2.3 | 2.6 | 2.9 | 3.2 | 2.7 | 15 |
| 32) | Carbon tetrachloride | 3.0 | 3.1 | 3.0 | 3.2 | 3.5 | 3.2 | 6.9 |
| 33) | Tetrahydrofuran | 1.5 | 1.3 | 1.5 | 1.6 | 1.7 | 1.5 | 9.4 |
| 34) | 1,1,1-Trichloroethane | 2.5 | 2.7 | 2.7 | 2.9 | 3.1 | 2.8 | 8.7 |
| 35) | Methyl ethyl ketone | 2.3 | 2.1 | 2.4 | 2.6 | 2.9 | 2.4 | 13 |
| 36) | n-Heptane | 2.6 | 2.6 | 2.9 | 2.9 | 2.9 | 2.8 | 6.9 |
| 37) | Benzene | 3.6 | 3.8 | 3.8 | 4.1 | 4.5 | 4.0 | 9.3 |
| 38) | 1,2-Dichloroethane | 1.3 | 1.5 | 1.7 | 1.8 | 2.0 | 1.7 | 17 |
| 39) | 1,4-Difluorobenzene | ----------ISTD---------- | | | | | | |
| 40) | Trichloroethene | 0.38 | 0.47 | 0.44 | 0.45 | 0.47 | 0.44 | 8.1 |
| 41) | 2,2,4-Trimethylpentane | 1.2 | 1.5 | 1.2 | 1.3 | 1.3 | 1.3 | 9.8 |
| 42) | 1,2-Dichloropropane | 0.38 | 0.40 | 0.39 | 0.39 | 0.39 | 0.39 | 2.1 |
| 43) | Bromodichloromethane | 0.59 | 0.68 | 0.66 | 0.68 | 0.68 | 0.66 | 6.0 |

***% RSD (Relative Standard Deviation) must be within 30%**
****An exception is made for 2 compounds that must be within 40%**
**RRF - Relative Response Factor**

# Initial Calibration Data Summary Report

**Initial Calibration Curve:** 10/10/2023 **Method ID:** 231009.M
**Instrument:** AA

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4131BFB] | 10/10/2023 10:13 |
| 0.2 PPBV STD [AA4132STD05] | 10/10/2023 10:40 |
| 2 PPBV STD [AA4133STD04] | 10/10/2023 11:46 |
| 10 PPBV STD [AA4134STD03] | 10/10/2023 12:21 |
| 20 PPBV STD [AA4135STD02] | 10/10/2023 12:55 |
| 40 PPBV STD [AA4136STD01] | 10/10/2023 14:05 |
| 10 PPBV ICVSS [AA4137ICVSS] | 10/10/2023 16:48 |

| | Parameter | RRF 0.2ppbv | RRF 2ppbv | RRF 10ppbv | RRF 20ppbv | RRF 40ppbv | Avg ppbv | % RSD |
|---|---|---|---|---|---|---|---|---|
| 44) | Methyl methacrylate | 0.42 | 0.46 | 0.50 | 0.50 | 0.48 | 0.47 | 6.8 |
| 45) | 1,4-Dioxane | 0.21 | 0.24 | 0.24 | 0.25 | 0.25 | 0.24 | 5.9 |
| 46) | 1,3-Dichloropropene (cis) | 0.55 | 0.59 | 0.63 | 0.63 | 0.62 | 0.60 | 5.6 |
| 47) | Toluene | 1.2 | 1.5 | 1.5 | 1.5 | 1.4 | 1.4 | 7.6 |
| 48) | Methyl isobutyl ketone | 0.76 | 0.92 | 0.95 | 0.93 | 0.86 | 0.88 | 8.6 |
| 49) | Tetrachloroethene | 0.53 | 0.61 | 0.63 | 0.64 | 0.61 | 0.61 | 7.1 |
| 50) | 1,3-Dichloropropene (trans) | 0.46 | 0.57 | 0.63 | 0.65 | 0.62 | 0.59 | 13 |
| 51) | 1,1,2-Trichloroethane | 0.40 | 0.48 | 0.49 | 0.51 | 0.50 | 0.48 | 9.3 |
| 52) | Dibromochloromethane | 0.64 | 0.78 | 0.83 | 0.86 | 0.85 | 0.79 | 12 |
| 53) | 1,2-Dibromoethane | 0.54 | 0.67 | 0.73 | 0.75 | 0.74 | 0.69 | 13 |
| 54) | Methyl n-butyl ketone | 0.70 | 0.78 | 0.93 | 0.93 | 0.90 | 0.85 | 12 |
| 55) | d-5 Chlorbenzene | ----------ISTD---------- | | | | | | |
| 57) | Chlorobenzene | 0.97 | 1.1 | 0.99 | 0.99 | 0.99 | 1.00 | 3.0 |
| 58) | Ethylbenzene | 1.8 | 2.0 | 1.9 | 1.8 | 1.8 | 1.8 | 4.5 |
| 59) | Xylenes (m&p) | 1.3 | 1.5 | 1.4 | 1.4 | 1.2 | 1.4 | 9.3 |
| 60) | Xylenes (o) | 1.4 | 1.6 | 1.5 | 1.5 | 1.5 | 1.5 | 5.0 |
| 61) | Styrene | 0.85 | 1.0 | 1.1 | 1.1 | 1.1 | 1.0 | 9.4 |
| 62) | Bromoform | 0.63 | 0.72 | 0.75 | 0.77 | 0.80 | 0.73 | 8.7 |
| 63) | Cumene | 1.8 | 2.2 | 2.0 | 1.9 | 1.9 | 1.9 | 7.1 |
| 66) | 1,1,2,2-Tetrachloroethane | 0.96 | 1.1 | 1.0 | 1.0 | 1.1 | 1.0 | 5.5 |
| 67) | 4-Ethyltoluene | 2.1 | 2.2 | 2.2 | 2.2 | 2.1 | 2.2 | 3.8 |
| 68) | 2-Chlorotoluene | 1.6 | 1.8 | 1.7 | 1.7 | 1.7 | 1.7 | 4.3 |
| 69) | 1,3,5-Trimethylbenzene | 1.5 | 1.9 | 1.8 | 1.8 | 1.7 | 1.7 | 7.6 |
| 70) | 1,2,4-Trimethylbenzene | 1.4 | 1.9 | 1.8 | 1.8 | 1.8 | 1.7 | 9.6 |
| 71) | 1,3-Dichlorobenzene | 1.0 | 1.0 | 1.1 | 1.1 | 1.1 | 1.1 | 4.2 |
| 72) | 1,4-Dichlorobenzene | 0.94 | 1.0 | 1.1 | 1.1 | 1.2 | 1.1 | 8.6 |
| 73) | Benzyl chloride | 1.2 | 1.4 | 1.6 | 1.7 | 1.7 | 1.5 | 15 |
| 74) | 1,2-Dichlorobenzene | 0.90 | 1.1 | 1.0 | 1.1 | 1.1 | 1.0 | 7.4 |
| 75) | 1,3-Hexachlorobutadiene | 0.73 | 0.78 | 0.70 | 0.69 | 0.66 | 0.71 | 6.1 |
| 76) | 1,2,4-Trichlorobenzene | 0.83 | 0.81 | 0.82 | 0.84 | 0.83 | 0.82 | 1.4 |
| 77) | Naphthalene | 2.0 | 1.9 | 1.9 | 1.9 | 1.7 | 1.9 | 4.8 |

***% RSD (Relative Standard Deviation) must be within 30%**
****An exception is made for 2 compounds that must be within 40%**
**RRF - Relative Response Factor**

Method Path : C:\msdchem\1\METHODS\
Method File : 231009.M
Title : TO-15 on the Agilent 7890A / 5975C
Last Update : Tue Oct 10 15:12:35 2023
Response Via : Initial Calibration

Calibration Files
0.2 =aa4132std05.D 2 =aa4133std04.D 10 =aa4134std03.D 20 =aa4135std02.D 40 =aa4136std01.D

| | | Compound | 0.2 | 2 | 10 | 20 | 40 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|
| 1) | I | Bromochloromethane... | ----------ISTD---------- | | | | | | |
| 2) | T | Propene | 0.779 | 0.688 | 0.601 | 0.651 | 0.751 | 0.694 | 10.44 |
| 3) | T | Dichlorodifluoro... | 1.907 | 1.983 | 2.168 | 2.390 | 2.633 | 2.216 | 13.46 |
| 4) | T | 1,2-Dichlorotetr... | 3.185 | 3.352 | 2.944 | 3.158 | 3.458 | 3.219 | 6.12 |
| 5) | T | n-Butane | 1.490 | 1.596 | 1.532 | 1.649 | 1.719 | 1.597 | 5.69 |
| 6) | T | Chloromethane | 0.085 | 0.098 | 0.113 | 0.121 | 0.137 | 0.111 | 18.16 |
| 7) | T | Vinyl chloride | 0.695 | 0.837 | 0.907 | 0.984 | 1.107 | 0.906 | 17.06 |
| 8) | T | 1,3-Butadiene | 0.868 | 0.820 | 0.800 | 0.839 | 0.905 | 0.846 | 4.88 |
| 9) | T | Bromomethane | 0.486 | 0.695 | 0.751 | 0.814 | 0.911 | 0.731 | 21.71 |
| 10) | T | Chloroethane | 0.242 | 0.451 | 0.502 | 0.547 | 0.634 | 0.475 | 30.85 |
| 11) | T | Vinyl bromide | 0.534 | 0.864 | 0.915 | 1.018 | 1.146 | 0.895 | 25.58 |
| 12) | T | Trichlorofluorom... | 2.621 | 2.609 | 2.656 | 2.932 | 3.178 | 2.799 | 8.92 |
| 13) | T | Ethanol | 0.278 | 0.262 | 0.269 | 0.289 | 0.366 | 0.293 | 14.44 |
| 14) | T | 1,1-Dichloroethene | 1.413 | 1.490 | 1.944 | 2.133 | 2.308 | 1.858 | 21.17 |
| 15) | T | Carbon disulfide | 2.407 | 2.574 | 3.227 | 3.426 | 3.653 | 3.058 | 17.73 |
| 16) | T | 1,1,2-Trichloro-... | 2.836 | 3.030 | 2.523 | 2.712 | 2.994 | 2.819 | 7.42 |
| 17) | T | Acrolein | 0.385 | 0.331 | 0.431 | 0.447 | 0.494 | 0.418 | 14.91 |
| 18) | T | Allyl chloride | 0.345 | 0.421 | 0.535 | 0.582 | 0.624 | 0.501 | 23.11 |
| 19) | T | Isopropanol | 1.617 | 1.677 | 2.082 | 2.254 | 2.397 | 2.005 | 17.28 |
| 20) | T | Methylene chloride | 1.726 | 0.973 | 1.020 | 1.121 | 1.307 | 1.229 | 24.89 |
| 21) | T | Acetone | 1.489 | 1.226 | 1.538 | 1.595 | 1.694 | 1.508 | 11.62 |
| 22) | T | trans-1,2-Dichlo... | 1.377 | 1.330 | 1.784 | 1.951 | 2.181 | 1.724 | 21.29 |
| 23) | T | n-Pentane | 2.223 | 2.305 | 2.173 | 2.308 | 2.616 | 2.325 | 7.41 |
| 24) | T | n-Hexane | 3.143 | 2.995 | 2.967 | 3.122 | 3.534 | 3.152 | 7.19 |
| 25) | T | Methyl tert-buty... | 3.476 | 4.059 | 3.641 | 3.875 | 4.310 | 3.872 | 8.54 |
| 26) | T | Tert-butyl alcohol | 2.280 | 2.528 | 2.502 | 2.698 | 3.027 | 2.607 | 10.66 |
| 27) | T | 1,1-Dichloroethane | 2.208 | 2.008 | 2.236 | 2.445 | 2.714 | 2.322 | 11.56 |
| 28) | T | cis-1,2-Dichloro... | 1.343 | 1.351 | 1.654 | 1.825 | 2.018 | 1.638 | 18.03 |
| 29) | t | Cyclohexane | 2.057 | 2.245 | 2.081 | 2.192 | 2.434 | 2.202 | 6.86 |
| 30) | T | Chloroform | 2.233 | 2.343 | 2.644 | 2.933 | 3.225 | 2.676 | 15.36 |
| 31) | T | Ethyl acetate | 0.310 | 0.390 | 0.450 | 0.493 | 0.533 | 0.435 | 20.09 |
| 32) | T | Carbon tetrachlo... | 2.964 | 3.097 | 3.048 | 3.232 | 3.528 | 3.174 | 6.95 |
| 33) | T | Tetrahydrofuran | 1.456 | 1.307 | 1.488 | 1.591 | 1.681 | 1.504 | 9.42 |
| 34) | T | 1,1,1-Trichloroe... | 2.481 | 2.746 | 2.667 | 2.869 | 3.137 | 2.780 | 8.79 |
| 35) | T | Methyl ethyl ketone | 2.291 | 2.066 | 2.372 | 2.620 | 2.862 | 2.442 | 12.58 |
| 36) | T | n-Heptane | 2.552 | 2.559 | 2.850 | 2.930 | 2.928 | 2.764 | 6.98 |
| 37) | T | Benzene | 3.627 | 3.758 | 3.801 | 4.128 | 4.544 | 3.972 | 9.30 |
| 38) | T | 1,2-Dichloroethane | 1.312 | 1.486 | 1.666 | 1.833 | 2.016 | 1.663 | 16.69 |
| 39) | I | 1,4-Difluorobenzen... | ----------ISTD---------- | | | | | | |
| 40) | T | Trichloroethene | 0.381 | 0.468 | 0.441 | 0.454 | 0.469 | 0.442 | 8.16 |
| 41) | T | 2,2,4-Trimethylp... | 1.199 | 1.522 | 1.226 | 1.268 | 1.298 | 1.303 | 9.87 |
| 42) | T | 1,2-Dichloropropane | 0.377 | 0.399 | 0.391 | 0.393 | 0.385 | 0.389 | 2.16 |
| 43) | T | Bromodichloromet... | 0.586 | 0.682 | 0.655 | 0.678 | 0.675 | 0.655 | 6.09 |
| 44) | T | Methyl methacrylate | 0.419 | 0.464 | 0.497 | 0.498 | 0.481 | 0.472 | 6.88 |
| 45) | T | 1,4-Dioxane | 0.214 | 0.238 | 0.243 | 0.249 | 0.248 | 0.238 | 5.94 |
| 46) | T | cis-1,3-Dichloro... | 0.549 | 0.592 | 0.626 | 0.634 | 0.615 | 0.603 | 5.69 |
| 47) | T | Toluene | 1.225 | 1.453 | 1.484 | 1.478 | 1.387 | 1.405 | 7.68 |
| 48) | T | Methyl isobutyl ... | 0.759 | 0.922 | 0.947 | 0.925 | 0.863 | 0.883 | 8.63 |
| 49) | T | Tetrachloroethene | 0.531 | 0.613 | 0.633 | 0.639 | 0.613 | 0.606 | 7.17 |
| 50) | T | trans-1,3-Dichlo... | 0.459 | 0.568 | 0.633 | 0.647 | 0.618 | 0.585 | 13.11 |
| 51) | T | 1,1,2-Trichloroe... | 0.399 | 0.475 | 0.494 | 0.506 | 0.500 | 0.475 | 9.30 |
| 52) | T | Dibromochloromet... | 0.636 | 0.778 | 0.834 | 0.857 | 0.849 | 0.791 | 11.62 |
| 53) | T | 1,2-Dibromoethane | 0.535 | 0.672 | 0.732 | 0.751 | 0.743 | 0.686 | 13.15 |
| 54) | T | Methyl n-butyl k... | 0.704 | 0.779 | 0.932 | 0.932 | 0.900 | 0.849 | 12.07 |
| 55) | I | d-5 Chlorobenzene ... | ----------ISTD---------- | | | | | | |
| 56) | T | n-Nonane | 0.927 | 1.067 | 1.027 | 0.986 | 0.955 | 0.992 | 5.62 |
| 57) | T | Chlorobenzene | 0.971 | 1.050 | 0.990 | 0.986 | 0.988 | 0.997 | 3.09 |
| 58) | T | Ethylbenzene | 1.789 | 1.981 | 1.852 | 1.820 | 1.771 | 1.843 | 4.51 |
| 59) | T | Xylenes (m&p) | 1.326 | 1.536 | 1.415 | 1.363 | 1.186 | 1.365 | 9.36 |
| 60) | T | Xylene (o) | 1.445 | 1.623 | 1.468 | 1.461 | 1.451 | 1.490 | 5.05 |

Method Path : C:\msdchem\1\METHODS\
Method File : 231009.M

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 61) | T | Styrene | 0.849 | 1.047 | 1.067 | 1.065 | 1.073 | 1.020 | 9.41 |
| 62) | T | Bromoform | 0.629 | 0.724 | 0.745 | 0.767 | 0.797 | 0.732 | 8.70 |
| 63) | T | Cumene | 1.783 | 2.168 | 1.955 | 1.932 | 1.897 | 1.947 | 7.18 |
| 64) | S | Bromofluorobenze... | 0.801 | 0.842 | 0.870 | 0.891 | 0.954 | 0.872 | 6.54 |
| 65) | T | n-Propyl benzene | 2.478 | 2.727 | 2.610 | 2.556 | 2.335 | 2.541 | 5.77 |
| 66) | T | 1,1,2,2-Tetrachl... | 0.959 | 1.120 | 1.040 | 1.040 | 1.055 | 1.043 | 5.50 |
| 67) | T | 4-Ethyltoluene | 2.059 | 2.245 | 2.204 | 2.174 | 2.073 | 2.151 | 3.80 |
| 68) | T | 2-Chlorotoluene | 1.626 | 1.829 | 1.701 | 1.690 | 1.690 | 1.707 | 4.35 |
| 69) | T | 1,3,5-Trimethylb... | 1.513 | 1.880 | 1.755 | 1.754 | 1.747 | 1.730 | 7.69 |
| 70) | T | 1,2,4-Trimethylb... | 1.441 | 1.880 | 1.785 | 1.775 | 1.764 | 1.729 | 9.68 |
| 71) | T | 1,3-Dichlorobenzene | 1.031 | 1.007 | 1.050 | 1.081 | 1.124 | 1.059 | 4.27 |
| 72) | T | 1,4-Dichlorobenzene | 0.943 | 1.005 | 1.082 | 1.123 | 1.174 | 1.065 | 8.65 |
| 73) | T | Benzyl chloride | 1.159 | 1.435 | 1.619 | 1.688 | 1.742 | 1.529 | 15.48 |
| 74) | T | 1,2-Dichlorobenzene | 0.895 | 1.065 | 1.034 | 1.054 | 1.089 | 1.027 | 7.47 |
| 75) | T | 1,3-Hexachlorobu... | 0.731 | 0.778 | 0.703 | 0.687 | 0.664 | 0.713 | 6.17 |
| 76) | T | 1,2,4-Trichlorob... | 0.829 | 0.807 | 0.819 | 0.838 | 0.828 | 0.824 | 1.43 |
| 77) | T | Naphthalene | 1.972 | 1.901 | 1.894 | 1.926 | 1.733 | 1.885 | 4.80 |

(#) = Out of Range

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4132std05.D
Acq On : 10 Oct 2023 10:40 am
Operator : jjw
Sample : 0.2 ppbv standard
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 10 15:08:52 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:03:48 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.380 | 130 | 335961 | 10.00 | ppbV | | -0.014 |
| 39) 1,4-Difluorobenzene (IS) | 5.444 | 114 | 1366548 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 1287551 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1031937 | 9.01 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 1.451 | 41 | 5709 | 0.25 | ppbV | | 95 |
| 3) Dichlorodifluoromethane | 1.499 | 85 | 13581 | 0.18 | ppbV | # | 83 |
| 4) 1,2-Dichlorotetrafluor... | 1.619 | 85 | 20971 | 0.19 | ppbV | | 99 |
| 5) n-Butane | 1.702 | 43 | 10916 | 0.20 | ppbV | # | 85 |
| 6) Chloromethane | 1.684 | 52 | 641 | 0.16 | ppbV | | 65 |
| 7) Vinyl chloride | 1.753 | 62 | 5046 | 0.16 | ppbV | # | 50 |
| 8) 1,3-Butadiene | 1.760 | 39 | 6239 | 0.22 | ppbV | | 75 |
| 9) Bromomethane | 2.059 | 94 | 3266 | 0.12 | ppbV | | 66 |
| 10) Chloroethane | 2.168 | 64 | 1724 | 0.10 | ppbV | | 80 |
| 11) Vinyl bromide | 2.261 | 106 | 3625 | 0.11 | ppbV | | 95 |
| 12) Trichlorofluoromethane | 2.287 | 101 | 19370 | 0.20 | ppbV | | 97 |
| 13) Ethanol | 2.654 | 45 | 1944 | 0.20 | ppbV | # | 47 |
| 14) 1,1-Dichloroethene | 2.708 | 61 | 9877 | 0.15 | ppbV | | 99 |
| 15) Carbon disulfide | 2.728 | 76 | 17305 | 0.16 | ppbV | | 100 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.750 | 101 | 20772 | 0.22 | ppbV | | 98 |
| 17) Acrolein | 2.969 | 56 | 2586 | 0.18 | ppbV | # | 42 |
| 18) Allyl chloride | 3.084 | 76 | 2500 | 0.14 | ppbV | | 100 |
| 19) Isopropanol | 3.094 | 45 | 9669 | 0.14 | ppbV | # | 84 |
| 20) Methylene chloride | 3.178 | 49 | 12526 | 0.34 | ppbV | | 92 |
| 21) Acetone | 3.194 | 43 | 10805 | 0.21 | ppbV | # | 83 |
| 22) trans-1,2-Dichloroethene | 3.306 | 61 | 10268 | 0.17 | ppbV | | 100 |
| 23) n-Pentane | 3.393 | 43 | 16132 | 0.20 | ppbV | | 92 |
| 24) n-Hexane | 3.380 | 57 | 23439 | 0.22 | ppbV | | 95 |
| 25) Methyl tert-butyl ether | 3.393 | 73 | 26157 | 0.20 | ppbV | | 89 |
| 26) Tert-butyl alcohol | 3.445 | 59 | 17620 | 0.20 | ppbV | | 100 |
| 27) 1,1-Dichloroethane | 3.792 | 63 | 15876 | 0.20 | ppbV | | 91 |
| 28) cis-1,2-Dichloroethene | 4.219 | 61 | 9833 | 0.17 | ppbV | | 98 |
| 29) Cyclohexane | 4.396 | 56 | 15483 | 0.21 | ppbV | | 99 |
| 30) Chloroform | 4.445 | 83 | 16203 | 0.17 | ppbV | | 96 |
| 31) Ethyl acetate | 4.535 | 61 | 2253 | 0.14 | ppbV | | 88 |
| 32) Carbon tetrachloride | 4.563 | 117 | 22109 | 0.20 | ppbV | | 100 |
| 33) Tetrahydrofuran | 4.570 | 42 | 10856 | 0.21 | ppbV | | 87 |
| 34) 1,1,1-Trichloroethane | 4.615 | 97 | 18169 | 0.19 | ppbV | | 97 |
| 35) Methyl ethyl ketone | 4.676 | 43 | 16932 | 0.20 | ppbV | | 91 |
| 36) n-Heptane | 4.911 | 43 | 19030 | 0.20 | ppbV | | 92 |
| 37) Benzene | 4.920 | 78 | 26320 | 0.19 | ppbV | | 98 |
| 38) 1,2-Dichloroethane | 5.078 | 62 | 9608 | 0.16 | ppbV | | 97 |
| 40) Trichloroethene | 5.428 | 130 | 10418 | 0.17 | ppbV | | 93 |
| 41) 2,2,4-Trimethylpentane | 4.827 | 57 | 35716 | 0.20 | ppbV | | 97 |
| 42) 1,2-Dichloropropane | 5.882 | 63 | 11430 | 0.21 | ppbV | | 90 |
| 43) Bromodichloromethane | 5.940 | 83 | 18430 | 0.20 | ppbV | | 98 |
| 44) Methyl methacrylate | 6.081 | 41 | 12606 | 0.19 | ppbV | | 96 |
| 45) 1,4-Dioxane | 6.116 | 88 | 6852 | 0.21 | ppbV | | 97 |
| 46) cis-1,3-Dichloropropene | 6.528 | 75 | 16642 | 0.20 | ppbV | | 95 |
| 47) Toluene | 6.766 | 91 | 36156 | 0.18 | ppbV | | 100 |
| 48) Methyl isobutyl ketone | 7.136 | 43 | 22603 | 0.18 | ppbV | | 98 |
| 49) Tetrachloroethene | 7.155 | 166 | 16259 | 0.19 | ppbV | | 100 |
| 50) trans-1,3-Dichloropropene | 7.174 | 75 | 13916 | 0.17 | ppbV | | 98 |
| 51) 1,1,2-Trichloroethane | 7.332 | 97 | 11763 | 0.17 | ppbV | | 94 |

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4132std05.D
Acq On : 10 Oct 2023 10:40 am
Operator : jjw
Sample : 0.2 ppbv standard
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

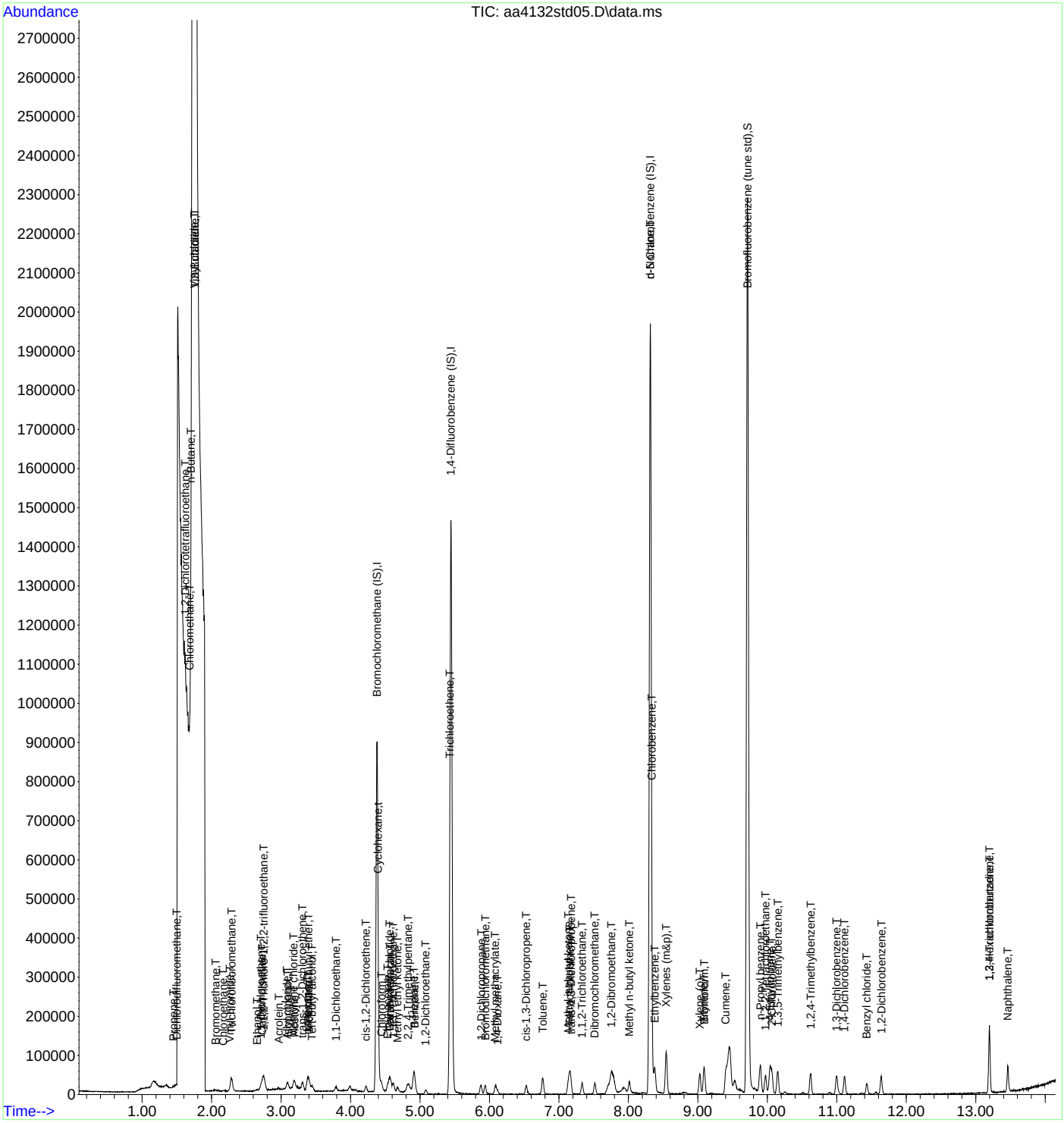
Quant Time: Oct 10 15:08:52 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:03:48 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.515 | 129 | 19465 | 0.17 | ppbV | | 100 |
| 53) 1,2-Dibromoethane | 7.753 | 107 | 15790 | 0.16 | ppbV | | 99 |
| 54) Methyl n-butyl ketone | 8.014 | 43 | 21755 | 0.18 | ppbV | | 91 |
| 56) n-Nonane | 8.316 | 43 | 26498 | 0.20 | ppbV | | 95 |
| 57) Chlorobenzene | 8.335 | 112 | 27757 | 0.21 | ppbV | # | 47 |
| 58) Ethylbenzene | 8.380 | 91 | 51133 | 0.21 | ppbV | | 99 |
| 59) Xylenes (m&p) | 8.544 | 91 | 76173 | 0.43 | ppbV | | 98 |
| 60) Xylene (o) | 9.026 | 91 | 40935 | 0.21 | ppbV | | 95 |
| 61) Styrene | 9.087 | 104 | 24712 | 0.18 | ppbV | | 97 |
| 62) Bromoform | 9.094 | 173 | 18307 | 0.19 | ppbV | | 99 |
| 63) Cumene | 9.399 | 105 | 49138 | 0.19 | ppbV | | 100 |
| 65) n-Propyl benzene | 9.901 | 91 | 68920 | 0.21 | ppbV | | 97 |
| 66) 1,1,2,2-Tetrachloroethane | 9.975 | 83 | 28157 | 0.21 | ppbV | | 96 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 57273 | 0.20 | ppbV | | 99 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 45637 | 0.21 | ppbV | | 98 |
| 69) 1,3,5-Trimethylbenzene | 10.152 | 105 | 42479 | 0.18 | ppbV | | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 40083 | 0.17 | ppbV | | 96 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 29481 | 0.21 | ppbV | | 95 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 25984 | 0.18 | ppbV | | 99 |
| 73) Benzyl chloride | 11.428 | 91 | 29858 | 0.14 | ppbV | | 95 |
| 74) 1,2-Dichlorobenzene | 11.644 | 146 | 24649 | 0.18 | ppbV | | 99 |
| 75) 1,3-Hexachlorobutadiene | 13.197 | 225 | 20901 | 0.23 | ppbV | | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.197 | 180 | 23485 | 0.22 | ppbV | | 97 |
| 77) Naphthalene | 13.460 | 128 | 50770 | 0.21 | ppbV | | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4132std05.D
Acq On : 10 Oct 2023 10:40 am
Operator : jjw
Sample : 0.2 ppbv standard
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 10 15:08:52 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:03:48 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4133std04.D
Acq On : 10 Oct 2023 11:46 am
Operator : jjw
Sample : 2.0 ppbv standard
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 10 15:14:52 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.378 | 130 | 266219 | 10.00 | ppbV | -0.016 |
| 39) 1,4-Difluorobenzene (IS) | 5.445 | 114 | 1004403 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.313 | 117 | 1028709 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.715 | 95 | 866440 | 9.66 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.454 | 41 | 39983 | 2.16 | ppbV | 100 |
| 3) Dichlorodifluoromethane | 1.496 | 85 | 111937 | 1.90 | ppbV | 99 |
| 4) 1,2-Dichlorotetrafluor... | 1.613 | 85 | 174894 | 2.04 | ppbV | 97 |
| 5) n-Butane | 1.699 | 43 | 92630 | 2.18 | ppbV | 97 |
| 6) Chloromethane | 1.767 | 52 | 6226 | 2.11 | ppbV | 99 |
| 7) Vinyl chloride | 1.761 | 62 | 48102 | 1.99 | ppbV | 99 |
| 8) 1,3-Butadiene | 1.764 | 39 | 46700 | 2.07 | ppbV | 98 |
| 9) Bromomethane | 2.046 | 94 | 37014 | 1.90 | ppbV | 98 |
| 10) Chloroethane | 2.172 | 64 | 25446 | 2.01 | ppbV | 97 |
| 11) Vinyl bromide | 2.262 | 106 | 46443 | 1.95 | ppbV | 99 |
| 12) Trichlorofluoromethane | 2.284 | 101 | 152810 | 2.05 | ppbV | 98 |
| 13) Ethanol | 2.641 | 45 | 14500 | 1.86 | ppbV | 99 |
| 14) 1,1-Dichloroethene | 2.706 | 61 | 82725 | 1.67 | ppbV | 100 |
| 15) Carbon disulfide | 2.728 | 76 | 146663 | 1.80 | ppbV | 96 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.747 | 101 | 175871 | 2.34 | ppbV | 99 |
| 17) Acrolein | 2.963 | 56 | 17616 | 1.58 | ppbV | 96 |
| 18) Allyl chloride | 3.091 | 76 | 24227 | 1.82 | ppbV | 100 |
| 19) Isopropanol | 3.088 | 45 | 79453 | 1.49 | ppbV | 96 |
| 20) Methylene chloride | 3.178 | 49 | 55923 | 1.71 | ppbV | 98 |
| 21) Acetone | 3.188 | 43 | 70498 | 1.76 | ppbV | 98 |
| 22) trans-1,2-Dichloroethene | 3.307 | 61 | 78613 | 1.71 | ppbV | 100 |
| 23) n-Pentane | 3.390 | 43 | 132521 | 2.14 | ppbV | 97 |
| 24) n-Hexane | 3.387 | 57 | 176979 | 2.11 | ppbV | 97 |
| 25) Methyl tert-butyl ether | 3.390 | 73 | 242041 | 2.35 | ppbV | 92 |
| 26) Tert-butyl alcohol | 3.442 | 59 | 154807 | 2.23 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.789 | 63 | 106902 | 1.73 | ppbV | 99 |
| 28) cis-1,2-Dichloroethene | 4.217 | 61 | 78716 | 1.80 | ppbV | 98 |
| 29) Cyclohexane | 4.397 | 56 | 133883 | 2.28 | ppbV | 98 |
| 30) Chloroform | 4.439 | 83 | 134737 | 1.89 | ppbV | 98 |
| 31) Ethyl acetate | 4.532 | 61 | 22449 | 1.94 | ppbV | 99 |
| 32) Carbon tetrachloride | 4.561 | 117 | 183055 | 2.17 | ppbV | 99 |
| 33) Tetrahydrofuran | 4.564 | 42 | 77218 | 1.93 | ppbV | 99 |
| 34) 1,1,1-Trichloroethane | 4.612 | 97 | 159351 | 2.15 | ppbV | 97 |
| 35) Methyl ethyl ketone | 4.670 | 43 | 121249 | 1.86 | ppbV | 100 |
| 36) n-Heptane | 4.905 | 43 | 151248 | 2.06 | ppbV | 99 |
| 37) Benzene | 4.921 | 78 | 216088 | 2.04 | ppbV | 99 |
| 38) 1,2-Dichloroethane | 5.079 | 62 | 86250 | 1.95 | ppbV | 100 |
| 40) Trichloroethene | 5.423 | 130 | 93973 | 2.11 | ppbV | 100 |
| 41) 2,2,4-Trimethylpentane | 4.828 | 57 | 337914 | 2.58 | ppbV | 98 |
| 42) 1,2-Dichloropropane | 5.873 | 63 | 89006 | 2.28 | ppbV | 98 |
| 43) Bromodichloromethane | 5.937 | 83 | 157497 | 2.39 | ppbV | 99 |
| 44) Methyl methacrylate | 6.082 | 41 | 102545 | 2.16 | ppbV | 96 |
| 45) 1,4-Dioxane | 6.107 | 88 | 55879 | 2.33 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.529 | 75 | 132030 | 2.18 | ppbV | 98 |
| 47) Toluene | 6.767 | 91 | 315155 | 2.23 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.133 | 43 | 201872 | 2.28 | ppbV | 98 |
| 49) Tetrachloroethene | 7.152 | 166 | 137965 | 2.27 | ppbV | 99 |
| 50) trans-1,3-Dichloropropene | 7.175 | 75 | 126648 | 2.16 | ppbV | 100 |
| 51) 1,1,2-Trichloroethane | 7.336 | 97 | 103047 | 2.16 | ppbV | 99 |

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4133std04.D
Acq On : 10 Oct 2023 11:46 am
Operator : jjw
Sample : 2.0 ppbv standard
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

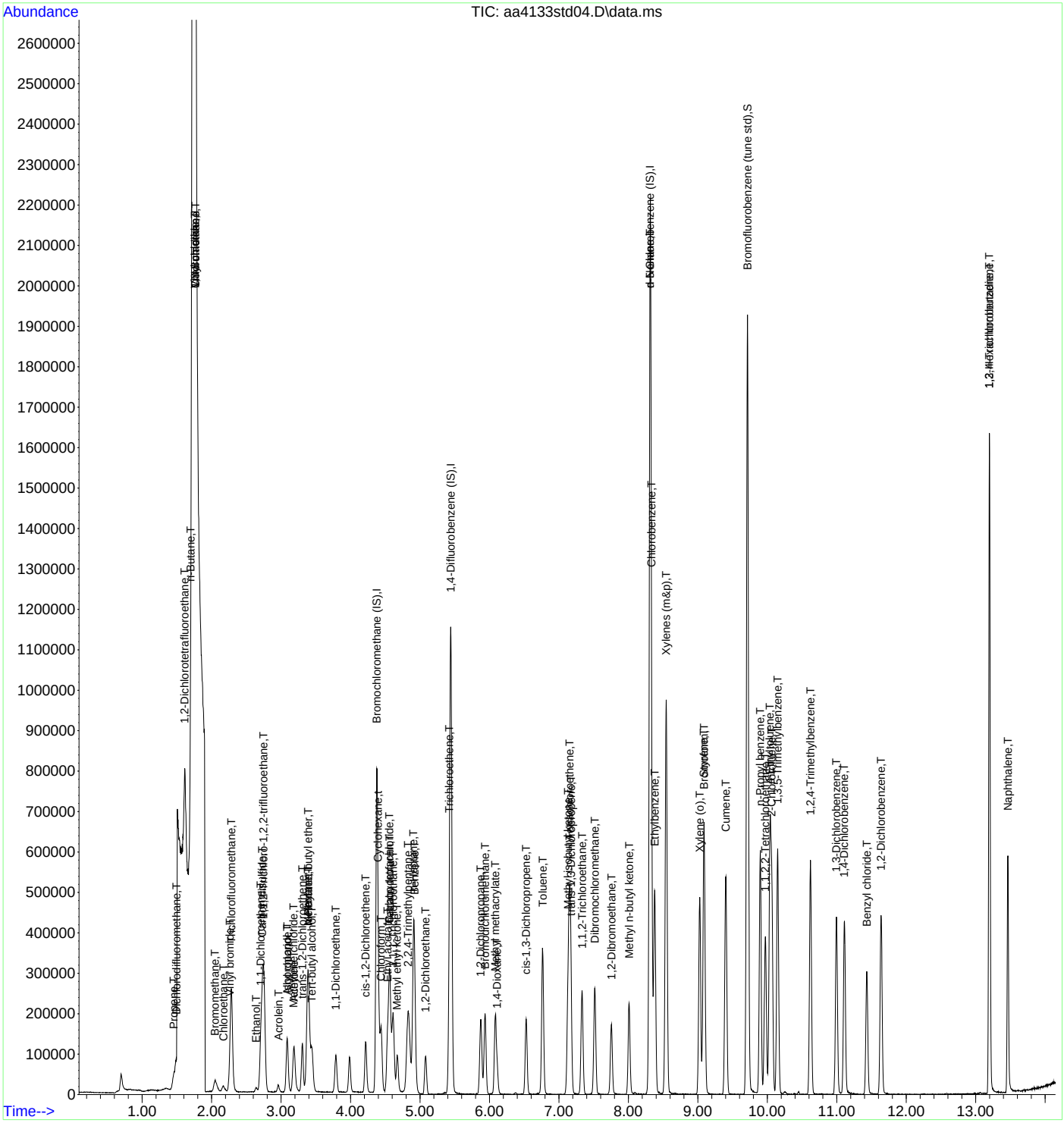
Quant Time: Oct 10 15:14:52 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.516 | 129 | 175087 | 2.20 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.757 | 107 | 145737 | 2.11 | ppbV | 99 |
| 54) Methyl n-butyl ketone | 8.011 | 43 | 176926 | 2.07 | ppbV | 99 |
| 56) n-Nonane | 8.313 | 43 | 243566 | 2.39 | ppbV | 99 |
| 57) Chlorobenzene | 8.332 | 112 | 239887 | 2.34 | ppbV | 96 |
| 58) Ethylbenzene | 8.381 | 91 | 452392 | 2.39 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.545 | 91 | 704842 | 5.02 | ppbV | 98 |
| 60) Xylene (o) | 9.027 | 91 | 367407 | 2.40 | ppbV | 99 |
| 61) Styrene | 9.088 | 104 | 243368 | 2.32 | ppbV | 99 |
| 62) Bromoform | 9.091 | 173 | 168245 | 2.23 | ppbV | 100 |
| 63) Cumene | 9.403 | 105 | 477213 | 2.38 | ppbV | 99 |
| 65) n-Propyl benzene | 9.898 | 91 | 606010 | 2.32 | ppbV | 98 |
| 66) 1,1,2,2-Tetrachloroethane | 9.972 | 83 | 262772 | 2.45 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.037 | 105 | 498880 | 2.25 | ppbV | 98 |
| 68) 2-Chlorotoluene | 10.062 | 91 | 410155 | 2.34 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.149 | 105 | 421510 | 2.37 | ppbV | 100 |
| 70) 1,2,4-Trimethylbenzene | 10.622 | 105 | 417786 | 2.35 | ppbV | 99 |
| 71) 1,3-Dichlorobenzene | 10.995 | 146 | 230016 | 2.11 | ppbV | 99 |
| 72) 1,4-Dichlorobenzene | 11.107 | 146 | 221287 | 2.02 | ppbV | 99 |
| 73) Benzyl chloride | 11.432 | 91 | 295275 | 1.88 | ppbV | 98 |
| 74) 1,2-Dichlorobenzene | 11.638 | 146 | 234385 | 2.22 | ppbV | 99 |
| 75) 1,3-Hexachlorobutadiene | 13.197 | 225 | 177745 | 2.42 | ppbV | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.197 | 180 | 182140 | 2.15 | ppbV | 99 |
| 77) Naphthalene | 13.464 | 128 | 391079 | 2.02 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4133std04.D
Acq On : 10 Oct 2023 11:46 am
Operator : jjw
Sample : 2.0 ppbv standard
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 10 15:14:52 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4134std03.D
Acq On : 10 Oct 2023 12:21 pm
Operator : jjw
Sample : 10 ppbv standard
Misc : EB0103704
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 10 15:20:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.394 | 130 | 393970 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.452 | 114 | 1695876 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 1964329 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.715 | 95 | 1708242 | 9.98 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.487 | 41 | 258254 | 9.44 | ppbV | 100 |
| 3) Dichlorodifluoromethane | 1.523 | 85 | 905524 | 10.37 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.644 | 85 | 1136761 | 8.96 | ppbV | 100 |
| 5) n-Butane | 1.730 | 43 | 657868 | 10.46 | ppbV | 100 |
| 6) Chloromethane | 1.792 | 52 | 50221 | 11.51 | ppbV | 98 |
| 7) Vinyl chloride | 1.781 | 62 | 385978 | 10.81 | ppbV | 100 |
| 8) 1,3-Butadiene | 1.792 | 39 | 337213 | 10.11 | ppbV | 100 |
| 9) Bromomethane | 2.082 | 94 | 295814 | 10.27 | ppbV | 100 |
| 10) Chloroethane | 2.195 | 64 | 209472 | 11.19 | ppbV | 100 |
| 11) Vinyl bromide | 2.288 | 106 | 363736 | 10.31 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.310 | 101 | 1152906 | 10.45 | ppbV | 100 |
| 13) Ethanol | 2.667 | 45 | 110171 | 9.55 | ppbV | 100 |
| 14) 1,1-Dichloroethene | 2.728 | 61 | 796558 | 10.88 | ppbV | 100 |
| 15) Carbon disulfide | 2.751 | 76 | 1360498 | 11.29 | ppbV | 100 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.776 | 101 | 1083429 | 9.75 | ppbV | 100 |
| 17) Acrolein | 2.982 | 56 | 169981 | 10.33 | ppbV | 100 |
| 18) Allyl chloride | 3.111 | 76 | 227552 | 11.52 | ppbV | 100 |
| 19) Isopropanol | 3.108 | 45 | 729204 | 9.23 | ppbV | 100 |
| 20) Methylene chloride | 3.204 | 49 | 433980 | 8.96 | ppbV | 100 |
| 21) Acetone | 3.211 | 43 | 654299 | 11.01 | ppbV | 100 |
| 22) trans-1,2-Dichloroethene | 3.326 | 61 | 780121 | 11.48 | ppbV | 100 |
| 23) n-Pentane | 3.407 | 43 | 924569 | 10.09 | ppbV | 100 |
| 24) n-Hexane | 3.403 | 57 | 1285851 | 10.35 | ppbV | 100 |
| 25) Methyl tert-butyl ether | 3.410 | 73 | 1606753 | 10.53 | ppbV | 100 |
| 26) Tert-butyl alcohol | 3.465 | 59 | 1133398 | 11.03 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.805 | 63 | 942517 | 10.30 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.230 | 61 | 719414 | 11.15 | ppbV | 99 |
| 29) Cyclohexane | 4.413 | 56 | 918448 | 10.59 | ppbV | 100 |
| 30) Chloroform | 4.455 | 83 | 1125163 | 10.67 | ppbV | 100 |
| 31) Ethyl acetate | 4.538 | 61 | 191456 | 11.17 | ppbV | 100 |
| 32) Carbon tetrachloride | 4.574 | 117 | 1320797 | 10.56 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.571 | 42 | 644824 | 10.88 | ppbV | 100 |
| 34) 1,1,1-Trichloroethane | 4.625 | 97 | 1145085 | 10.46 | ppbV | 100 |
| 35) Methyl ethyl ketone | 4.680 | 43 | 1033883 | 10.75 | ppbV | 100 |
| 36) n-Heptane | 4.918 | 43 | 1246184 | 11.45 | ppbV | 100 |
| 37) Benzene | 4.931 | 78 | 1617158 | 10.34 | ppbV | 100 |
| 38) 1,2-Dichloroethane | 5.091 | 62 | 715639 | 10.92 | ppbV | 100 |
| 40) Trichloroethene | 5.432 | 130 | 747440 | 9.96 | ppbV | 100 |
| 41) 2,2,4-Trimethylpentane | 4.844 | 57 | 2224941 | 10.07 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.882 | 63 | 729348 | 11.06 | ppbV | 100 |
| 43) Bromodichloromethane | 5.944 | 83 | 1277100 | 11.49 | ppbV | 100 |
| 44) Methyl methacrylate | 6.088 | 41 | 926458 | 11.58 | ppbV | 100 |
| 45) 1,4-Dioxane | 6.114 | 88 | 481882 | 11.92 | ppbV | 100 |
| 46) cis-1,3-Dichloropropene | 6.532 | 75 | 1178257 | 11.52 | ppbV | 100 |
| 47) Toluene | 6.770 | 91 | 2718261 | 11.40 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.133 | 43 | 1751107 | 11.69 | ppbV | 100 |
| 49) Tetrachloroethene | 7.159 | 166 | 1202779 | 11.70 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.175 | 75 | 1191758 | 12.01 | ppbV | 100 |
| 51) 1,1,2-Trichloroethane | 7.336 | 97 | 904123 | 11.23 | ppbV | 100 |

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4134std03.D
Acq On : 10 Oct 2023 12:21 pm
Operator : jjw
Sample : 10 ppbv standard
Misc : EB0103704
ALS Vial : 4 Sample Multiplier: 1

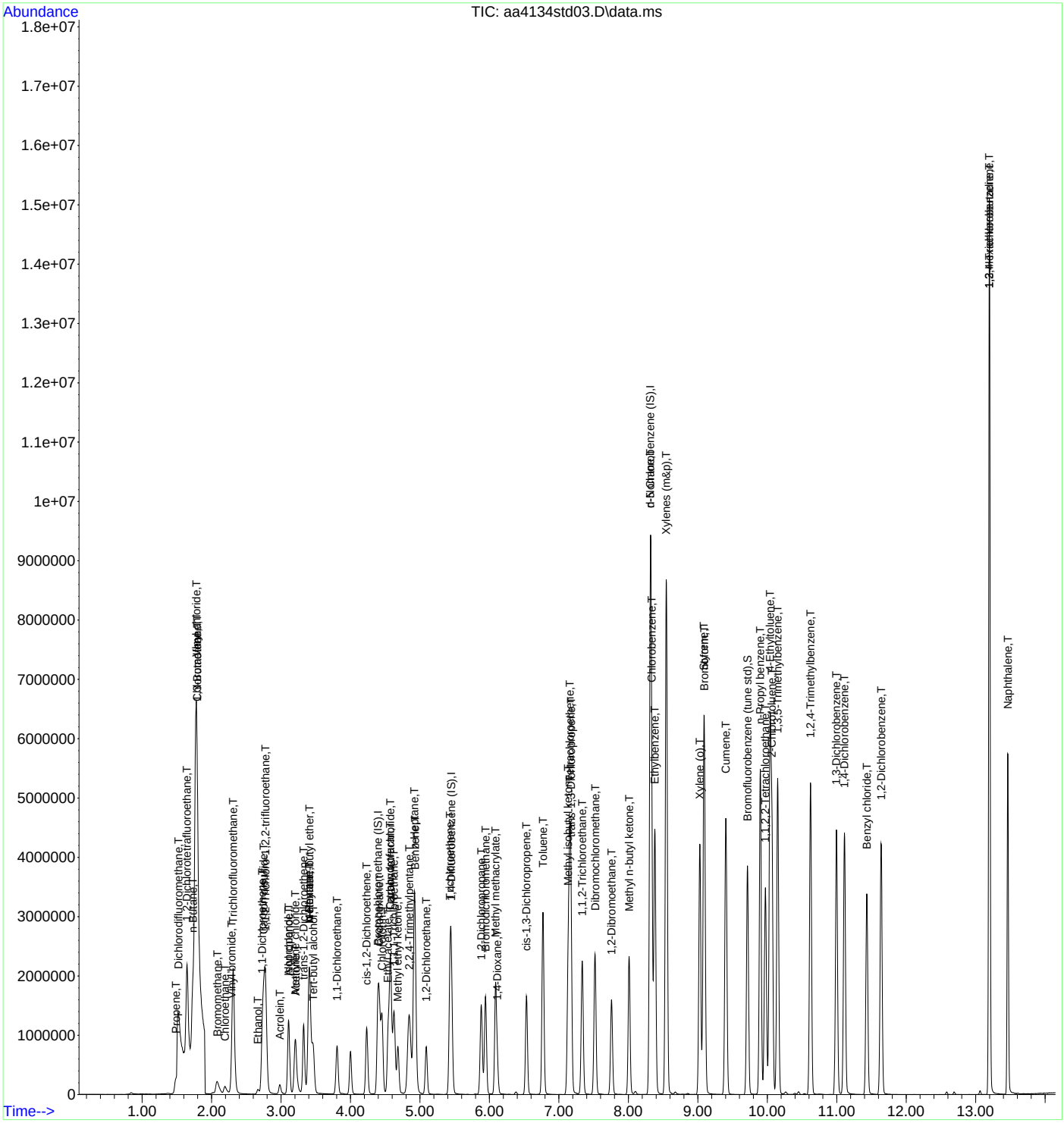
Quant Time: Oct 10 15:20:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.522 | 129 | 1584449 | 11.81 | ppbV | 100 |
| 53) 1,2-Dibromoethane | 7.757 | 107 | 1340384 | 11.51 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.011 | 43 | 1785511 | 12.39 | ppbV | 100 |
| 56) n-Nonane | 8.316 | 43 | 2220175 | 11.39 | ppbV | 100 |
| 57) Chlorobenzene | 8.336 | 112 | 2157593 | 11.02 | ppbV | 100 |
| 58) Ethylbenzene | 8.381 | 91 | 4038783 | 11.16 | ppbV | 100 |
| 59) Xylenes (m&p) | 8.545 | 91 | 6199781 | 23.12 | ppbV | 100 |
| 60) Xylene (o) | 9.027 | 91 | 3172411 | 10.84 | ppbV | 100 |
| 61) Styrene | 9.088 | 104 | 2368407 | 11.82 | ppbV | 100 |
| 62) Bromoform | 9.095 | 173 | 1652936 | 11.49 | ppbV | 100 |
| 63) Cumene | 9.403 | 105 | 4108750 | 10.74 | ppbV | 100 |
| 65) n-Propyl benzene | 9.898 | 91 | 5536013 | 11.09 | ppbV | 100 |
| 66) 1,1,2,2-Tetrachloroethane | 9.972 | 83 | 2329432 | 11.37 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.040 | 105 | 4675293 | 11.06 | ppbV | 100 |
| 68) 2-Chlorotoluene | 10.066 | 91 | 3642460 | 10.86 | ppbV | 100 |
| 69) 1,3,5-Trimethylbenzene | 10.149 | 105 | 3757367 | 11.06 | ppbV | 100 |
| 70) 1,2,4-Trimethylbenzene | 10.622 | 105 | 3786813 | 11.15 | ppbV | 100 |
| 71) 1,3-Dichlorobenzene | 10.995 | 146 | 2289894 | 11.01 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.111 | 146 | 2273891 | 10.87 | ppbV | 100 |
| 73) Benzyl chloride | 11.432 | 91 | 3179639 | 10.59 | ppbV | 100 |
| 74) 1,2-Dichlorobenzene | 11.641 | 146 | 2172244 | 10.77 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.197 | 225 | 1532545 | 10.95 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.197 | 180 | 1768989 | 10.93 | ppbV | 100 |
| 77) Naphthalene | 13.464 | 128 | 3720647 | 10.05 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4134std03.D
Acq On : 10 Oct 2023 12:21 pm
Operator : jjw
Sample : 10 ppbv standard
Misc : EB0103704
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 10 15:20:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4135std02.D
Acq On : 10 Oct 2023 12:55 pm
Operator : jjw
Sample : 20 ppbv standard
Misc : EB0103704
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 10 15:20:48 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.397 | 130 | 363381 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.455 | 114 | 1661895 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 1933627 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.715 | 95 | 1722328 | 10.22 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.490 | 41 | 515568 | 20.44 | ppbV | 98 |
| 3) Dichlorodifluoromethane | 1.530 | 85 | 1841081 | 22.86 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.650 | 85 | 2249237 | 19.23 | ppbV | 99 |
| 5) n-Butane | 1.730 | 43 | 1305900 | 22.50 | ppbV | 99 |
| 6) Chloromethane | 1.788 | 52 | 98143 | 24.39 | ppbV | 93 |
| 7) Vinyl chloride | 1.781 | 62 | 772248 | 23.46 | ppbV | 100 |
| 8) 1,3-Butadiene | 1.795 | 39 | 652429 | 21.21 | ppbV | 98 |
| 9) Bromomethane | 2.085 | 94 | 591691 | 22.26 | ppbV | 98 |
| 10) Chloroethane | 2.194 | 64 | 421571 | 24.42 | ppbV | 99 |
| 11) Vinyl bromide | 2.294 | 106 | 747200 | 22.97 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.313 | 101 | 2343589 | 23.04 | ppbV | 100 |
| 13) Ethanol | 2.667 | 45 | 218329 | 20.52 | ppbV | 96 |
| 14) 1,1-Dichloroethene | 2.735 | 61 | 1612191 | 23.88 | ppbV | 100 |
| 15) Carbon disulfide | 2.754 | 76 | 2664558 | 23.98 | ppbV | 100 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.776 | 101 | 2148248 | 20.97 | ppbV | 100 |
| 17) Acrolein | 2.989 | 56 | 325182 | 21.42 | ppbV | 99 |
| 18) Allyl chloride | 3.111 | 76 | 456662 | 25.07 | ppbV | 100 |
| 19) Isopropanol | 3.111 | 45 | 1457678 | 20.00 | ppbV | 99 |
| 20) Methylene chloride | 3.204 | 49 | 879522 | 19.69 | ppbV | 98 |
| 21) Acetone | 3.214 | 43 | 1252029 | 22.84 | ppbV | 99 |
| 22) trans-1,2-Dichloroethene | 3.326 | 61 | 1573792 | 25.11 | ppbV | 99 |
| 23) n-Pentane | 3.407 | 43 | 1811231 | 21.44 | ppbV | 99 |
| 24) n-Hexane | 3.407 | 57 | 2518540 | 21.99 | ppbV | 100 |
| 25) Methyl tert-butyl ether | 3.410 | 73 | 3154053 | 22.42 | ppbV | 100 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 2254575 | 23.80 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 1901162 | 22.53 | ppbV | 99 |
| 28) cis-1,2-Dichloroethene | 4.236 | 61 | 1445410 | 24.28 | ppbV | 99 |
| 29) Cyclohexane | 4.413 | 56 | 1783891 | 22.29 | ppbV | 99 |
| 30) Chloroform | 4.455 | 83 | 2301846 | 23.67 | ppbV | 99 |
| 31) Ethyl acetate | 4.542 | 61 | 386835 | 24.46 | ppbV | 99 |
| 32) Carbon tetrachloride | 4.577 | 117 | 2607121 | 22.61 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.574 | 42 | 1283380 | 23.48 | ppbV | 99 |
| 34) 1,1,1-Trichloroethane | 4.625 | 97 | 2272798 | 22.50 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.683 | 43 | 2094715 | 23.60 | ppbV | 100 |
| 36) n-Heptane | 4.918 | 43 | 2363613 | 23.53 | ppbV | 100 |
| 37) Benzene | 4.934 | 78 | 3240471 | 22.45 | ppbV | 100 |
| 38) 1,2-Dichloroethane | 5.091 | 62 | 1451918 | 24.03 | ppbV | 100 |
| 40) Trichloroethene | 5.432 | 130 | 1508747 | 20.52 | ppbV | 98 |
| 41) 2,2,4-Trimethylpentane | 4.841 | 57 | 4438426 | 20.50 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.886 | 63 | 1448431 | 22.41 | ppbV | 99 |
| 43) Bromodichloromethane | 5.943 | 83 | 2592041 | 23.80 | ppbV | 99 |
| 44) Methyl methacrylate | 6.088 | 41 | 1821528 | 23.23 | ppbV | 99 |
| 45) 1,4-Dioxane | 6.114 | 88 | 966504 | 24.40 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.535 | 75 | 2338061 | 23.33 | ppbV | 100 |
| 47) Toluene | 6.773 | 91 | 5305706 | 22.72 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.133 | 43 | 3350206 | 22.82 | ppbV | 99 |
| 49) Tetrachloroethene | 7.162 | 166 | 2379736 | 23.63 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.175 | 75 | 2387243 | 24.55 | ppbV | 98 |
| 51) 1,1,2-Trichloroethane | 7.339 | 97 | 1817644 | 23.04 | ppbV | 100 |

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4135std02.D
Acq On : 10 Oct 2023 12:55 pm
Operator : jjw
Sample : 20 ppbv standard
Misc : EB0103704
ALS Vial : 5 Sample Multiplier: 1

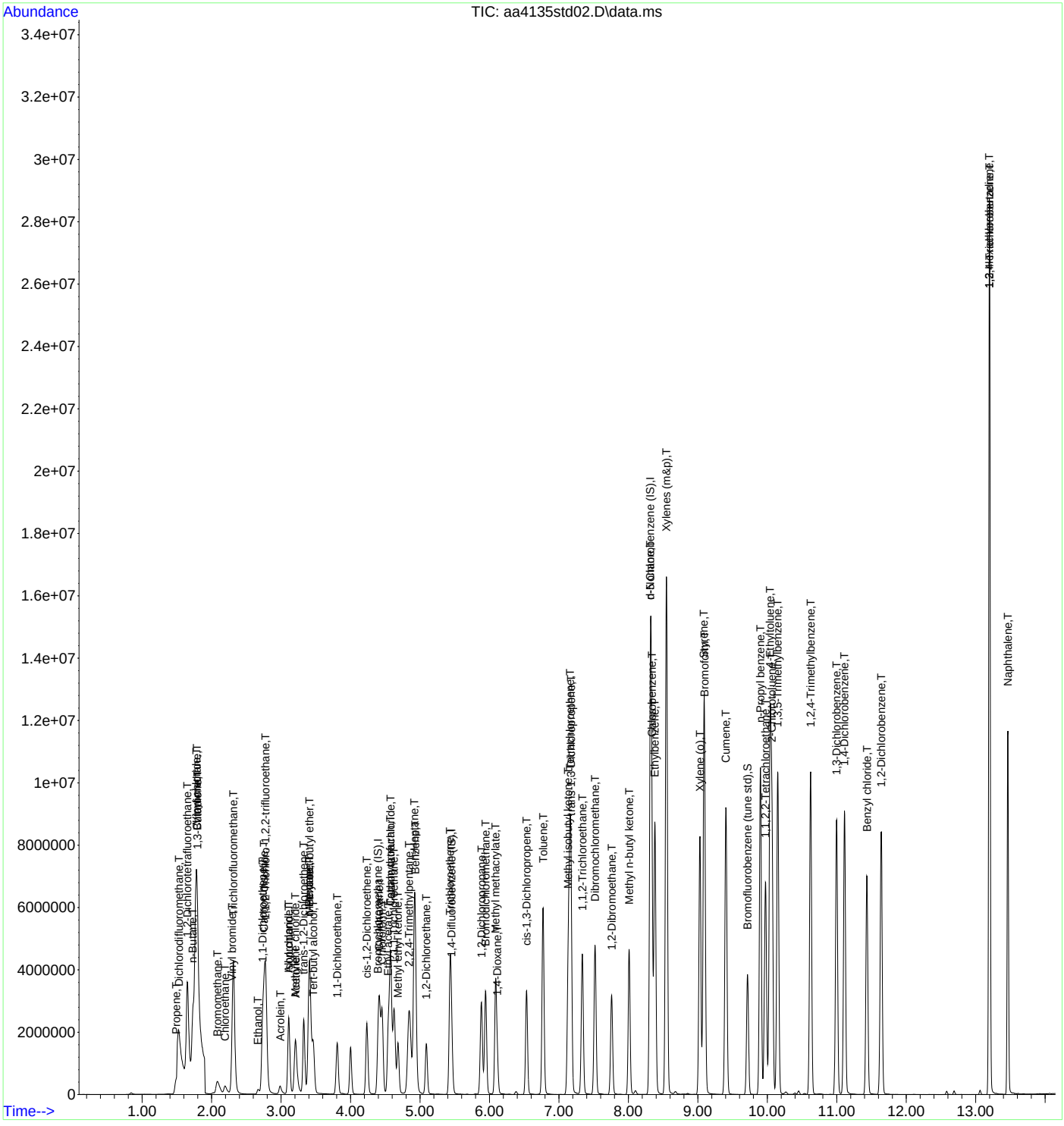
Quant Time: Oct 10 15:20:48 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.522 | 129 | 3189477 | 24.27 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.760 | 107 | 2695314 | 23.62 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.011 | 43 | 3500354 | 24.80 | ppbV | 100 |
| 56) n-Nonane | 8.316 | 43 | 4196367 | 21.87 | ppbV | 99 |
| 57) Chlorobenzene | 8.339 | 112 | 4231170 | 21.95 | ppbV | 100 |
| 58) Ethylbenzene | 8.381 | 91 | 7813775 | 21.93 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.548 | 91 | 11753861 | 44.52 | ppbV | 98 |
| 60) Xylene (o) | 9.030 | 91 | 6215156 | 21.57 | ppbV | 100 |
| 61) Styrene | 9.088 | 104 | 4654583 | 23.60 | ppbV | 99 |
| 62) Bromoform | 9.098 | 173 | 3352006 | 23.67 | ppbV | 99 |
| 63) Cumene | 9.403 | 105 | 7994834 | 21.23 | ppbV | 99 |
| 65) n-Propyl benzene | 9.901 | 91 | 10677156 | 21.73 | ppbV | 99 |
| 66) 1,1,2,2-Tetrachloroethane | 9.975 | 83 | 4583433 | 22.73 | ppbV | 99 |
| 67) 4-Ethyltoluene | 10.040 | 105 | 9079626 | 21.83 | ppbV | 99 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 7122967 | 21.58 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.149 | 105 | 7395052 | 22.11 | ppbV | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.625 | 105 | 7412335 | 22.17 | ppbV | 99 |
| 71) 1,3-Dichlorobenzene | 10.998 | 146 | 4641497 | 22.67 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 4645158 | 22.55 | ppbV | 100 |
| 73) Benzyl chloride | 11.435 | 91 | 6527364 | 22.08 | ppbV | 99 |
| 74) 1,2-Dichlorobenzene | 11.641 | 146 | 4361556 | 21.96 | ppbV | 99 |
| 75) 1,3-Hexachlorobutadiene | 13.197 | 225 | 2950129 | 21.41 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 3565503 | 22.37 | ppbV | 99 |
| 77) Naphthalene | 13.464 | 128 | 7448434 | 20.44 | ppbV | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4135std02.D
Acq On : 10 Oct 2023 12:55 pm
Operator : jjw
Sample : 20 ppbv standard
Misc : EB0103704
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 10 15:20:48 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4136std01.D
Acq On : 10 Oct 2023 2:05 pm
Operator : jjw
Sample : 40 ppbv standard
Misc : EB0103704
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 10 15:21:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.400 | 130 | 356266 | 10.00 | ppbV | | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.458 | 114 | 1769398 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 1970985 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.718 | 95 | 1881267 | 10.95 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 1.493 | 41 | 1166461 | 47.16 | ppbV | | 99 |
| 3) Dichlorodifluoromethane | 1.530 | 85 | 3976819 | 50.37 | ppbV | | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.654 | 85 | 4829984 | 42.11 | ppbV | | 100 |
| 5) n-Butane | 1.733 | 43 | 2669458 | 46.92 | ppbV | | 100 |
| 6) Chloromethane | 1.798 | 52 | 218685 | 55.44 | ppbV | # | 1 |
| 7) Vinyl chloride | 1.788 | 62 | 1703493 | 52.78 | ppbV | | 100 |
| 8) 1,3-Butadiene | 1.798 | 39 | 1380202 | 45.78 | ppbV | | 97 |
| 9) Bromomethane | 2.088 | 94 | 1297810 | 49.81 | ppbV | | 98 |
| 10) Chloroethane | 2.197 | 64 | 957066 | 56.55 | ppbV | | 99 |
| 11) Vinyl bromide | 2.294 | 106 | 1649730 | 51.72 | ppbV | | 99 |
| 12) Trichlorofluoromethane | 2.316 | 101 | 4982088 | 49.96 | ppbV | | 100 |
| 13) Ethanol | 2.670 | 45 | 542733 | 52.03 | ppbV | | 98 |
| 14) 1,1-Dichloroethene | 2.734 | 61 | 3420744 | 51.68 | ppbV | | 100 |
| 15) Carbon disulfide | 2.757 | 76 | 5570013 | 51.13 | ppbV | | 99 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.776 | 101 | 4651123 | 46.31 | ppbV | | 99 |
| 17) Acrolein | 2.991 | 56 | 704002 | 47.31 | ppbV | | 100 |
| 18) Allyl chloride | 3.114 | 76 | 960536 | 53.78 | ppbV | | 100 |
| 19) Isopropanol | 3.114 | 45 | 3040718 | 42.56 | ppbV | | 99 |
| 20) Methylene chloride | 3.204 | 49 | 2011731 | 45.94 | ppbV | | 99 |
| 21) Acetone | 3.217 | 43 | 2606931 | 48.51 | ppbV | | 99 |
| 22) trans-1,2-Dichloroethene | 3.329 | 61 | 3449388 | 56.15 | ppbV | | 99 |
| 23) n-Pentane | 3.409 | 43 | 4025985 | 48.61 | ppbV | | 99 |
| 24) n-Hexane | 3.409 | 57 | 5589811 | 49.78 | ppbV | | 100 |
| 25) Methyl tert-butyl ether | 3.409 | 73 | 6879864 | 49.87 | ppbV | | 99 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 4961423 | 53.42 | ppbV | | 100 |
| 27) 1,1-Dichloroethane | 3.811 | 63 | 4139076 | 50.03 | ppbV | | 98 |
| 28) cis-1,2-Dichloroethene | 4.236 | 61 | 3134852 | 53.71 | ppbV | | 99 |
| 29) Cyclohexane | 4.416 | 56 | 3885234 | 49.53 | ppbV | | 100 |
| 30) Chloroform | 4.454 | 83 | 4963958 | 52.07 | ppbV | | 99 |
| 31) Ethyl acetate | 4.541 | 61 | 819660 | 52.86 | ppbV | | 99 |
| 32) Carbon tetrachloride | 4.580 | 117 | 5580598 | 49.35 | ppbV | | 99 |
| 33) Tetrahydrofuran | 4.573 | 42 | 2658620 | 49.61 | ppbV | | 98 |
| 34) 1,1,1-Trichloroethane | 4.628 | 97 | 4872977 | 49.20 | ppbV | | 99 |
| 35) Methyl ethyl ketone | 4.686 | 43 | 4486611 | 51.57 | ppbV | | 99 |
| 36) n-Heptane | 4.921 | 43 | 4632338 | 47.05 | ppbV | | 99 |
| 37) Benzene | 4.933 | 78 | 6993711 | 49.43 | ppbV | | 100 |
| 38) 1,2-Dichloroethane | 5.094 | 62 | 3131902 | 52.87 | ppbV | | 100 |
| 40) Trichloroethene | 5.435 | 130 | 3316781 | 42.37 | ppbV | | 99 |
| 41) 2,2,4-Trimethylpentane | 4.843 | 57 | 9712768 | 42.14 | ppbV | | 98 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 3027090 | 43.98 | ppbV | | 99 |
| 43) Bromodichloromethane | 5.946 | 83 | 5494302 | 47.39 | ppbV | | 99 |
| 44) Methyl methacrylate | 6.088 | 41 | 3747387 | 44.88 | ppbV | | 99 |
| 45) 1,4-Dioxane | 6.114 | 88 | 2055391 | 48.74 | ppbV | | 98 |
| 46) cis-1,3-Dichloropropene | 6.535 | 75 | 4834720 | 45.30 | ppbV | | 99 |
| 47) Toluene | 6.773 | 91 | 10605745 | 42.65 | ppbV | | 98 |
| 48) Methyl isobutyl ketone | 7.133 | 43 | 6661468 | 42.63 | ppbV | | 99 |
| 49) Tetrachloroethene | 7.162 | 166 | 4858576 | 45.31 | ppbV | | 99 |
| 50) trans-1,3-Dichloropropene | 7.178 | 75 | 4856047 | 46.91 | ppbV | | 100 |
| 51) 1,1,2-Trichloroethane | 7.339 | 97 | 3819106 | 45.48 | ppbV | | 100 |

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4136std01.D
Acq On : 10 Oct 2023 2:05 pm
Operator : jjw
Sample : 40 ppbv standard
Misc : EB0103704
ALS Vial : 6 Sample Multiplier: 1

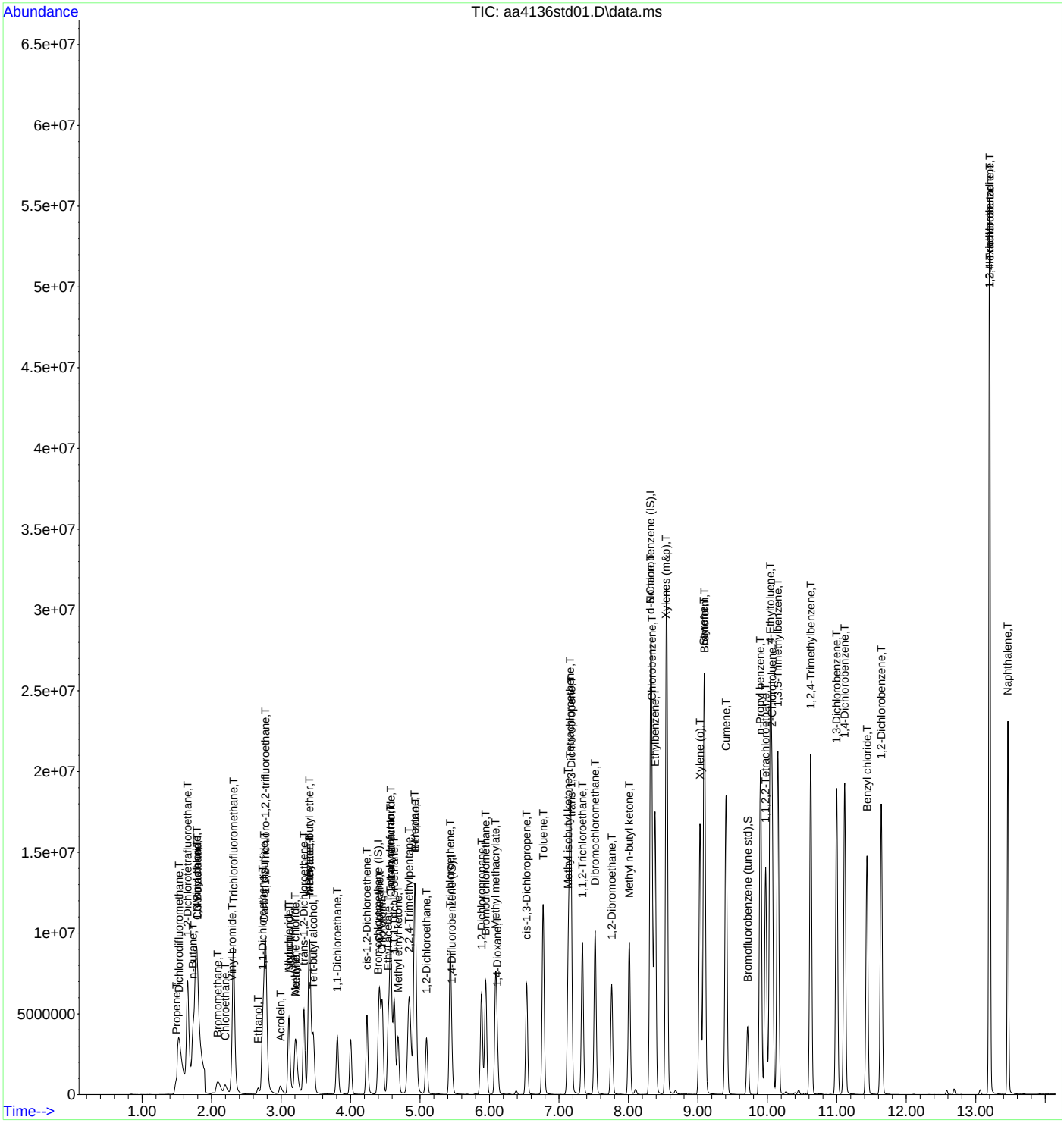
Quant Time: Oct 10 15:21:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.522 | 129 | 6730612 | 48.10 | ppbV | | 99 |
| 53) 1,2-Dibromoethane | 7.760 | 107 | 5679586 | 46.76 | ppbV | | 100 |
| 54) Methyl n-butyl ketone | 8.011 | 43 | 7194438 | 47.87 | ppbV | | 98 |
| 56) n-Nonane | 8.319 | 43 | 8278410 | 42.32 | ppbV | | 98 |
| 57) Chlorobenzene | 8.338 | 112 | 8642594 | 43.99 | ppbV | | 100 |
| 58) Ethylbenzene | 8.384 | 91 | 15502498 | 42.68 | ppbV | | 96 |
| 59) Xylenes (m&p) | 8.541 | 91 | 20852616 | 77.48 | ppbV | | 89 |
| 60) Xylene (o) | 9.030 | 91 | 12586480 | 42.86 | ppbV | | 98 |
| 61) Styrene | 9.088 | 104 | 9555594 | 47.52 | ppbV | | 98 |
| 62) Bromoform | 9.097 | 173 | 7098495 | 49.18 | ppbV | | 99 |
| 63) Cumene | 9.406 | 105 | 16006588 | 41.71 | ppbV | | 96 |
| 65) n-Propyl benzene | 9.898 | 91 | 19885132 | 39.70 | ppbV | | 93 |
| 66) 1,1,2,2-Tetrachloroethane | 9.975 | 83 | 9484025 | 46.14 | ppbV | | 99 |
| 67) 4-Ethyltoluene | 10.043 | 105 | 17650930 | 41.63 | ppbV | | 95 |
| 68) 2-Chlorotoluene | 10.068 | 91 | 14525182 | 43.17 | ppbV | | 97 |
| 69) 1,3,5-Trimethylbenzene | 10.152 | 105 | 15012049 | 44.03 | ppbV | | 96 |
| 70) 1,2,4-Trimethylbenzene | 10.625 | 105 | 15021608 | 44.08 | ppbV | | 97 |
| 71) 1,3-Dichlorobenzene | 10.998 | 146 | 9832383 | 47.12 | ppbV | | 99 |
| 72) 1,4-Dichlorobenzene | 11.113 | 146 | 9906545 | 47.18 | ppbV | | 99 |
| 73) Benzyl chloride | 11.435 | 91 | 13735706 | 45.59 | ppbV | | 96 |
| 74) 1,2-Dichlorobenzene | 11.641 | 146 | 9184158 | 45.37 | ppbV | | 98 |
| 75) 1,3-Hexachlorobutadiene | 13.200 | 225 | 5812342 | 41.37 | ppbV | | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 7183784 | 44.22 | ppbV | | 99 |
| 77) Naphthalene | 13.460 | 128 | 13659104 | 36.76 | ppbV | # | 93 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4136std01.D
Acq On : 10 Oct 2023 2:05 pm
Operator : jjw
Sample : 40 ppbv standard
Misc : EB0103704
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 10 15:21:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Initial Calibration Verification Sample Standard

**Lab Sample Name:** 10 PPBV ICVSS **Data File:** AA3407ICVSS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 8/15/2023

**Amount of standard injected (ml):** 50

Runs with this ICVSS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA3401BFB] | 08/15/2023 10:11 |
| 0.2 PPBV STD [AA3402STD05] | 08/15/2023 11:15 |
| 10 PPBV STANDARD STD [AA3404STD03] | 08/15/2023 13:09 |
| 2 PPBV STD [AA3403STD04] | 08/15/2023 13:45 |
| 20 PPBV STD [AA3405STD02] | 08/15/2023 15:12 |
| 40 PPBV STD [AA3406STD01] | 08/15/2023 16:47 |
| 10 PPBV ICVSS [AA3407ICVSS] | 08/15/2023 18:09 |

| Compound | CAS # | Injected Amount (ppbv) | Recovered Amount (ppbv) | % Recovery | QC Limit |
|---|---|---|---|---|---|
| Acetone | 67-64-1 | 11 | 10 | 95 | |
| Acrolein | 107-02-8 | 9.4 | 10.0 | 110 | |
| Allyl Chloride | 107-05-1 | 11 | 11 | 99 | |
| Benzene | 71-43-2 | 10 | 9.7 | 93 | |
| Benzyl chloride | 100-44-7 | 11 | 11 | 100 | |
| Bromodichloromethane | 75-27-4 | 11 | 11 | 100 | |
| Bromoform | 75-25-2 | 11 | 11 | 96 | |
| Bromomethane | 74-83-9 | 11 | 10 | 92 | |
| 1,3-Butadiene | 106-99-0 | 11 | 10 | 92 | |
| n-Butane | 106-97-8 | 11 | 11 | 100 | |
| Chlorobenzene | 108-90-7 | 10 | 11 | 110 | |
| Chloroethane | 75-00-3 | 9.8 | 11 | 110 | |
| Chloroform | 67-66-3 | 11 | 10 | 92 | |
| Chloromethane | 74-87-3 | 9.9 | 12 | 120 | |
| Carbon disulfide | 75-15-0 | 10 | 11 | 110 | |
| Carbon tetrachloride | 56-23-5 | 11 | 9.7 | 91 | |
| 2-Chlorotoluene | 95-49-8 | 11 | 10 | 91 | |
| Cumene | 98-82-8 | 10 | 10 | 99 | |
| Cyclohexane | 110-82-7 | 11 | 9.7 | 89 | |
| Dibromochloromethane | 124-48-1 | 11 | 11 | 100 | |
| 1,2-Dibromoethane | 106-93-4 | 11 | 11 | 100 | |
| 1,2-Dichlorobenzene | 95-50-1 | 10 | 10 | 97 | |
| 1,3-Dichlorobenzene | 541-73-1 | 10 | 10 | 96 | |
| 1,4-Dichlorobenzene | 106-46-7 | 10 | 11 | 110 | |
| Dichlorodifluoromethane | 75-71-8 | 11 | 10 | 92 | |
| 1,1-Dichloroethane | 75-34-3 | 11 | 9.7 | 92 | |
| 1,2-Dichloroethane | 107-06-2 | 11 | 10 | 95 | |
| 1,1-Dichloroethene | 75-35-4 | 11 | 11 | 100 | |
| 1,2-Dichloroethene (cis) | 156-59-2 | 10 | 11 | 110 | |
| 1,2-Dichloroethene (trans) | 156-60-5 | 11 | 11 | 100 | |
| 1,2-Dichloropropane | 78-87-5 | 11 | 10.0 | 95 | |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 9.9 | 11 | 110 | |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 11 | 11 | 100 | |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 11 | 8.6 | 77 | |
| 1,4-Dioxane | 123-91-1 | 11 | 11 | 98 | |
| Ethanol | 64-17-5 | 9.8 | 8.5 | 87 | |
| Ethyl acetate | 141-78-6 | 10 | 9.9 | 96 | |
| Ethylbenzene | 100-41-4 | 10 | 11 | 110 | |
| 4-Ethyltoluene | 622-96-8 | 11 | 11 | 100 | |
| n-Heptane | 142-82-5 | 11 | 10 | 92 | |

**ICVSS recovery must be within 70-130% of the spiked value for all compounds.**

*** Values outside of QC limits**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Initial Calibration Verification Sample Standard

**Lab Sample Name:** 10 PPBV ICVSS **Data File:** AA3407ICVSS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 8/15/2023

**Amount of standard injected (ml):** 50

Runs with this ICVSS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA3401BFB] | 08/15/2023 10:11 |
| 0.2 PPBV STD [AA3402STD05] | 08/15/2023 11:15 |
| 10 PPBV STANDARD STD [AA3404STD03] | 08/15/2023 13:09 |
| 2 PPBV STD [AA3403STD04] | 08/15/2023 13:45 |
| 20 PPBV STD [AA3405STD02] | 08/15/2023 15:12 |
| 40 PPBV STD [AA3406STD01] | 08/15/2023 16:47 |
| 10 PPBV ICVSS [AA3407ICVSS] | 08/15/2023 18:09 |

| Compound | CAS # | Injected Amount (ppbv) | Recovered Amount (ppbv) | % Recovery | QC Limit |
|---|---|---|---|---|---|
| 1,3-Hexachlorobutadiene | 87-68-3 | 9.8 | 9.8 | 100 | |
| n-Hexane | 110-54-3 | 11 | 9.7 | 90 | |
| Isopropanol | 67-63-0 | 8.1 | 8.8 | 110 | |
| Methylene chloride | 75-09-2 | 11 | 9.1 | 85 | |
| Methyl ethyl ketone | 78-93-3 | 11 | 10 | 92 | |
| Methyl isobutyl ketone | 108-10-1 | 10 | 11 | 110 | |
| Methyl methacrylate | 80-62-6 | 11 | 11 | 100 | |
| Methyl n-butyl ketone | 591-78-6 | 11 | 12 | 110 | |
| Methyl tert-butyl ether | 1634-04-4 | 11 | 9.9 | 91 | |
| Naphthalene | 91-20-3 | 11 | 10 | 93 | |
| n-Nonane | 111-84-2 | 11 | 10 | 89 | |
| n-Pentane | 109-66-0 | 11 | 9.1 | 82 | |
| Propene | 115-07-1 | 11 | 10 | 91 | |
| n-Propyl benzene | 103-65-1 | 11 | 11 | 100 | |
| Styrene | 100-42-5 | 11 | 12 | 110 | |
| Tert-butyl alcohol | 75-65-0 | 12 | 10 | 87 | |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 10 | 10 | 97 | |
| Tetrachloroethene | 127-18-4 | 12 | 11 | 93 | |
| Tetrahydrofuran | 109-99-9 | 11 | 10 | 93 | |
| Toluene | 108-88-3 | 11 | 11 | 100 | |
| 1,2,4-Trichlorobenzene | 120-82-1 | 10 | 10 | 100 | |
| 1,1,1-Trichloroethane | 71-55-6 | 11 | 9.4 | 88 | |
| 1,1,2-Trichloroethane | 79-00-5 | 11 | 10 | 93 | |
| Trichloroethene | 79-01-6 | 10 | 9.5 | 93 | |
| Trichlorofluoromethane | 75-69-4 | 11 | 10 | 94 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 11 | 9.1 | 83 | |
| 1,2,4-Trimethylbenzene | 95-63-6 | 10 | 11 | 100 | |
| 1,3,5-Trimethylbenzene | 108-67-8 | 10 | 11 | 110 | |
| 2,2,4-Trimethylpentane | 540-84-1 | 11 | 10 | 92 | |
| Vinyl bromide | 593-60-2 | 10 | 10 | 100 | |
| Vinyl chloride | 75-01-4 | 11 | 11 | 97 | |
| Xylenes (m&p) | 179601-23-1 | 21 | 22 | 110 | |
| Xylenes (o) | 95-47-6 | 10 | 11 | 110 | |

**ICVSS recovery must be within 70-130% of the spiked value for all compounds.**

*** Values outside of QC limits**

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3407icvss.D
Acq On : 15 Aug 2023 6:09 pm
Operator : jjw
Sample : 10 ppbv icvss
Misc : EB0116272
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 16 10:02:33 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.396 | 130 | 614925 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.454 | 114 | 2660514 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 3151139 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 2639252 | 10.07 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.486 | 41 | 437009 | 10.32 | ppbV | 100 |
| 3) Dichlorodifluoromethane | 1.526 | 85 | 1589571 | 10.23 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.646 | 85 | 1915451 | 8.57 | ppbV | 100 |
| 5) n-Butane | 1.729 | 43 | 1085164 | 10.79 | ppbV | 99 |
| 6) Chloromethane | 1.791 | 52 | 84692 | 11.77 | ppbV | 91 |
| 7) Vinyl chloride | 1.780 | 62 | 624265 | 10.68 | ppbV | 99 |
| 8) 1,3-Butadiene | 1.794 | 39 | 615975 | 10.31 | ppbV | 99 |
| 9) Bromomethane | 2.084 | 94 | 497818 | 10.14 | ppbV | 99 |
| 10) Chloroethane | 2.197 | 64 | 339826 | 10.69 | ppbV | 99 |
| 11) Vinyl bromide | 2.293 | 106 | 630457 | 10.21 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.312 | 101 | 2122221 | 10.15 | ppbV | 100 |
| 13) Ethanol | 2.669 | 45 | 210384 | 8.55 | ppbV | 99 |
| 14) 1,1-Dichloroethene | 2.734 | 61 | 1353018 | 10.54 | ppbV | 100 |
| 15) Carbon disulfide | 2.753 | 76 | 2291667 | 10.87 | ppbV | 99 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.776 | 101 | 1880237 | 9.10 | ppbV | 99 |
| 17) Acrolein | 2.984 | 56 | 263590 | 9.98 | ppbV | 99 |
| 18) Allyl chloride | 3.113 | 76 | 378917 | 11.01 | ppbV | 100 |
| 19) Isopropanol | 3.113 | 45 | 1247145 | 8.77 | ppbV | 99 |
| 20) Methylene chloride | 3.203 | 49 | 707555 | 9.12 | ppbV | 99 |
| 21) Acetone | 3.213 | 43 | 1199665 | 10.40 | ppbV | 99 |
| 22) trans-1,2-Dichloroethene | 3.329 | 61 | 1279551 | 11.07 | ppbV | 99 |
| 23) n-Pentane | 3.409 | 43 | 1345011 | 9.12 | ppbV | 99 |
| 24) n-Hexane | 3.409 | 57 | 2003979 | 9.73 | ppbV | 100 |
| 25) Methyl tert-butyl ether | 3.412 | 73 | 2769119 | 9.89 | ppbV | 99 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 1862648 | 10.34 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 1576537 | 9.72 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.235 | 61 | 1186018 | 10.57 | ppbV | 99 |
| 29) Cyclohexane | 4.415 | 56 | 1446092 | 9.72 | ppbV | 99 |
| 30) Chloroform | 4.454 | 83 | 2014411 | 10.15 | ppbV | 99 |
| 31) Ethyl acetate | 4.541 | 61 | 312517 | 9.89 | ppbV | 100 |
| 32) Carbon tetrachloride | 4.576 | 117 | 2310805 | 9.71 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.576 | 42 | 1135151 | 10.18 | ppbV | 99 |
| 34) 1,1,1-Trichloroethane | 4.631 | 97 | 2017204 | 9.42 | ppbV | 100 |
| 35) Methyl ethyl ketone | 4.685 | 43 | 1824867 | 10.25 | ppbV | 99 |
| 36) n-Heptane | 4.917 | 43 | 2119295 | 10.29 | ppbV | 99 |
| 37) Benzene | 4.933 | 78 | 2760579 | 9.73 | ppbV | 100 |
| 38) 1,2-Dichloroethane | 5.094 | 62 | 1306989 | 10.28 | ppbV | 99 |
| 40) Trichloroethene | 5.435 | 130 | 1277643 | 9.46 | ppbV | 100 |
| 41) 2,2,4-Trimethylpentane | 4.846 | 57 | 3384494 | 10.04 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.881 | 63 | 1210091 | 9.97 | ppbV | 99 |
| 43) Bromodichloromethane | 5.946 | 83 | 2297408 | 10.86 | ppbV | 100 |
| 44) Methyl methacrylate | 6.087 | 41 | 1707517 | 10.94 | ppbV | 100 |
| 45) 1,4-Dioxane | 6.113 | 88 | 839393 | 11.21 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 2028992 | 10.81 | ppbV | 99 |
| 47) Toluene | 6.772 | 91 | 4536523 | 10.63 | ppbV | 99 |
| 48) Methyl isobutyl ketone | 7.135 | 43 | 3266617 | 10.60 | ppbV | 100 |
| 49) Tetrachloroethene | 7.161 | 166 | 2057579 | 10.73 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 2121255 | 11.47 | ppbV | 99 |
| 51) 1,1,2-Trichloroethane | 7.338 | 97 | 1545574 | 10.28 | ppbV | 100 |

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3407icvss.D
Acq On : 15 Aug 2023 6:09 pm
Operator : jjw
Sample : 10 ppbv icvss
Misc : EB0116272
ALS Vial : 10 Sample Multiplier: 1

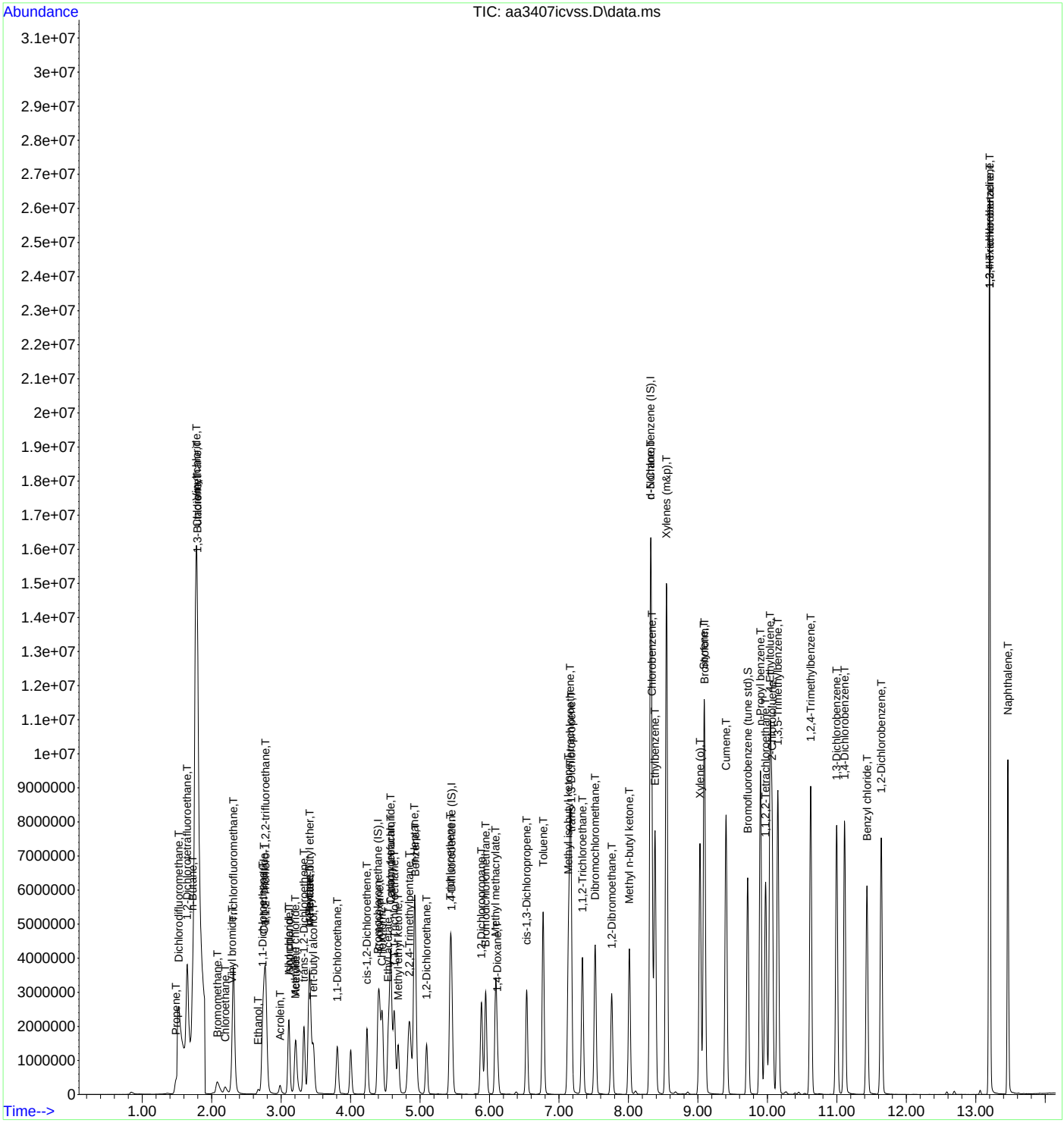
Quant Time: Aug 16 10:02:33 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 2775633 | 11.06 | ppbV | 100 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 2393720 | 10.88 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.013 | 43 | 3342265 | 11.58 | ppbV | 99 |
| 56) n-Nonane | 8.319 | 43 | 3980940 | 10.32 | ppbV | 99 |
| 57) Chlorobenzene | 8.338 | 112 | 3631305 | 10.52 | ppbV | 99 |
| 58) Ethylbenzene | 8.383 | 91 | 6749535 | 10.58 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.547 | 91 | 10243811 | 22.27 | ppbV | 100 |
| 60) Xylene (o) | 9.029 | 91 | 5367160 | 10.51 | ppbV | 100 |
| 61) Styrene | 9.087 | 104 | 3897707 | 11.50 | ppbV | 99 |
| 62) Bromoform | 9.097 | 173 | 2909911 | 11.11 | ppbV | 100 |
| 63) Cumene | 9.405 | 105 | 6858593 | 10.31 | ppbV | 100 |
| 65) n-Propyl benzene | 9.901 | 91 | 9335682 | 10.76 | ppbV | 99 |
| 66) 1,1,2,2-Tetrachloroethane | 9.975 | 83 | 4046668 | 10.45 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 7675301 | 10.73 | ppbV | 100 |
| 68) 2-Chlorotoluene | 10.068 | 91 | 6134373 | 10.42 | ppbV | 100 |
| 69) 1,3,5-Trimethylbenzene | 10.151 | 105 | 6150320 | 10.63 | ppbV | 100 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 6292442 | 10.96 | ppbV | 100 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 3955353 | 10.39 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.113 | 146 | 3900278 | 10.66 | ppbV | 99 |
| 73) Benzyl chloride | 11.434 | 91 | 5411364 | 10.79 | ppbV | 100 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 3729037 | 10.35 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.200 | 225 | 2519603 | 9.76 | ppbV | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 2920155 | 10.31 | ppbV | 100 |
| 77) Naphthalene | 13.463 | 128 | 6029829 | 10.31 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3407icvss.D
Acq On : 15 Aug 2023 6:09 pm
Operator : jjw
Sample : 10 ppbv icvss
Misc : EB0116272
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 16 10:02:33 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Initial Calibration Verification Sample Standard

**Lab Sample Name:** 10 PPBV ICVSS **Data File:** AA4137ICVSS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 10/10/2023

**Amount of standard injected (ml):** 50

Runs with this ICVSS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4131BFB] | 10/10/2023 10:13 |
| 0.2 PPBV STD [AA4132STD05] | 10/10/2023 10:40 |
| 2 PPBV STD [AA4133STD04] | 10/10/2023 11:46 |
| 10 PPBV STD [AA4134STD03] | 10/10/2023 12:21 |
| 20 PPBV STD [AA4135STD02] | 10/10/2023 12:55 |
| 40 PPBV STD [AA4136STD01] | 10/10/2023 14:05 |
| 10 PPBV ICVSS [AA4137ICVSS] | 10/10/2023 16:48 |
| 10 PPBV LCS [AA4138LCS] | 10/10/2023 17:39 |
| METHOD BLANK [AA4139BLK] | 10/10/2023 18:07 |
| 02 PPBV RLLCS [AA4140RLLCS] | 10/10/2023 18:35 |
| 10 PPBV CCCVS [AA4154CCCVS] | 10/11/2023 1:53 |

| Compound | CAS # | Injected Amount (ppbv) | Recovered Amount (ppbv) | % Recovery | QC Limit |
|---|---|---|---|---|---|
| Acetone | 67-64-1 | 11 | 10 | 95 | |
| Acrolein | 107-02-8 | 9.4 | 9.5 | 100 | |
| Allyl Chloride | 107-05-1 | 11 | 11 | 99 | |
| Benzene | 71-43-2 | 10 | 9.7 | 93 | |
| Benzyl chloride | 100-44-7 | 11 | 10 | 93 | |
| Bromodichloromethane | 75-27-4 | 11 | 11 | 100 | |
| Bromoform | 75-25-2 | 11 | 11 | 96 | |
| Bromomethane | 74-83-9 | 11 | 10 | 92 | |
| 1,3-Butadiene | 106-99-0 | 11 | 10 | 92 | |
| n-Butane | 106-97-8 | 11 | 10 | 94 | |
| Chlorobenzene | 108-90-7 | 10 | 10 | 96 | |
| Chloroethane | 75-00-3 | 9.8 | 11 | 110 | |
| Chloroform | 67-66-3 | 11 | 9.9 | 91 | |
| Chloromethane | 74-87-3 | 9.9 | 11 | 110 | |
| Carbon disulfide | 75-15-0 | 10 | 11 | 110 | |
| Carbon tetrachloride | 56-23-5 | 11 | 10 | 93 | |
| 2-Chlorotoluene | 95-49-8 | 11 | 10 | 91 | |
| Cumene | 98-82-8 | 10 | 10 | 99 | |
| Cyclohexane | 110-82-7 | 11 | 10 | 92 | |
| Dibromochloromethane | 124-48-1 | 11 | 12 | 110 | |
| 1,2-Dibromoethane | 106-93-4 | 11 | 11 | 100 | |
| 1,2-Dichlorobenzene | 95-50-1 | 10 | 10.0 | 97 | |
| 1,3-Dichlorobenzene | 541-73-1 | 10 | 10 | 96 | |
| 1,4-Dichlorobenzene | 106-46-7 | 10 | 10.0 | 97 | |
| Dichlorodifluoromethane | 75-71-8 | 11 | 10 | 92 | |
| 1,1-Dichloroethane | 75-34-3 | 11 | 9.4 | 90 | |
| 1,2-Dichloroethane | 107-06-2 | 11 | 10 | 95 | |
| 1,1-Dichloroethene | 75-35-4 | 11 | 10.0 | 93 | |
| 1,2-Dichloroethene (cis) | 156-59-2 | 10 | 10 | 97 | |
| 1,2-Dichloroethene (trans) | 156-60-5 | 11 | 11 | 100 | |
| 1,2-Dichloropropane | 78-87-5 | 11 | 10 | 95 | |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 9.9 | 11 | 110 | |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 11 | 11 | 100 | |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 11 | 9.0 | 80 | |
| 1,4-Dioxane | 123-91-1 | 11 | 11 | 98 | |

**ICVSS recovery must be within 70-130% of the spiked value for all compounds.**

*** Values outside of QC limits**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Initial Calibration Verification Sample Standard

**Lab Sample Name:** 10 PPBV ICVSS **Data File:** AA4137ICVSS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 10/10/2023

**Amount of standard injected (ml):** 50

Runs with this ICVSS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4131BFB] | 10/10/2023 10:13 |
| 0.2 PPBV STD [AA4132STD05] | 10/10/2023 10:40 |
| 2 PPBV STD [AA4133STD04] | 10/10/2023 11:46 |
| 10 PPBV STD [AA4134STD03] | 10/10/2023 12:21 |
| 20 PPBV STD [AA4135STD02] | 10/10/2023 12:55 |
| 40 PPBV STD [AA4136STD01] | 10/10/2023 14:05 |
| 10 PPBV ICVSS [AA4137ICVSS] | 10/10/2023 16:48 |
| 10 PPBV LCS [AA4138LCS] | 10/10/2023 17:39 |
| METHOD BLANK [AA4139BLK] | 10/10/2023 18:07 |
| 02 PPBV RLLCS [AA4140RLLCS] | 10/10/2023 18:35 |
| 10 PPBV CCCVS [AA4154CCCVS] | 10/11/2023 1:53 |

| Compound | CAS # | Injected Amount (ppbv) | Recovered Amount (ppbv) | % Recovery | QC Limit |
|---|---|---|---|---|---|
| Ethanol | 64-17-5 | 9.8 | 7.0 | 71 | |
| Ethyl acetate | 141-78-6 | 10 | 11 | 110 | |
| Ethylbenzene | 100-41-4 | 10 | 10 | 96 | |
| 4-Ethyltoluene | 622-96-8 | 11 | 11 | 100 | |
| n-Heptane | 142-82-5 | 11 | 11 | 100 | |
| 1,3-Hexachlorobutadiene | 87-68-3 | 9.8 | 9.8 | 100 | |
| n-Hexane | 110-54-3 | 11 | 10 | 93 | |
| Isopropanol | 67-63-0 | 8.1 | 8.4 | 100 | |
| Methylene chloride | 75-09-2 | 11 | 8.1 | 76 | |
| Methyl ethyl ketone | 78-93-3 | 11 | 10.0 | 92 | |
| Methyl isobutyl ketone | 108-10-1 | 10 | 11 | 110 | |
| Methyl methacrylate | 80-62-6 | 11 | 11 | 100 | |
| Methyl n-butyl ketone | 591-78-6 | 11 | 11 | 99 | |
| Methyl tert-butyl ether | 1634-04-4 | 11 | 10 | 92 | |
| Naphthalene | 91-20-3 | 11 | 9.7 | 91 | |
| n-Nonane | 111-84-2 | 11 | 11 | 97 | |
| n-Pentane | 109-66-0 | 11 | 9.7 | 87 | |
| Propene | 115-07-1 | 11 | 9.2 | 84 | |
| n-Propyl benzene | 103-65-1 | 11 | 11 | 100 | |
| Styrene | 100-42-5 | 11 | 11 | 100 | |
| Tert-butyl alcohol | 75-65-0 | 12 | 11 | 96 | |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 10 | 11 | 110 | |
| Tetrachloroethene | 127-18-4 | 12 | 11 | 93 | |
| Tetrahydrofuran | 109-99-9 | 11 | 10 | 93 | |
| Toluene | 108-88-3 | 11 | 11 | 100 | |
| 1,2,4-Trichlorobenzene | 120-82-1 | 10 | 9.7 | 97 | |
| 1,1,1-Trichloroethane | 71-55-6 | 11 | 10.0 | 93 | |
| 1,1,2-Trichloroethane | 79-00-5 | 11 | 11 | 100 | |
| Trichloroethene | 79-01-6 | 10 | 9.2 | 90 | |
| Trichlorofluoromethane | 75-69-4 | 11 | 10 | 94 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 11 | 9.3 | 85 | |
| 1,2,4-Trimethylbenzene | 95-63-6 | 10 | 10 | 100 | |
| 1,3,5-Trimethylbenzene | 108-67-8 | 10 | 10 | 96 | |
| 2,2,4-Trimethylpentane | 540-84-1 | 11 | 9.6 | 88 | |
| Vinyl bromide | 593-60-2 | 10 | 10 | 100 | |

**ICVSS recovery must be within 70-130% of the spiked value for all compounds.**

*** Values outside of QC limits**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Initial Calibration Verification Sample Standard

**Lab Sample Name:** 10 PPBV ICVSS **Data File:** AA4137ICVSS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 10/10/2023

**Amount of standard injected (ml):** 50

Runs with this ICVSS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4131BFB] | 10/10/2023 10:13 |
| 0.2 PPBV STD [AA4132STD05] | 10/10/2023 10:40 |
| 2 PPBV STD [AA4133STD04] | 10/10/2023 11:46 |
| 10 PPBV STD [AA4134STD03] | 10/10/2023 12:21 |
| 20 PPBV STD [AA4135STD02] | 10/10/2023 12:55 |
| 40 PPBV STD [AA4136STD01] | 10/10/2023 14:05 |
| 10 PPBV ICVSS [AA4137ICVSS] | 10/10/2023 16:48 |
| 10 PPBV LCS [AA4138LCS] | 10/10/2023 17:39 |
| METHOD BLANK [AA4139BLK] | 10/10/2023 18:07 |
| 02 PPBV RLLCS [AA4140RLLCS] | 10/10/2023 18:35 |
| 10 PPBV CCCVS [AA4154CCCVS] | 10/11/2023 1:53 |

| Compound | CAS # | Injected Amount (ppbv) | Recovered Amount (ppbv) | % Recovery | QC Limit |
|---|---|---|---|---|---|
| Vinyl chloride | 75-01-4 | 11 | 11 | 97 | |
| Xylenes (m&p) | 179601-23-1 | 21 | 22 | 110 | |
| Xylenes (o) | 95-47-6 | 10 | 10 | 96 | |

**ICVSS recovery must be within 70-130% of the spiked value for all compounds.**

*** Values outside of QC limits**

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4137icvss.D
Acq On : 10 Oct 2023 4:48 pm
Operator : jjw
Sample : 10 ppbv icvss
Misc : EB0116272
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 11 12:34:17 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.394 | 130 | 450439 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.451 | 114 | 1936760 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 2279414 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.715 | 95 | 1999577 | 10.06 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.487 | 41 | 289233 | 9.25 | ppbV | 98 |
| 3) Dichlorodifluoromethane | 1.527 | 85 | 1032587 | 10.34 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.647 | 85 | 1304952 | 9.00 | ppbV | 100 |
| 5) n-Butane | 1.730 | 43 | 750417 | 10.43 | ppbV | 99 |
| 6) Chloromethane | 1.792 | 52 | 54388 | 10.90 | ppbV | 98 |
| 7) Vinyl chloride | 1.781 | 62 | 431150 | 10.57 | ppbV | 99 |
| 8) 1,3-Butadiene | 1.795 | 39 | 382252 | 10.03 | ppbV | 97 |
| 9) Bromomethane | 2.079 | 94 | 336675 | 10.22 | ppbV | 97 |
| 10) Chloroethane | 2.191 | 64 | 232639 | 10.87 | ppbV | 99 |
| 11) Vinyl bromide | 2.291 | 106 | 412014 | 10.22 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.313 | 101 | 1310652 | 10.39 | ppbV | 99 |
| 13) Ethanol | 2.664 | 45 | 92719 | 7.03 | ppbV | 99 |
| 14) 1,1-Dichloroethene | 2.731 | 61 | 835358 | 9.98 | ppbV | 99 |
| 15) Carbon disulfide | 2.751 | 76 | 1485573 | 10.79 | ppbV | 99 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.773 | 101 | 1177177 | 9.27 | ppbV | 100 |
| 17) Acrolein | 2.985 | 56 | 178709 | 9.50 | ppbV | 99 |
| 18) Allyl chloride | 3.111 | 76 | 250470 | 11.09 | ppbV | 100 |
| 19) Isopropanol | 3.111 | 45 | 759040 | 8.40 | ppbV | 100 |
| 20) Methylene chloride | 3.204 | 49 | 449695 | 8.12 | ppbV | 99 |
| 21) Acetone | 3.210 | 43 | 693658 | 10.21 | ppbV | 98 |
| 22) trans-1,2-Dichloroethene | 3.329 | 61 | 849185 | 10.93 | ppbV | 100 |
| 23) n-Pentane | 3.403 | 43 | 1018939 | 9.73 | ppbV | 98 |
| 24) n-Hexane | 3.403 | 57 | 1426750 | 10.05 | ppbV | 99 |
| 25) Methyl tert-butyl ether | 3.413 | 73 | 1803139 | 10.34 | ppbV | 99 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 1242393 | 10.58 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 977991 | 9.35 | ppbV | 99 |
| 28) cis-1,2-Dichloroethene | 4.233 | 61 | 755931 | 10.24 | ppbV | 99 |
| 29) Cyclohexane | 4.416 | 56 | 1026465 | 10.35 | ppbV | 99 |
| 30) Chloroform | 4.455 | 83 | 1194486 | 9.91 | ppbV | 99 |
| 31) Ethyl acetate | 4.545 | 61 | 208391 | 10.63 | ppbV | 99 |
| 32) Carbon tetrachloride | 4.577 | 117 | 1452418 | 10.16 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.574 | 42 | 693411 | 10.23 | ppbV | 100 |
| 34) 1,1,1-Trichloroethane | 4.625 | 97 | 1251697 | 10.00 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.683 | 43 | 1099463 | 9.99 | ppbV | 100 |
| 36) n-Heptane | 4.915 | 43 | 1406396 | 11.30 | ppbV | 100 |
| 37) Benzene | 4.934 | 78 | 1734004 | 9.69 | ppbV | 100 |
| 38) 1,2-Dichloroethane | 5.091 | 62 | 756182 | 10.10 | ppbV | 100 |
| 40) Trichloroethene | 5.432 | 130 | 792615 | 9.25 | ppbV | 97 |
| 41) 2,2,4-Trimethylpentane | 4.844 | 57 | 2425296 | 9.61 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.882 | 63 | 788220 | 10.46 | ppbV | 100 |
| 43) Bromodichloromethane | 5.943 | 83 | 1432936 | 11.29 | ppbV | 99 |
| 44) Methyl methacrylate | 6.088 | 41 | 1025399 | 11.22 | ppbV | 100 |
| 45) 1,4-Dioxane | 6.111 | 88 | 520094 | 11.27 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.535 | 75 | 1277949 | 10.94 | ppbV | 99 |
| 47) Toluene | 6.770 | 91 | 2952624 | 10.85 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.133 | 43 | 1919423 | 11.22 | ppbV | 99 |
| 49) Tetrachloroethene | 7.159 | 166 | 1314607 | 11.20 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.178 | 75 | 1281531 | 11.31 | ppbV | 97 |
| 51) 1,1,2-Trichloroethane | 7.336 | 97 | 989955 | 10.77 | ppbV | 99 |

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4137icvss.D
Acq On : 10 Oct 2023 4:48 pm
Operator : jjw
Sample : 10 ppbv icvss
Misc : EB0116272
ALS Vial : 7 Sample Multiplier: 1

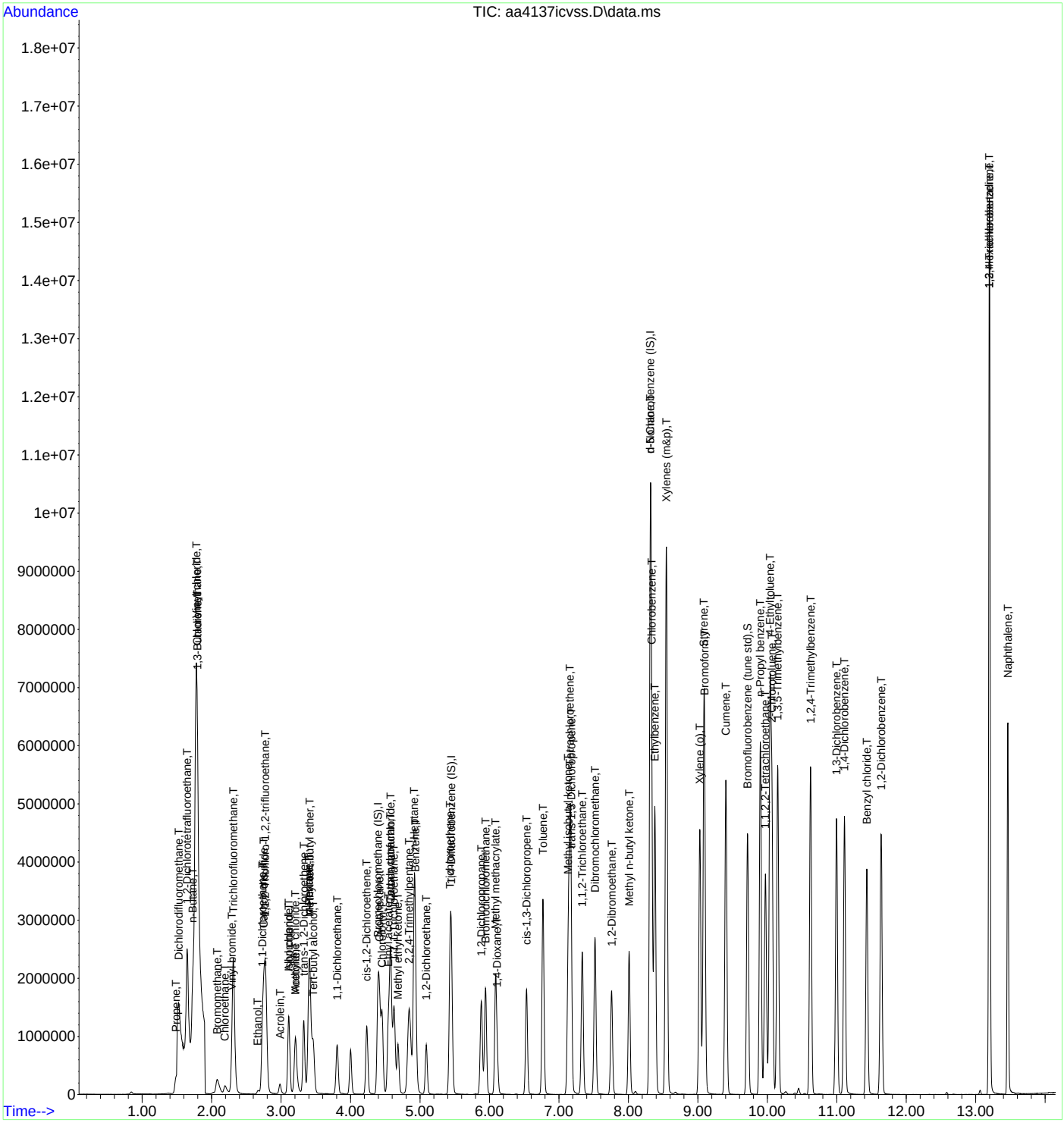
Quant Time: Oct 11 12:34:17 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.519 | 129 | 1775637 | 11.59 | ppbV | 100 |
| 53) 1,2-Dibromoethane | 7.760 | 107 | 1480875 | 11.14 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.011 | 43 | 1847140 | 11.23 | ppbV | 100 |
| 56) n-Nonane | 8.316 | 43 | 2482776 | 10.98 | ppbV | 100 |
| 57) Chlorobenzene | 8.336 | 112 | 2343720 | 10.31 | ppbV | 100 |
| 58) Ethylbenzene | 8.381 | 91 | 4399658 | 10.47 | ppbV | 100 |
| 59) Xylenes (m&p) | 8.548 | 91 | 6725199 | 21.61 | ppbV | 100 |
| 60) Xylene (o) | 9.027 | 91 | 3439926 | 10.13 | ppbV | 100 |
| 61) Styrene | 9.088 | 104 | 2542191 | 10.93 | ppbV | 98 |
| 62) Bromoform | 9.098 | 173 | 1858650 | 11.14 | ppbV | 100 |
| 63) Cumene | 9.403 | 105 | 4624440 | 10.42 | ppbV | 99 |
| 65) n-Propyl benzene | 9.898 | 91 | 6209527 | 10.72 | ppbV | 100 |
| 66) 1,1,2,2-Tetrachloroethane | 9.972 | 83 | 2517951 | 10.59 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.040 | 105 | 5225612 | 10.66 | ppbV | 100 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 4079374 | 10.48 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.149 | 105 | 4048872 | 10.27 | ppbV | 100 |
| 70) 1,2,4-Trimethylbenzene | 10.625 | 105 | 4049729 | 10.28 | ppbV | 100 |
| 71) 1,3-Dichlorobenzene | 10.998 | 146 | 2445218 | 10.13 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 2419709 | 9.96 | ppbV | 99 |
| 73) Benzyl chloride | 11.432 | 91 | 3624814 | 10.40 | ppbV | 100 |
| 74) 1,2-Dichlorobenzene | 11.641 | 146 | 2329520 | 9.95 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.197 | 225 | 1597275 | 9.83 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.197 | 180 | 1825252 | 9.71 | ppbV | 100 |
| 77) Naphthalene | 13.464 | 128 | 4147327 | 9.65 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4137icvss.D
Acq On : 10 Oct 2023 4:48 pm
Operator : jjw
Sample : 10 ppbv icvss
Misc : EB0116272
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 11 12:34:17 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Continuing Calibration Data Summary Report

**Initial Calibration Curve:** 8/15/2023
**Instrument:** AA
**Amount of standard injected (ml):** 50

**Date/Time of Calibration:** 9/28/2023 10:31
**Sample ID:** DCS
**Laboratory ID:** AA4072DCVS

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2164 [AA4076] | 09/28/2023 15:00 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 4870 [AA4077] | 09/28/2023 15:30 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 00:28 |

| Compound Name | Average RRF | Standard RRF | % Difference | PassFail | * |
|---|---|---|---|---|---|
| Acetone | 1.9 | 2.3 | -22 | PASS | |
| Benzene | 4.6 | 5.3 | -16 | PASS | |
| Bromodichloromethane | 0.80 | 0.86 | -8.4 | PASS | |
| Bromoform | 0.83 | 0.94 | -13 | PASS | |
| Bromomethane | 0.80 | 0.95 | -19 | PASS | |
| 1,3-Butadiene | 0.97 | 1.3 | -29 | PASS | |
| Chlorobenzene | 1.1 | 1.2 | -10 | PASS | |
| Chloroethane | 0.52 | 0.59 | -14 | PASS | |
| Chloroform | 3.2 | 3.9 | -22 | PASS | |
| Chloromethane | 0.12 | 0.13 | -14 | PASS | |
| Carbon disulfide | 3.4 | 3.9 | -14 | PASS | |
| Carbon tetrachloride | 3.9 | 3.9 | -0.40 | PASS | |
| Cyclohexane | 2.4 | 2.6 | -8.2 | PASS | |
| Dibromochloromethane | 0.94 | 0.96 | -1.2 | PASS | |
| 1,2-Dibromoethane | 0.83 | 0.86 | -4.5 | PASS | |
| 1,2-Dichlorobenzene | 1.1 | 1.3 | -14 | PASS | |
| 1,3-Dichlorobenzene | 1.2 | 1.4 | -12 | PASS | |
| 1,4-Dichlorobenzene | 1.2 | 1.4 | -20 | PASS | |
| Dichlorodifluoromethane | 2.5 | 3.1 | -22 | PASS | |
| 1,1-Dichloroethane | 2.6 | 3.2 | -23 | PASS | |
| 1,2-Dichloroethane | 2.1 | 2.6 | -24 | PASS | |
| 1,1-Dichloroethene | 2.1 | 2.2 | -6.4 | PASS | |
| 1,2-Dichloroethene (cis) | 1.8 | 2.4 | -30 | PASS | |
| 1,2-Dichloroethene (trans) | 1.9 | 2.4 | -28 | PASS | |
| 1,2-Dichloropropane | 0.46 | 0.48 | -5.7 | PASS | |
| 1,3-Dichloropropene (cis) | 0.71 | 0.75 | -6.8 | PASS | |
| 1,3-Dichloropropene (trans) | 0.70 | 0.79 | -14 | PASS | |
| 1,2-Dichlorotetrafluoroethane | 3.6 | 4.0 | -9.4 | PASS | |
| 1,4-Dioxane | 0.28 | 0.29 | -3.2 | PASS | |
| Ethylbenzene | 2.0 | 2.3 | -13 | PASS | |
| n-Heptane | 3.4 | 3.7 | -11 | PASS | |
| 1,3-Hexachlorobutadiene | 0.82 | 0.86 | -4.5 | PASS | |
| n-Hexane | 3.3 | 3.9 | -15 | PASS | |
| Methylene chloride | 1.3 | 1.5 | -21 | PASS | |
| Methyl ethyl ketone | 2.9 | 3.7 | -29 | PASS | |
| Methyl isobutyl ketone | 1.2 | 1.3 | -8.7 | PASS | |
| Methyl tert-butyl ether | 4.6 | 4.9 | -8.5 | PASS | |
| Styrene | 1.1 | 1.3 | -21 | PASS | |
| Tert-butyl alcohol | 2.9 | 3.3 | -13 | PASS | |
| 1,1,2,2-Tetrachloroethane | 1.2 | 1.3 | -8.6 | PASS | |
| Tetrachloroethene | 0.72 | 0.70 | 3.5 | PASS | |

***%Difference must be within +/- 30%**
**RRF - Relative Response Factor**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Continuing Calibration Data Summary Report

| | | | |
|---|---|---|---|
| **Initial Calibration Curve:** | **8/15/2023** | **Date/Time of Calibration:** | **9/28/2023 10:31** |
| **Instrument:** | **AA** | **Sample ID:** | **DCS** |
| **Amount of standard injected (ml):** | **50** | **Laboratory ID:** | **AA4072DCVS** |

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2164 [AA4076] | 09/28/2023 15:00 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 4870 [AA4077] | 09/28/2023 15:30 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 00:28 |

| Compound Name | Average RRF | Standard RRF | % Difference | PassFail | * |
|---|---|---|---|---|---|
| Toluene | 1.6 | 1.7 | -4.2 | PASS | |
| 1,2,4-Trichlorobenzene | 0.90 | 1.1 | -19 | PASS | |
| 1,1,1-Trichloroethane | 3.5 | 3.6 | -1.9 | PASS | |
| 1,1,2-Trichloroethane | 0.57 | 0.57 | -1.4 | PASS | |
| Trichloroethene | 0.51 | 0.51 | -0.60 | PASS | |
| Trichlorofluoromethane | 3.4 | 4.0 | -17 | PASS | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 3.4 | 3.4 | -1.3 | PASS | |
| 1,2,4-Trimethylbenzene | 1.8 | 2.2 | -20 | PASS | |
| 1,3,5-Trimethylbenzene | 1.8 | 2.1 | -13 | PASS | |
| 2,2,4-Trimethylpentane | 1.3 | 1.4 | -11 | PASS | |
| Vinyl bromide | 1.0 | 1.3 | -25 | PASS | |
| Vinyl chloride | 0.95 | 1.2 | -29 | PASS | |
| Xylenes (m&p) | 1.5 | 1.7 | -20 | PASS | |
| Xylenes (o) | 1.6 | 1.8 | -11 | PASS | |

***%Difference must be within +/- 30%**
**RRF - Relative Response Factor**

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4072dcvs.D
Acq On : 28 Sep 2023 10:31 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 05 12:20:58 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 0% Max. R.T. Dev 0.40min
Max. RRF Dev : 30% Max. Rel. Area : 500%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Bromochloromethane (IS) | 1.000 | 1.000 | 0.0 | 74 | 0.00 |
| 2 | T | Propene | 0.689 | 0.782 | -13.5 | 89 | 0.00 |
| 3 | T | Dichlorodifluoromethane | 2.527 | 3.082 | -22.0 | 95 | 0.00 |
| 4 | T | 1,2-Dichlorotetrafluoroetha | 3.636 | 3.979 | -9.4 | 93 | 0.00 |
| 5 | T | n-Butane | 1.635 | 1.772 | -8.4 | 82 | 0.00 |
| 6 | T | Chloromethane | 0.117 | 0.133 | -13.7 | 85 | 0.00 |
| 7 | T | Vinyl chloride | 0.950 | 1.223 | -28.7 | 97 | 0.00 |
| 8 | T | 1,3-Butadiene | 0.972 | 1.253 | -28.9 | 100 | 0.00 |
| 9 | T | Bromomethane | 0.798 | 0.946 | -18.5 | 90 | 0.00 |
| 10 | T | Chloroethane | 0.517 | 0.591 | -14.3 | 84 | 0.00 |
| 11 | T | Vinyl bromide | 1.004 | 1.257 | -25.2 | 94 | 0.00 |
| 12 | T | Trichlorofluoromethane | 3.400 | 3.990 | -17.4 | 96 | 0.00 |
| 13 | T | Ethanol | 0.400 | 0.423 | -5.7 | 97 | 0.00 |
| 14 | T | 1,1-Dichloroethene | 2.088 | 2.222 | -6.4 | 78 | 0.00 |
| 15 | T | Carbon disulfide | 3.429 | 3.921 | -14.3 | 83 | 0.00 |
| 16 | T | 1,1,2-Trichloro-1,2,2-trifl | 3.360 | 3.402 | -1.3 | 90 | 0.00 |
| 17 | T | Acrolein | 0.430 | 0.491 | -14.2 | 85 | 0.00 |
| 18 | T | Allyl chloride | 0.559 | 0.693 | -24.0 | 92 | 0.00 |
| 19 | T | Isopropanol | 2.312 | 2.922 | -26.4 | 96 | 0.00 |
| 20 | T | Methylene chloride | 1.262 | 1.521 | -20.5 | 107 | 0.00 |
| 21 | T | Acetone | 1.876 | 2.285 | -21.8 | 93 | 0.00 |
| 22 | T | trans-1,2-Dichloroethene | 1.879 | 2.400 | -27.7 | 95 | 0.00 |
| 23 | T | n-Pentane | 2.398 | 2.695 | -12.4 | 99 | 0.00 |
| 24 | T | n-Hexane | 3.349 | 3.850 | -15.0 | 95 | 0.00 |
| 25 | T | Methyl tert-butyl ether | 4.555 | 4.942 | -8.5 | 92 | 0.00 |
| 26 | T | Tert-butyl alcohol | 2.929 | 3.318 | -13.3 | 95 | 0.00 |
| 27 | T | 1,1-Dichloroethane | 2.637 | 3.242 | -22.9 | 100 | 0.00 |
| 28 | T | cis-1,2-Dichloroethene | 1.824 | 2.366 | -29.7 | 100 | 0.00 |
| 29 | t | Cyclohexane | 2.420 | 2.619 | -8.2 | 92 | 0.00 |
| 30 | T | Chloroform | 3.228 | 3.928 | -21.7 | 96 | 0.00 |
| 31 | T | Ethyl acetate | 0.514 | 0.617 | -20.0 | 96 | 0.00 |
| 32 | T | Carbon tetrachloride | 3.870 | 3.885 | -0.4 | 86 | 0.00 |
| 33 | T | Tetrahydrofuran | 1.813 | 2.046 | -12.9 | 88 | 0.00 |
| 34 | T | 1,1,1-Trichloroethane | 3.484 | 3.550 | -1.9 | 89 | 0.00 |
| 35 | T | Methyl ethyl ketone | 2.894 | 3.723 | -28.6 | 102 | 0.00 |
| 36 | T | n-Heptane | 3.350 | 3.721 | -11.1 | 87 | 0.00 |
| 37 | T | Benzene | 4.614 | 5.348 | -15.9 | 94 | 0.00 |
| 38 | T | 1,2-Dichloroethane | 2.067 | 2.563 | -24.0 | 98 | 0.00 |
| 39 | I | 1,4-Difluorobenzene (IS) | 1.000 | 1.000 | 0.0 | 81 | 0.00 |
| 40 | T | Trichloroethene | 0.508 | 0.511 | -0.6 | 87 | 0.00 |
| 41 | T | 2,2,4-Trimethylpentane | 1.267 | 1.406 | -11.0 | 98 | 0.00 |
| 42 | T | 1,2-Dichloropropane | 0.456 | 0.482 | -5.7 | 92 | 0.00 |
| 43 | T | Bromodichloromethane | 0.795 | 0.862 | -8.4 | 92 | 0.00 |
| 44 | T | Methyl methacrylate | 0.587 | 0.686 | -16.9 | 93 | 0.00 |
| 45 | T | 1,4-Dioxane | 0.281 | 0.290 | -3.2 | 86 | 0.00 |
| 46 | T | cis-1,3-Dichloropropene | 0.705 | 0.753 | -6.8 | 88 | 0.00 |
| 47 | T | Toluene | 1.603 | 1.670 | -4.2 | 84 | 0.00 |
| 48 | T | Methyl isobutyl ketone | 1.158 | 1.259 | -8.7 | 88 | 0.00 |
| 49 | T | Tetrachloroethene | 0.721 | 0.696 | 3.5 | 81 | 0.00 |
| 50 | T | trans-1,3-Dichloropropene | 0.695 | 0.791 | -13.8 | 88 | 0.00 |
| 51 | T | 1,1,2-Trichloroethane | 0.565 | 0.573 | -1.4 | 85 | 0.00 |
| 52 | T | Dibromochloromethane | 0.944 | 0.955 | -1.2 | 83 | 0.00 |
| 53 | T | 1,2-Dibromoethane | 0.827 | 0.864 | -4.5 | 84 | 0.00 |

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4072dcvs.D
Acq On : 28 Sep 2023 10:31 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 05 12:20:58 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 0% Max. R.T. Dev 0.40min
Max. RRF Dev : 30% Max. Rel. Area : 500%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 54 | T | Methyl n-butyl ketone | 1.085 | 1.314 | -21.1 | 94 | 0.00 |
| 55 | I | d-5 Chlorobenzene (IS) | 1.000 | 1.000 | 0.0 | 71 | 0.00 |
| 56 | T | n-Nonane | 1.224 | 1.455 | -18.9 | 89 | 0.00 |
| 57 | T | Chlorobenzene | 1.095 | 1.205 | -10.0 | 84 | 0.00 |
| 58 | T | Ethylbenzene | 2.025 | 2.281 | -12.6 | 84 | 0.00 |
| 59 | T | Xylenes (m&p) | 1.460 | 1.746 | -19.6 | 86 | 0.00 |
| 60 | T | Xylene (o) | 1.621 | 1.793 | -10.6 | 83 | 0.00 |
| 61 | T | Styrene | 1.076 | 1.301 | -20.9 | 85 | 0.00 |
| 62 | T | Bromoform | 0.831 | 0.940 | -13.1 | 83 | 0.00 |
| 63 | T | Cumene | 2.112 | 2.309 | -9.3 | 81 | 0.00 |
| 64 | S | Bromofluorobenzene (tune st | 0.832 | 1.037 | -24.6 | 91 | 0.00 |
| 65 | T | n-Propyl benzene | 2.753 | 3.313 | -20.3 | 86 | 0.00 |
| 66 | T | 1,1,2,2-Tetrachloroethane | 1.228 | 1.333 | -8.6 | 84 | 0.00 |
| 67 | T | 4-Ethyltoluene | 2.270 | 2.728 | -20.2 | 86 | 0.00 |
| 68 | T | 2-Chlorotoluene | 1.868 | 2.133 | -14.2 | 86 | 0.00 |
| 69 | T | 1,3,5-Trimethylbenzene | 1.837 | 2.075 | -13.0 | 83 | 0.00 |
| 70 | T | 1,2,4-Trimethylbenzene | 1.821 | 2.187 | -20.1 | 84 | 0.00 |
| 71 | T | 1,3-Dichlorobenzene | 1.208 | 1.351 | -11.8 | 86 | 0.00 |
| 72 | T | 1,4-Dichlorobenzene | 1.161 | 1.398 | -20.4 | 87 | 0.00 |
| 73 | T | Benzyl chloride | 1.591 | 2.051 | -28.9 | 86 | 0.00 |
| 74 | T | 1,2-Dichlorobenzene | 1.143 | 1.308 | -14.4 | 84 | 0.00 |
| 75 | T | 1,3-Hexachlorobutadiene | 0.820 | 0.857 | -4.5 | 84 | 0.00 |
| 76 | T | 1,2,4-Trichlorobenzene | 0.899 | 1.068 | -18.8 | 89 | 0.00 |
| 77 | T | Naphthalene | 1.857 | 2.352 | -26.7 | 88 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4072dcvs.D
Acq On : 28 Sep 2023 10:31 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 05 12:20:58 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.399 | 130 | 394533 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 1846241 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 1956014 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 2028598 | 12.47 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.492 | 41 | 336126 | 12.37 | ppbV | 99 |
| 3) Dichlorodifluoromethane | 1.533 | 85 | 1288817 | 12.93 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.650 | 85 | 1538324 | 10.72 | ppbV | 95 |
| 5) n-Butane | 1.729 | 43 | 762109 | 11.81 | ppbV | 100 |
| 6) Chloromethane | 1.791 | 52 | 58792 | 12.73 | ppbV | 99 |
| 7) Vinyl chloride | 1.784 | 62 | 521002 | 13.90 | ppbV | 100 |
| 8) 1,3-Butadiene | 1.794 | 39 | 528910 | 13.80 | ppbV | 94 |
| 9) Bromomethane | 2.091 | 94 | 373349 | 11.86 | ppbV | 100 |
| 10) Chloroethane | 2.200 | 64 | 247247 | 12.12 | ppbV | 97 |
| 11) Vinyl bromide | 2.293 | 106 | 500772 | 12.64 | ppbV | 99 |
| 12) Trichlorofluoromethane | 2.312 | 101 | 1731764 | 12.91 | ppbV | 100 |
| 13) Ethanol | 2.669 | 45 | 173409 | 10.98 | ppbV | 98 |
| 14) 1,1-Dichloroethene | 2.734 | 61 | 911565 | 11.06 | ppbV | 96 |
| 15) Carbon disulfide | 2.756 | 76 | 1655394 | 12.24 | ppbV | 98 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.775 | 101 | 1462822 | 11.04 | ppbV | 98 |
| 17) Acrolein | 2.988 | 56 | 193825 | 11.44 | ppbV | 99 |
| 18) Allyl chloride | 3.116 | 76 | 295490 | 13.39 | ppbV | 100 |
| 19) Isopropanol | 3.113 | 45 | 1026023 | 11.25 | ppbV | 98 |
| 20) Methylene chloride | 3.203 | 49 | 648001 | 13.02 | ppbV | 93 |
| 21) Acetone | 3.213 | 43 | 973812 | 13.16 | ppbV | 97 |
| 22) trans-1,2-Dichloroethene | 3.329 | 61 | 1051022 | 14.18 | ppbV | 94 |
| 23) n-Pentane | 3.412 | 43 | 1148262 | 12.14 | ppbV | 98 |
| 24) n-Hexane | 3.409 | 57 | 1670880 | 12.65 | ppbV | 94 |
| 25) Methyl tert-butyl ether | 3.412 | 73 | 2183824 | 12.15 | ppbV | 96 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 1505615 | 13.03 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 1368811 | 13.16 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.235 | 61 | 1017589 | 14.14 | ppbV | 95 |
| 29) Cyclohexane | 4.415 | 56 | 1157367 | 12.12 | ppbV | 95 |
| 30) Chloroform | 4.457 | 83 | 1673696 | 13.14 | ppbV | 99 |
| 31) Ethyl acetate | 4.544 | 61 | 262896 | 12.97 | ppbV | 96 |
| 32) Carbon tetrachloride | 4.576 | 117 | 1686035 | 11.04 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.576 | 42 | 888033 | 12.41 | ppbV | 98 |
| 34) 1,1,1-Trichloroethane | 4.628 | 97 | 1526804 | 11.11 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.685 | 43 | 1615518 | 14.15 | ppbV | 96 |
| 36) n-Heptane | 4.920 | 43 | 1629713 | 12.33 | ppbV | 95 |
| 37) Benzene | 4.933 | 78 | 2278943 | 12.52 | ppbV | 99 |
| 38) 1,2-Dichloroethane | 5.094 | 62 | 1102144 | 13.51 | ppbV | 100 |
| 40) Trichloroethene | 5.435 | 130 | 942528 | 10.06 | ppbV | 99 |
| 41) 2,2,4-Trimethylpentane | 4.846 | 57 | 2829737 | 12.10 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 978690 | 11.62 | ppbV | 99 |
| 43) Bromodichloromethane | 5.946 | 83 | 1830581 | 12.47 | ppbV | 98 |
| 44) Methyl methacrylate | 6.090 | 41 | 1393236 | 12.86 | ppbV | 96 |
| 45) 1,4-Dioxane | 6.113 | 88 | 626413 | 12.06 | ppbV | 95 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 1542564 | 11.85 | ppbV | 100 |
| 47) Toluene | 6.772 | 91 | 3329666 | 11.25 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.135 | 43 | 2533215 | 11.85 | ppbV | 97 |
| 49) Tetrachloroethene | 7.161 | 166 | 1439441 | 10.82 | ppbV | 99 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 1621869 | 12.63 | ppbV | 95 |
| 51) 1,1,2-Trichloroethane | 7.335 | 97 | 1143196 | 10.95 | ppbV | 98 |

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4072dcvs.D
Acq On : 28 Sep 2023 10:31 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

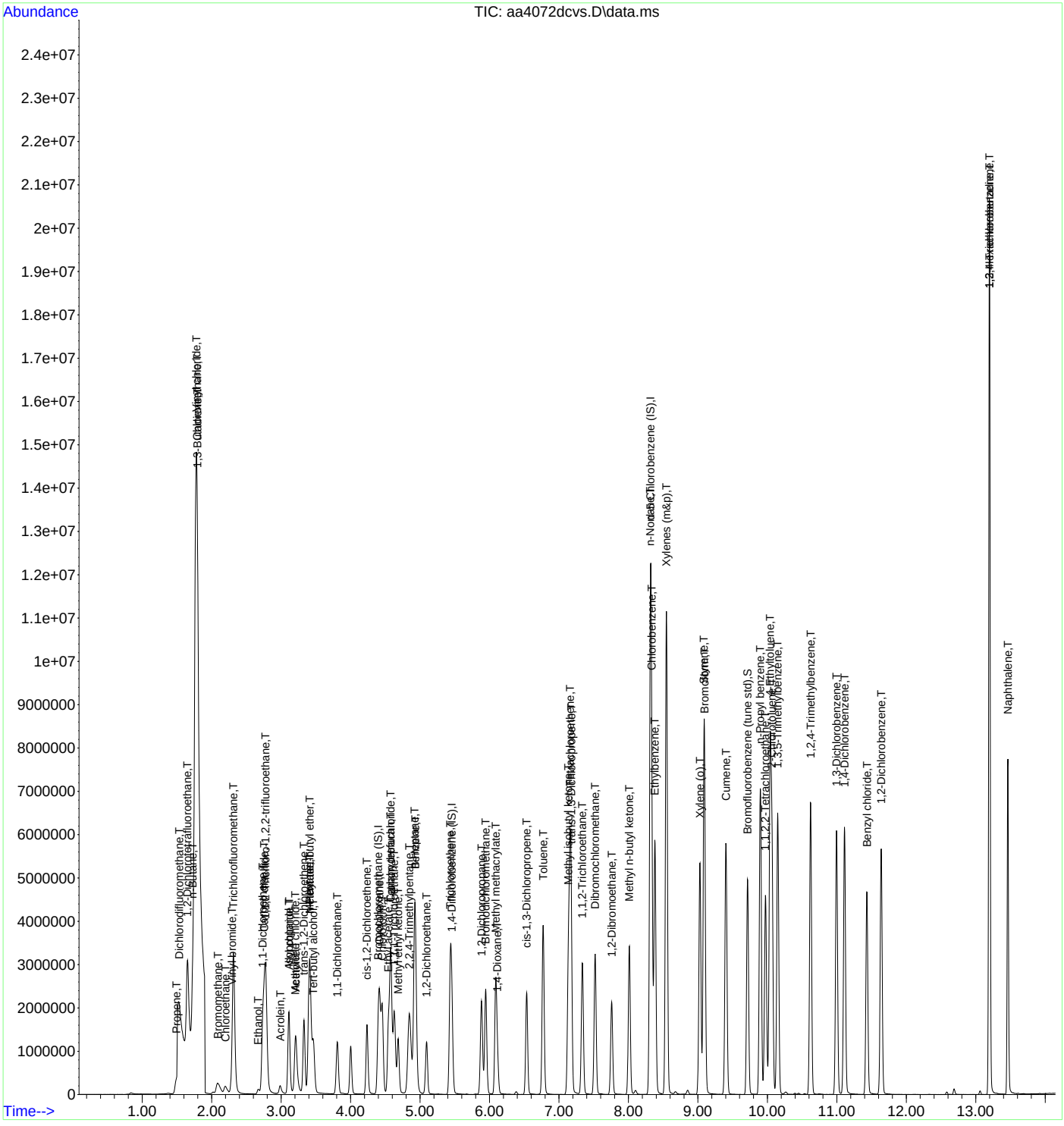
Quant Time: Oct 05 12:20:58 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 1974797 | 11.34 | ppbV | 100 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 1723352 | 11.29 | ppbV | 99 |
| 54) Methyl n-butyl ketone | 8.013 | 43 | 2740906 | 13.68 | ppbV | 97 |
| 56) n-Nonane | 8.315 | 43 | 3130203 | 13.08 | ppbV | 95 |
| 57) Chlorobenzene | 8.335 | 112 | 2616855 | 12.22 | ppbV | 96 |
| 58) Ethylbenzene | 8.380 | 91 | 4951669 | 12.50 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.547 | 91 | 7618001 | 26.68 | ppbV | 98 |
| 60) Xylene (o) | 9.029 | 91 | 3858864 | 12.17 | ppbV | 98 |
| 61) Styrene | 9.087 | 104 | 2876626 | 13.67 | ppbV | 100 |
| 62) Bromoform | 9.097 | 173 | 2077944 | 12.78 | ppbV | 100 |
| 63) Cumene | 9.405 | 105 | 4831919 | 11.70 | ppbV | 99 |
| 65) n-Propyl benzene | 9.897 | 91 | 6998521 | 12.99 | ppbV | 98 |
| 66) 1,1,2,2-Tetrachloroethane | 9.971 | 83 | 2971483 | 12.37 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 5763454 | 12.98 | ppbV | 98 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 4548166 | 12.45 | ppbV | 98 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 4424594 | 12.31 | ppbV | 98 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 4619816 | 12.97 | ppbV | 98 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 2933863 | 12.42 | ppbV | 99 |
| 72) 1,4-Dichlorobenzene | 11.113 | 146 | 2925919 | 12.89 | ppbV | 100 |
| 73) Benzyl chloride | 11.434 | 91 | 4012288 | 12.89 | ppbV | 98 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 2736550 | 12.24 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.196 | 225 | 1861511 | 11.61 | ppbV | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.196 | 180 | 2298365 | 13.07 | ppbV | 100 |
| 77) Naphthalene | 13.463 | 128 | 4601232 | 12.67 | ppbV | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4072dcvs.D
Acq On : 28 Sep 2023 10:31 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 05 12:20:58 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Continuing Calibration Data Summary Report

**Initial Calibration Curve:** 10/10/2023
**Instrument:** AA
**Amount of standard injected (ml):** 50

**Date/Time of Calibration:** 12/8/2023 10:50
**Sample ID:** DCS
**Laboratory ID:** AA4882DCVS

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05093-01 [AA4895] | 12/08/2023 19:11 |

| Compound Name | Average RRF | Standard RRF | % Difference | PassFail | * |
|---|---|---|---|---|---|
| Acetone | 1.5 | 1.5 | -0.30 | PASS | |
| Benzene | 4.0 | 3.4 | 15 | PASS | |
| Bromoform | 0.73 | 0.73 | 0.70 | PASS | |
| Bromomethane | 0.73 | 0.78 | -6.2 | PASS | |
| 1,3-Butadiene | 0.85 | 0.76 | 9.7 | PASS | |
| Chlorobenzene | 1.00 | 0.90 | 10 | PASS | |
| Chloroethane | 0.48 | 0.50 | -5.7 | PASS | |
| Chloroform | 2.7 | 2.4 | 8.5 | PASS | |
| Chloromethane | 0.11 | 0.11 | 3.6 | PASS | |
| Carbon disulfide | 3.1 | 3.0 | 1.4 | PASS | |
| Carbon tetrachloride | 3.2 | 2.9 | 7.1 | PASS | |
| Cyclohexane | 2.2 | 2.0 | 11 | PASS | |
| 1,2-Dibromoethane | 0.69 | 0.69 | -1.2 | PASS | |
| 1,2-Dichlorobenzene | 1.0 | 0.95 | 7.9 | PASS | |
| 1,3-Dichlorobenzene | 1.1 | 0.95 | 9.9 | PASS | |
| 1,4-Dichlorobenzene | 1.1 | 0.99 | 7.1 | PASS | |
| Dichlorodifluoromethane | 2.2 | 2.2 | 1.0 | PASS | |
| 1,1-Dichloroethane | 2.3 | 2.0 | 13 | PASS | |
| 1,2-Dichloroethane | 1.7 | 1.6 | 2.3 | PASS | |
| 1,1-Dichloroethene | 1.9 | 1.8 | 0.80 | PASS | |
| 1,2-Dichloroethene (cis) | 1.6 | 1.5 | 8.3 | PASS | |
| 1,2-Dichloroethene (trans) | 1.7 | 1.7 | 3.9 | PASS | |
| 1,2-Dichloropropane | 0.39 | 0.37 | 3.9 | PASS | |
| 1,3-Dichloropropene (cis) | 0.60 | 0.59 | 2.3 | PASS | |
| 1,3-Dichloropropene (trans) | 0.59 | 0.61 | -4.4 | PASS | |
| 1,2-Dichlorotetrafluoroethane | 3.2 | 2.9 | 11 | PASS | |
| 1,4-Dioxane | 0.24 | 0.24 | -0.40 | PASS | |
| Ethylbenzene | 1.8 | 1.7 | 7.2 | PASS | |
| n-Heptane | 2.8 | 2.6 | 4.3 | PASS | |
| 1,3-Hexachlorobutadiene | 0.71 | 0.66 | 8.1 | PASS | |
| n-Hexane | 3.2 | 2.8 | 12 | PASS | |
| Methylene chloride | 1.2 | 1.1 | 13 | PASS | |
| Methyl ethyl ketone | 2.4 | 2.2 | 8.0 | PASS | |
| Methyl isobutyl ketone | 0.88 | 0.96 | -8.5 | PASS | |
| Methyl tert-butyl ether | 3.9 | 3.5 | 9.8 | PASS | |
| Styrene | 1.0 | 0.95 | 6.9 | PASS | |
| Tert-butyl alcohol | 2.6 | 2.3 | 11 | PASS | |
| 1,1,2,2-Tetrachloroethane | 1.0 | 0.97 | 7.4 | PASS | |
| Tetrachloroethene | 0.61 | 0.59 | 3.1 | PASS | |
| Toluene | 1.4 | 1.4 | 2.8 | PASS | |
| 1,2,4-Trichlorobenzene | 0.82 | 0.78 | 5.5 | PASS | |
| 1,1,1-Trichloroethane | 2.8 | 2.6 | 7.2 | PASS | |
| 1,1,2-Trichloroethane | 0.48 | 0.46 | 2.7 | PASS | |
| Trichloroethene | 0.44 | 0.42 | 6.1 | PASS | |
| Trichlorofluoromethane | 2.8 | 2.8 | 1.6 | PASS | |

***%Difference must be within +/- 30%**
**RRF - Relative Response Factor**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Continuing Calibration Data Summary Report

| | | | |
|---|---|---|---|
| **Initial Calibration Curve:** | **10/10/2023** | **Date/Time of Calibration:** | **12/8/2023 10:50** |
| **Instrument:** | **AA** | **Sample ID:** | **DCS** |
| **Amount of standard injected (ml):** | **50** | **Laboratory ID:** | **AA4882DCVS** |

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05093-01 [AA4895] | 12/08/2023 19:11 |

| Compound Name | Average RRF | Standard RRF | % Difference | PassFail | * |
|---|---|---|---|---|---|
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 2.8 | 2.4 | 16 | PASS | |
| 1,2,4-Trimethylbenzene | 1.7 | 1.6 | 5.2 | PASS | |
| 1,3,5-Trimethylbenzene | 1.7 | 1.6 | 7.1 | PASS | |
| 2,2,4-Trimethylpentane | 1.3 | 1.3 | 2.8 | PASS | |
| Vinyl bromide | 0.90 | 0.89 | 0.80 | PASS | |
| Vinyl chloride | 0.91 | 0.87 | 4.1 | PASS | |
| Xylenes (m&p) | 1.4 | 1.3 | 4.2 | PASS | |
| Xylenes (o) | 1.5 | 1.4 | 9.2 | PASS | |

***%Difference must be within +/- 30%**
**RRF - Relative Response Factor**

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4882dcvs.D
Acq On : 8 Dec 2023 10:50 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 12 09:41:42 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 0% Max. R.T. Dev 0.40min
Max. RRF Dev : 30% Max. Rel. Area : 500%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Bromochloromethane (IS) | 1.000 | 1.000 | 0.0 | 126 | 0.00 |
| 2 | T | Propene | 0.694 | 0.600 | 13.5 | 126 | 0.00 |
| 3 | T | Dichlorodifluoromethane | 2.216 | 2.193 | 1.0 | 128 | 0.00 |
| 4 | T | 1,2-Dichlorotetrafluoroetha | 3.219 | 2.869 | 10.9 | 123 | 0.00 |
| 5 | T | n-Butane | 1.597 | 1.500 | 6.1 | 124 | 0.00 |
| 6 | T | Chloromethane | 0.111 | 0.107 | 3.6 | 120 | 0.00 |
| 7 | T | Vinyl chloride | 0.906 | 0.869 | 4.1 | 121 | 0.00 |
| 8 | T | 1,3-Butadiene | 0.846 | 0.764 | 9.7 | 121 | 0.00 |
| 9 | T | Bromomethane | 0.731 | 0.776 | -6.2 | 130 | 0.00 |
| 10 | T | Chloroethane | 0.475 | 0.502 | -5.7 | 126 | 0.00 |
| 11 | T | Vinyl bromide | 0.895 | 0.888 | 0.8 | 123 | 0.00 |
| 12 | T | Trichlorofluoromethane | 2.799 | 2.753 | 1.6 | 131 | 0.00 |
| 13 | T | Ethanol | 0.293 | 0.309 | -5.5 | 145 | 0.00 |
| 14 | T | 1,1-Dichloroethene | 1.858 | 1.844 | 0.8 | 120 | 0.00 |
| 15 | T | Carbon disulfide | 3.058 | 3.016 | 1.4 | 118 | 0.00 |
| 16 | T | 1,1,2-Trichloro-1,2,2-trifl | 2.819 | 2.364 | 16.1 | 118 | 0.00 |
| 17 | T | Acrolein | 0.418 | 0.406 | 2.9 | 119 | 0.00 |
| 18 | T | Allyl chloride | 0.501 | 0.485 | 3.2 | 114 | 0.00 |
| 19 | T | Isopropanol | 2.005 | 1.954 | 2.5 | 118 | 0.00 |
| 20 | T | Methylene chloride | 1.229 | 1.073 | 12.7 | 133 | 0.00 |
| 21 | T | Acetone | 1.508 | 1.512 | -0.3 | 124 | 0.00 |
| 22 | T | trans-1,2-Dichloroethene | 1.724 | 1.657 | 3.9 | 117 | 0.00 |
| 23 | T | n-Pentane | 2.325 | 2.146 | 7.7 | 125 | 0.00 |
| 24 | T | n-Hexane | 3.152 | 2.784 | 11.7 | 118 | 0.00 |
| 25 | T | Methyl tert-butyl ether | 3.872 | 3.493 | 9.8 | 121 | 0.00 |
| 26 | T | Tert-butyl alcohol | 2.607 | 2.316 | 11.2 | 117 | 0.00 |
| 27 | T | 1,1-Dichloroethane | 2.322 | 2.010 | 13.4 | 114 | 0.00 |
| 28 | T | cis-1,2-Dichloroethene | 1.638 | 1.502 | 8.3 | 115 | 0.00 |
| 29 | t | Cyclohexane | 2.202 | 1.965 | 10.8 | 119 | 0.00 |
| 30 | T | Chloroform | 2.676 | 2.449 | 8.5 | 117 | 0.00 |
| 31 | T | Ethyl acetate | 0.435 | 0.410 | 5.7 | 115 | 0.00 |
| 32 | T | Carbon tetrachloride | 3.174 | 2.948 | 7.1 | 122 | 0.00 |
| 33 | T | Tetrahydrofuran | 1.504 | 1.387 | 7.8 | 118 | 0.00 |
| 34 | T | 1,1,1-Trichloroethane | 2.780 | 2.579 | 7.2 | 122 | 0.00 |
| 35 | T | Methyl ethyl ketone | 2.442 | 2.246 | 8.0 | 120 | 0.00 |
| 36 | T | n-Heptane | 2.764 | 2.646 | 4.3 | 117 | 0.00 |
| 37 | T | Benzene | 3.972 | 3.382 | 14.9 | 112 | 0.00 |
| 38 | T | 1,2-Dichloroethane | 1.663 | 1.624 | 2.3 | 123 | 0.00 |
| 39 | I | 1,4-Difluorobenzene (IS) | 1.000 | 1.000 | 0.0 | 118 | 0.00 |
| 40 | T | Trichloroethene | 0.442 | 0.415 | 6.1 | 111 | 0.00 |
| 41 | T | 2,2,4-Trimethylpentane | 1.303 | 1.266 | 2.8 | 122 | 0.00 |
| 42 | T | 1,2-Dichloropropane | 0.389 | 0.374 | 3.9 | 113 | 0.00 |
| 43 | T | Bromodichloromethane | 0.655 | 0.674 | -2.9 | 121 | 0.00 |
| 44 | T | Methyl methacrylate | 0.472 | 0.490 | -3.8 | 116 | 0.00 |
| 45 | T | 1,4-Dioxane | 0.238 | 0.239 | -0.4 | 116 | 0.00 |
| 46 | T | cis-1,3-Dichloropropene | 0.603 | 0.589 | 2.3 | 111 | 0.00 |
| 47 | T | Toluene | 1.405 | 1.366 | 2.8 | 108 | 0.00 |
| 48 | T | Methyl isobutyl ketone | 0.883 | 0.958 | -8.5 | 119 | 0.00 |
| 49 | T | Tetrachloroethene | 0.606 | 0.587 | 3.1 | 109 | 0.00 |
| 50 | T | trans-1,3-Dichloropropene | 0.585 | 0.611 | -4.4 | 114 | 0.00 |
| 51 | T | 1,1,2-Trichloroethane | 0.475 | 0.462 | 2.7 | 110 | 0.00 |
| 52 | T | Dibromochloromethane | 0.791 | 0.812 | -2.7 | 115 | 0.00 |
| 53 | T | 1,2-Dibromoethane | 0.686 | 0.694 | -1.2 | 112 | 0.00 |

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4882dcvs.D
Acq On : 8 Dec 2023 10:50 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 12 09:41:42 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 0% Max. R.T. Dev 0.40min
Max. RRF Dev : 30% Max. Rel. Area : 500%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 54 | T | Methyl n-butyl ketone | 0.849 | 0.929 | -9.4 | 117 | 0.00 |
| 55 | I | d-5 Chlorobenzene (IS) | 1.000 | 1.000 | 0.0 | 119 | 0.00 |
| 56 | T | n-Nonane | 0.992 | 1.014 | -2.2 | 118 | 0.00 |
| 57 | T | Chlorobenzene | 0.997 | 0.897 | 10.0 | 108 | 0.00 |
| 58 | T | Ethylbenzene | 1.843 | 1.711 | 7.2 | 110 | 0.00 |
| 59 | T | Xylenes (m&p) | 1.365 | 1.308 | 4.2 | 110 | 0.00 |
| 60 | T | Xylene (o) | 1.490 | 1.353 | 9.2 | 110 | 0.00 |
| 61 | T | Styrene | 1.020 | 0.950 | 6.9 | 106 | 0.00 |
| 62 | T | Bromoform | 0.732 | 0.727 | 0.7 | 117 | 0.00 |
| 63 | T | Cumene | 1.947 | 1.854 | 4.8 | 113 | 0.00 |
| 64 | S | Bromofluorobenzene (tune st | 0.872 | 0.895 | -2.6 | 123 | 0.00 |
| 65 | T | n-Propyl benzene | 2.541 | 2.507 | 1.3 | 115 | 0.00 |
| 66 | T | 1,1,2,2-Tetrachloroethane | 1.043 | 0.966 | 7.4 | 111 | 0.00 |
| 67 | T | 4-Ethyltoluene | 2.151 | 2.065 | 4.0 | 112 | 0.00 |
| 68 | T | 2-Chlorotoluene | 1.707 | 1.639 | 4.0 | 115 | 0.00 |
| 69 | T | 1,3,5-Trimethylbenzene | 1.730 | 1.608 | 7.1 | 109 | 0.00 |
| 70 | T | 1,2,4-Trimethylbenzene | 1.729 | 1.639 | 5.2 | 109 | 0.00 |
| 71 | T | 1,3-Dichlorobenzene | 1.059 | 0.954 | 9.9 | 108 | 0.00 |
| 72 | T | 1,4-Dichlorobenzene | 1.065 | 0.989 | 7.1 | 109 | 0.00 |
| 73 | T | Benzyl chloride | 1.529 | 1.550 | -1.4 | 114 | 0.00 |
| 74 | T | 1,2-Dichlorobenzene | 1.027 | 0.946 | 7.9 | 109 | 0.00 |
| 75 | T | 1,3-Hexachlorobutadiene | 0.713 | 0.655 | 8.1 | 111 | 0.00 |
| 76 | T | 1,2,4-Trichlorobenzene | 0.824 | 0.779 | 5.5 | 113 | 0.00 |
| 77 | T | Naphthalene | 1.885 | 1.868 | 0.9 | 118 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4882dcvs.D
Acq On : 8 Dec 2023 10:50 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 12 09:41:42 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.390 | 130 | 497428 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.451 | 114 | 1995098 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.315 | 117 | 2342927 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 2097748 | 10.27 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.483 | 41 | 325585 | 9.43 | ppbV | 97 |
| 3) Dichlorodifluoromethane | 1.522 | 85 | 1156523 | 10.49 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.643 | 85 | 1398478 | 8.73 | ppbV | 97 |
| 5) n-Butane | 1.725 | 43 | 813377 | 10.24 | ppbV | 99 |
| 6) Chloromethane | 1.787 | 52 | 59773 | 10.85 | ppbV | 90 |
| 7) Vinyl chloride | 1.777 | 62 | 466932 | 10.36 | ppbV | 100 |
| 8) 1,3-Butadiene | 1.791 | 39 | 406894 | 9.67 | ppbV | 98 |
| 9) Bromomethane | 2.075 | 94 | 385826 | 10.61 | ppbV | 98 |
| 10) Chloroethane | 2.190 | 64 | 264511 | 11.19 | ppbV | 99 |
| 11) Vinyl bromide | 2.287 | 106 | 446119 | 10.02 | ppbV | 99 |
| 12) Trichlorofluoromethane | 2.306 | 101 | 1506447 | 10.82 | ppbV | 100 |
| 13) Ethanol | 2.666 | 45 | 159941 | 10.98 | ppbV | 98 |
| 14) 1,1-Dichloroethene | 2.727 | 61 | 954181 | 10.33 | ppbV | 96 |
| 15) Carbon disulfide | 2.747 | 76 | 1604997 | 10.55 | ppbV | 96 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.769 | 101 | 1281549 | 9.14 | ppbV | 99 |
| 17) Acrolein | 2.981 | 56 | 201838 | 9.71 | ppbV | 99 |
| 18) Allyl chloride | 3.110 | 76 | 260522 | 10.45 | ppbV | 100 |
| 19) Isopropanol | 3.107 | 45 | 865101 | 8.67 | ppbV | 97 |
| 20) Methylene chloride | 3.197 | 49 | 576215 | 9.42 | ppbV | 94 |
| 21) Acetone | 3.210 | 43 | 812442 | 10.83 | ppbV | 98 |
| 22) trans-1,2-Dichloroethene | 3.322 | 61 | 914937 | 10.67 | ppbV | 99 |
| 23) n-Pentane | 3.402 | 43 | 1153103 | 9.97 | ppbV | 98 |
| 24) n-Hexane | 3.402 | 57 | 1523505 | 9.72 | ppbV | 95 |
| 25) Methyl tert-butyl ether | 3.406 | 73 | 1946245 | 10.10 | ppbV | 98 |
| 26) Tert-butyl alcohol | 3.460 | 59 | 1324915 | 10.22 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.804 | 63 | 1070062 | 9.26 | ppbV | 99 |
| 28) cis-1,2-Dichloroethene | 4.232 | 61 | 814529 | 10.00 | ppbV | 97 |
| 29) Cyclohexane | 4.412 | 56 | 1094521 | 9.99 | ppbV | 99 |
| 30) Chloroform | 4.451 | 83 | 1315872 | 9.89 | ppbV | 100 |
| 31) Ethyl acetate | 4.544 | 61 | 220415 | 10.18 | ppbV | 96 |
| 32) Carbon tetrachloride | 4.573 | 117 | 1612899 | 10.22 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.570 | 42 | 759074 | 10.14 | ppbV | 98 |
| 34) 1,1,1-Trichloroethane | 4.624 | 97 | 1398155 | 10.11 | ppbV | 98 |
| 35) Methyl ethyl ketone | 4.682 | 43 | 1229080 | 10.12 | ppbV | 97 |
| 36) n-Heptane | 4.917 | 43 | 1460837 | 10.63 | ppbV | 97 |
| 37) Benzene | 4.930 | 78 | 1816777 | 9.20 | ppbV | 97 |
| 38) 1,2-Dichloroethane | 5.087 | 62 | 880596 | 10.65 | ppbV | 100 |
| 40) Trichloroethene | 5.431 | 130 | 827314 | 9.37 | ppbV | 99 |
| 41) 2,2,4-Trimethylpentane | 4.843 | 57 | 2753707 | 10.60 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.881 | 63 | 821769 | 10.59 | ppbV | 100 |
| 43) Bromodichloromethane | 5.943 | 83 | 1546117 | 11.83 | ppbV | 99 |
| 44) Methyl methacrylate | 6.084 | 41 | 1074952 | 11.42 | ppbV | 96 |
| 45) 1,4-Dioxane | 6.113 | 88 | 556955 | 11.71 | ppbV | 100 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 1304823 | 10.84 | ppbV | 100 |
| 47) Toluene | 6.769 | 91 | 2943669 | 10.50 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.129 | 43 | 2083775 | 11.83 | ppbV | 97 |
| 49) Tetrachloroethene | 7.158 | 166 | 1312474 | 10.86 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.174 | 75 | 1353861 | 11.60 | ppbV | 98 |
| 51) 1,1,2-Trichloroethane | 7.335 | 97 | 994836 | 10.51 | ppbV | 99 |

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4882dcvs.D
Acq On : 8 Dec 2023 10:50 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

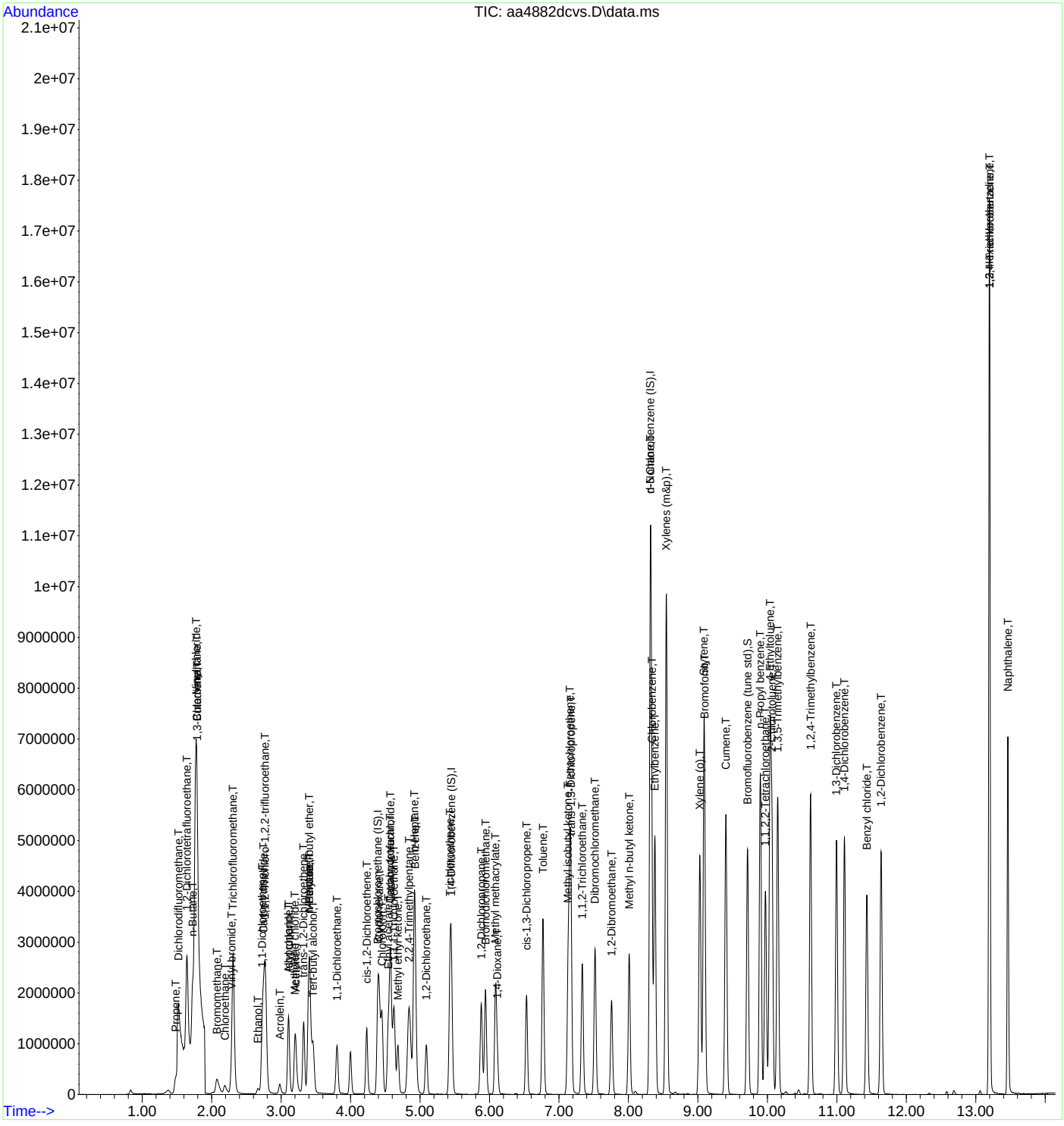
Quant Time: Dec 12 09:41:42 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.518 | 129 | 1815407 | 11.51 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.756 | 107 | 1495380 | 10.92 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.010 | 43 | 2094056 | 12.36 | ppbV | 97 |
| 56) n-Nonane | 8.315 | 43 | 2612956 | 11.24 | ppbV | 97 |
| 57) Chlorobenzene | 8.338 | 112 | 2332552 | 9.99 | ppbV | 97 |
| 58) Ethylbenzene | 8.380 | 91 | 4450991 | 10.31 | ppbV | 98 |
| 59) Xylenes (m&p) | 8.544 | 91 | 6834641 | 21.36 | ppbV | 99 |
| 60) Xylene (o) | 9.026 | 91 | 3488106 | 9.99 | ppbV | 98 |
| 61) Styrene | 9.087 | 104 | 2516387 | 10.53 | ppbV | 98 |
| 62) Bromoform | 9.097 | 173 | 1925681 | 11.22 | ppbV | 100 |
| 63) Cumene | 9.402 | 105 | 4647970 | 10.19 | ppbV | 100 |
| 65) n-Propyl benzene | 9.897 | 91 | 6343495 | 10.65 | ppbV | 98 |
| 66) 1,1,2,2-Tetrachloroethane | 9.971 | 83 | 2579002 | 10.55 | ppbV | 99 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 5223938 | 10.37 | ppbV | 100 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 4185953 | 10.47 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 4107061 | 10.13 | ppbV | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 4146495 | 10.24 | ppbV | 99 |
| 71) 1,3-Dichlorobenzene | 10.994 | 146 | 2479981 | 10.00 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 2478669 | 9.93 | ppbV | 99 |
| 73) Benzyl chloride | 11.431 | 91 | 3632702 | 10.14 | ppbV | 99 |
| 74) 1,2-Dichlorobenzene | 11.637 | 146 | 2370759 | 9.85 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.196 | 225 | 1704319 | 10.21 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.199 | 180 | 2007051 | 10.39 | ppbV | 99 |
| 77) Naphthalene | 13.463 | 128 | 4377391 | 9.91 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4882dcvs.D
Acq On : 8 Dec 2023 10:50 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 12 09:41:42 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Continuing Calibration Data Summary Report

**Initial Calibration Curve:** 10/10/2023
**Instrument:** AA
**Amount of standard injected (ml):** 50

**Date/Time of Calibration:** 12/11/2023 10:26
**Sample ID:** DCS
**Laboratory ID:** AA4902DCVS

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 09:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 1458 [AA4906] | 12/11/2023 12:50 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 1588 [AA4907] | 12/11/2023 13:19 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05093-01 [AA4913] | 12/11/2023 16:20 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 01:59 |

| Compound Name | Average RRF | Standard RRF | % Difference | PassFail | * |
|---|---|---|---|---|---|
| Acetone | 1.5 | 1.6 | -2.9 | PASS | |
| Benzene | 4.0 | 3.4 | 14 | PASS | |
| Bromoform | 0.73 | 0.73 | 0.10 | PASS | |
| Bromomethane | 0.73 | 0.76 | -4.4 | PASS | |
| 1,3-Butadiene | 0.85 | 0.80 | 5.7 | PASS | |
| Chlorobenzene | 1.00 | 0.92 | 7.3 | PASS | |
| Chloroethane | 0.48 | 0.52 | -9.3 | PASS | |
| Chloroform | 2.7 | 2.5 | 8.2 | PASS | |
| Chloromethane | 0.11 | 0.12 | -5.4 | PASS | |
| Carbon disulfide | 3.1 | 3.1 | -0.90 | PASS | |
| Carbon tetrachloride | 3.2 | 2.9 | 9.9 | PASS | |
| Cyclohexane | 2.2 | 2.0 | 7.9 | PASS | |
| 1,2-Dibromoethane | 0.69 | 0.69 | 0.10 | PASS | |
| 1,2-Dichlorobenzene | 1.0 | 0.97 | 5.6 | PASS | |
| 1,3-Dichlorobenzene | 1.1 | 0.98 | 7.4 | PASS | |
| 1,4-Dichlorobenzene | 1.1 | 1.0 | 4.5 | PASS | |
| Dichlorodifluoromethane | 2.2 | 2.2 | 1.3 | PASS | |
| 1,1-Dichloroethane | 2.3 | 2.1 | 10 | PASS | |
| 1,2-Dichloroethane | 1.7 | 1.6 | 3.6 | PASS | |
| 1,1-Dichloroethene | 1.9 | 1.9 | -1.0 | PASS | |
| 1,2-Dichloroethene (cis) | 1.6 | 1.6 | 3.8 | PASS | |
| 1,2-Dichloroethene (trans) | 1.7 | 1.7 | 0.20 | PASS | |
| 1,2-Dichloropropane | 0.39 | 0.37 | 4.6 | PASS | |
| 1,3-Dichloropropene (cis) | 0.60 | 0.59 | 2.7 | PASS | |
| 1,3-Dichloropropene (trans) | 0.59 | 0.60 | -2.6 | PASS | |
| 1,2-Dichlorotetrafluoroethane | 3.2 | 2.9 | 11 | PASS | |
| 1,4-Dioxane | 0.24 | 0.23 | 2.5 | PASS | |
| Ethylbenzene | 1.8 | 1.7 | 5.1 | PASS | |
| n-Heptane | 2.8 | 2.7 | 1.0 | PASS | |
| 1,3-Hexachlorobutadiene | 0.71 | 0.67 | 6.3 | PASS | |
| n-Hexane | 3.2 | 2.9 | 7.9 | PASS | |
| Methylene chloride | 1.2 | 1.1 | 12 | PASS | |
| Methyl ethyl ketone | 2.4 | 2.4 | 3.5 | PASS | |
| Methyl isobutyl ketone | 0.88 | 0.96 | -8.5 | PASS | |
| Methyl tert-butyl ether | 3.9 | 3.6 | 6.7 | PASS | |
| Styrene | 1.0 | 0.98 | 3.7 | PASS | |
| Tert-butyl alcohol | 2.6 | 2.4 | 6.1 | PASS | |
| 1,1,2,2-Tetrachloroethane | 1.0 | 1.00 | 4.3 | PASS | |
| Tetrachloroethene | 0.61 | 0.57 | 5.4 | PASS | |
| Toluene | 1.4 | 1.3 | 4.0 | PASS | |

***%Difference must be within +/- 30%**
**RRF - Relative Response Factor**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Continuing Calibration Data Summary Report

| | | | |
|---|---|---|---|
| **Initial Calibration Curve:** | **10/10/2023** | **Date/Time of Calibration:** | **12/11/2023 10:26** |
| **Instrument:** | **AA** | **Sample ID:** | **DCS** |
| **Amount of standard injected (ml):** | **50** | **Laboratory ID:** | **AA4902DCVS** |

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 09:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 1458 [AA4906] | 12/11/2023 12:50 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 1588 [AA4907] | 12/11/2023 13:19 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05093-01 [AA4913] | 12/11/2023 16:20 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 01:59 |

| Compound Name | Average RRF | Standard RRF | % Difference | PassFail | * |
|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | 0.82 | 0.79 | 3.9 | PASS | |
| 1,1,1-Trichloroethane | 2.8 | 2.5 | 8.6 | PASS | |
| 1,1,2-Trichloroethane | 0.48 | 0.46 | 4.0 | PASS | |
| Trichloroethene | 0.44 | 0.41 | 8.4 | PASS | |
| Trichlorofluoromethane | 2.8 | 2.7 | 3.1 | PASS | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 2.8 | 2.4 | 15 | PASS | |
| 1,2,4-Trimethylbenzene | 1.7 | 1.7 | 3.1 | PASS | |
| 1,3,5-Trimethylbenzene | 1.7 | 1.7 | 4.2 | PASS | |
| 2,2,4-Trimethylpentane | 1.3 | 1.2 | 4.3 | PASS | |
| Vinyl bromide | 0.90 | 0.91 | -1.8 | PASS | |
| Vinyl chloride | 0.91 | 0.89 | 1.5 | PASS | |
| Xylenes (m&p) | 1.4 | 1.3 | 2.0 | PASS | |
| Xylenes (o) | 1.5 | 1.4 | 6.4 | PASS | |

***%Difference must be within +/- 30%**
**RRF - Relative Response Factor**

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4902dcvs.D
Acq On : 11 Dec 2023 10:26 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 11 10:45:53 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 0% Max. R.T. Dev 0.40min
Max. RRF Dev : 30% Max. Rel. Area : 500%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Bromochloromethane (IS) | 1.000 | 1.000 | 0.0 | 151 | 0.00 |
| 2 | T | Propene | 0.694 | 0.638 | 8.1 | 161 | 0.00 |
| 3 | T | Dichlorodifluoromethane | 2.216 | 2.188 | 1.3 | 153 | 0.00 |
| 4 | T | 1,2-Dichlorotetrafluoroetha | 3.219 | 2.870 | 10.8 | 147 | 0.00 |
| 5 | T | n-Butane | 1.597 | 1.560 | 2.3 | 154 | 0.00 |
| 6 | T | Chloromethane | 0.111 | 0.117 | -5.4 | 157 | 0.00 |
| 7 | T | Vinyl chloride | 0.906 | 0.892 | 1.5 | 149 | 0.00 |
| 8 | T | 1,3-Butadiene | 0.846 | 0.798 | 5.7 | 151 | 0.00 |
| 9 | T | Bromomethane | 0.731 | 0.763 | -4.4 | 154 | 0.00 |
| 10 | T | Chloroethane | 0.475 | 0.519 | -9.3 | 156 | 0.00 |
| 11 | T | Vinyl bromide | 0.895 | 0.911 | -1.8 | 151 | 0.00 |
| 12 | T | Trichlorofluoromethane | 2.799 | 2.713 | 3.1 | 155 | 0.00 |
| 13 | T | Ethanol | 0.293 | 0.325 | -10.9 | 183 | 0.00 |
| 14 | T | 1,1-Dichloroethene | 1.858 | 1.877 | -1.0 | 146 | 0.00 |
| 15 | T | Carbon disulfide | 3.058 | 3.087 | -0.9 | 145 | 0.00 |
| 16 | T | 1,1,2-Trichloro-1,2,2-trifl | 2.819 | 2.390 | 15.2 | 143 | 0.00 |
| 17 | T | Acrolein | 0.418 | 0.423 | -1.2 | 149 | 0.00 |
| 18 | T | Allyl chloride | 0.501 | 0.513 | -2.4 | 145 | 0.00 |
| 19 | T | Isopropanol | 2.005 | 2.110 | -5.2 | 153 | 0.00 |
| 20 | T | Methylene chloride | 1.229 | 1.083 | 11.9 | 161 | 0.00 |
| 21 | T | Acetone | 1.508 | 1.551 | -2.9 | 153 | 0.00 |
| 22 | T | trans-1,2-Dichloroethene | 1.724 | 1.721 | 0.2 | 146 | 0.00 |
| 23 | T | n-Pentane | 2.325 | 2.210 | 4.9 | 154 | 0.00 |
| 24 | T | n-Hexane | 3.152 | 2.903 | 7.9 | 148 | 0.00 |
| 25 | T | Methyl tert-butyl ether | 3.872 | 3.613 | 6.7 | 150 | 0.00 |
| 26 | T | Tert-butyl alcohol | 2.607 | 2.448 | 6.1 | 148 | 0.00 |
| 27 | T | 1,1-Dichloroethane | 2.322 | 2.083 | 10.3 | 141 | 0.00 |
| 28 | T | cis-1,2-Dichloroethene | 1.638 | 1.576 | 3.8 | 144 | 0.00 |
| 29 | t | Cyclohexane | 2.202 | 2.029 | 7.9 | 148 | 0.00 |
| 30 | T | Chloroform | 2.676 | 2.457 | 8.2 | 141 | 0.00 |
| 31 | T | Ethyl acetate | 0.435 | 0.434 | 0.2 | 146 | 0.00 |
| 32 | T | Carbon tetrachloride | 3.174 | 2.860 | 9.9 | 142 | 0.00 |
| 33 | T | Tetrahydrofuran | 1.504 | 1.466 | 2.5 | 149 | 0.00 |
| 34 | T | 1,1,1-Trichloroethane | 2.780 | 2.541 | 8.6 | 144 | 0.00 |
| 35 | T | Methyl ethyl ketone | 2.442 | 2.356 | 3.5 | 150 | 0.00 |
| 36 | T | n-Heptane | 2.764 | 2.735 | 1.0 | 145 | 0.00 |
| 37 | T | Benzene | 3.972 | 3.428 | 13.7 | 136 | 0.00 |
| 38 | T | 1,2-Dichloroethane | 1.663 | 1.603 | 3.6 | 146 | 0.00 |
| 39 | I | 1,4-Difluorobenzene (IS) | 1.000 | 1.000 | 0.0 | 147 | 0.00 |
| 40 | T | Trichloroethene | 0.442 | 0.405 | 8.4 | 135 | 0.00 |
| 41 | T | 2,2,4-Trimethylpentane | 1.303 | 1.247 | 4.3 | 149 | 0.00 |
| 42 | T | 1,2-Dichloropropane | 0.389 | 0.371 | 4.6 | 139 | 0.00 |
| 43 | T | Bromodichloromethane | 0.655 | 0.640 | 2.3 | 143 | 0.00 |
| 44 | T | Methyl methacrylate | 0.472 | 0.494 | -4.7 | 146 | 0.00 |
| 45 | T | 1,4-Dioxane | 0.238 | 0.232 | 2.5 | 140 | 0.00 |
| 46 | T | cis-1,3-Dichloropropene | 0.603 | 0.587 | 2.7 | 137 | 0.00 |
| 47 | T | Toluene | 1.405 | 1.349 | 4.0 | 133 | 0.00 |
| 48 | T | Methyl isobutyl ketone | 0.883 | 0.958 | -8.5 | 148 | 0.00 |
| 49 | T | Tetrachloroethene | 0.606 | 0.573 | 5.4 | 133 | 0.00 |
| 50 | T | trans-1,3-Dichloropropene | 0.585 | 0.600 | -2.6 | 139 | 0.00 |
| 51 | T | 1,1,2-Trichloroethane | 0.475 | 0.456 | 4.0 | 135 | 0.00 |
| 52 | T | Dibromochloromethane | 0.791 | 0.789 | 0.3 | 139 | 0.00 |
| 53 | T | 1,2-Dibromoethane | 0.686 | 0.685 | 0.1 | 137 | 0.00 |

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4902dcvs.D
Acq On : 11 Dec 2023 10:26 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 11 10:45:53 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 0% Max. R.T. Dev 0.40min
Max. RRF Dev : 30% Max. Rel. Area : 500%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 54 | T | Methyl n-butyl ketone | 0.849 | 0.947 | -11.5 | 149 | 0.00 |
| 55 | I | d-5 Chlorobenzene (IS) | 1.000 | 1.000 | 0.0 | 142 | 0.00 |
| 56 | T | n-Nonane | 0.992 | 1.053 | -6.1 | 146 | 0.00 |
| 57 | T | Chlorobenzene | 0.997 | 0.924 | 7.3 | 133 | 0.00 |
| 58 | T | Ethylbenzene | 1.843 | 1.749 | 5.1 | 134 | 0.00 |
| 59 | T | Xylenes (m&p) | 1.365 | 1.338 | 2.0 | 134 | 0.00 |
| 60 | T | Xylene (o) | 1.490 | 1.395 | 6.4 | 135 | 0.00 |
| 61 | T | Styrene | 1.020 | 0.982 | 3.7 | 131 | 0.00 |
| 62 | T | Bromoform | 0.732 | 0.731 | 0.1 | 139 | 0.00 |
| 63 | T | Cumene | 1.947 | 1.907 | 2.1 | 139 | 0.00 |
| 64 | S | Bromofluorobenzene (tune st | 0.872 | 0.871 | 0.1 | 142 | 0.00 |
| 65 | T | n-Propyl benzene | 2.541 | 2.576 | -1.4 | 140 | 0.00 |
| 66 | T | 1,1,2,2-Tetrachloroethane | 1.043 | 0.998 | 4.3 | 136 | 0.00 |
| 67 | T | 4-Ethyltoluene | 2.151 | 2.143 | 0.4 | 138 | 0.00 |
| 68 | T | 2-Chlorotoluene | 1.707 | 1.675 | 1.9 | 140 | 0.00 |
| 69 | T | 1,3,5-Trimethylbenzene | 1.730 | 1.657 | 4.2 | 134 | 0.00 |
| 70 | T | 1,2,4-Trimethylbenzene | 1.729 | 1.675 | 3.1 | 133 | 0.00 |
| 71 | T | 1,3-Dichlorobenzene | 1.059 | 0.981 | 7.4 | 133 | 0.00 |
| 72 | T | 1,4-Dichlorobenzene | 1.065 | 1.017 | 4.5 | 134 | 0.00 |
| 73 | T | Benzyl chloride | 1.529 | 1.639 | -7.2 | 144 | 0.00 |
| 74 | T | 1,2-Dichlorobenzene | 1.027 | 0.970 | 5.6 | 133 | 0.00 |
| 75 | T | 1,3-Hexachlorobutadiene | 0.713 | 0.668 | 6.3 | 135 | 0.00 |
| 76 | T | 1,2,4-Trichlorobenzene | 0.824 | 0.792 | 3.9 | 137 | 0.00 |
| 77 | T | Naphthalene | 1.885 | 1.937 | -2.8 | 145 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4902dcvs.D
Acq On : 11 Dec 2023 10:26 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 11 10:45:53 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.393 | 130 | 596109 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.454 | 114 | 2484518 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 2791354 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 2431677 | 9.99 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.486 | 41 | 414687 | 10.02 | ppbV | 98 |
| 3) Dichlorodifluoromethane | 1.522 | 85 | 1382298 | 10.46 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.646 | 85 | 1676477 | 8.74 | ppbV | 97 |
| 5) n-Butane | 1.729 | 43 | 1013335 | 10.64 | ppbV | 99 |
| 6) Chloromethane | 1.791 | 52 | 78218 | 11.85 | ppbV | 100 |
| 7) Vinyl chloride | 1.784 | 62 | 574429 | 10.64 | ppbV | 100 |
| 8) 1,3-Butadiene | 1.794 | 39 | 509282 | 10.09 | ppbV | 97 |
| 9) Bromomethane | 2.081 | 94 | 454826 | 10.43 | ppbV | 98 |
| 10) Chloroethane | 2.194 | 64 | 327772 | 11.57 | ppbV | 98 |
| 11) Vinyl bromide | 2.293 | 106 | 548259 | 10.27 | ppbV | 99 |
| 12) Trichlorofluoromethane | 2.309 | 101 | 1779124 | 10.66 | ppbV | 99 |
| 13) Ethanol | 2.666 | 45 | 201466 | 11.54 | ppbV | 97 |
| 14) 1,1-Dichloroethene | 2.731 | 61 | 1163954 | 10.51 | ppbV | 96 |
| 15) Carbon disulfide | 2.750 | 76 | 1969223 | 10.80 | ppbV | 97 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.772 | 101 | 1553181 | 9.24 | ppbV | 99 |
| 17) Acrolein | 2.985 | 56 | 252446 | 10.14 | ppbV | 100 |
| 18) Allyl chloride | 3.110 | 76 | 330196 | 11.05 | ppbV | 100 |
| 19) Isopropanol | 3.110 | 45 | 1119255 | 9.36 | ppbV | 100 |
| 20) Methylene chloride | 3.203 | 49 | 696985 | 9.51 | ppbV | 95 |
| 21) Acetone | 3.210 | 43 | 998590 | 11.11 | ppbV | 100 |
| 22) trans-1,2-Dichloroethene | 3.325 | 61 | 1138568 | 11.08 | ppbV | 98 |
| 23) n-Pentane | 3.409 | 43 | 1422770 | 10.27 | ppbV | 98 |
| 24) n-Hexane | 3.406 | 57 | 1903376 | 10.13 | ppbV | 98 |
| 25) Methyl tert-butyl ether | 3.409 | 73 | 2411960 | 10.45 | ppbV | 99 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 1678450 | 10.80 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 1328374 | 9.60 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.232 | 61 | 1023865 | 10.48 | ppbV | 96 |
| 29) Cyclohexane | 4.412 | 56 | 1354780 | 10.32 | ppbV | 97 |
| 30) Chloroform | 4.454 | 83 | 1581616 | 9.92 | ppbV | 99 |
| 31) Ethyl acetate | 4.541 | 61 | 279320 | 10.77 | ppbV | 96 |
| 32) Carbon tetrachloride | 4.576 | 117 | 1875059 | 9.91 | ppbV | 99 |
| 33) Tetrahydrofuran | 4.573 | 42 | 961491 | 10.72 | ppbV | 97 |
| 34) 1,1,1-Trichloroethane | 4.628 | 97 | 1650986 | 9.96 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.682 | 43 | 1545036 | 10.61 | ppbV | 98 |
| 36) n-Heptane | 4.914 | 43 | 1809408 | 10.98 | ppbV | 97 |
| 37) Benzene | 4.930 | 78 | 2206639 | 9.32 | ppbV | 97 |
| 38) 1,2-Dichloroethane | 5.091 | 62 | 1041657 | 10.51 | ppbV | 100 |
| 40) Trichloroethene | 5.431 | 130 | 1006216 | 9.15 | ppbV | 100 |
| 41) 2,2,4-Trimethylpentane | 4.846 | 57 | 3376289 | 10.43 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 1014651 | 10.50 | ppbV | 99 |
| 43) Bromodichloromethane | 5.943 | 83 | 1828286 | 11.23 | ppbV | 100 |
| 44) Methyl methacrylate | 6.087 | 41 | 1350577 | 11.52 | ppbV | 96 |
| 45) 1,4-Dioxane | 6.113 | 88 | 673669 | 11.38 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 1619348 | 10.81 | ppbV | 99 |
| 47) Toluene | 6.772 | 91 | 3618902 | 10.36 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.135 | 43 | 2595670 | 11.83 | ppbV | 98 |
| 49) Tetrachloroethene | 7.161 | 166 | 1595415 | 10.60 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 1655291 | 11.39 | ppbV | 98 |
| 51) 1,1,2-Trichloroethane | 7.335 | 97 | 1222341 | 10.37 | ppbV | 100 |

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4902dcvs.D
Acq On : 11 Dec 2023 10:26 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

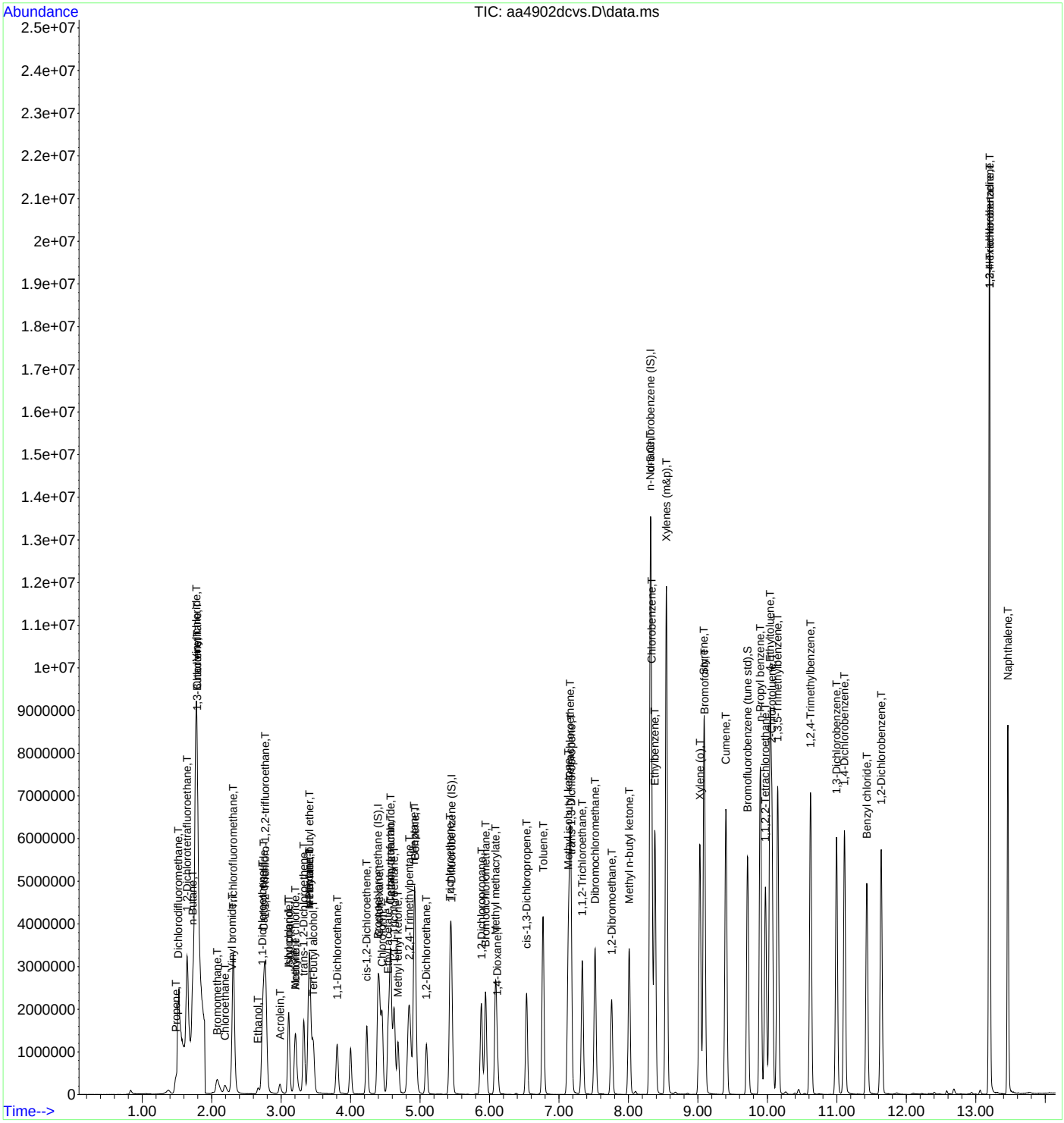
Quant Time: Dec 11 10:45:53 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 2194895 | 11.17 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 1838806 | 10.78 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.010 | 43 | 2657481 | 12.59 | ppbV | 97 |
| 56) n-Nonane | 8.316 | 43 | 3233636 | 11.67 | ppbV | 98 |
| 57) Chlorobenzene | 8.335 | 112 | 2863155 | 10.29 | ppbV | 98 |
| 58) Ethylbenzene | 8.380 | 91 | 5418295 | 10.53 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.547 | 91 | 8329861 | 21.86 | ppbV | 99 |
| 60) Xylene (o) | 9.029 | 91 | 4282583 | 10.30 | ppbV | 98 |
| 61) Styrene | 9.087 | 104 | 3096431 | 10.87 | ppbV | 99 |
| 62) Bromoform | 9.097 | 173 | 2305769 | 11.28 | ppbV | 100 |
| 63) Cumene | 9.402 | 105 | 5696839 | 10.48 | ppbV | 100 |
| 65) n-Propyl benzene | 9.897 | 91 | 7764284 | 10.95 | ppbV | 99 |
| 66) 1,1,2,2-Tetrachloroethane | 9.971 | 83 | 3175462 | 10.91 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 6460729 | 10.76 | ppbV | 99 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 5096400 | 10.69 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 5041969 | 10.44 | ppbV | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.621 | 105 | 5048160 | 10.46 | ppbV | 99 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 3039816 | 10.29 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 3038927 | 10.22 | ppbV | 99 |
| 73) Benzyl chloride | 11.431 | 91 | 4575705 | 10.72 | ppbV | 99 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 2896425 | 10.10 | ppbV | 99 |
| 75) 1,3-Hexachlorobutadiene | 13.200 | 225 | 2068735 | 10.40 | ppbV | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 2432158 | 10.57 | ppbV | 99 |
| 77) Naphthalene | 13.463 | 128 | 5407318 | 10.28 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4902dcvs.D
Acq On : 11 Dec 2023 10:26 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 11 10:45:53 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



# Section VIII: Raw Quality Control Data Package

**BFB Tune Spectra**

**Method Blank**

**Laboratory Control Sample**

**Laboratory Sample Duplicate**

**Instrument Run Logs**

**Pressure Gauge Readings (initial and final)**

**Example Calculations**

**Screening Data**

**Clean Canister Certification**

# BFB

**Data Path:** C:\DATA\2023\08-2023\08-15-2023\
**Data File:** AA3401BFB.D
**Acq On:** 8/15/2023 10:11:00AM
**Operator:** jls
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\230525.M
**Last Update:** Tue May 30 13:24:12 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 251499 | 18.7 |
| PASS | 75 | 95 | 30 | 66 | 703104 | 52.3 |
| PASS | 95 | 95 | 100 | 100 | 1345024 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 89525 | 6.7 |
| PASS | 173 | 174 | 0.00 | 2 | 8293 | 0.8 |
| PASS | 174 | 95 | 50 | 100 | 1069397 | 79.5 |
| PASS | 175 | 174 | 4 | 9 | 78181 | 7.3 |
| PASS | 176 | 174 | 93 | 101 | 1035413 | 96.8 |
| PASS | 177 | 176 | 5 | 9 | 68613 | 6.6 |

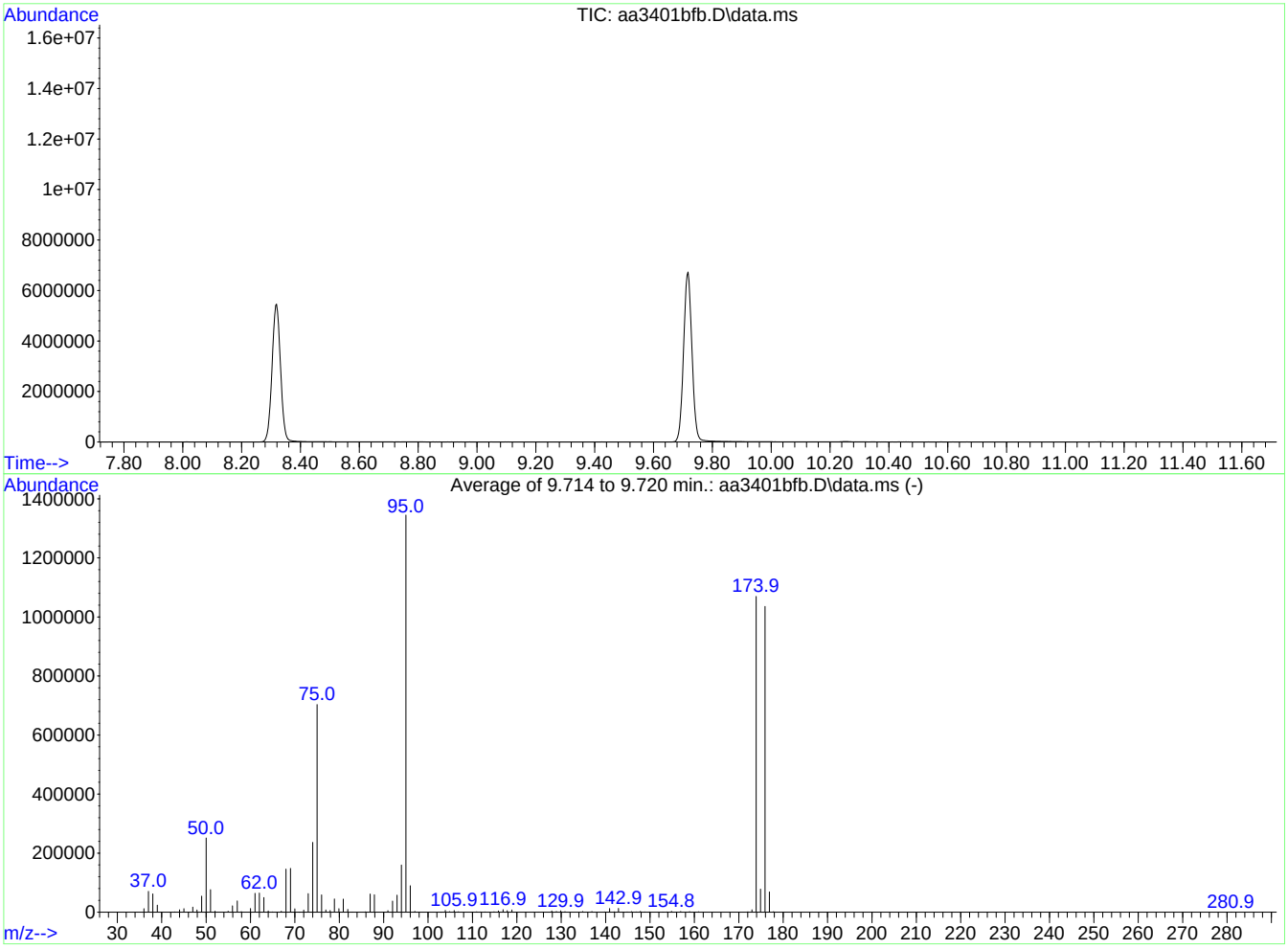
Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA3401BFB | NA | 8/15/2023 10:11:00 AM |
| 0.2 PPBV STD | AA3402STD05 | NA | 8/15/2023 11:15:00 AM |
| 10 PPBV STD | AA3404STD03 | NA | 8/15/2023 1:09:00 PM |
| 2 PPBV STD | AA3403STD04 | NA | 8/15/2023 1:45:00 PM |
| 20 PPBV STD | AA3405STD02 | NA | 8/15/2023 3:12:00 PM |
| 40 PPBV STD | AA3406STD01 | NA | 8/15/2023 4:47:00 PM |
| 10 PPBV ICVSS | AA3407ICVSS | NA | 8/15/2023 6:09:00 PM |

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3401bfb.D
Acq On : 15 Aug 2023 10:11 am
Operator : jjw
Sample : BFB
Misc : ALM018474
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\230525.M
Title : TO-15 on the Agilent 7890A / 5975C
Last Update : Tue May 30 13:24:12 2023




AutoFind: Scans 2982, 2983, 2984; Background Corrected with Scan 2964

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 18.7 | 251499 | PASS |
| 75 | 95 | 30 | 66 | 52.3 | 703104 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 1345024 | PASS |
| 96 | 95 | 5 | 9 | 6.7 | 89525 | PASS |
| 173 | 174 | 0.00 | 2 | 0.8 | 8293 | PASS |
| 174 | 95 | 50 | 100 | 79.5 | 1069397 | PASS |
| 175 | 174 | 4 | 9 | 7.3 | 78181 | PASS |
| 176 | 174 | 93 | 101 | 96.8 | 1035413 | PASS |
| 177 | 176 | 5 | 9 | 6.6 | 68613 | PASS |

# BFB

**Data Path:** C:\DATA\2023\09-2023\09-28-2023\
**Data File:** AA4071BFB.D
**Acq On:** 9/28/2023 10:01:00AM
**Operator:** jjw
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\230815.M
**Last Update:** Wed Aug 16 10:00:51 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 96931 | 19.9 |
| PASS | 75 | 95 | 30 | 66 | 265259 | 54.6 |
| PASS | 95 | 95 | 100 | 100 | 485931 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 33264 | 6.8 |
| PASS | 173 | 174 | 0.00 | 2 | 3017 | 0.8 |
| PASS | 174 | 95 | 50 | 100 | 366187 | 75.4 |
| PASS | 175 | 174 | 4 | 9 | 27080 | 7.4 |
| PASS | 176 | 174 | 93 | 101 | 360832 | 98.5 |
| PASS | 177 | 176 | 5 | 9 | 23088 | 6.4 |

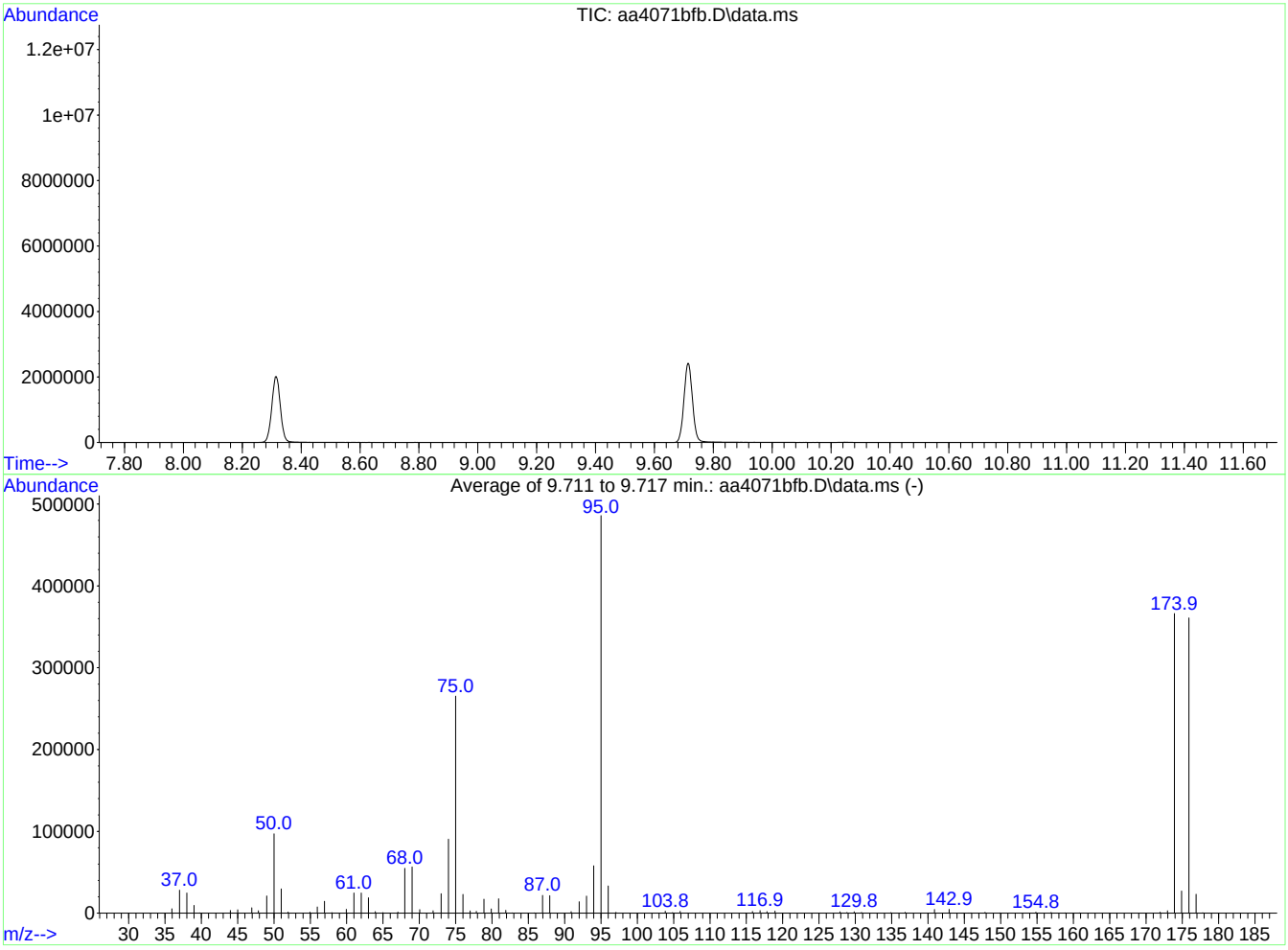
Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4071BFB | NA | 9/28/2023 10:01:00 AM |
| 10 PPBV DCVS | AA4072DCVS | NA | 9/28/2023 10:31:00 AM |
| 10 PPBV LCS | AA4073LCS | NA | 9/28/2023 11:19:00 AM |
| METHOD BLANK | AA4074BLK | NA | 9/28/2023 11:47:00 AM |
| 02 PPBV RLLCS | AA4075RLLCS | NA | 9/28/2023 1:22:00 PM |
| 2164 | AA4076 | NA | 9/28/2023 3:00:00 PM |
| 4870 | AA4077 | NA | 9/28/2023 3:30:00 PM |
| 2160 | AA4078 | NA | 9/28/2023 4:00:00 PM |
| 10 PPBV CCCVS | AA4093CCCVS | NA | 9/29/2023 12:28:00 AM |

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4071bfb.D
Acq On : 28 Sep 2023 10:01 am
Operator : jjw
Sample : BFB
Misc : ALM018474
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\230815.M
Title : TO-15 on the Agilent 7890A / 5975C
Last Update : Wed Aug 16 10:00:51 2023




AutoFind: Scans 2981, 2982, 2983; Background Corrected with Scan 2965

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 19.9 | 96931 | PASS |
| 75 | 95 | 30 | 66 | 54.6 | 265259 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 485931 | PASS |
| 96 | 95 | 5 | 9 | 6.8 | 33264 | PASS |
| 173 | 174 | 0.00 | 2 | 0.8 | 3017 | PASS |
| 174 | 95 | 50 | 100 | 75.4 | 366187 | PASS |
| 175 | 174 | 4 | 9 | 7.4 | 27080 | PASS |
| 176 | 174 | 93 | 101 | 98.5 | 360832 | PASS |
| 177 | 176 | 5 | 9 | 6.4 | 23088 | PASS |

# BFB

**Data Path:** C:\DATA\2023\10-2023\10-10-2023\

**Data File:** AA4131BFB.D

**Acq On:** 10/10/2023 10:13:00AM

**Operator:** jls

**Sample:** BFB

**Misc:** ALM018474

**ALS Vial:** 1 **Multiplier:** 1

**Integration File:** rteint.p

**Method:** C:\msdchem\1\METHODS\231009.M

**Last Update:** Tue Oct 10 09:54:56 2023

**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 65523 | 16.8 |
| PASS | 75 | 95 | 30 | 66 | 182571 | 46.8 |
| PASS | 95 | 95 | 100 | 100 | 389867 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 25643 | 6.6 |
| PASS | 173 | 174 | 0.00 | 2 | 0 | 0.0 |
| PASS | 174 | 95 | 50 | 100 | 293952 | 75.4 |
| PASS | 175 | 174 | 4 | 9 | 22269 | 7.6 |
| PASS | 176 | 174 | 93 | 101 | 282667 | 96.2 |
| PASS | 177 | 176 | 5 | 9 | 18629 | 6.6 |

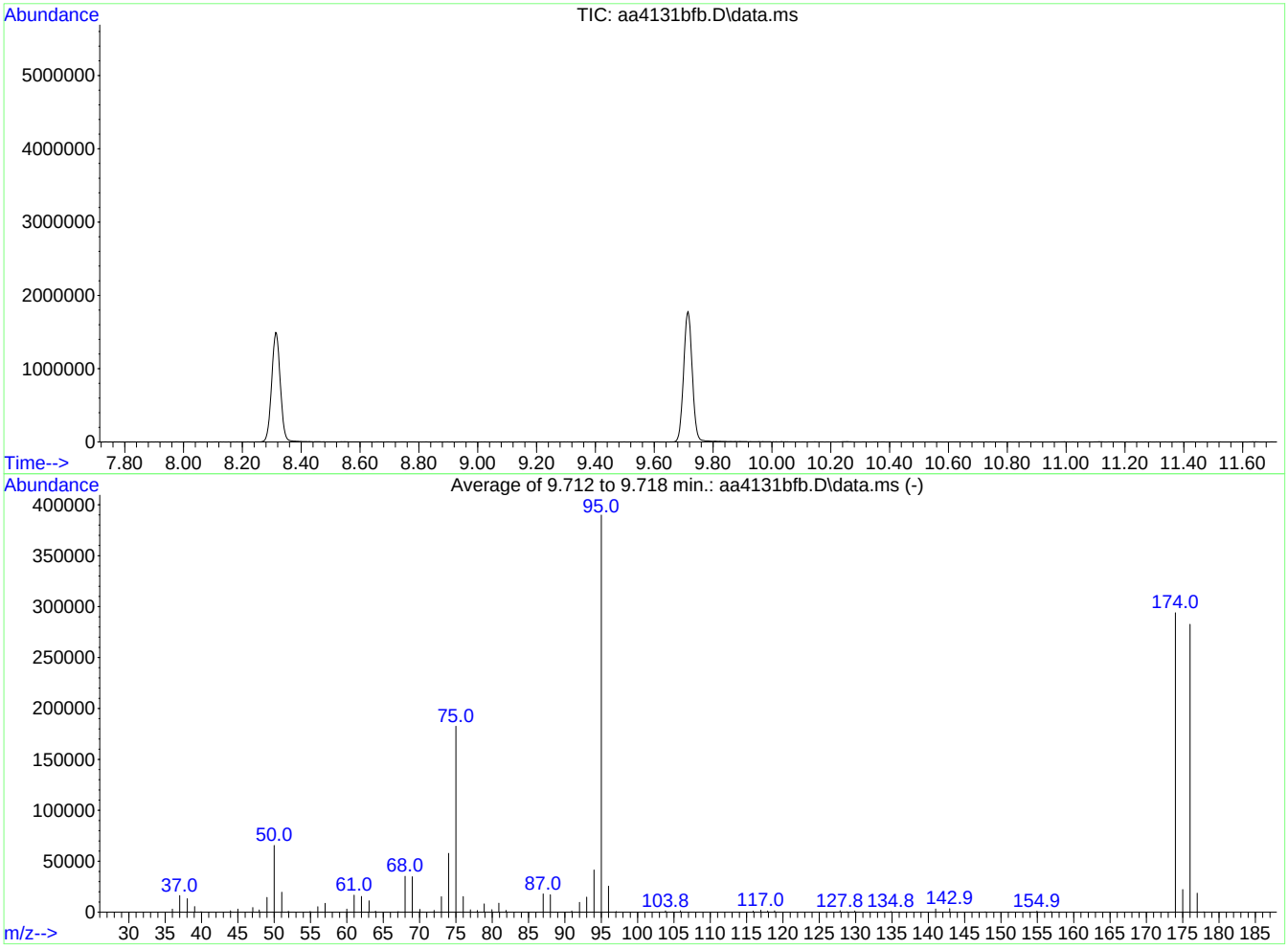
Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4131BFB | NA | 10/10/2023 10:13:00 AM |
| 0.2 PPBV STD | AA4132STD05 | NA | 10/10/2023 10:40:00 AM |
| 2 PPBV STD | AA4133STD04 | NA | 10/10/2023 11:46:00 AM |
| 10 PPBV STANDARD STD | AA4134STD03 | NA | 10/10/2023 12:21:00 PM |
| 20 PPBV STD | AA4135STD02 | NA | 10/10/2023 12:55:00 PM |
| 40 PPBV STD | AA4136STD01 | NA | 10/10/2023 2:05:00 PM |
| 10 PPBV ICVSS | AA4137ICVSS | NA | 10/10/2023 4:48:00 PM |
| 10 PPBV LCS | AA4138LCS | NA | 10/10/2023 5:39:00 PM |
| METHOD BLANK | AA4139BLK | NA | 10/10/2023 6:07:00 PM |
| 02 PPBV RLLCS | AA4140RLLCS | NA | 10/10/2023 6:35:00 PM |
| 5101 | AA4142 | NA | 10/10/2023 7:36:00 PM |
| 4869 | AA4143 | NA | 10/10/2023 8:06:00 PM |
| 2157 | AA4144 | NA | 10/10/2023 8:36:00 PM |
| 10 PPBV CCCVS | AA4154CCCVS | NA | 10/11/2023 1:53:00 AM |

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4131bfb.D
Acq On : 10 Oct 2023 10:13 am
Operator : jjw
Sample : BFB
Misc : ALM018474
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\231009.M
Title : TO-15 on the Agilent 7890A / 5975C
Last Update : Tue Oct 10 09:54:56 2023




AutoFind: Scans 2981, 2982, 2983; Background Corrected with Scan 2964

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 16.8 | 65523 | PASS |
| 75 | 95 | 30 | 66 | 46.8 | 182571 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 389867 | PASS |
| 96 | 95 | 5 | 9 | 6.6 | 25643 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 100 | 75.4 | 293952 | PASS |
| 175 | 174 | 4 | 9 | 7.6 | 22269 | PASS |
| 176 | 174 | 93 | 101 | 96.2 | 282667 | PASS |
| 177 | 176 | 5 | 9 | 6.6 | 18629 | PASS |

# BFB

**Data Path:** C:\DATA\2023\12-2023\12-08-2023\
**Data File:** AA4881BFB.D
**Acq On:** 12/8/2023 10:21:00AM
**Operator:** jjw
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\231009.M
**Last Update:** Tue Oct 10 15:12:35 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 185045 | 18.5 |
| PASS | 75 | 95 | 30 | 66 | 508523 | 50.7 |
| PASS | 95 | 95 | 100 | 100 | 1002688 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 66973 | 6.7 |
| PASS | 173 | 174 | 0.00 | 2 | 4685 | 0.6 |
| PASS | 174 | 95 | 50 | 100 | 744704 | 74.3 |
| PASS | 175 | 174 | 4 | 9 | 56251 | 7.6 |
| PASS | 176 | 174 | 93 | 101 | 716907 | 96.3 |
| PASS | 177 | 176 | 5 | 9 | 46309 | 6.5 |

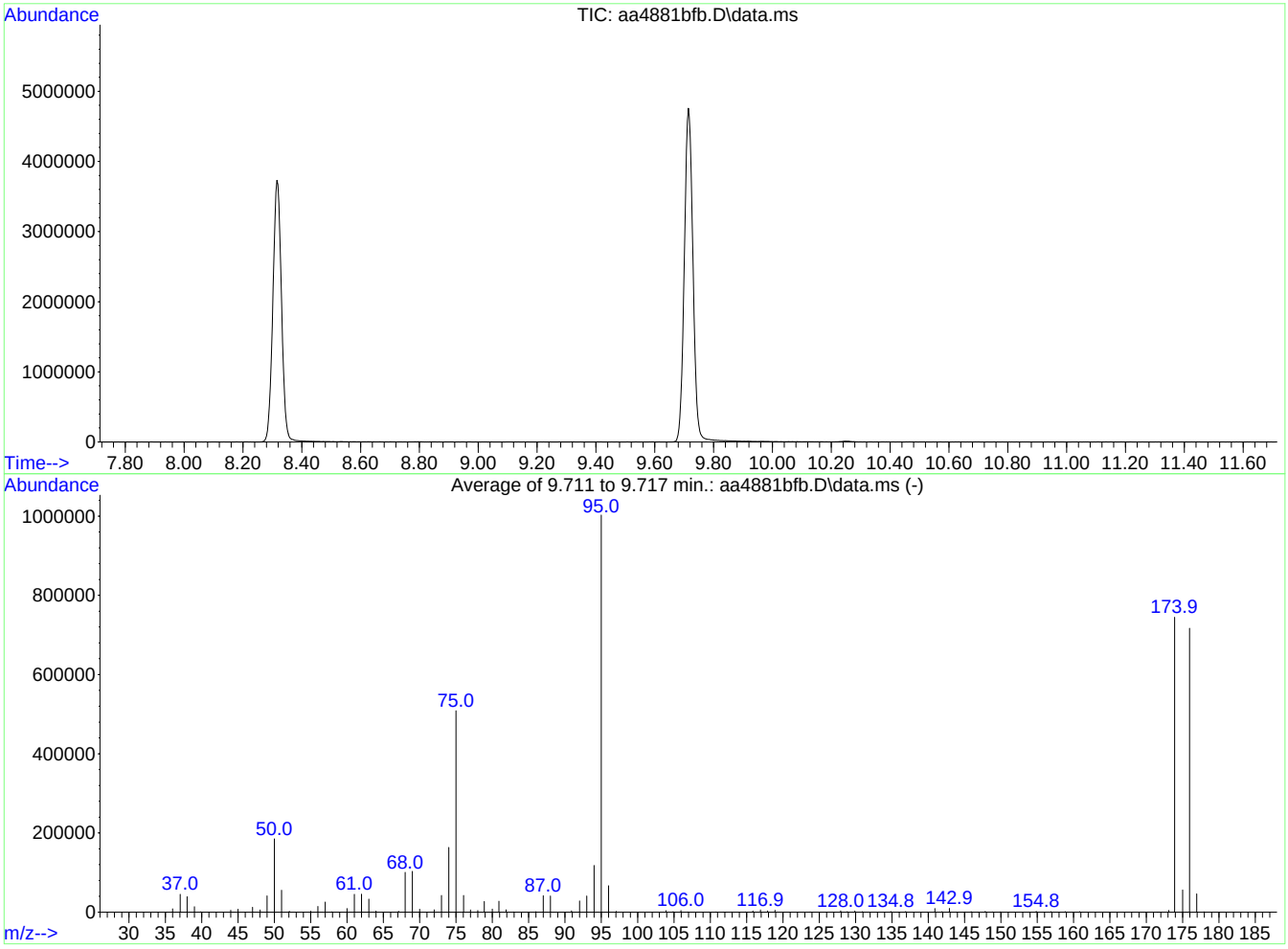
Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4881BFB | NA | 12/8/2023 10:21:00 AM |
| 10 PPBV DCVS | AA4882DCVS | NA | 12/8/2023 10:50:00 AM |
| 10 PPBV LCS | AA4883LCS | NA | 12/8/2023 11:21:00 AM |
| METHOD BLANK | AA4884BLK | NA | 12/8/2023 12:26:00 PM |
| E23-05093-01 | AA4895 | SV9 | 12/8/2023 7:11:00 PM |

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4881bfb.D
Acq On : 8 Dec 2023 10:21 am
Operator : jjw
Sample : BFB
Misc : ALM018474
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\231009.M
Title : TO-15 on the Agilent 7890A / 5975C
Last Update : Tue Oct 10 15:12:35 2023




AutoFind: Scans 2981, 2982, 2983; Background Corrected with Scan 2964

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 18.5 | 185045 | PASS |
| 75 | 95 | 30 | 66 | 50.7 | 508523 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 1002688 | PASS |
| 96 | 95 | 5 | 9 | 6.7 | 66973 | PASS |
| 173 | 174 | 0.00 | 2 | 0.6 | 4685 | PASS |
| 174 | 95 | 50 | 100 | 74.3 | 744704 | PASS |
| 175 | 174 | 4 | 9 | 7.6 | 56251 | PASS |
| 176 | 174 | 93 | 101 | 96.3 | 716907 | PASS |
| 177 | 176 | 5 | 9 | 6.5 | 46309 | PASS |

# BFB

**Data Path:** C:\DATA\2023\12-2023\12-11-2023\
**Data File:** AA4901BFB.D
**Acq On:** 12/11/2023 9:24:00AM
**Operator:** jjw
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\231009.M
**Last Update:** Tue Oct 10 15:12:35 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 267904 | 18.4 |
| PASS | 75 | 95 | 30 | 66 | 717035 | 49.1 |
| PASS | 95 | 95 | 100 | 100 | 1459371 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 91040 | 6.2 |
| PASS | 173 | 174 | 0.00 | 2 | 10848 | 1.0 |
| PASS | 174 | 95 | 50 | 100 | 1053269 | 72.2 |
| PASS | 175 | 174 | 4 | 9 | 81547 | 7.7 |
| PASS | 176 | 174 | 93 | 101 | 1021824 | 97.0 |
| PASS | 177 | 176 | 5 | 9 | 65264 | 6.4 |

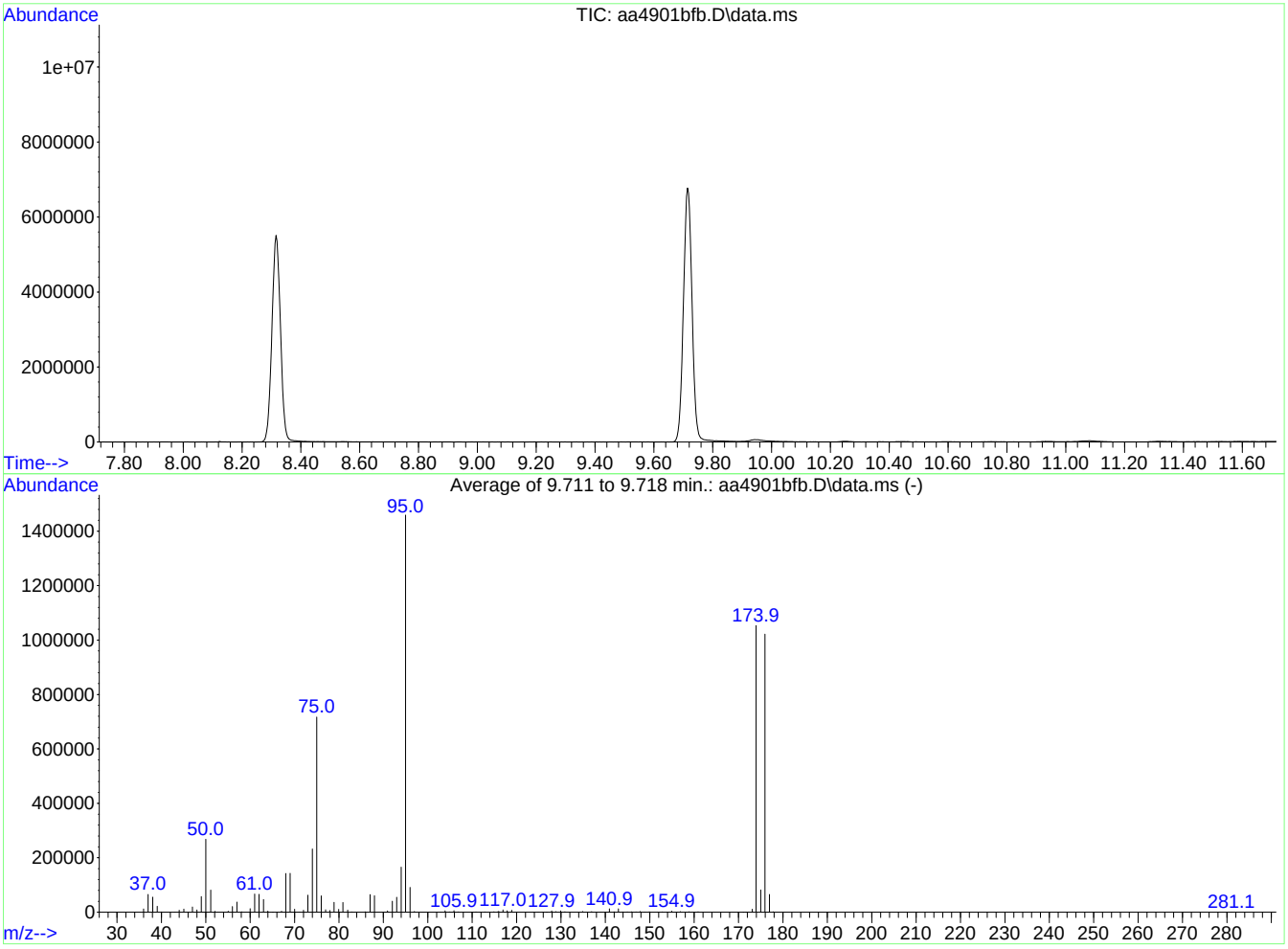
Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4901BFB | NA | 12/11/2023 9:24:00 AM |
| 10 PPBV DCVS | AA4902DCVS | NA | 12/11/2023 10:26:00 AM |
| 10 PPBV LCS | AA4903LCS | NA | 12/11/2023 10:57:00 AM |
| METHOD BLANK | AA4904BLK | NA | 12/11/2023 11:51:00 AM |
| 02 PPBV RLLCS | AA4905RLLCS | NA | 12/11/2023 12:18:00 PM |
| 1458 | AA4906 | NA | 12/11/2023 12:50:00 PM |
| 1588 | AA4907 | NA | 12/11/2023 1:19:00 PM |
| 3012 | AA4908 | NA | 12/11/2023 1:49:00 PM |
| E23-05093-01 | AA4913 | SV9 | 12/11/2023 4:20:00 PM |
| 10 PPBV CCCVS | AA4931CCCVS | NA | 12/12/2023 1:59:00 AM |

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4901bfb.D
Acq On : 11 Dec 2023 9:24 am
Operator : jjw
Sample : BFB
Misc : ALM018474
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\231009.M
Title : TO-15 on the Agilent 7890A / 5975C
Last Update : Tue Oct 10 15:12:35 2023




AutoFind: Scans 2981, 2982, 2983; Background Corrected with Scan 2963

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 18.4 | 267904 | PASS |
| 75 | 95 | 30 | 66 | 49.1 | 717035 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 1459371 | PASS |
| 96 | 95 | 5 | 9 | 6.2 | 91040 | PASS |
| 173 | 174 | 0.00 | 2 | 1.0 | 10848 | PASS |
| 174 | 95 | 50 | 100 | 72.2 | 1053269 | PASS |
| 175 | 174 | 4 | 9 | 7.7 | 81547 | PASS |
| 176 | 174 | 93 | 101 | 97.0 | 1021824 | PASS |
| 177 | 176 | 5 | 9 | 6.4 | 65264 | PASS |

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4074BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **9/28/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| 2164 [AA4076] | 09/28/2023 15:00 |
| 4870 [AA4077] | 09/28/2023 15:30 |
| 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 0:28 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromodichloromethane | 75-27-4 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| Dibromochloromethane | 124-48-1 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.17 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.19 | ND |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.18 | ND |
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |
| n-Hexane | 110-54-3 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4074BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **9/28/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| 2164 [AA4076] | 09/28/2023 15:00 |
| 4870 [AA4077] | 09/28/2023 15:30 |
| 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 0:28 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Methylene chloride | 75-09-2 | 0.20 | ND |
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.17 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.17 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.20 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4074blk.D
Acq On : 28 Sep 2023 11:47 am
Operator : jjw
Sample : Method Blank
Misc : 1127
ALS Vial : 4 Sample Multiplier: 1

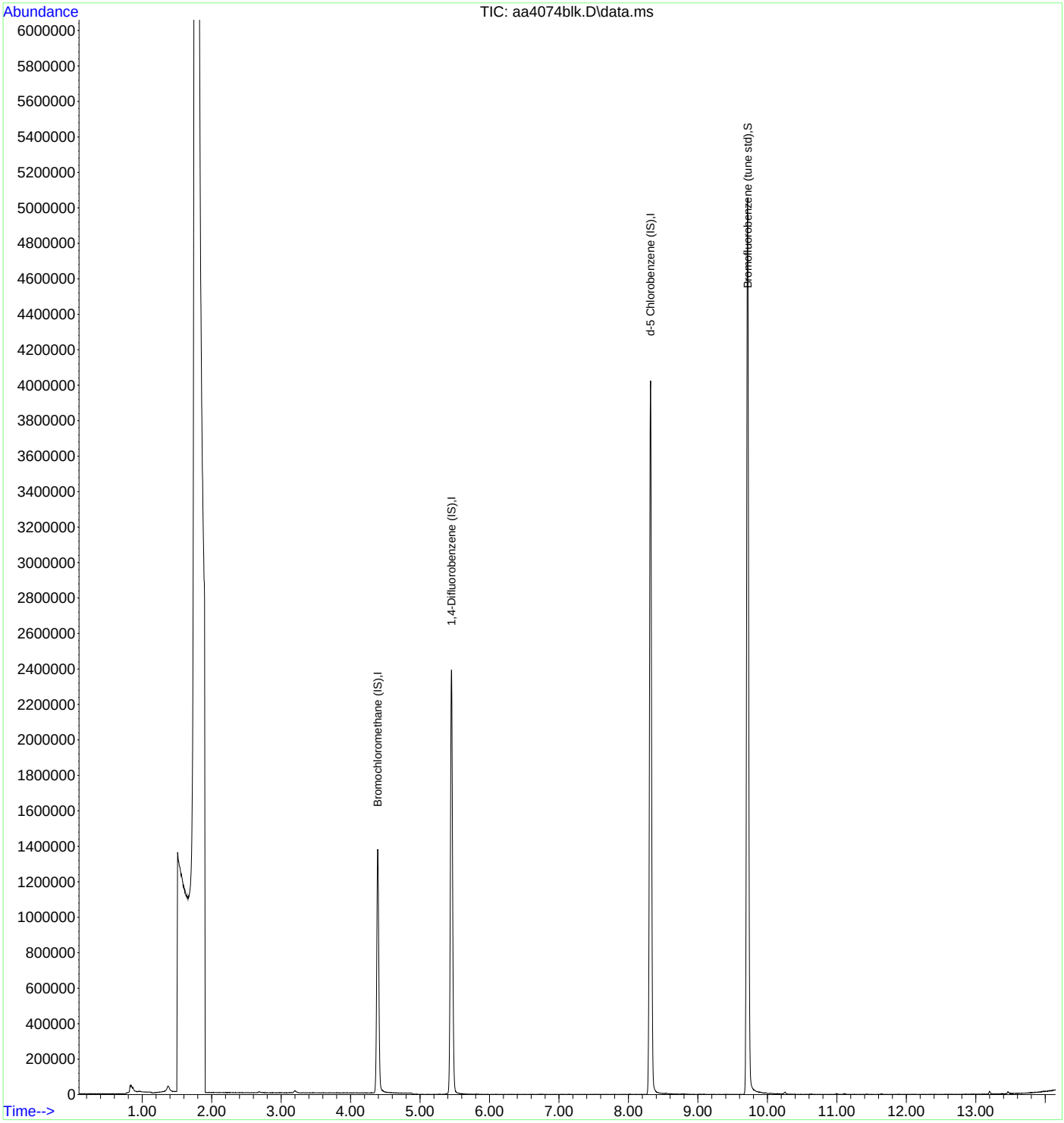
Quant Time: Sep 28 12:02:32 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.393 | 130 | 502187 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.454 | 114 | 2139413 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 2500606 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 2123353 | 10.21 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4074blk.D
Acq On : 28 Sep 2023 11:47 am
Operator : jjw
Sample : Method Blank
Misc : 1127
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 28 12:02:32 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4884BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/8/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05093-01 [AA4895] | 12/08/2023 19:11 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.17 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.19 | ND |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.18 | ND |
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |
| n-Hexane | 110-54-3 | 0.20 | ND |
| Methylene chloride | 75-09-2 | 0.20 | ND |
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4884BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/8/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05093-01 [AA4895] | 12/08/2023 19:11 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.17 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.17 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.20 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4884blk.D
Acq On : 8 Dec 2023 12:26 pm
Operator : jjw
Sample : Method Blank
Misc : 1127
ALS Vial : 4 Sample Multiplier: 1

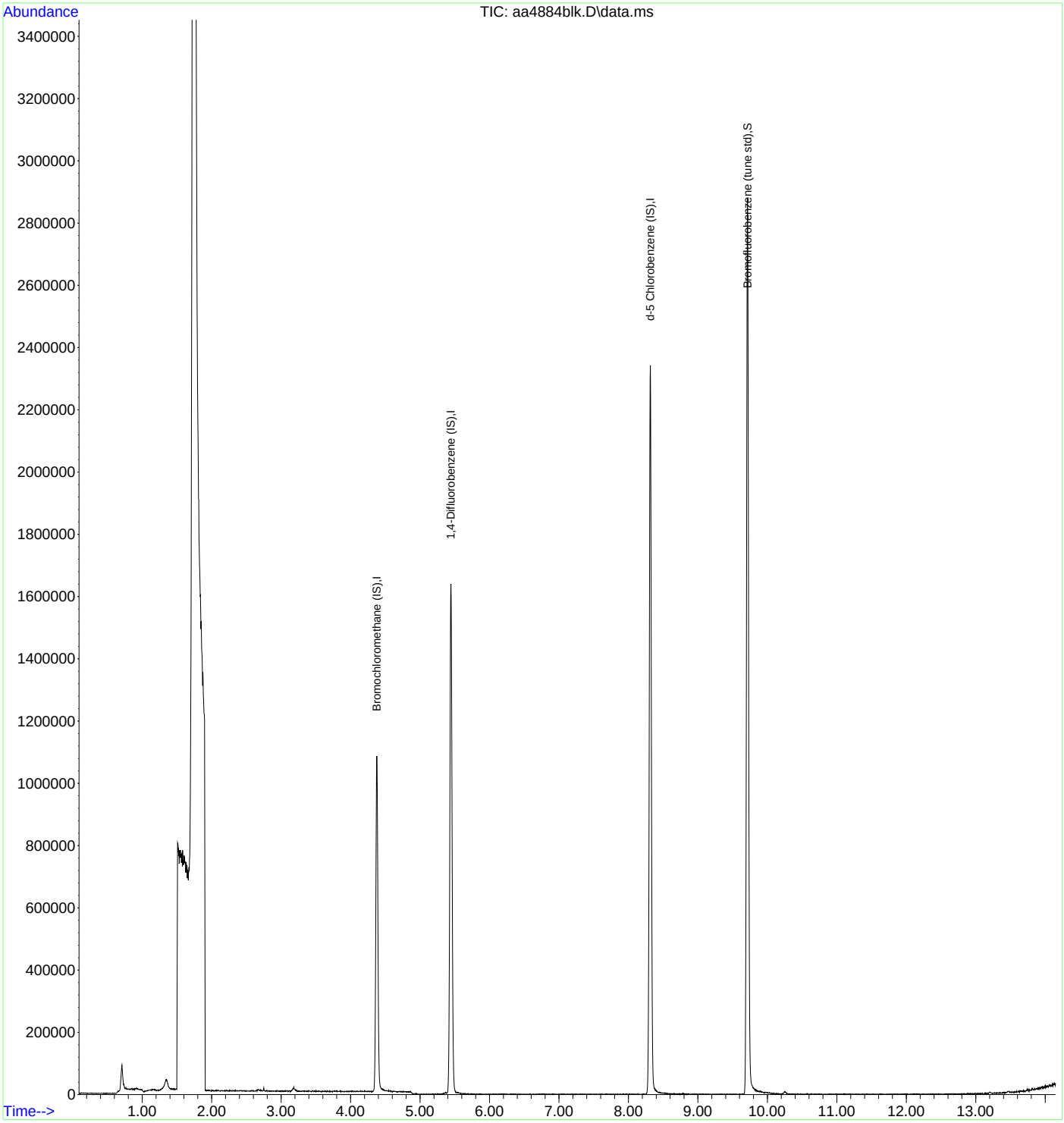
Quant Time: Dec 12 09:46:27 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.377 | 130 | 407142 | 10.00 | ppbV | -0.017 |
| 39) 1,4-Difluorobenzene (IS) | 5.444 | 114 | 1506485 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 1527551 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1276284 | 9.58 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4884blk.D
Acq On : 8 Dec 2023 12:26 pm
Operator : jjw
Sample : Method Blank
Misc : 1127
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 12 09:46:27 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4904BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/11/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05093-01 [AA4913] | 12/11/2023 16:20 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.17 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.19 | ND |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.18 | ND |
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |
| n-Hexane | 110-54-3 | 0.20 | ND |
| Methylene chloride | 75-09-2 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4904BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/11/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05093-01 [AA4913] | 12/11/2023 16:20 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.17 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.17 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.20 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4904blk.D
Acq On : 11 Dec 2023 11:51 am
Operator : jjw
Sample : Method Blank
Misc : 1127
ALS Vial : 4 Sample Multiplier: 1

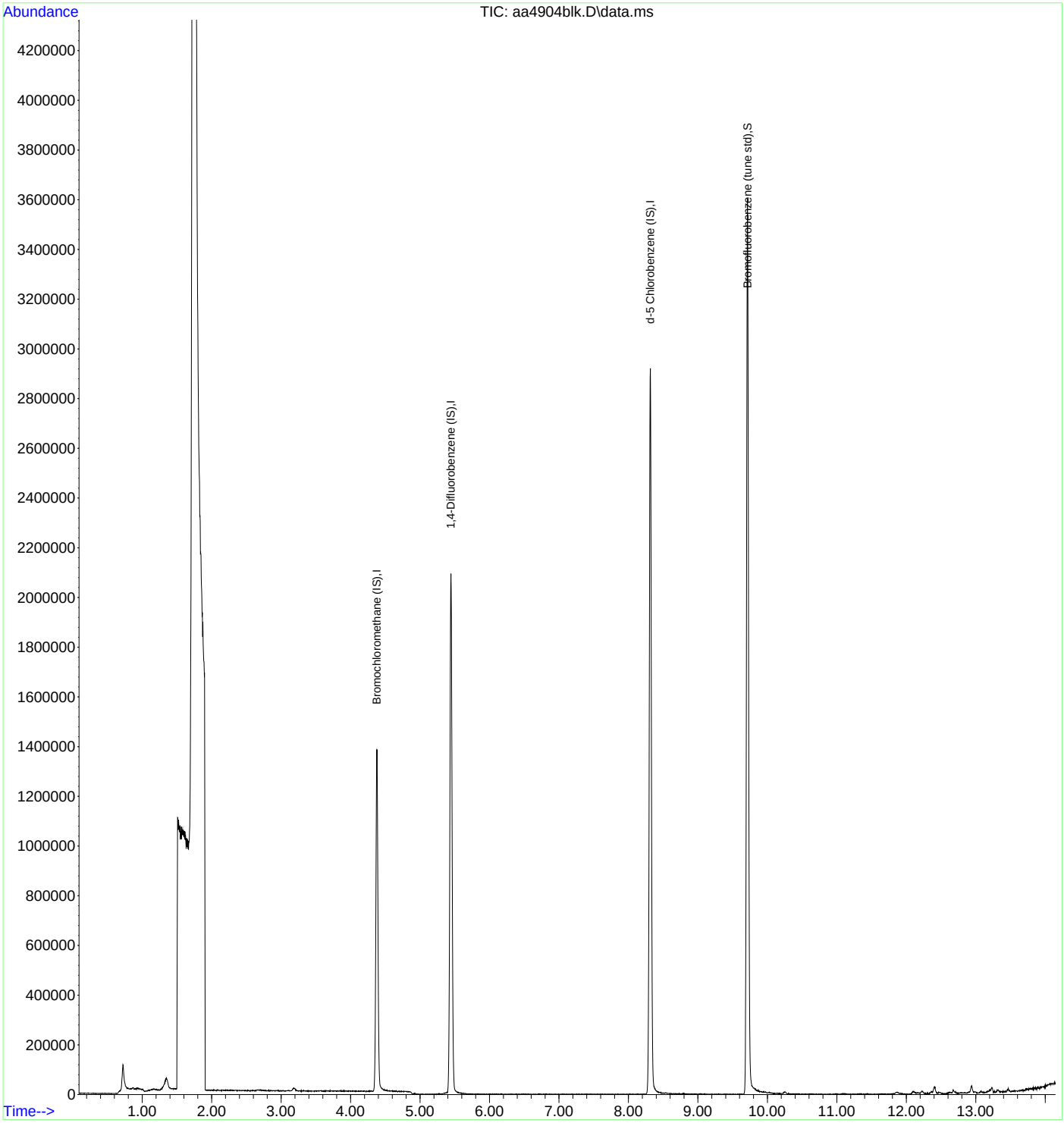
Quant Time: Dec 11 12:06:14 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.377 | 130 | 518939 | 10.00 | ppbV | -0.017 |
| 39) 1,4-Difluorobenzene (IS) | 5.444 | 114 | 1920464 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.315 | 117 | 1920350 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1609305 | 9.61 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4904blk.D
Acq On : 11 Dec 2023 11:51 am
Operator : jjw
Sample : Method Blank
Misc : 1127
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 11 12:06:14 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4073LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 9/28/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| 2164 [AA4076] | 09/28/2023 15:00 |
| 4870 [AA4077] | 09/28/2023 15:30 |
| 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 0:28 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Acetone | 67-64-1 | 13 | 120 |
| Benzene | 71-43-2 | 12 | 120 |
| Bromodichloromethane | 75-27-4 | 12 | 110 |
| Bromoform | 75-25-2 | 11 | 100 |
| Bromomethane | 74-83-9 | 12 | 110 |
| 1,3-Butadiene | 106-99-0 | 14 | 130 |
| Chlorobenzene | 108-90-7 | 10 | 100 |
| Chloroethane | 75-00-3 | 13 | 130 |
| Chloroform | 67-66-3 | 13 | 130 |
| Chloromethane | 74-87-3 | 14 | 120 |
| Carbon disulfide | 75-15-0 | 14 | 130 |
| Carbon tetrachloride | 56-23-5 | 11 | 110 |
| Cyclohexane | 110-82-7 | 12 | 120 |
| Dibromochloromethane | 124-48-1 | 11 | 100 |
| 1,2-Dibromoethane | 106-93-4 | 11 | 100 |
| 1,2-Dichlorobenzene | 95-50-1 | 10 | 91 |
| 1,3-Dichlorobenzene | 541-73-1 | 10 | 91 |
| 1,4-Dichlorobenzene | 106-46-7 | 11 | 100 |
| Dichlorodifluoromethane | 75-71-8 | 13 | 120 |
| 1,1-Dichloroethane | 75-34-3 | 13 | 120 |
| 1,2-Dichloroethane | 107-06-2 | 13 | 130 |
| 1,1-Dichloroethene | 75-35-4 | 13 | 120 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 14 | 130 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 14 | 130 |
| 1,2-Dichloropropane | 78-87-5 | 11 | 110 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 12 | 110 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 13 | 130 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 11 | 100 |
| 1,4-Dioxane | 123-91-1 | 12 | 100 |
| Ethylbenzene | 100-41-4 | 11 | 110 |
| n-Heptane | 142-82-5 | 12 | 120 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4073LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 9/28/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| 2164 [AA4076] | 09/28/2023 15:00 |
| 4870 [AA4077] | 09/28/2023 15:30 |
| 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 0:28 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| 1,3-Hexachlorobutadiene | 87-68-3 | 9.6 | 84 |
| n-Hexane | 110-54-3 | 13 | 130 |
| Methylene chloride | 75-09-2 | 13 | 120 |
| Methyl ethyl ketone | 78-93-3 | 14 | 120 |
| Methyl isobutyl ketone | 108-10-1 | 12 | 110 |
| Methyl tert-butyl ether | 1634-04-4 | 12 | 110 |
| Styrene | 100-42-5 | 11 | 100 |
| Tert-butyl alcohol | 75-65-0 | 13 | 110 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 10 | 91 |
| Tetrachloroethene | 127-18-4 | 11 | 110 |
| Toluene | 108-88-3 | 11 | 110 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 11 | 96 |
| 1,1,1-Trichloroethane | 71-55-6 | 11 | 110 |
| 1,1,2-Trichloroethane | 79-00-5 | 11 | 100 |
| Trichloroethene | 79-01-6 | 9.8 | 98 |
| Trichlorofluoromethane | 75-69-4 | 13 | 120 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 11 | 110 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 11 | 100 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 10 | 91 |
| 2,2,4-Trimethylpentane | 540-84-1 | 12 | 120 |
| Vinyl bromide | 593-60-2 | 12 | 120 |
| Vinyl chloride | 75-01-4 | 14 | 130 |
| Xylenes (m&p) | 179601-23-1 | 22 | 110 |
| Xylenes (o) | 95-47-6 | 10 | 100 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4073lcs.D
Acq On : 28 Sep 2023 11:19 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 28 12:10:06 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.396 | 130 | 409432 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.454 | 114 | 1933513 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 2364904 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 2078765 | 10.57 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.486 | 41 | 371726 | 13.18 | ppbV | 100 |
| 3) Dichlorodifluoromethane | 1.529 | 85 | 1310888 | 12.67 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.650 | 85 | 1582960 | 10.63 | ppbV | 94 |
| 5) n-Butane | 1.729 | 43 | 904419 | 13.51 | ppbV | 100 |
| 6) Chloromethane | 1.791 | 52 | 67655 | 14.12 | ppbV | 94 |
| 7) Vinyl chloride | 1.780 | 62 | 531992 | 13.67 | ppbV | 100 |
| 8) 1,3-Butadiene | 1.794 | 39 | 550480 | 13.84 | ppbV | 93 |
| 9) Bromomethane | 2.091 | 94 | 397168 | 12.15 | ppbV | 100 |
| 10) Chloroethane | 2.194 | 64 | 271717 | 12.84 | ppbV | 98 |
| 11) Vinyl bromide | 2.297 | 106 | 511821 | 12.45 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.313 | 101 | 1773173 | 12.74 | ppbV | 99 |
| 13) Ethanol | 2.670 | 45 | 187147 | 11.42 | ppbV | 99 |
| 14) 1,1-Dichloroethene | 2.734 | 61 | 1143672 | 13.38 | ppbV | 95 |
| 15) Carbon disulfide | 2.753 | 76 | 1947574 | 13.87 | ppbV | 98 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.776 | 101 | 1493461 | 10.86 | ppbV | 98 |
| 17) Acrolein | 2.985 | 56 | 208388 | 11.85 | ppbV | 100 |
| 18) Allyl chloride | 3.110 | 76 | 311360 | 13.59 | ppbV | 100 |
| 19) Isopropanol | 3.110 | 45 | 1091138 | 11.53 | ppbV | 99 |
| 20) Methylene chloride | 3.200 | 49 | 664730 | 12.87 | ppbV | 93 |
| 21) Acetone | 3.213 | 43 | 1016794 | 13.24 | ppbV | 97 |
| 22) trans-1,2-Dichloroethene | 3.329 | 61 | 1107246 | 14.39 | ppbV | 95 |
| 23) n-Pentane | 3.409 | 43 | 1192108 | 12.14 | ppbV | 99 |
| 24) n-Hexane | 3.406 | 57 | 1715467 | 12.51 | ppbV | 94 |
| 25) Methyl tert-butyl ether | 3.409 | 73 | 2233934 | 11.98 | ppbV | 96 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 1556448 | 12.98 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 1410547 | 13.06 | ppbV | 99 |
| 28) cis-1,2-Dichloroethene | 4.232 | 61 | 1043309 | 13.97 | ppbV | 94 |
| 29) Cyclohexane | 4.419 | 56 | 1188304 | 11.99 | ppbV | 96 |
| 30) Chloroform | 4.454 | 83 | 1720861 | 13.02 | ppbV | 98 |
| 31) Ethyl acetate | 4.544 | 61 | 270686 | 12.87 | ppbV | 96 |
| 32) Carbon tetrachloride | 4.579 | 117 | 1731906 | 10.93 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.576 | 42 | 1055646 | 14.22 | ppbV | 95 |
| 34) 1,1,1-Trichloroethane | 4.628 | 97 | 1558554 | 10.93 | ppbV | 100 |
| 35) Methyl ethyl ketone | 4.682 | 43 | 1682004 | 14.19 | ppbV | 97 |
| 36) n-Heptane | 4.917 | 43 | 1673877 | 12.20 | ppbV | 95 |
| 37) Benzene | 4.933 | 78 | 2314027 | 12.25 | ppbV | 99 |
| 38) 1,2-Dichloroethane | 5.094 | 62 | 1125187 | 13.29 | ppbV | 100 |
| 40) Trichloroethene | 5.435 | 130 | 960270 | 9.78 | ppbV | 99 |
| 41) 2,2,4-Trimethylpentane | 4.846 | 57 | 2903918 | 11.86 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 987657 | 11.19 | ppbV | 99 |
| 43) Bromodichloromethane | 5.946 | 83 | 1869255 | 12.16 | ppbV | 100 |
| 44) Methyl methacrylate | 6.087 | 41 | 1444941 | 12.73 | ppbV | 95 |
| 45) 1,4-Dioxane | 6.113 | 88 | 646261 | 11.88 | ppbV | 95 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 1603607 | 11.76 | ppbV | 99 |
| 47) Toluene | 6.772 | 91 | 3435166 | 11.08 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.136 | 43 | 2598152 | 11.60 | ppbV | 97 |
| 49) Tetrachloroethene | 7.161 | 166 | 1477394 | 10.60 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 1686526 | 12.54 | ppbV | 95 |
| 51) 1,1,2-Trichloroethane | 7.335 | 97 | 1173769 | 10.74 | ppbV | 97 |

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4073lcs.D
Acq On : 28 Sep 2023 11:19 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

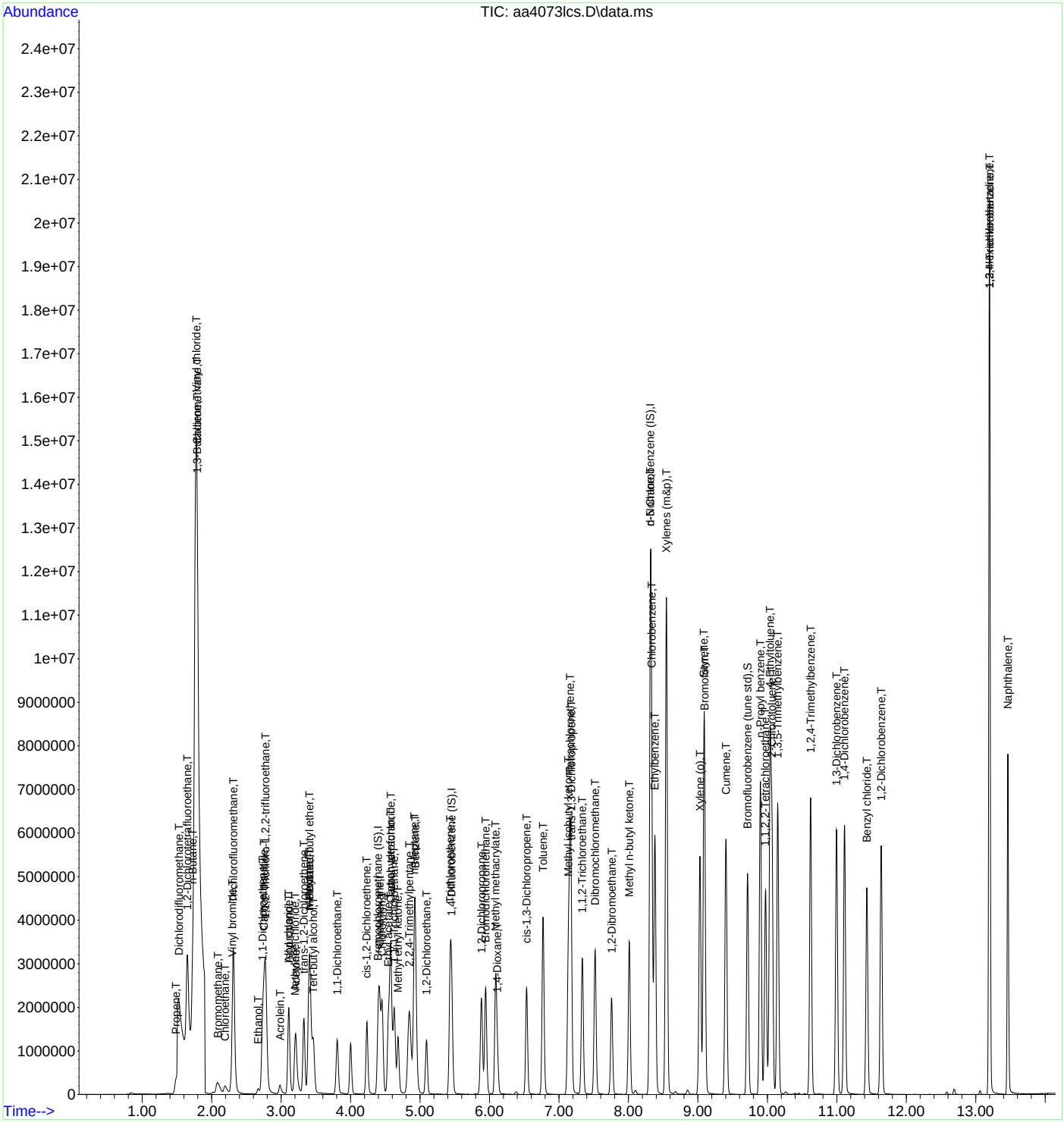
Quant Time: Sep 28 12:10:06 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 2046806 | 11.22 | ppbV | 100 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 1776029 | 11.11 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.010 | 43 | 2823122 | 13.46 | ppbV | 97 |
| 56) n-Nonane | 8.316 | 43 | 3181135 | 10.99 | ppbV | 95 |
| 57) Chlorobenzene | 8.335 | 112 | 2697259 | 10.41 | ppbV | 97 |
| 58) Ethylbenzene | 8.380 | 91 | 5055299 | 10.55 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.547 | 91 | 7753841 | 22.46 | ppbV | 98 |
| 60) Xylene (o) | 9.029 | 91 | 3909805 | 10.20 | ppbV | 99 |
| 61) Styrene | 9.087 | 104 | 2909338 | 11.44 | ppbV | 100 |
| 62) Bromoform | 9.097 | 173 | 2119263 | 10.78 | ppbV | 100 |
| 63) Cumene | 9.406 | 105 | 4907030 | 9.83 | ppbV | 98 |
| 65) n-Propyl benzene | 9.901 | 91 | 7047936 | 10.82 | ppbV | 98 |
| 66) 1,1,2,2-Tetrachloroethane | 9.971 | 83 | 3018168 | 10.39 | ppbV | 99 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 5768083 | 10.75 | ppbV | 98 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 4590640 | 10.39 | ppbV | 98 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 4460371 | 10.27 | ppbV | 98 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 4654164 | 10.80 | ppbV | 97 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 2940866 | 10.30 | ppbV | 99 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 2934826 | 10.69 | ppbV | 100 |
| 73) Benzyl chloride | 11.431 | 91 | 4169793 | 11.08 | ppbV | 98 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 2748354 | 10.17 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.196 | 225 | 1870014 | 9.65 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 2281637 | 10.73 | ppbV | 100 |
| 77) Naphthalene | 13.463 | 128 | 4616007 | 10.51 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4073lcs.D
Acq On : 28 Sep 2023 11:19 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 28 12:10:06 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4883LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 12/8/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05093-01 [AA4895] | 12/08/2023 19:11 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Acetone | 67-64-1 | 11 | 100 |
| Benzene | 71-43-2 | 9.3 | 93 |
| Bromoform | 75-25-2 | 11 | 100 |
| Bromomethane | 74-83-9 | 11 | 100 |
| 1,3-Butadiene | 106-99-0 | 9.9 | 99 |
| Chlorobenzene | 108-90-7 | 9.9 | 99 |
| Chloroethane | 75-00-3 | 11 | 110 |
| Chloroform | 67-66-3 | 10.0 | 100 |
| Chloromethane | 74-87-3 | 12 | 100 |
| Carbon disulfide | 75-15-0 | 11 | 100 |
| Carbon tetrachloride | 56-23-5 | 10 | 100 |
| Cyclohexane | 110-82-7 | 10 | 100 |
| 1,2-Dibromoethane | 106-93-4 | 11 | 100 |
| 1,2-Dichlorobenzene | 95-50-1 | 9.7 | 88 |
| 1,3-Dichlorobenzene | 541-73-1 | 9.8 | 89 |
| 1,4-Dichlorobenzene | 106-46-7 | 9.6 | 87 |
| Dichlorodifluoromethane | 75-71-8 | 11 | 100 |
| 1,1-Dichloroethane | 75-34-3 | 9.4 | 85 |
| 1,2-Dichloroethane | 107-06-2 | 11 | 110 |
| 1,1-Dichloroethene | 75-35-4 | 11 | 100 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 10 | 91 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 11 | 100 |
| 1,2-Dichloropropane | 78-87-5 | 11 | 110 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 11 | 100 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 12 | 120 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 9.0 | 82 |
| 1,4-Dioxane | 123-91-1 | 12 | 100 |
| Ethylbenzene | 100-41-4 | 10 | 100 |
| n-Heptane | 142-82-5 | 11 | 110 |
| 1,3-Hexachlorobutadiene | 87-68-3 | 10.0 | 88 |
| n-Hexane | 110-54-3 | 10.0 | 100 |
| Methylene chloride | 75-09-2 | 9.5 | 86 |
| Methyl ethyl ketone | 78-93-3 | 10 | 85 |
| Methyl isobutyl ketone | 108-10-1 | 12 | 110 |
| Methyl tert-butyl ether | 1634-04-4 | 10 | 91 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4883LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 12/8/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05093-01 [AA4895] | 12/08/2023 19:11 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Styrene | 100-42-5 | 10 | 91 |
| Tert-butyl alcohol | 75-65-0 | 11 | 93 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 10 | 91 |
| Tetrachloroethene | 127-18-4 | 11 | 110 |
| Toluene | 108-88-3 | 10 | 100 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 10 | 88 |
| 1,1,1-Trichloroethane | 71-55-6 | 10 | 100 |
| 1,1,2-Trichloroethane | 79-00-5 | 10 | 91 |
| Trichloroethene | 79-01-6 | 9.3 | 93 |
| Trichlorofluoromethane | 75-69-4 | 11 | 100 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 9.2 | 92 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 10.0 | 91 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 10 | 91 |
| 2,2,4-Trimethylpentane | 540-84-1 | 10 | 100 |
| Vinyl bromide | 593-60-2 | 10 | 100 |
| Vinyl chloride | 75-01-4 | 10 | 100 |
| Xylenes (m&p) | 179601-23-1 | 21 | 110 |
| Xylenes (o) | 95-47-6 | 9.9 | 99 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4883lcs.D
Acq On : 8 Dec 2023 11:21 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 08 11:44:48 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.390 | 130 | 505072 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.451 | 114 | 2076916 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 2432062 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 2156035 | 10.17 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.483 | 41 | 339866 | 9.69 | ppbV | 98 |
| 3) Dichlorodifluoromethane | 1.522 | 85 | 1193354 | 10.66 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.646 | 85 | 1455605 | 8.95 | ppbV | 97 |
| 5) n-Butane | 1.725 | 43 | 845634 | 10.48 | ppbV | 100 |
| 6) Chloromethane | 1.791 | 52 | 65331 | 11.68 | ppbV | 99 |
| 7) Vinyl chloride | 1.777 | 62 | 478632 | 10.46 | ppbV | 99 |
| 8) 1,3-Butadiene | 1.791 | 39 | 422824 | 9.89 | ppbV | 100 |
| 9) Bromomethane | 2.078 | 94 | 388679 | 10.52 | ppbV | 99 |
| 10) Chloroethane | 2.190 | 64 | 273833 | 11.41 | ppbV | 98 |
| 11) Vinyl bromide | 2.293 | 106 | 461478 | 10.21 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.309 | 101 | 1567568 | 11.09 | ppbV | 99 |
| 13) Ethanol | 2.663 | 45 | 169372 | 11.45 | ppbV | 98 |
| 14) 1,1-Dichloroethene | 2.727 | 61 | 987655 | 10.53 | ppbV | 95 |
| 15) Carbon disulfide | 2.750 | 76 | 1643881 | 10.64 | ppbV | 96 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.772 | 101 | 1310794 | 9.21 | ppbV | 99 |
| 17) Acrolein | 2.978 | 56 | 207019 | 9.81 | ppbV | 100 |
| 18) Allyl chloride | 3.110 | 76 | 275622 | 10.89 | ppbV | 100 |
| 19) Isopropanol | 3.107 | 45 | 904477 | 8.93 | ppbV | 98 |
| 20) Methylene chloride | 3.197 | 49 | 591035 | 9.52 | ppbV | 94 |
| 21) Acetone | 3.210 | 43 | 830614 | 10.90 | ppbV | 98 |
| 22) trans-1,2-Dichloroethene | 3.325 | 61 | 938844 | 10.78 | ppbV | 99 |
| 23) n-Pentane | 3.403 | 43 | 1185445 | 10.10 | ppbV | 97 |
| 24) n-Hexane | 3.403 | 57 | 1587921 | 9.97 | ppbV | 96 |
| 25) Methyl tert-butyl ether | 3.409 | 73 | 2034430 | 10.40 | ppbV | 97 |
| 26) Tert-butyl alcohol | 3.460 | 59 | 1390520 | 10.56 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.804 | 63 | 1101260 | 9.39 | ppbV | 98 |
| 28) cis-1,2-Dichloroethene | 4.232 | 61 | 832929 | 10.07 | ppbV | 98 |
| 29) Cyclohexane | 4.412 | 56 | 1127775 | 10.14 | ppbV | 98 |
| 30) Chloroform | 4.451 | 83 | 1346283 | 9.96 | ppbV | 99 |
| 31) Ethyl acetate | 4.541 | 61 | 230413 | 10.48 | ppbV | 97 |
| 32) Carbon tetrachloride | 4.576 | 117 | 1656389 | 10.33 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.570 | 42 | 788257 | 10.37 | ppbV | 98 |
| 34) 1,1,1-Trichloroethane | 4.624 | 97 | 1432554 | 10.20 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.682 | 43 | 1259095 | 10.21 | ppbV | 97 |
| 36) n-Heptane | 4.917 | 43 | 1499293 | 10.74 | ppbV | 98 |
| 37) Benzene | 4.930 | 78 | 1864968 | 9.30 | ppbV | 97 |
| 38) 1,2-Dichloroethane | 5.091 | 62 | 898599 | 10.70 | ppbV | 99 |
| 40) Trichloroethene | 5.431 | 130 | 856754 | 9.32 | ppbV | 99 |
| 41) 2,2,4-Trimethylpentane | 4.840 | 57 | 2788828 | 10.31 | ppbV | 99 |
| 42) 1,2-Dichloropropane | 5.882 | 63 | 862133 | 10.67 | ppbV | 97 |
| 43) Bromodichloromethane | 5.943 | 83 | 1584233 | 11.64 | ppbV | 98 |
| 44) Methyl methacrylate | 6.087 | 41 | 1124187 | 11.47 | ppbV | 97 |
| 45) 1,4-Dioxane | 6.110 | 88 | 569216 | 11.50 | ppbV | 98 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 1357719 | 10.84 | ppbV | 99 |
| 47) Toluene | 6.769 | 91 | 3039671 | 10.41 | ppbV | 99 |
| 48) Methyl isobutyl ketone | 7.132 | 43 | 2139470 | 11.66 | ppbV | 97 |
| 49) Tetrachloroethene | 7.158 | 166 | 1350560 | 10.73 | ppbV | 99 |
| 50) trans-1,3-Dichloropropene | 7.174 | 75 | 1400019 | 11.52 | ppbV | 98 |
| 51) 1,1,2-Trichloroethane | 7.335 | 97 | 1033705 | 10.49 | ppbV | 99 |

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4883lcs.D
Acq On : 8 Dec 2023 11:21 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

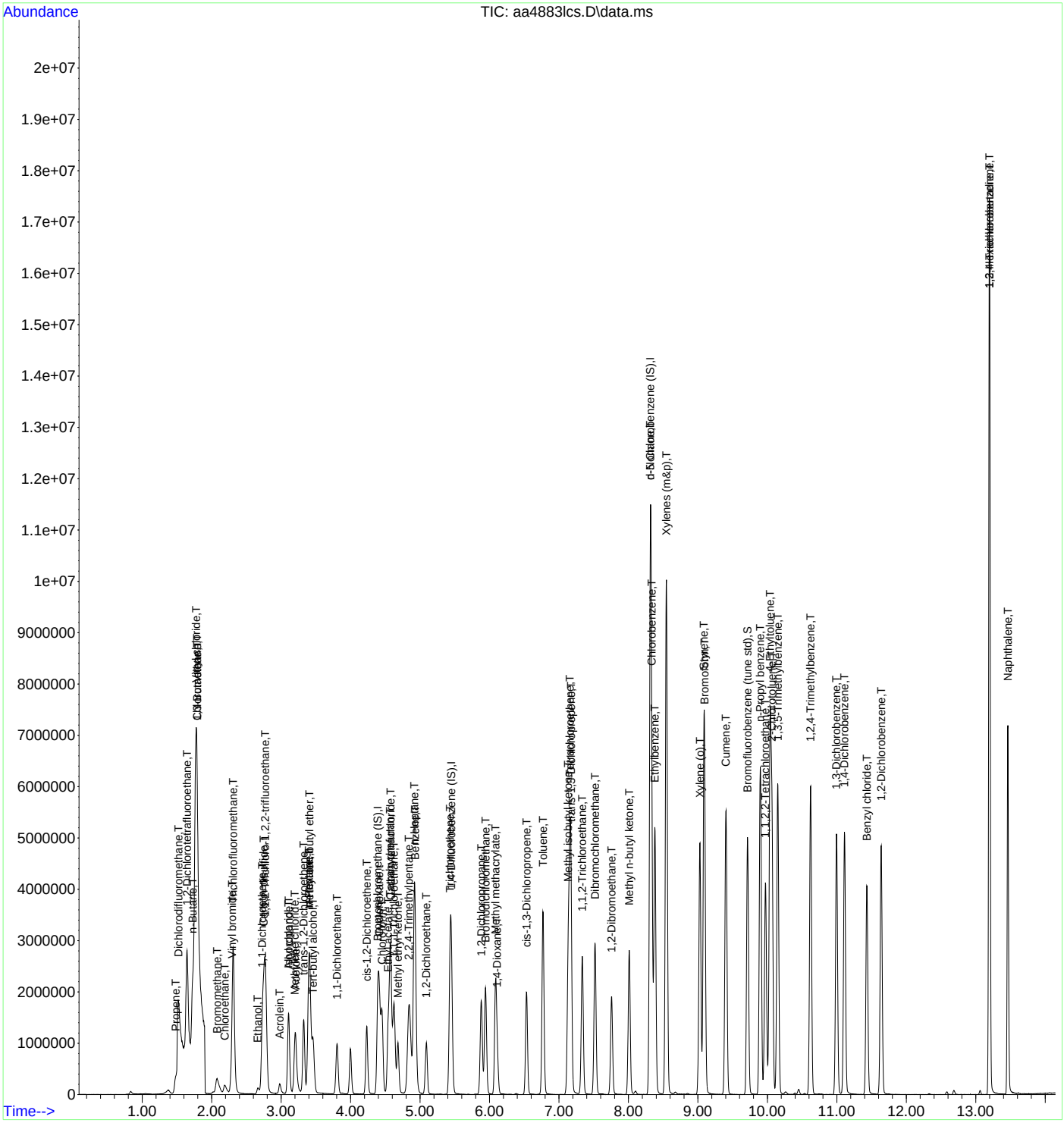
Quant Time: Dec 08 11:44:48 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 1892252 | 11.52 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.756 | 107 | 1547631 | 10.85 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.010 | 43 | 2159034 | 12.24 | ppbV | 97 |
| 56) n-Nonane | 8.316 | 43 | 2654309 | 11.00 | ppbV | 98 |
| 57) Chlorobenzene | 8.335 | 112 | 2403740 | 9.91 | ppbV | 97 |
| 58) Ethylbenzene | 8.380 | 91 | 4537964 | 10.13 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.547 | 91 | 7032687 | 21.18 | ppbV | 98 |
| 60) Xylene (o) | 9.029 | 91 | 3571722 | 9.86 | ppbV | 99 |
| 61) Styrene | 9.087 | 104 | 2552482 | 10.29 | ppbV | 99 |
| 62) Bromoform | 9.097 | 173 | 1990020 | 11.17 | ppbV | 100 |
| 63) Cumene | 9.402 | 105 | 4737625 | 10.00 | ppbV | 100 |
| 65) n-Propyl benzene | 9.897 | 91 | 6446429 | 10.43 | ppbV | 98 |
| 66) 1,1,2,2-Tetrachloroethane | 9.971 | 83 | 2658446 | 10.48 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 5335012 | 10.20 | ppbV | 99 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 4272712 | 10.29 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.152 | 105 | 4211249 | 10.01 | ppbV | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.621 | 105 | 4189424 | 9.96 | ppbV | 99 |
| 71) 1,3-Dichlorobenzene | 10.994 | 146 | 2515699 | 9.77 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 2495448 | 9.63 | ppbV | 100 |
| 73) Benzyl chloride | 11.431 | 91 | 3717594 | 10.00 | ppbV | 98 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 2414336 | 9.67 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.196 | 225 | 1728324 | 9.97 | ppbV | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.196 | 180 | 2026696 | 10.11 | ppbV | 99 |
| 77) Naphthalene | 13.463 | 128 | 4433251 | 9.67 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4883lcs.D
Acq On : 8 Dec 2023 11:21 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 08 11:44:48 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



**INTEGRATED ANALYTICAL LABORATORIES, LLC**

# Laboratory Control Spike

**Lab Sample Name:** **10 PPBV LCS** **Data File:** **AA4903LCS**

**Spike Amount:** **10 ppbv, except m&p-Xylenes at 20 ppbv** **Date Analyzed:** **12/11/2023**

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05093-01 [AA4913] | 12/11/2023 16:20 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Acetone | 67-64-1 | 11 | 100 |
| Benzene | 71-43-2 | 9.5 | 95 |
| Bromoform | 75-25-2 | 11 | 100 |
| Bromomethane | 74-83-9 | 10 | 91 |
| 1,3-Butadiene | 106-99-0 | 10 | 100 |
| Chlorobenzene | 108-90-7 | 10 | 100 |
| Chloroethane | 75-00-3 | 11 | 110 |
| Chloroform | 67-66-3 | 10 | 100 |
| Chloromethane | 74-87-3 | 11 | 96 |
| Carbon disulfide | 75-15-0 | 11 | 100 |
| Carbon tetrachloride | 56-23-5 | 10 | 100 |
| Cyclohexane | 110-82-7 | 10 | 100 |
| 1,2-Dibromoethane | 106-93-4 | 11 | 100 |
| 1,2-Dichlorobenzene | 95-50-1 | 10 | 91 |
| 1,3-Dichlorobenzene | 541-73-1 | 10 | 91 |
| 1,4-Dichlorobenzene | 106-46-7 | 10 | 91 |
| Dichlorodifluoromethane | 75-71-8 | 11 | 100 |
| 1,1-Dichloroethane | 75-34-3 | 9.8 | 89 |
| 1,2-Dichloroethane | 107-06-2 | 11 | 110 |
| 1,1-Dichloroethene | 75-35-4 | 11 | 100 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 10 | 91 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 11 | 100 |
| 1,2-Dichloropropane | 78-87-5 | 10 | 100 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 11 | 100 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 11 | 110 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 8.8 | 80 |
| 1,4-Dioxane | 123-91-1 | 11 | 92 |
| Ethylbenzene | 100-41-4 | 11 | 110 |
| n-Heptane | 142-82-5 | 11 | 110 |
| 1,3-Hexachlorobutadiene | 87-68-3 | 10 | 88 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4903LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 12/11/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05093-01 [AA4913] | 12/11/2023 16:20 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| n-Hexane | 110-54-3 | 10 | 100 |
| Methylene chloride | 75-09-2 | 9.6 | 87 |
| Methyl ethyl ketone | 78-93-3 | 11 | 93 |
| Methyl isobutyl ketone | 108-10-1 | 12 | 110 |
| Methyl tert-butyl ether | 1634-04-4 | 11 | 100 |
| Styrene | 100-42-5 | 11 | 100 |
| Tert-butyl alcohol | 75-65-0 | 11 | 93 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 11 | 100 |
| Tetrachloroethene | 127-18-4 | 11 | 110 |
| Toluene | 108-88-3 | 10 | 100 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 11 | 96 |
| 1,1,1-Trichloroethane | 71-55-6 | 10 | 100 |
| 1,1,2-Trichloroethane | 79-00-5 | 10 | 91 |
| Trichloroethene | 79-01-6 | 9.1 | 91 |
| Trichlorofluoromethane | 75-69-4 | 11 | 100 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 9.4 | 94 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 11 | 100 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 11 | 100 |
| 2,2,4-Trimethylpentane | 540-84-1 | 10 | 100 |
| Vinyl bromide | 593-60-2 | 10 | 100 |
| Vinyl chloride | 75-01-4 | 11 | 110 |
| Xylenes (m&p) | 179601-23-1 | 22 | 110 |
| Xylenes (o) | 95-47-6 | 10 | 100 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4903lcs.D
Acq On : 11 Dec 2023 10:57 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 11 11:13:35 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.390 | 130 | 647607 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.454 | 114 | 2729004 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.315 | 117 | 3090532 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 2704486 | 10.04 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.486 | 41 | 448674 | 9.98 | ppbV | 100 |
| 3) Dichlorodifluoromethane | 1.522 | 85 | 1540061 | 10.73 | ppbV | 99 |
| 4) 1,2-Dichlorotetrafluor... | 1.650 | 85 | 1837270 | 8.81 | ppbV | 99 |
| 5) n-Butane | 1.729 | 43 | 1071383 | 10.36 | ppbV | 100 |
| 6) Chloromethane | 1.794 | 52 | 79721 | 11.12 | ppbV | 100 |
| 7) Vinyl chloride | 1.784 | 62 | 624707 | 10.65 | ppbV | 99 |
| 8) 1,3-Butadiene | 1.794 | 39 | 556597 | 10.16 | ppbV | 97 |
| 9) Bromomethane | 2.081 | 94 | 492205 | 10.39 | ppbV | 96 |
| 10) Chloroethane | 2.190 | 64 | 343138 | 11.15 | ppbV | 98 |
| 11) Vinyl bromide | 2.296 | 106 | 601925 | 10.38 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.309 | 101 | 1958992 | 10.81 | ppbV | 99 |
| 13) Ethanol | 2.669 | 45 | 223820 | 11.80 | ppbV | 98 |
| 14) 1,1-Dichloroethene | 2.730 | 61 | 1287938 | 10.71 | ppbV | 96 |
| 15) Carbon disulfide | 2.753 | 76 | 2170829 | 10.96 | ppbV | 98 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.775 | 101 | 1721921 | 9.43 | ppbV | 99 |
| 17) Acrolein | 2.981 | 56 | 275902 | 10.20 | ppbV | 98 |
| 18) Allyl chloride | 3.110 | 76 | 363800 | 11.21 | ppbV | 100 |
| 19) Isopropanol | 3.107 | 45 | 1249280 | 9.62 | ppbV | 99 |
| 20) Methylene chloride | 3.203 | 49 | 760938 | 9.56 | ppbV | 96 |
| 21) Acetone | 3.209 | 43 | 1102830 | 11.29 | ppbV | 100 |
| 22) trans-1,2-Dichloroethene | 3.325 | 61 | 1261504 | 11.30 | ppbV | 98 |
| 23) n-Pentane | 3.409 | 43 | 1563342 | 10.38 | ppbV | 98 |
| 24) n-Hexane | 3.409 | 57 | 2086837 | 10.22 | ppbV | 98 |
| 25) Methyl tert-butyl ether | 3.409 | 73 | 2641389 | 10.53 | ppbV | 99 |
| 26) Tert-butyl alcohol | 3.460 | 59 | 1870916 | 11.08 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 1473126 | 9.80 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.232 | 61 | 1109173 | 10.46 | ppbV | 97 |
| 29) Cyclohexane | 4.415 | 56 | 1494221 | 10.48 | ppbV | 98 |
| 30) Chloroform | 4.454 | 83 | 1763283 | 10.18 | ppbV | 99 |
| 31) Ethyl acetate | 4.544 | 61 | 310143 | 11.00 | ppbV | 98 |
| 32) Carbon tetrachloride | 4.576 | 117 | 2075194 | 10.10 | ppbV | 99 |
| 33) Tetrahydrofuran | 4.573 | 42 | 1055760 | 10.84 | ppbV | 98 |
| 34) 1,1,1-Trichloroethane | 4.627 | 97 | 1829339 | 10.16 | ppbV | 98 |
| 35) Methyl ethyl ketone | 4.682 | 43 | 1694596 | 10.71 | ppbV | 98 |
| 36) n-Heptane | 4.917 | 43 | 1984236 | 11.09 | ppbV | 98 |
| 37) Benzene | 4.933 | 78 | 2436463 | 9.47 | ppbV | 98 |
| 38) 1,2-Dichloroethane | 5.090 | 62 | 1158367 | 10.76 | ppbV | 100 |
| 40) Trichloroethene | 5.431 | 130 | 1104206 | 9.14 | ppbV | 98 |
| 41) 2,2,4-Trimethylpentane | 4.843 | 57 | 3701197 | 10.41 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 1110425 | 10.46 | ppbV | 100 |
| 43) Bromodichloromethane | 5.946 | 83 | 2026843 | 11.34 | ppbV | 100 |
| 44) Methyl methacrylate | 6.087 | 41 | 1477655 | 11.47 | ppbV | 97 |
| 45) 1,4-Dioxane | 6.113 | 88 | 746186 | 11.47 | ppbV | 98 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 1788041 | 10.86 | ppbV | 99 |
| 47) Toluene | 6.772 | 91 | 4000386 | 10.43 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.132 | 43 | 2867635 | 11.90 | ppbV | 98 |
| 49) Tetrachloroethene | 7.161 | 166 | 1771569 | 10.71 | ppbV | 99 |
| 50) trans-1,3-Dichloropropene | 7.174 | 75 | 1825213 | 11.43 | ppbV | 98 |
| 51) 1,1,2-Trichloroethane | 7.335 | 97 | 1347280 | 10.40 | ppbV | 99 |

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4903lcs.D
Acq On : 11 Dec 2023 10:57 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

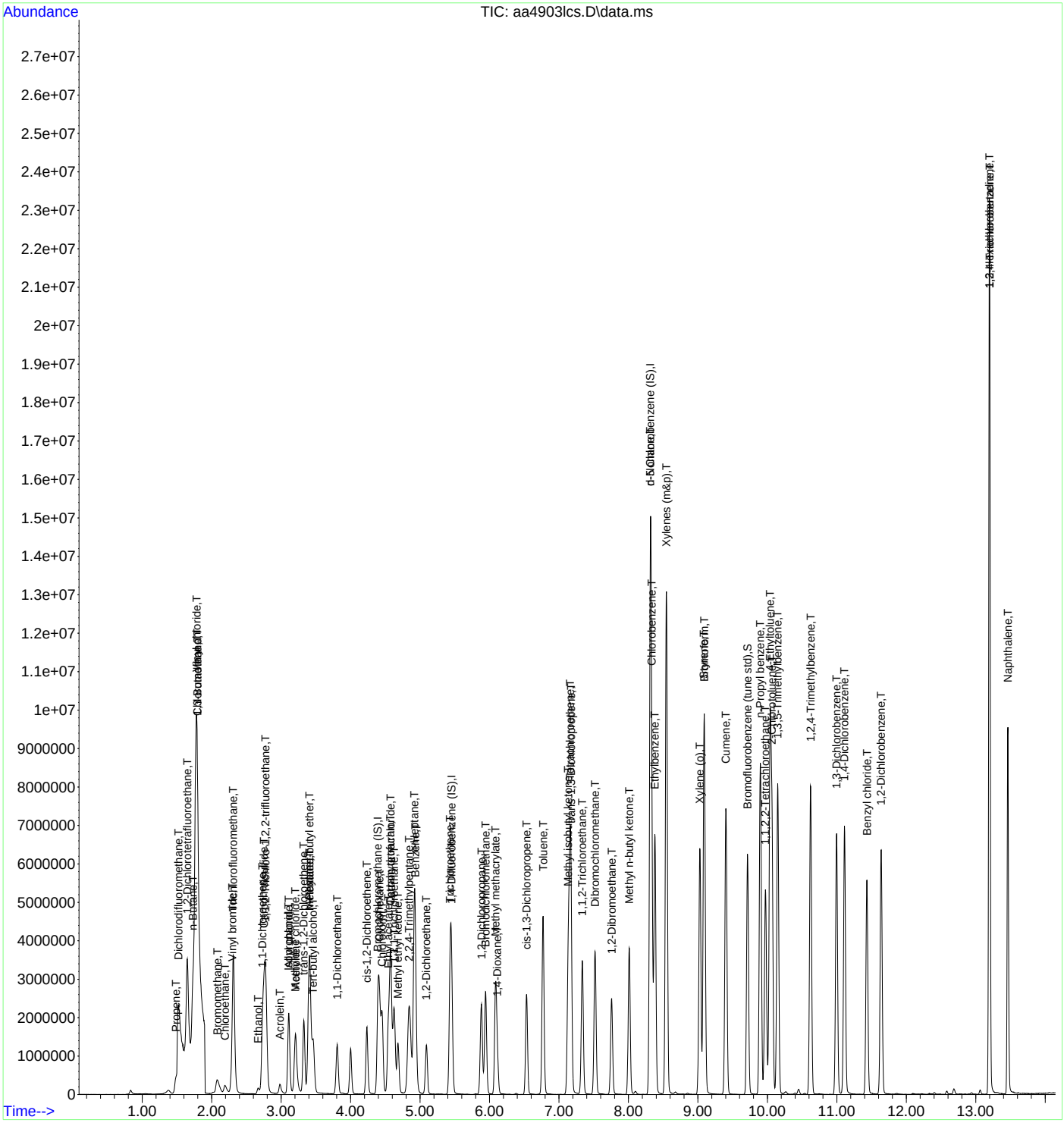
Quant Time: Dec 11 11:13:35 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 2436418 | 11.29 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 2033372 | 10.85 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.013 | 43 | 2915562 | 12.58 | ppbV | 98 |
| 56) n-Nonane | 8.315 | 43 | 3624209 | 11.82 | ppbV | 98 |
| 57) Chlorobenzene | 8.335 | 112 | 3170809 | 10.29 | ppbV | 98 |
| 58) Ethylbenzene | 8.380 | 91 | 6016260 | 10.56 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.547 | 91 | 9208112 | 21.82 | ppbV | 99 |
| 60) Xylene (o) | 9.026 | 91 | 4740095 | 10.29 | ppbV | 99 |
| 61) Styrene | 9.087 | 104 | 3439384 | 10.91 | ppbV | 100 |
| 62) Bromoform | 9.094 | 173 | 2568104 | 11.35 | ppbV | 100 |
| 63) Cumene | 9.402 | 105 | 6358038 | 10.57 | ppbV | 100 |
| 65) n-Propyl benzene | 9.897 | 91 | 8673958 | 11.04 | ppbV | 99 |
| 66) 1,1,2,2-Tetrachloroethane | 9.971 | 83 | 3528435 | 10.95 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 7191816 | 10.82 | ppbV | 100 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 5637797 | 10.69 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 5654494 | 10.58 | ppbV | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 5639014 | 10.55 | ppbV | 99 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 3401177 | 10.39 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.109 | 146 | 3376653 | 10.26 | ppbV | 99 |
| 73) Benzyl chloride | 11.434 | 91 | 5116198 | 10.83 | ppbV | 99 |
| 74) 1,2-Dichlorobenzene | 11.637 | 146 | 3236300 | 10.20 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.196 | 225 | 2308103 | 10.48 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.199 | 180 | 2718525 | 10.67 | ppbV | 100 |
| 77) Naphthalene | 13.463 | 128 | 6001329 | 10.30 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4903lcs.D
Acq On : 11 Dec 2023 10:57 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 11 11:13:35 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 9/13/23 |
| SDG Number: | E23-04122 | Date Analyzed: | 9/28/23,9/28/23 |
| IAL Sample ID: | E23-04122-06 | Lab Data File#: | AA4087,AA4088 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 1781 | Injection Volume: | 50ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-04122-06** | | **E23-04122-26** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Acetone | 67-64-1 | **50** | | **54** | | 4.0 | **-7.69%** |
| Allyl Chloride | 107-05-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Benzene | 71-43-2 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| Bromodichloromethane | 75-27-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Bromoform | 75-25-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Bromomethane | 74-83-9 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3-Butadiene | 106-99-0 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chlorobenzene | 108-90-7 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chloroethane | 75-00-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chloroform | 67-66-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chloromethane | 74-87-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Carbon disulfide | 75-15-0 | **10.0** | | **11** | | 4.0 | **-9.52%** |
| Carbon tetrachloride | 56-23-5 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 2-Chlorotoluene | 95-49-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Cyclohexane | 110-82-7 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Dibromochloromethane | 124-48-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dibromoethane | 106-93-4 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,2-Dichlorobenzene | 95-50-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3-Dichlorobenzene | 541-73-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,4-Dichlorobenzene | 106-46-7 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Dichlorodifluoromethane | 75-71-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1-Dichloroethane | 75-34-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloroethane | 107-06-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1-Dichloroethene | 75-35-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloroethene (cis) | 156-59-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloroethene (trans) | 156-60-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloropropane | 78-87-5 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Ethylbenzene | 100-41-4 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 4-Ethyltoluene | 622-96-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| n-Heptane | 142-82-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3-Hexachlorobutadiene | 87-68-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| n-Hexane | 110-54-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Methylene chloride | 75-09-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Methyl ethyl ketone | 78-93-3 | **8.1** | | **10** | | 4.0 | **-20.99%** |
| Methyl isobutyl ketone | 108-10-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 9/13/23 |
| SDG Number: | E23-04122 | Date Analyzed: | 9/28/23,9/28/23 |
| IAL Sample ID: | E23-04122-06 | Lab Data File#: | AA4087,AA4088 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 1781 | Injection Volume: | 50ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-04122-06** | | **E23-04122-26** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Methyl tert-butyl ether | 1634-04-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Styrene | 100-42-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Tert-butyl alcohol | 75-65-0 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Tetrachloroethene | 127-18-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Toluene | 108-88-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2,4-Trichlorobenzene | 120-82-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,1-Trichloroethane | 71-55-6 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,2-Trichloroethane | 79-00-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Trichloroethene | 79-01-6 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| Trichlorofluoromethane | 75-69-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2,4-Trimethylbenzene | 95-63-6 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3,5-Trimethylbenzene | 108-67-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 2,2,4-Trimethylpentane | 540-84-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Vinyl bromide | 593-60-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Vinyl chloride | 75-01-4 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| Xylenes (m&p) | 179601-23-1 | 4.0 | U | **4.2** | | 4.0 | **NC** |
| Xylenes (o) | 95-47-6 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |

**RPD must be <25% for all laboratory duplicate samples. Laboratory duplicate samples are run once daily.**
**NC = The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample.**

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4087.D
Acq On : 28 Sep 2023 9:29 pm
Operator : jjw
Sample : E23-04122-06x10 dil
Misc : 1781, 50cc
ALS Vial : 21 Sample Multiplier: 1

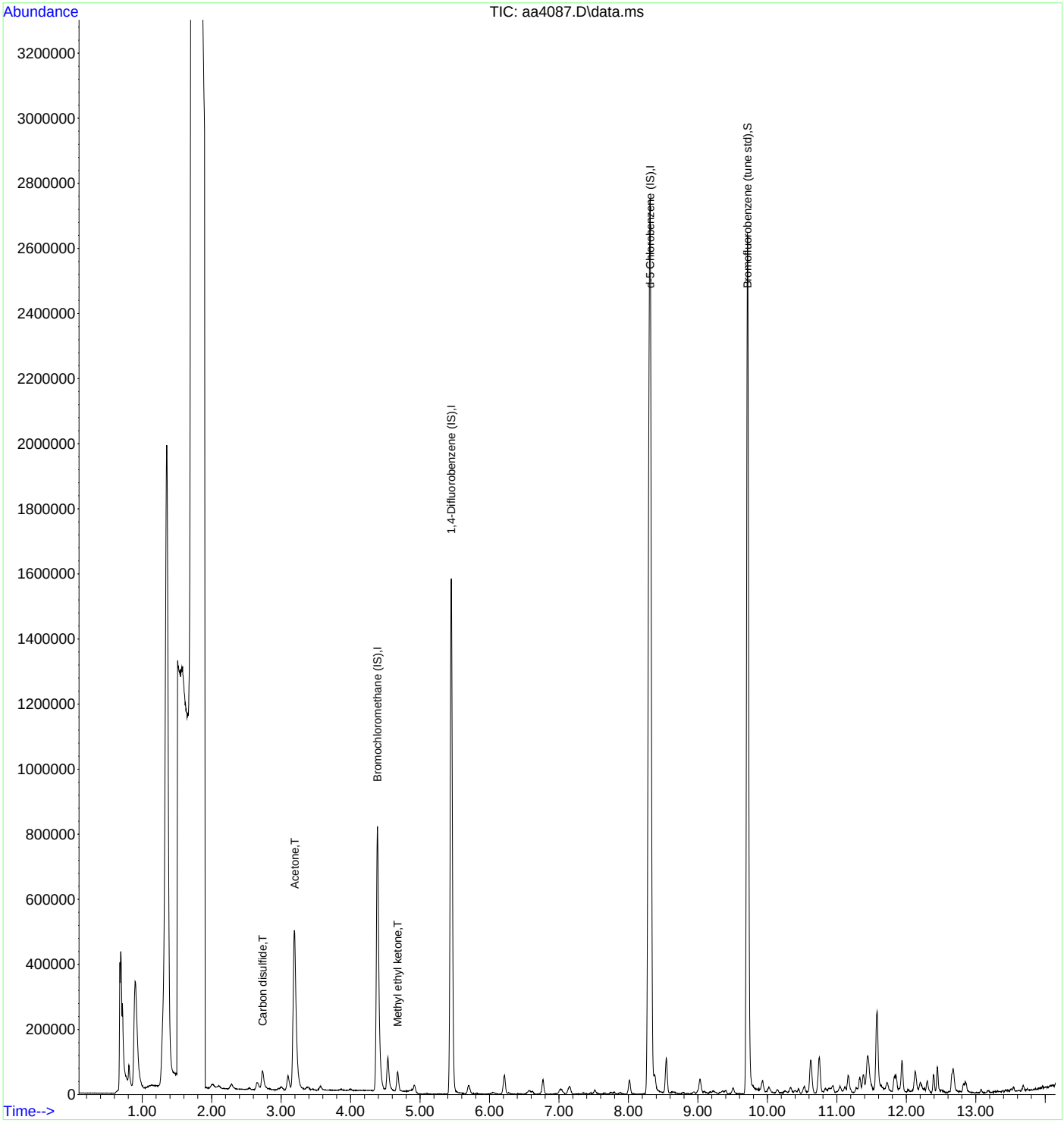
Quant Time: Oct 04 12:38:10 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

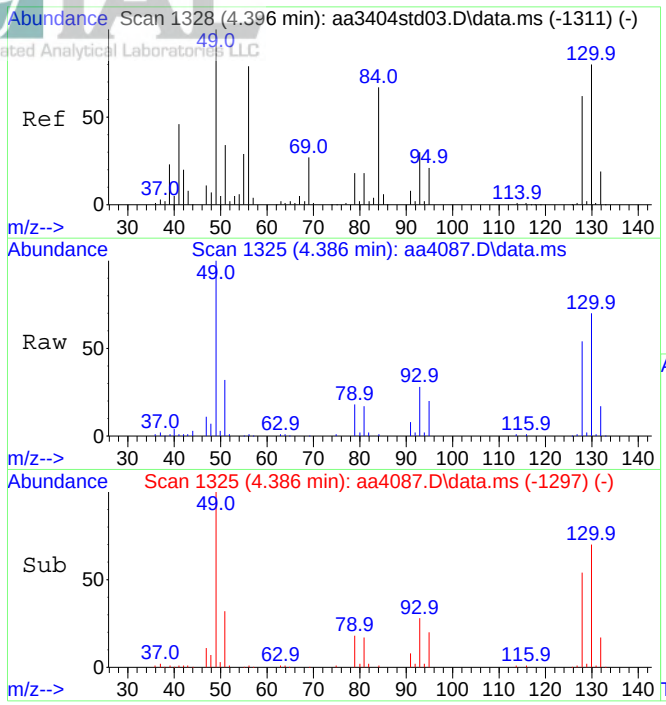
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.386 | 130 | 333645 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.451 | 114 | 1400704 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.315 | 117 | 1383190 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1064307 | 9.25 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 15) Carbon disulfide | 2.734 | 76 | 114195 | 1.00 | ppbV | 97 |
| 21) Acetone | 3.197 | 43 | 311157 | 4.97 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.679 | 43 | 78641 | 0.81 | ppbV | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4087.D
Acq On : 28 Sep 2023 9:29 pm
Operator : jjw
Sample : E23-04122-06x10 dil
Misc : 1781, 50cc
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Oct 04 12:38:10 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

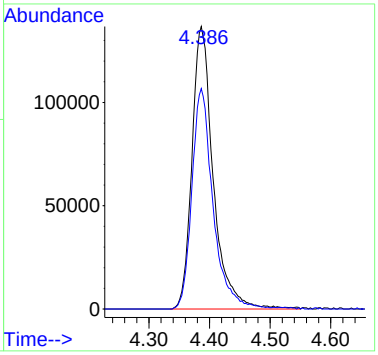


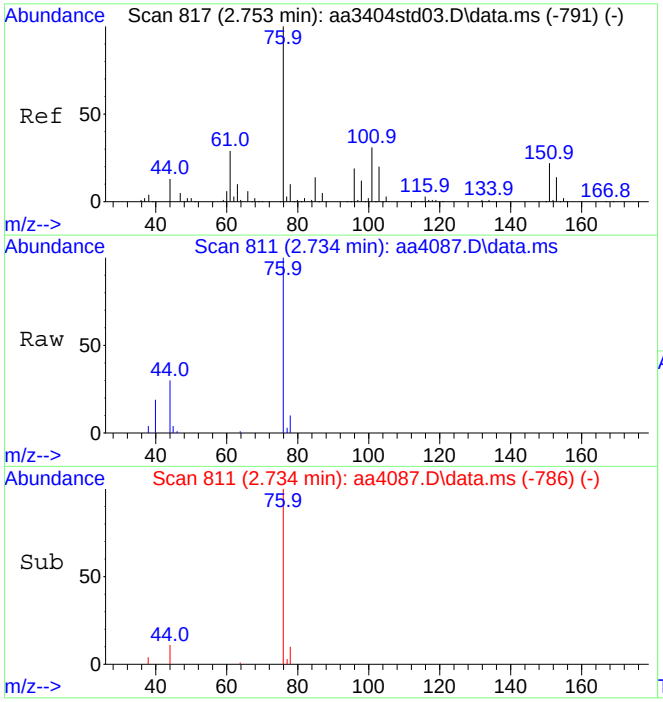



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.386 min Scan# 1325
Delta R.T. -0.010 min
Lab File: aa4087.D
Acq: 28 Sep 2023 9:29 pm

Tgt Ion:130 Resp: 333645

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 78.0 | 61.8 | 92.6 |

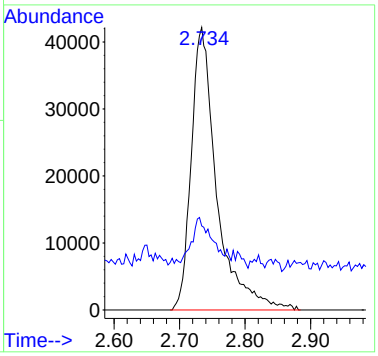


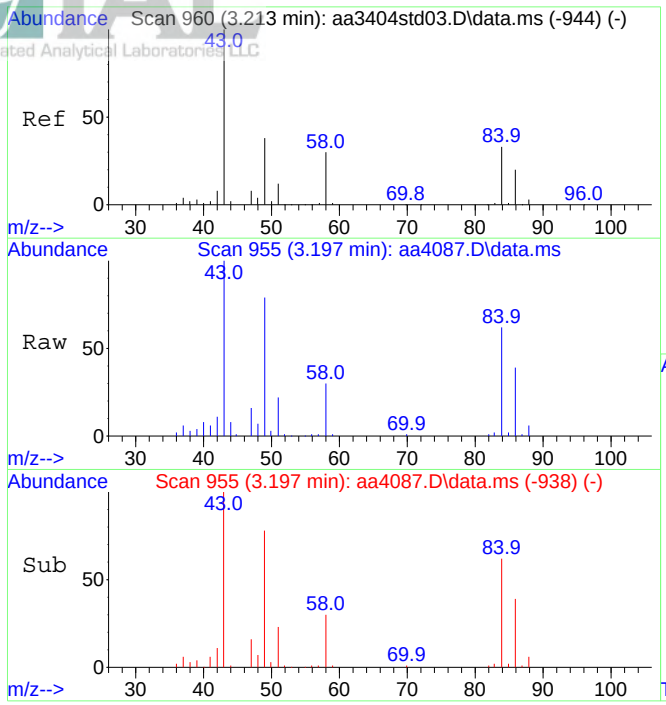




#15
Carbon disulfide
Concen: 1.00 ppbV
RT: 2.734 min Scan# 811
Delta R.T. -0.020 min
Lab File: aa4087.D
Acq: 28 Sep 2023 9:29 pm

Tgt Ion: 76 Resp: 114195

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 14.2 | 10.5 | 15.7 |

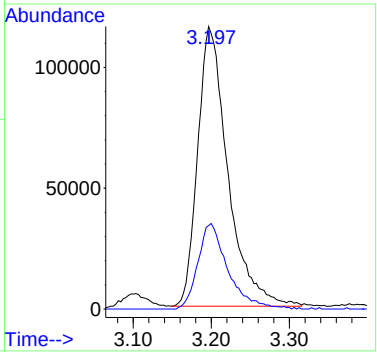


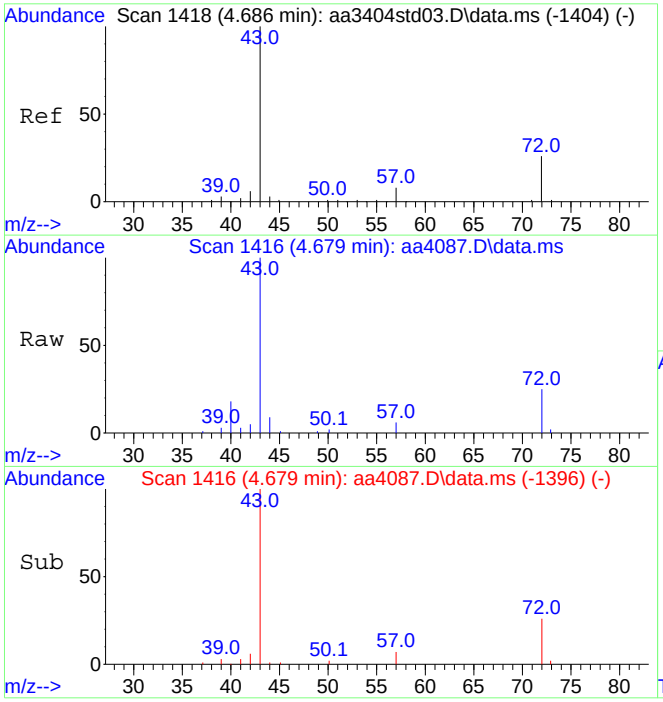



#21
Acetone
Concen: 4.97 ppbV
RT: 3.197 min Scan# 955
Delta R.T. -0.016 min
Lab File: aa4087.D
Acq: 28 Sep 2023 9:29 pm

Tgt Ion: 43 Resp: 311157

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 30.3 | 24.9 | 37.3 |

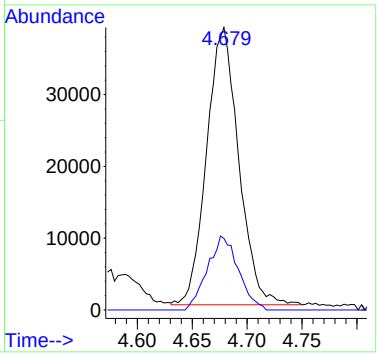


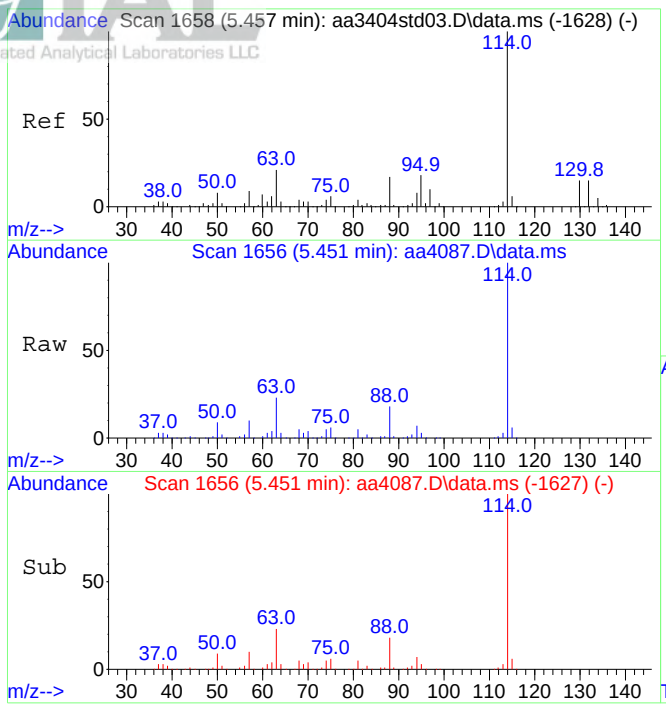




#35
Methyl ethyl ketone
Concen: 0.81 ppbV
RT: 4.679 min Scan# 1416
Delta R.T. -0.007 min
Lab File: aa4087.D
Acq: 28 Sep 2023 9:29 pm

Tgt Ion: 43 Resp: 78641

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 25.5 | 20.8 | 31.2 |

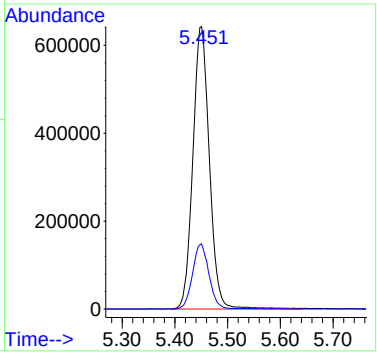


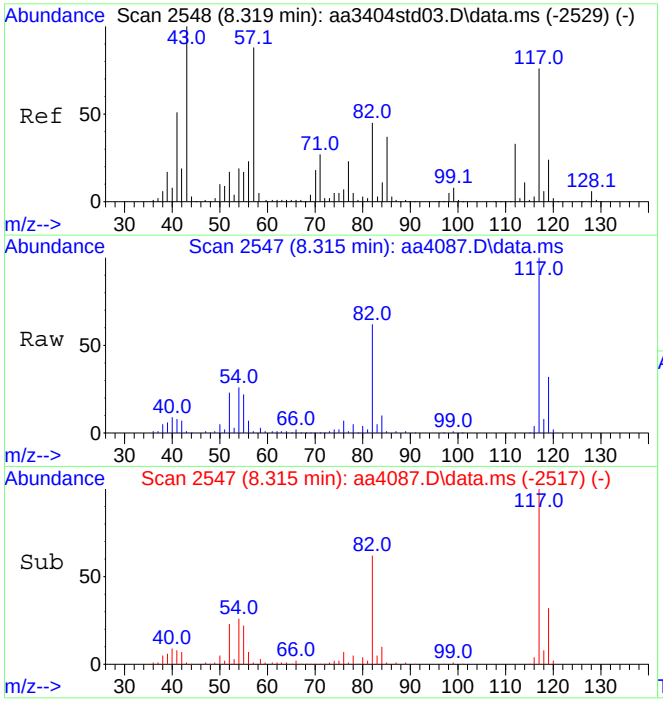



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.451 min Scan# 1656
Delta R.T. -0.006 min
Lab File: aa4087.D
Acq: 28 Sep 2023 9:29 pm

Tgt Ion:114 Resp: 1400704

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 23.0 | 17.4 | 26.2 |

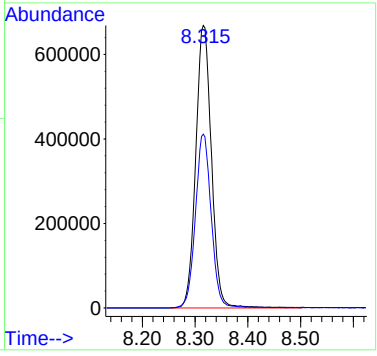


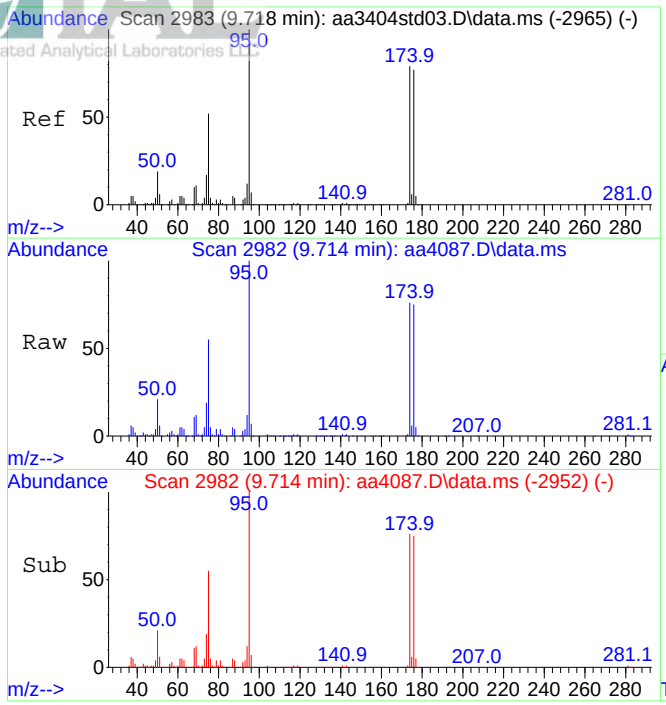




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.315 min Scan# 2547
Delta R.T. -0.004 min
Lab File: aa4087.D
Acq: 28 Sep 2023 9:29 pm

Tgt Ion:117 Resp: 1383190

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 62.2 | 47.4 | 71.0 |

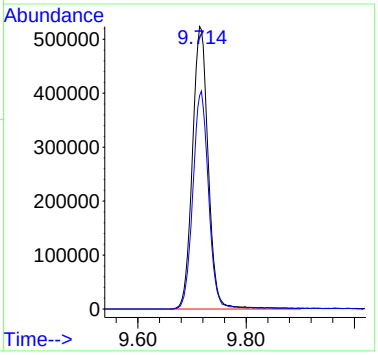





#64
Bromofluorobenzene (tune std)
Concen: 9.25 ppbV
RT: 9.714 min Scan# 2982
Delta R.T. -0.003 min
Lab File: aa4087.D
Acq: 28 Sep 2023 9:29 pm

Tgt Ion: 95 Resp: 1064307

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 77.0 | 62.9 | 94.3 |



Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4088.D
Acq On : 28 Sep 2023 10:00 pm
Operator : jjw
Sample : E23-04122-26x10 dil
Misc : Dup of E23-04122-06x10 dil, Can # 1781
ALS Vial : 22 Sample Multiplier: 1

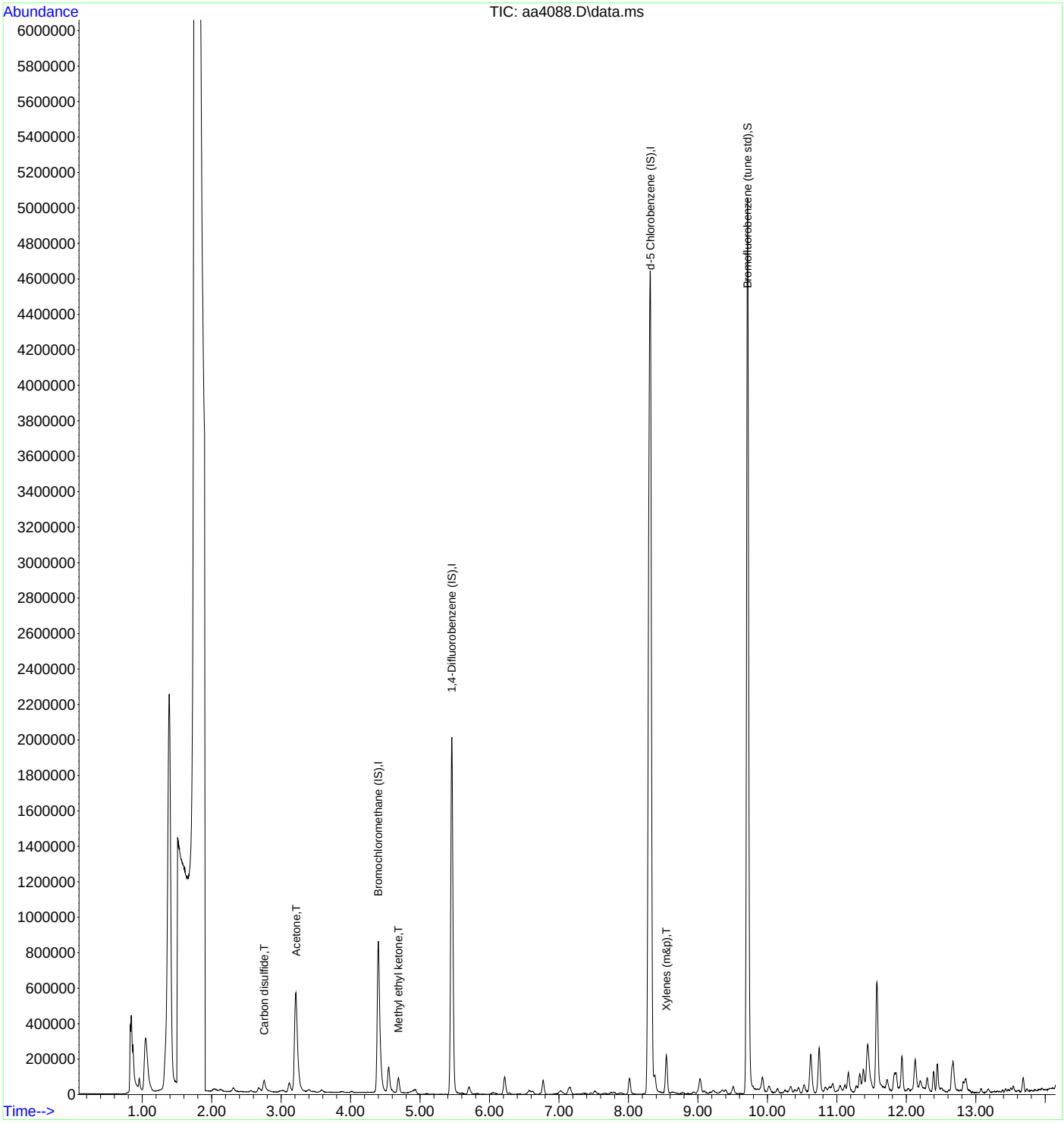
Quant Time: Oct 04 12:49:41 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

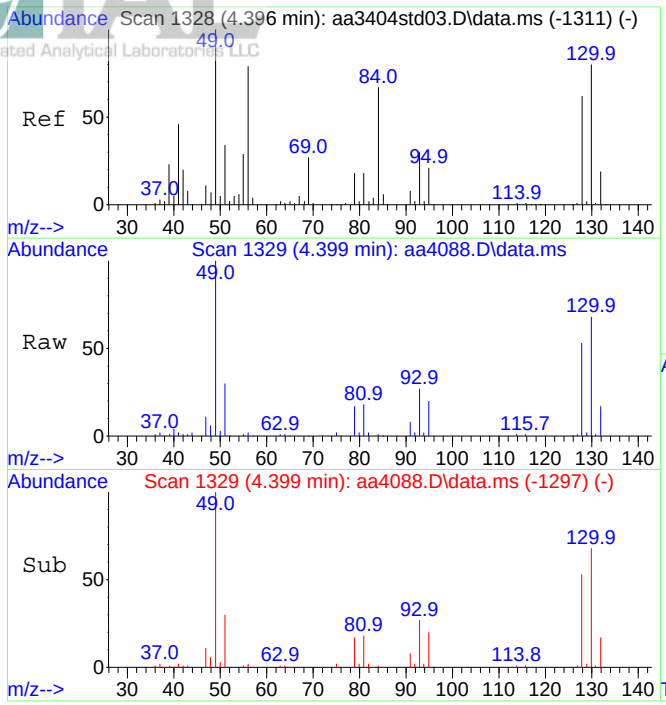
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.399 | 130 | 378421 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 1821981 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 2357353 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 2004719 | 10.22 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 15) Carbon disulfide | 2.756 | 76 | 137474 | 1.06 | ppbV | 97 |
| 21) Acetone | 3.219 | 43 | 384617 | 5.42 | ppbV | 98 |
| 35) Methyl ethyl ketone | 4.689 | 43 | 112963 | 1.03 | ppbV | 98 |
| 59) Xylenes (m&p) | 8.547 | 91 | 145250 | 0.42 | ppbV | 97 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4088.D
Acq On : 28 Sep 2023 10:00 pm
Operator : jjw
Sample : E23-04122-26x10 dil
Misc : Dup of E23-04122-06x10 dil, Can # 1781
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Oct 04 12:49:41 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

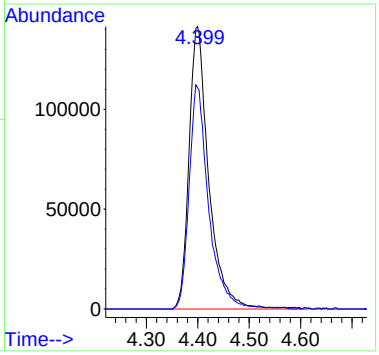


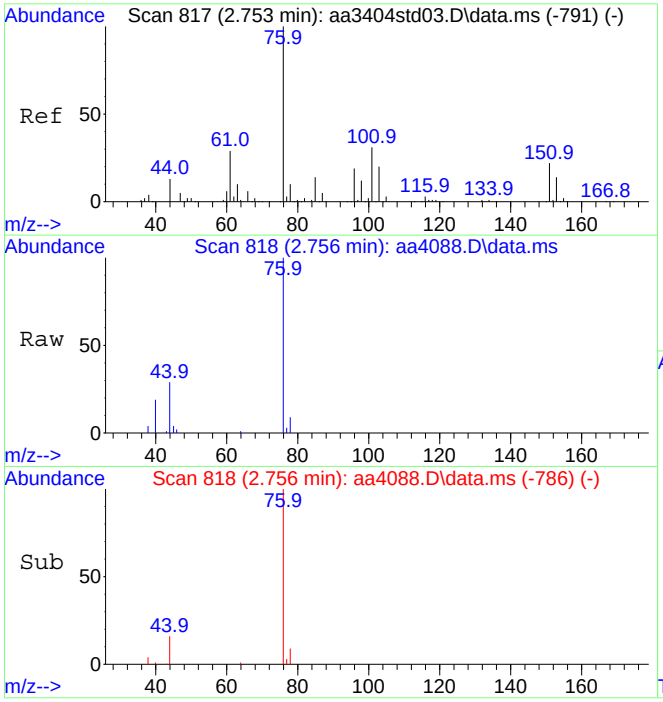



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.399 min Scan# 1329
Delta R.T. 0.003 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion:130 Resp: 378421

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 78.2 | 61.8 | 92.6 |

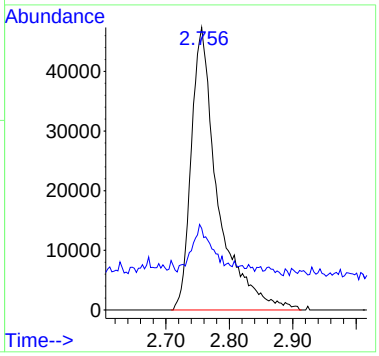


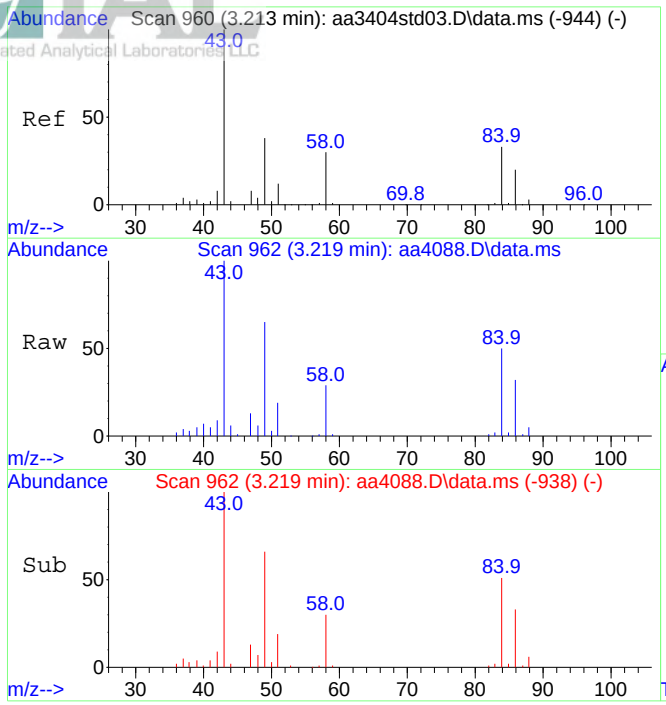




#15
Carbon disulfide
Concen: 1.06 ppbV
RT: 2.756 min Scan# 818
Delta R.T. 0.003 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion: 76 Resp: 137474

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 14.5 | 10.5 | 15.7 |

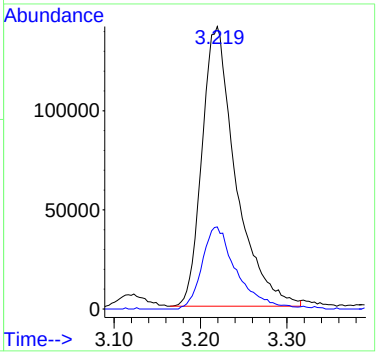


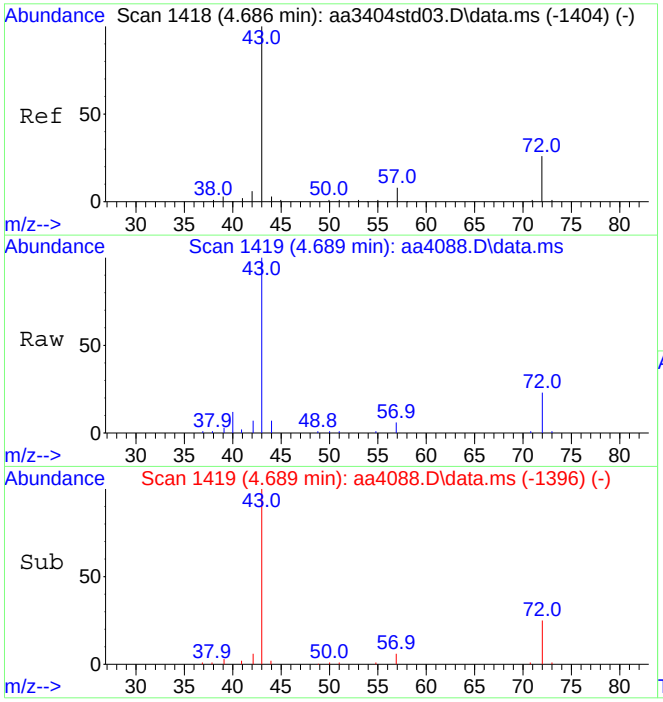



#21
Acetone
Concen: 5.42 ppbV
RT: 3.219 min Scan# 962
Delta R.T. 0.006 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion: 43 Resp: 384617

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 30.0 | 24.9 | 37.3 |

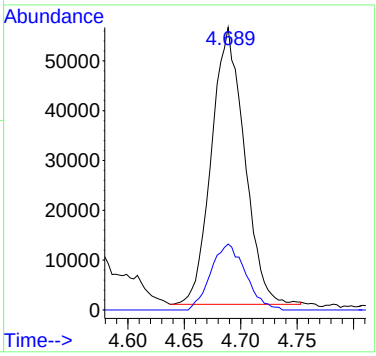


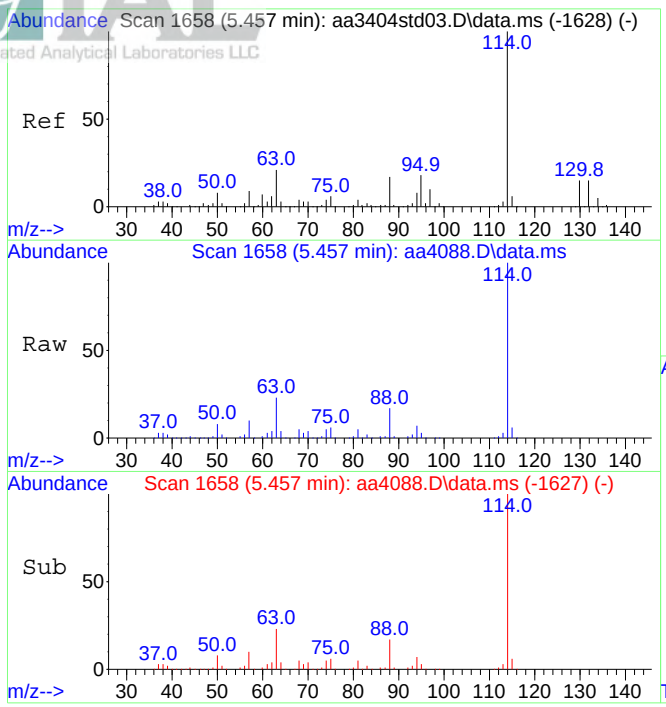




#35
Methyl ethyl ketone
Concen: 1.03 ppbV
RT: 4.689 min Scan# 1419
Delta R.T. 0.003 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion: 43 Resp: 112963

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 25.1 | 20.8 | 31.2 |

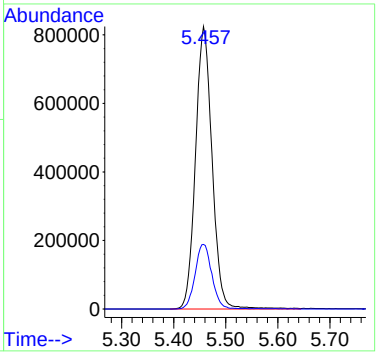


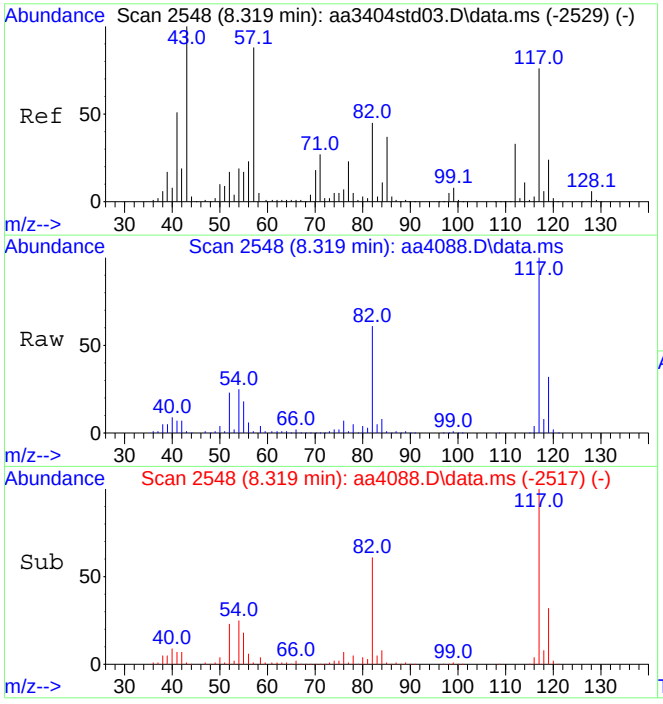



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.457 min Scan# 1658
Delta R.T. 0.000 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion:114 Resp: 1821981

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 23.3 | 17.4 | 26.2 |

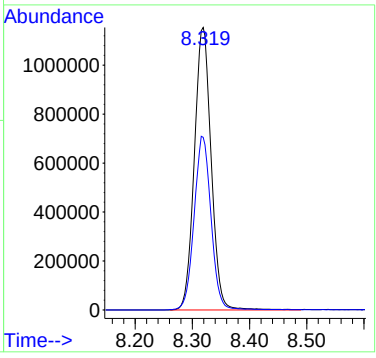


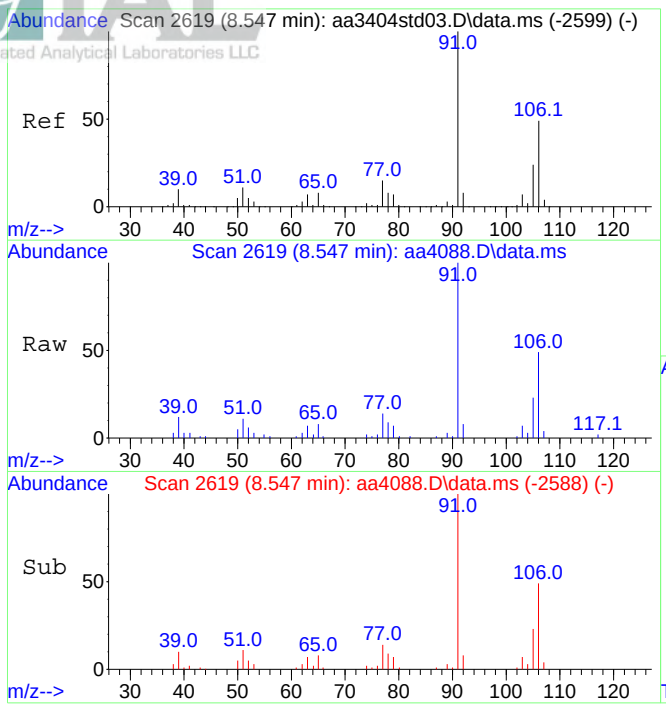




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.319 min Scan# 2548
Delta R.T. -0.000 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion:117 Resp: 2357353

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 61.9 | 47.4 | 71.0 |

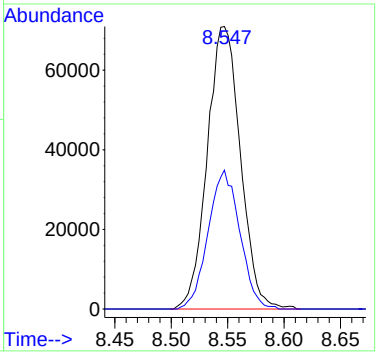


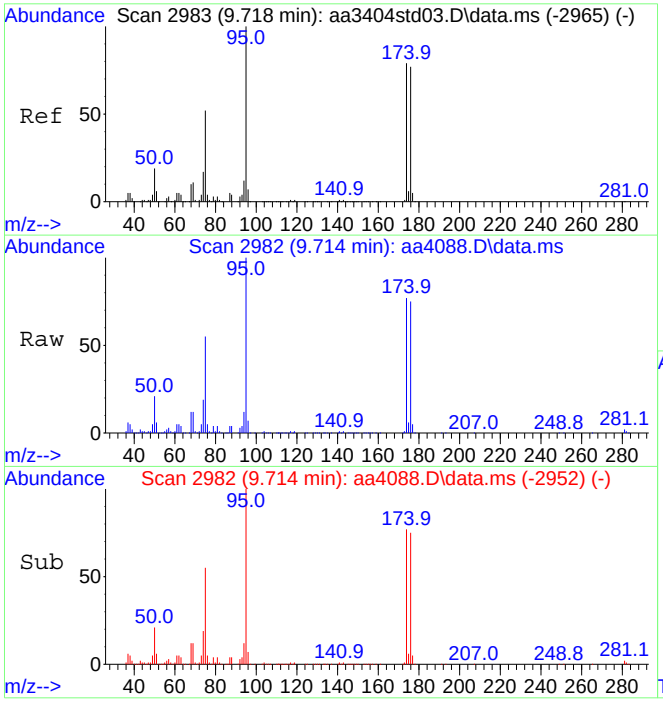



#59
Xylenes (m&p)
Concen: 0.42 ppbV
RT: 8.547 min Scan# 2619
Delta R.T. -0.000 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion: 91 Resp: 145250

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 46.9 | 39.2 | 58.8 |

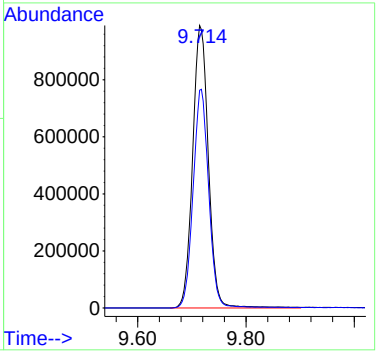



#64
Bromofluorobenzene (tune std)
Concen: 10.22 ppbV
RT: 9.714 min Scan# 2982
Delta R.T. -0.003 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion: 95 Resp: 2004719

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 76.8 | 62.9 | 94.3 |



**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

SDG Number: E23-05061
IAL Sample ID: E23-05061-03
Matrix: Air
Summa ID: 3045a

Date Received: 11/17/23
Date Analyzed: 12/7/23,12/7/23
Lab Data File#: AA4869,AA4870
Dilution Factor: 1
Injection Volume: 500ml
GC/MS Column: RTX-1, 0.32 mmID

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-05061-03** | | **E23-05061-23** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Acetone | 67-64-1 | **11** | | **11** | | 0.20 | **0.00%** |
| Allyl Chloride | 107-05-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Benzene | 71-43-2 | **2.6** | | **2.3** | | 0.20 | **12.24%** |
| Bromodichloromethane | 75-27-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Bromoform | 75-25-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Bromomethane | 74-83-9 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Butadiene | 106-99-0 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Chlorobenzene | 108-90-7 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Chloroethane | 75-00-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Chloroform | 67-66-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Chloromethane | 74-87-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Carbon disulfide | 75-15-0 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Carbon tetrachloride | 56-23-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 2-Chlorotoluene | 95-49-8 | 0.20 | U | **0.27** | | 0.20 | **NC** |
| Cyclohexane | 110-82-7 | **3.9** | | **3.4** | | 0.20 | **13.70%** |
| Dibromochloromethane | 124-48-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dibromoethane | 106-93-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,4-Dioxane | 123-91-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Ethanol | 64-17-5 | **10** | | 0.20 | U | 0.20 | **NC** |
| Ethylbenzene | 100-41-4 | **1.9** | | **1.6** | | 0.20 | **17.14%** |
| 4-Ethyltoluene | 622-96-8 | **1.9** | X | **1.4** | X | 0.20 | **30.30%** |
| n-Heptane | 142-82-5 | **3.7** | | **3.4** | | 0.20 | **8.45%** |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| n-Hexane | 110-54-3 | **4.4** | | **3.8** | | 0.20 | **14.63%** |
| Isopropanol | 67-63-0 | **2.7** | | 0.20 | U | 0.20 | **NC** |

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**INTEGRATED ANALYTICAL LABORATORIES, LLC**

***Integrated Analytical Laboratories LLC***

**Analysis: Volatile Organic Compounds by EPA Method TO-15**

**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 11/17/23 |
| SDG Number: | E23-05061 | Date Analyzed: | 12/7/23,12/7/23 |
| IAL Sample ID: | E23-05061-03 | Lab Data File#: | AA4869,AA4870 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 3045a | Injection Volume: | 500ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-05061-03** | | **E23-05061-23** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Methylene chloride | 75-09-2 | **2.8** | | 0.20 | U | 0.20 | **NC** |
| Methyl ethyl ketone | 78-93-3 | **0.85** | | **0.83** | | 0.20 | **2.38%** |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | U | **0.24** | | 0.20 | **NC** |
| Methyl methacrylate | 80-62-6 | 0.20 | U | **3.4** | | 0.20 | **NC** |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Styrene | 100-42-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Tert-butyl alcohol | 75-65-0 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Tetrachloroethene | 127-18-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Tetrahydrofuran | 109-99-9 | **0.96** | | **0.90** | | 0.20 | **6.45%** |
| Toluene | 108-88-3 | **7.1** | | **7.1** | | 0.20 | **0.00%** |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1,1-Trichloroethane | 71-55-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Trichloroethene | 79-01-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Trichlorofluoromethane | 75-69-4 | **0.33** | | **0.33** | | 0.20 | **0.00%** |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2,4-Trimethylbenzene | 95-63-6 | **1.9** | | **1.5** | | 0.20 | **23.53%** |
| 1,3,5-Trimethylbenzene | 108-67-8 | **0.53** | | **0.45** | | 0.20 | **16.33%** |
| 2,2,4-Trimethylpentane | 540-84-1 | **6.9** | | **7.0** | | 0.20 | **-1.44%** |
| Vinyl bromide | 593-60-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Vinyl chloride | 75-01-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Xylenes (m&p) | 179601-23-1 | **7.0** | | **5.9** | | 0.40 | **17.05%** |
| Xylenes (o) | 95-47-6 | **2.3** | | **2.0** | | 0.20 | **13.95%** |

**RPD must be <25% for all laboratory duplicate samples. Laboratory duplicate samples are run once daily.**

**NC = The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample.**

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

Quantitation Report (QT Reviewed)

Data Path : C:\DATA\2023\12-2023\12-07-2023\
Data File : aa4869.D
Acq On : 7 Dec 2023 7:50 pm
Operator : jjw
Sample : E23-05061-03
Misc : 3045A, 500cc
ALS Vial : 23 Sample Multiplier: 1

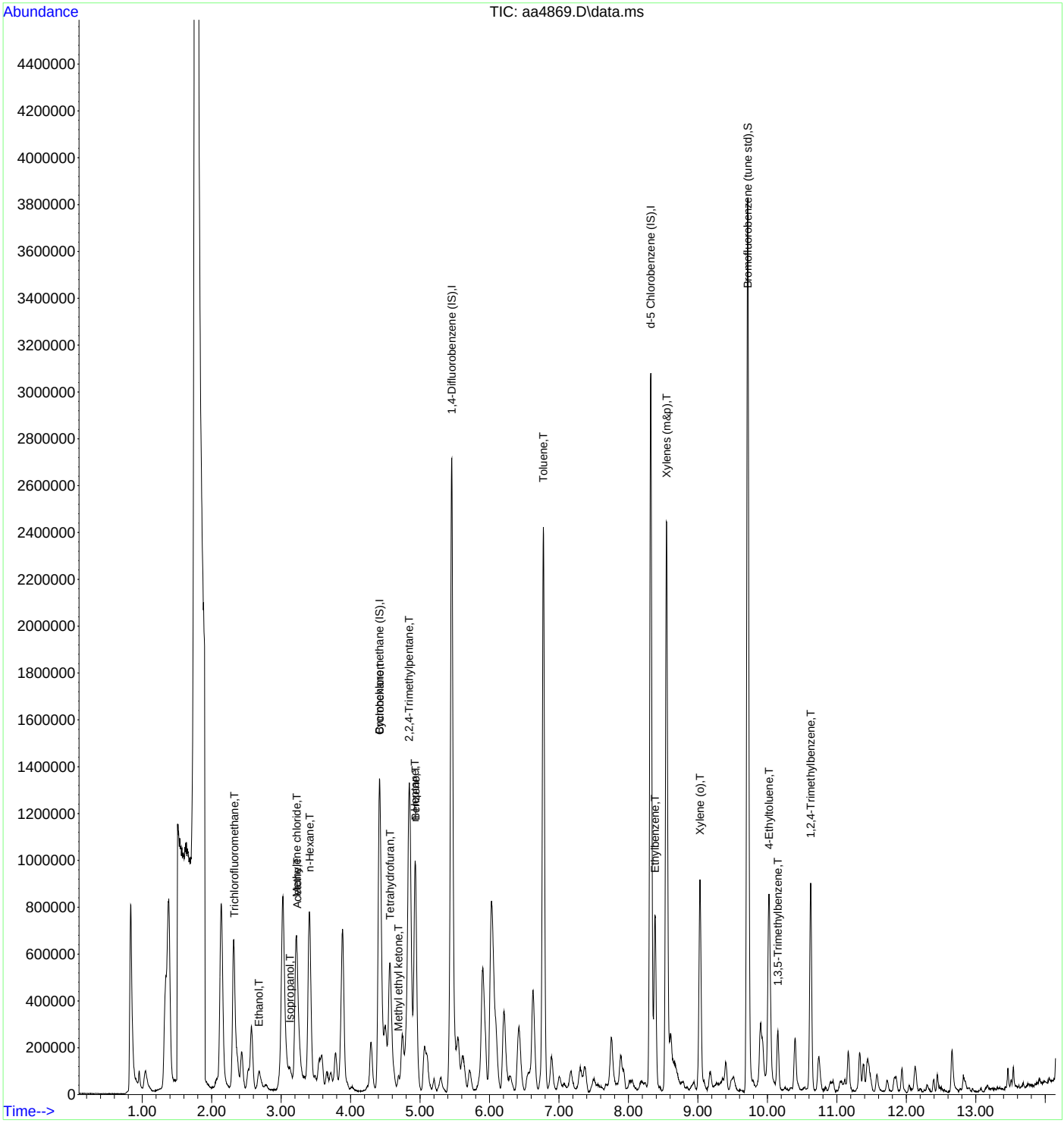
Quant Time: Dec 13 12:49:53 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

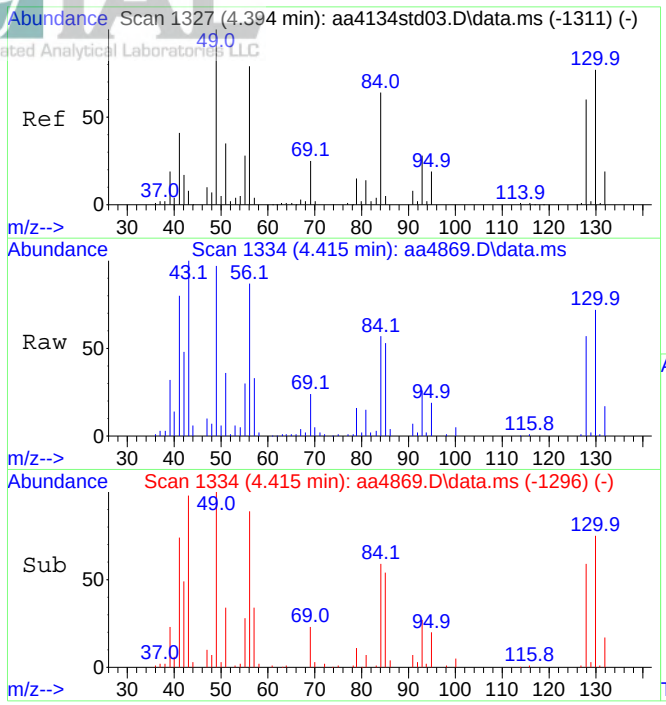
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.415 | 130 | 377969 | 10.00 | ppbV | | 0.021 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 2104054 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.322 | 117 | 1855524 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 1687506 | 10.43 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 12) Trichlorofluoromethane | 2.329 | 101 | 35340 | 0.33 | ppbV | | 84 |
| 13) Ethanol | 2.682 | 45 | 111256 | 10.05 | ppbV | | 96 |
| 19) Isopropanol | 3.129 | 45 | 208140 | 2.75 | ppbV | # | 74 |
| 20) Methylene chloride | 3.226 | 49 | 129701 | 2.79 | ppbV | | 90 |
| 21) Acetone | 3.232 | 43 | 610229 | 10.70 | ppbV | | 96 |
| 24) n-Hexane | 3.412 | 57 | 520146 | 4.37 | ppbV | | 97 |
| 29) Cyclohexane | 4.419 | 56 | 324297 | 3.90 | ppbV | # | 74 |
| 33) Tetrahydrofuran | 4.570 | 42 | 54848 | 0.96 | ppbV | # | 80 |
| 35) Methyl ethyl ketone | 4.689 | 43 | 78559 | 0.85 | ppbV | | 96 |
| 36) n-Heptane | 4.927 | 43 | 386594 | 3.70 | ppbV | | 97 |
| 37) Benzene | 4.936 | 78 | 388496 | 2.59 | ppbV | | 94 |
| 41) 2,2,4-Trimethylpentane | 4.843 | 57 | 1877837 | 6.85 | ppbV | | 96 |
| 47) Toluene | 6.775 | 91 | 2112833 | 7.14 | ppbV | | 100 |
| 58) Ethylbenzene | 8.383 | 91 | 655687 | 1.92 | ppbV | | 98 |
| 59) Xylenes (m&p) | 8.550 | 91 | 1780980 | 7.03 | ppbV | | 97 |
| 60) Xylene (o) | 9.029 | 91 | 648554 | 2.35 | ppbV | | 97 |
| 67) 4-Ethyltoluene | 10.023 | 105 | 762163 | 1.91 | ppbV | | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.151 | 105 | 170234 | 0.53 | ppbV | | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 614979 | 1.92 | ppbV | | 98 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-07-2023\
Data File : aa4869.D
Acq On : 7 Dec 2023 7:50 pm
Operator : jjw
Sample : E23-05061-03
Misc : 3045A, 500cc
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Dec 13 12:49:53 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

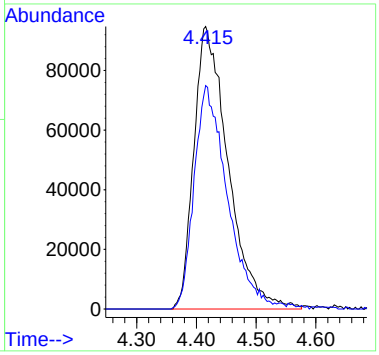


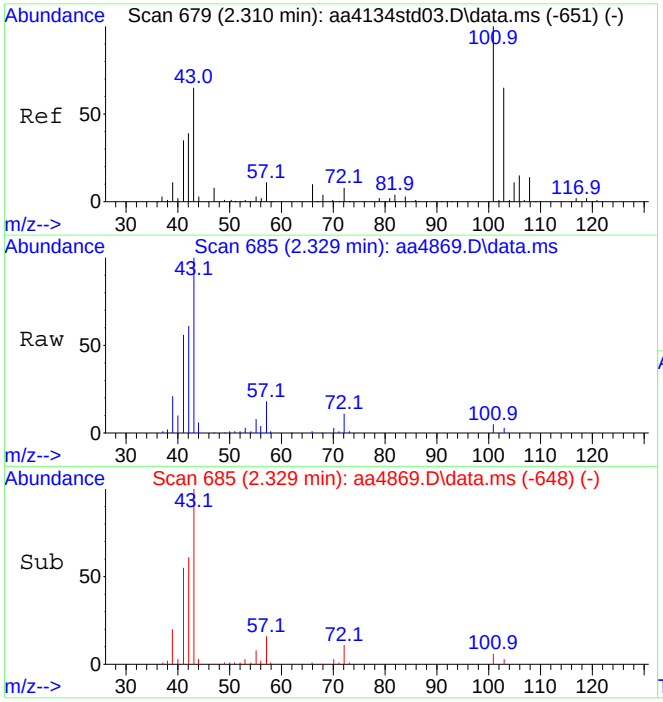



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.415 min Scan# 1334
Delta R.T. 0.021 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion:130 Resp: 377969

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 76.5 | 62.2 | 93.4 |

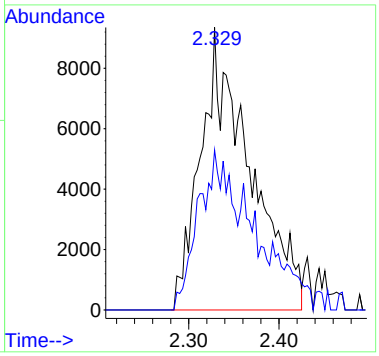


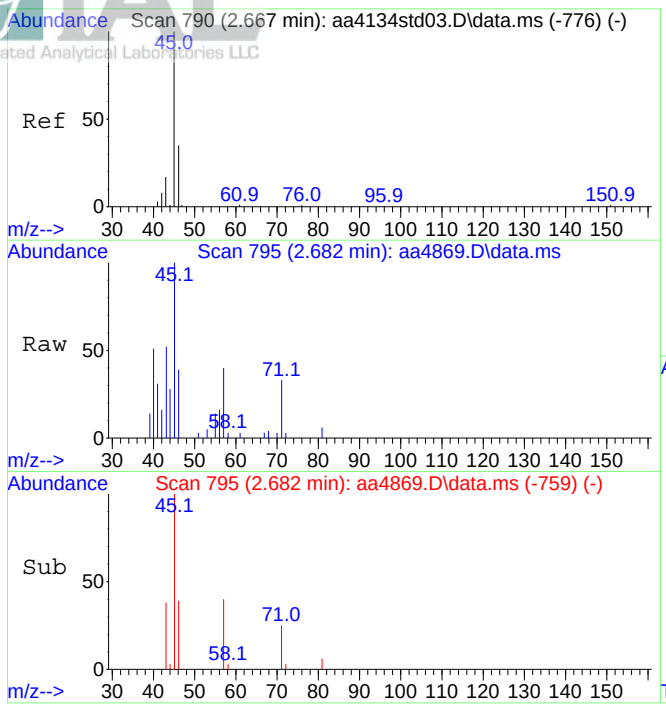




#12
Trichlorofluoromethane
Concen: 0.33 ppbV
RT: 2.329 min Scan# 685
Delta R.T. 0.018 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion:101 Resp: 35340

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 53.1 | 52.5 | 78.7 |

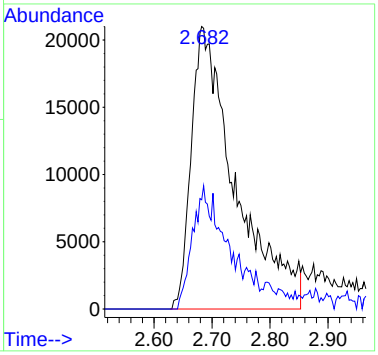


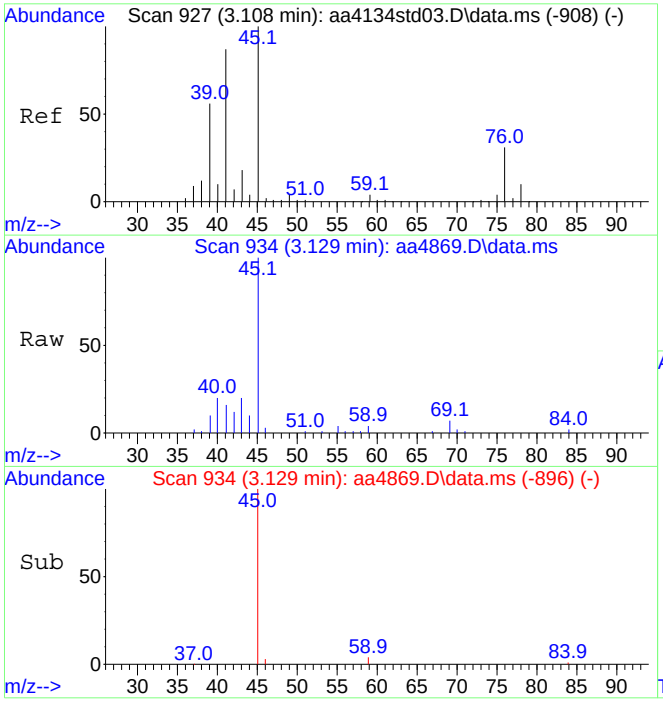



#13
Ethanol
Concen: 10.05 ppbV
RT: 2.682 min Scan# 795
Delta R.T. 0.015 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 45 Resp: 111256

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 46 | 35.3 | 30.0 | 45.0 |

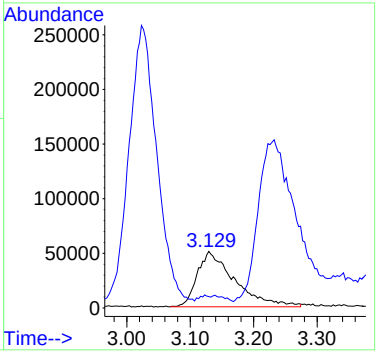


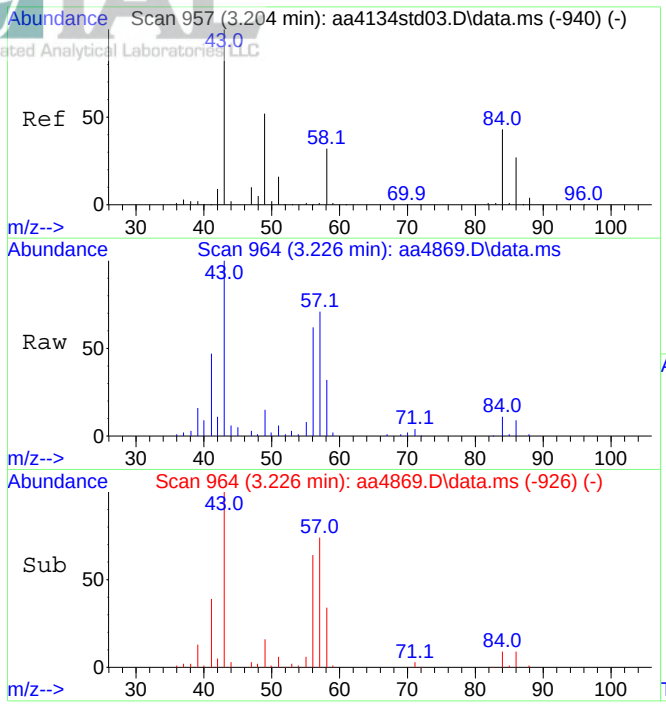




#19
Isopropanol
Concen: 2.75 ppbV
RT: 3.129 min Scan# 934
Delta R.T. 0.021 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 45 Resp: 208140

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 43 | 6.6 | 14.6 | 21.8# |

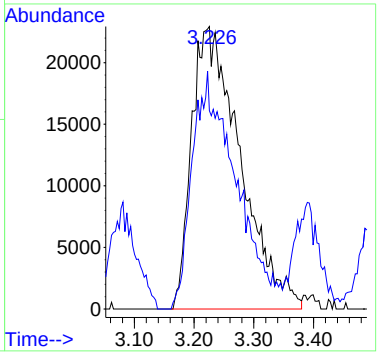


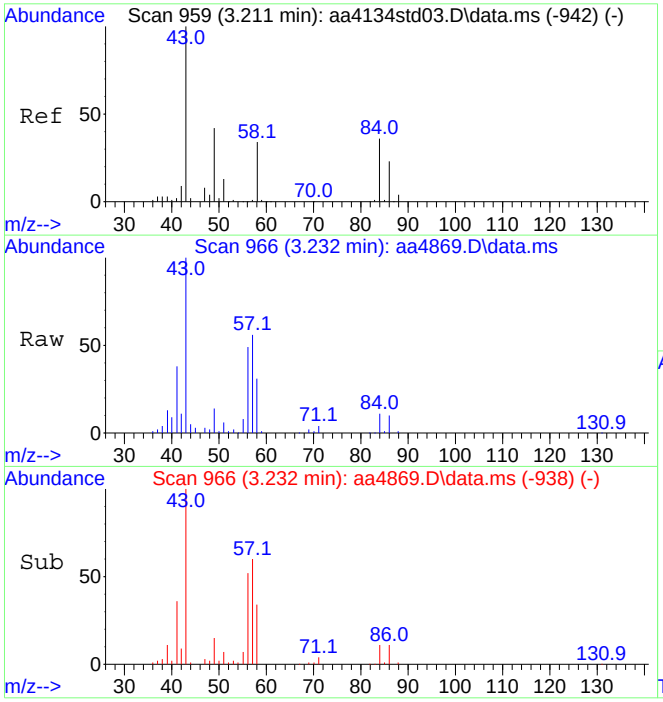



#20
Methylene chloride
Concen: 2.79 ppbV
RT: 3.226 min Scan# 964
Delta R.T. 0.022 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 49 Resp: 129701

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 75.6 | 64.8 | 104.8 |

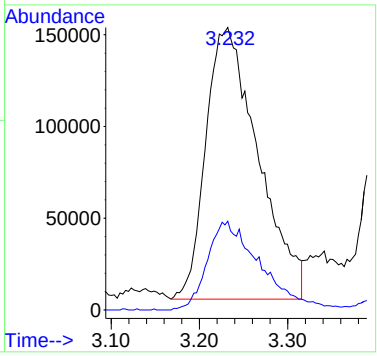


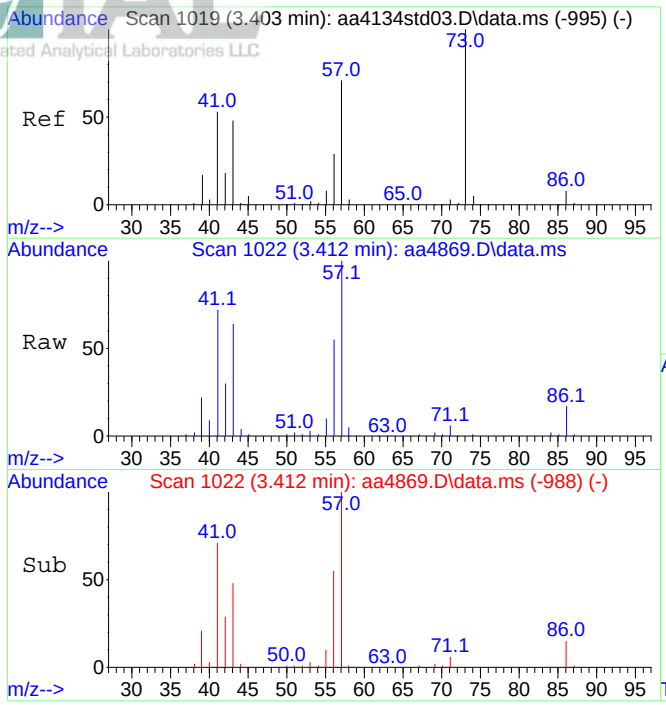




#21
Acetone
Concen: 10.70 ppbV
RT: 3.232 min Scan# 966
Delta R.T. 0.021 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 43 Resp: 610229

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 31.8 | 27.1 | 40.7 |

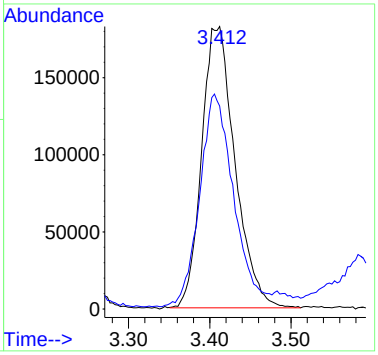


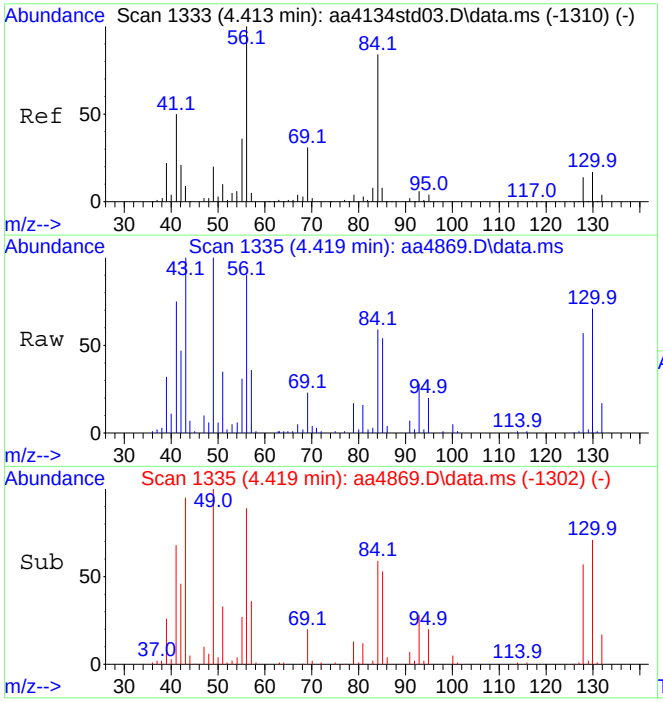



#24
n-Hexane
Concen: 4.37 ppbV
RT: 3.412 min Scan# 1022
Delta R.T. 0.009 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 57 Resp: 520146

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 41 | 80.4 | 66.4 | 99.6 |

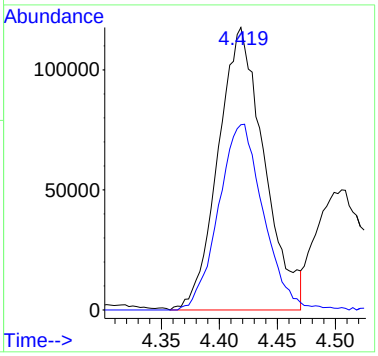


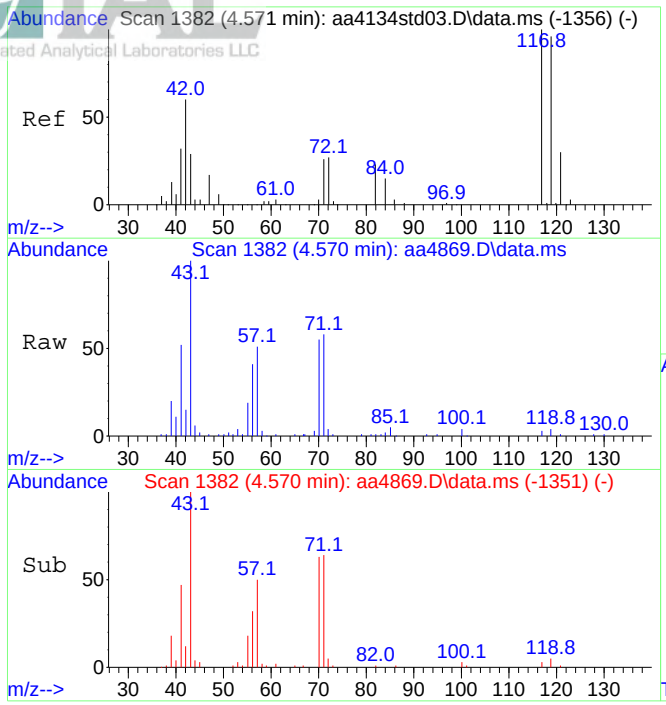




#29
Cyclohexane
Concen: 3.90 ppbV
RT: 4.419 min Scan# 1335
Delta R.T. 0.005 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 56 Resp: 324297

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 64.3 | 71.2 | 106.8# |

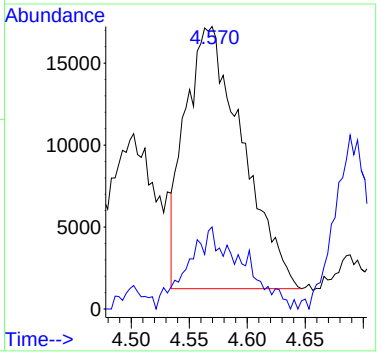


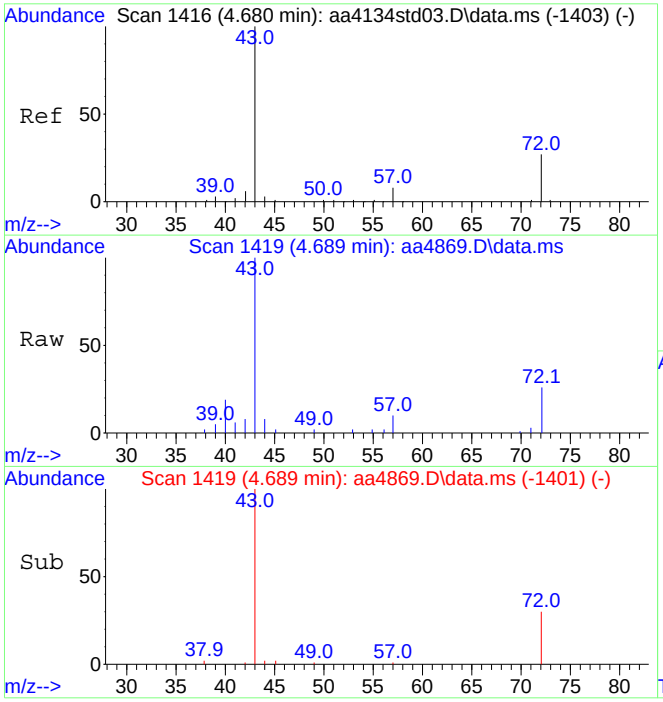



#33
Tetrahydrofuran
Concen: 0.96 ppbV
RT: 4.570 min Scan# 1382
Delta R.T. -0.001 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 42 Resp: 54848

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 42 | 100 | | |
| 72 | 29.9 | 33.8 | 50.8# |

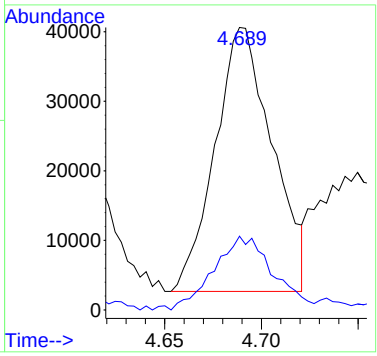


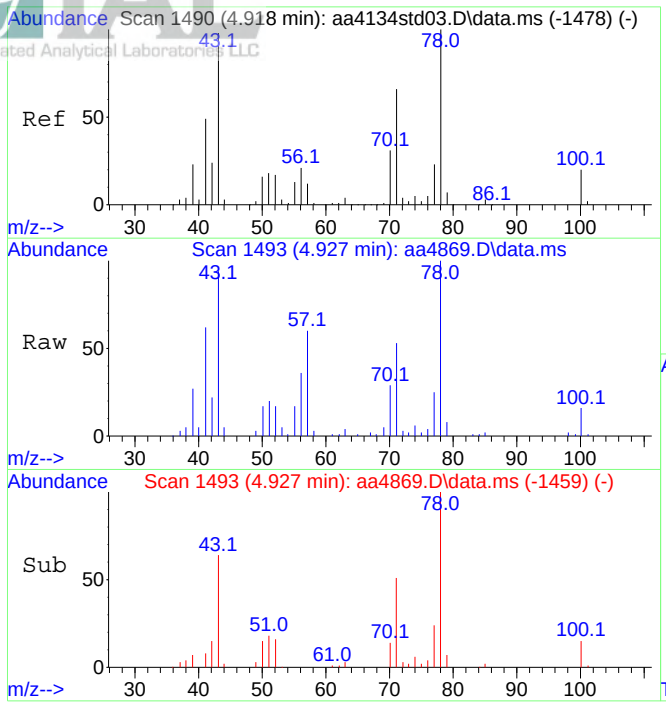




#35
Methyl ethyl ketone
Concen: 0.85 ppbV
RT: 4.689 min Scan# 1419
Delta R.T. 0.009 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 43 Resp: 78559

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 29.0 | 21.6 | 32.4 |

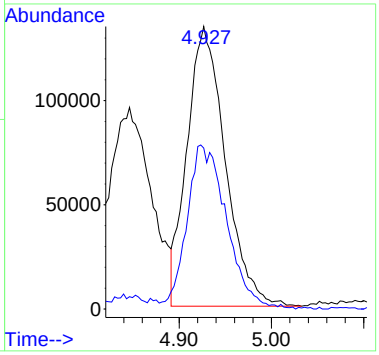


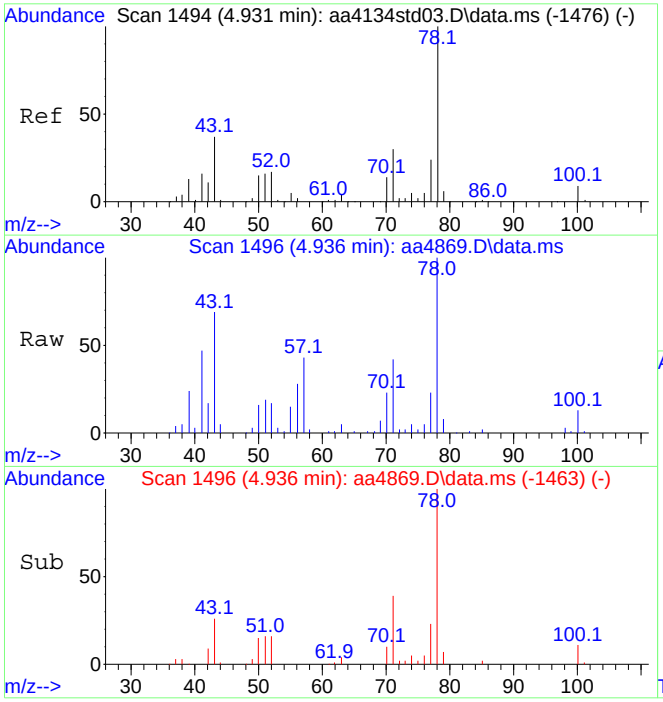



#36
n-Heptane
Concen: 3.70 ppbV
RT: 4.927 min Scan# 1493
Delta R.T. 0.009 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 43 Resp: 386594

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 71 | 60.7 | 50.5 | 75.7 |

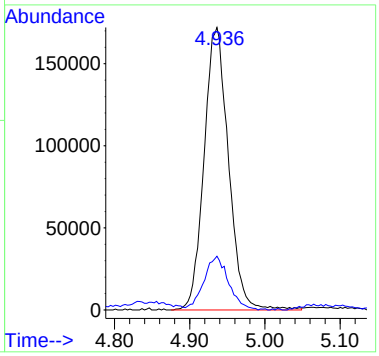


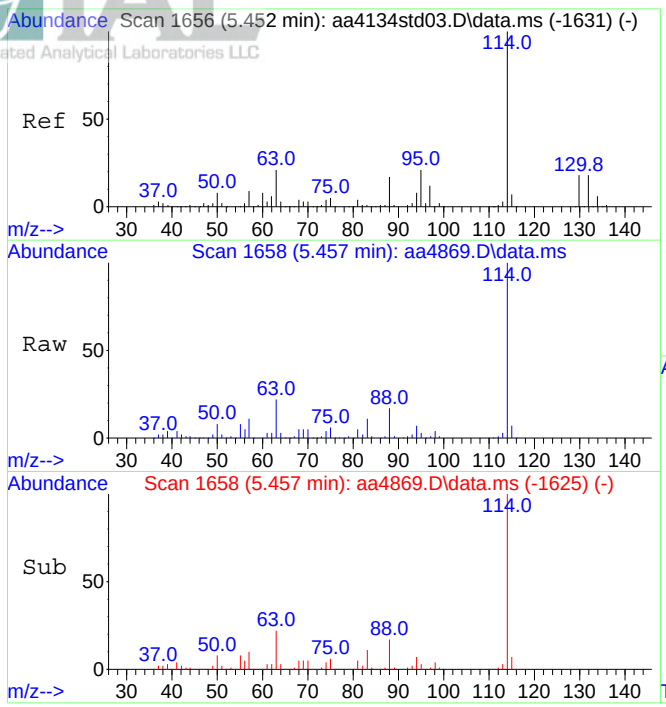




#37
Benzene
Concen: 2.59 ppbV
RT: 4.936 min Scan# 1496
Delta R.T. 0.005 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 78 Resp: 388496

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 19.2 | 13.4 | 20.0 |

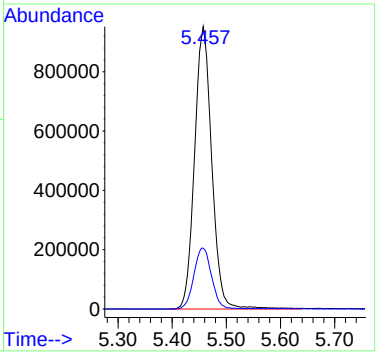


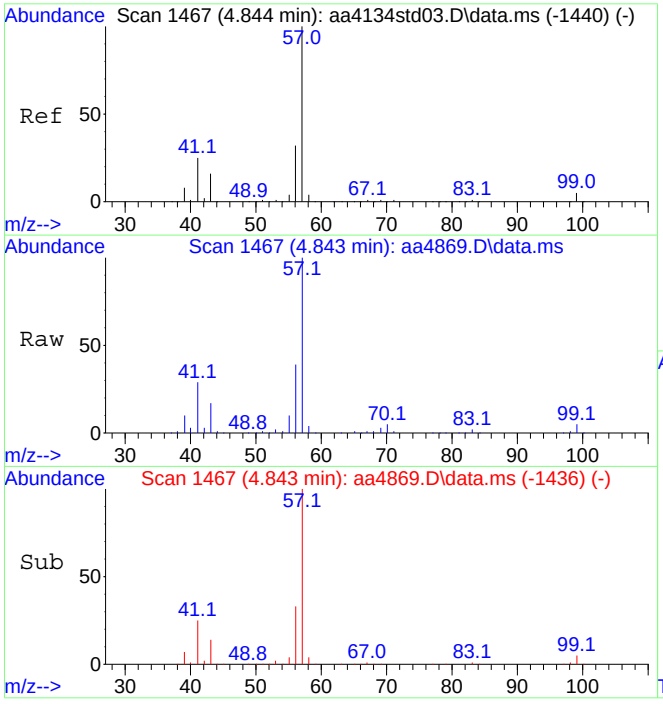



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.457 min Scan# 1658
Delta R.T. 0.005 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion:114 Resp: 2104054

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.1 | 17.0 | 25.6 |

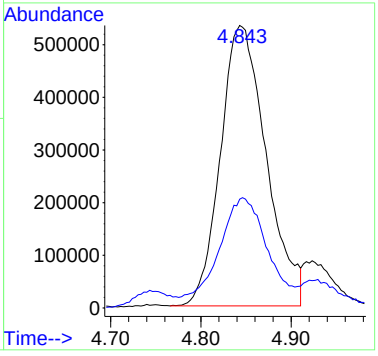


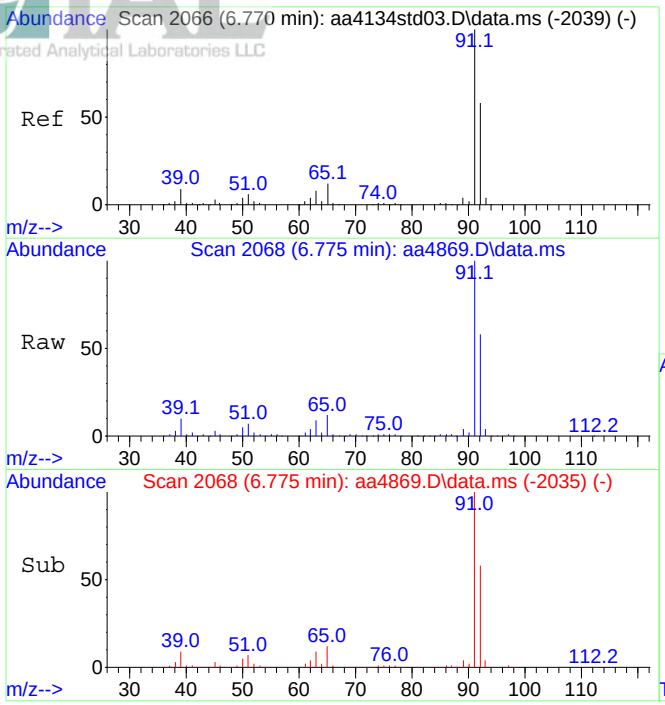




#41
2,2,4-Trimethylpentane
Concen: 6.85 ppbV
RT: 4.843 min Scan# 1467
Delta R.T. -0.001 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 57 Resp: 1877837

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 56 | 34.6 | 25.7 | 38.5 |

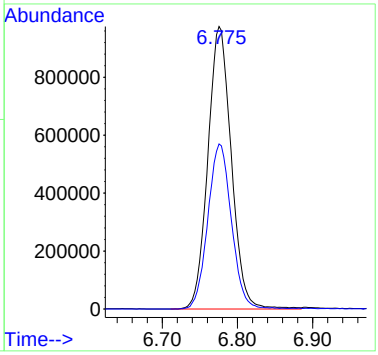


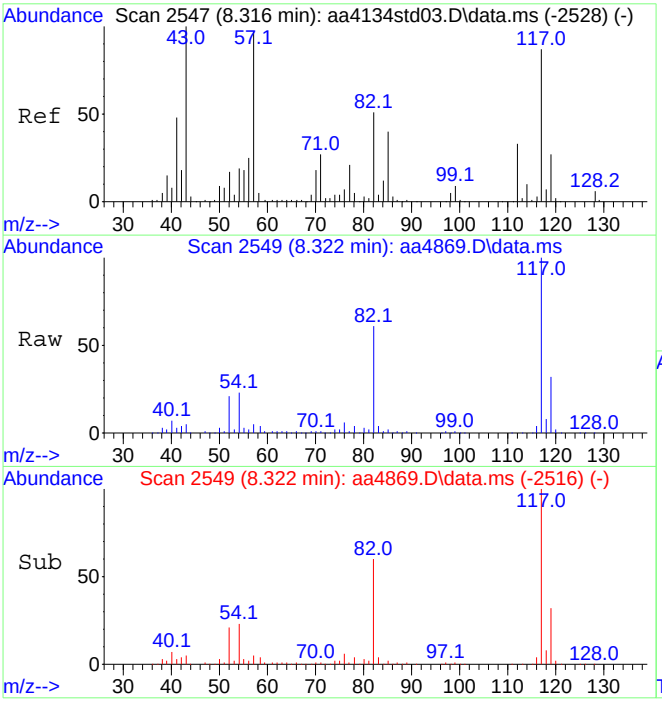



#47
Toluene
Concen: 7.14 ppbV
RT: 6.775 min Scan# 2068
Delta R.T. 0.005 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 91 Resp: 2112833

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 59.0 | 47.3 | 70.9 |

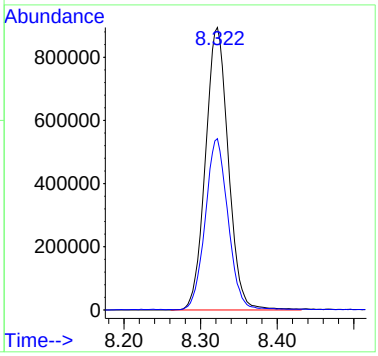


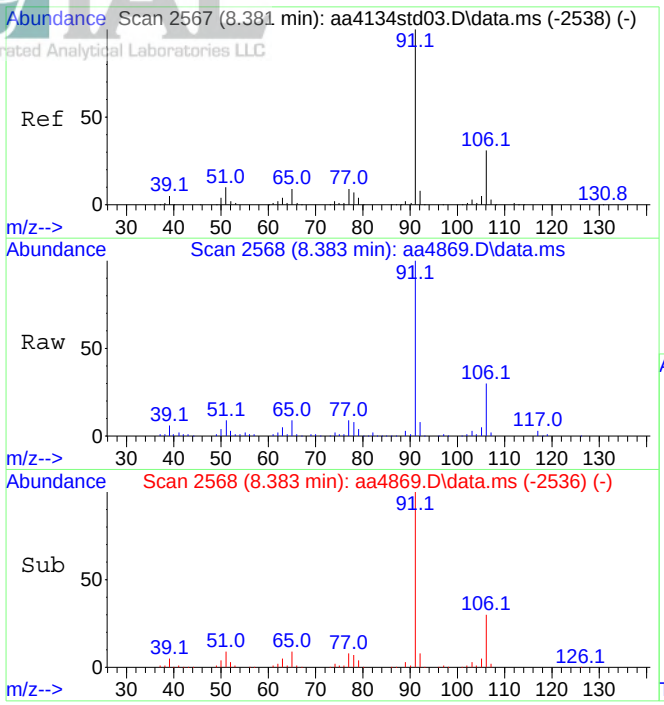




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.322 min Scan# 2549
Delta R.T. 0.005 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion:117 Resp: 1855524

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 60.2 | 47.0 | 70.4 |

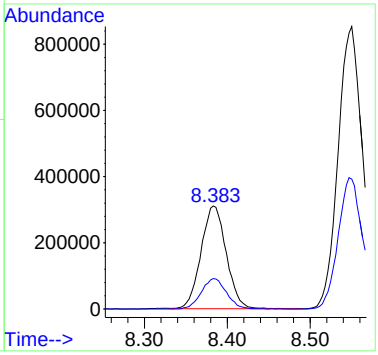


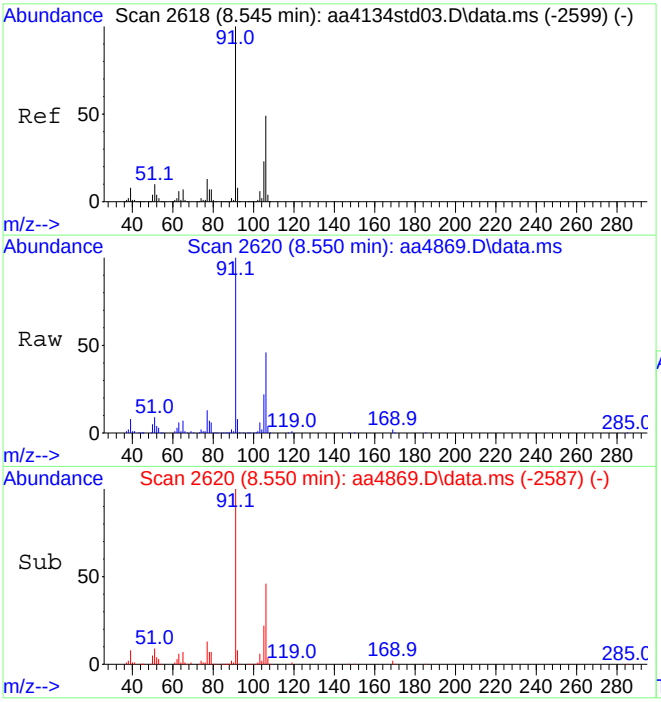



#58
Ethylbenzene
Concen: 1.92 ppbV
RT: 8.383 min Scan# 2568
Delta R.T. 0.002 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 91 Resp: 655687

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 29.4 | 24.6 | 36.8 |

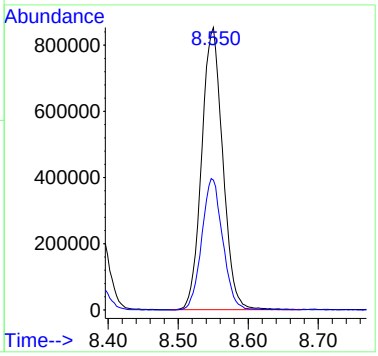


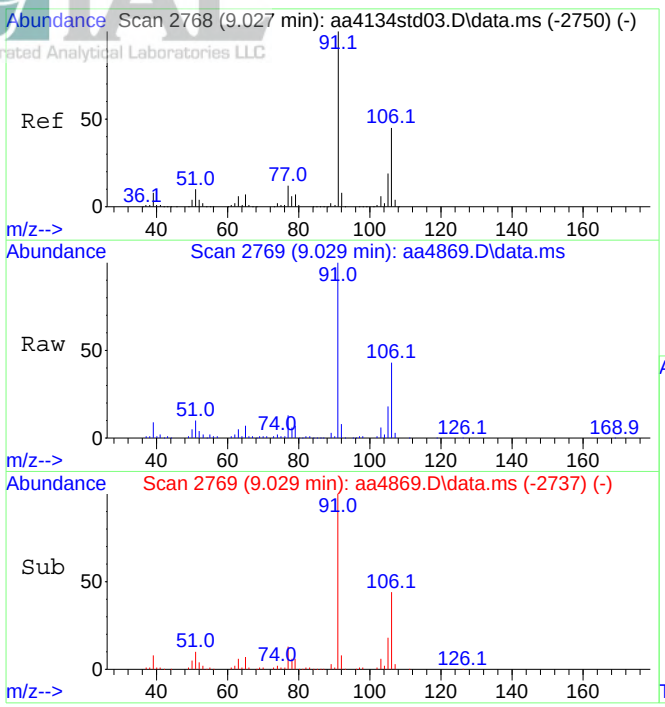




#59
Xylenes (m&p)
Concen: 7.03 ppbV
RT: 8.550 min Scan# 2620
Delta R.T. 0.005 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 91 Resp: 1780980

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 46.5 | 39.0 | 58.4 |

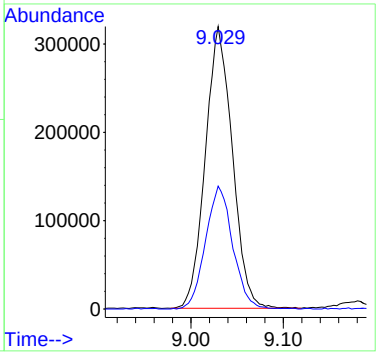


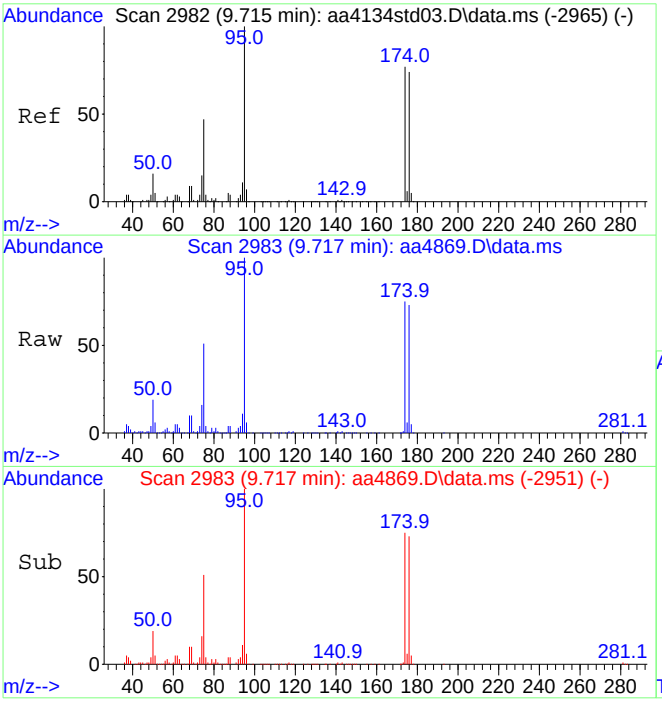



#60
Xylene (o)
Concen: 2.35 ppbV
RT: 9.029 min Scan# 2769
Delta R.T. 0.002 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 91 Resp: 648554

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 44.0 | 36.8 | 55.2 |

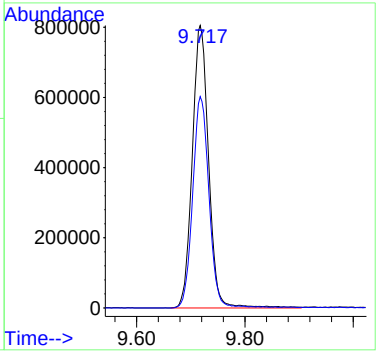


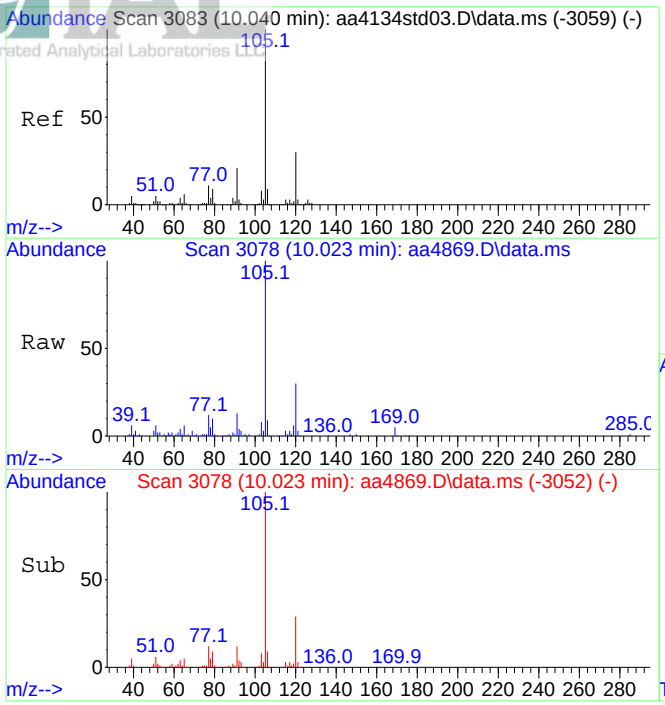




#64
Bromofluorobenzene (tune std)
Concen: 10.43 ppbV
RT: 9.717 min Scan# 2983
Delta R.T. 0.002 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 95 Resp: 1687506

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 75.1 | 61.1 | 91.7 |

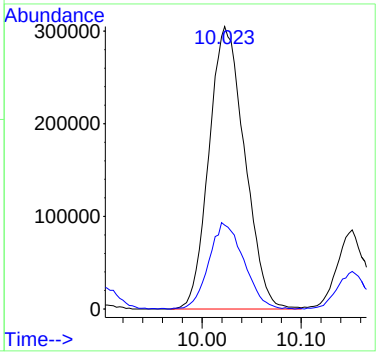


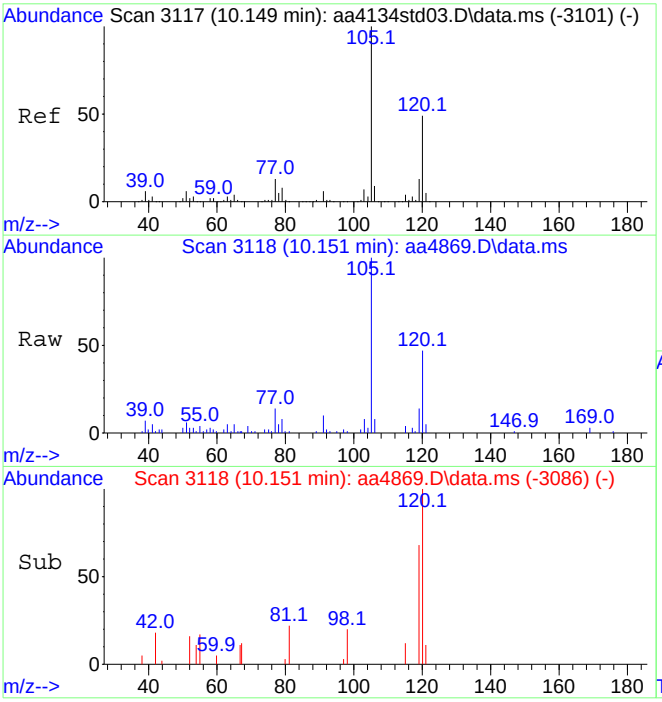



#67
4-Ethyltoluene
Concen: 1.91 ppbV
RT: 10.023 min Scan# 3078
Delta R.T. -0.017 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion:105 Resp: 762163

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 30.0 | 23.4 | 35.2 |

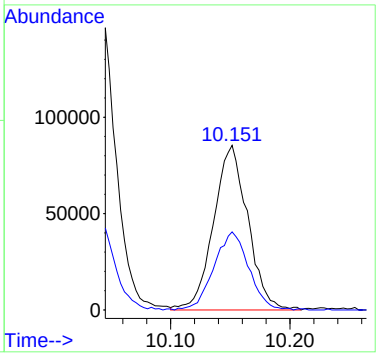


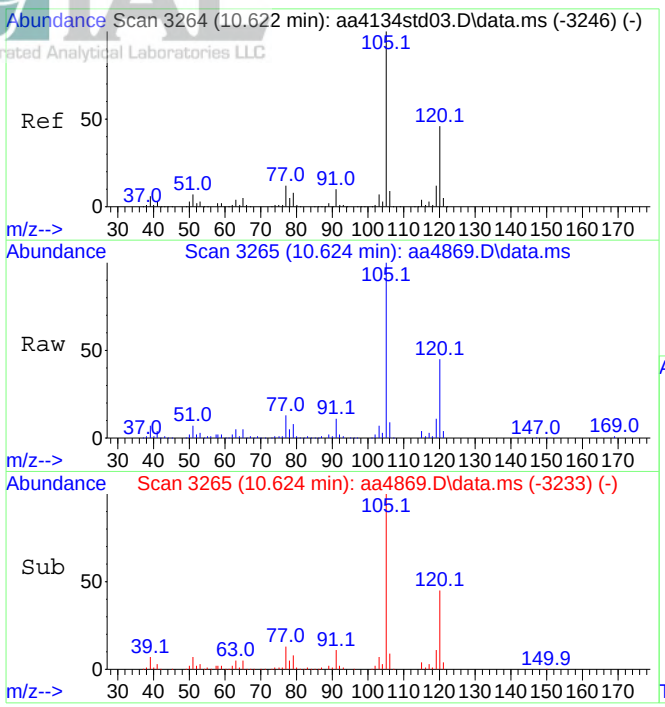




#69
1,3,5-Trimethylbenzene
Concen: 0.53 ppbV
RT: 10.151 min Scan# 3118
Delta R.T. 0.002 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion:105 Resp: 170234

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 48.2 | 38.9 | 58.3 |

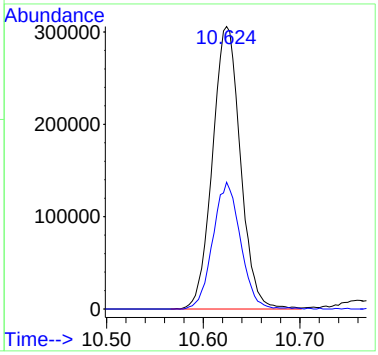





#70
1,2,4-Trimethylbenzene
Concen: 1.92 ppbV
RT: 10.624 min Scan# 3265
Delta R.T. 0.002 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion:105 Resp: 614979

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 44.4 | 36.3 | 54.5 |



Data Path : C:\DATA\2023\12-2023\12-07-2023\
Data File : aa4870.D
Acq On : 7 Dec 2023 8:30 pm
Operator : jjw
Sample : E23-05061-23
Misc : Dup of E23-05061-03, Can # 3045A
ALS Vial : 24 Sample Multiplier: 1

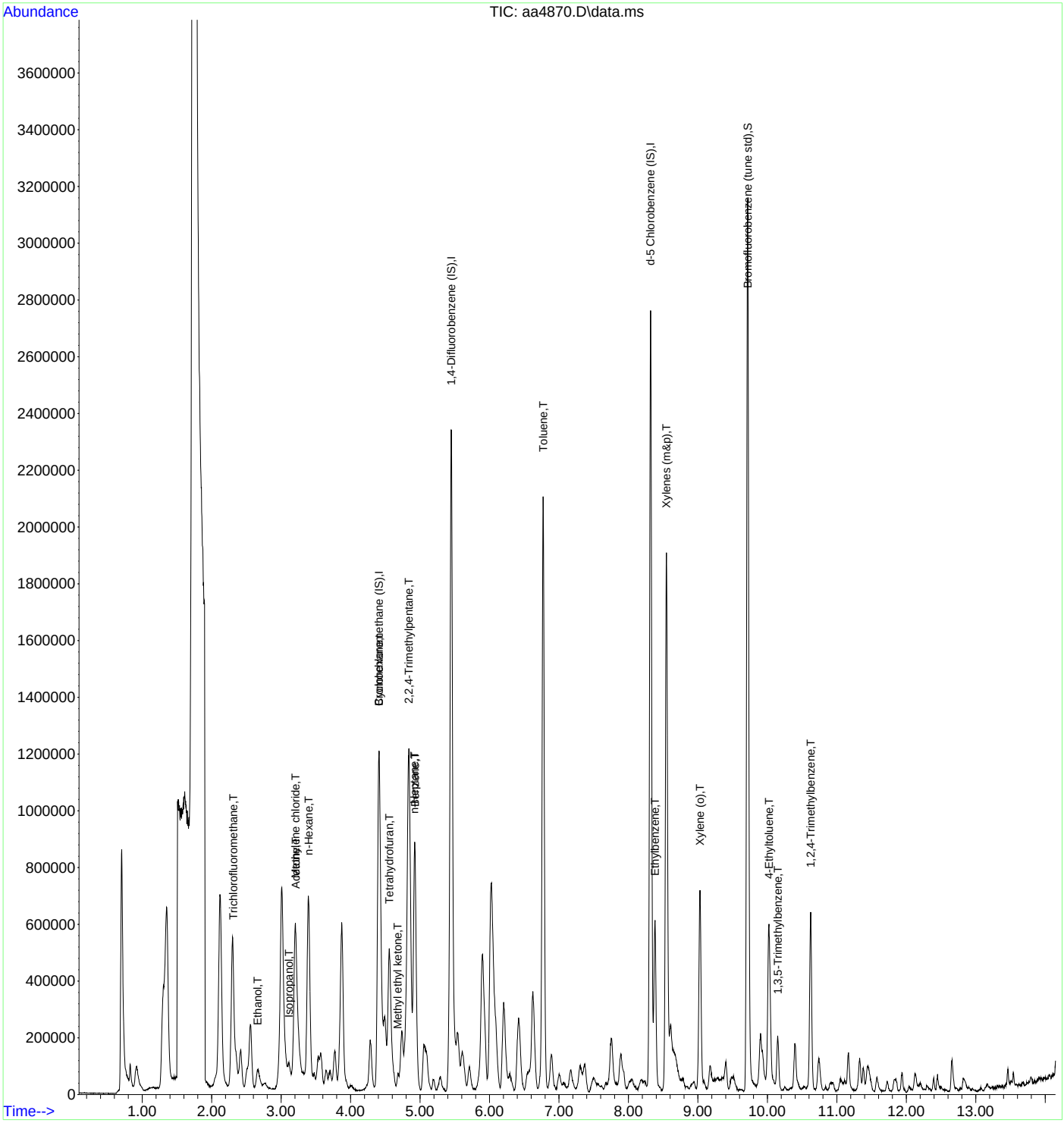
Quant Time: Dec 13 12:53:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

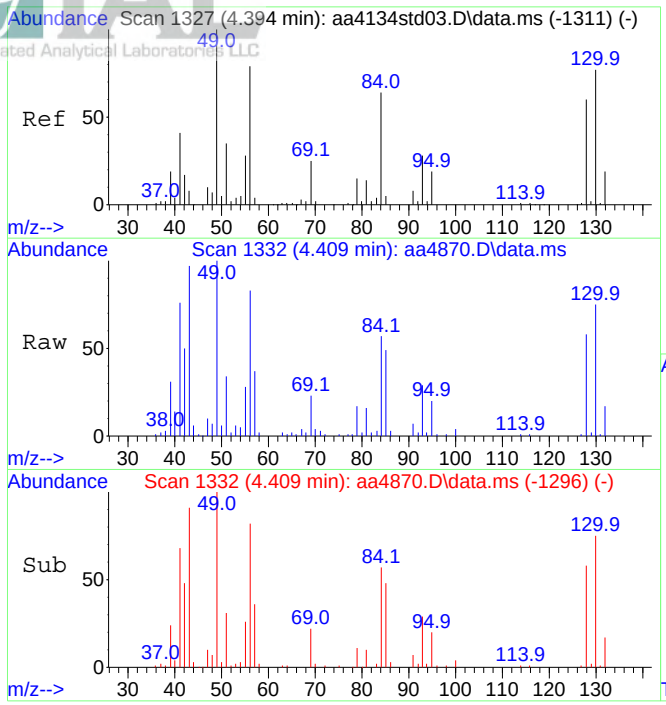
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.409 | 130 | 368396 | 10.00 | ppbV | | 0.015 |
| 39) 1,4-Difluorobenzene (IS) | 5.451 | 114 | 1818981 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 1692684 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 1387863 | 9.41 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 12) Trichlorofluoromethane | 2.313 | 101 | 33879 | 0.33 | ppbV | | 90 |
| 13) Ethanol | 2.663 | 45 | 109072 | 10.11 | ppbV | | 99 |
| 19) Isopropanol | 3.113 | 45 | 208075 | 2.82 | ppbV | # | 70 |
| 20) Methylene chloride | 3.206 | 49 | 125882 | 2.78 | ppbV | # | 7 |
| 21) Acetone | 3.213 | 43 | 562689 | 10.13 | ppbV | | 99 |
| 24) n-Hexane | 3.396 | 57 | 444919 | 3.83 | ppbV | | 97 |
| 29) Cyclohexane | 4.409 | 56 | 279096 | 3.44 | ppbV | # | 74 |
| 33) Tetrahydrofuran | 4.557 | 42 | 49663 | 0.90 | ppbV | # | 75 |
| 35) Methyl ethyl ketone | 4.679 | 43 | 75094 | 0.83 | ppbV | | 98 |
| 36) n-Heptane | 4.917 | 43 | 341229 | 3.35 | ppbV | | 97 |
| 37) Benzene | 4.930 | 78 | 338080 | 2.31 | ppbV | | 95 |
| 41) 2,2,4-Trimethylpentane | 4.840 | 57 | 1725941 | 7.28 | ppbV | | 95 |
| 47) Toluene | 6.772 | 91 | 1825367 | 7.14 | ppbV | | 100 |
| 58) Ethylbenzene | 8.383 | 91 | 499733 | 1.60 | ppbV | | 99 |
| 59) Xylenes (m&p) | 8.547 | 91 | 1368186 | 5.92 | ppbV | | 97 |
| 60) Xylene (o) | 9.029 | 91 | 512360 | 2.03 | ppbV | | 97 |
| 67) 4-Ethyltoluene | 10.023 | 105 | 521383 | 1.43 | ppbV | | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.151 | 105 | 130813 | 0.45 | ppbV | | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 434326 | 1.48 | ppbV | | 98 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-07-2023\
Data File : aa4870.D
Acq On : 7 Dec 2023 8:30 pm
Operator : jjw
Sample : E23-05061-23
Misc : Dup of E23-05061-03, Can # 3045A
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Dec 13 12:53:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

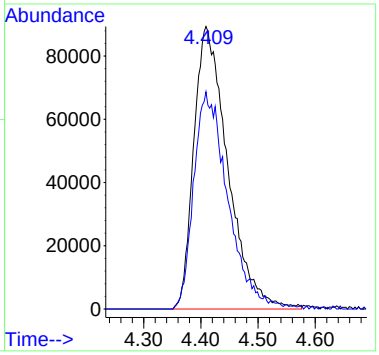


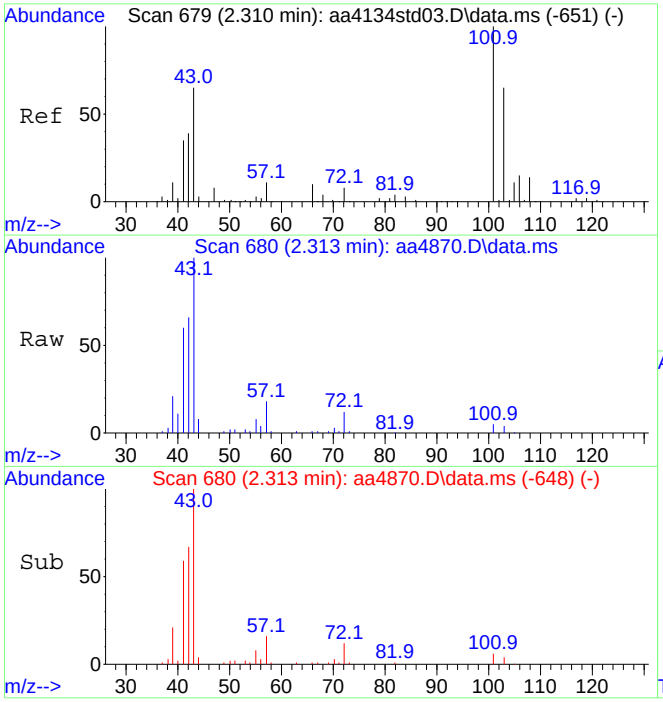



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.409 min Scan# 1332
Delta R.T. 0.015 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion:130 Resp: 368396

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 76.6 | 62.2 | 93.4 |

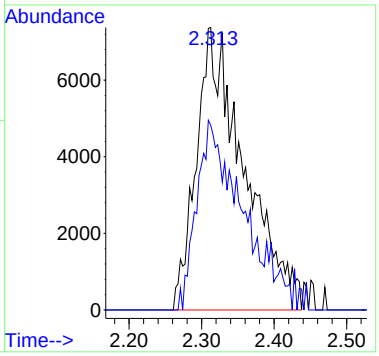


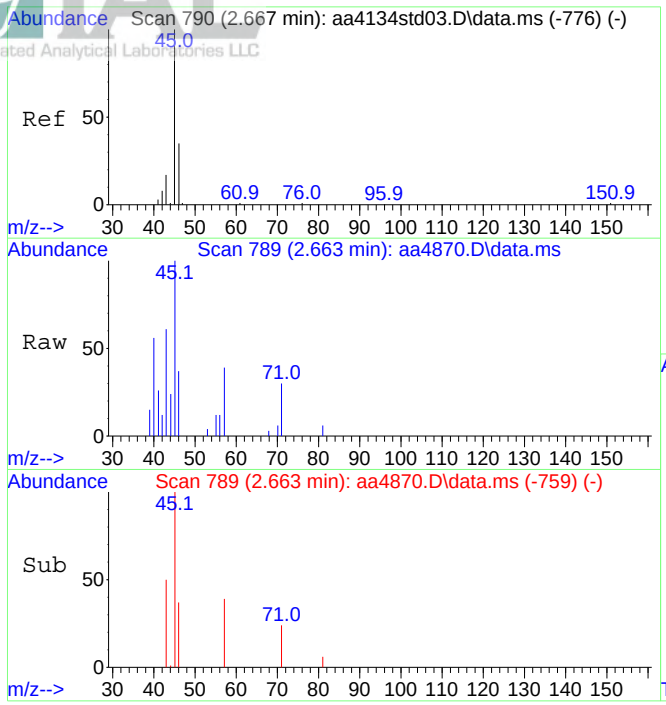




#12
Trichlorofluoromethane
Concen: 0.33 ppbV
RT: 2.313 min Scan# 680
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion:101 Resp: 33879

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 57.5 | 52.5 | 78.7 |

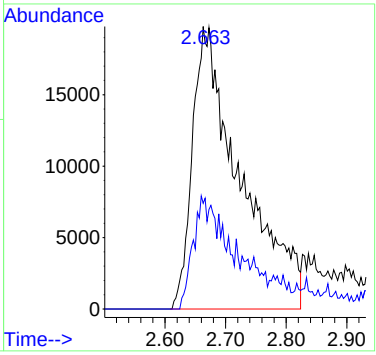


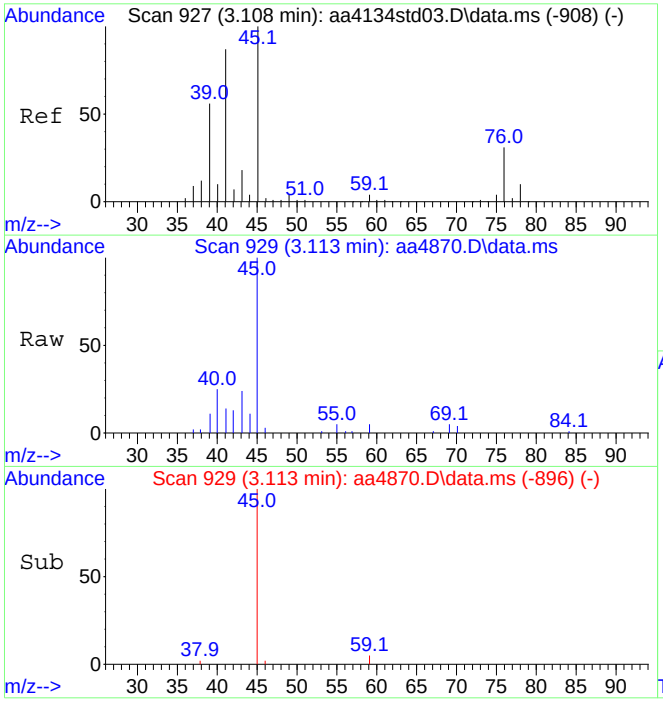



#13
Ethanol
Concen: 10.11 ppbV
RT: 2.663 min Scan# 789
Delta R.T. -0.004 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 45 Resp: 109072

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 46 | 37.9 | 30.0 | 45.0 |

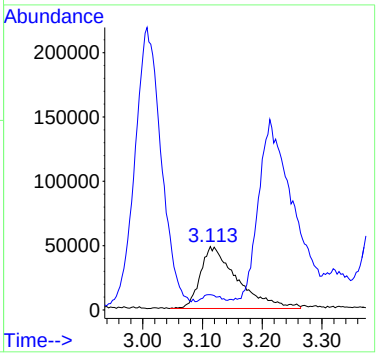


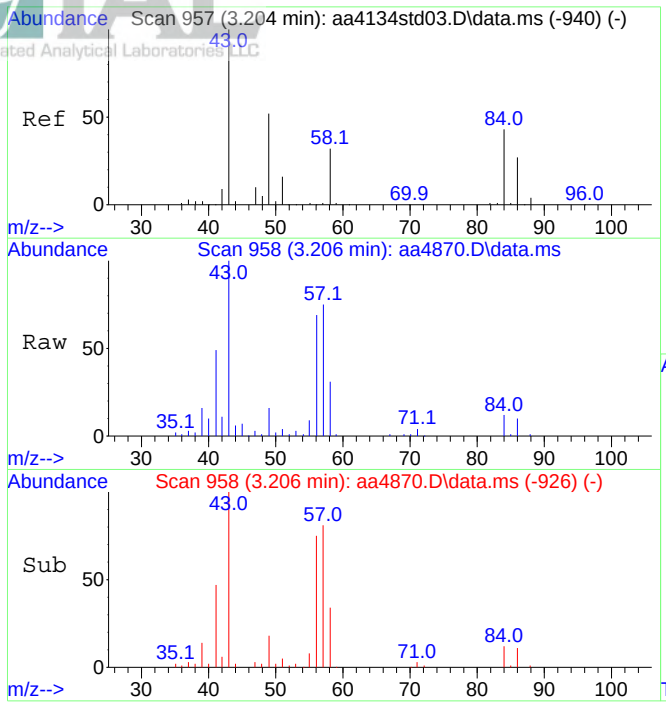




#19
Isopropanol
Concen: 2.82 ppbV
RT: 3.113 min Scan# 929
Delta R.T. 0.005 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 45 Resp: 208075

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 43 | 5.0 | 14.6 | 21.8# |

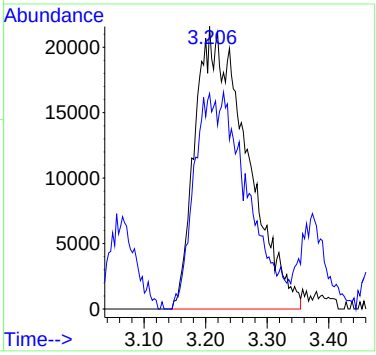


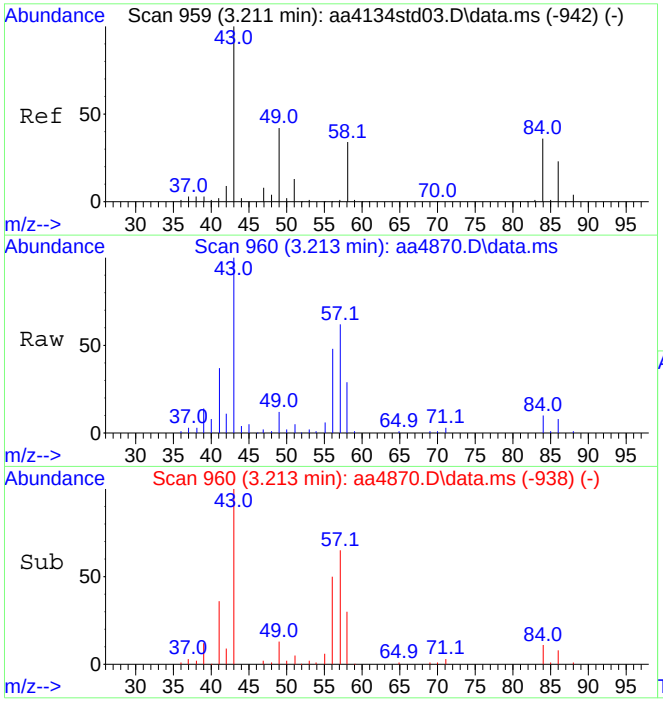



#20
Methylene chloride
Concen: 2.78 ppbV
RT: 3.206 min Scan# 958
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 49 Resp: 125882

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 0.0 | 64.8 | 104.8# |

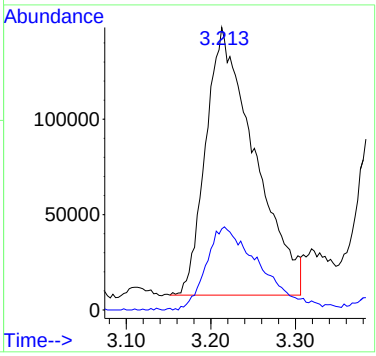


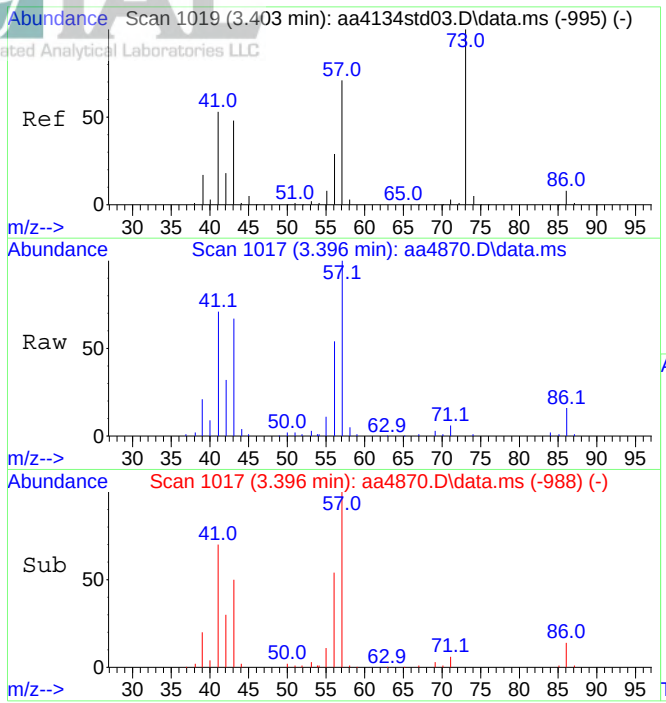




#21
Acetone
Concen: 10.13 ppbV
RT: 3.213 min Scan# 960
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 43 Resp: 562689

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 33.1 | 27.1 | 40.7 |

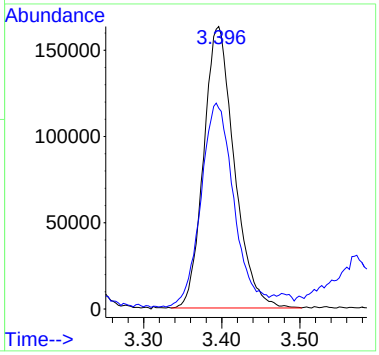


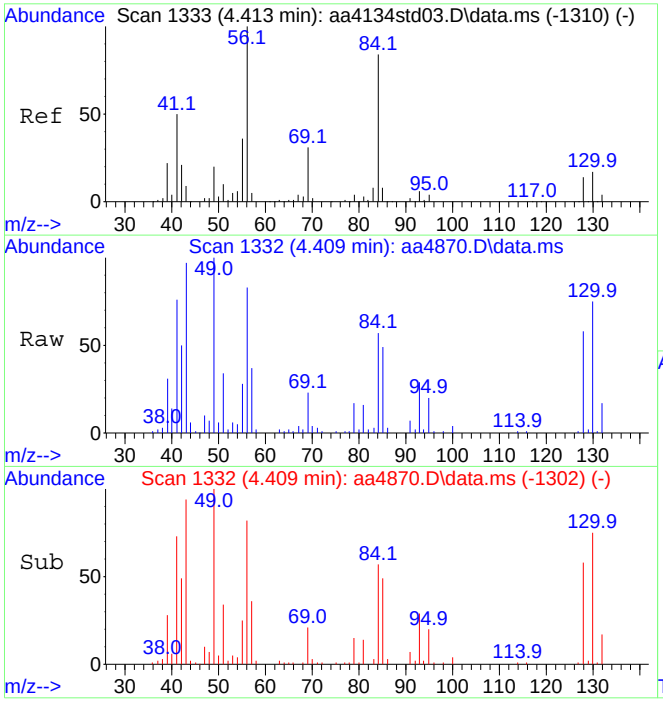



#24
n-Hexane
Concen: 3.83 ppbV
RT: 3.396 min Scan# 1017
Delta R.T. -0.007 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 57 Resp: 444919

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 41 | 80.6 | 66.4 | 99.6 |

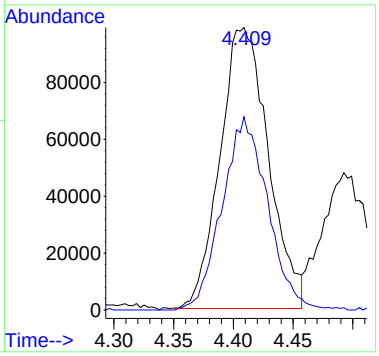


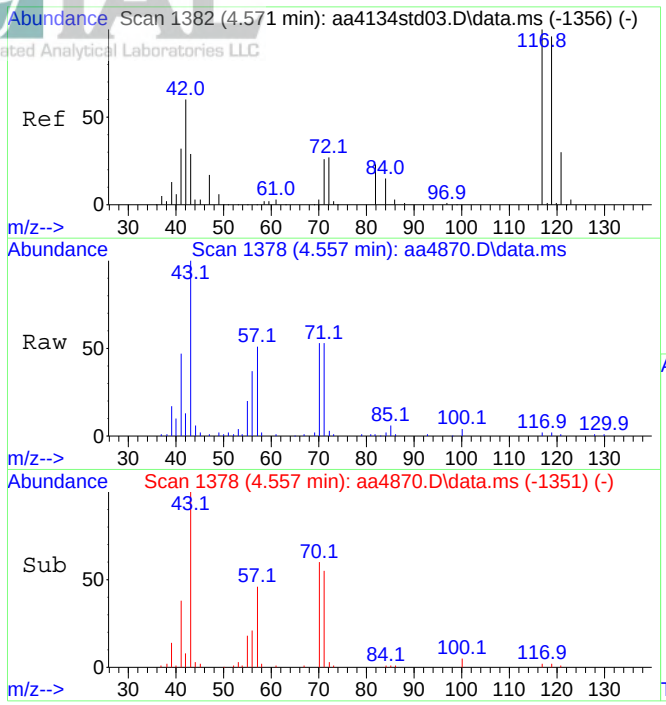




#29
Cyclohexane
Concen: 3.44 ppbV
RT: 4.409 min Scan# 1332
Delta R.T. -0.004 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 56 Resp: 279096

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 64.4 | 71.2 | 106.8# |

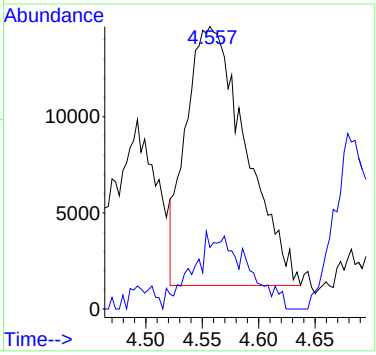


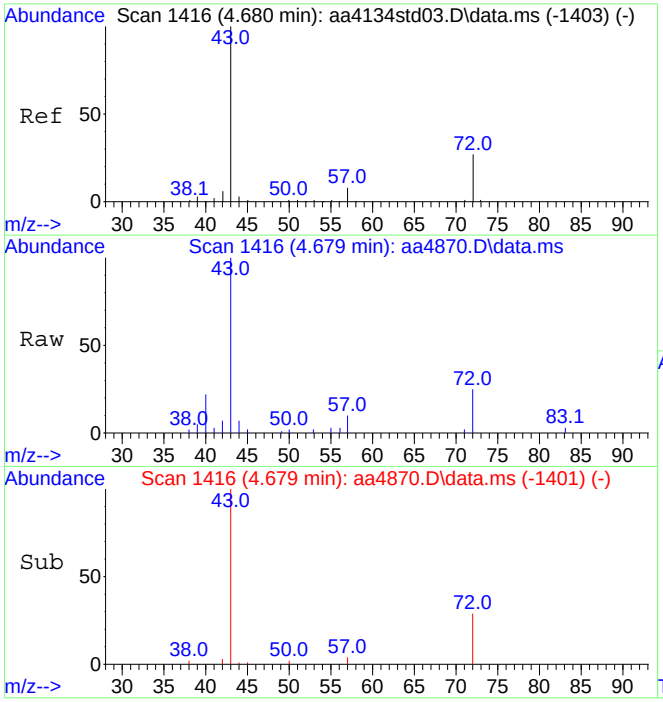



#33
Tetrahydrofuran
Concen: 0.90 ppbV
RT: 4.557 min Scan# 1378
Delta R.T. -0.014 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 42 Resp: 49663

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 42 | 100 | | |
| 72 | 26.4 | 33.8 | 50.8# |

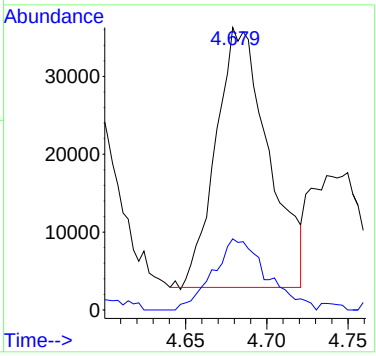


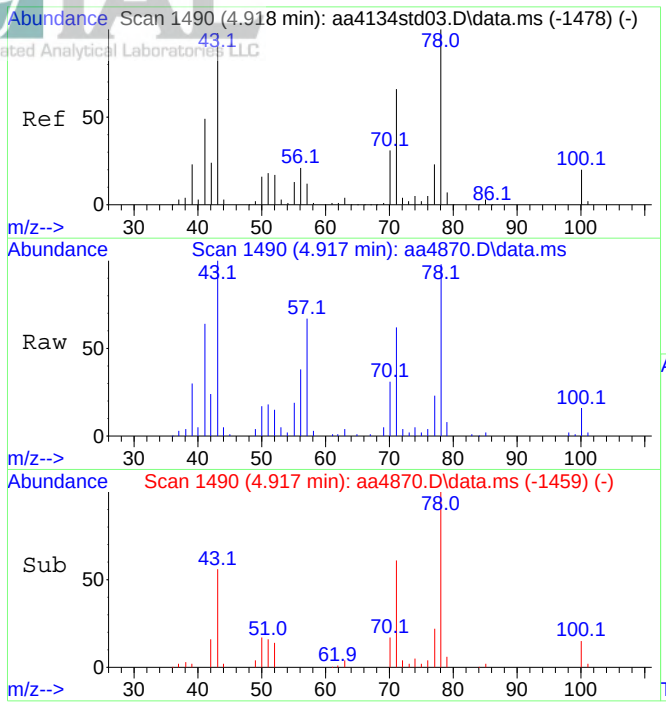




#35
Methyl ethyl ketone
Concen: 0.83 ppbV
RT: 4.679 min Scan# 1416
Delta R.T. -0.001 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 43 Resp: 75094

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 27.9 | 21.6 | 32.4 |

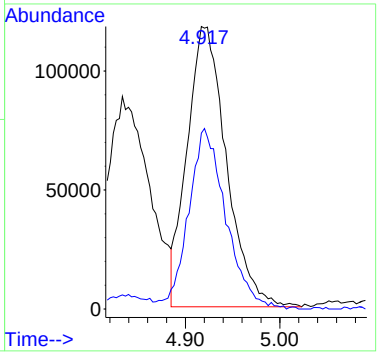


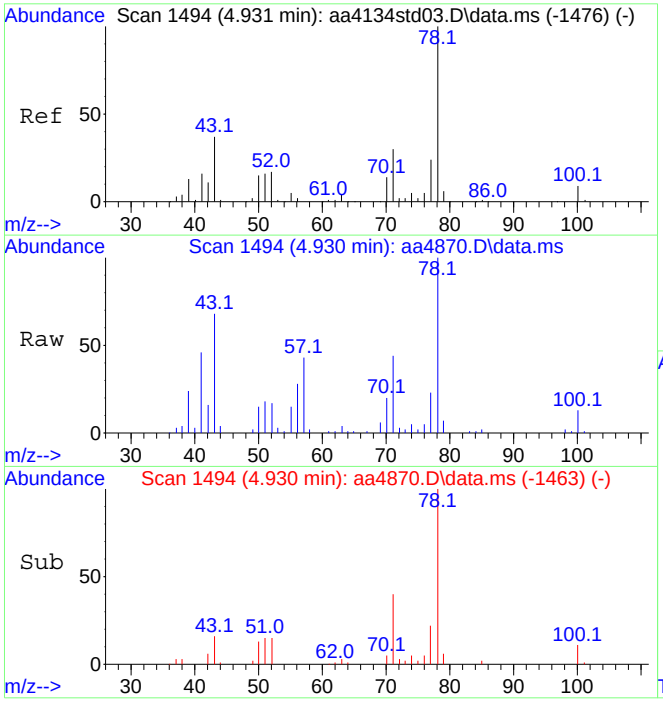



#36
n-Heptane
Concen: 3.35 ppbV
RT: 4.917 min Scan# 1490
Delta R.T. -0.001 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 43 Resp: 341229

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 71 | 61.1 | 50.5 | 75.7 |

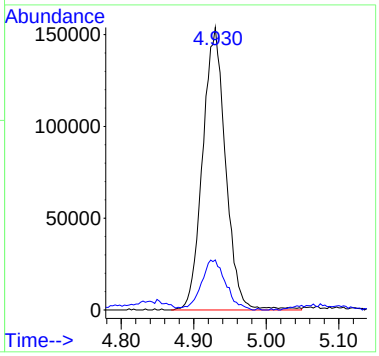


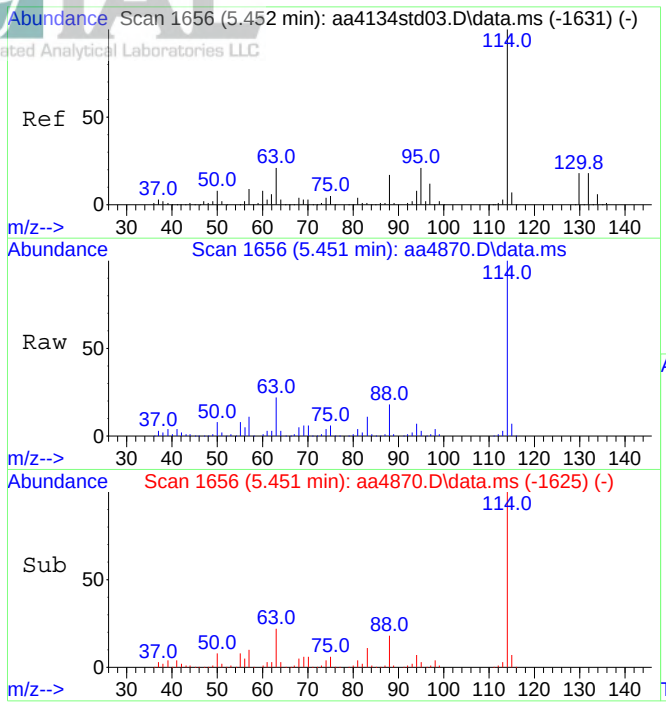




#37
Benzene
Concen: 2.31 ppbV
RT: 4.930 min Scan# 1494
Delta R.T. -0.001 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 78 Resp: 338080

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 18.8 | 13.4 | 20.0 |

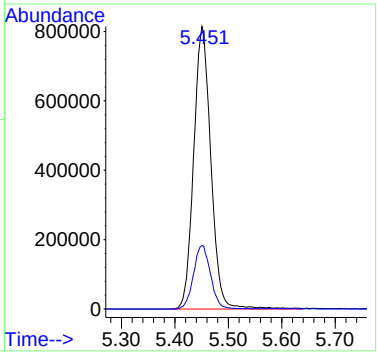


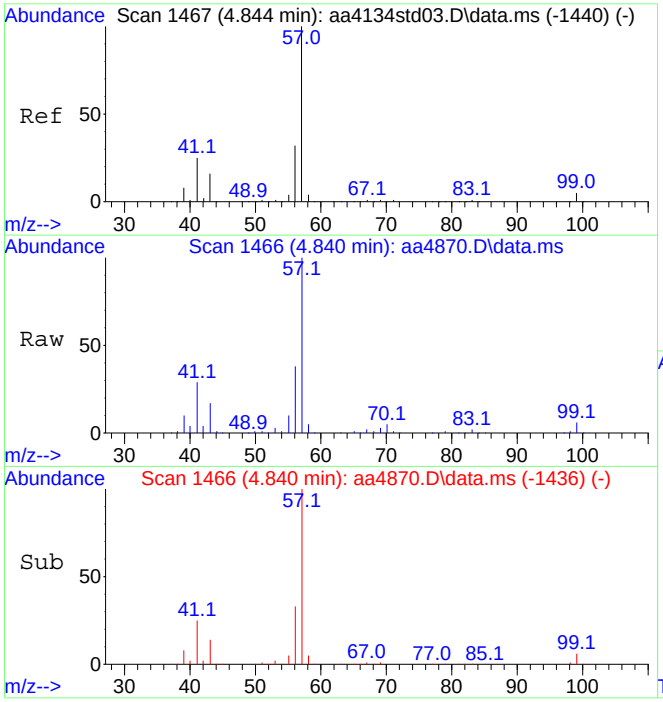



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.451 min Scan# 1656
Delta R.T. -0.001 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion:114 Resp: 1818981

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.3 | 17.0 | 25.6 |

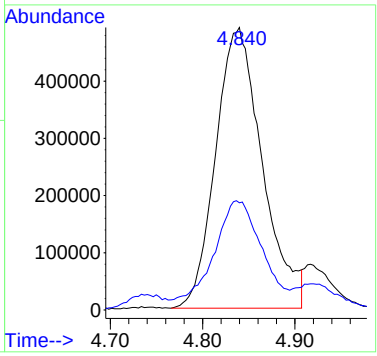


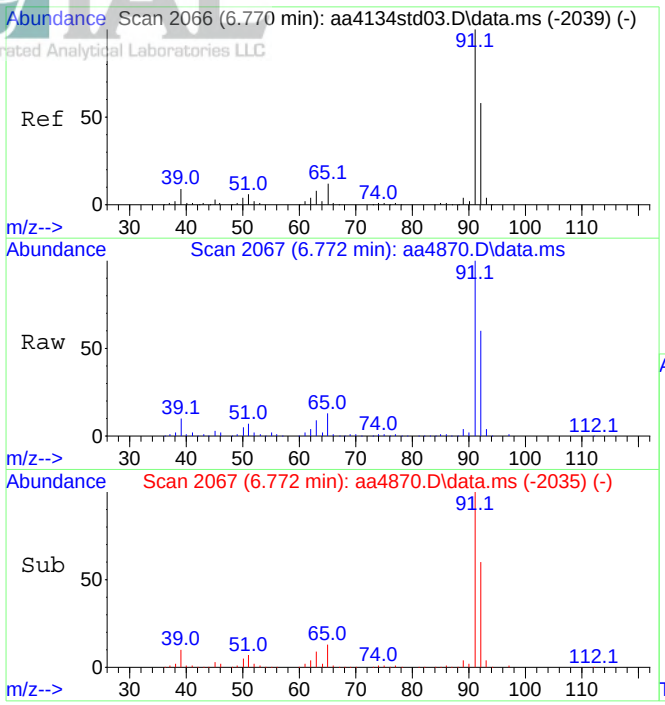




#41
2,2,4-Trimethylpentane
Concen: 7.28 ppbV
RT: 4.840 min Scan# 1466
Delta R.T. -0.004 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 57 Resp: 1725941

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 56 | 34.7 | 25.7 | 38.5 |

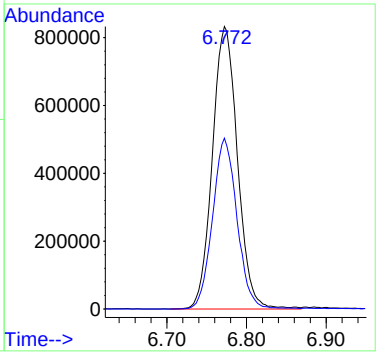


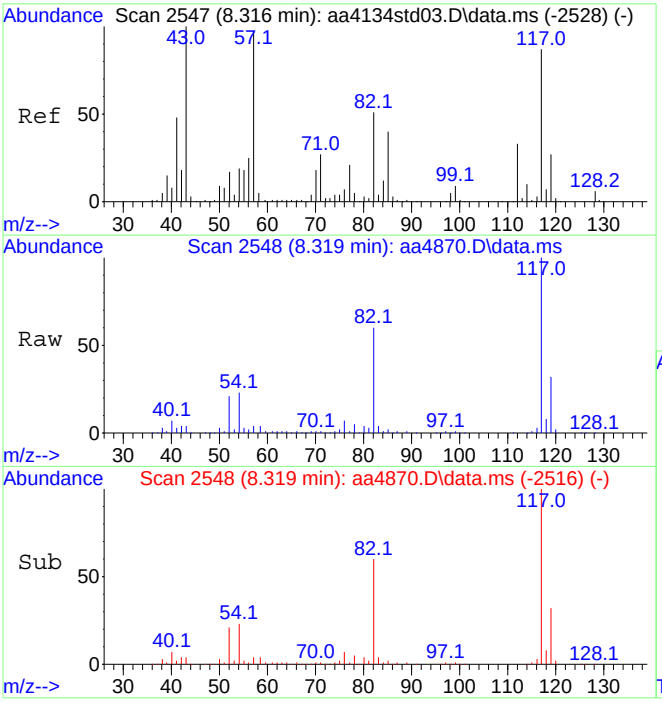



#47
Toluene
Concen: 7.14 ppbV
RT: 6.772 min Scan# 2067
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 91 Resp: 1825367

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 59.2 | 47.3 | 70.9 |

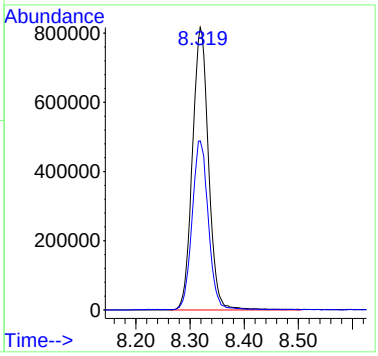


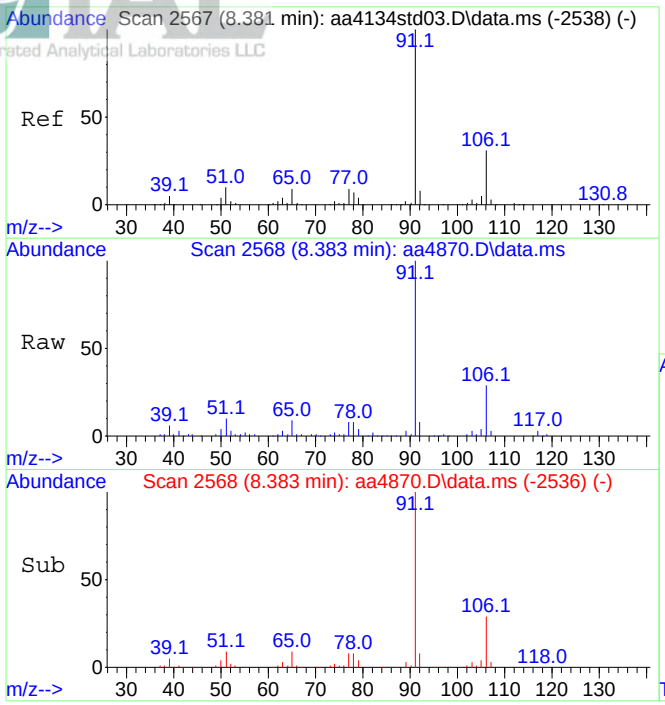




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.319 min Scan# 2548
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion:117 Resp: 1692684

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 59.7 | 47.0 | 70.4 |

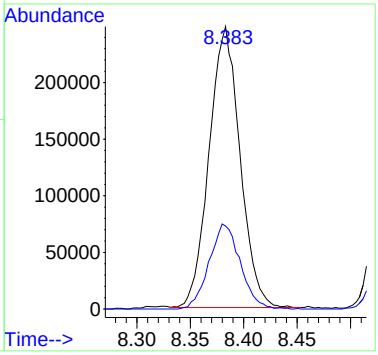


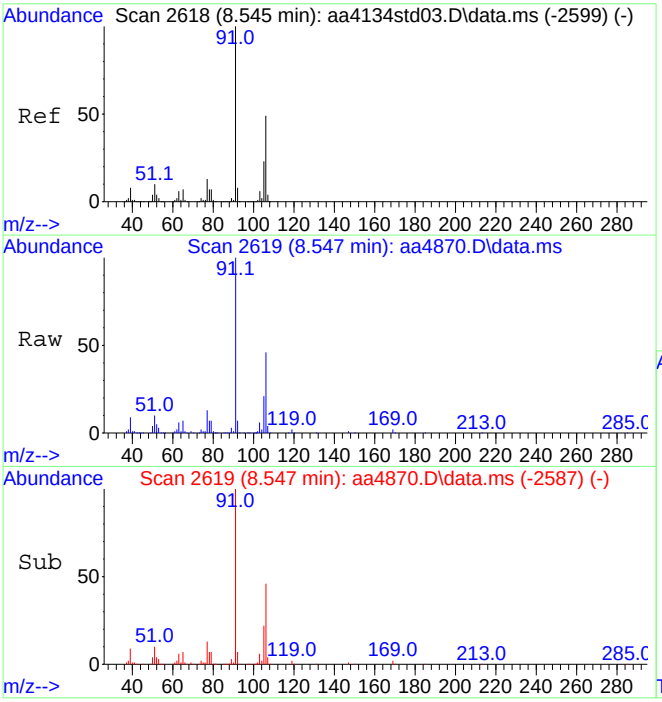



#58
Ethylbenzene
Concen: 1.60 ppbV
RT: 8.383 min Scan# 2568
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 91 Resp: 499733

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 30.4 | 24.6 | 36.8 |

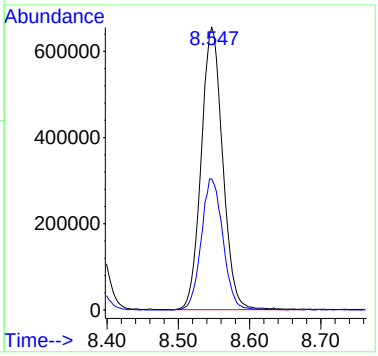


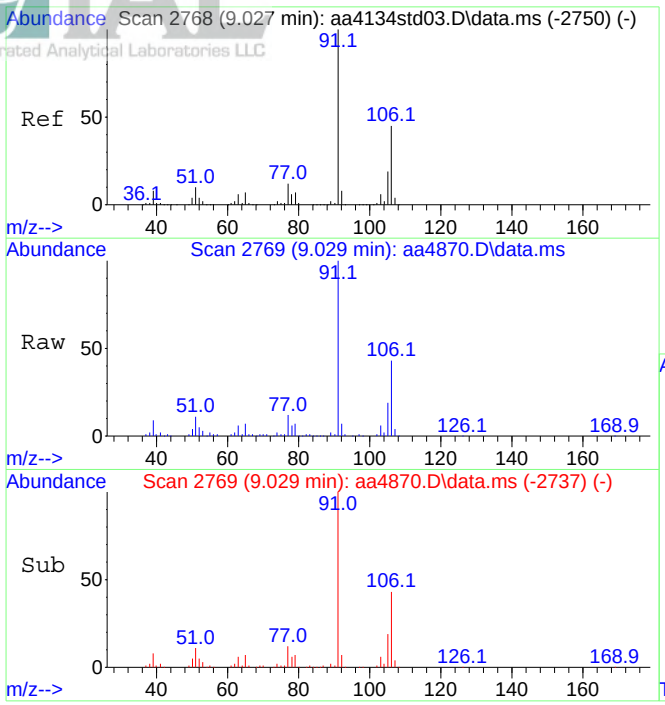




#59
Xylenes (m&p)
Concen: 5.92 ppbV
RT: 8.547 min Scan# 2619
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 91 Resp: 1368186

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 47.0 | 39.0 | 58.4 |

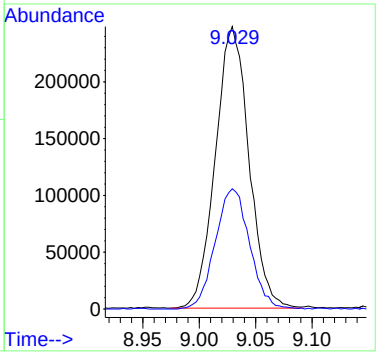


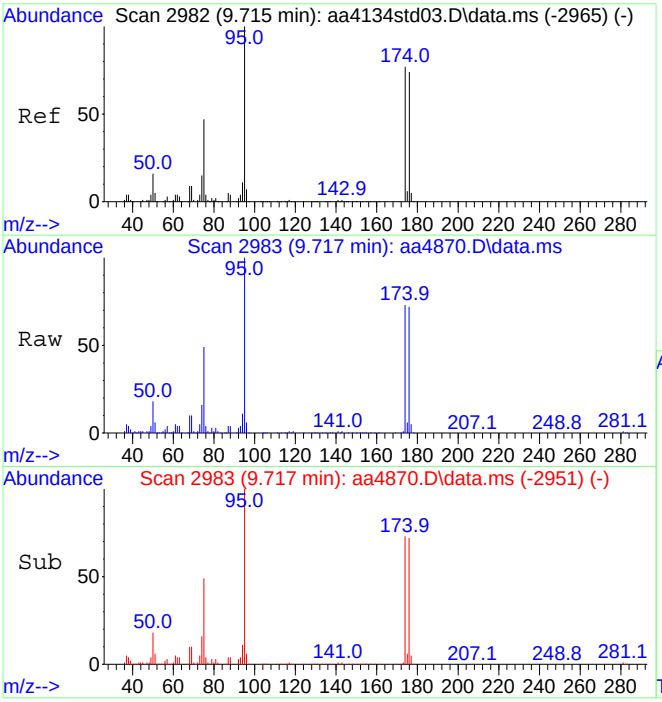



#60
Xylene (o)
Concen: 2.03 ppbV
RT: 9.029 min Scan# 2769
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 91 Resp: 512360

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 43.7 | 36.8 | 55.2 |

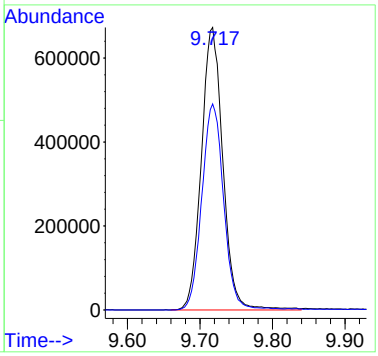


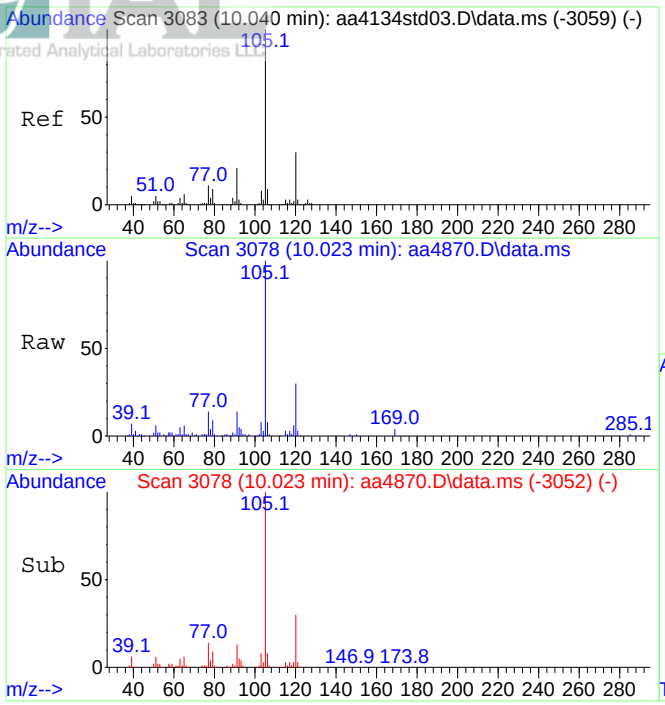




#64
Bromofluorobenzene (tune std)
Concen: 9.41 ppbV
RT: 9.717 min Scan# 2983
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 95 Resp: 1387863

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 74.3 | 61.1 | 91.7 |

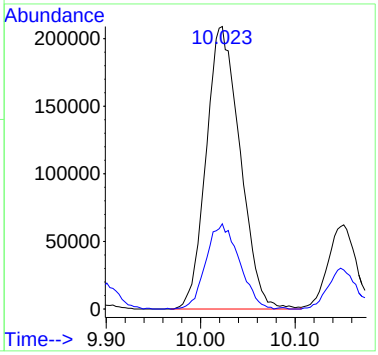


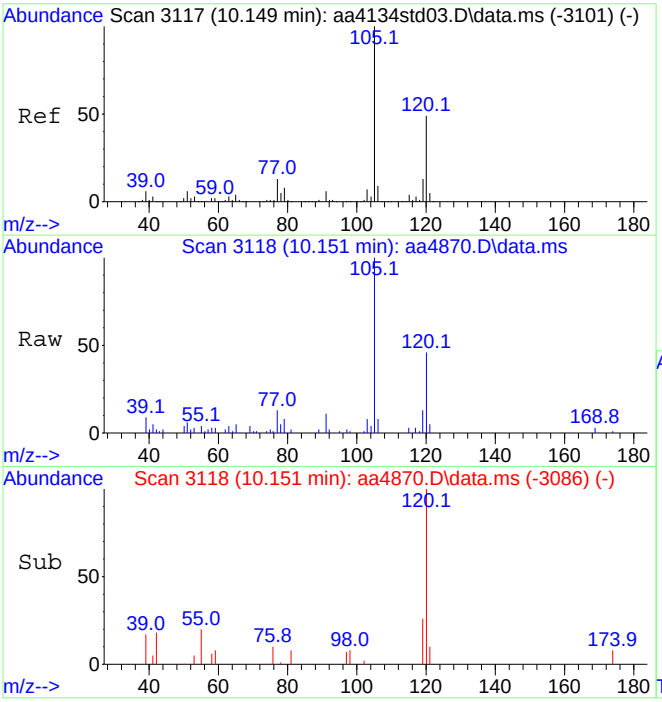



#67
4-Ethyltoluene
Concen: 1.43 ppbV
RT: 10.023 min Scan# 3078
Delta R.T. -0.017 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion:105 Resp: 521383

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 29.6 | 23.4 | 35.2 |

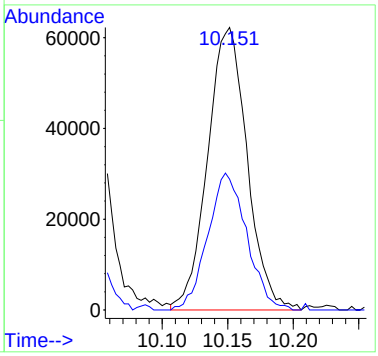


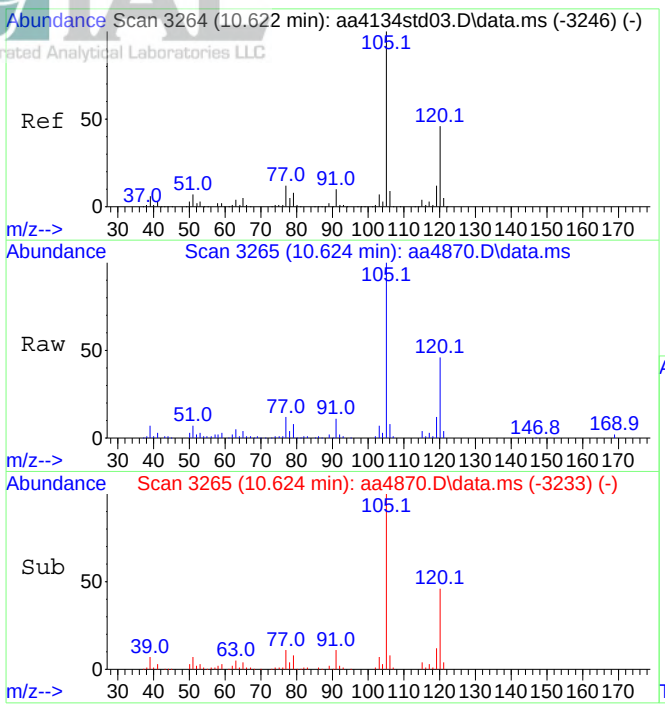




#69
1,3,5-Trimethylbenzene
Concen: 0.45 ppbV
RT: 10.151 min Scan# 3118
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion:105 Resp: 130813

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 47.7 | 38.9 | 58.3 |

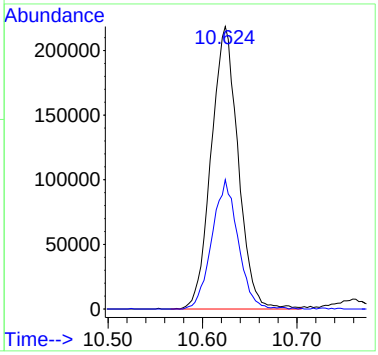





#70
1,2,4-Trimethylbenzene
Concen: 1.48 ppbV
RT: 10.624 min Scan# 3265
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion:105 Resp: 434326

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 44.2 | 36.3 | 54.5 |



**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 11/20/23 |
| SDG Number: | E23-05079 | Date Analyzed: | 12/12/23,12/12/23 |
| IAL Sample ID: | E23-05079-03 | Lab Data File#: | AA4929,AA4930 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 3830 | Injection Volume: | 500ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-05079-03** | | **E23-05079-23** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Acetone | 67-64-1 | **6.1** | | **5.9** | | 0.40 | **3.33%** |
| Allyl Chloride | 107-05-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Benzene | 71-43-2 | **0.31** | | **0.32** | | 0.20 | **-3.17%** |
| Bromodichloromethane | 75-27-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Bromoform | 75-25-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Bromomethane | 74-83-9 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Butadiene | 106-99-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chlorobenzene | 108-90-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloroethane | 75-00-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloroform | 67-66-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloromethane | 74-87-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Carbon disulfide | 75-15-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Carbon tetrachloride | 56-23-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 2-Chlorotoluene | 95-49-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Cyclohexane | 110-82-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Dibromochloromethane | 124-48-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dibromoethane | 106-93-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorobenzene | 95-50-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Dichlorobenzene | 541-73-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,4-Dichlorobenzene | 106-46-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Dichlorodifluoromethane | 75-71-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1-Dichloroethane | 75-34-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethane | 107-06-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1-Dichloroethene | 75-35-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Ethylbenzene | 100-41-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 4-Ethyltoluene | 622-96-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| n-Heptane | 142-82-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| n-Hexane | 110-54-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Methylene chloride | 75-09-2 | **3.5** | | **3.4** | | 0.40 | **2.90%** |
| Methyl ethyl ketone | 78-93-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Methyl isobutyl ketone | 108-10-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

SDG Number: E23-05079
IAL Sample ID: E23-05079-03
Matrix: Air
Summa ID: 3830

Date Received: 11/20/23
Date Analyzed: 12/12/23,12/12/23
Lab Data File#: AA4929,AA4930
Dilution Factor: 1
Injection Volume: 500ml
GC/MS Column: RTX-1, 0.32 mmID

| Compound | CAS # | Sample E23-05079-03 Concentration Reported ppbv | Q | Sample Dup E23-05079-23 Concentration Reported ppbv | Q | Reporting Limits ppbv | RPD |
|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | 1634-04-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Styrene | 100-42-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Tert-butyl alcohol | 75-65-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Tetrachloroethene | 127-18-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Toluene | 108-88-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,1-Trichloroethane | 71-55-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2-Trichloroethane | 79-00-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Trichloroethene | 79-01-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Trichlorofluoromethane | 75-69-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Vinyl bromide | 593-60-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Vinyl chloride | 75-01-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Xylenes (m&p) | 179601-23-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Xylenes (o) | 95-47-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |

**RPD must be <25% for all laboratory duplicate samples. Laboratory duplicate samples are run once daily.**
**NC = The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample.**

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4929.D
Acq On : 12 Dec 2023 12:58 am
Operator : jjw
Sample : E23-05079-03
Misc : 3830, 500cc
ALS Vial : 32 Sample Multiplier: 1

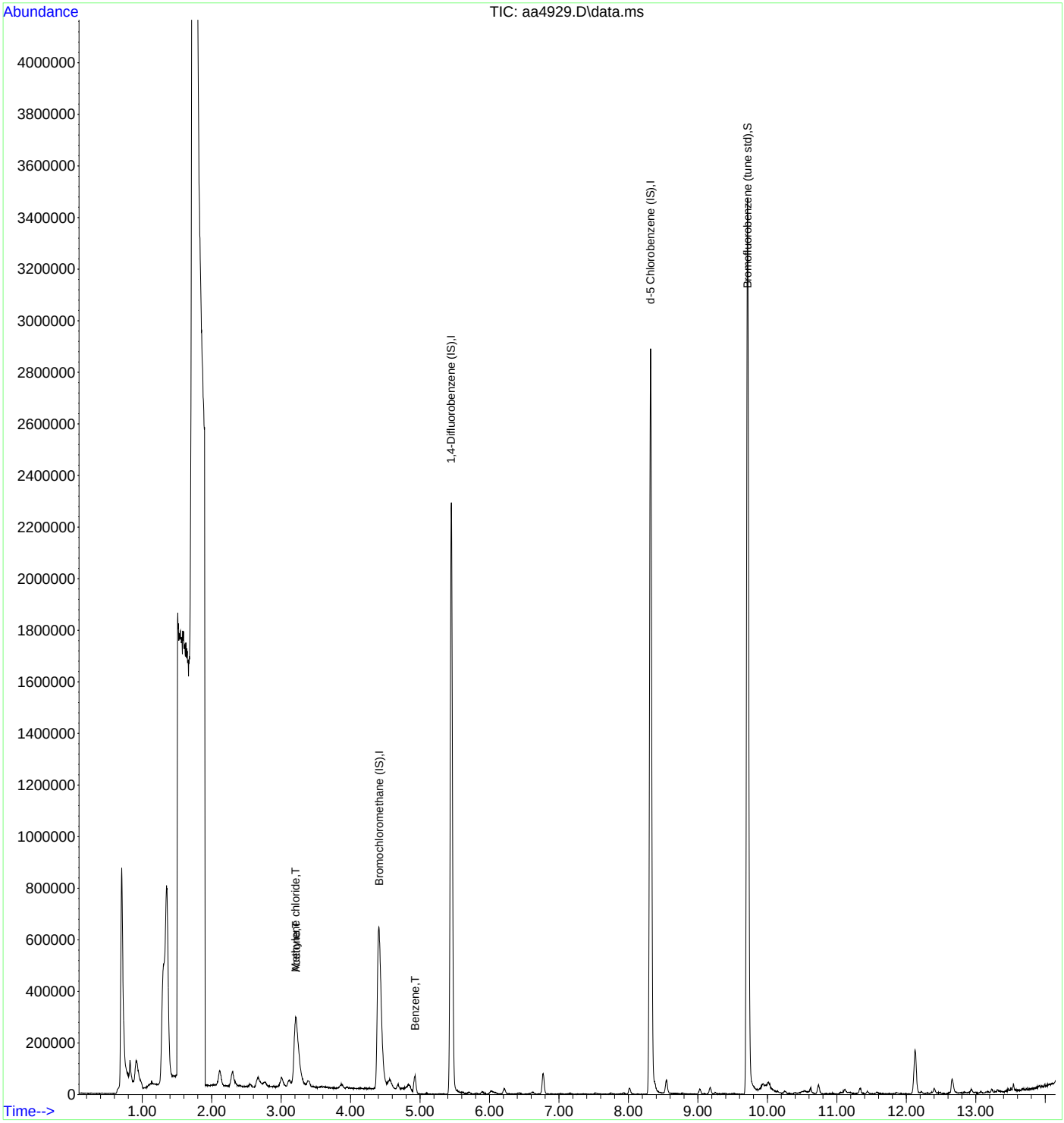
Quant Time: Dec 13 11:23:02 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

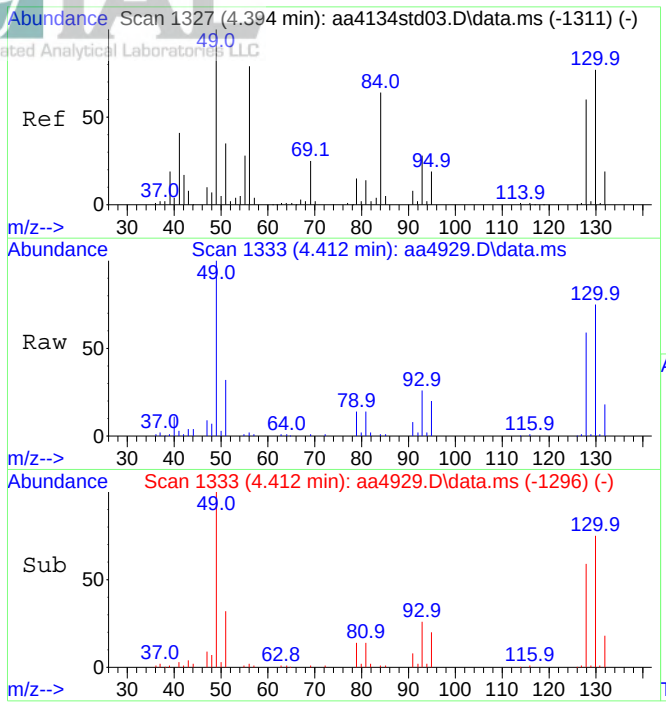
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.412 | 130 | 441232 | 10.00 | ppbV | 0.018 |
| 39) 1,4-Difluorobenzene (IS) | 5.448 | 114 | 2147334 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 1948898 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1597112 | 9.40 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 20) Methylene chloride | 3.210 | 49 | 190775 | 3.52 | ppbV | 93 |
| 21) Acetone | 3.216 | 43 | 404473 | 6.08 | ppbV | 99 |
| 37) Benzene | 4.930 | 78 | 54291 | 0.31 | ppbV | 97 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4929.D
Acq On : 12 Dec 2023 12:58 am
Operator : jjw
Sample : E23-05079-03
Misc : 3830, 500cc
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Dec 13 11:23:02 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

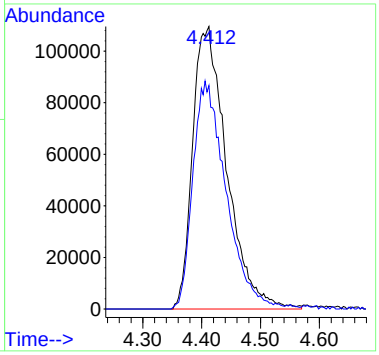


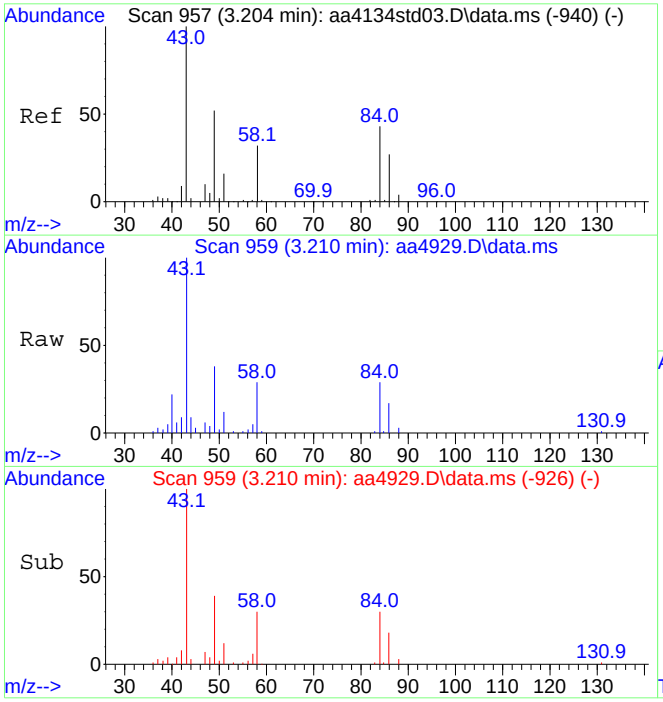



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.412 min Scan# 1333
Delta R.T. 0.018 min
Lab File: aa4929.D
Acq: 12 Dec 2023 12:58 am

Tgt Ion:130 Resp: 441232

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 78.4 | 62.2 | 93.4 |

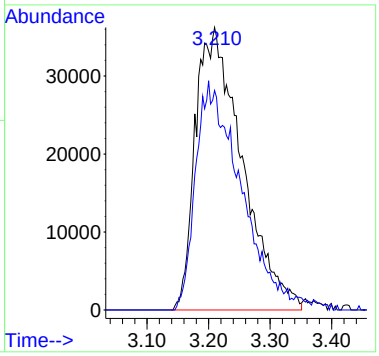


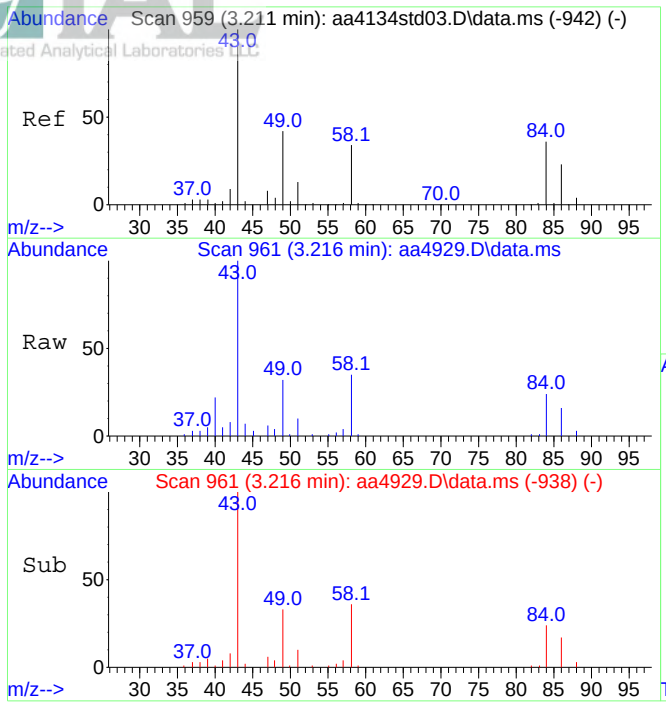




#20
Methylene chloride
Concen: 3.52 ppbV
RT: 3.210 min Scan# 959
Delta R.T. 0.006 min
Lab File: aa4929.D
Acq: 12 Dec 2023 12:58 am

Tgt Ion: 49 Resp: 190775

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 78.6 | 64.8 | 104.8 |

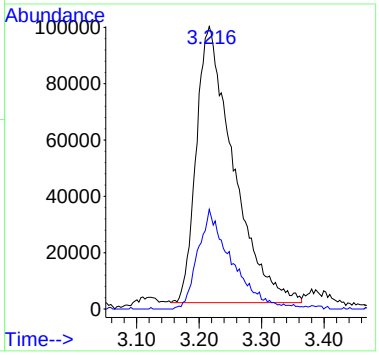


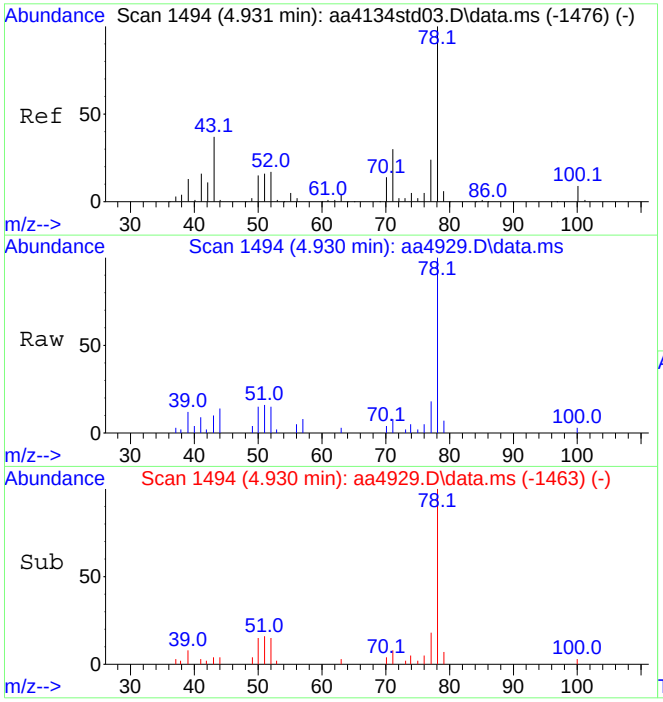



#21
Acetone
Concen: 6.08 ppbV
RT: 3.216 min Scan# 961
Delta R.T. 0.006 min
Lab File: aa4929.D
Acq: 12 Dec 2023 12:58 am

Tgt Ion: 43 Resp: 404473

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 33.2 | 27.1 | 40.7 |

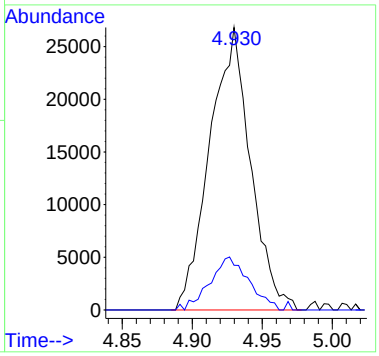


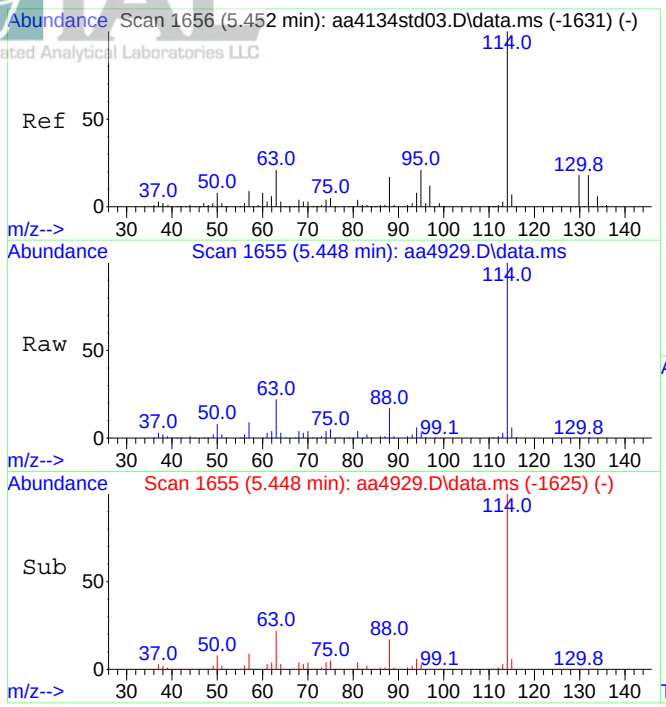




#37
Benzene
Concen: 0.31 ppbV
RT: 4.930 min Scan# 1494
Delta R.T. -0.001 min
Lab File: aa4929.D
Acq: 12 Dec 2023 12:58 am

Tgt Ion: 78 Resp: 54291

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 17.9 | 13.4 | 20.0 |

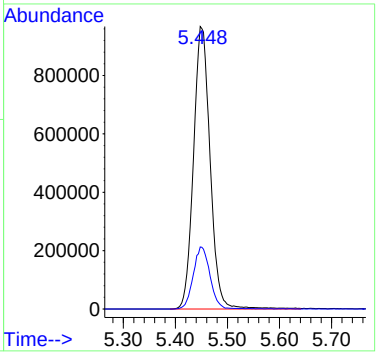


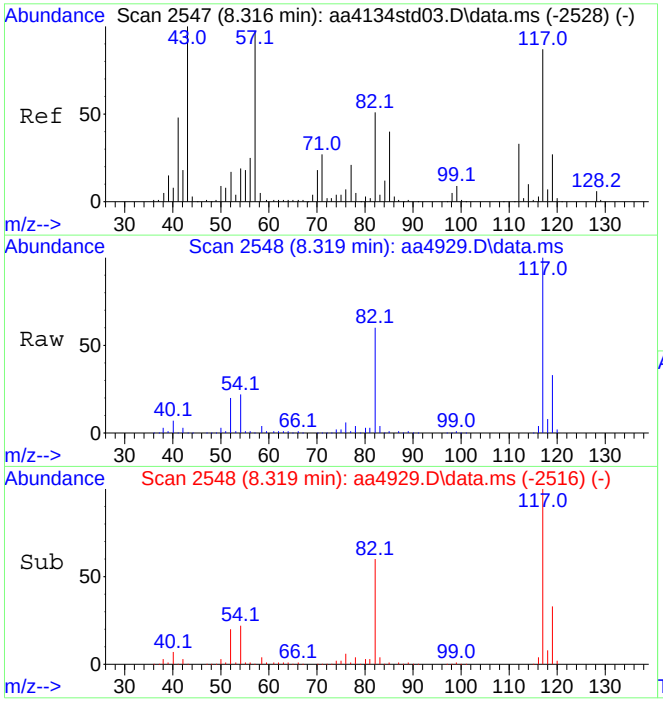



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.448 min Scan# 1655
Delta R.T. -0.004 min
Lab File: aa4929.D
Acq: 12 Dec 2023 12:58 am

Tgt Ion:114 Resp: 2147334

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.0 | 17.0 | 25.6 |

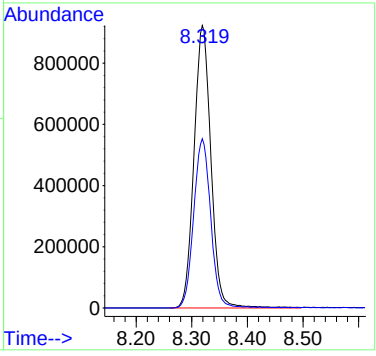


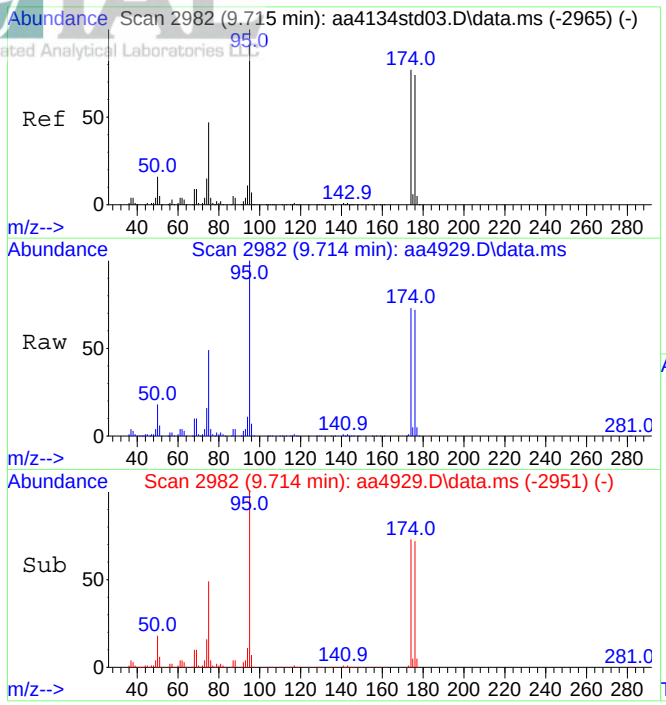




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.319 min Scan# 2548
Delta R.T. 0.002 min
Lab File: aa4929.D
Acq: 12 Dec 2023 12:58 am

Tgt Ion:117 Resp: 1948898

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 60.3 | 47.0 | 70.4 |

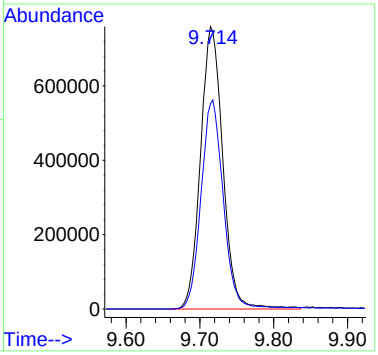





#64
Bromofluorobenzene (tune std)
Concen: 9.40 ppbV
RT: 9.714 min Scan# 2982
Delta R.T. -0.001 min
Lab File: aa4929.D
Acq: 12 Dec 2023 12:58 am

Tgt Ion: 95 Resp: 1597112

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 74.1 | 61.1 | 91.7 |



Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4930.D
Acq On : 12 Dec 2023 1:31 am
Operator : jjw
Sample : E23-05079-23
Misc : Dup of E23-05079-03, Can # 3830
ALS Vial : 33 Sample Multiplier: 1

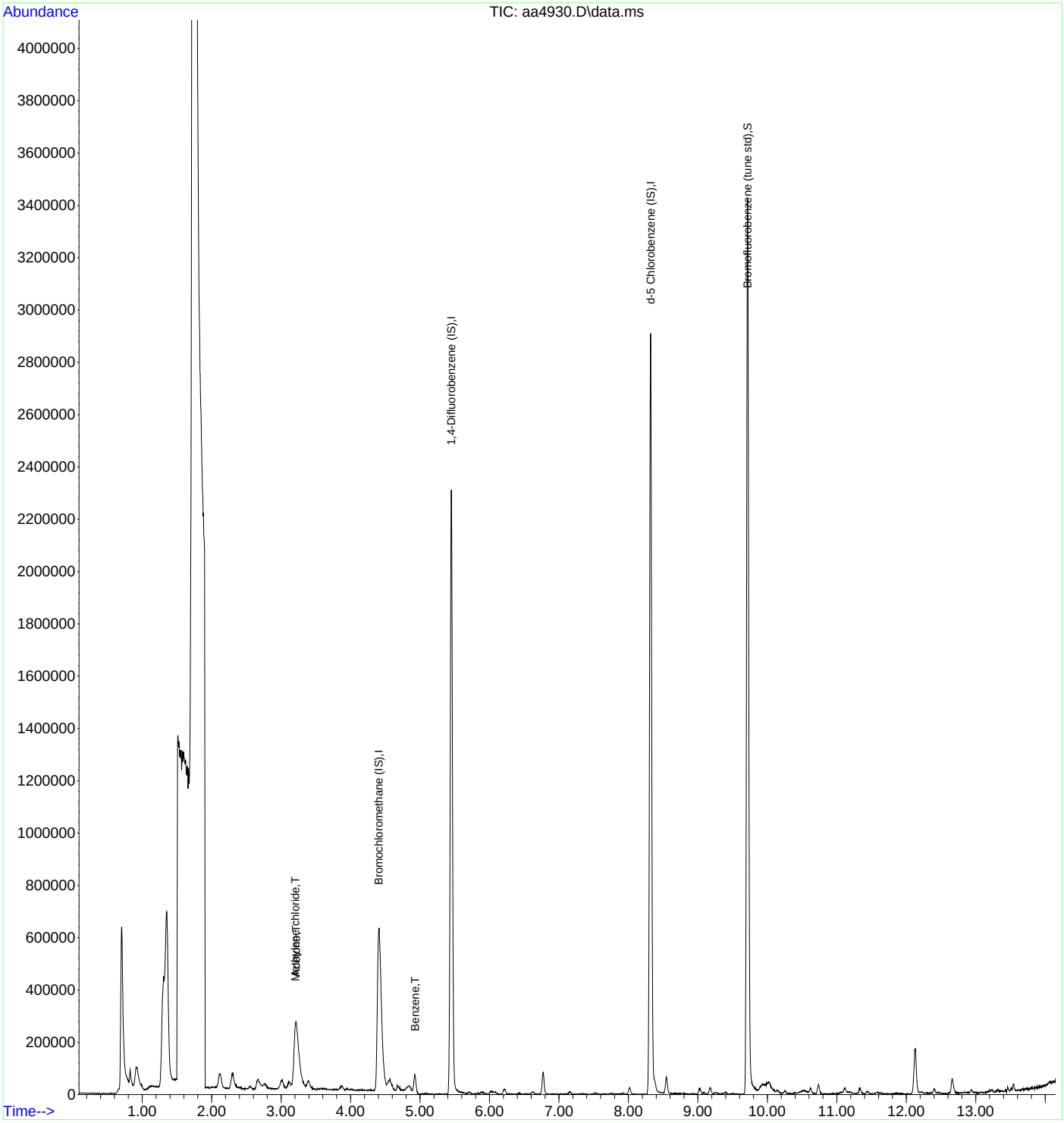
Quant Time: Dec 13 11:24:13 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

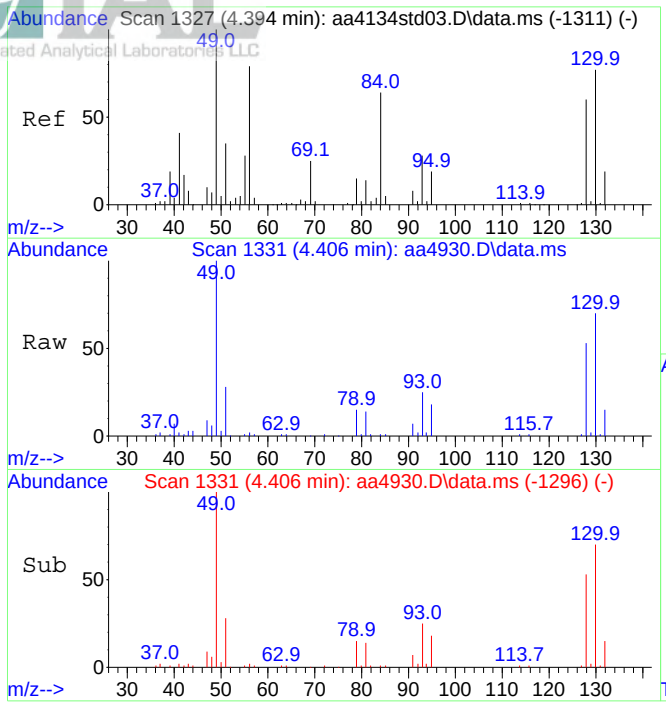
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.406 | 130 | 452291 | 10.00 | ppbV | 0.012 |
| 39) 1,4-Difluorobenzene (IS) | 5.451 | 114 | 2167232 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.322 | 117 | 1931386 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1574669 | 9.35 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 20) Methylene chloride | 3.203 | 49 | 191374 | 3.44 | ppbV | 90 |
| 21) Acetone | 3.216 | 43 | 399825 | 5.86 | ppbV | 99 |
| 37) Benzene | 4.930 | 78 | 56929 | 0.32 | ppbV | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4930.D
Acq On : 12 Dec 2023 1:31 am
Operator : jjw
Sample : E23-05079-23
Misc : Dup of E23-05079-03, Can # 3830
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Dec 13 11:24:13 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

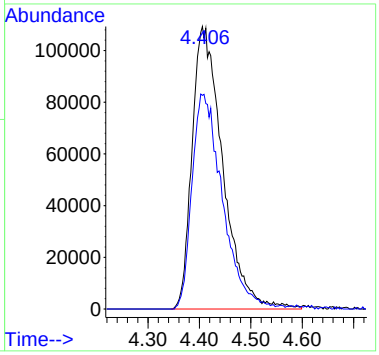


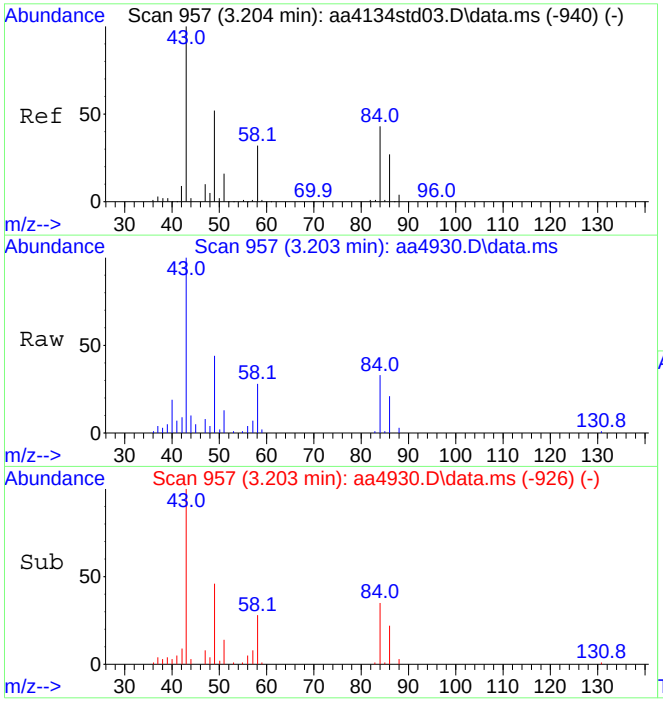



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.406 min Scan# 1331
Delta R.T. 0.012 min
Lab File: aa4930.D
Acq: 12 Dec 2023 1:31 am

Tgt Ion:130 Resp: 452291

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 75.9 | 62.2 | 93.4 |

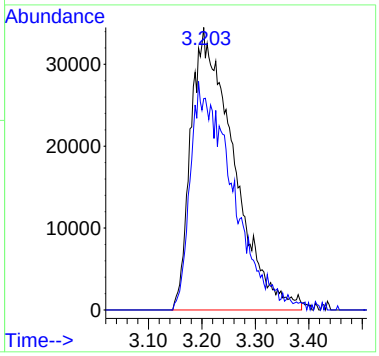


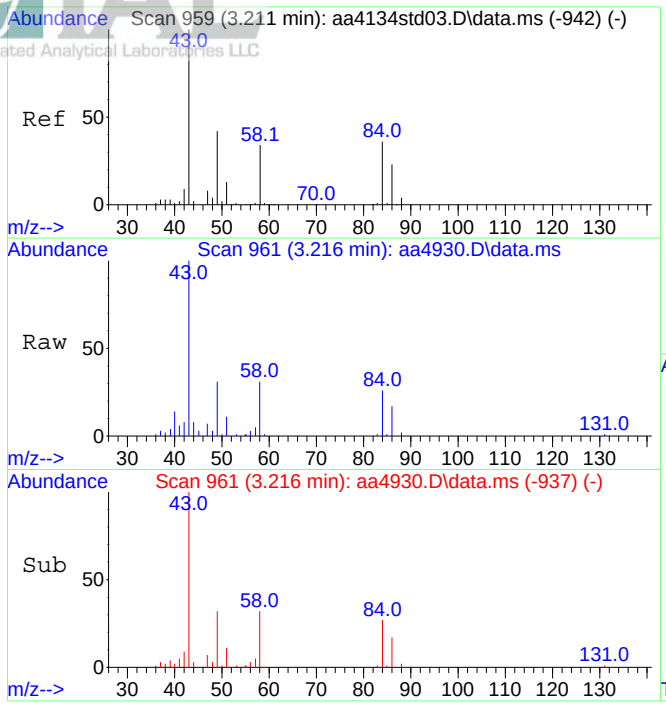




#20
Methylene chloride
Concen: 3.44 ppbV
RT: 3.203 min Scan# 957
Delta R.T. -0.001 min
Lab File: aa4930.D
Acq: 12 Dec 2023 1:31 am

Tgt Ion: 49 Resp: 191374

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 76.0 | 64.8 | 104.8 |

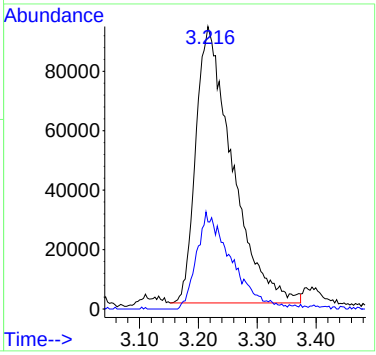


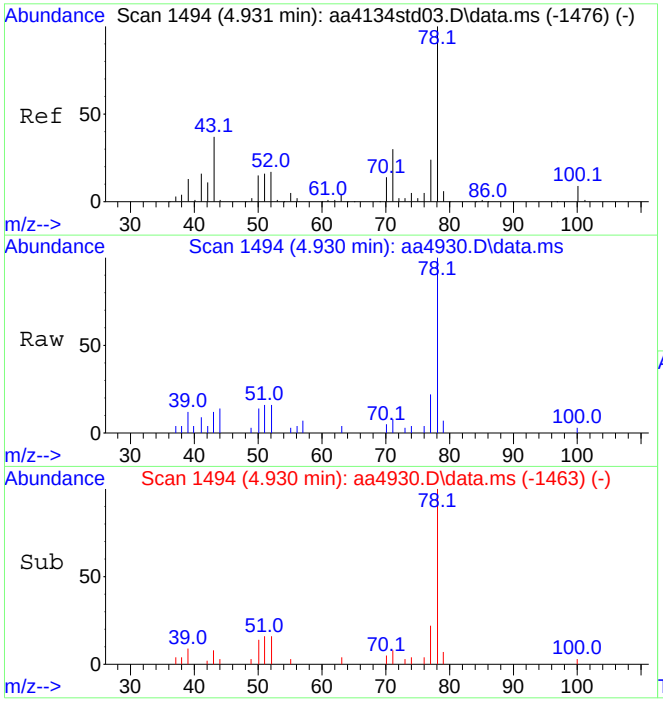



#21
Acetone
Concen: 5.86 ppbV
RT: 3.216 min Scan# 961
Delta R.T. 0.006 min
Lab File: aa4930.D
Acq: 12 Dec 2023 1:31 am

Tgt Ion: 43 Resp: 399825

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 33.3 | 27.1 | 40.7 |

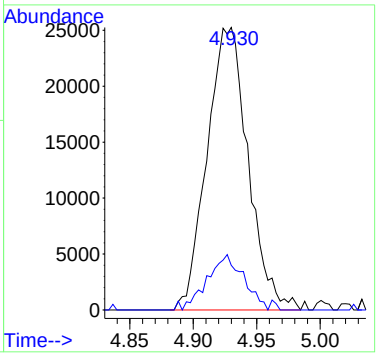


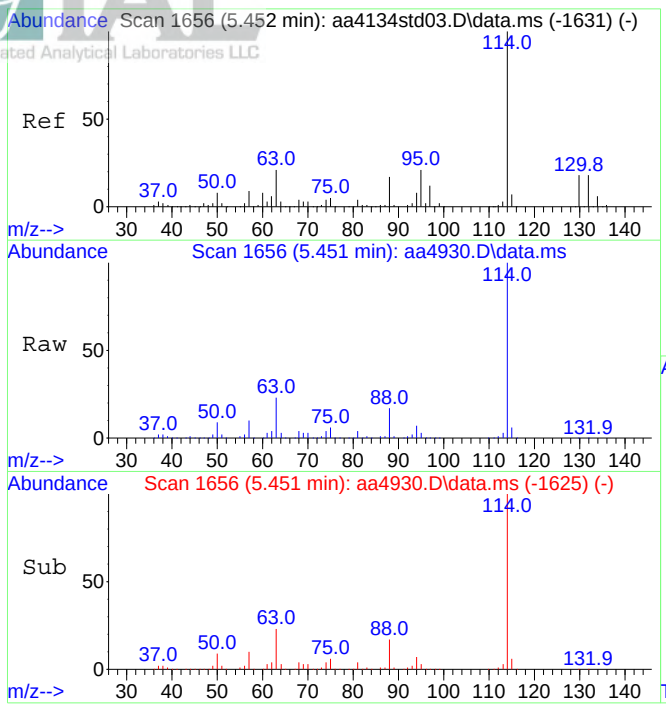




#37
Benzene
Concen: 0.32 ppbV
RT: 4.930 min Scan# 1494
Delta R.T. -0.001 min
Lab File: aa4930.D
Acq: 12 Dec 2023 1:31 am

Tgt Ion: 78 Resp: 56929

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 17.1 | 13.4 | 20.0 |

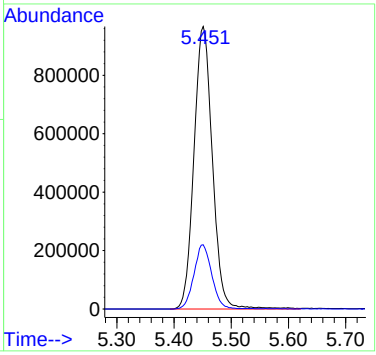


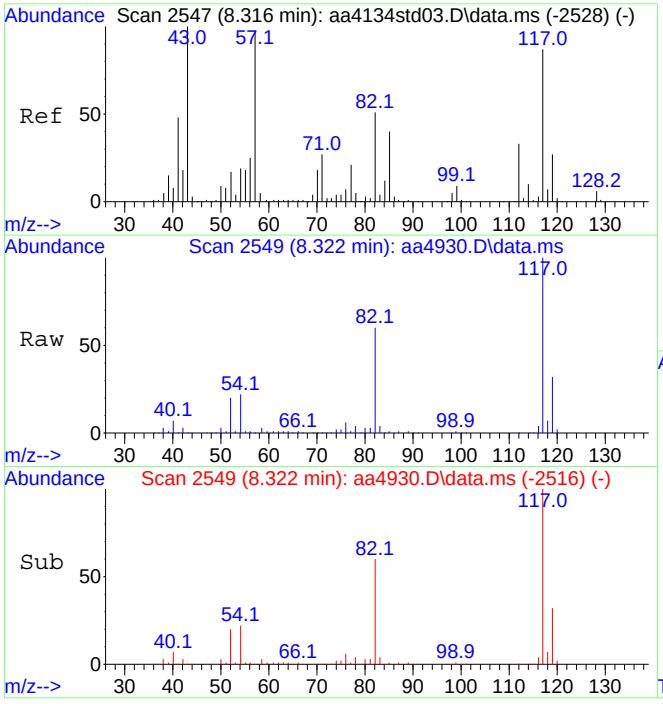



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.451 min Scan# 1656
Delta R.T. -0.001 min
Lab File: aa4930.D
Acq: 12 Dec 2023 1:31 am

Tgt Ion:114 Resp: 2167232

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.0 | 17.0 | 25.6 |

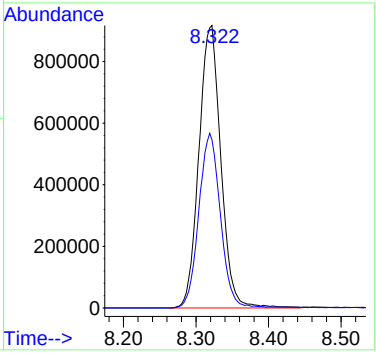


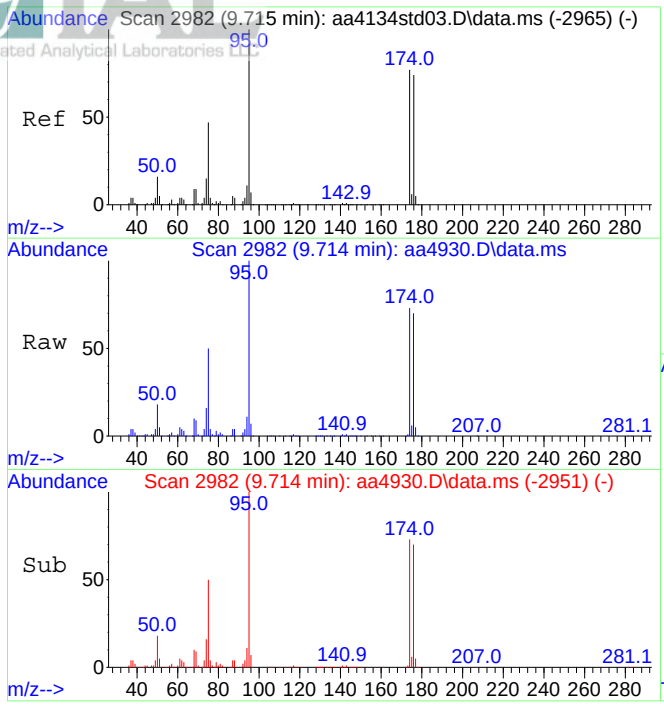




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.322 min Scan# 2549
Delta R.T. 0.006 min
Lab File: aa4930.D
Acq: 12 Dec 2023 1:31 am

Tgt Ion:117 Resp: 1931386

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 61.0 | 47.0 | 70.4 |

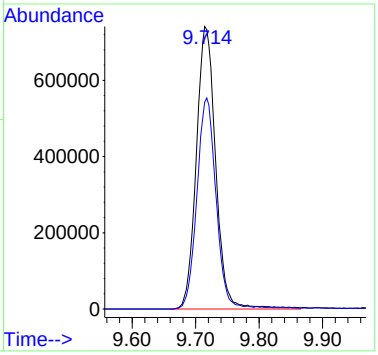





#64
Bromofluorobenzene (tune std)
Concen: 9.35 ppbV
RT: 9.714 min Scan# 2982
Delta R.T. -0.001 min
Lab File: aa4930.D
Acq: 12 Dec 2023 1:31 am

Tgt Ion: 95 Resp: 1574669

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 74.6 | 61.1 | 91.7 |



# INTEGRATED ANALYTICAL LABORATORIES, LLC

**Integrated Analytical Laboratories**

**GC/MS Run Log**

Instrument ID: Agilent 7890A / 5975C
Column: Restek RTX-1 SN 992567

Target Directory: D:\Agilent GCMS\

**Date of Analysis:** 12/8, 11/2023
**Date of Initial Calibration:** 8/15/2023, 10/10/2023
**SDG #:** E23-05093

| File # | Laboratory Sample ID | QC Check | Dilution Factor | Can # | Analyst | Injection Volume (cc) | Comments | *Make-up Air* | | *Acquisition* | | *Room* | | *TO-15 Standard* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Added to canister (cc) | Added for dilution | Date | Time | Temp | BP "Hg | Working ID | Vendor ID (Lot#) |
| aa3401bfb | BFB | ✓ | | ALM018474 | JJW | 0.5 | | | | **8/15/2023** | 10:11 | 70 | 30.30 | | 160-402352677-1 |
| aa3402std05 | 0.2 ppbv Std | ✓ | | EB0103704 | JJW | 1 | | | | | | | | 8/15/2023 | 160-402619255-1 |
| aa3403std04 | 2 ppbv Std | ✓ | | EB0103704 | JJW | 10 | | | | | | | | 8/15/2023 | 160-402619255-1 |
| aa3404std03 | 10 ppbv Std | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 8/15/2023 | 160-402619255-1 |
| aa3405std02 | 20 ppbv Std | ✓ | | EB0103704 | JJW | 100 | | | | | | | | 8/15/2023 | 160-402619255-1 |
| aa3406std01 | 40 ppbv Std | ✓ | | EB0103704 | JJW | 200 | | | | | | | | 8/15/2023 | 160-402619255-1 |
| aa3407icvss | 10 ppbv ICVSS | ✓ | | EB0116272 | JJW | 50 | | | | | | | | 8/15/2023 | 160-402744241-1 |

Analyst Name: J Walukiewicz

Signature: Joseph Walukiewicz

# INTEGRATED ANALYTICAL LABORATORIES, LLC

**Integrated Analytical Laboratories**
**GC/MS Run Log**

Instrument ID: Agilent 7890A / 5975C
Column: Restek RTX-1 SN 992567

Target Directory: D:\Agilent GCMS\

**Date of Analysis:** 12/8, 11/2023
**Date of Initial Calibration:** 8/15/2023, 10/10/2023
**SDG #:** E23-05093

| File # | Laboratory Sample ID | QC Check | Dilution Factor | Can # | Analyst | Injection Volume (cc) | Comments | *Make-up Air* | | *Acquisition* | | *Room* | | *TO-15 Standard* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Added to canister (cc) | Added for dilution | Date | Time | Temp | BP "Hg | Working ID | Vendor ID (Lot#) |
| aa4071bfb | BFB | ✓ | | ALM018474 | JJW | 0.5 | | | | **9/28/2023** | 10:01 | 70 | 30.54 | | 160-402352677-1 |
| aa4072dcvs | 10 ppbv DCVS | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 8/15/2023 | 160-401980152-1 |
| aa4073lcs | 10 ppbv LCS | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 8/15/2023 | 160-401980152-1 |
| aa4074blk | Method Blank | ✓ | | 1127 | JJW | 500 | | | | | | | | | |
| aa4075rllcs | 0.2 ppbv RLLCS | ✓ | | EB0103704 | JJW | 1 | | | | | | | | 8/15/2023 | 160-401980152-1 |
| aa4076 | 2164 | ✓ | | 8242301 | JJW | 500 | | | | | | | | | |
| aa4077 | 4870 | ✓ | | 9132301 | JJW | 500 | | | | | | | | | |
| aa4078 | 2160 | ✓ | | 9142301 | JJW | 500 | | | | | | | | | |
| aa4079 | E23-03970-01x5 dil | ✓ | 5 | 2881 | JJW | 100 | | | | | | | | | |
| aa4080 | E23-03970-02x5 dil | ✓ | 5 | 3025A | JJW | 100 | | | | | | | | | |
| aa4081 | E23-04122-02x10 dil | ✓ | 10 | 1068 | JJW | 50 | | | | | | | | | |
| aa4082 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4083 | E23-04122-03x10 dil | ✓ | 10 | 1571 | JJW | 50 | | | | | | | | | |
| aa4084 | E23-04122-04x10 dil | ✓ | 10 | 1366 | JJW | 50 | | | | | | | | | |
| aa4085 | E23-04122-05x10 dil | ✓ | 10 | 1596 | JJW | 50 | | | | | | | | | |
| aa4086 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4087 | E23-04122-06x10 dil | ✓ | 10 | 1781 | JJW | 50 | | | | | | | | | |
| aa4088 | E23-04122-26x10 dil | ✓ | 10 | 4122-06x10 d | JJW | 50 | | | | | | | | | |
| aa4089 | E23-04154-05x10 dil | ✓ | 10 | 1404 | JJW | 50 | | | | | | | | | |
| aa4090 | E23-04154-06x10 dil | ✓ | 10 | 1565 | JJW | 50 | | | | | | | | | |
| aa4091 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4092 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4093cccvs | 10 ppbv CCCVS | ✓ | | EB0103704 | JJW | 50 | | | | 9/29/2023 | 12:28 | | | 8/15/2023 | 160-402619255-1 |

Analyst Name: J Walukiewicz

Signature: Joseph Walukiewicz

# INTEGRATED ANALYTICAL LABORATORIES, LLC

**Integrated Analytical Laboratories**
**GC/MS Run Log**

Instrument ID: Agilent 7890A / 5975C
Column: Restek RTX-1 SN 992567

Target Directory: D:\Agilent GCMS\

**Date of Analysis:** 12/8, 11/2023
**Date of Initial Calibration:** 8/15/2023, 10/10/2023
**SDG #:** E23-05093

| File # | Laboratory Sample ID | QC Check | Dilution Factor | Can # | Analyst | Injection Volume (cc) | Comments | *Make-up Air* | | *Acquisition* | | *Room* | | *TO-15 Standard* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Added to canister (cc) | Added for dilution | Date | Time | Temp | BP "Hg | Working ID | Vendor ID (Lot#) |
| aa4131bfb | BFB | ✓ | | ALM018474 | JJW | 0.5 | | | | **10/10/2023** | 10:13 | 70 | 30.10 | | 160-402352677-1 |
| aa4132std05 | 0.2 ppbv Std | ✓ | | EB0103704 | JJW | 1 | | | | | | | | 10/10/2023 | 160-402619255-1 |
| aa4133std04 | 2 ppbv Std | ✓ | | EB0103704 | JJW | 10 | | | | | | | | 10/10/2023 | 160-402619255-1 |
| aa4134std03 | 10 ppbv Std | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 10/10/2023 | 160-402619255-1 |
| aa4135std02 | 20 ppbv Std | ✓ | | EB0103704 | JJW | 100 | | | | | | | | 10/10/2023 | 160-402619255-1 |
| aa4136std01 | 40 ppbv Std | ✓ | | EB0103704 | JJW | 200 | | | | | | | | 10/10/2023 | 160-402619255-1 |
| aa4137icvss | 10 ppbv ICVSS | ✓ | | EB0116272 | JJW | 50 | | | | | | | | 10/10/2023 | 160-402744241-1 |
| aa4138lcs | 10 ppbv LCS | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4139blk | Method Blank | ✓ | | 1127 | JJW | 500 | | | | | | | | | |
| aa4140rllcs | 0.2 ppbv RLLCS | ✓ | | EB0103704 | JJW | 1 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4141 | 5078 | ✓ | | 9252301 | JJW | 500 | | | | | | | | | |
| aa4142 | 5101 | ✓ | | 9262301 | JJW | 500 | | | | | | | | | |
| aa4143 | 4869 | ✓ | | 9272301 | JJW | 500 | | | | | | | | | |
| aa4144 | 2157 | ✓ | | 10022301 | JJW | 500 | | | | | | | | | |
| aa4145 | E23-04192-01 | ✓ | | 5100 | JJW | 500 | | | | | | | | | |
| aa4146 | E23-04192-02 | ✓ | | 2072 | JJW | 500 | | | | | | | | | |
| aa4147 | blank | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4148 | E23-04378-01 | ✓ | | 2033 | JJW | 500 | | | | | | | | | |
| aa4149 | E23-04378-02 | ✓ | | 5080 | JJW | 500 | | | | | | | | | |
| aa4150 | E23-04378-22 | ✓ | Dup of E23-04378-02, C | | JJW | 500 | | | | | | | | | |
| aa4151 | E23-04513-01 | ✓ | | 3814 | JJW | 500 | | | | | | | | | |
| aa4152 | blank | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4153 | blank | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4154cccvs | 10 ppbv CCCVS | ✓ | | EB0103704 | JJW | 50 | | | | 10/11/2023 | 1:53 | | | 10/10/2023 | 160-402619255-1 |

Analyst Name: J Walukiewicz

Signature: Joseph Walukiewicz

# INTEGRATED ANALYTICAL LABORATORIES, LLC

**Integrated Analytical Laboratories**
**GC/MS Run Log**

Instrument ID: Agilent 7890A / 5975C
Column: Restek RTX-1 SN 992567

Target Directory: D:\Agilent GCMS\

**Date of Analysis:** 12/8, 11/2023
**Date of Initial Calibration:** 8/15/2023, 10/10/2023
**SDG #:** E23-05093

| File # | Laboratory Sample ID | QC Check | Dilution Factor | Can # | Analyst | Injection Volume (cc) | Comments | *Make-up Air* | | *Acquisition* | | *Room* | | *TO-15 Standard* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Added to canister (cc) | Added for dilution | Date | Time | Temp | BP "Hg | Working ID | Vendor ID (Lot#) |
| aa4881bfb | BFB | ✓ | | ALM018474 | JJW | 0.5 | | | | **12/8/2023** | 10:21 | 68 | 30.46 | | 160-402352677-1 |
| aa4882dcvs | 10 ppbv DCVS | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4883lcs | 10 ppbv LCS | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4884blk | Method Blank | ✓ | | 1127 | JJW | 500 | | | | | | | | | |
| aa4885rllcs | 0.2 ppbv RLLCS | ✓ | | EB0103704 | JJW | 1 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4886 | E23-05047-01 | ✓ | | 2902 | JJW | 500 | | | | | | | | | |
| aa4887 | E23-05047-02 | ✓ | | 2037 | JJW | 500 | | | | | | | | | |
| aa4888 | E23-05047-03 | ✓ | | 3811 | JJW | 500 | | | | | | | | | |
| aa4889 | E23-05047-04 | ✓ | | 3283 | JJW | 500 | | | | | | | | | |
| aa4890 | E23-05047-05 | ✓ | | 2749 | JJW | 500 | | | | | | | | | |
| aa4891 | E23-05047-06 | ✓ | | 5091 | JJW | 500 | | | | | | | | | |
| aa4892 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4893 | E23-05080-01 | ✓ | | 3006 | JJW | 500 | | | | | | | | | |
| aa4894 | E23-05080-02 | ✓ | | 2155 | JJW | 500 | | | | | | | | | |
| aa4895 | E23-05093-01 | ✓ | | 3044A | JJW | 500 | | | | | | | | | |
| aa4896 | E23-05047-01x10 dil | ✓ | 10 | 2902 | JJW | 50 | | | | | | | | | |
| aa4897 | E23-05047-03x10 dil | ✓ | 10 | 3811 | JJW | 50 | | | | | | | | | |
| aa4898 | E23-05047-04x10 dil | ✓ | 10 | 3283 | JJW | 50 | | | | | | | | | |

Analyst Name: J Walukiewicz

Signature: Joseph Walukiewicz

# INTEGRATED ANALYTICAL LABORATORIES, LLC

**Integrated Analytical Laboratories**
**GC/MS Run Log**

Instrument ID: Agilent 7890A / 5975C
Column: Restek RTX-1 SN 992567

Target Directory: D:\Agilent GCMS\

**Date of Analysis:** 12/8, 11/2023
**Date of Initial Calibration:** 8/15/2023, 10/10/2023
**SDG #:** E23-05093

| File # | Laboratory Sample ID | QC Check | Dilution Factor | Can # | Analyst | Injection Volume (cc) | Comments | *Make-up Air* | | *Acquisition* | | *Room* | | *TO-15 Standard* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Added to canister (cc) | Added for dilution | Date | Time | Temp | BP "Hg | Working ID | Vendor ID (Lot#) |
| aa4901bfb | BFB | ✓ | | ALM018474 | JJW | 0.5 | | | | **12/11/2023** | 9:24 | 68 | 30.07 | | 160-402352677-1 |
| aa4902dcvs | 10 ppbv DCVS | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4903lcs | 10 ppbv LCS | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4904blk | Method Blank | ✓ | | 1127 | JJW | 500 | | | | | | | | | |
| aa4905rllcs | 0.2 ppbv RLLCS | ✓ | | EB0103704 | JJW | 1 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4906 | 1458 | ✓ | | 12062301 | JJW | 50 | | | | | | | | | |
| aa4907 | 1588 | ✓ | | 12082301 | JJW | 50 | | | | | | | | | |
| aa4908 | 3012 | ✓ | | 12072301 | JJW | 500 | | | | | | | | | |
| aa4909 | E23-05047-03x10 dil | ✓ | 10 | 3811 | JJW | 50 | | | | | | | | | |
| aa4910 | E23-05047-04x5 dil | ✓ | 5 | 3283 | JJW | 100 | | | | | | | | | |
| aa4911 | E23-05080-01x10 dil | ✓ | 10 | 3006 | JJW | 50 | | | | | | | | | |
| aa4912 | E23-05080-02x10 dil | ✓ | 10 | 2155 | JJW | 50 | | | | | | | | | |
| aa4913 | E23-05093-01x5 dil | ✓ | 5 | 3044Ac | JJW | 100 | | | | | | | | | |
| aa4914 | E23-05047-06x5 dil | ✓ | 5 | 5091 | JJW | 100 | | | | | | | | | |
| aa4915 | E23-05047-06 | ✓ | | 5091 | JJW | 500 | | | | | | | | | |
| aa4916 | E23-05081-01x5 dil | ✓ | 5 | 5073 | JJW | 100 | | | | | | | | | |
| aa4917 | E23-05081-01 | ✓ | | 5073 | JJW | 500 | | | | | | | | | |
| aa4918 | E23-05081-02x5 dil | ✓ | 5 | 2758 | JJW | 100 | | | | | | | | | |
| aa4919 | E23-05081-02 | ✓ | | 2758 | JJW | 500 | | | | | | | | | |
| aa4920 | E23-05081-03x5 dil | ✓ | 5 | 3809 | JJW | 100 | | | | | | | | | |
| aa4921 | E23-05081-03 | ✓ | | 3809 | JJW | 500 | | | | | | | | | |
| aa4922 | E23-05081-04x5 dil | ✓ | 5 | 2896B | JJW | 100 | | | | | | | | | |
| aa4923 | E23-05081-04 | ✓ | | 2896B | JJW | 500 | | | | | | | | | |
| aa4924 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4925 | E23-05007-01x10 dil | ✓ | 10 | 1543 | JJW | 50 | | | | | | | | | |
| aa4926 | E23-05007-02x10 dil | ✓ | 10 | 1601 | JJW | 50 | | | | | | | | | |
| aa4927 | E23-05007-03x10 dil | ✓ | 10 | 1773 | JJW | 50 | | | | | | | | | |
| aa4928 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4929 | E23-05079-03 | ✓ | | 3830 | JJW | 500 | | | | | | | | | |
| aa4930 | E23-05079-23 | ✓ | Dup of E23-05079-03, C | | JJW | 500 | | | | | | | | | |
| aa4931cccvs | 10 ppbv CCCVS | ✓ | | EB0103704 | JJW | 50 | | | | 12/12/2023 | 1:59 | | | 10/10/2023 | 160-401980152-1 |

Analyst Name: J Walukiewicz

Signature: Joseph Walukiewicz

Integrated Analytical Labs
273 Franklin Rd
Randolph, NJ 07869

# External Chain of Custody Record/ Field Test Data Sheet USEPA Method TO-15

Contact Us: 973 361-4252
fax: 973 366-5613
Web: www.ialonline.com

Carrier (check one): ____ IAL Courier ____Client Courier ____FedEx/UPS



| Client Contact Information | Project Information | Invoice Information |
|---|---|---|
| Company: HK Engineering and Geology D.P.C. | Project Name: HK2661.1 | Attn: |
| Address: 1600 US 22 East | Project Location (State): NY | Address: |
| Union, NJ 07083 | Project Manager: Chris Hirschmann | |
| Phone: 908 -688-7800 | PM Signature: | PO #: HK2661.1 |
| Fax: | PM E-Mail: chirschmann@hillmannconsulting.com | Quote #: |
| Report to: Chris Hirschmann | Sampler: D. Aponte | |

Analysis Turnaround Time - IF NO TAT IS SPECIFIED, 2 WEEK TAT IS ASSUMED

IAL Standard: 2 weeks (10 business days)

Rush (**pre-approved by lab): 24hr** 48hr** 72hr** 96hr** 1wk**

| Sample Identification | Start DATE & TIME (24hr Clock) | End DATE & TIME (24hr Clock) | Starting Vacuum ("Hg) | Ending Vacuum ("Hg) | Starting Temp (°F) | Ending Temp (°F) | Outgoing Vacuum - Lab ("Hg) | Barometric Pressure Start: Incoming Vacuum - Lab ("Hg) | Flow Regulator ID | Barometric Pressure Stop: Canister ID | Canister Size (1L or 6L) | Flow Controller Readout (cc/min) | EPA TO - 15 | NJDEP LLTO-15 (includes 30 TICs) | Library Search (10, 20, or 30 TICs) | Other (Explain in Comments) | Regulatory/ NY Cat B / Full (NJ Required) | Reduced / NY Cat A Data Package | Results Only | Indoor Air | Ambient / Outdoor Air | Sub Slab / Soil Gas / Near Slab (Circle One) | Stack Emission / SVE System | High Concentrations Expected |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SV9 | 11/20/23 - 8:30 | 11/20/23 - 10:56 | -29 | -7 | 38 | 42 | -24.0 | -7.0 | A0224857-7 | 3044A | 6L | 31.80 | X | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |

Comments/ Special Analysis Instructions / QC Requirements:

5 Day TAT Hard Copy and Verbal.

09132301 : 1
100223aa : 3830

Note: Hold or contingent samples may be designated by writing an "H" or "C" in the appropriate analysis box.

ALL FIELDS IN RED ARE REQUIRED

IAL 5093

Shipping Information / Canister Preparation (for laboratory use only)

Individual Preparing Canisters / Title: Desmond Flores / Air Department Sample Custodian

Lab Affixed Seal Number(s):

Date/Time Shipping Container Sealed: 1615 11/13/23

Laboratory Canister Certification

GC/MS Analyst Signature: Joseph J Walukiewicz III (IAL)

External Chain of Custody

| Relinquished | Received | Date / Time | Reason for Change of External Custody |
|---|---|---|---|
| | Joseph J Walukiewicz III (IAL) | 11/20/23 1518 | shipment from laboratory to client |
| | | 11/20/23 1643 | Received at air Lab |

Name/Title Resealing Shipping Container Name:

Date/Time Sample Shipping Container Resealed:

Date/Time Sample Shipping Container Opened: 11/20/23 1643

NJDEP Affixed Seal Number:

Individual Opening Sample Shipping Container: Joseph Walukiewicz/Desmond Flores

Date/Time Internal Chain of Custody Initiated: 11/21/23 09 15

e appropriate care with IAL sampling equipment when sampling and packing for shipment. The client is responsible for all damage incurred to IAL equipment. Notify IAL if equipment is damaged upon receipt. Holding time before sampling is 15 days, er sampling is 30 days; failure to follow these times may result in data rejection by regulatory agencies. The lab will contact you if your COC is not clear, incomplete, or if discrepancies exist. The use of initials is not permitted on the COC except en correcting errors.

White and yellow - lab copies; Pink - client copy

# Example Calculation (EPA TO-15)

$$\frac{\text{Area of Compound}}{\text{Area of Internal Standard}} \times \frac{\text{Concentration of Internal Standard (10 ppbv)}}{\text{Response Factor}} = \text{Concentration of Compound (ppbv)}$$

# Conversion from ppbv to µg/m $^3$

$$\frac{\text{Concentration of Compound (ppbv)} \times \text{Molecular Weight of Compound}}{24.45} = \text{Concentration of Compound (µg/m3)}$$

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Clean Canister Certification Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **Clean Canister, Batch Master 4870** | **Data File:** | **AA4077** |
| **Field Sample Name:** | **Canister 4870** | **Date Analyzed:** | **9/28/2023** |
| **Sample Volume:** | **500ml** | **Matrix:** | **Air** |

Canisters associated with this run: 4870, 2896B, 5086, 2890, 2758, 3041A, 3044 A (used for E23-05093-01), 2902

Runs with this Clean Canister Certification:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2164 [AA4076] | 09/28/2023 15:00 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 4870 [AA4077] | 09/28/2023 15:30 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 00:28 |

This canister has been certified clean, all compounds are below 0.2 ppbv.

| Compound | CAS # | RL (ppbv) | Calculated Amount (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromodichloromethane | 75-27-4 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| Dibromochloromethane | 124-48-1 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.20 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.20 | ND |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.20 | ND |
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |
| n-Hexane | 110-54-3 | 0.20 | ND |

# Clean Canister Certification Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **Clean Canister, Batch Master 4870** | **Data File:** | **AA4077** |
| **Field Sample Name:** | **Canister 4870** | **Date Analyzed:** | **9/28/2023** |
| **Sample Volume:** | **500ml** | **Matrix:** | **Air** |

Canisters associated with this run: 4870, 2896B, 5086, 2890, 2758, 3041A, 3044 A (used for E23-05093-01), 2902

Runs with this Clean Canister Certification:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2164 [AA4076] | 09/28/2023 15:00 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 4870 [AA4077] | 09/28/2023 15:30 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 00:28 |

This canister has been certified clean, all compounds are below 0.2 ppbv.

| Compound | CAS # | RL (ppbv) | Calculated Amount (ppbv) |
|---|---|---|---|
| Methylene chloride | 75-09-2 | 0.20 | ND |
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.20 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.20 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.40 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4077.D
Acq On : 28 Sep 2023 3:30 pm
Operator : jjw
Sample : 4870
Misc : 2902, 3044A, 3041A, 2758, 2890, 2896B, 5086
ALS Vial : 10 Sample Multiplier: 1

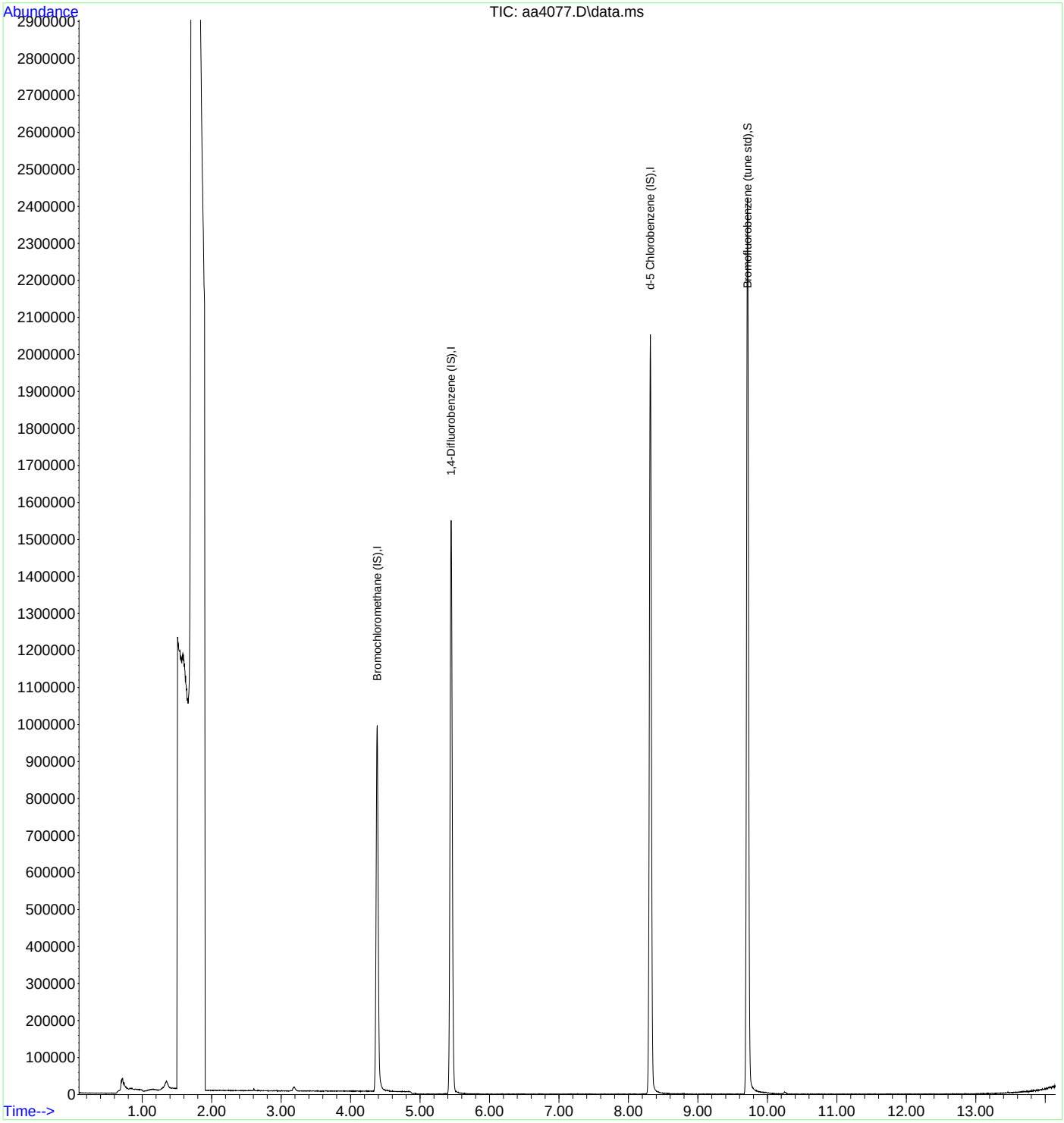
Quant Time: Sep 28 16:47:17 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.383 | 130 | 360790 | 10.00 | ppbV | -0.013 |
| 39) 1,4-Difluorobenzene (IS) | 5.447 | 114 | 1388747 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 1279774 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1010735 | 9.49 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4077.D
Acq On : 28 Sep 2023 3:30 pm
Operator : jjw
Sample : 4870
Misc : 2902, 3044A, 3041A, 2758, 2890, 2896B, 5086
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 28 16:47:17 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration



**LAST PAGE OF DOCUMENT**

# Appendix D

## Lab Reports Chelsea Elliott

Integrated Analytical Laboratories LLC

# *ANALYTICAL DATA REPORT*

HK Engineering & Geology, D.P.C.
1600 Route 22 East
Union, NJ 07083

Project Name: **HK-2661.1 CHELSEA**
IAL Case Number: **E23-05046**

These data have been reviewed and accepted by:

Michael H. Leffin, Ph.D.
Laboratory Director



273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252

IAL is a NELAP accredited lab (TNI01284) and maintains certification in Connecticut (PH-0699), New Jersey (14751), New York (11402) and Pennsylvania (68-00773).

# Integrated Analytical Laboratories - Table of Contents

# Sample Summary

*IAL Case No.*

**E23-05046**

*Client* HK Engineering & Geology, D.P.C.

*Project* HK-2661.1 CHELSEA

*Received On* 11/16/2023@17:12

| *Lab ID* | *Client Sample ID* | *Depth Top/Bottom* | *Sampling Time* | *Matrix* | *# of Container* |
|---|---|---|---|---|---|
| 05046-001 | SB12A | 0/2 | 11/15/2023@08:15 | Soil | 5 |
| 05046-002 | SB2A | 0/2 | 11/15/2023@08:30 | Soil | 5 |
| 05046-003 | SB2B | 10/12 | 11/15/2023@08:35 | Soil | 8 |
| 05046-004 | SB1A | 0/2 | 11/15/2023@09:30 | Soil | 5 |
| 05046-005 | SB1B | 10/12 | 11/15/2023@09:35 | Soil | 2 |
| 05046-006 | SB3A | 0/2 | 11/15/2023@10:45 | Soil | 5 |
| 05046-007 | SB3B | 10/12 | 11/15/2023@10:50 | Soil | 5 |
| 05046-008 | SB10A | 1.5/2.5 | 11/15/2023@13:05 | Soil | 5 |
| 05046-009 | SB11A | 1/2 | 11/15/2023@13:40 | Soil | 5 |
| 05046-010 | SB8A | 0/1.5 | 11/15/2023@14:00 | Soil | 5 |
| 05046-011 | TWP1 | n/a | 11/15/2023@12:20 | Aqueous | 10 |
| 05046-012 | TWP2 | n/a | 11/15/2023@13:00 | Aqueous | 10 |
| 05046-013 | TWP4 | n/a | 11/16/2023@09:10 | Aqueous | 10 |
| 05046-014 | TWP5 | n/a | 11/16/2023@09:30 | Aqueous | 10 |
| 05046-015 | SB4A | 0/2 | 11/16/2023@08:10 | Soil | 5 |
| 05046-016 | SB4B | 10/12 | 11/16/2023@08:15 | Soil | 5 |
| 05046-017 | SB5A | 0/2 | 11/16/2023@08:20 | Soil | 5 |
| 05046-018 | SB5B | 10/12 | 11/16/2023@08:35 | Soil | 5 |
| 05046-019 | TWP1 FILT | n/a | 11/15/2023@12:20 | Aqueous | 1 |
| 05046-020 | TWP2 FILT | n/a | 11/15/2023@13:00 | Aqueous | 1 |
| 05046-021 | TWP4 FILT | n/a | 11/16/2023@09:10 | Aqueous | 1 |
| 05046-022 | TWP5 FILT | n/a | 11/16/2023@09:30 | Aqueous | 1 |



*Integrated Analytical Labs ~ 273 Franklin Road, Randolph, NJ 07869 ~ (973) 361-4252*

## DATA QUALIFIERS AND FLAGS

| | |
|---|---|
| B | Indicates the analyte found in the associated method blank and in the sample due to potential lab contamination. |
| C | Indicates analyte is a common laboratory contaminant. |
| D | Indicates analyte was reported from diluted analysis. |
| E | Identifies a compound concentration that exceeds the upper level of the calibration range of the instrument |
| J | Indicates an estimated value either when the concentration in the sample is less than the RL or for qualification of TICs |
| J1 | Indicates an estimated value when ICC or CCV did not meet the criteria. |
| M | Indicates matrix interference |
| N | Presumptive evidence of a compound from the use of GC/MS library search. |
| T | Sample analyzed outside of holding time |
| X | Indicates samples analyzed for total and dissolved metals differ at ≤20% RPD. |
| Y | Indicates DO depletion in the BOD blank is >0.20ppm |
| Z | Indicates internal standard failure. Sample results are either biased high or biased low. |
| $ | Value outside NJDEP DKQP Limits |
| * | Result outside of QC limits |

## PROJECT NOTES

- All results for soils, solids, and sludges are reported on a dry-weight basis except where noted
- All test results and QC are compliant with TNI or other applicable state agency requirements/guidance unless otherwise notated in the case narrative and/or project information page.
- The case narrative for this SDG should be consulted to determine any non-conformances.
- Any samples with 15-minute or "analyze immediately" holding times (e.g. pH, Dissolved Oxygen, Sulfite, etc.) which are analyzed in the laboratory are considered out of holding time.
- IAL is a NELAP/TNI certified laboratory (TNI ID# TNI01284). IAL retains certification in Connecticut (PH-0699), New Jersey (14751), New York (11402), and Pennsylvania (68-00773).
- Certification is not required to perform analyses in the following states: AL, CO, DE, GA, HI, ID, IN, KY, MD, MI, MS, MO, MT, NE, NM, SD and TN. IAL can perform all analyses, except Drinking Water, within its scope of capabilities in these states.

## ACRONYMS AND ABBREVIATIONS

| | | | |
|---|---|---|---|
| CFU | Colony Forming Unit | ND | Indicates analyte was analyzed for but not detected at MDL or RL (only if MDL is not used) |
| CCB | Continuing Calibration Blank | NTU | Nephelometric Turbidity Units |
| CCV | Continuing Calibration Verification | ppb | Parts per billion. Reported as µg/L or µg/kg |
| DF | Dilution Factor | ppm | Parts per million. Reported as mg/L, µg/mL or mg/kg |
| DL | Attached as a suffix to a diluted sample | QC | Quality Control |
| DUP | Duplicate | % Rec | Percent Recovery |
| ICB | Initial Calibration Blank | RL | Reporting Limit. The RL is typically determined by the concentration of the lowest standard in the calibration curve |
| ICC | Initial Calibration Curve | | |
| ICV | Initial Calibration Verification | | |
| kg | kilogram | | |
| L | Liter | RPD | Relative Percent Difference |
| LCS | Laboratory Control Sample | RSD | Relative Standard Deviation |
| LCSD | Laboratory Control Sample Duplicate | RT | Retention Time |
| MDL | Method Detection Limit as determined according to 40 CFR Part 136 Appendix B | SU | Standard Units |
| | | TIC | Tentatively Identified Compound AKA Library Search Compounds |
| MF | Membrane Filter | | |
| mg | milligram (1000mg = 1g) | TNI | The NELAC (National Environmental Laboratory Accreditation Council) Institute |
| µg | microgram (1000µg = 1mg) | | |
| ml | milliliter (1000ml = 1L) | TNTC | Too numerous to count |
| µl | microliter (1000µl = 1ml) | * | When attached to a compound name, indicates this analyte was analyzed by Method SW-846 8270 SIM |
| µmhos | Conductivity units - resistance expressed in ohms | | |
| MPN | Most Probable Number | ^ | When attached to a compound name, indicates this analyte was analyzed by Method SW-846 8011 or EPA 504.1 |
| MS | Matrix Spike | | |
| MSD | Matrix Spike Duplicate | | |
| NA | Not applicable | < | Less than; In conjunction with a numerical value, indicates a concentration less than the RL or MDL |
| NC | Not calculated | | |

SAMPLE DELIVERY GROUP CASE NARRATIVE
(Conformance / Non-Conformance Summary)

# SAMPLE DELIVERY GROUP CASE NARRATIVE

## SDG#: E23-05046

Integrated Analytical Laboratories, LLC. received twenty-two (22) samples** from HK Engineering & Geology, D.P.C. (IAL SDG# **E23-05046**, Project: HK-2661.1 CHELSEA) on November 16, 2023 for the analysis of :

( 4 ) Low Level TCL VO for 8260+8011 + 15
( 14 ) TCL VO + 15
( 14 ) TCL BNA + 15
( 4 ) TCL BNA + SIMS + 15
( 18 ) TCL PCB
( 18 ) TCL Pesticides
( 18 ) Cyanide, Total
( 22 ) TAL Metals (6020B/7471B) by SGS Dayton

**Number of samples listed above may be greater than what is listed on the chain of custody. Any samples that require in-house filtration or splitting will be counted as separate samples.

Samples were received in good condition with documentation in order.
Cooler temperature was acceptable at 4 ± 2 degree C.

**Volatiles By SW 8260D** **Batch: 231120** **Matrix: Aqueous**

**QC**
- Calibration curve met QC criteria.
- Internal standards recovery met QC criteria.
- Surrogate percent recovery met QC criteria.
- Method blank met QC criteria.
- LCS percent recovery met QC criteria. NJDEP DKQP criteria not met.
- MS/MSD RPD met QC criteria.
- MS/MSD percent recovery met QC criteria. NJDEP DKQP criteria not met.

**E23-05046**
- All samples were received within holding time.
- All samples were analyzed within holding time.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05046-011 | 1 | NA |
| E23-05046-012 | 1 | NA |
| E23-05046-013 | 1 | NA |
| E23-05046-014 | 1 | NA |

**Microextractable By SW 8011** **Batch: 231121-01** **Matrix: Aqueous**

**QC**
- Calibration curve met QC criteria.
- Method blank met QC criteria.
- LCS Percent Recovery met QC criteria.
- MS Percent Recovery met QC criteria.
- RPD between the Sample/Duplicate met QC criteria.

**E23-05046**
- All samples were received within holding time.
- All samples were analyzed within holding time.
- Retention Time Shift met QC criteria.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05046-011 | 1 | NA |
| E23-05046-012 | 1 | NA |
| E23-05046-013 | 1 | NA |
| E23-05046-014 | 1 | NA |

# SAMPLE DELIVERY GROUP CASE NARRATIVE

## SDG#: E23-05046

**Semivolatiles By SW 8270E** | **Batch: 231120-01** | **Matrix: Soil**

**QC**

- Calibration curve met QC criteria.
- Internal standard recovery met QC criteria.
- Surrogate recovery did not meet QC criteria due to matrix interference. NJDEP DKQP criteria not met.
- Method blank met QC criteria.
- LCS percent recovery did not meet QC criteria due to Benzidine, 3,3'-Dimethylbenzidine fail high, but no positive hits was/were found in the associated sample. NJDEP DKQP criteria not met.
- MS/MSD RPD did not meet QC criteria due to matrix interference. NJDEP DKQP criteria not met.
- MS/MSD percent recovery did not meet QC criteria due to matrix interference. NJDEP DKQP criteria not met.

**E23-05046**

- All samples were received within holding time.
- All samples were extracted within holding time.
- All samples were analyzed within holding time.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05046-001 | 1 | NA |
| E23-05046-002 | 1 | NA |
| E23-05046-003 | 1 | NA |
| E23-05046-004 | 1 | NA |
| E23-05046-005 | 1 | NA |
| E23-05046-006 | 2 | Target compound(s). |
| E23-05046-007 | 10 | Target compound(s). |
| E23-05046-008 | 1 | NA |
| E23-05046-009 | 1 | NA |
| E23-05046-010 | 1 | NA |
| E23-05046-015 | 1 | NA |
| E23-05046-016 | 1 | NA |
| E23-05046-017 | 1 | NA |
| E23-05046-018 | 1 | NA |

The result reported for 1,2-Diphenylhydrazine is also representative of Azobenzene. 1,2-Diphenylhydrazine rapidly decomposes to Azobenzene when exposed to water or heat. Analytical results from analysis of 1,2-Diphenylhydrazine will be directly compared to the applicable criteria for Azobenzene and/or 1,2-Diphenylhydrazine.

# SAMPLE DELIVERY GROUP CASE NARRATIVE

## SDG#: E23-05046

**Semivolatiles By SW 8270E, SW 8270E SIM** **Batch: 231120-04** **Matrix: Aqueous**

**QC**
- Calibration curve met QC criteria.
- Internal standard recovery met QC criteria.
- Surrogate recovery did not meet QC criteria due to matrix interference. NJDEP DKQP criteria not met.
- Method blank met QC criteria.
- LCS percent recovery met QC criteria. NJDEP DKQP criteria not met.
- MS/MSD RPD did not meet QC criteria due to RPD failing high for benzaldehyde. NJDEP DKQP criteria not met.
- MS/MSD percent recovery met QC criteria. NJDEP DKQP criteria not met.
- CCV did not pass for all compounds. A sensitivity check was ran for Benzaldehyde. Compounds that did not have a passing CCV were reported as non-detect.

**E23-05046**
- All samples were received within holding time.
- All samples were extracted within holding time.
- All samples were analyzed within holding time.
- 05046-012: SIM not reported due to matrix interference and high target compounds.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05046-011 | 1 | NA |
| E23-05046-012 | 1 | NA |
| E23-05046-013 | 1 | NA |
| E23-05046-014 | 1 | NA |

The result reported for 1,2-Diphenylhydrazine is also representative of Azobenzene. 1,2-Diphenylhydrazine rapidly decomposes to Azobenzene when exposed to water or heat. Analytical results from analysis of 1,2-Diphenylhydrazine will be directly compared to the applicable criteria for Azobenzene and/or 1,2-Diphenylhydrazine.

**PCB By SW 8082A** **Batch: 231120-01** **Matrix: Aqueous**

**QC**
- Calibration curve met QC criteria.
- Surrogate percent recovery met QC criteria.
- Method blank met QC criteria.
- LCS Percent Recovery met QC criteria.
- RPD between MS/MSD met QC criteria.
- MS/MSD Percent Recovery met QC criteria.
- The following samples were cleaned up using method 3660B to remove sulfur: BLKA231120-01, LCSA231120-01, E23-05046-014MS, E23-05046-014MSD, E23-05046-011, E23-05046-012, E23-05046-013, E23-05046-014.

**E23-05046**
- All samples were received within holding time.
- All samples were extracted within holding time.
- All samples were analyzed within holding time.
- Retention Time Shift met QC criteria.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05046-011 | 1 | NA |
| E23-05046-012 | 1 | NA |
| E23-05046-013 | 1 | NA |
| E23-05046-014 | 1 | NA |

# SAMPLE DELIVERY GROUP CASE NARRATIVE

## SDG#: E23-05046

**PCB By SW 8082A** | **Batch: 231120-08** | **Matrix: Soil**

**QC**
- Calibration curve met QC criteria.
- Surrogate percent recovery met QC criteria.
- Method blank met QC criteria.
- LCS Percent Recovery met QC criteria.
- RPD between MS/MSD met QC criteria.
- MS/MSD Percent Recovery met QC criteria.
- The following samples were cleaned up using method 3660B to remove sulfur: BLKS231120-08, LCSS231120-08, E23-05046-010MS, E23-05046-010MSD, E23-05046-001, E23-05046-002, E23-05046-003, E23-05046-004, E23-05046-005, E23-05046-006, E23-05046-007, E23-05046-008, E23-05046-009, E23-05046-010, E23-05046-015, E23-05046-016, E23-05046-017, E23-05046-018.

**E23-05046**
- All samples were received within holding time.
- All samples were extracted within holding time.
- All samples were analyzed within holding time.
- Retention Time Shift met QC criteria.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05046-001 | 1 | NA |
| E23-05046-002 | 1 | NA |
| E23-05046-003 | 1 | NA |
| E23-05046-004 | 1 | NA |
| E23-05046-005 | 1 | NA |
| E23-05046-006 | 1 | NA |
| E23-05046-007 | 1 | NA |
| E23-05046-008 | 1 | NA |
| E23-05046-009 | 1 | NA |
| E23-05046-010 | 1 | NA |
| E23-05046-015 | 1 | NA |
| E23-05046-016 | 1 | NA |
| E23-05046-017 | 1 | NA |
| E23-05046-018 | 1 | NA |

**Pesticides By SW 8081B** | **Batch: 231120-01** | **Matrix: Aqueous**

**QC**
- Calibration curve met QC criteria.
- Surrogate percent recovery met QC criteria.
- Method blank met QC criteria.
- LCS Percent Recovery met QC criteria.
- RPD between MS/MSD met QC criteria.
- MS/MSD percent recovery did not meet QC criteria due to matrix interference. NJDEP DKQP criteria not met.
- The following samples were cleaned up using method 3660B to remove sulfur: BLKA231120-01, E23-05009-001MSD, LCSA231120-01, E23-05046-011, E23-05046-012, E23-05046-013, E23-05046-014.

**E23-05046**
- All samples were received within holding time.
- All samples were extracted within holding time.
- All samples were analyzed within holding time.
- Retention Time Shift met QC criteria.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05046-011 | 1 | NA |
| E23-05046-012 | 1 | NA |
| E23-05046-013 | 1 | NA |
| E23-05046-014 | 1 | NA |

# SAMPLE DELIVERY GROUP CASE NARRATIVE

## SDG#: E23-05046

**Pesticides By SW 8081B** | **Batch: 231120-08** | **Matrix: Soil**

**QC**
- Calibration curve met QC criteria.
- Surrogate percent recovery did not meet QC criteria due to matrix intreference for #006; #007; #008. NJDEP DKQP criteria not met.
- Method blank met QC criteria.
- LCS Percent Recovery met QC criteria.
- RPD between MS/MSD met QC criteria.
- MS/MSD percent recovery did not meet QC criteria due to matrix interference. NJDEP DKQP criteria not met.
- The RPD between the primary and secondary column was >40% for the following samples: #017. Per SW-846 8000D, the lower of the two concentrations was reported.
- The following samples were cleaned up using method 3660B to remove sulfur: BLKS231120-08, LCSS231120-08, E23-05046-010MS, E23-05046-010MSD, E23-05046-001, E23-05046-002, E23-05046-003, E23-05046-004, E23-05046-005, E23-05046-006, E23-05046-007, E23-05046-008, E23-05046-009, E23-05046-010, E23-05046-015, E23-05046-016, E23-05046-017, E23-05046-018.

**E23-05046**
- All samples were received within holding time.
- All samples were extracted within holding time.
- All samples were analyzed within holding time.
- Retention Time Shift met QC criteria.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05046-001 | 1 | NA |
| E23-05046-002 | 1 | NA |
| E23-05046-003 | 1 | NA |
| E23-05046-004 | 1 | NA |
| E23-05046-005 | 1 | NA |
| E23-05046-006 | 1 | NA |
| E23-05046-007 | 1 | NA |
| E23-05046-008 | 1;2 | Target compound(s). |
| E23-05046-009 | 1 | NA |
| E23-05046-010 | 1 | NA |
| E23-05046-015 | 1 | NA |
| E23-05046-016 | 1 | NA |
| E23-05046-017 | 1 | NA |
| E23-05046-018 | 1 | NA |

**Cyanide, Total By EPA 335.4** | **Batch: AP013-0113** | **Matrix: Aqueous**

**QC**
- Method blank met QC criteria.
- LCS percent recovery met QC criteria.
- MS/MSD Percent Recovery met QC criteria.
- Duplicate Recoveries met QC criteria.

**E23-05046**
- All samples were received within holding time.
- All samples were analyzed within holding time.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05046-011 | 1 | NA |
| E23-05046-012 | 1 | NA |
| E23-05046-013 | 1 | NA |
| E23-05046-014 | 1 | NA |

# SAMPLE DELIVERY GROUP CASE NARRATIVE

## SDG#: E23-05046

**Cyanide, Total By SW 9012B** **Batch: AP013-0114** **Matrix: Soil**

**QC** - Method blank met QC criteria.
- LCS percent recovery met QC criteria.
- MS/MSD Percent Recovery met QC criteria.
- Duplicate Recoveries met QC criteria.

**E23-05046** - All samples were received within holding time.
- All samples were analyzed within holding time.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05046-001 | 1 | NA |
| E23-05046-002 | 1 | NA |
| E23-05046-003 | 1 | NA |
| E23-05046-004 | 1 | NA |
| E23-05046-005 | 1 | NA |
| E23-05046-006 | 1 | NA |
| E23-05046-007 | 1 | NA |
| E23-05046-008 | 1 | NA |
| E23-05046-009 | 1 | NA |
| E23-05046-010 | 1 | NA |
| E23-05046-015 | 1 | NA |
| E23-05046-016 | 1 | NA |
| E23-05046-017 | 1 | NA |
| E23-05046-018 | 1 | NA |

**Subcontracted to SGS Dayton, TNI certified*, #TNI01283, NJ certified**

**Method: 6020B/7471B** **Matrix: Soil, Aqueous**

**QC** - All analyses met QC criteria.

**E23-05046** - Please see Case Narrative of Subcontracted Report.

Integrated Analytical Laboratories has subcontracted part or all of the results in this report. The laboratory performing the subcontracted work is listed above. These analyses were performed by a NELAP/TNI accredited laboratory, unless otherwise specified. This work was placed with a laboratory accredited for TNI standards for the tests to be performed OR with a laboratory that meets applicable statutory and regulatory requirements for performing the tests and submitting the results of tests performed. Integrated Analytical Laboratories will keep a copy of the subcontractor's report on file.
*TNI, The NELAC Institute, is a nationally recognized laboratory accreditation program. The TNI Standard is intended as an application of ISO/IEC 17025:2005(E), General Requirements for the Competence of Testing and Calibration Laboratories. While individual states and entities offer certification, TNI standards foster the generation of environmental data of known and documented quality through an open, inclusive, and transparent process that is responsive to the needs of the community.

A review of the QA/QC measures for the analysis of the sample(s) contained in this report has been performed by:

Heather Daly
Reviewed by

12/6/2023
Date

# CASE NARRATIVE / CONFORMANCE SUMMARY



**Client:** Integrated Analytical Lab **Job No:** JD77310

**Site:** Integrated Analytical Lab, Randolph, NJ **Report Date** 12/5/2023 4:30:37 PM

On 11/20/2023, 22 sample(s), 0 Trip Blank(s), 0 Equip. Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. (SGS) at a temperature of 1.1 °C. The samples were intact and properly preserved, unless noted below. An SGS Job Number of JD77310 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

## Metals Analysis By Method SW846 6010D

**Matrix:** AQ **Batch ID:** MP43267

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD77310-14FMSD, JD77310-14FSDL, JD77310-14FMS, JD77310-14FMSD were used as the QC samples for the metals analysis.
- The matrix spike (MS) recovery(s) of Sodium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- The serial dilution RPD(s) for Aluminum, Barium, Chromium, Copper, Magnesium, Vanadium, Zinc, Calcium are outside control limits for sample MP43267-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP43267-SD1 for Calcium: Serial dilution indicates possible matrix interference.

**Matrix:** AQ **Batch ID:** MP43295

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD77329-4MS, JD77329-4MSD, JD77329-4SDL were used as the QC samples for the metals analysis.
- The serial dilution RPD(s) for Antimony, Arsenic, Barium, Cadmium, Cobalt, Copper, Lead, Thallium, Vanadium, Aluminum, Chromium, Potassium, Zinc are outside control limits for sample MP43295-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP43295-SD1 for Aluminum: Serial dilution indicates possible matrix interference.

**Matrix:** SO **Batch ID:** MP43275

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD77308-1MSD, JD77308-1PS, JD77308-1SDL, JD77308-1MS, JD77308-1MSD were used as the QC samples for the metals analysis.
- The matrix spike (MS) recovery(s) of Antimony are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- The matrix spike duplicate (MSD) recovery(s) of Antimony are outside control limits. Probable cause due to matrix interference.
- The matrix spike (MS) recovery(s) of Aluminum, Iron are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- The serial dilution RPD(s) for Antimony, Silver, Sodium, Magnesium, Potassium are outside control limits for sample MP43275-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

## Metals Analysis By Method SW846 6010D

**Matrix:** SO **Batch ID:** MP43275

- JD77310-7 for Arsenic: Elevated detection limit due to dilution required for high interfering element.
- JD77310-7 for Silver: Elevated detection limit due to dilution required for high interfering element.
- JD77310-7 for Selenium: Elevated detection limit due to dilution required for high interfering element.
- JD77310-7 for Nickel: Elevated detection limit due to dilution required for high interfering element.
- JD77310-7 for Lead: Elevated detection limit due to dilution required for high interfering element.
- JD77310-7 for Copper: Elevated detection limit due to dilution required for high interfering element.
- JD77310-7 for Chromium: Elevated detection limit due to dilution required for high interfering element.
- JD77310-7 for Beryllium: Elevated detection limit due to dilution required for high interfering element.
- JD77310-5 for Silver: Elevated detection limit due to dilution required for high interfering element.
- JD77310-7 for Thallium: Elevated detection limit due to dilution required for high interfering element.
- JD77310-7 for Antimony: Elevated detection limit due to dilution required for high interfering element.
- JD77310-6 for Thallium: Elevated detection limit due to dilution required for high interfering element.
- JD77310-5 for Thallium: Elevated detection limit due to dilution required for high interfering element.
- MP43275-SD1 for Magnesium: Serial dilution indicates possible matrix interference.
- MP43275-SD1 for Potassium: Serial dilution indicates possible matrix interference.
- JD77310-5 for Copper: Elevated detection limit due to dilution required for high interfering element.
- JD77310-5 for Selenium: Elevated detection limit due to dilution required for high interfering element.
- JD77310-7 for Cadmium: Elevated detection limit due to dilution required for high interfering element.

## Metals Analysis By Method SW846 7470A

**Matrix:** AQ **Batch ID:** MP43369

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD77310-11FMS, JD77310-11FMSD were used as the QC samples for the metals analysis.

## Metals Analysis By Method SW846 7471B

**Matrix:** SO **Batch ID:** MP43335

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD77310-1MSD, JD77310-1MS were used as the QC samples for the metals analysis.
- The matrix spike (MS) recovery(s) of Mercury are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- The RPD(s) for the MS and MSD recoveries of Mercury are outside control limits for sample MP43335-S2. High rpd due to possible sample nonhomogeneity.

## General Chemistry By Method SM2540 G 18TH ED MOD

**Matrix:** SO **Batch ID:** GN48483

- Sample(s) JD77310-1DUP were used as the QC samples for the Solids, Percent analysis.

2

SGS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting SGS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by SGS indicated via signature on the report cover.

RESULTS SUMMARY REPORT

**SUMMARY REPORT**
**Client: HK Engineering & Geology, D.P.C.**
**Project: HK-2661.1 CHELSEA**
**Lab Case No.: E23-05046**

| Lab ID: | 05046-011 | | | 05046-012 | | | 05046-013 | | | 05046-014 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | TWP1 | | | TWP2 | | | TWP4 | | | TWP5 | | |
| Matrix: | Aqueous | | | Aqueous | | | Aqueous | | | Aqueous | | |
| Sampled Date | 11/15/23 | | | 11/15/23 | | | 11/16/23 | | | 11/16/23 | | |
| **PARAMETER(Units)** | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL |
| **Volatiles (Units)** | *(ug/L)* | | | *(ug/L)* | | | *(ug/L)* | | | *(ug/L)* | | |
| Chloroform | 14.0 | | 0.285 | ND | | 0.285 | ND | | 0.285 | 7.89 | | 0.285 |
| **TOTAL VO's:** | 14.0 | | | ND | | | ND | | | 7.89 | | |
| **TOTAL TIC's:** | ND | | | ND | | | ND | | | ND | | |
| **TOTAL VO's & TIC's:** | 14.0 | | | ND | | | ND | | | 7.89 | | |
| **Semivolatiles - BNA (Units)** | *(ug/L)* | | | *(ug/L)* | | | *(ug/L)* | | | *(ug/L)* | | |
| Phenanthrene | 1.69 | | 0.263 | 20.2 | | 0.263 | ND | | 0.263 | ND | | 0.263 |
| Di-n-butyl phthalate | ND | | 0.343 | 1.84 | | 0.343 | ND | | 0.343 | ND | | 0.343 |
| Fluoranthene | 1.65 | | 0.482 | 21.1 | | 0.482 | ND | | 0.482 | ND | | 0.482 |
| Pyrene | 1.32 | | 0.555 | 29.6 | | 0.555 | ND | | 0.555 | ND | | 0.555 |
| Benzo[a]anthracene | 1.63 | | 0.029 | 10.8 | | 0.300 | 0.103 | | 0.029 | ND | | 0.029 |
| Chrysene | ND | | 0.232 | 9.27 | | 0.232 | ND | | 0.232 | ND | | 0.232 |
| Benzo[b]fluoranthene | 1.62 | | 0.026 | 7.43 | | 0.605 | 0.132 | | 0.026 | ND | | 0.026 |
| Benzo[k]fluoranthene | 1.10 | | 0.035 | 3.28 | | 0.403 | 0.123 | | 0.035 | ND | | 0.035 |
| Benzo[a]pyrene | 1.47 | | 0.027 | 6.64 | | 0.285 | 0.153 | | 0.027 | ND | | 0.027 |
| Indeno[1,2,3-cd]pyrene | 1.01 | | 0.036 | 3.57 | | 1.14 | 0.190 | | 0.036 | ND | | 0.036 |
| Dibenz[a,h]anthracene | 0.594 | | 0.031 | 4.62 | | 1.35 | 0.166 | | 0.031 | ND | | 0.031 |
| Benzo[g,h,i]perylene | ND | | 1.04 | 3.84 | | 1.04 | ND | | 1.04 | ND | | 1.04 |
| **TOTAL BNA'S:** | 12.1 | | | 122 | | | 0.867 | | | ND | | |
| **TOTAL TIC's:** | 23.7 | J | | 614 | JN | | 22.8 | J | | 23.1 | J | |
| **TOTAL BNA'S & TIC's:** | 35.8 | | | 736 | | | 23.7 | | | 23.1 | | |
| **PCB's (Units)** | *(ug/L)* | | | *(ug/L)* | | | *(ug/L)* | | | *(ug/L)* | | |
| Aroclor-1016 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 |
| Aroclor-1221 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 |
| Aroclor-1232 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 |
| Aroclor-1242 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 |
| Aroclor-1248 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 |
| Aroclor-1254 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 |
| Aroclor-1260 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 |
| Aroclor-1262 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 |
| Aroclor-1268 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 |
| PCBs | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 | ND | | 0.015 |

~ = Sample not analyzed for
ND = Analyzed for but Not Detected at the MDL
J = Indicates an estimated value either when the concentration in the sample is greater than MDL and less than RL, or for qualification of TICs
D = The compound was reported from the Diluted analysis
All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.

**SUMMARY REPORT**
**Client: HK Engineering & Geology, D.P.C.**
**Project: HK-2661.1 CHELSEA**
**Lab Case No.: E23-05046**

| Lab ID: | 05046-011 | | | 05046-012 | | | 05046-013 | | | 05046-014 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | TWP1 | | | TWP2 | | | TWP4 | | | TWP5 | | |
| Matrix: | Aqueous | | | Aqueous | | | Aqueous | | | Aqueous | | |
| Sampled Date | 11/15/23 | | | 11/15/23 | | | 11/16/23 | | | 11/16/23 | | |
| PARAMETER(Units) | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL |
| **Pesticides (Units)** | *(ug/L)* | | | *(ug/L)* | | | *(ug/L)* | | | *(ug/L)* | | |
| alpha-BHC | ND | | 0.00206 | ND | | 0.00206 | ND | | 0.00206 | ND | | 0.00206 |
| beta-BHC | ND | | 0.00303 | ND | | 0.00303 | ND | | 0.00303 | ND | | 0.00303 |
| gamma-BHC (Lindane) | ND | | 0.00201 | ND | | 0.00201 | ND | | 0.00201 | ND | | 0.00201 |
| delta-BHC | ND | | 0.00238 | ND | | 0.00238 | ND | | 0.00238 | ND | | 0.00238 |
| Heptachlor | ND | | 0.00235 | ND | | 0.00235 | ND | | 0.00235 | ND | | 0.00235 |
| Aldrin | ND | | 0.00187 | ND | | 0.00187 | ND | | 0.00187 | ND | | 0.00187 |
| Heptachlor epoxide | ND | | 0.00217 | ND | | 0.00217 | ND | | 0.00217 | ND | | 0.00217 |
| Endosulfan I | ND | | 0.00208 | ND | | 0.00208 | ND | | 0.00208 | ND | | 0.00208 |
| 4,4'-DDE | ND | | 0.00197 | ND | | 0.00197 | ND | | 0.00197 | ND | | 0.00197 |
| Dieldrin | ND | | 0.00237 | ND | | 0.00237 | ND | | 0.00237 | ND | | 0.00237 |
| Endrin | ND | | 0.00289 | ND | | 0.00289 | ND | | 0.00289 | ND | | 0.00289 |
| Endosulfan II | ND | | 0.00258 | ND | | 0.00258 | ND | | 0.00258 | ND | | 0.00258 |
| 4,4'-DDD | ND | | 0.00294 | ND | | 0.00294 | ND | | 0.00294 | ND | | 0.00294 |
| Endrin aldehyde | ND | | 0.0023 | ND | | 0.0023 | ND | | 0.0023 | ND | | 0.0023 |
| Endosulfan sulfate | ND | | 0.00314 | ND | | 0.00314 | ND | | 0.00314 | ND | | 0.00314 |
| 4,4'-DDT | ND | | 0.00202 | ND | | 0.00202 | ND | | 0.00202 | ND | | 0.00202 |
| Endrin ketone | ND | | 0.00323 | ND | | 0.00323 | ND | | 0.00323 | ND | | 0.00323 |
| Methoxychlor | ND | | 0.00337 | ND | | 0.00337 | ND | | 0.00337 | ND | | 0.00337 |
| alpha-Chlordane | ND | | 0.00215 | ND | | 0.00215 | ND | | 0.00215 | ND | | 0.00215 |
| gamma-Chlordane | ND | | 0.00314 | ND | | 0.00314 | ND | | 0.00314 | ND | | 0.00314 |
| Toxaphene | ND | | 0.050 | ND | | 0.050 | ND | | 0.050 | ND | | 0.050 |
| Endosulfan (I and II) | ND | | 0.00208 | ND | | 0.00208 | ND | | 0.00208 | ND | | 0.00208 |
| Chlordane (alpha and gamma) | ND | | 0.00215 | ND | | 0.00215 | ND | | 0.00215 | ND | | 0.00215 |
| **General Analytical (Units)** | | | | | | | | | | | | |
| Cyanide, Total(ug/L) | ND | | 4.00 | ND | | 4.00 | ND | | 4.00 | ND | | 4.00 |

| Lab ID: | 05046-019 | | | 05046-020 | | | 05046-021 | | | 05046-022 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | TWP1 FILT | | | TWP2 FILT | | | TWP4 FILT | | | TWP5 FILT | | |
| Matrix: | Aqueous | | | Aqueous | | | Aqueous | | | Aqueous | | |
| Sampled Date | 11/15/23 | | | 11/15/23 | | | 11/16/23 | | | 11/16/23 | | |
| PARAMETER(Units) | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL |
| **Semivolatiles - BNA (Units)** | *(ug/L)* | | | *(ug/L)* | | | *(ug/L)* | | | *(ug/L)* | | |
| | ~ | | ~ | ~ | | ~ | ~ | | ~ | ~ | | ~ |

~ = Sample not analyzed for
ND = Analyzed for but Not Detected at the MDL

**SUMMARY REPORT**
**Client: HK Engineering & Geology, D.P.C.**
**Project: HK-2661.1 CHELSEA**
**Lab Case No.: E23-05046**

| Lab ID: | 05046-001 | | | 05046-002 | | | 05046-003 | | | 05046-004 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | SB12A | | | SB2A | | | SB2B | | | SB1A | | |
| Depth: | 0/2 | | | 0/2 | | | 10/12 | | | 0/2 | | |
| Matrix: | Soil | | | Soil | | | Soil | | | Soil | | |
| Sampled Date | 11/15/23 | | | 11/15/23 | | | 11/15/23 | | | 11/15/23 | | |
| PARAMETER(Units) | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL |
| **Volatiles (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| Acetone | ND | | 0.007 | ND | | 0.0048 | 0.00904 | J | 0.00645 | ND | | 0.00795 |
| Methylene chloride | ND | | 0.0042 | ND | | 0.00288 | 0.0046 | CJ | 0.00387 | ND | | 0.00477 |
| **TOTAL VO's:** | ND | | | ND | | | 0.014 | CJ | | ND | | |
| **TOTAL TIC's:** | ND | | | ND | | | 0.0071 | JN | | ND | | |
| **TOTAL VO's & TIC's:** | ND | | | ND | | | 0.021 | CJ | | ND | | |
| **Semivolatiles - BNA (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| Benzaldehyde | ND | | 0.029 | ND | | 0.027 | 0.102 | | 0.027 | ND | | 0.028 |
| Naphthalene | ND | | 0.00557 | 0.085 | | 0.00525 | ND | | 0.00527 | 0.032 | J | 0.00536 |
| 2-Methylnaphthalene | ND | | 0.013 | 0.065 | | 0.013 | ND | | 0.013 | 0.023 | J | 0.013 |
| 1,1'-Biphenyl | ND | | 0.00568 | 0.020 | J | 0.00535 | ND | | 0.00537 | ND | | 0.00546 |
| Acenaphthylene | 0.031 | J | 0.00836 | 0.074 | | 0.00787 | ND | | 0.0079 | 0.076 | | 0.00804 |
| Acenaphthene | ND | | 0.00754 | 0.143 | | 0.0071 | ND | | 0.00713 | 0.091 | | 0.00725 |
| Dibenzofuran | ND | | 0.005 | 0.102 | | 0.0047 | ND | | 0.00472 | 0.039 | | 0.0048 |
| Fluorene | ND | | 0.010 | 0.166 | | 0.00968 | ND | | 0.00972 | 0.068 | | 0.00988 |
| Phenanthrene | 0.353 | | 0.00625 | 2.61 | | 0.00588 | 0.180 | | 0.00591 | 1.18 | | 0.00601 |
| Anthracene | 0.080 | | 0.00389 | 0.626 | | 0.00366 | 0.059 | | 0.00368 | 0.311 | | 0.00374 |
| Carbazole | 0.026 | J | 0.0089 | 0.163 | | 0.00838 | ND | | 0.00842 | 0.103 | | 0.00856 |
| Di-n-butyl phthalate | ND | | 0.016 | ND | | 0.015 | ND | | 0.015 | 0.029 | J | 0.015 |
| Fluoranthene | 0.601 | | 0.012 | 3.46 | | 0.012 | 0.379 | | 0.012 | 2.25 | | 0.012 |
| Pyrene | 0.608 | | 0.00889 | 3.17 | | 0.00837 | 0.325 | | 0.0084 | 2.17 | | 0.00854 |
| Benzo[a]anthracene | 0.313 | | 0.014 | 1.80 | | 0.013 | 0.190 | | 0.013 | 1.28 | | 0.013 |
| Chrysene | 0.332 | | 0.011 | 1.60 | | 0.00992 | 0.173 | | 0.00997 | 1.10 | | 0.010 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.025 | ND | | 0.023 | ND | | 0.023 | 0.280 | | 0.024 |
| Benzo[b]fluoranthene | 0.287 | | 0.019 | 1.57 | | 0.018 | 0.207 | | 0.018 | 1.42 | | 0.018 |
| Benzo[k]fluoranthene | 0.264 | | 0.026 | 1.08 | | 0.025 | 0.138 | | 0.025 | 0.858 | | 0.025 |
| Benzo[a]pyrene | 0.299 | | 0.019 | 1.44 | | 0.017 | 0.177 | | 0.018 | 1.29 | | 0.018 |
| Indeno[1,2,3-cd]pyrene | 0.190 | | 0.024 | 0.845 | | 0.023 | 0.114 | | 0.023 | 0.788 | | 0.024 |
| Dibenz[a,h]anthracene | 0.103 | | 0.015 | 0.487 | | 0.014 | 0.064 | | 0.014 | 0.380 | | 0.015 |
| Benzo[g,h,i]perylene | 0.199 | | 0.029 | 0.870 | | 0.027 | 0.120 | | 0.027 | 0.831 | | 0.028 |
| **TOTAL BNA'S:** | 3.69 | J | | 20.4 | J | | 2.23 | | | 14.6 | J | |
| **TOTAL TIC's:** | ND | | | 0.676 | JN | | ND | | | 0.191 | J | |
| **TOTAL BNA'S & TIC's:** | 3.69 | J | | 21.1 | J | | 2.23 | | | 14.8 | J | |

ND = Analyzed for but Not Detected at the MDL
J = Indicates an estimated value either when the concentration in the sample is greater than MDL and less than RL, or for qualification of TICs
D = The compound was reported from the Diluted analysis
All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.

**SUMMARY REPORT**
**Client: HK Engineering & Geology, D.P.C.**
**Project: HK-2661.1 CHELSEA**
**Lab Case No.: E23-05046**

| Lab ID: | 05046-001 | | | 05046-002 | | | 05046-003 | | | 05046-004 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | SB12A | | | SB2A | | | SB2B | | | SB1A | | |
| Depth: | 0/2 | | | 0/2 | | | 10/12 | | | 0/2 | | |
| Matrix: | Soil | | | Soil | | | Soil | | | Soil | | |
| Sampled Date | 11/15/23 | | | 11/15/23 | | | 11/15/23 | | | 11/15/23 | | |
| **PARAMETER(Units)** | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL |
| **PCB's (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| Aroclor-1016 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1221 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1232 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1242 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1248 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1254 | ND | | 0.0011 | 0.080 | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1260 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1262 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1268 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| PCBs | ND | | 0.00115 | 0.080 | | 0.00108 | ND | | 0.00109 | ND | | 0.00111 |
| **Pesticides (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| alpha-BHC | ND | | 0.000137 | ND | | 0.000128 | ND | | 0.00013 | ND | | 0.000132 |
| beta-BHC | ND | | 0.000179 | ND | | 0.000168 | ND | | 0.00017 | ND | | 0.000172 |
| gamma-BHC (Lindane) | ND | | 0.000171 | ND | | 0.00016 | ND | | 0.000162 | ND | | 0.000164 |
| delta-BHC | ND | | 0.000149 | ND | | 0.000139 | ND | | 0.000141 | ND | | 0.000143 |
| Heptachlor | ND | | 0.000182 | ND | | 0.00017 | ND | | 0.000173 | ND | | 0.000175 |
| Aldrin | ND | | 0.00016 | ND | | 0.00015 | ND | | 0.000152 | ND | | 0.000154 |
| Heptachlor epoxide | ND | | 0.000166 | ND | | 0.000156 | ND | | 0.000158 | ND | | 0.00016 |
| Endosulfan I | ND | | 0.000172 | ND | | 0.000161 | ND | | 0.000163 | ND | | 0.000165 |
| 4,4'-DDE | ND | | 0.000156 | 0.0034 | | 0.000146 | 0.00226 | | 0.000148 | 0.019 | | 0.00015 |
| Dieldrin | ND | | 0.000156 | 0.00127 | | 0.000146 | ND | | 0.000148 | 0.00332 | | 0.00015 |
| Endrin | ND | | 0.000193 | ND | | 0.000181 | ND | | 0.000183 | ND | | 0.000186 |
| Endosulfan II | ND | | 0.000176 | ND | | 0.000165 | ND | | 0.000167 | ND | | 0.000169 |
| 4,4'-DDD | ND | | 0.000204 | ND | | 0.000192 | 0.000712 | J | 0.000194 | 0.00407 | | 0.000197 |
| Endrin aldehyde | ND | | 0.00016 | ND | | 0.00015 | ND | | 0.000152 | ND | | 0.000154 |
| Endosulfan sulfate | ND | | 0.00019 | ND | | 0.000178 | ND | | 0.00018 | ND | | 0.000183 |
| 4,4'-DDT | ND | | 0.000143 | 0.00556 | | 0.000134 | 0.00384 | | 0.000135 | 0.027 | | 0.000137 |
| Endrin ketone | ND | | 0.000149 | ND | | 0.00014 | ND | | 0.000142 | ND | | 0.000144 |
| Methoxychlor | ND | | 0.000205 | ND | | 0.000192 | ND | | 0.000194 | ND | | 0.000197 |
| alpha-Chlordane | ND | | 0.000169 | ND | | 0.000159 | ND | | 0.00016 | 0.00369 | | 0.000163 |
| gamma-Chlordane | ND | | 0.000151 | ND | | 0.000141 | ND | | 0.000143 | 0.00319 | | 0.000145 |
| Toxaphene | ND | | 0.00383 | ND | | 0.00359 | ND | | 0.00364 | ND | | 0.00369 |
| Endosulfan (I and II) | ND | | 0.000172 | ND | | 0.000161 | ND | | 0.000163 | ND | | 0.000165 |
| Chlordane (alpha and gamma) | ND | | 0.000151 | ND | | 0.000141 | ND | | 0.000143 | 0.00688 | | 0.000145 |
| **General Analytical (Units)** | | | | | | | | | | | | |
| Cyanide, Total(mg/Kg) | 0.288 | J | 0.231 | ND | | 0.216 | ND | | 0.218 | 0.222 | J | 0.222 |

ND = Analyzed for but Not Detected at the MDL
J = Indicates an estimated value either when the concentration in the sample is greater than MDL and less than RL, or for qualification of TICs
D = The compound was reported from the Diluted analysis
All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.

**SUMMARY REPORT**
**Client: HK Engineering & Geology, D.P.C.**
**Project: HK-2661.1 CHELSEA**
**Lab Case No.: E23-05046**

| Lab ID: | 05046-005 | | | 05046-006 | | | 05046-007 | | | 05046-008 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | SB1B | | | SB3A | | | SB3B | | | SB10A | | |
| Depth: | 10/12 | | | 0/2 | | | 10/12 | | | 1.5/2.5 | | |
| Matrix: | Soil | | | Soil | | | Soil | | | Soil | | |
| Sampled Date | 11/15/23 | | | 11/15/23 | | | 11/15/23 | | | 11/15/23 | | |
| PARAMETER(Units) | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL |
| **Volatiles (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| Acetone | ND | | 0.00585 | ND | | 0.00595 | 0.019 | | 0.00595 | 0.0068 | J | 0.0055 |
| Methylene chloride | 0.00432 | CJ | 0.00351 | ND | | 0.00357 | ND | | 0.00357 | ND | | 0.0033 |
| **TOTAL VO's:** | 0.00432 | CJ | | ND | | | 0.019 | | | 0.0068 | J | |
| **TOTAL TIC's:** | ND | | | ND | | | 0.030 | JN | | 0.041 | JN | |
| **TOTAL VO's & TIC's:** | 0.00432 | CJ | | ND | | | 0.049 | | | 0.048 | J | |
| **Semivolatiles - BNA (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| Naphthalene | 0.108 | | 0.00569 | 0.117 | D | 0.011 | 1.29 | D | 0.054 | ND | | 0.00534 |
| 2-Methylnaphthalene | 0.156 | | 0.014 | 0.084 | D | 0.026 | 0.910 | D | 0.131 | ND | | 0.013 |
| 1,1'-Biphenyl | ND | | 0.0058 | ND | | 0.011 | 0.265 | DJ | 0.056 | ND | | 0.00544 |
| Acenaphthylene | 0.125 | | 0.00854 | 0.251 | D | 0.016 | 0.969 | D | 0.082 | 0.078 | | 0.00801 |
| Acenaphthene | 0.335 | | 0.0077 | 0.444 | D | 0.015 | 3.45 | D | 0.074 | 0.115 | | 0.00723 |
| Dibenzofuran | ND | | 0.0051 | 0.197 | D | 0.0097 | 1.68 | D | 0.049 | 0.048 | | 0.00479 |
| Fluorene | 0.193 | | 0.011 | 0.318 | D | 0.020 | 2.22 | D | 0.100 | 0.098 | | 0.00985 |
| Phenanthrene | 2.95 | | 0.00638 | 5.70 | D | 0.012 | 33.6 | D | 0.061 | 1.62 | | 0.00599 |
| Anthracene | 0.524 | | 0.00397 | 1.28 | D | 0.00755 | 7.19 | D | 0.038 | 0.447 | | 0.00372 |
| Carbazole | ND | | 0.00909 | 0.426 | D | 0.017 | 2.76 | D | 0.087 | 0.098 | | 0.00853 |
| Di-n-butyl phthalate | ND | | 0.016 | 0.112 | D | 0.030 | ND | | 0.151 | ND | | 0.015 |
| Fluoranthene | 3.89 | | 0.013 | 9.14 | D | 0.024 | 38.7 | D | 0.120 | 3.39 | | 0.012 |
| Pyrene | 3.32 | | 0.00908 | 8.24 | D | 0.017 | 34.2 | D | 0.087 | 2.81 | | 0.00851 |
| Benzo[a]anthracene | 1.68 | | 0.014 | 4.16 | D | 0.027 | 15.3 | D | 0.136 | 1.62 | | 0.013 |
| Chrysene | 1.52 | | 0.011 | 3.86 | D | 0.021 | 14.0 | D | 0.103 | 1.39 | | 0.010 |
| Bis(2-ethylhexyl) phthalate | 0.125 | | 0.025 | ND | | 0.048 | ND | | 0.239 | ND | | 0.024 |
| Benzo[b]fluoranthene | 1.58 | | 0.019 | 3.81 | D | 0.037 | 13.6 | D | 0.184 | 1.51 | | 0.018 |
| Benzo[k]fluoranthene | 1.10 | | 0.027 | 3.22 | D | 0.051 | 10.4 | D | 0.258 | 1.17 | | 0.025 |
| Benzo[a]pyrene | 1.46 | | 0.019 | 3.97 | D | 0.036 | 13.3 | D | 0.181 | 1.48 | | 0.018 |
| Indeno[1,2,3-cd]pyrene | 0.858 | | 0.025 | 1.98 | D | 0.048 | 7.05 | D | 0.239 | 0.932 | | 0.023 |
| Dibenz[a,h]anthracene | 0.443 | | 0.016 | 1.03 | D | 0.030 | 3.51 | D | 0.149 | 0.489 | | 0.015 |
| Benzo[g,h,i]perylene | 0.874 | | 0.029 | 1.89 | D | 0.056 | 7.07 | D | 0.281 | 1.07 | | 0.028 |
| **TOTAL BNA'S:** | 21.2 | | | 50.2 | D | | 211 | DJ | | 18.4 | | |
| **TOTAL TIC's:** | 23.4 | JN | | 1.53 | DJ | | 2.42 | DJN | | 0.168 | JN | |
| **TOTAL BNA'S & TIC's:** | 44.6 | | | 51.7 | D | | 213 | DJ | | 18.6 | | |

ND = Analyzed for but Not Detected at the MDL
J = Indicates an estimated value either when the concentration in the sample is greater than MDL and less than RL, or for qualification of TICs
D = The compound was reported from the Diluted analysis
All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.
N = Presumptive evidence of a compound from the use of GC/MS library search.

**SUMMARY REPORT**
**Client: HK Engineering & Geology, D.P.C.**
**Project: HK-2661.1 CHELSEA**
**Lab Case No.: E23-05046**

| Lab ID: | 05046-005 | | | 05046-006 | | | 05046-007 | | | 05046-008 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | SB1B | | | SB3A | | | SB3B | | | SB10A | | |
| Depth: | 10/12 | | | 0/2 | | | 10/12 | | | 1.5/2.5 | | |
| Matrix: | Soil | | | Soil | | | Soil | | | Soil | | |
| Sampled Date | 11/15/23 | | | 11/15/23 | | | 11/15/23 | | | 11/15/23 | | |
| **PARAMETER(Units)** | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL |
| **PCB's (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| Aroclor-1016 | ND | | 0.0012 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1221 | ND | | 0.0012 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1232 | ND | | 0.0012 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1242 | ND | | 0.0012 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1248 | ND | | 0.0012 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1254 | ND | | 0.0012 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1260 | ND | | 0.0012 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1262 | ND | | 0.0012 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1268 | ND | | 0.0012 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| PCBs | ND | | 0.00117 | ND | | 0.00111 | ND | | 0.00113 | ND | | 0.00109 |
| **Pesticides (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| alpha-BHC | ND | | 0.00014 | ND | | 0.000132 | ND | | 0.000134 | ND | | 0.00013 |
| beta-BHC | ND | | 0.000182 | ND | | 0.000172 | ND | | 0.000175 | ND | | 0.00017 |
| gamma-BHC (Lindane) | ND | | 0.000174 | ND | | 0.000165 | ND | | 0.000167 | ND | | 0.000162 |
| delta-BHC | ND | | 0.000152 | ND | | 0.000143 | ND | | 0.000145 | ND | | 0.000141 |
| Heptachlor | ND | | 0.000186 | ND | | 0.000175 | ND | | 0.000178 | ND | | 0.000173 |
| Aldrin | ND | | 0.000164 | ND | | 0.000155 | ND | | 0.000157 | ND | | 0.000152 |
| Heptachlor epoxide | ND | | 0.00017 | ND | | 0.00016 | ND | | 0.000163 | ND | | 0.000158 |
| Endosulfan I | ND | | 0.000175 | ND | | 0.000165 | ND | | 0.000168 | ND | | 0.000163 |
| 4,4'-DDE | ND | | 0.00016 | 0.013 | | 0.000151 | ND | | 0.000153 | 0.095 | D | 0.000297 |
| Dieldrin | ND | | 0.000159 | ND | | 0.00015 | ND | | 0.000153 | ND | | 0.000148 |
| Endrin | ND | | 0.000197 | ND | | 0.000186 | ND | | 0.000189 | ND | | 0.000184 |
| Endosulfan II | ND | | 0.000179 | ND | | 0.000169 | ND | | 0.000172 | ND | | 0.000167 |
| 4,4'-DDD | ND | | 0.000209 | ND | | 0.000197 | ND | | 0.0002 | 0.014 | | 0.000194 |
| Endrin aldehyde | ND | | 0.000164 | ND | | 0.000155 | ND | | 0.000157 | ND | | 0.000153 |
| Endosulfan sulfate | ND | | 0.000194 | ND | | 0.000183 | ND | | 0.000186 | ND | | 0.00018 |
| 4,4'-DDT | ND | | 0.000145 | 0.021 | | 0.000137 | ND | | 0.000139 | 0.096 | D | 0.000271 |
| Endrin ketone | ND | | 0.000152 | ND | | 0.000144 | ND | | 0.000146 | ND | | 0.000142 |
| Methoxychlor | ND | | 0.000209 | ND | | 0.000197 | ND | | 0.0002 | ND | | 0.000195 |
| alpha-Chlordane | ND | | 0.000173 | ND | | 0.000163 | ND | | 0.000165 | ND | | 0.000161 |
| gamma-Chlordane | ND | | 0.000154 | ND | | 0.000145 | ND | | 0.000147 | ND | | 0.000143 |
| Toxaphene | ND | | 0.00391 | ND | | 0.00369 | ND | | 0.00375 | ND | | 0.00364 |
| Endosulfan (I and II) | ND | | 0.000175 | ND | | 0.000165 | ND | | 0.000168 | ND | | 0.000163 |
| Chlordane (alpha and gamma) | ND | | 0.000154 | ND | | 0.000145 | ND | | 0.000147 | ND | | 0.000143 |
| **General Analytical (Units)** | | | | | | | | | | | | |
| Cyanide, Total(mg/Kg) | 5.71 | | 0.236 | 0.501 | J | 0.222 | 1.24 | | 0.225 | ND | | 0.220 |

ND = Analyzed for but Not Detected at the MDL
J = Indicates an estimated value either when the concentration in the sample is greater than MDL and less than RL, or for qualification of TICs
D = The compound was reported from the Diluted analysis

**SUMMARY REPORT**
**Client: HK Engineering & Geology, D.P.C.**
**Project: HK-2661.1 CHELSEA**
**Lab Case No.: E23-05046**

| Lab ID: | 05046-009 | | | 05046-010 | | | 05046-015 | | | 05046-016 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | SB11A | | | SB8A | | | SB4A | | | SB4B | | |
| Depth: | 1/2 | | | 0/1.5 | | | 0/2 | | | 10/12 | | |
| Matrix: | Soil | | | Soil | | | Soil | | | Soil | | |
| Sampled Date | 11/15/23 | | | 11/15/23 | | | 11/16/23 | | | 11/16/23 | | |
| PARAMETER(Units) | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL |
| **Volatiles (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| Acetone | ND | | 0.00515 | 0.00649 | J | 0.0056 | ND | | 0.0063 | ND | | 0.00585 |
| **TOTAL VO's:** | ND | | | 0.00649 | J | | ND | | | ND | | |
| **TOTAL TIC's:** | ND | | | ND | | | ND | | | ND | | |
| **TOTAL VO's & TIC's:** | ND | | | 0.00649 | J | | ND | | | ND | | |
| **Semivolatiles - BNA (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| Benzaldehyde | ND | | 0.030 | ND | | 0.026 | ND | | 0.029 | 0.173 | | 0.031 |
| Acenaphthylene | 0.048 | | 0.00859 | ND | | 0.0077 | 0.037 | J | 0.00837 | ND | | 0.00906 |
| Acenaphthene | 0.032 | J | 0.00775 | ND | | 0.00694 | ND | | 0.00755 | ND | | 0.00818 |
| Fluorene | 0.032 | J | 0.011 | ND | | 0.00947 | 0.020 | J | 0.010 | ND | | 0.011 |
| Phenanthrene | 0.626 | | 0.00642 | ND | | 0.00575 | 0.212 | | 0.00626 | ND | | 0.00677 |
| Anthracene | 0.177 | | 0.00399 | ND | | 0.00358 | 0.062 | | 0.00389 | ND | | 0.00422 |
| Carbazole | 0.041 | | 0.00914 | ND | | 0.0082 | 0.028 | J | 0.00891 | ND | | 0.00965 |
| Fluoranthene | 1.74 | | 0.013 | 0.018 | J | 0.011 | 0.371 | | 0.012 | 0.030 | J | 0.013 |
| Pyrene | 1.46 | | 0.00913 | 0.019 | J | 0.00818 | 0.333 | | 0.0089 | 0.025 | J | 0.00964 |
| Benzo[a]anthracene | 0.947 | | 0.014 | ND | | 0.013 | 0.191 | | 0.014 | 0.026 | J | 0.015 |
| Chrysene | 0.742 | | 0.011 | ND | | 0.0097 | 0.172 | | 0.011 | 0.028 | J | 0.011 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.025 | 0.032 | J | 0.023 | ND | | 0.025 | ND | | 0.027 |
| Benzo[b]fluoranthene | 0.856 | | 0.019 | ND | | 0.017 | 0.197 | | 0.019 | 0.035 | J | 0.020 |
| Benzo[k]fluoranthene | 0.739 | | 0.027 | ND | | 0.024 | 0.157 | | 0.026 | 0.034 | J | 0.029 |
| Benzo[a]pyrene | 0.865 | | 0.019 | ND | | 0.017 | 0.189 | | 0.019 | 0.037 | J | 0.020 |
| Indeno[1,2,3-cd]pyrene | 0.511 | | 0.025 | ND | | 0.023 | 0.118 | | 0.025 | 0.034 | J | 0.027 |
| Dibenz[a,h]anthracene | 0.277 | | 0.016 | ND | | 0.014 | 0.056 | | 0.015 | ND | | 0.017 |
| Benzo[g,h,i]perylene | 0.511 | | 0.030 | ND | | 0.027 | 0.121 | | 0.029 | 0.042 | | 0.031 |
| **TOTAL BNA'S:** | 9.60 | J | | 0.069 | J | | 2.26 | J | | 0.464 | J | |
| **TOTAL TIC's:** | 0.180 | JN | | 0.232 | JN | | ND | | | 0.911 | J | |
| **TOTAL BNA'S & TIC's:** | 9.78 | J | | 0.301 | J | | 2.26 | J | | 1.38 | J | |
| **PCB's (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| Aroclor-1016 | ND | | 0.0012 | ND | | 0.0011 | ND | | 0.0012 | ND | | 0.0012 |
| Aroclor-1221 | ND | | 0.0012 | ND | | 0.0011 | ND | | 0.0012 | ND | | 0.0012 |
| Aroclor-1232 | ND | | 0.0012 | ND | | 0.0011 | ND | | 0.0012 | ND | | 0.0012 |
| Aroclor-1242 | ND | | 0.0012 | ND | | 0.0011 | ND | | 0.0012 | ND | | 0.0012 |
| Aroclor-1248 | ND | | 0.0012 | ND | | 0.0011 | ND | | 0.0012 | ND | | 0.0012 |
| Aroclor-1254 | ND | | 0.0012 | ND | | 0.0011 | ND | | 0.0012 | ND | | 0.0012 |
| Aroclor-1260 | ND | | 0.0012 | ND | | 0.0011 | ND | | 0.0012 | ND | | 0.0012 |
| Aroclor-1262 | ND | | 0.0012 | ND | | 0.0011 | ND | | 0.0012 | ND | | 0.0012 |
| Aroclor-1268 | ND | | 0.0012 | ND | | 0.0011 | ND | | 0.0012 | ND | | 0.0012 |
| PCBs | ND | | 0.00118 | ND | | 0.00105 | ND | | 0.00115 | ND | | 0.00124 |

ND = Analyzed for but Not Detected at the MDL
J = Indicates an estimated value either when the concentration in the sample is greater than MDL and less than RL, or for qualification of TICs
D = The compound was reported from the Diluted analysis
All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.
ND = Analyzed for but Not Detected at the MDL

**SUMMARY REPORT**
**Client: HK Engineering & Geology, D.P.C.**
**Project: HK-2661.1 CHELSEA**
**Lab Case No.: E23-05046**

| Lab ID: | 05046-009 | | | 05046-010 | | | 05046-015 | | | 05046-016 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | SB11A | | | SB8A | | | SB4A | | | SB4B | | |
| Depth: | 1/2 | | | 0/1.5 | | | 0/2 | | | 10/12 | | |
| Matrix: | Soil | | | Soil | | | Soil | | | Soil | | |
| Sampled Date | 11/15/23 | | | 11/15/23 | | | 11/16/23 | | | 11/16/23 | | |
| PARAMETER(Units) | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL |
| **Pesticides (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| alpha-BHC | ND | | 0.000141 | ND | | 0.000125 | ND | | 0.000137 | ND | | 0.000148 |
| beta-BHC | ND | | 0.000184 | ND | | 0.000163 | ND | | 0.000179 | ND | | 0.000193 |
| gamma-BHC (Lindane) | ND | | 0.000176 | ND | | 0.000156 | ND | | 0.000171 | ND | | 0.000184 |
| delta-BHC | ND | | 0.000153 | ND | | 0.000136 | ND | | 0.000149 | ND | | 0.00016 |
| Heptachlor | ND | | 0.000187 | ND | | 0.000166 | ND | | 0.000182 | ND | | 0.000196 |
| Aldrin | ND | | 0.000165 | ND | | 0.000147 | ND | | 0.000161 | ND | | 0.000173 |
| Heptachlor epoxide | ND | | 0.000171 | ND | | 0.000152 | ND | | 0.000167 | ND | | 0.000179 |
| Endosulfan I | ND | | 0.000176 | ND | | 0.000157 | ND | | 0.000172 | ND | | 0.000185 |
| 4,4'-DDE | 0.078 | | 0.000161 | 0.012 | | 0.000143 | ND | | 0.000157 | ND | | 0.000168 |
| Dieldrin | ND | | 0.00016 | ND | | 0.000143 | ND | | 0.000156 | ND | | 0.000168 |
| Endrin | ND | | 0.000199 | ND | | 0.000177 | ND | | 0.000194 | ND | | 0.000208 |
| Endosulfan II | ND | | 0.00018 | ND | | 0.00016 | ND | | 0.000176 | ND | | 0.000189 |
| 4,4'-DDD | 0.011 | | 0.00021 | 0.000357 | J | 0.000187 | ND | | 0.000205 | ND | | 0.00022 |
| Endrin aldehyde | ND | | 0.000165 | ND | | 0.000147 | 0.018 | | 0.000161 | ND | | 0.000173 |
| Endosulfan sulfate | ND | | 0.000195 | ND | | 0.000173 | ND | | 0.00019 | ND | | 0.000205 |
| 4,4'-DDT | 0.075 | | 0.000146 | 0.0021 | | 0.00013 | ND | | 0.000143 | ND | | 0.000154 |
| Endrin ketone | ND | | 0.000153 | ND | | 0.000136 | ND | | 0.000149 | ND | | 0.000161 |
| Methoxychlor | ND | | 0.00021 | ND | | 0.000187 | ND | | 0.000205 | ND | | 0.000221 |
| alpha-Chlordane | ND | | 0.000174 | ND | | 0.000155 | ND | | 0.000169 | ND | | 0.000182 |
| gamma-Chlordane | ND | | 0.000155 | ND | | 0.000138 | ND | | 0.000151 | ND | | 0.000162 |
| Toxaphene | ND | | 0.00394 | ND | | 0.0035 | ND | | 0.00384 | ND | | 0.00413 |
| Endosulfan (I and II) | ND | | 0.000176 | ND | | 0.000157 | ND | | 0.000172 | ND | | 0.000185 |
| Chlordane (alpha and gamma) | ND | | 0.000155 | ND | | 0.000138 | ND | | 0.000151 | ND | | 0.000162 |
| **General Analytical (Units)** | | | | | | | | | | | | |
| Cyanide, Total(mg/Kg) | ND | | 0.237 | ND | | 0.211 | ND | | 0.231 | ND | | 0.244 |

ND = Analyzed for but Not Detected at the MDL
J = Indicates an estimated value either when the concentration in the sample is greater than MDL and less than RL, or for qualification of TICs
D = The compound was reported from the Diluted analysis
All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.

**SUMMARY REPORT**
**Client: HK Engineering & Geology, D.P.C.**
**Project: HK-2661.1 CHELSEA**
**Lab Case No.: E23-05046**

| | Lab ID: | 05046-017 | | | 05046-018 | | |
|---|---|---|---|---|---|---|---|
| | Client ID: | SB5A | | | SB5B | | |
| | Depth: | 0/2 | | | 10/12 | | |
| | Matrix: | Soil | | | Soil | | |
| | Sampled Date | 11/16/23 | | | 11/16/23 | | |
| PARAMETER(Units) | | Conc | Q | MDL | Conc | Q | MDL |
| **Volatiles (Units)** | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| Acetone | | 0.031 | | 0.00525 | ND | | 0.00585 |
| **TOTAL VO's:** | | 0.031 | | | ND | | |
| **TOTAL TIC's:** | | ND | | | ND | | |
| **TOTAL VO's & TIC's:** | | 0.031 | | | ND | | |
| **Semivolatiles - BNA (Units)** | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| Phenanthrene | | 0.035 | J | 0.00599 | ND | | 0.00637 |
| Fluoranthene | | 0.057 | | 0.012 | 0.023 | J | 0.013 |
| Pyrene | | 0.054 | | 0.00852 | 0.024 | J | 0.00906 |
| Benzo[a]anthracene | | 0.035 | J | 0.013 | ND | | 0.014 |
| Chrysene | | 0.031 | J | 0.010 | ND | | 0.011 |
| Benzo[b]fluoranthene | | 0.034 | J | 0.018 | ND | | 0.019 |
| Benzo[k]fluoranthene | | 0.028 | J | 0.025 | ND | | 0.027 |
| Benzo[a]pyrene | | 0.030 | J | 0.018 | ND | | 0.019 |
| **TOTAL BNA'S:** | | 0.304 | J | | 0.047 | J | |
| **TOTAL TIC's:** | | 0.568 | JN | | 0.903 | JN | |
| **TOTAL BNA'S & TIC's:** | | 0.872 | J | | 0.950 | J | |
| **PCB's (Units)** | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| Aroclor-1016 | | ND | | 0.0011 | ND | | 0.0012 |
| Aroclor-1221 | | ND | | 0.0011 | ND | | 0.0012 |
| Aroclor-1232 | | ND | | 0.0011 | ND | | 0.0012 |
| Aroclor-1242 | | ND | | 0.0011 | ND | | 0.0012 |
| Aroclor-1248 | | ND | | 0.0011 | ND | | 0.0012 |
| Aroclor-1254 | | ND | | 0.0011 | ND | | 0.0012 |
| Aroclor-1260 | | ND | | 0.0011 | ND | | 0.0012 |
| Aroclor-1262 | | ND | | 0.0011 | ND | | 0.0012 |
| Aroclor-1268 | | ND | | 0.0011 | ND | | 0.0012 |
| PCBs | | ND | | 0.0011 | ND | | 0.00117 |

ND = Analyzed for but Not Detected at the MDL

J = Indicates an estimated value either when the concentration in the sample is greater than MDL and less than RL, or for qualification of TICs

N = Presumptive evidence of a compound from the use of GC/MS library search.

All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.

**SUMMARY REPORT**
**Client: HK Engineering & Geology, D.P.C.**
**Project: HK-2661.1 CHELSEA**
**Lab Case No.: E23-05046**

| Lab ID: | 05046-017 | | | 05046-018 | | |
|---|---|---|---|---|---|---|
| Client ID: | SB5A | | | SB5B | | |
| Depth: | 0/2 | | | 10/12 | | |
| Matrix: | Soil | | | Soil | | |
| Sampled Date | 11/16/23 | | | 11/16/23 | | |
| **PARAMETER(Units)** | Conc | Q | MDL | Conc | Q | MDL |
| **Pesticides (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | |
| alpha-BHC | ND | | 0.00013 | ND | | 0.000139 |
| beta-BHC | ND | | 0.00017 | ND | | 0.000181 |
| gamma-BHC (Lindane) | ND | | 0.000163 | ND | | 0.000173 |
| delta-BHC | ND | | 0.000141 | ND | | 0.000151 |
| Heptachlor | ND | | 0.000173 | ND | | 0.000185 |
| Aldrin | ND | | 0.000153 | ND | | 0.000163 |
| Heptachlor epoxide | ND | | 0.000159 | ND | | 0.000169 |
| Endosulfan I | ND | | 0.000163 | ND | | 0.000174 |
| 4,4'-DDE | 0.00285 | | 0.000149 | 0.00041 | J | 0.000159 |
| Dieldrin | ND | | 0.000149 | ND | | 0.000158 |
| Endrin | ND | | 0.000184 | ND | | 0.000196 |
| Endosulfan II | ND | | 0.000167 | ND | | 0.000178 |
| 4,4'-DDD | 0.00649 | | 0.000195 | 0.000444 | J | 0.000207 |
| Endrin aldehyde | ND | | 0.000153 | ND | | 0.000163 |
| Endosulfan sulfate | ND | | 0.000181 | ND | | 0.000193 |
| 4,4'-DDT | 0.000589 | J | 0.000136 | 0.000229 | J | 0.000145 |
| Endrin ketone | ND | | 0.000142 | ND | | 0.000151 |
| Methoxychlor | ND | | 0.000195 | ND | | 0.000208 |
| alpha-Chlordane | ND | | 0.000161 | ND | | 0.000172 |
| gamma-Chlordane | ND | | 0.000143 | ND | | 0.000153 |
| Toxaphene | ND | | 0.00365 | ND | | 0.00389 |
| Endosulfan (I and II) | ND | | 0.000163 | ND | | 0.000174 |
| Chlordane (alpha and gamma) | ND | | 0.000143 | ND | | 0.000153 |
| **General Analytical (Units)** | | | | | | |
| Cyanide, Total(mg/Kg) | ND | | 0.220 | ND | | 0.234 |

ND = Analyzed for but Not Detected at the MDL

J = Indicates an estimated value either when the concentration in the sample is greater than MDL and less than RL, or for qualification of TICs

+ Subcontracted data for TAL Metals (6020B/7471B) by SGS Dayton will be sent separately once available.

ANALYTICAL RESULTS

## VOLATILE ORGANICS

Lab ID: E23-05046-001
Client ID: SB12A
Date Received: 11/16/2023
Date Analyzed: 11/17/2023
Data file: L7671.D 11/17/2023 22:09

GC/MS Column: DB-624
Sample wt/vol: 4.12g
Matrix-Units: Soil-mg/Kg
% Moisture: 13.3
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.0014 | 0.000727 |
| Chloromethane | ND | | 0.0028 | 0.000444 |
| Vinyl chloride | ND | | 0.0014 | 0.000454 |
| Bromomethane | ND | | 0.0028 | 0.00122 |
| Chloroethane | ND | | 0.0014 | 0.000416 |
| Trichlorofluoromethane | ND | | 0.0014 | 0.000568 |
| 1,1-Dichloroethene | ND | | 0.0014 | 0.00049 |
| Acetone | ND | | 0.014 | 0.007 |
| Carbon disulfide | ND | | 0.0014 | 0.00055 |
| Methylene chloride | ND | | 0.007 | 0.0042 |
| trans-1,2-Dichloroethene | ND | | 0.0028 | 0.000496 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.0014 | 0.000305 |
| 1,1-Dichloroethane | ND | | 0.0028 | 0.000357 |
| cis-1,2-Dichloroethene | ND | | 0.0028 | 0.0003 |
| 2-Butanone (MEK) | ND | | 0.014 | 0.0028 |
| Bromochloromethane | ND | | 0.0014 | 0.000356 |
| Chloroform | ND | | 0.0028 | 0.0007 |
| 1,1,1-Trichloroethane | ND | | 0.0014 | 0.00043 |
| Carbon tetrachloride | ND | | 0.0014 | 0.00028 |
| 1,2-Dichloroethane (EDC) | ND | | 0.0014 | 0.000323 |
| Benzene | ND | | 0.0014 | 0.00012 |
| Trichloroethene | ND | | 0.0014 | 0.000209 |
| 1,2-Dichloropropane | ND | | 0.0014 | 0.00014 |
| Bromodichloromethane | ND | | 0.0014 | 0.000167 |
| cis-1,3-Dichloropropene | ND | | 0.0014 | 0.000214 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.014 | 0.000732 |

## VOLATILE ORGANICS

Lab ID: E23-05046-001
Client ID: SB12A
Date Received: 11/16/2023
Date Analyzed: 11/17/2023
Data file: L7671.D 11/17/2023 22:09

GC/MS Column: DB-624
Sample wt/vol: 4.12g
Matrix-Units: Soil-mg/Kg
% Moisture: 13.3
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.0014 | 0.0007 |
| trans-1,3-Dichloropropene | ND | | 0.0014 | 0.000155 |
| 1,1,2-Trichloroethane | ND | | 0.0014 | 0.0003 |
| Tetrachloroethene | ND | | 0.0014 | 0.000144 |
| 2-Hexanone | ND | | 0.014 | 0.00214 |
| Dibromochloromethane | ND | | 0.0014 | 0.000232 |
| 1,2-Dibromoethane (EDB) | ND | | 0.0014 | 0.000259 |
| Chlorobenzene | ND | | 0.0014 | 0.000242 |
| Ethylbenzene | ND | | 0.0014 | 0.000153 |
| Total Xylenes | ND | | 0.0028 | 0.000196 |
| Styrene | ND | | 0.0014 | 0.000301 |
| Bromoform | ND | | 0.0014 | 0.000435 |
| Isopropylbenzene | ND | | 0.0014 | 0.000298 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0014 | 0.000732 |
| 1,3-Dichlorobenzene | ND | | 0.0014 | 0.000371 |
| 1,4-Dichlorobenzene | ND | | 0.0014 | 0.000434 |
| 1,2-Dichlorobenzene | ND | | 0.0014 | 0.000351 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.0014 | 0.00115 |
| 1,2,4-Trichlorobenzene | ND | | 0.0014 | 0.000588 |
| 1,2,3-Trichlorobenzene | ND | | 0.0028 | 0.000445 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.0028 | 0.000836 |
| Methyl acetate | ND | | 0.0014 | 0.00113 |
| Cyclohexane | ND | | 0.007 | 0.000252 |
| Methylcyclohexane | ND | | 0.0028 | 0.000241 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.0014 | 0.000155 |

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-001
Client ID: SB12A
Date Received: 11/16/2023
Date Analyzed: 11/17/2023
Date File: L7671.D

GC/MS Column: DB-624
Sample wt/vol: 4.12g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 13.3

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Column/Septa bleed | 0 | J | 5.40 |

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05046-002
Client ID: SB2A
Date Received: 11/16/2023
Date Analyzed: 11/17/2023
Data file: L7673.D 11/17/2023 23:04

GC/MS Column: DB-624
Sample wt/vol: 5.61g
Matrix-Units: Soil-mg/Kg
% Moisture: 7.3
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00096 | 0.000498 |
| Chloromethane | ND | | 0.00192 | 0.000304 |
| Vinyl chloride | ND | | 0.00096 | 0.000311 |
| Bromomethane | ND | | 0.00192 | 0.000837 |
| Chloroethane | ND | | 0.00096 | 0.000285 |
| Trichlorofluoromethane | ND | | 0.00096 | 0.00039 |
| 1,1-Dichloroethene | ND | | 0.00096 | 0.000336 |
| Acetone | ND | | 0.0096 | 0.0048 |
| Carbon disulfide | ND | | 0.00096 | 0.000377 |
| Methylene chloride | ND | | 0.0048 | 0.00288 |
| trans-1,2-Dichloroethene | ND | | 0.00192 | 0.00034 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00096 | 0.000209 |
| 1,1-Dichloroethane | ND | | 0.00192 | 0.000245 |
| cis-1,2-Dichloroethene | ND | | 0.00192 | 0.000205 |
| 2-Butanone (MEK) | ND | | 0.0096 | 0.00192 |
| Bromochloromethane | ND | | 0.00096 | 0.000244 |
| Chloroform | ND | | 0.00192 | 0.00048 |
| 1,1,1-Trichloroethane | ND | | 0.00096 | 0.000295 |
| Carbon tetrachloride | ND | | 0.00096 | 0.000192 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00096 | 0.000222 |
| Benzene | ND | | 0.00096 | 0.0000826 |
| Trichloroethene | ND | | 0.00096 | 0.000143 |
| 1,2-Dichloropropane | ND | | 0.00096 | 0.000096 |
| Bromodichloromethane | ND | | 0.00096 | 0.000114 |
| cis-1,3-Dichloropropene | ND | | 0.00096 | 0.000147 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.0096 | 0.000502 |

## VOLATILE ORGANICS

Lab ID: E23-05046-002
Client ID: SB2A
Date Received: 11/16/2023
Date Analyzed: 11/17/2023
Data file: L7673.D 11/17/2023 23:04

GC/MS Column: DB-624
Sample wt/vol: 5.61g
Matrix-Units: Soil-mg/Kg
% Moisture: 7.3
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00096 | 0.00048 |
| trans-1,3-Dichloropropene | ND | | 0.00096 | 0.000107 |
| 1,1,2-Trichloroethane | ND | | 0.00096 | 0.000205 |
| Tetrachloroethene | ND | | 0.00096 | 0.0000989 |
| 2-Hexanone | ND | | 0.0096 | 0.00147 |
| Dibromochloromethane | ND | | 0.00096 | 0.000159 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00096 | 0.000178 |
| Chlorobenzene | ND | | 0.00096 | 0.000166 |
| Ethylbenzene | ND | | 0.00096 | 0.000105 |
| Total Xylenes | ND | | 0.00192 | 0.000134 |
| Styrene | ND | | 0.00096 | 0.000206 |
| Bromoform | ND | | 0.00096 | 0.000299 |
| Isopropylbenzene | ND | | 0.00096 | 0.000204 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00096 | 0.000502 |
| 1,3-Dichlorobenzene | ND | | 0.00096 | 0.000254 |
| 1,4-Dichlorobenzene | ND | | 0.00096 | 0.000298 |
| 1,2-Dichlorobenzene | ND | | 0.00096 | 0.000241 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00096 | 0.000791 |
| 1,2,4-Trichlorobenzene | ND | | 0.00096 | 0.000403 |
| 1,2,3-Trichlorobenzene | ND | | 0.00192 | 0.000305 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.00192 | 0.000573 |
| Methyl acetate | ND | | 0.00096 | 0.000776 |
| Cyclohexane | ND | | 0.0048 | 0.000173 |
| Methylcyclohexane | ND | | 0.00192 | 0.000165 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00096 | 0.000107 |

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-002
Client ID: SB2A
Date Received: 11/16/2023
Date Analyzed: 11/17/2023
Date File: L7673.D

GC/MS Column: DB-624
Sample wt/vol: 5.61g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 7.3

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Column/Septa bleed | 0 | J | 5.40 |

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05046-003
Client ID: SB2B/10-12
Date Received: 11/16/2023
Date Analyzed: 11/20/2023
Data file: L7703.D 11/20/2023 18:05

GC/MS Column: DB-624
Sample wt/vol: 4.24g
Matrix-Units: Soil-mg/Kg
% Moisture: 8.30
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00129 | 0.00067 |
| Chloromethane | ND | | 0.00258 | 0.000409 |
| Vinyl chloride | ND | | 0.00129 | 0.000418 |
| Bromomethane | ND | | 0.00258 | 0.00112 |
| Chloroethane | ND | | 0.00129 | 0.000383 |
| Trichlorofluoromethane | ND | | 0.00129 | 0.000524 |
| 1,1-Dichloroethene | ND | | 0.00129 | 0.000452 |
| Acetone | 0.00904 | J | 0.013 | 0.00645 |
| Carbon disulfide | ND | | 0.00129 | 0.000507 |
| Methylene chloride | 0.0046 | CJ | 0.00645 | 0.00387 |
| trans-1,2-Dichloroethene | ND | | 0.00258 | 0.000457 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00129 | 0.000281 |
| 1,1-Dichloroethane | ND | | 0.00258 | 0.000329 |
| cis-1,2-Dichloroethene | ND | | 0.00258 | 0.000276 |
| 2-Butanone (MEK) | ND | | 0.013 | 0.00258 |
| Bromochloromethane | ND | | 0.00129 | 0.000328 |
| Chloroform | ND | | 0.00258 | 0.000645 |
| 1,1,1-Trichloroethane | ND | | 0.00129 | 0.000396 |
| Carbon tetrachloride | ND | | 0.00129 | 0.000258 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00129 | 0.000298 |
| Benzene | ND | | 0.00129 | 0.000111 |
| Trichloroethene | ND | | 0.00129 | 0.000192 |
| 1,2-Dichloropropane | ND | | 0.00129 | 0.000129 |
| Bromodichloromethane | ND | | 0.00129 | 0.000154 |
| cis-1,3-Dichloropropene | ND | | 0.00129 | 0.000197 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.013 | 0.000675 |

## VOLATILE ORGANICS

Lab ID: E23-05046-003
Client ID: SB2B/10-12
Date Received: 11/16/2023
Date Analyzed: 11/20/2023
Data file: L7703.D 11/20/2023 18:05

GC/MS Column: DB-624
Sample wt/vol: 4.24g
Matrix-Units: Soil-mg/Kg
% Moisture: 8.30
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00129 | 0.000645 |
| trans-1,3-Dichloropropene | ND | | 0.00129 | 0.000143 |
| 1,1,2-Trichloroethane | ND | | 0.00129 | 0.000276 |
| Tetrachloroethene | ND | | 0.00129 | 0.000133 |
| 2-Hexanone | ND | | 0.013 | 0.00198 |
| Dibromochloromethane | ND | | 0.00129 | 0.000214 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00129 | 0.000239 |
| Chlorobenzene | ND | | 0.00129 | 0.000223 |
| Ethylbenzene | ND | | 0.00129 | 0.000141 |
| Total Xylenes | ND | | 0.00258 | 0.000181 |
| Styrene | ND | | 0.00129 | 0.000277 |
| Bromoform | ND | | 0.00129 | 0.000401 |
| Isopropylbenzene | ND | | 0.00129 | 0.000275 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00129 | 0.000675 |
| 1,3-Dichlorobenzene | ND | | 0.00129 | 0.000342 |
| 1,4-Dichlorobenzene | ND | | 0.00129 | 0.0004 |
| 1,2-Dichlorobenzene | ND | | 0.00129 | 0.000324 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00129 | 0.00106 |
| 1,2,4-Trichlorobenzene | ND | | 0.00129 | 0.000542 |
| 1,2,3-Trichlorobenzene | ND | | 0.00258 | 0.00041 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.00258 | 0.00077 |
| Methyl acetate | ND | | 0.00129 | 0.00104 |
| Cyclohexane | ND | | 0.00645 | 0.000232 |
| Methylcyclohexane | ND | | 0.00258 | 0.000222 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00129 | 0.000143 |
| Total Target Compounds (51): | 0.014 | CJ | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-003
Client ID: SB2B/10-12
Date Received: 11/16/2023
Date Analyzed: 11/20/2023
Date File: L7703.D

GC/MS Column: DB-624
Sample wt/vol: 4.24g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 8.30

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Column/Septa bleed | 0 | J | 5.39 |
| 000079-92-5 | Camphene | 0.0071 | JN | 11.73 |

Total TICs = 0.0071 JN

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05046-004
Client ID: SB1A
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Data file: L7677.D 11/18/2023 00:56

GC/MS Column: DB-624
Sample wt/vol: 3.49g
Matrix-Units: Soil-mg/Kg
% Moisture: 9.8
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00159 | 0.000825 |
| Chloromethane | ND | | 0.00318 | 0.000504 |
| Vinyl chloride | ND | | 0.00159 | 0.000515 |
| Bromomethane | ND | | 0.00318 | 0.00139 |
| Chloroethane | ND | | 0.00159 | 0.000472 |
| Trichlorofluoromethane | ND | | 0.00159 | 0.000646 |
| 1,1-Dichloroethene | ND | | 0.00159 | 0.000557 |
| Acetone | ND | | 0.016 | 0.00795 |
| Carbon disulfide | ND | | 0.00159 | 0.000625 |
| Methylene chloride | ND | | 0.00795 | 0.00477 |
| trans-1,2-Dichloroethene | ND | | 0.00318 | 0.000563 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00159 | 0.000347 |
| 1,1-Dichloroethane | ND | | 0.00318 | 0.000405 |
| cis-1,2-Dichloroethene | ND | | 0.00318 | 0.00034 |
| 2-Butanone (MEK) | ND | | 0.016 | 0.00318 |
| Bromochloromethane | ND | | 0.00159 | 0.000404 |
| Chloroform | ND | | 0.00318 | 0.000795 |
| 1,1,1-Trichloroethane | ND | | 0.00159 | 0.000488 |
| Carbon tetrachloride | ND | | 0.00159 | 0.000318 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00159 | 0.000367 |
| Benzene | ND | | 0.00159 | 0.000137 |
| Trichloroethene | ND | | 0.00159 | 0.000237 |
| 1,2-Dichloropropane | ND | | 0.00159 | 0.000159 |
| Bromodichloromethane | ND | | 0.00159 | 0.000189 |
| cis-1,3-Dichloropropene | ND | | 0.00159 | 0.000243 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.016 | 0.000832 |

## VOLATILE ORGANICS

Lab ID: E23-05046-004
Client ID: SB1A
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Data file: L7677.D 11/18/2023 00:56

GC/MS Column: DB-624
Sample wt/vol: 3.49g
Matrix-Units: Soil-mg/Kg
% Moisture: 9.8
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00159 | 0.000795 |
| trans-1,3-Dichloropropene | ND | | 0.00159 | 0.000176 |
| 1,1,2-Trichloroethane | ND | | 0.00159 | 0.00034 |
| Tetrachloroethene | ND | | 0.00159 | 0.000164 |
| 2-Hexanone | ND | | 0.016 | 0.00244 |
| Dibromochloromethane | ND | | 0.00159 | 0.000264 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00159 | 0.000294 |
| Chlorobenzene | ND | | 0.00159 | 0.000275 |
| Ethylbenzene | ND | | 0.00159 | 0.000173 |
| Total Xylenes | ND | | 0.00318 | 0.000223 |
| Styrene | ND | | 0.00159 | 0.000342 |
| Bromoform | ND | | 0.00159 | 0.000494 |
| Isopropylbenzene | ND | | 0.00159 | 0.000339 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00159 | 0.000832 |
| 1,3-Dichlorobenzene | ND | | 0.00159 | 0.000421 |
| 1,4-Dichlorobenzene | ND | | 0.00159 | 0.000493 |
| 1,2-Dichlorobenzene | ND | | 0.00159 | 0.000399 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00159 | 0.00131 |
| 1,2,4-Trichlorobenzene | ND | | 0.00159 | 0.000668 |
| 1,2,3-Trichlorobenzene | ND | | 0.00318 | 0.000506 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.00318 | 0.000949 |
| Methyl acetate | ND | | 0.00159 | 0.00128 |
| Cyclohexane | ND | | 0.00795 | 0.000286 |
| Methylcyclohexane | ND | | 0.00318 | 0.000273 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00159 | 0.000176 |

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-004
Client ID: SB1A
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Date File: L7677.D

GC/MS Column: DB-624
Sample wt/vol: 3.49g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 9.8

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Column/Septa bleed | 0 | J | 5.39 |

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05046-005
Client ID: SB1B/10-12
Date Received: 11/16/2023
Date Analyzed: 11/20/2023
Data file: L7704.D 11/20/2023 18:33

GC/MS Column: DB-624
Sample wt/vol: 5.05g
Matrix-Units: Soil-mg/Kg
% Moisture: 15.1
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00117 | 0.000607 |
| Chloromethane | ND | | 0.00234 | 0.000371 |
| Vinyl chloride | ND | | 0.00117 | 0.000379 |
| Bromomethane | ND | | 0.00234 | 0.00102 |
| Chloroethane | ND | | 0.00117 | 0.000347 |
| Trichlorofluoromethane | ND | | 0.00117 | 0.000475 |
| 1,1-Dichloroethene | ND | | 0.00117 | 0.00041 |
| Acetone | ND | | 0.012 | 0.00585 |
| Carbon disulfide | ND | | 0.00117 | 0.00046 |
| Methylene chloride | 0.00432 | CJ | 0.00585 | 0.00351 |
| trans-1,2-Dichloroethene | ND | | 0.00234 | 0.000414 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00117 | 0.000255 |
| 1,1-Dichloroethane | ND | | 0.00234 | 0.000298 |
| cis-1,2-Dichloroethene | ND | | 0.00234 | 0.00025 |
| 2-Butanone (MEK) | ND | | 0.012 | 0.00234 |
| Bromochloromethane | ND | | 0.00117 | 0.000297 |
| Chloroform | ND | | 0.00234 | 0.000585 |
| 1,1,1-Trichloroethane | ND | | 0.00117 | 0.000359 |
| Carbon tetrachloride | ND | | 0.00117 | 0.000234 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00117 | 0.00027 |
| Benzene | ND | | 0.00117 | 0.000101 |
| Trichloroethene | ND | | 0.00117 | 0.000174 |
| 1,2-Dichloropropane | ND | | 0.00117 | 0.000117 |
| Bromodichloromethane | ND | | 0.00117 | 0.000139 |
| cis-1,3-Dichloropropene | ND | | 0.00117 | 0.000179 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.012 | 0.000612 |

## VOLATILE ORGANICS

Lab ID: E23-05046-005
Client ID: SB1B/10-12
Date Received: 11/16/2023
Date Analyzed: 11/20/2023
Data file: L7704.D 11/20/2023 18:33

GC/MS Column: DB-624
Sample wt/vol: 5.05g
Matrix-Units: Soil-mg/Kg
% Moisture: 15.1
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00117 | 0.000585 |
| trans-1,3-Dichloropropene | ND | | 0.00117 | 0.00013 |
| 1,1,2-Trichloroethane | ND | | 0.00117 | 0.00025 |
| Tetrachloroethene | ND | | 0.00117 | 0.000121 |
| 2-Hexanone | ND | | 0.012 | 0.00179 |
| Dibromochloromethane | ND | | 0.00117 | 0.000194 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00117 | 0.000216 |
| Chlorobenzene | ND | | 0.00117 | 0.000202 |
| Ethylbenzene | ND | | 0.00117 | 0.000128 |
| Total Xylenes | ND | | 0.00234 | 0.000164 |
| Styrene | ND | | 0.00117 | 0.000252 |
| Bromoform | ND | | 0.00117 | 0.000364 |
| Isopropylbenzene | ND | | 0.00117 | 0.000249 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00117 | 0.000612 |
| 1,3-Dichlorobenzene | ND | | 0.00117 | 0.00031 |
| 1,4-Dichlorobenzene | ND | | 0.00117 | 0.000363 |
| 1,2-Dichlorobenzene | ND | | 0.00117 | 0.000294 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00117 | 0.000964 |
| 1,2,4-Trichlorobenzene | ND | | 0.00117 | 0.000491 |
| 1,2,3-Trichlorobenzene | ND | | 0.00234 | 0.000372 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.00234 | 0.000698 |
| Methyl acetate | ND | | 0.00117 | 0.000945 |
| Cyclohexane | ND | | 0.00585 | 0.000211 |
| Methylcyclohexane | ND | | 0.00234 | 0.000201 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00117 | 0.00013 |
| Total Target Compounds (51): | 0.00432 | CJ | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
## Tentatively Identified Compounds

Lab ID: E23-05046-005
Client ID: SB1B/10-12
Date Received: 11/16/2023
Date Analyzed: 11/20/2023
Date File: L7704.D

GC/MS Column: DB-624
Sample wt/vol: 5.05g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 15.1

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Column/Septa bleed | 0 | J | 5.38 |

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05046-006
Client ID: SB3A
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Data file: L7678.D 11/18/2023 01:25

GC/MS Column: DB-624
Sample wt/vol: 4.66g
Matrix-Units: Soil-mg/Kg
% Moisture: 10.1
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00119 | 0.000618 |
| Chloromethane | ND | | 0.00238 | 0.000377 |
| Vinyl chloride | ND | | 0.00119 | 0.000386 |
| Bromomethane | ND | | 0.00238 | 0.00104 |
| Chloroethane | ND | | 0.00119 | 0.000353 |
| Trichlorofluoromethane | ND | | 0.00119 | 0.000483 |
| 1,1-Dichloroethene | ND | | 0.00119 | 0.000417 |
| Acetone | ND | | 0.012 | 0.00595 |
| Carbon disulfide | ND | | 0.00119 | 0.000468 |
| Methylene chloride | ND | | 0.00595 | 0.00357 |
| trans-1,2-Dichloroethene | ND | | 0.00238 | 0.000421 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00119 | 0.000259 |
| 1,1-Dichloroethane | ND | | 0.00238 | 0.000303 |
| cis-1,2-Dichloroethene | ND | | 0.00238 | 0.000255 |
| 2-Butanone (MEK) | ND | | 0.012 | 0.00238 |
| Bromochloromethane | ND | | 0.00119 | 0.000302 |
| Chloroform | ND | | 0.00238 | 0.000595 |
| 1,1,1-Trichloroethane | ND | | 0.00119 | 0.000365 |
| Carbon tetrachloride | ND | | 0.00119 | 0.000238 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00119 | 0.000275 |
| Benzene | ND | | 0.00119 | 0.000102 |
| Trichloroethene | ND | | 0.00119 | 0.000177 |
| 1,2-Dichloropropane | ND | | 0.00119 | 0.000119 |
| Bromodichloromethane | ND | | 0.00119 | 0.000142 |
| cis-1,3-Dichloropropene | ND | | 0.00119 | 0.000182 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.012 | 0.000622 |

## VOLATILE ORGANICS

Lab ID: E23-05046-006
Client ID: SB3A
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Data file: L7678.D 11/18/2023 01:25

GC/MS Column: DB-624
Sample wt/vol: 4.66g
Matrix-Units: Soil-mg/Kg
% Moisture: 10.1
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00119 | 0.000595 |
| trans-1,3-Dichloropropene | ND | | 0.00119 | 0.000132 |
| 1,1,2-Trichloroethane | ND | | 0.00119 | 0.000255 |
| Tetrachloroethene | ND | | 0.00119 | 0.000123 |
| 2-Hexanone | ND | | 0.012 | 0.00182 |
| Dibromochloromethane | ND | | 0.00119 | 0.000198 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00119 | 0.00022 |
| Chlorobenzene | ND | | 0.00119 | 0.000206 |
| Ethylbenzene | ND | | 0.00119 | 0.00013 |
| Total Xylenes | ND | | 0.00238 | 0.000167 |
| Styrene | ND | | 0.00119 | 0.000256 |
| Bromoform | ND | | 0.00119 | 0.00037 |
| Isopropylbenzene | ND | | 0.00119 | 0.000253 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00119 | 0.000622 |
| 1,3-Dichlorobenzene | ND | | 0.00119 | 0.000315 |
| 1,4-Dichlorobenzene | ND | | 0.00119 | 0.000369 |
| 1,2-Dichlorobenzene | ND | | 0.00119 | 0.000299 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00119 | 0.000981 |
| 1,2,4-Trichlorobenzene | ND | | 0.00119 | 0.0005 |
| 1,2,3-Trichlorobenzene | ND | | 0.00238 | 0.000378 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.00238 | 0.00071 |
| Methyl acetate | ND | | 0.00119 | 0.000962 |
| Cyclohexane | ND | | 0.00595 | 0.000214 |
| Methylcyclohexane | ND | | 0.00238 | 0.000205 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00119 | 0.000132 |

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-006
Client ID: SB3A
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Date File: L7678.D

GC/MS Column: DB-624
Sample wt/vol: 4.66g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 10.1

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Column/Septa bleed | 0 | J | 5.39 |

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05046-007
Client ID: SB3B
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Data file: L7679.D 11/18/2023 01:53

GC/MS Column: DB-624
Sample wt/vol: 4.74g
Matrix-Units: Soil-mg/Kg
% Moisture: 11.2
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00119 | 0.000618 |
| Chloromethane | ND | | 0.00238 | 0.000377 |
| Vinyl chloride | ND | | 0.00119 | 0.000386 |
| Bromomethane | ND | | 0.00238 | 0.00104 |
| Chloroethane | ND | | 0.00119 | 0.000353 |
| Trichlorofluoromethane | ND | | 0.00119 | 0.000483 |
| 1,1-Dichloroethene | ND | | 0.00119 | 0.000417 |
| Acetone | 0.019 | | 0.012 | 0.00595 |
| Carbon disulfide | ND | | 0.00119 | 0.000468 |
| Methylene chloride | ND | | 0.00595 | 0.00357 |
| trans-1,2-Dichloroethene | ND | | 0.00238 | 0.000421 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00119 | 0.000259 |
| 1,1-Dichloroethane | ND | | 0.00238 | 0.000303 |
| cis-1,2-Dichloroethene | ND | | 0.00238 | 0.000255 |
| 2-Butanone (MEK) | ND | | 0.012 | 0.00238 |
| Bromochloromethane | ND | | 0.00119 | 0.000302 |
| Chloroform | ND | | 0.00238 | 0.000595 |
| 1,1,1-Trichloroethane | ND | | 0.00119 | 0.000365 |
| Carbon tetrachloride | ND | | 0.00119 | 0.000238 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00119 | 0.000275 |
| Benzene | ND | | 0.00119 | 0.000102 |
| Trichloroethene | ND | | 0.00119 | 0.000177 |
| 1,2-Dichloropropane | ND | | 0.00119 | 0.000119 |
| Bromodichloromethane | ND | | 0.00119 | 0.000142 |
| cis-1,3-Dichloropropene | ND | | 0.00119 | 0.000182 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.012 | 0.000622 |

## VOLATILE ORGANICS

Lab ID: E23-05046-007
Client ID: SB3B
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Data file: L7679.D 11/18/2023 01:53

GC/MS Column: DB-624
Sample wt/vol: 4.74g
Matrix-Units: Soil-mg/Kg
% Moisture: 11.2
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00119 | 0.000595 |
| trans-1,3-Dichloropropene | ND | | 0.00119 | 0.000132 |
| 1,1,2-Trichloroethane | ND | | 0.00119 | 0.000255 |
| Tetrachloroethene | ND | | 0.00119 | 0.000123 |
| 2-Hexanone | ND | | 0.012 | 0.00182 |
| Dibromochloromethane | ND | | 0.00119 | 0.000198 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00119 | 0.00022 |
| Chlorobenzene | ND | | 0.00119 | 0.000206 |
| Ethylbenzene | ND | | 0.00119 | 0.00013 |
| Total Xylenes | ND | | 0.00238 | 0.000167 |
| Styrene | ND | | 0.00119 | 0.000256 |
| Bromoform | ND | | 0.00119 | 0.00037 |
| Isopropylbenzene | ND | | 0.00119 | 0.000253 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00119 | 0.000622 |
| 1,3-Dichlorobenzene | ND | | 0.00119 | 0.000315 |
| 1,4-Dichlorobenzene | ND | | 0.00119 | 0.000369 |
| 1,2-Dichlorobenzene | ND | | 0.00119 | 0.000299 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00119 | 0.000981 |
| 1,2,4-Trichlorobenzene | ND | | 0.00119 | 0.0005 |
| 1,2,3-Trichlorobenzene | ND | | 0.00238 | 0.000378 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.00238 | 0.00071 |
| Methyl acetate | ND | | 0.00119 | 0.000962 |
| Cyclohexane | ND | | 0.00595 | 0.000214 |
| Methylcyclohexane | ND | | 0.00238 | 0.000205 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00119 | 0.000132 |

Total Target Compounds (51): 0.019

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-007
Client ID: SB3B
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Date File: L7679.D

GC/MS Column: DB-624
Sample wt/vol: 4.74g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 11.2

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Column/Septa bleed | 0 | J | 5.39 |
| 000091-20-3 | Naphthalene | 0.015 | JN | 15.64 |
| 000090-12-0 | Naphthalene, 1-methyl- | 0.0069 | JN | 16.77 |
| 000091-57-6 | Naphthalene, 2-methyl- | 0.0075 | JN | 16.97 |

Total TICs = 0.030 JN

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05046-008
Client ID: SB10A
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Data file: L7680.D 11/18/2023 02:21

GC/MS Column: DB-624
Sample wt/vol: 5.00g
Matrix-Units: Soil-mg/Kg
% Moisture: 8.9
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.0011 | 0.000571 |
| Chloromethane | ND | | 0.0022 | 0.000349 |
| Vinyl chloride | ND | | 0.0011 | 0.000356 |
| Bromomethane | ND | | 0.0022 | 0.000959 |
| Chloroethane | ND | | 0.0011 | 0.000327 |
| Trichlorofluoromethane | ND | | 0.0011 | 0.000447 |
| 1,1-Dichloroethene | ND | | 0.0011 | 0.000385 |
| Acetone | 0.0068 | J | 0.011 | 0.0055 |
| Carbon disulfide | ND | | 0.0011 | 0.000432 |
| Methylene chloride | ND | | 0.0055 | 0.0033 |
| trans-1,2-Dichloroethene | ND | | 0.0022 | 0.000389 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.0011 | 0.00024 |
| 1,1-Dichloroethane | ND | | 0.0022 | 0.000281 |
| cis-1,2-Dichloroethene | ND | | 0.0022 | 0.000235 |
| 2-Butanone (MEK) | ND | | 0.011 | 0.0022 |
| Bromochloromethane | ND | | 0.0011 | 0.000279 |
| Chloroform | ND | | 0.0022 | 0.00055 |
| 1,1,1-Trichloroethane | ND | | 0.0011 | 0.000338 |
| Carbon tetrachloride | ND | | 0.0011 | 0.00022 |
| 1,2-Dichloroethane (EDC) | ND | | 0.0011 | 0.000254 |
| Benzene | ND | | 0.0011 | 0.0000946 |
| Trichloroethene | ND | | 0.0011 | 0.000164 |
| 1,2-Dichloropropane | ND | | 0.0011 | 0.00011 |
| Bromodichloromethane | ND | | 0.0011 | 0.000131 |
| cis-1,3-Dichloropropene | ND | | 0.0011 | 0.000168 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.011 | 0.000575 |

## VOLATILE ORGANICS

Lab ID: E23-05046-008
Client ID: SB10A
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Data file: L7680.D 11/18/2023 02:21

GC/MS Column: DB-624
Sample wt/vol: 5.00g
Matrix-Units: Soil-mg/Kg
% Moisture: 8.9
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.0011 | 0.00055 |
| trans-1,3-Dichloropropene | ND | | 0.0011 | 0.000122 |
| 1,1,2-Trichloroethane | ND | | 0.0011 | 0.000235 |
| Tetrachloroethene | ND | | 0.0011 | 0.000113 |
| 2-Hexanone | ND | | 0.011 | 0.00169 |
| Dibromochloromethane | ND | | 0.0011 | 0.000183 |
| 1,2-Dibromoethane (EDB) | ND | | 0.0011 | 0.000204 |
| Chlorobenzene | ND | | 0.0011 | 0.00019 |
| Ethylbenzene | ND | | 0.0011 | 0.00012 |
| Total Xylenes | ND | | 0.0022 | 0.000154 |
| Styrene | ND | | 0.0011 | 0.000237 |
| Bromoform | ND | | 0.0011 | 0.000342 |
| Isopropylbenzene | ND | | 0.0011 | 0.000234 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0011 | 0.000575 |
| 1,3-Dichlorobenzene | ND | | 0.0011 | 0.000292 |
| 1,4-Dichlorobenzene | ND | | 0.0011 | 0.000341 |
| 1,2-Dichlorobenzene | ND | | 0.0011 | 0.000276 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.0011 | 0.000906 |
| 1,2,4-Trichlorobenzene | ND | | 0.0011 | 0.000462 |
| 1,2,3-Trichlorobenzene | ND | | 0.0022 | 0.00035 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.0022 | 0.000657 |
| Methyl acetate | ND | | 0.0011 | 0.000889 |
| Cyclohexane | ND | | 0.0055 | 0.000198 |
| Methylcyclohexane | ND | | 0.0022 | 0.000189 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.0011 | 0.000122 |
| Total Target Compounds (51): | 0.0068 | J | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-008
Client ID: SB10A
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Date File: L7680.D

GC/MS Column: DB-624
Sample wt/vol: 5.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 8.9

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| 001066-40-6 | Silanol, trimethyl- | 0.00693 | JN | 5.40 |
| | Unknown VOA | 0.034 | J | 13.28 |

Total TICs = 0.041 JN

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05046-009
Client ID: SB11A
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Data file: L7681.D 11/18/2023 02:49

GC/MS Column: DB-624
Sample wt/vol: 5.75g
Matrix-Units: Soil-mg/Kg
% Moisture: 15.6
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00103 | 0.000535 |
| Chloromethane | ND | | 0.00206 | 0.000327 |
| Vinyl chloride | ND | | 0.00103 | 0.000334 |
| Bromomethane | ND | | 0.00206 | 0.000898 |
| Chloroethane | ND | | 0.00103 | 0.000306 |
| Trichlorofluoromethane | ND | | 0.00103 | 0.000418 |
| 1,1-Dichloroethene | ND | | 0.00103 | 0.000361 |
| Acetone | ND | | 0.010 | 0.00515 |
| Carbon disulfide | ND | | 0.00103 | 0.000405 |
| Methylene chloride | ND | | 0.00515 | 0.00309 |
| trans-1,2-Dichloroethene | ND | | 0.00206 | 0.000365 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00103 | 0.000225 |
| 1,1-Dichloroethane | ND | | 0.00206 | 0.000263 |
| cis-1,2-Dichloroethene | ND | | 0.00206 | 0.00022 |
| 2-Butanone (MEK) | ND | | 0.010 | 0.00206 |
| Bromochloromethane | ND | | 0.00103 | 0.000262 |
| Chloroform | ND | | 0.00206 | 0.000515 |
| 1,1,1-Trichloroethane | ND | | 0.00103 | 0.000316 |
| Carbon tetrachloride | ND | | 0.00103 | 0.000206 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00103 | 0.000238 |
| Benzene | ND | | 0.00103 | 0.0000886 |
| Trichloroethene | ND | | 0.00103 | 0.000153 |
| 1,2-Dichloropropane | ND | | 0.00103 | 0.000103 |
| Bromodichloromethane | ND | | 0.00103 | 0.000123 |
| cis-1,3-Dichloropropene | ND | | 0.00103 | 0.000158 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.010 | 0.000539 |

## VOLATILE ORGANICS

Lab ID: E23-05046-009
Client ID: SB11A
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Data file: L7681.D 11/18/2023 02:49

GC/MS Column: DB-624
Sample wt/vol: 5.75g
Matrix-Units: Soil-mg/Kg
% Moisture: 15.6
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00103 | 0.000515 |
| trans-1,3-Dichloropropene | ND | | 0.00103 | 0.000114 |
| 1,1,2-Trichloroethane | ND | | 0.00103 | 0.00022 |
| Tetrachloroethene | ND | | 0.00103 | 0.000106 |
| 2-Hexanone | ND | | 0.010 | 0.00158 |
| Dibromochloromethane | ND | | 0.00103 | 0.000171 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00103 | 0.000191 |
| Chlorobenzene | ND | | 0.00103 | 0.000178 |
| Ethylbenzene | ND | | 0.00103 | 0.000112 |
| Total Xylenes | ND | | 0.00206 | 0.000144 |
| Styrene | ND | | 0.00103 | 0.000221 |
| Bromoform | ND | | 0.00103 | 0.00032 |
| Isopropylbenzene | ND | | 0.00103 | 0.000219 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00103 | 0.000539 |
| 1,3-Dichlorobenzene | ND | | 0.00103 | 0.000273 |
| 1,4-Dichlorobenzene | ND | | 0.00103 | 0.000319 |
| 1,2-Dichlorobenzene | ND | | 0.00103 | 0.000259 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00103 | 0.000849 |
| 1,2,4-Trichlorobenzene | ND | | 0.00103 | 0.000433 |
| 1,2,3-Trichlorobenzene | ND | | 0.00206 | 0.000328 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.00206 | 0.000615 |
| Methyl acetate | ND | | 0.00103 | 0.000832 |
| Cyclohexane | ND | | 0.00515 | 0.000185 |
| Methylcyclohexane | ND | | 0.00206 | 0.000177 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00103 | 0.000114 |

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-009
Client ID: SB11A
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Date File: L7681.D

GC/MS Column: DB-624
Sample wt/vol: 5.75g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 15.6

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Column/Septa bleed | 0 | J | 5.39 |

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05046-010
Client ID: SB8A
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Data file: L7682.D 11/18/2023 03:17

GC/MS Column: DB-624
Sample wt/vol: 4.70g
Matrix-Units: Soil-mg/Kg
% Moisture: 5.2
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00112 | 0.000581 |
| Chloromethane | ND | | 0.00224 | 0.000355 |
| Vinyl chloride | ND | | 0.00112 | 0.000363 |
| Bromomethane | ND | | 0.00224 | 0.000977 |
| Chloroethane | ND | | 0.00112 | 0.000333 |
| Trichlorofluoromethane | ND | | 0.00112 | 0.000455 |
| 1,1-Dichloroethene | ND | | 0.00112 | 0.000392 |
| Acetone | 0.00649 | J | 0.011 | 0.0056 |
| Carbon disulfide | ND | | 0.00112 | 0.00044 |
| Methylene chloride | ND | | 0.0056 | 0.00336 |
| trans-1,2-Dichloroethene | ND | | 0.00224 | 0.000396 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00112 | 0.000244 |
| 1,1-Dichloroethane | ND | | 0.00224 | 0.000286 |
| cis-1,2-Dichloroethene | ND | | 0.00224 | 0.00024 |
| 2-Butanone (MEK) | ND | | 0.011 | 0.00224 |
| Bromochloromethane | ND | | 0.00112 | 0.000284 |
| Chloroform | ND | | 0.00224 | 0.00056 |
| 1,1,1-Trichloroethane | ND | | 0.00112 | 0.000344 |
| Carbon tetrachloride | ND | | 0.00112 | 0.000224 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00112 | 0.000259 |
| Benzene | ND | | 0.00112 | 0.0000963 |
| Trichloroethene | ND | | 0.00112 | 0.000167 |
| 1,2-Dichloropropane | ND | | 0.00112 | 0.000112 |
| Bromodichloromethane | ND | | 0.00112 | 0.000133 |
| cis-1,3-Dichloropropene | ND | | 0.00112 | 0.000171 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.011 | 0.000586 |

## VOLATILE ORGANICS

Lab ID: E23-05046-010
Client ID: SB8A
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Data file: L7682.D 11/18/2023 03:17

GC/MS Column: DB-624
Sample wt/vol: 4.70g
Matrix-Units: Soil-mg/Kg
% Moisture: 5.2
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00112 | 0.00056 |
| trans-1,3-Dichloropropene | ND | | 0.00112 | 0.000124 |
| 1,1,2-Trichloroethane | ND | | 0.00112 | 0.00024 |
| Tetrachloroethene | ND | | 0.00112 | 0.000115 |
| 2-Hexanone | ND | | 0.011 | 0.00172 |
| Dibromochloromethane | ND | | 0.00112 | 0.000186 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00112 | 0.000207 |
| Chlorobenzene | ND | | 0.00112 | 0.000194 |
| Ethylbenzene | ND | | 0.00112 | 0.000122 |
| Total Xylenes | ND | | 0.00224 | 0.000157 |
| Styrene | ND | | 0.00112 | 0.000241 |
| Bromoform | ND | | 0.00112 | 0.000348 |
| Isopropylbenzene | ND | | 0.00112 | 0.000239 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00112 | 0.000586 |
| 1,3-Dichlorobenzene | ND | | 0.00112 | 0.000297 |
| 1,4-Dichlorobenzene | ND | | 0.00112 | 0.000347 |
| 1,2-Dichlorobenzene | ND | | 0.00112 | 0.000281 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00112 | 0.000923 |
| 1,2,4-Trichlorobenzene | ND | | 0.00112 | 0.00047 |
| 1,2,3-Trichlorobenzene | ND | | 0.00224 | 0.000356 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.00224 | 0.000669 |
| Methyl acetate | ND | | 0.00112 | 0.000905 |
| Cyclohexane | ND | | 0.0056 | 0.000202 |
| Methylcyclohexane | ND | | 0.00224 | 0.000193 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00112 | 0.000124 |
| Total Target Compounds (51): | 0.00649 | J | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-010
Client ID: SB8A
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Date File: L7682.D

GC/MS Column: DB-624
Sample wt/vol: 4.70g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 5.2

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Column/Septa bleed | 0 | J | 5.40 |

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

# VOLATILE ORGANICS

Lab ID: E23-05046-011
Client ID: TWP1
Date Received: 11/16/2023
Date Analyzed: 11/20/2023
Data file: E5244.D 11/20/2023 15:33
Data file: P5605.D^

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 1.00 | 0.552 |
| Chloromethane | ND | | 0.500 | 0.309 |
| Vinyl chloride | ND | | 0.500 | 0.352 |
| Bromomethane | ND | | 0.500 | 0.386 |
| Chloroethane | ND | | 0.500 | 0.324 |
| Trichlorofluoromethane | ND | | 1.00 | 0.503 |
| 1,1-Dichloroethene | ND | | 0.500 | 0.363 |
| Acetone | ND | | 1.00 | 1.00 |
| Carbon disulfide | ND | | 0.500 | 0.403 |
| Methylene chloride | ND | | 1.00 | 0.500 |
| trans-1,2-Dichloroethene | ND | | 0.500 | 0.372 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.500 | 0.245 |
| 1,1-Dichloroethane | ND | | 0.500 | 0.285 |
| cis-1,2-Dichloroethene | ND | | 0.500 | 0.277 |
| 2-Butanone (MEK) | ND | | 1.00 | 0.802 |
| Bromochloromethane | ND | | 0.500 | 0.379 |
| Chloroform | 14.0 | | 0.500 | 0.285 |
| 1,1,1-Trichloroethane | ND | | 0.500 | 0.381 |
| Carbon tetrachloride | ND | | 0.500 | 0.349 |
| 1,2-Dichloroethane (EDC) | ND | | 0.500 | 0.273 |
| Benzene | ND | | 0.500 | 0.270 |
| Trichloroethene | ND | | 0.500 | 0.347 |
| 1,2-Dichloropropane | ND | | 0.500 | 0.272 |
| Bromodichloromethane | ND | | 0.500 | 0.258 |
| cis-1,3-Dichloropropene | ND | | 0.500 | 0.264 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 1.00 | 0.611 |

## VOLATILE ORGANICS

Lab ID: E23-05046-011
Client ID: TWP1
Date Received: 11/16/2023
Date Analyzed: 11/20/2023
Data file: E5244.D 11/20/2023 15:33
Data file: P5605.D^

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.500 | 0.302 |
| trans-1,3-Dichloropropene | ND | | 0.500 | 0.330 |
| 1,1,2-Trichloroethane | ND | | 0.500 | 0.313 |
| Tetrachloroethene | ND | | 0.500 | 0.365 |
| 2-Hexanone | ND | | 1.00 | 0.818 |
| Dibromochloromethane | ND | | 0.500 | 0.263 |
| 1,2-Dibromoethane (EDB)^ | ND | | 0.00484 | 0.00364 |
| Chlorobenzene | ND | | 0.500 | 0.304 |
| Ethylbenzene | ND | | 0.500 | 0.313 |
| Total Xylenes | ND | | 1.00 | 0.345 |
| Styrene | ND | | 0.500 | 0.317 |
| Bromoform | ND | | 0.500 | 0.328 |
| Isopropylbenzene | ND | | 0.500 | 0.332 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.500 | 0.284 |
| 1,3-Dichlorobenzene | ND | | 0.500 | 0.386 |
| 1,4-Dichlorobenzene | ND | | 0.500 | 0.397 |
| 1,2-Dichlorobenzene | ND | | 0.500 | 0.354 |
| 1,2-Dibromo-3-chloropropane^ | ND | | 0.00484 | 0.00364 |
| 1,2,4-Trichlorobenzene | ND | | 0.500 | 0.358 |
| 1,2,3-Trichlorobenzene | ND | | 0.500 | 0.406 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.00 | 0.538 |
| Methyl acetate | ND | | 0.500 | 0.345 |
| Cyclohexane | ND | | 1.00 | 0.469 |
| Methylcyclohexane | ND | | 0.500 | 0.421 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.500 | 0.264 |
| Total Target Compounds (51): | 14.0 | | | |

^ --- Results reported from SW-846 8011
D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-011
Client ID: TWP1
Date Received: 11/16/2023
Date Analyzed: 11/20/2023
Date File: E5244.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|

No peaks detected

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05046-012
Client ID: TWP2
Date Received: 11/16/2023
Date Analyzed: 11/20/2023
Data file: E5245.D 11/20/2023 16:01
Data file: P5606.D^

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 1.00 | 0.552 |
| Chloromethane | ND | | 0.500 | 0.309 |
| Vinyl chloride | ND | | 0.500 | 0.352 |
| Bromomethane | ND | | 0.500 | 0.386 |
| Chloroethane | ND | | 0.500 | 0.324 |
| Trichlorofluoromethane | ND | | 1.00 | 0.503 |
| 1,1-Dichloroethene | ND | | 0.500 | 0.363 |
| Acetone | ND | | 1.00 | 1.00 |
| Carbon disulfide | ND | | 0.500 | 0.403 |
| Methylene chloride | ND | | 1.00 | 0.500 |
| trans-1,2-Dichloroethene | ND | | 0.500 | 0.372 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.500 | 0.245 |
| 1,1-Dichloroethane | ND | | 0.500 | 0.285 |
| cis-1,2-Dichloroethene | ND | | 0.500 | 0.277 |
| 2-Butanone (MEK) | ND | | 1.00 | 0.802 |
| Bromochloromethane | ND | | 0.500 | 0.379 |
| Chloroform | ND | | 0.500 | 0.285 |
| 1,1,1-Trichloroethane | ND | | 0.500 | 0.381 |
| Carbon tetrachloride | ND | | 0.500 | 0.349 |
| 1,2-Dichloroethane (EDC) | ND | | 0.500 | 0.273 |
| Benzene | ND | | 0.500 | 0.270 |
| Trichloroethene | ND | | 0.500 | 0.347 |
| 1,2-Dichloropropane | ND | | 0.500 | 0.272 |
| Bromodichloromethane | ND | | 0.500 | 0.258 |
| cis-1,3-Dichloropropene | ND | | 0.500 | 0.264 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 1.00 | 0.611 |

## VOLATILE ORGANICS

Lab ID: E23-05046-012
Client ID: TWP2
Date Received: 11/16/2023
Date Analyzed: 11/20/2023
Data file: E5245.D 11/20/2023 16:01
Data file: P5606.D^

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.500 | 0.302 |
| trans-1,3-Dichloropropene | ND | | 0.500 | 0.330 |
| 1,1,2-Trichloroethane | ND | | 0.500 | 0.313 |
| Tetrachloroethene | ND | | 0.500 | 0.365 |
| 2-Hexanone | ND | | 1.00 | 0.818 |
| Dibromochloromethane | ND | | 0.500 | 0.263 |
| 1,2-Dibromoethane (EDB)^ | ND | | 0.00483 | 0.00364 |
| Chlorobenzene | ND | | 0.500 | 0.304 |
| Ethylbenzene | ND | | 0.500 | 0.313 |
| Total Xylenes | ND | | 1.00 | 0.345 |
| Styrene | ND | | 0.500 | 0.317 |
| Bromoform | ND | | 0.500 | 0.328 |
| Isopropylbenzene | ND | | 0.500 | 0.332 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.500 | 0.284 |
| 1,3-Dichlorobenzene | ND | | 0.500 | 0.386 |
| 1,4-Dichlorobenzene | ND | | 0.500 | 0.397 |
| 1,2-Dichlorobenzene | ND | | 0.500 | 0.354 |
| 1,2-Dibromo-3-chloropropane^ | ND | | 0.00483 | 0.00364 |
| 1,2,4-Trichlorobenzene | ND | | 0.500 | 0.358 |
| 1,2,3-Trichlorobenzene | ND | | 0.500 | 0.406 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.00 | 0.538 |
| Methyl acetate | ND | | 0.500 | 0.345 |
| Cyclohexane | ND | | 1.00 | 0.469 |
| Methylcyclohexane | ND | | 0.500 | 0.421 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.500 | 0.264 |

Total Target Compounds (51): 0

^ --- Results reported from SW-846 8011
D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-012
Client ID: TWP2
Date Received: 11/16/2023
Date Analyzed: 11/20/2023
Date File: E5245.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|

No peaks detected

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

# VOLATILE ORGANICS

Lab ID: E23-05046-013
Client ID: TWP4
Date Received: 11/16/2023
Date Analyzed: 11/20/2023
Data file: E5246.D 11/20/2023 16:28
Data file: P5607.D^

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 1.00 | 0.552 |
| Chloromethane | ND | | 0.500 | 0.309 |
| Vinyl chloride | ND | | 0.500 | 0.352 |
| Bromomethane | ND | | 0.500 | 0.386 |
| Chloroethane | ND | | 0.500 | 0.324 |
| Trichlorofluoromethane | ND | | 1.00 | 0.503 |
| 1,1-Dichloroethene | ND | | 0.500 | 0.363 |
| Acetone | ND | | 1.00 | 1.00 |
| Carbon disulfide | ND | | 0.500 | 0.403 |
| Methylene chloride | ND | | 1.00 | 0.500 |
| trans-1,2-Dichloroethene | ND | | 0.500 | 0.372 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.500 | 0.245 |
| 1,1-Dichloroethane | ND | | 0.500 | 0.285 |
| cis-1,2-Dichloroethene | ND | | 0.500 | 0.277 |
| 2-Butanone (MEK) | ND | | 1.00 | 0.802 |
| Bromochloromethane | ND | | 0.500 | 0.379 |
| Chloroform | ND | | 0.500 | 0.285 |
| 1,1,1-Trichloroethane | ND | | 0.500 | 0.381 |
| Carbon tetrachloride | ND | | 0.500 | 0.349 |
| 1,2-Dichloroethane (EDC) | ND | | 0.500 | 0.273 |
| Benzene | ND | | 0.500 | 0.270 |
| Trichloroethene | ND | | 0.500 | 0.347 |
| 1,2-Dichloropropane | ND | | 0.500 | 0.272 |
| Bromodichloromethane | ND | | 0.500 | 0.258 |
| cis-1,3-Dichloropropene | ND | | 0.500 | 0.264 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 1.00 | 0.611 |

## VOLATILE ORGANICS

Lab ID: E23-05046-013
Client ID: TWP4
Date Received: 11/16/2023
Date Analyzed: 11/20/2023
Data file: E5246.D 11/20/2023 16:28
Data file: P5607.D^

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.500 | 0.302 |
| trans-1,3-Dichloropropene | ND | | 0.500 | 0.330 |
| 1,1,2-Trichloroethane | ND | | 0.500 | 0.313 |
| Tetrachloroethene | ND | | 0.500 | 0.365 |
| 2-Hexanone | ND | | 1.00 | 0.818 |
| Dibromochloromethane | ND | | 0.500 | 0.263 |
| 1,2-Dibromoethane (EDB)^ | ND | | 0.00487 | 0.00364 |
| Chlorobenzene | ND | | 0.500 | 0.304 |
| Ethylbenzene | ND | | 0.500 | 0.313 |
| Total Xylenes | ND | | 1.00 | 0.345 |
| Styrene | ND | | 0.500 | 0.317 |
| Bromoform | ND | | 0.500 | 0.328 |
| Isopropylbenzene | ND | | 0.500 | 0.332 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.500 | 0.284 |
| 1,3-Dichlorobenzene | ND | | 0.500 | 0.386 |
| 1,4-Dichlorobenzene | ND | | 0.500 | 0.397 |
| 1,2-Dichlorobenzene | ND | | 0.500 | 0.354 |
| 1,2-Dibromo-3-chloropropane^ | ND | | 0.00487 | 0.00364 |
| 1,2,4-Trichlorobenzene | ND | | 0.500 | 0.358 |
| 1,2,3-Trichlorobenzene | ND | | 0.500 | 0.406 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.00 | 0.538 |
| Methyl acetate | ND | | 0.500 | 0.345 |
| Cyclohexane | ND | | 1.00 | 0.469 |
| Methylcyclohexane | ND | | 0.500 | 0.421 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.500 | 0.264 |

Total Target Compounds (51): 0

^ --- Results reported from SW-846 8011
D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-013
Client ID: TWP4
Date Received: 11/16/2023
Date Analyzed: 11/20/2023
Date File: E5246.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|

No peaks detected

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

# VOLATILE ORGANICS

Lab ID: E23-05046-014
Client ID: TWP5
Date Received: 11/16/2023
Date Analyzed: 11/20/2023
Data file: E5247.D 11/20/2023 16:55
Data file: P5608.D^

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 1.00 | 0.552 |
| Chloromethane | ND | | 0.500 | 0.309 |
| Vinyl chloride | ND | | 0.500 | 0.352 |
| Bromomethane | ND | | 0.500 | 0.386 |
| Chloroethane | ND | | 0.500 | 0.324 |
| Trichlorofluoromethane | ND | | 1.00 | 0.503 |
| 1,1-Dichloroethene | ND | | 0.500 | 0.363 |
| Acetone | ND | | 1.00 | 1.00 |
| Carbon disulfide | ND | | 0.500 | 0.403 |
| Methylene chloride | ND | | 1.00 | 0.500 |
| trans-1,2-Dichloroethene | ND | | 0.500 | 0.372 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.500 | 0.245 |
| 1,1-Dichloroethane | ND | | 0.500 | 0.285 |
| cis-1,2-Dichloroethene | ND | | 0.500 | 0.277 |
| 2-Butanone (MEK) | ND | | 1.00 | 0.802 |
| Bromochloromethane | ND | | 0.500 | 0.379 |
| Chloroform | 7.89 | | 0.500 | 0.285 |
| 1,1,1-Trichloroethane | ND | | 0.500 | 0.381 |
| Carbon tetrachloride | ND | | 0.500 | 0.349 |
| 1,2-Dichloroethane (EDC) | ND | | 0.500 | 0.273 |
| Benzene | ND | | 0.500 | 0.270 |
| Trichloroethene | ND | | 0.500 | 0.347 |
| 1,2-Dichloropropane | ND | | 0.500 | 0.272 |
| Bromodichloromethane | ND | | 0.500 | 0.258 |
| cis-1,3-Dichloropropene | ND | | 0.500 | 0.264 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 1.00 | 0.611 |

## VOLATILE ORGANICS

Lab ID: E23-05046-014
Client ID: TWP5
Date Received: 11/16/2023
Date Analyzed: 11/20/2023
Data file: E5247.D 11/20/2023 16:55
Data file: P5608.D^

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.500 | 0.302 |
| trans-1,3-Dichloropropene | ND | | 0.500 | 0.330 |
| 1,1,2-Trichloroethane | ND | | 0.500 | 0.313 |
| Tetrachloroethene | ND | | 0.500 | 0.365 |
| 2-Hexanone | ND | | 1.00 | 0.818 |
| Dibromochloromethane | ND | | 0.500 | 0.263 |
| 1,2-Dibromoethane (EDB)^ | ND | | 0.00483 | 0.00364 |
| Chlorobenzene | ND | | 0.500 | 0.304 |
| Ethylbenzene | ND | | 0.500 | 0.313 |
| Total Xylenes | ND | | 1.00 | 0.345 |
| Styrene | ND | | 0.500 | 0.317 |
| Bromoform | ND | | 0.500 | 0.328 |
| Isopropylbenzene | ND | | 0.500 | 0.332 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.500 | 0.284 |
| 1,3-Dichlorobenzene | ND | | 0.500 | 0.386 |
| 1,4-Dichlorobenzene | ND | | 0.500 | 0.397 |
| 1,2-Dichlorobenzene | ND | | 0.500 | 0.354 |
| 1,2-Dibromo-3-chloropropane^ | ND | | 0.00483 | 0.00364 |
| 1,2,4-Trichlorobenzene | ND | | 0.500 | 0.358 |
| 1,2,3-Trichlorobenzene | ND | | 0.500 | 0.406 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.00 | 0.538 |
| Methyl acetate | ND | | 0.500 | 0.345 |
| Cyclohexane | ND | | 1.00 | 0.469 |
| Methylcyclohexane | ND | | 0.500 | 0.421 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.500 | 0.264 |
| Total Target Compounds (51): | 7.89 | | | |

^ --- Results reported from SW-846 8011
D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-014
Client ID: TWP5
Date Received: 11/16/2023
Date Analyzed: 11/20/2023
Date File: E5247.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | No peaks detected | | | |

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05046-015
Client ID: SB4A
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Data file: L7683.D 11/18/2023 03:46

GC/MS Column: DB-624
Sample wt/vol: 4.60g
Matrix-Units: Soil-mg/Kg
% Moisture: 13.4
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00126 | 0.000654 |
| Chloromethane | ND | | 0.00252 | 0.000399 |
| Vinyl chloride | ND | | 0.00126 | 0.000408 |
| Bromomethane | ND | | 0.00252 | 0.0011 |
| Chloroethane | ND | | 0.00126 | 0.000374 |
| Trichlorofluoromethane | ND | | 0.00126 | 0.000512 |
| 1,1-Dichloroethene | ND | | 0.00126 | 0.000441 |
| Acetone | ND | | 0.013 | 0.0063 |
| Carbon disulfide | ND | | 0.00126 | 0.000495 |
| Methylene chloride | ND | | 0.0063 | 0.00378 |
| trans-1,2-Dichloroethene | ND | | 0.00252 | 0.000446 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00126 | 0.000275 |
| 1,1-Dichloroethane | ND | | 0.00252 | 0.000321 |
| cis-1,2-Dichloroethene | ND | | 0.00252 | 0.00027 |
| 2-Butanone (MEK) | ND | | 0.013 | 0.00252 |
| Bromochloromethane | ND | | 0.00126 | 0.00032 |
| Chloroform | ND | | 0.00252 | 0.00063 |
| 1,1,1-Trichloroethane | ND | | 0.00126 | 0.000387 |
| Carbon tetrachloride | ND | | 0.00126 | 0.000252 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00126 | 0.000291 |
| Benzene | ND | | 0.00126 | 0.000108 |
| Trichloroethene | ND | | 0.00126 | 0.000188 |
| 1,2-Dichloropropane | ND | | 0.00126 | 0.000126 |
| Bromodichloromethane | ND | | 0.00126 | 0.00015 |
| cis-1,3-Dichloropropene | ND | | 0.00126 | 0.000193 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.013 | 0.000659 |

## VOLATILE ORGANICS

Lab ID: E23-05046-015
Client ID: SB4A
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Data file: L7683.D 11/18/2023 03:46

GC/MS Column: DB-624
Sample wt/vol: 4.60g
Matrix-Units: Soil-mg/Kg
% Moisture: 13.4
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00126 | 0.00063 |
| trans-1,3-Dichloropropene | ND | | 0.00126 | 0.00014 |
| 1,1,2-Trichloroethane | ND | | 0.00126 | 0.00027 |
| Tetrachloroethene | ND | | 0.00126 | 0.00013 |
| 2-Hexanone | ND | | 0.013 | 0.00193 |
| Dibromochloromethane | ND | | 0.00126 | 0.000209 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00126 | 0.000233 |
| Chlorobenzene | ND | | 0.00126 | 0.000218 |
| Ethylbenzene | ND | | 0.00126 | 0.000137 |
| Total Xylenes | ND | | 0.00252 | 0.000176 |
| Styrene | ND | | 0.00126 | 0.000271 |
| Bromoform | ND | | 0.00126 | 0.000392 |
| Isopropylbenzene | ND | | 0.00126 | 0.000268 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00126 | 0.000659 |
| 1,3-Dichlorobenzene | ND | | 0.00126 | 0.000334 |
| 1,4-Dichlorobenzene | ND | | 0.00126 | 0.000391 |
| 1,2-Dichlorobenzene | ND | | 0.00126 | 0.000316 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00126 | 0.00104 |
| 1,2,4-Trichlorobenzene | ND | | 0.00126 | 0.000529 |
| 1,2,3-Trichlorobenzene | ND | | 0.00252 | 0.000401 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.00252 | 0.000752 |
| Methyl acetate | ND | | 0.00126 | 0.00102 |
| Cyclohexane | ND | | 0.0063 | 0.000227 |
| Methylcyclohexane | ND | | 0.00252 | 0.000217 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00126 | 0.00014 |

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-015
Client ID: SB4A
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Date File: L7683.D

GC/MS Column: DB-624
Sample wt/vol: 4.60g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 13.4

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | No peaks detected | | | |

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05046-016
Client ID: SB4B
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Data file: L7684.D 11/18/2023 04:14

GC/MS Column: DB-624
Sample wt/vol: 5.33g
Matrix-Units: Soil-mg/Kg
% Moisture: 19.5
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00117 | 0.000607 |
| Chloromethane | ND | | 0.00234 | 0.000371 |
| Vinyl chloride | ND | | 0.00117 | 0.000379 |
| Bromomethane | ND | | 0.00234 | 0.00102 |
| Chloroethane | ND | | 0.00117 | 0.000347 |
| Trichlorofluoromethane | ND | | 0.00117 | 0.000475 |
| 1,1-Dichloroethene | ND | | 0.00117 | 0.00041 |
| Acetone | ND | | 0.012 | 0.00585 |
| Carbon disulfide | ND | | 0.00117 | 0.00046 |
| Methylene chloride | ND | | 0.00585 | 0.00351 |
| trans-1,2-Dichloroethene | ND | | 0.00234 | 0.000414 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00117 | 0.000255 |
| 1,1-Dichloroethane | ND | | 0.00234 | 0.000298 |
| cis-1,2-Dichloroethene | ND | | 0.00234 | 0.00025 |
| 2-Butanone (MEK) | ND | | 0.012 | 0.00234 |
| Bromochloromethane | ND | | 0.00117 | 0.000297 |
| Chloroform | ND | | 0.00234 | 0.000585 |
| 1,1,1-Trichloroethane | ND | | 0.00117 | 0.000359 |
| Carbon tetrachloride | ND | | 0.00117 | 0.000234 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00117 | 0.00027 |
| Benzene | ND | | 0.00117 | 0.000101 |
| Trichloroethene | ND | | 0.00117 | 0.000174 |
| 1,2-Dichloropropane | ND | | 0.00117 | 0.000117 |
| Bromodichloromethane | ND | | 0.00117 | 0.000139 |
| cis-1,3-Dichloropropene | ND | | 0.00117 | 0.000179 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.012 | 0.000612 |

## VOLATILE ORGANICS

Lab ID: E23-05046-016
Client ID: SB4B
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Data file: L7684.D 11/18/2023 04:14

GC/MS Column: DB-624
Sample wt/vol: 5.33g
Matrix-Units: Soil-mg/Kg
% Moisture: 19.5
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00117 | 0.000585 |
| trans-1,3-Dichloropropene | ND | | 0.00117 | 0.00013 |
| 1,1,2-Trichloroethane | ND | | 0.00117 | 0.00025 |
| Tetrachloroethene | ND | | 0.00117 | 0.000121 |
| 2-Hexanone | ND | | 0.012 | 0.00179 |
| Dibromochloromethane | ND | | 0.00117 | 0.000194 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00117 | 0.000216 |
| Chlorobenzene | ND | | 0.00117 | 0.000202 |
| Ethylbenzene | ND | | 0.00117 | 0.000128 |
| Total Xylenes | ND | | 0.00234 | 0.000164 |
| Styrene | ND | | 0.00117 | 0.000252 |
| Bromoform | ND | | 0.00117 | 0.000364 |
| Isopropylbenzene | ND | | 0.00117 | 0.000249 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00117 | 0.000612 |
| 1,3-Dichlorobenzene | ND | | 0.00117 | 0.00031 |
| 1,4-Dichlorobenzene | ND | | 0.00117 | 0.000363 |
| 1,2-Dichlorobenzene | ND | | 0.00117 | 0.000294 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00117 | 0.000964 |
| 1,2,4-Trichlorobenzene | ND | | 0.00117 | 0.000491 |
| 1,2,3-Trichlorobenzene | ND | | 0.00234 | 0.000372 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.00234 | 0.000698 |
| Methyl acetate | ND | | 0.00117 | 0.000945 |
| Cyclohexane | ND | | 0.00585 | 0.000211 |
| Methylcyclohexane | ND | | 0.00234 | 0.000201 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00117 | 0.00013 |

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-016
Client ID: SB4B
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Date File: L7684.D

GC/MS Column: DB-624
Sample wt/vol: 5.33g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 19.5

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Column/Septa bleed | 0 | J | 5.39 |

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05046-017
Client ID: SB5A
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Data file: L7685.D 11/18/2023 04:42

GC/MS Column: DB-624
Sample wt/vol: 5.21g
Matrix-Units: Soil-mg/Kg
% Moisture: 9
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00105 | 0.000545 |
| Chloromethane | ND | | 0.0021 | 0.000333 |
| Vinyl chloride | ND | | 0.00105 | 0.00034 |
| Bromomethane | ND | | 0.0021 | 0.000916 |
| Chloroethane | ND | | 0.00105 | 0.000312 |
| Trichlorofluoromethane | ND | | 0.00105 | 0.000426 |
| 1,1-Dichloroethene | ND | | 0.00105 | 0.000368 |
| Acetone | 0.031 | | 0.011 | 0.00525 |
| Carbon disulfide | ND | | 0.00105 | 0.000413 |
| Methylene chloride | ND | | 0.00525 | 0.00315 |
| trans-1,2-Dichloroethene | ND | | 0.0021 | 0.000372 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00105 | 0.000229 |
| 1,1-Dichloroethane | ND | | 0.0021 | 0.000268 |
| cis-1,2-Dichloroethene | ND | | 0.0021 | 0.000225 |
| 2-Butanone (MEK) | ND | | 0.011 | 0.0021 |
| Bromochloromethane | ND | | 0.00105 | 0.000267 |
| Chloroform | ND | | 0.0021 | 0.000525 |
| 1,1,1-Trichloroethane | ND | | 0.00105 | 0.000322 |
| Carbon tetrachloride | ND | | 0.00105 | 0.00021 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00105 | 0.000243 |
| Benzene | ND | | 0.00105 | 0.0000903 |
| Trichloroethene | ND | | 0.00105 | 0.000156 |
| 1,2-Dichloropropane | ND | | 0.00105 | 0.000105 |
| Bromodichloromethane | ND | | 0.00105 | 0.000125 |
| cis-1,3-Dichloropropene | ND | | 0.00105 | 0.000161 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.011 | 0.000549 |

## VOLATILE ORGANICS

Lab ID: E23-05046-017
Client ID: SB5A
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Data file: L7685.D 11/18/2023 04:42

GC/MS Column: DB-624
Sample wt/vol: 5.21g
Matrix-Units: Soil-mg/Kg
% Moisture: 9
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00105 | 0.000525 |
| trans-1,3-Dichloropropene | ND | | 0.00105 | 0.000117 |
| 1,1,2-Trichloroethane | ND | | 0.00105 | 0.000225 |
| Tetrachloroethene | ND | | 0.00105 | 0.000108 |
| 2-Hexanone | ND | | 0.011 | 0.00161 |
| Dibromochloromethane | ND | | 0.00105 | 0.000174 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00105 | 0.000194 |
| Chlorobenzene | ND | | 0.00105 | 0.000182 |
| Ethylbenzene | ND | | 0.00105 | 0.000114 |
| Total Xylenes | ND | | 0.0021 | 0.000147 |
| Styrene | ND | | 0.00105 | 0.000226 |
| Bromoform | ND | | 0.00105 | 0.000327 |
| Isopropylbenzene | ND | | 0.00105 | 0.000224 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00105 | 0.000549 |
| 1,3-Dichlorobenzene | ND | | 0.00105 | 0.000278 |
| 1,4-Dichlorobenzene | ND | | 0.00105 | 0.000326 |
| 1,2-Dichlorobenzene | ND | | 0.00105 | 0.000264 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00105 | 0.000865 |
| 1,2,4-Trichlorobenzene | ND | | 0.00105 | 0.000441 |
| 1,2,3-Trichlorobenzene | ND | | 0.0021 | 0.000334 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.0021 | 0.000627 |
| Methyl acetate | ND | | 0.00105 | 0.000848 |
| Cyclohexane | ND | | 0.00525 | 0.000189 |
| Methylcyclohexane | ND | | 0.0021 | 0.000181 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00105 | 0.000117 |

Total Target Compounds (51): 0.031

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-017
Client ID: SB5A
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Date File: L7685.D

GC/MS Column: DB-624
Sample wt/vol: 5.21g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 9

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | No peaks detected | | | |

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05046-018
Client ID: SB5B
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Data file: L7686.D 11/18/2023 05:11

GC/MS Column: DB-624
Sample wt/vol: 4.98g
Matrix-Units: Soil-mg/Kg
% Moisture: 14.4
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00117 | 0.000607 |
| Chloromethane | ND | | 0.00234 | 0.000371 |
| Vinyl chloride | ND | | 0.00117 | 0.000379 |
| Bromomethane | ND | | 0.00234 | 0.00102 |
| Chloroethane | ND | | 0.00117 | 0.000347 |
| Trichlorofluoromethane | ND | | 0.00117 | 0.000475 |
| 1,1-Dichloroethene | ND | | 0.00117 | 0.00041 |
| Acetone | ND | | 0.012 | 0.00585 |
| Carbon disulfide | ND | | 0.00117 | 0.00046 |
| Methylene chloride | ND | | 0.00585 | 0.00351 |
| trans-1,2-Dichloroethene | ND | | 0.00234 | 0.000414 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00117 | 0.000255 |
| 1,1-Dichloroethane | ND | | 0.00234 | 0.000298 |
| cis-1,2-Dichloroethene | ND | | 0.00234 | 0.00025 |
| 2-Butanone (MEK) | ND | | 0.012 | 0.00234 |
| Bromochloromethane | ND | | 0.00117 | 0.000297 |
| Chloroform | ND | | 0.00234 | 0.000585 |
| 1,1,1-Trichloroethane | ND | | 0.00117 | 0.000359 |
| Carbon tetrachloride | ND | | 0.00117 | 0.000234 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00117 | 0.00027 |
| Benzene | ND | | 0.00117 | 0.000101 |
| Trichloroethene | ND | | 0.00117 | 0.000174 |
| 1,2-Dichloropropane | ND | | 0.00117 | 0.000117 |
| Bromodichloromethane | ND | | 0.00117 | 0.000139 |
| cis-1,3-Dichloropropene | ND | | 0.00117 | 0.000179 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.012 | 0.000612 |

## VOLATILE ORGANICS

Lab ID: E23-05046-018
Client ID: SB5B
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Data file: L7686.D 11/18/2023 05:11

GC/MS Column: DB-624
Sample wt/vol: 4.98g
Matrix-Units: Soil-mg/Kg
% Moisture: 14.4
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00117 | 0.000585 |
| trans-1,3-Dichloropropene | ND | | 0.00117 | 0.00013 |
| 1,1,2-Trichloroethane | ND | | 0.00117 | 0.00025 |
| Tetrachloroethene | ND | | 0.00117 | 0.000121 |
| 2-Hexanone | ND | | 0.012 | 0.00179 |
| Dibromochloromethane | ND | | 0.00117 | 0.000194 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00117 | 0.000216 |
| Chlorobenzene | ND | | 0.00117 | 0.000202 |
| Ethylbenzene | ND | | 0.00117 | 0.000128 |
| Total Xylenes | ND | | 0.00234 | 0.000164 |
| Styrene | ND | | 0.00117 | 0.000252 |
| Bromoform | ND | | 0.00117 | 0.000364 |
| Isopropylbenzene | ND | | 0.00117 | 0.000249 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00117 | 0.000612 |
| 1,3-Dichlorobenzene | ND | | 0.00117 | 0.00031 |
| 1,4-Dichlorobenzene | ND | | 0.00117 | 0.000363 |
| 1,2-Dichlorobenzene | ND | | 0.00117 | 0.000294 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00117 | 0.000964 |
| 1,2,4-Trichlorobenzene | ND | | 0.00117 | 0.000491 |
| 1,2,3-Trichlorobenzene | ND | | 0.00234 | 0.000372 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.00234 | 0.000698 |
| Methyl acetate | ND | | 0.00117 | 0.000945 |
| Cyclohexane | ND | | 0.00585 | 0.000211 |
| Methylcyclohexane | ND | | 0.00234 | 0.000201 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00117 | 0.00013 |

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-018
Client ID: SB5B
Date Received: 11/16/2023
Date Analyzed: 11/18/2023
Date File: L7686.D

GC/MS Column: DB-624
Sample wt/vol: 4.98g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 14.4

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Column/Septa bleed | 0 | J | 5.39 |

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: BLKS231120-01
Client ID: BLKS231120-01
Date Received: 11/16/2023
Date Analyzed: 11/20/2023
Data file: L7692.D 11/20/2023 12:59

GC/MS Column: DB-624
Sample wt/vol: 5.00g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.001 | 0.000519 |
| Chloromethane | ND | | 0.002 | 0.000317 |
| Vinyl chloride | ND | | 0.001 | 0.000324 |
| Bromomethane | ND | | 0.002 | 0.000872 |
| Chloroethane | ND | | 0.001 | 0.000297 |
| Trichlorofluoromethane | ND | | 0.001 | 0.000406 |
| 1,1-Dichloroethene | ND | | 0.001 | 0.00035 |
| Acetone | ND | | 0.010 | 0.005 |
| Carbon disulfide | ND | | 0.001 | 0.000393 |
| Methylene chloride | ND | | 0.005 | 0.003 |
| trans-1,2-Dichloroethene | ND | | 0.002 | 0.000354 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.001 | 0.000218 |
| 1,1-Dichloroethane | ND | | 0.002 | 0.000255 |
| cis-1,2-Dichloroethene | ND | | 0.002 | 0.000214 |
| 2-Butanone (MEK) | ND | | 0.010 | 0.002 |
| Bromochloromethane | ND | | 0.001 | 0.000254 |
| Chloroform | ND | | 0.002 | 0.0005 |
| 1,1,1-Trichloroethane | ND | | 0.001 | 0.000307 |
| Carbon tetrachloride | ND | | 0.001 | 0.0002 |
| 1,2-Dichloroethane (EDC) | ND | | 0.001 | 0.000231 |
| Benzene | ND | | 0.001 | 0.000086 |
| Trichloroethene | ND | | 0.001 | 0.000149 |
| 1,2-Dichloropropane | ND | | 0.001 | 0.0001 |
| Bromodichloromethane | ND | | 0.001 | 0.000119 |
| cis-1,3-Dichloropropene | ND | | 0.001 | 0.000153 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.010 | 0.000523 |

## VOLATILE ORGANICS

Lab ID: BLKS231120-01
Client ID: BLKS231120-01
Date Received: 11/16/2023
Date Analyzed: 11/20/2023
Data file: L7692.D 11/20/2023 12:59

GC/MS Column: DB-624
Sample wt/vol: 5.00g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.001 | 0.0005 |
| trans-1,3-Dichloropropene | ND | | 0.001 | 0.000111 |
| 1,1,2-Trichloroethane | ND | | 0.001 | 0.000214 |
| Tetrachloroethene | ND | | 0.001 | 0.000103 |
| 2-Hexanone | ND | | 0.010 | 0.00153 |
| Dibromochloromethane | ND | | 0.001 | 0.000166 |
| 1,2-Dibromoethane (EDB) | ND | | 0.001 | 0.000185 |
| Chlorobenzene | ND | | 0.001 | 0.000173 |
| Ethylbenzene | ND | | 0.001 | 0.000109 |
| Total Xylenes | ND | | 0.002 | 0.00014 |
| Styrene | ND | | 0.001 | 0.000215 |
| Bromoform | ND | | 0.001 | 0.000311 |
| Isopropylbenzene | ND | | 0.001 | 0.000213 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.001 | 0.000523 |
| 1,3-Dichlorobenzene | ND | | 0.001 | 0.000265 |
| 1,4-Dichlorobenzene | ND | | 0.001 | 0.00031 |
| 1,2-Dichlorobenzene | ND | | 0.001 | 0.000251 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.001 | 0.000824 |
| 1,2,4-Trichlorobenzene | ND | | 0.001 | 0.00042 |
| 1,2,3-Trichlorobenzene | ND | | 0.002 | 0.000318 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.002 | 0.000597 |
| Methyl acetate | ND | | 0.001 | 0.000808 |
| Cyclohexane | ND | | 0.005 | 0.00018 |
| Methylcyclohexane | ND | | 0.002 | 0.000172 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.001 | 0.000111 |

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: BLKS231120-01
Client ID: BLKS231120-01
Date Received: 11/16/2023
Date Analyzed: 11/20/2023
Date File: L7692.D

GC/MS Column: DB-624
Sample wt/vol: 5.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: NA

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | No peaks detected | | | |

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## Volatiles (8011)

Lab ID: BLKA231121-01
Client ID: 8011
Date Received: NA
Date Extracted: 11/21/2023
Date Analyzed: 11/21/2023
Data file: P5601.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 35.0ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ND | | 0.00486 | 0.00364 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00486 | 0.00364 |
| 1,2,3-Trichloropropane | ND | | 0.00971 | 0.00729 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-001
Client ID: SB12A/0-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3835.D 11/21/2023 17:12

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 13.3
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.076 | 0.029 |
| Phenol | ND | | 0.038 | 0.00864 |
| Bis(2-chloroethyl) ether | ND | | 0.038 | 0.013 |
| 2-Chlorophenol | ND | | 0.038 | 0.012 |
| 2-Methylphenol | ND | | 0.038 | 0.017 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.038 | 0.00952 |
| 4-Methylphenol ** | ND | | 0.038 | 0.017 |
| N-Nitrosodi-n-propylamine | ND | | 0.038 | 0.024 |
| Acetophenone | ND | | 0.038 | 0.023 |
| 1,4-Dioxane | ND | | 0.038 | 0.025 |
| Hexachloroethane | ND | | 0.038 | 0.016 |
| Nitrobenzene | ND | | 0.038 | 0.00927 |
| Isophorone | ND | | 0.038 | 0.016 |
| 2-Nitrophenol | ND | | 0.076 | 0.023 |
| 2,4-Dimethylphenol | ND | | 0.038 | 0.011 |
| Bis(2-chloroethoxy) methane | ND | | 0.038 | 0.00851 |
| 2,4-Dichlorophenol | ND | | 0.038 | 0.010 |
| Naphthalene | ND | | 0.038 | 0.00557 |
| 4-Chloroaniline | ND | | 0.038 | 0.015 |
| Hexachlorobutadiene | ND | | 0.038 | 0.011 |
| Caprolactam | ND | | 0.076 | 0.028 |
| 4-Chloro-3-methylphenol | ND | | 0.038 | 0.015 |
| 2-Methylnaphthalene | ND | | 0.038 | 0.013 |
| Hexachlorocyclopentadiene | ND | | 0.076 | 0.066 |
| 2,4,6-Trichlorophenol | ND | | 0.038 | 0.011 |
| 2,4,5-Trichlorophenol | ND | | 0.038 | 0.029 |
| 1,1'-Biphenyl | ND | | 0.038 | 0.00568 |
| 2-Chloronaphthalene | ND | | 0.038 | 0.00882 |
| 2-Nitroaniline | ND | | 0.038 | 0.020 |
| Dimethyl phthalate | ND | | 0.038 | 0.00876 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-001
Client ID: SB12A/0-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3835.D 11/21/2023 17:12

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 13.3
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.076 | 0.044 |
| Acenaphthylene | 0.031 | J | 0.038 | 0.00836 |
| 3-Nitroaniline | ND | | 0.038 | 0.024 |
| Acenaphthene | ND | | 0.038 | 0.00754 |
| 2,4-Dinitrophenol | ND | | 0.076 | 0.016 |
| 4-Nitrophenol | ND | | 0.076 | 0.039 |
| 2,4-Dinitrotoluene | ND | | 0.076 | 0.043 |
| Dibenzofuran | ND | | 0.038 | 0.005 |
| Diethyl phthalate | ND | | 0.038 | 0.012 |
| Fluorene | ND | | 0.038 | 0.010 |
| 4-Chlorophenyl phenyl ether | ND | | 0.038 | 0.00839 |
| 4-Nitroaniline | ND | | 0.038 | 0.023 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.038 | 0.013 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.038 | 0.013 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.076 | 0.016 |
| N-Nitrosodiphenylamine | ND | | 0.038 | 0.00784 |
| 4-Bromophenyl phenyl ether | ND | | 0.038 | 0.011 |
| Hexachlorobenzene | ND | | 0.038 | 0.012 |
| Atrazine | ND | | 0.038 | 0.023 |
| Pentachlorophenol | ND | | 0.038 | 0.017 |
| Phenanthrene | 0.353 | | 0.038 | 0.00625 |
| Anthracene | 0.080 | | 0.038 | 0.00389 |
| Carbazole | 0.026 | J | 0.038 | 0.0089 |
| Di-n-butyl phthalate | ND | | 0.038 | 0.016 |
| Fluoranthene | 0.601 | | 0.038 | 0.012 |
| Pyrene | 0.608 | | 0.038 | 0.00889 |
| Butyl benzyl phthalate | ND | | 0.038 | 0.017 |
| 3,3'-Dichlorobenzidine | ND | | 0.038 | 0.027 |
| Benzo[a]anthracene | 0.313 | | 0.038 | 0.014 |
| Chrysene | 0.332 | | 0.038 | 0.011 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.038 | 0.025 |
| Di-n-octyl phthalate | ND | | 0.038 | 0.028 |
| Benzo[b]fluoranthene | 0.287 | | 0.038 | 0.019 |
| Benzo[k]fluoranthene | 0.264 | | 0.038 | 0.026 |
| Benzo[a]pyrene | 0.299 | | 0.038 | 0.019 |
| Indeno[1,2,3-cd]pyrene | 0.190 | | 0.038 | 0.024 |
| Dibenz[a,h]anthracene | 0.103 | | 0.038 | 0.015 |
| Benzo[g,h,i]perylene | 0.199 | | 0.038 | 0.029 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.076 | 0.043 |
| Total Target Compounds (69): | 3.69 | J | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-001
Client ID: SB12A/0-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Date File: A3835.D

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 13.3

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|

No peaks detected

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-002
Client ID: SB2A/0-2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3836.D 11/21/2023 17:28

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 7.30
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.072 | 0.027 |
| Phenol | ND | | 0.036 | 0.00813 |
| Bis(2-chloroethyl) ether | ND | | 0.036 | 0.013 |
| 2-Chlorophenol | ND | | 0.036 | 0.012 |
| 2-Methylphenol | ND | | 0.036 | 0.016 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.036 | 0.00897 |
| 4-Methylphenol ** | ND | | 0.036 | 0.016 |
| N-Nitrosodi-n-propylamine | ND | | 0.036 | 0.022 |
| Acetophenone | ND | | 0.036 | 0.022 |
| 1,4-Dioxane | ND | | 0.036 | 0.023 |
| Hexachloroethane | ND | | 0.036 | 0.015 |
| Nitrobenzene | ND | | 0.036 | 0.00873 |
| Isophorone | ND | | 0.036 | 0.015 |
| 2-Nitrophenol | ND | | 0.072 | 0.021 |
| 2,4-Dimethylphenol | ND | | 0.036 | 0.011 |
| Bis(2-chloroethoxy) methane | ND | | 0.036 | 0.00802 |
| 2,4-Dichlorophenol | ND | | 0.036 | 0.00956 |
| Naphthalene | 0.085 | | 0.036 | 0.00525 |
| 4-Chloroaniline | ND | | 0.036 | 0.014 |
| Hexachlorobutadiene | ND | | 0.036 | 0.00998 |
| Caprolactam | ND | | 0.072 | 0.027 |
| 4-Chloro-3-methylphenol | ND | | 0.036 | 0.014 |
| 2-Methylnaphthalene | 0.065 | | 0.036 | 0.013 |
| Hexachlorocyclopentadiene | ND | | 0.072 | 0.062 |
| 2,4,6-Trichlorophenol | ND | | 0.036 | 0.00989 |
| 2,4,5-Trichlorophenol | ND | | 0.036 | 0.027 |
| 1,1'-Biphenyl | 0.020 | J | 0.036 | 0.00535 |
| 2-Chloronaphthalene | ND | | 0.036 | 0.00831 |
| 2-Nitroaniline | ND | | 0.036 | 0.019 |
| Dimethyl phthalate | ND | | 0.036 | 0.00825 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-002
Client ID: SB2A/0-2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3836.D 11/21/2023 17:28

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 7.30
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.072 | 0.041 |
| Acenaphthylene | 0.074 | | 0.036 | 0.00787 |
| 3-Nitroaniline | ND | | 0.036 | 0.023 |
| Acenaphthene | 0.143 | | 0.036 | 0.0071 |
| 2,4-Dinitrophenol | ND | | 0.072 | 0.015 |
| 4-Nitrophenol | ND | | 0.072 | 0.036 |
| 2,4-Dinitrotoluene | ND | | 0.072 | 0.041 |
| Dibenzofuran | 0.102 | | 0.036 | 0.0047 |
| Diethyl phthalate | ND | | 0.036 | 0.011 |
| Fluorene | 0.166 | | 0.036 | 0.00968 |
| 4-Chlorophenyl phenyl ether | ND | | 0.036 | 0.0079 |
| 4-Nitroaniline | ND | | 0.036 | 0.021 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.036 | 0.012 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.036 | 0.012 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.072 | 0.015 |
| N-Nitrosodiphenylamine | ND | | 0.036 | 0.00738 |
| 4-Bromophenyl phenyl ether | ND | | 0.036 | 0.00996 |
| Hexachlorobenzene | ND | | 0.036 | 0.011 |
| Atrazine | ND | | 0.036 | 0.022 |
| Pentachlorophenol | ND | | 0.036 | 0.016 |
| Phenanthrene | 2.61 | | 0.036 | 0.00588 |
| Anthracene | 0.626 | | 0.036 | 0.00366 |
| Carbazole | 0.163 | | 0.036 | 0.00838 |
| Di-n-butyl phthalate | ND | | 0.036 | 0.015 |
| Fluoranthene | 3.46 | | 0.036 | 0.012 |
| Pyrene | 3.17 | | 0.036 | 0.00837 |
| Butyl benzyl phthalate | ND | | 0.036 | 0.016 |
| 3,3'-Dichlorobenzidine | ND | | 0.036 | 0.025 |
| Benzo[a]anthracene | 1.80 | | 0.036 | 0.013 |
| Chrysene | 1.60 | | 0.036 | 0.00992 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.036 | 0.023 |
| Di-n-octyl phthalate | ND | | 0.036 | 0.026 |
| Benzo[b]fluoranthene | 1.57 | | 0.036 | 0.018 |
| Benzo[k]fluoranthene | 1.08 | | 0.036 | 0.025 |
| Benzo[a]pyrene | 1.44 | | 0.036 | 0.017 |
| Indeno[1,2,3-cd]pyrene | 0.845 | | 0.036 | 0.023 |
| Dibenz[a,h]anthracene | 0.487 | | 0.036 | 0.014 |
| Benzo[g,h,i]perylene | 0.870 | | 0.036 | 0.027 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.072 | 0.041 |
| Total Target Compounds (69): | 20.4 | J | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-002
Client ID: SB2A/0-2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Date File: A3836.D

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 7.30

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| 000949-41-7 | 1H-Cyclopropa[l]phenanthrene,1a,9b | 0.342 | JN | 6.19 |
| 002381-21-7 | Pyrene, 1-methyl- | 0.147 | JN | 6.87 |
| | Unknown SV | 0.187 | J | 7.24 |

Total TICs = 0.676 JN

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-003
Client ID: SB2B/10-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3837.D 11/21/2023 17:44

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 8.30
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | 0.102 | | 0.072 | 0.027 |
| Phenol | ND | | 0.036 | 0.00817 |
| Bis(2-chloroethyl) ether | ND | | 0.036 | 0.013 |
| 2-Chlorophenol | ND | | 0.036 | 0.012 |
| 2-Methylphenol | ND | | 0.036 | 0.016 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.036 | 0.00901 |
| 4-Methylphenol ** | ND | | 0.036 | 0.016 |
| N-Nitrosodi-n-propylamine | ND | | 0.036 | 0.022 |
| Acetophenone | ND | | 0.036 | 0.022 |
| 1,4-Dioxane | ND | | 0.036 | 0.023 |
| Hexachloroethane | ND | | 0.036 | 0.015 |
| Nitrobenzene | ND | | 0.036 | 0.00877 |
| Isophorone | ND | | 0.036 | 0.015 |
| 2-Nitrophenol | ND | | 0.072 | 0.022 |
| 2,4-Dimethylphenol | ND | | 0.036 | 0.011 |
| Bis(2-chloroethoxy) methane | ND | | 0.036 | 0.00805 |
| 2,4-Dichlorophenol | ND | | 0.036 | 0.0096 |
| Naphthalene | ND | | 0.036 | 0.00527 |
| 4-Chloroaniline | ND | | 0.036 | 0.014 |
| Hexachlorobutadiene | ND | | 0.036 | 0.010 |
| Caprolactam | ND | | 0.072 | 0.027 |
| 4-Chloro-3-methylphenol | ND | | 0.036 | 0.014 |
| 2-Methylnaphthalene | ND | | 0.036 | 0.013 |
| Hexachlorocyclopentadiene | ND | | 0.072 | 0.063 |
| 2,4,6-Trichlorophenol | ND | | 0.036 | 0.00993 |
| 2,4,5-Trichlorophenol | ND | | 0.036 | 0.027 |
| 1,1'-Biphenyl | ND | | 0.036 | 0.00537 |
| 2-Chloronaphthalene | ND | | 0.036 | 0.00834 |
| 2-Nitroaniline | ND | | 0.036 | 0.019 |
| Dimethyl phthalate | ND | | 0.036 | 0.00829 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-003
Client ID: SB2B/10-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3837.D 11/21/2023 17:44

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 8.30
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.072 | 0.042 |
| Acenaphthylene | ND | | 0.036 | 0.0079 |
| 3-Nitroaniline | ND | | 0.036 | 0.023 |
| Acenaphthene | ND | | 0.036 | 0.00713 |
| 2,4-Dinitrophenol | ND | | 0.072 | 0.015 |
| 4-Nitrophenol | ND | | 0.072 | 0.037 |
| 2,4-Dinitrotoluene | ND | | 0.072 | 0.041 |
| Dibenzofuran | ND | | 0.036 | 0.00472 |
| Diethyl phthalate | ND | | 0.036 | 0.011 |
| Fluorene | ND | | 0.036 | 0.00972 |
| 4-Chlorophenyl phenyl ether | ND | | 0.036 | 0.00794 |
| 4-Nitroaniline | ND | | 0.036 | 0.021 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.036 | 0.012 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.036 | 0.012 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.072 | 0.015 |
| N-Nitrosodiphenylamine | ND | | 0.036 | 0.00741 |
| 4-Bromophenyl phenyl ether | ND | | 0.036 | 0.010 |
| Hexachlorobenzene | ND | | 0.036 | 0.011 |
| Atrazine | ND | | 0.036 | 0.022 |
| Pentachlorophenol | ND | | 0.036 | 0.016 |
| Phenanthrene | 0.180 | | 0.036 | 0.00591 |
| Anthracene | 0.059 | | 0.036 | 0.00368 |
| Carbazole | ND | | 0.036 | 0.00842 |
| Di-n-butyl phthalate | ND | | 0.036 | 0.015 |
| Fluoranthene | 0.379 | | 0.036 | 0.012 |
| Pyrene | 0.325 | | 0.036 | 0.0084 |
| Butyl benzyl phthalate | ND | | 0.036 | 0.016 |
| 3,3'-Dichlorobenzidine | ND | | 0.036 | 0.026 |
| Benzo[a]anthracene | 0.190 | | 0.036 | 0.013 |
| Chrysene | 0.173 | | 0.036 | 0.00997 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.036 | 0.023 |
| Di-n-octyl phthalate | ND | | 0.036 | 0.026 |
| Benzo[b]fluoranthene | 0.207 | | 0.036 | 0.018 |
| Benzo[k]fluoranthene | 0.138 | | 0.036 | 0.025 |
| Benzo[a]pyrene | 0.177 | | 0.036 | 0.018 |
| Indeno[1,2,3-cd]pyrene | 0.114 | | 0.036 | 0.023 |
| Dibenz[a,h]anthracene | 0.064 | | 0.036 | 0.014 |
| Benzo[g,h,i]perylene | 0.120 | | 0.036 | 0.027 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.072 | 0.041 |
| Total Target Compounds (69): | 2.23 | | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
## Tentatively Identified Compounds

Lab ID: E23-05046-003
Client ID: SB2B/10-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Date File: A3837.D

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 8.30

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | No peaks detected | | | |

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-004
Client ID: SB1A/0-2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3838.D 11/21/2023 18:00

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 9.80
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.073 | 0.028 |
| Phenol | ND | | 0.037 | 0.0083 |
| Bis(2-chloroethyl) ether | ND | | 0.037 | 0.013 |
| 2-Chlorophenol | ND | | 0.037 | 0.012 |
| 2-Methylphenol | ND | | 0.037 | 0.017 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.037 | 0.00916 |
| 4-Methylphenol ** | ND | | 0.037 | 0.017 |
| N-Nitrosodi-n-propylamine | ND | | 0.037 | 0.023 |
| Acetophenone | ND | | 0.037 | 0.022 |
| 1,4-Dioxane | ND | | 0.037 | 0.024 |
| Hexachloroethane | ND | | 0.037 | 0.015 |
| Nitrobenzene | ND | | 0.037 | 0.00891 |
| Isophorone | ND | | 0.037 | 0.016 |
| 2-Nitrophenol | ND | | 0.073 | 0.022 |
| 2,4-Dimethylphenol | ND | | 0.037 | 0.011 |
| Bis(2-chloroethoxy) methane | ND | | 0.037 | 0.00818 |
| 2,4-Dichlorophenol | ND | | 0.037 | 0.00976 |
| Naphthalene | 0.032 | J | 0.037 | 0.00536 |
| 4-Chloroaniline | ND | | 0.037 | 0.014 |
| Hexachlorobutadiene | ND | | 0.037 | 0.010 |
| Caprolactam | ND | | 0.073 | 0.027 |
| 4-Chloro-3-methylphenol | ND | | 0.037 | 0.014 |
| 2-Methylnaphthalene | 0.023 | J | 0.037 | 0.013 |
| Hexachlorocyclopentadiene | ND | | 0.073 | 0.064 |
| 2,4,6-Trichlorophenol | ND | | 0.037 | 0.010 |
| 2,4,5-Trichlorophenol | ND | | 0.037 | 0.028 |
| 1,1'-Biphenyl | ND | | 0.037 | 0.00546 |
| 2-Chloronaphthalene | ND | | 0.037 | 0.00848 |
| 2-Nitroaniline | ND | | 0.037 | 0.020 |
| Dimethyl phthalate | ND | | 0.037 | 0.00842 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-004
Client ID: SB1A/0-2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3838.D 11/21/2023 18:00

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 9.80
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.073 | 0.042 |
| Acenaphthylene | 0.076 | | 0.037 | 0.00804 |
| 3-Nitroaniline | ND | | 0.037 | 0.023 |
| Acenaphthene | 0.091 | | 0.037 | 0.00725 |
| 2,4-Dinitrophenol | ND | | 0.073 | 0.015 |
| 4-Nitrophenol | ND | | 0.073 | 0.037 |
| 2,4-Dinitrotoluene | ND | | 0.073 | 0.042 |
| Dibenzofuran | 0.039 | | 0.037 | 0.0048 |
| Diethyl phthalate | ND | | 0.037 | 0.011 |
| Fluorene | 0.068 | | 0.037 | 0.00988 |
| 4-Chlorophenyl phenyl ether | ND | | 0.037 | 0.00807 |
| 4-Nitroaniline | ND | | 0.037 | 0.022 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.037 | 0.012 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.037 | 0.013 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.073 | 0.016 |
| N-Nitrosodiphenylamine | ND | | 0.037 | 0.00753 |
| 4-Bromophenyl phenyl ether | ND | | 0.037 | 0.010 |
| Hexachlorobenzene | ND | | 0.037 | 0.011 |
| Atrazine | ND | | 0.037 | 0.022 |
| Pentachlorophenol | ND | | 0.037 | 0.016 |
| Phenanthrene | 1.18 | | 0.037 | 0.00601 |
| Anthracene | 0.311 | | 0.037 | 0.00374 |
| Carbazole | 0.103 | | 0.037 | 0.00856 |
| Di-n-butyl phthalate | 0.029 | J | 0.037 | 0.015 |
| Fluoranthene | 2.25 | | 0.037 | 0.012 |
| Pyrene | 2.17 | | 0.037 | 0.00854 |
| Butyl benzyl phthalate | ND | | 0.037 | 0.016 |
| 3,3'-Dichlorobenzidine | ND | | 0.037 | 0.026 |
| Benzo[a]anthracene | 1.28 | | 0.037 | 0.013 |
| Chrysene | 1.10 | | 0.037 | 0.010 |
| Bis(2-ethylhexyl) phthalate | 0.280 | | 0.037 | 0.024 |
| Di-n-octyl phthalate | ND | | 0.037 | 0.027 |
| Benzo[b]fluoranthene | 1.42 | | 0.037 | 0.018 |
| Benzo[k]fluoranthene | 0.858 | | 0.037 | 0.025 |
| Benzo[a]pyrene | 1.29 | | 0.037 | 0.018 |
| Indeno[1,2,3-cd]pyrene | 0.788 | | 0.037 | 0.024 |
| Dibenz[a,h]anthracene | 0.380 | | 0.037 | 0.015 |
| Benzo[g,h,i]perylene | 0.831 | | 0.037 | 0.028 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.073 | 0.042 |
| Total Target Compounds (69): | 14.6 | J | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-004
Client ID: SB1A/0-2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Date File: A3838.D

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 9.80

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Unknown SV | 0.191 | J | 7.24 |

Total TICs = 0.191 J

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search
B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-005
Client ID: SB1B/10-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3839.D 11/21/2023 18:16

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 15.1
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.078 | 0.029 |
| Phenol | ND | | 0.039 | 0.00882 |
| Bis(2-chloroethyl) ether | ND | | 0.039 | 0.014 |
| 2-Chlorophenol | ND | | 0.039 | 0.013 |
| 2-Methylphenol | ND | | 0.039 | 0.018 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.039 | 0.00973 |
| 4-Methylphenol ** | ND | | 0.039 | 0.018 |
| N-Nitrosodi-n-propylamine | ND | | 0.039 | 0.024 |
| Acetophenone | ND | | 0.039 | 0.024 |
| 1,4-Dioxane | ND | | 0.039 | 0.025 |
| Hexachloroethane | ND | | 0.039 | 0.016 |
| Nitrobenzene | ND | | 0.039 | 0.00947 |
| Isophorone | ND | | 0.039 | 0.016 |
| 2-Nitrophenol | ND | | 0.078 | 0.023 |
| 2,4-Dimethylphenol | ND | | 0.039 | 0.012 |
| Bis(2-chloroethoxy) methane | ND | | 0.039 | 0.00869 |
| 2,4-Dichlorophenol | ND | | 0.039 | 0.010 |
| Naphthalene | 0.108 | | 0.039 | 0.00569 |
| 4-Chloroaniline | ND | | 0.039 | 0.015 |
| Hexachlorobutadiene | ND | | 0.039 | 0.011 |
| Caprolactam | ND | | 0.078 | 0.029 |
| 4-Chloro-3-methylphenol | ND | | 0.039 | 0.015 |
| 2-Methylnaphthalene | 0.156 | | 0.039 | 0.014 |
| Hexachlorocyclopentadiene | ND | | 0.078 | 0.068 |
| 2,4,6-Trichlorophenol | ND | | 0.039 | 0.011 |
| 2,4,5-Trichlorophenol | ND | | 0.039 | 0.030 |
| 1,1'-Biphenyl | ND | | 0.039 | 0.0058 |
| 2-Chloronaphthalene | ND | | 0.039 | 0.00901 |
| 2-Nitroaniline | ND | | 0.039 | 0.021 |
| Dimethyl phthalate | ND | | 0.039 | 0.00895 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-005
Client ID: SB1B/10-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3839.D 11/21/2023 18:16

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 15.1
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.078 | 0.045 |
| Acenaphthylene | 0.125 | | 0.039 | 0.00854 |
| 3-Nitroaniline | ND | | 0.039 | 0.025 |
| Acenaphthene | 0.335 | | 0.039 | 0.0077 |
| 2,4-Dinitrophenol | ND | | 0.078 | 0.016 |
| 4-Nitrophenol | ND | | 0.078 | 0.039 |
| 2,4-Dinitrotoluene | ND | | 0.078 | 0.044 |
| Dibenzofuran | ND | | 0.039 | 0.0051 |
| Diethyl phthalate | ND | | 0.039 | 0.012 |
| Fluorene | 0.193 | | 0.039 | 0.011 |
| 4-Chlorophenyl phenyl ether | ND | | 0.039 | 0.00857 |
| 4-Nitroaniline | ND | | 0.039 | 0.023 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.039 | 0.013 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.039 | 0.013 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.078 | 0.017 |
| N-Nitrosodiphenylamine | ND | | 0.039 | 0.008 |
| 4-Bromophenyl phenyl ether | ND | | 0.039 | 0.011 |
| Hexachlorobenzene | ND | | 0.039 | 0.012 |
| Atrazine | ND | | 0.039 | 0.023 |
| Pentachlorophenol | ND | | 0.039 | 0.017 |
| Phenanthrene | 2.95 | | 0.039 | 0.00638 |
| Anthracene | 0.524 | | 0.039 | 0.00397 |
| Carbazole | ND | | 0.039 | 0.00909 |
| Di-n-butyl phthalate | ND | | 0.039 | 0.016 |
| Fluoranthene | 3.89 | | 0.039 | 0.013 |
| Pyrene | 3.32 | | 0.039 | 0.00908 |
| Butyl benzyl phthalate | ND | | 0.039 | 0.017 |
| 3,3'-Dichlorobenzidine | ND | | 0.039 | 0.028 |
| Benzo[a]anthracene | 1.68 | | 0.039 | 0.014 |
| Chrysene | 1.52 | | 0.039 | 0.011 |
| Bis(2-ethylhexyl) phthalate | 0.125 | | 0.039 | 0.025 |
| Di-n-octyl phthalate | ND | | 0.039 | 0.029 |
| Benzo[b]fluoranthene | 1.58 | | 0.039 | 0.019 |
| Benzo[k]fluoranthene | 1.10 | | 0.039 | 0.027 |
| Benzo[a]pyrene | 1.46 | | 0.039 | 0.019 |
| Indeno[1,2,3-cd]pyrene | 0.858 | | 0.039 | 0.025 |
| Dibenz[a,h]anthracene | 0.443 | | 0.039 | 0.016 |
| Benzo[g,h,i]perylene | 0.874 | | 0.039 | 0.029 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.078 | 0.044 |

Total Target Compounds (69): 21.2

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-005
Client ID: SB1B/10-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Date File: A3839.D

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 15.1

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| 000629-50-5 | Tridecane | 3.83 | JN | 4.31 |
| 017312-62-8 | Decane, 5-propyl- | 0.347 | JN | 4.78 |
| | Unknown SV | 0.577 | J | 4.82 |
| 001560-97-0 | Dodecane, 2-methyl- | 0.616 | JN | 5.11 |
| 000544-76-3 | Hexadecane | 1.64 | JN | 5.22 |
| 055045-07-3 | Dodecane, 2-methyl-8-propyl- | 1.04 | JN | 5.59 |
| 000629-62-9 | Pentadecane | 3.43 | JN | 5.73 |
| 000638-36-8 | Hexadecane, 2,6,10,14-tetramethyl- | 0.858 | JN | 5.76 |
| 000629-92-5 | Nonadecane | 3.31 | JN | 5.98 |
| | Unknown SV | 0.710 | J | 6.07 |
| | Unknown SV | 2.42 | J | 6.20 |
| 000629-94-7 | Heneicosane | 1.81 | JN | 6.42 |
| 000638-67-5 | Tricosane | 1.58 | JN | 6.84 |
| 000646-31-1 | Tetracosane | 1.24 | JN | 7.04 |

Total TICs = 23.4 JN

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-006
Client ID: SB3A/0-2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3840.D 11/21/2023 18:32

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 10.1
Dilution Factor: 2

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.148 | 0.056 |
| Phenol | ND | | 0.074 | 0.017 |
| Bis(2-chloroethyl) ether | ND | | 0.074 | 0.026 |
| 2-Chlorophenol | ND | | 0.074 | 0.024 |
| 2-Methylphenol | ND | | 0.074 | 0.033 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.074 | 0.019 |
| 4-Methylphenol ** | ND | | 0.074 | 0.034 |
| N-Nitrosodi-n-propylamine | ND | | 0.074 | 0.046 |
| Acetophenone | ND | | 0.074 | 0.045 |
| 1,4-Dioxane | ND | | 0.074 | 0.048 |
| Hexachloroethane | ND | | 0.074 | 0.031 |
| Nitrobenzene | ND | | 0.074 | 0.018 |
| Isophorone | ND | | 0.074 | 0.031 |
| 2-Nitrophenol | ND | | 0.148 | 0.044 |
| 2,4-Dimethylphenol | ND | | 0.074 | 0.022 |
| Bis(2-chloroethoxy) methane | ND | | 0.074 | 0.017 |
| 2,4-Dichlorophenol | ND | | 0.074 | 0.020 |
| Naphthalene | 0.117 | D | 0.074 | 0.011 |
| 4-Chloroaniline | ND | | 0.074 | 0.029 |
| Hexachlorobutadiene | ND | | 0.074 | 0.021 |
| Caprolactam | ND | | 0.148 | 0.055 |
| 4-Chloro-3-methylphenol | ND | | 0.074 | 0.029 |
| 2-Methylnaphthalene | 0.084 | D | 0.074 | 0.026 |
| Hexachlorocyclopentadiene | ND | | 0.148 | 0.129 |
| 2,4,6-Trichlorophenol | ND | | 0.074 | 0.020 |
| 2,4,5-Trichlorophenol | ND | | 0.074 | 0.056 |
| 1,1'-Biphenyl | ND | | 0.074 | 0.011 |
| 2-Chloronaphthalene | ND | | 0.074 | 0.017 |
| 2-Nitroaniline | ND | | 0.074 | 0.039 |
| Dimethyl phthalate | ND | | 0.074 | 0.017 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-006
Client ID: SB3A/0-2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3840.D 11/21/2023 18:32

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 10.1
Dilution Factor: 2

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.148 | 0.085 |
| Acenaphthylene | 0.251 | D | 0.074 | 0.016 |
| 3-Nitroaniline | ND | | 0.074 | 0.047 |
| Acenaphthene | 0.444 | D | 0.074 | 0.015 |
| 2,4-Dinitrophenol | ND | | 0.148 | 0.031 |
| 4-Nitrophenol | ND | | 0.148 | 0.075 |
| 2,4-Dinitrotoluene | ND | | 0.148 | 0.084 |
| Dibenzofuran | 0.197 | D | 0.074 | 0.0097 |
| Diethyl phthalate | ND | | 0.074 | 0.023 |
| Fluorene | 0.318 | D | 0.074 | 0.020 |
| 4-Chlorophenyl phenyl ether | ND | | 0.074 | 0.016 |
| 4-Nitroaniline | ND | | 0.074 | 0.044 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.074 | 0.025 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.074 | 0.025 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.148 | 0.031 |
| N-Nitrosodiphenylamine | ND | | 0.074 | 0.015 |
| 4-Bromophenyl phenyl ether | ND | | 0.074 | 0.021 |
| Hexachlorobenzene | ND | | 0.074 | 0.023 |
| Atrazine | ND | | 0.074 | 0.044 |
| Pentachlorophenol | ND | | 0.074 | 0.033 |
| Phenanthrene | 5.70 | D | 0.074 | 0.012 |
| Anthracene | 1.28 | D | 0.074 | 0.00755 |
| Carbazole | 0.426 | D | 0.074 | 0.017 |
| Di-n-butyl phthalate | 0.112 | D | 0.074 | 0.030 |
| Fluoranthene | 9.14 | D | 0.074 | 0.024 |
| Pyrene | 8.24 | D | 0.074 | 0.017 |
| Butyl benzyl phthalate | ND | | 0.074 | 0.033 |
| 3,3'-Dichlorobenzidine | ND | | 0.074 | 0.052 |
| Benzo[a]anthracene | 4.16 | D | 0.074 | 0.027 |
| Chrysene | 3.86 | D | 0.074 | 0.021 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.074 | 0.048 |
| Di-n-octyl phthalate | ND | | 0.074 | 0.054 |
| Benzo[b]fluoranthene | 3.81 | D | 0.074 | 0.037 |
| Benzo[k]fluoranthene | 3.22 | D | 0.074 | 0.051 |
| Benzo[a]pyrene | 3.97 | D | 0.074 | 0.036 |
| Indeno[1,2,3-cd]pyrene | 1.98 | D | 0.074 | 0.048 |
| Dibenz[a,h]anthracene | 1.03 | D | 0.074 | 0.030 |
| Benzo[g,h,i]perylene | 1.89 | D | 0.074 | 0.056 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.148 | 0.084 |
| Total Target Compounds (69): | 50.2 | D | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
## Tentatively Identified Compounds

Lab ID: E23-05046-006
Client ID: SB3A/0-2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Date File: A3840.D

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 2
% Moisture: 10.1

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Unknown SV | 0.334 | DJ | 7.28 |
| | Unknown SV | 1.20 | DJ | 8.46 |

Total TICs = 1.53 DJ

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-007
Client ID: SB3B/10-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3841.D 11/21/2023 18:48

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 11.2
Dilution Factor: 10

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.746 | 0.280 |
| Phenol | ND | | 0.373 | 0.084 |
| Bis(2-chloroethyl) ether | ND | | 0.373 | 0.131 |
| 2-Chlorophenol | ND | | 0.373 | 0.121 |
| 2-Methylphenol | ND | | 0.373 | 0.168 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.373 | 0.093 |
| 4-Methylphenol ** | ND | | 0.373 | 0.170 |
| N-Nitrosodi-n-propylamine | ND | | 0.373 | 0.231 |
| Acetophenone | ND | | 0.373 | 0.227 |
| 1,4-Dioxane | ND | | 0.373 | 0.241 |
| Hexachloroethane | ND | | 0.373 | 0.155 |
| Nitrobenzene | ND | | 0.373 | 0.091 |
| Isophorone | ND | | 0.373 | 0.157 |
| 2-Nitrophenol | ND | | 0.746 | 0.222 |
| 2,4-Dimethylphenol | ND | | 0.373 | 0.110 |
| Bis(2-chloroethoxy) methane | ND | | 0.373 | 0.083 |
| 2,4-Dichlorophenol | ND | | 0.373 | 0.099 |
| Naphthalene | 1.29 | D | 0.373 | 0.054 |
| 4-Chloroaniline | ND | | 0.373 | 0.143 |
| Hexachlorobutadiene | ND | | 0.373 | 0.103 |
| Caprolactam | ND | | 0.746 | 0.275 |
| 4-Chloro-3-methylphenol | ND | | 0.373 | 0.144 |
| 2-Methylnaphthalene | 0.910 | D | 0.373 | 0.131 |
| Hexachlorocyclopentadiene | ND | | 0.746 | 0.648 |
| 2,4,6-Trichlorophenol | ND | | 0.373 | 0.103 |
| 2,4,5-Trichlorophenol | ND | | 0.373 | 0.283 |
| 1,1'-Biphenyl | 0.265 | DJ | 0.373 | 0.056 |
| 2-Chloronaphthalene | ND | | 0.373 | 0.086 |
| 2-Nitroaniline | ND | | 0.373 | 0.198 |
| Dimethyl phthalate | ND | | 0.373 | 0.086 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-007
Client ID: SB3B/10-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3841.D 11/21/2023 18:48

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 11.2
Dilution Factor: 10

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.746 | 0.428 |
| Acenaphthylene | 0.969 | D | 0.373 | 0.082 |
| 3-Nitroaniline | ND | | 0.373 | 0.236 |
| Acenaphthene | 3.45 | D | 0.373 | 0.074 |
| 2,4-Dinitrophenol | ND | | 0.746 | 0.153 |
| 4-Nitrophenol | ND | | 0.746 | 0.376 |
| 2,4-Dinitrotoluene | ND | | 0.746 | 0.422 |
| Dibenzofuran | 1.68 | D | 0.373 | 0.049 |
| Diethyl phthalate | ND | | 0.373 | 0.116 |
| Fluorene | 2.22 | D | 0.373 | 0.100 |
| 4-Chlorophenyl phenyl ether | ND | | 0.373 | 0.082 |
| 4-Nitroaniline | ND | | 0.373 | 0.221 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.373 | 0.125 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.373 | 0.128 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.746 | 0.158 |
| N-Nitrosodiphenylamine | ND | | 0.373 | 0.077 |
| 4-Bromophenyl phenyl ether | ND | | 0.373 | 0.103 |
| Hexachlorobenzene | ND | | 0.373 | 0.116 |
| Atrazine | ND | | 0.373 | 0.222 |
| Pentachlorophenol | ND | | 0.373 | 0.165 |
| Phenanthrene | 33.6 | D | 0.373 | 0.061 |
| Anthracene | 7.19 | D | 0.373 | 0.038 |
| Carbazole | 2.76 | D | 0.373 | 0.087 |
| Di-n-butyl phthalate | ND | | 0.373 | 0.151 |
| Fluoranthene | 38.7 | D | 0.373 | 0.120 |
| Pyrene | 34.2 | D | 0.373 | 0.087 |
| Butyl benzyl phthalate | ND | | 0.373 | 0.166 |
| 3,3'-Dichlorobenzidine | ND | | 0.373 | 0.264 |
| Benzo[a]anthracene | 15.3 | D | 0.373 | 0.136 |
| Chrysene | 14.0 | D | 0.373 | 0.103 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.373 | 0.239 |
| Di-n-octyl phthalate | ND | | 0.373 | 0.273 |
| Benzo[b]fluoranthene | 13.6 | D | 0.373 | 0.184 |
| Benzo[k]fluoranthene | 10.4 | D | 0.373 | 0.258 |
| Benzo[a]pyrene | 13.3 | D | 0.373 | 0.181 |
| Indeno[1,2,3-cd]pyrene | 7.05 | D | 0.373 | 0.239 |
| Dibenz[a,h]anthracene | 3.51 | D | 0.373 | 0.149 |
| Benzo[g,h,i]perylene | 7.07 | D | 0.373 | 0.281 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.746 | 0.422 |
| Total Target Compounds (69): | 211 | DJ | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-007
Client ID: SB3B/10-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Date File: A3841.D

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 10
% Moisture: 11.2

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| 000203-64-5 | 4H-Cyclopenta[def]phenanthrene | 2.42 | DJN | 6.20 |

Total TICs = 2.42 DJN

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search
B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-008
Client ID: SB10A/1.
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3842.D 11/21/2023 19:04

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 8.90
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.073 | 0.028 |
| Phenol | ND | | 0.037 | 0.00828 |
| Bis(2-chloroethyl) ether | ND | | 0.037 | 0.013 |
| 2-Chlorophenol | ND | | 0.037 | 0.012 |
| 2-Methylphenol | ND | | 0.037 | 0.016 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.037 | 0.00913 |
| 4-Methylphenol ** | ND | | 0.037 | 0.017 |
| N-Nitrosodi-n-propylamine | ND | | 0.037 | 0.023 |
| Acetophenone | ND | | 0.037 | 0.022 |
| 1,4-Dioxane | ND | | 0.037 | 0.024 |
| Hexachloroethane | ND | | 0.037 | 0.015 |
| Nitrobenzene | ND | | 0.037 | 0.00888 |
| Isophorone | ND | | 0.037 | 0.015 |
| 2-Nitrophenol | ND | | 0.073 | 0.022 |
| 2,4-Dimethylphenol | ND | | 0.037 | 0.011 |
| Bis(2-chloroethoxy) methane | ND | | 0.037 | 0.00816 |
| 2,4-Dichlorophenol | ND | | 0.037 | 0.00973 |
| Naphthalene | ND | | 0.037 | 0.00534 |
| 4-Chloroaniline | ND | | 0.037 | 0.014 |
| Hexachlorobutadiene | ND | | 0.037 | 0.010 |
| Caprolactam | ND | | 0.073 | 0.027 |
| 4-Chloro-3-methylphenol | ND | | 0.037 | 0.014 |
| 2-Methylnaphthalene | ND | | 0.037 | 0.013 |
| Hexachlorocyclopentadiene | ND | | 0.073 | 0.064 |
| 2,4,6-Trichlorophenol | ND | | 0.037 | 0.010 |
| 2,4,5-Trichlorophenol | ND | | 0.037 | 0.028 |
| 1,1'-Biphenyl | ND | | 0.037 | 0.00544 |
| 2-Chloronaphthalene | ND | | 0.037 | 0.00845 |
| 2-Nitroaniline | ND | | 0.037 | 0.019 |
| Dimethyl phthalate | ND | | 0.037 | 0.0084 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-008
Client ID: SB10A/1.
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3842.D 11/21/2023 19:04

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 8.90
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.073 | 0.042 |
| Acenaphthylene | 0.078 | | 0.037 | 0.00801 |
| 3-Nitroaniline | ND | | 0.037 | 0.023 |
| Acenaphthene | 0.115 | | 0.037 | 0.00723 |
| 2,4-Dinitrophenol | ND | | 0.073 | 0.015 |
| 4-Nitrophenol | ND | | 0.073 | 0.037 |
| 2,4-Dinitrotoluene | ND | | 0.073 | 0.041 |
| Dibenzofuran | 0.048 | | 0.037 | 0.00479 |
| Diethyl phthalate | ND | | 0.037 | 0.011 |
| Fluorene | 0.098 | | 0.037 | 0.00985 |
| 4-Chlorophenyl phenyl ether | ND | | 0.037 | 0.00804 |
| 4-Nitroaniline | ND | | 0.037 | 0.022 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.037 | 0.012 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.037 | 0.013 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.073 | 0.016 |
| N-Nitrosodiphenylamine | ND | | 0.037 | 0.00751 |
| 4-Bromophenyl phenyl ether | ND | | 0.037 | 0.010 |
| Hexachlorobenzene | ND | | 0.037 | 0.011 |
| Atrazine | ND | | 0.037 | 0.022 |
| Pentachlorophenol | ND | | 0.037 | 0.016 |
| Phenanthrene | 1.62 | | 0.037 | 0.00599 |
| Anthracene | 0.447 | | 0.037 | 0.00372 |
| Carbazole | 0.098 | | 0.037 | 0.00853 |
| Di-n-butyl phthalate | ND | | 0.037 | 0.015 |
| Fluoranthene | 3.39 | | 0.037 | 0.012 |
| Pyrene | 2.81 | | 0.037 | 0.00851 |
| Butyl benzyl phthalate | ND | | 0.037 | 0.016 |
| 3,3'-Dichlorobenzidine | ND | | 0.037 | 0.026 |
| Benzo[a]anthracene | 1.62 | | 0.037 | 0.013 |
| Chrysene | 1.39 | | 0.037 | 0.010 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.037 | 0.024 |
| Di-n-octyl phthalate | ND | | 0.037 | 0.027 |
| Benzo[b]fluoranthene | 1.51 | | 0.037 | 0.018 |
| Benzo[k]fluoranthene | 1.17 | | 0.037 | 0.025 |
| Benzo[a]pyrene | 1.48 | | 0.037 | 0.018 |
| Indeno[1,2,3-cd]pyrene | 0.932 | | 0.037 | 0.023 |
| Dibenz[a,h]anthracene | 0.489 | | 0.037 | 0.015 |
| Benzo[g,h,i]perylene | 1.07 | | 0.037 | 0.028 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.073 | 0.041 |

Total Target Compounds (69): 18.4

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-008
Client ID: SB10A/1.
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Date File: A3842.D

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 8.90

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| 000239-35-0 | Benzo[b]naphtho[2,1-d]thiophene | 0.168 | JN | 7.24 |

Total TICs = 0.168 JN

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search
B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-009
Client ID: SB11A/1-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3843.D 11/21/2023 19:20

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 15.6
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.079 | 0.030 |
| Phenol | ND | | 0.039 | 0.00887 |
| Bis(2-chloroethyl) ether | ND | | 0.039 | 0.014 |
| 2-Chlorophenol | ND | | 0.039 | 0.013 |
| 2-Methylphenol | ND | | 0.039 | 0.018 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.039 | 0.00978 |
| 4-Methylphenol ** | ND | | 0.039 | 0.018 |
| N-Nitrosodi-n-propylamine | ND | | 0.039 | 0.024 |
| Acetophenone | ND | | 0.039 | 0.024 |
| 1,4-Dioxane | ND | | 0.039 | 0.025 |
| Hexachloroethane | ND | | 0.039 | 0.016 |
| Nitrobenzene | ND | | 0.039 | 0.00953 |
| Isophorone | ND | | 0.039 | 0.017 |
| 2-Nitrophenol | ND | | 0.079 | 0.023 |
| 2,4-Dimethylphenol | ND | | 0.039 | 0.012 |
| Bis(2-chloroethoxy) methane | ND | | 0.039 | 0.00874 |
| 2,4-Dichlorophenol | ND | | 0.039 | 0.010 |
| Naphthalene | ND | | 0.039 | 0.00572 |
| 4-Chloroaniline | ND | | 0.039 | 0.015 |
| Hexachlorobutadiene | ND | | 0.039 | 0.011 |
| Caprolactam | ND | | 0.079 | 0.029 |
| 4-Chloro-3-methylphenol | ND | | 0.039 | 0.015 |
| 2-Methylnaphthalene | ND | | 0.039 | 0.014 |
| Hexachlorocyclopentadiene | ND | | 0.079 | 0.068 |
| 2,4,6-Trichlorophenol | ND | | 0.039 | 0.011 |
| 2,4,5-Trichlorophenol | ND | | 0.039 | 0.030 |
| 1,1'-Biphenyl | ND | | 0.039 | 0.00584 |
| 2-Chloronaphthalene | ND | | 0.039 | 0.00906 |
| 2-Nitroaniline | ND | | 0.039 | 0.021 |
| Dimethyl phthalate | ND | | 0.039 | 0.009 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-009
Client ID: SB11A/1-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3843.D 11/21/2023 19:20

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 15.6
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.079 | 0.045 |
| Acenaphthylene | 0.048 | | 0.039 | 0.00859 |
| 3-Nitroaniline | ND | | 0.039 | 0.025 |
| Acenaphthene | 0.032 | J | 0.039 | 0.00775 |
| 2,4-Dinitrophenol | ND | | 0.079 | 0.016 |
| 4-Nitrophenol | ND | | 0.079 | 0.040 |
| 2,4-Dinitrotoluene | ND | | 0.079 | 0.044 |
| Dibenzofuran | ND | | 0.039 | 0.00513 |
| Diethyl phthalate | ND | | 0.039 | 0.012 |
| Fluorene | 0.032 | J | 0.039 | 0.011 |
| 4-Chlorophenyl phenyl ether | ND | | 0.039 | 0.00862 |
| 4-Nitroaniline | ND | | 0.039 | 0.023 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.039 | 0.013 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.039 | 0.013 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.079 | 0.017 |
| N-Nitrosodiphenylamine | ND | | 0.039 | 0.00805 |
| 4-Bromophenyl phenyl ether | ND | | 0.039 | 0.011 |
| Hexachlorobenzene | ND | | 0.039 | 0.012 |
| Atrazine | ND | | 0.039 | 0.023 |
| Pentachlorophenol | ND | | 0.039 | 0.017 |
| Phenanthrene | 0.626 | | 0.039 | 0.00642 |
| Anthracene | 0.177 | | 0.039 | 0.00399 |
| Carbazole | 0.041 | | 0.039 | 0.00914 |
| Di-n-butyl phthalate | ND | | 0.039 | 0.016 |
| Fluoranthene | 1.74 | | 0.039 | 0.013 |
| Pyrene | 1.46 | | 0.039 | 0.00913 |
| Butyl benzyl phthalate | ND | | 0.039 | 0.017 |
| 3,3'-Dichlorobenzidine | ND | | 0.039 | 0.028 |
| Benzo[a]anthracene | 0.947 | | 0.039 | 0.014 |
| Chrysene | 0.742 | | 0.039 | 0.011 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.039 | 0.025 |
| Di-n-octyl phthalate | ND | | 0.039 | 0.029 |
| Benzo[b]fluoranthene | 0.856 | | 0.039 | 0.019 |
| Benzo[k]fluoranthene | 0.739 | | 0.039 | 0.027 |
| Benzo[a]pyrene | 0.865 | | 0.039 | 0.019 |
| Indeno[1,2,3-cd]pyrene | 0.511 | | 0.039 | 0.025 |
| Dibenz[a,h]anthracene | 0.277 | | 0.039 | 0.016 |
| Benzo[g,h,i]perylene | 0.511 | | 0.039 | 0.030 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.079 | 0.044 |
| Total Target Compounds (69): | 9.60 | J | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-009
Client ID: SB11A/1-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Date File: A3843.D

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 15.6

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| 000239-35-0 | Benzo[b]naphtho[2,1-d]thiophene | 0.180 | JN | 7.24 |

Total TICs = 0.180 JN

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search
B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-010
Client ID: SB8A/0-1
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3844.D 11/21/2023 19:36

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 5.20
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.070 | 0.026 |
| Phenol | ND | | 0.035 | 0.00795 |
| Bis(2-chloroethyl) ether | ND | | 0.035 | 0.012 |
| 2-Chlorophenol | ND | | 0.035 | 0.011 |
| 2-Methylphenol | ND | | 0.035 | 0.016 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.035 | 0.00877 |
| 4-Methylphenol ** | ND | | 0.035 | 0.016 |
| N-Nitrosodi-n-propylamine | ND | | 0.035 | 0.022 |
| Acetophenone | ND | | 0.035 | 0.021 |
| 1,4-Dioxane | ND | | 0.035 | 0.023 |
| Hexachloroethane | ND | | 0.035 | 0.015 |
| Nitrobenzene | ND | | 0.035 | 0.00854 |
| Isophorone | ND | | 0.035 | 0.015 |
| 2-Nitrophenol | ND | | 0.070 | 0.021 |
| 2,4-Dimethylphenol | ND | | 0.035 | 0.010 |
| Bis(2-chloroethoxy) methane | ND | | 0.035 | 0.00784 |
| 2,4-Dichlorophenol | ND | | 0.035 | 0.00935 |
| Naphthalene | ND | | 0.035 | 0.00513 |
| 4-Chloroaniline | ND | | 0.035 | 0.014 |
| Hexachlorobutadiene | ND | | 0.035 | 0.00976 |
| Caprolactam | ND | | 0.070 | 0.026 |
| 4-Chloro-3-methylphenol | ND | | 0.035 | 0.014 |
| 2-Methylnaphthalene | ND | | 0.035 | 0.012 |
| Hexachlorocyclopentadiene | ND | | 0.070 | 0.061 |
| 2,4,6-Trichlorophenol | ND | | 0.035 | 0.00967 |
| 2,4,5-Trichlorophenol | ND | | 0.035 | 0.027 |
| 1,1'-Biphenyl | ND | | 0.035 | 0.00523 |
| 2-Chloronaphthalene | ND | | 0.035 | 0.00812 |
| 2-Nitroaniline | ND | | 0.035 | 0.019 |
| Dimethyl phthalate | ND | | 0.035 | 0.00807 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-010
Client ID: SB8A/0-1
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3844.D 11/21/2023 19:36

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 5.20
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.070 | 0.040 |
| Acenaphthylene | ND | | 0.035 | 0.0077 |
| 3-Nitroaniline | ND | | 0.035 | 0.022 |
| Acenaphthene | ND | | 0.035 | 0.00694 |
| 2,4-Dinitrophenol | ND | | 0.070 | 0.015 |
| 4-Nitrophenol | ND | | 0.070 | 0.036 |
| 2,4-Dinitrotoluene | ND | | 0.070 | 0.040 |
| Dibenzofuran | ND | | 0.035 | 0.0046 |
| Diethyl phthalate | ND | | 0.035 | 0.011 |
| Fluorene | ND | | 0.035 | 0.00947 |
| 4-Chlorophenyl phenyl ether | ND | | 0.035 | 0.00773 |
| 4-Nitroaniline | ND | | 0.035 | 0.021 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.035 | 0.012 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.035 | 0.012 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.070 | 0.015 |
| N-Nitrosodiphenylamine | ND | | 0.035 | 0.00721 |
| 4-Bromophenyl phenyl ether | ND | | 0.035 | 0.00974 |
| Hexachlorobenzene | ND | | 0.035 | 0.011 |
| Atrazine | ND | | 0.035 | 0.021 |
| Pentachlorophenol | ND | | 0.035 | 0.016 |
| Phenanthrene | ND | | 0.035 | 0.00575 |
| Anthracene | ND | | 0.035 | 0.00358 |
| Carbazole | ND | | 0.035 | 0.0082 |
| Di-n-butyl phthalate | ND | | 0.035 | 0.014 |
| Fluoranthene | 0.018 | J | 0.035 | 0.011 |
| Pyrene | 0.019 | J | 0.035 | 0.00818 |
| Butyl benzyl phthalate | ND | | 0.035 | 0.016 |
| 3,3'-Dichlorobenzidine | ND | | 0.035 | 0.025 |
| Benzo[a]anthracene | ND | | 0.035 | 0.013 |
| Chrysene | ND | | 0.035 | 0.0097 |
| Bis(2-ethylhexyl) phthalate | 0.032 | J | 0.035 | 0.023 |
| Di-n-octyl phthalate | ND | | 0.035 | 0.026 |
| Benzo[b]fluoranthene | ND | | 0.035 | 0.017 |
| Benzo[k]fluoranthene | ND | | 0.035 | 0.024 |
| Benzo[a]pyrene | ND | | 0.035 | 0.017 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.035 | 0.023 |
| Dibenz[a,h]anthracene | ND | | 0.035 | 0.014 |
| Benzo[g,h,i]perylene | ND | | 0.035 | 0.027 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.070 | 0.040 |
| Total Target Compounds (69): | 0.069 | J | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
## Tentatively Identified Compounds

Lab ID: E23-05046-010
Client ID: SB8A/0-1
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Date File: A3844.D

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 5.20

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| 007206-21-5 | 5-Octadecene, (E)- | 0.232 | JN | 6.38 |

Total TICs = 0.232 JN

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search
B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-011
Client ID: TWP1
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/29/2023
Data file: B6009.D 11/29/2023 20:58
SIM Data file: B5989.D 11/29/2023 15:16

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 2.00 | 0.492 |
| Phenol | ND | | 1.00 | 0.276 |
| Bis(2-chloroethyl) ether | ND | | 1.00 | 0.459 |
| 2-Chlorophenol | ND | | 1.00 | 0.257 |
| 2-Methylphenol | ND | | 1.00 | 0.267 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 1.00 | 0.682 |
| 4-Methylphenol ** | ND | | 1.00 | 0.337 |
| N-Nitrosodi-n-propylamine | ND | | 1.00 | 0.391 |
| Acetophenone | ND | | 1.00 | 0.241 |
| Hexachloroethane | ND | | 1.00 | 0.470 |
| Nitrobenzene | ND | | 1.00 | 0.442 |
| Isophorone | ND | | 1.00 | 0.232 |
| 2-Nitrophenol | ND | | 2.00 | 0.581 |
| 2,4-Dimethylphenol | ND | | 2.00 | 1.06 |
| Bis(2-chloroethoxy) methane | ND | | 1.00 | 0.344 |
| 2,4-Dichlorophenol | ND | | 1.00 | 0.383 |
| Naphthalene | ND | | 1.00 | 0.183 |
| 4-Chloroaniline | ND | | 1.00 | 0.612 |
| Hexachlorobutadiene | ND | | 1.00 | 0.561 |
| Caprolactam | ND | | 3.00 | 1.15 |
| 4-Chloro-3-methylphenol | ND | | 1.00 | 0.336 |
| 2-Methylnaphthalene | ND | | 1.00 | 0.200 |
| Hexachlorocyclopentadiene | ND | | 2.00 | 1.89 |
| 2,4,6-Trichlorophenol | ND | | 1.00 | 0.497 |
| 2,4,5-Trichlorophenol | ND | | 2.00 | 0.505 |
| 1,1'-Biphenyl | ND | | 1.00 | 0.212 |
| 2-Chloronaphthalene | ND | | 1.00 | 0.234 |
| 2-Nitroaniline | ND | | 2.00 | 0.702 |
| Dimethyl phthalate | ND | | 1.00 | 0.197 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-011
Client ID: TWP1
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/29/2023
Data file: B6009.D 11/29/2023 20:58
SIM Data file: B5989.D 11/29/2023 15:16

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 1.00 | 0.996 |
| Acenaphthylene | ND | | 1.00 | 0.268 |
| 3-Nitroaniline | ND | | 3.00 | 0.436 |
| Acenaphthene | ND | | 1.00 | 0.281 |
| 2,4-Dinitrophenol | ND | | 3.00 | 2.35 |
| 4-Nitrophenol | ND | | 3.00 | 2.41 |
| 2,4-Dinitrotoluene | ND | | 1.00 | 0.886 |
| Dibenzofuran | ND | | 1.00 | 0.199 |
| Diethyl phthalate | ND | | 1.00 | 0.239 |
| Fluorene | ND | | 1.00 | 0.367 |
| 4-Chlorophenyl phenyl ether | ND | | 1.00 | 0.396 |
| 4-Nitroaniline | ND | | 2.00 | 0.692 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 1.00 | 0.326 |
| 2,3,4,6-Tetrachlorophenol | ND | | 1.00 | 0.872 |
| 4,6-Dinitro-2-methylphenol * | ND | | 0.100 | 0.033 |
| N-Nitrosodiphenylamine | ND | | 1.00 | 0.196 |
| 4-Bromophenyl phenyl ether | ND | | 1.00 | 0.940 |
| Hexachlorobenzene * | ND | | 0.020 | 0.016 |
| Atrazine | ND | | 1.00 | 0.468 |
| Pentachlorophenol * | ND | | 0.100 | 0.052 |
| Phenanthrene | 1.69 | | 1.00 | 0.263 |
| Anthracene | ND | | 1.00 | 0.560 |
| Carbazole | ND | | 1.00 | 0.594 |
| Di-n-butyl phthalate | ND | | 1.00 | 0.343 |
| Fluoranthene | 1.65 | | 1.00 | 0.482 |
| Pyrene | 1.32 | | 1.00 | 0.555 |
| Butyl benzyl phthalate | ND | | 1.00 | 0.642 |
| 3,3'-Dichlorobenzidine | ND | | 1.00 | 0.524 |
| Benzo[a]anthracene * | 1.63 | | 0.100 | 0.029 |
| Chrysene | ND | | 1.00 | 0.232 |
| Bis(2-ethylhexyl) phthalate | ND | | 2.00 | 1.38 |
| Di-n-octyl phthalate | ND | | 2.00 | 1.09 |
| Benzo[b]fluoranthene * | 1.62 | | 0.100 | 0.026 |
| Benzo[k]fluoranthene * | 1.10 | | 0.100 | 0.035 |
| Benzo[a]pyrene * | 1.47 | | 0.100 | 0.027 |
| Indeno[1,2,3-cd]pyrene * | 1.01 | | 0.100 | 0.036 |
| Dibenz[a,h]anthracene * | 0.594 | | 0.100 | 0.031 |
| Benzo[g,h,i]perylene | ND | | 2.00 | 1.04 |
| 1,4-Dioxane | ND | | 0.400 | 0.329 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 1.00 | 0.886 |

Total Target Compounds (69): 12.1

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

* - RL & MDL from SIM run
** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-011
Client ID: TWP1
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/29/2023
Date File: B6009.D

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Unknown SV | 13.1 | J | 2.05 |
| | Unknown SV | 5.00 | J | 2.10 |
| | Unknown SV | 5.60 | J | 2.14 |

Total TICs = 23.7 J

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search
B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-012
Client ID: TWP2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/30/2023
Data file: B6030.D 11/30/2023 15:07

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 2.00 | 0.492 |
| Phenol | ND | | 1.00 | 0.276 |
| Bis(2-chloroethyl) ether | ND | | 1.00 | 0.459 |
| 2-Chlorophenol | ND | | 1.00 | 0.257 |
| 2-Methylphenol | ND | | 1.00 | 0.267 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 1.00 | 0.682 |
| 4-Methylphenol ** | ND | | 1.00 | 0.337 |
| N-Nitrosodi-n-propylamine | ND | | 1.00 | 0.391 |
| Acetophenone | ND | | 1.00 | 0.241 |
| Hexachloroethane | ND | | 1.00 | 0.470 |
| Nitrobenzene | ND | | 1.00 | 0.442 |
| Isophorone | ND | | 1.00 | 0.232 |
| 2-Nitrophenol | ND | | 2.00 | 0.581 |
| 2,4-Dimethylphenol | ND | | 2.00 | 1.06 |
| Bis(2-chloroethoxy) methane | ND | | 1.00 | 0.344 |
| 2,4-Dichlorophenol | ND | | 1.00 | 0.383 |
| Naphthalene | ND | | 1.00 | 0.183 |
| 4-Chloroaniline | ND | | 1.00 | 0.612 |
| Hexachlorobutadiene | ND | | 1.00 | 0.561 |
| Caprolactam | ND | | 3.00 | 1.15 |
| 4-Chloro-3-methylphenol | ND | | 1.00 | 0.336 |
| 2-Methylnaphthalene | ND | | 1.00 | 0.200 |
| Hexachlorocyclopentadiene | ND | | 2.00 | 1.89 |
| 2,4,6-Trichlorophenol | ND | | 1.00 | 0.497 |
| 2,4,5-Trichlorophenol | ND | | 2.00 | 0.505 |
| 1,1'-Biphenyl | ND | | 1.00 | 0.212 |
| 2-Chloronaphthalene | ND | | 1.00 | 0.234 |
| 2-Nitroaniline | ND | | 2.00 | 0.702 |
| Dimethyl phthalate | ND | | 1.00 | 0.197 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-012
Client ID: TWP2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/30/2023
Data file: B6030.D 11/30/2023 15:07

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 1.00 | 0.996 |
| Acenaphthylene | ND | | 1.00 | 0.268 |
| 3-Nitroaniline | ND | | 3.00 | 0.436 |
| Acenaphthene | ND | | 1.00 | 0.281 |
| 2,4-Dinitrophenol | ND | | 3.00 | 2.35 |
| 4-Nitrophenol | ND | | 3.00 | 2.41 |
| 2,4-Dinitrotoluene | ND | | 1.00 | 0.886 |
| Dibenzofuran | ND | | 1.00 | 0.199 |
| Diethyl phthalate | ND | | 1.00 | 0.239 |
| Fluorene | ND | | 1.00 | 0.367 |
| 4-Chlorophenyl phenyl ether | ND | | 1.00 | 0.396 |
| 4-Nitroaniline | ND | | 2.00 | 0.692 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 1.00 | 0.326 |
| 2,3,4,6-Tetrachlorophenol | ND | | 1.00 | 0.872 |
| 4,6-Dinitro-2-methylphenol | ND | | 2.00 | 1.99 |
| N-Nitrosodiphenylamine | ND | | 1.00 | 0.196 |
| 4-Bromophenyl phenyl ether | ND | | 1.00 | 0.940 |
| Hexachlorobenzene | ND | | 1.00 | 0.584 |
| Atrazine | ND | | 1.00 | 0.468 |
| Pentachlorophenol | ND | | 3.00 | 2.34 |
| Phenanthrene | 20.2 | | 1.00 | 0.263 |
| Anthracene | ND | | 1.00 | 0.560 |
| Carbazole | ND | | 1.00 | 0.594 |
| Di-n-butyl phthalate | 1.84 | | 1.00 | 0.343 |
| Fluoranthene | 21.1 | | 1.00 | 0.482 |
| Pyrene | 29.6 | | 1.00 | 0.555 |
| Butyl benzyl phthalate | ND | | 1.00 | 0.642 |
| 3,3'-Dichlorobenzidine | ND | | 1.00 | 0.524 |
| Benzo[a]anthracene | 10.8 | | 1.00 | 0.300 |
| Chrysene | 9.27 | | 1.00 | 0.232 |
| Bis(2-ethylhexyl) phthalate | ND | | 2.00 | 1.38 |
| Di-n-octyl phthalate | ND | | 2.00 | 1.09 |
| Benzo[b]fluoranthene | 7.43 | | 1.00 | 0.605 |
| Benzo[k]fluoranthene | 3.28 | | 2.00 | 0.403 |
| Benzo[a]pyrene | 6.64 | | 1.00 | 0.285 |
| Indeno[1,2,3-cd]pyrene | 3.57 | | 2.00 | 1.14 |
| Dibenz[a,h]anthracene | 4.62 | | 2.00 | 1.35 |
| Benzo[g,h,i]perylene | 3.84 | | 2.00 | 1.04 |
| 1,4-Dioxane | ND | | 0.400 | 0.329 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 1.00 | 0.886 |

Total Target Compounds (69): 122

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-012
Client ID: TWP2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/30/2023
Date File: B6030.D

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Unknown SV | 14.4 | J | 2.54 |
| | Unknown SV | 17.0 | J | 2.56 |
| 054676-39-0 | Cyclohexane, 2-butyl-1,1,3-trimeth | 20.4 | JN | 3.02 |
| 026730-14-3 | Tridecane, 7-methyl- | 42.3 | JN | 3.08 |
| | Unknown SV | 23.2 | J | 3.17 |
| | Unknown SV | 26.6 | J | 3.20 |
| | Unknown SV | 29.8 | J | 3.45 |
| | Unknown SV | 28.3 | J | 3.55 |
| 000544-76-3 | Hexadecane | 113 | JN | 3.57 |
| | Unknown SV | 20.2 | J | 3.62 |
| 062376-17-4 | Cyclohexane, 1,2-dimethyl-3-pentyl | 14.9 | JN | 3.66 |
| 014905-56-7 | Tetradecane, 2,6,10-trimethyl- | 21.0 | JN | 3.80 |
| 055045-11-9 | Tridecane, 5-propyl- | 149 | JN | 4.03 |
| 001921-70-6 | Pentadecane, 2,6,10,14-tetramethyl | 54.1 | JN | 4.17 |
| 000638-36-8 | Hexadecane, 2,6,10,14-tetramethyl- | 40.0 | JN | 4.42 |

Total TICs = 614 JN

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-013
Client ID: TWP4
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/29/2023
Data file: B6010.D 11/29/2023 21:14
SIM Data file: B5990.D 11/29/2023 15:33

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 2.00 | 0.492 |
| Phenol | ND | | 1.00 | 0.276 |
| Bis(2-chloroethyl) ether | ND | | 1.00 | 0.459 |
| 2-Chlorophenol | ND | | 1.00 | 0.257 |
| 2-Methylphenol | ND | | 1.00 | 0.267 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 1.00 | 0.682 |
| 4-Methylphenol ** | ND | | 1.00 | 0.337 |
| N-Nitrosodi-n-propylamine | ND | | 1.00 | 0.391 |
| Acetophenone | ND | | 1.00 | 0.241 |
| Hexachloroethane | ND | | 1.00 | 0.470 |
| Nitrobenzene | ND | | 1.00 | 0.442 |
| Isophorone | ND | | 1.00 | 0.232 |
| 2-Nitrophenol | ND | | 2.00 | 0.581 |
| 2,4-Dimethylphenol | ND | | 2.00 | 1.06 |
| Bis(2-chloroethoxy) methane | ND | | 1.00 | 0.344 |
| 2,4-Dichlorophenol | ND | | 1.00 | 0.383 |
| Naphthalene | ND | | 1.00 | 0.183 |
| 4-Chloroaniline | ND | | 1.00 | 0.612 |
| Hexachlorobutadiene | ND | | 1.00 | 0.561 |
| Caprolactam | ND | | 3.00 | 1.15 |
| 4-Chloro-3-methylphenol | ND | | 1.00 | 0.336 |
| 2-Methylnaphthalene | ND | | 1.00 | 0.200 |
| Hexachlorocyclopentadiene | ND | | 2.00 | 1.89 |
| 2,4,6-Trichlorophenol | ND | | 1.00 | 0.497 |
| 2,4,5-Trichlorophenol | ND | | 2.00 | 0.505 |
| 1,1'-Biphenyl | ND | | 1.00 | 0.212 |
| 2-Chloronaphthalene | ND | | 1.00 | 0.234 |
| 2-Nitroaniline | ND | | 2.00 | 0.702 |
| Dimethyl phthalate | ND | | 1.00 | 0.197 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-013
Client ID: TWP4
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/29/2023
Data file: B6010.D 11/29/2023 21:14
SIM Data file: B5990.D 11/29/2023 15:33

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 1.00 | 0.996 |
| Acenaphthylene | ND | | 1.00 | 0.268 |
| 3-Nitroaniline | ND | | 3.00 | 0.436 |
| Acenaphthene | ND | | 1.00 | 0.281 |
| 2,4-Dinitrophenol | ND | | 3.00 | 2.35 |
| 4-Nitrophenol | ND | | 3.00 | 2.41 |
| 2,4-Dinitrotoluene | ND | | 1.00 | 0.886 |
| Dibenzofuran | ND | | 1.00 | 0.199 |
| Diethyl phthalate | ND | | 1.00 | 0.239 |
| Fluorene | ND | | 1.00 | 0.367 |
| 4-Chlorophenyl phenyl ether | ND | | 1.00 | 0.396 |
| 4-Nitroaniline | ND | | 2.00 | 0.692 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 1.00 | 0.326 |
| 2,3,4,6-Tetrachlorophenol | ND | | 1.00 | 0.872 |
| 4,6-Dinitro-2-methylphenol * | ND | | 0.100 | 0.033 |
| N-Nitrosodiphenylamine | ND | | 1.00 | 0.196 |
| 4-Bromophenyl phenyl ether | ND | | 1.00 | 0.940 |
| Hexachlorobenzene * | ND | | 0.020 | 0.016 |
| Atrazine | ND | | 1.00 | 0.468 |
| Pentachlorophenol * | ND | | 0.100 | 0.052 |
| Phenanthrene | ND | | 1.00 | 0.263 |
| Anthracene | ND | | 1.00 | 0.560 |
| Carbazole | ND | | 1.00 | 0.594 |
| Di-n-butyl phthalate | ND | | 1.00 | 0.343 |
| Fluoranthene | ND | | 1.00 | 0.482 |
| Pyrene | ND | | 1.00 | 0.555 |
| Butyl benzyl phthalate | ND | | 1.00 | 0.642 |
| 3,3'-Dichlorobenzidine | ND | | 1.00 | 0.524 |
| Benzo[a]anthracene * | 0.103 | | 0.100 | 0.029 |
| Chrysene | ND | | 1.00 | 0.232 |
| Bis(2-ethylhexyl) phthalate | ND | | 2.00 | 1.38 |
| Di-n-octyl phthalate | ND | | 2.00 | 1.09 |
| Benzo[b]fluoranthene * | 0.132 | | 0.100 | 0.026 |
| Benzo[k]fluoranthene * | 0.123 | | 0.100 | 0.035 |
| Benzo[a]pyrene * | 0.153 | | 0.100 | 0.027 |
| Indeno[1,2,3-cd]pyrene * | 0.190 | | 0.100 | 0.036 |
| Dibenz[a,h]anthracene * | 0.166 | | 0.100 | 0.031 |
| Benzo[g,h,i]perylene | ND | | 2.00 | 1.04 |
| 1,4-Dioxane | ND | | 0.400 | 0.329 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 1.00 | 0.886 |

Total Target Compounds (69): 0.867

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

* - RL & MDL from SIM run
** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-013
Client ID: TWP4
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/29/2023
Date File: B6010.D

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Unknown SV | 13.1 | J | 2.05 |
| | Unknown SV | 4.70 | J | 2.10 |
| | Unknown SV | 5.00 | J | 2.14 |

Total TICs = 22.8 J

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-014
Client ID: TWP5
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/29/2023
Data file: B6011.D 11/29/2023 21:30
SIM Data file: B5991.D 11/29/2023 15:49

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 2.00 | 0.492 |
| Phenol | ND | | 1.00 | 0.276 |
| Bis(2-chloroethyl) ether | ND | | 1.00 | 0.459 |
| 2-Chlorophenol | ND | | 1.00 | 0.257 |
| 2-Methylphenol | ND | | 1.00 | 0.267 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 1.00 | 0.682 |
| 4-Methylphenol ** | ND | | 1.00 | 0.337 |
| N-Nitrosodi-n-propylamine | ND | | 1.00 | 0.391 |
| Acetophenone | ND | | 1.00 | 0.241 |
| Hexachloroethane | ND | | 1.00 | 0.470 |
| Nitrobenzene | ND | | 1.00 | 0.442 |
| Isophorone | ND | | 1.00 | 0.232 |
| 2-Nitrophenol | ND | | 2.00 | 0.581 |
| 2,4-Dimethylphenol | ND | | 2.00 | 1.06 |
| Bis(2-chloroethoxy) methane | ND | | 1.00 | 0.344 |
| 2,4-Dichlorophenol | ND | | 1.00 | 0.383 |
| Naphthalene | ND | | 1.00 | 0.183 |
| 4-Chloroaniline | ND | | 1.00 | 0.612 |
| Hexachlorobutadiene | ND | | 1.00 | 0.561 |
| Caprolactam | ND | | 3.00 | 1.15 |
| 4-Chloro-3-methylphenol | ND | | 1.00 | 0.336 |
| 2-Methylnaphthalene | ND | | 1.00 | 0.200 |
| Hexachlorocyclopentadiene | ND | | 2.00 | 1.89 |
| 2,4,6-Trichlorophenol | ND | | 1.00 | 0.497 |
| 2,4,5-Trichlorophenol | ND | | 2.00 | 0.505 |
| 1,1'-Biphenyl | ND | | 1.00 | 0.212 |
| 2-Chloronaphthalene | ND | | 1.00 | 0.234 |
| 2-Nitroaniline | ND | | 2.00 | 0.702 |
| Dimethyl phthalate | ND | | 1.00 | 0.197 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-014
Client ID: TWP5
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/29/2023
Data file: B6011.D 11/29/2023 21:30
SIM Data file: B5991.D 11/29/2023 15:49

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 1.00 | 0.996 |
| Acenaphthylene | ND | | 1.00 | 0.268 |
| 3-Nitroaniline | ND | | 3.00 | 0.436 |
| Acenaphthene | ND | | 1.00 | 0.281 |
| 2,4-Dinitrophenol | ND | | 3.00 | 2.35 |
| 4-Nitrophenol | ND | | 3.00 | 2.41 |
| 2,4-Dinitrotoluene | ND | | 1.00 | 0.886 |
| Dibenzofuran | ND | | 1.00 | 0.199 |
| Diethyl phthalate | ND | | 1.00 | 0.239 |
| Fluorene | ND | | 1.00 | 0.367 |
| 4-Chlorophenyl phenyl ether | ND | | 1.00 | 0.396 |
| 4-Nitroaniline | ND | | 2.00 | 0.692 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 1.00 | 0.326 |
| 2,3,4,6-Tetrachlorophenol | ND | | 1.00 | 0.872 |
| 4,6-Dinitro-2-methylphenol * | ND | | 0.100 | 0.033 |
| N-Nitrosodiphenylamine | ND | | 1.00 | 0.196 |
| 4-Bromophenyl phenyl ether | ND | | 1.00 | 0.940 |
| Hexachlorobenzene * | ND | | 0.020 | 0.016 |
| Atrazine | ND | | 1.00 | 0.468 |
| Pentachlorophenol * | ND | | 0.100 | 0.052 |
| Phenanthrene | ND | | 1.00 | 0.263 |
| Anthracene | ND | | 1.00 | 0.560 |
| Carbazole | ND | | 1.00 | 0.594 |
| Di-n-butyl phthalate | ND | | 1.00 | 0.343 |
| Fluoranthene | ND | | 1.00 | 0.482 |
| Pyrene | ND | | 1.00 | 0.555 |
| Butyl benzyl phthalate | ND | | 1.00 | 0.642 |
| 3,3'-Dichlorobenzidine | ND | | 1.00 | 0.524 |
| Benzo[a]anthracene * | ND | | 0.100 | 0.029 |
| Chrysene | ND | | 1.00 | 0.232 |
| Bis(2-ethylhexyl) phthalate | ND | | 2.00 | 1.38 |
| Di-n-octyl phthalate | ND | | 2.00 | 1.09 |
| Benzo[b]fluoranthene * | ND | | 0.100 | 0.026 |
| Benzo[k]fluoranthene * | ND | | 0.100 | 0.035 |
| Benzo[a]pyrene * | ND | | 0.100 | 0.027 |
| Indeno[1,2,3-cd]pyrene * | ND | | 0.100 | 0.036 |
| Dibenz[a,h]anthracene * | ND | | 0.100 | 0.031 |
| Benzo[g,h,i]perylene | ND | | 2.00 | 1.04 |
| 1,4-Dioxane | ND | | 0.400 | 0.329 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 1.00 | 0.886 |

Total Target Compounds (69): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

* - RL & MDL from SIM run
** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
## Tentatively Identified Compounds

Lab ID: E23-05046-014
Client ID: TWP5
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/29/2023
Date File: B6011.D

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Unknown SV | 12.9 | J | 2.05 |
| | Unknown SV | 4.70 | J | 2.10 |
| | Unknown SV | 5.50 | J | 2.14 |

Total TICs = 23.1 J

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

B --- Compound detected in Blank

# SEMIVOLATILE ORGANICS

Lab ID: E23-05046-015
Client ID: SB4A/0-2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3845.D 11/21/2023 19:53

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 13.4
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.077 | 0.029 |
| Phenol | ND | | 0.038 | 0.00865 |
| Bis(2-chloroethyl) ether | ND | | 0.038 | 0.013 |
| 2-Chlorophenol | ND | | 0.038 | 0.012 |
| 2-Methylphenol | ND | | 0.038 | 0.017 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.038 | 0.00954 |
| 4-Methylphenol ** | ND | | 0.038 | 0.017 |
| N-Nitrosodi-n-propylamine | ND | | 0.038 | 0.024 |
| Acetophenone | ND | | 0.038 | 0.023 |
| 1,4-Dioxane | ND | | 0.038 | 0.025 |
| Hexachloroethane | ND | | 0.038 | 0.016 |
| Nitrobenzene | ND | | 0.038 | 0.00928 |
| Isophorone | ND | | 0.038 | 0.016 |
| 2-Nitrophenol | ND | | 0.077 | 0.023 |
| 2,4-Dimethylphenol | ND | | 0.038 | 0.011 |
| Bis(2-chloroethoxy) methane | ND | | 0.038 | 0.00852 |
| 2,4-Dichlorophenol | ND | | 0.038 | 0.010 |
| Naphthalene | ND | | 0.038 | 0.00558 |
| 4-Chloroaniline | ND | | 0.038 | 0.015 |
| Hexachlorobutadiene | ND | | 0.038 | 0.011 |
| Caprolactam | ND | | 0.077 | 0.028 |
| 4-Chloro-3-methylphenol | ND | | 0.038 | 0.015 |
| 2-Methylnaphthalene | ND | | 0.038 | 0.014 |
| Hexachlorocyclopentadiene | ND | | 0.077 | 0.066 |
| 2,4,6-Trichlorophenol | ND | | 0.038 | 0.011 |
| 2,4,5-Trichlorophenol | ND | | 0.038 | 0.029 |
| 1,1'-Biphenyl | ND | | 0.038 | 0.00569 |
| 2-Chloronaphthalene | ND | | 0.038 | 0.00883 |
| 2-Nitroaniline | ND | | 0.038 | 0.020 |
| Dimethyl phthalate | ND | | 0.038 | 0.00878 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-015
Client ID: SB4A/0-2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3845.D 11/21/2023 19:53

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 13.4
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.077 | 0.044 |
| Acenaphthylene | 0.037 | J | 0.038 | 0.00837 |
| 3-Nitroaniline | ND | | 0.038 | 0.024 |
| Acenaphthene | ND | | 0.038 | 0.00755 |
| 2,4-Dinitrophenol | ND | | 0.077 | 0.016 |
| 4-Nitrophenol | ND | | 0.077 | 0.039 |
| 2,4-Dinitrotoluene | ND | | 0.077 | 0.043 |
| Dibenzofuran | ND | | 0.038 | 0.005 |
| Diethyl phthalate | ND | | 0.038 | 0.012 |
| Fluorene | 0.020 | J | 0.038 | 0.010 |
| 4-Chlorophenyl phenyl ether | ND | | 0.038 | 0.00841 |
| 4-Nitroaniline | ND | | 0.038 | 0.023 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.038 | 0.013 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.038 | 0.013 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.077 | 0.016 |
| N-Nitrosodiphenylamine | ND | | 0.038 | 0.00785 |
| 4-Bromophenyl phenyl ether | ND | | 0.038 | 0.011 |
| Hexachlorobenzene | ND | | 0.038 | 0.012 |
| Atrazine | ND | | 0.038 | 0.023 |
| Pentachlorophenol | ND | | 0.038 | 0.017 |
| Phenanthrene | 0.212 | | 0.038 | 0.00626 |
| Anthracene | 0.062 | | 0.038 | 0.00389 |
| Carbazole | 0.028 | J | 0.038 | 0.00891 |
| Di-n-butyl phthalate | ND | | 0.038 | 0.016 |
| Fluoranthene | 0.371 | | 0.038 | 0.012 |
| Pyrene | 0.333 | | 0.038 | 0.0089 |
| Butyl benzyl phthalate | ND | | 0.038 | 0.017 |
| 3,3'-Dichlorobenzidine | ND | | 0.038 | 0.027 |
| Benzo[a]anthracene | 0.191 | | 0.038 | 0.014 |
| Chrysene | 0.172 | | 0.038 | 0.011 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.038 | 0.025 |
| Di-n-octyl phthalate | ND | | 0.038 | 0.028 |
| Benzo[b]fluoranthene | 0.197 | | 0.038 | 0.019 |
| Benzo[k]fluoranthene | 0.157 | | 0.038 | 0.026 |
| Benzo[a]pyrene | 0.189 | | 0.038 | 0.019 |
| Indeno[1,2,3-cd]pyrene | 0.118 | | 0.038 | 0.025 |
| Dibenz[a,h]anthracene | 0.056 | | 0.038 | 0.015 |
| Benzo[g,h,i]perylene | 0.121 | | 0.038 | 0.029 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.077 | 0.043 |
| Total Target Compounds (69): | 2.26 | J | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-015
Client ID: SB4A/0-2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Date File: A3845.D

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 13.4

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | No peaks detected | | | |

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

B --- Compound detected in Blank

# SEMIVOLATILE ORGANICS

Lab ID: E23-05046-016
Client ID: SB4B/10-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3846.D 11/21/2023 20:09

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 19.5
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | 0.173 | | 0.083 | 0.031 |
| Phenol | ND | | 0.041 | 0.00937 |
| Bis(2-chloroethyl) ether | ND | | 0.041 | 0.015 |
| 2-Chlorophenol | ND | | 0.041 | 0.014 |
| 2-Methylphenol | ND | | 0.041 | 0.019 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.041 | 0.010 |
| 4-Methylphenol ** | ND | | 0.041 | 0.019 |
| N-Nitrosodi-n-propylamine | ND | | 0.041 | 0.026 |
| Acetophenone | ND | | 0.041 | 0.025 |
| 1,4-Dioxane | ND | | 0.041 | 0.027 |
| Hexachloroethane | ND | | 0.041 | 0.017 |
| Nitrobenzene | ND | | 0.041 | 0.010 |
| Isophorone | ND | | 0.041 | 0.017 |
| 2-Nitrophenol | ND | | 0.083 | 0.025 |
| 2,4-Dimethylphenol | ND | | 0.041 | 0.012 |
| Bis(2-chloroethoxy) methane | ND | | 0.041 | 0.00923 |
| 2,4-Dichlorophenol | ND | | 0.041 | 0.011 |
| Naphthalene | ND | | 0.041 | 0.00604 |
| 4-Chloroaniline | ND | | 0.041 | 0.016 |
| Hexachlorobutadiene | ND | | 0.041 | 0.012 |
| Caprolactam | ND | | 0.083 | 0.031 |
| 4-Chloro-3-methylphenol | ND | | 0.041 | 0.016 |
| 2-Methylnaphthalene | ND | | 0.041 | 0.015 |
| Hexachlorocyclopentadiene | ND | | 0.083 | 0.072 |
| 2,4,6-Trichlorophenol | ND | | 0.041 | 0.011 |
| 2,4,5-Trichlorophenol | ND | | 0.041 | 0.032 |
| 1,1'-Biphenyl | ND | | 0.041 | 0.00616 |
| 2-Chloronaphthalene | ND | | 0.041 | 0.00957 |
| 2-Nitroaniline | ND | | 0.041 | 0.022 |
| Dimethyl phthalate | ND | | 0.041 | 0.0095 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-016
Client ID: SB4B/10-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3846.D 11/21/2023 20:09

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 19.5
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.083 | 0.048 |
| Acenaphthylene | ND | | 0.041 | 0.00906 |
| 3-Nitroaniline | ND | | 0.041 | 0.026 |
| Acenaphthene | ND | | 0.041 | 0.00818 |
| 2,4-Dinitrophenol | ND | | 0.083 | 0.017 |
| 4-Nitrophenol | ND | | 0.083 | 0.042 |
| 2,4-Dinitrotoluene | ND | | 0.083 | 0.047 |
| Dibenzofuran | ND | | 0.041 | 0.00542 |
| Diethyl phthalate | ND | | 0.041 | 0.013 |
| Fluorene | ND | | 0.041 | 0.011 |
| 4-Chlorophenyl phenyl ether | ND | | 0.041 | 0.0091 |
| 4-Nitroaniline | ND | | 0.041 | 0.025 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.041 | 0.014 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.041 | 0.014 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.083 | 0.018 |
| N-Nitrosodiphenylamine | ND | | 0.041 | 0.0085 |
| 4-Bromophenyl phenyl ether | ND | | 0.041 | 0.012 |
| Hexachlorobenzene | ND | | 0.041 | 0.013 |
| Atrazine | ND | | 0.041 | 0.025 |
| Pentachlorophenol | ND | | 0.041 | 0.018 |
| Phenanthrene | ND | | 0.041 | 0.00677 |
| Anthracene | ND | | 0.041 | 0.00422 |
| Carbazole | ND | | 0.041 | 0.00965 |
| Di-n-butyl phthalate | ND | | 0.041 | 0.017 |
| Fluoranthene | 0.030 | J | 0.041 | 0.013 |
| Pyrene | 0.025 | J | 0.041 | 0.00964 |
| Butyl benzyl phthalate | ND | | 0.041 | 0.018 |
| 3,3'-Dichlorobenzidine | ND | | 0.041 | 0.029 |
| Benzo[a]anthracene | 0.026 | J | 0.041 | 0.015 |
| Chrysene | 0.028 | J | 0.041 | 0.011 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.041 | 0.027 |
| Di-n-octyl phthalate | ND | | 0.041 | 0.030 |
| Benzo[b]fluoranthene | 0.035 | J | 0.041 | 0.020 |
| Benzo[k]fluoranthene | 0.034 | J | 0.041 | 0.029 |
| Benzo[a]pyrene | 0.037 | J | 0.041 | 0.020 |
| Indeno[1,2,3-cd]pyrene | 0.034 | J | 0.041 | 0.027 |
| Dibenz[a,h]anthracene | ND | | 0.041 | 0.017 |
| Benzo[g,h,i]perylene | 0.042 | | 0.041 | 0.031 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.083 | 0.047 |
| Total Target Compounds (69): | 0.464 | J | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-016
Client ID: SB4B/10-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Date File: A3846.D

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 19.5

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Unknown SV | 0.513 | J | 9.05 |
| | Unknown SV | 0.398 | J | 9.42 |

Total TICs = 0.911 J

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-017
Client ID: SB5A/0-2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3847.D 11/21/2023 20:25

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 9.00
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.073 | 0.028 |
| Phenol | ND | | 0.037 | 0.00829 |
| Bis(2-chloroethyl) ether | ND | | 0.037 | 0.013 |
| 2-Chlorophenol | ND | | 0.037 | 0.012 |
| 2-Methylphenol | ND | | 0.037 | 0.017 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.037 | 0.00914 |
| 4-Methylphenol ** | ND | | 0.037 | 0.017 |
| N-Nitrosodi-n-propylamine | ND | | 0.037 | 0.023 |
| Acetophenone | ND | | 0.037 | 0.022 |
| 1,4-Dioxane | ND | | 0.037 | 0.024 |
| Hexachloroethane | ND | | 0.037 | 0.015 |
| Nitrobenzene | ND | | 0.037 | 0.00889 |
| Isophorone | ND | | 0.037 | 0.015 |
| 2-Nitrophenol | ND | | 0.073 | 0.022 |
| 2,4-Dimethylphenol | ND | | 0.037 | 0.011 |
| Bis(2-chloroethoxy) methane | ND | | 0.037 | 0.00816 |
| 2,4-Dichlorophenol | ND | | 0.037 | 0.00974 |
| Naphthalene | ND | | 0.037 | 0.00534 |
| 4-Chloroaniline | ND | | 0.037 | 0.014 |
| Hexachlorobutadiene | ND | | 0.037 | 0.010 |
| Caprolactam | ND | | 0.073 | 0.027 |
| 4-Chloro-3-methylphenol | ND | | 0.037 | 0.014 |
| 2-Methylnaphthalene | ND | | 0.037 | 0.013 |
| Hexachlorocyclopentadiene | ND | | 0.073 | 0.064 |
| 2,4,6-Trichlorophenol | ND | | 0.037 | 0.010 |
| 2,4,5-Trichlorophenol | ND | | 0.037 | 0.028 |
| 1,1'-Biphenyl | ND | | 0.037 | 0.00545 |
| 2-Chloronaphthalene | ND | | 0.037 | 0.00846 |
| 2-Nitroaniline | ND | | 0.037 | 0.020 |
| Dimethyl phthalate | ND | | 0.037 | 0.00841 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-017
Client ID: SB5A/0-2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3847.D 11/21/2023 20:25

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 9.00
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.073 | 0.042 |
| Acenaphthylene | ND | | 0.037 | 0.00802 |
| 3-Nitroaniline | ND | | 0.037 | 0.023 |
| Acenaphthene | ND | | 0.037 | 0.00723 |
| 2,4-Dinitrophenol | ND | | 0.073 | 0.015 |
| 4-Nitrophenol | ND | | 0.073 | 0.037 |
| 2,4-Dinitrotoluene | ND | | 0.073 | 0.042 |
| Dibenzofuran | ND | | 0.037 | 0.00479 |
| Diethyl phthalate | ND | | 0.037 | 0.011 |
| Fluorene | ND | | 0.037 | 0.00986 |
| 4-Chlorophenyl phenyl ether | ND | | 0.037 | 0.00805 |
| 4-Nitroaniline | ND | | 0.037 | 0.022 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.037 | 0.012 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.037 | 0.013 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.073 | 0.016 |
| N-Nitrosodiphenylamine | ND | | 0.037 | 0.00752 |
| 4-Bromophenyl phenyl ether | ND | | 0.037 | 0.010 |
| Hexachlorobenzene | ND | | 0.037 | 0.011 |
| Atrazine | ND | | 0.037 | 0.022 |
| Pentachlorophenol | ND | | 0.037 | 0.016 |
| Phenanthrene | 0.035 | J | 0.037 | 0.00599 |
| Anthracene | ND | | 0.037 | 0.00373 |
| Carbazole | ND | | 0.037 | 0.00854 |
| Di-n-butyl phthalate | ND | | 0.037 | 0.015 |
| Fluoranthene | 0.057 | | 0.037 | 0.012 |
| Pyrene | 0.054 | | 0.037 | 0.00852 |
| Butyl benzyl phthalate | ND | | 0.037 | 0.016 |
| 3,3'-Dichlorobenzidine | ND | | 0.037 | 0.026 |
| Benzo[a]anthracene | 0.035 | J | 0.037 | 0.013 |
| Chrysene | 0.031 | J | 0.037 | 0.010 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.037 | 0.024 |
| Di-n-octyl phthalate | ND | | 0.037 | 0.027 |
| Benzo[b]fluoranthene | 0.034 | J | 0.037 | 0.018 |
| Benzo[k]fluoranthene | 0.028 | J | 0.037 | 0.025 |
| Benzo[a]pyrene | 0.030 | J | 0.037 | 0.018 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.037 | 0.023 |
| Dibenz[a,h]anthracene | ND | | 0.037 | 0.015 |
| Benzo[g,h,i]perylene | ND | | 0.037 | 0.028 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.073 | 0.042 |
| Total Target Compounds (69): | 0.304 | J | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-017
Client ID: SB5A/0-2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Date File: A3847.D

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 9.00

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| 1000130-97-9 | E-15-Heptadecenal | 0.568 | JN | 6.38 |

Total TICs = 0.568 JN

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search
B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-018
Client ID: SB5B/10-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3848.D 11/21/2023 20:41

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 14.4
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.078 | 0.029 |
| Phenol | ND | | 0.039 | 0.00881 |
| Bis(2-chloroethyl) ether | ND | | 0.039 | 0.014 |
| 2-Chlorophenol | ND | | 0.039 | 0.013 |
| 2-Methylphenol | ND | | 0.039 | 0.018 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.039 | 0.00971 |
| 4-Methylphenol ** | ND | | 0.039 | 0.018 |
| N-Nitrosodi-n-propylamine | ND | | 0.039 | 0.024 |
| Acetophenone | ND | | 0.039 | 0.024 |
| 1,4-Dioxane | ND | | 0.039 | 0.025 |
| Hexachloroethane | ND | | 0.039 | 0.016 |
| Nitrobenzene | ND | | 0.039 | 0.00945 |
| Isophorone | ND | | 0.039 | 0.016 |
| 2-Nitrophenol | ND | | 0.078 | 0.023 |
| 2,4-Dimethylphenol | ND | | 0.039 | 0.012 |
| Bis(2-chloroethoxy) methane | ND | | 0.039 | 0.00868 |
| 2,4-Dichlorophenol | ND | | 0.039 | 0.010 |
| Naphthalene | ND | | 0.039 | 0.00568 |
| 4-Chloroaniline | ND | | 0.039 | 0.015 |
| Hexachlorobutadiene | ND | | 0.039 | 0.011 |
| Caprolactam | ND | | 0.078 | 0.029 |
| 4-Chloro-3-methylphenol | ND | | 0.039 | 0.015 |
| 2-Methylnaphthalene | ND | | 0.039 | 0.014 |
| Hexachlorocyclopentadiene | ND | | 0.078 | 0.068 |
| 2,4,6-Trichlorophenol | ND | | 0.039 | 0.011 |
| 2,4,5-Trichlorophenol | ND | | 0.039 | 0.030 |
| 1,1'-Biphenyl | ND | | 0.039 | 0.00579 |
| 2-Chloronaphthalene | ND | | 0.039 | 0.009 |
| 2-Nitroaniline | ND | | 0.039 | 0.021 |
| Dimethyl phthalate | ND | | 0.039 | 0.00894 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05046-018
Client ID: SB5B/10-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3848.D 11/21/2023 20:41

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 14.4
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.078 | 0.045 |
| Acenaphthylene | ND | | 0.039 | 0.00852 |
| 3-Nitroaniline | ND | | 0.039 | 0.025 |
| Acenaphthene | ND | | 0.039 | 0.00769 |
| 2,4-Dinitrophenol | ND | | 0.078 | 0.016 |
| 4-Nitrophenol | ND | | 0.078 | 0.039 |
| 2,4-Dinitrotoluene | ND | | 0.078 | 0.044 |
| Dibenzofuran | ND | | 0.039 | 0.00509 |
| Diethyl phthalate | ND | | 0.039 | 0.012 |
| Fluorene | ND | | 0.039 | 0.011 |
| 4-Chlorophenyl phenyl ether | ND | | 0.039 | 0.00856 |
| 4-Nitroaniline | ND | | 0.039 | 0.023 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.039 | 0.013 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.039 | 0.013 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.078 | 0.017 |
| N-Nitrosodiphenylamine | ND | | 0.039 | 0.00799 |
| 4-Bromophenyl phenyl ether | ND | | 0.039 | 0.011 |
| Hexachlorobenzene | ND | | 0.039 | 0.012 |
| Atrazine | ND | | 0.039 | 0.023 |
| Pentachlorophenol | ND | | 0.039 | 0.017 |
| Phenanthrene | ND | | 0.039 | 0.00637 |
| Anthracene | ND | | 0.039 | 0.00396 |
| Carbazole | ND | | 0.039 | 0.00908 |
| Di-n-butyl phthalate | ND | | 0.039 | 0.016 |
| Fluoranthene | 0.023 | J | 0.039 | 0.013 |
| Pyrene | 0.024 | J | 0.039 | 0.00906 |
| Butyl benzyl phthalate | ND | | 0.039 | 0.017 |
| 3,3'-Dichlorobenzidine | ND | | 0.039 | 0.028 |
| Benzo[a]anthracene | ND | | 0.039 | 0.014 |
| Chrysene | ND | | 0.039 | 0.011 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.039 | 0.025 |
| Di-n-octyl phthalate | ND | | 0.039 | 0.029 |
| Benzo[b]fluoranthene | ND | | 0.039 | 0.019 |
| Benzo[k]fluoranthene | ND | | 0.039 | 0.027 |
| Benzo[a]pyrene | ND | | 0.039 | 0.019 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.039 | 0.025 |
| Dibenz[a,h]anthracene | ND | | 0.039 | 0.016 |
| Benzo[g,h,i]perylene | ND | | 0.039 | 0.029 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.078 | 0.044 |
| Total Target Compounds (69): | 0.047 | J | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05046-018
Client ID: SB5B/10-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Date File: A3848.D

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 14.4

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Unknown SV | 0.257 | J | 10.13 |
| 001615-91-4 | A'-Neogammacer-22(29)-ene | 0.646 | JN | 10.32 |

Total TICs = 0.903 JN

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search
B --- Compound detected in Blank

# SEMIVOLATILE ORGANICS

Lab ID: BLKS231120-01
Client ID: .
Date Received: NA
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3826.D 11/21/2023 14:46

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.067 | 0.025 |
| Phenol | ND | | 0.033 | 0.00754 |
| Bis(2-chloroethyl) ether | ND | | 0.033 | 0.012 |
| 2-Chlorophenol | ND | | 0.033 | 0.011 |
| 2-Methylphenol | ND | | 0.033 | 0.015 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.033 | 0.00831 |
| 4-Methylphenol ** | ND | | 0.033 | 0.015 |
| N-Nitrosodi-n-propylamine | ND | | 0.033 | 0.021 |
| Acetophenone | ND | | 0.033 | 0.020 |
| 1,4-Dioxane | ND | | 0.033 | 0.022 |
| Hexachloroethane | ND | | 0.033 | 0.014 |
| Nitrobenzene | ND | | 0.033 | 0.00809 |
| Isophorone | ND | | 0.033 | 0.014 |
| 2-Nitrophenol | ND | | 0.067 | 0.020 |
| 2,4-Dimethylphenol | ND | | 0.033 | 0.00981 |
| Bis(2-chloroethoxy) methane | ND | | 0.033 | 0.00743 |
| 2,4-Dichlorophenol | ND | | 0.033 | 0.00886 |
| Naphthalene | ND | | 0.033 | 0.00486 |
| 4-Chloroaniline | ND | | 0.033 | 0.013 |
| Hexachlorobutadiene | ND | | 0.033 | 0.00925 |
| Caprolactam | ND | | 0.067 | 0.025 |
| 4-Chloro-3-methylphenol | ND | | 0.033 | 0.013 |
| 2-Methylnaphthalene | ND | | 0.033 | 0.012 |
| Hexachlorocyclopentadiene | ND | | 0.067 | 0.058 |
| 2,4,6-Trichlorophenol | ND | | 0.033 | 0.00916 |
| 2,4,5-Trichlorophenol | ND | | 0.033 | 0.025 |
| 1,1'-Biphenyl | ND | | 0.033 | 0.00496 |
| 2-Chloronaphthalene | ND | | 0.033 | 0.0077 |
| 2-Nitroaniline | ND | | 0.033 | 0.018 |
| Dimethyl phthalate | ND | | 0.033 | 0.00765 |

## SEMIVOLATILE ORGANICS

Lab ID: BLKS231120-01
Client ID: .
Date Received: NA
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3826.D 11/21/2023 14:46

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.067 | 0.038 |
| Acenaphthylene | ND | | 0.033 | 0.0073 |
| 3-Nitroaniline | ND | | 0.033 | 0.021 |
| Acenaphthene | ND | | 0.033 | 0.00658 |
| 2,4-Dinitrophenol | ND | | 0.067 | 0.014 |
| 4-Nitrophenol | ND | | 0.067 | 0.034 |
| 2,4-Dinitrotoluene | ND | | 0.067 | 0.038 |
| Dibenzofuran | ND | | 0.033 | 0.00436 |
| Diethyl phthalate | ND | | 0.033 | 0.010 |
| Fluorene | ND | | 0.033 | 0.00897 |
| 4-Chlorophenyl phenyl ether | ND | | 0.033 | 0.00733 |
| 4-Nitroaniline | ND | | 0.033 | 0.020 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.033 | 0.011 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.033 | 0.011 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.067 | 0.014 |
| N-Nitrosodiphenylamine | ND | | 0.033 | 0.00684 |
| 4-Bromophenyl phenyl ether | ND | | 0.033 | 0.00924 |
| Hexachlorobenzene | ND | | 0.033 | 0.010 |
| Atrazine | ND | | 0.033 | 0.020 |
| Pentachlorophenol | ND | | 0.033 | 0.015 |
| Phenanthrene | ND | | 0.033 | 0.00545 |
| Anthracene | ND | | 0.033 | 0.00339 |
| Carbazole | ND | | 0.033 | 0.00777 |
| Di-n-butyl phthalate | ND | | 0.033 | 0.014 |
| Fluoranthene | ND | | 0.033 | 0.011 |
| Pyrene | ND | | 0.033 | 0.00776 |
| Butyl benzyl phthalate | ND | | 0.033 | 0.015 |
| 3,3'-Dichlorobenzidine | ND | | 0.033 | 0.024 |
| Benzo[a]anthracene | ND | | 0.033 | 0.012 |
| Chrysene | ND | | 0.033 | 0.0092 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.033 | 0.021 |
| Di-n-octyl phthalate | ND | | 0.033 | 0.024 |
| Benzo[b]fluoranthene | ND | | 0.033 | 0.016 |
| Benzo[k]fluoranthene | ND | | 0.033 | 0.023 |
| Benzo[a]pyrene | ND | | 0.033 | 0.016 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.033 | 0.021 |
| Dibenz[a,h]anthracene | ND | | 0.033 | 0.013 |
| Benzo[g,h,i]perylene | ND | | 0.033 | 0.025 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.067 | 0.038 |

Total Target Compounds (69): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: BLKS231120-01
Client ID:
Date Received: NA
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: A3826.D 11/21/2023 14:46

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: NA

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | No peaks detected | | | |

Total TICs = 0

# SEMIVOLATILE ORGANICS

Lab ID: BLKA231120-04
Client ID: .
Date Received: NA
Date Extracted: 11/20/2023
Date Analyzed: 11/30/2023
Data file: B6026.D 11/30/2023 11:58
SIM Data file: B5984.D 11/29/2023 13:10

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 2.00 | 0.492 |
| Phenol | ND | | 1.00 | 0.276 |
| Bis(2-chloroethyl) ether | ND | | 1.00 | 0.459 |
| 2-Chlorophenol | ND | | 1.00 | 0.257 |
| 2-Methylphenol | ND | | 1.00 | 0.267 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 1.00 | 0.682 |
| 4-Methylphenol ** | ND | | 1.00 | 0.337 |
| N-Nitrosodi-n-propylamine | ND | | 1.00 | 0.391 |
| Acetophenone | ND | | 1.00 | 0.241 |
| Hexachloroethane | ND | | 1.00 | 0.470 |
| Nitrobenzene | ND | | 1.00 | 0.442 |
| Isophorone | ND | | 1.00 | 0.232 |
| 2-Nitrophenol | ND | | 2.00 | 0.581 |
| 2,4-Dimethylphenol | ND | | 2.00 | 1.06 |
| Bis(2-chloroethoxy) methane | ND | | 1.00 | 0.344 |
| 2,4-Dichlorophenol | ND | | 1.00 | 0.383 |
| Naphthalene | ND | | 1.00 | 0.183 |
| 4-Chloroaniline | ND | | 1.00 | 0.612 |
| Hexachlorobutadiene | ND | | 1.00 | 0.561 |
| Caprolactam | ND | | 3.00 | 1.15 |
| 4-Chloro-3-methylphenol | ND | | 1.00 | 0.336 |
| 2-Methylnaphthalene | ND | | 1.00 | 0.200 |
| Hexachlorocyclopentadiene | ND | | 2.00 | 1.89 |
| 2,4,6-Trichlorophenol | ND | | 1.00 | 0.497 |
| 2,4,5-Trichlorophenol | ND | | 2.00 | 0.505 |
| 1,1'-Biphenyl | ND | | 1.00 | 0.212 |
| 2-Chloronaphthalene | ND | | 1.00 | 0.234 |
| 2-Nitroaniline | ND | | 2.00 | 0.702 |
| Dimethyl phthalate | ND | | 1.00 | 0.197 |

## SEMIVOLATILE ORGANICS

Lab ID: BLKA231120-04
Client ID: .
Date Received: NA
Date Extracted: 11/20/2023
Date Analyzed: 11/30/2023
Data file: B6026.D 11/30/2023 11:58
SIM Data file: B5984.D 11/29/2023 13:10

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 1.00 | 0.996 |
| Acenaphthylene | ND | | 1.00 | 0.268 |
| 3-Nitroaniline | ND | | 3.00 | 0.436 |
| Acenaphthene | ND | | 1.00 | 0.281 |
| 2,4-Dinitrophenol | ND | | 3.00 | 2.35 |
| 4-Nitrophenol | ND | | 3.00 | 2.41 |
| 2,4-Dinitrotoluene | ND | | 1.00 | 0.886 |
| Dibenzofuran | ND | | 1.00 | 0.199 |
| Diethyl phthalate | ND | | 1.00 | 0.239 |
| Fluorene | ND | | 1.00 | 0.367 |
| 4-Chlorophenyl phenyl ether | ND | | 1.00 | 0.396 |
| 4-Nitroaniline | ND | | 2.00 | 0.692 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 1.00 | 0.326 |
| 2,3,4,6-Tetrachlorophenol | ND | | 1.00 | 0.872 |
| 4,6-Dinitro-2-methylphenol * | ND | | 0.100 | 0.033 |
| N-Nitrosodiphenylamine | ND | | 1.00 | 0.196 |
| 4-Bromophenyl phenyl ether | ND | | 1.00 | 0.940 |
| Hexachlorobenzene * | ND | | 0.020 | 0.016 |
| Atrazine | ND | | 1.00 | 0.468 |
| Pentachlorophenol * | ND | | 0.100 | 0.052 |
| Phenanthrene | ND | | 1.00 | 0.263 |
| Anthracene | ND | | 1.00 | 0.560 |
| Carbazole | ND | | 1.00 | 0.594 |
| Di-n-butyl phthalate | ND | | 1.00 | 0.343 |
| Fluoranthene | ND | | 1.00 | 0.482 |
| Pyrene | ND | | 1.00 | 0.555 |
| Butyl benzyl phthalate | ND | | 1.00 | 0.642 |
| 3,3'-Dichlorobenzidine | ND | | 1.00 | 0.524 |
| Benzo[a]anthracene * | ND | | 0.100 | 0.029 |
| Chrysene | ND | | 1.00 | 0.232 |
| Bis(2-ethylhexyl) phthalate | ND | | 2.00 | 1.38 |
| Di-n-octyl phthalate | ND | | 2.00 | 1.09 |
| Benzo[b]fluoranthene * | ND | | 0.100 | 0.026 |
| Benzo[k]fluoranthene * | ND | | 0.100 | 0.035 |
| Benzo[a]pyrene * | ND | | 0.100 | 0.027 |
| Indeno[1,2,3-cd]pyrene * | ND | | 0.100 | 0.036 |
| Dibenz[a,h]anthracene * | ND | | 0.100 | 0.031 |
| Benzo[g,h,i]perylene | ND | | 2.00 | 1.04 |
| 1,4-Dioxane | ND | | 0.400 | 0.329 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 1.00 | 0.886 |

Total Target Compounds (69): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

* - RL & MDL from SIM run
** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: BLKA231120-04
Client ID: .
Date Received: NA
Date Extracted: 11/20/2023
Date Analyzed: 11/30/2023
Date File: B6026.D

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Unknown SV | 12.0 | J | 2.05 |
| | Unknown SV | 4.10 | J | 2.10 |
| | Unknown SV | 4.60 | J | 2.14 |

Total TICs = 20.7 J

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search
B --- Compound detected in Blank

# PCB's

Lab ID: E23-05046-001
Client ID: SB12A/0-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: R5437.D 11/21/2023 12:45

GC Column: DB-5/DB1701P
Sample wt/vol: 15.04g
Matrix-Units: Soil-mg/Kg
% Moisture: 13.3
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00383 | 0.0011 |
| Aroclor-1221 | ND | | 0.00383 | 0.0011 |
| Aroclor-1232 | ND | | 0.00383 | 0.0011 |
| Aroclor-1242 | ND | | 0.00383 | 0.0011 |
| Aroclor-1248 | ND | | 0.00383 | 0.0011 |
| Aroclor-1254 | ND | | 0.00383 | 0.0011 |
| Aroclor-1260 | ND | | 0.00383 | 0.0011 |
| Aroclor-1262 | ND | | 0.00383 | 0.0011 |
| Aroclor-1268 | ND | | 0.00383 | 0.0011 |
| PCBs | ND | | 0.00383 | 0.0011 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05046-002
Client ID: SB2A/0-2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: R5438.D 11/21/2023 13:02

GC Column: DB-5/DB1701P
Sample wt/vol: 15.02g
Matrix-Units: Soil-mg/Kg
% Moisture: 7.30
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00359 | 0.0011 |
| Aroclor-1221 | ND | | 0.00359 | 0.0011 |
| Aroclor-1232 | ND | | 0.00359 | 0.0011 |
| Aroclor-1242 | ND | | 0.00359 | 0.0011 |
| Aroclor-1248 | ND | | 0.00359 | 0.0011 |
| Aroclor-1254 | 0.080 | | 0.00359 | 0.0011 |
| Aroclor-1260 | ND | | 0.00359 | 0.0011 |
| Aroclor-1262 | ND | | 0.00359 | 0.0011 |
| Aroclor-1268 | ND | | 0.00359 | 0.0011 |
| PCBs | 0.080 | | 0.00359 | 0.0011 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05046-003
Client ID: SB2B/10-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: R5439.D 11/21/2023 13:19

GC Column: DB-5/DB1701P
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
% Moisture: 8.30
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00364 | 0.0011 |
| Aroclor-1221 | ND | | 0.00364 | 0.0011 |
| Aroclor-1232 | ND | | 0.00364 | 0.0011 |
| Aroclor-1242 | ND | | 0.00364 | 0.0011 |
| Aroclor-1248 | ND | | 0.00364 | 0.0011 |
| Aroclor-1254 | ND | | 0.00364 | 0.0011 |
| Aroclor-1260 | ND | | 0.00364 | 0.0011 |
| Aroclor-1262 | ND | | 0.00364 | 0.0011 |
| Aroclor-1268 | ND | | 0.00364 | 0.0011 |
| PCBs | ND | | 0.00364 | 0.0011 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05046-004
Client ID: SB1A/0-2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: R5440.D 11/21/2023 13:36

GC Column: DB-5/DB1701P
Sample wt/vol: 15.03g
Matrix-Units: Soil-mg/Kg
% Moisture: 9.80
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00369 | 0.0011 |
| Aroclor-1221 | ND | | 0.00369 | 0.0011 |
| Aroclor-1232 | ND | | 0.00369 | 0.0011 |
| Aroclor-1242 | ND | | 0.00369 | 0.0011 |
| Aroclor-1248 | ND | | 0.00369 | 0.0011 |
| Aroclor-1254 | ND | | 0.00369 | 0.0011 |
| Aroclor-1260 | ND | | 0.00369 | 0.0011 |
| Aroclor-1262 | ND | | 0.00369 | 0.0011 |
| Aroclor-1268 | ND | | 0.00369 | 0.0011 |
| PCBs | ND | | 0.00369 | 0.0011 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05046-005
Client ID: SB1B/10-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: R5441.D 11/21/2023 13:53

GC Column: DB-5/DB1701P
Sample wt/vol: 15.06g
Matrix-Units: Soil-mg/Kg
% Moisture: 15.1
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00391 | 0.0012 |
| Aroclor-1221 | ND | | 0.00391 | 0.0012 |
| Aroclor-1232 | ND | | 0.00391 | 0.0012 |
| Aroclor-1242 | ND | | 0.00391 | 0.0012 |
| Aroclor-1248 | ND | | 0.00391 | 0.0012 |
| Aroclor-1254 | ND | | 0.00391 | 0.0012 |
| Aroclor-1260 | ND | | 0.00391 | 0.0012 |
| Aroclor-1262 | ND | | 0.00391 | 0.0012 |
| Aroclor-1268 | ND | | 0.00391 | 0.0012 |
| PCBs | ND | | 0.00391 | 0.0012 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05046-006
Client ID: SB3A/0-2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: R5442.D 11/21/2023 14:11

GC Column: DB-5/DB1701P
Sample wt/vol: 15.06g
Matrix-Units: Soil-mg/Kg
% Moisture: 10.1
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00369 | 0.0011 |
| Aroclor-1221 | ND | | 0.00369 | 0.0011 |
| Aroclor-1232 | ND | | 0.00369 | 0.0011 |
| Aroclor-1242 | ND | | 0.00369 | 0.0011 |
| Aroclor-1248 | ND | | 0.00369 | 0.0011 |
| Aroclor-1254 | ND | | 0.00369 | 0.0011 |
| Aroclor-1260 | ND | | 0.00369 | 0.0011 |
| Aroclor-1262 | ND | | 0.00369 | 0.0011 |
| Aroclor-1268 | ND | | 0.00369 | 0.0011 |
| PCBs | ND | | 0.00369 | 0.0011 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05046-007
Client ID: SB3B/10-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: R5443.D 11/21/2023 14:28

GC Column: DB-5/DB1701P
Sample wt/vol: 15.03g
Matrix-Units: Soil-mg/Kg
% Moisture: 11.2
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00375 | 0.0011 |
| Aroclor-1221 | ND | | 0.00375 | 0.0011 |
| Aroclor-1232 | ND | | 0.00375 | 0.0011 |
| Aroclor-1242 | ND | | 0.00375 | 0.0011 |
| Aroclor-1248 | ND | | 0.00375 | 0.0011 |
| Aroclor-1254 | ND | | 0.00375 | 0.0011 |
| Aroclor-1260 | ND | | 0.00375 | 0.0011 |
| Aroclor-1262 | ND | | 0.00375 | 0.0011 |
| Aroclor-1268 | ND | | 0.00375 | 0.0011 |
| PCBs | ND | | 0.00375 | 0.0011 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05046-008
Client ID: SB10A/1.
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: R5444.D 11/21/2023 14:45

GC Column: DB-5/DB1701P
Sample wt/vol: 15.06g
Matrix-Units: Soil-mg/Kg
% Moisture: 8.90
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00364 | 0.0011 |
| Aroclor-1221 | ND | | 0.00364 | 0.0011 |
| Aroclor-1232 | ND | | 0.00364 | 0.0011 |
| Aroclor-1242 | ND | | 0.00364 | 0.0011 |
| Aroclor-1248 | ND | | 0.00364 | 0.0011 |
| Aroclor-1254 | ND | | 0.00364 | 0.0011 |
| Aroclor-1260 | ND | | 0.00364 | 0.0011 |
| Aroclor-1262 | ND | | 0.00364 | 0.0011 |
| Aroclor-1268 | ND | | 0.00364 | 0.0011 |
| PCBs | ND | | 0.00364 | 0.0011 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05046-009
Client ID: SB11A/1-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: R5445.D 11/21/2023 15:02

GC Column: DB-5/DB1701P
Sample wt/vol: 15.05g
Matrix-Units: Soil-mg/Kg
% Moisture: 15.6
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00394 | 0.0012 |
| Aroclor-1221 | ND | | 0.00394 | 0.0012 |
| Aroclor-1232 | ND | | 0.00394 | 0.0012 |
| Aroclor-1242 | ND | | 0.00394 | 0.0012 |
| Aroclor-1248 | ND | | 0.00394 | 0.0012 |
| Aroclor-1254 | ND | | 0.00394 | 0.0012 |
| Aroclor-1260 | ND | | 0.00394 | 0.0012 |
| Aroclor-1262 | ND | | 0.00394 | 0.0012 |
| Aroclor-1268 | ND | | 0.00394 | 0.0012 |
| PCBs | ND | | 0.00394 | 0.0012 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05046-010
Client ID: SB8A/0-1
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: R5446.D 11/21/2023 15:19

GC Column: DB-5/DB1701P
Sample wt/vol: 15.06g
Matrix-Units: Soil-mg/Kg
% Moisture: 5.20
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.0035 | 0.0011 |
| Aroclor-1221 | ND | | 0.0035 | 0.0011 |
| Aroclor-1232 | ND | | 0.0035 | 0.0011 |
| Aroclor-1242 | ND | | 0.0035 | 0.0011 |
| Aroclor-1248 | ND | | 0.0035 | 0.0011 |
| Aroclor-1254 | ND | | 0.0035 | 0.0011 |
| Aroclor-1260 | ND | | 0.0035 | 0.0011 |
| Aroclor-1262 | ND | | 0.0035 | 0.0011 |
| Aroclor-1268 | ND | | 0.0035 | 0.0011 |
| PCBs | ND | | 0.0035 | 0.0011 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05046-011
Client ID: TWP1
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/27/2023
Data file: R5486.D 11/27/2023 18:34

GC Column: DB-5/DB1701P
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.050 | 0.015 |
| Aroclor-1221 | ND | | 0.050 | 0.015 |
| Aroclor-1232 | ND | | 0.050 | 0.015 |
| Aroclor-1242 | ND | | 0.050 | 0.015 |
| Aroclor-1248 | ND | | 0.050 | 0.015 |
| Aroclor-1254 | ND | | 0.050 | 0.015 |
| Aroclor-1260 | ND | | 0.050 | 0.015 |
| Aroclor-1262 | ND | | 0.050 | 0.015 |
| Aroclor-1268 | ND | | 0.050 | 0.015 |
| PCBs | ND | | 0.050 | 0.015 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05046-012
Client ID: TWP2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/27/2023
Data file: R5487.D 11/27/2023 18:51

GC Column: DB-5/DB1701P
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.050 | 0.015 |
| Aroclor-1221 | ND | | 0.050 | 0.015 |
| Aroclor-1232 | ND | | 0.050 | 0.015 |
| Aroclor-1242 | ND | | 0.050 | 0.015 |
| Aroclor-1248 | ND | | 0.050 | 0.015 |
| Aroclor-1254 | ND | | 0.050 | 0.015 |
| Aroclor-1260 | ND | | 0.050 | 0.015 |
| Aroclor-1262 | ND | | 0.050 | 0.015 |
| Aroclor-1268 | ND | | 0.050 | 0.015 |
| PCBs | ND | | 0.050 | 0.015 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05046-013
Client ID: TWP4
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/27/2023
Data file: R5488.D 11/27/2023 19:08

GC Column: DB-5/DB1701P
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.050 | 0.015 |
| Aroclor-1221 | ND | | 0.050 | 0.015 |
| Aroclor-1232 | ND | | 0.050 | 0.015 |
| Aroclor-1242 | ND | | 0.050 | 0.015 |
| Aroclor-1248 | ND | | 0.050 | 0.015 |
| Aroclor-1254 | ND | | 0.050 | 0.015 |
| Aroclor-1260 | ND | | 0.050 | 0.015 |
| Aroclor-1262 | ND | | 0.050 | 0.015 |
| Aroclor-1268 | ND | | 0.050 | 0.015 |
| PCBs | ND | | 0.050 | 0.015 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05046-014
Client ID: TWP5
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/27/2023
Data file: R5489.D 11/27/2023 19:26

GC Column: DB-5/DB1701P
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.050 | 0.015 |
| Aroclor-1221 | ND | | 0.050 | 0.015 |
| Aroclor-1232 | ND | | 0.050 | 0.015 |
| Aroclor-1242 | ND | | 0.050 | 0.015 |
| Aroclor-1248 | ND | | 0.050 | 0.015 |
| Aroclor-1254 | ND | | 0.050 | 0.015 |
| Aroclor-1260 | ND | | 0.050 | 0.015 |
| Aroclor-1262 | ND | | 0.050 | 0.015 |
| Aroclor-1268 | ND | | 0.050 | 0.015 |
| PCBs | ND | | 0.050 | 0.015 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05046-015
Client ID: SB4A/0-2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: R5447.D 11/21/2023 15:36

GC Column: DB-5/DB1701P
Sample wt/vol: 15.04g
Matrix-Units: Soil-mg/Kg
% Moisture: 13.4
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00384 | 0.0012 |
| Aroclor-1221 | ND | | 0.00384 | 0.0012 |
| Aroclor-1232 | ND | | 0.00384 | 0.0012 |
| Aroclor-1242 | ND | | 0.00384 | 0.0012 |
| Aroclor-1248 | ND | | 0.00384 | 0.0012 |
| Aroclor-1254 | ND | | 0.00384 | 0.0012 |
| Aroclor-1260 | ND | | 0.00384 | 0.0012 |
| Aroclor-1262 | ND | | 0.00384 | 0.0012 |
| Aroclor-1268 | ND | | 0.00384 | 0.0012 |
| PCBs | ND | | 0.00384 | 0.0012 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05046-016
Client ID: SB4B/10-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: R5448.D 11/21/2023 15:54

GC Column: DB-5/DB1701P
Sample wt/vol: 15.04g
Matrix-Units: Soil-mg/Kg
% Moisture: 19.5
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00413 | 0.0012 |
| Aroclor-1221 | ND | | 0.00413 | 0.0012 |
| Aroclor-1232 | ND | | 0.00413 | 0.0012 |
| Aroclor-1242 | ND | | 0.00413 | 0.0012 |
| Aroclor-1248 | ND | | 0.00413 | 0.0012 |
| Aroclor-1254 | ND | | 0.00413 | 0.0012 |
| Aroclor-1260 | ND | | 0.00413 | 0.0012 |
| Aroclor-1262 | ND | | 0.00413 | 0.0012 |
| Aroclor-1268 | ND | | 0.00413 | 0.0012 |
| PCBs | ND | | 0.00413 | 0.0012 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05046-017
Client ID: SB5A/0-2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: R5449.D 11/21/2023 16:11

GC Column: DB-5/DB1701P
Sample wt/vol: 15.05g
Matrix-Units: Soil-mg/Kg
% Moisture: 9.00
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00365 | 0.0011 |
| Aroclor-1221 | ND | | 0.00365 | 0.0011 |
| Aroclor-1232 | ND | | 0.00365 | 0.0011 |
| Aroclor-1242 | ND | | 0.00365 | 0.0011 |
| Aroclor-1248 | ND | | 0.00365 | 0.0011 |
| Aroclor-1254 | ND | | 0.00365 | 0.0011 |
| Aroclor-1260 | ND | | 0.00365 | 0.0011 |
| Aroclor-1262 | ND | | 0.00365 | 0.0011 |
| Aroclor-1268 | ND | | 0.00365 | 0.0011 |
| PCBs | ND | | 0.00365 | 0.0011 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05046-018
Client ID: SB5B/10-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: R5451.D 11/21/2023 17:02

GC Column: DB-5/DB1701P
Sample wt/vol: 15.02g
Matrix-Units: Soil-mg/Kg
% Moisture: 14.4
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00389 | 0.0012 |
| Aroclor-1221 | ND | | 0.00389 | 0.0012 |
| Aroclor-1232 | ND | | 0.00389 | 0.0012 |
| Aroclor-1242 | ND | | 0.00389 | 0.0012 |
| Aroclor-1248 | ND | | 0.00389 | 0.0012 |
| Aroclor-1254 | ND | | 0.00389 | 0.0012 |
| Aroclor-1260 | ND | | 0.00389 | 0.0012 |
| Aroclor-1262 | ND | | 0.00389 | 0.0012 |
| Aroclor-1268 | ND | | 0.00389 | 0.0012 |
| PCBs | ND | | 0.00389 | 0.0012 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: BLKS231120-08
Client ID: PCB
Date Received: NA
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: R5433.D 11/21/2023 11:36

GC Column: DB-5/DB1701P
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00333 | 0.001 |
| Aroclor-1221 | ND | | 0.00333 | 0.001 |
| Aroclor-1232 | ND | | 0.00333 | 0.001 |
| Aroclor-1242 | ND | | 0.00333 | 0.001 |
| Aroclor-1248 | ND | | 0.00333 | 0.001 |
| Aroclor-1254 | ND | | 0.00333 | 0.001 |
| Aroclor-1260 | ND | | 0.00333 | 0.001 |
| Aroclor-1262 | ND | | 0.00333 | 0.001 |
| Aroclor-1268 | ND | | 0.00333 | 0.001 |
| PCBs | ND | | 0.00333 | 0.001 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: BLKA231120-01
Client ID: PCB
Date Received: NA
Date Extracted: 11/20/2023
Date Analyzed: 11/27/2023
Data file: R5482.D 11/27/2023 17:25

GC Column: DB-5/DB1701P
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.050 | 0.015 |
| Aroclor-1221 | ND | | 0.050 | 0.015 |
| Aroclor-1232 | ND | | 0.050 | 0.015 |
| Aroclor-1242 | ND | | 0.050 | 0.015 |
| Aroclor-1248 | ND | | 0.050 | 0.015 |
| Aroclor-1254 | ND | | 0.050 | 0.015 |
| Aroclor-1260 | ND | | 0.050 | 0.015 |
| Aroclor-1262 | ND | | 0.050 | 0.015 |
| Aroclor-1268 | ND | | 0.050 | 0.015 |
| PCBs | ND | | 0.050 | 0.015 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# PESTICIDES

Lab ID: E23-05046-001
Client ID: SB12A/0-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: V1605.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.04g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 13.3

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.000766 | 0.000137 |
| beta-BHC | ND | | 0.000766 | 0.000179 |
| gamma-BHC (Lindane) | ND | | 0.000766 | 0.000171 |
| delta-BHC | ND | | 0.000766 | 0.000149 |
| Heptachlor | ND | | 0.000766 | 0.000182 |
| Aldrin | ND | | 0.000766 | 0.00016 |
| Heptachlor epoxide | ND | | 0.000766 | 0.000166 |
| Endosulfan I | ND | | 0.000766 | 0.000172 |
| 4,4'-DDE | ND | | 0.000766 | 0.000156 |
| Dieldrin | ND | | 0.000766 | 0.000156 |
| Endrin | ND | | 0.000766 | 0.000193 |
| Endosulfan II | ND | | 0.000766 | 0.000176 |
| 4,4'-DDD | ND | | 0.000766 | 0.000204 |
| Endrin aldehyde | ND | | 0.000766 | 0.00016 |
| Endosulfan sulfate | ND | | 0.000766 | 0.00019 |
| 4,4'-DDT | ND | | 0.000766 | 0.000143 |
| Endrin ketone | ND | | 0.000766 | 0.000149 |
| Methoxychlor | ND | | 0.000766 | 0.000205 |
| alpha-Chlordane | ND | | 0.000766 | 0.000169 |
| gamma-Chlordane | ND | | 0.000766 | 0.000151 |
| Toxaphene | ND | | 0.00958 | 0.00383 |
| Endosulfan (I and II) | ND | | 0.000766 | 0.000172 |
| Chlordane (alpha and gamma) | ND | | 0.000766 | 0.000151 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# PESTICIDES

Lab ID: E23-05046-002
Client ID: SB2A/0-2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: V1606.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.02g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 7.30

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.000718 | 0.000128 |
| beta-BHC | ND | | 0.000718 | 0.000168 |
| gamma-BHC (Lindane) | ND | | 0.000718 | 0.00016 |
| delta-BHC | ND | | 0.000718 | 0.000139 |
| Heptachlor | ND | | 0.000718 | 0.00017 |
| Aldrin | ND | | 0.000718 | 0.00015 |
| Heptachlor epoxide | ND | | 0.000718 | 0.000156 |
| Endosulfan I | ND | | 0.000718 | 0.000161 |
| 4,4'-DDE | 0.0034 | | 0.000718 | 0.000146 |
| Dieldrin | 0.00127 | | 0.000718 | 0.000146 |
| Endrin | ND | | 0.000718 | 0.000181 |
| Endosulfan II | ND | | 0.000718 | 0.000165 |
| 4,4'-DDD | ND | | 0.000718 | 0.000192 |
| Endrin aldehyde | ND | | 0.000718 | 0.00015 |
| Endosulfan sulfate | ND | | 0.000718 | 0.000178 |
| 4,4'-DDT | 0.00556 | | 0.000718 | 0.000134 |
| Endrin ketone | ND | | 0.000718 | 0.00014 |
| Methoxychlor | ND | | 0.000718 | 0.000192 |
| alpha-Chlordane | ND | | 0.000718 | 0.000159 |
| gamma-Chlordane | ND | | 0.000718 | 0.000141 |
| Toxaphene | ND | | 0.00898 | 0.00359 |
| Endosulfan (I and II) | ND | | 0.000718 | 0.000161 |
| Chlordane (alpha and gamma) | ND | | 0.000718 | 0.000141 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# PESTICIDES

Lab ID: E23-05046-003
Client ID: SB2B/10-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: V1607.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 8.30

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.000728 | 0.00013 |
| beta-BHC | ND | | 0.000728 | 0.00017 |
| gamma-BHC (Lindane) | ND | | 0.000728 | 0.000162 |
| delta-BHC | ND | | 0.000728 | 0.000141 |
| Heptachlor | ND | | 0.000728 | 0.000173 |
| Aldrin | ND | | 0.000728 | 0.000152 |
| Heptachlor epoxide | ND | | 0.000728 | 0.000158 |
| Endosulfan I | ND | | 0.000728 | 0.000163 |
| 4,4'-DDE | 0.00226 | | 0.000728 | 0.000148 |
| Dieldrin | ND | | 0.000728 | 0.000148 |
| Endrin | ND | | 0.000728 | 0.000183 |
| Endosulfan II | ND | | 0.000728 | 0.000167 |
| 4,4'-DDD | 0.000712 | J | 0.000728 | 0.000194 |
| Endrin aldehyde | ND | | 0.000728 | 0.000152 |
| Endosulfan sulfate | ND | | 0.000728 | 0.00018 |
| 4,4'-DDT | 0.00384 | | 0.000728 | 0.000135 |
| Endrin ketone | ND | | 0.000728 | 0.000142 |
| Methoxychlor | ND | | 0.000728 | 0.000194 |
| alpha-Chlordane | ND | | 0.000728 | 0.00016 |
| gamma-Chlordane | ND | | 0.000728 | 0.000143 |
| Toxaphene | ND | | 0.0091 | 0.00364 |
| Endosulfan (I and II) | ND | | 0.000728 | 0.000163 |
| Chlordane (alpha and gamma) | ND | | 0.000728 | 0.000143 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# PESTICIDES

Lab ID: E23-05046-004
Client ID: SB1A/0-2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: V1608.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.03g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 9.80

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.000738 | 0.000132 |
| beta-BHC | ND | | 0.000738 | 0.000172 |
| gamma-BHC (Lindane) | ND | | 0.000738 | 0.000164 |
| delta-BHC | ND | | 0.000738 | 0.000143 |
| Heptachlor | ND | | 0.000738 | 0.000175 |
| Aldrin | ND | | 0.000738 | 0.000154 |
| Heptachlor epoxide | ND | | 0.000738 | 0.00016 |
| Endosulfan I | ND | | 0.000738 | 0.000165 |
| 4,4'-DDE | 0.019 | | 0.000738 | 0.00015 |
| Dieldrin | 0.00332 | | 0.000738 | 0.00015 |
| Endrin | ND | | 0.000738 | 0.000186 |
| Endosulfan II | ND | | 0.000738 | 0.000169 |
| 4,4'-DDD | 0.00407 | | 0.000738 | 0.000197 |
| Endrin aldehyde | ND | | 0.000738 | 0.000154 |
| Endosulfan sulfate | ND | | 0.000738 | 0.000183 |
| 4,4'-DDT | 0.027 | | 0.000738 | 0.000137 |
| Endrin ketone | ND | | 0.000738 | 0.000144 |
| Methoxychlor | ND | | 0.000738 | 0.000197 |
| alpha-Chlordane | 0.00369 | | 0.000738 | 0.000163 |
| gamma-Chlordane | 0.00319 | | 0.000738 | 0.000145 |
| Toxaphene | ND | | 0.00923 | 0.00369 |
| Endosulfan (I and II) | ND | | 0.000738 | 0.000165 |
| Chlordane (alpha and gamma) | 0.00688 | | 0.000738 | 0.000145 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# PESTICIDES

Lab ID: E23-05046-005
Client ID: SB1B/10-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: V1609.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.06g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 15.1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.000782 | 0.00014 |
| beta-BHC | ND | | 0.000782 | 0.000182 |
| gamma-BHC (Lindane) | ND | | 0.000782 | 0.000174 |
| delta-BHC | ND | | 0.000782 | 0.000152 |
| Heptachlor | ND | | 0.000782 | 0.000186 |
| Aldrin | ND | | 0.000782 | 0.000164 |
| Heptachlor epoxide | ND | | 0.000782 | 0.00017 |
| Endosulfan I | ND | | 0.000782 | 0.000175 |
| 4,4'-DDE | ND | | 0.000782 | 0.00016 |
| Dieldrin | ND | | 0.000782 | 0.000159 |
| Endrin | ND | | 0.000782 | 0.000197 |
| Endosulfan II | ND | | 0.000782 | 0.000179 |
| 4,4'-DDD | ND | | 0.000782 | 0.000209 |
| Endrin aldehyde | ND | | 0.000782 | 0.000164 |
| Endosulfan sulfate | ND | | 0.000782 | 0.000194 |
| 4,4'-DDT | ND | | 0.000782 | 0.000145 |
| Endrin ketone | ND | | 0.000782 | 0.000152 |
| Methoxychlor | ND | | 0.000782 | 0.000209 |
| alpha-Chlordane | ND | | 0.000782 | 0.000173 |
| gamma-Chlordane | ND | | 0.000782 | 0.000154 |
| Toxaphene | ND | | 0.00978 | 0.00391 |
| Endosulfan (I and II) | ND | | 0.000782 | 0.000175 |
| Chlordane (alpha and gamma) | ND | | 0.000782 | 0.000154 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# PESTICIDES

Lab ID: E23-05046-006
Client ID: SB3A/0-2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: V1610.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.06g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 10.1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.000738 | 0.000132 |
| beta-BHC | ND | | 0.000738 | 0.000172 |
| gamma-BHC (Lindane) | ND | | 0.000738 | 0.000165 |
| delta-BHC | ND | | 0.000738 | 0.000143 |
| Heptachlor | ND | | 0.000738 | 0.000175 |
| Aldrin | ND | | 0.000738 | 0.000155 |
| Heptachlor epoxide | ND | | 0.000738 | 0.00016 |
| Endosulfan I | ND | | 0.000738 | 0.000165 |
| 4,4'-DDE | 0.013 | | 0.000738 | 0.000151 |
| Dieldrin | ND | | 0.000738 | 0.00015 |
| Endrin | ND | | 0.000738 | 0.000186 |
| Endosulfan II | ND | | 0.000738 | 0.000169 |
| 4,4'-DDD | ND | | 0.000738 | 0.000197 |
| Endrin aldehyde | ND | | 0.000738 | 0.000155 |
| Endosulfan sulfate | ND | | 0.000738 | 0.000183 |
| 4,4'-DDT | 0.021 | | 0.000738 | 0.000137 |
| Endrin ketone | ND | | 0.000738 | 0.000144 |
| Methoxychlor | ND | | 0.000738 | 0.000197 |
| alpha-Chlordane | ND | | 0.000738 | 0.000163 |
| gamma-Chlordane | ND | | 0.000738 | 0.000145 |
| Toxaphene | ND | | 0.00923 | 0.00369 |
| Endosulfan (I and II) | ND | | 0.000738 | 0.000165 |
| Chlordane (alpha and gamma) | ND | | 0.000738 | 0.000145 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# PESTICIDES

Lab ID: E23-05046-007
Client ID: SB3B/10-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: V1611.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.03g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 11.2

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.00075 | 0.000134 |
| beta-BHC | ND | | 0.00075 | 0.000175 |
| gamma-BHC (Lindane) | ND | | 0.00075 | 0.000167 |
| delta-BHC | ND | | 0.00075 | 0.000145 |
| Heptachlor | ND | | 0.00075 | 0.000178 |
| Aldrin | ND | | 0.00075 | 0.000157 |
| Heptachlor epoxide | ND | | 0.00075 | 0.000163 |
| Endosulfan I | ND | | 0.00075 | 0.000168 |
| 4,4'-DDE | ND | | 0.00075 | 0.000153 |
| Dieldrin | ND | | 0.00075 | 0.000153 |
| Endrin | ND | | 0.00075 | 0.000189 |
| Endosulfan II | ND | | 0.00075 | 0.000172 |
| 4,4'-DDD | ND | | 0.00075 | 0.0002 |
| Endrin aldehyde | ND | | 0.00075 | 0.000157 |
| Endosulfan sulfate | ND | | 0.00075 | 0.000186 |
| 4,4'-DDT | ND | | 0.00075 | 0.000139 |
| Endrin ketone | ND | | 0.00075 | 0.000146 |
| Methoxychlor | ND | | 0.00075 | 0.0002 |
| alpha-Chlordane | ND | | 0.00075 | 0.000165 |
| gamma-Chlordane | ND | | 0.00075 | 0.000147 |
| Toxaphene | ND | | 0.00938 | 0.00375 |
| Endosulfan (I and II) | ND | | 0.00075 | 0.000168 |
| Chlordane (alpha and gamma) | ND | | 0.00075 | 0.000147 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# PESTICIDES

Lab ID: E23-05046-008
Client ID: SB10A/1.
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: V1612.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.06g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 8.90

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.000728 | 0.00013 |
| beta-BHC | ND | | 0.000728 | 0.00017 |
| gamma-BHC (Lindane) | ND | | 0.000728 | 0.000162 |
| delta-BHC | ND | | 0.000728 | 0.000141 |
| Heptachlor | ND | | 0.000728 | 0.000173 |
| Aldrin | ND | | 0.000728 | 0.000152 |
| Heptachlor epoxide | ND | | 0.000728 | 0.000158 |
| Endosulfan I | ND | | 0.000728 | 0.000163 |
| 4,4'-DDE | 0.114 | E | 0.000728 | 0.000149 |
| Dieldrin | ND | | 0.000728 | 0.000148 |
| Endrin | ND | | 0.000728 | 0.000184 |
| Endosulfan II | ND | | 0.000728 | 0.000167 |
| 4,4'-DDD | 0.014 | | 0.000728 | 0.000194 |
| Endrin aldehyde | ND | | 0.000728 | 0.000153 |
| Endosulfan sulfate | ND | | 0.000728 | 0.00018 |
| 4,4'-DDT | 0.122 | E | 0.000728 | 0.000136 |
| Endrin ketone | ND | | 0.000728 | 0.000142 |
| Methoxychlor | ND | | 0.000728 | 0.000195 |
| alpha-Chlordane | ND | | 0.000728 | 0.000161 |
| gamma-Chlordane | ND | | 0.000728 | 0.000143 |
| Toxaphene | ND | | 0.0091 | 0.00364 |
| Endosulfan (I and II) | ND | | 0.000728 | 0.000163 |
| Chlordane (alpha and gamma) | ND | | 0.000728 | 0.000143 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PESTICIDES

Lab ID: E23-05046-008DL
Client ID: SB10A/1.
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/27/2023
Data file: V1638.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.06g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 2
% Moisture: 8.90

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.00146 | 0.00026 |
| beta-BHC | ND | | 0.00146 | 0.00034 |
| gamma-BHC (Lindane) | ND | | 0.00146 | 0.000325 |
| delta-BHC | ND | | 0.00146 | 0.000282 |
| Heptachlor | ND | | 0.00146 | 0.000346 |
| Aldrin | ND | | 0.00146 | 0.000305 |
| Heptachlor epoxide | ND | | 0.00146 | 0.000316 |
| Endosulfan I | ND | | 0.00146 | 0.000326 |
| 4,4'-DDE | 0.095 | D | 0.00146 | 0.000297 |
| Dieldrin | ND | | 0.00146 | 0.000297 |
| Endrin | ND | | 0.00146 | 0.000368 |
| Endosulfan II | ND | | 0.00146 | 0.000334 |
| 4,4'-DDD | 0.013 | D | 0.00146 | 0.000389 |
| Endrin aldehyde | ND | | 0.00146 | 0.000305 |
| Endosulfan sulfate | ND | | 0.00146 | 0.000361 |
| 4,4'-DDT | 0.096 | D | 0.00146 | 0.000271 |
| Endrin ketone | ND | | 0.00146 | 0.000284 |
| Methoxychlor | ND | | 0.00146 | 0.00039 |
| alpha-Chlordane | ND | | 0.00146 | 0.000322 |
| gamma-Chlordane | ND | | 0.00146 | 0.000286 |
| Toxaphene | ND | | 0.018 | 0.00729 |
| Endosulfan (I and II) | ND | | 0.00146 | 0.000326 |
| Chlordane (alpha and gamma) | ND | | 0.00146 | 0.000286 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# PESTICIDES

Lab ID: E23-05046-009
Client ID: SB11A/1-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: V1613.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.05g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 15.6

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.000788 | 0.000141 |
| beta-BHC | ND | | 0.000788 | 0.000184 |
| gamma-BHC (Lindane) | ND | | 0.000788 | 0.000176 |
| delta-BHC | ND | | 0.000788 | 0.000153 |
| Heptachlor | ND | | 0.000788 | 0.000187 |
| Aldrin | ND | | 0.000788 | 0.000165 |
| Heptachlor epoxide | ND | | 0.000788 | 0.000171 |
| Endosulfan I | ND | | 0.000788 | 0.000176 |
| 4,4'-DDE | 0.078 | | 0.000788 | 0.000161 |
| Dieldrin | ND | | 0.000788 | 0.00016 |
| Endrin | ND | | 0.000788 | 0.000199 |
| Endosulfan II | ND | | 0.000788 | 0.00018 |
| 4,4'-DDD | 0.011 | | 0.000788 | 0.00021 |
| Endrin aldehyde | ND | | 0.000788 | 0.000165 |
| Endosulfan sulfate | ND | | 0.000788 | 0.000195 |
| 4,4'-DDT | 0.075 | | 0.000788 | 0.000146 |
| Endrin ketone | ND | | 0.000788 | 0.000153 |
| Methoxychlor | ND | | 0.000788 | 0.00021 |
| alpha-Chlordane | ND | | 0.000788 | 0.000174 |
| gamma-Chlordane | ND | | 0.000788 | 0.000155 |
| Toxaphene | ND | | 0.00985 | 0.00394 |
| Endosulfan (I and II) | ND | | 0.000788 | 0.000176 |
| Chlordane (alpha and gamma) | ND | | 0.000788 | 0.000155 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# PESTICIDES

Lab ID: E23-05046-010
Client ID: SB8A/0-1
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/27/2023
Data file: V1630.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.06g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 5.20

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.0007 | 0.000125 |
| beta-BHC | ND | | 0.0007 | 0.000163 |
| gamma-BHC (Lindane) | ND | | 0.0007 | 0.000156 |
| delta-BHC | ND | | 0.0007 | 0.000136 |
| Heptachlor | ND | | 0.0007 | 0.000166 |
| Aldrin | ND | | 0.0007 | 0.000147 |
| Heptachlor epoxide | ND | | 0.0007 | 0.000152 |
| Endosulfan I | ND | | 0.0007 | 0.000157 |
| 4,4'-DDE | 0.012 | | 0.0007 | 0.000143 |
| Dieldrin | ND | | 0.0007 | 0.000143 |
| Endrin | ND | | 0.0007 | 0.000177 |
| Endosulfan II | ND | | 0.0007 | 0.00016 |
| 4,4'-DDD | 0.000357 | J | 0.0007 | 0.000187 |
| Endrin aldehyde | ND | | 0.0007 | 0.000147 |
| Endosulfan sulfate | ND | | 0.0007 | 0.000173 |
| 4,4'-DDT | 0.0021 | | 0.0007 | 0.00013 |
| Endrin ketone | ND | | 0.0007 | 0.000136 |
| Methoxychlor | ND | | 0.0007 | 0.000187 |
| alpha-Chlordane | ND | | 0.0007 | 0.000155 |
| gamma-Chlordane | ND | | 0.0007 | 0.000138 |
| Toxaphene | ND | | 0.00875 | 0.0035 |
| Endosulfan (I and II) | ND | | 0.0007 | 0.000157 |
| Chlordane (alpha and gamma) | ND | | 0.0007 | 0.000138 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PESTICIDES

Lab ID: E23-05046-011
Client ID: TWP1
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: O8761.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.010 | 0.00206 |
| beta-BHC | ND | | 0.010 | 0.00303 |
| gamma-BHC (Lindane) | ND | | 0.010 | 0.00201 |
| delta-BHC | ND | | 0.010 | 0.00238 |
| Heptachlor | ND | | 0.010 | 0.00235 |
| Aldrin | ND | | 0.010 | 0.00187 |
| Heptachlor epoxide | ND | | 0.010 | 0.00217 |
| Endosulfan I | ND | | 0.010 | 0.00208 |
| 4,4'-DDE | ND | | 0.010 | 0.00197 |
| Dieldrin | ND | | 0.010 | 0.00237 |
| Endrin | ND | | 0.010 | 0.00289 |
| Endosulfan II | ND | | 0.010 | 0.00258 |
| 4,4'-DDD | ND | | 0.010 | 0.00294 |
| Endrin aldehyde | ND | | 0.010 | 0.0023 |
| Endosulfan sulfate | ND | | 0.010 | 0.00314 |
| 4,4'-DDT | ND | | 0.010 | 0.00202 |
| Endrin ketone | ND | | 0.010 | 0.00323 |
| Methoxychlor | ND | | 0.010 | 0.00337 |
| alpha-Chlordane | ND | | 0.010 | 0.00215 |
| gamma-Chlordane | ND | | 0.010 | 0.00314 |
| Toxaphene | ND | | 0.125 | 0.050 |
| Endosulfan (I and II) | ND | | 0.010 | 0.00208 |
| Chlordane (alpha and gamma) | ND | | 0.010 | 0.00215 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# PESTICIDES

Lab ID: E23-05046-012
Client ID: TWP2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: O8762.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.010 | 0.00206 |
| beta-BHC | ND | | 0.010 | 0.00303 |
| gamma-BHC (Lindane) | ND | | 0.010 | 0.00201 |
| delta-BHC | ND | | 0.010 | 0.00238 |
| Heptachlor | ND | | 0.010 | 0.00235 |
| Aldrin | ND | | 0.010 | 0.00187 |
| Heptachlor epoxide | ND | | 0.010 | 0.00217 |
| Endosulfan I | ND | | 0.010 | 0.00208 |
| 4,4'-DDE | ND | | 0.010 | 0.00197 |
| Dieldrin | ND | | 0.010 | 0.00237 |
| Endrin | ND | | 0.010 | 0.00289 |
| Endosulfan II | ND | | 0.010 | 0.00258 |
| 4,4'-DDD | ND | | 0.010 | 0.00294 |
| Endrin aldehyde | ND | | 0.010 | 0.0023 |
| Endosulfan sulfate | ND | | 0.010 | 0.00314 |
| 4,4'-DDT | ND | | 0.010 | 0.00202 |
| Endrin ketone | ND | | 0.010 | 0.00323 |
| Methoxychlor | ND | | 0.010 | 0.00337 |
| alpha-Chlordane | ND | | 0.010 | 0.00215 |
| gamma-Chlordane | ND | | 0.010 | 0.00314 |
| Toxaphene | ND | | 0.125 | 0.050 |
| Endosulfan (I and II) | ND | | 0.010 | 0.00208 |
| Chlordane (alpha and gamma) | ND | | 0.010 | 0.00215 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PESTICIDES

Lab ID: E23-05046-013
Client ID: TWP4
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: O8763.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.010 | 0.00206 |
| beta-BHC | ND | | 0.010 | 0.00303 |
| gamma-BHC (Lindane) | ND | | 0.010 | 0.00201 |
| delta-BHC | ND | | 0.010 | 0.00238 |
| Heptachlor | ND | | 0.010 | 0.00235 |
| Aldrin | ND | | 0.010 | 0.00187 |
| Heptachlor epoxide | ND | | 0.010 | 0.00217 |
| Endosulfan I | ND | | 0.010 | 0.00208 |
| 4,4'-DDE | ND | | 0.010 | 0.00197 |
| Dieldrin | ND | | 0.010 | 0.00237 |
| Endrin | ND | | 0.010 | 0.00289 |
| Endosulfan II | ND | | 0.010 | 0.00258 |
| 4,4'-DDD | ND | | 0.010 | 0.00294 |
| Endrin aldehyde | ND | | 0.010 | 0.0023 |
| Endosulfan sulfate | ND | | 0.010 | 0.00314 |
| 4,4'-DDT | ND | | 0.010 | 0.00202 |
| Endrin ketone | ND | | 0.010 | 0.00323 |
| Methoxychlor | ND | | 0.010 | 0.00337 |
| alpha-Chlordane | ND | | 0.010 | 0.00215 |
| gamma-Chlordane | ND | | 0.010 | 0.00314 |
| Toxaphene | ND | | 0.125 | 0.050 |
| Endosulfan (I and II) | ND | | 0.010 | 0.00208 |
| Chlordane (alpha and gamma) | ND | | 0.010 | 0.00215 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PESTICIDES

Lab ID: E23-05046-014
Client ID: TWP5
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: O8764.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.010 | 0.00206 |
| beta-BHC | ND | | 0.010 | 0.00303 |
| gamma-BHC (Lindane) | ND | | 0.010 | 0.00201 |
| delta-BHC | ND | | 0.010 | 0.00238 |
| Heptachlor | ND | | 0.010 | 0.00235 |
| Aldrin | ND | | 0.010 | 0.00187 |
| Heptachlor epoxide | ND | | 0.010 | 0.00217 |
| Endosulfan I | ND | | 0.010 | 0.00208 |
| 4,4'-DDE | ND | | 0.010 | 0.00197 |
| Dieldrin | ND | | 0.010 | 0.00237 |
| Endrin | ND | | 0.010 | 0.00289 |
| Endosulfan II | ND | | 0.010 | 0.00258 |
| 4,4'-DDD | ND | | 0.010 | 0.00294 |
| Endrin aldehyde | ND | | 0.010 | 0.0023 |
| Endosulfan sulfate | ND | | 0.010 | 0.00314 |
| 4,4'-DDT | ND | | 0.010 | 0.00202 |
| Endrin ketone | ND | | 0.010 | 0.00323 |
| Methoxychlor | ND | | 0.010 | 0.00337 |
| alpha-Chlordane | ND | | 0.010 | 0.00215 |
| gamma-Chlordane | ND | | 0.010 | 0.00314 |
| Toxaphene | ND | | 0.125 | 0.050 |
| Endosulfan (I and II) | ND | | 0.010 | 0.00208 |
| Chlordane (alpha and gamma) | ND | | 0.010 | 0.00215 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# PESTICIDES

Lab ID: E23-05046-015
Client ID: SB4A/0-2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/27/2023
Data file: V1631.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.04g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 13.4

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.000768 | 0.000137 |
| beta-BHC | ND | | 0.000768 | 0.000179 |
| gamma-BHC (Lindane) | ND | | 0.000768 | 0.000171 |
| delta-BHC | ND | | 0.000768 | 0.000149 |
| Heptachlor | ND | | 0.000768 | 0.000182 |
| Aldrin | ND | | 0.000768 | 0.000161 |
| Heptachlor epoxide | ND | | 0.000768 | 0.000167 |
| Endosulfan I | ND | | 0.000768 | 0.000172 |
| 4,4'-DDE | ND | | 0.000768 | 0.000157 |
| Dieldrin | ND | | 0.000768 | 0.000156 |
| Endrin | ND | | 0.000768 | 0.000194 |
| Endosulfan II | ND | | 0.000768 | 0.000176 |
| 4,4'-DDD | ND | | 0.000768 | 0.000205 |
| Endrin aldehyde | 0.018 | | 0.000768 | 0.000161 |
| Endosulfan sulfate | ND | | 0.000768 | 0.00019 |
| 4,4'-DDT | ND | | 0.000768 | 0.000143 |
| Endrin ketone | ND | | 0.000768 | 0.000149 |
| Methoxychlor | ND | | 0.000768 | 0.000205 |
| alpha-Chlordane | ND | | 0.000768 | 0.000169 |
| gamma-Chlordane | ND | | 0.000768 | 0.000151 |
| Toxaphene | ND | | 0.0096 | 0.00384 |
| Endosulfan (I and II) | ND | | 0.000768 | 0.000172 |
| Chlordane (alpha and gamma) | ND | | 0.000768 | 0.000151 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# PESTICIDES

Lab ID: E23-05046-016
Client ID: SB4B/10-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/27/2023
Data file: V1632.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.04g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 19.5

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.000826 | 0.000148 |
| beta-BHC | ND | | 0.000826 | 0.000193 |
| gamma-BHC (Lindane) | ND | | 0.000826 | 0.000184 |
| delta-BHC | ND | | 0.000826 | 0.00016 |
| Heptachlor | ND | | 0.000826 | 0.000196 |
| Aldrin | ND | | 0.000826 | 0.000173 |
| Heptachlor epoxide | ND | | 0.000826 | 0.000179 |
| Endosulfan I | ND | | 0.000826 | 0.000185 |
| 4,4'-DDE | ND | | 0.000826 | 0.000168 |
| Dieldrin | ND | | 0.000826 | 0.000168 |
| Endrin | ND | | 0.000826 | 0.000208 |
| Endosulfan II | ND | | 0.000826 | 0.000189 |
| 4,4'-DDD | ND | | 0.000826 | 0.00022 |
| Endrin aldehyde | ND | | 0.000826 | 0.000173 |
| Endosulfan sulfate | ND | | 0.000826 | 0.000205 |
| 4,4'-DDT | ND | | 0.000826 | 0.000154 |
| Endrin ketone | ND | | 0.000826 | 0.000161 |
| Methoxychlor | ND | | 0.000826 | 0.000221 |
| alpha-Chlordane | ND | | 0.000826 | 0.000182 |
| gamma-Chlordane | ND | | 0.000826 | 0.000162 |
| Toxaphene | ND | | 0.010 | 0.00413 |
| Endosulfan (I and II) | ND | | 0.000826 | 0.000185 |
| Chlordane (alpha and gamma) | ND | | 0.000826 | 0.000162 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PESTICIDES

Lab ID: E23-05046-017
Client ID: SB5A/0-2
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/27/2023
Data file: V1633.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.05g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 9.00

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.00073 | 0.00013 |
| beta-BHC | ND | | 0.00073 | 0.00017 |
| gamma-BHC (Lindane) | ND | | 0.00073 | 0.000163 |
| delta-BHC | ND | | 0.00073 | 0.000141 |
| Heptachlor | ND | | 0.00073 | 0.000173 |
| Aldrin | ND | | 0.00073 | 0.000153 |
| Heptachlor epoxide | ND | | 0.00073 | 0.000159 |
| Endosulfan I | ND | | 0.00073 | 0.000163 |
| 4,4'-DDE | 0.00285 | | 0.00073 | 0.000149 |
| Dieldrin | ND | | 0.00073 | 0.000149 |
| Endrin | ND | | 0.00073 | 0.000184 |
| Endosulfan II | ND | | 0.00073 | 0.000167 |
| 4,4'-DDD | 0.00649 | | 0.00073 | 0.000195 |
| Endrin aldehyde | ND | | 0.00073 | 0.000153 |
| Endosulfan sulfate | ND | | 0.00073 | 0.000181 |
| 4,4'-DDT | 0.000589 | J | 0.00073 | 0.000136 |
| Endrin ketone | ND | | 0.00073 | 0.000142 |
| Methoxychlor | ND | | 0.00073 | 0.000195 |
| alpha-Chlordane | ND | | 0.00073 | 0.000161 |
| gamma-Chlordane | ND | | 0.00073 | 0.000143 |
| Toxaphene | ND | | 0.00913 | 0.00365 |
| Endosulfan (I and II) | ND | | 0.00073 | 0.000163 |
| Chlordane (alpha and gamma) | ND | | 0.00073 | 0.000143 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# PESTICIDES

Lab ID: E23-05046-018
Client ID: SB5B/10-
Date Received: 11/16/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/27/2023
Data file: V1634.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.02g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 14.4

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.000778 | 0.000139 |
| beta-BHC | ND | | 0.000778 | 0.000181 |
| gamma-BHC (Lindane) | ND | | 0.000778 | 0.000173 |
| delta-BHC | ND | | 0.000778 | 0.000151 |
| Heptachlor | ND | | 0.000778 | 0.000185 |
| Aldrin | ND | | 0.000778 | 0.000163 |
| Heptachlor epoxide | ND | | 0.000778 | 0.000169 |
| Endosulfan I | ND | | 0.000778 | 0.000174 |
| 4,4'-DDE | 0.00041 | J | 0.000778 | 0.000159 |
| Dieldrin | ND | | 0.000778 | 0.000158 |
| Endrin | ND | | 0.000778 | 0.000196 |
| Endosulfan II | ND | | 0.000778 | 0.000178 |
| 4,4'-DDD | 0.000444 | J | 0.000778 | 0.000207 |
| Endrin aldehyde | ND | | 0.000778 | 0.000163 |
| Endosulfan sulfate | ND | | 0.000778 | 0.000193 |
| 4,4'-DDT | 0.000229 | J | 0.000778 | 0.000145 |
| Endrin ketone | ND | | 0.000778 | 0.000151 |
| Methoxychlor | ND | | 0.000778 | 0.000208 |
| alpha-Chlordane | ND | | 0.000778 | 0.000172 |
| gamma-Chlordane | ND | | 0.000778 | 0.000153 |
| Toxaphene | ND | | 0.00973 | 0.00389 |
| Endosulfan (I and II) | ND | | 0.000778 | 0.000174 |
| Chlordane (alpha and gamma) | ND | | 0.000778 | 0.000153 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# PESTICIDES

Lab ID: BLKS231120-08
Client ID: Pest
Date Received: NA
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: V1601.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: NA

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.000666 | 0.000119 |
| beta-BHC | ND | | 0.000666 | 0.000156 |
| gamma-BHC (Lindane) | ND | | 0.000666 | 0.000149 |
| delta-BHC | ND | | 0.000666 | 0.000129 |
| Heptachlor | ND | | 0.000666 | 0.000158 |
| Aldrin | ND | | 0.000666 | 0.000139 |
| Heptachlor epoxide | ND | | 0.000666 | 0.000145 |
| Endosulfan I | ND | | 0.000666 | 0.000149 |
| 4,4'-DDE | ND | | 0.000666 | 0.000136 |
| Dieldrin | ND | | 0.000666 | 0.000136 |
| Endrin | ND | | 0.000666 | 0.000168 |
| Endosulfan II | ND | | 0.000666 | 0.000153 |
| 4,4'-DDD | ND | | 0.000666 | 0.000178 |
| Endrin aldehyde | ND | | 0.000666 | 0.00014 |
| Endosulfan sulfate | ND | | 0.000666 | 0.000165 |
| 4,4'-DDT | ND | | 0.000666 | 0.000124 |
| Endrin ketone | ND | | 0.000666 | 0.00013 |
| Methoxychlor | ND | | 0.000666 | 0.000178 |
| alpha-Chlordane | ND | | 0.000666 | 0.000147 |
| gamma-Chlordane | ND | | 0.000666 | 0.000131 |
| Toxaphene | ND | | 0.00833 | 0.00333 |
| Endosulfan (I and II) | ND | | 0.000666 | 0.000149 |
| Chlordane (alpha and gamma) | ND | | 0.000666 | 0.000131 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# PESTICIDES

Lab ID: BLKA231120-01
Client ID: Pest
Date Received: NA
Date Extracted: 11/20/2023
Date Analyzed: 11/21/2023
Data file: O8757.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.010 | 0.00206 |
| beta-BHC | ND | | 0.010 | 0.00303 |
| gamma-BHC (Lindane) | ND | | 0.010 | 0.00201 |
| delta-BHC | ND | | 0.010 | 0.00238 |
| Heptachlor | ND | | 0.010 | 0.00235 |
| Aldrin | ND | | 0.010 | 0.00187 |
| Heptachlor epoxide | ND | | 0.010 | 0.00217 |
| Endosulfan I | ND | | 0.010 | 0.00208 |
| 4,4'-DDE | ND | | 0.010 | 0.00197 |
| Dieldrin | ND | | 0.010 | 0.00237 |
| Endrin | ND | | 0.010 | 0.00289 |
| Endosulfan II | ND | | 0.010 | 0.00258 |
| 4,4'-DDD | ND | | 0.010 | 0.00294 |
| Endrin aldehyde | ND | | 0.010 | 0.0023 |
| Endosulfan sulfate | ND | | 0.010 | 0.00314 |
| 4,4'-DDT | ND | | 0.010 | 0.00202 |
| Endrin ketone | ND | | 0.010 | 0.00323 |
| Methoxychlor | ND | | 0.010 | 0.00337 |
| alpha-Chlordane | ND | | 0.010 | 0.00215 |
| gamma-Chlordane | ND | | 0.010 | 0.00314 |
| Toxaphene | ND | | 0.125 | 0.050 |
| Endosulfan (I and II) | ND | | 0.010 | 0.00208 |
| Chlordane (alpha and gamma) | ND | | 0.010 | 0.00215 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# Cyanide, Total

Client/Project: HK Engineering/HK-2661.1 CHELSEA

Date Received: 11/16/23 17:12
Method: SW 9012B

Analyst: B. Pillsbury

| Lab ID | Client ID | Result | Q | DF | Matrix-Unit | MDL | RL | % Solid | Date Collected | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| E23-05046-001 | SB12A | 0.288 | J | 1 | Soil-mg/Kg | 0.231 | 1.15 | 86.7 | 11/15/23 08:15 | 11/20/23 12:44 |
| E23-05046-002 | SB2A | ND | | 1 | Soil-mg/Kg | 0.216 | 1.08 | 92.7 | 11/15/23 08:30 | 11/20/23 12:44 |
| E23-05046-003 | SB2B | ND | | 1 | Soil-mg/Kg | 0.218 | 1.09 | 91.7 | 11/15/23 08:35 | 11/20/23 12:44 |
| E23-05046-004 | SB1A | 0.222 | J | 1 | Soil-mg/Kg | 0.222 | 1.11 | 90.2 | 11/15/23 09:30 | 11/20/23 12:44 |
| E23-05046-005 | SB1B | 5.71 | | 1 | Soil-mg/Kg | 0.236 | 1.18 | 84.9 | 11/15/23 09:35 | 11/20/23 12:44 |
| E23-05046-006 | SB3A | 0.501 | J | 1 | Soil-mg/Kg | 0.222 | 1.11 | 89.9 | 11/15/23 10:45 | 11/20/23 12:44 |
| E23-05046-007 | SB3B | 1.24 | | 1 | Soil-mg/Kg | 0.225 | 1.13 | 88.8 | 11/15/23 10:50 | 11/20/23 12:44 |
| E23-05046-008 | SB10A | ND | | 1 | Soil-mg/Kg | 0.220 | 1.10 | 91.1 | 11/15/23 13:05 | 11/20/23 12:44 |
| E23-05046-009 | SB11A | ND | | 1 | Soil-mg/Kg | 0.237 | 1.18 | 84.4 | 11/15/23 13:40 | 11/20/23 12:44 |
| E23-05046-010 | SB8A | ND | | 1 | Soil-mg/Kg | 0.211 | 1.05 | 94.8 | 11/15/23 14:00 | 11/20/23 12:44 |
| E23-05046-015 | SB4A | ND | | 1 | Soil-mg/Kg | 0.231 | 1.15 | 86.6 | 11/16/23 08:10 | 11/20/23 12:44 |
| E23-05046-016 | SB4B | ND | | 1 | Soil-mg/Kg | 0.244 | 1.22 | 80.5 | 11/16/23 08:15 | 11/20/23 12:44 |
| E23-05046-017 | SB5A | ND | | 1 | Soil-mg/Kg | 0.220 | 1.10 | 91.0 | 11/16/23 08:20 | 11/20/23 12:44 |
| E23-05046-018 | SB5B | ND | | 1 | Soil-mg/Kg | 0.234 | 1.17 | 85.6 | 11/16/23 08:35 | 11/20/23 12:44 |

J = The concentration was detected at a value below the RL and aboved the MDL.

## Cyanide, Total

Client/Project: HK Engineering/HK-2661.1 CHELSEA

Date Received: 11/16/23 17:12
Method: EPA 335.4

Analyst: B. Pillsbury

| Lab ID | Client ID | Result | Q | DF | Matrix-Unit | MDL | RL | % Solid | Date Collected | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| E23-05046-011 | TWP1 | ND | | 1 | Aqueous-ug/L | 4.00 | 20.0 | 0 | 11/15/23 12:20 | 11/22/23 11:29 |
| E23-05046-012 | TWP2 | ND | | 1 | Aqueous-ug/L | 4.00 | 20.0 | 0 | 11/15/23 13:00 | 11/22/23 11:29 |
| E23-05046-013 | TWP4 | ND | | 1 | Aqueous-ug/L | 4.00 | 20.0 | 0 | 11/16/23 09:10 | 11/22/23 11:29 |
| E23-05046-014 | TWP5 | ND | | 1 | Aqueous-ug/L | 4.00 | 20.0 | 0 | 11/16/23 09:30 | 11/22/23 11:29 |

Certified for NJDEP, NY(DOH)
NJ ID# 14751
NY ID# 11402

## General Chemistry Quality Control

## Cyanide, Total

**Matrix: Soil**
**Unit: mg/Kg**

**Batch: AP013-0114**
**Method: SW 9012B**

**Date: 11/20/2023**

| | Sample ID | Result | TrueValue / SpikeAdded | RPD | RPD Limit | % Recovery | %Recovery Limit |
|---|---|---|---|---|---|---|---|
| BLK | BLKS231120 | < 0.200 | NA | NA | NA | NA | NA |
| LCS (ppm) | ICV231120.007_07 | 12.7 | 12.5 | NA | NA | 102 | 85-115 |
| SAMPLE | E23-05046-002 | < 0.216 | NA | NA | NA | NA | NA |
| DUP | E23-05046-002DUP | < 0.216 | NA | NC | 20 | NA | NA |
| MS | E23-05046-002MS | 13.8 | 13.5 | NA | NA | 102 | 90-110 |
| MSD | E23-05046-002MSD | 13.6 | 13.5 | 1 | 20 | 101 | 90-110 |

The above blank result applies to the follow samples:

E23-05046-002
E23-05046-001
E23-05046-003
E23-05046-004
E23-05046-005
E23-05046-006
E23-05046-007
E23-05046-008
E23-05046-009
E23-05046-010
E23-05046-015
E23-05046-016
E23-05046-017
E23-05046-018
E23-05028-001
E23-05028-002
E23-05022-009

See "Initial & Continuing Calibration Verification" page for ICV results. The ICV (Initial Calibration Verification) sample doubles as the LCS.

NA - Not Applicable
ND - Not Detected
NC - Non calculable RPD due to value less than the detection limit

Certified for NJDEP, NY(DOH)
NJ ID# 14751
NY ID# 11402

## General Chemistry Quality Control

## Cyanide, Total

**Matrix: Aqueous**
**Unit: ug/L**

**Batch: AP013-0113**
**Method: EPA 335.4**

**Date: 11/22/2023**

| | Sample ID | Result | TrueValue / SpikeAdded | RPD | RPD Limit | % Recovery | %Recovery Limit |
|---|---|---|---|---|---|---|---|
| BLK | BLKA231122 | < 4.00 | NA | NA | NA | NA | NA |
| LCS | ICV231122.007_07 | 251 | 250 | NA | NA | 100 | 90-110 |
| SAMPLE | E23-05046-011 | < 4.00 | NA | NA | NA | NA | NA |
| DUP | E23-05046-011DUP | < 4.00 | NA | NC | 20 | NA | NA |
| MS | E23-05046-011MS | 252 | 250 | NA | NA | 101 | 90-110 |
| MSD | E23-05046-011MSD | 253 | 250 | 0 | 20 | 101 | 90-110 |

The above blank result applies to the follow samples:

E23-05046-011
E23-04990-001
E23-05046-012
E23-05046-013
E23-05046-014
E23-05066-016
E23-05066-017
E23-05066-018
E23-05066-019

See "Initial & Continuing Calibration Verification" page for ICV results. The ICV (Initial Calibration Verification) sample doubles as the LCS.

NA - Not Applicable
ND - Not Detected
NC - Non calculable RPD due to value less than the detection limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-001_SB12A | | |
| **Lab Sample ID:** | JD77310-1 | **Date Sampled:** | 11/15/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | 87.1 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 4950 | 57 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.3 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 8.7 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 173 | 23 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.39 | 0.23 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | 12.8 | 0.57 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 50200 | 2900 | mg/kg | 5 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 17.6 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | 6.0 | 5.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 42.9 | 2.9 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 19700 | 57 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 773 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 2110 | 570 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 351 | 1.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 5.2 | 0.35 | mg/kg | 10 | 11/22/23 | 11/27/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 17.3 | 4.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | < 1100 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.3 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | 1.1 | 0.57 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 20.7 | 5.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 2050 | 29 | mg/kg | 5 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55124
(3) Prep QC Batch: MP43275
(4) Prep QC Batch: MP43335

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05046-002_SB2A | | |
| Lab Sample ID: | JD77310-2 | Date Sampled: | 11/15/23 |
| Matrix: | SO - Soil | Date Received: | 11/20/23 |
| | | Percent Solids: | 93.8 |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6300 | 53 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.1 | 2.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 2.9 | 2.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 48.5 | 21 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.41 | 0.21 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | < 0.53 | 0.53 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 17800 | 530 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 20.7 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | 6.5 | 5.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 21.5 | 2.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 12200 | 53 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 39.0 | 2.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 6090 | 530 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 263 | 1.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.037 | 0.033 | mg/kg | 1 | 11/22/23 | 11/27/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 42.8 | 4.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | 1780 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.1 | 2.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | 0.78 | 0.53 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 22.7 | 5.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 60.2 | 5.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55124
(3) Prep QC Batch: MP43275
(4) Prep QC Batch: MP43335

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05046-003_SB2B | | |
| Lab Sample ID: | JD77310-3 | Date Sampled: | 11/15/23 |
| Matrix: | SO - Soil | Date Received: | 11/20/23 |
| | | Percent Solids: | 92.1 |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 5040 | 55 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 3.8 | 2.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 163 | 22 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.76 | 0.22 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | < 0.55 | 0.55 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 10500 | 550 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 15.9 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | 7.7 | 5.5 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 31.8 | 2.8 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 13100 | 55 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 235 | 2.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 6400 | 550 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 292 | 1.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.56 | 0.030 | mg/kg | 1 | 11/22/23 | 11/27/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 56.8 | 4.4 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | 1270 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.2 | 2.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | 0.78 | 0.55 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 20.2 | 5.5 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 176 | 5.5 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55124
(3) Prep QC Batch: MP43275
(4) Prep QC Batch: MP43335

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-004_SB1A | | |
| **Lab Sample ID:** | JD77310-4 | **Date Sampled:** | 11/15/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | 91.2 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 7910 | 55 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 7.5 | 2.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 298 | 22 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.46 | 0.22 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | 0.63 | 0.55 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 14000 | 550 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 20.8 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | < 5.5 | 5.5 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 47.9 | 2.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 12500 | 55 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 436 | 2.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 2880 | 550 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 241 | 1.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.61 | 0.034 | mg/kg | 1 | 11/22/23 | 11/27/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 15.5 | 4.4 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | < 1100 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.2 | 2.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | 0.86 | 0.55 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 24.9 | 5.5 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 276 | 5.5 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55124
(3) Prep QC Batch: MP43275
(4) Prep QC Batch: MP43335

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-005_SB1B | | |
| **Lab Sample ID:** | JD77310-5 | **Date Sampled:** | 11/15/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | 86.2 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 10700 | 56 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 7.6 | 2.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 463 | 22 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.64 | 0.22 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | 1.9 | 0.56 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 77400 | 2800 | mg/kg | 5 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 28.8 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | 5.8 | 5.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper [a] | 128 | 14 | mg/kg | 5 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 32600 | 280 | mg/kg | 5 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 1260 | 11 | mg/kg | 5 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 12800 | 560 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 704 | 1.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 1.1 | 0.066 | mg/kg | 2 | 11/22/23 | 11/27/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 22.8 | 4.5 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | 1670 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium [a] | < 11 | 11 | mg/kg | 5 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver [a] | < 2.8 | 2.8 | mg/kg | 5 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium [a] | < 5.6 | 5.6 | mg/kg | 5 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 29.8 | 5.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 477 | 5.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55124
(3) Prep QC Batch: MP43275
(4) Prep QC Batch: MP43335

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-006_SB3A | | |
| **Lab Sample ID:** | JD77310-6 | **Date Sampled:** | 11/15/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | 90.6 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6400 | 57 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | 8.0 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 8.9 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 309 | 23 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.43 | 0.23 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | 1.4 | 0.57 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 34300 | 1100 | mg/kg | 2 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 16.8 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | < 5.7 | 5.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 195 | 2.8 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 13400 | 57 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 774 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 2920 | 570 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 1210 | 3.4 | mg/kg | 2 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.68 | 0.035 | mg/kg | 1 | 11/22/23 | 11/27/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 32.2 | 4.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | < 1100 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.3 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | 1.2 | 0.57 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium [a] | < 2.3 | 2.3 | mg/kg | 2 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 25.8 | 5.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 483 | 5.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55124
(3) Prep QC Batch: MP43275
(4) Prep QC Batch: MP43335

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05046-007_SB3B | | |
| Lab Sample ID: | JD77310-7 | Date Sampled: | 11/15/23 |
| Matrix: | SO - Soil | Date Received: | 11/20/23 |
| | | Percent Solids: | 88.9 |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 5390 | 56 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony [a] | < 45 | 45 | mg/kg | 20 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic [a] | < 45 | 45 | mg/kg | 20 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 288 | 22 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium [a] | < 4.5 | 4.5 | mg/kg | 20 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium [a] | < 11 | 11 | mg/kg | 20 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 49000 | 11000 | mg/kg | 20 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium [a] | 70.1 | 22 | mg/kg | 20 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | 39.9 | 5.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper [a] | 503 | 56 | mg/kg | 20 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 254000 | 1100 | mg/kg | 20 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead [a] | 888 | 45 | mg/kg | 20 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 3500 | 560 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 2890 | 33 | mg/kg | 20 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.65 | 0.036 | mg/kg | 1 | 11/22/23 | 11/27/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel [a] | 98.3 | 89 | mg/kg | 20 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | < 1100 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium [a] | < 45 | 45 | mg/kg | 20 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver [a] | < 11 | 11 | mg/kg | 20 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium [a] | < 22 | 22 | mg/kg | 20 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 94.8 | 5.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 688 | 5.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55124
(3) Prep QC Batch: MP43275
(4) Prep QC Batch: MP43335

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-008_SB10A | | |
| **Lab Sample ID:** | JD77310-8 | **Date Sampled:** | 11/15/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | 91.1 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 7400 | 56 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 3.6 | 2.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 90.2 | 22 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.46 | 0.22 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | < 0.56 | 0.56 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 31300 | 1100 | mg/kg | 2 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 22.0 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | 6.1 | 5.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 26.4 | 2.8 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 13700 | 56 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 159 | 2.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 3600 | 560 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 386 | 1.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.27 | 0.034 | mg/kg | 1 | 11/22/23 | 11/27/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 18.6 | 4.5 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | 1520 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.2 | 2.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | 0.58 | 0.56 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 21.6 | 5.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 54.9 | 5.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55124
(3) Prep QC Batch: MP43275
(4) Prep QC Batch: MP43335

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-009_SB11A | | |
| **Lab Sample ID:** | JD77310-9 | **Date Sampled:** | 11/15/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | 83.5 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 7780 | 58 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.3 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 3.9 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 98.7 | 23 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.44 | 0.23 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | < 0.58 | 0.58 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 5130 | 580 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 16.9 | 1.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | 6.4 | 5.8 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 17.1 | 2.9 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 16100 | 58 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 56.1 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 3220 | 580 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 442 | 1.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.23 | 0.036 | mg/kg | 1 | 11/22/23 | 11/27/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 19.4 | 4.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | < 1200 | 1200 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.3 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | < 0.58 | 0.58 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1200 | 1200 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.2 | 1.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 17.7 | 5.8 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 80.8 | 5.8 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55124
(3) Prep QC Batch: MP43275
(4) Prep QC Batch: MP43335

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-010_SB8A | | |
| **Lab Sample ID:** | JD77310-10 | **Date Sampled:** | 11/15/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | 95.4 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6710 | 52 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.1 | 2.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 2.5 | 2.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 45.1 | 21 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.39 | 0.21 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | < 0.52 | 0.52 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 15800 | 520 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 17.0 | 1.0 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | < 5.2 | 5.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 17.3 | 2.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 10900 | 52 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 12.0 | 2.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 2740 | 520 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 321 | 1.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.052 | 0.032 | mg/kg | 1 | 11/22/23 | 11/27/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 16.5 | 4.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | < 1000 | 1000 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.1 | 2.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | < 0.52 | 0.52 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1000 | 1000 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.0 | 1.0 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 17.3 | 5.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 26.6 | 5.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55124
(3) Prep QC Batch: MP43275
(4) Prep QC Batch: MP43335

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05046-011_TWP1 | | |
| Lab Sample ID: | JD77310-11 | Date Sampled: | 11/15/23 |
| Matrix: | AQ - Water | Date Received: | 11/20/23 |
| | | Percent Solids: | n/a |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Total Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6990 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Arsenic | 5.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Barium | 229 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Beryllium | 1.3 | 1.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Calcium | 118000 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Chromium | 29.5 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Copper | 60.5 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Iron | 10400 | 100 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Lead | 68.9 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Magnesium | 14700 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Manganese | 1100 | 15 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/28/23 | 11/28/23 | LM | SW846 7470A [2] | SW846 7470A [4] |
| Nickel | 24.7 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Potassium | 10400 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Silver | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Sodium | 64300 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Zinc | 64.0 | 20 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |

(1) Instrument QC Batch: MA55130
(2) Instrument QC Batch: MA55145
(3) Prep QC Batch: MP43295
(4) Prep QC Batch: MP43369

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-019_TWP1 FILT | | |
| **Lab Sample ID:** | JD77310-11F | **Date Sampled:** | 11/15/23 |
| **Matrix:** | AQ - Water Filtered | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | n/a |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Dissolved Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 850 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Arsenic | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Barium | < 200 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Beryllium | < 1.0 | 1.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Calcium | 128000 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Chromium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Copper | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Iron | 1090 | 100 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Lead | 8.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Magnesium | 13700 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Manganese | 145 | 15 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/28/23 | 11/28/23 | LM | SW846 7470A [2] | SW846 7470A [4] |
| Nickel | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Potassium | 10600 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Silver | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Sodium | 73000 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Zinc | < 20 | 20 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |

(1) Instrument QC Batch: MA55130
(2) Instrument QC Batch: MA55145
(3) Prep QC Batch: MP43295
(4) Prep QC Batch: MP43369

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-012_TWP2 | | |
| **Lab Sample ID:** | JD77310-12 | **Date Sampled:** | 11/15/23 |
| **Matrix:** | AQ - Water | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | n/a |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Total Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 3300 | 200 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Arsenic | 7.7 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Barium | < 200 | 200 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Beryllium | < 1.0 | 1.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Calcium | 75100 | 5000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Chromium | 10.9 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Copper | 56.9 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Iron | 10400 | 100 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Lead | 43.9 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Magnesium | < 5000 | 5000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Manganese | 182 | 15 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Mercury | 0.63 | 0.20 | ug/l | 1 | 11/28/23 | 11/28/23 | LM | SW846 7470A [2] | SW846 7470A [4] |
| Nickel | 11.2 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Potassium | 11200 | 10000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Silver | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Sodium | 106000 | 10000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Zinc | 49.2 | 20 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55145
(3) Prep QC Batch: MP43267
(4) Prep QC Batch: MP43369

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-020_TWP2 FILT | | |
| **Lab Sample ID:** | JD77310-12F | **Date Sampled:** | 11/15/23 |
| **Matrix:** | AQ - Water Filtered | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | n/a |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Dissolved Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 579 | 200 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Arsenic | 7.1 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Barium | < 200 | 200 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Beryllium | < 1.0 | 1.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Calcium | 60900 | 5000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Chromium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Copper | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Iron | 784 | 100 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Lead | 4.7 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Magnesium | < 5000 | 5000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Manganese | 20.3 | 15 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/28/23 | 11/28/23 | LM | SW846 7470A [2] | SW846 7470A [4] |
| Nickel | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Potassium | 11700 | 10000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Silver | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Sodium | 121000 | 10000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Zinc | < 20 | 20 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55145
(3) Prep QC Batch: MP43267
(4) Prep QC Batch: MP43369

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-013_TWP4 | | |
| **Lab Sample ID:** | JD77310-13 | **Date Sampled:** | 11/16/23 |
| **Matrix:** | AQ - Water | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | n/a |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Total Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6580 | 200 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Arsenic | 5.2 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Barium | 487 | 200 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Beryllium | 1.1 | 1.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Calcium | 169000 | 5000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Chromium | 11.0 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Copper | 27.1 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Iron | 9230 | 100 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Lead | 122 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Magnesium | 24400 | 5000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Manganese | 2110 | 15 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/28/23 | 11/28/23 | LM | SW846 7470A [2] | SW846 7470A [4] |
| Nickel | 24.0 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Potassium | 15200 | 10000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Silver | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Sodium | 190000 | 10000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Zinc | 107 | 20 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55145
(3) Prep QC Batch: MP43267
(4) Prep QC Batch: MP43369

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-021_TWP4 FILT | | |
| **Lab Sample ID:** | JD77310-13F | **Date Sampled:** | 11/16/23 |
| **Matrix:** | AQ - Water Filtered | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | n/a |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Dissolved Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | < 200 | 200 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Arsenic | < 3.0 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Barium | 236 | 200 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Beryllium | < 1.0 | 1.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Calcium | 170000 | 5000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Chromium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Copper | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Iron | 110 | 100 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Lead | < 3.0 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Magnesium | 23300 | 5000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Manganese | 1020 | 15 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/28/23 | 11/28/23 | LM | SW846 7470A [3] | SW846 7470A [5] |
| Nickel | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Potassium | 15600 | 10000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Silver | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Sodium | 209000 | 20000 | ug/l | 2 | 11/21/23 | 11/28/23 | ND | SW846 6010D [2] | SW846 3010A [4] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Zinc | < 20 | 20 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55138
(3) Instrument QC Batch: MA55145
(4) Prep QC Batch: MP43267
(5) Prep QC Batch: MP43369

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-014_TWP5 | | |
| **Lab Sample ID:** | JD77310-14 | **Date Sampled:** | 11/16/23 |
| **Matrix:** | AQ - Water | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | n/a |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Total Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 4230 | 200 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Arsenic | < 3.0 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Barium | < 200 | 200 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Beryllium | < 1.0 | 1.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Calcium | 33100 | 5000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Chromium | 15.2 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Copper | 13.3 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Iron | 8200 | 100 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Lead | 8.7 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Magnesium | < 5000 | 5000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Manganese | 140 | 15 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/28/23 | 11/28/23 | LM | SW846 7470A [3] | SW846 7470A [5] |
| Nickel | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Potassium | < 10000 | 10000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Silver | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Sodium | 274000 | 20000 | ug/l | 2 | 11/21/23 | 11/28/23 | ND | SW846 6010D [2] | SW846 3010A [4] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Zinc | 26.9 | 20 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55138
(3) Instrument QC Batch: MA55145
(4) Prep QC Batch: MP43267
(5) Prep QC Batch: MP43369

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-022_TWP5 FILT | | |
| **Lab Sample ID:** | JD77310-14F | **Date Sampled:** | 11/16/23 |
| **Matrix:** | AQ - Water Filtered | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | n/a |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Dissolved Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | < 200 | 200 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Arsenic | < 3.0 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Barium | < 200 | 200 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Beryllium | < 1.0 | 1.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Calcium | 31300 | 5000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Chromium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Copper | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Iron | 294 | 100 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Lead | < 3.0 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Magnesium | < 5000 | 5000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Manganese | 89.2 | 15 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/28/23 | 11/28/23 | LM | SW846 7470A [3] | SW846 7470A [5] |
| Nickel | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Potassium | < 10000 | 10000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Silver | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Sodium | 264000 | 50000 | ug/l | 5 | 11/21/23 | 11/27/23 | ND | SW846 6010D [2] | SW846 3010A [4] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Zinc | < 20 | 20 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55130
(3) Instrument QC Batch: MA55145
(4) Prep QC Batch: MP43267
(5) Prep QC Batch: MP43369

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-015_SB4A | | |
| **Lab Sample ID:** | JD77310-15 | **Date Sampled:** | 11/15/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | 87.1 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 11900 | 60 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.4 | 2.4 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 6.4 | 2.4 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 298 | 24 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.60 | 0.24 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | < 0.60 | 0.60 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 8670 | 600 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 19.9 | 1.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | < 6.0 | 6.0 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 25.2 | 3.0 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 16200 | 60 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 203 | 2.4 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 2690 | 600 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 461 | 1.8 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.23 | 0.036 | mg/kg | 1 | 11/22/23 | 11/27/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 14.9 | 4.8 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | < 1200 | 1200 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.4 | 2.4 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | 0.85 | 0.60 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1200 | 1200 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.2 | 1.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 27.4 | 6.0 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 196 | 6.0 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55124
(3) Prep QC Batch: MP43275
(4) Prep QC Batch: MP43335

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-016_SB4B | | |
| **Lab Sample ID:** | JD77310-16 | **Date Sampled:** | 11/15/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | 83.0 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 8270 | 61 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.4 | 2.4 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 9.2 | 2.4 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 2180 | 120 | mg/kg | 5 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.56 | 0.24 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | 1.0 | 0.61 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 67200 | 3000 | mg/kg | 5 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 24.9 | 1.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | 6.5 | 6.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 35.7 | 3.0 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 18900 | 61 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 2680 | 12 | mg/kg | 5 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 4210 | 610 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 604 | 1.8 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.57 | 0.036 | mg/kg | 1 | 11/22/23 | 11/27/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 21.7 | 4.9 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | 1560 | 1200 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.4 | 2.4 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | 1.1 | 0.61 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1200 | 1200 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.2 | 1.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 23.0 | 6.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 2550 | 30 | mg/kg | 5 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55124
(3) Prep QC Batch: MP43275
(4) Prep QC Batch: MP43335

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-017_SB5A | | |
| **Lab Sample ID:** | JD77310-17 | **Date Sampled:** | 11/15/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | 91.0 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 10700 | 53 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.1 | 2.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 3.1 | 2.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 59.6 | 21 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.61 | 0.21 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | < 0.53 | 0.53 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 2980 | 530 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 23.6 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | 7.4 | 5.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 20.0 | 2.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 15600 | 53 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 29.9 | 2.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 3310 | 530 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 443 | 1.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.21 | 0.035 | mg/kg | 1 | 11/22/23 | 11/27/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 21.9 | 4.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | 1390 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.1 | 2.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | 0.70 | 0.53 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 26.8 | 5.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 51.6 | 5.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55124
(3) Prep QC Batch: MP43275
(4) Prep QC Batch: MP43335

RL = Reporting Limit

SGS North America Inc.

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-018_SB5B | | |
| **Lab Sample ID:** | JD77310-18 | **Date Sampled:** | 11/15/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | 90.2 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 7620 | 57 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.3 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 2.5 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 43.4 | 23 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.47 | 0.23 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | < 0.57 | 0.57 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 2090 | 570 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 17.0 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | < 5.7 | 5.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 16.2 | 2.9 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 11300 | 57 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 27.7 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 2480 | 570 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 307 | 1.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.11 | 0.035 | mg/kg | 1 | 11/22/23 | 11/27/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 14.0 | 4.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | 1390 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.3 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | < 0.57 | 0.57 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 19.5 | 5.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 30.1 | 5.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55124
(3) Prep QC Batch: MP43275
(4) Prep QC Batch: MP43335

RL = Reporting Limit

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD77310
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43267
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 11/21/23

| Metal | RL | IDL | MDL | MB raw | final |
|---|---|---|---|---|---|
| Aluminum | 200 | 17 | 150 | -11 | <200 |
| Antimony | 6.0 | 1.7 | 4.7 | -0.10 | <6.0 |
| Arsenic | 3.0 | 2.1 | 2.8 | -0.10 | <3.0 |
| Barium | 200 | .8 | 13 | -0.20 | <200 |
| Beryllium | 1.0 | .3 | .5 | 0.0 | <1.0 |
| Bismuth | 20 | 2.3 | 8.6 | | |
| Boron | 100 | 2.3 | 10 | | |
| Cadmium | 3.0 | .3 | 1 | 0.0 | <3.0 |
| Calcium | 5000 | 6.6 | 99 | 29.3 | <5000 |
| Cerium | 100 | | | | |
| Chromium | 10 | .3 | 2 | 0.0 | <10 |
| Cobalt | 50 | .4 | 2.6 | -0.20 | <50 |
| Copper | 10 | .8 | 5.9 | 0.0 | <10 |
| Iron | 100 | 5.3 | 32 | 9.3 | <100 |
| Lead | 3.0 | 1.1 | 1.8 | 0.10 | <3.0 |
| Lithium | 50 | 4.8 | 7.3 | | |
| Magnesium | 5000 | 32 | 140 | 12.0 | <5000 |
| Manganese | 15 | .1 | 1.4 | 0.20 | <15 |
| Molybdenum | 20 | .6 | 3.6 | | |
| Nickel | 10 | .4 | 1.7 | -0.20 | <10 |
| Phosphorus | 50 | 1.2 | 18 | | |
| Potassium | 10000 | 77 | 200 | 28.5 | <10000 |
| Selenium | 10 | 3.2 | 4.9 | 0.90 | <10 |
| Silicon | 200 | 1.7 | 32 | | |
| Silver | 10 | 1 | 6.1 | -0.10 | <10 |
| Sodium | 10000 | 34 | 570 | 338 | <10000 |
| Strontium | 10 | .3 | 2.7 | | |
| Sulfur | 50 | 3 | 45 | | |
| Thallium | 10 | 1.8 | 1.8 | -0.10 | <10 |
| Tin | 10 | .8 | 3.7 | | |
| Titanium | 10 | .5 | 2.5 | | |
| Tungsten | 50 | 2.6 | 40 | | |
| Vanadium | 50 | .6 | 1.8 | 0.10 | <50 |

6.1.1

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD77310
Account: IALNJR - Integrated Analytical Lab
Project: Integrated Analytical Lab, Randolph, NJ

QC Batch ID: MP43267
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 11/21/23

| Metal | RL | IDL | MDL | MB raw | final |
|---|---|---|---|---|---|
| Zinc | 20 | .1 | 6.9 | 0.20 | <20 |
| Zirconium | 10 | .3 | 4.1 | | |

Associated samples MP43267: JD77310-12, JD77310-13, JD77310-14, JD77310-12F, JD77310-13F, JD77310-14F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

6.1.1

6

SAMPLE TRACKING

IAL Integrated Analytical Laboratories LLC
Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

# Chain of Custody Record

Contact Us: 973-361-4252
Web: www.ialonline.com

| Customer Information | Reporting Information |
|---|---|
| Company: HK Eng+Geo | ☒ Check here if same as "Customer Information" |
| Address: 1600 Rt. 22 East | REPORT TO: |
| Union, NJ 07083 | Address: |
| Telephone #: 908 688-7800 | |
| Project Manager: R. Powell | Attn: |
| Email Address(es): | INVOICE TO: |
| | Address: |
| Project Name: HK-2661.1 Chelsea | |
| Project Location (State): NY | Attn: |
| Bottle Order #: B02222 | PO # HK2661 |
| ☒ "Report to"/"Invoice To" same as above | Quote # |
| Sampled by: | |
| COMPLETED BY IAL: | |
| ____ Field Sampling ____ Equipment Rental | |

**Sample Matrix**

DW - Drinking Water; WW - Waste Water; GW - Groundwater; SW - Surface Water; LIQ - Liquid (specify); M - Multiphasic; OI - Oil; S - Soil; SED - Sediment; SOL - Solid (specify); SL - Sludge; W - Wipe

**Rush TAT Charge**

24 hr - 100%...
48 hr - 75%....
72 hr - 50%....
96 hr - 35%....
5 day - 25%....
6-9 day - 10%

**Deliverables** *Surchage may apply for regulatory

| NJ, CT, PA | NY |
|---|---|
| ☐ Results Only (Level I) | ☒ ASP Category A |
| ☐ Reduced (Level II/III) | ☐ ASP Category B* |
| ☐ Regulatory/ Full* (Level IV) | |

**EDDs**

☐ NJ SRP
☐ NYSDEC EQuIS
☐ lab approved custom EDD
☐ NO EDD REQ'D

**Concentrations Expected:** Low Med High

Known Hazard: ☐ YES ☐ NO

Describe:

**Turn-Around Time (TAT)**

Standard (10 business days) Verbal

Rush/date needed (only if pre-approved)** 5 Day *

Hard Copy: Standard 3 week Other - call for price

**Petroleum Hydrocarbons - Selection is REQUIRED**

☐ NJ EPH-DRO - Category 1
☐ NJ EPH-C40 - Category 2
☐ NJ EPH-Fractionated - Cat 2
TAT for PHC, if other than 2 weeks:
☐ CT ETPH
☐ DRO-8015

**Regulatory Requirement**

| New Jersey | New York |
|---|---|
| ☐ GWQS | ☒ AWQS (TOGS Table 1) |
| ☐ IGW | ☐ GWEL (TOGS Table 5) |
| ☐ SRS | ☒ Part 375-6.8(a) - Unrestricted |
| ☐ Ecological | ☒ Part 375-6.8(b) - Restricted |
| ☐ DW | ☐ CP-51 Table 2 or 3 (selection required) |
| ☐ SPLP | |

Other States / Criteria
☐ Pennsylvania Act 2
☐ CT RCSA 22a-133k1-k3
☐ TSCA PCBs
OTHER Regulatory Requirements - specify in comments

**SAMPLE INFORMATION**

| Client ID | Depth (ft only) | Sampling Date | Sampling Time | Matrix | # containers | IAL # | TAL/TCL +30 | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|
| SB12A | 0-2 | 11-15-23 | 0815 | S | 5 | 1 | X | |
| SB2A | 0-2 | 11-15-23 | 0830 | | | 2 | X | |
| SB2B | 10-12 | 11-15-23 | 0835 | | | 3 | X | |
| SB1A | 0-2 | 11-15-23 | 0930 | | | 4 | X | |
| SB1B | 10-12 | 11-15-23 | 0935 | | | 5 | X | |
| SB3A | 0-2 | | 1045 | | | 6 | X | |
| SB3B | 10-12 | | 1050 | | | 7 | X | |
| SB10A | 1.5-2.5 | ↓ | 1305 | ↓ | ↓ | 8 | X | |

ANALYTICAL PARAMETERS (please note if contingent)

Samples previously analyzed by IAL? YES / NO

Preservative Code: Container Code:

Preservative (use code)

Container Type (use code)

1 = None; 2 = HCl; 3 = HNO3; 4 = MeOH; 5 = NaOH; 6 = H2SO4; 7 = Other

A = Amber Glass; B = Plastic; C = Vial; D = Glass; E = EnCore; T = Terracore

Special Instructions/QC Requirements & Comments:

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time (TAT) will not start until any ambiguities have been resolved. TAT starts the following day if samples rec'd at lab ≥ 5PM. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY IAL'S TERMS & CONDITIONS (found on rear of pink copy).

Carrier (check one):
☐ IAL Courier
☐ Client Courier
☐ FedEx/UPS***

***Tracking #:

FOR LAB USE ONLY

SDG #: J046

Cooler Temp: 5 °C

| Relinquished by (Signature and Company) | Date | Time | Received by (Signature and Company) | Date | Time |
|---|---|---|---|---|---|
| R. Powell | | | | 11-16-23 | 1402 |
| Dale Mark | 11-16-23 | 1712 | | 11/16/23 | 17:12 |

IAL Rev 11/2019

* AB COPIES - WHITE & YELLOW; CLIENT COPY - PINK

Certification IDs: TNI (TNI01284); CT (PH-0699); NJ (14751); NY (11402); PA (68-00773).

FINALIZED 12/06/2023

INTEGRATED ANALYTICAL LABORATORIES, LLC

E23-05046 Page 214

Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

# Chain of Custody Record

Contact Us: 973-361-4252
Web: www.ialonline.com

**Customer Information**

Company: HK Eng + Geo
Address:
Telephone #:
Project Manager:
Email Address(es):
Project Name: HK2661.1 Chelsea
Project Location (State): NY
Bottle Order #: B02222
☒ "Report to"/"Invoice To" same as above
Sampled by:

**COMPLETED BY IAL:**
____ Field Sampling ____ Equipment Rental

**Reporting Information**

☒ Check here if same as "Customer Information"
REPORT TO:
Address:
Attn:
INVOICE TO:
Address:
Attn:
PO # HK2661
Quote #

**Sample Matrix**

DW - Drinking Water; WW - Waste Water; GW - Groundwater; SW - Surface Water; LIQ - Liquid (specify); M - Multiphasic; OI - Oil; S - Soil; SED - Sediment; SOL - Solid (specify); SL - Sludge; W - Wipe

****Rush TAT Charge**

24 hr - 100%...
48 hr - 75%....
72 hr - 50%....
96 hr - 35%....
5 day - 25%....
6-9 day - 10%

**Deliverables** *Surcharge may apply for regulatory

NJ, CT, PA:
☐ Results Only (Level I)
☐ Reduced (Level II/III)
☐ Regulatory/ Full* (Level IV)

NY:
☒ ASP Category A
☐ ASP Category B*

**EDDs**

☐ NJ SRP
☐ NYSDEC EQuIS
☐ lab approved custom EDD
☐ NO EDD REQ'D

**Concentrations Expected:**

Low Med High
Known Hazard:
☐ YES ☐ NO
Describe:

**Turn-Around Time (TAT)**

Standard (10 business days) Verbal
Rush/date needed (only if pre-approved)** 5 Day
Hard Copy: Standard 3 week Other - call for price

**Petroleum Hydrocarbons - Selection is REQUIRED**

☐ NJ EPH-DRO - Category 1
☐ NJ EPH-C40 - Category 2
☐ NJ EPH-Fractionated - Cat 2
TAT for PHC, if other than 2 weeks:
☐ CT ETPH
☐ DRO-8015

**Regulatory Requirement**

| New Jersey | New York |
|---|---|
| ☐ GWQS | ☒ AWQS (TOGS Table 1) |
| ☐ IGW | ☐ GWEL (TOGS Table 5) |
| ☐ SRS | ☒ Part 375-6.8(a) - Unrestricted |
| ☐ Ecological | ☒ Part 375-6.8(b) - Restricted |
| ☐ DW | ☐ CP-51 Table 2 or 3 (selection required) |
| ☐ SPLP | Other States / Criteria |
| | ☐ Pennsylvania Act 2 |
| | ☐ CT RCSA 22a-133k1-k3 |
| | ☐ TSCA PCBs |
| | OTHER Regulatory Requirements - specify in comments |

**SAMPLE INFORMATION**

| Client ID | Depth (ft only) | Sampling Date | Sampling Time | Matrix | # containers | IAL # | TAL ITEL +30 | Dissolved Metals | | | | | | | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SB1A | 1-2 | 11-15-23 | 1340 | S | 5 | 9 | X | | | | | | | | |
| SB 8A | 0-1.5 | | 1400 | S | 5 | 10 | X | | | | | | | | |
| TWP1 | - | | 1220 | GW | 11 | 11 | X | X | 9 | | | | | | |
| TWP2 | - | | 1300 | GW | 11 | 12 | X | X | 20 | | | | | | |
| ~~TWP~~ TWP4 | - | 11-16-23 | 0910 | GW | 11 | 13 | X | X | 21 | | | | | | |
| TWP5 | - | | 0930 | GW | 11 | 14 | X | X | 22 | | | | | | |
| SB4A | 0-2 | | 0810 | S | 5 | 15 | X | | | | | | | | |
| SB4B | 10-12 | | 0815 | S | 5 | 16 | X | | | | | | | | |

Samples previously analyzed by IAL? YES / NO

Preservative Code: 1 = None; 2 = HCl; 3 = HNO3; 4 = MeOH; 5 = NaOH; 6 = H2SO4; 7 = Other

Container Code: A = Amber Glass; B = Plastic; C = Vial; D = Glass; E = EnCore; T = Terracore

Preservative (use code)
Container Type (use code)

**Special Instructions/QC Requirements & Comments:**
Dissolved Metal Bottles were field filtered w/ lab supplied bottles

**FOR LAB USE ONLY**
SDG #: J046
Cooler Temp: ____ °C

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time (TAT) will not start until any ambiguities have been resolved. TAT starts the following day if samples rec'd at lab ≥ 5PM. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY IAL'S TERMS & CONDITIONS (found on rear of pink copy).

Carrier (check one):
☐ IAL Courier
☐ Client Courier
☐ FedEx/UPS***
***Tracking #:

| Relinquished by (Signature and Company) | Date | Time | Received by (Signature and Company) | Date | Time |
|---|---|---|---|---|---|
| K.V. Todd | | | Joseph Mele | 11-16-23 | 1402 |
| Dale Martin | 11-16-23 | 1712 | | 11/16/23 | 17:18 |

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LAB COPIES - WHITE & YELLOW; CLIENT COPY - PINK

Certification IDs: TNI (TNI01284); CT (PH-0699); NJ (14751); NY (11402); PA (68-00773)

FINALIZED 12/06/2023

E23-05046 Page 215

INTEGRATED ANALYTICAL LABORATORIES, LLC

Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

# Chain of Custody Record

Contact Us: 973-361-4252
Web: www.ialonline.com

| Customer Information | Reporting Information |
|---|---|
| Company: HK Eng + Geo | ☒ Check here if same as "Customer Information" |
| Address: | REPORT TO: |
| | Address: |
| Telephone #: | |
| Project Manager: | Attn: |
| Email Address(es): | INVOICE TO: |
| | Address: |
| Project Name: HK21661.1 | |
| Project Location (State): NY | Attn: |
| Bottle Order #: B022221 | PO # HK21661 |
| ☒ "Report to"/"Invoice To" same as above | Quote # |
| Sampled by: | |

COMPLETED BY IAL:
_____ Field Sampling _____ Equipment Rental

**Rush TAT Charge**
24 hr - 100%...
48 hr - 75%....
72 hr - 50%....
96 hr - 35%....
5 day - 25%....
6-9 day - 10%

**Deliverables** *Surchage may apply for regulatory

| NJ, CT, PA | NY |
|---|---|
| ☐ Results Only (Level I) | ☐ ASP Category A |
| ☐ Reduced (Level II/III) | ☐ ASP Category B* |
| ☐ Regulatory/ Full* (Level IV) | |

**EDDs**
☐ NJ SRP
☐ NYSDEC EQuIS
☐ lab approved custom EDD
☐ NO EDD REQ'D

**Concentrations Expected:**
Low Med High
Known Hazard:
☐ YES ☐ NO
Describe:

**Turn-Around Time (TAT)**
Standard (10 business days) Verbal
Rush/date needed (only if pre-approved)**
Hard Copy: Standard 3 week Other - call for price

**Petroleum Hydrocarbons - Selection is REQUIRED**
☐ NJ EPH-DRO - Category 1
☐ NJ EPH-C40 - Category 2
☐ NJ EPH-Fractionated - Cat 2
☐ CT ETPH
☐ DRO-8015
TAT for PHC, if other than 2 weeks:

**Regulatory Requirement**

| New Jersey | New York |
|---|---|
| ☐ GWQS | ☐ AWQS (TOGS Table 1) |
| ☐ IGW | ☐ GWEL (TOGS Table 5) |
| ☐ SRS | ☐ Part 375-6.8(a) - Unrestricted |
| ☐ Ecological | ☐ Part 375-6.8(b) - Restricted |
| ☐ DW | ☐ CP-51 Table 2 or 3 (selection required) |
| ☐ SPLP | |

Other States / Criteria
☐ Pennsylvania Act 2
☐ CT RCSA 22a-133k1-k3
☐ TSCA PCBs
OTHER Regulatory Requirements - specify in comments

**Sample Matrix**

| | |
|---|---|
| DW - Drinking Water | OI - Oil |
| WW - Waste Water | S - Soil |
| GW - Groundwater | SED - Sediment |
| SW - Surface Water | SOL - Solid (specify) |
| LIQ - Liquid (specify) | SL - Sludge |
| M - Multiphasic | W - Wipe |

## SAMPLE INFORMATION

| Client ID | Depth (ft only) | Sampling Date | Sampling Time | Matrix | # containers | IAL # | TAL/TCL +30 | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|
| SB5A | 0-2 | 11-16-23 | 0820 | S | 5 | 17 | X | |
| SB5B | 10-12 | ↓ | 0835 | S | 5 | 18 | X | |

ANALYTICAL PARAMETERS (please note if contingent)

Samples previously analyzed by IAL? YES / NO

Preservative Code: 1 = None, 2 = HCl, 3 = HNO3, 4 = MeOH, 5 = NaOH, 6 = H2SO4, 7 = Other

Container Code: A = Amber Glass, B = Plastic, C = Vial, D = Glass, E = EnCore, T = Terracore

Preservative (use code)
Container Type (use code)

*Please print legibly and fill out completely. Samples cannot be processed and the turnaround time (TAT) will not start until any ambiguities have been resolved. TAT starts the following day if samples rec'd at lab ≥ 5PM. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY IAL'S TERMS & CONDITIONS (found on rear of pink copy).*

IAL Rev 11/2019

Special Instructions/QC Requirements & Comments:

FOR LAB USE ONLY
SDG #: J046
Cooler Temp: 5 °C

| Relinquished by (Signature and Company) | Date | Time | Received by (Signature and Company) | Date | Time |
|---|---|---|---|---|---|
| | 11-16-23 | 1712 | | 11-16-23 | 1902 |
| | | | | 11/16/23 | 1912 |

Carrier (check one):
☐ IAL Courier
☐ Client Courier
☐ FedEx/UPS***
***Tracking #:

LAB COPIES - WHITE & YELLOW; CLIENT COPY - PINK

Certification IDs: TNI (TNI01284); CT (PH-0699); NJ (14751); NY (11402); PA (68-00773).

Nov 21, 2023 @ 09:14

RUSH

# PROJECT INFORMATION

## E23-05046: HK-2661.1 CHELSEA

**To:** Ryan Powell
HK Engineering & Geology, D.P.C.
Fax:
EMail: rpowell@hillmanngroup.com;chirschmann@hillmanngroup.com

**Report To**

HK Engineering & Geology, D.P.C.
1600 Route 22 East
Union, NJ 07083
Attn: Ryan Powell

**Bill To**

HK Engineering & Geology, D.P.C.
1600 Route 22 East
Union, NJ 07083
Attn: Chris Hirschmann

| Report Format | P.O. # | Received At Lab | PHC Due | Verbal Due | Hardcopy Due |
|---|---|---|---|---|---|
| Category A | HK2661 | Nov 16, 2023 @ 17:12 | NA | Nov 27, 2023 | Nov 28, 2023 * |

* Any ***Conditional or Hold*** status will delay final hardcopy report sent date.

**Diskette Req.** Not Required

**Criteria Requirement:** NY TOGS Tbl1 (AWQS)

| Lab ID | Client Sample ID | Depth | Sampling Time | Matrix | Unit | Field pH/Temp |
|---|---|---|---|---|---|---|
| 05046-001 | SB12A | 0/2 | 11/15/23@08:15 | Soil | mg/Kg (ppm) | |
| 05046-002 | SB2A | 0/2 | 11/15/23@08:30 | Soil | mg/Kg (ppm) | |
| 05046-003 | SB2B | 10/12 | 11/15/23@08:35 | Soil | mg/Kg (ppm) | |
| 05046-004 | SB1A | 0/2 | 11/15/23@09:30 | Soil | mg/Kg (ppm) | |
| 05046-005 | SB1B | 10/12 | 11/15/23@09:35 | Soil | mg/Kg (ppm) | |
| 05046-006 | SB3A | 0/2 | 11/15/23@10:45 | Soil | mg/Kg (ppm) | |
| 05046-007 | SB3B | 10/12 | 11/15/23@10:50 | Soil | mg/Kg (ppm) | |
| 05046-008 | SB10A | 1.5/2.5 | 11/15/23@13:05 | Soil | mg/Kg (ppm) | |
| 05046-009 | SB11A | 1/2 | 11/15/23@13:40 | Soil | mg/Kg (ppm) | |
| 05046-010 | SB8A | 0/1.5 | 11/15/23@14:00 | Soil | mg/Kg (ppm) | |
| 05046-011 | TWP1 | NA | 11/15/23@12:20 | Aqueous | ug/L (ppb) | |
| 05046-012 | TWP2 | NA | 11/15/23@13:00 | Aqueous | ug/L (ppb) | |
| 05046-013 | TWP4 | NA | 11/16/23@09:10 | Aqueous | ug/L (ppb) | |
| 05046-014 | TWP5 | NA | 11/16/23@09:30 | Aqueous | ug/L (ppb) | |
| 05046-015 | SB4A | 0/2 | 11/16/23@08:10 | Soil | mg/Kg (ppm) | |
| 05046-016 | SB4B | 10/12 | 11/16/23@08:15 | Soil | mg/Kg (ppm) | |
| 05046-017 | SB5A | 0/2 | 11/16/23@08:20 | Soil | mg/Kg (ppm) | |
| 05046-018 | SB5B | 10/12 | 11/16/23@08:35 | Soil | mg/Kg (ppm) | |
| 05046-019 | TWP1 FILT | NA | 11/15/23@12:20 | Aqueous | ug/L (ppb) | |
| 05046-020 | TWP2 FILT | NA | 11/15/23@13:00 | Aqueous | ug/L (ppb) | |
| 05046-021 | TWP4 FILT | NA | 11/16/23@09:10 | Aqueous | ug/L (ppb) | |
| 05046-022 | TWP5 FILT | NA | 11/16/23@09:30 | Aqueous | ug/L (ppb) | |

* No Cert = IAL does not hold certification for this test/method

| Sample # | Test | Status | Analytical Method | TAT | Holding Time Expires |
|---|---|---|---|---|---|
| 001 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 11/29/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 11/29/2023 |



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# PROJECT INFORMATION

RUSH

## E23-05046: HK-2661.1 CHELSEA

| Sample # | Test | Status | Analytical Method | TAT | Holding Time Expires |
|---|---|---|---|---|---|
| 001 | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/29/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/14/2024 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 11/29/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/15/2023 |
| 002 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 11/29/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 11/29/2023 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/29/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/14/2024 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 11/29/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/15/2023 |
| 003 | TCL VO + 15 | Analyze | 8260D | STD/2 WKS | 11/29/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 11/29/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/14/2024 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/29/2023 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 11/29/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/15/2023 |
| 004 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 11/29/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 11/29/2023 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/29/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/14/2024 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 11/29/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/15/2023 |
| 005 | TCL VO + 15 | Analyze | 8260D | STD/2 WKS | 11/29/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 11/29/2023 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/29/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/14/2024 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 11/29/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/15/2023 |
| 006 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 11/29/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 11/29/2023 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/29/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/14/2024 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 11/29/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/15/2023 |
| 007 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 11/29/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 11/29/2023 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/29/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/14/2024 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 11/29/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/15/2023 |



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# PROJECT INFORMATION

RUSH

## E23-05046: HK-2661.1 CHELSEA

| Sample # | Test | Status | Analytical Method | TAT | Holding Time Expires |
|---|---|---|---|---|---|
| 008 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 11/29/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 11/29/2023 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/29/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/14/2024 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 11/29/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/15/2023 |
| 009 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 11/29/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 11/29/2023 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/29/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/14/2024 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 11/29/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/15/2023 |
| 010 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 11/29/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 11/29/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/14/2024 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/29/2023 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 11/29/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/15/2023 |
| 011 | Low Level TCL VO for 8260+8011 + 15 | Analyze | 8260D/8011 | RUSH 1 WK | 11/29/2023 |
| | TCL BNA + SIMS + 15 | Analyze | 8270E SIM | RUSH 1 WK | 11/22/2023 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/22/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/14/2024 |
| | Cyanide, Total | Analyze | 335.4 | RUSH 1 WK | 11/29/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/15/2023 |
| 012 | Low Level TCL VO for 8260+8011 + 15 | Analyze | 8260D/8011 | RUSH 1 WK | 11/29/2023 |
| | TCL BNA + SIMS + 15 | Analyze | 8270E SIM | RUSH 1 WK | 11/22/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/14/2024 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/22/2023 |
| | Cyanide, Total | Analyze | 335.4 | RUSH 1 WK | 11/29/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/15/2023 |
| 013 | Low Level TCL VO for 8260+8011 + 15 | Analyze | 8260D/8011 | RUSH 1 WK | 11/30/2023 |
| | TCL BNA + SIMS + 15 | Analyze | 8270E SIM | RUSH 1 WK | 11/23/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/15/2024 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/23/2023 |
| | Cyanide, Total | Analyze | 335.4 | RUSH 1 WK | 11/30/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/16/2023 |
| 014 | Low Level TCL VO for 8260+8011 + 15 | Analyze | 8260D/8011 | RUSH 1 WK | 11/30/2023 |
| | TCL BNA + SIMS + 15 | Analyze | 8270E SIM | RUSH 1 WK | 11/23/2023 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/23/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/15/2024 |
| | Cyanide, Total | Analyze | 335.4 | RUSH 1 WK | 11/30/2023 |



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# PROJECT INFORMATION

RUSH

## E23-05046: HK-2661.1 CHELSEA

| Sample # | Test | Status | Analytical Method | TAT | Holding Time Expires |
|---|---|---|---|---|---|
| 014 | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/16/2023 |
| 015 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 11/30/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 11/30/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/15/2024 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/30/2023 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 11/30/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/16/2023 |
| 016 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 11/30/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 11/30/2023 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/30/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/15/2024 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 11/30/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/16/2023 |
| 017 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 11/30/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 11/30/2023 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/30/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/15/2024 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 11/30/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/16/2023 |
| 018 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 11/30/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 11/30/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/15/2024 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/30/2023 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 11/30/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/16/2023 |
| 019 | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/15/2023 |
| 020 | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/15/2023 |
| 021 | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/16/2023 |
| 022 | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/16/2023 |

**Project Notes:**

**NOTE 1 taken by kfalconer on 11/17/2023 12:11**

WE RECEIVED TWO SETS OF ENCORES LABELED SB2B, WE DID NOT RECEIVE ENCORES LABELED SB1B. PER RYAN POWELL, ENCORE BAGS LABELED WITH DEPTH ARE FOR SB1B. ENCORES WITHOUT DEPTH ON BAG ARE FOR SB2B.

COMPARE SOIL RESULTS TO NY Part 375-6.8(UUSCO+RUSCO).

COMPARE GW RESULTS TO NY TOGS Tbl1 (AWQS).



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RUSH

# PROJECT INFORMATION

## E23-05046: HK-2661.1 CHELSEA

**NOTE 3 taken by kfalconer on 11/17/2023 03:49**

CLIENT WAS NOTIFIED VIA E-MAIL THAT ALL METALS ANALYSES WILL BE SUBCONTRACTED TO SGS DAYTON.

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# SAMPLE RECEIPT VERIFICATION

CASE NO: **E 23** **05046** CLIENT: AKEnv & Co.

COOLER TEMPERATURE: 2° - 6°C: ✓ ( See Chain of Custody)

**Comments**

COC: (COMPLETE) / INCOMPLETE

**KEY**
✓ = YES/NA
✗ = NO

VOA received: ☒ Encore ☐ IGW - Methanol
(check one) ☐ Terra Core ☐ No Preservative

| | |
|---|---|
| ✓ | Bottles Intact |
| ✓ | no-Missing Bottles |
| ✓ | no-Extra Bottles |
| ✓ | Sufficient Sample Volume |
| ✓ | no-headspace/bubbles in VOs |
| ✓ | Labels intact/correct |
| ✗ | pH Check[1] (refer to Receipt pH Log) |
| ✓ | Correct bottles/preservative |
| ✓ | Sufficient Holding/Prep Time[1] |
| ☐ | Multiphasic Sample |
| ☐ | Sample to be Subcontracted |
| ✓ | **Chain of Custody is Clear** |

[1] All samples with "Analyze Immediately" holding times will be analyzed by this laboratory past the holding time. This includes but is not limited to the following tests: pH, Temperature, Free Residual Chlorine, Total Residual Chlorine, Dissolved Oxygen, Sulfite.

ADDITIONAL COMMENTS: Encore samples 2 sets of SB2B (c) no sets of SB1B - How to proceed?

SAMPLE(S) VERIFIED BY: INITIAL [ ] DATE 11/14/23

**CORRECTIVE ACTION REQUIRED:** **YES** [X] (SEE BELOW) **NO** [ ]

If COC is **NOT** clear, ***STOP*** until you get client to authorize/clarify work.

CLIENT NOTIFIED: YES ☐ Date/ Time: _____ NO ☐
PROJECT CONTACT:
SUBCONTRACTED LAB:
DATE SHIPPED:

ADDITIONAL COMMENTS:

VERIFIED/TAKEN BY: INITIAL KJ DATE 11/20/23

Rev 2 2/11/2021

# Laboratory Custody Chronicle

*IAL Case No.*
**E23-05046**

*Client* HK Engineering & Geology, D.P.C.

*Project* HK-2661.1 CHELSEA

*Received On* 11/16/2023@17:12

| Department: Volatiles | | | Prep. Date | Analyst | Analysis Date | Analyst |
|---|---|---|---|---|---|---|
| Low Level TCL VO for 8260+8011 + 15 | 05046-011 | Aqueous | n/a | n/a | 11/20/23 | Sylvia |
| " | -012 | " | n/a | n/a | 11/20/23 | Sylvia |
| " | -013 | " | n/a | n/a | 11/20/23 | Sylvia |
| " | -014 | " | n/a | n/a | 11/20/23 | Sylvia |
| TCL VO + 15 | -001 | Soil | n/a | n/a | 11/28/23 | Thien |
| " | -002 | " | n/a | n/a | 11/28/23 | Thien |
| " | -003 | " | n/a | n/a | 11/28/23 | Thien |
| " | -004 | " | n/a | n/a | 11/28/23 | Thien |
| " | -005 | " | n/a | n/a | 11/28/23 | Thien |
| " | -006 | " | n/a | n/a | 11/28/23 | Thien |
| " | -007 | " | n/a | n/a | 11/28/23 | Thien |
| " | -008 | " | n/a | n/a | 11/28/23 | Thien |
| " | -009 | " | n/a | n/a | 11/28/23 | Thien |
| " | -010 | " | n/a | n/a | 11/28/23 | Thien |
| " | -015 | " | n/a | n/a | 11/28/23 | Thien |
| " | -016 | " | n/a | n/a | 11/28/23 | Thien |
| " | -017 | " | n/a | n/a | 11/28/23 | Thien |
| " | -018 | " | n/a | n/a | 11/28/23 | Thien |

| Department: Semivolatiles | | | Prep. Date | Analyst | Analysis Date | Analyst |
|---|---|---|---|---|---|---|
| TCL BNA + 15 | -001 | Soil | 11/20/23 | Frank L. | 11/28/23 | Thien |
| " | -002 | " | 11/20/23 | Frank L. | 11/28/23 | Thien |
| " | -003 | " | 11/20/23 | Frank L. | 11/28/23 | Thien |
| " | -004 | " | 11/20/23 | Frank L. | 11/28/23 | Thien |
| " | -005 | " | 11/20/23 | Frank L. | 11/28/23 | Thien |
| " | -006 | " | 11/20/23 | Frank L. | 11/28/23 | Thien |
| " | -007 | " | 11/20/23 | Frank L. | 11/28/23 | Thien |
| " | -008 | " | 11/20/23 | Frank L. | 11/28/23 | Thien |
| " | -009 | " | 11/20/23 | Frank L. | 11/28/23 | Thien |
| " | -010 | " | 11/20/23 | Frank L. | 11/28/23 | Thien |
| " | -015 | " | 11/20/23 | Frank L. | 11/28/23 | Thien |
| " | -016 | " | 11/20/23 | Frank L. | 11/28/23 | Thien |
| " | -017 | " | 11/20/23 | Frank L. | 11/28/23 | Thien |
| " | -018 | " | 11/20/23 | Frank L. | 11/28/23 | Thien |
| TCL BNA + SIMS + 15 | -011 | Aqueous | 11/20/23 | Frank L. | 11/29/23 | Dana Tryon |
| " | -012 | " | 11/20/23 | Frank L. | 11/29/23 | Dana Tryon |
| " | -013 | " | 11/20/23 | Frank L. | 11/29/23 | Dana Tryon |
| " | -014 | " | 11/20/23 | Frank L. | 11/29/23 | Dana Tryon |

| Department: GC | | | Prep. Date | Analyst | Analysis Date | Analyst |
|---|---|---|---|---|---|---|
| TCL PCB | -001 | Soil | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -002 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -003 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |



NOTE: All soil, sediment, sludge, and solid samples are reported on a dry-weight basis.

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# Laboratory Custody Chronicle

*IAL Case No.*
**E23-05046**

*Client* HK Engineering & Geology, D.P.C.

*Project* HK-2661.1 CHELSEA

*Received On* 11/16/2023@17:12

| | | | | | | |
|---|---|---|---|---|---|---|
| " | -004 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -005 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -006 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -007 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -008 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -009 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -010 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -011 | Aqueous | 11/20/23 | Archimede | 11/28/23 | Iwona |
| " | -012 | " | 11/20/23 | Archimede | 11/28/23 | Iwona |
| " | -013 | " | 11/20/23 | Archimede | 11/28/23 | Iwona |
| " | -014 | " | 11/20/23 | Archimede | 11/28/23 | Iwona |
| " | -015 | Soil | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -016 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -017 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -018 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |
| TCL Pesticides | -001 | Soil | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -002 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -003 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -004 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -005 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -006 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -007 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -008 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -009 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -010 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -011 | Aqueous | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -012 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -013 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -014 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -015 | Soil | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -016 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -017 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |
| " | -018 | " | 11/20/23 | Archimede | 11/27/23 | Iwona |

| **Department: Wet Chemistry** | | | *Prep. Date* | *Analyst* | *Analysis Date* | *Analyst* |
|---|---|---|---|---|---|---|
| Cyanide, Total | -001 | Soil | n/a | n/a | 11/20/23 | Brianna P |
| " | -002 | " | n/a | n/a | 11/20/23 | Brianna P |
| " | -003 | " | n/a | n/a | 11/20/23 | Brianna P |
| " | -004 | " | n/a | n/a | 11/20/23 | Brianna P |
| " | -005 | " | n/a | n/a | 11/20/23 | Brianna P |
| " | -006 | " | n/a | n/a | 11/20/23 | Brianna P |
| " | -007 | " | n/a | n/a | 11/20/23 | Brianna P |
| " | -008 | " | n/a | n/a | 11/20/23 | Brianna P |
| " | -009 | " | n/a | n/a | 11/20/23 | Brianna P |
| " | -010 | " | n/a | n/a | 11/20/23 | Brianna P |



NOTE: All soil, sediment, sludge, and solid samples are reported on a dry-weight basis.

# Laboratory Custody Chronicle

*IAL Case No.*
**E23-05046**

*Client* HK Engineering & Geology, D.P.C.

*Project* HK-2661.1 CHELSEA

*Received On* 11/16/2023@17:12

| | | | | | | |
|---|---|---|---|---|---|---|
| " | -011 | Aqueous | n/a | n/a | 11/22/23 | Brianna P |
| " | -012 | " | n/a | n/a | 11/22/23 | Brianna P |
| " | -013 | " | n/a | n/a | 11/22/23 | Brianna P |
| " | -014 | " | n/a | n/a | 11/22/23 | Brianna P |
| " | -015 | Soil | n/a | n/a | 11/20/23 | Brianna P |
| " | -016 | " | n/a | n/a | 11/20/23 | Brianna P |
| " | -017 | " | n/a | n/a | 11/20/23 | Brianna P |
| " | -018 | " | n/a | n/a | 11/20/23 | Brianna P |

| **Department: Others** | | | *Prep. Date* | *Analyst* | *Analysis Date* | *Analyst* |
|---|---|---|---|---|---|---|
| TAL Metals (6020B/7471B) by SGS Dayton | -001 | Soil | 11/17/23 | Rob | n/a | n/a |
| " | -002 | " | 11/17/23 | Rob | n/a | n/a |
| " | -003 | " | 11/17/23 | Rob | n/a | n/a |
| " | -004 | " | 11/17/23 | Rob | n/a | n/a |
| " | -005 | " | 11/17/23 | Rob | n/a | n/a |
| " | -006 | " | 11/17/23 | Rob | n/a | n/a |
| " | -007 | " | 11/17/23 | Rob | n/a | n/a |
| " | -008 | " | 11/17/23 | Rob | n/a | n/a |
| " | -009 | " | 11/17/23 | Rob | n/a | n/a |
| " | -010 | " | 11/17/23 | Rob | n/a | n/a |
| " | -011 | Aqueous | 11/17/23 | Rob | n/a | n/a |
| " | -012 | " | 11/17/23 | Rob | n/a | n/a |
| " | -013 | " | 11/17/23 | Rob | n/a | n/a |
| " | -014 | " | 11/17/23 | Rob | n/a | n/a |
| " | -015 | Soil | 11/17/23 | Rob | n/a | n/a |
| " | -016 | " | 11/17/23 | Rob | n/a | n/a |
| " | -017 | " | 11/17/23 | Rob | n/a | n/a |
| " | -018 | " | 11/17/23 | Rob | n/a | n/a |
| " | -019 | Aqueous | 11/17/23 | Rob | n/a | n/a |
| " | -020 | " | 11/17/23 | Rob | n/a | n/a |
| " | -021 | " | 11/17/23 | Rob | n/a | n/a |
| " | -022 | " | 11/17/23 | Rob | n/a | n/a |



NOTE: All soil, sediment, sludge, and solid samples are reported on a dry-weight basis.

**LAST PAGE OF DOCUMENT**

Integrated Analytical Laboratories LLC

# *ANALYTICAL DATA REPORT*

HK Engineering & Geology, D.P.C.
1600 Route 22 East
Union, NJ 07083

Project Name: **HK2661.1**
IAL Case Number: **E23-05091**

These data have been reviewed and accepted by:

Michael H. Leffin, Ph.D.
Laboratory Director



273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252

IAL is a NELAP accredited lab (TNI01284) and maintains certification in Connecticut (PH-0699), New Jersey (14751), New York (11402) and Pennsylvania (68-00773).

# Integrated Analytical Laboratories - Table of Contents

# Sample Summary

*IAL Case No.*
**E23-05091**

*Client* HK Engineering & Geology, D.P.C.

*Project* HK2661.1

*Received On* 11/20/2023@16:48

| *Lab ID* | *Client Sample ID* | *Depth Top/Bottom* | *Sampling Time* | *Matrix* | *# of Container* |
|---|---|---|---|---|---|
| 05091-001 | SB9A | 0/2 | 11/20/2023@08:15 | Soil | 5 |
| 05091-002 | SB9B | 10/12 | 11/20/2023@08:25 | Soil | 5 |
| 05091-003 | SB6A | 0/2 | 11/20/2023@09:45 | Soil | 5 |
| 05091-004 | SB6B | 10/12 | 11/20/2023@09:55 | Soil | 5 |
| 05091-005 | TWP6 | n/a | 11/20/2023@10:15 | Aqueous | 10 |
| 05091-006 | TWP6 FILT | n/a | 11/20/2023@10:15 | Aqueous | 1 |



*Integrated Analytical Labs ~ 273 Franklin Road, Randolph, NJ 07869 ~ (973) 361-4252*

## DATA QUALIFIERS AND FLAGS

| | |
|---|---|
| **B** | Indicates the analyte found in the associated method blank and in the sample due to potential lab contamination. |
| **C** | Indicates analyte is a common laboratory contaminant. |
| **D** | Indicates analyte was reported from diluted analysis. |
| **E** | Identifies a compound concentration that exceeds the upper level of the calibration range of the instrument |
| **J** | Indicates an estimated value either when the concentration in the sample is less than the RL or for qualification of TICs |
| **J1** | Indicates an estimated value when ICC or CCV did not meet the criteria. |
| **M** | Indicates matrix interference |
| **N** | Presumptive evidence of a compound from the use of GC/MS library search. |
| **T** | Sample analyzed outside of holding time |
| **X** | Indicates samples analyzed for total and dissolved metals differ at ≤20% RPD. |
| **Y** | Indicates DO depletion in the BOD blank is >0.20ppm |
| **Z** | Indicates internal standard failure. Sample results are either biased high or biased low. |
| **$** | Value outside NJDEP DKQP Limits |
| * | Result outside of QC limits |

## PROJECT NOTES

- All results for soils, solids, and sludges are reported on a dry-weight basis except where noted
- All test results and QC are compliant with TNI or other applicable state agency requirements/guidance unless otherwise notated in the case narrative and/or project information page.
- The case narrative for this SDG should be consulted to determine any non-conformances.
- Any samples with 15-minute or "analyze immediately" holding times (e.g. pH, Dissolved Oxygen, Sulfite, etc.) which are analyzed in the laboratory are considered out of holding time.
- IAL is a NELAP/TNI certified laboratory (TNI ID# TNI01284). IAL retains certification in Connecticut (PH-0699), New Jersey (14751), New York (11402), and Pennsylvania (68-00773).
- Certification is not required to perform analyses in the following states: AL, CO, DE, GA, HI, ID, IN, KY, MD, MI, MS, MO, MT, NE, NM, SD and TN. IAL can perform all analyses, except Drinking Water, within its scope of capabilities in these states.

## ACRONYMS AND ABBREVIATIONS

| | | | |
|---|---|---|---|
| **CFU** | Colony Forming Unit | **ND** | Indicates analyte was analyzed for but not detected at MDL or RL (only if MDL is not used) |
| **CCB** | Continuing Calibration Blank | | |
| **CCV** | Continuing Calibration Verification | **NTU** | Nephelometric Turbidity Units |
| **DF** | Dilution Factor | **ppb** | Parts per billion. Reported as µg/L or µg/kg |
| **DL** | Attached as a suffix to a diluted sample | **ppm** | Parts per million. Reported as mg/L, µg/mL or mg/kg |
| **DUP** | Duplicate | **QC** | Quality Control |
| **ICB** | Initial Calibration Blank | **% Rec** | Percent Recovery |
| **ICC** | Initial Calibration Curve | **RL** | Reporting Limit. The RL is typically determined by the concentration of the lowest standard in the calibration curve |
| **ICV** | Initial Calibration Verification | | |
| **kg** | kilogram | | |
| **L** | Liter | **RPD** | Relative Percent Difference |
| **LCS** | Laboratory Control Sample | **RSD** | Relative Standard Deviation |
| **LCSD** | Laboratory Control Sample Duplicate | **RT** | Retention Time |
| **MDL** | Method Detection Limit as determined according to 40 CFR Part 136 Appendix B | **SU** | Standard Units |
| | | **TIC** | Tentatively Identified Compound AKA Library Search Compounds |
| **MF** | Membrane Filter | | |
| **mg** | milligram (1000mg = 1g) | **TNI** | The NELAC (National Environmental Laboratory Accreditation Council) Institute |
| **µg** | microgram (1000µg = 1mg) | | |
| **ml** | milliliter (1000ml = 1L) | **TNTC** | Too numerous to count |
| **µl** | microliter (1000µl = 1ml) | * | When attached to a compound name, indicates this analyte was analyzed by Method SW-846 8270 SIM |
| **µmhos** | Conductivity units - resistance expressed in ohms | | |
| **MPN** | Most Probable Number | ^ | When attached to a compound name, indicates this analyte was analyzed by Method SW-846 8011 or EPA 504.1 |
| **MS** | Matrix Spike | | |
| **MSD** | Matrix Spike Duplicate | | |
| **NA** | Not applicable | < | Less than; In conjunction with a numerical value, indicates a concentration less than the RL or MDL |
| **NC** | Not calculated | | |

SAMPLE DELIVERY GROUP CASE NARRATIVE
(Conformance / Non-Conformance Summary)

# SAMPLE DELIVERY GROUP CASE NARRATIVE

## SDG#: E23-05091

Integrated Analytical Laboratories, LLC. received six (6) samples** from HK Engineering & Geology, D.P.C. (IAL SDG# **E23-05091**, Project: HK2661.1) on November 20, 2023 for the analysis of :

( 1 ) Low Level TCL VO for 8260+8011 + 15
( 4 ) TCL VO + 15
( 4 ) TCL BNA + 15
( 1 ) TCL BNA + SIMS + 15
( 5 ) TCL PCB
( 5 ) TCL Pesticides
( 5 ) Cyanide, Total
( 6 ) TAL Metals (6020B/7471B) by SGS Dayton

**Number of samples listed above may be greater than what is listed on the chain of custody. Any samples that require in-house filtration or splitting will be counted as separate samples.

Samples were received in good condition with documentation in order.
Cooler temperature was acceptable at 4 ± 2 degree C.

**Volatiles By SW 8260D** | **Batch: 231122-01** | **Matrix: Aqueous**

**QC**
- Calibration curve met QC criteria.
- Internal standards recovery met QC criteria.
- Surrogate percent recovery met QC criteria.
- Method blank met QC criteria.
- LCS percent recovery met QC criteria. NJDEP DKQP criteria not met.
- MS/MSD RPD met QC criteria.
- MS/MSD percent recovery met QC criteria. NJDEP DKQP criteria not met.

**E23-05091**
- All samples were received within holding time.
- All samples were analyzed within holding time.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05091-005 | 1 | NA |

**Volatiles By SW 8260D** | **Batch: L231121-02** | **Matrix: Soil**

**QC**
- Calibration curve met QC criteria.
- Internal standards recovery met QC criteria.
- Surrogate percent recovery met QC criteria.
- Method blank met QC criteria.
- LCS percent recovery met QC criteria.
- MS/MSD RPD met QC criteria.
- MS/MSD percent recovery met QC criteria. NJDEP DKQP criteria not met.

**E23-05091**
- All samples were received within holding time.
- All samples were analyzed within holding time.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05091-001 | 1 | NA |
| E23-05091-002 | 1 | NA |
| E23-05091-003 | 1 | NA |
| E23-05091-004 | 1 | NA |

# SAMPLE DELIVERY GROUP CASE NARRATIVE

## SDG#: E23-05091

**Microextractable By SW 8011** **Batch: 231129-01** **Matrix: Aqueous**

**QC**
- Calibration curve met QC criteria.
- Method blank met QC criteria.
- RPD between LCS/LCSD met QC criteria.
- LCS/LCSD Percent Recovery met QC criteria.
- MS/MSD were not analyzed because of Limited Volume. LCS/LCSD were analyzed in their absence.

**E23-05091**
- All samples were received within holding time.
- All samples were analyzed within holding time.
- Retention Time Shift met QC criteria.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05091-005 | 1 | NA |

**Semivolatiles By SW 8270E, SW 8270E SIM** **Batch: 231120-04** **Matrix: Aqueous**

**QC**
- Calibration curve met QC criteria.
- Internal standard recovery met QC criteria.
- Surrogate recovery met QC criteria.
- Method blank met QC criteria.
- LCS percent recovery met QC criteria. NJDEP DKQP criteria not met.
- MS/MSD RPD did not meet QC criteria due to RPD failing high for benzaldehyde. NJDEP DKQP criteria not met.
- MS/MSD percent recovery met QC criteria. NJDEP DKQP criteria not met.
- CCV did not pass for all compounds. A sensitivity check was ran for Benzaldehyde. Compounds that did not have a passing CCV were reported as non-detect.

**E23-05091**
- All samples were received within holding time.
- All samples were extracted within holding time.
- All samples were analyzed within holding time.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05091-005 | 1 | NA |

The result reported for 1,2-Diphenylhydrazine is also representative of Azobenzene. 1,2-Diphenylhydrazine rapidly decomposes to Azobenzene when exposed to water or heat. Analytical results from analysis of 1,2-Diphenylhydrazine will be directly compared to the applicable criteria for Azobenzene and/or 1,2-Diphenylhydrazine.

# SAMPLE DELIVERY GROUP CASE NARRATIVE

## SDG#: E23-05091

**Semivolatiles By SW 8270E** | **Batch: 231121-01** | **Matrix: Soil**

**QC**
- Calibration curve met QC criteria.
- Internal standard recovery met QC criteria.
- Surrogate recovery did not meet QC criteria due to matrix interferenc. NJDEP DKQP criteria not met.
- Method blank met QC criteria.
- LCS percent recovery met QC criteria. NJDEP DKQP criteria not met.
- MS/MSD RPD did not meet QC criteria due to matrix interference. NJDEP DKQP criteria not met.
- MS/MSD percent recovery did not meet QC criteria due to matrix interference. NJDEP DKQP criteria not met.

**E23-05091**
- All samples were received within holding time.
- All samples were extracted within holding time.
- All samples were analyzed within holding time.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05091-001 | 1 | NA |
| E23-05091-002 | 1;10 | Target compound(s). |
| E23-05091-003 | 1 | NA |
| E23-05091-004 | 1 | NA |

The result reported for 1,2-Diphenylhydrazine is also representative of Azobenzene. 1,2-Diphenylhydrazine rapidly decomposes to Azobenzene when exposed to water or heat. Analytical results from analysis of 1,2-Diphenylhydrazine will be directly compared to the applicable criteria for Azobenzene and/or 1,2-Diphenylhydrazine.

**PCB By SW 8082A** | **Batch: 231121-02** | **Matrix: Soil**

**QC**
- Calibration curve met QC criteria.
- Surrogate percent recovery met QC criteria.
- Method blank met QC criteria.
- LCS Percent Recovery met QC criteria.
- RPD between MS/MSD met QC criteria.
- MS/MSD Percent Recovery met QC criteria.
- The following samples were cleaned up using method 3660B to remove sulfur: BLKS231121-02, LCSS231121-02, E23-05066-002MS, E23-05066-002MSD, E23-05091-001, E23-05091-002, E23-05091-003, E23-05091-004.

**E23-05091**
- All samples were received within holding time.
- All samples were extracted within holding time.
- All samples were analyzed within holding time.
- Retention Time Shift met QC criteria.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05091-001 | 1 | NA |
| E23-05091-002 | 1 | NA |
| E23-05091-003 | 1 | NA |
| E23-05091-004 | 1 | NA |

# SAMPLE DELIVERY GROUP CASE NARRATIVE

## SDG#: E23-05091

**PCB By SW 8082A** | **Batch: 231127-04** | **Matrix: Aqueous**

**QC**
- Calibration curve met QC criteria.
- Surrogate percent recovery did not meet QC criteria due to matrix interference for MS; MSD. NJDEP DKQP criteria not met.
- Method blank met QC criteria.
- LCS Percent Recovery met QC criteria.
- RPD between MS/MSD met QC criteria.
- MS/MSD percent recovery did not meet QC criteria due to matrix interference. NJDEP DKQP criteria not met.

**E23-05091**
- All samples were received within holding time.
- All samples were extracted within holding time.
- All samples were analyzed within holding time.
- Retention Time Shift met QC criteria.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05091-005 | 1 | NA |

**Pesticides By SW 8081B** | **Batch: 231121-02** | **Matrix: Soil**

**QC**
- Calibration curve met QC criteria.
- Surrogate percent recovery did not meet QC criteria due to matrix interference for #002. NJDEP DKQP criteria not met.
- Method blank met QC criteria.
- LCS Percent Recovery met QC criteria.
- RPD between MS/MSD met QC criteria.
- MS/MSD Percent Recovery met QC criteria.
- The RPD between the primary and secondary column was >40% for the following samples: #002; #003. Per SW-846 8000D, the lower of the two concentrations was reported.
- The following samples were cleaned up using method 3660B to remove sulfur: BLKS231121-02, LCSS231121-02, E23-05066-002MS, E23-05066-002MSD, E23-05091-001, E23-05091-002, E23-05091-003, E23-05091-004.

**E23-05091**
- All samples were received within holding time.
- All samples were extracted within holding time.
- All samples were analyzed within holding time.
- Retention Time Shift met QC criteria.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05091-001 | 1 | NA |
| E23-05091-002 | 1 | NA |
| E23-05091-003 | 1 | NA |
| E23-05091-004 | 1 | NA |

# SAMPLE DELIVERY GROUP CASE NARRATIVE

## SDG#: E23-05091

**Pesticides By SW 8081B** | **Batch: 231127-04** | **Matrix: Aqueous**

**QC**
- Calibration curve met QC criteria.
- Surrogate percent recovery met QC criteria.
- Method blank met QC criteria.
- LCS Percent Recovery met QC criteria.
- RPD between MS/MSD met QC criteria.
- MS/MSD percent recovery did not meet QC criteria due to matrix interference. NJDEP DKQP criteria not met.

**E23-05091**
- All samples were received within holding time.
- All samples were extracted within holding time.
- All samples were analyzed within holding time.
- Retention Time Shift met QC criteria.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05091-005 | 1 | NA |

**Cyanide, Total By EPA 335.4** | **Batch: AP013-0117** | **Matrix: Aqueous**

**QC**
- Method blank met QC criteria.
- LCS percent recovery met QC criteria.
- MS/MSD Percent Recovery met QC criteria.
- Duplicate Recoveries met QC criteria.

**E23-05091**
- All samples were received within holding time.
- All samples were analyzed within holding time.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05091-005 | 1 | NA |

**Cyanide, Total By SW 9012B** | **Batch: AP013-0116** | **Matrix: Soil**

**QC**
- Method blank met QC criteria.
- LCS percent recovery met QC criteria.
- MS/MSD Percent Recovery met QC criteria.
- Duplicate Recoveries met QC criteria.

**E23-05091**
- All samples were received within holding time.
- All samples were analyzed within holding time.

Dilution Summary:

| Sample ID | DF(s) | Dilution For |
|---|---|---|
| E23-05091-001 | 1 | NA |
| E23-05091-002 | 1 | NA |
| E23-05091-003 | 1 | NA |
| E23-05091-004 | 1 | NA |

# SAMPLE DELIVERY GROUP CASE NARRATIVE

## SDG#: E23-05091

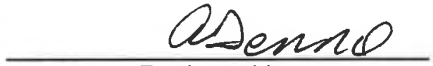
**Subcontracted to SGS Dayton, TNI certified*, #TNI01283, NJ certified**

**Method: 6020B/7471B** **Matrix: Soil, Aqueous**

**QC** - No QCs were provided.

Integrated Analytical Laboratories has subcontracted part or all of the results in this report. The laboratory performing the subcontracted work is listed above. These analyses were performed by a NELAP/TNI accredited laboratory, unless otherwise specified. This work was placed with a laboratory accredited for TNI standards for the tests to be performed OR with a laboratory that meets applicable statutory and regulatory requirements for performing the tests and submitting the results of tests performed. Integrated Analytical Laboratories will keep a copy of the subcontractor's report on file.
*TNI, The NELAC Institute, is a nationally recognized laboratory accreditation program. The TNI Standard is intended as an application of ISO/IEC 17025:2005(E), General Requirements for the Competence of Testing and Calibration Laboratories. While individual states and entities offer certification, TNI standards foster the generation of environmental data of known and documented quality through an open, inclusive, and transparent process that is responsive to the needs of the community.

A review of the QA/QC measures for the analysis of the sample(s) contained in this report has been performed by:



Reviewed by

12/4/2023
Date

RESULTS SUMMARY REPORT

**SUMMARY REPORT**
**Client: HK Engineering & Geology, D.P.C.**
**Project: HK2661.1**
**Lab Case No.: E23-05091**

| Lab ID: | 05091-005 | | | 05091-006 | | |
|---|---|---|---|---|---|---|
| Client ID: | TWP6 | | | TWP6 FILT | | |
| Matrix: | Aqueous | | | Aqueous | | |
| Sampled Date | 11/20/23 | | | 11/20/23 | | |
| **PARAMETER(Units)** | Conc | Q | MDL | Conc | Q | MDL |
| **Volatiles (Units)** | | *(ug/L)* | | | *(ug/L)* | |
| cis-1,2-Dichloroethene | 0.442 | J | 0.277 | ~ | | ~ |
| Trichloroethene | 0.776 | | 0.347 | ~ | | ~ |
| **TOTAL VO's:** | 1.22 | J | | ~ | | ~ |
| **TOTAL TIC's:** | ND | | | ~ | | ~ |
| **TOTAL VO's & TIC's:** | 1.22 | J | | ~ | | ~ |
| **Semivolatiles - BNA (Units)** | | *(ug/L)* | | | *(ug/L)* | |
| **TOTAL BNA'S:** | ND | | | ~ | | ~ |
| **TOTAL TIC's:** | 45.7 | JN | | ~ | | ~ |
| **TOTAL BNA'S & TIC's:** | 45.7 | JN | | ~ | | ~ |
| **PCB's (Units)** | | *(ug/L)* | | | *(ug/L)* | |
| Aroclor-1016 | ND | | 0.015 | ~ | | ~ |
| Aroclor-1221 | ND | | 0.015 | ~ | | ~ |
| Aroclor-1232 | ND | | 0.015 | ~ | | ~ |
| Aroclor-1242 | ND | | 0.015 | ~ | | ~ |
| Aroclor-1248 | ND | | 0.015 | ~ | | ~ |
| Aroclor-1254 | ND | | 0.015 | ~ | | ~ |
| Aroclor-1260 | ND | | 0.015 | ~ | | ~ |
| Aroclor-1262 | ND | | 0.015 | ~ | | ~ |
| Aroclor-1268 | ND | | 0.015 | ~ | | ~ |
| PCBs | ND | | 0.015 | ~ | | ~ |
| **Pesticides (Units)** | | *(mg/L)* | | | *(ug/L)* | |
| alpha-BHC | ND | | 0.00000206 | ~ | | ~ |
| beta-BHC | ND | | 0.00000303 | ~ | | ~ |
| gamma-BHC (Lindane) | ND | | 0.00000201 | ~ | | ~ |
| delta-BHC | ND | | 0.00000238 | ~ | | ~ |
| Heptachlor | ND | | 0.00000235 | ~ | | ~ |
| Aldrin | ND | | 0.00000188 | ~ | | ~ |
| Heptachlor epoxide | ND | | 0.00000217 | ~ | | ~ |
| Endosulfan I | ND | | 0.00000208 | ~ | | ~ |
| 4,4'-DDE | ND | | 0.00000197 | ~ | | ~ |
| Dieldrin | ND | | 0.00000237 | ~ | | ~ |
| Endrin | ND | | 0.00000289 | ~ | | ~ |
| Endosulfan II | ND | | 0.00000258 | ~ | | ~ |
| 4,4'-DDD | ND | | 0.00000294 | ~ | | ~ |
| Endrin aldehyde | ND | | 0.0000023 | ~ | | ~ |
| Endosulfan sulfate | ND | | 0.00000314 | ~ | | ~ |
| 4,4'-DDT | ND | | 0.00000202 | ~ | | ~ |
| Endrin ketone | ND | | 0.00000323 | ~ | | ~ |
| Methoxychlor | ND | | 0.00000337 | ~ | | ~ |
| alpha-Chlordane | ND | | 0.00000215 | ~ | | ~ |
| gamma-Chlordane | ND | | 0.00000314 | ~ | | ~ |
| Toxaphene | ND | | 0.00005 | ~ | | ~ |
| Endosulfan (I and II) | ND | | 0.00000208 | ~ | | ~ |
| Chlordane (alpha and gamma) | ND | | 0.00000215 | ~ | | ~ |

ND = Analyzed for but Not Detected at the MDL

J = Indicates an estimated value either when the concentration in the sample is greater than MDL and less than RL, or for qualification of TICs

N = Presumptive evidence of a compound from the use of GC/MS library search.

All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.

**SUMMARY REPORT**
**Client: HK Engineering & Geology, D.P.C.**
**Project: HK2661.1**
**Lab Case No.: E23-05091**

| Lab ID: | 05091-005 | | | 05091-006 | | |
|---|---|---|---|---|---|---|
| Client ID: | TWP6 | | | TWP6 FILT | | |
| Matrix: | Aqueous | | | Aqueous | | |
| Sampled Date | 11/20/23 | | | 11/20/23 | | |
| PARAMETER(Units) | Conc | Q | MDL | Conc | Q | MDL |
| **General Analytical (Units)** | | | | | | |
| Cyanide, Total(ug/L) | ND | | 4.00 | ~ | | ~ |

| Lab ID: | 05091-001 | | | 05091-002 | | | 05091-003 | | | 05091-004 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | SB9A | | | SB9B | | | SB6A | | | SB6B | | |
| Depth: | 0/2 | | | 10/12 | | | 0/2 | | | 10/12 | | |
| Matrix: | Soil | | | Soil | | | Soil | | | Soil | | |
| Sampled Date | 11/20/23 | | | 11/20/23 | | | 11/20/23 | | | 11/20/23 | | |
| PARAMETER(Units) | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL |
| **Volatiles (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| Acetone | ND | | 0.0058 | ND | | 0.00595 | ND | | 0.0057 | 0.00529 | J | 0.0051 |
| **TOTAL VO's:** | ND | | | ND | | | ND | | | 0.00529 | J | |
| **TOTAL TIC's:** | ND | | | ND | | | ND | | | ND | | |
| **TOTAL VO's & TIC's:** | ND | | | ND | | | ND | | | 0.00529 | J | |
| **Semivolatiles - BNA (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| Naphthalene | ND | | 0.00521 | 0.029 | J | 0.00518 | ND | | 0.00518 | ND | | 0.00532 |
| 2-Methylnaphthalene | ND | | 0.013 | 0.031 | J | 0.013 | ND | | 0.013 | ND | | 0.013 |
| Acenaphthylene | ND | | 0.00782 | ND | | 0.00777 | 0.027 | J | 0.00777 | ND | | 0.00797 |
| Acenaphthene | ND | | 0.00706 | 0.209 | | 0.00701 | 0.021 | J | 0.00701 | ND | | 0.00719 |
| Dibenzofuran | ND | | 0.00467 | 0.063 | | 0.00464 | ND | | 0.00464 | ND | | 0.00477 |
| Fluorene | ND | | 0.00962 | 0.154 | | 0.00955 | 0.020 | J | 0.00955 | ND | | 0.00981 |
| Phenanthrene | 0.113 | | 0.00585 | 2.56 | | 0.00581 | 0.237 | | 0.00581 | 0.150 | | 0.00596 |
| Anthracene | 0.031 | J | 0.00364 | 0.707 | | 0.00361 | 0.075 | | 0.00361 | 0.051 | | 0.00371 |
| Carbazole | 0.018 | J | 0.00833 | 0.432 | | 0.00827 | 0.030 | J | 0.00827 | ND | | 0.00849 |
| Fluoranthene | 0.213 | | 0.012 | 10.6 | D | 0.137 | 0.549 | | 0.011 | 0.451 | | 0.012 |
| Pyrene | 0.174 | | 0.00831 | 8.03 | D | 0.099 | 0.500 | | 0.00826 | 0.386 | | 0.00848 |
| Benzo[a]anthracene | 0.106 | | 0.013 | 3.62 | | 0.013 | 0.304 | | 0.013 | 0.225 | | 0.013 |
| Chrysene | 0.097 | | 0.00986 | 3.48 | | 0.0098 | 0.271 | | 0.0098 | 0.190 | | 0.010 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.023 | 0.109 | | 0.023 | 0.035 | J | 0.023 | ND | | 0.023 |
| Benzo[b]fluoranthene | 0.150 | | 0.018 | 4.33 | | 0.018 | 0.347 | | 0.018 | 0.246 | | 0.018 |
| Benzo[k]fluoranthene | 0.072 | | 0.025 | 2.66 | | 0.025 | 0.242 | | 0.025 | 0.142 | | 0.025 |
| Benzo[a]pyrene | 0.103 | | 0.017 | 3.61 | | 0.017 | 0.314 | | 0.017 | 0.215 | | 0.018 |
| Indeno[1,2,3-cd]pyrene | 0.254 | | 0.023 | 1.93 | | 0.023 | 0.242 | | 0.023 | 0.128 | | 0.023 |
| Dibenz[a,h]anthracene | 0.119 | | 0.014 | 0.942 | | 0.014 | 0.112 | | 0.014 | 0.055 | | 0.015 |
| Benzo[g,h,i]perylene | 0.453 | | 0.027 | 1.89 | | 0.027 | 0.308 | | 0.027 | 0.125 | | 0.028 |
| **TOTAL BNA'S:** | 1.90 | J | | 45.4 | JD | | 3.63 | J | | 2.36 | | |
| **TOTAL TIC's:** | ND | | | 1.76 | JN | | 0.479 | JN | | 0.215 | JN | |
| **TOTAL BNA'S & TIC's:** | 1.90 | J | | 47.2 | JDN | | 4.11 | JN | | 2.57 | JN | |

ND = Analyzed for but Not Detected at the MDL

J = Indicates an estimated value either when the concentration in the sample is greater than MDL and less than RL, or for qualification of TICs
N = Presumptive evidence of a compound from the use of GC/MS library search.
All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.
D = The compound was reported from the Diluted analysis

**SUMMARY REPORT**
**Client: HK Engineering & Geology, D.P.C.**
**Project: HK2661.1**
**Lab Case No.: E23-05091**

| Lab ID: | 05091-001 | | | 05091-002 | | | 05091-003 | | | 05091-004 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | SB9A | | | SB9B | | | SB6A | | | SB6B | | |
| Depth: | 0/2 | | | 10/12 | | | 0/2 | | | 10/12 | | |
| Matrix: | Soil | | | Soil | | | Soil | | | Soil | | |
| Sampled Date | 11/20/23 | | | 11/20/23 | | | 11/20/23 | | | 11/20/23 | | |
| **PARAMETER(Units)** | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL | Conc | Q | MDL |
| **PCB's (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| Aroclor-1016 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1221 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1232 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1242 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1248 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1254 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1260 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1262 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| Aroclor-1268 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 | ND | | 0.0011 |
| PCBs | ND | | 0.00107 | ND | | 0.00107 | ND | | 0.00107 | ND | | 0.0011 |
| **Pesticides (Units)** | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | | *(mg/Kg)* | | |
| alpha-BHC | ND | | 0.000127 | ND | | 0.000127 | ND | | 0.000127 | ND | | 0.000131 |
| beta-BHC | ND | | 0.000166 | ND | | 0.000166 | ND | | 0.000166 | ND | | 0.000171 |
| gamma-BHC (Lindane) | ND | | 0.000159 | ND | | 0.000159 | ND | | 0.000159 | ND | | 0.000163 |
| delta-BHC | ND | | 0.000138 | ND | | 0.000138 | ND | | 0.000138 | ND | | 0.000142 |
| Heptachlor | ND | | 0.000169 | ND | | 0.000169 | ND | | 0.000169 | ND | | 0.000174 |
| Aldrin | ND | | 0.000149 | ND | | 0.000149 | ND | | 0.000149 | ND | | 0.000153 |
| Heptachlor epoxide | ND | | 0.000155 | ND | | 0.000155 | ND | | 0.000155 | ND | | 0.000159 |
| Endosulfan I | ND | | 0.000159 | ND | | 0.000159 | ND | | 0.000159 | ND | | 0.000164 |
| 4,4'-DDE | 0.011 | | 0.000145 | 0.017 | | 0.000145 | 0.023 | | 0.000145 | 0.000726 | J | 0.000149 |
| Dieldrin | ND | | 0.000145 | ND | | 0.000145 | ND | | 0.000145 | ND | | 0.000149 |
| Endrin | ND | | 0.00018 | ND | | 0.00018 | ND | | 0.00018 | ND | | 0.000184 |
| Endosulfan II | ND | | 0.000163 | ND | | 0.000163 | ND | | 0.000163 | ND | | 0.000168 |
| 4,4'-DDD | 0.00103 | | 0.00019 | ND | | 0.00019 | 0.00236 | | 0.00019 | ND | | 0.000195 |
| Endrin aldehyde | ND | | 0.000149 | ND | | 0.000149 | ND | | 0.000149 | ND | | 0.000153 |
| Endosulfan sulfate | ND | | 0.000176 | ND | | 0.000176 | ND | | 0.000176 | ND | | 0.000181 |
| 4,4'-DDT | 0.00808 | | 0.000133 | 0.023 | | 0.000132 | 0.038 | | 0.000133 | 0.00113 | | 0.000136 |
| Endrin ketone | ND | | 0.000139 | ND | | 0.000139 | ND | | 0.000139 | ND | | 0.000142 |
| Methoxychlor | ND | | 0.00019 | ND | | 0.00019 | ND | | 0.00019 | ND | | 0.000196 |
| alpha-Chlordane | 0.00913 | | 0.000157 | 0.00246 | | 0.000157 | 0.00126 | | 0.000157 | ND | | 0.000161 |
| gamma-Chlordane | 0.00769 | | 0.00014 | 0.00274 | | 0.00014 | 0.00125 | | 0.00014 | ND | | 0.000144 |
| Toxaphene | ND | | 0.00356 | ND | | 0.00356 | ND | | 0.00356 | ND | | 0.00366 |
| Endosulfan (I and II) | ND | | 0.000159 | ND | | 0.000159 | ND | | 0.000159 | ND | | 0.000164 |
| Chlordane (alpha and gamma) | 0.017 | | 0.00014 | 0.0052 | | 0.00014 | 0.00251 | | 0.00014 | ND | | 0.000144 |
| **General Analytical (Units)** | | | | | | | | | | | | |
| Cyanide, Total(mg/Kg) | ND | | 0.214 | ND | | 0.214 | ND | | 0.214 | ND | | 0.220 |

ND = Analyzed for but Not Detected at the MDL
J = Indicates an estimated value either when the concentration in the sample is greater than MDL and less than RL, or for qualification of TICs
N = Presumptive evidence of a compound from the use of GC/MS library search.
+ Subcontracted data for TAL Metals (6020B/7471B) by SGS Dayton will be sent separately once available.

ANALYTICAL RESULTS

## VOLATILE ORGANICS

Lab ID: E23-05091-001
Client ID: SB9A/0-2
Date Received: 11/20/2023
Date Analyzed: 11/22/2023
Data file: L7738.D 11/22/2023 02:52

GC/MS Column: DB-624
Sample wt/vol: 4.62g
Matrix-Units: Soil-mg/Kg
% Moisture: 6.7
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00116 | 0.000602 |
| Chloromethane | ND | | 0.00232 | 0.000368 |
| Vinyl chloride | ND | | 0.00116 | 0.000376 |
| Bromomethane | ND | | 0.00232 | 0.00101 |
| Chloroethane | ND | | 0.00116 | 0.000345 |
| Trichlorofluoromethane | ND | | 0.00116 | 0.000471 |
| 1,1-Dichloroethene | ND | | 0.00116 | 0.000406 |
| Acetone | ND | | 0.012 | 0.0058 |
| Carbon disulfide | ND | | 0.00116 | 0.000456 |
| Methylene chloride | ND | | 0.0058 | 0.00348 |
| trans-1,2-Dichloroethene | ND | | 0.00232 | 0.000411 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00116 | 0.000253 |
| 1,1-Dichloroethane | ND | | 0.00232 | 0.000296 |
| cis-1,2-Dichloroethene | ND | | 0.00232 | 0.000248 |
| 2-Butanone (MEK) | ND | | 0.012 | 0.00232 |
| Bromochloromethane | ND | | 0.00116 | 0.000295 |
| Chloroform | ND | | 0.00232 | 0.00058 |
| 1,1,1-Trichloroethane | ND | | 0.00116 | 0.000356 |
| Carbon tetrachloride | ND | | 0.00116 | 0.000232 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00116 | 0.000268 |
| Benzene | ND | | 0.00116 | 0.0000998 |
| Trichloroethene | ND | | 0.00116 | 0.000173 |
| 1,2-Dichloropropane | ND | | 0.00116 | 0.000116 |
| Bromodichloromethane | ND | | 0.00116 | 0.000138 |
| cis-1,3-Dichloropropene | ND | | 0.00116 | 0.000177 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.012 | 0.000607 |

## VOLATILE ORGANICS

Lab ID: E23-05091-001
Client ID: SB9A/0-2
Date Received: 11/20/2023
Date Analyzed: 11/22/2023
Data file: L7738.D 11/22/2023 02:52

GC/MS Column: DB-624
Sample wt/vol: 4.62g
Matrix-Units: Soil-mg/Kg
% Moisture: 6.7
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00116 | 0.00058 |
| trans-1,3-Dichloropropene | ND | | 0.00116 | 0.000129 |
| 1,1,2-Trichloroethane | ND | | 0.00116 | 0.000248 |
| Tetrachloroethene | ND | | 0.00116 | 0.000119 |
| 2-Hexanone | ND | | 0.012 | 0.00178 |
| Dibromochloromethane | ND | | 0.00116 | 0.000193 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00116 | 0.000215 |
| Chlorobenzene | ND | | 0.00116 | 0.000201 |
| Ethylbenzene | ND | | 0.00116 | 0.000126 |
| Total Xylenes | ND | | 0.00232 | 0.000162 |
| Styrene | ND | | 0.00116 | 0.000249 |
| Bromoform | ND | | 0.00116 | 0.000361 |
| Isopropylbenzene | ND | | 0.00116 | 0.000247 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00116 | 0.000607 |
| 1,3-Dichlorobenzene | ND | | 0.00116 | 0.000307 |
| 1,4-Dichlorobenzene | ND | | 0.00116 | 0.00036 |
| 1,2-Dichlorobenzene | ND | | 0.00116 | 0.000291 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00116 | 0.000956 |
| 1,2,4-Trichlorobenzene | ND | | 0.00116 | 0.000487 |
| 1,2,3-Trichlorobenzene | ND | | 0.00232 | 0.000369 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.00232 | 0.000693 |
| Methyl acetate | ND | | 0.00116 | 0.000937 |
| Cyclohexane | ND | | 0.0058 | 0.000209 |
| Methylcyclohexane | ND | | 0.00232 | 0.0002 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00116 | 0.000129 |

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05091-001
Client ID: SB9A/0-2
Date Received: 11/20/2023
Date Analyzed: 11/22/2023
Date File: L7738.D

GC/MS Column: DB-624
Sample wt/vol: 4.62g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 6.7

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Column/Septa bleed | 0 | J | 5.39 |

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05091-002
Client ID: SB9B/10-12
Date Received: 11/20/2023
Date Analyzed: 11/22/2023
Data file: L7739.D 11/22/2023 03:20

GC/MS Column: DB-624
Sample wt/vol: 4.51g
Matrix-Units: Soil-mg/Kg
% Moisture: 6.7
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00119 | 0.000618 |
| Chloromethane | ND | | 0.00238 | 0.000377 |
| Vinyl chloride | ND | | 0.00119 | 0.000386 |
| Bromomethane | ND | | 0.00238 | 0.00104 |
| Chloroethane | ND | | 0.00119 | 0.000353 |
| Trichlorofluoromethane | ND | | 0.00119 | 0.000483 |
| 1,1-Dichloroethene | ND | | 0.00119 | 0.000417 |
| Acetone | ND | | 0.012 | 0.00595 |
| Carbon disulfide | ND | | 0.00119 | 0.000468 |
| Methylene chloride | ND | | 0.00595 | 0.00357 |
| trans-1,2-Dichloroethene | ND | | 0.00238 | 0.000421 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00119 | 0.000259 |
| 1,1-Dichloroethane | ND | | 0.00238 | 0.000303 |
| cis-1,2-Dichloroethene | ND | | 0.00238 | 0.000255 |
| 2-Butanone (MEK) | ND | | 0.012 | 0.00238 |
| Bromochloromethane | ND | | 0.00119 | 0.000302 |
| Chloroform | ND | | 0.00238 | 0.000595 |
| 1,1,1-Trichloroethane | ND | | 0.00119 | 0.000365 |
| Carbon tetrachloride | ND | | 0.00119 | 0.000238 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00119 | 0.000275 |
| Benzene | ND | | 0.00119 | 0.000102 |
| Trichloroethene | ND | | 0.00119 | 0.000177 |
| 1,2-Dichloropropane | ND | | 0.00119 | 0.000119 |
| Bromodichloromethane | ND | | 0.00119 | 0.000142 |
| cis-1,3-Dichloropropene | ND | | 0.00119 | 0.000182 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.012 | 0.000622 |

## VOLATILE ORGANICS

Lab ID: E23-05091-002
Client ID: SB9B/10-12
Date Received: 11/20/2023
Date Analyzed: 11/22/2023
Data file: L7739.D 11/22/2023 03:20

GC/MS Column: DB-624
Sample wt/vol: 4.51g
Matrix-Units: Soil-mg/Kg
% Moisture: 6.7
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00119 | 0.000595 |
| trans-1,3-Dichloropropene | ND | | 0.00119 | 0.000132 |
| 1,1,2-Trichloroethane | ND | | 0.00119 | 0.000255 |
| Tetrachloroethene | ND | | 0.00119 | 0.000123 |
| 2-Hexanone | ND | | 0.012 | 0.00182 |
| Dibromochloromethane | ND | | 0.00119 | 0.000198 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00119 | 0.00022 |
| Chlorobenzene | ND | | 0.00119 | 0.000206 |
| Ethylbenzene | ND | | 0.00119 | 0.00013 |
| Total Xylenes | ND | | 0.00238 | 0.000167 |
| Styrene | ND | | 0.00119 | 0.000256 |
| Bromoform | ND | | 0.00119 | 0.00037 |
| Isopropylbenzene | ND | | 0.00119 | 0.000253 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00119 | 0.000622 |
| 1,3-Dichlorobenzene | ND | | 0.00119 | 0.000315 |
| 1,4-Dichlorobenzene | ND | | 0.00119 | 0.000369 |
| 1,2-Dichlorobenzene | ND | | 0.00119 | 0.000299 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00119 | 0.000981 |
| 1,2,4-Trichlorobenzene | ND | | 0.00119 | 0.0005 |
| 1,2,3-Trichlorobenzene | ND | | 0.00238 | 0.000378 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.00238 | 0.00071 |
| Methyl acetate | ND | | 0.00119 | 0.000962 |
| Cyclohexane | ND | | 0.00595 | 0.000214 |
| Methylcyclohexane | ND | | 0.00238 | 0.000205 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00119 | 0.000132 |

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05091-002
Client ID: SB9B/10-12
Date Received: 11/20/2023
Date Analyzed: 11/22/2023
Date File: L7739.D

GC/MS Column: DB-624
Sample wt/vol: 4.51g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 6.7

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | No peaks detected | | | |

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05091-003
Client ID: SB6A/0-2
Date Received: 11/20/2023
Date Analyzed: 11/22/2023
Data file: L7740.D 11/22/2023 03:48

GC/MS Column: DB-624
Sample wt/vol: 4.71g
Matrix-Units: Soil-mg/Kg
% Moisture: 6.7
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00114 | 0.000592 |
| Chloromethane | ND | | 0.00228 | 0.000361 |
| Vinyl chloride | ND | | 0.00114 | 0.000369 |
| Bromomethane | ND | | 0.00228 | 0.000994 |
| Chloroethane | ND | | 0.00114 | 0.000339 |
| Trichlorofluoromethane | ND | | 0.00114 | 0.000463 |
| 1,1-Dichloroethene | ND | | 0.00114 | 0.000399 |
| Acetone | ND | | 0.011 | 0.0057 |
| Carbon disulfide | ND | | 0.00114 | 0.000448 |
| Methylene chloride | ND | | 0.0057 | 0.00342 |
| trans-1,2-Dichloroethene | ND | | 0.00228 | 0.000404 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00114 | 0.000249 |
| 1,1-Dichloroethane | ND | | 0.00228 | 0.000291 |
| cis-1,2-Dichloroethene | ND | | 0.00228 | 0.000244 |
| 2-Butanone (MEK) | ND | | 0.011 | 0.00228 |
| Bromochloromethane | ND | | 0.00114 | 0.00029 |
| Chloroform | ND | | 0.00228 | 0.00057 |
| 1,1,1-Trichloroethane | ND | | 0.00114 | 0.00035 |
| Carbon tetrachloride | ND | | 0.00114 | 0.000228 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00114 | 0.000263 |
| Benzene | ND | | 0.00114 | 0.000098 |
| Trichloroethene | ND | | 0.00114 | 0.00017 |
| 1,2-Dichloropropane | ND | | 0.00114 | 0.000114 |
| Bromodichloromethane | ND | | 0.00114 | 0.000136 |
| cis-1,3-Dichloropropene | ND | | 0.00114 | 0.000174 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.011 | 0.000596 |

## VOLATILE ORGANICS

Lab ID: E23-05091-003
Client ID: SB6A/0-2
Date Received: 11/20/2023
Date Analyzed: 11/22/2023
Data file: L7740.D 11/22/2023 03:48

GC/MS Column: DB-624
Sample wt/vol: 4.71g
Matrix-Units: Soil-mg/Kg
% Moisture: 6.7
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00114 | 0.00057 |
| trans-1,3-Dichloropropene | ND | | 0.00114 | 0.000127 |
| 1,1,2-Trichloroethane | ND | | 0.00114 | 0.000244 |
| Tetrachloroethene | ND | | 0.00114 | 0.000117 |
| 2-Hexanone | ND | | 0.011 | 0.00175 |
| Dibromochloromethane | ND | | 0.00114 | 0.000189 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00114 | 0.000211 |
| Chlorobenzene | ND | | 0.00114 | 0.000197 |
| Ethylbenzene | ND | | 0.00114 | 0.000124 |
| Total Xylenes | ND | | 0.00228 | 0.00016 |
| Styrene | ND | | 0.00114 | 0.000245 |
| Bromoform | ND | | 0.00114 | 0.000355 |
| Isopropylbenzene | ND | | 0.00114 | 0.000243 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00114 | 0.000596 |
| 1,3-Dichlorobenzene | ND | | 0.00114 | 0.000302 |
| 1,4-Dichlorobenzene | ND | | 0.00114 | 0.000353 |
| 1,2-Dichlorobenzene | ND | | 0.00114 | 0.000286 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00114 | 0.000939 |
| 1,2,4-Trichlorobenzene | ND | | 0.00114 | 0.000479 |
| 1,2,3-Trichlorobenzene | ND | | 0.00228 | 0.000363 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.00228 | 0.000681 |
| Methyl acetate | ND | | 0.00114 | 0.000921 |
| Cyclohexane | ND | | 0.0057 | 0.000205 |
| Methylcyclohexane | ND | | 0.00228 | 0.000196 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00114 | 0.000127 |

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05091-003
Client ID: SB6A/0-2
Date Received: 11/20/2023
Date Analyzed: 11/22/2023
Date File: L7740.D

GC/MS Column: DB-624
Sample wt/vol: 4.71g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 6.7

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Column/Septa bleed | 0 | J | 5.39 |

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05091-004
Client ID: SB6B/10-12
Date Received: 11/20/2023
Date Analyzed: 11/22/2023
Data file: L7741.D 11/22/2023 04:16

GC/MS Column: DB-624
Sample wt/vol: 5.38g
Matrix-Units: Soil-mg/Kg
% Moisture: 9.1
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.00102 | 0.000529 |
| Chloromethane | ND | | 0.00204 | 0.000323 |
| Vinyl chloride | ND | | 0.00102 | 0.00033 |
| Bromomethane | ND | | 0.00204 | 0.000889 |
| Chloroethane | ND | | 0.00102 | 0.000303 |
| Trichlorofluoromethane | ND | | 0.00102 | 0.000414 |
| 1,1-Dichloroethene | ND | | 0.00102 | 0.000357 |
| Acetone | 0.00529 | J | 0.010 | 0.0051 |
| Carbon disulfide | ND | | 0.00102 | 0.000401 |
| Methylene chloride | ND | | 0.0051 | 0.00306 |
| trans-1,2-Dichloroethene | ND | | 0.00204 | 0.000361 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.00102 | 0.000222 |
| 1,1-Dichloroethane | ND | | 0.00204 | 0.00026 |
| cis-1,2-Dichloroethene | ND | | 0.00204 | 0.000218 |
| 2-Butanone (MEK) | ND | | 0.010 | 0.00204 |
| Bromochloromethane | ND | | 0.00102 | 0.000259 |
| Chloroform | ND | | 0.00204 | 0.00051 |
| 1,1,1-Trichloroethane | ND | | 0.00102 | 0.000313 |
| Carbon tetrachloride | ND | | 0.00102 | 0.000204 |
| 1,2-Dichloroethane (EDC) | ND | | 0.00102 | 0.000236 |
| Benzene | ND | | 0.00102 | 0.0000877 |
| Trichloroethene | ND | | 0.00102 | 0.000152 |
| 1,2-Dichloropropane | ND | | 0.00102 | 0.000102 |
| Bromodichloromethane | ND | | 0.00102 | 0.000121 |
| cis-1,3-Dichloropropene | ND | | 0.00102 | 0.000156 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.010 | 0.000533 |

## VOLATILE ORGANICS

Lab ID: E23-05091-004
Client ID: SB6B/10-12
Date Received: 11/20/2023
Date Analyzed: 11/22/2023
Data file: L7741.D 11/22/2023 04:16

GC/MS Column: DB-624
Sample wt/vol: 5.38g
Matrix-Units: Soil-mg/Kg
% Moisture: 9.1
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.00102 | 0.00051 |
| trans-1,3-Dichloropropene | ND | | 0.00102 | 0.000113 |
| 1,1,2-Trichloroethane | ND | | 0.00102 | 0.000218 |
| Tetrachloroethene | ND | | 0.00102 | 0.000105 |
| 2-Hexanone | ND | | 0.010 | 0.00156 |
| Dibromochloromethane | ND | | 0.00102 | 0.000169 |
| 1,2-Dibromoethane (EDB) | ND | | 0.00102 | 0.000189 |
| Chlorobenzene | ND | | 0.00102 | 0.000176 |
| Ethylbenzene | ND | | 0.00102 | 0.000111 |
| Total Xylenes | ND | | 0.00204 | 0.000143 |
| Styrene | ND | | 0.00102 | 0.000219 |
| Bromoform | ND | | 0.00102 | 0.000317 |
| Isopropylbenzene | ND | | 0.00102 | 0.000217 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00102 | 0.000533 |
| 1,3-Dichlorobenzene | ND | | 0.00102 | 0.00027 |
| 1,4-Dichlorobenzene | ND | | 0.00102 | 0.000316 |
| 1,2-Dichlorobenzene | ND | | 0.00102 | 0.000256 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00102 | 0.00084 |
| 1,2,4-Trichlorobenzene | ND | | 0.00102 | 0.000428 |
| 1,2,3-Trichlorobenzene | ND | | 0.00204 | 0.000324 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.00204 | 0.000609 |
| Methyl acetate | ND | | 0.00102 | 0.000824 |
| Cyclohexane | ND | | 0.0051 | 0.000184 |
| Methylcyclohexane | ND | | 0.00204 | 0.000175 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.00102 | 0.000113 |
| Total Target Compounds (51): | 0.00529 | J | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05091-004
Client ID: SB6B/10-12
Date Received: 11/20/2023
Date Analyzed: 11/22/2023
Date File: L7741.D

GC/MS Column: DB-624
Sample wt/vol: 5.38g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 9.1

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Column/Septa bleed | 0 | J | 5.39 |

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: BLKS231121-02
Client ID: BLKS231121-02
Date Received: 11/17/2023
Date Analyzed: 11/22/2023
Data file: L7732.D 11/22/2023 00:04

GC/MS Column: DB-624
Sample wt/vol: 5.00g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 2

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.001 | 0.000519 |
| Chloromethane | ND | | 0.002 | 0.000317 |
| Vinyl chloride | ND | | 0.001 | 0.000324 |
| Bromomethane | ND | | 0.002 | 0.000872 |
| Chloroethane | ND | | 0.001 | 0.000297 |
| Trichlorofluoromethane | ND | | 0.001 | 0.000406 |
| 1,1-Dichloroethene | ND | | 0.001 | 0.00035 |
| Acetone | ND | | 0.010 | 0.005 |
| Carbon disulfide | ND | | 0.001 | 0.000393 |
| Methylene chloride | ND | | 0.005 | 0.003 |
| trans-1,2-Dichloroethene | ND | | 0.002 | 0.000354 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.001 | 0.000218 |
| 1,1-Dichloroethane | ND | | 0.002 | 0.000255 |
| cis-1,2-Dichloroethene | ND | | 0.002 | 0.000214 |
| 2-Butanone (MEK) | ND | | 0.010 | 0.002 |
| Bromochloromethane | ND | | 0.001 | 0.000254 |
| Chloroform | ND | | 0.002 | 0.0005 |
| 1,1,1-Trichloroethane | ND | | 0.001 | 0.000307 |
| Carbon tetrachloride | ND | | 0.001 | 0.0002 |
| 1,2-Dichloroethane (EDC) | ND | | 0.001 | 0.000231 |
| Benzene | ND | | 0.001 | 0.000086 |
| Trichloroethene | ND | | 0.001 | 0.000149 |
| 1,2-Dichloropropane | ND | | 0.001 | 0.0001 |
| Bromodichloromethane | ND | | 0.001 | 0.000119 |
| cis-1,3-Dichloropropene | ND | | 0.001 | 0.000153 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.010 | 0.000523 |

## VOLATILE ORGANICS

Lab ID: BLKS231121-02
Client ID: BLKS231121-02
Date Received: 11/17/2023
Date Analyzed: 11/22/2023
Data file: L7732.D 11/22/2023 00:04

GC/MS Column: DB-624
Sample wt/vol: 5.00g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 2

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.001 | 0.0005 |
| trans-1,3-Dichloropropene | ND | | 0.001 | 0.000111 |
| 1,1,2-Trichloroethane | ND | | 0.001 | 0.000214 |
| Tetrachloroethene | ND | | 0.001 | 0.000103 |
| 2-Hexanone | ND | | 0.010 | 0.00153 |
| Dibromochloromethane | ND | | 0.001 | 0.000166 |
| 1,2-Dibromoethane (EDB) | ND | | 0.001 | 0.000185 |
| Chlorobenzene | ND | | 0.001 | 0.000173 |
| Ethylbenzene | ND | | 0.001 | 0.000109 |
| Total Xylenes | ND | | 0.002 | 0.00014 |
| Styrene | ND | | 0.001 | 0.000215 |
| Bromoform | ND | | 0.001 | 0.000311 |
| Isopropylbenzene | ND | | 0.001 | 0.000213 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.001 | 0.000523 |
| 1,3-Dichlorobenzene | ND | | 0.001 | 0.000265 |
| 1,4-Dichlorobenzene | ND | | 0.001 | 0.00031 |
| 1,2-Dichlorobenzene | ND | | 0.001 | 0.000251 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.001 | 0.000824 |
| 1,2,4-Trichlorobenzene | ND | | 0.001 | 0.00042 |
| 1,2,3-Trichlorobenzene | ND | | 0.002 | 0.000318 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.002 | 0.000597 |
| Methyl acetate | ND | | 0.001 | 0.000808 |
| Cyclohexane | ND | | 0.005 | 0.00018 |
| Methylcyclohexane | ND | | 0.002 | 0.000172 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.001 | 0.000111 |

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: BLKS231121-02
Client ID: BLKS231121-02
Date Received: 11/17/2023
Date Analyzed: 11/22/2023
Date File: L7732.D

GC/MS Column: DB-624
Sample wt/vol: 5.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 2
% Moisture: NA

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Column/Septa bleed | 0 | DJ | 9.08 |

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: E23-05091-005
Client ID: TWP6
Date Received: 11/20/2023
Date Analyzed: 11/22/2023
Data file: E5315.D 11/22/2023 17:10
Data file: P5618.D^

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 1.00 | 0.552 |
| Chloromethane | ND | | 0.500 | 0.309 |
| Vinyl chloride | ND | | 0.500 | 0.352 |
| Bromomethane | ND | | 0.500 | 0.386 |
| Chloroethane | ND | | 0.500 | 0.324 |
| Trichlorofluoromethane | ND | | 1.00 | 0.503 |
| 1,1-Dichloroethene | ND | | 0.500 | 0.363 |
| Acetone | ND | | 1.00 | 1.00 |
| Carbon disulfide | ND | | 0.500 | 0.403 |
| Methylene chloride | ND | | 1.00 | 0.500 |
| trans-1,2-Dichloroethene | ND | | 0.500 | 0.372 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.500 | 0.245 |
| 1,1-Dichloroethane | ND | | 0.500 | 0.285 |
| cis-1,2-Dichloroethene | 0.442 | J | 0.500 | 0.277 |
| 2-Butanone (MEK) | ND | | 1.00 | 0.802 |
| Bromochloromethane | ND | | 0.500 | 0.379 |
| Chloroform | ND | | 0.500 | 0.285 |
| 1,1,1-Trichloroethane | ND | | 0.500 | 0.381 |
| Carbon tetrachloride | ND | | 0.500 | 0.349 |
| 1,2-Dichloroethane (EDC) | ND | | 0.500 | 0.273 |
| Benzene | ND | | 0.500 | 0.270 |
| Trichloroethene | 0.776 | | 0.500 | 0.347 |
| 1,2-Dichloropropane | ND | | 0.500 | 0.272 |
| Bromodichloromethane | ND | | 0.500 | 0.258 |
| cis-1,3-Dichloropropene | ND | | 0.500 | 0.264 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 1.00 | 0.611 |

## VOLATILE ORGANICS

Lab ID: E23-05091-005
Client ID: TWP6
Date Received: 11/20/2023
Date Analyzed: 11/22/2023
Data file: E5315.D 11/22/2023 17:10
Data file: P5618.D^

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.500 | 0.302 |
| trans-1,3-Dichloropropene | ND | | 0.500 | 0.330 |
| 1,1,2-Trichloroethane | ND | | 0.500 | 0.313 |
| Tetrachloroethene | ND | | 0.500 | 0.365 |
| 2-Hexanone | ND | | 1.00 | 0.818 |
| Dibromochloromethane | ND | | 0.500 | 0.263 |
| 1,2-Dibromoethane (EDB)^ | ND | | 0.00482 | 0.00364 |
| Chlorobenzene | ND | | 0.500 | 0.304 |
| Ethylbenzene | ND | | 0.500 | 0.313 |
| Total Xylenes | ND | | 1.00 | 0.345 |
| Styrene | ND | | 0.500 | 0.317 |
| Bromoform | ND | | 0.500 | 0.328 |
| Isopropylbenzene | ND | | 0.500 | 0.332 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.500 | 0.284 |
| 1,3-Dichlorobenzene | ND | | 0.500 | 0.386 |
| 1,4-Dichlorobenzene | ND | | 0.500 | 0.397 |
| 1,2-Dichlorobenzene | ND | | 0.500 | 0.354 |
| 1,2-Dibromo-3-chloropropane^ | ND | | 0.00482 | 0.00364 |
| 1,2,4-Trichlorobenzene | ND | | 0.500 | 0.358 |
| 1,2,3-Trichlorobenzene | ND | | 0.500 | 0.406 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.00 | 0.538 |
| Methyl acetate | ND | | 0.500 | 0.345 |
| Cyclohexane | ND | | 1.00 | 0.469 |
| Methylcyclohexane | ND | | 0.500 | 0.421 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.500 | 0.264 |
| Total Target Compounds (51): | 1.22 | J | | |

^ --- Results reported from SW-846 8011
D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05091-005
Client ID: TWP6
Date Received: 11/20/2023
Date Analyzed: 11/22/2023
Date File: E5315.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | No peaks detected | | | |

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

## VOLATILE ORGANICS

Lab ID: BLKA231122-01
Client ID: BLKA231122-01
Date Received: NA
Date Analyzed: 11/22/2023
Data file: E5297.D 11/22/2023 08:58

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Dichlorodifluoromethane | ND | | 1.00 | 0.552 |
| Chloromethane | ND | | 0.500 | 0.309 |
| Vinyl chloride | ND | | 0.500 | 0.352 |
| Bromomethane | ND | | 0.500 | 0.386 |
| Chloroethane | ND | | 0.500 | 0.324 |
| Trichlorofluoromethane | ND | | 1.00 | 0.503 |
| 1,1-Dichloroethene | ND | | 0.500 | 0.363 |
| Acetone | ND | | 1.00 | 1.00 |
| Carbon disulfide | ND | | 0.500 | 0.403 |
| Methylene chloride | ND | | 1.00 | 0.500 |
| trans-1,2-Dichloroethene | ND | | 0.500 | 0.372 |
| Methyl tert-butyl ether (MTBE) | ND | | 0.500 | 0.245 |
| 1,1-Dichloroethane | ND | | 0.500 | 0.285 |
| cis-1,2-Dichloroethene | ND | | 0.500 | 0.277 |
| 2-Butanone (MEK) | ND | | 1.00 | 0.802 |
| Bromochloromethane | ND | | 0.500 | 0.379 |
| Chloroform | ND | | 0.500 | 0.285 |
| 1,1,1-Trichloroethane | ND | | 0.500 | 0.381 |
| Carbon tetrachloride | ND | | 0.500 | 0.349 |
| 1,2-Dichloroethane (EDC) | ND | | 0.500 | 0.273 |
| Benzene | ND | | 0.500 | 0.270 |
| Trichloroethene | ND | | 0.500 | 0.347 |
| 1,2-Dichloropropane | ND | | 0.500 | 0.272 |
| Bromodichloromethane | ND | | 0.500 | 0.258 |
| cis-1,3-Dichloropropene | ND | | 0.500 | 0.264 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 1.00 | 0.611 |

## VOLATILE ORGANICS

Lab ID: BLKA231122-01
Client ID: BLKA231122-01
Date Received: NA
Date Analyzed: 11/22/2023
Data file: E5297.D 11/22/2023 08:58

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Toluene | ND | | 0.500 | 0.302 |
| trans-1,3-Dichloropropene | ND | | 0.500 | 0.330 |
| 1,1,2-Trichloroethane | ND | | 0.500 | 0.313 |
| Tetrachloroethene | ND | | 0.500 | 0.365 |
| 2-Hexanone | ND | | 1.00 | 0.818 |
| Dibromochloromethane | ND | | 0.500 | 0.263 |
| 1,2-Dibromoethane (EDB) | ND | | 0.500 | 0.289 |
| Chlorobenzene | ND | | 0.500 | 0.304 |
| Ethylbenzene | ND | | 0.500 | 0.313 |
| Total Xylenes | ND | | 1.00 | 0.345 |
| Styrene | ND | | 0.500 | 0.317 |
| Bromoform | ND | | 0.500 | 0.328 |
| Isopropylbenzene | ND | | 0.500 | 0.332 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.500 | 0.284 |
| 1,3-Dichlorobenzene | ND | | 0.500 | 0.386 |
| 1,4-Dichlorobenzene | ND | | 0.500 | 0.397 |
| 1,2-Dichlorobenzene | ND | | 0.500 | 0.354 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.500 | 0.410 |
| 1,2,4-Trichlorobenzene | ND | | 0.500 | 0.358 |
| 1,2,3-Trichlorobenzene | ND | | 0.500 | 0.406 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.00 | 0.538 |
| Methyl acetate | ND | | 0.500 | 0.345 |
| Cyclohexane | ND | | 1.00 | 0.469 |
| Methylcyclohexane | ND | | 0.500 | 0.421 |
| 1,3-Dichloropropene (cis- and trans-) | ND | | 0.500 | 0.264 |

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## VOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: BLKA231122-01
Client ID: BLKA231122-01
Date Received: NA
Date Analyzed: 11/22/2023
Data file: E5297.D 11/22/2023 08:58

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|

No peaks detected

Total TICs = 0

## Volatiles (8011)

Lab ID: BLKA231129-01
Client ID: 8011
Date Received: NA
Date Extracted: 11/29/2023
Date Analyzed: 11/29/2023
Data file: P5615.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 35.0ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ND | | 0.00486 | 0.00364 |
| 1,2-Dibromo-3-chloropropane | ND | | 0.00486 | 0.00364 |
| 1,2,3-Trichloropropane | ND | | 0.00971 | 0.00729 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS

Lab ID: E23-05091-001
Client ID: SB9A/0-2
Date Received: 11/20/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: A3906.D 11/28/2023 15:31

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 6.70
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.072 | 0.027 |
| Phenol | ND | | 0.036 | 0.00808 |
| Bis(2-chloroethyl) ether | ND | | 0.036 | 0.013 |
| 2-Chlorophenol | ND | | 0.036 | 0.012 |
| 2-Methylphenol | ND | | 0.036 | 0.016 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.036 | 0.00891 |
| 4-Methylphenol ** | ND | | 0.036 | 0.016 |
| N-Nitrosodi-n-propylamine | ND | | 0.036 | 0.022 |
| Acetophenone | ND | | 0.036 | 0.022 |
| 1,4-Dioxane | ND | | 0.036 | 0.023 |
| Hexachloroethane | ND | | 0.036 | 0.015 |
| Nitrobenzene | ND | | 0.036 | 0.00868 |
| Isophorone | ND | | 0.036 | 0.015 |
| 2-Nitrophenol | ND | | 0.072 | 0.021 |
| 2,4-Dimethylphenol | ND | | 0.036 | 0.011 |
| Bis(2-chloroethoxy) methane | ND | | 0.036 | 0.00796 |
| 2,4-Dichlorophenol | ND | | 0.036 | 0.0095 |
| Naphthalene | ND | | 0.036 | 0.00521 |
| 4-Chloroaniline | ND | | 0.036 | 0.014 |
| Hexachlorobutadiene | ND | | 0.036 | 0.00992 |
| Caprolactam | ND | | 0.072 | 0.026 |
| 4-Chloro-3-methylphenol | ND | | 0.036 | 0.014 |
| 2-Methylnaphthalene | ND | | 0.036 | 0.013 |
| Hexachlorocyclopentadiene | ND | | 0.072 | 0.062 |
| 2,4,6-Trichlorophenol | ND | | 0.036 | 0.00982 |
| 2,4,5-Trichlorophenol | ND | | 0.036 | 0.027 |
| 1,1'-Biphenyl | ND | | 0.036 | 0.00532 |
| 2-Chloronaphthalene | ND | | 0.036 | 0.00825 |
| 2-Nitroaniline | ND | | 0.036 | 0.019 |
| Dimethyl phthalate | ND | | 0.036 | 0.0082 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05091-001
Client ID: SB9A/0-2
Date Received: 11/20/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: A3906.D 11/28/2023 15:31

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: 6.70
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.072 | 0.041 |
| Acenaphthylene | ND | | 0.036 | 0.00782 |
| 3-Nitroaniline | ND | | 0.036 | 0.023 |
| Acenaphthene | ND | | 0.036 | 0.00706 |
| 2,4-Dinitrophenol | ND | | 0.072 | 0.015 |
| 4-Nitrophenol | ND | | 0.072 | 0.036 |
| 2,4-Dinitrotoluene | ND | | 0.072 | 0.041 |
| Dibenzofuran | ND | | 0.036 | 0.00467 |
| Diethyl phthalate | ND | | 0.036 | 0.011 |
| Fluorene | ND | | 0.036 | 0.00962 |
| 4-Chlorophenyl phenyl ether | ND | | 0.036 | 0.00785 |
| 4-Nitroaniline | ND | | 0.036 | 0.021 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.036 | 0.012 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.036 | 0.012 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.072 | 0.015 |
| N-Nitrosodiphenylamine | ND | | 0.036 | 0.00733 |
| 4-Bromophenyl phenyl ether | ND | | 0.036 | 0.0099 |
| Hexachlorobenzene | ND | | 0.036 | 0.011 |
| Atrazine | ND | | 0.036 | 0.021 |
| Pentachlorophenol | ND | | 0.036 | 0.016 |
| Phenanthrene | 0.113 | | 0.036 | 0.00585 |
| Anthracene | 0.031 | J | 0.036 | 0.00364 |
| Carbazole | 0.018 | J | 0.036 | 0.00833 |
| Di-n-butyl phthalate | ND | | 0.036 | 0.015 |
| Fluoranthene | 0.213 | | 0.036 | 0.012 |
| Pyrene | 0.174 | | 0.036 | 0.00831 |
| Butyl benzyl phthalate | ND | | 0.036 | 0.016 |
| 3,3'-Dichlorobenzidine | ND | | 0.036 | 0.025 |
| Benzo[a]anthracene | 0.106 | | 0.036 | 0.013 |
| Chrysene | 0.097 | | 0.036 | 0.00986 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.036 | 0.023 |
| Di-n-octyl phthalate | ND | | 0.036 | 0.026 |
| Benzo[b]fluoranthene | 0.150 | | 0.036 | 0.018 |
| Benzo[k]fluoranthene | 0.072 | | 0.036 | 0.025 |
| Benzo[a]pyrene | 0.103 | | 0.036 | 0.017 |
| Indeno[1,2,3-cd]pyrene | 0.254 | | 0.036 | 0.023 |
| Dibenz[a,h]anthracene | 0.119 | | 0.036 | 0.014 |
| Benzo[g,h,i]perylene | 0.453 | | 0.036 | 0.027 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.072 | 0.041 |
| Total Target Compounds (69): | 1.90 | J | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
## Tentatively Identified Compounds

Lab ID: E23-05091-001
Client ID: SB9A/0-2
Date Received: 11/20/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Date File: A3906.D

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 6.70

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | No peaks detected | | | |

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05091-002
Client ID: SB9B/10-
Date Received: 11/20/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: A3907.D 11/28/2023 15:47

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 6.70
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.071 | 0.027 |
| Phenol | ND | | 0.036 | 0.00803 |
| Bis(2-chloroethyl) ether | ND | | 0.036 | 0.013 |
| 2-Chlorophenol | ND | | 0.036 | 0.012 |
| 2-Methylphenol | ND | | 0.036 | 0.016 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.036 | 0.00885 |
| 4-Methylphenol ** | ND | | 0.036 | 0.016 |
| N-Nitrosodi-n-propylamine | ND | | 0.036 | 0.022 |
| Acetophenone | ND | | 0.036 | 0.022 |
| 1,4-Dioxane | ND | | 0.036 | 0.023 |
| Hexachloroethane | ND | | 0.036 | 0.015 |
| Nitrobenzene | ND | | 0.036 | 0.00862 |
| Isophorone | ND | | 0.036 | 0.015 |
| 2-Nitrophenol | ND | | 0.071 | 0.021 |
| 2,4-Dimethylphenol | ND | | 0.036 | 0.010 |
| Bis(2-chloroethoxy) methane | ND | | 0.036 | 0.00791 |
| 2,4-Dichlorophenol | ND | | 0.036 | 0.00944 |
| Naphthalene | 0.029 | J | 0.036 | 0.00518 |
| 4-Chloroaniline | ND | | 0.036 | 0.014 |
| Hexachlorobutadiene | ND | | 0.036 | 0.00985 |
| Caprolactam | ND | | 0.071 | 0.026 |
| 4-Chloro-3-methylphenol | ND | | 0.036 | 0.014 |
| 2-Methylnaphthalene | 0.031 | J | 0.036 | 0.013 |
| Hexachlorocyclopentadiene | ND | | 0.071 | 0.062 |
| 2,4,6-Trichlorophenol | ND | | 0.036 | 0.00976 |
| 2,4,5-Trichlorophenol | ND | | 0.036 | 0.027 |
| 1,1'-Biphenyl | ND | | 0.036 | 0.00528 |
| 2-Chloronaphthalene | ND | | 0.036 | 0.0082 |
| 2-Nitroaniline | ND | | 0.036 | 0.019 |
| Dimethyl phthalate | ND | | 0.036 | 0.00814 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05091-002
Client ID: SB9B/10-
Date Received: 11/20/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: A3907.D 11/28/2023 15:47

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 6.70
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.071 | 0.041 |
| Acenaphthylene | ND | | 0.036 | 0.00777 |
| 3-Nitroaniline | ND | | 0.036 | 0.023 |
| Acenaphthene | 0.209 | | 0.036 | 0.00701 |
| 2,4-Dinitrophenol | ND | | 0.071 | 0.015 |
| 4-Nitrophenol | ND | | 0.071 | 0.036 |
| 2,4-Dinitrotoluene | ND | | 0.071 | 0.040 |
| Dibenzofuran | 0.063 | | 0.036 | 0.00464 |
| Diethyl phthalate | ND | | 0.036 | 0.011 |
| Fluorene | 0.154 | | 0.036 | 0.00955 |
| 4-Chlorophenyl phenyl ether | ND | | 0.036 | 0.0078 |
| 4-Nitroaniline | ND | | 0.036 | 0.021 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.036 | 0.012 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.036 | 0.012 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.071 | 0.015 |
| N-Nitrosodiphenylamine | ND | | 0.036 | 0.00728 |
| 4-Bromophenyl phenyl ether | ND | | 0.036 | 0.00983 |
| Hexachlorobenzene | ND | | 0.036 | 0.011 |
| Atrazine | ND | | 0.036 | 0.021 |
| Pentachlorophenol | ND | | 0.036 | 0.016 |
| Phenanthrene | 2.56 | | 0.036 | 0.00581 |
| Anthracene | 0.707 | | 0.036 | 0.00361 |
| Carbazole | 0.432 | | 0.036 | 0.00827 |
| Di-n-butyl phthalate | ND | | 0.036 | 0.014 |
| Fluoranthene | 7.58 | E | 0.036 | 0.011 |
| Pyrene | 6.65 | E | 0.036 | 0.00826 |
| Butyl benzyl phthalate | ND | | 0.036 | 0.016 |
| 3,3'-Dichlorobenzidine | ND | | 0.036 | 0.025 |
| Benzo[a]anthracene | 3.62 | | 0.036 | 0.013 |
| Chrysene | 3.48 | | 0.036 | 0.0098 |
| Bis(2-ethylhexyl) phthalate | 0.109 | | 0.036 | 0.023 |
| Di-n-octyl phthalate | ND | | 0.036 | 0.026 |
| Benzo[b]fluoranthene | 4.33 | | 0.036 | 0.018 |
| Benzo[k]fluoranthene | 2.66 | | 0.036 | 0.025 |
| Benzo[a]pyrene | 3.61 | | 0.036 | 0.017 |
| Indeno[1,2,3-cd]pyrene | 1.93 | | 0.036 | 0.023 |
| Dibenz[a,h]anthracene | 0.942 | | 0.036 | 0.014 |
| Benzo[g,h,i]perylene | 1.89 | | 0.036 | 0.027 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.071 | 0.040 |
| Total Target Compounds (69): | 41.0 | EJ | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
## Tentatively Identified Compounds

Lab ID: E23-05091-002
Client ID: SB9B/10-
Date Received: 11/20/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Date File: A3907.D

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 6.70

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| 000243-17-4 | 11H-Benzo[b]fluorene | 0.429 | JN | 6.85 |
| 002381-21-7 | Pyrene, 1-methyl- | 0.366 | JN | 6.92 |
| 000239-35-0 | Benzo[b]naphtho[2,1-d]thiophene | 0.586 | JN | 7.23 |
| 025732-74-5 | Cyclopenta(cd)pyrene, 3,4-dihydro- | 0.376 | JN | 7.46 |

Total TICs = 1.76 JN

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05091-002DL
Client ID: SB9B/10-
Date Received: 11/20/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/30/2023
Data file: A3939.D 11/30/2023 10:16

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 6.70
Dilution Factor: 10

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.852 | 0.320 |
| Phenol | ND | | 0.426 | 0.096 |
| Bis(2-chloroethyl) ether | ND | | 0.426 | 0.150 |
| 2-Chlorophenol | ND | | 0.426 | 0.138 |
| 2-Methylphenol | ND | | 0.426 | 0.191 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.426 | 0.106 |
| 4-Methylphenol ** | ND | | 0.426 | 0.194 |
| N-Nitrosodi-n-propylamine | ND | | 0.426 | 0.264 |
| Acetophenone | ND | | 0.426 | 0.260 |
| 1,4-Dioxane | ND | | 0.426 | 0.276 |
| Hexachloroethane | ND | | 0.426 | 0.177 |
| Nitrobenzene | ND | | 0.426 | 0.103 |
| Isophorone | 2.03 | D | 0.426 | 0.179 |
| 2-Nitrophenol | ND | | 0.852 | 0.254 |
| 2,4-Dimethylphenol | ND | | 0.426 | 0.125 |
| Bis(2-chloroethoxy) methane | ND | | 0.426 | 0.095 |
| 2,4-Dichlorophenol | ND | | 0.426 | 0.113 |
| Naphthalene | ND | | 0.426 | 0.062 |
| 4-Chloroaniline | ND | | 0.426 | 0.164 |
| Hexachlorobutadiene | ND | | 0.426 | 0.118 |
| Caprolactam | ND | | 0.852 | 0.314 |
| 4-Chloro-3-methylphenol | ND | | 0.426 | 0.165 |
| 2-Methylnaphthalene | ND | | 0.426 | 0.150 |
| Hexachlorocyclopentadiene | ND | | 0.852 | 0.740 |
| 2,4,6-Trichlorophenol | ND | | 0.426 | 0.117 |
| 2,4,5-Trichlorophenol | ND | | 0.426 | 0.324 |
| 1,1'-Biphenyl | ND | | 0.426 | 0.063 |
| 2-Chloronaphthalene | ND | | 0.426 | 0.098 |
| 2-Nitroaniline | ND | | 0.426 | 0.226 |
| Dimethyl phthalate | ND | | 0.426 | 0.098 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05091-002DL
Client ID: SB9B/10-
Date Received: 11/20/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/30/2023
Data file: A3939.D 11/30/2023 10:16

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 6.70
Dilution Factor: 10

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.852 | 0.489 |
| Acenaphthylene | ND | | 0.426 | 0.093 |
| 3-Nitroaniline | ND | | 0.426 | 0.269 |
| Acenaphthene | 0.259 | DJ | 0.426 | 0.084 |
| 2,4-Dinitrophenol | ND | | 0.852 | 0.175 |
| 4-Nitrophenol | ND | | 0.852 | 0.430 |
| 2,4-Dinitrotoluene | ND | | 0.852 | 0.482 |
| Dibenzofuran | ND | | 0.426 | 0.056 |
| Diethyl phthalate | ND | | 0.426 | 0.133 |
| Fluorene | ND | | 0.426 | 0.115 |
| 4-Chlorophenyl phenyl ether | ND | | 0.426 | 0.094 |
| 4-Nitroaniline | ND | | 0.426 | 0.253 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.426 | 0.142 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.426 | 0.146 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.852 | 0.180 |
| N-Nitrosodiphenylamine | ND | | 0.426 | 0.087 |
| 4-Bromophenyl phenyl ether | ND | | 0.426 | 0.118 |
| Hexachlorobenzene | ND | | 0.426 | 0.132 |
| Atrazine | ND | | 0.426 | 0.254 |
| Pentachlorophenol | ND | | 0.426 | 0.188 |
| Phenanthrene | 3.00 | D | 0.426 | 0.070 |
| Anthracene | 1.07 | D | 0.426 | 0.043 |
| Carbazole | 0.534 | D | 0.426 | 0.099 |
| Di-n-butyl phthalate | ND | | 0.426 | 0.173 |
| Fluoranthene | 10.6 | D | 0.426 | 0.137 |
| Pyrene | 8.03 | D | 0.426 | 0.099 |
| Butyl benzyl phthalate | ND | | 0.426 | 0.189 |
| 3,3'-Dichlorobenzidine | ND | | 0.426 | 0.301 |
| Benzo[a]anthracene | 4.02 | D | 0.426 | 0.155 |
| Chrysene | 4.70 | D | 0.426 | 0.118 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.426 | 0.273 |
| Di-n-octyl phthalate | ND | | 0.426 | 0.312 |
| Benzo[b]fluoranthene | 4.99 | D | 0.426 | 0.210 |
| Benzo[k]fluoranthene | 3.03 | D | 0.426 | 0.294 |
| Benzo[a]pyrene | 4.35 | D | 0.426 | 0.206 |
| Indeno[1,2,3-cd]pyrene | 2.30 | D | 0.426 | 0.273 |
| Dibenz[a,h]anthracene | 1.11 | D | 0.426 | 0.170 |
| Benzo[g,h,i]perylene | 2.61 | D | 0.426 | 0.321 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.852 | 0.482 |
| Total Target Compounds (69): | 52.6 | DJ | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS

Lab ID: E23-05091-003
Client ID: SB6A/0-2
Date Received: 11/20/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: A3908.D 11/28/2023 16:03

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 6.70
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.071 | 0.027 |
| Phenol | ND | | 0.036 | 0.00803 |
| Bis(2-chloroethyl) ether | ND | | 0.036 | 0.013 |
| 2-Chlorophenol | ND | | 0.036 | 0.012 |
| 2-Methylphenol | ND | | 0.036 | 0.016 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.036 | 0.00885 |
| 4-Methylphenol ** | ND | | 0.036 | 0.016 |
| N-Nitrosodi-n-propylamine | ND | | 0.036 | 0.022 |
| Acetophenone | ND | | 0.036 | 0.022 |
| 1,4-Dioxane | ND | | 0.036 | 0.023 |
| Hexachloroethane | ND | | 0.036 | 0.015 |
| Nitrobenzene | ND | | 0.036 | 0.00862 |
| Isophorone | ND | | 0.036 | 0.015 |
| 2-Nitrophenol | ND | | 0.071 | 0.021 |
| 2,4-Dimethylphenol | ND | | 0.036 | 0.010 |
| Bis(2-chloroethoxy) methane | ND | | 0.036 | 0.00791 |
| 2,4-Dichlorophenol | ND | | 0.036 | 0.00944 |
| Naphthalene | ND | | 0.036 | 0.00518 |
| 4-Chloroaniline | ND | | 0.036 | 0.014 |
| Hexachlorobutadiene | ND | | 0.036 | 0.00985 |
| Caprolactam | ND | | 0.071 | 0.026 |
| 4-Chloro-3-methylphenol | ND | | 0.036 | 0.014 |
| 2-Methylnaphthalene | ND | | 0.036 | 0.013 |
| Hexachlorocyclopentadiene | ND | | 0.071 | 0.062 |
| 2,4,6-Trichlorophenol | ND | | 0.036 | 0.00976 |
| 2,4,5-Trichlorophenol | ND | | 0.036 | 0.027 |
| 1,1'-Biphenyl | ND | | 0.036 | 0.00528 |
| 2-Chloronaphthalene | ND | | 0.036 | 0.0082 |
| 2-Nitroaniline | ND | | 0.036 | 0.019 |
| Dimethyl phthalate | ND | | 0.036 | 0.00814 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05091-003
Client ID: SB6A/0-2
Date Received: 11/20/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: A3908.D 11/28/2023 16:03

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 6.70
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.071 | 0.041 |
| Acenaphthylene | 0.027 | J | 0.036 | 0.00777 |
| 3-Nitroaniline | ND | | 0.036 | 0.023 |
| Acenaphthene | 0.021 | J | 0.036 | 0.00701 |
| 2,4-Dinitrophenol | ND | | 0.071 | 0.015 |
| 4-Nitrophenol | ND | | 0.071 | 0.036 |
| 2,4-Dinitrotoluene | ND | | 0.071 | 0.040 |
| Dibenzofuran | ND | | 0.036 | 0.00464 |
| Diethyl phthalate | ND | | 0.036 | 0.011 |
| Fluorene | 0.020 | J | 0.036 | 0.00955 |
| 4-Chlorophenyl phenyl ether | ND | | 0.036 | 0.0078 |
| 4-Nitroaniline | ND | | 0.036 | 0.021 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.036 | 0.012 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.036 | 0.012 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.071 | 0.015 |
| N-Nitrosodiphenylamine | ND | | 0.036 | 0.00728 |
| 4-Bromophenyl phenyl ether | ND | | 0.036 | 0.00983 |
| Hexachlorobenzene | ND | | 0.036 | 0.011 |
| Atrazine | ND | | 0.036 | 0.021 |
| Pentachlorophenol | ND | | 0.036 | 0.016 |
| Phenanthrene | 0.237 | | 0.036 | 0.00581 |
| Anthracene | 0.075 | | 0.036 | 0.00361 |
| Carbazole | 0.030 | J | 0.036 | 0.00827 |
| Di-n-butyl phthalate | ND | | 0.036 | 0.014 |
| Fluoranthene | 0.549 | | 0.036 | 0.011 |
| Pyrene | 0.500 | | 0.036 | 0.00826 |
| Butyl benzyl phthalate | ND | | 0.036 | 0.016 |
| 3,3'-Dichlorobenzidine | ND | | 0.036 | 0.025 |
| Benzo[a]anthracene | 0.304 | | 0.036 | 0.013 |
| Chrysene | 0.271 | | 0.036 | 0.0098 |
| Bis(2-ethylhexyl) phthalate | 0.035 | J | 0.036 | 0.023 |
| Di-n-octyl phthalate | ND | | 0.036 | 0.026 |
| Benzo[b]fluoranthene | 0.347 | | 0.036 | 0.018 |
| Benzo[k]fluoranthene | 0.242 | | 0.036 | 0.025 |
| Benzo[a]pyrene | 0.314 | | 0.036 | 0.017 |
| Indeno[1,2,3-cd]pyrene | 0.242 | | 0.036 | 0.023 |
| Dibenz[a,h]anthracene | 0.112 | | 0.036 | 0.014 |
| Benzo[g,h,i]perylene | 0.308 | | 0.036 | 0.027 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.071 | 0.040 |
| Total Target Compounds (69): | 3.63 | J | | |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
## Tentatively Identified Compounds

Lab ID: E23-05091-003
Client ID: SB6A/0-2
Date Received: 11/20/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Date File: A3908.D

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 6.70

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| 007206-21-5 | 5-Octadecene, (E)- | 0.277 | JN | 6.36 |
| 027519-02-4 | 9-Tricosene, (Z)- | 0.202 | JN | 7.22 |

Total TICs = 0.479 JN

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: E23-05091-004
Client ID: SB6B/10-
Date Received: 11/20/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: A3909.D 11/28/2023 16:19

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 9.10
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 0.073 | 0.027 |
| Phenol | ND | | 0.036 | 0.00824 |
| Bis(2-chloroethyl) ether | ND | | 0.036 | 0.013 |
| 2-Chlorophenol | ND | | 0.036 | 0.012 |
| 2-Methylphenol | ND | | 0.036 | 0.016 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.036 | 0.00909 |
| 4-Methylphenol ** | ND | | 0.036 | 0.017 |
| N-Nitrosodi-n-propylamine | ND | | 0.036 | 0.023 |
| Acetophenone | ND | | 0.036 | 0.022 |
| 1,4-Dioxane | ND | | 0.036 | 0.024 |
| Hexachloroethane | ND | | 0.036 | 0.015 |
| Nitrobenzene | ND | | 0.036 | 0.00885 |
| Isophorone | ND | | 0.036 | 0.015 |
| 2-Nitrophenol | ND | | 0.073 | 0.022 |
| 2,4-Dimethylphenol | ND | | 0.036 | 0.011 |
| Bis(2-chloroethoxy) methane | ND | | 0.036 | 0.00812 |
| 2,4-Dichlorophenol | ND | | 0.036 | 0.00969 |
| Naphthalene | ND | | 0.036 | 0.00532 |
| 4-Chloroaniline | ND | | 0.036 | 0.014 |
| Hexachlorobutadiene | ND | | 0.036 | 0.010 |
| Caprolactam | ND | | 0.073 | 0.027 |
| 4-Chloro-3-methylphenol | ND | | 0.036 | 0.014 |
| 2-Methylnaphthalene | ND | | 0.036 | 0.013 |
| Hexachlorocyclopentadiene | ND | | 0.073 | 0.063 |
| 2,4,6-Trichlorophenol | ND | | 0.036 | 0.010 |
| 2,4,5-Trichlorophenol | ND | | 0.036 | 0.028 |
| 1,1'-Biphenyl | ND | | 0.036 | 0.00542 |
| 2-Chloronaphthalene | ND | | 0.036 | 0.00842 |
| 2-Nitroaniline | ND | | 0.036 | 0.019 |
| Dimethyl phthalate | ND | | 0.036 | 0.00836 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05091-004
Client ID: SB6B/10-
Date Received: 11/20/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: A3909.D 11/28/2023 16:19

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
% Moisture: 9.10
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.073 | 0.042 |
| Acenaphthylene | ND | | 0.036 | 0.00797 |
| 3-Nitroaniline | ND | | 0.036 | 0.023 |
| Acenaphthene | ND | | 0.036 | 0.00719 |
| 2,4-Dinitrophenol | ND | | 0.073 | 0.015 |
| 4-Nitrophenol | ND | | 0.073 | 0.037 |
| 2,4-Dinitrotoluene | ND | | 0.073 | 0.041 |
| Dibenzofuran | ND | | 0.036 | 0.00477 |
| Diethyl phthalate | ND | | 0.036 | 0.011 |
| Fluorene | ND | | 0.036 | 0.00981 |
| 4-Chlorophenyl phenyl ether | ND | | 0.036 | 0.00801 |
| 4-Nitroaniline | ND | | 0.036 | 0.022 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.036 | 0.012 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.036 | 0.013 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.073 | 0.015 |
| N-Nitrosodiphenylamine | ND | | 0.036 | 0.00748 |
| 4-Bromophenyl phenyl ether | ND | | 0.036 | 0.010 |
| Hexachlorobenzene | ND | | 0.036 | 0.011 |
| Atrazine | ND | | 0.036 | 0.022 |
| Pentachlorophenol | ND | | 0.036 | 0.016 |
| Phenanthrene | 0.150 | | 0.036 | 0.00596 |
| Anthracene | 0.051 | | 0.036 | 0.00371 |
| Carbazole | ND | | 0.036 | 0.00849 |
| Di-n-butyl phthalate | ND | | 0.036 | 0.015 |
| Fluoranthene | 0.451 | | 0.036 | 0.012 |
| Pyrene | 0.386 | | 0.036 | 0.00848 |
| Butyl benzyl phthalate | ND | | 0.036 | 0.016 |
| 3,3'-Dichlorobenzidine | ND | | 0.036 | 0.026 |
| Benzo[a]anthracene | 0.225 | | 0.036 | 0.013 |
| Chrysene | 0.190 | | 0.036 | 0.010 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.036 | 0.023 |
| Di-n-octyl phthalate | ND | | 0.036 | 0.027 |
| Benzo[b]fluoranthene | 0.246 | | 0.036 | 0.018 |
| Benzo[k]fluoranthene | 0.142 | | 0.036 | 0.025 |
| Benzo[a]pyrene | 0.215 | | 0.036 | 0.018 |
| Indeno[1,2,3-cd]pyrene | 0.128 | | 0.036 | 0.023 |
| Dibenz[a,h]anthracene | 0.055 | | 0.036 | 0.015 |
| Benzo[g,h,i]perylene | 0.125 | | 0.036 | 0.028 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.073 | 0.041 |

Total Target Compounds (69): 2.36

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05091-004
Client ID: SB6B/10-
Date Received: 11/20/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Date File: A3909.D

GC/MS Column: DB-5
Sample wt/vol: 15.1g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 9.10

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| 000112-88-9 | 1-Octadecene | 0.215 | JN | 6.36 |

Total TICs = 0.215 JN

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search
B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: BLKS231121-01
Client ID: .
Date Received: NA
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: A3902.D 11/28/2023 14:27

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| N-Nitrosodimethylamine | ND | | 0.033 | 0.00969 |
| Benzaldehyde | ND | | 0.067 | 0.025 |
| Phenol | ND | | 0.033 | 0.00754 |
| Bis(2-chloroethyl) ether | ND | | 0.033 | 0.012 |
| 2-Chlorophenol | ND | | 0.033 | 0.011 |
| 2-Methylphenol | ND | | 0.033 | 0.015 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 0.033 | 0.00831 |
| 4-Methylphenol ** | ND | | 0.033 | 0.015 |
| N-Nitrosodi-n-propylamine | ND | | 0.033 | 0.021 |
| Acetophenone | ND | | 0.033 | 0.020 |
| 1,4-Dioxane | ND | | 0.033 | 0.022 |
| Hexachloroethane | ND | | 0.033 | 0.014 |
| Nitrobenzene | ND | | 0.033 | 0.00809 |
| Isophorone | ND | | 0.033 | 0.014 |
| 2-Nitrophenol | ND | | 0.067 | 0.020 |
| 2,4-Dimethylphenol | ND | | 0.033 | 0.00981 |
| Bis(2-chloroethoxy) methane | ND | | 0.033 | 0.00743 |
| 2,4-Dichlorophenol | ND | | 0.033 | 0.00886 |
| Naphthalene | ND | | 0.033 | 0.00486 |
| 4-Chloroaniline | ND | | 0.033 | 0.013 |
| Hexachlorobutadiene | ND | | 0.033 | 0.00925 |
| Caprolactam | ND | | 0.067 | 0.025 |
| 4-Chloro-3-methylphenol | ND | | 0.033 | 0.013 |
| 2-Methylnaphthalene | ND | | 0.033 | 0.012 |
| Hexachlorocyclopentadiene | ND | | 0.067 | 0.058 |
| 2,4,6-Trichlorophenol | ND | | 0.033 | 0.00916 |
| 2,4,5-Trichlorophenol | ND | | 0.033 | 0.025 |
| 1,1'-Biphenyl | ND | | 0.033 | 0.00496 |
| 2-Chloronaphthalene | ND | | 0.033 | 0.0077 |
| 2-Nitroaniline | ND | | 0.033 | 0.018 |
| Dimethyl phthalate | ND | | 0.033 | 0.00765 |

## SEMIVOLATILE ORGANICS

Lab ID: BLKS231121-01
Client ID: .
Date Received: NA
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: A3902.D 11/28/2023 14:27

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 0.067 | 0.038 |
| Acenaphthylene | ND | | 0.033 | 0.0073 |
| 3-Nitroaniline | ND | | 0.033 | 0.021 |
| Acenaphthene | ND | | 0.033 | 0.00658 |
| 2,4-Dinitrophenol | ND | | 0.067 | 0.014 |
| 4-Nitrophenol | ND | | 0.067 | 0.034 |
| 2,4-Dinitrotoluene | ND | | 0.067 | 0.038 |
| Dibenzofuran | ND | | 0.033 | 0.00436 |
| Diethyl phthalate | ND | | 0.033 | 0.010 |
| Fluorene | ND | | 0.033 | 0.00897 |
| 4-Chlorophenyl phenyl ether | ND | | 0.033 | 0.00733 |
| 4-Nitroaniline | ND | | 0.033 | 0.020 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 0.033 | 0.011 |
| 2,3,4,6-Tetrachlorophenol | ND | | 0.033 | 0.011 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.067 | 0.014 |
| N-Nitrosodiphenylamine | ND | | 0.033 | 0.00684 |
| 1,2-Diphenylhydrazine | ND | | 0.033 | 0.0074 |
| 4-Bromophenyl phenyl ether | ND | | 0.033 | 0.00924 |
| Hexachlorobenzene | ND | | 0.033 | 0.010 |
| Atrazine | ND | | 0.033 | 0.020 |
| Pentachlorophenol | ND | | 0.033 | 0.015 |
| Phenanthrene | ND | | 0.033 | 0.00545 |
| Anthracene | ND | | 0.033 | 0.00339 |
| Carbazole | ND | | 0.033 | 0.00777 |
| Di-n-butyl phthalate | ND | | 0.033 | 0.014 |
| Fluoranthene | ND | | 0.033 | 0.011 |
| Benzidine | ND | | 0.100 | 0.087 |
| Pyrene | ND | | 0.033 | 0.00776 |
| Butyl benzyl phthalate | ND | | 0.033 | 0.015 |
| 3,3'-Dichlorobenzidine | ND | | 0.033 | 0.024 |
| Benzo[a]anthracene | ND | | 0.033 | 0.012 |
| Chrysene | ND | | 0.033 | 0.0092 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.033 | 0.021 |
| Di-n-octyl phthalate | ND | | 0.033 | 0.024 |
| Benzo[b]fluoranthene | ND | | 0.033 | 0.016 |
| Benzo[k]fluoranthene | ND | | 0.033 | 0.023 |
| Benzo[a]pyrene | ND | | 0.033 | 0.016 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.033 | 0.021 |
| Dibenz[a,h]anthracene | ND | | 0.033 | 0.013 |
| Benzo[g,h,i]perylene | ND | | 0.033 | 0.025 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 0.067 | 0.038 |

Total Target Compounds (72): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
Q --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: BLKS231121-01
Client ID: .
Date Received: NA
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: A3902.D 11/28/2023 14:27

GC/MS Column: DB-5
Sample wt/vol: 15.0g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: NA

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|

No peaks detected

Total TICs = 0

## SEMIVOLATILE ORGANICS

Lab ID: E23-05091-005
Client ID: TWP6
Date Received: 11/20/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/29/2023
Data file: B6015.D 11/29/2023 22:34
SIM Data file: B5995.D 11/29/2023 17:13

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 2.00 | 0.492 |
| Phenol | ND | | 1.00 | 0.276 |
| Bis(2-chloroethyl) ether | ND | | 1.00 | 0.459 |
| 2-Chlorophenol | ND | | 1.00 | 0.257 |
| 2-Methylphenol | ND | | 1.00 | 0.267 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 1.00 | 0.682 |
| 4-Methylphenol ** | ND | | 1.00 | 0.337 |
| N-Nitrosodi-n-propylamine | ND | | 1.00 | 0.391 |
| Acetophenone | ND | | 1.00 | 0.241 |
| Hexachloroethane | ND | | 1.00 | 0.470 |
| Nitrobenzene | ND | | 1.00 | 0.442 |
| Isophorone | ND | | 1.00 | 0.232 |
| 2-Nitrophenol | ND | | 2.00 | 0.581 |
| 2,4-Dimethylphenol | ND | | 2.00 | 1.06 |
| Bis(2-chloroethoxy) methane | ND | | 1.00 | 0.344 |
| 2,4-Dichlorophenol | ND | | 1.00 | 0.383 |
| Naphthalene | ND | | 1.00 | 0.183 |
| 4-Chloroaniline | ND | | 1.00 | 0.612 |
| Hexachlorobutadiene | ND | | 1.00 | 0.561 |
| Caprolactam | ND | | 3.00 | 1.15 |
| 4-Chloro-3-methylphenol | ND | | 1.00 | 0.336 |
| 2-Methylnaphthalene | ND | | 1.00 | 0.200 |
| Hexachlorocyclopentadiene | ND | | 2.00 | 1.89 |
| 2,4,6-Trichlorophenol | ND | | 1.00 | 0.497 |
| 2,4,5-Trichlorophenol | ND | | 2.00 | 0.505 |
| 1,1'-Biphenyl | ND | | 1.00 | 0.212 |
| 2-Chloronaphthalene | ND | | 1.00 | 0.234 |
| 2-Nitroaniline | ND | | 2.00 | 0.702 |
| Dimethyl phthalate | ND | | 1.00 | 0.197 |

## SEMIVOLATILE ORGANICS

Lab ID: E23-05091-005
Client ID: TWP6
Date Received: 11/20/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/29/2023
Data file: B6015.D 11/29/2023 22:34
SIM Data file: B5995.D 11/29/2023 17:13

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 1.00 | 0.996 |
| Acenaphthylene | ND | | 1.00 | 0.268 |
| 3-Nitroaniline | ND | | 3.00 | 0.436 |
| Acenaphthene | ND | | 1.00 | 0.281 |
| 2,4-Dinitrophenol | ND | | 3.00 | 2.35 |
| 4-Nitrophenol | ND | | 3.00 | 2.41 |
| 2,4-Dinitrotoluene | ND | | 1.00 | 0.886 |
| Dibenzofuran | ND | | 1.00 | 0.199 |
| Diethyl phthalate | ND | | 1.00 | 0.239 |
| Fluorene | ND | | 1.00 | 0.367 |
| 4-Chlorophenyl phenyl ether | ND | | 1.00 | 0.396 |
| 4-Nitroaniline | ND | | 2.00 | 0.692 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 1.00 | 0.326 |
| 2,3,4,6-Tetrachlorophenol | ND | | 1.00 | 0.872 |
| 4,6-Dinitro-2-methylphenol * | ND | | 0.100 | 0.033 |
| N-Nitrosodiphenylamine | ND | | 1.00 | 0.196 |
| 4-Bromophenyl phenyl ether | ND | | 1.00 | 0.940 |
| Hexachlorobenzene * | ND | | 0.020 | 0.016 |
| Atrazine | ND | | 1.00 | 0.468 |
| Pentachlorophenol * | ND | | 0.100 | 0.052 |
| Phenanthrene | ND | | 1.00 | 0.263 |
| Anthracene | ND | | 1.00 | 0.560 |
| Carbazole | ND | | 1.00 | 0.594 |
| Di-n-butyl phthalate | ND | | 1.00 | 0.343 |
| Fluoranthene | ND | | 1.00 | 0.482 |
| Pyrene | ND | | 1.00 | 0.555 |
| Butyl benzyl phthalate | ND | | 1.00 | 0.642 |
| 3,3'-Dichlorobenzidine | ND | | 1.00 | 0.524 |
| Benzo[a]anthracene * | ND | | 0.100 | 0.029 |
| Chrysene | ND | | 1.00 | 0.232 |
| Bis(2-ethylhexyl) phthalate | ND | | 2.00 | 1.38 |
| Di-n-octyl phthalate | ND | | 2.00 | 1.09 |
| Benzo[b]fluoranthene * | ND | | 0.100 | 0.026 |
| Benzo[k]fluoranthene * | ND | | 0.100 | 0.035 |
| Benzo[a]pyrene * | ND | | 0.100 | 0.027 |
| Indeno[1,2,3-cd]pyrene * | ND | | 0.100 | 0.036 |
| Dibenz[a,h]anthracene * | ND | | 0.100 | 0.031 |
| Benzo[g,h,i]perylene | ND | | 2.00 | 1.04 |
| 1,4-Dioxane | ND | | 0.400 | 0.329 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 1.00 | 0.886 |

Total Target Compounds (69): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

* - RL & MDL from SIM run
** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## SEMIVOLATILE ORGANICS
### Tentatively Identified Compounds

Lab ID: E23-05091-005
Client ID: TWP6
Date Received: 11/20/2023
Date Extracted: 11/20/2023
Date Analyzed: 11/29/2023
Date File: B6015.D

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| CAS # | Compound | Estimated Concentration | Q | Retention Time |
|---|---|---|---|---|
| | Unknown SV | 20.0 | J | 2.05 |
| | Unknown SV | 3.50 | J | 2.06 |
| | Unknown SV | 7.00 | J | 2.10 |
| | Unknown SV | 11.1 | J | 2.14 |
| 000057-10-3 | n-Hexadecanoic acid | 4.10 | JN | 4.67 |

Total TICs = 45.7 JN

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search
B --- Compound detected in Blank

## SEMIVOLATILE ORGANICS

Lab ID: BLKA231120-04
Client ID: .
Date Received: NA
Date Extracted: 11/20/2023
Date Analyzed: 11/30/2023
Data file: B6026.D 11/30/2023 11:58
SIM Data file: B5984.D 11/29/2023 13:10

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Benzaldehyde | ND | | 2.00 | 0.492 |
| Phenol | ND | | 1.00 | 0.276 |
| Bis(2-chloroethyl) ether | ND | | 1.00 | 0.459 |
| 2-Chlorophenol | ND | | 1.00 | 0.257 |
| 2-Methylphenol | ND | | 1.00 | 0.267 |
| 2,2'-Oxybis(1-Chloropropane) | ND | | 1.00 | 0.682 |
| 4-Methylphenol ** | ND | | 1.00 | 0.337 |
| N-Nitrosodi-n-propylamine | ND | | 1.00 | 0.391 |
| Acetophenone | ND | | 1.00 | 0.241 |
| Hexachloroethane | ND | | 1.00 | 0.470 |
| Nitrobenzene | ND | | 1.00 | 0.442 |
| Isophorone | ND | | 1.00 | 0.232 |
| 2-Nitrophenol | ND | | 2.00 | 0.581 |
| 2,4-Dimethylphenol | ND | | 2.00 | 1.06 |
| Bis(2-chloroethoxy) methane | ND | | 1.00 | 0.344 |
| 2,4-Dichlorophenol | ND | | 1.00 | 0.383 |
| Naphthalene | ND | | 1.00 | 0.183 |
| 4-Chloroaniline | ND | | 1.00 | 0.612 |
| Hexachlorobutadiene | ND | | 1.00 | 0.561 |
| Caprolactam | ND | | 3.00 | 1.15 |
| 4-Chloro-3-methylphenol | ND | | 1.00 | 0.336 |
| 2-Methylnaphthalene | ND | | 1.00 | 0.200 |
| Hexachlorocyclopentadiene | ND | | 2.00 | 1.89 |
| 2,4,6-Trichlorophenol | ND | | 1.00 | 0.497 |
| 2,4,5-Trichlorophenol | ND | | 2.00 | 0.505 |
| 1,1'-Biphenyl | ND | | 1.00 | 0.212 |
| 2-Chloronaphthalene | ND | | 1.00 | 0.234 |
| 2-Nitroaniline | ND | | 2.00 | 0.702 |
| Dimethyl phthalate | ND | | 1.00 | 0.197 |

## SEMIVOLATILE ORGANICS

Lab ID: BLKA231120-04
Client ID: .
Date Received: NA
Date Extracted: 11/20/2023
Date Analyzed: 11/30/2023
Data file: B6026.D 11/30/2023 11:58
SIM Data file: B5984.D 11/29/2023 13:10

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| 2,6-Dinitrotoluene | ND | | 1.00 | 0.996 |
| Acenaphthylene | ND | | 1.00 | 0.268 |
| 3-Nitroaniline | ND | | 3.00 | 0.436 |
| Acenaphthene | ND | | 1.00 | 0.281 |
| 2,4-Dinitrophenol | ND | | 3.00 | 2.35 |
| 4-Nitrophenol | ND | | 3.00 | 2.41 |
| 2,4-Dinitrotoluene | ND | | 1.00 | 0.886 |
| Dibenzofuran | ND | | 1.00 | 0.199 |
| Diethyl phthalate | ND | | 1.00 | 0.239 |
| Fluorene | ND | | 1.00 | 0.367 |
| 4-Chlorophenyl phenyl ether | ND | | 1.00 | 0.396 |
| 4-Nitroaniline | ND | | 2.00 | 0.692 |
| 1,2,4,5-Tetrachlorobenzene | ND | | 1.00 | 0.326 |
| 2,3,4,6-Tetrachlorophenol | ND | | 1.00 | 0.872 |
| 4,6-Dinitro-2-methylphenol * | ND | | 0.100 | 0.033 |
| N-Nitrosodiphenylamine | ND | | 1.00 | 0.196 |
| 4-Bromophenyl phenyl ether | ND | | 1.00 | 0.940 |
| Hexachlorobenzene * | ND | | 0.020 | 0.016 |
| Atrazine | ND | | 1.00 | 0.468 |
| Pentachlorophenol * | ND | | 0.100 | 0.052 |
| Phenanthrene | ND | | 1.00 | 0.263 |
| Anthracene | ND | | 1.00 | 0.560 |
| Carbazole | ND | | 1.00 | 0.594 |
| Di-n-butyl phthalate | ND | | 1.00 | 0.343 |
| Fluoranthene | ND | | 1.00 | 0.482 |
| Pyrene | ND | | 1.00 | 0.555 |
| Butyl benzyl phthalate | ND | | 1.00 | 0.642 |
| 3,3'-Dichlorobenzidine | ND | | 1.00 | 0.524 |
| Benzo[a]anthracene * | ND | | 0.100 | 0.029 |
| Chrysene | ND | | 1.00 | 0.232 |
| Bis(2-ethylhexyl) phthalate | ND | | 2.00 | 1.38 |
| Di-n-octyl phthalate | ND | | 2.00 | 1.09 |
| Benzo[b]fluoranthene * | ND | | 0.100 | 0.026 |
| Benzo[k]fluoranthene * | ND | | 0.100 | 0.035 |
| Benzo[a]pyrene * | ND | | 0.100 | 0.027 |
| Indeno[1,2,3-cd]pyrene * | ND | | 0.100 | 0.036 |
| Dibenz[a,h]anthracene * | ND | | 0.100 | 0.031 |
| Benzo[g,h,i]perylene | ND | | 2.00 | 1.04 |
| 1,4-Dioxane | ND | | 0.400 | 0.329 |
| Dinitrotoluene (2,4- and 2,6-) | ND | | 1.00 | 0.886 |

Total Target Compounds (69): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

* - RL & MDL from SIM run
** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05091-001
Client ID: SB9A/0-2
Date Received: 11/20/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/27/2023
Data file: R5477.D 11/27/2023 15:42

GC Column: DB-5/DB1701P
Sample wt/vol: 15.04g
Matrix-Units: Soil-mg/Kg
% Moisture: 6.70
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00356 | 0.0011 |
| Aroclor-1221 | ND | | 0.00356 | 0.0011 |
| Aroclor-1232 | ND | | 0.00356 | 0.0011 |
| Aroclor-1242 | ND | | 0.00356 | 0.0011 |
| Aroclor-1248 | ND | | 0.00356 | 0.0011 |
| Aroclor-1254 | ND | | 0.00356 | 0.0011 |
| Aroclor-1260 | ND | | 0.00356 | 0.0011 |
| Aroclor-1262 | ND | | 0.00356 | 0.0011 |
| Aroclor-1268 | ND | | 0.00356 | 0.0011 |
| PCBs | ND | | 0.00356 | 0.0011 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05091-002
Client ID: SB9B/10-
Date Received: 11/20/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/27/2023
Data file: R5478.D 11/27/2023 15:59

GC Column: DB-5/DB1701P
Sample wt/vol: 15.06g
Matrix-Units: Soil-mg/Kg
% Moisture: 6.70
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00356 | 0.0011 |
| Aroclor-1221 | ND | | 0.00356 | 0.0011 |
| Aroclor-1232 | ND | | 0.00356 | 0.0011 |
| Aroclor-1242 | ND | | 0.00356 | 0.0011 |
| Aroclor-1248 | ND | | 0.00356 | 0.0011 |
| Aroclor-1254 | ND | | 0.00356 | 0.0011 |
| Aroclor-1260 | ND | | 0.00356 | 0.0011 |
| Aroclor-1262 | ND | | 0.00356 | 0.0011 |
| Aroclor-1268 | ND | | 0.00356 | 0.0011 |
| PCBs | ND | | 0.00356 | 0.0011 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05091-003
Client ID: SB6A/0-2
Date Received: 11/20/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/27/2023
Data file: R5479.D 11/27/2023 16:16

GC Column: DB-5/DB1701P
Sample wt/vol: 15.04g
Matrix-Units: Soil-mg/Kg
% Moisture: 6.70
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00356 | 0.0011 |
| Aroclor-1221 | ND | | 0.00356 | 0.0011 |
| Aroclor-1232 | ND | | 0.00356 | 0.0011 |
| Aroclor-1242 | ND | | 0.00356 | 0.0011 |
| Aroclor-1248 | ND | | 0.00356 | 0.0011 |
| Aroclor-1254 | ND | | 0.00356 | 0.0011 |
| Aroclor-1260 | ND | | 0.00356 | 0.0011 |
| Aroclor-1262 | ND | | 0.00356 | 0.0011 |
| Aroclor-1268 | ND | | 0.00356 | 0.0011 |
| PCBs | ND | | 0.00356 | 0.0011 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: E23-05091-004
Client ID: SB6B/10-
Date Received: 11/20/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/27/2023
Data file: R5480.D 11/27/2023 16:34

GC Column: DB-5/DB1701P
Sample wt/vol: 15.04g
Matrix-Units: Soil-mg/Kg
% Moisture: 9.10
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00366 | 0.0011 |
| Aroclor-1221 | ND | | 0.00366 | 0.0011 |
| Aroclor-1232 | ND | | 0.00366 | 0.0011 |
| Aroclor-1242 | ND | | 0.00366 | 0.0011 |
| Aroclor-1248 | ND | | 0.00366 | 0.0011 |
| Aroclor-1254 | ND | | 0.00366 | 0.0011 |
| Aroclor-1260 | ND | | 0.00366 | 0.0011 |
| Aroclor-1262 | ND | | 0.00366 | 0.0011 |
| Aroclor-1268 | ND | | 0.00366 | 0.0011 |
| PCBs | ND | | 0.00366 | 0.0011 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: BLKS231121-02
Client ID: PCB
Date Received: NA
Date Extracted: 11/21/2023
Date Analyzed: 11/27/2023
Data file: R5457.D 11/27/2023 09:38

GC Column: DB-5/DB1701P
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.00333 | 0.001 |
| Aroclor-1221 | ND | | 0.00333 | 0.001 |
| Aroclor-1232 | ND | | 0.00333 | 0.001 |
| Aroclor-1242 | ND | | 0.00333 | 0.001 |
| Aroclor-1248 | ND | | 0.00333 | 0.001 |
| Aroclor-1254 | ND | | 0.00333 | 0.001 |
| Aroclor-1260 | ND | | 0.00333 | 0.001 |
| Aroclor-1262 | ND | | 0.00333 | 0.001 |
| Aroclor-1268 | ND | | 0.00333 | 0.001 |
| PCBs | ND | | 0.00333 | 0.001 |

D --- Dilution Performed
J — Value Less than RL & greater than MDL
E — Exceeds upper level of Calibration curve
B — Compound detected in Blank
C — Common laboratory contamination

## PCB's

Lab ID: E23-05091-005
Client ID: TWP6
Date Received: 11/20/2023
Date Extracted: 11/27/2023
Date Analyzed: 11/28/2023
Data file: R5507.D 11/28/2023 12:15

GC Column: DB-5/DB1701P
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.050 | 0.015 |
| Aroclor-1221 | ND | | 0.050 | 0.015 |
| Aroclor-1232 | ND | | 0.050 | 0.015 |
| Aroclor-1242 | ND | | 0.050 | 0.015 |
| Aroclor-1248 | ND | | 0.050 | 0.015 |
| Aroclor-1254 | ND | | 0.050 | 0.015 |
| Aroclor-1260 | ND | | 0.050 | 0.015 |
| Aroclor-1262 | ND | | 0.050 | 0.015 |
| Aroclor-1268 | ND | | 0.050 | 0.015 |
| PCBs | ND | | 0.050 | 0.015 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PCB's

Lab ID: BLKA231127-04
Client ID: PCB
Date Received: NA
Date Extracted: 11/27/2023
Date Analyzed: 11/28/2023
Data file: R5503.D 11/28/2023 09:13

GC Column: DB-5/DB1701P
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| Aroclor-1016 | ND | | 0.050 | 0.015 |
| Aroclor-1221 | ND | | 0.050 | 0.015 |
| Aroclor-1232 | ND | | 0.050 | 0.015 |
| Aroclor-1242 | ND | | 0.050 | 0.015 |
| Aroclor-1248 | ND | | 0.050 | 0.015 |
| Aroclor-1254 | ND | | 0.050 | 0.015 |
| Aroclor-1260 | ND | | 0.050 | 0.015 |
| Aroclor-1262 | ND | | 0.050 | 0.015 |
| Aroclor-1268 | ND | | 0.050 | 0.015 |
| PCBs | ND | | 0.050 | 0.015 |

D — Dilution Performed
J — Value Less than RL & greater than MDL
E — Exceeds upper level of Calibration curve

B — Compound detected in Blank
C — Common laboratory contamination

## PESTICIDES

Lab ID: E23-05091-001
Client ID: SB9A/0-2
Date Received: 11/20/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: V1688.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.04g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 6.70

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.000712 | 0.000127 |
| beta-BHC | ND | | 0.000712 | 0.000166 |
| gamma-BHC (Lindane) | ND | | 0.000712 | 0.000159 |
| delta-BHC | ND | | 0.000712 | 0.000138 |
| Heptachlor | ND | | 0.000712 | 0.000169 |
| Aldrin | ND | | 0.000712 | 0.000149 |
| Heptachlor epoxide | ND | | 0.000712 | 0.000155 |
| Endosulfan I | ND | | 0.000712 | 0.000159 |
| 4,4'-DDE | 0.011 | | 0.000712 | 0.000145 |
| Dieldrin | ND | | 0.000712 | 0.000145 |
| Endrin | ND | | 0.000712 | 0.00018 |
| Endosulfan II | ND | | 0.000712 | 0.000163 |
| 4,4'-DDD | 0.00103 | | 0.000712 | 0.00019 |
| Endrin aldehyde | ND | | 0.000712 | 0.000149 |
| Endosulfan sulfate | ND | | 0.000712 | 0.000176 |
| 4,4'-DDT | 0.00808 | | 0.000712 | 0.000133 |
| Endrin ketone | ND | | 0.000712 | 0.000139 |
| Methoxychlor | ND | | 0.000712 | 0.00019 |
| alpha-Chlordane | 0.00913 | | 0.000712 | 0.000157 |
| gamma-Chlordane | 0.00769 | | 0.000712 | 0.00014 |
| Toxaphene | ND | | 0.0089 | 0.00356 |
| Endosulfan (I and II) | ND | | 0.000712 | 0.000159 |
| Chlordane (alpha and gamma) | 0.017 | | 0.000712 | 0.00014 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PESTICIDES

Lab ID: E23-05091-002
Client ID: SB9B/10-
Date Received: 11/20/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: V1689.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.06g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 6.70

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.000712 | 0.000127 |
| beta-BHC | ND | | 0.000712 | 0.000166 |
| gamma-BHC (Lindane) | ND | | 0.000712 | 0.000159 |
| delta-BHC | ND | | 0.000712 | 0.000138 |
| Heptachlor | ND | | 0.000712 | 0.000169 |
| Aldrin | ND | | 0.000712 | 0.000149 |
| Heptachlor epoxide | ND | | 0.000712 | 0.000155 |
| Endosulfan I | ND | | 0.000712 | 0.000159 |
| 4,4'-DDE | 0.017 | | 0.000712 | 0.000145 |
| Dieldrin | ND | | 0.000712 | 0.000145 |
| Endrin | ND | | 0.000712 | 0.00018 |
| Endosulfan II | ND | | 0.000712 | 0.000163 |
| 4,4'-DDD | ND | | 0.000712 | 0.00019 |
| Endrin aldehyde | ND | | 0.000712 | 0.000149 |
| Endosulfan sulfate | ND | | 0.000712 | 0.000176 |
| 4,4'-DDT | 0.023 | | 0.000712 | 0.000132 |
| Endrin ketone | ND | | 0.000712 | 0.000139 |
| Methoxychlor | ND | | 0.000712 | 0.00019 |
| alpha-Chlordane | 0.00246 | | 0.000712 | 0.000157 |
| gamma-Chlordane | 0.00274 | | 0.000712 | 0.00014 |
| Toxaphene | ND | | 0.0089 | 0.00356 |
| Endosulfan (I and II) | ND | | 0.000712 | 0.000159 |
| Chlordane (alpha and gamma) | 0.0052 | | 0.000712 | 0.00014 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PESTICIDES

Lab ID: E23-05091-003
Client ID: SB6A/0-2
Date Received: 11/20/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: V1690.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.04g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 6.70

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.000712 | 0.000127 |
| beta-BHC | ND | | 0.000712 | 0.000166 |
| gamma-BHC (Lindane) | ND | | 0.000712 | 0.000159 |
| delta-BHC | ND | | 0.000712 | 0.000138 |
| Heptachlor | ND | | 0.000712 | 0.000169 |
| Aldrin | ND | | 0.000712 | 0.000149 |
| Heptachlor epoxide | ND | | 0.000712 | 0.000155 |
| Endosulfan I | ND | | 0.000712 | 0.000159 |
| 4,4'-DDE | 0.023 | | 0.000712 | 0.000145 |
| Dieldrin | ND | | 0.000712 | 0.000145 |
| Endrin | ND | | 0.000712 | 0.00018 |
| Endosulfan II | ND | | 0.000712 | 0.000163 |
| 4,4'-DDD | 0.00236 | | 0.000712 | 0.00019 |
| Endrin aldehyde | ND | | 0.000712 | 0.000149 |
| Endosulfan sulfate | ND | | 0.000712 | 0.000176 |
| 4,4'-DDT | 0.038 | | 0.000712 | 0.000133 |
| Endrin ketone | ND | | 0.000712 | 0.000139 |
| Methoxychlor | ND | | 0.000712 | 0.00019 |
| alpha-Chlordane | 0.00126 | | 0.000712 | 0.000157 |
| gamma-Chlordane | 0.00125 | | 0.000712 | 0.00014 |
| Toxaphene | ND | | 0.0089 | 0.00356 |
| Endosulfan (I and II) | ND | | 0.000712 | 0.000159 |
| Chlordane (alpha and gamma) | 0.00251 | | 0.000712 | 0.00014 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PESTICIDES

Lab ID: E23-05091-004
Client ID: SB6B/10-
Date Received: 11/20/2023
Date Extracted: 11/21/2023
Date Analyzed: 11/28/2023
Data file: V1691.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.04g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 9.10

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.000732 | 0.000131 |
| beta-BHC | ND | | 0.000732 | 0.000171 |
| gamma-BHC (Lindane) | ND | | 0.000732 | 0.000163 |
| delta-BHC | ND | | 0.000732 | 0.000142 |
| Heptachlor | ND | | 0.000732 | 0.000174 |
| Aldrin | ND | | 0.000732 | 0.000153 |
| Heptachlor epoxide | ND | | 0.000732 | 0.000159 |
| Endosulfan I | ND | | 0.000732 | 0.000164 |
| 4,4'-DDE | 0.000726 | J | 0.000732 | 0.000149 |
| Dieldrin | ND | | 0.000732 | 0.000149 |
| Endrin | ND | | 0.000732 | 0.000184 |
| Endosulfan II | ND | | 0.000732 | 0.000168 |
| 4,4'-DDD | ND | | 0.000732 | 0.000195 |
| Endrin aldehyde | ND | | 0.000732 | 0.000153 |
| Endosulfan sulfate | ND | | 0.000732 | 0.000181 |
| 4,4'-DDT | 0.00113 | | 0.000732 | 0.000136 |
| Endrin ketone | ND | | 0.000732 | 0.000142 |
| Methoxychlor | ND | | 0.000732 | 0.000196 |
| alpha-Chlordane | ND | | 0.000732 | 0.000161 |
| gamma-Chlordane | ND | | 0.000732 | 0.000144 |
| Toxaphene | ND | | 0.00915 | 0.00366 |
| Endosulfan (I and II) | ND | | 0.000732 | 0.000164 |
| Chlordane (alpha and gamma) | ND | | 0.000732 | 0.000144 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PESTICIDES

Lab ID: BLKS231121-02
Client ID: Pest
Date Received: NA
Date Extracted: 11/21/2023
Date Analyzed: 11/27/2023
Data file: V1645.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: NA

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.000666 | 0.000119 |
| beta-BHC | ND | | 0.000666 | 0.000156 |
| gamma-BHC (Lindane) | ND | | 0.000666 | 0.000149 |
| delta-BHC | ND | | 0.000666 | 0.000129 |
| Heptachlor | ND | | 0.000666 | 0.000158 |
| Aldrin | ND | | 0.000666 | 0.000139 |
| Heptachlor epoxide | ND | | 0.000666 | 0.000145 |
| Endosulfan I | ND | | 0.000666 | 0.000149 |
| 4,4'-DDE | ND | | 0.000666 | 0.000136 |
| Dieldrin | ND | | 0.000666 | 0.000136 |
| Endrin | ND | | 0.000666 | 0.000168 |
| Endosulfan II | ND | | 0.000666 | 0.000153 |
| 4,4'-DDD | ND | | 0.000666 | 0.000178 |
| Endrin aldehyde | ND | | 0.000666 | 0.00014 |
| Endosulfan sulfate | ND | | 0.000666 | 0.000165 |
| 4,4'-DDT | ND | | 0.000666 | 0.000124 |
| Endrin ketone | ND | | 0.000666 | 0.00013 |
| Methoxychlor | ND | | 0.000666 | 0.000178 |
| alpha-Chlordane | ND | | 0.000666 | 0.000147 |
| gamma-Chlordane | ND | | 0.000666 | 0.000131 |
| Toxaphene | ND | | 0.00833 | 0.00333 |
| Endosulfan (I and II) | ND | | 0.000666 | 0.000149 |
| Chlordane (alpha and gamma) | ND | | 0.000666 | 0.000131 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## PESTICIDES

Lab ID: E23-05091-005
Client ID: TWP6
Date Received: 11/20/2023
Date Extracted: 11/27/2023
Date Analyzed: 11/28/2023
Data file: O8829.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 500ml
Matrix-Units: Aqueous-mg/L
Dilution Factor: 1
% Moisture: 100

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.00001 | 0.00000206 |
| beta-BHC | ND | | 0.00001 | 0.00000303 |
| gamma-BHC (Lindane) | ND | | 0.00001 | 0.00000201 |
| delta-BHC | ND | | 0.00001 | 0.00000238 |
| Heptachlor | ND | | 0.00001 | 0.00000235 |
| Aldrin | ND | | 0.00001 | 0.00000188 |
| Heptachlor epoxide | ND | | 0.00001 | 0.00000217 |
| Endosulfan I | ND | | 0.00001 | 0.00000208 |
| 4,4'-DDE | ND | | 0.00001 | 0.00000197 |
| Dieldrin | ND | | 0.00001 | 0.00000237 |
| Endrin | ND | | 0.00001 | 0.00000289 |
| Endosulfan II | ND | | 0.00001 | 0.00000258 |
| 4,4'-DDD | ND | | 0.00001 | 0.00000294 |
| Endrin aldehyde | ND | | 0.00001 | 0.00000230 |
| Endosulfan sulfate | ND | | 0.00001 | 0.00000314 |
| 4,4'-DDT | ND | | 0.00001 | 0.00000202 |
| Endrin ketone | ND | | 0.00001 | 0.00000323 |
| Methoxychlor | ND | | 0.00001 | 0.00000337 |
| alpha-Chlordane | ND | | 0.00001 | 0.00000215 |
| gamma-Chlordane | ND | | 0.00001 | 0.00000314 |
| Toxaphene | ND | | 0.000125 | 0.00005 |
| Endosulfan (I and II) | ND | | 0.00001 | 0.00000208 |
| Chlordane (alpha and gamma) | ND | | 0.00001 | 0.00000215 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

# PESTICIDES

Lab ID: BLKA231127-04
Client ID: Pest
Date Received: NA
Date Extracted: 11/27/2023
Date Analyzed: 11/28/2023
Data file: 08825.D

GC Column: RTX-CLP1/CLP2
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

| Compound | Concentration | Q | RL | MDL |
|---|---|---|---|---|
| alpha-BHC | ND | | 0.010 | 0.00206 |
| beta-BHC | ND | | 0.010 | 0.00303 |
| gamma-BHC (Lindane) | ND | | 0.010 | 0.00201 |
| delta-BHC | ND | | 0.010 | 0.00238 |
| Heptachlor | ND | | 0.010 | 0.00235 |
| Aldrin | ND | | 0.010 | 0.00187 |
| Heptachlor epoxide | ND | | 0.010 | 0.00217 |
| Endosulfan I | ND | | 0.010 | 0.00208 |
| 4,4'-DDE | ND | | 0.010 | 0.00197 |
| Dieldrin | ND | | 0.010 | 0.00237 |
| Endrin | ND | | 0.010 | 0.00289 |
| Endosulfan II | ND | | 0.010 | 0.00258 |
| 4,4'-DDD | ND | | 0.010 | 0.00294 |
| Endrin aldehyde | ND | | 0.010 | 0.0023 |
| Endosulfan sulfate | ND | | 0.010 | 0.00314 |
| 4,4'-DDT | ND | | 0.010 | 0.00202 |
| Endrin ketone | ND | | 0.010 | 0.00323 |
| Methoxychlor | ND | | 0.010 | 0.00337 |
| alpha-Chlordane | ND | | 0.010 | 0.00215 |
| gamma-Chlordane | ND | | 0.010 | 0.00314 |
| Toxaphene | ND | | 0.125 | 0.050 |
| Endosulfan (I and II) | ND | | 0.010 | 0.00208 |
| Chlordane (alpha and gamma) | ND | | 0.010 | 0.00215 |

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

## Cyanide, Total

Client/Project: HK Engineering/HK2661.1

Date Received: 11/20/23 16:48
Method: SW 9012B

Analyst: B. Pillsbury

| Lab ID | Client ID | Result | Q | DF | Matrix-Unit | MDL | RL | % Solid | Date Collected | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| E23-05091-001 | SB9A | ND | | 1 | Soil-mg/Kg | 0.214 | 1.07 | 93.3 | 11/20/23 08:15 | 11/28/23 14:45 |
| E23-05091-002 | SB9B | ND | | 1 | Soil-mg/Kg | 0.214 | 1.07 | 93.3 | 11/20/23 08:25 | 11/28/23 14:45 |
| E23-05091-003 | SB6A | ND | | 1 | Soil-mg/Kg | 0.214 | 1.07 | 93.3 | 11/20/23 09:45 | 11/28/23 14:45 |
| E23-05091-004 | SB6B | ND | | 1 | Soil-mg/Kg | 0.220 | 1.10 | 90.9 | 11/20/23 09:55 | 11/28/23 14:45 |

Certified for NJDEP, NY(DOH)
NJ ID# 14751
NY ID# 11402

## General Chemistry Quality Control

## Cyanide, Total

**Matrix: Soil**
**Unit: mg/Kg**

**Batch: AP013-0116**
**Method: SW 9012B**

**Date: 11/28/2023**

| | Sample ID | Result | TrueValue / SpikeAdded | RPD | RPD Limit | % Recovery | %Recovery Limit |
|---|---|---|---|---|---|---|---|
| BLK | BLKS231128 | < 0.200 | NA | NA | NA | NA | NA |
| LCS (ppm) | ICV231128.007_07 | 12.3 | 12.5 | NA | NA | 98.4 | 85-115 |
| SAMPLE | E23-05091-001 | < 0.214 | NA | NA | NA | NA | NA |
| DUP | E23-05091-001DUP | < 0.214 | NA | NC | 20 | NA | NA |
| MS | E23-05091-001MS | 12.8 | 13.4 | NA | NA | 95.5 | 90-110 |
| MSD | E23-05091-001MSD | 13.3 | 13.4 | 4 | 20 | 99.3 | 90-110 |

The above blank result applies to the follow samples:

E23-05091-001
E23-05091-002
E23-05091-003
E23-05091-004
E23-05058-002
E23-05084-006

See "Initial & Continuing Calibration Verification" page for ICV results. The ICV (Initial Calibration Verification) sample doubles as the LCS.

NA - Not Applicable
ND - Not Detected
NC - Non calculable RPD due to value less than the detection limit

INITIAL & CONTINUING CALIBRATION VERIFICATION

## Cyanide, Total

| | |
|---|---|
| Batch: AP013-0116 | Date & Time: 11/28/2023 14:45 |
| Method: SW 9012B | Analyst: Brianna Pillsbury |

| | True Value | Result | % REC | Unit |
|---|---|---|---|---|
| BLKS231128 | | < 0.200 | | mg/Kg |
| ICV231128 | 12.5 | 12.3 | 98.4 | mg/Kg |
| CCV231128.009_09 | 0.250 | 0.258 | 103 | mg/L |
| CCV231128.021_21 | 0.250 | 0.257 | 103 | mg/L |
| CCV231128.025_25 | 0.250 | 0.259 | 104 | mg/L |
| | | | | |
| | | | | |
| | | | | |

The ICV (Initial Calibration Verification) sample doubles as the LCS.

NJDEP FORM M-9A (12/94)

## Cyanide, Total

Client/Project: HK Engineering/HK2661.1

Date Received: 11/20/23 16:48
Method: EPA 335.4

Analyst: B. Pillsbury

| Lab ID | Client ID | Result | Q | DF | Matrix-Unit | MDL | RL | % Solid | Date Collected | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| E23-05091-005 | TWP6 | ND | | 1 | Aqueous-ug/L | 4.00 | 20.0 | 0 | 11/20/23 10:15 | 11/28/23 15:25 |

Certified for NJDEP, NY(DOH)
NJ ID# 14751
NY ID# 11402

General Chemistry Quality Control

## Cyanide, Total

**Matrix: Aqueous**
**Unit: ug/L**

**Batch: AP013-0117**
**Method: EPA 335.4**

**Date: 11/28/2023**

| | Sample ID | Result | TrueValue / SpikeAdded | RPD | RPD Limit | % Recovery | %Recovery Limit |
|---|---|---|---|---|---|---|---|
| BLK | BLKA231128 | < 4.00 | NA | NA | NA | NA | NA |
| LCS | ICV231128.007_07 | 238 | 250 | NA | NA | 95.2 | 90-110 |
| SAMPLE | E23-05091-005 | < 4.00 | NA | NA | NA | NA | NA |
| DUP | E23-05091-005DUP | < 4.00 | NA | NC | 20 | NA | NA |
| MS | E23-05091-005MS | 250 | 250 | NA | NA | 100 | 90-110 |
| MSD | E23-05091-005MSD | 246 | 250 | 2 | 20 | 98.4 | 90-110 |

The above blank result applies to the follow samples:

E23-05091-005

See "Initial & Continuing Calibration Verification" page for ICV results. The ICV (Initial Calibration Verification) sample doubles as the LCS.

NA - Not Applicable
ND - Not Detected
NC - Non calculable RPD due to value less than the detection limit

INITIAL & CONTINUING CALIBRATION VERIFICATION

## Cyanide, Total

| | |
|---|---|
| Batch: AP013-0117 | Date & Time: 11/28/2023 15:25 |
| Method: EPA 335.4 | Analyst: Brianna Pillsbury |

| | True Value | Result | % REC | Unit |
|---|---|---|---|---|
| BLKA231128 | | < 4.00 | | ug/L |
| ICV231128 | 250 | 238 | 95.2 | ug/L |
| CCV231128.009_09 | 250 | 259 | 104 | ug/L |
| CCV231128.017_17 | 250 | 258 | 103 | ug/L |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

The ICV (Initial Calibration Verification) sample doubles as the LCS.

NJDEP FORM M-9A (12/94)

SGS LabLink@20:27 30-Nov-2023

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05091-001_SB9A | | |
| Lab Sample ID: | JD77487-1 | Date Sampled: | 11/20/23 |
| Matrix: | SO - Soil | Date Received: | 11/22/23 |
| | | Percent Solids: | 93.6 |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6140 | 53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 3.5 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 46.7 | 21 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.37 | 0.21 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | < 0.53 | 0.53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 9440 | 530 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 14.2 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | 6.6 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 16.0 | 2.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 11700 | 53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 21.5 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 4360 | 530 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 335 | 1.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.044 | 0.031 | mg/kg | 1 | 11/29/23 | 11/30/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 24.5 | 4.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | 0.86 | 0.53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 19.1 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 39.9 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55138
(2) Instrument QC Batch: MA55149
(3) Prep QC Batch: MP43344
(4) Prep QC Batch: MP43430

RL = Reporting Limit

SGS LabLink@20:27 30-Nov-2023

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05091-002_SB9B | | |
| Lab Sample ID: | JD77487-2 | Date Sampled: | 11/20/23 |
| Matrix: | SO - Soil | Date Received: | 11/22/23 |
| | | Percent Solids: | 88.5 |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 11900 | 55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 4.4 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 157 | 22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.71 | 0.22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | < 0.55 | 0.55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 8260 | 550 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 29.4 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | 8.2 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 25.0 | 2.8 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 18400 | 55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 64.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 6700 | 550 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 562 | 1.7 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.060 | 0.032 | mg/kg | 1 | 11/29/23 | 11/30/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 31.3 | 4.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | 2200 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | 1.4 | 0.55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 31.7 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 100 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55138
(2) Instrument QC Batch: MA55149
(3) Prep QC Batch: MP43344
(4) Prep QC Batch: MP43430

RL = Reporting Limit

SGS LabLink@20:27 30-Nov-2023

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05091-003_SB6A | | |
| Lab Sample ID: | JD77487-3 | Date Sampled: | 11/20/23 |
| Matrix: | SO - Soil | Date Received: | 11/22/23 |
| | | Percent Solids: | 92.8 |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 5550 | 55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | 4.5 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 224 | 22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.31 | 0.22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | < 0.55 | 0.55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Calcium | 30600 | 1100 | mg/kg | 2 | 11/27/23 | 11/29/23 | ND | SW846 6010D [2] | SW846 3050B [4] |
| Chromium | 14.4 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | < 5.5 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 20.0 | 2.7 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 11000 | 55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 143 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Magnesium | 14100 | 550 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 275 | 1.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | 0.15 | 0.033 | mg/kg | 1 | 11/29/23 | 11/30/23 | LM | SW846 7471B [3] | SW846 7471B [5] |
| Nickel | 20.2 | 4.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | 0.77 | 0.55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 21.5 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 148 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55138
(2) Instrument QC Batch: MA55148
(3) Instrument QC Batch: MA55149
(4) Prep QC Batch: MP43344
(5) Prep QC Batch: MP43430

RL = Reporting Limit

SGS LabLink@20:27 30-Nov-2023

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05091-004_SB6B | | |
| Lab Sample ID: | JD77487-4 | Date Sampled: | 11/20/23 |
| Matrix: | SO - Soil | Date Received: | 11/22/23 |
| | | Percent Solids: | 92.6 |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6100 | 53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 3.8 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 38.0 | 21 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.28 | 0.21 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | < 0.53 | 0.53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 17300 | 530 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 13.5 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | < 5.3 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 15.6 | 2.7 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 9790 | 53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 48.9 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 6650 | 530 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 201 | 1.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.054 | 0.034 | mg/kg | 1 | 11/29/23 | 11/30/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 18.1 | 4.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | 0.78 | 0.53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 20.0 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 66.2 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55138
(2) Instrument QC Batch: MA55149
(3) Prep QC Batch: MP43344
(4) Prep QC Batch: MP43430

RL = Reporting Limit

SGS LabLink@20:27 30-Nov-2023

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05091-005_TWP6 | | |
| Lab Sample ID: | JD77487-5 | Date Sampled: | 11/20/23 |
| Matrix: | AQ - Water | Date Received: | 11/22/23 |
| | | Percent Solids: | n/a |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Total Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 5960 | 200 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Arsenic | < 3.0 | 3.0 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Barium | 440 | 200 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Beryllium | 1.2 | 1.0 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Calcium | 74300 | 5000 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Chromium | 18.1 | 10 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Copper | 44.5 | 10 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Iron | 8980 | 100 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Lead | 20.9 | 3.0 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Magnesium | 22200 | 5000 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Manganese | 3260 | 15 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/30/23 | 11/30/23 | LM | SW846 7470A [2] | SW846 7470A [5] |
| Nickel | 26.1 | 10 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Potassium | 16300 | 10000 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Selenium | 10.5 | 10 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Silver | < 10 | 10 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Sodium | 193000 | 20000 | ug/l | 2 | 11/28/23 | 11/30/23 | ND | SW846 6010D [3] | SW846 3010A [4] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Zinc | 57.4 | 20 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |

(1) Instrument QC Batch: MA55148
(2) Instrument QC Batch: MA55150
(3) Instrument QC Batch: MA55156
(4) Prep QC Batch: MP43371
(5) Prep QC Batch: MP43435

RL = Reporting Limit

SGS LabLink@20:27 30-Nov-2023

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | E23-05091-006_TWP6 FILT | | |
| Lab Sample ID: | JD77487-6F | Date Sampled: | 11/20/23 |
| Matrix: | AQ - Water Filtered | Date Received: | 11/22/23 |
| | | Percent Solids: | n/a |
| Project: | Integrated Analytical Lab, Randolph, NJ | | |

Dissolved Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6990 | 200 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Arsenic | < 3.0 | 3.0 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Barium | 328 | 200 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Beryllium | < 1.0 | 1.0 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Calcium | 70000 | 5000 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Chromium | 13.2 | 10 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Copper | 35.7 | 10 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Iron | 9040 | 100 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Lead | 9.6 | 3.0 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Magnesium | 20000 | 5000 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Manganese | 2730 | 15 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/30/23 | 11/30/23 | LM | SW846 7470A [2] | SW846 7470A [5] |
| Nickel | 19.6 | 10 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Potassium | 16600 | 10000 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Selenium | 10.7 | 10 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Silver | < 10 | 10 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Sodium | 192000 | 20000 | ug/l | 2 | 11/28/23 | 11/30/23 | ND | SW846 6010D [3] | SW846 3010A [4] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Zinc | 32.7 | 20 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |

(1) Instrument QC Batch: MA55148
(2) Instrument QC Batch: MA55150
(3) Instrument QC Batch: MA55156
(4) Prep QC Batch: MP43371
(5) Prep QC Batch: MP43435

RL = Reporting Limit

SAMPLE TRACKING

FINALIZED 12/05/2023

E23-05091 Page 86

INTEGRATED ANALYTICAL LABORATORIES, LLC

IAL

Integrated Analytical Labs
273 Franklin Rd
Randolph, NJ 07869

# Chain of Custody Record

Contact Us: 973 361-4252
Web: www.ialonline.com

| Customer Information | Reporting Information |
|---|---|
| Company: HK Engineering and Geology D.P.C. | ☒ Check here if same as "Customer Information" |
| Address: 1600 US 22 East | REPORT TO: |
| Union, NJ 07083 | Address: |
| Telephone #: 908-688-7800 | |
| Project Manager: Chris Hirschmann | Attn: |
| Email Address(es): chirschmann@hillmannconsulting.com | INVOICE TO: |
| | Address: |
| Project Name: HK2661.1 | |
| Project Location (State): NY | Attn: |
| Bottle Order #: | PO # HK2661.1 |
| ☒ "Report to"/"Invoice To" same as above | Quote # |
| Sampled by: D. Aponte | |

**Rush TAT Charge**
24 hr - 100%...
48 hr - 75%....
72 hr - 50%....
96 hr - 35%....
5 day - 25%....
6-9 day - 10%

**Deliverables** *Surchage may apply for regulatory

| NJ, CT, PA | NY |
|---|---|
| ☐ Results Only (Level I) | ☒ ASP Category A |
| ☐ Reduced (Level II/III) | ☐ ASP Category B* |
| ☐ Regulatory/ Full* (Level IV) | |

**EDDs**
☐ NJ SRP
☐ NYSDEC EQuIS
☐ lab approved custom EDD
☒ NO EDD REQ'D

**Concentrations Expected:** Low Med High

Known Hazard: ☐ YES ☐ NO

Describe:

**Turn-Around Time (TAT)**

5 Day TAT Hard Copy and Verbal

Hard Copy: Standard 3 week — Other - call for price

**Petroleum Hydrocarbons - Selection is REQUIRED**

TAT for PHC, if other than 2 weeks:

☐ NJ EPH-DRO - Category 1
☐ NJ EPH-C40 - Category 2
☐ NJ EPH-Fractionated - Cat 2
☐ CT ETPH
☐ DRO-8015

**Regulatory Requirement**

| New Jersey | New York |
|---|---|
| ☐ GWQS | ☒ AWQS (TOGS Table 1) |
| ☐ 2017 SRS/IGW | ☐ GWEL (TOGS Table 5) |
| ☐ 2021 SRS/MGW | ☒ Part 375-6.8(a) - Unrestricted |
| ☐ Ecological | ☒ Part 375-6.8(b) - Restricted |
| ☐ DW | ☐ CP-51 Table 2 or 3 (selection required) |
| ☐ SPLP | |

Other States / Criteria
☐ Pennsylvania Act 2
☐ CT RCSA 22a-133k1-k3
☐ TSCA PCBs

OTHER Regulatory Requirements - specify in comments

Sample Specific Notes:

Sample Matrix
DW - Drinking Water; WW - Waste Water; GW - Groundwater; SW - Surface Water; LIQ - Liquid (specify); M - Multiphasic; OI - Oil; S - Soil; SED - Sediment; SOL - Solid (specify); SL - Sludge; W - Wipe

COMPLETED BY IAL: ____ Field Sampling ____ Equipment Rental

## SAMPLE INFORMATION

ANALYTICAL PARAMETERS (please note if contingent)

| Client ID | Depth (ft only) | Sampling Date | Sampling Time | Matrix | # containers | IAL # | TAL/TCL + 30 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SB9A | 0-2 | 11/20/2023 | 8:15 | S | 5 | 1 | X | | | | | | | | | |
| SB9B | 10-12' | 11/20/2023 | 8:25 | S | 5 | 2 | X | | | | | | | | | |
| SB6A | 0-2 | 11/20/2023 | 9:45 | S | 5 | 3 | X | | | | | | | | | |
| SB6B | 10-12' | 11/20/2023 | 9:55 | S | 5 | 4 | X | | | | | | | | | |
| TWP6 | | 11/20/2023 | 10:15 | GW | 11 | 5 | X | 6 diss | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

Samples previously analyzed by IAL? YES / NO

Preservative Code: 1 = None; 2 = HCl; 3 = HNO3; 4 = MeOH; 5 = NaOH; 6 = H2SO4; 7 = Other

Container Code: A = Amber Glass; B = Plastic; C = Vial; D = Glass; E = EnCore; T = Terracore

Preservative (use code)

Container Type (use code)

*Please print legibly and fill out completely. Samples cannot be processed and the turnaround time (TAT) will not start until any ambiguities have been resolved. TAT starts the following day if samples rec'd at lab ≥ 5PM. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY IAL'S TERMS & CONDITIONS (found on rear of pink copy).*

IAL Rev 06/2021

Carrier (check one):
☐ IAL Courier
☐ Client Courier
☐ FedEx/UPS***
***Tracking #:

**Special Instructions/QC Requirements & Comments:**

5 Day TAT Hard Copy and Verbal.

| Relinquished by (Signature and Company) | Date | Time | Received by (Signature and Company) | Date | Time |
|---|---|---|---|---|---|
| [illegible] | 11/20/23 | | [illegible] | 11/20/23 | 1520 |
| [illegible] | 11/20/23 | 1648 | [illegible] | 11/20/23 | 16:48 |
| | | | | | |
| | | | | | |

FOR LAB USE ONLY

SDG #: 5091

Cooler Temp: 6 °C

LAB COPIES - WHITE & YELLOW; CLIENT COPY - PINK

Certification IDs: TNI (TNI01284); CT (PH-0699); NJ (14751); NY (11402); PA (68-00773).

Nov 22, 2023 @ 09:35

RUSH

# PROJECT INFORMATION

## E23-05091: HK2661.1

**To:** Chris Hirschmann
HK Engineering & Geology, D.P.C.
Fax: 908-377-8909 cell
EMail: chirschmann@hillmannconsulting.com;rpowell@hillmanngroup.com

**Report To**

HK Engineering & Geology, D.P.C.
1600 Route 22 East
Union, NJ 07083
Attn: Chris Hirschmann

**Bill To**

HK Engineering & Geology, D.P.C.
1600 Route 22 East
Union, NJ 07083
Attn: Chris Hirschmann

| Report Format | P.O. # | Received At Lab | PHC Due | Verbal Due | Hardcopy Due |
|---|---|---|---|---|---|
| Category A | HK2661.1 | Nov 20, 2023 @ 16:48 | NA | Nov 29, 2023 | Nov 29, 2023 * |

* Any ***Conditional or Hold*** status will delay final hardcopy report sent date.

**Diskette Req.** Not Required

**Criteria Requirement:** NY Part 375-6.8(UUSCO+RUSCO)

| Lab ID | Client Sample ID | Depth | Sampling Time | Matrix | Unit | Field pH/Temp |
|---|---|---|---|---|---|---|
| 05091-001 | SB9A | 0/2 | 11/20/23@08:15 | Soil | mg/Kg (ppm) | |
| 05091-002 | SB9B | 10/12 | 11/20/23@08:25 | Soil | mg/Kg (ppm) | |
| 05091-003 | SB6A | 0/2 | 11/20/23@09:45 | Soil | mg/Kg (ppm) | |
| 05091-004 | SB6B | 10/12 | 11/20/23@09:55 | Soil | mg/Kg (ppm) | |
| 05091-005 | TWP6 | NA | 11/20/23@10:15 | Aqueous | ug/L (ppb) | |
| 05091-006 | TWP6 FILT | NA | 11/20/23@10:15 | Aqueous | ug/L (ppb) | |

* No Cert = IAL does not hold certification for this test/method

| Sample # | Test | Status | Analytical Method | TAT | Holding Time Expires |
|---|---|---|---|---|---|
| 001 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 12/4/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 12/4/2023 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 12/4/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/19/2024 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 12/4/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/20/2023 |
| 002 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 12/4/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 12/4/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/19/2024 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 12/4/2023 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 12/4/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/20/2023 |
| 003 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 12/4/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 12/4/2023 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 12/4/2023 |



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Randolph, NJ 07869
Phone: 973 361 4252
www.ialonline.com

Nov 22, 2023 @ 09:35

# PROJECT INFORMATION

RUSH

## E23-05091: HK2661.1

| Sample # | Test | Status | Analytical Method | TAT | Holding Time Expires |
|---|---|---|---|---|---|
| 003 | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/19/2024 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 12/4/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/20/2023 |
| 004 | TCL VO + 15 | Analyze | 8260D | RUSH 1 WK | 12/4/2023 |
| | TCL BNA + 15 | Analyze | 8270E | RUSH 1 WK | 12/4/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/19/2024 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 12/4/2023 |
| | Cyanide, Total | Analyze | 9012B | RUSH 1 WK | 12/4/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/20/2023 |
| 005 | Low Level TCL VO for 8260+8011 + 15 | Analyze | 8260D/8011 | RUSH 1 WK | 12/4/2023 |
| | TCL BNA + SIMS + 15 | Analyze | 8270E SIM | RUSH 1 WK | 11/27/2023 |
| | TCL PCB | Analyze | 8082A | RUSH 1 WK | 11/19/2024 |
| | TCL Pesticides | Analyze | 8081B | RUSH 1 WK | 11/27/2023 |
| | Cyanide, Total | Analyze | 335.4 | RUSH 1 WK | 12/4/2023 |
| | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/20/2023 |
| 006 | TAL Metals (6020B/7471B) by SGS Dayton, TNI certified | Analyze | | RUSH 1 WK | 11/20/2023 |

**Project Notes:**

**NOTE 1 taken by kfalconer on 11/21/2023 09:06**
CLIENT WAS NOTIFIED VIA E-MAIL THAT METALS ANALYSES WILL BE SUBCONTRACTED TO SGS DAYTON.

**NOTE 4 taken by kfalconer on 11/21/2023 09:08**
3 ENCORS RECEIVED - 1 INTO MEOH/2 INTO H2O

**NOTE 5 taken by kfalconer on 11/21/2023 09:08**
COMPARE SOIL RESULTS TO NY Part 375-6.8(UUSCO+RUSCO).

COMPARE GW RESULTS TO NY TOGS Tbl1 (AWQS).

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Phone: 973 361 4252
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## SAMPLE RECEIPT VERIFICATION

CASE NO: **E 23** **05091** CLIENT: HK Eng

COOLER TEMPERATURE: 2° - 6°C: ✓ ( See Chain of Custody)

COC: (COMPLETE) / INCOMPLETE

**Comments**

**KEY**

✓ = YES/NA

✗ = NO

VOA received: ☒ Encore ☐ IGW - Methanol

(check one) ☐ Terra Core ☐ No Preservative

| | |
|---|---|
| ✓ | Bottles Intact |
| ✓ | no-Missing Bottles |
| ✓ | no-Extra Bottles |
| ✓ | Sufficient Sample Volume |
| ✓ | no-headspace/bubbles in VOs |
| ✓ | Labels intact/correct |
| ✗ | pH Check[1] (refer to Receipt pH Log) |
| ✓ | Correct bottles/preservative |
| ✓ | Sufficient Holding/Prep Time[1] |
| ☐ | Multiphasic Sample |
| ☐ | Sample to be Subcontracted |
| ✓ | **Chain of Custody is Clear** |

[1] All samples with "Analyze Immediately" holding times will be analyzed by this laboratory past the holding time. This includes but is not limited to the following tests: pH, Temperature, Free Residual Chlorine, Total Residual Chlorine, Dissolved Oxygen, Sulfite.

ADDITIONAL COMMENTS:

SAMPLE(S) VERIFIED BY: INITIAL [KG] DATE [12/11/23]

**CORRECTIVE ACTION REQUIRED:** **YES** ☐ (SEE BELOW) **NO** ☒

If COC is **NOT** clear, ***STOP*** until you get client to authorize/clarify work.

CLIENT NOTIFIED: YES ☐ Date/ Time: _____ NO ☐

PROJECT CONTACT:

SUBCONTRACTED LAB:

DATE SHIPPED:

ADDITIONAL COMMENTS:

VERIFIED/TAKEN BY: INITIAL [ME] DATE [1/2/23]

Rev 2 2/11/2021

# *Laboratory Custody Chronicle*

***IAL Case No.***
**E23-05091**

***Client*** HK Engineering & Geology, D.P.C.

***Project*** HK2661.1

***Received On*** 11/20/2023@16:48

| **Department: Volatiles** | | | ***Prep. Date*** | ***Analyst*** | ***Analysis Date*** | ***Analyst*** |
|---|---|---|---|---|---|---|
| Low Level TCL VO for 8260+8011 + 15 | 05091-005 | Aqueous | n/a | n/a | 11/22/23 | Sylvia |
| TCL VO + 15 | -001 | Soil | n/a | n/a | 11/22/23 | Mei |
| " | -002 | " | n/a | n/a | 11/22/23 | Mei |
| " | -003 | " | n/a | n/a | 11/22/23 | Mei |
| " | -004 | " | n/a | n/a | 11/22/23 | Mei |

| **Department: Semivolatiles** | | | ***Prep. Date*** | ***Analyst*** | ***Analysis Date*** | ***Analyst*** |
|---|---|---|---|---|---|---|
| TCL BNA + 15 | -001 | Soil | 11/21/23 | Frank L. | 11/30/23 | Thien |
| " | -002 | " | 11/21/23 | Frank L. | 11/30/23 | Thien |
| " | -003 | " | 11/21/23 | Frank L. | 11/30/23 | Thien |
| " | -004 | " | 11/21/23 | Frank L. | 11/30/23 | Thien |
| TCL BNA + SIMS + 15 | -005 | Aqueous | 11/20/23 | Frank L. | 11/29/23 | Dana Tryon |

| **Department: GC** | | | ***Prep. Date*** | ***Analyst*** | ***Analysis Date*** | ***Analyst*** |
|---|---|---|---|---|---|---|
| TCL PCB | -001 | Soil | 11/21/23 | Archimede | 11/28/23 | Iwona |
| " | -002 | " | 11/21/23 | Archimede | 11/28/23 | Iwona |
| " | -003 | " | 11/21/23 | Archimede | 11/28/23 | Iwona |
| " | -004 | " | 11/21/23 | Archimede | 11/28/23 | Iwona |
| " | -005 | Aqueous | 11/27/23 | Archimede | 11/29/23 | Iwona |
| TCL Pesticides | -001 | Soil | 11/21/23 | Archimede | 11/29/23 | Iwona |
| " | -002 | " | 11/21/23 | Archimede | 11/29/23 | Iwona |
| " | -003 | " | 11/21/23 | Archimede | 11/29/23 | Iwona |
| " | -004 | " | 11/21/23 | Archimede | 11/29/23 | Iwona |
| " | -005 | Aqueous | 11/27/23 | Archimede | 11/29/23 | Iwona |

| **Department: Wet Chemistry** | | | ***Prep. Date*** | ***Analyst*** | ***Analysis Date*** | ***Analyst*** |
|---|---|---|---|---|---|---|
| Cyanide, Total | -001 | Soil | n/a | n/a | 11/28/23 | Brianna P |
| " | -002 | " | n/a | n/a | 11/28/23 | Brianna P |
| " | -003 | " | n/a | n/a | 11/28/23 | Brianna P |
| " | -004 | " | n/a | n/a | 11/28/23 | Brianna P |
| " | -005 | Aqueous | n/a | n/a | 11/28/23 | Brianna P |

| **Department: Others** | | | ***Prep. Date*** | ***Analyst*** | ***Analysis Date*** | ***Analyst*** |
|---|---|---|---|---|---|---|
| TAL Metals (6020B/7471B) by SGS Dayton | -001 | Soil | 11/21/23 | Rob | n/a | n/a |
| " | -002 | " | 11/21/23 | Rob | n/a | n/a |
| " | -003 | " | 11/21/23 | Rob | n/a | n/a |
| " | -004 | " | 11/21/23 | Rob | n/a | n/a |
| " | -005 | Aqueous | 11/21/23 | Rob | n/a | n/a |
| " | -006 | " | 11/21/23 | Rob | n/a | n/a |



NOTE: All soil, sediment, sludge, and solid samples are reported on a dry-weight basis.

*Integrated Analytical Labs ~ 273 Franklin Road, Randolph, NJ 07869 ~ (973) 361-4252*

# *Report Out Form*

**IAL SDG No.**

**E23-05091**


**Client** HK Engineering & Geology, D.P.C.

**Project** HK2661.1

**State** NY

**Diskette Requirements**

Spreadsheet: RCS_____

**Report Requirements**

WEB

**Sent on** _____

**By**
(please circle one) **Web** **US Mail** **Other** _____

*Dec 01, 2023 @ 03:00*

**LAST PAGE OF DOCUMENT**

The results set forth herein are provided by SGS North America Inc.

*e-Hardcopy 2.0*
*Automated Report*

Technical Report for

# Integrated Analytical Lab

Integrated Analytical Lab, Randolph, NJ

E23-05046

SGS Job Number: JD77310

Sampling Dates: 11/15/23 - 11/16/23

Report to:

Integrated Analytical Lab
273 Franklin Road
Randolph, NJ 07869
msimmons@ialonline.com

ATTN: Melissa Simmons

Total number of pages in report: 41

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable unless noted in the narrative, comments or footnotes.

David Chastain
General Manager

Client Service contact: Victoria Pushkova 732-329-0200
Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA(68-00408), RI, SC, TX, UT, VA, WV

Sections: 1 2 3 4

# Table of Contents

SGS North America Inc.

# Sample Summary

Integrated Analytical Lab

**Job No:** JD77310

Integrated Analytical Lab, Randolph, NJ
Project No: E23-05046

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| JD77310-1 | 11/15/23 | 08:15 | | 11/20/23 | SO | Soil | E23-05046-001_SB12A |
| JD77310-2 | 11/15/23 | 08:30 | | 11/20/23 | SO | Soil | E23-05046-002_SB2A |
| JD77310-3 | 11/15/23 | 08:35 | | 11/20/23 | SO | Soil | E23-05046-003_SB2B |
| JD77310-4 | 11/15/23 | 09:30 | | 11/20/23 | SO | Soil | E23-05046-004_SB1A |
| JD77310-5 | 11/15/23 | 09:35 | | 11/20/23 | SO | Soil | E23-05046-005_SB1B |
| JD77310-6 | 11/15/23 | 10:45 | | 11/20/23 | SO | Soil | E23-05046-006_SB3A |
| JD77310-7 | 11/15/23 | 10:50 | | 11/20/23 | SO | Soil | E23-05046-007_SB3B |
| JD77310-8 | 11/15/23 | 13:05 | | 11/20/23 | SO | Soil | E23-05046-008_SB10A |
| JD77310-9 | 11/15/23 | 13:40 | | 11/20/23 | SO | Soil | E23-05046-009_SB11A |
| JD77310-10 | 11/15/23 | 14:00 | | 11/20/23 | SO | Soil | E23-05046-010_SB8A |
| JD77310-11 | 11/15/23 | 12:20 | | 11/20/23 | AQ | Water | E23-05046-011_TWP1 |
| JD77310-11F | 11/15/23 | 12:20 | | 11/20/23 | AQ | Water Filtered | E23-05046-019_TWP1 FILT |
| JD77310-12 | 11/15/23 | 13:00 | | 11/20/23 | AQ | Water | E23-05046-012_TWP2 |

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

# Sample Summary
(continued)

Integrated Analytical Lab

**Job No:** JD77310

Integrated Analytical Lab, Randolph, NJ
Project No: E23-05046

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| JD77310-12F | 11/15/23 | 13:00 | | 11/20/23 | AQ | Water Filtered | E23-05046-020_TWP2 FILT |
| JD77310-13 | 11/16/23 | 09:10 | | 11/20/23 | AQ | Water | E23-05046-013_TWP4 |
| JD77310-13F | 11/16/23 | 09:10 | | 11/20/23 | AQ | Water Filtered | E23-05046-021_TWP4 FILT |
| JD77310-14 | 11/16/23 | 09:30 | | 11/20/23 | AQ | Water | E23-05046-014_TWP5 |
| JD77310-14F | 11/16/23 | 09:30 | | 11/20/23 | AQ | Water Filtered | E23-05046-022_TWP5 FILT |
| JD77310-15 | 11/15/23 | 08:10 | | 11/20/23 | SO | Soil | E23-05046-015_SB4A |
| JD77310-16 | 11/15/23 | 08:15 | | 11/20/23 | SO | Soil | E23-05046-016_SB4B |
| JD77310-17 | 11/15/23 | 08:20 | | 11/20/23 | SO | Soil | E23-05046-017_SB5A |
| JD77310-18 | 11/15/23 | 08:35 | | 11/20/23 | SO | Soil | E23-05046-018_SB5B |

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

# Summary of Hits

**Job Number:** JD77310
**Account:** Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Collected:** 11/15/23 thru 11/16/23

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| **JD77310-1** | **E23-05046-001_SB12A** | | | | | |
| Aluminum | | 4950 | 57 | | mg/kg | SW846 6010D |
| Arsenic | | 8.7 | 2.3 | | mg/kg | SW846 6010D |
| Barium | | 173 | 23 | | mg/kg | SW846 6010D |
| Beryllium | | 0.39 | 0.23 | | mg/kg | SW846 6010D |
| Cadmium | | 12.8 | 0.57 | | mg/kg | SW846 6010D |
| Calcium | | 50200 | 2900 | | mg/kg | SW846 6010D |
| Chromium | | 17.6 | 1.1 | | mg/kg | SW846 6010D |
| Cobalt | | 6.0 | 5.7 | | mg/kg | SW846 6010D |
| Copper | | 42.9 | 2.9 | | mg/kg | SW846 6010D |
| Iron | | 19700 | 57 | | mg/kg | SW846 6010D |
| Lead | | 773 | 2.3 | | mg/kg | SW846 6010D |
| Magnesium | | 2110 | 570 | | mg/kg | SW846 6010D |
| Manganese | | 351 | 1.7 | | mg/kg | SW846 6010D |
| Mercury | | 5.2 | 0.35 | | mg/kg | SW846 7471B |
| Nickel | | 17.3 | 4.6 | | mg/kg | SW846 6010D |
| Silver | | 1.1 | 0.57 | | mg/kg | SW846 6010D |
| Vanadium | | 20.7 | 5.7 | | mg/kg | SW846 6010D |
| Zinc | | 2050 | 29 | | mg/kg | SW846 6010D |
| **JD77310-2** | **E23-05046-002_SB2A** | | | | | |
| Aluminum | | 6300 | 53 | | mg/kg | SW846 6010D |
| Arsenic | | 2.9 | 2.1 | | mg/kg | SW846 6010D |
| Barium | | 48.5 | 21 | | mg/kg | SW846 6010D |
| Beryllium | | 0.41 | 0.21 | | mg/kg | SW846 6010D |
| Calcium | | 17800 | 530 | | mg/kg | SW846 6010D |
| Chromium | | 20.7 | 1.1 | | mg/kg | SW846 6010D |
| Cobalt | | 6.5 | 5.3 | | mg/kg | SW846 6010D |
| Copper | | 21.5 | 2.6 | | mg/kg | SW846 6010D |
| Iron | | 12200 | 53 | | mg/kg | SW846 6010D |
| Lead | | 39.0 | 2.1 | | mg/kg | SW846 6010D |
| Magnesium | | 6090 | 530 | | mg/kg | SW846 6010D |
| Manganese | | 263 | 1.6 | | mg/kg | SW846 6010D |
| Mercury | | 0.037 | 0.033 | | mg/kg | SW846 7471B |
| Nickel | | 42.8 | 4.2 | | mg/kg | SW846 6010D |
| Potassium | | 1780 | 1100 | | mg/kg | SW846 6010D |
| Silver | | 0.78 | 0.53 | | mg/kg | SW846 6010D |
| Vanadium | | 22.7 | 5.3 | | mg/kg | SW846 6010D |
| Zinc | | 60.2 | 5.3 | | mg/kg | SW846 6010D |
| **JD77310-3** | **E23-05046-003_SB2B** | | | | | |
| Aluminum | | 5040 | 55 | | mg/kg | SW846 6010D |

# Summary of Hits

**Job Number:** JD77310
**Account:** Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Collected:** 11/15/23 thru 11/16/23

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| Arsenic | | 3.8 | 2.2 | | mg/kg | SW846 6010D |
| Barium | | 163 | 22 | | mg/kg | SW846 6010D |
| Beryllium | | 0.76 | 0.22 | | mg/kg | SW846 6010D |
| Calcium | | 10500 | 550 | | mg/kg | SW846 6010D |
| Chromium | | 15.9 | 1.1 | | mg/kg | SW846 6010D |
| Cobalt | | 7.7 | 5.5 | | mg/kg | SW846 6010D |
| Copper | | 31.8 | 2.8 | | mg/kg | SW846 6010D |
| Iron | | 13100 | 55 | | mg/kg | SW846 6010D |
| Lead | | 235 | 2.2 | | mg/kg | SW846 6010D |
| Magnesium | | 6400 | 550 | | mg/kg | SW846 6010D |
| Manganese | | 292 | 1.7 | | mg/kg | SW846 6010D |
| Mercury | | 0.56 | 0.030 | | mg/kg | SW846 7471B |
| Nickel | | 56.8 | 4.4 | | mg/kg | SW846 6010D |
| Potassium | | 1270 | 1100 | | mg/kg | SW846 6010D |
| Silver | | 0.78 | 0.55 | | mg/kg | SW846 6010D |
| Vanadium | | 20.2 | 5.5 | | mg/kg | SW846 6010D |
| Zinc | | 176 | 5.5 | | mg/kg | SW846 6010D |
| **JD77310-4** | **E23-05046-004_SB1A** | | | | | |
| Aluminum | | 7910 | 55 | | mg/kg | SW846 6010D |
| Arsenic | | 7.5 | 2.2 | | mg/kg | SW846 6010D |
| Barium | | 298 | 22 | | mg/kg | SW846 6010D |
| Beryllium | | 0.46 | 0.22 | | mg/kg | SW846 6010D |
| Cadmium | | 0.63 | 0.55 | | mg/kg | SW846 6010D |
| Calcium | | 14000 | 550 | | mg/kg | SW846 6010D |
| Chromium | | 20.8 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 47.9 | 2.7 | | mg/kg | SW846 6010D |
| Iron | | 12500 | 55 | | mg/kg | SW846 6010D |
| Lead | | 436 | 2.2 | | mg/kg | SW846 6010D |
| Magnesium | | 2880 | 550 | | mg/kg | SW846 6010D |
| Manganese | | 241 | 1.6 | | mg/kg | SW846 6010D |
| Mercury | | 0.61 | 0.034 | | mg/kg | SW846 7471B |
| Nickel | | 15.5 | 4.4 | | mg/kg | SW846 6010D |
| Silver | | 0.86 | 0.55 | | mg/kg | SW846 6010D |
| Vanadium | | 24.9 | 5.5 | | mg/kg | SW846 6010D |
| Zinc | | 276 | 5.5 | | mg/kg | SW846 6010D |
| **JD77310-5** | **E23-05046-005_SB1B** | | | | | |
| Aluminum | | 10700 | 56 | | mg/kg | SW846 6010D |
| Arsenic | | 7.6 | 2.2 | | mg/kg | SW846 6010D |
| Barium | | 463 | 22 | | mg/kg | SW846 6010D |
| Beryllium | | 0.64 | 0.22 | | mg/kg | SW846 6010D |
| Cadmium | | 1.9 | 0.56 | | mg/kg | SW846 6010D |

# Summary of Hits

**Job Number:** JD77310
**Account:** Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Collected:** 11/15/23 thru 11/16/23

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| Calcium | | 77400 | 2800 | | mg/kg | SW846 6010D |
| Chromium | | 28.8 | 1.1 | | mg/kg | SW846 6010D |
| Cobalt | | 5.8 | 5.6 | | mg/kg | SW846 6010D |
| Copper [a] | | 128 | 14 | | mg/kg | SW846 6010D |
| Iron | | 32600 | 280 | | mg/kg | SW846 6010D |
| Lead | | 1260 | 11 | | mg/kg | SW846 6010D |
| Magnesium | | 12800 | 560 | | mg/kg | SW846 6010D |
| Manganese | | 704 | 1.7 | | mg/kg | SW846 6010D |
| Mercury | | 1.1 | 0.066 | | mg/kg | SW846 7471B |
| Nickel | | 22.8 | 4.5 | | mg/kg | SW846 6010D |
| Potassium | | 1670 | 1100 | | mg/kg | SW846 6010D |
| Vanadium | | 29.8 | 5.6 | | mg/kg | SW846 6010D |
| Zinc | | 477 | 5.6 | | mg/kg | SW846 6010D |
| **JD77310-6** | **E23-05046-006_SB3A** | | | | | |
| Aluminum | | 6400 | 57 | | mg/kg | SW846 6010D |
| Antimony | | 8.0 | 2.3 | | mg/kg | SW846 6010D |
| Arsenic | | 8.9 | 2.3 | | mg/kg | SW846 6010D |
| Barium | | 309 | 23 | | mg/kg | SW846 6010D |
| Beryllium | | 0.43 | 0.23 | | mg/kg | SW846 6010D |
| Cadmium | | 1.4 | 0.57 | | mg/kg | SW846 6010D |
| Calcium | | 34300 | 1100 | | mg/kg | SW846 6010D |
| Chromium | | 16.8 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 195 | 2.8 | | mg/kg | SW846 6010D |
| Iron | | 13400 | 57 | | mg/kg | SW846 6010D |
| Lead | | 774 | 2.3 | | mg/kg | SW846 6010D |
| Magnesium | | 2920 | 570 | | mg/kg | SW846 6010D |
| Manganese | | 1210 | 3.4 | | mg/kg | SW846 6010D |
| Mercury | | 0.68 | 0.035 | | mg/kg | SW846 7471B |
| Nickel | | 32.2 | 4.6 | | mg/kg | SW846 6010D |
| Silver | | 1.2 | 0.57 | | mg/kg | SW846 6010D |
| Vanadium | | 25.8 | 5.7 | | mg/kg | SW846 6010D |
| Zinc | | 483 | 5.7 | | mg/kg | SW846 6010D |
| **JD77310-7** | **E23-05046-007_SB3B** | | | | | |
| Aluminum | | 5390 | 56 | | mg/kg | SW846 6010D |
| Barium | | 288 | 22 | | mg/kg | SW846 6010D |
| Calcium | | 49000 | 11000 | | mg/kg | SW846 6010D |
| Chromium [a] | | 70.1 | 22 | | mg/kg | SW846 6010D |
| Cobalt | | 39.9 | 5.6 | | mg/kg | SW846 6010D |
| Copper [a] | | 503 | 56 | | mg/kg | SW846 6010D |
| Iron | | 254000 | 1100 | | mg/kg | SW846 6010D |
| Lead [a] | | 888 | 45 | | mg/kg | SW846 6010D |

# Summary of Hits

**Job Number:** JD77310
**Account:** Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Collected:** 11/15/23 thru 11/16/23

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| Magnesium | | 3500 | 560 | | mg/kg | SW846 6010D |
| Manganese | | 2890 | 33 | | mg/kg | SW846 6010D |
| Mercury | | 0.65 | 0.036 | | mg/kg | SW846 7471B |
| Nickel [a] | | 98.3 | 89 | | mg/kg | SW846 6010D |
| Vanadium | | 94.8 | 5.6 | | mg/kg | SW846 6010D |
| Zinc | | 688 | 5.6 | | mg/kg | SW846 6010D |
| **JD77310-8** | **E23-05046-008_SB10A** | | | | | |
| Aluminum | | 7400 | 56 | | mg/kg | SW846 6010D |
| Arsenic | | 3.6 | 2.2 | | mg/kg | SW846 6010D |
| Barium | | 90.2 | 22 | | mg/kg | SW846 6010D |
| Beryllium | | 0.46 | 0.22 | | mg/kg | SW846 6010D |
| Calcium | | 31300 | 1100 | | mg/kg | SW846 6010D |
| Chromium | | 22.0 | 1.1 | | mg/kg | SW846 6010D |
| Cobalt | | 6.1 | 5.6 | | mg/kg | SW846 6010D |
| Copper | | 26.4 | 2.8 | | mg/kg | SW846 6010D |
| Iron | | 13700 | 56 | | mg/kg | SW846 6010D |
| Lead | | 159 | 2.2 | | mg/kg | SW846 6010D |
| Magnesium | | 3600 | 560 | | mg/kg | SW846 6010D |
| Manganese | | 386 | 1.7 | | mg/kg | SW846 6010D |
| Mercury | | 0.27 | 0.034 | | mg/kg | SW846 7471B |
| Nickel | | 18.6 | 4.5 | | mg/kg | SW846 6010D |
| Potassium | | 1520 | 1100 | | mg/kg | SW846 6010D |
| Silver | | 0.58 | 0.56 | | mg/kg | SW846 6010D |
| Vanadium | | 21.6 | 5.6 | | mg/kg | SW846 6010D |
| Zinc | | 54.9 | 5.6 | | mg/kg | SW846 6010D |
| **JD77310-9** | **E23-05046-009_SB11A** | | | | | |
| Aluminum | | 7780 | 58 | | mg/kg | SW846 6010D |
| Arsenic | | 3.9 | 2.3 | | mg/kg | SW846 6010D |
| Barium | | 98.7 | 23 | | mg/kg | SW846 6010D |
| Beryllium | | 0.44 | 0.23 | | mg/kg | SW846 6010D |
| Calcium | | 5130 | 580 | | mg/kg | SW846 6010D |
| Chromium | | 16.9 | 1.2 | | mg/kg | SW846 6010D |
| Cobalt | | 6.4 | 5.8 | | mg/kg | SW846 6010D |
| Copper | | 17.1 | 2.9 | | mg/kg | SW846 6010D |
| Iron | | 16100 | 58 | | mg/kg | SW846 6010D |
| Lead | | 56.1 | 2.3 | | mg/kg | SW846 6010D |
| Magnesium | | 3220 | 580 | | mg/kg | SW846 6010D |
| Manganese | | 442 | 1.7 | | mg/kg | SW846 6010D |
| Mercury | | 0.23 | 0.036 | | mg/kg | SW846 7471B |
| Nickel | | 19.4 | 4.7 | | mg/kg | SW846 6010D |
| Vanadium | | 17.7 | 5.8 | | mg/kg | SW846 6010D |

# Summary of Hits

**Job Number:** JD77310
**Account:** Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Collected:** 11/15/23 thru 11/16/23

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| Zinc | | 80.8 | 5.8 | | mg/kg | SW846 6010D |
| **JD77310-10** | **E23-05046-010_SB8A** | | | | | |
| Aluminum | | 6710 | 52 | | mg/kg | SW846 6010D |
| Arsenic | | 2.5 | 2.1 | | mg/kg | SW846 6010D |
| Barium | | 45.1 | 21 | | mg/kg | SW846 6010D |
| Beryllium | | 0.39 | 0.21 | | mg/kg | SW846 6010D |
| Calcium | | 15800 | 520 | | mg/kg | SW846 6010D |
| Chromium | | 17.0 | 1.0 | | mg/kg | SW846 6010D |
| Copper | | 17.3 | 2.6 | | mg/kg | SW846 6010D |
| Iron | | 10900 | 52 | | mg/kg | SW846 6010D |
| Lead | | 12.0 | 2.1 | | mg/kg | SW846 6010D |
| Magnesium | | 2740 | 520 | | mg/kg | SW846 6010D |
| Manganese | | 321 | 1.6 | | mg/kg | SW846 6010D |
| Mercury | | 0.052 | 0.032 | | mg/kg | SW846 7471B |
| Nickel | | 16.5 | 4.2 | | mg/kg | SW846 6010D |
| Vanadium | | 17.3 | 5.2 | | mg/kg | SW846 6010D |
| Zinc | | 26.6 | 5.2 | | mg/kg | SW846 6010D |
| **JD77310-11** | **E23-05046-011_TWP1** | | | | | |
| Aluminum | | 6990 | 200 | | ug/l | SW846 6010D |
| Arsenic | | 5.0 | 3.0 | | ug/l | SW846 6010D |
| Barium | | 229 | 200 | | ug/l | SW846 6010D |
| Beryllium | | 1.3 | 1.0 | | ug/l | SW846 6010D |
| Calcium | | 118000 | 5000 | | ug/l | SW846 6010D |
| Chromium | | 29.5 | 10 | | ug/l | SW846 6010D |
| Copper | | 60.5 | 10 | | ug/l | SW846 6010D |
| Iron | | 10400 | 100 | | ug/l | SW846 6010D |
| Lead | | 68.9 | 3.0 | | ug/l | SW846 6010D |
| Magnesium | | 14700 | 5000 | | ug/l | SW846 6010D |
| Manganese | | 1100 | 15 | | ug/l | SW846 6010D |
| Nickel | | 24.7 | 10 | | ug/l | SW846 6010D |
| Potassium | | 10400 | 10000 | | ug/l | SW846 6010D |
| Sodium | | 64300 | 10000 | | ug/l | SW846 6010D |
| Zinc | | 64.0 | 20 | | ug/l | SW846 6010D |
| **JD77310-11F** | **E23-05046-019_TWP1 FILT** | | | | | |
| Aluminum | | 850 | 200 | | ug/l | SW846 6010D |
| Calcium | | 128000 | 5000 | | ug/l | SW846 6010D |
| Iron | | 1090 | 100 | | ug/l | SW846 6010D |
| Lead | | 8.0 | 3.0 | | ug/l | SW846 6010D |
| Magnesium | | 13700 | 5000 | | ug/l | SW846 6010D |

# Summary of Hits

**Job Number:** JD77310
**Account:** Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Collected:** 11/15/23 thru 11/16/23

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| Manganese | | 145 | 15 | | ug/l | SW846 6010D |
| Potassium | | 10600 | 10000 | | ug/l | SW846 6010D |
| Sodium | | 73000 | 10000 | | ug/l | SW846 6010D |
| **JD77310-12** | **E23-05046-012_TWP2** | | | | | |
| Aluminum | | 3300 | 200 | | ug/l | SW846 6010D |
| Arsenic | | 7.7 | 3.0 | | ug/l | SW846 6010D |
| Calcium | | 75100 | 5000 | | ug/l | SW846 6010D |
| Chromium | | 10.9 | 10 | | ug/l | SW846 6010D |
| Copper | | 56.9 | 10 | | ug/l | SW846 6010D |
| Iron | | 10400 | 100 | | ug/l | SW846 6010D |
| Lead | | 43.9 | 3.0 | | ug/l | SW846 6010D |
| Manganese | | 182 | 15 | | ug/l | SW846 6010D |
| Mercury | | 0.63 | 0.20 | | ug/l | SW846 7470A |
| Nickel | | 11.2 | 10 | | ug/l | SW846 6010D |
| Potassium | | 11200 | 10000 | | ug/l | SW846 6010D |
| Sodium | | 106000 | 10000 | | ug/l | SW846 6010D |
| Zinc | | 49.2 | 20 | | ug/l | SW846 6010D |
| **JD77310-12F** | **E23-05046-020_TWP2 FILT** | | | | | |
| Aluminum | | 579 | 200 | | ug/l | SW846 6010D |
| Arsenic | | 7.1 | 3.0 | | ug/l | SW846 6010D |
| Calcium | | 60900 | 5000 | | ug/l | SW846 6010D |
| Iron | | 784 | 100 | | ug/l | SW846 6010D |
| Lead | | 4.7 | 3.0 | | ug/l | SW846 6010D |
| Manganese | | 20.3 | 15 | | ug/l | SW846 6010D |
| Potassium | | 11700 | 10000 | | ug/l | SW846 6010D |
| Sodium | | 121000 | 10000 | | ug/l | SW846 6010D |
| **JD77310-13** | **E23-05046-013_TWP4** | | | | | |
| Aluminum | | 6580 | 200 | | ug/l | SW846 6010D |
| Arsenic | | 5.2 | 3.0 | | ug/l | SW846 6010D |
| Barium | | 487 | 200 | | ug/l | SW846 6010D |
| Beryllium | | 1.1 | 1.0 | | ug/l | SW846 6010D |
| Calcium | | 169000 | 5000 | | ug/l | SW846 6010D |
| Chromium | | 11.0 | 10 | | ug/l | SW846 6010D |
| Copper | | 27.1 | 10 | | ug/l | SW846 6010D |
| Iron | | 9230 | 100 | | ug/l | SW846 6010D |
| Lead | | 122 | 3.0 | | ug/l | SW846 6010D |
| Magnesium | | 24400 | 5000 | | ug/l | SW846 6010D |
| Manganese | | 2110 | 15 | | ug/l | SW846 6010D |
| Nickel | | 24.0 | 10 | | ug/l | SW846 6010D |

# Summary of Hits

**Job Number:** JD77310
**Account:** Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Collected:** 11/15/23 thru 11/16/23

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| Potassium | | 15200 | 10000 | | ug/l | SW846 6010D |
| Sodium | | 190000 | 10000 | | ug/l | SW846 6010D |
| Zinc | | 107 | 20 | | ug/l | SW846 6010D |
| **JD77310-13F** | **E23-05046-021_TWP4 FILT** | | | | | |
| Barium | | 236 | 200 | | ug/l | SW846 6010D |
| Calcium | | 170000 | 5000 | | ug/l | SW846 6010D |
| Iron | | 110 | 100 | | ug/l | SW846 6010D |
| Magnesium | | 23300 | 5000 | | ug/l | SW846 6010D |
| Manganese | | 1020 | 15 | | ug/l | SW846 6010D |
| Potassium | | 15600 | 10000 | | ug/l | SW846 6010D |
| Sodium | | 209000 | 20000 | | ug/l | SW846 6010D |
| **JD77310-14** | **E23-05046-014_TWP5** | | | | | |
| Aluminum | | 4230 | 200 | | ug/l | SW846 6010D |
| Calcium | | 33100 | 5000 | | ug/l | SW846 6010D |
| Chromium | | 15.2 | 10 | | ug/l | SW846 6010D |
| Copper | | 13.3 | 10 | | ug/l | SW846 6010D |
| Iron | | 8200 | 100 | | ug/l | SW846 6010D |
| Lead | | 8.7 | 3.0 | | ug/l | SW846 6010D |
| Manganese | | 140 | 15 | | ug/l | SW846 6010D |
| Sodium | | 274000 | 20000 | | ug/l | SW846 6010D |
| Zinc | | 26.9 | 20 | | ug/l | SW846 6010D |
| **JD77310-14F** | **E23-05046-022_TWP5 FILT** | | | | | |
| Calcium | | 31300 | 5000 | | ug/l | SW846 6010D |
| Iron | | 294 | 100 | | ug/l | SW846 6010D |
| Manganese | | 89.2 | 15 | | ug/l | SW846 6010D |
| Sodium | | 264000 | 50000 | | ug/l | SW846 6010D |
| **JD77310-15** | **E23-05046-015_SB4A** | | | | | |
| Aluminum | | 11900 | 60 | | mg/kg | SW846 6010D |
| Arsenic | | 6.4 | 2.4 | | mg/kg | SW846 6010D |
| Barium | | 298 | 24 | | mg/kg | SW846 6010D |
| Beryllium | | 0.60 | 0.24 | | mg/kg | SW846 6010D |
| Calcium | | 8670 | 600 | | mg/kg | SW846 6010D |
| Chromium | | 19.9 | 1.2 | | mg/kg | SW846 6010D |
| Copper | | 25.2 | 3.0 | | mg/kg | SW846 6010D |
| Iron | | 16200 | 60 | | mg/kg | SW846 6010D |
| Lead | | 203 | 2.4 | | mg/kg | SW846 6010D |
| Magnesium | | 2690 | 600 | | mg/kg | SW846 6010D |

# Summary of Hits

**Job Number:** JD77310
**Account:** Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Collected:** 11/15/23 thru 11/16/23

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| Manganese | | 461 | 1.8 | | mg/kg | SW846 6010D |
| Mercury | | 0.23 | 0.036 | | mg/kg | SW846 7471B |
| Nickel | | 14.9 | 4.8 | | mg/kg | SW846 6010D |
| Silver | | 0.85 | 0.60 | | mg/kg | SW846 6010D |
| Vanadium | | 27.4 | 6.0 | | mg/kg | SW846 6010D |
| Zinc | | 196 | 6.0 | | mg/kg | SW846 6010D |
| **JD77310-16** | **E23-05046-016_SB4B** | | | | | |
| Aluminum | | 8270 | 61 | | mg/kg | SW846 6010D |
| Arsenic | | 9.2 | 2.4 | | mg/kg | SW846 6010D |
| Barium | | 2180 | 120 | | mg/kg | SW846 6010D |
| Beryllium | | 0.56 | 0.24 | | mg/kg | SW846 6010D |
| Cadmium | | 1.0 | 0.61 | | mg/kg | SW846 6010D |
| Calcium | | 67200 | 3000 | | mg/kg | SW846 6010D |
| Chromium | | 24.9 | 1.2 | | mg/kg | SW846 6010D |
| Cobalt | | 6.5 | 6.1 | | mg/kg | SW846 6010D |
| Copper | | 35.7 | 3.0 | | mg/kg | SW846 6010D |
| Iron | | 18900 | 61 | | mg/kg | SW846 6010D |
| Lead | | 2680 | 12 | | mg/kg | SW846 6010D |
| Magnesium | | 4210 | 610 | | mg/kg | SW846 6010D |
| Manganese | | 604 | 1.8 | | mg/kg | SW846 6010D |
| Mercury | | 0.57 | 0.036 | | mg/kg | SW846 7471B |
| Nickel | | 21.7 | 4.9 | | mg/kg | SW846 6010D |
| Potassium | | 1560 | 1200 | | mg/kg | SW846 6010D |
| Silver | | 1.1 | 0.61 | | mg/kg | SW846 6010D |
| Vanadium | | 23.0 | 6.1 | | mg/kg | SW846 6010D |
| Zinc | | 2550 | 30 | | mg/kg | SW846 6010D |
| **JD77310-17** | **E23-05046-017_SB5A** | | | | | |
| Aluminum | | 10700 | 53 | | mg/kg | SW846 6010D |
| Arsenic | | 3.1 | 2.1 | | mg/kg | SW846 6010D |
| Barium | | 59.6 | 21 | | mg/kg | SW846 6010D |
| Beryllium | | 0.61 | 0.21 | | mg/kg | SW846 6010D |
| Calcium | | 2980 | 530 | | mg/kg | SW846 6010D |
| Chromium | | 23.6 | 1.1 | | mg/kg | SW846 6010D |
| Cobalt | | 7.4 | 5.3 | | mg/kg | SW846 6010D |
| Copper | | 20.0 | 2.7 | | mg/kg | SW846 6010D |
| Iron | | 15600 | 53 | | mg/kg | SW846 6010D |
| Lead | | 29.9 | 2.1 | | mg/kg | SW846 6010D |
| Magnesium | | 3310 | 530 | | mg/kg | SW846 6010D |
| Manganese | | 443 | 1.6 | | mg/kg | SW846 6010D |
| Mercury | | 0.21 | 0.035 | | mg/kg | SW846 7471B |
| Nickel | | 21.9 | 4.3 | | mg/kg | SW846 6010D |

# Summary of Hits

**Job Number:** JD77310
**Account:** Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Collected:** 11/15/23 thru 11/16/23

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| Potassium | | 1390 | 1100 | | mg/kg | SW846 6010D |
| Silver | | 0.70 | 0.53 | | mg/kg | SW846 6010D |
| Vanadium | | 26.8 | 5.3 | | mg/kg | SW846 6010D |
| Zinc | | 51.6 | 5.3 | | mg/kg | SW846 6010D |
| **JD77310-18** | **E23-05046-018_SB5B** | | | | | |
| Aluminum | | 7620 | 57 | | mg/kg | SW846 6010D |
| Arsenic | | 2.5 | 2.3 | | mg/kg | SW846 6010D |
| Barium | | 43.4 | 23 | | mg/kg | SW846 6010D |
| Beryllium | | 0.47 | 0.23 | | mg/kg | SW846 6010D |
| Calcium | | 2090 | 570 | | mg/kg | SW846 6010D |
| Chromium | | 17.0 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 16.2 | 2.9 | | mg/kg | SW846 6010D |
| Iron | | 11300 | 57 | | mg/kg | SW846 6010D |
| Lead | | 27.7 | 2.3 | | mg/kg | SW846 6010D |
| Magnesium | | 2480 | 570 | | mg/kg | SW846 6010D |
| Manganese | | 307 | 1.7 | | mg/kg | SW846 6010D |
| Mercury | | 0.11 | 0.035 | | mg/kg | SW846 7471B |
| Nickel | | 14.0 | 4.6 | | mg/kg | SW846 6010D |
| Potassium | | 1390 | 1100 | | mg/kg | SW846 6010D |
| Vanadium | | 19.5 | 5.7 | | mg/kg | SW846 6010D |
| Zinc | | 30.1 | 5.7 | | mg/kg | SW846 6010D |

(a) Elevated detection limit due to dilution required for high interfering element.

## Sample Results

Report of Analysis

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-001_SB12A | | |
| **Lab Sample ID:** | JD77310-1 | **Date Sampled:** | 11/15/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | 87.1 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 4950 | 57 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.3 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 8.7 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 173 | 23 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.39 | 0.23 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | 12.8 | 0.57 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 50200 | 2900 | mg/kg | 5 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 17.6 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | 6.0 | 5.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 42.9 | 2.9 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 19700 | 57 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 773 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 2110 | 570 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 351 | 1.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 5.2 | 0.35 | mg/kg | 10 | 11/22/23 | 11/27/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 17.3 | 4.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | < 1100 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.3 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | 1.1 | 0.57 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 20.7 | 5.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 2050 | 29 | mg/kg | 5 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55124
(3) Prep QC Batch: MP43275
(4) Prep QC Batch: MP43335

RL = Reporting Limit

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-002_SB2A | | |
| **Lab Sample ID:** | JD77310-2 | **Date Sampled:** | 11/15/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | 93.8 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6300 | 53 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.1 | 2.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 2.9 | 2.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 48.5 | 21 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.41 | 0.21 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | < 0.53 | 0.53 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 17800 | 530 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 20.7 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | 6.5 | 5.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 21.5 | 2.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 12200 | 53 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 39.0 | 2.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 6090 | 530 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 263 | 1.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.037 | 0.033 | mg/kg | 1 | 11/22/23 | 11/27/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 42.8 | 4.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | 1780 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.1 | 2.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | 0.78 | 0.53 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 22.7 | 5.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 60.2 | 5.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55124
(3) Prep QC Batch: MP43275
(4) Prep QC Batch: MP43335

RL = Reporting Limit

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-003_SB2B | | |
| **Lab Sample ID:** | JD77310-3 | **Date Sampled:** | 11/15/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | 92.1 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 5040 | 55 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 3.8 | 2.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 163 | 22 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.76 | 0.22 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | < 0.55 | 0.55 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 10500 | 550 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 15.9 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | 7.7 | 5.5 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 31.8 | 2.8 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 13100 | 55 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 235 | 2.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 6400 | 550 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 292 | 1.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.56 | 0.030 | mg/kg | 1 | 11/22/23 | 11/27/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 56.8 | 4.4 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | 1270 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.2 | 2.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | 0.78 | 0.55 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 20.2 | 5.5 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 176 | 5.5 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55124
(3) Prep QC Batch: MP43275
(4) Prep QC Batch: MP43335

RL = Reporting Limit

# Report of Analysis





**Client Sample ID:** E23-05046-004_SB1A
**Lab Sample ID:** JD77310-4
**Matrix:** SO - Soil
**Project:** Integrated Analytical Lab, Randolph, NJ

**Date Sampled:** 11/15/23
**Date Received:** 11/20/23
**Percent Solids:** 91.2

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 7910 | 55 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 7.5 | 2.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 298 | 22 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.46 | 0.22 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | 0.63 | 0.55 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 14000 | 550 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 20.8 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | < 5.5 | 5.5 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 47.9 | 2.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 12500 | 55 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 436 | 2.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 2880 | 550 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 241 | 1.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.61 | 0.034 | mg/kg | 1 | 11/22/23 | 11/27/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 15.5 | 4.4 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | < 1100 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.2 | 2.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | 0.86 | 0.55 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 24.9 | 5.5 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 276 | 5.5 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55124
(3) Prep QC Batch: MP43275
(4) Prep QC Batch: MP43335

RL = Reporting Limit

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-005_SB1B | | |
| **Lab Sample ID:** | JD77310-5 | **Date Sampled:** | 11/15/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | 86.2 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 10700 | 56 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 7.6 | 2.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 463 | 22 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.64 | 0.22 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | 1.9 | 0.56 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 77400 | 2800 | mg/kg | 5 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 28.8 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | 5.8 | 5.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper [a] | 128 | 14 | mg/kg | 5 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 32600 | 280 | mg/kg | 5 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 1260 | 11 | mg/kg | 5 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 12800 | 560 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 704 | 1.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 1.1 | 0.066 | mg/kg | 2 | 11/22/23 | 11/27/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 22.8 | 4.5 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | 1670 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium [a] | < 11 | 11 | mg/kg | 5 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver [a] | < 2.8 | 2.8 | mg/kg | 5 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium [a] | < 5.6 | 5.6 | mg/kg | 5 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 29.8 | 5.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 477 | 5.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55124
(3) Prep QC Batch: MP43275
(4) Prep QC Batch: MP43335

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-006_SB3A | | |
| **Lab Sample ID:** | JD77310-6 | **Date Sampled:** | 11/15/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | 90.6 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6400 | 57 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | 8.0 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 8.9 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 309 | 23 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.43 | 0.23 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | 1.4 | 0.57 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 34300 | 1100 | mg/kg | 2 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 16.8 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | < 5.7 | 5.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 195 | 2.8 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 13400 | 57 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 774 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 2920 | 570 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 1210 | 3.4 | mg/kg | 2 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.68 | 0.035 | mg/kg | 1 | 11/22/23 | 11/27/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 32.2 | 4.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | < 1100 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.3 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | 1.2 | 0.57 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium [a] | < 2.3 | 2.3 | mg/kg | 2 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 25.8 | 5.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 483 | 5.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55124
(3) Prep QC Batch: MP43275
(4) Prep QC Batch: MP43335

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-007_SB3B | | |
| **Lab Sample ID:** | JD77310-7 | **Date Sampled:** | 11/15/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | 88.9 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 5390 | 56 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony [a] | < 45 | 45 | mg/kg | 20 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic [a] | < 45 | 45 | mg/kg | 20 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 288 | 22 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium [a] | < 4.5 | 4.5 | mg/kg | 20 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium [a] | < 11 | 11 | mg/kg | 20 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 49000 | 11000 | mg/kg | 20 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium [a] | 70.1 | 22 | mg/kg | 20 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | 39.9 | 5.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper [a] | 503 | 56 | mg/kg | 20 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 254000 | 1100 | mg/kg | 20 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead [a] | 888 | 45 | mg/kg | 20 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 3500 | 560 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 2890 | 33 | mg/kg | 20 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.65 | 0.036 | mg/kg | 1 | 11/22/23 | 11/27/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel [a] | 98.3 | 89 | mg/kg | 20 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | < 1100 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium [a] | < 45 | 45 | mg/kg | 20 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver [a] | < 11 | 11 | mg/kg | 20 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium [a] | < 22 | 22 | mg/kg | 20 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 94.8 | 5.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 688 | 5.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55124
(3) Prep QC Batch: MP43275
(4) Prep QC Batch: MP43335

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-008_SB10A | | |
| **Lab Sample ID:** | JD77310-8 | **Date Sampled:** | 11/15/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | 91.1 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 7400 | 56 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 3.6 | 2.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 90.2 | 22 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.46 | 0.22 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | < 0.56 | 0.56 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 31300 | 1100 | mg/kg | 2 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 22.0 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | 6.1 | 5.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 26.4 | 2.8 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 13700 | 56 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 159 | 2.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 3600 | 560 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 386 | 1.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.27 | 0.034 | mg/kg | 1 | 11/22/23 | 11/27/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 18.6 | 4.5 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | 1520 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.2 | 2.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | 0.58 | 0.56 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 21.6 | 5.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 54.9 | 5.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55124
(3) Prep QC Batch: MP43275
(4) Prep QC Batch: MP43335

RL = Reporting Limit

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-009_SB11A | | |
| **Lab Sample ID:** | JD77310-9 | **Date Sampled:** | 11/15/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | 83.5 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 7780 | 58 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.3 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 3.9 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 98.7 | 23 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.44 | 0.23 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | < 0.58 | 0.58 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 5130 | 580 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 16.9 | 1.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | 6.4 | 5.8 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 17.1 | 2.9 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 16100 | 58 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 56.1 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 3220 | 580 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 442 | 1.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.23 | 0.036 | mg/kg | 1 | 11/22/23 | 11/27/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 19.4 | 4.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | < 1200 | 1200 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.3 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | < 0.58 | 0.58 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1200 | 1200 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.2 | 1.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 17.7 | 5.8 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 80.8 | 5.8 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55124
(3) Prep QC Batch: MP43275
(4) Prep QC Batch: MP43335

RL = Reporting Limit

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-010_SB8A | | |
| **Lab Sample ID:** | JD77310-10 | **Date Sampled:** | 11/15/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | 95.4 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6710 | 52 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.1 | 2.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 2.5 | 2.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 45.1 | 21 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.39 | 0.21 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | < 0.52 | 0.52 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 15800 | 520 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 17.0 | 1.0 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | < 5.2 | 5.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 17.3 | 2.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 10900 | 52 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 12.0 | 2.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 2740 | 520 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 321 | 1.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.052 | 0.032 | mg/kg | 1 | 11/22/23 | 11/27/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 16.5 | 4.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | < 1000 | 1000 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.1 | 2.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | < 0.52 | 0.52 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1000 | 1000 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.0 | 1.0 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 17.3 | 5.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 26.6 | 5.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55124
(3) Prep QC Batch: MP43275
(4) Prep QC Batch: MP43335

RL = Reporting Limit

# Report of Analysis





**Client Sample ID:** E23-05046-011_TWP1
**Lab Sample ID:** JD77310-11
**Matrix:** AQ - Water
**Project:** Integrated Analytical Lab, Randolph, NJ

**Date Sampled:** 11/15/23
**Date Received:** 11/20/23
**Percent Solids:** n/a

**Total Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6990 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Arsenic | 5.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Barium | 229 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Beryllium | 1.3 | 1.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Calcium | 118000 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Chromium | 29.5 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Copper | 60.5 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Iron | 10400 | 100 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Lead | 68.9 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Magnesium | 14700 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Manganese | 1100 | 15 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/28/23 | 11/28/23 | LM | SW846 7470A [2] | SW846 7470A [4] |
| Nickel | 24.7 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Potassium | 10400 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Silver | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Sodium | 64300 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Zinc | 64.0 | 20 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |

(1) Instrument QC Batch: MA55130
(2) Instrument QC Batch: MA55145
(3) Prep QC Batch: MP43295
(4) Prep QC Batch: MP43369

RL = Reporting Limit

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-019_TWP1 FILT | | |
| **Lab Sample ID:** | JD77310-11F | **Date Sampled:** | 11/15/23 |
| **Matrix:** | AQ - Water Filtered | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | n/a |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Dissolved Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 850 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Arsenic | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Barium | < 200 | 200 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Beryllium | < 1.0 | 1.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Calcium | 128000 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Chromium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Copper | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Iron | 1090 | 100 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Lead | 8.0 | 3.0 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Magnesium | 13700 | 5000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Manganese | 145 | 15 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/28/23 | 11/28/23 | LM | SW846 7470A [2] | SW846 7470A [4] |
| Nickel | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Potassium | 10600 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Silver | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Sodium | 73000 | 10000 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Zinc | < 20 | 20 | ug/l | 1 | 11/22/23 | 11/27/23 | ND | SW846 6010D [1] | SW846 3010A [3] |

(1) Instrument QC Batch: MA55130
(2) Instrument QC Batch: MA55145
(3) Prep QC Batch: MP43295
(4) Prep QC Batch: MP43369

RL = Reporting Limit

# Report of Analysis



**Client Sample ID:** E23-05046-012_TWP2
**Lab Sample ID:** JD77310-12
**Matrix:** AQ - Water
**Project:** Integrated Analytical Lab, Randolph, NJ

**Date Sampled:** 11/15/23
**Date Received:** 11/20/23
**Percent Solids:** n/a

**Total Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 3300 | 200 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Arsenic | 7.7 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Barium | < 200 | 200 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Beryllium | < 1.0 | 1.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Calcium | 75100 | 5000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Chromium | 10.9 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Copper | 56.9 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Iron | 10400 | 100 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Lead | 43.9 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Magnesium | < 5000 | 5000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Manganese | 182 | 15 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Mercury | 0.63 | 0.20 | ug/l | 1 | 11/28/23 | 11/28/23 | LM | SW846 7470A [2] | SW846 7470A [4] |
| Nickel | 11.2 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Potassium | 11200 | 10000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Silver | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Sodium | 106000 | 10000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Zinc | 49.2 | 20 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55145
(3) Prep QC Batch: MP43267
(4) Prep QC Batch: MP43369

RL = Reporting Limit

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-020_TWP2 FILT | | |
| **Lab Sample ID:** | JD77310-12F | **Date Sampled:** | 11/15/23 |
| **Matrix:** | AQ - Water Filtered | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | n/a |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Dissolved Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 579 | 200 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Arsenic | 7.1 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Barium | < 200 | 200 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Beryllium | < 1.0 | 1.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Calcium | 60900 | 5000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Chromium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Copper | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Iron | 784 | 100 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Lead | 4.7 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Magnesium | < 5000 | 5000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Manganese | 20.3 | 15 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/28/23 | 11/28/23 | LM | SW846 7470A [2] | SW846 7470A [4] |
| Nickel | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Potassium | 11700 | 10000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Silver | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Sodium | 121000 | 10000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Zinc | < 20 | 20 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55145
(3) Prep QC Batch: MP43267
(4) Prep QC Batch: MP43369

RL = Reporting Limit

# Report of Analysis



**Client Sample ID:** E23-05046-013_TWP4
**Lab Sample ID:** JD77310-13
**Matrix:** AQ - Water
**Project:** Integrated Analytical Lab, Randolph, NJ

**Date Sampled:** 11/16/23
**Date Received:** 11/20/23
**Percent Solids:** n/a

**Total Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6580 | 200 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Arsenic | 5.2 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Barium | 487 | 200 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Beryllium | 1.1 | 1.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Calcium | 169000 | 5000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Chromium | 11.0 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Copper | 27.1 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Iron | 9230 | 100 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Lead | 122 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Magnesium | 24400 | 5000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Manganese | 2110 | 15 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/28/23 | 11/28/23 | LM | SW846 7470A [2] | SW846 7470A [4] |
| Nickel | 24.0 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Potassium | 15200 | 10000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Silver | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Sodium | 190000 | 10000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |
| Zinc | 107 | 20 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55145
(3) Prep QC Batch: MP43267
(4) Prep QC Batch: MP43369

RL = Reporting Limit

# Report of Analysis



**Client Sample ID:** E23-05046-021_TWP4 FILT
**Lab Sample ID:** JD77310-13F
**Matrix:** AQ - Water Filtered
**Project:** Integrated Analytical Lab, Randolph, NJ

**Date Sampled:** 11/16/23
**Date Received:** 11/20/23
**Percent Solids:** n/a

**Dissolved Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | < 200 | 200 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Arsenic | < 3.0 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Barium | 236 | 200 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Beryllium | < 1.0 | 1.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Calcium | 170000 | 5000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Chromium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Copper | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Iron | 110 | 100 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Lead | < 3.0 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Magnesium | 23300 | 5000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Manganese | 1020 | 15 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/28/23 | 11/28/23 | LM | SW846 7470A [3] | SW846 7470A [5] |
| Nickel | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Potassium | 15600 | 10000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Silver | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Sodium | 209000 | 20000 | ug/l | 2 | 11/21/23 | 11/28/23 | ND | SW846 6010D [2] | SW846 3010A [4] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Zinc | < 20 | 20 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55138
(3) Instrument QC Batch: MA55145
(4) Prep QC Batch: MP43267
(5) Prep QC Batch: MP43369

RL = Reporting Limit

# Report of Analysis



**Client Sample ID:** E23-05046-014_TWP5
**Lab Sample ID:** JD77310-14
**Matrix:** AQ - Water
**Project:** Integrated Analytical Lab, Randolph, NJ

**Date Sampled:** 11/16/23
**Date Received:** 11/20/23
**Percent Solids:** n/a

**Total Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 4230 | 200 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Arsenic | < 3.0 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Barium | < 200 | 200 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Beryllium | < 1.0 | 1.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Calcium | 33100 | 5000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Chromium | 15.2 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Copper | 13.3 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Iron | 8200 | 100 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Lead | 8.7 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Magnesium | < 5000 | 5000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Manganese | 140 | 15 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/28/23 | 11/28/23 | LM | SW846 7470A [3] | SW846 7470A [5] |
| Nickel | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Potassium | < 10000 | 10000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Silver | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Sodium | 274000 | 20000 | ug/l | 2 | 11/21/23 | 11/28/23 | ND | SW846 6010D [2] | SW846 3010A [4] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Zinc | 26.9 | 20 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55138
(3) Instrument QC Batch: MA55145
(4) Prep QC Batch: MP43267
(5) Prep QC Batch: MP43369

RL = Reporting Limit

# Report of Analysis





**Client Sample ID:** E23-05046-022_TWP5 FILT
**Lab Sample ID:** JD77310-14F
**Matrix:** AQ - Water Filtered
**Project:** Integrated Analytical Lab, Randolph, NJ

**Date Sampled:** 11/16/23
**Date Received:** 11/20/23
**Percent Solids:** n/a

**Dissolved Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | < 200 | 200 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Arsenic | < 3.0 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Barium | < 200 | 200 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Beryllium | < 1.0 | 1.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Calcium | 31300 | 5000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Chromium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Copper | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Iron | 294 | 100 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Lead | < 3.0 | 3.0 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Magnesium | < 5000 | 5000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Manganese | 89.2 | 15 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/28/23 | 11/28/23 | LM | SW846 7470A [3] | SW846 7470A [5] |
| Nickel | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Potassium | < 10000 | 10000 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Selenium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Silver | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Sodium | 264000 | 50000 | ug/l | 5 | 11/21/23 | 11/27/23 | ND | SW846 6010D [2] | SW846 3010A [4] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Zinc | < 20 | 20 | ug/l | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3010A [4] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55130
(3) Instrument QC Batch: MA55145
(4) Prep QC Batch: MP43267
(5) Prep QC Batch: MP43369

RL = Reporting Limit

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-015_SB4A | | |
| **Lab Sample ID:** | JD77310-15 | **Date Sampled:** | 11/15/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | 87.1 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 11900 | 60 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.4 | 2.4 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 6.4 | 2.4 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 298 | 24 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.60 | 0.24 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | < 0.60 | 0.60 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 8670 | 600 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 19.9 | 1.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | < 6.0 | 6.0 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 25.2 | 3.0 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 16200 | 60 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 203 | 2.4 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 2690 | 600 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 461 | 1.8 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.23 | 0.036 | mg/kg | 1 | 11/22/23 | 11/27/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 14.9 | 4.8 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | < 1200 | 1200 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.4 | 2.4 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | 0.85 | 0.60 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1200 | 1200 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.2 | 1.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 27.4 | 6.0 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 196 | 6.0 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55124
(3) Prep QC Batch: MP43275
(4) Prep QC Batch: MP43335

RL = Reporting Limit

# Report of Analysis





**Client Sample ID:** E23-05046-016_SB4B
**Lab Sample ID:** JD77310-16
**Matrix:** SO - Soil
**Project:** Integrated Analytical Lab, Randolph, NJ

**Date Sampled:** 11/15/23
**Date Received:** 11/20/23
**Percent Solids:** 83.0

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 8270 | 61 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.4 | 2.4 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 9.2 | 2.4 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 2180 | 120 | mg/kg | 5 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.56 | 0.24 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | 1.0 | 0.61 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 67200 | 3000 | mg/kg | 5 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 24.9 | 1.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | 6.5 | 6.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 35.7 | 3.0 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 18900 | 61 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 2680 | 12 | mg/kg | 5 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 4210 | 610 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 604 | 1.8 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.57 | 0.036 | mg/kg | 1 | 11/22/23 | 11/27/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 21.7 | 4.9 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | 1560 | 1200 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.4 | 2.4 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | 1.1 | 0.61 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1200 | 1200 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.2 | 1.2 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 23.0 | 6.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 2550 | 30 | mg/kg | 5 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55124
(3) Prep QC Batch: MP43275
(4) Prep QC Batch: MP43335

RL = Reporting Limit

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-017_SB5A | | |
| **Lab Sample ID:** | JD77310-17 | **Date Sampled:** | 11/15/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | 91.0 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 10700 | 53 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.1 | 2.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 3.1 | 2.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 59.6 | 21 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.61 | 0.21 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | < 0.53 | 0.53 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 2980 | 530 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 23.6 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | 7.4 | 5.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 20.0 | 2.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 15600 | 53 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 29.9 | 2.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 3310 | 530 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 443 | 1.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.21 | 0.035 | mg/kg | 1 | 11/22/23 | 11/27/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 21.9 | 4.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | 1390 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.1 | 2.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | 0.70 | 0.53 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 26.8 | 5.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 51.6 | 5.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55124
(3) Prep QC Batch: MP43275
(4) Prep QC Batch: MP43335

RL = Reporting Limit

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05046-018_SB5B | | |
| **Lab Sample ID:** | JD77310-18 | **Date Sampled:** | 11/15/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/20/23 |
| | | **Percent Solids:** | 90.2 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 7620 | 57 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.3 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 2.5 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 43.4 | 23 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.47 | 0.23 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | < 0.57 | 0.57 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 2090 | 570 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 17.0 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | < 5.7 | 5.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 16.2 | 2.9 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 11300 | 57 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 27.7 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 2480 | 570 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 307 | 1.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.11 | 0.035 | mg/kg | 1 | 11/22/23 | 11/27/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 14.0 | 4.6 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | 1390 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.3 | 2.3 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | < 0.57 | 0.57 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 19.5 | 5.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 30.1 | 5.7 | mg/kg | 1 | 11/21/23 | 11/22/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55123
(2) Instrument QC Batch: MA55124
(3) Prep QC Batch: MP43275
(4) Prep QC Batch: MP43335

RL = Reporting Limit

## Misc. Forms

### Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

**SGS Dayton**
**Fresh Ponds Corporate Village, Building B 2235 Route 130, Dayton, NJ 08810**

D/O4927

JD77310

## CLIENT & PROJECT

| | |
|---|---|
| Name: Integrated Analytical Laboratories LLC | |
| | |
| Address: | |
| 273 Franklin Road | |
| Randolph, NJ 07869 | |
| Telephone #: 973-361-4252 | |
| | |
| Project Name: E23-05046 | |
| Project Location (State): NY | |
| Project Manager: | |
| Reference ID#: PO# | |

## REPORTING & BILLING

| | |
|---|---|
| Contact: | Kim James |
| Fax #: | |
| EMail to: | msimmons@ialonline.com |
| Report to: | Melissa Simmons |
| Address: | |
| | |
| Invoice to: | Brenda Barone |
| Address: | |

| Turnaround Time | | | | | | | Report Format |
|---|---|---|---|---|---|---|---|
| Verbal/Fax | | | | | | | Category A |
| 24 hr* | 48 hr* | 72 hr* | 1 wk* | 2 wk | Other: | 1 WEEK | |
| Hard Copy | | | | | | | Special Requirements |
| 72 hr* | 1 wk* | 2 wk* | 3 wk | | Other: | | |

*Prior to sample arrival, Lab notification is required.

Preservative
1 = HCl; 2 = NaOH; 3 = $HNO_3$
4 = $H_2SO_4$; 5= MeOH; 6 = Other

## ANALYTICAL PARAMETERS / PRESERVATIVES

## SAMPLE INFORMATION

| | Sample ID | Sample Depth (in Feet) | Sampling Date | Sampling Time | Matrix | # of Containers | TAL Metals (6020B/7471B) | 1 2 3 4 5 6 |
|---|---|---|---|---|---|---|---|---|
| 1 | E23-05046-001_SB12A | | 11/15/23 | 08:15 | Soil | 1 | Run | A13 |
| 2 | E23-05046-002_SB2A | | 11/15/23 | 08:30 | Soil | 1 | Run | D49 T1 |
| 3 | E23-05046-003_SB2B | | 11/15/23 | 08:35 | Soil | 1 | Run | |
| 4 | E23-05046-004_SB1A | | 11/15/23 | 09:30 | Soil | 1 | Run | |
| 5 | E23-05046-005_SB1B | | 11/15/23 | 09:35 | Soil | 1 | Run | |
| 6 | E23-05046-006_SB3A | | 11/15/23 | 10:45 | Soil | 1 | Run | |
| 7 | E23-05046-007_SB3B | | 11/15/23 | 10:50 | Soil | 1 | Run | |
| 8 | E23-05046-008_SB10A | | 11/15/23 | 13:05 | Soil | 1 | Run | |
| 9 | E23-05046-009_SB11A | | 11/15/23 | 13:40 | Soil | 1 | Run | |
| 10 | E23-05046-010_SB8A | | 11/15/23 | 14:00 | Soil | 1 | Run | |

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

COOLER TEMP. 1.1 °C IR#0

Concentrations Expected: LOW MED HIGH

Known Hazard: yes no
Describe:

## EMAIL CONFIRMATION REQUIRED

Note: SAMPLES 019 THROUGH 022 ARE FIELD FILTERED VOLUME OF SAMPLES 11 THROUGH 14.

1 WEEK RUSH.

Initial Assessment 2B14R
Label Verification

Lab Case #

PAGE: 1 OF 3

1.1 IR40

REV Feb 2013

## CUSTODY LOG

| Signature/Company | Date | Time | Signature/Company |
|---|---|---|---|
| Relinquished by: | 11/20/23 | 5:00PM | Received by: 11/2023 6:30 |
| Relinquished by: | 11/20/23 | 10:05 | Received by: 11/20/23 |
| Relinquished by: | | | Received by: |

COC (001-010)

**SGS Dayton**
**Fresh Ponds Corporate Village, Building B 2235 Route 130, Dayton, NJ 08810**

D/O 4927 JD77310

## CLIENT & PROJECT

| | |
|---|---|
| Name: Integrated Analytical Laboratories LLC | |
| | |
| Address: | |
| 273 Franklin Road | |
| Randolph, NJ 07869 | |
| Telephone #: 973-361-4252 | |
| | |
| Project Name: E23-05046 | |
| Project Location (State): NY | |
| Project Manager: | |
| Reference ID#: PO# | |

## REPORTING & BILLING

| | |
|---|---|
| Contact: | Kim James |
| Fax #: | |
| EMail to: | msimmons@iaionline.com |
| Report to: | Melissa Simmons |
| Address: | |
| | |
| Invoice to: | Brenda Barone |
| Address: | |

**Turnaround Time**

Verbal/Fax: 24 hr* 48 hr* 72 hr* 1 wk* 2 wk Other: 1 WEEK

Hard Copy: 72 hr* 1 wk* 2 wk* 3 wk Other:

*Prior to sample arrival, Lab notification is required.

**Report Format**: Category A

**Special Requirements**:

## ANALYTICAL PARAMETERS / PRESERVATIVES

Preservative: 1 = HCL; 2 = NaOH; 3 = $HNO_3$; 4 = $H_2SO_4$; 5 = MeOH; 6 = Other

## SAMPLE INFORMATION

| | Sample ID | Sample Depth (in Feet) | Sampling Date | Sampling Time | Matrix | # of Containers | TAL Metals (6020B/7471B) |
|---|---|---|---|---|---|---|---|
| 11 | E23-05046-011_TWP1 | | 11/15/23 | 12:20 | Aqueous | 1 | Run |
| 12 | E23-05046-012_TWP2 | | 11/15/23 | 13:00 | Aqueous | 1 | Run |
| 13 | E23-05046-013_TWP4 | | 11/16/23 | 09:10 | Aqueous | 1 | Run |
| 14 | E23-05046-014_TWP5 | | 11/16/23 | 09:30 | Aqueous | 1 | Run |
| 15 | E23-05046-015_SB4A | | 11/16/23 | 08:10 | Soil | 1 | Run |
| 16 | E23-05046-016_SB4B | | 11/16/23 | 08:15 | Soil | 1 | Run |
| 17 | E23-05046-017_SB5A | | 11/16/23 | 08:20 | Soil | 1 | Run |
| 8 | E23-05046-018_SB5B | | 11/16/23 | 08:35 | Soil | 1 | Run |
| 11 | E23-05046-019_TWP1 FILT | | 11/15/23 | 12:20 | Aqueous | 1 | Run |
| 12 | E23-05046-020_TWP2 FILT | | 11/15/23 | 13:00 | Aqueous | 1 | Run |

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

COOLER TEMP. 1.1 °C (IR#0)

Concentrations Expected: LOW MED HIGH

Known Hazard: yes no

Describe:

## EMAIL CONFIRMATION REQUIRED

Note: SAMPLES 019 THROUGH 022 ARE FIELD FILTERED VOLUME OF SAMPLES 11 THROUGH 14.

1 WEEK RUSH.

## CUSTODY LOG

| Signature/Company | Date | Time | Signature/Company |
|---|---|---|---|
| Relinquished by: Kim James | 11/20/23 | 8:00AM | Received by: Courier Delivery 11/20/23 6:30 |
| Relinquished by: Gwyn Allen | 11/20/23 | 10:05 | Received by: Edward Courier Delivery 11/20/23 10:41 |
| Relinquished by: | | | Received by: |

Lab Case #

PAGE: 2 OF 3

11 TAT

COC (011-020)

REV Feb 2013

**SGS Dayton**
**Fresh Ponds Corporate Village, Building B 2235 Route 130, Dayton, NJ 08810**

D/O4927

JD77310

## CLIENT & PROJECT

| | |
|---|---|
| Name: Integrated Analytical Laboratories LLC | |
| | |
| Address: | |
| 273 Franklin Road | |
| Randolph, NJ 07869 | |
| Telephone #: 973-361-4252 | |
| | |
| Project Name: E23-05046 | |
| Project Location (State): NY | |
| Project Manager: | |
| Reference ID#: PO# | |

## REPORTING & BILLING

| | |
|---|---|
| Contact: Kim James | |
| Fax #: | |
| EMail to: msimmons@ialonline.com | |
| Report to: Melissa Simmons | |
| Address: | |
| | |
| | |
| Invoice to: Brenda Barone | |
| Address: | |
| | |
| | |

| Turnaround Time | Report Format |
|---|---|
| Verbal/Fax: 24 hr* 48 hr* 72 hr* 1 wk* 2 wk Other: 1 WEEK | Category A |
| Hard Copy: 72 hr* 1 wk* 2 wk* 3 wk Other: | Special Requirements |
| *Prior to sample arrival, Lab notification is required. | |

## ANALYTICAL PARAMETERS / PRESERVATIVES

Preservative
1 = HCL; 2 = NaOH; 3 = $HNO_3$
4 = $H_2SO_4$; 5 = MeOH; 6 = Other

## SAMPLE INFORMATION

| | Sample ID | Sample Depth (in Feet) | Sampling Date | Sampling Time | Matrix | # of Containers | TAL Metals (6020B/7471B) |
|---|---|---|---|---|---|---|---|
| 13 | E23-05046-021_TWP4 FILT | | 11/16/23 | 09:10 | Aqueous | 1 | Run |
| 14 | E23-05046-022_TWP5 FILT | | 11/16/23 | 09:30 | Aqueous | 1 | Run |

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

COOLER TEMP: 1.1 °C 12:40

Concentrations Expected: LOW MED HIGH

Known Hazard: yes no

Describe:

**EMAIL CONFIRMATION REQUIRED**

Note: SAMPLES 019 THROUGH 022 ARE FIELD FILTERED VOLUME OF SAMPLES 11 THROUGH 14.

## CUSTODY LOG

| Signature/Company | Date | Time | Signature/Company |
|---|---|---|---|
| Relinquished by: [illegible] | 11/20/23 | 3:20PM | Received by: [illegible] 11/20/23 6:30 |
| Relinquished by: [illegible] | 11/24/23 | 10:05 | Received by: Edward Capote/SGS 10:11 11/20/23 |
| Relinquished by: | | | Received by: |

1 WEEK RUSH.

Lab Case #

PAGE: 3 OF 3

COC (021-022)

REV Feb 2013

1.1 1240

# SGS Sample Receipt Summary

**Job Number:** JD77310 **Client:** INTEGRATED ANALYTICAL LABORATOR **Project:** E23-05046

**Date / Time Received:** 11/20/2023 10:11:00 AM **Delivery Method:** CLIENT **Airbill #'s:**

**Cooler Temps (Raw Measured) °C:** Cooler 1: (1.1);

**Cooler Temps (Corrected) °C:** Cooler 1: (1.1);

| **Cooler Security** | Y | or | N | | Y | or | N |
|---|---|---|---|---|---|---|---|
| 1. Custody Seals Present: | ☑ | | ☐ | 3. COC Present: | ☑ | | ☐ |
| 2. Custody Seals Intact: | ☑ | | ☐ | 4. Smpl Dates/Time OK | ☑ | | ☐ |

| **Cooler Temperature** | Y | or | N |
|---|---|---|---|
| 1. Temp criteria achieved: | ☑ | | ☐ |
| 2. Cooler temp verification: | | | |
| 3. Cooler media: | Ice (Bag) | | |
| 4. No. Coolers: | 1 | | |

| **Quality Control Preservatio** | Y | or | N | N/A |
|---|---|---|---|---|
| 1. Trip Blank present / cooler: | ☐ | | ☑ | ☐ |
| 2. Trip Blank listed on COC: | ☐ | | ☑ | ☐ |
| 3. Samples preserved properly: | ☑ | | ☐ | |
| 4. VOCs headspace free: | ☐ | | ☐ | ☑ |

| **Sample Integrity - Documentation** | Y | or | N |
|---|---|---|---|
| 1. Sample labels present on bottles: | ☑ | | ☐ |
| 2. Container labeling complete: | ☑ | | ☐ |
| 3. Sample container label / COC agree: | ☑ | | ☐ |

| **Sample Integrity - Condition** | Y | or | N |
|---|---|---|---|
| 1. Sample recvd within HT: | ☑ | | ☐ |
| 2. All containers accounted for: | ☑ | | ☐ |
| 3. Condition of sample: | Intact | | |

| **Sample Integrity - Instructions** | Y | or | N | N/A |
|---|---|---|---|---|
| 1. Analysis requested is clear: | ☑ | | ☐ | |
| 2. Bottles received for unspecified tests | ☐ | | ☑ | |
| 3. Sufficient volume recvd for analysis: | ☑ | | ☐ | |
| 4. Compositing instructions clear: | ☐ | | ☐ | ☑ |
| 5. Filtering instructions clear: | ☐ | | ☐ | ☑ |

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

The results set forth herein are provided by SGS North America Inc.

*e-Hardcopy 2.0*
*Automated Report*

Technical Report for

# Integrated Analytical Lab

Integrated Analytical Lab, Randolph, NJ

E23-05091

SGS Job Number: JD77487

Sampling Date: 11/20/23

Report to:

Integrated Analytical Lab
273 Franklin Road
Randolph, NJ 07869
msimmons@ialonline.com

ATTN: Melissa Simmons

Total number of pages in report: **16**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable unless noted in the narrative, comments or footnotes.

David Chastain
General Manager

Client Service contact: Victoria Pushkova 732-329-0200
Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA(68-00408), RI, SC, TX, UT, VA, WV

# Table of Contents

# Sample Summary

Integrated Analytical Lab

**Job No:** JD77487

Integrated Analytical Lab, Randolph, NJ
Project No: E23-05091

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| JD77487-1 | 11/20/23 | 08:15 | | 11/22/23 | SO | Soil | E23-05091-001_SB9A |
| JD77487-2 | 11/20/23 | 08:25 | | 11/22/23 | SO | Soil | E23-05091-002_SB9B |
| JD77487-3 | 11/20/23 | 09:45 | | 11/22/23 | SO | Soil | E23-05091-003_SB6A |
| JD77487-4 | 11/20/23 | 09:55 | | 11/22/23 | SO | Soil | E23-05091-004_SB6B |
| JD77487-5 | 11/20/23 | 10:15 | | 11/22/23 | AQ | Water | E23-05091-005_TWP6 |
| JD77487-6F | 11/20/23 | 10:15 | | 11/22/23 | AQ | Water Filtered | E23-05091-006_TWP6 FILT |

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

# Summary of Hits

**Job Number:** JD77487
**Account:** Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Collected:** 11/20/23

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| **JD77487-1** | **E23-05091-001_SB9A** | | | | | |
| Aluminum | | 6140 | 53 | | mg/kg | SW846 6010D |
| Arsenic | | 3.5 | 2.1 | | mg/kg | SW846 6010D |
| Barium | | 46.7 | 21 | | mg/kg | SW846 6010D |
| Beryllium | | 0.37 | 0.21 | | mg/kg | SW846 6010D |
| Calcium | | 9440 | 530 | | mg/kg | SW846 6010D |
| Chromium | | 14.2 | 1.1 | | mg/kg | SW846 6010D |
| Cobalt | | 6.6 | 5.3 | | mg/kg | SW846 6010D |
| Copper | | 16.0 | 2.6 | | mg/kg | SW846 6010D |
| Iron | | 11700 | 53 | | mg/kg | SW846 6010D |
| Lead | | 21.5 | 2.1 | | mg/kg | SW846 6010D |
| Magnesium | | 4360 | 530 | | mg/kg | SW846 6010D |
| Manganese | | 335 | 1.6 | | mg/kg | SW846 6010D |
| Mercury | | 0.044 | 0.031 | | mg/kg | SW846 7471B |
| Nickel | | 24.5 | 4.2 | | mg/kg | SW846 6010D |
| Silver | | 0.86 | 0.53 | | mg/kg | SW846 6010D |
| Vanadium | | 19.1 | 5.3 | | mg/kg | SW846 6010D |
| Zinc | | 39.9 | 5.3 | | mg/kg | SW846 6010D |
| **JD77487-2** | **E23-05091-002_SB9B** | | | | | |
| Aluminum | | 11900 | 55 | | mg/kg | SW846 6010D |
| Arsenic | | 4.4 | 2.2 | | mg/kg | SW846 6010D |
| Barium | | 157 | 22 | | mg/kg | SW846 6010D |
| Beryllium | | 0.71 | 0.22 | | mg/kg | SW846 6010D |
| Calcium | | 8260 | 550 | | mg/kg | SW846 6010D |
| Chromium | | 29.4 | 1.1 | | mg/kg | SW846 6010D |
| Cobalt | | 8.2 | 5.5 | | mg/kg | SW846 6010D |
| Copper | | 25.0 | 2.8 | | mg/kg | SW846 6010D |
| Iron | | 18400 | 55 | | mg/kg | SW846 6010D |
| Lead | | 64.2 | 2.2 | | mg/kg | SW846 6010D |
| Magnesium | | 6700 | 550 | | mg/kg | SW846 6010D |
| Manganese | | 562 | 1.7 | | mg/kg | SW846 6010D |
| Mercury | | 0.060 | 0.032 | | mg/kg | SW846 7471B |
| Nickel | | 31.3 | 4.4 | | mg/kg | SW846 6010D |
| Potassium | | 2200 | 1100 | | mg/kg | SW846 6010D |
| Silver | | 1.4 | 0.55 | | mg/kg | SW846 6010D |
| Vanadium | | 31.7 | 5.5 | | mg/kg | SW846 6010D |
| Zinc | | 100 | 5.5 | | mg/kg | SW846 6010D |
| **JD77487-3** | **E23-05091-003_SB6A** | | | | | |
| Aluminum | | 5550 | 55 | | mg/kg | SW846 6010D |
| Arsenic | | 4.5 | 2.2 | | mg/kg | SW846 6010D |

# Summary of Hits

**Job Number:** JD77487
**Account:** Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Collected:** 11/20/23

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| Barium | | 224 | 22 | | mg/kg | SW846 6010D |
| Beryllium | | 0.31 | 0.22 | | mg/kg | SW846 6010D |
| Calcium | | 30600 | 1100 | | mg/kg | SW846 6010D |
| Chromium | | 14.4 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 20.0 | 2.7 | | mg/kg | SW846 6010D |
| Iron | | 11000 | 55 | | mg/kg | SW846 6010D |
| Lead | | 143 | 2.2 | | mg/kg | SW846 6010D |
| Magnesium | | 14100 | 550 | | mg/kg | SW846 6010D |
| Manganese | | 275 | 1.6 | | mg/kg | SW846 6010D |
| Mercury | | 0.15 | 0.033 | | mg/kg | SW846 7471B |
| Nickel | | 20.2 | 4.4 | | mg/kg | SW846 6010D |
| Silver | | 0.77 | 0.55 | | mg/kg | SW846 6010D |
| Vanadium | | 21.5 | 5.5 | | mg/kg | SW846 6010D |
| Zinc | | 148 | 5.5 | | mg/kg | SW846 6010D |
| **JD77487-4** | **E23-05091-004_SB6B** | | | | | |
| Aluminum | | 6100 | 53 | | mg/kg | SW846 6010D |
| Arsenic | | 3.8 | 2.1 | | mg/kg | SW846 6010D |
| Barium | | 38.0 | 21 | | mg/kg | SW846 6010D |
| Beryllium | | 0.28 | 0.21 | | mg/kg | SW846 6010D |
| Calcium | | 17300 | 530 | | mg/kg | SW846 6010D |
| Chromium | | 13.5 | 1.1 | | mg/kg | SW846 6010D |
| Copper | | 15.6 | 2.7 | | mg/kg | SW846 6010D |
| Iron | | 9790 | 53 | | mg/kg | SW846 6010D |
| Lead | | 48.9 | 2.1 | | mg/kg | SW846 6010D |
| Magnesium | | 6650 | 530 | | mg/kg | SW846 6010D |
| Manganese | | 201 | 1.6 | | mg/kg | SW846 6010D |
| Mercury | | 0.054 | 0.034 | | mg/kg | SW846 7471B |
| Nickel | | 18.1 | 4.3 | | mg/kg | SW846 6010D |
| Silver | | 0.78 | 0.53 | | mg/kg | SW846 6010D |
| Vanadium | | 20.0 | 5.3 | | mg/kg | SW846 6010D |
| Zinc | | 66.2 | 5.3 | | mg/kg | SW846 6010D |
| **JD77487-5** | **E23-05091-005_TWP6** | | | | | |
| Aluminum | | 5960 | 200 | | ug/l | SW846 6010D |
| Barium | | 440 | 200 | | ug/l | SW846 6010D |
| Beryllium | | 1.2 | 1.0 | | ug/l | SW846 6010D |
| Calcium | | 74300 | 5000 | | ug/l | SW846 6010D |
| Chromium | | 18.1 | 10 | | ug/l | SW846 6010D |
| Copper | | 44.5 | 10 | | ug/l | SW846 6010D |
| Iron | | 8980 | 100 | | ug/l | SW846 6010D |
| Lead | | 20.9 | 3.0 | | ug/l | SW846 6010D |
| Magnesium | | 22200 | 5000 | | ug/l | SW846 6010D |

# Summary of Hits

**Job Number:** JD77487
**Account:** Integrated Analytical Lab
**Project:** Integrated Analytical Lab, Randolph, NJ
**Collected:** 11/20/23

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| Manganese | | 3260 | 15 | | ug/l | SW846 6010D |
| Nickel | | 26.1 | 10 | | ug/l | SW846 6010D |
| Potassium | | 16300 | 10000 | | ug/l | SW846 6010D |
| Selenium | | 10.5 | 10 | | ug/l | SW846 6010D |
| Sodium | | 193000 | 20000 | | ug/l | SW846 6010D |
| Zinc | | 57.4 | 20 | | ug/l | SW846 6010D |
| **JD77487-6F** | **E23-05091-006_TWP6 FILT** | | | | | |
| Aluminum | | 6990 | 200 | | ug/l | SW846 6010D |
| Barium | | 328 | 200 | | ug/l | SW846 6010D |
| Calcium | | 70000 | 5000 | | ug/l | SW846 6010D |
| Chromium | | 13.2 | 10 | | ug/l | SW846 6010D |
| Copper | | 35.7 | 10 | | ug/l | SW846 6010D |
| Iron | | 9040 | 100 | | ug/l | SW846 6010D |
| Lead | | 9.6 | 3.0 | | ug/l | SW846 6010D |
| Magnesium | | 20000 | 5000 | | ug/l | SW846 6010D |
| Manganese | | 2730 | 15 | | ug/l | SW846 6010D |
| Nickel | | 19.6 | 10 | | ug/l | SW846 6010D |
| Potassium | | 16600 | 10000 | | ug/l | SW846 6010D |
| Selenium | | 10.7 | 10 | | ug/l | SW846 6010D |
| Sodium | | 192000 | 20000 | | ug/l | SW846 6010D |
| Zinc | | 32.7 | 20 | | ug/l | SW846 6010D |

## Sample Results

Report of Analysis

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05091-001_SB9A | | |
| **Lab Sample ID:** | JD77487-1 | **Date Sampled:** | 11/20/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/22/23 |
| | | **Percent Solids:** | 93.6 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6140 | 53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 3.5 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 46.7 | 21 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.37 | 0.21 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | < 0.53 | 0.53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 9440 | 530 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 14.2 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | 6.6 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 16.0 | 2.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 11700 | 53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 21.5 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 4360 | 530 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 335 | 1.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.044 | 0.031 | mg/kg | 1 | 11/29/23 | 11/30/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 24.5 | 4.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | 0.86 | 0.53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 19.1 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 39.9 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55138
(2) Instrument QC Batch: MA55149
(3) Prep QC Batch: MP43344
(4) Prep QC Batch: MP43430

RL = Reporting Limit

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05091-002_SB9B | | |
| **Lab Sample ID:** | JD77487-2 | **Date Sampled:** | 11/20/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/22/23 |
| | | **Percent Solids:** | 88.5 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 11900 | 55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 4.4 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 157 | 22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.71 | 0.22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | < 0.55 | 0.55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 8260 | 550 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 29.4 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | 8.2 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 25.0 | 2.8 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 18400 | 55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 64.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 6700 | 550 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 562 | 1.7 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.060 | 0.032 | mg/kg | 1 | 11/29/23 | 11/30/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 31.3 | 4.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | 2200 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | 1.4 | 0.55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 31.7 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 100 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55138
(2) Instrument QC Batch: MA55149
(3) Prep QC Batch: MP43344
(4) Prep QC Batch: MP43430

RL = Reporting Limit

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05091-003_SB6A | | |
| **Lab Sample ID:** | JD77487-3 | **Date Sampled:** | 11/20/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/22/23 |
| | | **Percent Solids:** | 92.8 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 5550 | 55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Antimony | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Arsenic | 4.5 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Barium | 224 | 22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Beryllium | 0.31 | 0.22 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cadmium | < 0.55 | 0.55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Calcium | 30600 | 1100 | mg/kg | 2 | 11/27/23 | 11/29/23 | ND | SW846 6010D [2] | SW846 3050B [4] |
| Chromium | 14.4 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Cobalt | < 5.5 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Copper | 20.0 | 2.7 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Iron | 11000 | 55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Lead | 143 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Magnesium | 14100 | 550 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Manganese | 275 | 1.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Mercury | 0.15 | 0.033 | mg/kg | 1 | 11/29/23 | 11/30/23 | LM | SW846 7471B [3] | SW846 7471B [5] |
| Nickel | 20.2 | 4.4 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Potassium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Selenium | < 2.2 | 2.2 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Silver | 0.77 | 0.55 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Vanadium | 21.5 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |
| Zinc | 148 | 5.5 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [4] |

(1) Instrument QC Batch: MA55138
(2) Instrument QC Batch: MA55148
(3) Instrument QC Batch: MA55149
(4) Prep QC Batch: MP43344
(5) Prep QC Batch: MP43430

RL = Reporting Limit

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05091-004_SB6B | | |
| **Lab Sample ID:** | JD77487-4 | **Date Sampled:** | 11/20/23 |
| **Matrix:** | SO - Soil | **Date Received:** | 11/22/23 |
| | | **Percent Solids:** | 92.6 |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6100 | 53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Antimony | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Arsenic | 3.8 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Barium | 38.0 | 21 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Beryllium | 0.28 | 0.21 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cadmium | < 0.53 | 0.53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Calcium | 17300 | 530 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Chromium | 13.5 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Cobalt | < 5.3 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Copper | 15.6 | 2.7 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Iron | 9790 | 53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Lead | 48.9 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Magnesium | 6650 | 530 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Manganese | 201 | 1.6 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Mercury | 0.054 | 0.034 | mg/kg | 1 | 11/29/23 | 11/30/23 | LM | SW846 7471B [2] | SW846 7471B [4] |
| Nickel | 18.1 | 4.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Potassium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Selenium | < 2.1 | 2.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Silver | 0.78 | 0.53 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Sodium | < 1100 | 1100 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Thallium | < 1.1 | 1.1 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Vanadium | 20.0 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |
| Zinc | 66.2 | 5.3 | mg/kg | 1 | 11/27/23 | 11/28/23 | ND | SW846 6010D [1] | SW846 3050B [3] |

(1) Instrument QC Batch: MA55138
(2) Instrument QC Batch: MA55149
(3) Prep QC Batch: MP43344
(4) Prep QC Batch: MP43430

RL = Reporting Limit

# Report of Analysis





**Client Sample ID:** E23-05091-005_TWP6
**Lab Sample ID:** JD77487-5
**Matrix:** AQ - Water
**Project:** Integrated Analytical Lab, Randolph, NJ

**Date Sampled:** 11/20/23
**Date Received:** 11/22/23
**Percent Solids:** n/a

**Total Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 5960 | 200 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Arsenic | < 3.0 | 3.0 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Barium | 440 | 200 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Beryllium | 1.2 | 1.0 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Calcium | 74300 | 5000 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Chromium | 18.1 | 10 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Copper | 44.5 | 10 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Iron | 8980 | 100 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Lead | 20.9 | 3.0 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Magnesium | 22200 | 5000 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Manganese | 3260 | 15 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/30/23 | 11/30/23 | LM | SW846 7470A [2] | SW846 7470A [5] |
| Nickel | 26.1 | 10 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Potassium | 16300 | 10000 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Selenium | 10.5 | 10 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Silver | < 10 | 10 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Sodium | 193000 | 20000 | ug/l | 2 | 11/28/23 | 11/30/23 | ND | SW846 6010D [3] | SW846 3010A [4] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Zinc | 57.4 | 20 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |

(1) Instrument QC Batch: MA55148
(2) Instrument QC Batch: MA55150
(3) Instrument QC Batch: MA55156
(4) Prep QC Batch: MP43371
(5) Prep QC Batch: MP43435

RL = Reporting Limit

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | E23-05091-006_TWP6 FILT | | |
| **Lab Sample ID:** | JD77487-6F | **Date Sampled:** | 11/20/23 |
| **Matrix:** | AQ - Water Filtered | **Date Received:** | 11/22/23 |
| | | **Percent Solids:** | n/a |
| **Project:** | Integrated Analytical Lab, Randolph, NJ | | |

**Dissolved Metals Analysis**

| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6990 | 200 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Antimony | < 6.0 | 6.0 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Arsenic | < 3.0 | 3.0 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Barium | 328 | 200 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Beryllium | < 1.0 | 1.0 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Cadmium | < 3.0 | 3.0 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Calcium | 70000 | 5000 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Chromium | 13.2 | 10 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Cobalt | < 50 | 50 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Copper | 35.7 | 10 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Iron | 9040 | 100 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Lead | 9.6 | 3.0 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Magnesium | 20000 | 5000 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Manganese | 2730 | 15 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Mercury | < 0.20 | 0.20 | ug/l | 1 | 11/30/23 | 11/30/23 | LM | SW846 7470A [2] | SW846 7470A [5] |
| Nickel | 19.6 | 10 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Potassium | 16600 | 10000 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Selenium | 10.7 | 10 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Silver | < 10 | 10 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Sodium | 192000 | 20000 | ug/l | 2 | 11/28/23 | 11/30/23 | ND | SW846 6010D [3] | SW846 3010A [4] |
| Thallium | < 10 | 10 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Vanadium | < 50 | 50 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |
| Zinc | 32.7 | 20 | ug/l | 1 | 11/28/23 | 11/29/23 | ND | SW846 6010D [1] | SW846 3010A [4] |

(1) Instrument QC Batch: MA55148
(2) Instrument QC Batch: MA55150
(3) Instrument QC Batch: MA55156
(4) Prep QC Batch: MP43371
(5) Prep QC Batch: MP43435

RL = Reporting Limit

## Misc. Forms

### Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SO
WW

**SGS Dayton**
**Fresh Ponds Corporate Village, Building B 2235 Route 130, Dayton, NJ 08810**

D/O4962

JD77487

## CLIENT & PROJECT

| | |
|---|---|
| Name: Integrated Analytical Laboratories LLC | |
| | |
| Address: | |
| 273 Franklin Road | |
| Randolph, NJ 07869 | |
| Telephone #: 973-361-4252 | |
| | |
| Project Name: E23-05091 | |
| Project Location (State): NY | |
| Project Manager: | |
| Reference ID#: PO# | |

## REPORTING & BILLING

| | |
|---|---|
| Contact: Kim James | |
| Fax #: | |
| EMail to: msimmons@ialonline.com | |
| Report to: Melissa Simmons | |
| Address: | |
| | |
| | |
| Invoice to: Brenda Barone | |
| Address: | |

| Turnaround Time | | | | | | | Report Format |
|---|---|---|---|---|---|---|---|
| Verbal/Fax | | | | | | | Category A |
| 24 hr* | 48 hr* | 72 hr* | 1 wk* | 2 wk | Other: | 1 WEEK | |
| Hard Copy | | | | | | | Special Requirements |
| 72 hr* | 1 wk* | 2 wk* | 3 wk | | Other: | | |
| *Prior to sample arrival, Lab notification is required. | | | | | | | |

Preservative
1 = HCL; 2 = NaOH; 3 = $HNO_3$
4 = $H_2SO_4$; 5= MeOH; 6 = Other

## ANALYTICAL PARAMETERS / PRESERVATIVES

## SAMPLE INFORMATION

| Sample ID | Sample Depth (in Feet) | Sampling Date | Sampling Time | Matrix | # of Containers | TAL Metals (6020B/7471B) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 1 2 3 4 5 6 | 1 2 3 4 5 6 | 1 2 3 4 5 6 | 1 2 3 4 5 6 | 1 2 3 4 5 6 | 1 2 3 4 5 6 | 1 2 3 4 5 6 | 1 2 3 4 5 6 | 1 2 3 4 5 6 | 1 2 3 4 5 6 | 1 2 3 4 5 6 | 1 2 3 4 5 6 | 1 2 3 4 5 6 | 1 2 3 4 5 6 |
| E23-05091-001_SB9A | | 11/20/23 | 08:15 | Soil | 1 | Run | | | | | | | | | | | | 1 | 807 |
| E23-05091-002_SB9B | | 11/20/23 | 08:25 | Soil | 1 | Run | | | | | | | | | | | | 2 | AB |
| E23-05091-003_SB6A | | 11/20/23 | 09:45 | Soil | 1 | Run | | | | | | | | | | | | 3 | |
| E23-05091-004_SB6B | | 11/20/23 | 09:55 | Soil | 1 | Run | | | | | | | | | | | | 4 | |
| E23-05091-005_TWP6 | | 11/20/23 | 10:15 | Aqueous | 1 | Run | | | | | | | | | | | | 5 | |
| E23-05091-006_TWP6 FILT | | 11/20/23 | 10:15 | Aqueous | 1 | Run | | | | | | | | | | | | 6 | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

COOLER TEMP. 0.2 °C

Concentrations Expected: LOW MED HIGH

Known Hazard: yes no

Describe:

Note: 1 WEEK TAT

SAMPLE 006 IS FIELD FILTERED DUPLICATE OF SAMPLE 005

COMPARE SOIL RESULTS TO NY Part 375-6.8(UUSCO+RUSCO).

COMPARE GW RESULTS TO NY TOGS Tbl1 (AWQS).

Initial Assessment 2BHK

Label Verification

## EMAIL CONFIRMATION REQUIRED

## CUSTODY LOG

| Signature/Company | Date | Time | Signature/Company |
|---|---|---|---|
| Relinquished by: Kim James | 11/22/23 | 5:00 PM | Received by: 11/22/23 |
| Relinquished by: | 11/22/23 | 12:21 | Received by: 12:30 |
| Relinquished by: | | | Received by: |

Lab Case #

PAGE: OF

COC (001-006)

REV Feb 2013

4.1
4

# SGS Sample Receipt Summary

**Job Number:** JD77487 **Client:** INTEGRATED ANALYTICAL LAB **Project:** E23-05091

**Date / Time Received:** 11/22/2023 12:30:00 PM **Delivery Method:** CLIENT **Airbill #'s:**

**Cooler Temps (Raw Measured) °C:** Cooler 1: (0.2);

**Cooler Temps (Corrected) °C:** Cooler 1: (0.2);

| Cooler Security | Y | or | N | | Y | or | N |
|---|---|---|---|---|---|---|---|
| 1. Custody Seals Present: | ☑ | | ☐ | 3. COC Present: | ☑ | | ☐ |
| 2. Custody Seals Intact: | ☑ | | ☐ | 4. Smpl Dates/Time OK | ☑ | | ☐ |

| Cooler Temperature | Y | or | N |
|---|---|---|---|
| 1. Temp criteria achieved: | ☑ | | ☐ |
| 2. Cooler temp verification: | | | |
| 3. Cooler media: | Ice (Bag) | | |
| 4. No. Coolers: | 1 | | |

| Quality Control Preservation | Y | or | N | N/A |
|---|---|---|---|---|
| 1. Trip Blank present / cooler: | ☐ | | ☑ | ☐ |
| 2. Trip Blank listed on COC: | ☐ | | ☑ | ☐ |
| 3. Samples preserved properly: | ☑ | | ☐ | |
| 4. VOCs headspace free: | ☐ | | ☐ | ☑ |

| Sample Integrity - Documentation | Y | or | N |
|---|---|---|---|
| 1. Sample labels present on bottles: | ☑ | | ☐ |
| 2. Container labeling complete: | ☑ | | ☐ |
| 3. Sample container label / COC agree: | ☑ | | ☐ |

| Sample Integrity - Condition | Y | or | N |
|---|---|---|---|
| 1. Sample recvd within HT: | ☑ | | ☐ |
| 2. All containers accounted for: | ☑ | | ☐ |
| 3. Condition of sample: | Intact | | |

| Sample Integrity - Instructions | Y | or | N | N/A |
|---|---|---|---|---|
| 1. Analysis requested is clear: | ☑ | | ☐ | |
| 2. Bottles received for unspecified tests | ☐ | | ☑ | |
| 3. Sufficient volume recvd for analysis: | ☑ | | ☐ | |
| 4. Compositing instructions clear: | ☐ | | ☐ | ☑ |
| 5. Filtering instructions clear: | ☐ | | ☐ | ☑ |

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

**JD77487: Chain of Custody**
**Page 2 of 2**

# EPA TO-15 DATA PACKAGE

**ANALYTICAL DATA PACKAGE FOR THE**
**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**
**ALBANY NEW YORK 12233**

**Integrated Analytical Laboratories, LLC** — **Randolph, NJ 07869**
**Project#: HK2661.2** — **NY ELAP Certification#: 11402**
**SDG #: E23-05080** — **NJDEP (Primary AB) Certification#: 14751**
**Date of first sample receipt: 11/20/2023** — **Date of last sample receipt: 11/20/2023**

**Client:** HK Engineering+Geology, D.P.C.

**Project/Site:** HK2661.2/NY

| Client Sample Number | Laboratory Sample | Sample Location | Date/Time of Collection |
|---|---|---|---|
| SV2 | E23-05080-01 | NA | 11/16/2023 12:10 |
| SV3 | E23-05080-02 | NA | 11/16/2023 12:30 |



I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of data contained in this hardcopy data package and in the computer-readable data submitted on CD/diskette and by electronic mail has been authorized by the laboratory manager or his designee, as verified by the following signature.

Michael H. Leftin, Ph.D.
Laboratory Director

Date: December 20, 2023

Ming-Hwa Reitan
QA/QC Manager

Date: December 20, 2023

Integrated Analytical Laboratories LLC

# *EPA Method TO-15 Table of Contents*

# Laboratory Acronyms

*The following is a list of laboratory acronyms commonly used in EPA Method TO-15 testing:*

| Acronym | Definition |
|---|---|
| BLK | Blank/Method Blank |
| BFB | 4-Bromofluorobenzene (Tuning Standard) |
| CAS Number | Chemical Abstract Service Registry Number |
| cc | cubic centimeters |
| CCCVS | Closing Calibration Check Verification Standard |
| COC | Chain of Custody |
| DCVS | Daily Calibration Verification Standard |
| DF | Dilution Factor |
| EPA | U. S. Environmental Protection Agency (aka USEPA) |
| "Hg | Inches of Mercury |
| IA | Indoor Air |
| IASL | Indoor Air Screening Level |
| ICAL | Initial Calibration |
| ICVSS | Initial Calibration Verification Standard |
| ISTD | Internal Standard |
| GC | Gas Chromatography |
| GC/MS | Gas Chromatography/Mass Spectrometry |
| LCS | Laboratory Control Sample/Spike |
| LLTO-15 | Low Level TO-15 |
| MDL | Method Detection Limit |
| MDLV | Method Detection Limit Verification |
| ml | milliliters |
| ND | Not Detected (at or above RL) |
| NJDEP | New Jersey Department of Environmental Protection |
| PM | Project Manager |
| ppbv | parts per billion, volume-to-volume ratio |
| PQL | Practical Quantitation Limit - MDLx3 |
| QA | Quality Assurance |
| QC | Quality Control |
| RAL | Rapid Action Limit |
| RL | Reporting Limit |
| RLLCS | Reporting Limit Laboratory Control Sample |
| RPD | Relative Percent Difference |
| RRF | Relative Response Factor |
| RSD | Relative Standard Deviation |
| SDG | Sample Delivery Group |
| SGSL | Soil Gas Screening Levels |
| SS | Sub Slab |
| TAT | Turnaround Time |
| TIC | Tentatively Identified Compound |
| µg/m3 | micrograms per cubic meter |

# Section I: Chain of Custody

Integrated Analytical Labs
273 Franklin Rd
Randolph, NJ 07869

# External Chain of Custody Record/ Field Test Data Sheet USEPA Method TO-15

Contact Us: 973 361-4252
fax: 973 366-5613
Web: www.ialonline.com

Carrier (check one): ____ IAL Courier ____ Client Courier ____ FedEx/UPS



| Client Contact Information | Project Information | Invoice Information |
|---|---|---|
| Company: HK Engineering and Geology D.P.C. | Project Name: HK2661.2 | |
| Address: 1600 US 22 East | Project Location (State): NY | Attn: |
| Union, NJ 07083 | Project Manager: Chris Hirschmann | Address: |
| Phone: 908 -688-7800 | PM Signature: | |
| Fax: | PM E-Mail: chirschmann@hillmannconsulting.com | PO #: HK2661.2 |
| Report to: Chris Hirschmann | Sampler: D. Aponte | Quote #: |

Analysis Turnaround Time - IF NO TAT IS SPECIFIED, 2 WEEK TAT IS ASSUMED

IAL Standard: 2 weeks (10 business days)

Rush (**pre-approved by lab): 24hr** 48hr** 72hr** 96hr** 1wk**

Barometric Pressure: Start ____ Stop ____

| Sample Identification | Start DATE & TIME (24hr Clock) | End DATE & TIME (24hr Clock) | Starting Vacuum ("Hg) | Ending Vacuum ("Hg) | Starting Temp. (°F) | Ending Temp. (°F) | Outgoing Vacuum - Lab ("Hg) | Incoming Vacuum - Lab ("Hg) | Flow Regulator ID | Canister ID | Canister Size (1L or 6L) | Flow Controller Readout (cc/min) | EPA TO - 15 | NJDEP LLTO-15 (includes 30 TICs) | Library Search (10, 20, or 30 TICs) | Other (Explain in Comments) | Regulatory/ NY Cat B / Full (NJ Required) | Reduced / NY Cat A Data Package | Results Only | Indoor Air | Ambient / Outdoor Air | Sub Slab / Soil Gas / Near Slab (Circle One) | Stack Emission / SVE System | High Concentrations Expected |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SV2 | 11/16/23 - 12:10 | 11/16/23 - 14:35 | -30 | -7 | 50 | 64 | -29.0 | -6.5 | A0070621-6 | 3006 | 6L | 33.80 | X | | | | | | | | | | | |
| SV3 | 11/16/23 - 12:30 | 11/16/23 - 15:15 | -30 | -7 | 52 | 65 | -29.0 | -6.5 | 7337462 | 2155 | 6L | 33.30 | X | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |

Comments/ Special Analysis Instructions / QC Requirements:

5 Day TAT Hard Copy and Verbal.

09142301 : 1, 2
092823aa : 2160

Note: Hold or contingent samples may be designated by writing an "H" or "C" in the appropriate analysis box.

ALL FIELDS IN RED ARE REQUIRED

Shipping Information / Canister Preparation (for laboratory use only)

Individual Preparing Canisters / Title: Desmond Flores / Air Department Sample Custodian

Lab Affixed Seal Number(s): ____

Date/Time Shipping Container Sealed: 1615 11/13/23

Laboratory Canister Certification

GC/MS Analyst Signature: Joseph J Walukiewicz III (IAL)

IAL 05080

External Chain of Custody

| Relinquished | Received | Date / Time | Reason for Change of External Custody |
|---|---|---|---|
| Dale Martin | Dale Martin | 11/17/23 1500 | shipment from laboratory to client |
| | Desmond Flores | 11-17-23 1634 | received at lab |
| | Joseph J Walukiewicz III (IAL) | 11/20/23 0920 | sample pressure check & storage |

Name/Title Resealing Shipping Container Name: ____

Date/Time Sample Shipping Container Resealed: ____

Date/Time Sample Shipping Container Opened: 11/17/23 1634

NJDEP Affixed Seal Number: ____

Individual Opening Sample Shipping Container: Joseph Walukiewicz/Desmond Flores

Date/Time Internal Chain of Custody Initiated: 11/20/23 0920

White and yellow - lab copies; Pink - client copy

Use appropriate care with IAL sampling equipment when sampling and packing for shipment. The client is responsible for all damage incurred to IAL equipment. Notify IAL if equipment is damaged upon receipt. Holding time before sampling is 15 days, after sampling is 30 days; failure to follow these times may result in data rejection by regulatory agencies. The lab will contact you if your COC is not clear, incomplete, or if discrepancies exist. The use of initials is not permitted on the COC except when correcting errors.

# PROJECT INFORMATION

RUSH

## E23-05080: HK2661.2

**To:** Chris Hirschmann
HK Engineering & Geology, D.P.C.
Fax: 908-377-8909 cell
EMail: chirschmann@hillmannconsulting.com;rpowell@hillmanngroup.com

**Report To**

HK Engineering & Geology, D.P.C.
1600 Route 22 East
Union, NJ 07083
Attn: Chris Hirschmann

**Bill To**

HK Engineering & Geology, D.P.C.
1600 Route 22 East
Union, NJ 07083
Attn: Chris Hirschmann

| Report Format | P.O. # | Received At Lab | PHC Due | Verbal Due | Hardcopy Due | |
|---|---|---|---|---|---|---|
| Air Regulatory | HK2661.2 | Nov 17, 2023 @ 16:34 | NA | Nov 28, 2023 | Nov 29, 2023 | * |

* Any ***Conditional or Hold*** status will delay final hardcopy report sent date.

**Diskette Req.** Not Required

| Lab ID | Client Sample ID | Depth | Sampling Time | Matrix | Unit | Field pH/Temp |
|---|---|---|---|---|---|---|
| 05080-001 | SV2 | NA | 11/16/23@14:35 | Air-Indoor | ppbV | |
| 05080-002 | SV3 | NA | 11/16/23@15:15 | Air-Indoor | ppbV | |

* No Cert = IAL does not hold certification for this test/method

| Sample # | Test | Status | Analytical Method | TAT | Holding Time Expires |
|---|---|---|---|---|---|
| 001 | EPA TO-15 | Analyze | TO-15 | RUSH 1 WK | 12/16/2023 |
| 002 | EPA TO-15 | Analyze | TO-15 | RUSH 1 WK | 12/16/2023 |

**Project Notes:**

**NOTE 2 taken by kfalconer on 11/20/2023 12:59**
CLIENT DID NOT RECORD BAROMETRIC PRESSURE.



273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
www.ialonline.com

# Internal Chain of Custody

**Instructions:** Use 1 form for each 20 samples of aliquot.

| Laboratory Person Accepting Responsibility for Sample(s) | | | |
|---|---|---|---|
| Laboratory: | Integrated Analytical Laboratories | Location: | 273 Franklin Rd Randolph, NJ 07869 |
| Name: | Joseph Walukiewicz | Title: | Air Department Receiving |
| Case No.: | E23-05080 | Analytical Parameter/Fraction: (check one) | ____ NJDEP LLTO-15<br>__X__ EPA TO-15 |

| Sample No. | Aliquot/Extract No. |
|---|---|
| 2V2 | E23-05080-01 |
| " 3 | E23- " -02 |
| | E23- |
| | E23- |
| | E23- |
| | E23 |
| | E23- |
| | E23- |
| | E23- |
| | E23- |

| Sample No. | Aliquot/Extract No. |
|---|---|
| | E23- |
| | E23- |
| | E23- |
| | E23- |
| | E23- |
| | E23- |
| | E23- |
| | E23- |
| | E23- |
| | E23- |

| Date | Time | Relinquished By | Received By | Purpose of Change of Custody |
|---|---|---|---|---|
| 11 20 23 | 0910 | SIGNATURE<br>PRINTED NAME | SIGNATURE Joseph Walukiewicz<br>PRINTED NAME JOSEPH WALUKIEWICZ | 1. Sample log-in<br>2. Pressure Check<br>3. Pre-analysis storage |
| 11 20 23 | 0925 | SIGNATURE Joseph Walukiewicz<br>PRINTED NAME JOSEPH WALUKIEWICZ | SIGNATURE<br>PRINTED NAME | Placement in TO-15 sample storage area until ready for analysis |
| 12 12 23 | 1000 | SIGNATURE<br>PRINTED NAME | SIGNATURE Joseph Walukiewicz<br>PRINTED NAME JOSEPH WALUKIEWICZ | TO-15 analysis on:<br>05080-01, -02 |
| | | | | |
| | | SIGNATURE<br>PRINTED NAME | SIGNATURE Joseph Walukiewicz<br>PRINTED NAME JOSEPH WALUKIEWICZ | TO-15 analysis on: |
| | | SIGNATURE<br>PRINTED NAME | SIGNATURE<br>PRINTED NAME | |
| | | SIGNATURE<br>PRINTED NAME | SIGNATURE<br>PRINTED NAME | |
| | | SIGNATURE<br>PRINTED NAME | SIGNATURE<br>PRINTED NAME | |
| | | SIGNATURE<br>PRINTED NAME | SIGNATURE<br>PRINTED NAME | |

Rev. 12/16

# Section II: Methodology Review

# Methodology Summary for Air Collected from Hazardous Waste Site Contract

| | | | |
|---|---|---|---|
| **Laboratory:** | **Integrated Analytical Lab, LLC** | **Project No:** | **HK2661.2** |
| **Location:** | **Randolph, NJ** | **SDG No:** | **E23-05080** |

| Name | Required Methodology | Indicate Method |
|---|---|---|
| Volatile Organics | US EPA TO-15 | US EPA Method TO-15 |

# Section III: Case Narrative

# CASE NARRATIVE

**Integrated Analytical Laboratories, LLC** — **Randolph, NJ 07869**
**Project #: HK2661.2** — **NJDEP (Primary AB) Certification#: 14751**
**SDG #: E23-05080** — **NY ELAP Certification #: 11402**
**CT DPH Certification#: PH-0699**
**Analytical Method: EPA Method TO-15** — **PADEP Certification#: 68-00773**

**Date of first sample receipt: 11/20/2023** — **Date of last sample receipt: 11/20/2023**

**Client: HK Engineering+Geology, D.P.C.**
**Project/Site: HK2661.2 / NY**

| Client ID | Lab ID | Receipt Date | Analysis Date | DF | Diluted For |
|---|---|---|---|---|---|
| SV2 | E23-05080-01 | 11/20/2023 | 12/11/2023 | 10.0 | Xylenes (m&p) |
| SV2 | E23-05080-01 | 11/20/2023 | 12/08/2023 | 1.0 | NA |
| SV3 | E23-05080-02 | 11/20/2023 | 12/11/2023 | 10.0 | Xylenes (m&p) |
| SV3 | E23-05080-02 | 11/20/2023 | 12/08/2023 | 1.0 | NA |

| IAL Sample ID | Canister ID | Outgoing Pressure ("Hg) | Incoming Pressure ("Hg) | Flow Controller ID | Outgoing Flow Rate (cc/min) | Incoming Flow Rate (cc/min) | Flow Rate RPD* |
|---|---|---|---|---|---|---|---|
| E23-05080-01 | 3006 | -29 | -6.5 | A0070621-6 | 33.80 | 33.50 | 0.89 |
| E23-05080-02 | 2155 | -29 | -6.5 | 7337462 | 33.30 | 32.70 | 1.82 |

*Pre-sampling and Post-sampling Flow Controller calibration check RPD ≤ 20%

Flow Controller Note: none

***Sample Receipt:*** Samples were received in good condition. Documentation was in order.
Samples were received at IAL by: Joseph Walukiewicz

***Sample Preparation:*** None required.

***Sample Analysis:***

*Hold Time:* All within recommended hold times.

*Instrument Calibration:* Meets method criteria.

*Analysis performed by:* jjw

*SDG Non-Conformances:* none

*Tentatively Identified Compounds:* Tentatively Identified Compounds (TICs) are determined using a NIST library search. TICs are reported at 10% of the applicable internal standard. Dilution factors are calculated into the final reported result. Since the compounds found are tentatively identified, the conversion from ppbv to ug/m3 may not be made.

*Canister-to-Canister dilutions:* none

*Dilutions:* Dilutions, if necessary, will be conducted directly on the instrument up to a 500x dilution. When dilutions of 1000x or higher are necessary, the laboratory must inject a volume of sample into another certified clean canister and add humidified Z-1 zero air to the remainder of the canister volume. Tedlar bags are not used for dilutions.

If a sample is received with historically high levels of analytes, a 100x can-to-can dilution my be used from the start. A 100x canister-to-canister dilution may be also be used at the analyst's discretion.

# CASE NARRATIVE

**Integrated Analytical Laboratories, LLC** | **Randolph, NJ 07869**
**Project #: HK2661.2** | **NJDEP (Primary AB) Certification#: 14751**
**SDG #: E23-05080** | **NY ELAP Certification #: 11402**
**CT DPH Certification#: PH-0699**
**Analytical Method: EPA Method TO-15** | **PADEP Certification#: 68-00773**

**Date of first sample receipt: 11/20/2023** | **Date of last sample receipt: 11/20/2023**

**Client: HK Engineering+Geology, D.P.C.**
**Project/Site: HK2661.2 / NY**

*On-instrument dilutions are conducted as follows:*

| Dilution Factor | Sample Volume Injected (cc) |
|---|---|
| 1 | 500 |
| 2.5 | 200 |
| 5 | 100 |
| 10 | 50 |
| 20 | 25 |
| 25 | 20 |
| 50 | 10 |
| 100 | 5 |
| 200 | 2.5 |
| 250 | 2 |
| 500 | 1 |

*Canister-to-canister dilutions are conducted as follows:*

A certified clean canister is obtained and evacuated to approximately -30"Hg. Both the clean/dilution canister and sample canister are fitted with a ¼" Swagelok® nut fitting equipped with septa. Depending on dilution factor necessary, a sample aliquot is removed from the canister and injected into the clean canister using 30cc Multifit gas-tight syringe. Once the correct sample aliquot has been transferred, the dilution canister should be connected to the humidified Z-1 zero air supply and filled to ambient pressure (0"Hg).

| Dilution Factor | Sample Aliquot | Z-1 Make-up Added |
|---|---|---|
| 100 | 60ml | 5940ml |
| 1000 | 6ml | 5994ml |

If further dilutions need to be made from the dilution canister, they may be made on-instrument. Using a 100x dilution canister, the following on-instrument dilutions can be produced:

| Dilution Factor | Sample Volume Injected |
|---|---|
| 100 | 500ml |
| 250 | 200ml |
| 500 | 100ml |
| 1000 | 50ml |
| 2000 | 25ml |
| 2500 | 20ml |
| 5000 | 10ml |

# CASE NARRATIVE

**Integrated Analytical Laboratories, LLC** — **Randolph, NJ 07869**
**Project #: HK2661.2** — **NJDEP (Primary AB) Certification#: 14751**
**SDG #: E23-05080** — **NY ELAP Certification #: 11402**
**CT DPH Certification#: PH-0699**
**Analytical Method: EPA Method TO-15** — **PADEP Certification#: 68-00773**

**Date of first sample receipt: 11/20/2023** — **Date of last sample receipt: 11/20/2023**

**Client: HK Engineering+Geology, D.P.C.**
**Project/Site: HK2661.2 / NY**

Using a 1000x dilution canister, the following on-instrument dilutions can be produced:

| Dilution Factor | Sample Volume Injected |
|---|---|
| 1000 | 500ml |
| 2500 | 200ml |
| 5000 | 100ml |
| 10,000 | 50ml |
| 20,000 | 25ml |
| 25,000 | 20ml |
| 50,000 | 10ml |

If further dilutions need to be made from the dilution canister, beyond 50,000x, a subsequent canister-to-canister dilution must be made using the above prescribed protocol.

***GC Column and ID:*** RTX-1 SN 1119138, RTX-VMS SN 1586881, or equivalent

***Calibration Standards:*** Only gas phase standards were used. Primary and second-source standards provided by Scott Specialty Gases or Airgas Specialty Gases/ Air Liquide

***Working Standards:*** Primary source standards* are created from:
- Airgas Specialty Gases #EB0103704, valid 1/18/2021 through 12/30/2024, @ approximately 100ppb per compound, with exception of m&p-xylenes @ 200ppb. Standard is directly introduced into the instrument for all calibration standard concentrations. Dilutions are made accordingly, on instrument. The 10ppbv standard is also used for the Daily Calibration Verification Standard (DCVS), the Laboratory Control Sample (LCS) and Closing Calibration Verification Standard (CCCVS).

The second source standard*, used as the Initial Calibration Verification Standard (ICVSS), is introduced into the instrument in the same manner as the primary source standard, using:
- Airgas Specialty Gases Cylinder #EB0116272, valid 7/28/2021 through 5/12/2025, @ approximately 100ppb per compound, with exception of m&p-xylenes @ 200ppb.

Internal standards* are created from:
- Airgas Specialty Gases Cylinder #ALM018474, valid 2/24/2022 through 2/24/2025. @ 5ppm per compound. Standard is directly introduced into the instrument to reach the 10ppbv concentrations. 1cc of internal standard is added to every standard, method blank, instrument blank, and sample run.

*Standard may be used past its expiration date provided that concentrations are verified by a current/unexpired second source standard.

**08/15/2023**

# CASE NARRATIVE

**Integrated Analytical Laboratories, LLC** — **Randolph, NJ 07869**
**Project #: HK2661.2** — **NJDEP (Primary AB) Certification#: 14751**
**SDG #: E23-05080** — **NY ELAP Certification #: 11402**
**CT DPH Certification#: PH-0699**
**Analytical Method: EPA Method TO-15** — **PADEP Certification#: 68-00773**

**Date of first sample receipt: 11/20/2023** — **Date of last sample receipt: 11/20/2023**

**Client: HK Engineering+Geology, D.P.C.**
**Project/Site: HK2661.2 / NY**

**08/15/2023**
- 100 ppbv internal standard mix (AA3401BFB) - prepared in cylinder #ALM018474
  - 10 ppbv per standard/sample - 50 ml injected
- 100 ppbv calibration standard (aa3406std01) - prepared in cylinder #EB0103704
  - 40 ppbv standard - 200 ml injected
  - 20 ppbv standard - 100 ml injected
  - 10 ppbv standard* - 50 ml injected
    - *Standard also used for CCCVS
  - 2 ppbv standard - 10 ml injected
  - 0.20 ppbv standard* - 1 ml injected
    - *Standard also used for RLLCS

**09/28/2023**
- 100 ppbv internal standard mix (AA4071BFB) - prepared in cylinder #ALM018474
  - 10 ppbv per standard/sample - 50 ml injected
- 100 ppbv calibration standard (AA4072DCVS) - prepared in cylinder #EB0103704
  - 10 ppbv standard* - 50 ml injected
    - *Standard also used for DCVS & CCCVS
  - 0.20 ppbv standard* - 1 ml injected
    - *Standard also used for RLLCS
- Method Blank (AA4074BLK) - prepared in canister #1127
  - 500 ml injected

**10/10/2023**
- 100 ppbv internal standard mix (AA4131BFB) - prepared in cylinder #ALM018474
  - 10 ppbv per standard/sample - 50 ml injected
- 100 ppbv calibration standard (aa4136std01) - prepared in cylinder #EB0103704
  - 40 ppbv standard - 200 ml injected
  - 20 ppbv standard - 100 ml injected
  - 10 ppbv standard* - 50 ml injected
    - *Standard also used for CCCVS
  - 2 ppbv standard - 10 ml injected
  - 0.20 ppbv standard* - 1 ml injected
    - *Standard also used for RLLCS
  - 0.20 ppbv standard* - 1 ml injected
    - *Standard also used for RLLCS
- Method Blank (AA4139BLK) - prepared in canister #1127
  - 500 ml injected

**12/08/2023**
- 100 ppbv internal standard mix (AA4881BFB) - prepared in cylinder #ALM018474
  - 10 ppbv per standard/sample - 50 ml injected
- 100 ppbv calibration standard (AA4882DCVS) - prepared in cylinder #EB0103704
  - 10 ppbv standard* - 50 ml injected
    - *Standard also used for DCVS & CCCVS
- Method Blank (AA4884BLK) - prepared in canister #1127

# CASE NARRATIVE

**Integrated Analytical Laboratories, LLC** — **Randolph, NJ 07869**
**Project #: HK2661.2** — **NJDEP (Primary AB) Certification#: 14751**
**SDG #: E23-05080** — **NY ELAP Certification #: 11402**
**CT DPH Certification#: PH-0699**
**Analytical Method: EPA Method TO-15** — **PADEP Certification#: 68-00773**

**Date of first sample receipt: 11/20/2023** — **Date of last sample receipt: 11/20/2023**

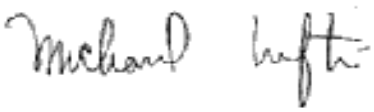
**Client: HK Engineering+Geology, D.P.C.**
**Project/Site: HK2661.2 / NY**

**12/08/2023**
500 ml injected
Sample E23-05080-01 (AA4893) - sample taken in canister #3006
500 ml sample volume injected, 1x dilution
Sample E23-05080-02 (AA4894) - sample taken in canister #2155
500 ml sample volume injected, 1x dilution

**12/11/2023**
100 ppbv internal standard mix (AA4901BFB) - prepared in cylinder #ALM018474
10 ppbv per standard/sample - 50 ml injected
100 ppbv calibration standard (AA4902DCVS) - prepared in cylinder #EB0103704
10 ppbv standard* - 50 ml injected
*Standard also used for DCVS & CCCVS
0.20 ppbv standard* - 1 ml injected
*Standard also used for RLLCS
Method Blank (AA4904BLK) - prepared in canister #1127
500 ml injected
Sample E23-05080-01 (AA4911) - sample taken in canister #3006
50 ml sample volume injected, 10x dilution
Sample E23-05080-02 (AA4912) - sample taken in canister #2155
50 ml sample volume injected, 10x dilution

All work recorded herein has been done in accordance with normal professional standards using accepted testing methodologies, quality assurance and quality control procedures except where otherwise agreed to by the client and testing company in writing. All conversions are based upon a room temperature of 77°F(25°C) and room pressure of 101.325 kPa (1atm).

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of data contained in this hardcopy data package and in the computer-readable data submitted on CD/diskette and by electronic mail has been authorized by the laboratory manager or his designee, as verified by the following signature.



Michael H. Leftin, Ph.D.
Laboratory Director

December 20, 2023
Date

Integrated Analytical Laboratories LLC

Airgas
an Air Liquide company

R 362

Received 01/06/2023

**Airgas Specialty Gases**
Airgas USA LLC
6141 Easton Road
Plumsteadville, PA 18949
Airgas.com

# CERTIFICATE OF ANALYSIS

## Grade of Product: CERTIFIED HYDROCARBON

| | | | |
|---|---|---|---|
| Customer: | INTEGRATED ANALYTICAL LABS | | |
| Part Number: | X76NI99C15AC001 | | |
| Cylinder Number: | EB0103704 | Reference Number: | 160-402619255-1 |
| Laboratory: | 124 - Plumsteadville - PA | Cylinder Volume: | 101.0 CF |
| Analysis Date: | Dec 30, 2022 | Cylinder Pressure: | 1400 PSIG |
| Lot Number: | 160-402619255-1 | Valve Outlet: | 350SS |
| | | Expiration Date: | Dec 30, 2024 |

Traceability Statement: Hydrocarbon Process standards are NIST traceable either directly by weight or by comparison to Airgas laboratory standards that are directly NIST traceable by weight.

### CERTIFIED CONCENTRATIONS

| Component | Requested Concentration | Reported Mole % | Accuracy |
|---|---|---|---|
| 1,1 DICHLOROETHANE | 100.000 PPB | 107.000 PPB | +/- 10% |
| 1,1 DICHLOROETHYLENE | 100.000 PPB | 104.000 PPB | +/- 10% |
| 1,1,1 TRICHLOROETHANE | 100.000 PPB | 109.000 PPB | +/- 10% |
| 1,1,2 TRICHLORO ETHANE | 100.000 PPB | 108.000 PPB | +/- 10% |
| 1,1,2,2 TETRACHLOROETHANE | 100.000 PPB | 114.000 PPB | +/- 10% |
| 1,2 DIBROMO ETHANE | 100.000 PPB | 108.000 PPB | +/- 10% |
| 1,2 DICHLORO PROPANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| 1,2 DICHLOROBENZENE | 100.000 PPB | 107.000 PPB | +/- 10% |
| 1,2 DICHLOROETHANE | 100.000 PPB | 109.000 PPB | +/- 10% |
| 1,2,4 TRICHLOROBENZENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| 1,2,4 TRIMETHYLBENZENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| 1,3 BUTADIENE | 100.000 PPB | 107.000 PPB | +/- 10% |
| 1,3 DICHLORO BENZENE | 100.000 PPB | 111.000 PPB | +/- 10% |
| 1,3,5 TRIMETHYL BENZENE | 100.000 PPB | 109.000 PPB | +/- 10% |
| 1,4 DICHLOROBENZENE | 100.000 PPB | 107.000 PPB | +/- 10% |
| 1,4 DIOXANE | 100.000 PPB | 117.000 PPB | +/- 10% |
| 2 CHLOROTOLUENE | 100.000 PPB | 109.000 PPB | +/- 10% |
| 3 CHLOROPROPYLENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| 4 ETHYL TOLUENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| ACETONE | 100.000 PPB | 108.000 PPB | +/- 10% |
| ACROLEIN | 100.000 PPB | 100.000 PPB | +/- 10% |
| BENZENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| BENZYL CHLORIDE | 100.000 PPB | 100.000 PPB | +/- 10% |
| BROMO DICHLORO METHANE | 100.000 PPB | 115.000 PPB | +/- 10% |
| BROMOFORM | 100.000 PPB | 113.000 PPB | +/- 10% |
| CARBON DISULFIDE | 100.000 PPB | 107.000 PPB | +/- 10% |
| CARBON TETRACHLORIDE | 100.000 PPB | 110.000 PPB | +/- 10% |
| CHLORO DIBROMO METHANE | 100.000 PPB | 112.000 PPB | +/- 10% |
| CHLOROBENZENE | 100.000 PPB | 111.000 PPB | +/- 10% |
| CHLOROFORM | 100.000 PPB | 108.000 PPB | +/- 10% |
| CIS 1,2 DICHLOROETHYLENE | 100.000 PPB | 109.000 PPB | +/- 10% |
| CIS 1,3 DICHLOROPROPENE | 100.000 PPB | 111.000 PPB | +/- 10% |
| CUMENE | 100.000 PPB | 107.000 PPB | +/- 10% |
| CYCLOHEXANE | 100.000 PPB | 112.000 PPB | +/- 10% |
| ETHANOL | 100.000 PPB | 104.000 PPB | +/- 10% |
| ETHYL ACETATE | 100.000 PPB | 108.000 PPB | +/- 10% |
| ETHYL BENZENE | 100.000 PPB | 111.000 PPB | +/- 10% |
| ETHYL CHLORIDE | 100.000 PPB | 106.000 PPB | +/- 10% |
| HEXACHLORO 1,3 BUTADIENE | 100.000 PPB | 111.000 PPB | +/- 10% |

Approved for Release

Integrated Analytical Laboratories LLC

Airgas
an Air Liquide company

**Airgas Specialty Gases**
Airgas USA LLC
6141 Easton Road
Plumsteadville, PA 18949
Airgas.com

| | | | |
|---|---|---|---|
| HEXANE | 100.000 PPB | 111.000 PPB | +/- 10% |
| ISOOCTANE | 100.000 PPB | 109.000 PPB | +/- 10% |
| ISOPROPYL ALCOHOL | 100.000 PPB | 89.000 PPB | +/- 10% |
| M XYLENE | 100.000 PPB | 112.000 PPB | +/- 10% |
| METHYL BROMIDE | 100.000 PPB | 100.000 PPB | +/- 10% |
| METHYL BUTYL KETONE | 100.000 PPB | 113.000 PPB | +/- 10% |
| METHYL CHLORIDE | 100.000 PPB | 112.000 PPB | +/- 10% |
| METHYL ETHYL KETONE | 100.000 PPB | 110.000 PPB | +/- 10% |
| METHYL ISOBUTYL KETONE | 100.000 PPB | 109.000 PPB | +/- 10% |
| METHYL METHACRYLATE | 100.000 PPB | 110.000 PPB | +/- 10% |
| METHYL TERT BUTYL ETHER | 100.000 PPB | 112.000 PPB | +/- 10% |
| METHYLENE CHLORIDE | 100.000 PPB | 108.000 PPB | +/- 10% |
| N BUTANE | 100.000 PPB | 109.000 PPB | +/- 10% |
| N HEPTANE | 100.000 PPB | 111.000 PPB | +/- 10% |
| N NONANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| N PENTANE | 100.000 PPB | 108.000 PPB | +/- 10% |
| N PROPYL BENZENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| NAPHTHALENE | 100.000 PPB | 100.000 PPB | +/- 10% |
| O XYLENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| P XYLENE | 100.000 PPB | 111.000 PPB | +/- 10% |
| PERCHLOROETHYLENE | 100.000 PPB | 112.000 PPB | +/- 10% |
| PROPYLENE | 100.000 PPB | 109.000 PPB | +/- 10% |
| R11 TRICHLOROFLUOROMETHANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| R113 TRICHLOROTRIFLUOROETHANE | 100.000 PPB | 109.000 PPB | +/- 10% |
| R114 DICHLOROTETRAFLUOROETHANE | 100.000 PPB | 98.000 PPB | +/- 10% |
| R12 DICHLORODIFLUOROMETHANE | 100.000 PPB | 106.000 PPB | +/- 10% |
| STYRENE | 100.000 PPB | 113.000 PPB | +/- 10% |
| TERT BUTANOL | 100.000 PPB | 115.000 PPB | +/- 10% |
| TETRAHYDROFURAN | 100.000 PPB | 110.000 PPB | +/- 10% |
| TOLUENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| TRANS 1,2 DICHLOROETHYLENE | 100.000 PPB | 111.000 PPB | +/- 10% |
| TRANS 1,3 DICHLOROPROPENE | 100.000 PPB | 111.000 PPB | +/- 10% |
| TRICHLOROETHYLENE | 100.000 PPB | 100.000 PPB | +/- 10% |
| VINYL ACETATE | 100.000 PPB | 110.000 PPB | +/- 10% |
| VINYL BROMIDE | 100.000 PPB | 101.000 PPB | +/- 10% |
| VINYL CHLORIDE | 100.000 PPB | 108.000 PPB | +/- 10% |
| NITROGEN | 99.99925 % | 99.999187 % | +/- 10% |

**Permanent Notes:** CUSTOM TO MIX - TO-15/17 MODIFIED NJ STD + NAPHTHALENE

**Notes:** PO number: 22578

Approved for Release

Integrated Analytical Laboratories LLC

Airgas
an Air Liquide company

**Airgas Specialty Gases**
Airgas USA LLC
6141 Easton Road
Plumsteadville, PA 18949
Airgas.com

R 366

# CERTIFICATE OF ANALYSIS

## Grade of Product: CERTIFIED HYDROCARBON

| | | | |
|---|---|---|---|
| Customer: | INTEGRATED ANALYTICAL LABS | | |
| Part Number: | X76NI99C15AC001 | Reference Number: | 160-402744241-1 |
| Cylinder Number: | EB0116272 | Cylinder Volume: | 146.0 CF |
| Laboratory: | 124 - Plumsteadville - PA | Cylinder Pressure: | 2050 PSIG |
| Analysis Date: | May 12, 2023 | Valve Outlet: | 350SS |
| Lot Number: | 160-402744241-1 | Expiration Date: | May 12, 2025 |

Traceability Statement: Hydrocarbon Process standards are NIST traceable either directly by weight or by comparison to Airgas laboratory standards that are directly NIST traceable by weight.

### CERTIFIED CONCENTRATIONS

| Component | Requested Concentration | Reported Mole % | Accuracy |
|---|---|---|---|
| 1,1 DICHLOROETHANE | 100.000 PPB | 100.000 PPB | +/- 10% |
| 1,1 DICHLOROETHYLENE | 100.000 PPB | 100.000 PPB | +/- 10% |
| 1,1,1 TRICHLOROETHANE | 100.000 PPB | 104.000 PPB | +/- 10% |
| 1,1,2 TRICHLORO ETHANE | 100.000 PPB | 101.000 PPB | +/- 10% |
| 1,1,2,2 TETRACHLOROETHANE | 100.000 PPB | 104.000 PPB | +/- 10% |
| 1,2 DIBROMO ETHANE | 100.000 PPB | 103.000 PPB | +/- 10% |
| 1,2 DICHLORO PROPANE | 100.000 PPB | 103.000 PPB | +/- 10% |
| 1,2 DICHLOROBENZENE | 100.000 PPB | 101.000 PPB | +/- 10% |
| 1,2 DICHLOROETHANE | 100.000 PPB | 102.000 PPB | +/- 10% |
| 1,2,4 TRICHLOROBENZENE | 100.000 PPB | 100.000 PPB | +/- 10% |
| 1,2,4 TRIMETHYLBENZENE | 100.000 PPB | 102.000 PPB | +/- 10% |
| 1,3 BUTADIENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| 1,3 DICHLORO BENZENE | 100.000 PPB | 105.000 PPB | +/- 10% |
| 1,3,5 TRIMETHYL BENZENE | 100.000 PPB | 103.000 PPB | +/- 10% |
| 1,4 DICHLOROBENZENE | 100.000 PPB | 100.000 PPB | +/- 10% |
| 1,4 DIOXANE | 100.000 PPB | 113.000 PPB | +/- 10% |
| 2 CHLOROTOLUENE | 100.000 PPB | 107.000 PPB | +/- 10% |
| 3 CHLOROPROPYLENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| 4 ETHYL TOLUENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| ACETONE | 100.000 PPB | 108.000 PPB | +/- 10% |
| ACROLEIN | 100.000 PPB | 105.000 PPB | +/- 10% |
| BENZENE | 100.000 PPB | 103.000 PPB | +/- 10% |
| BENZYL CHLORIDE | 100.000 PPB | 102.000 PPB | +/- 10% |
| BROMO DICHLORO METHANE | 100.000 PPB | 112.000 PPB | +/- 10% |
| BROMOFORM | 100.000 PPB | 113.000 PPB | +/- 10% |
| CARBON DISULFIDE | 100.000 PPB | 95.000 PPB | +/- 10% |
| CARBON TETRACHLORIDE | 100.000 PPB | 107.000 PPB | +/- 10% |
| CHLORO DIBROMO METHANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| CHLOROBENZENE | 100.000 PPB | 104.000 PPB | +/- 10% |
| CHLOROFORM | 100.000 PPB | 106.000 PPB | +/- 10% |
| CIS 1,2 DICHLOROETHYLENE | 100.000 PPB | 102.000 PPB | +/- 10% |
| CIS 1,3 DICHLOROPROPENE | 100.000 PPB | 94.000 PPB | +/- 10% |
| CUMENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| CYCLOHEXANE | 100.000 PPB | 109.000 PPB | +/- 10% |
| ETHANOL | 100.000 PPB | 98.000 PPB | +/- 10% |
| ETHYL ACETATE | 100.000 PPB | 104.000 PPB | +/- 10% |
| ETHYL BENZENE | 100.000 PPB | 105.000 PPB | +/- 10% |
| ETHYL CHLORIDE | 100.000 PPB | 104.000 PPB | +/- 10% |
| HEXACHLORO 1,3 BUTADIENE | 100.000 PPB | 101.000 PPB | +/- 10% |

Approved for Release

Integrated Analytical Laboratories LLC

Airgas
an Air Liquide company

**Airgas Specialty Gases**
Airgas USA LLC
6141 Easton Road
Plumsteadville, PA 18949
Airgas.com

| | | | |
|---|---|---|---|
| HEXANE | 100.000 PPB | 107.000 PPB | +/- 10% |
| ISOOCTANE | 100.000 PPB | 106.000 PPB | +/- 10% |
| ISOPROPYL ALCOHOL | 100.000 PPB | 95.000 PPB | +/- 10% |
| M XYLENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| METHYL BROMIDE | 100.000 PPB | 103.000 PPB | +/- 10% |
| METHYL BUTYL KETONE | 100.000 PPB | 109.000 PPB | +/- 10% |
| METHYL CHLORIDE | 100.000 PPB | 108.000 PPB | +/- 10% |
| METHYL ETHYL KETONE | 100.000 PPB | 105.000 PPB | +/- 10% |
| METHYL ISOBUTYL KETONE | 100.000 PPB | 105.000 PPB | +/- 10% |
| METHYL METHACRYLATE | 100.000 PPB | 106.000 PPB | +/- 10% |
| METHYL TERT BUTYL ETHER | 100.000 PPB | 107.000 PPB | +/- 10% |
| METHYLENE CHLORIDE | 100.000 PPB | 101.000 PPB | +/- 10% |
| N BUTANE | 100.000 PPB | 107.000 PPB | +/- 10% |
| N HEPTANE | 100.000 PPB | 107.000 PPB | +/- 10% |
| N NONANE | 100.000 PPB | 108.000 PPB | +/- 10% |
| N PENTANE | 100.000 PPB | 105.000 PPB | +/- 10% |
| N PROPYL BENZENE | 100.000 PPB | 112.000 PPB | +/- 10% |
| NAPHTHALENE | 100.000 PPB | 101.000 PPB | +/- 10% |
| O XYLENE | 100.000 PPB | 102.000 PPB | +/- 10% |
| P XYLENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| PERCHLOROETHYLENE | 100.000 PPB | 104.000 PPB | +/- 10% |
| PROPYLENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| R11 TRICHLOROFLUOROMETHANE | 100.000 PPB | 106.000 PPB | +/- 10% |
| R113 TRICHLOROTRIFLUOROETHANE | 100.000 PPB | 102.000 PPB | +/- 10% |
| R114 DICHLOROTETRAFLUOROETHANE | 100.000 PPB | 99.000 PPB | +/- 10% |
| R12 DICHLORODIFLUOROMETHANE | 100.000 PPB | 109.000 PPB | +/- 10% |
| STYRENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| TERT BUTANOL | 100.000 PPB | 111.000 PPB | +/- 10% |
| TETRAHYDROFURAN | 100.000 PPB | 106.000 PPB | +/- 10% |
| TOLUENE | 100.000 PPB | 101.000 PPB | +/- 10% |
| TRANS 1,2 DICHLOROETHYLENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| TRANS 1,3 DICHLOROPROPENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| TRICHLOROETHYLENE | 100.000 PPB | 102.000 PPB | +/- 10% |
| VINYL ACETATE | 100.000 PPB | 105.000 PPB | +/- 10% |
| VINYL BROMIDE | 100.000 PPB | 100.000 PPB | +/- 10% |
| VINYL CHLORIDE | 100.000 PPB | 107.000 PPB | +/- 10% |
| NITROGEN | 99.99925 % | 99.999216 % | |

**Permanent Notes:** CUSTOM TO MIX - TO-15/17 MODIFIED NJ STD + NAPHTHALENE

**Notes:** PO Number: 22896

Approved for Release

# Section IV: Method Detection Limit Summary

# INTEGRATED ANALYTICAL LABORATORIES, LLC
# REPORTING METHOD DETECTION LIMIT (MDL) REPORT

Integrated Analytical Laboratories - Randolph, NJ

Matrix: Air
MDL Effective Date: 8/16/2023
Column ID: Restek RtX-VMS, 30 meter, 0.32mm ID, 1.8 um DF
Instrument ID: GC - Agilent 7890A / MS - Agilent 5975C (IAL ID: *Instrument AA* )
Analyst: Joe Waluliewicz
Report Prepared by: Joe Waluliewicz

| Compound Name | CAS # | Molecular Weight | MDL ppbv | MDL µg/m$^3$ | PQL ppbv | RL ppbv | RL µg/m$^3$ | True value/ MDL |
|---|---|---|---|---|---|---|---|---|
| Propene | 115-07-1 | 42.08 | 0.18 | 0.31 | 0.54 | 0.20 | 0.34 | 1 |
| Dichlorodifluoromethane | 75-71-8 | 120.9 | 0.081 | 0.40 | 0.24 | 0.20 | 0.99 | 3 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 170.9 | 0.071 | 0.50 | 0.21 | 0.20 | 1.4 | 3 |
| n-Butane | 106-97-8 | 58 | 0.13 | 0.32 | 0.40 | 0.20 | 0.47 | 2 |
| Chloromethane | 74-87-3 | 50.49 | 0.15 | 0.30 | 0.44 | 0.20 | 0.41 | 1 |
| Vinyl chloride | 75-01-4 | 62.5 | 0.11 | 0.29 | 0.34 | 0.20 | 0.51 | 2 |
| 1,3-Butadiene | 106-99-0 | 54.09 | 0.12 | 0.27 | 0.37 | 0.20 | 0.44 | 2 |
| Bromomethane | 74-83-9 | 94.94 | 0.12 | 0.46 | 0.36 | 0.20 | 0.78 | 2 |
| Chloroethane | 75-00-3 | 64.52 | 0.12 | 0.32 | 0.36 | 0.20 | 0.53 | 2 |
| Vinyl bromide | 593-60-2 | 106.9 | 0.080 | 0.35 | 0.24 | 0.20 | 0.87 | 3 |
| Trichlorofluoromethane | 75-69-4 | 137.4 | 0.068 | 0.38 | 0.20 | 0.20 | 1.1 | 3 |
| Ethanol | 64-17-5 | 46.07 | 0.17 | 0.32 | 0.51 | 0.20 | 0.38 | 1 |
| 1,1-Dichloroethene | 75-35-4 | 96.94 | 0.086 | 0.34 | 0.26 | 0.20 | 0.79 | 3 |
| Carbon disulfide | 75-15-0 | 76.14 | 0.076 | 0.24 | 0.23 | 0.20 | 0.62 | 3 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 187.40 | 0.087 | 0.66 | 0.26 | 0.20 | 1.5 | 3 |
| Acrolein | 107-02-8 | 56.06 | 0.15 | 0.34 | 0.44 | 0.20 | 0.46 | 2 |
| Allyl Chloride | 107-05-1 | 76.53 | 0.088 | 0.27 | 0.26 | 0.20 | 0.63 | 3 |
| Isopropanol | 67-63-0 | 60.1 | 0.10 | 0.25 | 0.30 | 0.20 | 0.49 | 2 |
| Methylene chloride | 75-09-2 | 84.94 | 0.10 | 0.36 | 0.31 | 0.20 | 0.69 | 2 |
| Acetone | 67-64-1 | 58.08 | 0.12 | 0.28 | 0.36 | 0.20 | 0.48 | 2 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 96.94 | 0.080 | 0.32 | 0.24 | 0.20 | 0.79 | 3 |
| n-Pentane | 109-66-0 | 72.15 | 0.16 | 0.48 | 0.49 | 0.20 | 0.59 | 1 |
| n-Hexane | 110-54-3 | 86.17 | 0.087 | 0.31 | 0.26 | 0.20 | 0.70 | 3 |
| Methyl tert-butyl ether | 1634-04-4 | 88.15 | 0.080 | 0.29 | 0.24 | 0.20 | 0.72 | 3 |
| Tert-butyl alcohol | 75-65-0 | 74.12 | 0.14 | 0.44 | 0.43 | 0.20 | 0.61 | 2 |
| 1,1-Dichloroethane | 75-34-3 | 98.96 | 0.079 | 0.32 | 0.24 | 0.20 | 0.81 | 3 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 96.94 | 0.083 | 0.33 | 0.25 | 0.20 | 0.79 | 3 |
| Cyclohexane | 110-82-7 | 84.16 | 0.078 | 0.27 | 0.23 | 0.20 | 0.69 | 3 |
| Chloroform | 67-66-3 | 119.4 | 0.077 | 0.38 | 0.23 | 0.20 | 0.98 | 3 |
| Ethyl acetate | 141-78-6 | 88.11 | 0.11 | 0.40 | 0.33 | 0.20 | 0.72 | 2 |
| Carbon tetrachloride | 56-23-5 | 153.8 | 0.080 | 0.50 | 0.24 | 0.20 | 1.3 | 3 |
| Tetrahydrofuran | 109-99-9 | 72.11 | 0.11 | 0.31 | 0.32 | 0.20 | 0.59 | 2 |
| 1,1,1-Trichloroethane | 71-55-6 | 133.4 | 0.071 | 0.39 | 0.21 | 0.20 | 1.1 | 3 |
| Methyl ethyl ketone | 78-93-3 | 72.11 | 0.11 | 0.31 | 0.32 | 0.20 | 0.59 | 2 |
| n-Heptane | 142-82-5 | 100.2 | 0.090 | 0.37 | 0.27 | 0.20 | 0.82 | 2 |
| Benzene | 71-43-2 | 78.11 | 0.076 | 0.24 | 0.23 | 0.20 | 0.64 | 3 |
| 1,2-Dichloroethane | 107-06-2 | 98.96 | 0.079 | 0.32 | 0.24 | 0.20 | 0.81 | 3 |
| Trichloroethene | 79-01-6 | 131.4 | 0.064 | 0.34 | 0.19 | 0.20 | 1.1 | 3 |
| 2,2,4-Trimethylpentane | 540-84-1 | 114.2 | 0.085 | 0.40 | 0.26 | 0.20 | 0.93 | 3 |
| 1,2-Dichloropropane | 78-87-5 | 113 | 0.085 | 0.39 | 0.25 | 0.20 | 0.92 | 3 |
| Bromodichloromethane | 75-27-4 | 163.8 | 0.066 | 0.44 | 0.20 | 0.20 | 1.3 | 3 |
| Methyl methacrylate | 80-62-6 | 100.12 | 0.079 | 0.32 | 0.24 | 0.20 | 0.82 | 3 |
| 1,4-Dioxane | 123-91-1 | 88.12 | 0.092 | 0.33 | 0.28 | 0.20 | 0.72 | 2 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 111.0 | 0.070 | 0.32 | 0.21 | 0.20 | 0.91 | 3 |
| Toluene | 108-88-3 | 92.14 | 0.064 | 0.24 | 0.19 | 0.20 | 0.75 | 3 |
| Methyl isobutyl ketone | 108-10-1 | 100.2 | 0.11 | 0.43 | 0.32 | 0.20 | 0.82 | 2 |
| Tetrachloroethene | 127-18-4 | 165.8 | 0.063 | 0.43 | 0.19 | 0.20 | 1.4 | 3 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 111 | 0.077 | 0.35 | 0.23 | 0.20 | 0.91 | 3 |
| 1,1,2-Trichloroethane | 79-00-5 | 133.4 | 0.075 | 0.41 | 0.22 | 0.20 | 1.1 | 3 |
| Dibromochloromethane | 124-48-1 | 208.3 | 0.073 | 0.62 | 0.22 | 0.20 | 1.7 | 3 |
| 1,2-Dibromoethane | 106-93-4 | 187.9 | 0.067 | 0.52 | 0.20 | 0.20 | 1.5 | 3 |
| Methyl n-butyl ketone | 591-78-6 | 100.16 | 0.13 | 0.54 | 0.40 | 0.20 | 0.82 | 2 |
| n-Nonane | 111-84-2 | 128.2 | 0.10 | 0.52 | 0.30 | 0.20 | 1.0 | 2 |
| Chlorobenzene | 108-90-7 | 112.6 | 0.073 | 0.34 | 0.22 | 0.20 | 0.92 | 3 |
| Ethylbenzene | 100-41-4 | 106.2 | 0.067 | 0.29 | 0.20 | 0.20 | 0.9 | 3 |
| Xylenes (m&p) | 179601-23-1 | 106.2 | 0.15 | 0.64 | 0.44 | 0.40 | 1.74 | 3 |
| Xylene (o) | 79-34-5 | 167.9 | 0.073 | 0.50 | 0.22 | 0.20 | 1.4 | 3 |
| Styrene | 100-42-5 | 104.1 | 0.072 | 0.31 | 0.22 | 0.20 | 0.85 | 3 |
| Bromoform | 75-25-2 | 252.8 | 0.075 | 0.77 | 0.22 | 0.20 | 2.1 | 3 |
| Cumene (Isopropylbenzene) | 98-82-8 | 120.2 | 0.069 | 0.34 | 0.21 | 0.20 | 0.98 | 3 |
| n-Propyl benzene | 103-65-1 | 120.19 | 0.085 | 0.42 | 0.25 | 0.20 | 0.98 | 3 |
| 1,1,2,2-Tetrachloroethane | 95-47-6 | 106.2 | 0.069 | 0.30 | 0.21 | 0.20 | 0.87 | 3 |
| 4-Ethyltoluene | 622-96-8 | 120.2 | 0.090 | 0.44 | 0.27 | 0.20 | 0.98 | 2 |
| 2-Chlorotoluene | 95-49-8 | 126.6 | 0.077 | 0.40 | 0.23 | 0.20 | 1.0 | 3 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 120.2 | 0.076 | 0.37 | 0.23 | 0.20 | 0.98 | 3 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 120.2 | 0.080 | 0.39 | 0.24 | 0.20 | 0.98 | 3 |

# INTEGRATED ANALYTICAL LABORATORIES, LLC
# REPORTING METHOD DETECTION LIMIT (MDL) REPORT

Integrated Analytical Laboratories - Randolph, NJ

Matrix: Air
MDL Effective Date: 8/16/2023
Column ID: Restek RtX-VMS, 30 meter, 0.32mm ID, 1.8 um DF
Instrument ID: GC - Agilent 7890A / MS - Agilent 5975C (IAL ID: *Instrument AA* )
Analyst: Joe Waluliewicz
Report Prepared by: Joe Waluliewicz

| Compound Name | CAS # | Molecular Weight | MDL ppbv | MDL µg/m$^3$ | PQL ppbv | RL ppbv | RL µg/m$^3$ | True value/ MDL |
|---|---|---|---|---|---|---|---|---|
| 1,3-Dichlorobenzene | 541-73-1 | 147 | 0.086 | 0.52 | 0.26 | 0.20 | 1.2 | 3 |
| 1,4-Dichlorobenzene | 106-46-7 | 147.0 | 0.089 | 0.54 | 0.27 | 0.20 | 1.2 | 2 |
| Benzyl chloride | 100-44-7 | 126.6 | 0.064 | 0.33 | 0.19 | 0.20 | 1.0 | 3 |
| 1,2-Dichlorobenzene | 95-50-1 | 147.0 | 0.083 | 0.50 | 0.25 | 0.20 | 1.2 | 3 |
| 1,3-Hexachlorobutadiene | 87-68-3 | 260.8 | 0.096 | 1.03 | 0.29 | 0.20 | 2.1 | 2 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 181.5 | 0.12 | 0.89 | 0.36 | 0.20 | 1.5 | 2 |
| Naphthalene | 91-20-3 | 128 | 0.15 | 0.79 | 0.45 | 0.20 | 1.0 | 2 |

Where:
MDL is defined as the higher of the MDL Spike and MDL Blank
PQL is MDLx3
RL is defined as the lowest point of the calibration curve
ppbv is parts per billion by volume and is how results come off the instrument
µg/m$^3$ = ppbv x molecular weight / 24.45

Location of this file: P:\PAL Reports\LLTO-15 and TO-15 Common Files\Agilent MDL

Instrument used for Clean Canister Certification Analysis? YES

Michael Leftin, Ph.D.
Laboratory Director

Date: August 16, 2023

# INTEGRATED ANALYTICAL LABORATORIES, LLC
# METHOD DETECTION LIMIT VERIFICATION (MDLV) REPORT

Integrated Analytical Laboratories - Randolph, NJ

| | |
|---|---|
| Analysis Level: | 0.20 ppbv, 0.40 for m&p-xylenes |
| Matrix: | Air |
| Column ID: | RTX-VMS, 30-meter, 0.32 mm ID, 1.8 µm $d_f$ |
| Instrument Identification: | AA |
| Date of Verification Study: | 8/16/2023 |
| Study Identification File #: | aa3415rllcs |
| Analyst: | Joe Walukiewicz |
| Analysis/Processing Method: | C:\MSDCHEM\1\METHODS\230815.M |
| Cylinder ID: | EB0103704 |

Michael Leftin, Ph.D.
Laboratory Director

Date: August 16, 2023

| Compound Name | CAS # | MDLV (ppbv) | RL (ppbv) | RL/MDLV Ratio |
|---|---|---|---|---|
| Propene | 115-07-1 | 0.23 | 0.20 | 1 |
| Dichlorodifluoromethane | 124-48-1 | 0.24 | 0.20 | 1 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.26 | 0.20 | 1 |
| n-Butane | 106-97-8 | 0.23 | 0.20 | 1 |
| Chloromethane | 74-87-3 | 0.24 | 0.20 | 1 |
| Vinyl chloride | 75-01-4 | 0.26 | 0.20 | 1 |
| 1,3-Butadiene | 106-99-0 | 0.23 | 0.20 | 1 |
| Bromomethane | 74-83-9 | 0.23 | 0.20 | 1 |
| Chloroethane | 75-00-3 | 0.22 | 0.20 | 1 |
| Vinyl bromide | 593-60-2 | 0.23 | 0.20 | 1 |
| Trichlorofluoromethane | 75-69-4 | 0.26 | 0.20 | 1 |
| Ethanol | 64-17-5 | 0.30 | 0.20 | 2 |
| 1,1-Dichloroethene | 75-35-4 | 0.22 | 0.20 | 1 |
| Carbon disulfide | 75-15-0 | 0.22 | 0.20 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.27 | 0.20 | 1 |
| Acrolein | 107-02-8 | 0.24 | 0.20 | 1 |
| Allyl Chloride | 107-05-1 | 0.22 | 0.20 | 1 |
| Isopropanol | 67-63-0 | 0.20 | 0.20 | 1 |
| Methylene chloride | 75-09-2 | 0.35 | 0.20 | 2 |
| Acetone | 67-64-1 | 0.27 | 0.20 | 1 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.22 | 0.20 | 1 |
| n-Pentane | 109-66-0 | 0.25 | 0.20 | 1 |
| n-Hexane | 110-54-3 | 0.26 | 0.20 | 1 |
| Methyl tert-butyl ether | 1634-04-4 | 0.25 | 0.20 | 1 |
| Tert-butyl alcohol | 75-65-0 | 0.24 | 0.20 | 1 |
| 1,1-Dichloroethane | 75-34-3 | 0.24 | 0.20 | 1 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.21 | 0.20 | 1 |
| Cyclohexane | 110-82-7 | 0.24 | 0.20 | 1 |
| Chloroform | 67-66-3 | 0.23 | 0.20 | 1 |
| Ethyl acetate | 141-78-6 | 0.23 | 0.20 | 1 |
| Carbon tetrachloride | 56-23-5 | 0.26 | 0.20 | 1 |
| Tetrahydrofuran | 109-99-9 | 0.23 | 0.20 | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | 0.24 | 0.20 | 1 |
| Methyl ethyl ketone | 78-93-3 | 0.24 | 0.20 | 1 |
| n-Heptane | 142-82-5 | 0.23 | 0.20 | 1 |
| Benzene | 71-43-2 | 0.24 | 0.20 | 1 |
| 1,2-Dichloroethane | 106-93-4 | 0.23 | 0.20 | 1 |
| Trichloroethene | 79-01-6 | 0.25 | 0.20 | 1 |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.29 | 0.20 | 1 |
| 1,2-Dichloropropane | 78-87-5 | 0.26 | 0.20 | 1 |
| Bromodichloromethane | 75-27-4 | 0.28 | 0.20 | 1 |
| Methyl methacrylate | 80-62-6 | 0.22 | 0.20 | 1 |
| 1,4-Dioxane | 123-91-1 | 0.28 | 0.20 | 1 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.25 | 0.20 | 1 |
| Toluene | 108-88-3 | 0.24 | 0.20 | 1 |
| Methyl isobutyl ketone | 108-10-1 | 0.22 | 0.20 | 1 |
| Tetrachloroethene | 127-18-4 | 0.26 | 0.20 | 1 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.24 | 0.20 | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | 0.23 | 0.20 | 1 |
| Dibromochloromethane | 75-71-8 | 0.24 | 0.20 | 1 |
| 1,2-Dibromoethane | 107-06-2 | 0.22 | 0.20 | 1 |
| Methyl n-butyl ketone | 591-78-6 | 0.21 | 0.20 | 1 |

# INTEGRATED ANALYTICAL LABORATORIES, LLC
# METHOD DETECTION LIMIT VERIFICATION (MDLV) REPORT

Integrated Analytical Laboratories - Randolph, NJ

| | |
|---|---|
| Analysis Level: | 0.20 ppbv, 0.40 for m&p-xylenes |
| Matrix: | Air |
| Column ID: | RTX-VMS, 30-meter, 0.32 mm ID, 1.8 µm $d_f$ |
| Instrument Identification: | AA |
| Date of Verification Study: | 8/16/2023 |
| Study Identification File #: | aa3415rllcs |
| Analyst: | Joe Walukiewicz |
| Analysis/Processing Method: | C:\MSDCHEM\1\METHODS\230815.M |
| Cylinder ID: | EB0103704 |

Michael Leftin, Ph.D.
Laboratory Director

Date: August 16, 2023

| Compound Name | CAS # | MDLV (ppbv) | RL (ppbv) | RL/MDLV Ratio |
|---|---|---|---|---|
| n-Nonane | 111-84-2 | 0.21 | 0.20 | 1 |
| Chlorobenzene | 108-90-7 | 0.28 | 0.20 | 1 |
| Ethylbenzene | 100-41-4 | 0.26 | 0.20 | 1 |
| Xylenes (m&p) | 179601-23-1 | 0.54 | 0.40 | 1 |
| Xylene (o) | 95-47-6 | 0.26 | 0.20 | 1 |
| Styrene | 100-42-5 | 0.23 | 0.20 | 1 |
| Bromoform | 75-25-2 | 0.26 | 0.20 | 1 |
| Cumene | 98-82-8 | 0.24 | 0.20 | 1 |
| n-Propyl benzene | 103-65-1 | 0.25 | 0.20 | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.25 | 0.20 | 1 |
| 4-Ethyltoluene | 622-96-8 | 0.24 | 0.20 | 1 |
| 2-Chlorotoluene | 95-49-8 | 0.25 | 0.20 | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.24 | 0.20 | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.22 | 0.20 | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | 0.27 | 0.20 | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | 0.24 | 0.20 | 1 |
| Benzyl chloride | 100-44-7 | 0.17 | 0.20 | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | 0.25 | 0.20 | 1 |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.31 | 0.20 | 2 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.25 | 0.20 | 1 |
| Naphthalene | 91-20-3 | 0.28 | 0.20 | 1 |

# Section V: Quality Control Data Summary

**BFB Tune Summary**

**Method Blank**

**Laboratory Control Sample**

**Laboratory Sample Duplicate**

**Internal Standard Area Summary**

# BFB

**Data Path:** C:\DATA\2023\08-2023\08-15-2023\
**Data File:** AA3401BFB.D
**Acq On:** 8/15/2023 10:11:00AM
**Operator:** jls
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\230525.M
**Last Update:** Tue May 30 13:24:12 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 251499 | 18.7 |
| PASS | 75 | 95 | 30 | 66 | 703104 | 52.3 |
| PASS | 95 | 95 | 100 | 100 | 1345024 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 89525 | 6.7 |
| PASS | 173 | 174 | 0.00 | 2 | 8293 | 0.8 |
| PASS | 174 | 95 | 50 | 100 | 1069397 | 79.5 |
| PASS | 175 | 174 | 4 | 9 | 78181 | 7.3 |
| PASS | 176 | 174 | 93 | 101 | 1035413 | 96.8 |
| PASS | 177 | 176 | 5 | 9 | 68613 | 6.6 |

Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA3401BFB | NA | 8/15/2023 10:11:00 AM |
| 0.2 PPBV STD | AA3402STD05 | NA | 8/15/2023 11:15:00 AM |
| 10 PPBV STD | AA3404STD03 | NA | 8/15/2023 1:09:00 PM |
| 2 PPBV STD | AA3403STD04 | NA | 8/15/2023 1:45:00 PM |
| 20 PPBV STD | AA3405STD02 | NA | 8/15/2023 3:12:00 PM |
| 40 PPBV STD | AA3406STD01 | NA | 8/15/2023 4:47:00 PM |
| 10 PPBV ICVSS | AA3407ICVSS | NA | 8/15/2023 6:09:00 PM |

# BFB

**Data Path:** C:\DATA\2023\09-2023\09-28-2023\
**Data File:** AA4071BFB.D
**Acq On:** 9/28/2023 10:01:00AM
**Operator:** jjw
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\230815.M
**Last Update:** Wed Aug 16 10:00:51 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 96931 | 19.9 |
| PASS | 75 | 95 | 30 | 66 | 265259 | 54.6 |
| PASS | 95 | 95 | 100 | 100 | 485931 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 33264 | 6.8 |
| PASS | 173 | 174 | 0.00 | 2 | 3017 | 0.8 |
| PASS | 174 | 95 | 50 | 100 | 366187 | 75.4 |
| PASS | 175 | 174 | 4 | 9 | 27080 | 7.4 |
| PASS | 176 | 174 | 93 | 101 | 360832 | 98.5 |
| PASS | 177 | 176 | 5 | 9 | 23088 | 6.4 |

Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4071BFB | NA | 9/28/2023 10:01:00 AM |
| 10 PPBV DCVS | AA4072DCVS | NA | 9/28/2023 10:31:00 AM |
| 10 PPBV LCS | AA4073LCS | NA | 9/28/2023 11:19:00 AM |
| METHOD BLANK | AA4074BLK | NA | 9/28/2023 11:47:00 AM |
| 02 PPBV RLLCS | AA4075RLLCS | NA | 9/28/2023 1:22:00 PM |
| 2164 | AA4076 | NA | 9/28/2023 3:00:00 PM |
| 4870 | AA4077 | NA | 9/28/2023 3:30:00 PM |
| 2160 | AA4078 | NA | 9/28/2023 4:00:00 PM |
| 10 PPBV CCCVS | AA4093CCCVS | NA | 9/29/2023 12:28:00 AM |

# BFB

**Data Path:** C:\DATA\2023\10-2023\10-10-2023\

**Data File:** AA4131BFB.D

**Acq On:** 10/10/2023 10:13:00AM

**Operator:** jls

**Sample:** BFB

**Misc:** ALM018474

**ALS Vial:** 1 **Multiplier:** 1

**Integration File:** rteint.p

**Method:** C:\msdchem\1\METHODS\231009.M

**Last Update:** Tue Oct 10 09:54:56 2023

**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 65523 | 16.8 |
| PASS | 75 | 95 | 30 | 66 | 182571 | 46.8 |
| PASS | 95 | 95 | 100 | 100 | 389867 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 25643 | 6.6 |
| PASS | 173 | 174 | 0.00 | 2 | 0 | 0.0 |
| PASS | 174 | 95 | 50 | 100 | 293952 | 75.4 |
| PASS | 175 | 174 | 4 | 9 | 22269 | 7.6 |
| PASS | 176 | 174 | 93 | 101 | 282667 | 96.2 |
| PASS | 177 | 176 | 5 | 9 | 18629 | 6.6 |

Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4131BFB | NA | 10/10/2023 10:13:00 AM |
| 0.2 PPBV STD | AA4132STD05 | NA | 10/10/2023 10:40:00 AM |
| 2 PPBV STD | AA4133STD04 | NA | 10/10/2023 11:46:00 AM |
| 10 PPBV STANDARD STD | AA4134STD03 | NA | 10/10/2023 12:21:00 PM |
| 20 PPBV STD | AA4135STD02 | NA | 10/10/2023 12:55:00 PM |
| 40 PPBV STD | AA4136STD01 | NA | 10/10/2023 2:05:00 PM |
| 10 PPBV ICVSS | AA4137ICVSS | NA | 10/10/2023 4:48:00 PM |
| 10 PPBV LCS | AA4138LCS | NA | 10/10/2023 5:39:00 PM |
| METHOD BLANK | AA4139BLK | NA | 10/10/2023 6:07:00 PM |
| 02 PPBV RLLCS | AA4140RLLCS | NA | 10/10/2023 6:35:00 PM |
| 5101 | AA4142 | NA | 10/10/2023 7:36:00 PM |
| 4869 | AA4143 | NA | 10/10/2023 8:06:00 PM |
| 2157 | AA4144 | NA | 10/10/2023 8:36:00 PM |
| 10 PPBV CCCVS | AA4154CCCVS | NA | 10/11/2023 1:53:00 AM |

# BFB

**Data Path:** C:\DATA\2023\12-2023\12-08-2023\
**Data File:** AA4881BFB.D
**Acq On:** 12/8/2023 10:21:00AM
**Operator:** jjw
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\231009.M
**Last Update:** Tue Oct 10 15:12:35 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 185045 | 18.5 |
| PASS | 75 | 95 | 30 | 66 | 508523 | 50.7 |
| PASS | 95 | 95 | 100 | 100 | 1002688 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 66973 | 6.7 |
| PASS | 173 | 174 | 0.00 | 2 | 4685 | 0.6 |
| PASS | 174 | 95 | 50 | 100 | 744704 | 74.3 |
| PASS | 175 | 174 | 4 | 9 | 56251 | 7.6 |
| PASS | 176 | 174 | 93 | 101 | 716907 | 96.3 |
| PASS | 177 | 176 | 5 | 9 | 46309 | 6.5 |

Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4881BFB | NA | 12/8/2023 10:21:00 AM |
| 10 PPBV DCVS | AA4882DCVS | NA | 12/8/2023 10:50:00 AM |
| 10 PPBV LCS | AA4883LCS | NA | 12/8/2023 11:21:00 AM |
| METHOD BLANK | AA4884BLK | NA | 12/8/2023 12:26:00 PM |
| E23-05080-01 | AA4893 | SV2 | 12/8/2023 6:08:00 PM |
| E23-05080-02 | AA4894 | SV3 | 12/8/2023 6:39:00 PM |

# BFB

**Data Path:** C:\DATA\2023\12-2023\12-11-2023\
**Data File:** AA4901BFB.D
**Acq On:** 12/11/2023 9:24:00AM
**Operator:** jjw
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\231009.M
**Last Update:** Tue Oct 10 15:12:35 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 267904 | 18.4 |
| PASS | 75 | 95 | 30 | 66 | 717035 | 49.1 |
| PASS | 95 | 95 | 100 | 100 | 1459371 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 91040 | 6.2 |
| PASS | 173 | 174 | 0.00 | 2 | 10848 | 1.0 |
| PASS | 174 | 95 | 50 | 100 | 1053269 | 72.2 |
| PASS | 175 | 174 | 4 | 9 | 81547 | 7.7 |
| PASS | 176 | 174 | 93 | 101 | 1021824 | 97.0 |
| PASS | 177 | 176 | 5 | 9 | 65264 | 6.4 |

Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4901BFB | NA | 12/11/2023 9:24:00 AM |
| 10 PPBV DCVS | AA4902DCVS | NA | 12/11/2023 10:26:00 AM |
| 10 PPBV LCS | AA4903LCS | NA | 12/11/2023 10:57:00 AM |
| METHOD BLANK | AA4904BLK | NA | 12/11/2023 11:51:00 AM |
| 02 PPBV RLLCS | AA4905RLLCS | NA | 12/11/2023 12:18:00 PM |
| 1458 | AA4906 | NA | 12/11/2023 12:50:00 PM |
| 1588 | AA4907 | NA | 12/11/2023 1:19:00 PM |
| 3012 | AA4908 | NA | 12/11/2023 1:49:00 PM |
| E23-05080-01 | AA4911 | SV2 | 12/11/2023 3:19:00 PM |
| E23-05080-02 | AA4912 | SV3 | 12/11/2023 3:48:00 PM |
| 10 PPBV CCCVS | AA4931CCCVS | NA | 12/12/2023 1:59:00 AM |

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4074BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **9/28/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| 2164 [AA4076] | 09/28/2023 15:00 |
| 4870 [AA4077] | 09/28/2023 15:30 |
| 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 0:28 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromodichloromethane | 75-27-4 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| Dibromochloromethane | 124-48-1 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.17 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.19 | ND |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.18 | ND |
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |
| n-Hexane | 110-54-3 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4074BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **9/28/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| 2164 [AA4076] | 09/28/2023 15:00 |
| 4870 [AA4077] | 09/28/2023 15:30 |
| 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 0:28 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Methylene chloride | 75-09-2 | 0.20 | ND |
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.17 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.17 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.20 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4884BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/8/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05080-01 [AA4893] | 12/08/2023 18:08 |
| E23-05080-02 [AA4894] | 12/08/2023 18:39 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.17 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.19 | ND |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.18 | ND |
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |
| n-Hexane | 110-54-3 | 0.20 | ND |
| Methylene chloride | 75-09-2 | 0.20 | ND |
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4884BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/8/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05080-01 [AA4893] | 12/08/2023 18:08 |
| E23-05080-02 [AA4894] | 12/08/2023 18:39 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.17 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.17 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.20 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4904BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/11/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05080-01 [AA4911] | 12/11/2023 15:19 |
| E23-05080-02 [AA4912] | 12/11/2023 15:48 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.17 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.19 | ND |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.18 | ND |
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4904BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/11/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05080-01 [AA4911] | 12/11/2023 15:19 |
| E23-05080-02 [AA4912] | 12/11/2023 15:48 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| n-Hexane | 110-54-3 | 0.20 | ND |
| Methylene chloride | 75-09-2 | 0.20 | ND |
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.17 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.17 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.20 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4073LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 9/28/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| 2164 [AA4076] | 09/28/2023 15:00 |
| 4870 [AA4077] | 09/28/2023 15:30 |
| 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 0:28 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Acetone | 67-64-1 | 13 | 120 |
| Benzene | 71-43-2 | 12 | 120 |
| Bromodichloromethane | 75-27-4 | 12 | 110 |
| Bromoform | 75-25-2 | 11 | 100 |
| Bromomethane | 74-83-9 | 12 | 110 |
| 1,3-Butadiene | 106-99-0 | 14 | 130 |
| Chlorobenzene | 108-90-7 | 10 | 100 |
| Chloroethane | 75-00-3 | 13 | 130 |
| Chloroform | 67-66-3 | 13 | 130 |
| Chloromethane | 74-87-3 | 14 | 120 |
| Carbon disulfide | 75-15-0 | 14 | 130 |
| Carbon tetrachloride | 56-23-5 | 11 | 110 |
| Cyclohexane | 110-82-7 | 12 | 120 |
| Dibromochloromethane | 124-48-1 | 11 | 100 |
| 1,2-Dibromoethane | 106-93-4 | 11 | 100 |
| 1,2-Dichlorobenzene | 95-50-1 | 10 | 91 |
| 1,3-Dichlorobenzene | 541-73-1 | 10 | 91 |
| 1,4-Dichlorobenzene | 106-46-7 | 11 | 100 |
| Dichlorodifluoromethane | 75-71-8 | 13 | 120 |
| 1,1-Dichloroethane | 75-34-3 | 13 | 120 |
| 1,2-Dichloroethane | 107-06-2 | 13 | 130 |
| 1,1-Dichloroethene | 75-35-4 | 13 | 120 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 14 | 130 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 14 | 130 |
| 1,2-Dichloropropane | 78-87-5 | 11 | 110 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 12 | 110 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 13 | 130 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 11 | 100 |
| 1,4-Dioxane | 123-91-1 | 12 | 100 |
| Ethylbenzene | 100-41-4 | 11 | 110 |
| n-Heptane | 142-82-5 | 12 | 120 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4073LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 9/28/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| 2164 [AA4076] | 09/28/2023 15:00 |
| 4870 [AA4077] | 09/28/2023 15:30 |
| 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 0:28 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| 1,3-Hexachlorobutadiene | 87-68-3 | 9.6 | 84 |
| n-Hexane | 110-54-3 | 13 | 130 |
| Methylene chloride | 75-09-2 | 13 | 120 |
| Methyl ethyl ketone | 78-93-3 | 14 | 120 |
| Methyl isobutyl ketone | 108-10-1 | 12 | 110 |
| Methyl tert-butyl ether | 1634-04-4 | 12 | 110 |
| Styrene | 100-42-5 | 11 | 100 |
| Tert-butyl alcohol | 75-65-0 | 13 | 110 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 10 | 91 |
| Tetrachloroethene | 127-18-4 | 11 | 110 |
| Toluene | 108-88-3 | 11 | 110 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 11 | 96 |
| 1,1,1-Trichloroethane | 71-55-6 | 11 | 110 |
| 1,1,2-Trichloroethane | 79-00-5 | 11 | 100 |
| Trichloroethene | 79-01-6 | 9.8 | 98 |
| Trichlorofluoromethane | 75-69-4 | 13 | 120 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 11 | 110 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 11 | 100 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 10 | 91 |
| 2,2,4-Trimethylpentane | 540-84-1 | 12 | 120 |
| Vinyl bromide | 593-60-2 | 12 | 120 |
| Vinyl chloride | 75-01-4 | 14 | 130 |
| Xylenes (m&p) | 179601-23-1 | 22 | 110 |
| Xylenes (o) | 95-47-6 | 10 | 100 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4883LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 12/8/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05080-01 [AA4893] | 12/08/2023 18:08 |
| E23-05080-02 [AA4894] | 12/08/2023 18:39 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Acetone | 67-64-1 | 11 | 100 |
| Benzene | 71-43-2 | 9.3 | 93 |
| Bromoform | 75-25-2 | 11 | 100 |
| Bromomethane | 74-83-9 | 11 | 100 |
| 1,3-Butadiene | 106-99-0 | 9.9 | 99 |
| Chlorobenzene | 108-90-7 | 9.9 | 99 |
| Chloroethane | 75-00-3 | 11 | 110 |
| Chloroform | 67-66-3 | 10.0 | 100 |
| Chloromethane | 74-87-3 | 12 | 100 |
| Carbon disulfide | 75-15-0 | 11 | 100 |
| Carbon tetrachloride | 56-23-5 | 10 | 100 |
| Cyclohexane | 110-82-7 | 10 | 100 |
| 1,2-Dibromoethane | 106-93-4 | 11 | 100 |
| 1,2-Dichlorobenzene | 95-50-1 | 9.7 | 88 |
| 1,3-Dichlorobenzene | 541-73-1 | 9.8 | 89 |
| 1,4-Dichlorobenzene | 106-46-7 | 9.6 | 87 |
| Dichlorodifluoromethane | 75-71-8 | 11 | 100 |
| 1,1-Dichloroethane | 75-34-3 | 9.4 | 85 |
| 1,2-Dichloroethane | 107-06-2 | 11 | 110 |
| 1,1-Dichloroethene | 75-35-4 | 11 | 100 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 10 | 91 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 11 | 100 |
| 1,2-Dichloropropane | 78-87-5 | 11 | 110 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 11 | 100 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 12 | 120 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 9.0 | 82 |
| 1,4-Dioxane | 123-91-1 | 12 | 100 |
| Ethylbenzene | 100-41-4 | 10 | 100 |
| n-Heptane | 142-82-5 | 11 | 110 |
| 1,3-Hexachlorobutadiene | 87-68-3 | 10.0 | 88 |
| n-Hexane | 110-54-3 | 10.0 | 100 |
| Methylene chloride | 75-09-2 | 9.5 | 86 |
| Methyl ethyl ketone | 78-93-3 | 10 | 85 |
| Methyl isobutyl ketone | 108-10-1 | 12 | 110 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4883LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 12/8/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05080-01 [AA4893] | 12/08/2023 18:08 |
| E23-05080-02 [AA4894] | 12/08/2023 18:39 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Methyl tert-butyl ether | 1634-04-4 | 10 | 91 |
| Styrene | 100-42-5 | 10 | 91 |
| Tert-butyl alcohol | 75-65-0 | 11 | 93 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 10 | 91 |
| Tetrachloroethene | 127-18-4 | 11 | 110 |
| Toluene | 108-88-3 | 10 | 100 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 10 | 88 |
| 1,1,1-Trichloroethane | 71-55-6 | 10 | 100 |
| 1,1,2-Trichloroethane | 79-00-5 | 10 | 91 |
| Trichloroethene | 79-01-6 | 9.3 | 93 |
| Trichlorofluoromethane | 75-69-4 | 11 | 100 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 9.2 | 92 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 10.0 | 91 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 10 | 91 |
| 2,2,4-Trimethylpentane | 540-84-1 | 10 | 100 |
| Vinyl bromide | 593-60-2 | 10 | 100 |
| Vinyl chloride | 75-01-4 | 10 | 100 |
| Xylenes (m&p) | 179601-23-1 | 21 | 110 |
| Xylenes (o) | 95-47-6 | 9.9 | 99 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4903LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 12/11/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05080-01 [AA4911] | 12/11/2023 15:19 |
| E23-05080-02 [AA4912] | 12/11/2023 15:48 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Acetone | 67-64-1 | 11 | 100 |
| Benzene | 71-43-2 | 9.5 | 95 |
| Bromoform | 75-25-2 | 11 | 100 |
| Bromomethane | 74-83-9 | 10 | 91 |
| 1,3-Butadiene | 106-99-0 | 10 | 100 |
| Chlorobenzene | 108-90-7 | 10 | 100 |
| Chloroethane | 75-00-3 | 11 | 110 |
| Chloroform | 67-66-3 | 10 | 100 |
| Chloromethane | 74-87-3 | 11 | 96 |
| Carbon disulfide | 75-15-0 | 11 | 100 |
| Carbon tetrachloride | 56-23-5 | 10 | 100 |
| Cyclohexane | 110-82-7 | 10 | 100 |
| 1,2-Dibromoethane | 106-93-4 | 11 | 100 |
| 1,2-Dichlorobenzene | 95-50-1 | 10 | 91 |
| 1,3-Dichlorobenzene | 541-73-1 | 10 | 91 |
| 1,4-Dichlorobenzene | 106-46-7 | 10 | 91 |
| Dichlorodifluoromethane | 75-71-8 | 11 | 100 |
| 1,1-Dichloroethane | 75-34-3 | 9.8 | 89 |
| 1,2-Dichloroethane | 107-06-2 | 11 | 110 |
| 1,1-Dichloroethene | 75-35-4 | 11 | 100 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 10 | 91 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 11 | 100 |
| 1,2-Dichloropropane | 78-87-5 | 10 | 100 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 11 | 100 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 11 | 110 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 8.8 | 80 |
| 1,4-Dioxane | 123-91-1 | 11 | 92 |
| Ethylbenzene | 100-41-4 | 11 | 110 |
| n-Heptane | 142-82-5 | 11 | 110 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4903LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 12/11/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05080-01 [AA4911] | 12/11/2023 15:19 |
| E23-05080-02 [AA4912] | 12/11/2023 15:48 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| 1,3-Hexachlorobutadiene | 87-68-3 | 10 | 88 |
| n-Hexane | 110-54-3 | 10 | 100 |
| Methylene chloride | 75-09-2 | 9.6 | 87 |
| Methyl ethyl ketone | 78-93-3 | 11 | 93 |
| Methyl isobutyl ketone | 108-10-1 | 12 | 110 |
| Methyl tert-butyl ether | 1634-04-4 | 11 | 100 |
| Styrene | 100-42-5 | 11 | 100 |
| Tert-butyl alcohol | 75-65-0 | 11 | 93 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 11 | 100 |
| Tetrachloroethene | 127-18-4 | 11 | 110 |
| Toluene | 108-88-3 | 10 | 100 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 11 | 96 |
| 1,1,1-Trichloroethane | 71-55-6 | 10 | 100 |
| 1,1,2-Trichloroethane | 79-00-5 | 10 | 91 |
| Trichloroethene | 79-01-6 | 9.1 | 91 |
| Trichlorofluoromethane | 75-69-4 | 11 | 100 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 9.4 | 94 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 11 | 100 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 11 | 100 |
| 2,2,4-Trimethylpentane | 540-84-1 | 10 | 100 |
| Vinyl bromide | 593-60-2 | 10 | 100 |
| Vinyl chloride | 75-01-4 | 11 | 110 |
| Xylenes (m&p) | 179601-23-1 | 22 | 110 |
| Xylenes (o) | 95-47-6 | 10 | 100 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 9/13/23 |
| SDG Number: | E23-04122 | Date Analyzed: | 9/28/23,9/28/23 |
| IAL Sample ID: | E23-04122-06 | Lab Data File#: | AA4087,AA4088 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 1781 | Injection Volume: | 50ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-04122-06** | | **E23-04122-26** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Acetone | 67-64-1 | **50** | | **54** | | 4.0 | **-7.69%** |
| Allyl Chloride | 107-05-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Benzene | 71-43-2 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| Bromodichloromethane | 75-27-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Bromoform | 75-25-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Bromomethane | 74-83-9 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3-Butadiene | 106-99-0 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chlorobenzene | 108-90-7 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chloroethane | 75-00-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chloroform | 67-66-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chloromethane | 74-87-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Carbon disulfide | 75-15-0 | **10.0** | | **11** | | 4.0 | **-9.52%** |
| Carbon tetrachloride | 56-23-5 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 2-Chlorotoluene | 95-49-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Cyclohexane | 110-82-7 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Dibromochloromethane | 124-48-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dibromoethane | 106-93-4 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,2-Dichlorobenzene | 95-50-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3-Dichlorobenzene | 541-73-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,4-Dichlorobenzene | 106-46-7 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Dichlorodifluoromethane | 75-71-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1-Dichloroethane | 75-34-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloroethane | 107-06-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1-Dichloroethene | 75-35-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloroethene (cis) | 156-59-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloroethene (trans) | 156-60-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloropropane | 78-87-5 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Ethylbenzene | 100-41-4 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 4-Ethyltoluene | 622-96-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| n-Heptane | 142-82-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3-Hexachlorobutadiene | 87-68-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| n-Hexane | 110-54-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Methylene chloride | 75-09-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Methyl ethyl ketone | 78-93-3 | **8.1** | | **10** | | 4.0 | **-20.99%** |
| Methyl isobutyl ketone | 108-10-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 9/13/23 |
| SDG Number: | E23-04122 | Date Analyzed: | 9/28/23,9/28/23 |
| IAL Sample ID: | E23-04122-06 | Lab Data File#: | AA4087,AA4088 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 1781 | Injection Volume: | 50ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-04122-06** | | **E23-04122-26** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Methyl tert-butyl ether | 1634-04-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Styrene | 100-42-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Tert-butyl alcohol | 75-65-0 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Tetrachloroethene | 127-18-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Toluene | 108-88-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2,4-Trichlorobenzene | 120-82-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,1-Trichloroethane | 71-55-6 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,2-Trichloroethane | 79-00-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Trichloroethene | 79-01-6 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| Trichlorofluoromethane | 75-69-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2,4-Trimethylbenzene | 95-63-6 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3,5-Trimethylbenzene | 108-67-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 2,2,4-Trimethylpentane | 540-84-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Vinyl bromide | 593-60-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Vinyl chloride | 75-01-4 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| Xylenes (m&p) | 179601-23-1 | 4.0 | U | **4.2** | | 4.0 | **NC** |
| Xylenes (o) | 95-47-6 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |

**RPD must be <25% for all laboratory duplicate samples. Laboratory duplicate samples are run once daily.**
**NC = The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample.**

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

SDG Number: E23-05061
IAL Sample ID: E23-05061-03
Matrix: Air
Summa ID: 3045a

Date Received: 11/17/23
Date Analyzed: 12/7/23,12/7/23
Lab Data File#: AA4869,AA4870
Dilution Factor: 1
Injection Volume: 500ml
GC/MS Column: RTX-1, 0.32 mmID

| Compound | CAS # | Sample E23-05061-03 Concentration Reported ppbv | Q | Sample Dup E23-05061-23 Concentration Reported ppbv | Q | Reporting Limits ppbv | RPD |
|---|---|---|---|---|---|---|---|
| Acetone | 67-64-1 | **11** | | **11** | | 0.20 | **0.00%** |
| Allyl Chloride | 107-05-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Benzene | 71-43-2 | **2.6** | | **2.3** | | 0.20 | **12.24%** |
| Bromodichloromethane | 75-27-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Bromoform | 75-25-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Bromomethane | 74-83-9 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Butadiene | 106-99-0 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Chlorobenzene | 108-90-7 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Chloroethane | 75-00-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Chloroform | 67-66-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Chloromethane | 74-87-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Carbon disulfide | 75-15-0 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Carbon tetrachloride | 56-23-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 2-Chlorotoluene | 95-49-8 | 0.20 | U | **0.27** | | 0.20 | **NC** |
| Cyclohexane | 110-82-7 | **3.9** | | **3.4** | | 0.20 | **13.70%** |
| Dibromochloromethane | 124-48-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dibromoethane | 106-93-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,4-Dioxane | 123-91-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Ethanol | 64-17-5 | **10** | | 0.20 | U | 0.20 | **NC** |
| Ethylbenzene | 100-41-4 | **1.9** | | **1.6** | | 0.20 | **17.14%** |
| 4-Ethyltoluene | 622-96-8 | **1.9** | X | **1.4** | X | 0.20 | **30.30%** |
| n-Heptane | 142-82-5 | **3.7** | | **3.4** | | 0.20 | **8.45%** |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| n-Hexane | 110-54-3 | **4.4** | | **3.8** | | 0.20 | **14.63%** |
| Isopropanol | 67-63-0 | **2.7** | | 0.20 | U | 0.20 | **NC** |

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**INTEGRATED ANALYTICAL LABORATORIES, LLC**

***Integrated Analytical Laboratories LLC***

**Analysis: Volatile Organic Compounds by EPA Method TO-15**

**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 11/17/23 |
| SDG Number: | E23-05061 | Date Analyzed: | 12/7/23,12/7/23 |
| IAL Sample ID: | E23-05061-03 | Lab Data File#: | AA4869,AA4870 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 3045a | Injection Volume: | 500ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-05061-03** | | **E23-05061-23** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Methylene chloride | 75-09-2 | **2.8** | | 0.20 | U | 0.20 | **NC** |
| Methyl ethyl ketone | 78-93-3 | **0.85** | | **0.83** | | 0.20 | **2.38%** |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | U | **0.24** | | 0.20 | **NC** |
| Methyl methacrylate | 80-62-6 | 0.20 | U | **3.4** | | 0.20 | **NC** |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Styrene | 100-42-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Tert-butyl alcohol | 75-65-0 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Tetrachloroethene | 127-18-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Tetrahydrofuran | 109-99-9 | **0.96** | | **0.90** | | 0.20 | **6.45%** |
| Toluene | 108-88-3 | **7.1** | | **7.1** | | 0.20 | **0.00%** |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1,1-Trichloroethane | 71-55-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Trichloroethene | 79-01-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Trichlorofluoromethane | 75-69-4 | **0.33** | | **0.33** | | 0.20 | **0.00%** |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2,4-Trimethylbenzene | 95-63-6 | **1.9** | | **1.5** | | 0.20 | **23.53%** |
| 1,3,5-Trimethylbenzene | 108-67-8 | **0.53** | | **0.45** | | 0.20 | **16.33%** |
| 2,2,4-Trimethylpentane | 540-84-1 | **6.9** | | **7.0** | | 0.20 | **-1.44%** |
| Vinyl bromide | 593-60-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Vinyl chloride | 75-01-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Xylenes (m&p) | 179601-23-1 | **7.0** | | **5.9** | | 0.40 | **17.05%** |
| Xylenes (o) | 95-47-6 | **2.3** | | **2.0** | | 0.20 | **13.95%** |

**RPD must be <25% for all laboratory duplicate samples. Laboratory duplicate samples are run once daily.**

**NC = The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample.**

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

SDG Number: E23-05079
IAL Sample ID: E23-05079-03
Matrix: Air
Summa ID: 3830

Date Received: 11/20/23
Date Analyzed: 12/12/23,12/12/23
Lab Data File#: AA4929,AA4930
Dilution Factor: 1
Injection Volume: 500ml
GC/MS Column: RTX-1, 0.32 mmID

| Compound | CAS # | Sample E23-05079-03 Concentration Reported ppbv | Q | Sample Dup E23-05079-23 Concentration Reported ppbv | Q | Reporting Limits ppbv | RPD |
|---|---|---|---|---|---|---|---|
| Acetone | 67-64-1 | **6.1** | | **5.9** | | 0.40 | **3.33%** |
| Allyl Chloride | 107-05-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Benzene | 71-43-2 | **0.31** | | **0.32** | | 0.20 | **-3.17%** |
| Bromodichloromethane | 75-27-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Bromoform | 75-25-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Bromomethane | 74-83-9 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Butadiene | 106-99-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chlorobenzene | 108-90-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloroethane | 75-00-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloroform | 67-66-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloromethane | 74-87-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Carbon disulfide | 75-15-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Carbon tetrachloride | 56-23-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 2-Chlorotoluene | 95-49-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Cyclohexane | 110-82-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Dibromochloromethane | 124-48-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dibromoethane | 106-93-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorobenzene | 95-50-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Dichlorobenzene | 541-73-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,4-Dichlorobenzene | 106-46-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Dichlorodifluoromethane | 75-71-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1-Dichloroethane | 75-34-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethane | 107-06-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1-Dichloroethene | 75-35-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Ethylbenzene | 100-41-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 4-Ethyltoluene | 622-96-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| n-Heptane | 142-82-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| n-Hexane | 110-54-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Methylene chloride | 75-09-2 | **3.5** | | **3.4** | | 0.40 | **2.90%** |
| Methyl ethyl ketone | 78-93-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Methyl isobutyl ketone | 108-10-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

SDG Number: E23-05079
IAL Sample ID: E23-05079-03
Matrix: Air
Summa ID: 3830

Date Received: 11/20/23
Date Analyzed: 12/12/23,12/12/23
Lab Data File#: AA4929,AA4930
Dilution Factor: 1
Injection Volume: 500ml
GC/MS Column: RTX-1, 0.32 mmID

| Compound | CAS # | Sample E23-05079-03 Concentration Reported ppbv | Q | Sample Dup E23-05079-23 Concentration Reported ppbv | Q | Reporting Limits ppbv | RPD |
|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | 1634-04-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Styrene | 100-42-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Tert-butyl alcohol | 75-65-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Tetrachloroethene | 127-18-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Toluene | 108-88-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,1-Trichloroethane | 71-55-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2-Trichloroethane | 79-00-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Trichloroethene | 79-01-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Trichlorofluoromethane | 75-69-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Vinyl bromide | 593-60-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Vinyl chloride | 75-01-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Xylenes (m&p) | 179601-23-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Xylenes (o) | 95-47-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |

**RPD must be <25% for all laboratory duplicate samples. Laboratory duplicate samples are run once daily.**
**NC = The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample.**

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

## Initial Calibration Curve Internal Standard Area and Retention Time Summary

**Instrument:** AA **ICAL Date:** 8/15/2023

| | BROMOCHLOROMETHANE | | 1,4-DIFLUOROBENZENE | | D-5 CHLOROBENZENE | |
|---|---|---|---|---|---|---|
| | Area # | RT | Area # | RT | Area # | RT |
| AVERAGE OF CALIBRATION STANDARDS | 520465 | 4.395 | 2280663 | 5.455 | 2627605 | 8.318 |
| UPPER LIMIT | 728651 | 4.725 | 3192928 | 5.785 | 3678646 | 8.648 |
| LOWER LIMIT | 312279 | 4.065 | 1368398 | 5.125 | 1576563 | 7.988 |

| Lab ID | | BROMOCHLOROMETHANE | | | | 1,4-DIFLUOROBENZENE | | | | D-5 CHLOROBENZENE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Area # | % | RT | +/- | Area # | % | RT | +/- | Area # | % | RT | +/- |
| 40 PPBV STD | AA 3406 STD01 | 487271 | -6.38 | 4.406 | 0.01 | 2425798 | 6.36 | 5.457 | 0.00 | 2732166 | 3.98 | 8.319 | 0.00 |
| 20 PPBV STD | AA 3405 STD02 | 499473 | -4.03 | 4.399 | 0.00 | 2278768 | -0.08 | 5.457 | 0.00 | 2812211 | 7.03 | 8.319 | 0.00 |
| 10 PPBV STD | AA 3404 STD03 | 530723 | 1.97 | 4.396 | 0.00 | 2268530 | -0.53 | 5.457 | 0.00 | 2737620 | 4.19 | 8.319 | 0.00 |
| 2 PPBV STD | AA 3403 STD04 | 541075 | 3.96 | 4.393 | 0.00 | 2325427 | 1.96 | 5.454 | 0.00 | 2787489 | 6.08 | 8.319 | 0.00 |
| 0.2 PPBV STD | AA 3402 STD05 | 543782 | 4.48 | 4.380 | -0.01 | 2104790 | -7.71 | 5.448 | 0.01 | 2068537 | -21.28 | 8.316 | 0.00 |
| ICVSS | AA 3407 ICVSS | 614925 | 18.15 | 4.396 | 0.00 | 2660514 | 16.66 | 5.454 | 0.00 | 3151139 | 19.92 | 8.319 | 0.00 |

Difference of Internal Area must be within +/- 40%; Retention Times must be within +/- 0.33 minute.

* Values outsite QC limits.

# Internal Standard Area and Retention Time Summary

**Lab File ID (Standard):** AA4072DCVS **Date Analyzed:** 9/28/2023

**Instrument:** AA **ICAL Date:** 8/15/2023

| | | | BROMOCHLOROMETHANE | | | | 1,4-DIFLUOROBENZENE | | | | D-5 CHLOROBENZENE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Area # | | RT | | Area # | | RT | | Area # | | RT | |
| | CALIBRATION STANDARD | | 394533 | | 4.399 | | 1846241 | | 5.457 | | 1956014 | | 8.319 | |
| | UPPER LIMIT | | 552346 | | 4.73 | | 2584737 | | 5.79 | | 2738420 | | 8.65 | |
| | LOWER LIMIT | | 236720 | | 4.07 | | 1107745 | | 5.13 | | 1173608 | | 7.99 | |
| Lab ID | | DF | Area # | % | RT | +/- | Area # | % | RT | +/- | Area # | % | RT | +/- |
| Method Blank | AA4074BLK | 1.0 | 502187 | 27.29 | 4.393 | -0.01 | 2139413 | 15.88 | 5.454 | 0.00 | 2500606 | 27.84 | 8.319 | 0.00 |
| Reporting Limit Laboratory Control Standard | AA4075RLLCS | 1.0 | 400577 | 1.53 | 4.380 | -0.02 | 1566223 | -15.17 | 5.447 | -0.01 | 1477412 | -24.47 | 8.316 | 0.00 |
| 2164 | AA4076 | 1.0 | 481338 | 22.00 | 4.393 | -0.01 | 2110781 | 14.33 | 5.454 | 0.00 | 2516144 | 28.64 | 8.319 | 0.00 |
| 4870 | AA4077 | 1.0 | 360790 | -8.55 | 4.383 | -0.02 | 1388747 | -24.78 | 5.447 | -0.01 | 1279774 | -34.57 | 8.316 | 0.00 |
| 2160 | AA4078 | 1.0 | 361668 | -8.33 | 4.380 | -0.02 | 1313235 | -28.87 | 5.448 | -0.01 | 1248229 | -36.19 | 8.316 | 0.00 |
| Closing Calibration | AA4093CCCVS | 1.0 | 393835 | -0.18 | 4.399 | 0.00 | 1857833 | 0.63 | 5.457 | 0.00 | 2315299 | 18.37 | 8.319 | 0.00 |

Difference of Internal Area must be within +/- 40%; Retention Times must be within +/- 0.33 minute.
* Values outsite QC limits.

## Initial Calibration Curve Internal Standard Area and Retention Time Summary

**Instrument:** AA **ICAL Date:** 10/10/2023

| | | BROMOCHLOROMETHANE | | | | 1,4-DIFLUOROBENZENE | | | | D-5 CHLOROBENZENE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Area # | | RT | | Area # | | RT | | Area # | | RT | |
| AVERAGE OF CALIBRATION STANDARDS | | 343159 | | 4.390 | | 1499624 | | 5.451 | | 1637040 | | 8.316 | |
| UPPER LIMIT | | 480423 | | 4.720 | | 2099474 | | 5.781 | | 2291856 | | 8.646 | |
| LOWER LIMIT | | 205896 | | 4.060 | | 899774 | | 5.121 | | 982224 | | 7.986 | |
| Lab ID | | Area # | % | RT | +/- | Area # | % | RT | +/- | Area # | % | RT | +/- |
| 40 PPBV STD | AA 4136 STD01 | 356266 | 3.82 | 4.400 | 0.01 | 1769398 | 17.99 | 5.458 | -0.01 | 1970985 | 20.40 | 8.319 | 0.00 |
| 20 PPBV STD | AA 4135 STD02 | 363381 | 5.89 | 4.397 | 0.01 | 1661895 | 10.82 | 5.455 | 0.00 | 1933627 | 18.12 | 8.316 | 0.00 |
| 10 PPBV STD | AA 4134 STD03 | 393970 | 14.81 | 4.394 | 0.00 | 1695876 | 13.09 | 5.452 | 0.00 | 1964329 | 19.99 | 8.316 | 0.00 |
| 2 PPBV STD | AA 4133 STD04 | 266219 | -22.42 | 4.378 | -0.01 | 1004403 | -33.02 | 5.445 | 0.01 | 1028709 | -37.16 | 8.313 | 0.00 |
| 0.2 PPBV STD | AA 4132 STD05 | 335961 | -2.10 | 4.380 | -0.01 | 1366548 | -8.87 | 5.444 | 0.01 | 1287551 | -21.35 | 8.316 | 0.00 |
| ICVSS | AA 4137 ICVSS | 450439 | 31.26 | 4.394 | 0.00 | 1936760 | 29.15 | 5.451 | 0.00 | 2279414 | 39.24 | 8.316 | 0.00 |

Difference of Internal Area must be within +/- 40%; Retention Times must be within +/- 0.33 minute.

* Values outsite QC limits.

# Internal Standard Area and Retention Time Summary

**Lab File ID (Standard):** AA4882DCVS **Date Analyzed:** 12/8/2023

**Instrument:** AA **ICAL Date:** 10/10/2023

| | | | BROMOCHLOROMETHANE | | | | 1,4-DIFLUOROBENZENE | | | | D-5 CHLOROBENZENE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Area # | | RT | | Area # | | RT | | Area # | | RT | |
| | CALIBRATION STANDARD | | 497428 | | 4.390 | | 1995098 | | 5.451 | | 2342927 | | 8.315 | |
| | UPPER LIMIT | | 696399 | | 4.72 | | 2793137 | | 5.78 | | 3280098 | | 8.65 | |
| | LOWER LIMIT | | 298457 | | 4.06 | | 1197059 | | 5.12 | | 1405756 | | 7.99 | |
| Lab ID | | DF | Area # | % | RT | +/- | Area # | % | RT | +/- | Area # | % | RT | +/- |
| Method Blank | AA4884BLK | 1.0 | 407142 | -18.15 | 4.377 | -0.01 | 1506485 | -24.49 | 5.444 | -0.01 | 1527551 | -34.80 | 8.316 | 0.00 |
| E23-05080-01 | AA4893 | 1.0 | 384045 | -22.79 | 4.418 | 0.03 | 1903821 | -4.58 | 5.454 | 0.00 | 1757041 | -25.01 | 8.319 | 0.00 |
| E23-05080-02 | AA4894 | 1.0 | 439724 | -11.60 | 4.402 | 0.01 | 1996144 | 0.05 | 5.451 | 0.00 | 1814252 | -22.56 | 8.319 | 0.00 |

Difference of Internal Area must be within +/- 40%; Retention Times must be within +/- 0.33 minute.
* Values outsite QC limits.

# Internal Standard Area and Retention Time Summary

**Lab File ID (Standard):** AA4902DCVS **Date Analyzed:** 12/11/2023

**Instrument:** AA **ICAL Date:** 10/10/2023

| | | | BROMOCHLOROMETHANE | | | | 1,4-DIFLUOROBENZENE | | | | D-5 CHLOROBENZENE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Area # | | RT | | Area # | | RT | | Area # | | RT | |
| | CALIBRATION STANDARD | | 596109 | | 4.393 | | 2484518 | | 5.454 | | 2791354 | | 8.319 | |
| | UPPER LIMIT | | 834553 | | 4.72 | | 3478325 | | 5.78 | | 3907896 | | 8.65 | |
| | LOWER LIMIT | | 357665 | | 4.06 | | 1490711 | | 5.12 | | 1674812 | | 7.99 | |
| Lab ID | | DF | Area # | % | RT | +/- | Area # | % | RT | +/- | Area # | % | RT | +/- |
| Method Blank | AA4904BLK | 1.0 | 518939 | -12.95 | 4.377 | -0.02 | 1920464 | -22.70 | 5.444 | -0.01 | 1920350 | -31.20 | 8.315 | 0.00 |
| Reporting Limit Laboratory Control Standard | AA4905RLLCS | 1.0 | 566007 | -5.05 | 4.380 | -0.01 | 2290490 | -7.81 | 5.447 | -0.01 | 2210970 | -20.79 | 8.315 | 0.00 |
| 1458 | AA4906 | 1.0 | 809785 | 35.85 | 4.393 | 0.00 | 3431480 | 38.11 | 5.451 | 0.00 | 3836872 | 37.46 | 8.316 | 0.00 |
| 1588 | AA4907 | 1.0 | 706799 | 18.57 | 4.393 | 0.00 | 3079067 | 23.93 | 5.454 | 0.00 | 3708162 | 32.84 | 8.316 | 0.00 |
| 3012 | AA4908 | 1.0 | 589784 | -1.06 | 4.380 | -0.01 | 2099848 | -15.48 | 5.444 | -0.01 | 2006025 | -28.13 | 8.316 | 0.00 |
| E23-05080-01 | AA4911 | 10.0 | 486842 | -18.33 | 4.403 | 0.01 | 2600713 | 4.68 | 5.457 | 0.00 | 3169675 | 13.55 | 8.319 | 0.00 |
| E23-05080-02 | AA4912 | 10.0 | 599033 | 0.49 | 4.396 | 0.00 | 2878783 | 15.87 | 5.454 | 0.00 | 3437579 | 23.15 | 8.319 | 0.00 |
| Closing Calibration | AA4931CCCVS | 1.0 | 737975 | 23.80 | 4.393 | 0.00 | 3126526 | 25.84 | 5.454 | 0.00 | 3543265 | 26.94 | 8.316 | 0.00 |

Difference of Internal Area must be within +/- 40%; Retention Times must be within +/- 0.33 minute.
* Values outsite QC limits.

# Section VI: Sample Data Summary

**Certificate of Analysis**

**Summary of Results**

**Quantitation Reports, Chromatograms,
and Peak Integration Reports**

# CERTIFICATE OF ANALYSIS

**ANALYTICAL DATA PACKAGE FOR THE**
**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**
**ALBANY NEW YORK 12233**

**Integrated Analytical Laboratories, LLC** | **Randolph, NJ 07869**
**Project#: HK2661.2** | **NY ELAP Certification#: 11402**
**SDG #: E23-05080** | **NJDEP (Primary AB) Certification#: 14751**
**Date of first sample receipt: 11/20/2023** | **Date of last sample receipt: 11/20/2023**

*Client:* HK Engineering+Geology, D.P.C.
1600 US Route 22 East
Union, NJ 07083
*Attention:* Attention: Chris Hirschmann

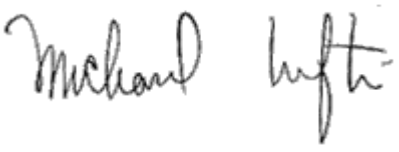
*Project/Site:* HK2661.2/NY

*Analysis conducted at:* Integrated Analytical Laboratories, LLC
273 Franklin Road
Randolph, NJ 07869
*Contact:* Michael H. Leftin, Ph.D.

*Sample(s):*
E23-05080-01
E23-05080-02

Samples for this analysis were received in good condition with a chain of custody.

All work recorded herein has been done in accordance with normal professional standards using accepted testing methodologies, quality assurance and quality control procedures except where otherwise agreed to by the client and testing company in writing. Once analysis has been performed on canisters that meets regulatory criteria, samples are recycled for future use, unless other provisions have been made by the client.



Michael H. Leftin, Ph.D.
Laboratory Director

Date: December 20, 2023

Volatile Organic Compounds by EPA Method TO-15
Summary of Results

| | | | |
|---|---|---|---|
| Lab ID: | E23-05080-01 | Instrument ID: | AA |
| Client ID: | SV2 | GC/MS Column: | RTX-1, 0.32 mmID |
| Date Sampled: | 11/16/2023 12:10 | Injection Volmue: | 500ml, 50ml |
| Date Received: | 11/20/2023 | Matrix: | Air-Other |
| Date Analyzed: | 12/08/2023 18:08, 12/11/2023 15:19 | % Moisture: | NA |
| Data File: | AA4893, AA4911 | Dilution Factor: | 1, 10 |
| Summa ID: | 3006 | Analyst: | J. Walukiewicz |

| | | | Concentration Reported | | Reporting Limits | |
|---|---|---|---|---|---|---|
| **Compound** | **CAS #** | **Q** | **ppbv** | **ug/m3** | **ppbv** | **ug/m3** |
| Acetone | 67-64-1 | | 17 | 41 | 0.20 | 0.48 |
| Benzene | 71-43-2 | | 3.1 | 10 | 0.20 | 0.64 |
| Bromodichloromethane | 75-27-4 | | ND | ND | 0.20 | 1.3 |
| Bromoform | 75-25-2 | | ND | ND | 0.20 | 2.1 |
| Bromomethane | 74-83-9 | | ND | ND | 0.20 | 0.78 |
| 1,3-Butadiene | 106-99-0 | | ND | ND | 0.20 | 0.44 |
| Chlorobenzene | 108-90-7 | | ND | ND | 0.20 | 0.92 |
| Chloroethane | 75-00-3 | | ND | ND | 0.20 | 0.53 |
| Chloroform | 67-66-3 | | 4.0 | 19 | 0.20 | 0.98 |
| Chloromethane | 74-87-3 | | ND | ND | 0.20 | 0.41 |
| Carbon disulfide | 75-15-0 | | 2.4 | 7.6 | 0.20 | 0.62 |
| Carbon tetrachloride | 56-23-5 | | ND | ND | 0.040 | 0.25 |
| Cyclohexane | 110-82-7 | | 1.5 | 5.2 | 0.20 | 0.69 |
| Dibromochloromethane | 124-48-1 | | ND | ND | 0.20 | 1.7 |
| 1,2-Dibromoethane | 106-93-4 | | ND | ND | 0.20 | 1.5 |
| 1,2-Dichlorobenzene | 95-50-1 | | ND | ND | 0.20 | 1.2 |
| 1,3-Dichlorobenzene | 541-73-1 | | ND | ND | 0.20 | 1.2 |
| 1,4-Dichlorobenzene | 106-46-7 | | ND | ND | 0.20 | 1.2 |
| Dichlorodifluoromethane | 75-71-8 | | ND | ND | 0.20 | 0.99 |
| 1,1-Dichloroethane | 75-34-3 | | ND | ND | 0.20 | 0.81 |
| 1,2-Dichloroethane | 107-06-2 | | ND | ND | 0.20 | 0.81 |
| 1,1-Dichloroethene | 75-35-4 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloroethene (cis) | 156-59-2 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloroethene (trans) | 156-60-5 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloropropane | 78-87-5 | | ND | ND | 0.20 | 0.92 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | | ND | ND | 0.20 | 0.91 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | | ND | ND | 0.20 | 0.91 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | | ND | ND | 0.20 | 1.4 |
| 1,4-Dioxane | 123-91-1 | | ND | ND | 0.20 | 0.72 |
| Ethylbenzene | 100-41-4 | | 28 | 120 | 0.20 | 0.87 |
| n-Heptane | 142-82-5 | | 2.2 | 8.8 | 0.20 | 0.82 |
| 1,3-Hexachlorobutadiene | 87-68-3 | | ND | ND | 0.20 | 2.1 |
| n-Hexane | 110-54-3 | | ND | ND | 0.20 | 0.70 |
| Methylene chloride | 75-09-2 | | 1.7 | 6.0 | 0.20 | 0.69 |
| Methyl ethyl ketone | 78-93-3 | | 1.6 | 4.6 | 0.20 | 0.59 |
| Methyl isobutyl ketone | 108-10-1 | | ND | ND | 0.20 | 0.82 |
| Methyl tert-butyl ether | 1634-04-4 | | ND | ND | 0.20 | 0.72 |
| Styrene | 100-42-5 | | 0.44 | 1.9 | 0.20 | 0.85 |
| Tert-butyl alcohol | 75-65-0 | | 3.7 | 11 | 0.20 | 0.61 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | ND | ND | 0.20 | 1.4 |
| Tetrachloroethene | 127-18-4 | | 15 | 100 | 0.20 | 1.4 |
| Toluene | 108-88-3 | | 3.2 | 12 | 0.20 | 0.75 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | ND | ND | 0.20 | 1.5 |
| 1,1,1-Trichloroethane | 71-55-6 | | ND | ND | 0.20 | 1.1 |
| 1,1,2-Trichloroethane | 79-00-5 | | ND | ND | 0.20 | 1.1 |

Qualifiers:
D = Dilution required

Volatile Organic Compounds by EPA Method TO-15
Summary of Results

| | | | |
|---|---|---|---|
| Lab ID: | E23-05080-01 | Instrument ID: | AA |
| Client ID: | SV2 | GC/MS Column: | RTX-1, 0.32 mmID |
| Date Sampled: | 11/16/2023 12:10 | Injection Volmue: | 500ml, 50ml |
| Date Received: | 11/20/2023 | Matrix: | Air-Other |
| Date Analyzed: | 12/08/2023 18:08, 12/11/2023 15:19 | % Moisture: | NA |
| Data File: | AA4893, AA4911 | Dilution Factor: | 1, 10 |
| Summa ID: | 3006 | Analyst: | J. Walukiewicz |

| | | | Concentration Reported | | Reporting Limits | |
|---|---|---|---|---|---|---|
| **Compound** | **CAS #** | **Q** | **ppbv** | **ug/m3** | **ppbv** | **ug/m3** |
| Trichloroethene | 79-01-6 | | ND | ND | 0.046 | 0.25 |
| Trichlorofluoromethane | 75-69-4 | | 0.32 | 1.8 | 0.20 | 1.1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | | ND | ND | 0.20 | 1.5 |
| 1,2,4-Trimethylbenzene | 95-63-6 | | 1.6 | 7.9 | 0.20 | 0.98 |
| 1,3,5-Trimethylbenzene | 108-67-8 | | 0.53 | 2.6 | 0.20 | 0.98 |
| 2,2,4-Trimethylpentane | 540-84-1 | | ND | ND | 0.20 | 0.93 |
| Vinyl bromide | 593-60-2 | | ND | ND | 0.20 | 0.87 |
| Vinyl chloride | 75-01-4 | | ND | ND | 0.20 | 0.51 |
| Xylenes (m&p) | 179601-23-1 | D | 150 | 630 | 2.0 | 8.7 |
| Xylenes (o) | 95-47-6 | | 21 | 93 | 0.20 | 0.87 |

Qualifiers:
D = Dilution required

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4893.D
Acq On : 8 Dec 2023 6:08 pm
Operator : jjw
Sample : E23-05080-01
Misc : 3006, 500cc
ALS Vial : 16 Sample Multiplier: 1

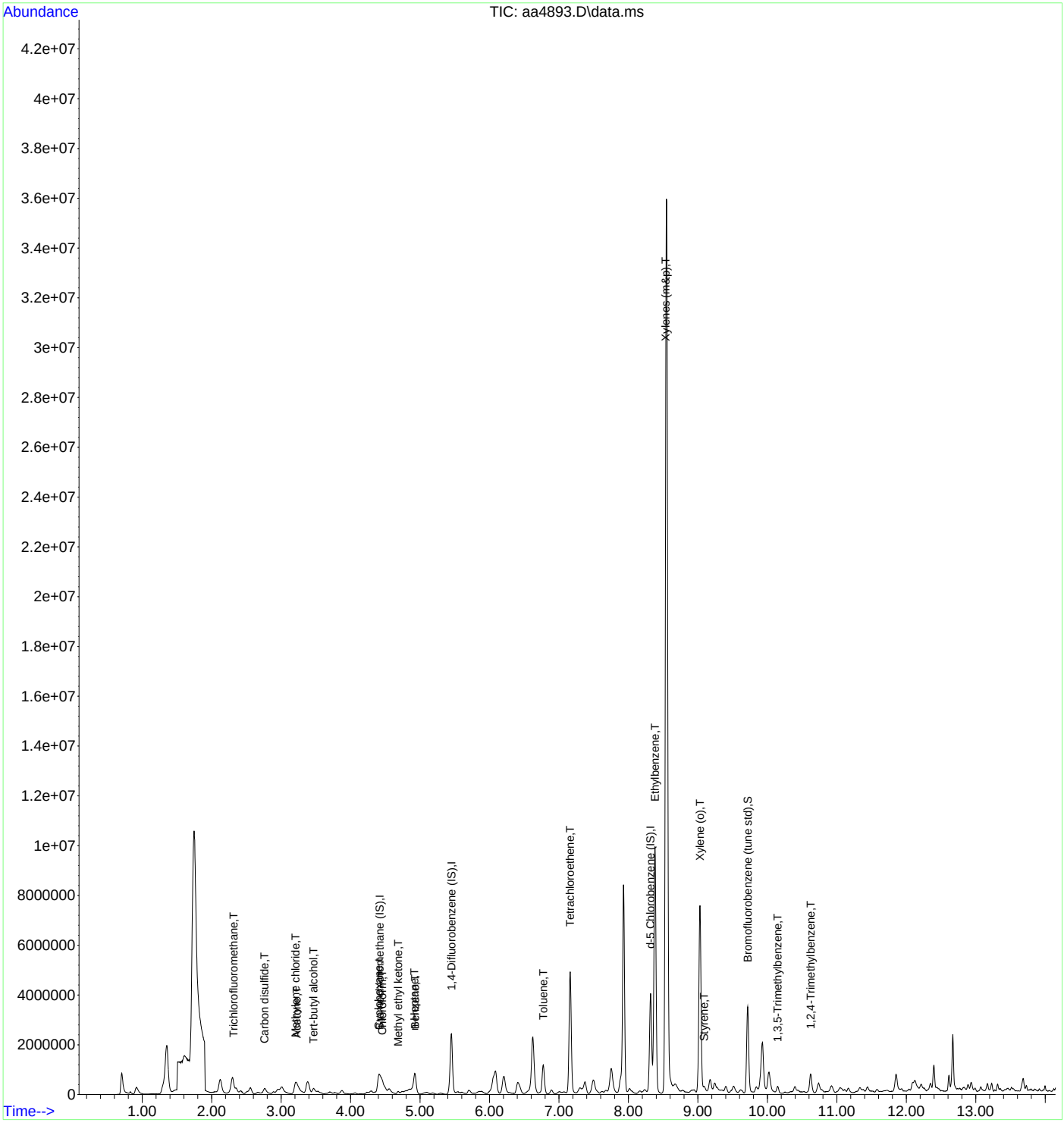
Quant Time: Dec 12 10:11:00 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

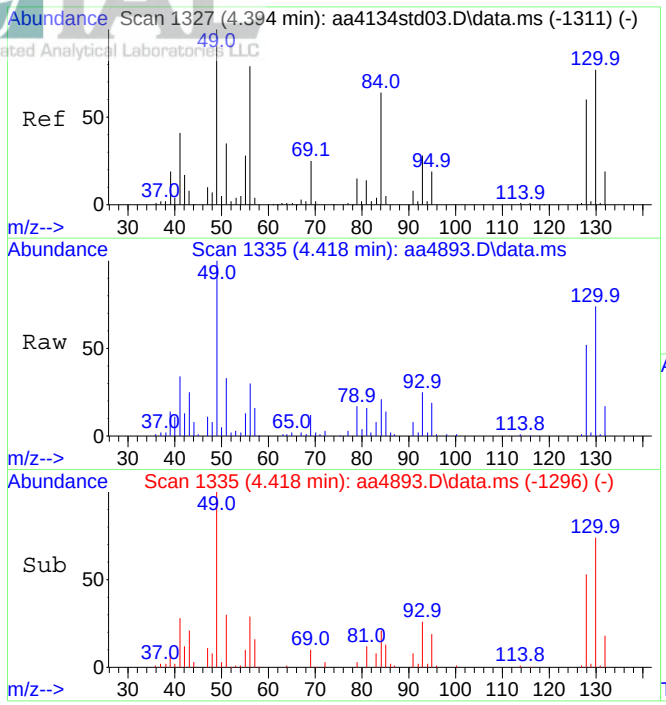
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.418 | 130 | 384045 | 10.00 | ppbV | | 0.024 |
| 39) 1,4-Difluorobenzene (IS) | 5.454 | 114 | 1903821 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 1757041 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 1475771 | 9.64 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 12) Trichlorofluoromethane | 2.316 | 101 | 34390 | 0.32 | ppbV | | 92 |
| 15) Carbon disulfide | 2.759 | 76 | 287100 | 2.44 | ppbV | | 96 |
| 20) Methylene chloride | 3.206 | 49 | 80864 | 1.71 | ppbV | | 87 |
| 21) Acetone | 3.226 | 43 | 995736 | 17.19 | ppbV | | 98 |
| 26) Tert-butyl alcohol | 3.467 | 59 | 373685 | 3.73 | ppbV | | 100 |
| 29) Cyclohexane | 4.406 | 56 | 127202 | 1.50 | ppbV | | 83 |
| 30) Chloroform | 4.457 | 83 | 408328 | 3.97 | ppbV | | 99 |
| 35) Methyl ethyl ketone | 4.685 | 43 | 146302 | 1.56 | ppbV | | 100 |
| 36) n-Heptane | 4.917 | 43 | 228215 | 2.15 | ppbV | | 94 |
| 37) Benzene | 4.930 | 78 | 477972 | 3.13 | ppbV | | 98 |
| 47) Toluene | 6.775 | 91 | 862462 | 3.22 | ppbV | | 99 |
| 49) Tetrachloroethene | 7.161 | 166 | 1721824 | 14.93 | ppbV | | 100 |
| 58) Ethylbenzene | 8.383 | 91 | 9105156 | 28.12 | ppbV | | 99 |
| 59) Xylenes (m&p) | 8.537 | 91 | 23373830 | 97.43 | ppbV | # | 85 |
| 60) Xylene (o) | 9.029 | 91 | 5623370 | 21.48 | ppbV | | 98 |
| 61) Styrene | 9.090 | 104 | 78016 | 0.44 | ppbV | | 92 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 160166 | 0.53 | ppbV | | 100 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 488434 | 1.61 | ppbV | | 98 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4893.D
Acq On : 8 Dec 2023 6:08 pm
Operator : jjw
Sample : E23-05080-01
Misc : 3006, 500cc
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Dec 12 10:11:00 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

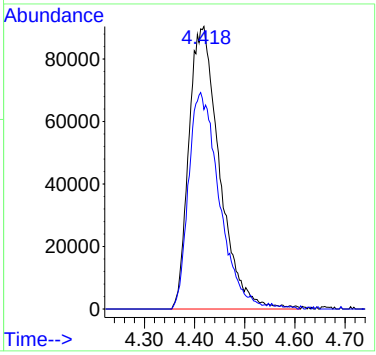


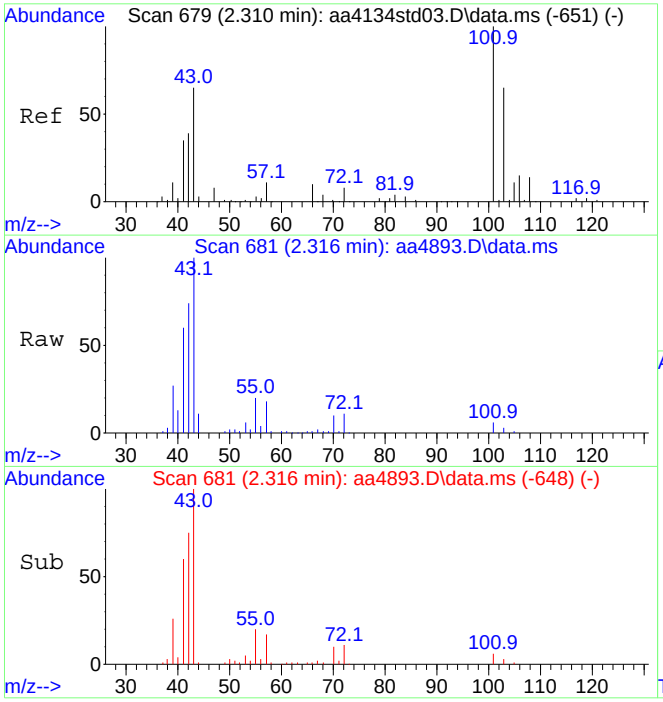



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.418 min Scan# 1335
Delta R.T. 0.024 min
Lab File: aa4893.D
Acq: 8 Dec 2023 6:08 pm

Tgt Ion:130 Resp: 384045

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 76.7 | 62.2 | 93.4 |

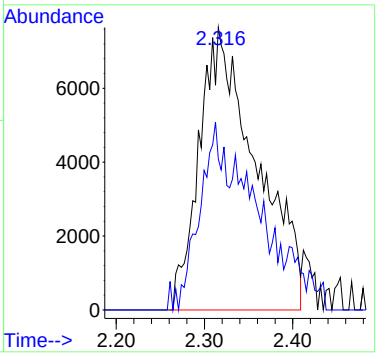


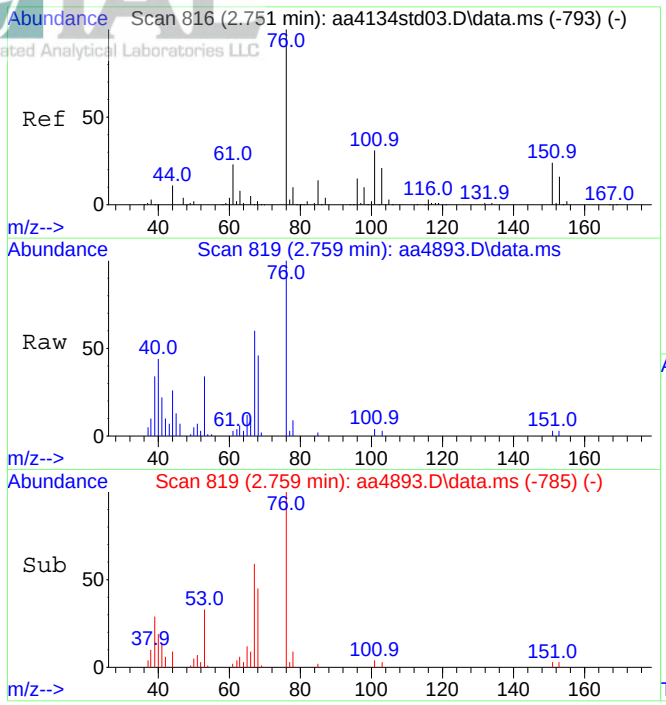




#12
Trichlorofluoromethane
Concen: 0.32 ppbV
RT: 2.316 min Scan# 681
Delta R.T. 0.005 min
Lab File: aa4893.D
Acq: 8 Dec 2023 6:08 pm

Tgt Ion:101 Resp: 34390

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 59.4 | 52.5 | 78.7 |

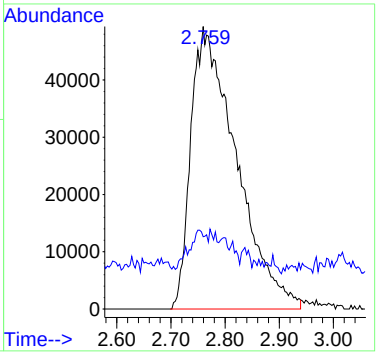


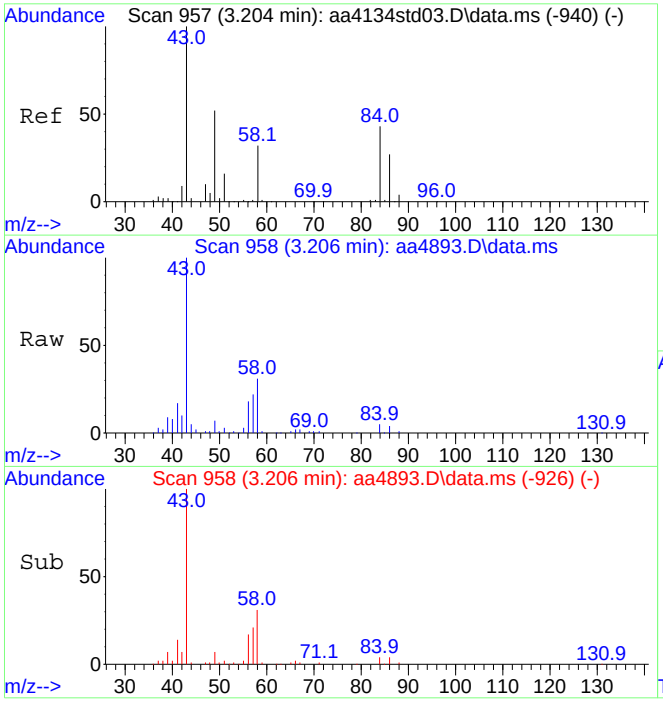



#15
Carbon disulfide
Concen: 2.44 ppbV
RT: 2.759 min Scan# 819
Delta R.T. 0.009 min
Lab File: aa4893.D
Acq: 8 Dec 2023 6:08 pm

Tgt Ion: 76 Resp: 287100

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 9.6 | 9.0 | 13.4 |

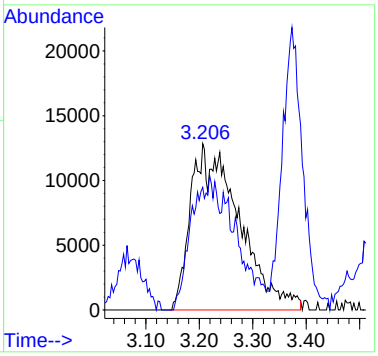


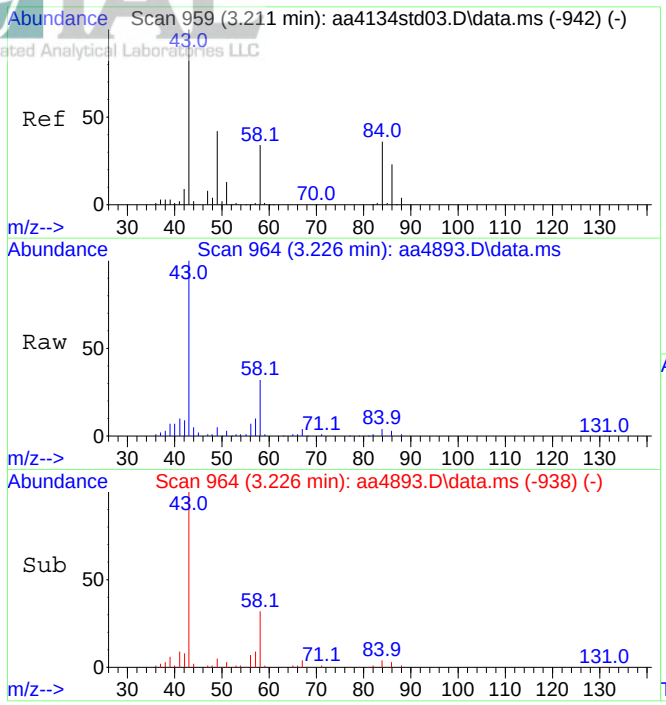




#20
Methylene chloride
Concen: 1.71 ppbV
RT: 3.206 min Scan# 958
Delta R.T. 0.002 min
Lab File: aa4893.D
Acq: 8 Dec 2023 6:08 pm

Tgt Ion: 49 Resp: 80864

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 73.3 | 64.8 | 104.8 |

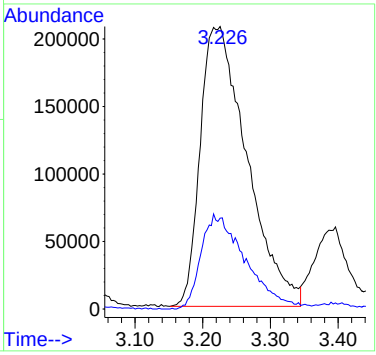


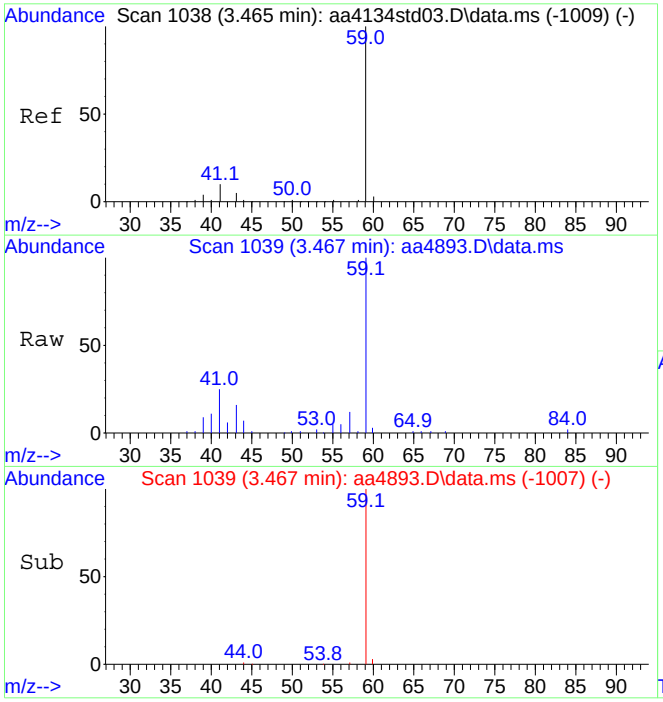



#21
Acetone
Concen: 17.19 ppbV
RT: 3.226 min Scan# 964
Delta R.T. 0.015 min
Lab File: aa4893.D
Acq: 8 Dec 2023 6:08 pm

Tgt Ion: 43 Resp: 995736

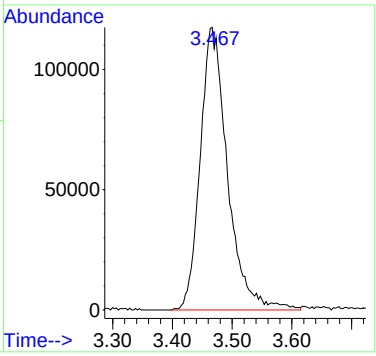
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 32.5 | 27.1 | 40.7 |

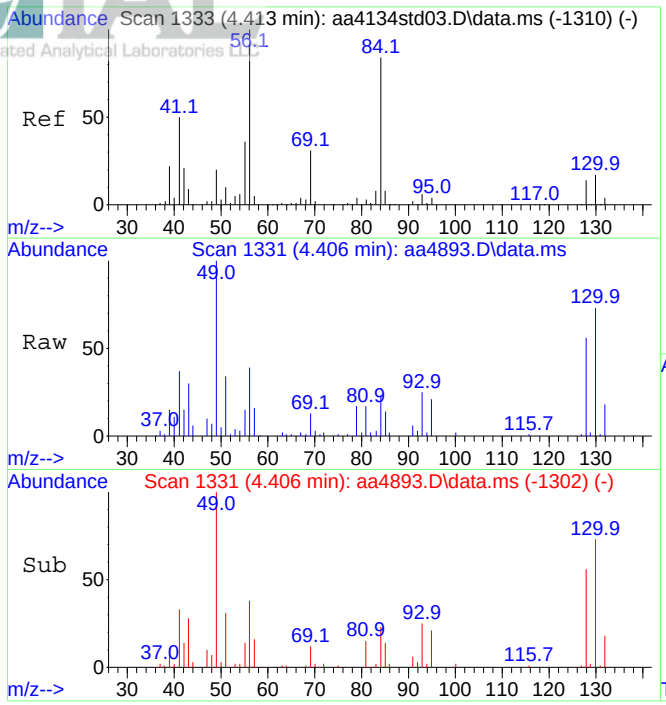



#26
Tert-butyl alcohol
Concen: 3.73 ppbV
RT: 3.467 min Scan# 1039
Delta R.T. 0.002 min
Lab File: aa4893.D
Acq: 8 Dec 2023 6:08 pm

Tgt Ion: 59 Resp: 373685

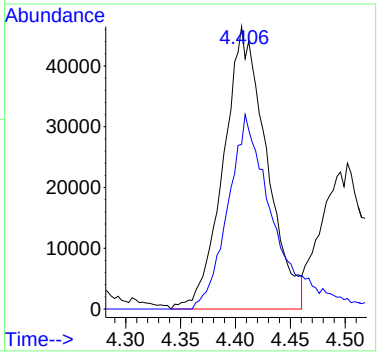


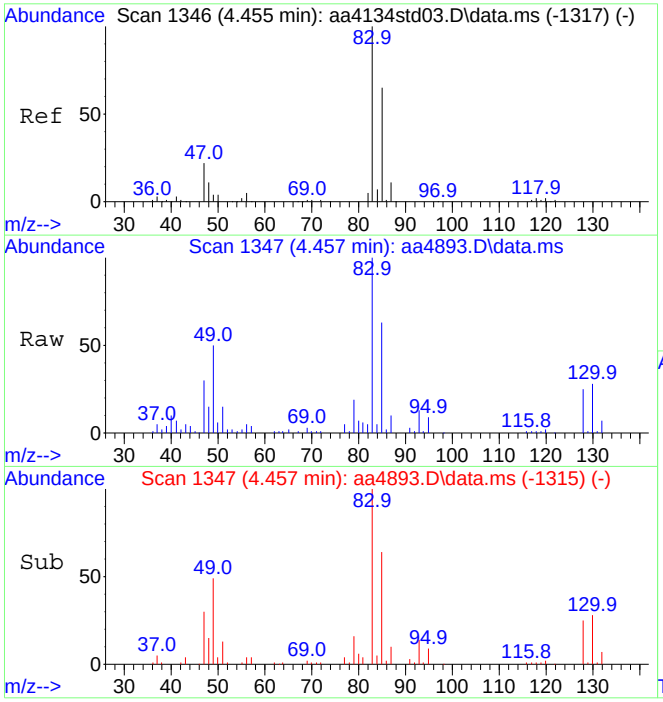



#29
Cyclohexane
Concen: 1.50 ppbV
RT: 4.406 min Scan# 1331
Delta R.T. -0.007 min
Lab File: aa4893.D
Acq: 8 Dec 2023 6:08 pm

Tgt Ion: 56 Resp: 127202

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 72.7 | 71.2 | 106.8 |

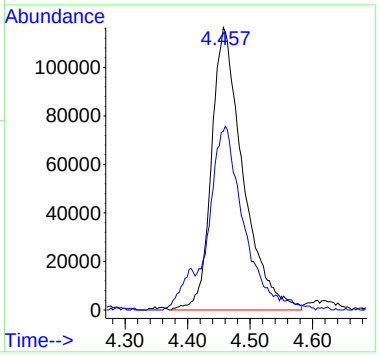


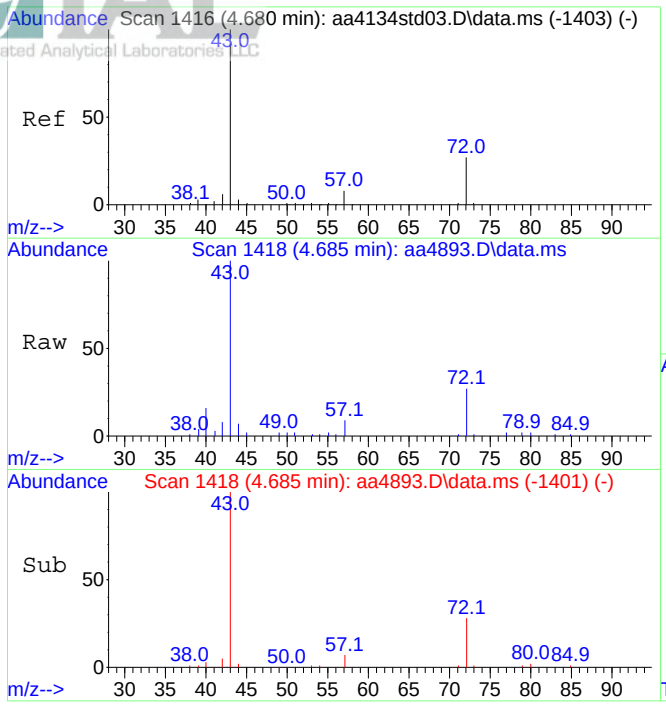




#30
Chloroform
Concen: 3.97 ppbV
RT: 4.457 min Scan# 1347
Delta R.T. 0.002 min
Lab File: aa4893.D
Acq: 8 Dec 2023 6:08 pm

Tgt Ion: 83 Resp: 408328

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 66.6 | 53.9 | 80.9 |

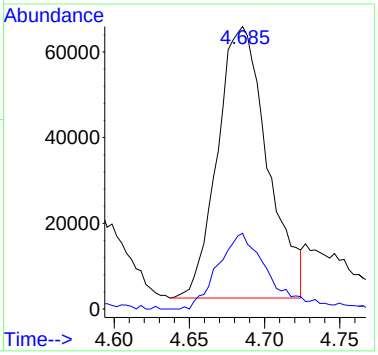


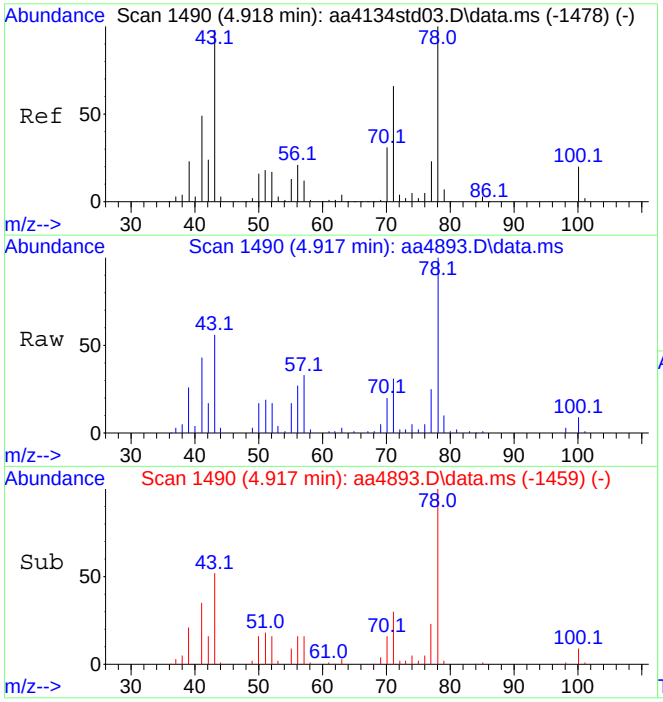



#35
Methyl ethyl ketone
Concen: 1.56 ppbV
RT: 4.685 min Scan# 1418
Delta R.T. 0.005 min
Lab File: aa4893.D
Acq: 8 Dec 2023 6:08 pm

Tgt Ion: 43 Resp: 146302

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 26.9 | 21.6 | 32.4 |

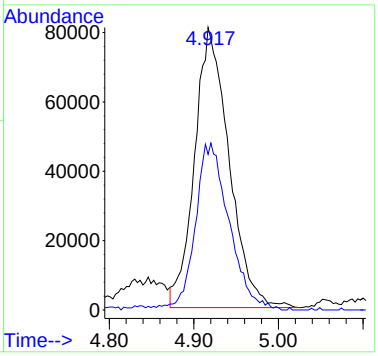


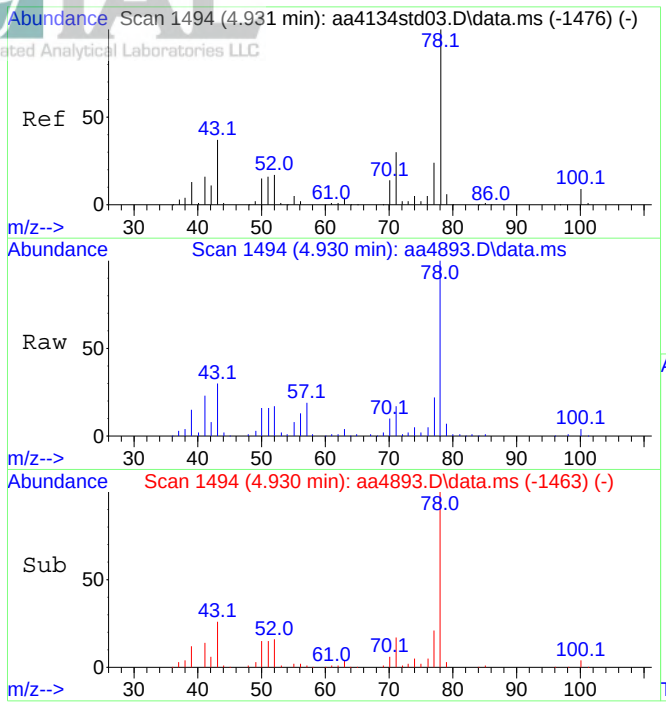




#36
n-Heptane
Concen: 2.15 ppbV
RT: 4.917 min Scan# 1490
Delta R.T. -0.001 min
Lab File: aa4893.D
Acq: 8 Dec 2023 6:08 pm

Tgt Ion: 43 Resp: 228215

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 71 | 58.3 | 50.5 | 75.7 |

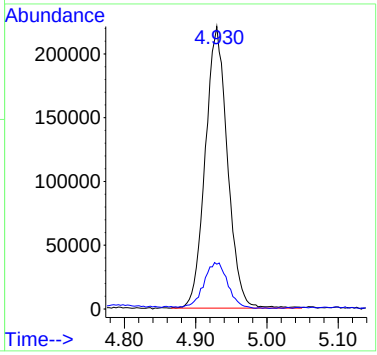


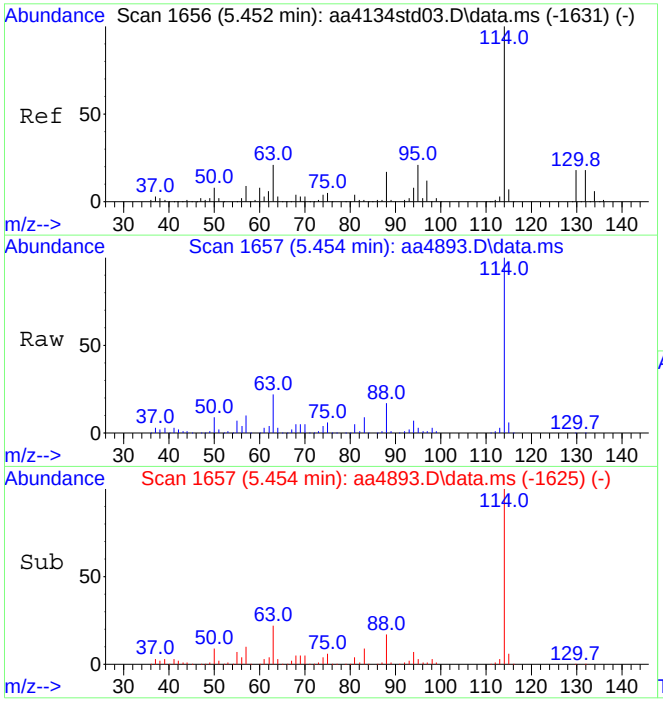



#37
Benzene
Concen: 3.13 ppbV
RT: 4.930 min Scan# 1494
Delta R.T. -0.001 min
Lab File: aa4893.D
Acq: 8 Dec 2023 6:08 pm

Tgt Ion: 78 Resp: 477972

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 17.6 | 13.4 | 20.0 |

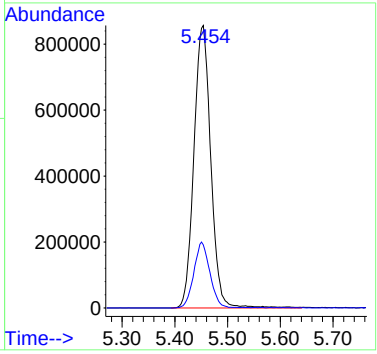


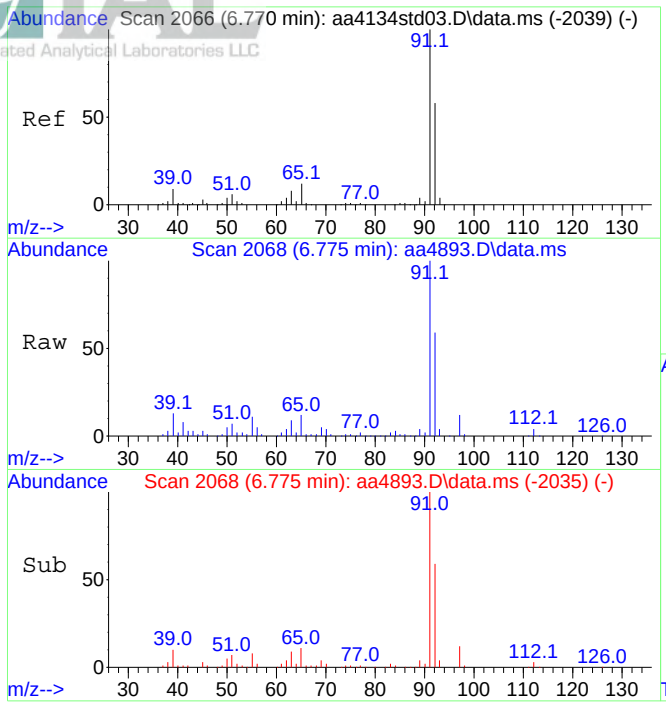




#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.454 min Scan# 1657
Delta R.T. 0.002 min
Lab File: aa4893.D
Acq: 8 Dec 2023 6:08 pm

Tgt Ion:114 Resp: 1903821

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.4 | 17.0 | 25.6 |

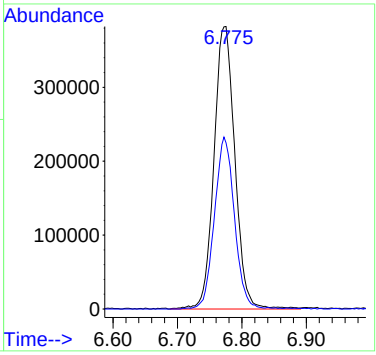


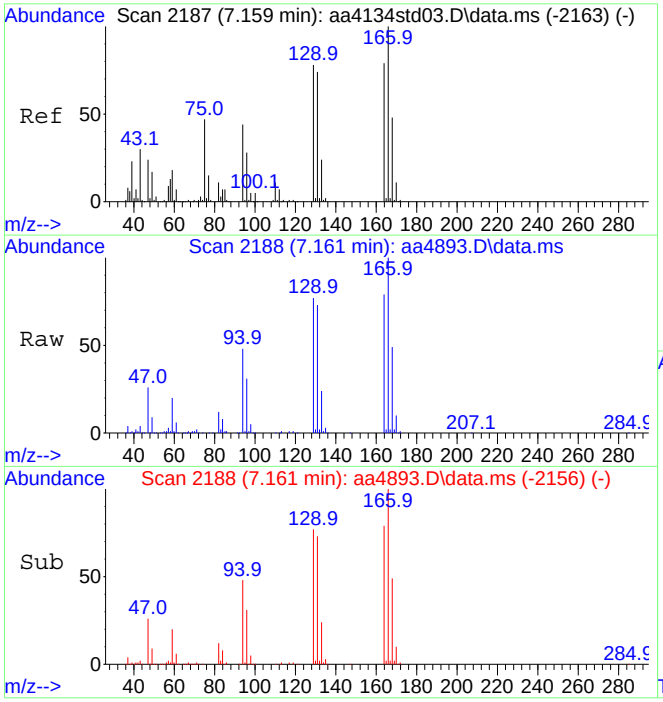



#47
Toluene
Concen: 3.22 ppbV
RT: 6.775 min Scan# 2068
Delta R.T. 0.005 min
Lab File: aa4893.D
Acq: 8 Dec 2023 6:08 pm

Tgt Ion: 91 Resp: 862462

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 58.0 | 47.3 | 70.9 |

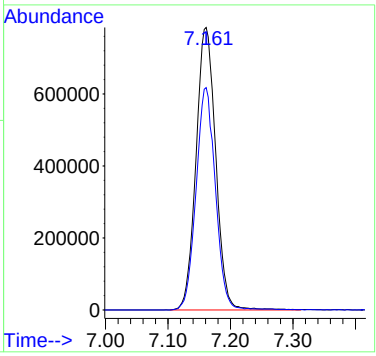


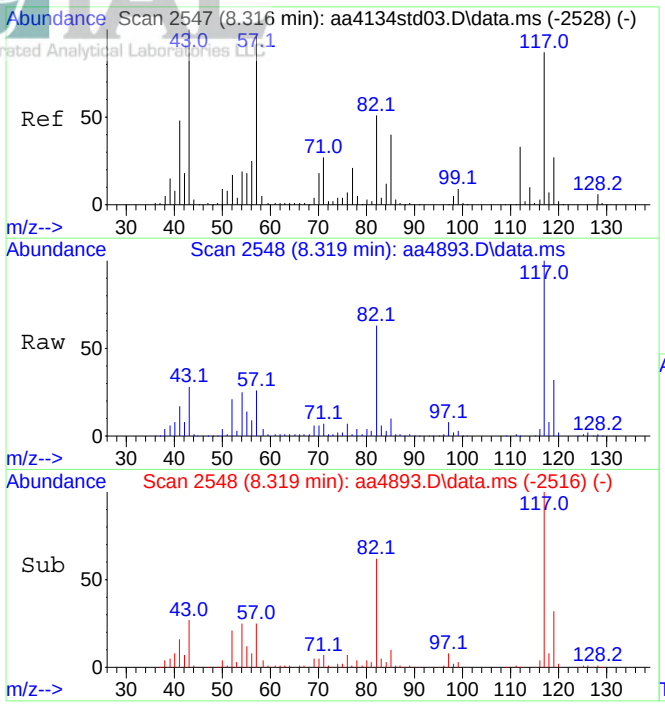




#49
Tetrachloroethene
Concen: 14.93 ppbV
RT: 7.161 min Scan# 2188
Delta R.T. 0.002 min
Lab File: aa4893.D
Acq: 8 Dec 2023 6:08 pm

Tgt Ion:166 Resp: 1721824

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 77.5 | 62.3 | 93.5 |

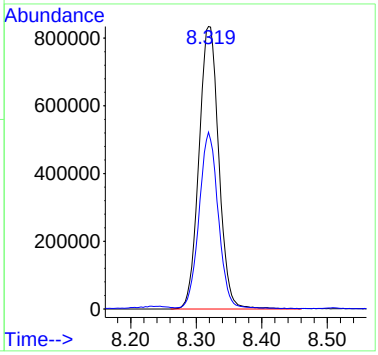


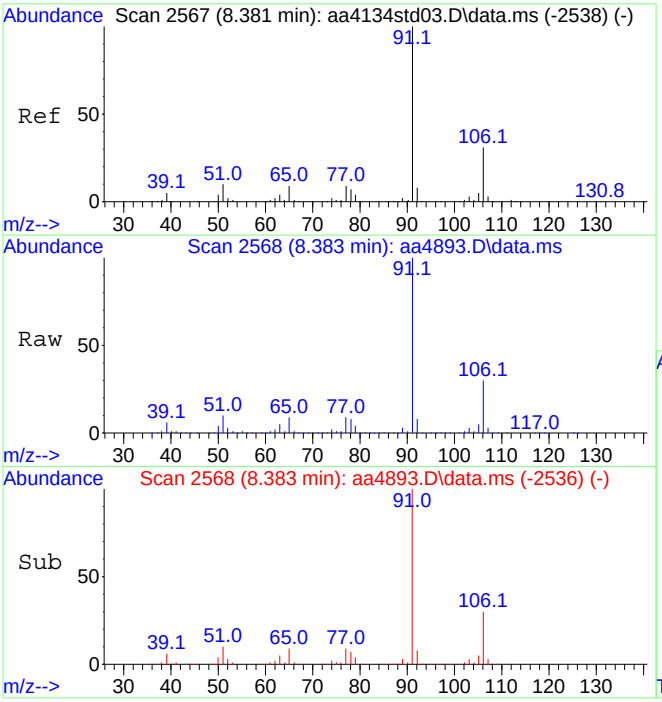



#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.319 min Scan# 2548
Delta R.T. 0.002 min
Lab File: aa4893.D
Acq: 8 Dec 2023 6:08 pm

Tgt Ion:117 Resp: 1757041

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 60.1 | 47.0 | 70.4 |

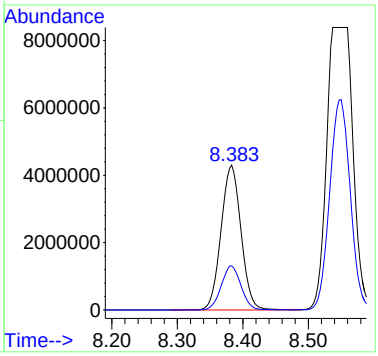


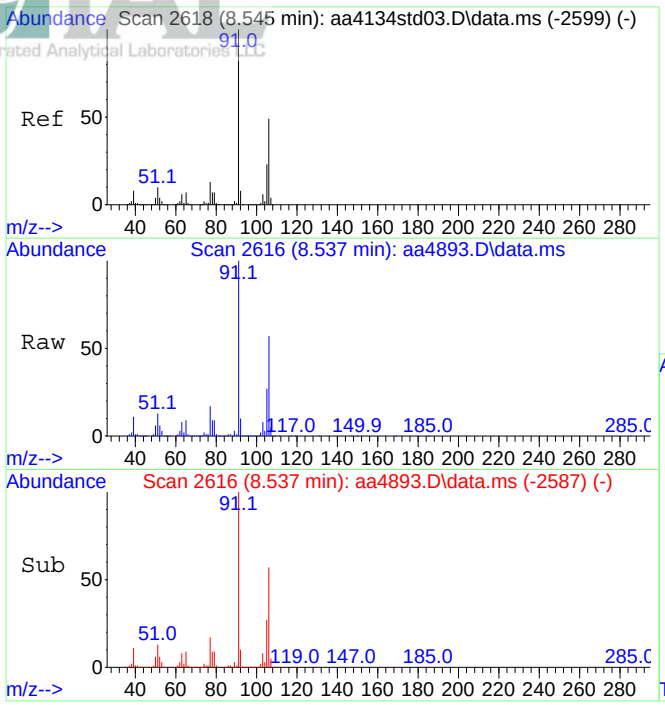




#58
Ethylbenzene
Concen: 28.12 ppbV
RT: 8.383 min Scan# 2568
Delta R.T. 0.002 min
Lab File: aa4893.D
Acq: 8 Dec 2023 6:08 pm

Tgt Ion: 91 Resp: 9105156

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 30.2 | 24.6 | 36.8 |

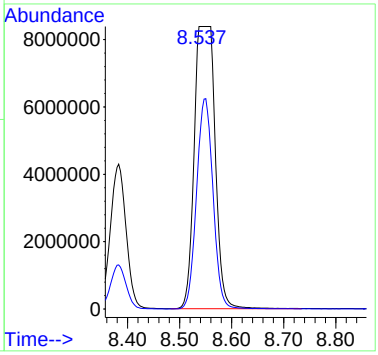


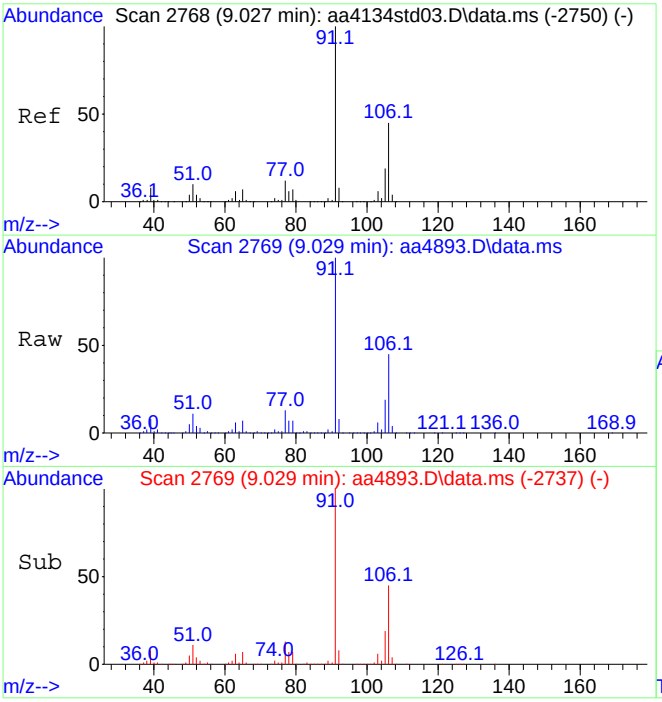



#59
Xylenes (m&p)
Concen: 97.43 ppbV
RT: 8.537 min Scan# 2616
Delta R.T. -0.007 min
Lab File: aa4893.D
Acq: 8 Dec 2023 6:08 pm

Tgt Ion: 91 Resp:23373830

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 58.7 | 39.0 | 58.4# |

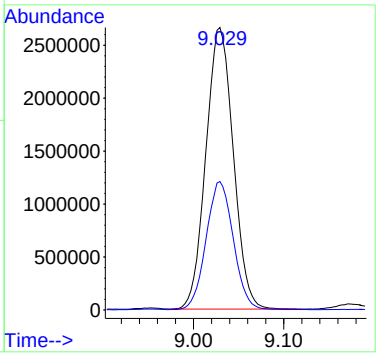


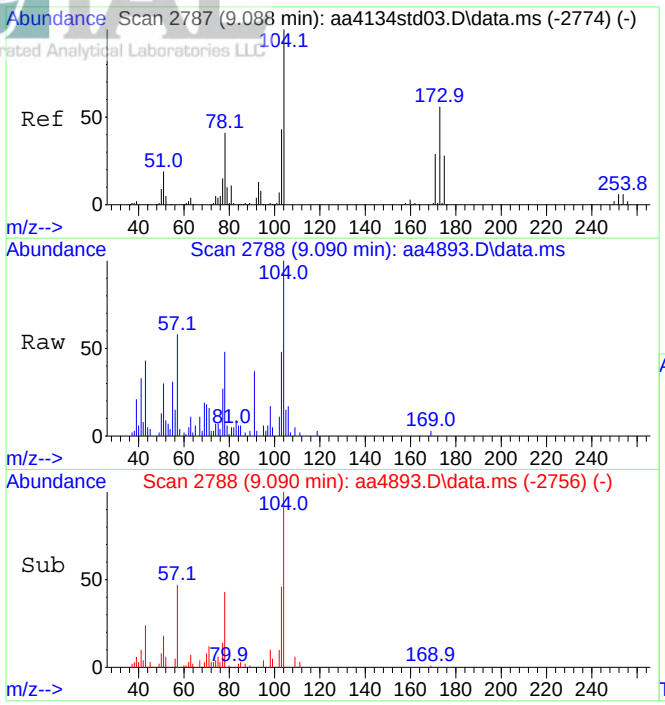




#60
Xylene (o)
Concen: 21.48 ppbV
RT: 9.029 min Scan# 2769
Delta R.T. 0.002 min
Lab File: aa4893.D
Acq: 8 Dec 2023 6:08 pm

Tgt Ion: 91 Resp: 5623370

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 45.0 | 36.8 | 55.2 |

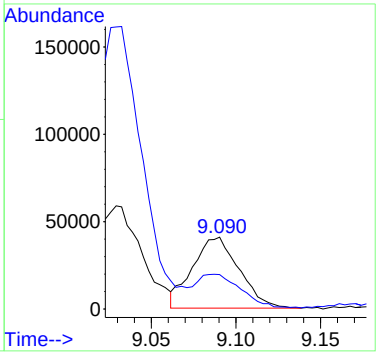


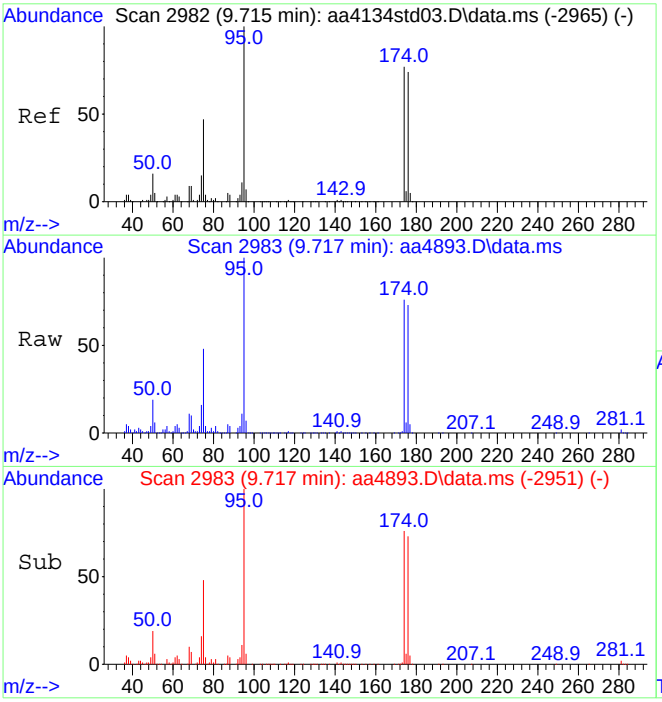



#61
Styrene
Concen: 0.44 ppbV
RT: 9.090 min Scan# 2788
Delta R.T. 0.002 min
Lab File: aa4893.D
Acq: 8 Dec 2023 6:08 pm

Tgt Ion:104 Resp: 78016

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 104 | 100 | | |
| 103 | 42.1 | 37.8 | 56.6 |

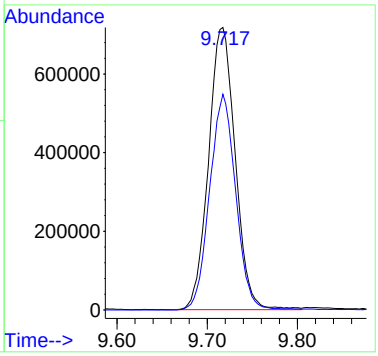


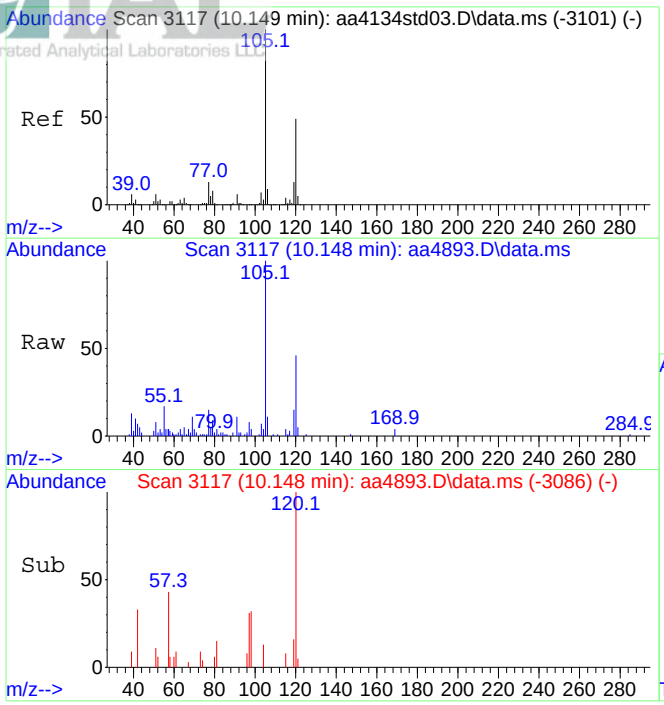




#64
Bromofluorobenzene (tune std)
Concen: 9.64 ppbV
RT: 9.717 min Scan# 2983
Delta R.T. 0.002 min
Lab File: aa4893.D
Acq: 8 Dec 2023 6:08 pm

Tgt Ion: 95 Resp: 1475771

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 74.9 | 61.1 | 91.7 |

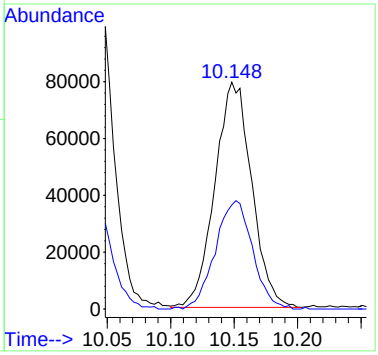


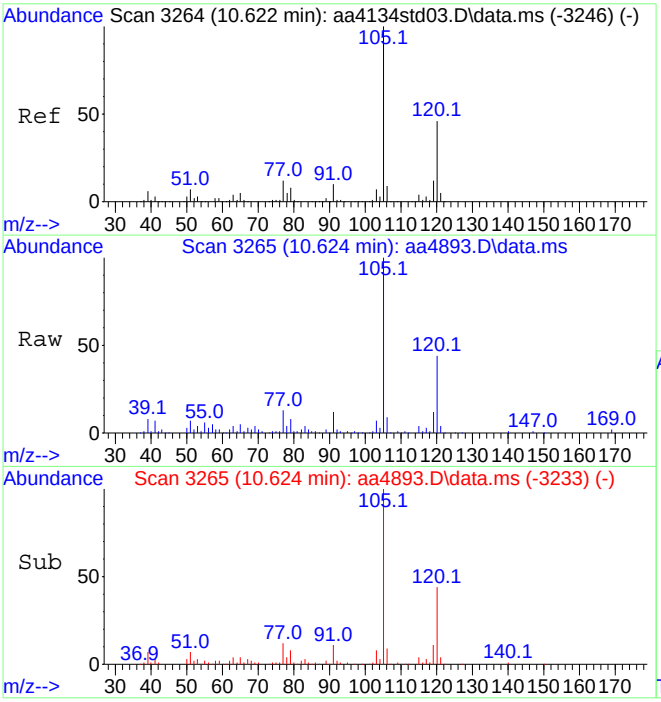



#69
1,3,5-Trimethylbenzene
Concen: 0.53 ppbV
RT: 10.148 min Scan# 3117
Delta R.T. -0.001 min
Lab File: aa4893.D
Acq: 8 Dec 2023 6:08 pm

Tgt Ion:105 Resp: 160166

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 48.6 | 38.9 | 58.3 |

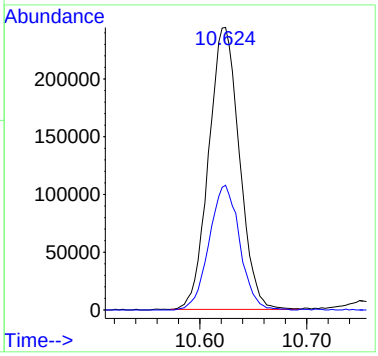



#70
1,2,4-Trimethylbenzene
Concen: 1.61 ppbV
RT: 10.624 min Scan# 3265
Delta R.T. 0.002 min
Lab File: aa4893.D
Acq: 8 Dec 2023 6:08 pm

Tgt Ion:105 Resp: 488434

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 44.0 | 36.3 | 54.5 |



Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4911.D
Acq On : 11 Dec 2023 3:19 pm
Operator : jjw
Sample : E23-05080-01x10 dil
Misc : 3006, 50cc
ALS Vial : 14 Sample Multiplier: 1

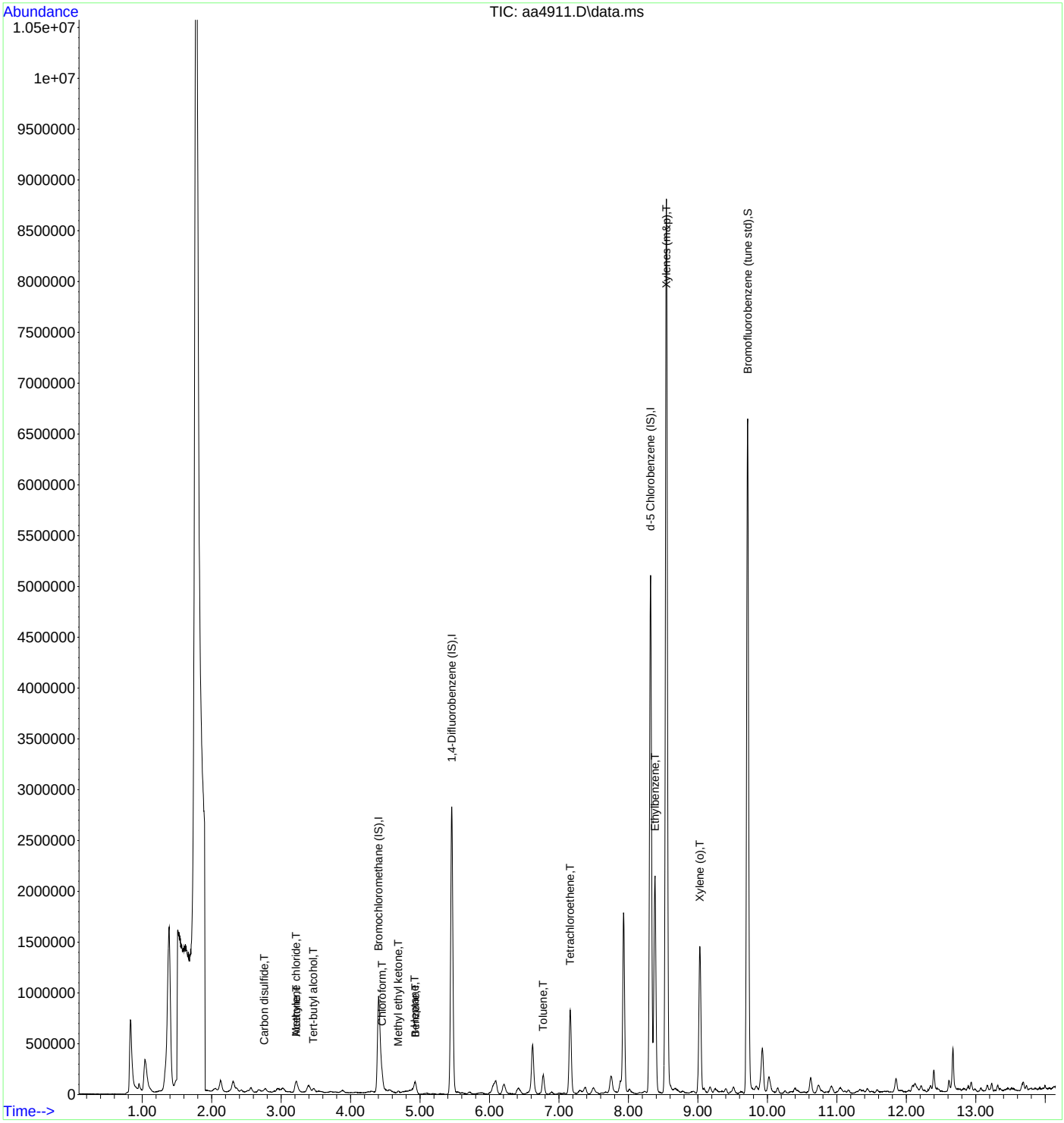
Quant Time: Dec 12 10:25:59 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

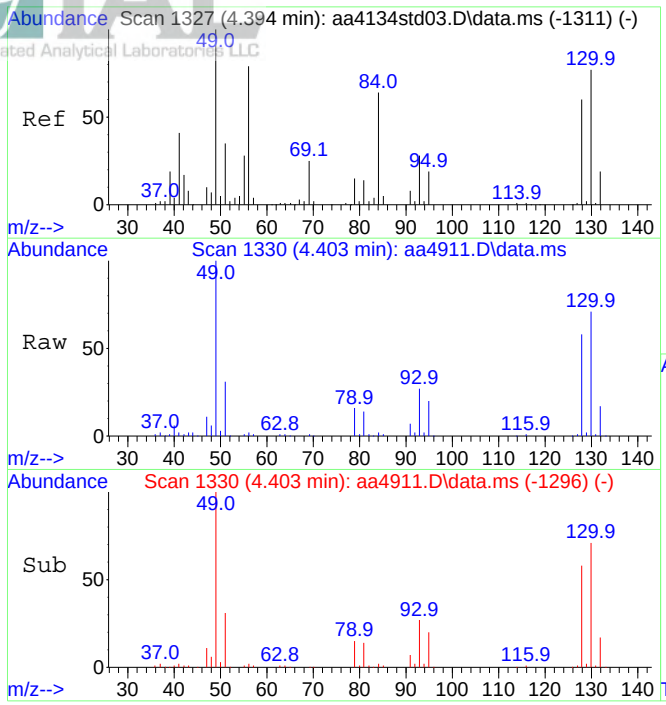
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.403 | 130 | 486842 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 2600713 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 3169675 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 2897244 | 10.49 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 15) Carbon disulfide | 2.756 | 76 | 38469 | 0.26 | ppbV | 95 |
| 20) Methylene chloride | 3.216 | 49 | 22901 | 0.38 | ppbV | 97 |
| 21) Acetone | 3.219 | 43 | 148140 | 2.02 | ppbV | 93 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 55019 | 0.43 | ppbV | 100 |
| 30) Chloroform | 4.454 | 83 | 63251 | 0.49 | ppbV | 93 |
| 35) Methyl ethyl ketone | 4.685 | 43 | 28317 | 0.24 | ppbV | 94 |
| 36) n-Heptane | 4.923 | 43 | 35701 | 0.27 | ppbV | 89 |
| 37) Benzene | 4.933 | 78 | 68079 | 0.35 | ppbV | 95 |
| 47) Toluene | 6.769 | 91 | 142316 | 0.39 | ppbV | 97 |
| 49) Tetrachloroethene | 7.161 | 166 | 288346 | 1.83 | ppbV | 99 |
| 58) Ethylbenzene | 8.383 | 91 | 1873959 | 3.21 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.547 | 91 | 6295935 | 14.55 | ppbV | 98 |
| 60) Xylene (o) | 9.026 | 91 | 1069376 | 2.26 | ppbV | 97 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4911.D
Acq On : 11 Dec 2023 3:19 pm
Operator : jjw
Sample : E23-05080-01x10 dil
Misc : 3006, 50cc
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Dec 12 10:25:59 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

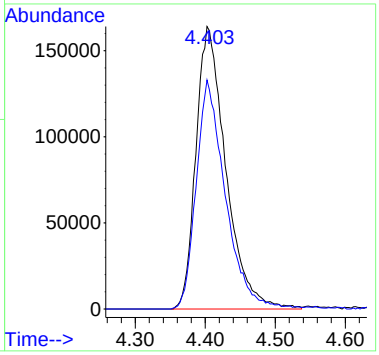


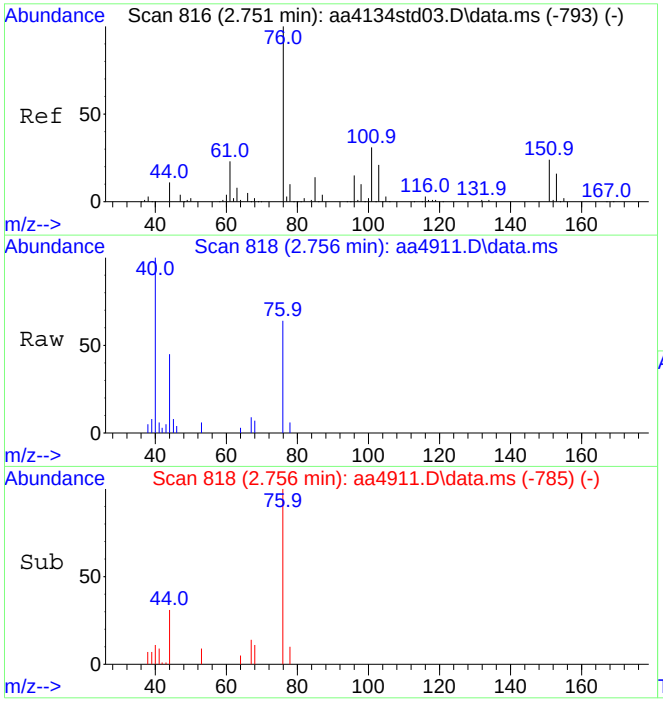



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.403 min Scan# 1330
Delta R.T. 0.009 min
Lab File: aa4911.D
Acq: 11 Dec 2023 3:19 pm

Tgt Ion:130 Resp: 486842

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 79.0 | 62.2 | 93.4 |

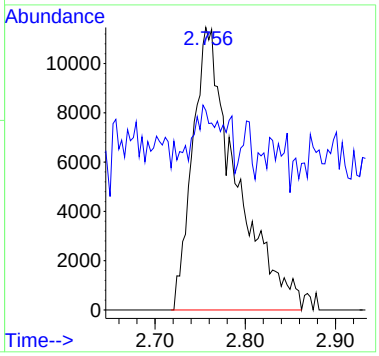


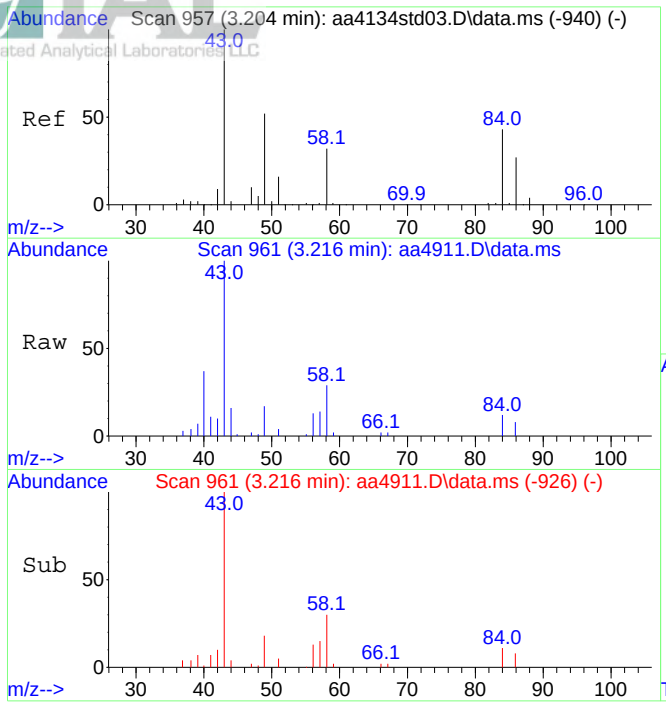




#15
Carbon disulfide
Concen: 0.26 ppbV
RT: 2.756 min Scan# 818
Delta R.T. 0.006 min
Lab File: aa4911.D
Acq: 11 Dec 2023 3:19 pm

Tgt Ion: 76 Resp: 38469

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 13.1 | 9.0 | 13.4 |

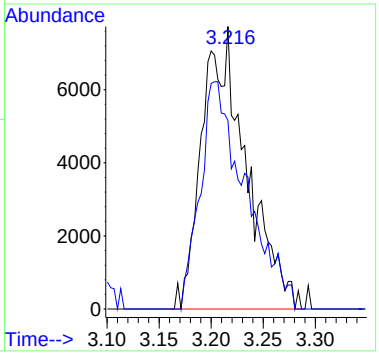


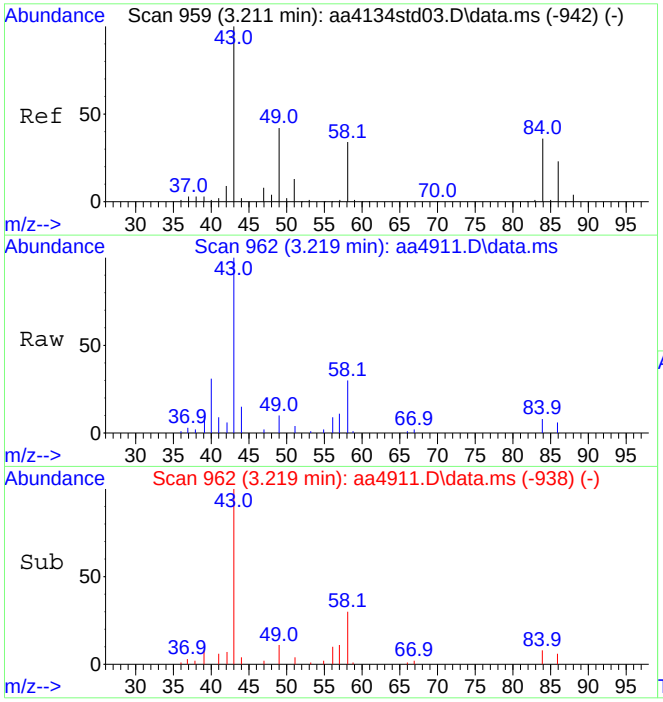



#20
Methylene chloride
Concen: 0.38 ppbV
RT: 3.216 min Scan# 961
Delta R.T. 0.012 min
Lab File: aa4911.D
Acq: 11 Dec 2023 3:19 pm

Tgt Ion: 49 Resp: 22901

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 82.4 | 64.8 | 104.8 |

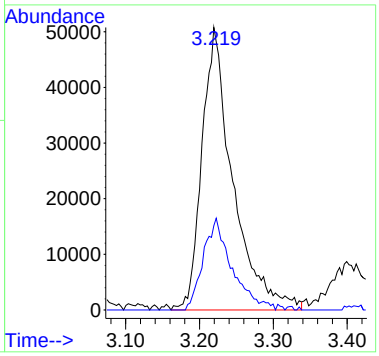


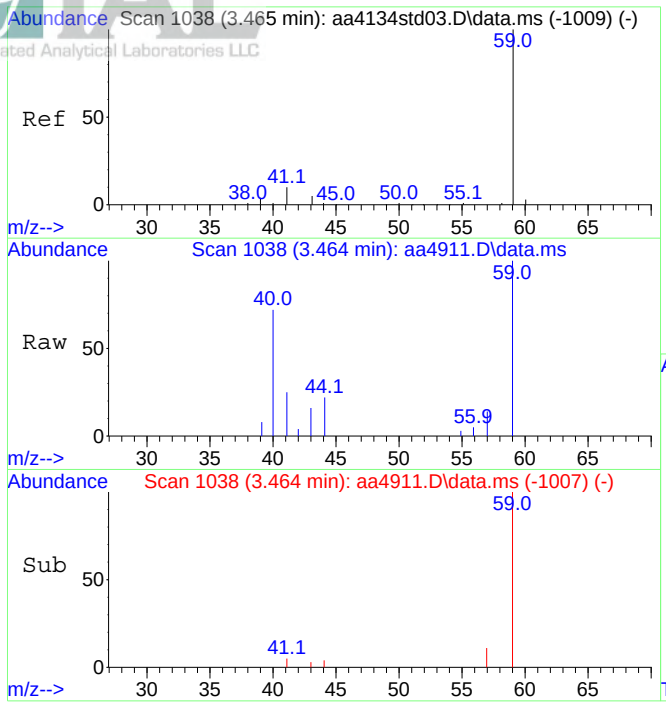




#21
Acetone
Concen: 2.02 ppbV
RT: 3.219 min Scan# 962
Delta R.T. 0.008 min
Lab File: aa4911.D
Acq: 11 Dec 2023 3:19 pm

Tgt Ion: 43 Resp: 148140

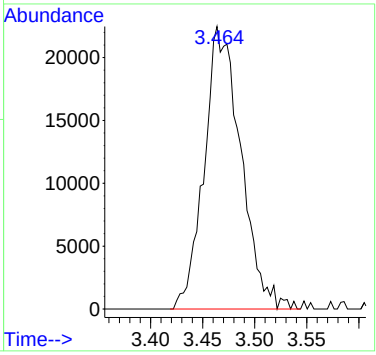
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 30.1 | 27.1 | 40.7 |

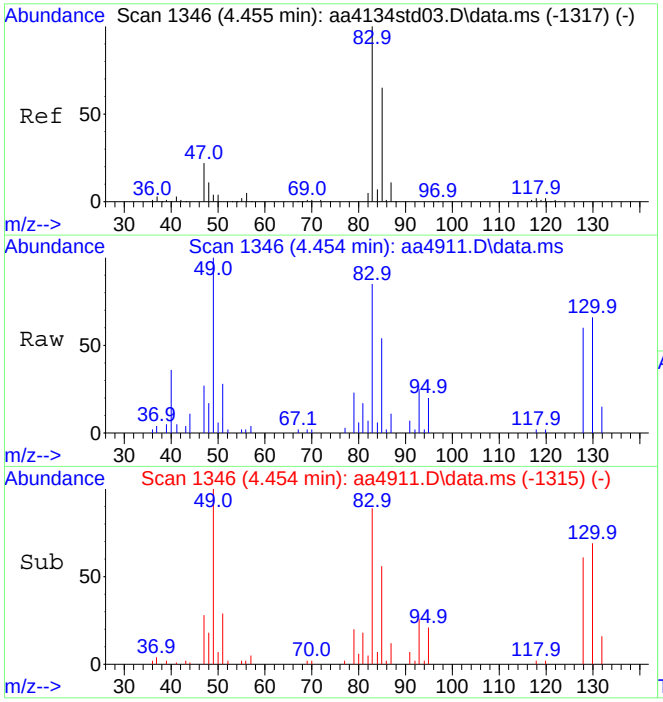





#26
Tert-butyl alcohol
Concen: 0.43 ppbV
RT: 3.464 min Scan# 1038
Delta R.T. -0.001 min
Lab File: aa4911.D
Acq: 11 Dec 2023 3:19 pm

Tgt Ion: 59 Resp: 55019

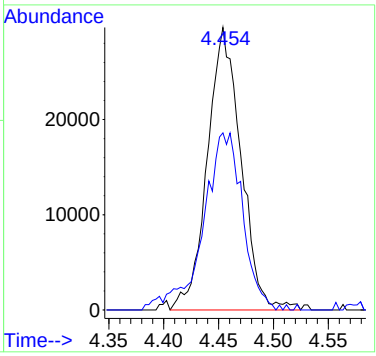


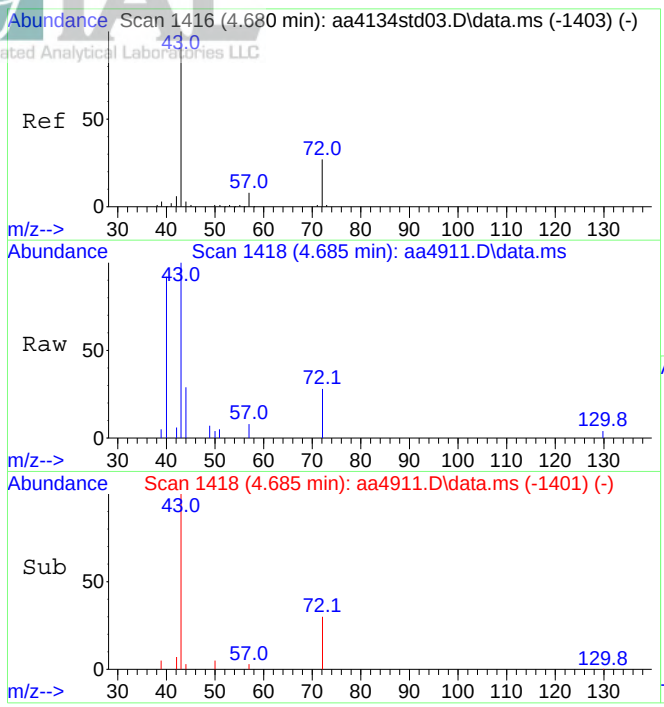




#30
Chloroform
Concen: 0.49 ppbV
RT: 4.454 min Scan# 1346
Delta R.T. -0.001 min
Lab File: aa4911.D
Acq: 11 Dec 2023 3:19 pm

Tgt Ion: 83 Resp: 63251

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 73.3 | 53.9 | 80.9 |

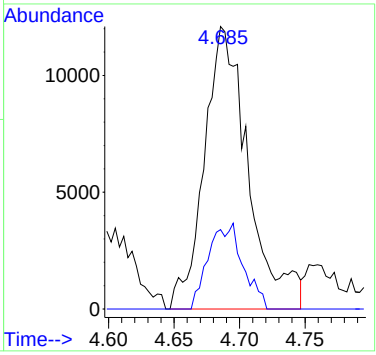


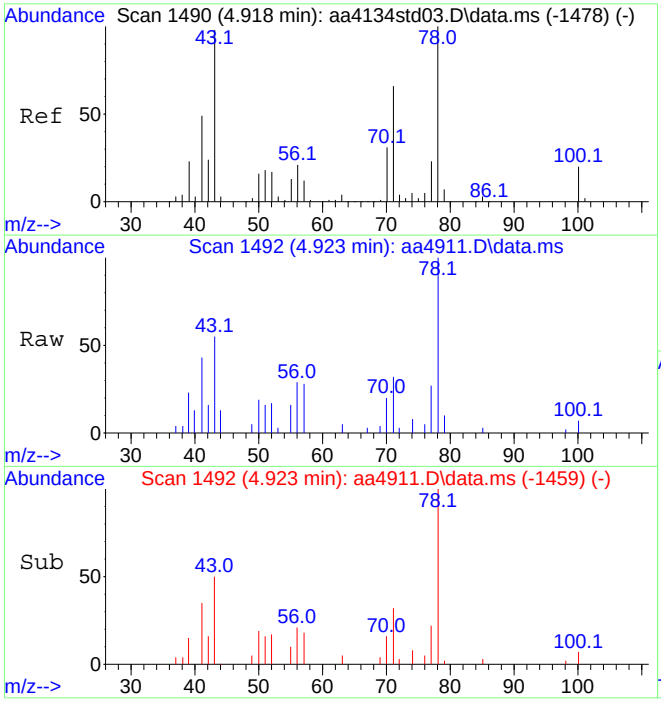



#35
Methyl ethyl ketone
Concen: 0.24 ppbV
RT: 4.685 min Scan# 1418
Delta R.T. 0.006 min
Lab File: aa4911.D
Acq: 11 Dec 2023 3:19 pm

Tgt Ion: 43 Resp: 28317

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 23.7 | 21.6 | 32.4 |

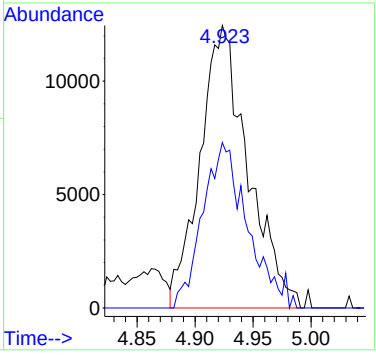


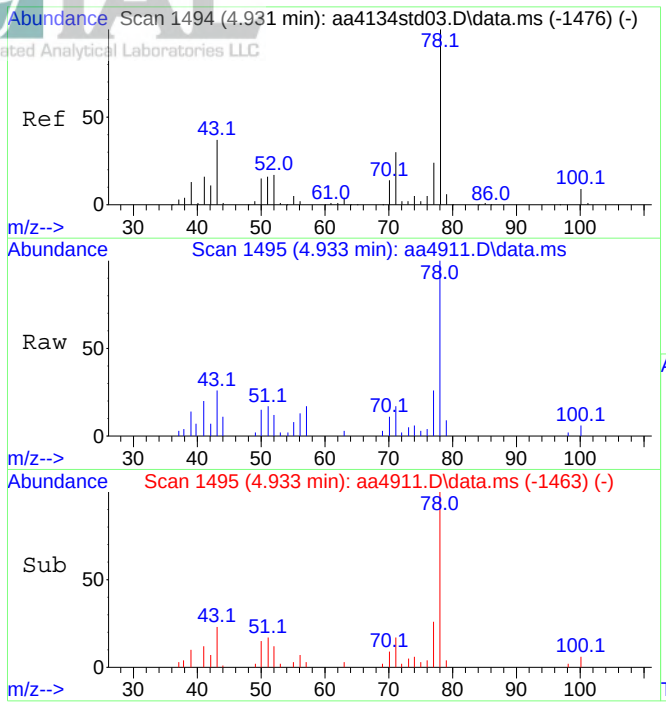




#36
n-Heptane
Concen: 0.27 ppbV
RT: 4.923 min Scan# 1492
Delta R.T. 0.006 min
Lab File: aa4911.D
Acq: 11 Dec 2023 3:19 pm

Tgt Ion: 43 Resp: 35701

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 71 | 54.7 | 50.5 | 75.7 |

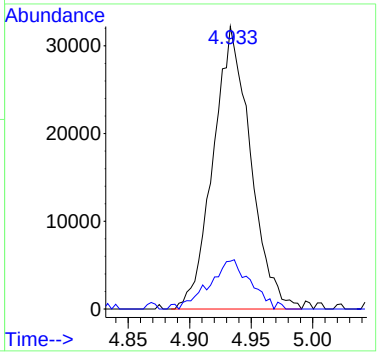


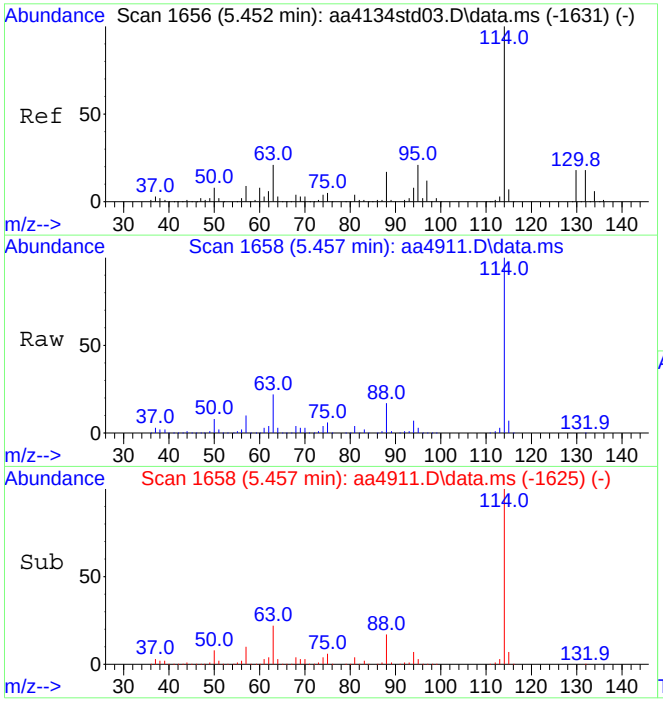



#37
Benzene
Concen: 0.35 ppbV
RT: 4.933 min Scan# 1495
Delta R.T. 0.002 min
Lab File: aa4911.D
Acq: 11 Dec 2023 3:19 pm

Tgt Ion: 78 Resp: 68079

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 19.0 | 13.4 | 20.0 |

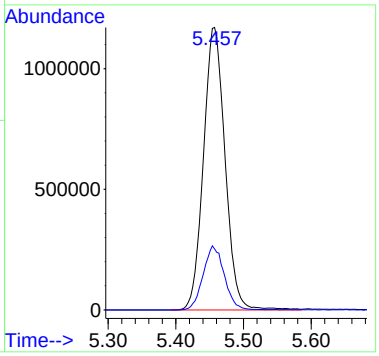


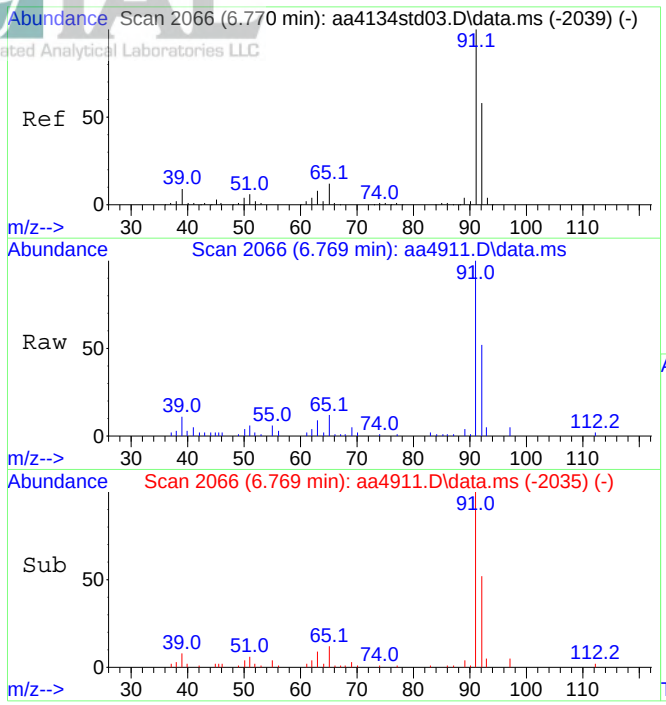




#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.457 min Scan# 1658
Delta R.T. 0.005 min
Lab File: aa4911.D
Acq: 11 Dec 2023 3:19 pm

Tgt Ion:114 Resp: 2600713

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.3 | 17.0 | 25.6 |

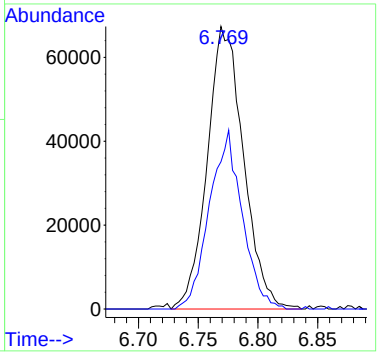


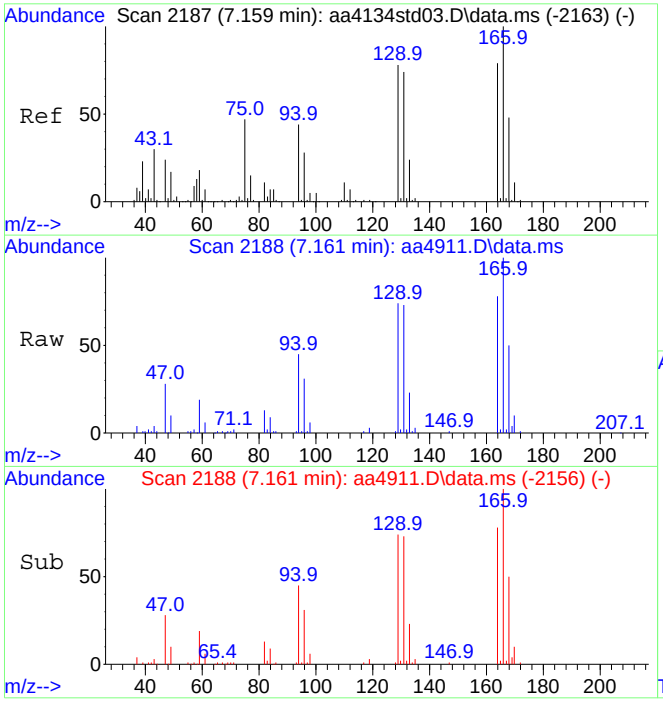



#47
Toluene
Concen: 0.39 ppbV
RT: 6.769 min Scan# 2066
Delta R.T. -0.001 min
Lab File: aa4911.D
Acq: 11 Dec 2023 3:19 pm

Tgt Ion: 91 Resp: 142316

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 57.2 | 47.3 | 70.9 |

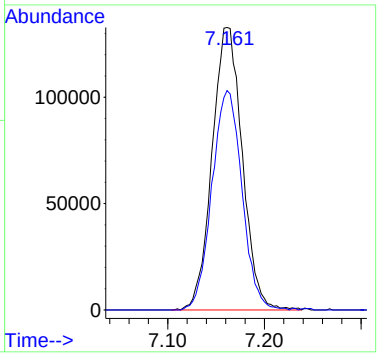


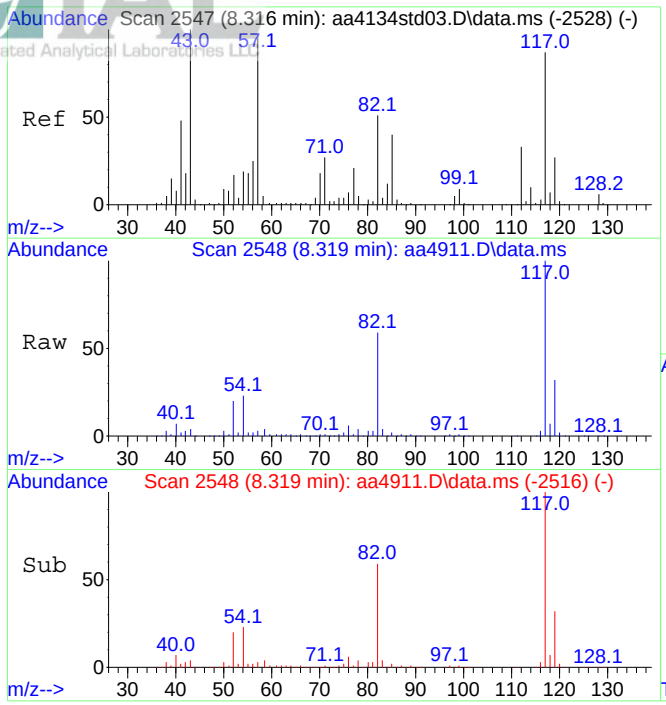




#49
Tetrachloroethene
Concen: 1.83 ppbV
RT: 7.161 min Scan# 2188
Delta R.T. 0.002 min
Lab File: aa4911.D
Acq: 11 Dec 2023 3:19 pm

Tgt Ion:166 Resp: 288346

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 77.1 | 62.3 | 93.5 |

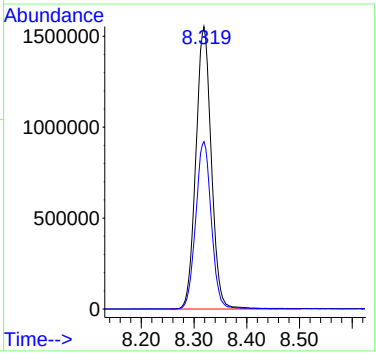


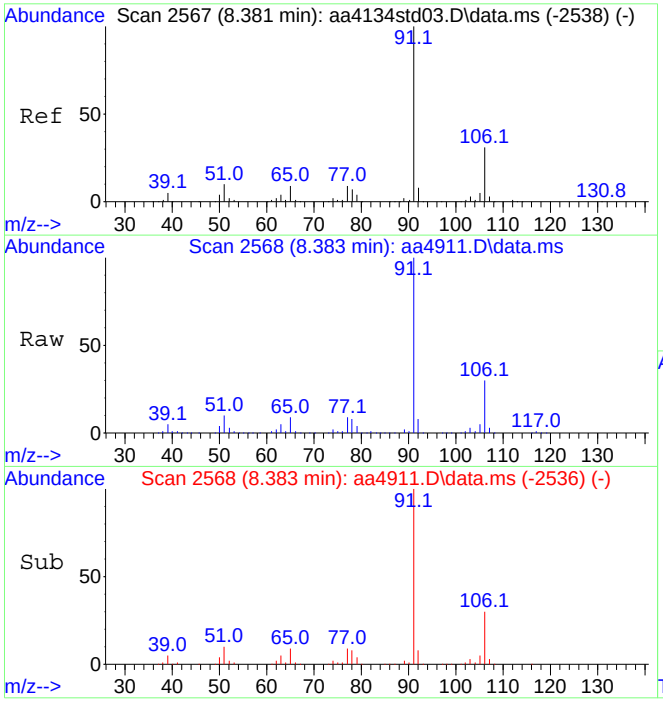



#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.319 min Scan# 2548
Delta R.T. 0.002 min
Lab File: aa4911.D
Acq: 11 Dec 2023 3:19 pm

Tgt Ion:117 Resp: 3169675

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 59.5 | 47.0 | 70.4 |

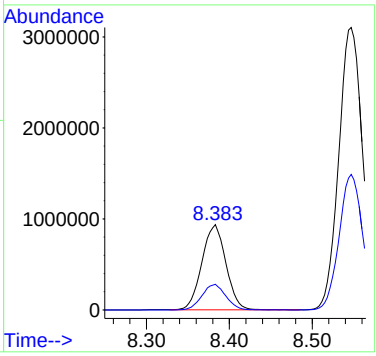


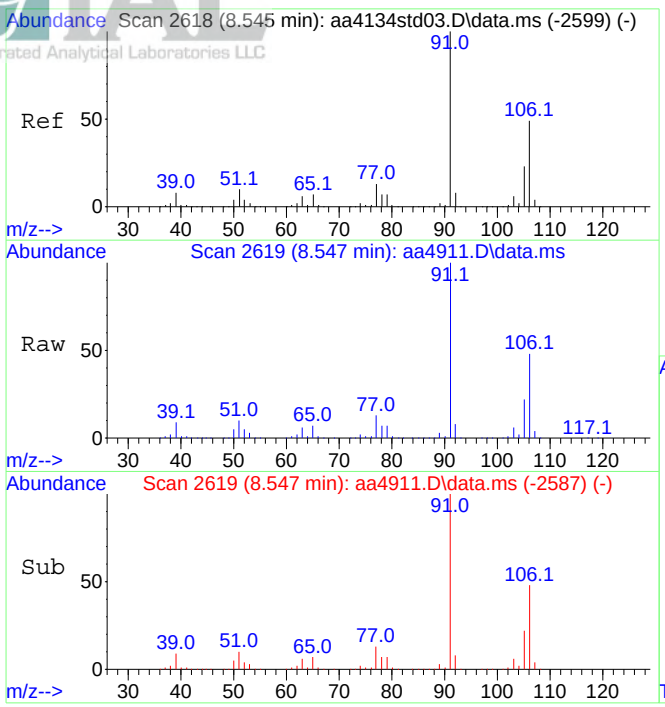




#58
Ethylbenzene
Concen: 3.21 ppbV
RT: 8.383 min Scan# 2568
Delta R.T. 0.002 min
Lab File: aa4911.D
Acq: 11 Dec 2023 3:19 pm

Tgt Ion: 91 Resp: 1873959

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 30.0 | 24.6 | 36.8 |

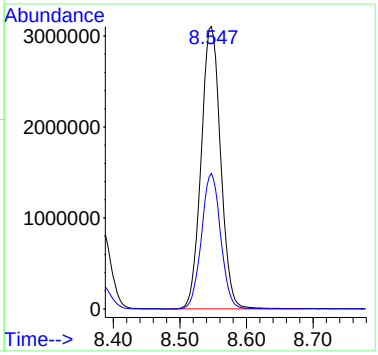


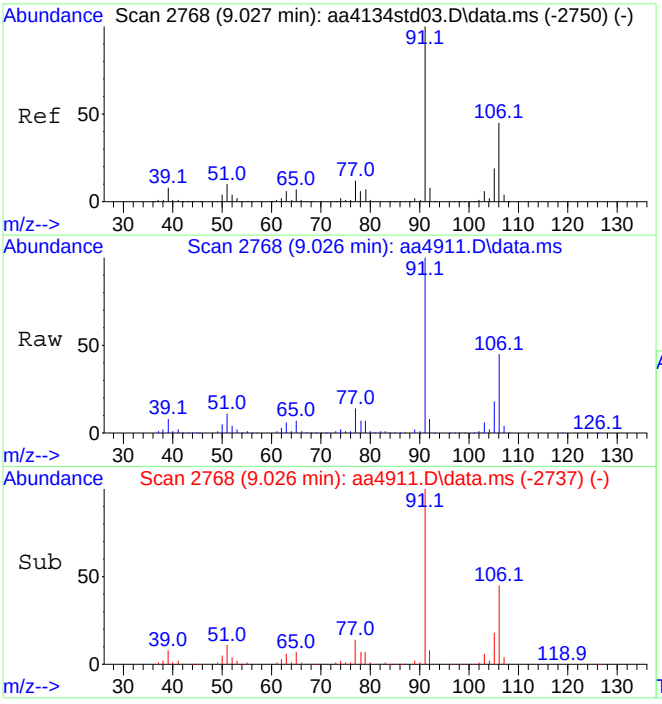



#59
Xylenes (m&p)
Concen: 14.55 ppbV
RT: 8.547 min Scan# 2619
Delta R.T. 0.002 min
Lab File: aa4911.D
Acq: 11 Dec 2023 3:19 pm

Tgt Ion: 91 Resp: 6295935

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 47.6 | 39.0 | 58.4 |

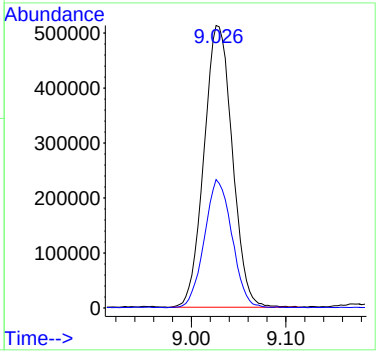


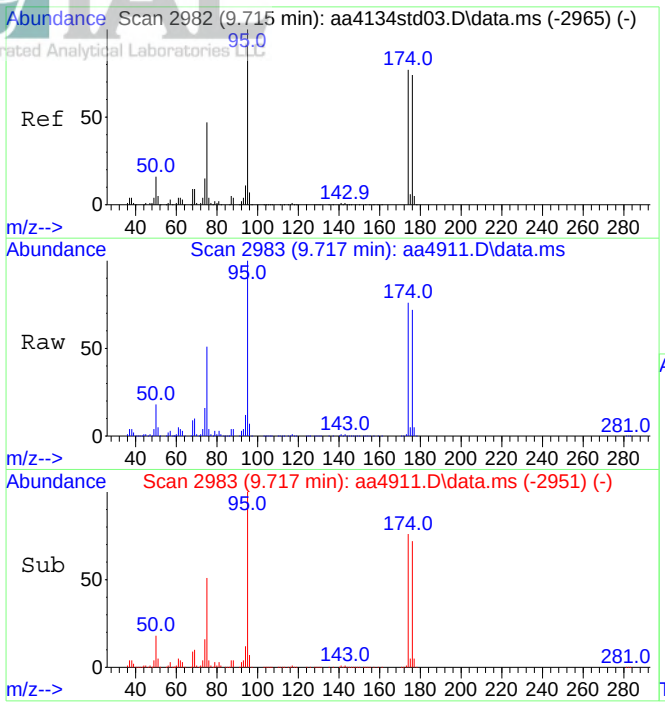




#60
Xylene (o)
Concen: 2.26 ppbV
RT: 9.026 min Scan# 2768
Delta R.T. -0.001 min
Lab File: aa4911.D
Acq: 11 Dec 2023 3:19 pm

Tgt Ion: 91 Resp: 1069376

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 44.2 | 36.8 | 55.2 |

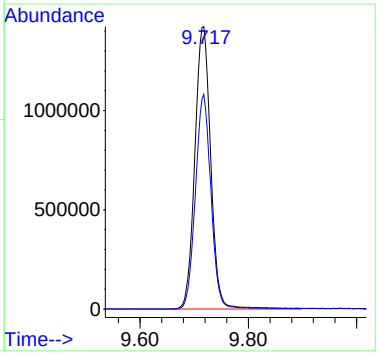





#64
Bromofluorobenzene (tune std)
Concen: 10.49 ppbV
RT: 9.717 min Scan# 2983
Delta R.T. 0.002 min
Lab File: aa4911.D
Acq: 11 Dec 2023 3:19 pm

Tgt Ion: 95 Resp: 2897244

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 74.7 | 61.1 | 91.7 |



Volatile Organic Compounds by EPA Method TO-15
Summary of Results

| | | | |
|---|---|---|---|
| Lab ID: | E23-05080-02 | Instrument ID: | AA |
| Client ID: | SV3 | GC/MS Column: | RTX-1, 0.32 mmID |
| Date Sampled: | 11/16/2023 12:30 | Injection Volmue: | 500ml, 50ml |
| Date Received: | 11/20/2023 | Matrix: | Air-Other |
| Date Analyzed: | 12/08/2023 18:39, 12/11/2023 15:48 | % Moisture: | NA |
| Data File: | AA4894, AA4912 | Dilution Factor: | 1, 10 |
| Summa ID: | 2155 | Analyst: | J. Walukiewicz |

| | | | Concentration Reported | | Reporting Limits | |
|---|---|---|---|---|---|---|
| **Compound** | **CAS #** | **Q** | **ppbv** | **ug/m3** | **ppbv** | **ug/m3** |
| Acetone | 67-64-1 | | 14 | 33 | 0.20 | 0.48 |
| Benzene | 71-43-2 | | 3.9 | 12 | 0.20 | 0.64 |
| Bromodichloromethane | 75-27-4 | | ND | ND | 0.20 | 1.3 |
| Bromoform | 75-25-2 | | ND | ND | 0.20 | 2.1 |
| Bromomethane | 74-83-9 | | ND | ND | 0.20 | 0.78 |
| 1,3-Butadiene | 106-99-0 | | ND | ND | 0.20 | 0.44 |
| Chlorobenzene | 108-90-7 | | ND | ND | 0.20 | 0.92 |
| Chloroethane | 75-00-3 | | ND | ND | 0.20 | 0.53 |
| Chloroform | 67-66-3 | | ND | ND | 0.20 | 0.98 |
| Chloromethane | 74-87-3 | | ND | ND | 0.20 | 0.41 |
| Carbon disulfide | 75-15-0 | | 3.1 | 9.5 | 0.20 | 0.62 |
| Carbon tetrachloride | 56-23-5 | | ND | ND | 0.040 | 0.25 |
| Cyclohexane | 110-82-7 | | 2.5 | 8.5 | 0.20 | 0.69 |
| Dibromochloromethane | 124-48-1 | | ND | ND | 0.20 | 1.7 |
| 1,2-Dibromoethane | 106-93-4 | | ND | ND | 0.20 | 1.5 |
| 1,2-Dichlorobenzene | 95-50-1 | | ND | ND | 0.20 | 1.2 |
| 1,3-Dichlorobenzene | 541-73-1 | | ND | ND | 0.20 | 1.2 |
| 1,4-Dichlorobenzene | 106-46-7 | | ND | ND | 0.20 | 1.2 |
| Dichlorodifluoromethane | 75-71-8 | | ND | ND | 0.20 | 0.99 |
| 1,1-Dichloroethane | 75-34-3 | | ND | ND | 0.20 | 0.81 |
| 1,2-Dichloroethane | 107-06-2 | | ND | ND | 0.20 | 0.81 |
| 1,1-Dichloroethene | 75-35-4 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloroethene (cis) | 156-59-2 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloroethene (trans) | 156-60-5 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloropropane | 78-87-5 | | ND | ND | 0.20 | 0.92 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | | ND | ND | 0.20 | 0.91 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | | ND | ND | 0.20 | 0.91 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | | ND | ND | 0.20 | 1.4 |
| 1,4-Dioxane | 123-91-1 | | ND | ND | 0.20 | 0.72 |
| Ethylbenzene | 100-41-4 | | 26 | 110 | 0.20 | 0.87 |
| n-Heptane | 142-82-5 | | 5.0 | 20 | 0.20 | 0.82 |
| 1,3-Hexachlorobutadiene | 87-68-3 | | ND | ND | 0.20 | 2.1 |
| n-Hexane | 110-54-3 | | 8.3 | 29 | 0.20 | 0.70 |
| Methylene chloride | 75-09-2 | | ND | ND | 0.20 | 0.69 |
| Methyl ethyl ketone | 78-93-3 | | 1.1 | 3.2 | 0.20 | 0.59 |
| Methyl isobutyl ketone | 108-10-1 | | ND | ND | 0.20 | 0.82 |
| Methyl tert-butyl ether | 1634-04-4 | | ND | ND | 0.20 | 0.72 |
| Styrene | 100-42-5 | | 0.28 | 1.2 | 0.20 | 0.85 |
| Tert-butyl alcohol | 75-65-0 | | 3.5 | 11 | 0.20 | 0.61 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | ND | ND | 0.20 | 1.4 |
| Tetrachloroethene | 127-18-4 | | 3.6 | 24 | 0.20 | 1.4 |
| Toluene | 108-88-3 | | 2.1 | 8.1 | 0.20 | 0.75 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | ND | ND | 0.20 | 1.5 |
| 1,1,1-Trichloroethane | 71-55-6 | | ND | ND | 0.20 | 1.1 |
| 1,1,2-Trichloroethane | 79-00-5 | | ND | ND | 0.20 | 1.1 |

Qualifiers:
D = Dilution required

Volatile Organic Compounds by EPA Method TO-15
Summary of Results

| | | | |
|---|---|---|---|
| Lab ID: | E23-05080-02 | Instrument ID: | AA |
| Client ID: | SV3 | GC/MS Column: | RTX-1, 0.32 mmID |
| Date Sampled: | 11/16/2023 12:30 | Injection Volmue: | 500ml, 50ml |
| Date Received: | 11/20/2023 | Matrix: | Air-Other |
| Date Analyzed: | 12/08/2023 18:39, 12/11/2023 15:48 | % Moisture: | NA |
| Data File: | AA4894, AA4912 | Dilution Factor: | 1, 10 |
| Summa ID: | 2155 | Analyst: | J. Walukiewicz |

| | | | Concentration Reported | | Reporting Limits | |
|---|---|---|---|---|---|---|
| **Compound** | **CAS #** | **Q** | **ppbv** | **ug/m3** | **ppbv** | **ug/m3** |
| Trichloroethene | 79-01-6 | | ND | ND | 0.046 | 0.25 |
| Trichlorofluoromethane | 75-69-4 | | 0.31 | 1.7 | 0.20 | 1.1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | | ND | ND | 0.20 | 1.5 |
| 1,2,4-Trimethylbenzene | 95-63-6 | | 0.78 | 3.8 | 0.20 | 0.98 |
| 1,3,5-Trimethylbenzene | 108-67-8 | | 0.26 | 1.3 | 0.20 | 0.98 |
| 2,2,4-Trimethylpentane | 540-84-1 | | ND | ND | 0.20 | 0.93 |
| Vinyl bromide | 593-60-2 | | ND | ND | 0.20 | 0.87 |
| Vinyl chloride | 75-01-4 | | ND | ND | 0.20 | 0.51 |
| Xylenes (m&p) | 179601-23-1 | D | 180 | 780 | 2.0 | 8.7 |
| Xylenes (o) | 95-47-6 | | 22 | 94 | 0.20 | 0.87 |

Qualifiers:
D = Dilution required

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4894.D
Acq On : 8 Dec 2023 6:39 pm
Operator : jjw
Sample : E23-05080-02
Misc : 2155, 500cc
ALS Vial : 17 Sample Multiplier: 1

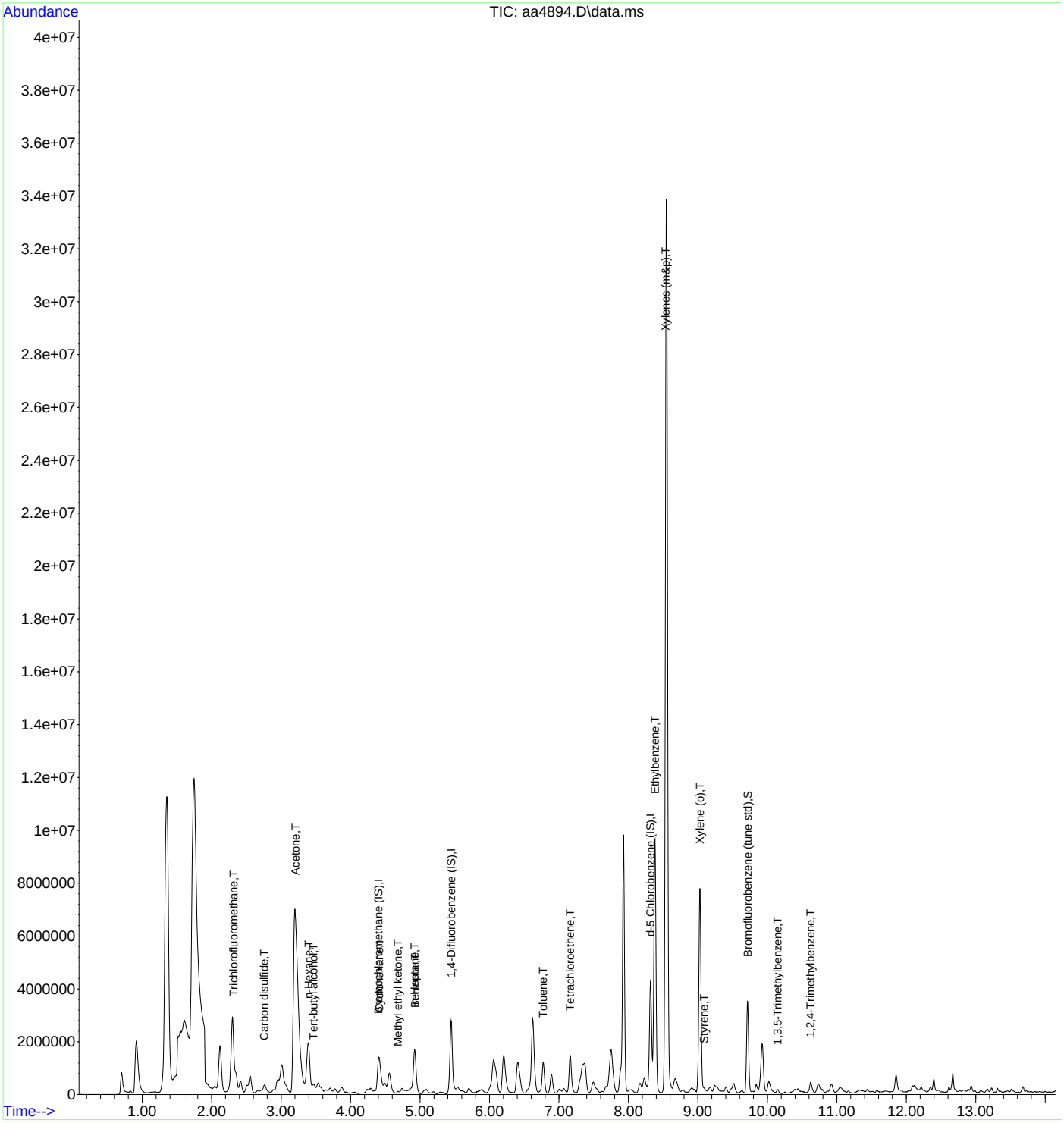
Quant Time: Dec 12 10:13:56 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

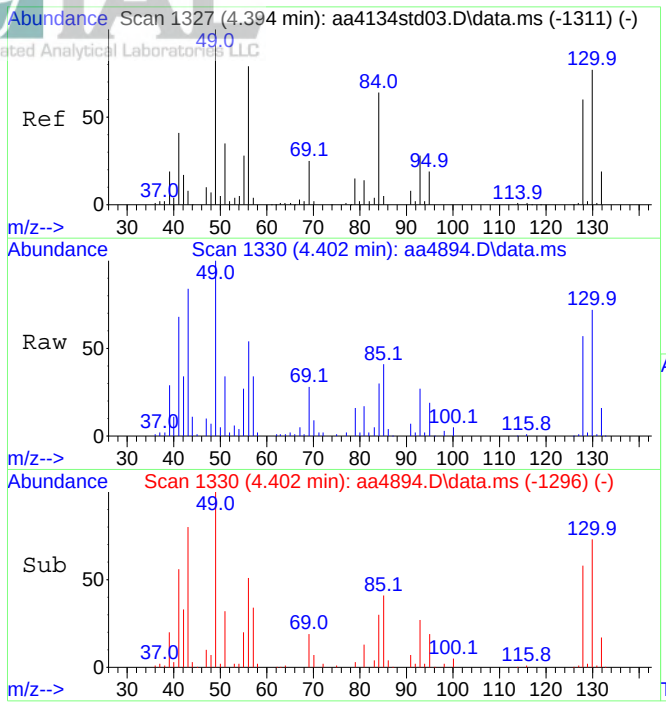
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.402 | 130 | 439724 | 10.00 | ppbV | | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.451 | 114 | 1996144 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 1814252 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 1523959 | 9.64 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 12) Trichlorofluoromethane | 2.316 | 101 | 38198 | 0.31 | ppbV | | 98 |
| 15) Carbon disulfide | 2.756 | 76 | 412083 | 3.06 | ppbV | | 98 |
| 21) Acetone | 3.210 | 43 | 908148 | 13.69 | ppbV | | 94 |
| 24) n-Hexane | 3.396 | 57 | 1149766 | 8.30 | ppbV | | 87 |
| 26) Tert-butyl alcohol | 3.467 | 59 | 399179 | 3.48 | ppbV | | 100 |
| 29) Cyclohexane | 4.412 | 56 | 239157 | 2.47 | ppbV | # | 62 |
| 35) Methyl ethyl ketone | 4.682 | 43 | 114980 | 1.07 | ppbV | | 99 |
| 36) n-Heptane | 4.923 | 43 | 602987 | 4.96 | ppbV | | 97 |
| 37) Benzene | 4.930 | 78 | 676181 | 3.87 | ppbV | | 95 |
| 47) Toluene | 6.772 | 91 | 601562 | 2.14 | ppbV | | 100 |
| 49) Tetrachloroethene | 7.161 | 166 | 436914 | 3.61 | ppbV | | 100 |
| 58) Ethylbenzene | 8.383 | 91 | 8840105 | 26.44 | ppbV | | 99 |
| 59) Xylenes (m&p) | 8.537 | 91 | 22652476 | 91.44 | ppbV | | 88 |
| 60) Xylene (o) | 9.029 | 91 | 5824717 | 21.55 | ppbV | | 99 |
| 61) Styrene | 9.090 | 104 | 52460 | 0.28 | ppbV | # | 29 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 82770 | 0.26 | ppbV | | 95 |
| 70) 1,2,4-Trimethylbenzene | 10.621 | 105 | 243895 | 0.78 | ppbV | | 98 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4894.D
Acq On : 8 Dec 2023 6:39 pm
Operator : jjw
Sample : E23-05080-02
Misc : 2155, 500cc
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Dec 12 10:13:56 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

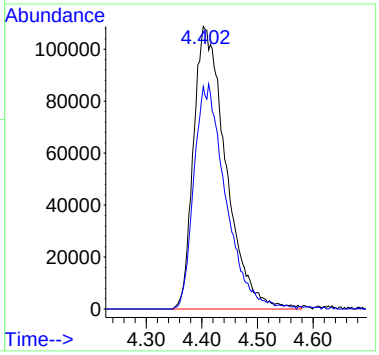


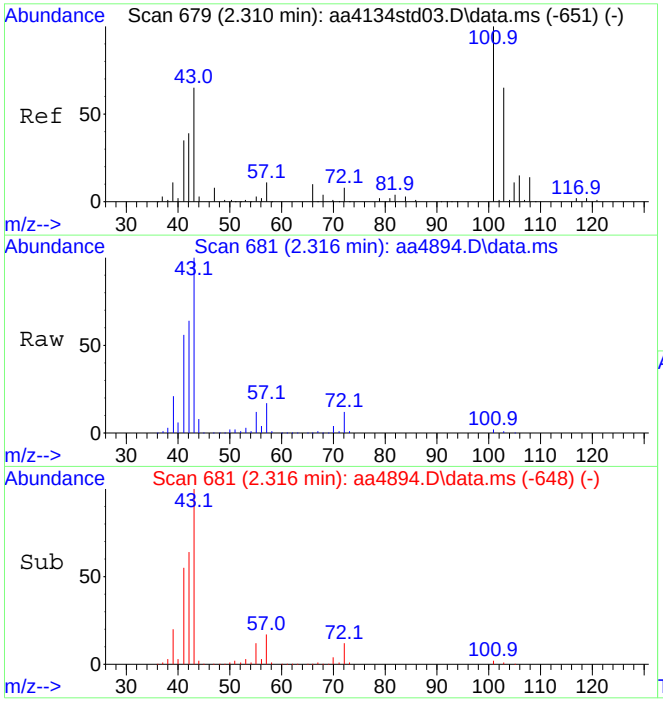



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.402 min Scan# 1330
Delta R.T. 0.008 min
Lab File: aa4894.D
Acq: 8 Dec 2023 6:39 pm

Tgt Ion:130 Resp: 439724

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 77.9 | 62.2 | 93.4 |

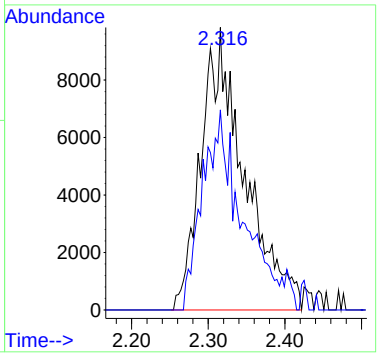


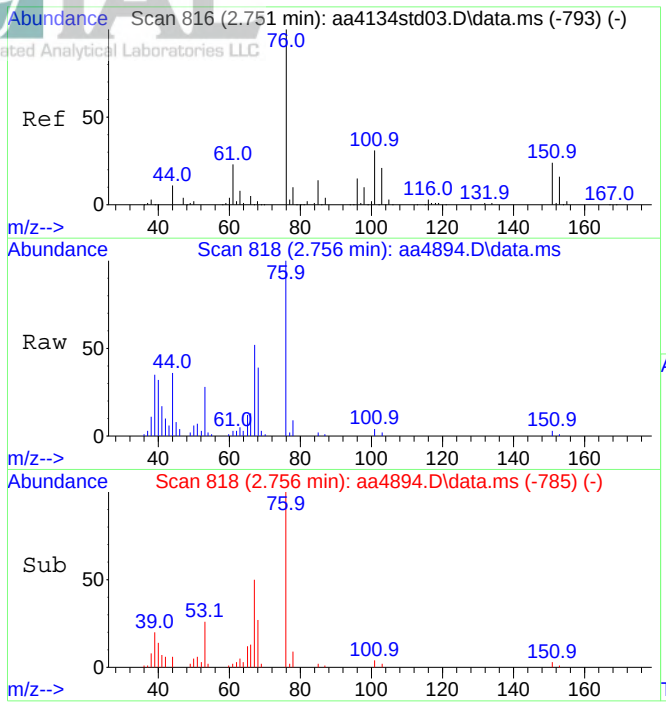




#12
Trichlorofluoromethane
Concen: 0.31 ppbV
RT: 2.316 min Scan# 681
Delta R.T. 0.005 min
Lab File: aa4894.D
Acq: 8 Dec 2023 6:39 pm

Tgt Ion:101 Resp: 38198

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 67.2 | 52.5 | 78.7 |

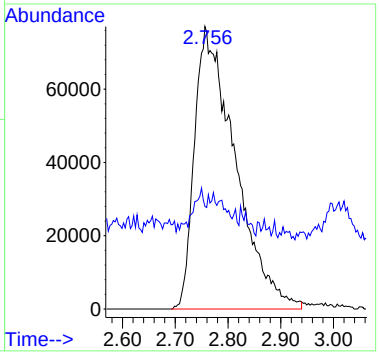


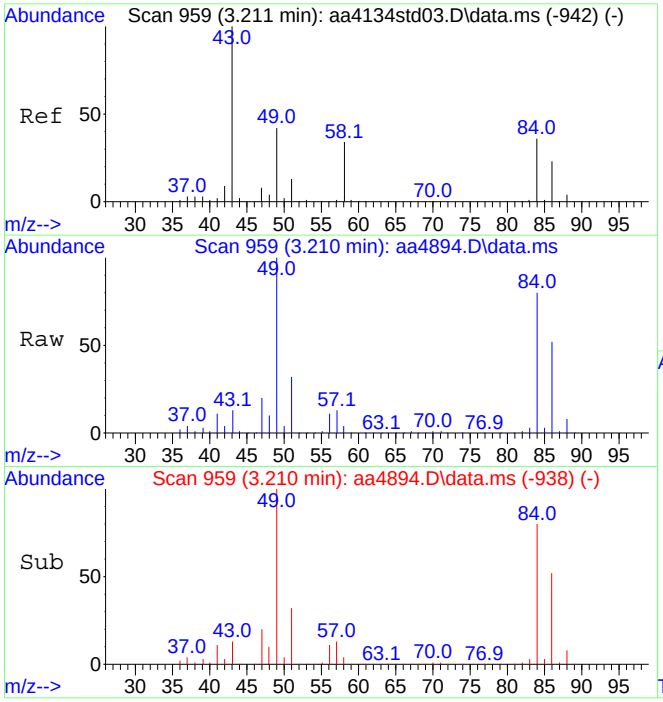



#15
Carbon disulfide
Concen: 3.06 ppbV
RT: 2.756 min Scan# 818
Delta R.T. 0.005 min
Lab File: aa4894.D
Acq: 8 Dec 2023 6:39 pm

Tgt Ion: 76 Resp: 412083

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 10.5 | 9.0 | 13.4 |

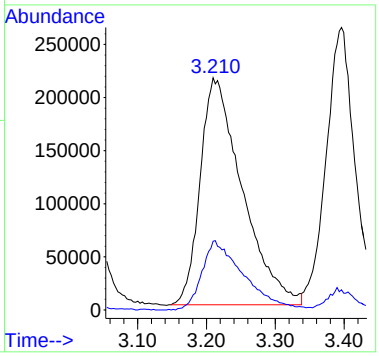


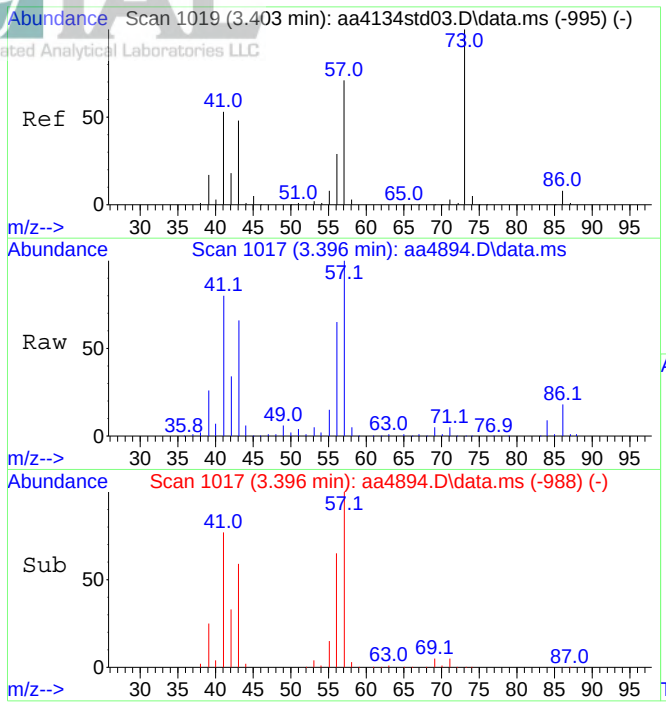




#21
Acetone
Concen: 13.69 ppbV
RT: 3.210 min Scan# 959
Delta R.T. -0.001 min
Lab File: aa4894.D
Acq: 8 Dec 2023 6:39 pm

Tgt Ion: 43 Resp: 908148

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 30.3 | 27.1 | 40.7 |

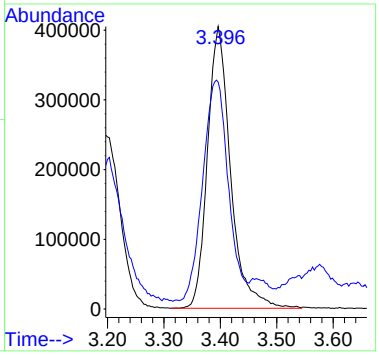


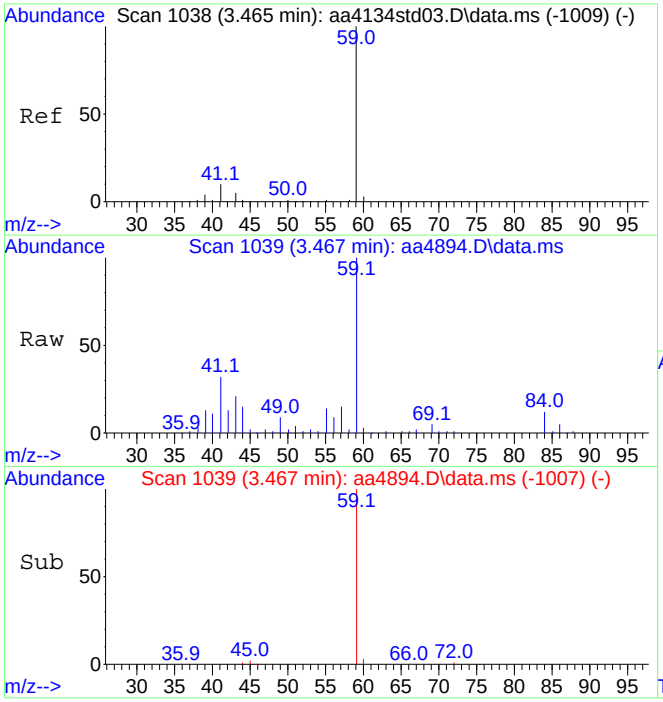



#24
n-Hexane
Concen: 8.30 ppbV
RT: 3.396 min Scan# 1017
Delta R.T. -0.007 min
Lab File: aa4894.D
Acq: 8 Dec 2023 6:39 pm

Tgt Ion: 57 Resp: 1149766

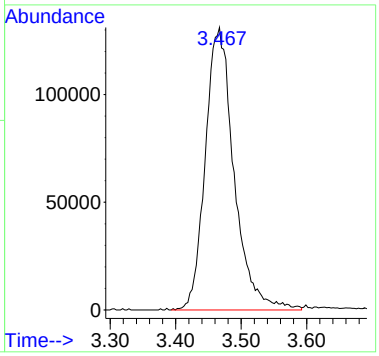
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 41 | 94.9 | 66.4 | 99.6 |

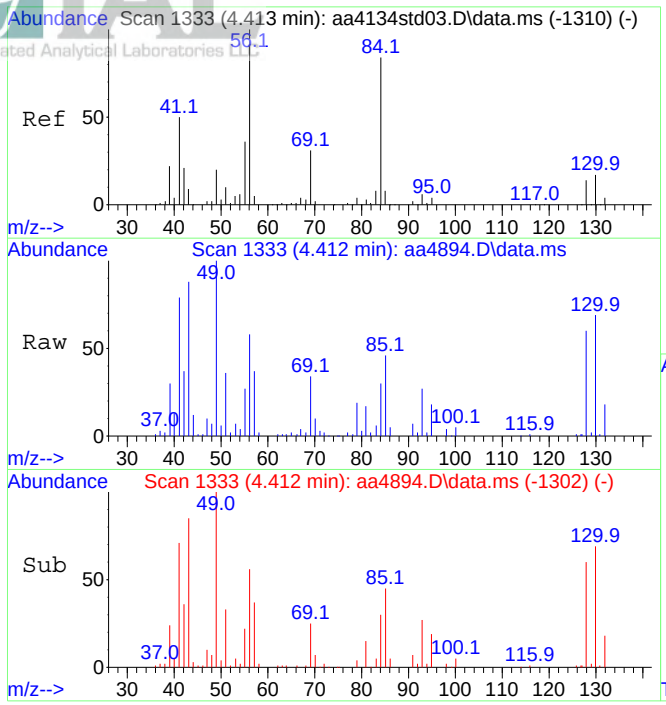



#26
Tert-butyl alcohol
Concen: 3.48 ppbV
RT: 3.467 min Scan# 1039
Delta R.T. 0.002 min
Lab File: aa4894.D
Acq: 8 Dec 2023 6:39 pm

Tgt Ion: 59 Resp: 399179

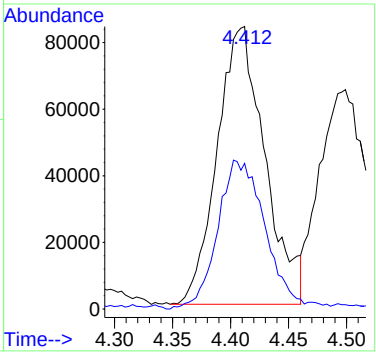


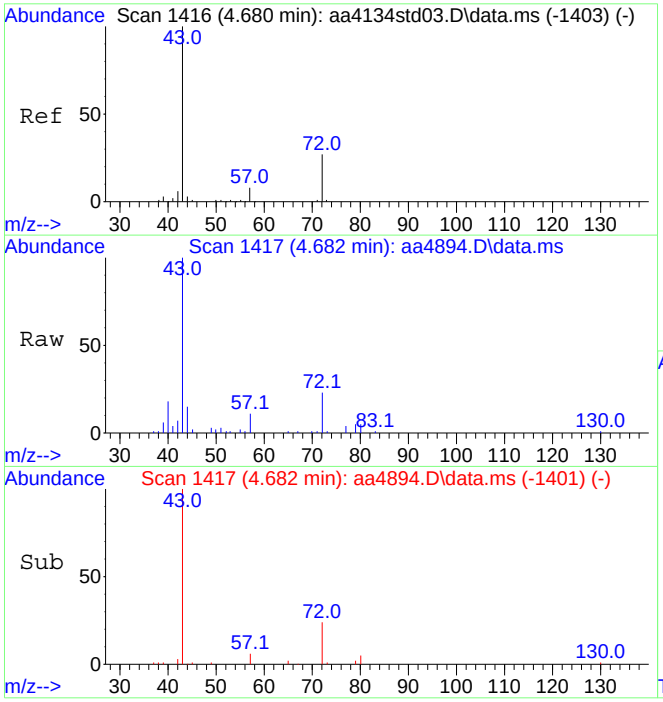



#29
Cyclohexane
Concen: 2.47 ppbV
RT: 4.412 min Scan# 1333
Delta R.T. -0.001 min
Lab File: aa4894.D
Acq: 8 Dec 2023 6:39 pm

Tgt Ion: 56 Resp: 239157

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 53.4 | 71.2 | 106.8# |

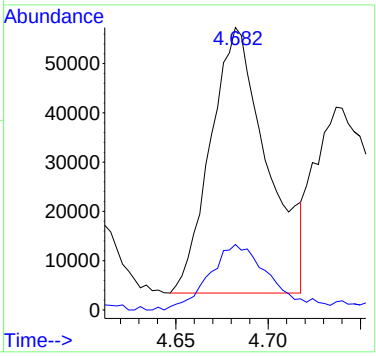


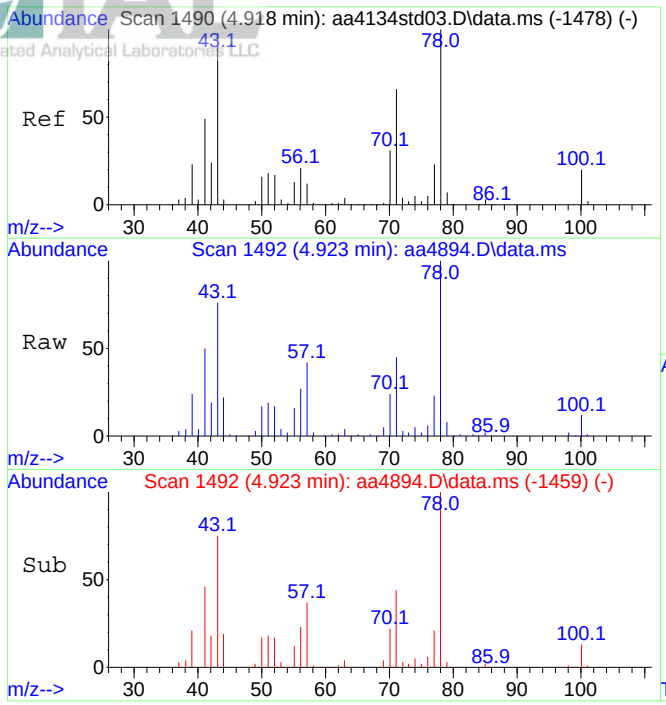




#35
Methyl ethyl ketone
Concen: 1.07 ppbV
RT: 4.682 min Scan# 1417
Delta R.T. 0.002 min
Lab File: aa4894.D
Acq: 8 Dec 2023 6:39 pm

Tgt Ion: 43 Resp: 114980

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 26.5 | 21.6 | 32.4 |

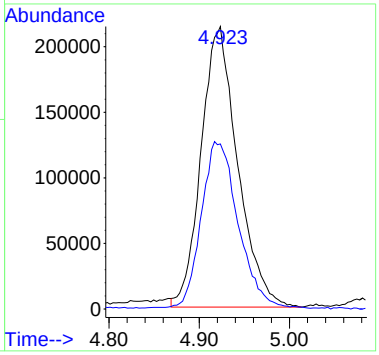


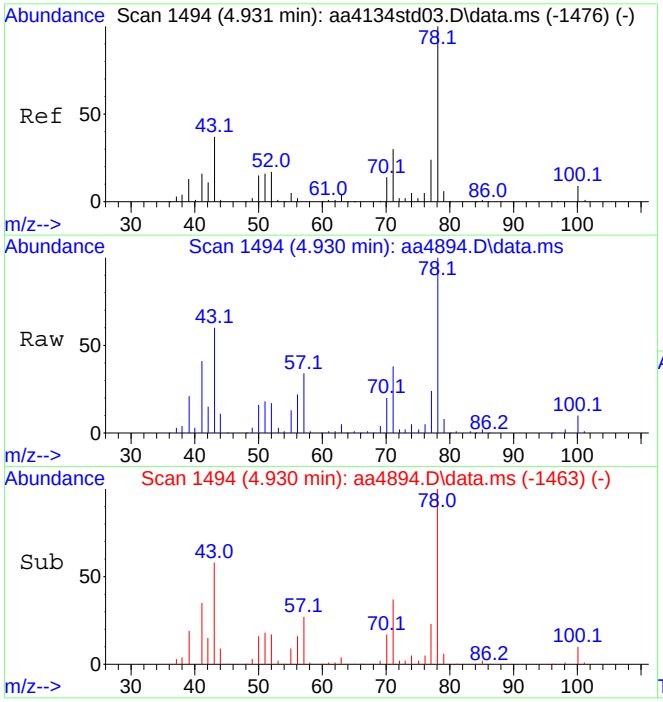



#36
n-Heptane
Concen: 4.96 ppbV
RT: 4.923 min Scan# 1492
Delta R.T. 0.005 min
Lab File: aa4894.D
Acq: 8 Dec 2023 6:39 pm

Tgt Ion: 43 Resp: 602987

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 71 | 60.8 | 50.5 | 75.7 |

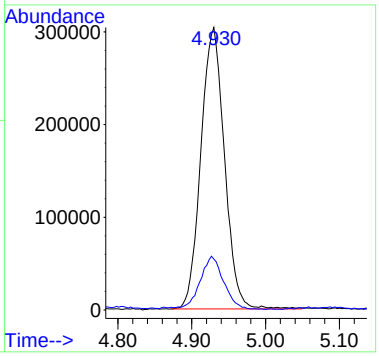


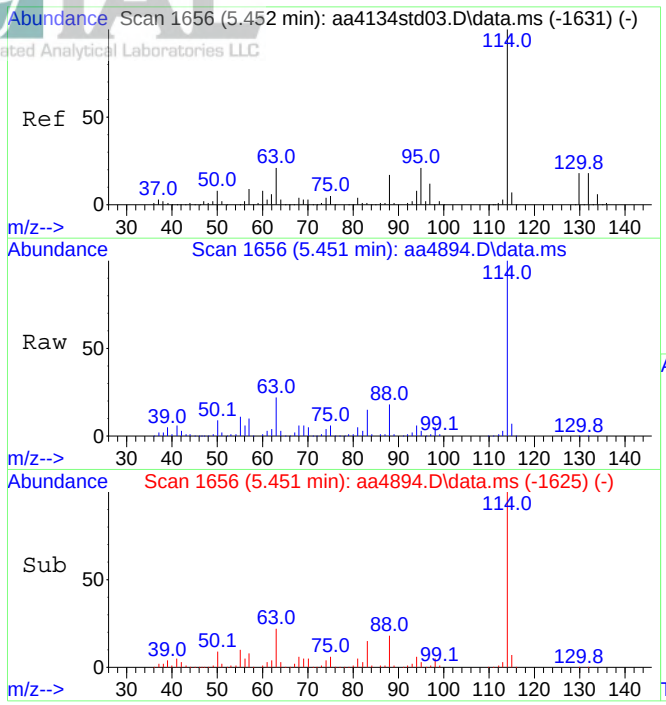




#37
Benzene
Concen: 3.87 ppbV
RT: 4.930 min Scan# 1494
Delta R.T. -0.001 min
Lab File: aa4894.D
Acq: 8 Dec 2023 6:39 pm

Tgt Ion: 78 Resp: 676181

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 18.7 | 13.4 | 20.0 |

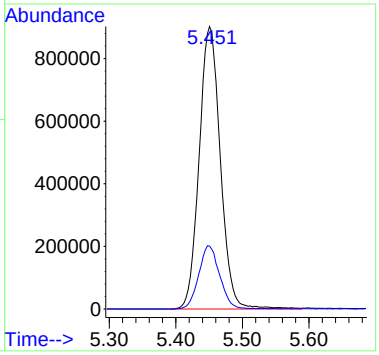


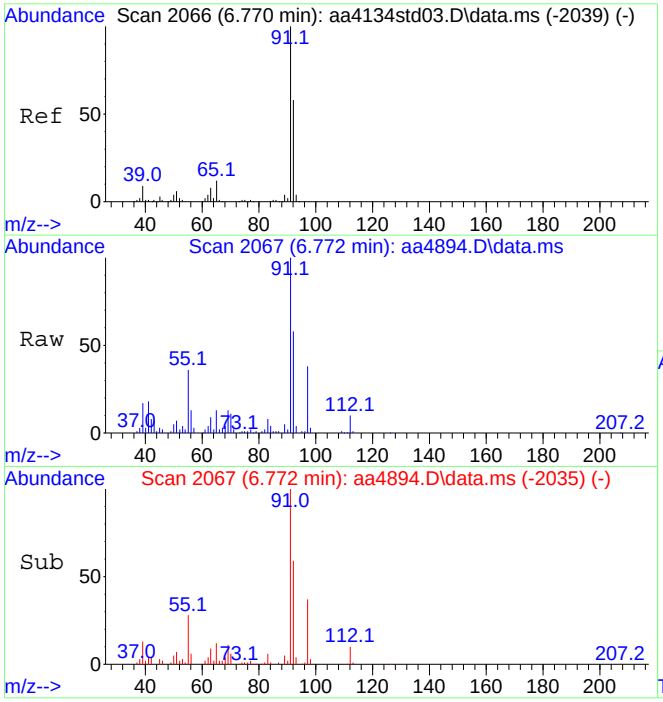



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.451 min Scan# 1656
Delta R.T. -0.001 min
Lab File: aa4894.D
Acq: 8 Dec 2023 6:39 pm

Tgt Ion:114 Resp: 1996144

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.2 | 17.0 | 25.6 |

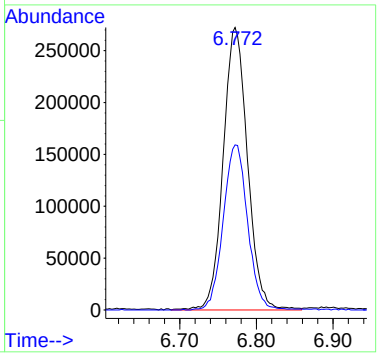


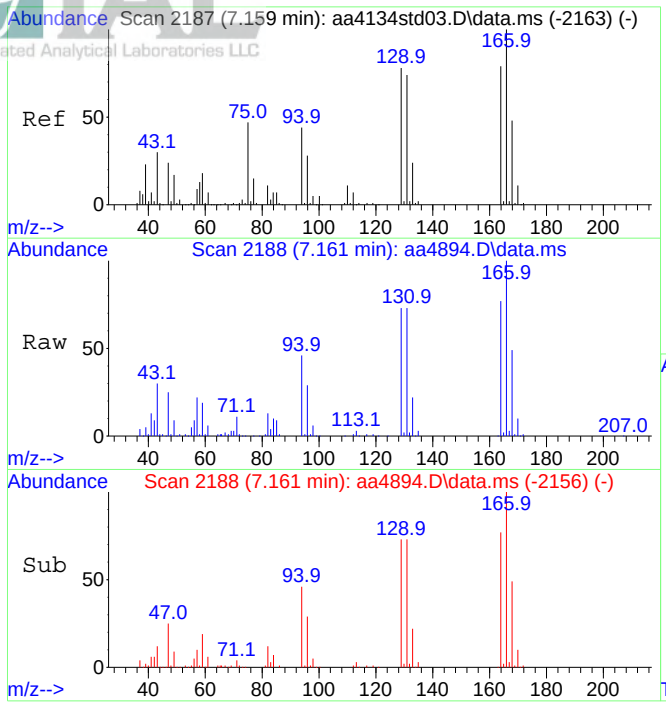




#47
Toluene
Concen: 2.14 ppbV
RT: 6.772 min Scan# 2067
Delta R.T. 0.002 min
Lab File: aa4894.D
Acq: 8 Dec 2023 6:39 pm

Tgt Ion: 91 Resp: 601562

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 58.7 | 47.3 | 70.9 |

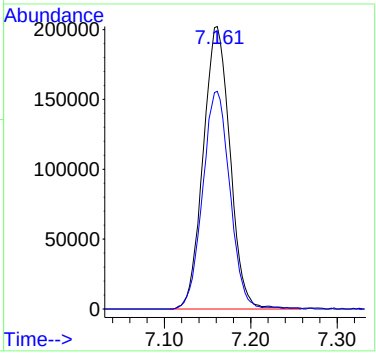


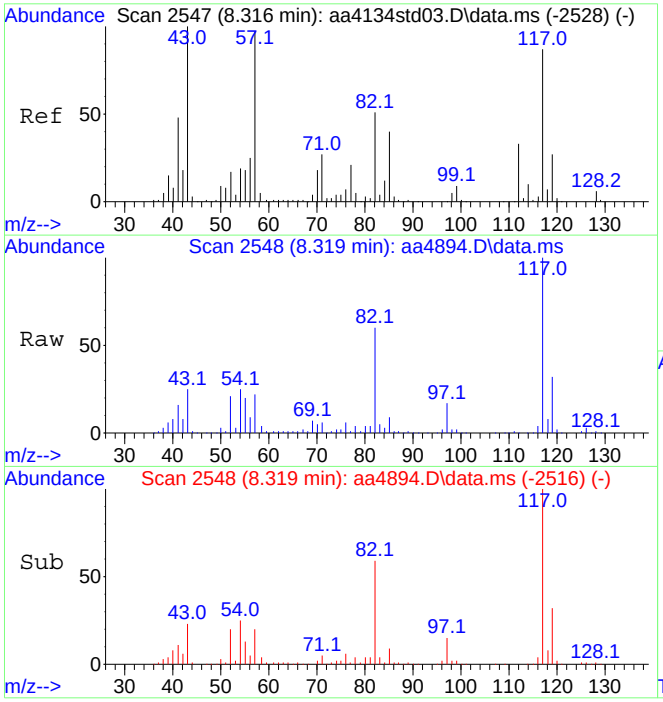



#49
Tetrachloroethene
Concen: 3.61 ppbV
RT: 7.161 min Scan# 2188
Delta R.T. 0.002 min
Lab File: aa4894.D
Acq: 8 Dec 2023 6:39 pm

Tgt Ion:166 Resp: 436914

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 78.0 | 62.3 | 93.5 |

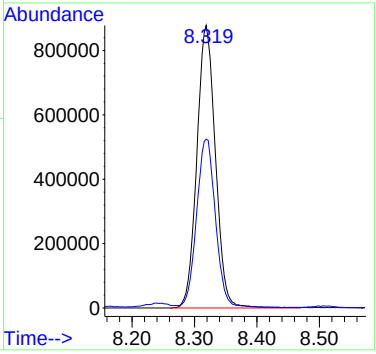


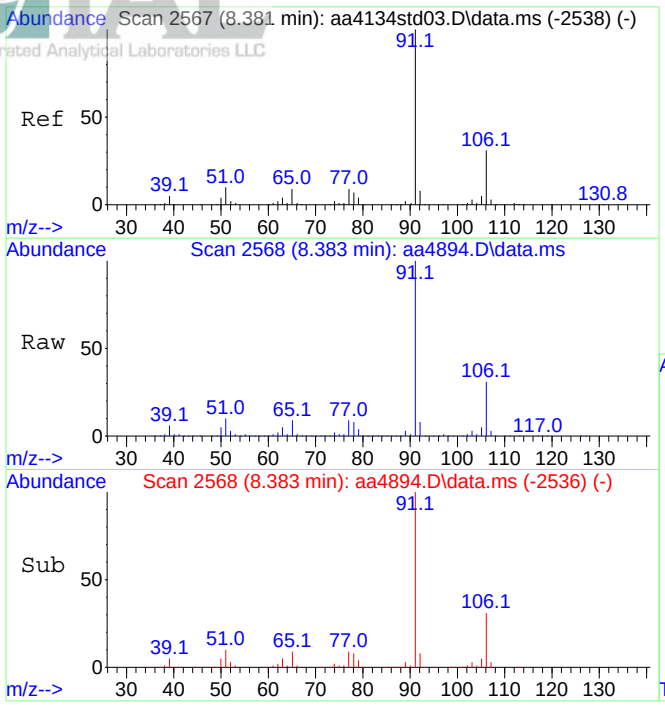




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.319 min Scan# 2548
Delta R.T. 0.002 min
Lab File: aa4894.D
Acq: 8 Dec 2023 6:39 pm

Tgt Ion:117 Resp: 1814252

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 60.6 | 47.0 | 70.4 |

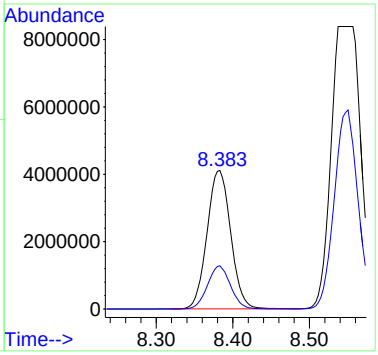


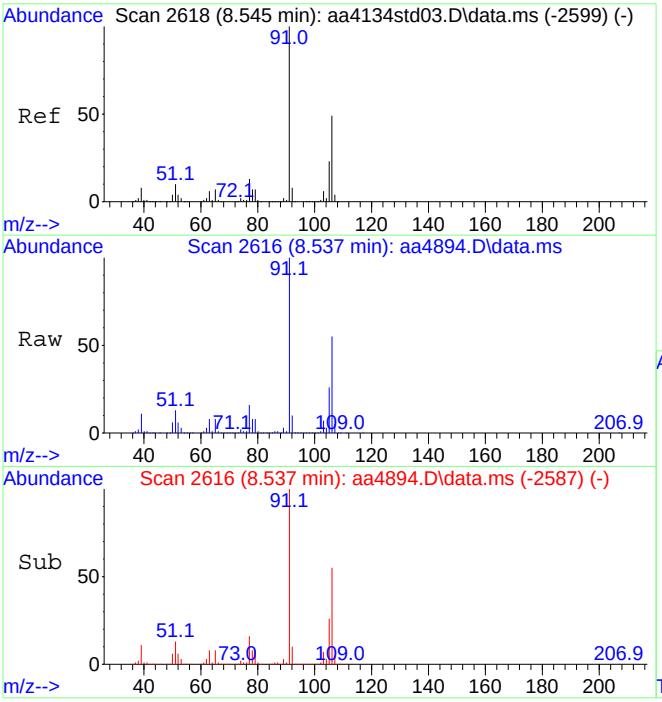



#58
Ethylbenzene
Concen: 26.44 ppbV
RT: 8.383 min Scan# 2568
Delta R.T. 0.002 min
Lab File: aa4894.D
Acq: 8 Dec 2023 6:39 pm

Tgt Ion: 91 Resp: 8840105

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 30.3 | 24.6 | 36.8 |

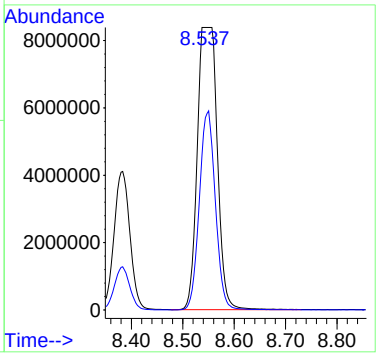


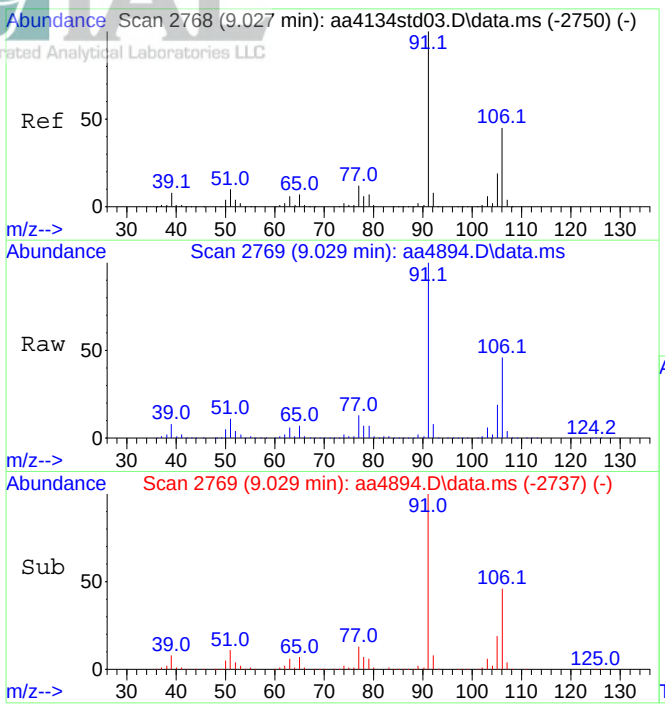




#59
Xylenes (m&p)
Concen: 91.44 ppbV
RT: 8.537 min Scan# 2616
Delta R.T. -0.007 min
Lab File: aa4894.D
Acq: 8 Dec 2023 6:39 pm

Tgt Ion: 91 Resp:22652476

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 56.6 | 39.0 | 58.4 |

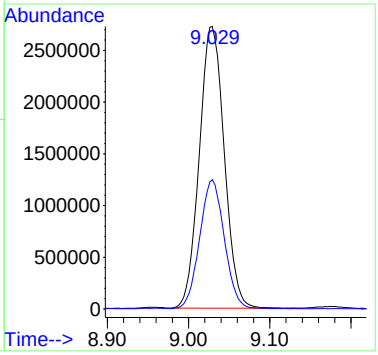


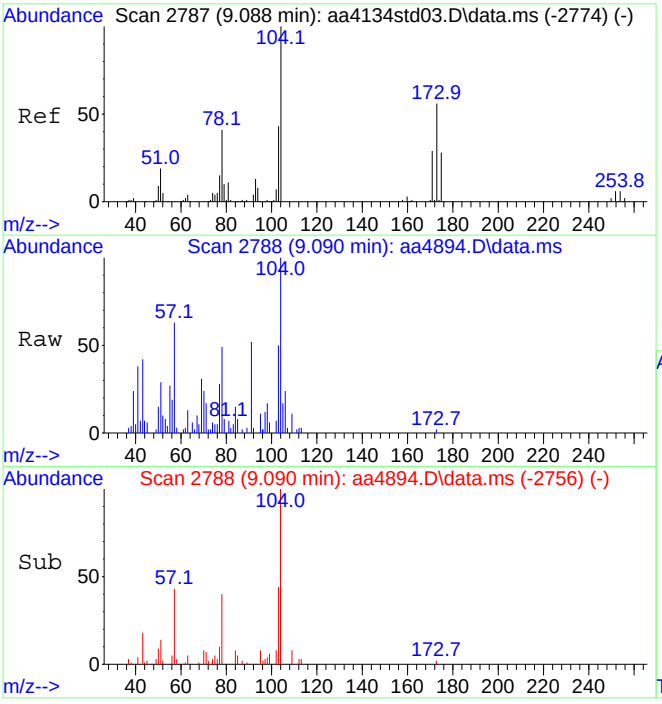



#60
Xylene (o)
Concen: 21.55 ppbV
RT: 9.029 min Scan# 2769
Delta R.T. 0.002 min
Lab File: aa4894.D
Acq: 8 Dec 2023 6:39 pm

Tgt Ion: 91 Resp: 5824717

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 45.1 | 36.8 | 55.2 |

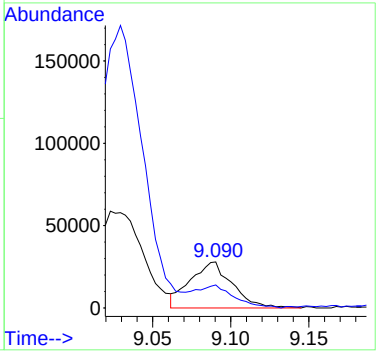


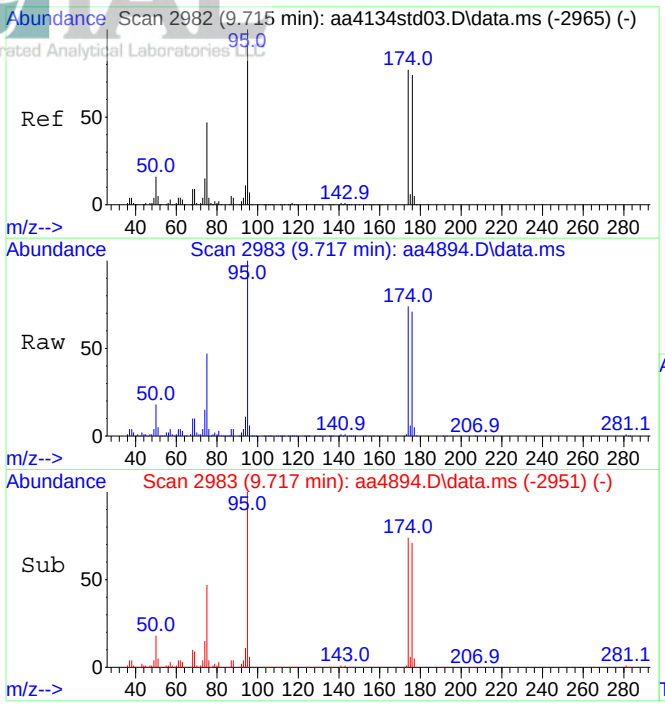




#61
Styrene
Concen: 0.28 ppbV
RT: 9.090 min Scan# 2788
Delta R.T. 0.002 min
Lab File: aa4894.D
Acq: 8 Dec 2023 6:39 pm

Tgt Ion:104 Resp: 52460

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 104 | 100 | | |
| 103 | 0.0 | 37.8 | 56.6# |

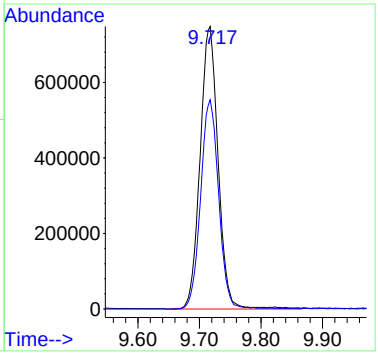


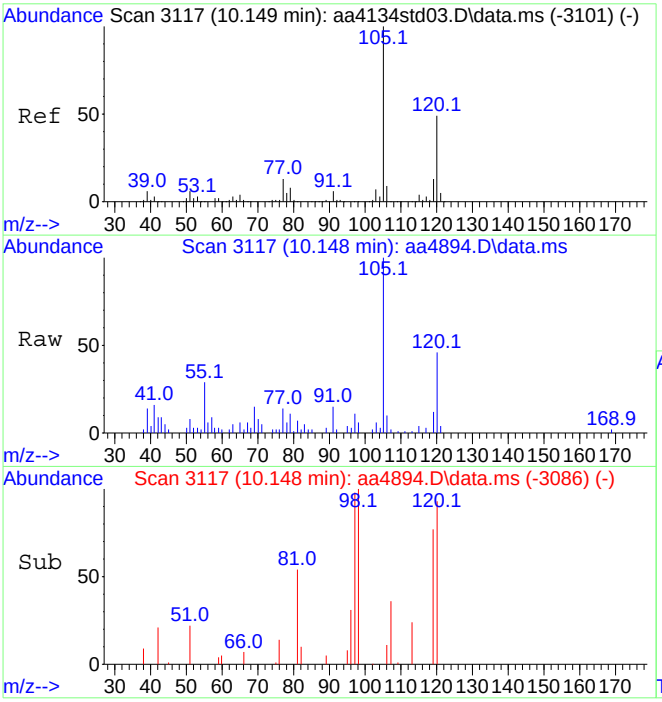



#64
Bromofluorobenzene (tune std)
Concen: 9.64 ppbV
RT: 9.717 min Scan# 2983
Delta R.T. 0.002 min
Lab File: aa4894.D
Acq: 8 Dec 2023 6:39 pm

Tgt Ion: 95 Resp: 1523959

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 74.2 | 61.1 | 91.7 |

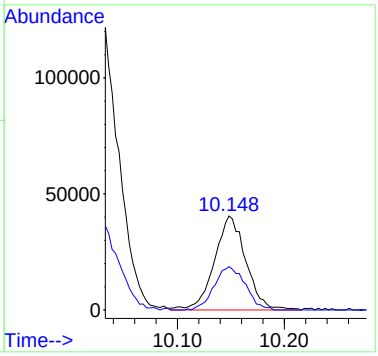


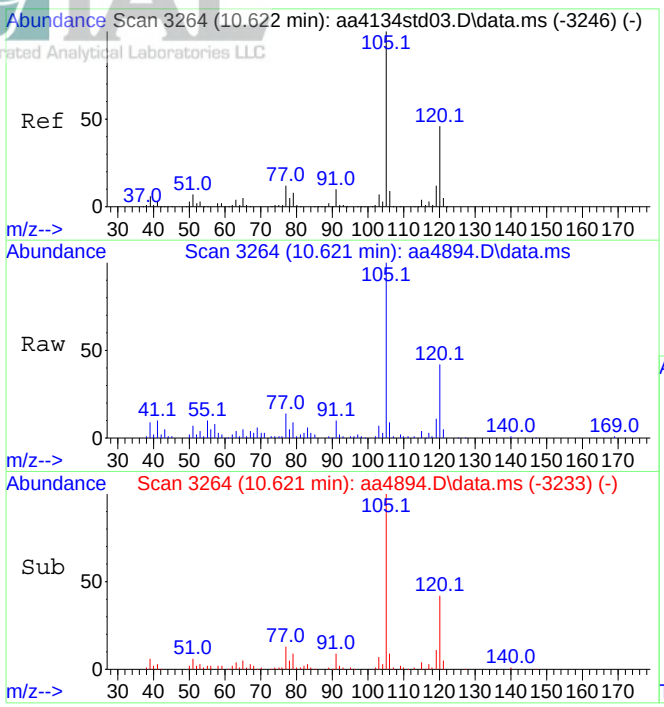




#69
1,3,5-Trimethylbenzene
Concen: 0.26 ppbV
RT: 10.148 min Scan# 3117
Delta R.T. -0.001 min
Lab File: aa4894.D
Acq: 8 Dec 2023 6:39 pm

Tgt Ion:105 Resp: 82770

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 45.5 | 38.9 | 58.3 |

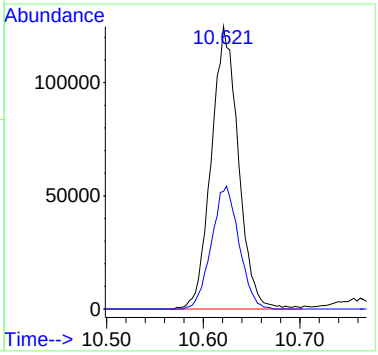





#70
1,2,4-Trimethylbenzene
Concen: 0.78 ppbV
RT: 10.621 min Scan# 3264
Delta R.T. -0.001 min
Lab File: aa4894.D
Acq: 8 Dec 2023 6:39 pm

Tgt Ion:105 Resp: 243895

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 43.9 | 36.3 | 54.5 |



Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4912.D
Acq On : 11 Dec 2023 3:48 pm
Operator : jjw
Sample : E23-05080-02x10 dil
Misc : 2155, 50cc
ALS Vial : 15 Sample Multiplier: 1

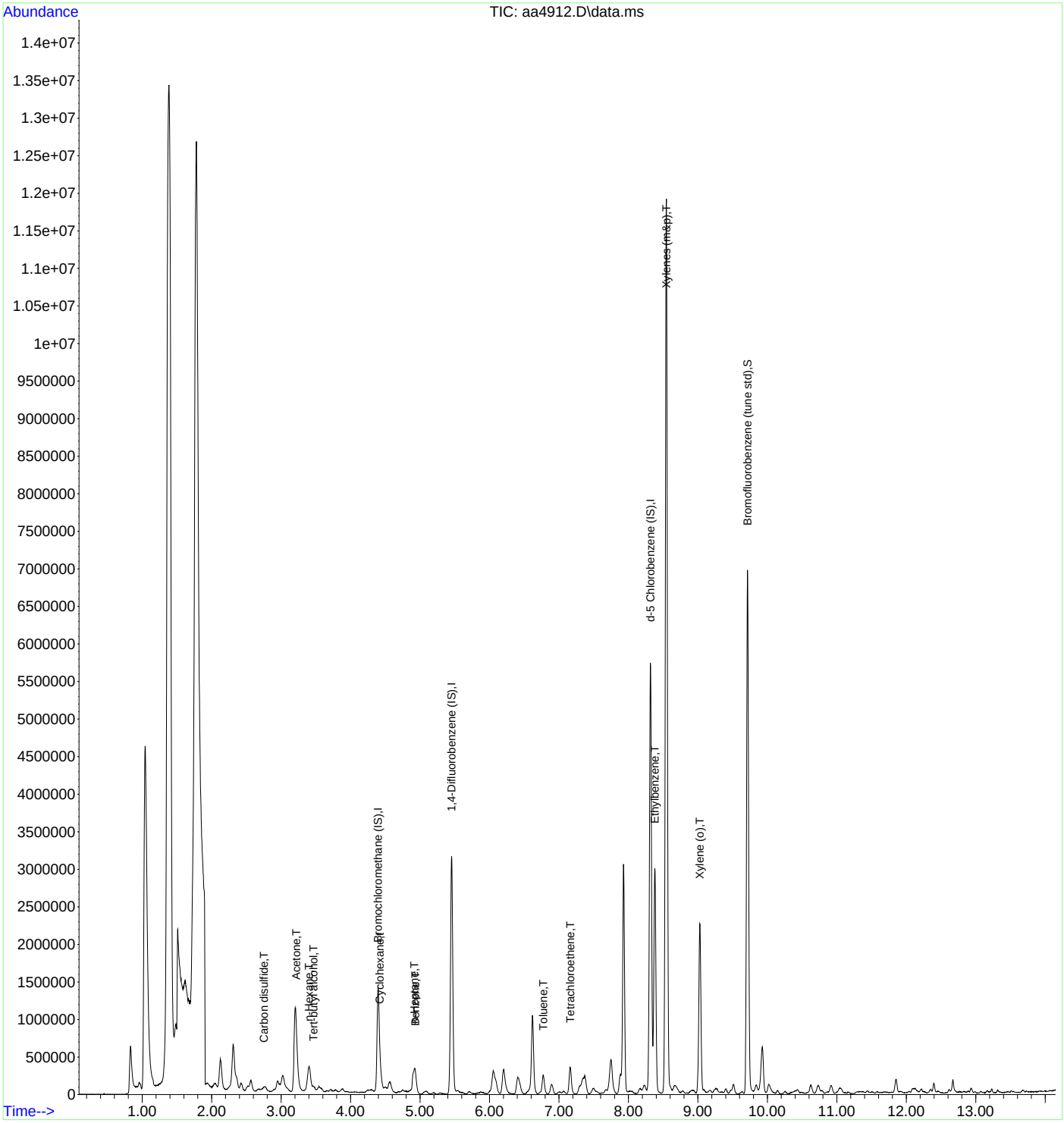
Quant Time: Dec 12 10:28:15 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

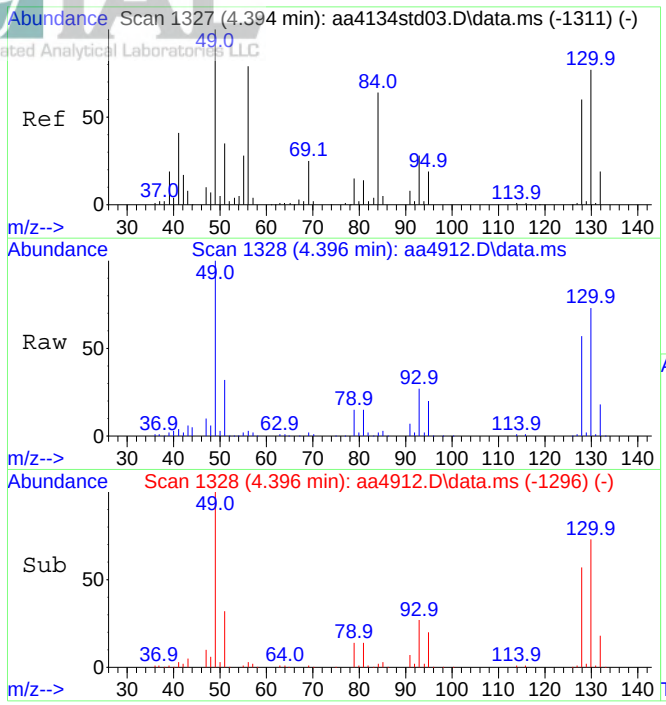
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.396 | 130 | 599033 | 10.00 | ppbV | | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.454 | 114 | 2878783 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 3437579 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 3038022 | 10.14 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 15) Carbon disulfide | 2.753 | 76 | 82416 | 0.45 | ppbV | # | 76 |
| 21) Acetone | 3.219 | 43 | 174617 | 1.93 | ppbV | | 93 |
| 24) n-Hexane | 3.403 | 57 | 218103 | 1.16 | ppbV | | 83 |
| 26) Tert-butyl alcohol | 3.467 | 59 | 81087 | 0.52 | ppbV | | 100 |
| 29) Cyclohexane | 4.422 | 56 | 48398 | 0.37 | ppbV | # | 60 |
| 36) n-Heptane | 4.917 | 43 | 142027 | 0.86 | ppbV | | 95 |
| 37) Benzene | 4.933 | 78 | 131541 | 0.55 | ppbV | | 93 |
| 47) Toluene | 6.772 | 91 | 136327 | 0.34 | ppbV | | 100 |
| 49) Tetrachloroethene | 7.164 | 166 | 108175 | 0.62 | ppbV | | 99 |
| 58) Ethylbenzene | 8.380 | 91 | 2641624 | 4.17 | ppbV | | 99 |
| 59) Xylenes (m&p) | 8.547 | 91 | 8388578 | 17.87 | ppbV | | 98 |
| 60) Xylene (o) | 9.026 | 91 | 1646259 | 3.21 | ppbV | | 98 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4912.D
Acq On : 11 Dec 2023 3:48 pm
Operator : jjw
Sample : E23-05080-02x10 dil
Misc : 2155, 50cc
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Dec 12 10:28:15 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

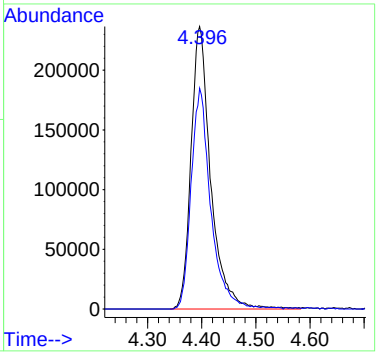


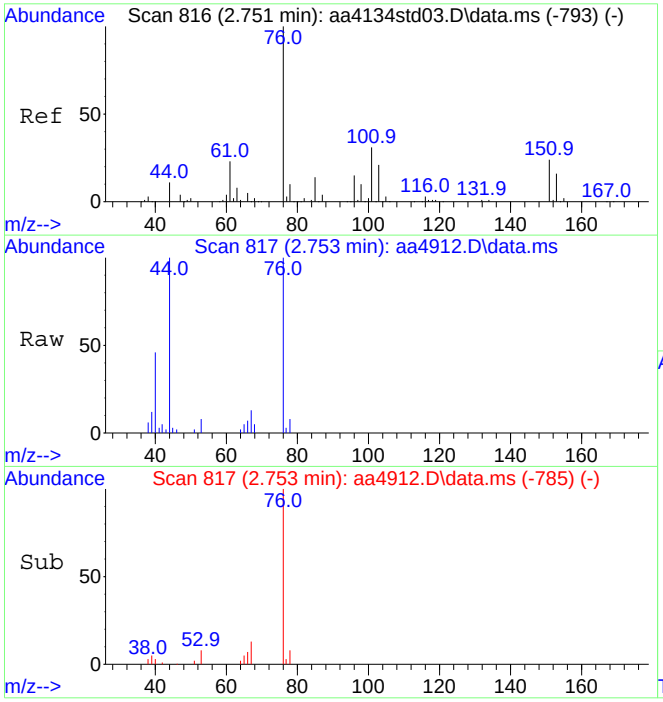



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.396 min Scan# 1328
Delta R.T. 0.002 min
Lab File: aa4912.D
Acq: 11 Dec 2023 3:48 pm

Tgt Ion:130 Resp: 599033

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 77.6 | 62.2 | 93.4 |

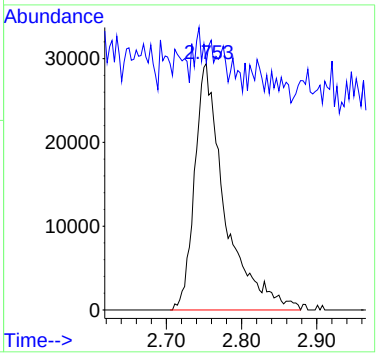


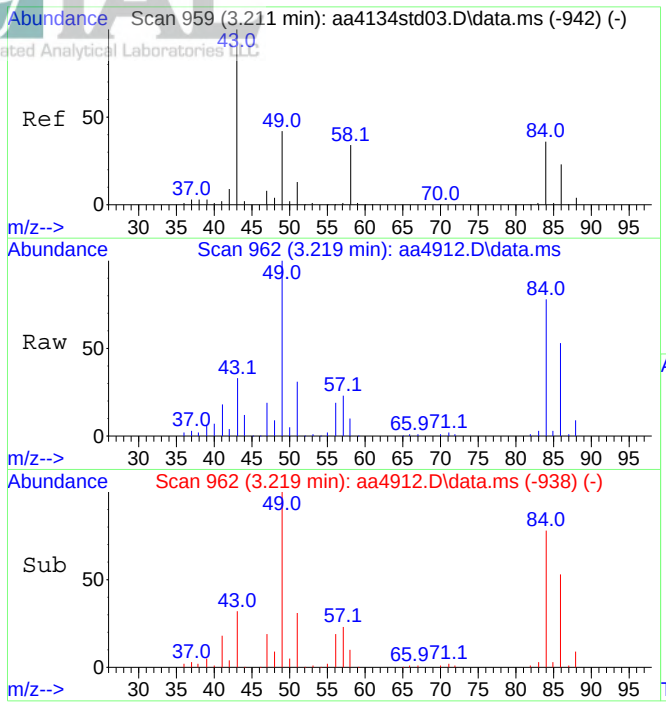




#15
Carbon disulfide
Concen: 0.45 ppbV
RT: 2.753 min Scan# 817
Delta R.T. 0.002 min
Lab File: aa4912.D
Acq: 11 Dec 2023 3:48 pm

Tgt Ion: 76 Resp: 82416

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 20.4 | 9.0 | 13.4# |

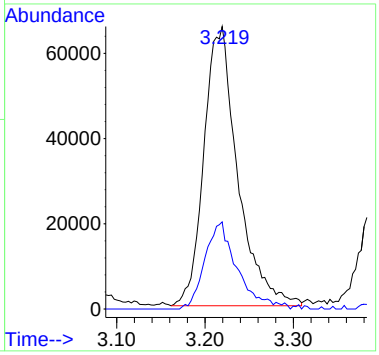


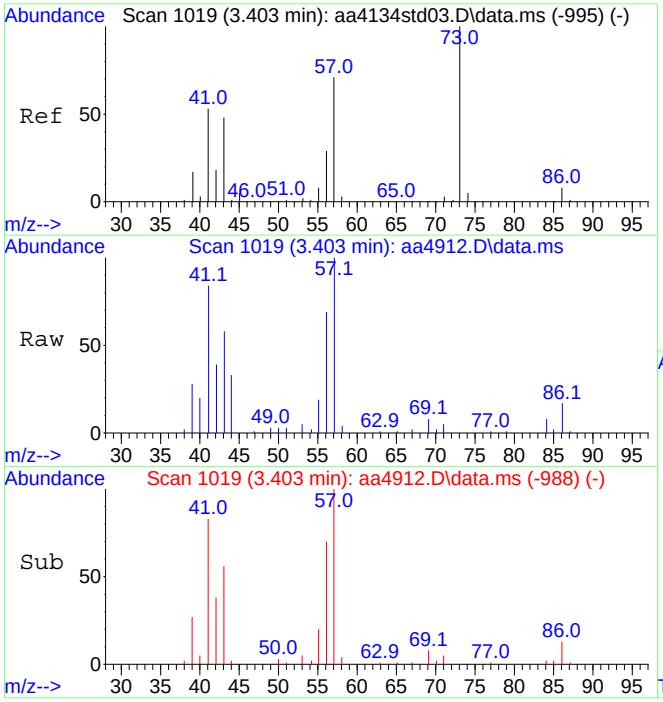



#21
Acetone
Concen: 1.93 ppbV
RT: 3.219 min Scan# 962
Delta R.T. 0.008 min
Lab File: aa4912.D
Acq: 11 Dec 2023 3:48 pm

Tgt Ion: 43 Resp: 174617

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 29.9 | 27.1 | 40.7 |

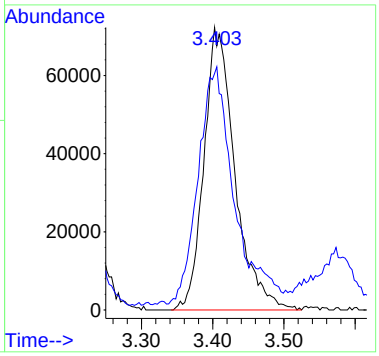


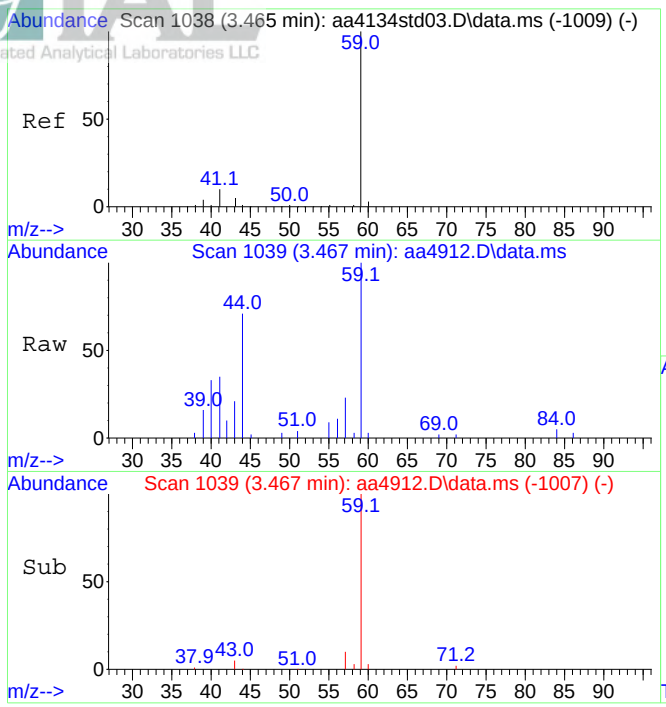




#24
n-Hexane
Concen: 1.16 ppbV
RT: 3.403 min Scan# 1019
Delta R.T. -0.001 min
Lab File: aa4912.D
Acq: 11 Dec 2023 3:48 pm

Tgt Ion: 57 Resp: 218103

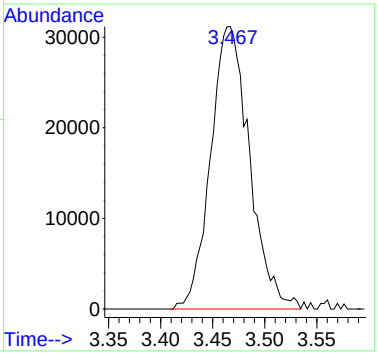
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 41 | 98.5 | 66.4 | 99.6 |

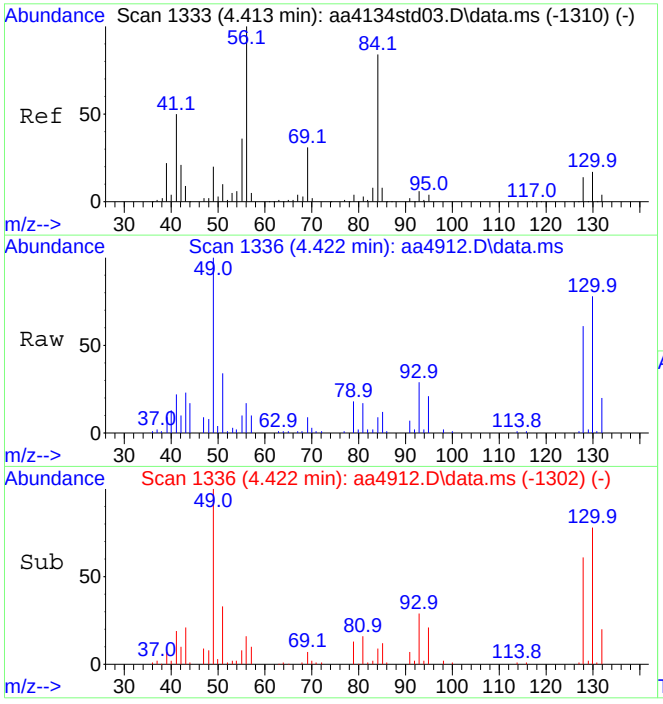





#26
Tert-butyl alcohol
Concen: 0.52 ppbV
RT: 3.467 min Scan# 1039
Delta R.T. 0.002 min
Lab File: aa4912.D
Acq: 11 Dec 2023 3:48 pm

Tgt Ion: 59 Resp: 81087

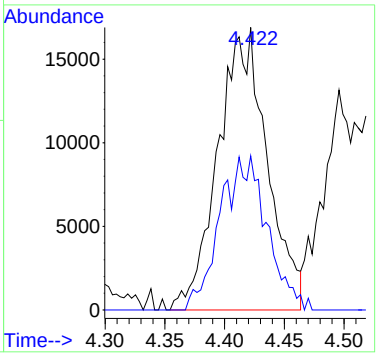


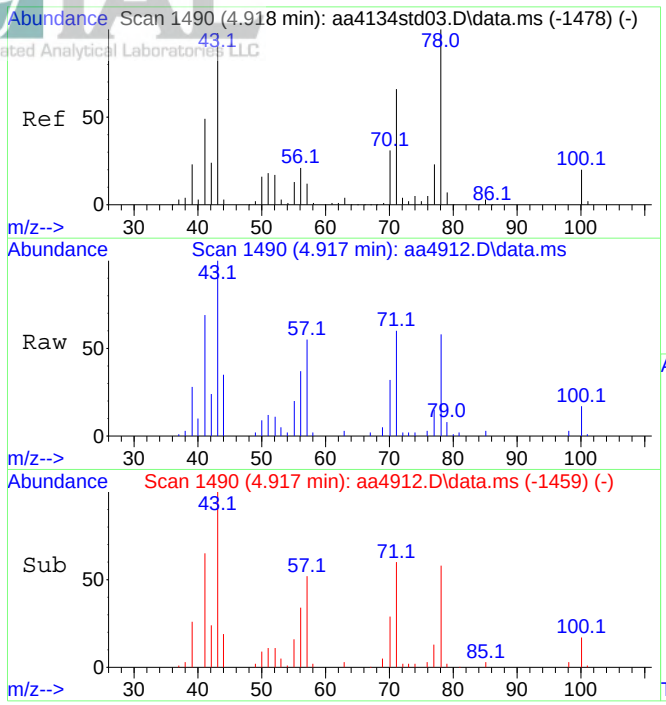




#29
Cyclohexane
Concen: 0.37 ppbV
RT: 4.422 min Scan# 1336
Delta R.T. 0.009 min
Lab File: aa4912.D
Acq: 11 Dec 2023 3:48 pm

Tgt Ion: 56 Resp: 48398

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 52.0 | 71.2 | 106.8# |

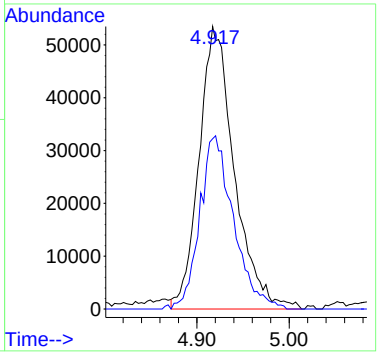


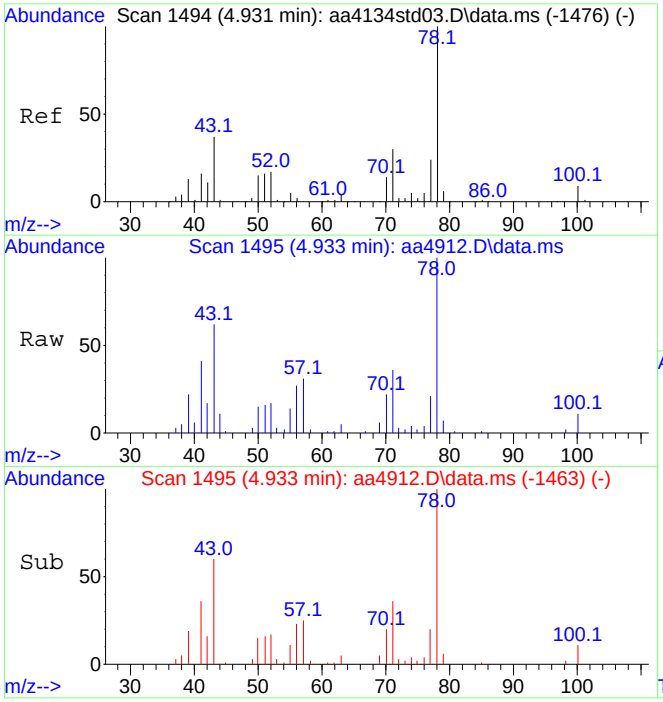



#36
n-Heptane
Concen: 0.86 ppbV
RT: 4.917 min Scan# 1490
Delta R.T. -0.001 min
Lab File: aa4912.D
Acq: 11 Dec 2023 3:48 pm

Tgt Ion: 43 Resp: 142027

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 71 | 58.9 | 50.5 | 75.7 |

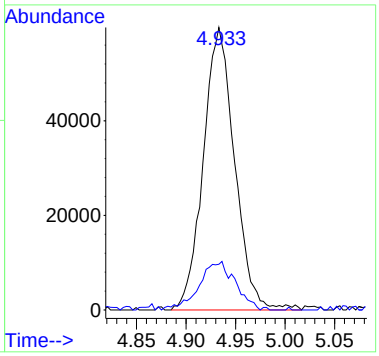


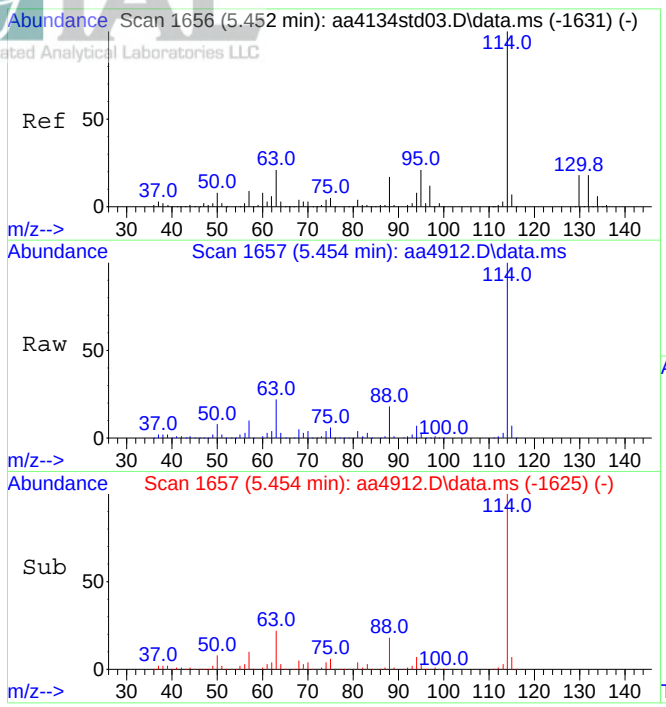




#37
Benzene
Concen: 0.55 ppbV
RT: 4.933 min Scan# 1495
Delta R.T. 0.002 min
Lab File: aa4912.D
Acq: 11 Dec 2023 3:48 pm

Tgt Ion: 78 Resp: 131541

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 19.6 | 13.4 | 20.0 |

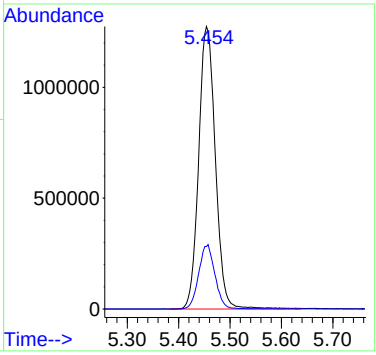


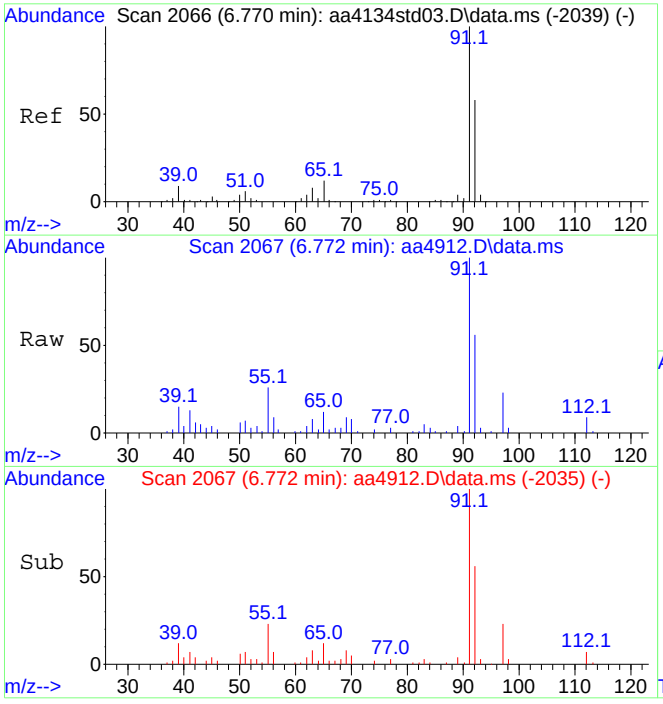



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.454 min Scan# 1657
Delta R.T. 0.002 min
Lab File: aa4912.D
Acq: 11 Dec 2023 3:48 pm

Tgt Ion:114 Resp: 2878783

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.1 | 17.0 | 25.6 |

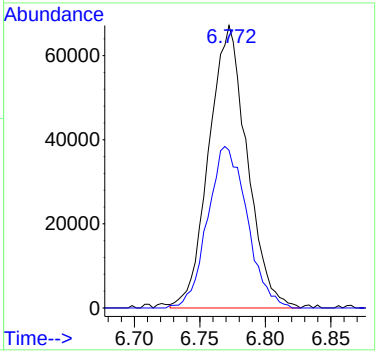


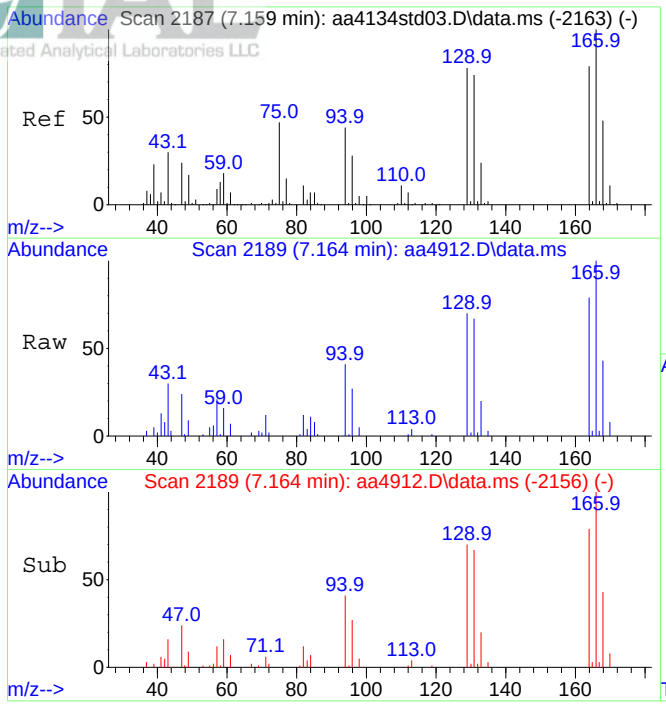




#47
Toluene
Concen: 0.34 ppbV
RT: 6.772 min Scan# 2067
Delta R.T. 0.002 min
Lab File: aa4912.D
Acq: 11 Dec 2023 3:48 pm

Tgt Ion: 91 Resp: 136327

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 59.1 | 47.3 | 70.9 |

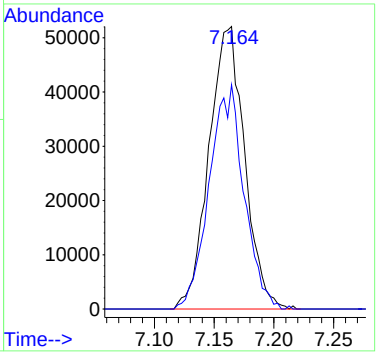


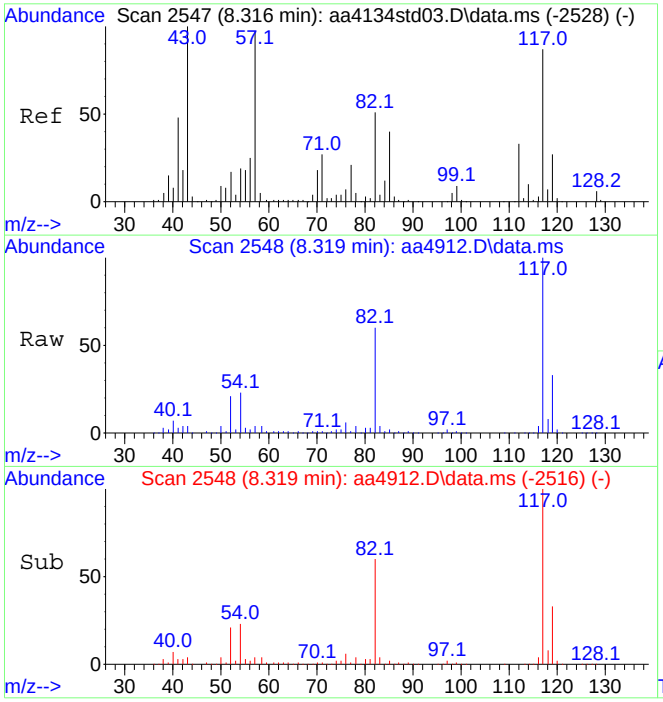



#49
Tetrachloroethene
Concen: 0.62 ppbV
RT: 7.164 min Scan# 2189
Delta R.T. 0.006 min
Lab File: aa4912.D
Acq: 11 Dec 2023 3:48 pm

Tgt Ion:166 Resp: 108175

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 77.1 | 62.3 | 93.5 |

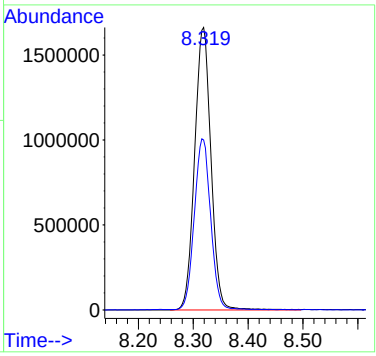


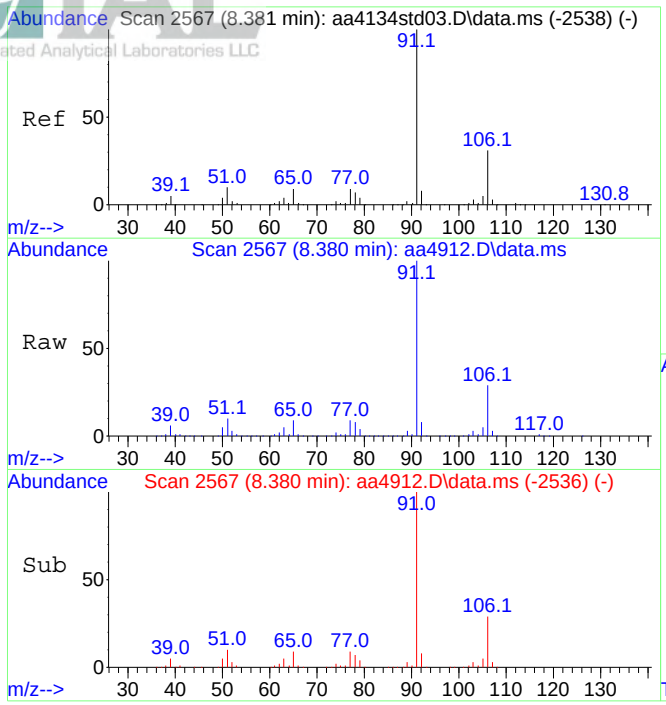




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.319 min Scan# 2548
Delta R.T. 0.002 min
Lab File: aa4912.D
Acq: 11 Dec 2023 3:48 pm

Tgt Ion:117 Resp: 3437579

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 60.3 | 47.0 | 70.4 |

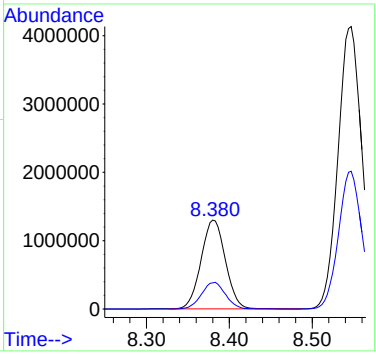


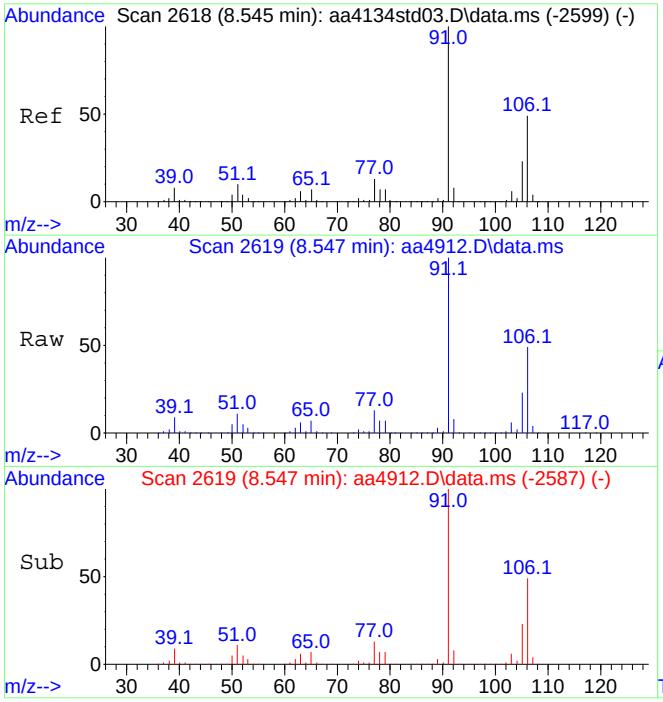



#58
Ethylbenzene
Concen: 4.17 ppbV
RT: 8.380 min Scan# 2567
Delta R.T. -0.001 min
Lab File: aa4912.D
Acq: 11 Dec 2023 3:48 pm

Tgt Ion: 91 Resp: 2641624

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 29.9 | 24.6 | 36.8 |

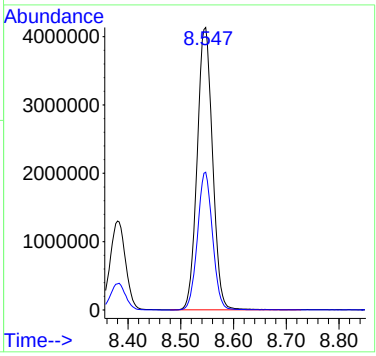


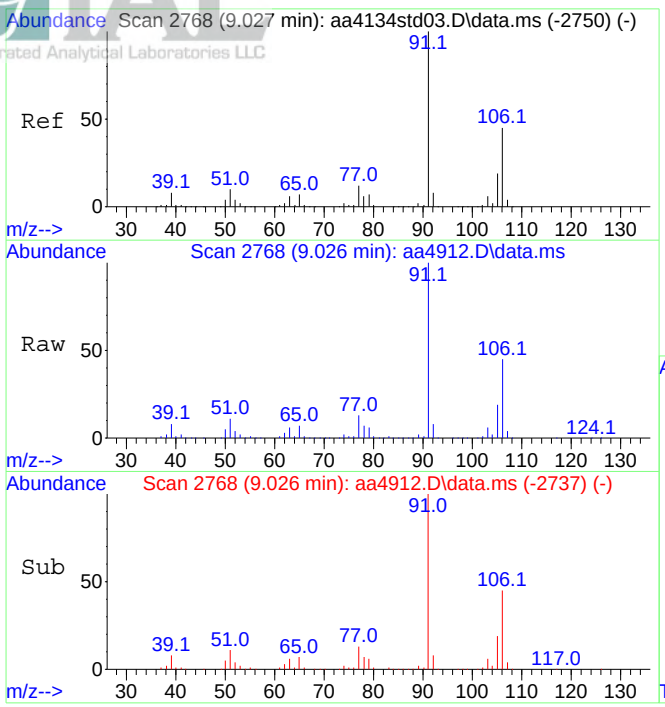




#59
Xylenes (m&p)
Concen: 17.87 ppbV
RT: 8.547 min Scan# 2619
Delta R.T. 0.002 min
Lab File: aa4912.D
Acq: 11 Dec 2023 3:48 pm

Tgt Ion: 91 Resp: 8388578

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 47.7 | 39.0 | 58.4 |

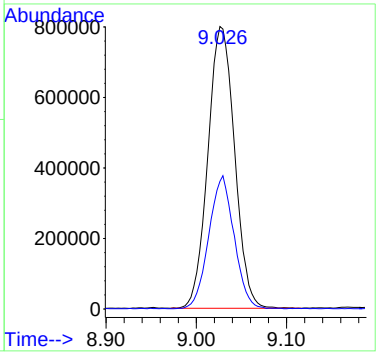


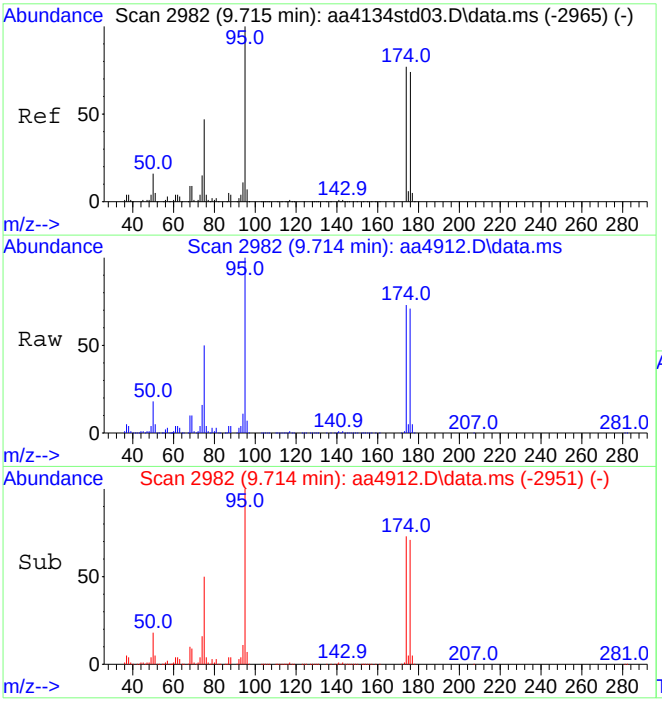



#60
Xylene (o)
Concen: 3.21 ppbV
RT: 9.026 min Scan# 2768
Delta R.T. -0.001 min
Lab File: aa4912.D
Acq: 11 Dec 2023 3:48 pm

Tgt Ion: 91 Resp: 1646259

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 44.6 | 36.8 | 55.2 |

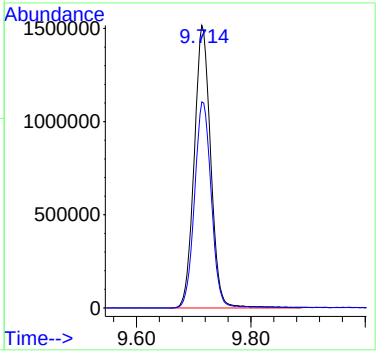



#64
Bromofluorobenzene (tune std)
Concen: 10.14 ppbV
RT: 9.714 min Scan# 2982
Delta R.T. -0.001 min
Lab File: aa4912.D
Acq: 11 Dec 2023 3:48 pm

Tgt Ion: 95 Resp: 3038022

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 74.3 | 61.1 | 91.7 |



# Section VII: Standards Data

## Initial Calibration Data

## Initial Calibration Verification Data

## Continuing Calibration Data

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Initial Calibration Data Summary Report

**Initial Calibration Curve:** 8/15/2023 **Method ID:** 230815.M
**Instrument:** AA

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA3401BFB] | 08/15/2023 10:11 |
| 0.2 PPBV STD [AA3402STD05] | 08/15/2023 11:15 |
| 10 PPBV STD [AA3404STD03] | 08/15/2023 13:09 |
| 2 PPBV STD [AA3403STD04] | 08/15/2023 13:45 |
| 20 PPBV STD [AA3405STD02] | 08/15/2023 15:12 |
| 40 PPBV STD [AA3406STD01] | 08/15/2023 16:47 |
| 10 PPBV ICVSS [AA3407ICVSS] | 08/15/2023 18:09 |

| | Parameter | RRF 0.2ppbv | RRF 2ppbv | RRF 10ppbv | RRF 20ppbv | RRF 40ppbv | Avg ppbv | % RSD |
|---|---|---|---|---|---|---|---|---|
| 1) | Bromochloromethane | ----------ISTD---------- | | | | | | |
| 3) | Dichlorodifluoromethane | 2.6 | 2.1 | 2.4 | 2.6 | 2.9 | 2.5 | 12 |
| 4) | 1,2-Dichlorotetrafluoroethane | 4.7 | 3.4 | 3.2 | 3.3 | 3.6 | 3.6 | 17 |
| 6) | Chloromethane | 0.073 | 0.12 | 0.12 | 0.13 | 0.15 | 0.12 | 23 |
| 7) | Vinyl chloride | 0.87 | 0.81 | 0.94 | 1.0 | 1.1 | 0.95 | 14 |
| 8) | 1,3-Butadiene | 0.94 | 0.96 | 0.93 | 0.99 | 1.0 | 0.97 | 4.6 |
| 9) | Bromomethane | 0.75 | 0.65 | 0.78 | 0.85 | 0.96 | 0.80 | 14 |
| 10) | Chloroethane | 0.44 | 0.40 | 0.52 | 0.57 | 0.65 | 0.52 | 19 |
| 11) | Vinyl bromide | 0.89 | 0.81 | 0.99 | 1.1 | 1.2 | 1.0 | 17 |
| 12) | Trichlorofluoromethane | 3.8 | 3.2 | 3.1 | 3.4 | 3.6 | 3.4 | 8.1 |
| 14) | 1,1-Dichloroethene | 1.8 | 1.7 | 2.1 | 2.3 | 2.5 | 2.1 | 15 |
| 15) | Carbon disulfide | 3.2 | 2.8 | 3.5 | 3.7 | 3.9 | 3.4 | 12 |
| 16) | 1,1,2-Trichloro-1,2,2-trifluoroethane | 4.1 | 3.6 | 2.8 | 3.0 | 3.3 | 3.4 | 16 |
| 17) | Acrolein | 0.45 | 0.34 | 0.43 | 0.45 | 0.49 | 0.43 | 13 |
| 18) | Allyl Chloride | 0.51 | 0.46 | 0.56 | 0.62 | 0.65 | 0.56 | 14 |
| 19) | Isopropanol | 2.2 | 2.0 | 2.3 | 2.5 | 2.6 | 2.3 | 10 |
| 20) | Methylene chloride | 1.9 | 0.89 | 1.1 | 1.2 | 1.3 | 1.3 | 29 |
| 21) | Acetone | 2.2 | 1.5 | 1.8 | 1.9 | 1.9 | 1.9 | 14 |
| 22) | 1,2-Dichloroethene (trans) | 1.6 | 1.5 | 1.9 | 2.1 | 2.3 | 1.9 | 17 |
| 24) | n-Hexane | 3.6 | 3.4 | 3.0 | 3.2 | 3.6 | 3.3 | 7.2 |
| 25) | Methyl tert-butyl ether | 4.7 | 5.1 | 4.0 | 4.3 | 4.7 | 4.6 | 9.5 |
| 26) | Tert-butyl alcohol | 2.9 | 3.2 | 2.6 | 2.8 | 3.2 | 2.9 | 8.1 |
| 27) | 1,1-Dichloroethane | 2.9 | 2.3 | 2.4 | 2.7 | 2.9 | 2.6 | 11 |
| 28) | 1,2-Dichloroethene (cis) | 1.7 | 1.5 | 1.8 | 2.0 | 2.2 | 1.8 | 14 |
| 29) | Cyclohexane | 2.5 | 2.7 | 2.1 | 2.3 | 2.5 | 2.4 | 9.8 |
| 30) | Chloroform | 3.3 | 2.8 | 3.0 | 3.3 | 3.6 | 3.2 | 9.6 |
| 32) | Carbon tetrachloride | 4.2 | 4.4 | 3.4 | 3.5 | 3.9 | 3.9 | 11 |
| 33) | Tetrahydrofuran | 1.8 | 1.6 | 1.7 | 1.9 | 2.0 | 1.8 | 8.7 |
| 34) | 1,1,1-Trichloroethane | 3.8 | 4.0 | 3.0 | 3.2 | 3.5 | 3.5 | 12 |
| 35) | Methyl ethyl ketone | 2.9 | 2.5 | 2.7 | 3.0 | 3.3 | 2.9 | 11 |
| 36) | n-Heptane | 3.0 | 4.0 | 3.2 | 3.3 | 3.3 | 3.4 | 11 |
| 37) | Benzene | 5.1 | 4.3 | 4.2 | 4.6 | 4.9 | 4.6 | 8.4 |
| 38) | 1,2-Dichloroethane | 2.0 | 1.8 | 1.9 | 2.2 | 2.4 | 2.1 | 11 |
| 39) | 1,4-Difluorobenzene | ----------ISTD---------- | | | | | | |
| 40) | Trichloroethene | 0.60 | 0.46 | 0.48 | 0.50 | 0.50 | 0.51 | 11 |
| 41) | 2,2,4-Trimethylpentane | 1.4 | 1.3 | 1.2 | 1.2 | 1.3 | 1.3 | 7.7 |
| 42) | 1,2-Dichloropropane | 0.54 | 0.45 | 0.43 | 0.44 | 0.42 | 0.46 | 11 |
| 43) | Bromodichloromethane | 0.91 | 0.75 | 0.76 | 0.79 | 0.77 | 0.80 | 8.1 |

***% RSD (Relative Standard Deviation) must be within 30%**
****An exception is made for 2 compounds that must be within 40%**
**RRF - Relative Response Factor**

# Initial Calibration Data Summary Report

**Initial Calibration Curve:** 8/15/2023 **Method ID:** 230815.M
**Instrument:** AA

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA3401BFB] | 08/15/2023 10:11 |
| 0.2 PPBV STD [AA3402STD05] | 08/15/2023 11:15 |
| 10 PPBV STD [AA3404STD03] | 08/15/2023 13:09 |
| 2 PPBV STD [AA3403STD04] | 08/15/2023 13:45 |
| 20 PPBV STD [AA3405STD02] | 08/15/2023 15:12 |
| 40 PPBV STD [AA3406STD01] | 08/15/2023 16:47 |
| 10 PPBV ICVSS [AA3407ICVSS] | 08/15/2023 18:09 |

| | Parameter | RRF 0.2ppbv | RRF 2ppbv | RRF 10ppbv | RRF 20ppbv | RRF 40ppbv | Avg ppbv | % RSD |
|---|---|---|---|---|---|---|---|---|
| 44) | Methyl methacrylate | 0.53 | 0.60 | 0.60 | 0.62 | 0.59 | 0.59 | 5.4 |
| 45) | 1,4-Dioxane | 0.30 | 0.29 | 0.27 | 0.28 | 0.27 | 0.28 | 3.5 |
| 46) | 1,3-Dichloropropene (cis) | 0.76 | 0.67 | 0.69 | 0.72 | 0.69 | 0.71 | 4.8 |
| 47) | Toluene | 1.6 | 1.8 | 1.6 | 1.6 | 1.4 | 1.6 | 7.6 |
| 48) | Methyl isobutyl ketone | 1.0 | 1.4 | 1.2 | 1.2 | 1.1 | 1.2 | 11 |
| 49) | Tetrachloroethene | 0.80 | 0.79 | 0.70 | 0.69 | 0.63 | 0.72 | 10 |
| 50) | 1,3-Dichloropropene (trans) | 0.59 | 0.70 | 0.73 | 0.76 | 0.71 | 0.70 | 9.3 |
| 51) | 1,1,2-Trichloroethane | 0.60 | 0.58 | 0.55 | 0.56 | 0.53 | 0.57 | 4.9 |
| 52) | Dibromochloromethane | 0.94 | 0.97 | 0.94 | 0.96 | 0.91 | 0.94 | 2.5 |
| 53) | 1,2-Dibromoethane | 0.77 | 0.84 | 0.84 | 0.87 | 0.82 | 0.83 | 4.3 |
| 54) | Methyl n-butyl ketone | 0.82 | 1.2 | 1.1 | 1.2 | 1.1 | 1.1 | 14 |
| 55) | d-5 Chlorbenzene | ----------ISTD---------- | | | | | | |
| 57) | Chlorobenzene | 1.3 | 1.1 | 1.0 | 1.0 | 1.0 | 1.1 | 11 |
| 58) | Ethylbenzene | 2.3 | 2.4 | 1.9 | 1.8 | 1.7 | 2.0 | 15 |
| 59) | Xylenes (m&p) | 1.7 | 1.8 | 1.5 | 1.3 | 0.99 | 1.5 | 22 |
| 60) | Xylenes (o) | 1.7 | 1.9 | 1.5 | 1.5 | 1.5 | 1.6 | 11 |
| 61) | Styrene | 0.95 | 1.2 | 1.1 | 1.1 | 1.1 | 1.1 | 8.3 |
| 62) | Bromoform | 0.90 | 0.87 | 0.81 | 0.79 | 0.79 | 0.83 | 6.3 |
| 63) | Cumene | 2.2 | 2.6 | 2.0 | 1.9 | 1.8 | 2.1 | 14 |
| 66) | 1,1,2,2-Tetrachloroethane | 1.4 | 1.4 | 1.1 | 1.1 | 1.1 | 1.2 | 11 |
| 67) | 4-Ethyltoluene | 2.4 | 2.7 | 2.3 | 2.1 | 1.8 | 2.3 | 14 |
| 68) | 2-Chlorotoluene | 2.0 | 2.2 | 1.8 | 1.7 | 1.7 | 1.9 | 11 |
| 69) | 1,3,5-Trimethylbenzene | 1.8 | 2.2 | 1.8 | 1.7 | 1.6 | 1.8 | 12 |
| 70) | 1,2,4-Trimethylbenzene | 1.6 | 2.2 | 1.9 | 1.8 | 1.7 | 1.8 | 13 |
| 71) | 1,3-Dichlorobenzene | 1.5 | 1.2 | 1.1 | 1.1 | 1.2 | 1.2 | 12 |
| 72) | 1,4-Dichlorobenzene | 1.2 | 1.2 | 1.2 | 1.1 | 1.2 | 1.2 | 1.4 |
| 73) | Benzyl chloride | 1.2 | 1.6 | 1.7 | 1.7 | 1.8 | 1.6 | 16 |
| 74) | 1,2-Dichlorobenzene | 1.2 | 1.2 | 1.1 | 1.1 | 1.1 | 1.1 | 4.8 |
| 75) | 1,3-Hexachlorobutadiene | 1.2 | 0.86 | 0.73 | 0.67 | 0.63 | 0.82 | 29 |
| 76) | 1,2,4-Trichlorobenzene | 1.2 | 0.85 | 0.86 | 0.82 | 0.78 | 0.90 | 18 |
| 77) | Naphthalene | 2.3 | 1.8 | 1.9 | 1.8 | 1.5 | 1.9 | 16 |

***% RSD (Relative Standard Deviation) must be within 30%**
****An exception is made for 2 compounds that must be within 40%**
**RRF - Relative Response Factor**

Method Path : C:\msdchem\1\METHODS\
Method File : 230815.M
Title : TO-15 on the Agilent 7890A / 5975C
Last Update : Wed Aug 16 10:00:51 2023
Response Via : Initial Calibration

Calibration Files
0.2 =aa3402std05.D 2 =aa3403std04.D 10 =aa3404std03.D 20 =aa3405std02.D 40 =aa3406std01.D

| | | Compound | 0.2 | 2 | 10 | 20 | 40 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|
| 1) | I | Bromochloromethane... | ----------ISTD---------- | | | | | | |
| 2) | T | Propene | 0.693 | 0.590 | 0.649 | 0.708 | 0.804 | 0.689 | 11.46 |
| 3) | T | Dichlorodifluoro... | 2.627 | 2.060 | 2.419 | 2.640 | 2.888 | 2.527 | 12.25 |
| 4) | T | 1,2-Dichlorotetr... | 4.698 | 3.379 | 3.171 | 3.318 | 3.612 | 3.636 | 16.92 |
| 5) | T | n-Butane | 1.529 | 1.686 | 1.607 | 1.650 | 1.703 | 1.635 | 4.27 |
| 6) | T | Chloromethane | 0.073 | 0.121 | 0.116 | 0.128 | 0.147 | 0.117 | 23.33 |
| 7) | T | Vinyl chloride | 0.866 | 0.806 | 0.938 | 1.004 | 1.138 | 0.950 | 13.56 |
| 8) | T | 1,3-Butadiene | 0.939 | 0.962 | 0.929 | 0.985 | 1.043 | 0.972 | 4.66 |
| 9) | T | Bromomethane | 0.754 | 0.650 | 0.781 | 0.852 | 0.955 | 0.798 | 14.26 |
| 10) | T | Chloroethane | 0.437 | 0.404 | 0.524 | 0.567 | 0.652 | 0.517 | 19.32 |
| 11) | T | Vinyl bromide | 0.891 | 0.806 | 0.989 | 1.088 | 1.246 | 1.004 | 17.12 |
| 12) | T | Trichlorofluorom... | 3.753 | 3.179 | 3.089 | 3.381 | 3.599 | 3.400 | 8.19 |
| 13) | T | Ethanol | 0.566 | 0.336 | 0.323 | 0.344 | 0.433 | 0.400 | 25.53 |
| 14) | T | 1,1-Dichloroethene | 1.836 | 1.703 | 2.114 | 2.324 | 2.466 | 2.088 | 15.36 |
| 15) | T | Carbon disulfide | 3.198 | 2.847 | 3.522 | 3.709 | 3.868 | 3.429 | 11.95 |
| 16) | T | 1,1,2-Trichloro-... | 4.138 | 3.589 | 2.807 | 2.990 | 3.274 | 3.360 | 15.67 |
| 17) | T | Acrolein | 0.446 | 0.337 | 0.430 | 0.447 | 0.488 | 0.430 | 13.07 |
| 18) | T | Allyl chloride | 0.510 | 0.458 | 0.563 | 0.616 | 0.651 | 0.559 | 13.89 |
| 19) | T | Isopropanol | 2.218 | 2.002 | 2.266 | 2.475 | 2.597 | 2.312 | 10.02 |
| 20) | T | Methylene chloride | 1.853 | 0.894 | 1.059 | 1.168 | 1.335 | 1.262 | 29.12 |
| 21) | T | Acetone | 2.238 | 1.490 | 1.826 | 1.890 | 1.937 | 1.876 | 14.27 |
| 22) | T | trans-1,2-Dichlo... | 1.626 | 1.515 | 1.873 | 2.082 | 2.300 | 1.879 | 17.14 |
| 23) | T | n-Pentane | 2.737 | 2.398 | 2.021 | 2.278 | 2.555 | 2.398 | 11.35 |
| 24) | T | n-Hexane | 3.560 | 3.405 | 3.010 | 3.196 | 3.573 | 3.349 | 7.26 |
| 25) | T | Methyl tert-buty... | 4.721 | 5.118 | 3.992 | 4.267 | 4.676 | 4.555 | 9.56 |
| 26) | T | Tert-butyl alcohol | 2.872 | 3.165 | 2.601 | 2.846 | 3.159 | 2.929 | 8.11 |
| 27) | T | 1,1-Dichloroethane | 2.886 | 2.279 | 2.406 | 2.680 | 2.935 | 2.637 | 10.96 |
| 28) | T | cis-1,2-Dichloro... | 1.666 | 1.532 | 1.766 | 1.984 | 2.173 | 1.824 | 14.01 |
| 29) | t | Cyclohexane | 2.480 | 2.742 | 2.109 | 2.281 | 2.488 | 2.420 | 9.87 |
| 30) | T | Chloroform | 3.341 | 2.813 | 3.029 | 3.345 | 3.610 | 3.228 | 9.60 |
| 31) | T | Ethyl acetate | 0.519 | 0.459 | 0.476 | 0.532 | 0.583 | 0.514 | 9.56 |
| 32) | T | Carbon tetrachlo... | 4.190 | 4.380 | 3.355 | 3.527 | 3.897 | 3.870 | 11.16 |
| 33) | T | Tetrahydrofuran | 1.813 | 1.612 | 1.725 | 1.883 | 2.033 | 1.813 | 8.79 |
| 34) | T | 1,1,1-Trichloroe... | 3.831 | 3.967 | 2.981 | 3.175 | 3.465 | 3.484 | 12.03 |
| 35) | T | Methyl ethyl ketone | 2.907 | 2.461 | 2.724 | 3.040 | 3.340 | 2.894 | 11.42 |
| 36) | T | n-Heptane | 3.009 | 3.965 | 3.169 | 3.287 | 3.321 | 3.350 | 10.89 |
| 37) | T | Benzene | 5.118 | 4.274 | 4.213 | 4.582 | 4.885 | 4.614 | 8.43 |
| 38) | T | 1,2-Dichloroethane | 2.033 | 1.799 | 1.949 | 2.171 | 2.385 | 2.067 | 10.78 |
| 39) | I | 1,4-Difluorobenzen... | ----------ISTD---------- | | | | | | |
| 40) | T | Trichloroethene | 0.604 | 0.461 | 0.476 | 0.499 | 0.498 | 0.508 | 11.08 |
| 41) | T | 2,2,4-Trimethylp... | 1.422 | 1.283 | 1.173 | 1.194 | 1.261 | 1.267 | 7.75 |
| 42) | T | 1,2-Dichloropropane | 0.544 | 0.451 | 0.428 | 0.436 | 0.423 | 0.456 | 10.95 |
| 43) | T | Bromodichloromet... | 0.909 | 0.753 | 0.759 | 0.786 | 0.768 | 0.795 | 8.19 |
| 44) | T | Methyl methacrylate | 0.533 | 0.595 | 0.599 | 0.618 | 0.589 | 0.587 | 5.41 |
| 45) | T | 1,4-Dioxane | 0.295 | 0.288 | 0.274 | 0.280 | 0.270 | 0.281 | 3.52 |
| 46) | T | cis-1,3-Dichloro... | 0.756 | 0.671 | 0.693 | 0.721 | 0.685 | 0.705 | 4.82 |
| 47) | T | Toluene | 1.603 | 1.770 | 1.615 | 1.607 | 1.423 | 1.603 | 7.69 |
| 48) | T | Methyl isobutyl ... | 1.020 | 1.358 | 1.158 | 1.169 | 1.085 | 1.158 | 10.96 |
| 49) | T | Tetrachloroethene | 0.802 | 0.785 | 0.698 | 0.693 | 0.626 | 0.721 | 10.04 |
| 50) | T | trans-1,3-Dichlo... | 0.586 | 0.696 | 0.728 | 0.757 | 0.709 | 0.695 | 9.37 |
| 51) | T | 1,1,2-Trichloroe... | 0.602 | 0.582 | 0.549 | 0.561 | 0.531 | 0.565 | 4.93 |
| 52) | T | Dibromochloromet... | 0.941 | 0.968 | 0.936 | 0.964 | 0.910 | 0.944 | 2.50 |
| 53) | T | 1,2-Dibromoethane | 0.770 | 0.838 | 0.835 | 0.869 | 0.822 | 0.827 | 4.35 |
| 54) | T | Methyl n-butyl k... | 0.821 | 1.172 | 1.136 | 1.176 | 1.120 | 1.085 | 13.80 |
| 55) | I | d-5 Chlorobenzene ... | ----------ISTD---------- | | | | | | |
| 56) | T | n-Nonane | 1.127 | 1.476 | 1.174 | 1.162 | 1.180 | 1.224 | 11.64 |
| 57) | T | Chlorobenzene | 1.289 | 1.143 | 1.029 | 1.009 | 1.005 | 1.095 | 11.15 |
| 58) | T | Ethylbenzene | 2.334 | 2.354 | 1.930 | 1.830 | 1.678 | 2.025 | 15.04 |
| 59) | T | Xylenes (m&p) | 1.738 | 1.788 | 1.455 | 1.324 | 0.993 | 1.460 | 22.23 |
| 60) | T | Xylene (o) | 1.710 | 1.878 | 1.542 | 1.505 | 1.471 | 1.621 | 10.51 |

Method Path : C:\msdchem\1\METHODS\
Method File : 230815.M

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 61) | T | Styrene | 0.947 | 1.200 | 1.093 | 1.071 | 1.068 | 1.076 | 8.35 |
| 62) | T | Bromoform | 0.903 | 0.872 | 0.806 | 0.789 | 0.786 | 0.831 | 6.38 |
| 63) | T | Cumene | 2.186 | 2.576 | 2.043 | 1.945 | 1.808 | 2.112 | 13.92 |
| 64) | S | Bromofluorobenze... | 0.736 | 0.817 | 0.818 | 0.845 | 0.943 | 0.832 | 8.94 |
| 65) | T | n-Propyl benzene | 2.996 | 3.397 | 2.766 | 2.573 | 2.034 | 2.753 | 18.37 |
| 66) | T | 1,1,2,2-Tetrachl... | 1.381 | 1.376 | 1.137 | 1.117 | 1.132 | 1.228 | 11.16 |
| 67) | T | 4-Ethyltoluene | 2.355 | 2.737 | 2.278 | 2.143 | 1.835 | 2.270 | 14.45 |
| 68) | T | 2-Chlorotoluene | 1.964 | 2.171 | 1.778 | 1.722 | 1.704 | 1.868 | 10.62 |
| 69) | T | 1,3,5-Trimethylb... | 1.800 | 2.225 | 1.792 | 1.719 | 1.648 | 1.837 | 12.28 |
| 70) | T | 1,2,4-Trimethylb... | 1.568 | 2.188 | 1.854 | 1.793 | 1.705 | 1.821 | 12.71 |
| 71) | T | 1,3-Dichlorobenzene | 1.459 | 1.183 | 1.126 | 1.114 | 1.157 | 1.208 | 11.85 |
| 72) | T | 1,4-Dichlorobenzene | 1.161 | 1.161 | 1.153 | 1.142 | 1.187 | 1.161 | 1.43 |
| 73) | T | Benzyl chloride | 1.168 | 1.566 | 1.708 | 1.744 | 1.770 | 1.591 | 15.67 |
| 74) | T | 1,2-Dichlorobenzene | 1.169 | 1.225 | 1.111 | 1.083 | 1.128 | 1.143 | 4.82 |
| 75) | T | 1,3-Hexachlorobu... | 1.209 | 0.857 | 0.729 | 0.674 | 0.629 | 0.820 | 28.53 |
| 76) | T | 1,2,4-Trichlorob... | 1.191 | 0.845 | 0.860 | 0.816 | 0.781 | 0.899 | 18.48 |
| 77) | T | Naphthalene | 2.270 | 1.826 | 1.920 | 1.809 | 1.459 | 1.857 | 15.61 |

(#) = Out of Range

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3402std05.D
Acq On : 15 Aug 2023 11:15 am
Operator : jjw
Sample : 0.2 ppbv standard
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 15 17:16:53 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:15:22 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.380 | 130 | 543782 | 10.00 | ppbV | | -0.016 |
| 39) 1,4-Difluorobenzene (IS) | 5.448 | 114 | 2104790 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 2068537 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1523370 | 8.85 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 1.454 | 41 | 8216 | 0.22 | ppbV | # | 67 |
| 3) Dichlorodifluoromethane | 1.492 | 85 | 30288 | 0.22 | ppbV | | 99 |
| 4) 1,2-Dichlorotetrafluor... | 1.626 | 85 | 50076 | 0.25 | ppbV | | 96 |
| 5) n-Butane | 1.698 | 43 | 18121 | 0.20 | ppbV | | 97 |
| 6) Chloromethane | 1.763 | 52 | 890 | 0.14 | ppbV | | 54 |
| 7) Vinyl chloride | 1.760 | 62 | 10168 | 0.20 | ppbV | | 97 |
| 8) 1,3-Butadiene | 1.767 | 39 | 10931 | 0.21 | ppbV | | 84 |
| 9) Bromomethane | 2.049 | 94 | 8195 | 0.19 | ppbV | | 87 |
| 10) Chloroethane | 2.171 | 64 | 5038 | 0.18 | ppbV | # | 73 |
| 11) Vinyl bromide | 2.271 | 106 | 9786 | 0.18 | ppbV | | 94 |
| 12) Trichlorofluoromethane | 2.287 | 101 | 44897 | 0.24 | ppbV | | 99 |
| 13) Ethanol | 2.650 | 45 | 6400 | 0.29 | ppbV | # | 53 |
| 14) 1,1-Dichloroethene | 2.711 | 61 | 20761 | 0.18 | ppbV | | 99 |
| 15) Carbon disulfide | 2.731 | 76 | 37217 | 0.20 | ppbV | # | 87 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.750 | 101 | 49053 | 0.27 | ppbV | | 100 |
| 17) Acrolein | 2.956 | 56 | 4855 | 0.21 | ppbV | | 84 |
| 18) Allyl chloride | 3.091 | 76 | 5995 | 0.20 | ppbV | | 100 |
| 19) Isopropanol | 3.097 | 45 | 21471 | 0.17 | ppbV | # | 78 |
| 20) Methylene chloride | 3.184 | 49 | 21768 | 0.31 | ppbV | | 94 |
| 21) Acetone | 3.194 | 43 | 26290 | 0.26 | ppbV | # | 87 |
| 22) trans-1,2-Dichloroethene | 3.309 | 61 | 19630 | 0.19 | ppbV | | 99 |
| 23) n-Pentane | 3.393 | 43 | 32143 | 0.25 | ppbV | | 94 |
| 24) n-Hexane | 3.387 | 57 | 42982 | 0.24 | ppbV | | 89 |
| 25) Methyl tert-butyl ether | 3.396 | 73 | 57505 | 0.23 | ppbV | | 99 |
| 26) Tert-butyl alcohol | 3.454 | 59 | 35922 | 0.23 | ppbV | | 100 |
| 27) 1,1-Dichloroethane | 3.798 | 63 | 33581 | 0.23 | ppbV | | 93 |
| 28) cis-1,2-Dichloroethene | 4.223 | 61 | 19745 | 0.20 | ppbV | | 100 |
| 29) Cyclohexane | 4.396 | 56 | 30214 | 0.23 | ppbV | | 97 |
| 30) Chloroform | 4.441 | 83 | 39248 | 0.22 | ppbV | | 97 |
| 31) Ethyl acetate | 4.534 | 61 | 6099 | 0.22 | ppbV | | 99 |
| 32) Carbon tetrachloride | 4.560 | 117 | 50587 | 0.24 | ppbV | | 99 |
| 33) Tetrahydrofuran | 4.567 | 42 | 21884 | 0.22 | ppbV | | 96 |
| 34) 1,1,1-Trichloroethane | 4.608 | 97 | 45414 | 0.24 | ppbV | | 97 |
| 35) Methyl ethyl ketone | 4.676 | 43 | 34778 | 0.22 | ppbV | | 96 |
| 36) n-Heptane | 4.907 | 43 | 36329 | 0.20 | ppbV | | 98 |
| 37) Benzene | 4.923 | 78 | 60118 | 0.24 | ppbV | | 100 |
| 38) 1,2-Dichloroethane | 5.087 | 62 | 24098 | 0.21 | ppbV | | 100 |
| 40) Trichloroethene | 5.425 | 130 | 25424 | 0.24 | ppbV | | 97 |
| 41) 2,2,4-Trimethylpentane | 4.833 | 57 | 65257 | 0.24 | ppbV | | 99 |
| 42) 1,2-Dichloropropane | 5.875 | 63 | 25405 | 0.26 | ppbV | | 97 |
| 43) Bromodichloromethane | 5.943 | 83 | 44017 | 0.26 | ppbV | | 100 |
| 44) Methyl methacrylate | 6.081 | 41 | 24702 | 0.20 | ppbV | | 95 |
| 45) 1,4-Dioxane | 6.116 | 88 | 14508 | 0.25 | ppbV | | 92 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 35333 | 0.24 | ppbV | | 100 |
| 47) Toluene | 6.769 | 91 | 72857 | 0.22 | ppbV | | 97 |
| 48) Methyl isobutyl ketone | 7.132 | 43 | 46816 | 0.19 | ppbV | | 96 |
| 49) Tetrachloroethene | 7.161 | 166 | 37803 | 0.25 | ppbV | | 99 |
| 50) trans-1,3-Dichloropropene | 7.174 | 75 | 27399 | 0.19 | ppbV | | 93 |
| 51) 1,1,2-Trichloroethane | 7.335 | 97 | 27389 | 0.23 | ppbV | | 98 |

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3402std05.D
Acq On : 15 Aug 2023 11:15 am
Operator : jjw
Sample : 0.2 ppbv standard
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

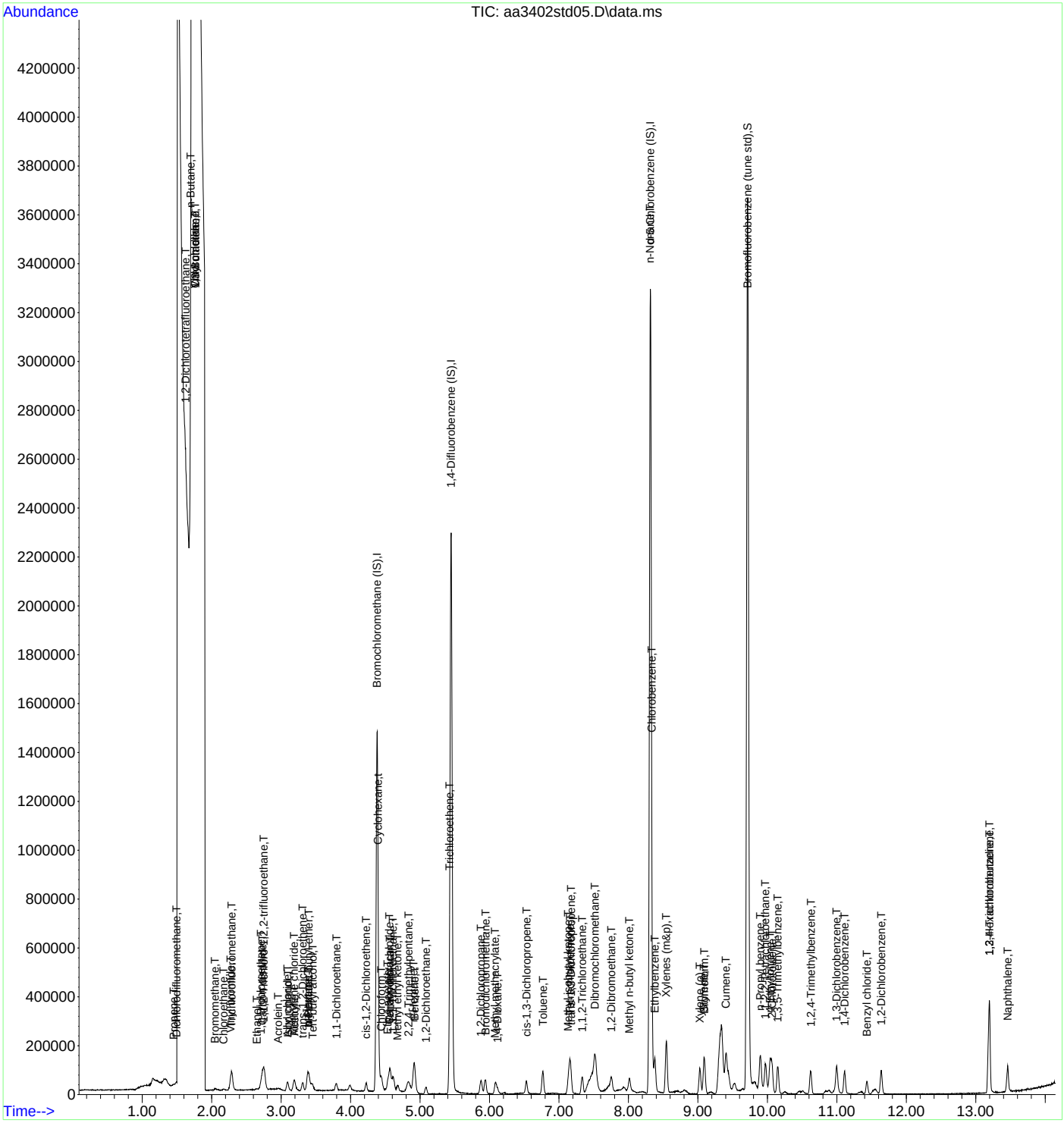
Quant Time: Aug 15 17:16:53 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:15:22 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.518 | 129 | 44365 | 0.22 | ppbV | | 98 |
| 53) 1,2-Dibromoethane | 7.753 | 107 | 35025 | 0.20 | ppbV | | 99 |
| 54) Methyl n-butyl ketone | 8.010 | 43 | 39036 | 0.17 | ppbV | | 94 |
| 56) n-Nonane | 8.312 | 43 | 51740 | 0.20 | ppbV | | 94 |
| 57) Chlorobenzene | 8.335 | 112 | 59186 | 0.26 | ppbV | # | 57 |
| 58) Ethylbenzene | 8.380 | 91 | 107190 | 0.26 | ppbV | | 98 |
| 59) Xylenes (m&p) | 8.544 | 91 | 160319 | 0.53 | ppbV | | 96 |
| 60) Xylene (o) | 9.026 | 91 | 77796 | 0.23 | ppbV | | 100 |
| 61) Styrene | 9.087 | 104 | 44277 | 0.20 | ppbV | | 97 |
| 62) Bromoform | 9.094 | 173 | 42204 | 0.25 | ppbV | | 99 |
| 63) Cumene | 9.402 | 105 | 96781 | 0.22 | ppbV | | 99 |
| 65) n-Propyl benzene | 9.898 | 91 | 133875 | 0.24 | ppbV | | 91 |
| 66) 1,1,2,2-Tetrachloroethane | 9.968 | 83 | 65139 | 0.26 | ppbV | | 99 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 105229 | 0.22 | ppbV | | 94 |
| 68) 2-Chlorotoluene | 10.068 | 91 | 88564 | 0.23 | ppbV | | 100 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 81154 | 0.21 | ppbV | | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.627 | 105 | 70043 | 0.19 | ppbV | | 100 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 67007 | 0.27 | ppbV | | 97 |
| 72) 1,4-Dichlorobenzene | 11.113 | 146 | 51408 | 0.21 | ppbV | | 98 |
| 73) Benzyl chloride | 11.431 | 91 | 48312 | 0.15 | ppbV | | 99 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 51755 | 0.22 | ppbV | | 97 |
| 75) 1,3-Hexachlorobutadiene | 13.196 | 225 | 55512 | 0.33 | ppbV | | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.196 | 180 | 54202 | 0.29 | ppbV | | 99 |
| 77) Naphthalene | 13.460 | 128 | 93896 | 0.24 | ppbV | | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3402std05.D
Acq On : 15 Aug 2023 11:15 am
Operator : jjw
Sample : 0.2 ppbv standard
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 15 17:16:53 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:15:22 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3403std04.D
Acq On : 15 Aug 2023 1:45 pm
Operator : jjw
Sample : 2.0 ppbv standard
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 16 09:55:55 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.393 | 130 | 541075 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.454 | 114 | 2325427 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 2787489 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 2277207 | 9.82 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.486 | 41 | 69587 | 1.87 | ppbV | 98 |
| 3) Dichlorodifluoromethane | 1.529 | 85 | 236252 | 1.73 | ppbV | 99 |
| 4) 1,2-Dichlorotetrafluor... | 1.650 | 85 | 358355 | 1.82 | ppbV | 100 |
| 5) n-Butane | 1.729 | 43 | 199054 | 2.26 | ppbV | 98 |
| 6) Chloromethane | 1.791 | 52 | 14658 | 2.32 | ppbV | 76 |
| 7) Vinyl chloride | 1.780 | 62 | 94169 | 1.83 | ppbV | 96 |
| 8) 1,3-Butadiene | 1.794 | 39 | 111420 | 2.12 | ppbV | 99 |
| 9) Bromomethane | 2.081 | 94 | 70289 | 1.63 | ppbV | 99 |
| 10) Chloroethane | 2.190 | 64 | 46371 | 1.66 | ppbV | 96 |
| 11) Vinyl bromide | 2.296 | 106 | 88069 | 1.62 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.313 | 101 | 378425 | 2.06 | ppbV | 100 |
| 13) Ethanol | 2.676 | 45 | 37762 | 1.74 | ppbV | 98 |
| 14) 1,1-Dichloroethene | 2.731 | 61 | 191611 | 1.70 | ppbV | 99 |
| 15) Carbon disulfide | 2.753 | 76 | 329694 | 1.78 | ppbV | 99 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.776 | 101 | 423345 | 2.33 | ppbV | 99 |
| 17) Acrolein | 2.985 | 56 | 36438 | 1.57 | ppbV | 98 |
| 18) Allyl chloride | 3.110 | 76 | 53539 | 1.77 | ppbV | 100 |
| 19) Isopropanol | 3.113 | 45 | 192840 | 1.54 | ppbV | 99 |
| 20) Methylene chloride | 3.203 | 49 | 104527 | 1.53 | ppbV | 97 |
| 21) Acetone | 3.213 | 43 | 174115 | 1.72 | ppbV | 100 |
| 22) trans-1,2-Dichloroethene | 3.325 | 61 | 182032 | 1.79 | ppbV | 100 |
| 23) n-Pentane | 3.406 | 43 | 280301 | 2.16 | ppbV | 97 |
| 24) n-Hexane | 3.403 | 57 | 408984 | 2.26 | ppbV | 97 |
| 25) Methyl tert-butyl ether | 3.409 | 73 | 620249 | 2.52 | ppbV | 91 |
| 26) Tert-butyl alcohol | 3.460 | 59 | 393824 | 2.49 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 246573 | 1.73 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.239 | 61 | 180663 | 1.83 | ppbV | 99 |
| 29) Cyclohexane | 4.409 | 56 | 332356 | 2.54 | ppbV | 100 |
| 30) Chloroform | 4.454 | 83 | 328798 | 1.88 | ppbV | 100 |
| 31) Ethyl acetate | 4.544 | 61 | 53660 | 1.93 | ppbV | 98 |
| 32) Carbon tetrachloride | 4.573 | 117 | 526172 | 2.51 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.576 | 42 | 193630 | 1.97 | ppbV | 100 |
| 34) 1,1,1-Trichloroethane | 4.624 | 97 | 467891 | 2.48 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.685 | 43 | 292932 | 1.87 | ppbV | 98 |
| 36) n-Heptane | 4.917 | 43 | 476323 | 2.63 | ppbV | 99 |
| 37) Benzene | 4.933 | 78 | 499517 | 2.00 | ppbV | 99 |
| 38) 1,2-Dichloroethane | 5.094 | 62 | 212238 | 1.90 | ppbV | 100 |
| 40) Trichloroethene | 5.435 | 130 | 214306 | 1.82 | ppbV | 99 |
| 41) 2,2,4-Trimethylpentane | 4.837 | 57 | 650366 | 2.21 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 232645 | 2.19 | ppbV | 99 |
| 43) Bromodichloromethane | 5.946 | 83 | 402522 | 2.18 | ppbV | 98 |
| 44) Methyl methacrylate | 6.091 | 41 | 304586 | 2.23 | ppbV | 100 |
| 45) 1,4-Dioxane | 6.113 | 88 | 156518 | 2.39 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 346212 | 2.11 | ppbV | 100 |
| 47) Toluene | 6.772 | 91 | 889263 | 2.39 | ppbV | 98 |
| 48) Methyl isobutyl ketone | 7.136 | 43 | 688572 | 2.56 | ppbV | 99 |
| 49) Tetrachloroethene | 7.161 | 166 | 408926 | 2.44 | ppbV | 99 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 359255 | 2.22 | ppbV | 99 |
| 51) 1,1,2-Trichloroethane | 7.338 | 97 | 292415 | 2.23 | ppbV | 99 |

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3403std04.D
Acq On : 15 Aug 2023 1:45 pm
Operator : jjw
Sample : 2.0 ppbv standard
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

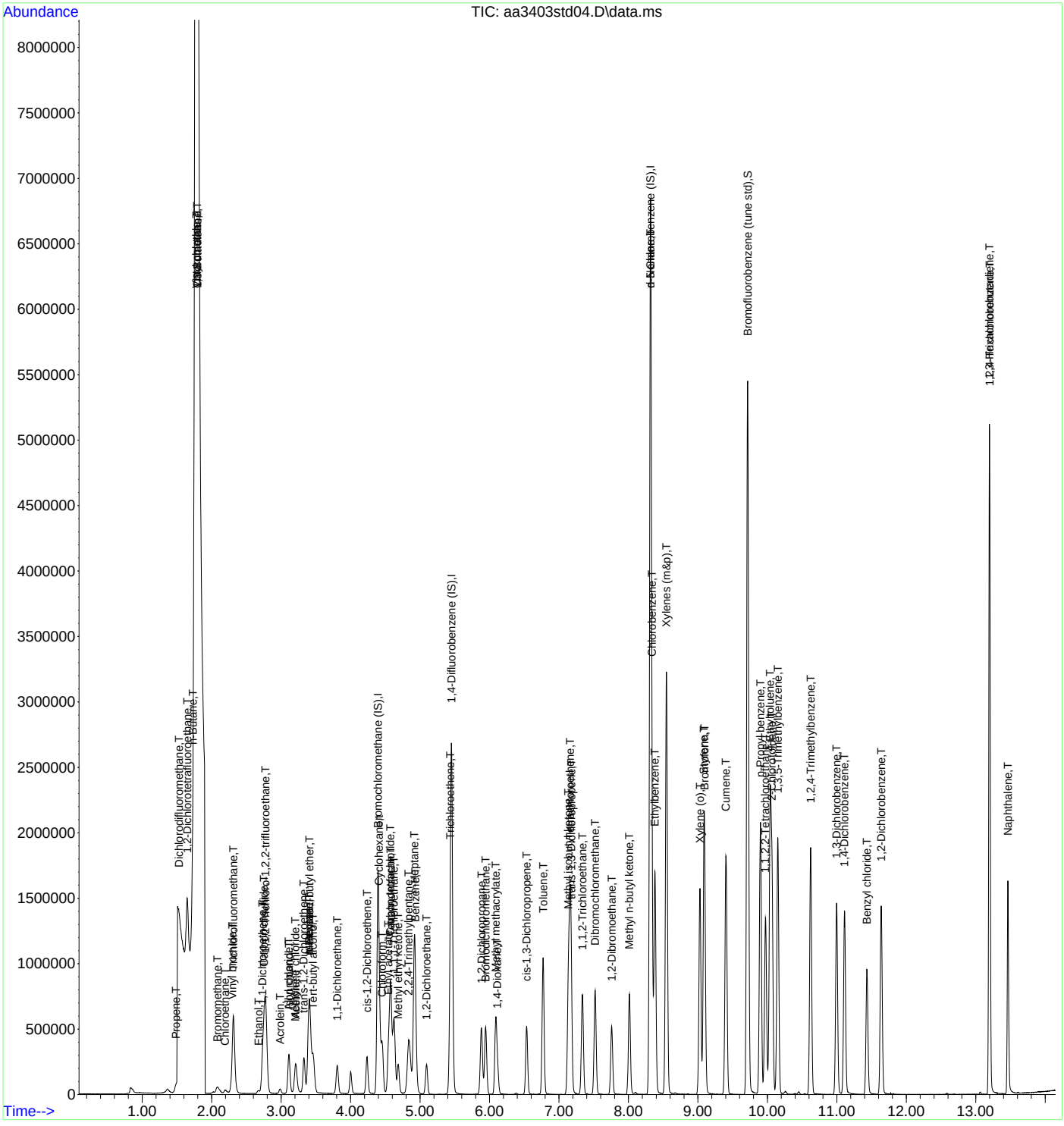
Quant Time: Aug 16 09:55:55 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 504182 | 2.30 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 421042 | 2.19 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.013 | 43 | 615992 | 2.44 | ppbV | 99 |
| 56) n-Nonane | 8.319 | 43 | 913232 | 2.68 | ppbV | 98 |
| 57) Chlorobenzene | 8.338 | 112 | 707397 | 2.32 | ppbV | 96 |
| 58) Ethylbenzene | 8.380 | 91 | 1456927 | 2.58 | ppbV | 100 |
| 59) Xylenes (m&p) | 8.547 | 91 | 2222904 | 5.46 | ppbV | 99 |
| 60) Xylene (o) | 9.029 | 91 | 1151590 | 2.55 | ppbV | 99 |
| 61) Styrene | 9.087 | 104 | 755721 | 2.52 | ppbV | 98 |
| 62) Bromoform | 9.097 | 173 | 549148 | 2.37 | ppbV | 100 |
| 63) Cumene | 9.402 | 105 | 1536381 | 2.61 | ppbV | 99 |
| 65) n-Propyl benzene | 9.901 | 91 | 2045481 | 2.67 | ppbV | 99 |
| 66) 1,1,2,2-Tetrachloroethane | 9.971 | 83 | 874245 | 2.55 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 1647910 | 2.60 | ppbV | 99 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 1319338 | 2.53 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.151 | 105 | 1352228 | 2.64 | ppbV | 100 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 1317527 | 2.59 | ppbV | 99 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 732133 | 2.17 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 692835 | 2.14 | ppbV | 99 |
| 73) Benzyl chloride | 11.431 | 91 | 873022 | 1.97 | ppbV | 99 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 730471 | 2.29 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.196 | 225 | 530064 | 2.32 | ppbV | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 518457 | 2.07 | ppbV | 100 |
| 77) Naphthalene | 13.463 | 128 | 1018158 | 1.97 | ppbV | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3403std04.D
Acq On : 15 Aug 2023 1:45 pm
Operator : jjw
Sample : 2.0 ppbv standard
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 16 09:55:55 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3404std03.D
Acq On : 15 Aug 2023 1:09 pm
Operator : jjw
Sample : 10 ppbv standard
Misc : EB0103704
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 16 09:54:13 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.396 | 130 | 530723 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 2268530 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 2737620 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.718 | 95 | 2240242 | 9.84 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.492 | 41 | 375623 | 10.28 | ppbV | 100 |
| 3) Dichlorodifluoromethane | 1.529 | 85 | 1361127 | 10.15 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.650 | 85 | 1649087 | 8.55 | ppbV | 100 |
| 5) n-Butane | 1.732 | 43 | 929570 | 10.75 | ppbV | 98 |
| 6) Chloromethane | 1.794 | 52 | 69017 | 11.11 | ppbV | 100 |
| 7) Vinyl chloride | 1.784 | 62 | 537570 | 10.66 | ppbV | 100 |
| 8) 1,3-Butadiene | 1.794 | 39 | 527528 | 10.23 | ppbV | 100 |
| 9) Bromomethane | 2.084 | 94 | 414507 | 9.79 | ppbV | 100 |
| 10) Chloroethane | 2.197 | 64 | 294705 | 10.74 | ppbV | 100 |
| 11) Vinyl bromide | 2.297 | 106 | 529947 | 9.94 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.313 | 101 | 1803210 | 9.99 | ppbV | 100 |
| 13) Ethanol | 2.670 | 45 | 178190 | 8.39 | ppbV | 100 |
| 14) 1,1-Dichloroethene | 2.734 | 61 | 1166579 | 10.54 | ppbV | 100 |
| 15) Carbon disulfide | 2.753 | 76 | 2000133 | 10.99 | ppbV | 100 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.779 | 101 | 1623708 | 9.11 | ppbV | 100 |
| 17) Acrolein | 2.988 | 56 | 228259 | 10.01 | ppbV | 100 |
| 18) Allyl chloride | 3.113 | 76 | 322565 | 10.86 | ppbV | 100 |
| 19) Isopropanol | 3.113 | 45 | 1070426 | 8.72 | ppbV | 100 |
| 20) Methylene chloride | 3.203 | 49 | 607018 | 9.06 | ppbV | 100 |
| 21) Acetone | 3.213 | 43 | 1046415 | 10.51 | ppbV | 100 |
| 22) trans-1,2-Dichloroethene | 3.329 | 61 | 1103133 | 11.06 | ppbV | 100 |
| 23) n-Pentane | 3.409 | 43 | 1158219 | 9.10 | ppbV | 100 |
| 24) n-Hexane | 3.406 | 57 | 1757143 | 9.89 | ppbV | 100 |
| 25) Methyl tert-butyl ether | 3.412 | 73 | 2372793 | 9.82 | ppbV | 100 |
| 26) Tert-butyl alcohol | 3.467 | 59 | 1587668 | 10.21 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.811 | 63 | 1366393 | 9.76 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.235 | 61 | 1021823 | 10.55 | ppbV | 100 |
| 29) Cyclohexane | 4.415 | 56 | 1253558 | 9.76 | ppbV | 100 |
| 30) Chloroform | 4.457 | 83 | 1736397 | 10.14 | ppbV | 100 |
| 31) Ethyl acetate | 4.544 | 61 | 272622 | 10.00 | ppbV | 100 |
| 32) Carbon tetrachloride | 4.579 | 117 | 1958808 | 9.54 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.576 | 42 | 1006885 | 10.46 | ppbV | 100 |
| 34) 1,1,1-Trichloroethane | 4.628 | 97 | 1724281 | 9.33 | ppbV | 100 |
| 35) Methyl ethyl ketone | 4.686 | 43 | 1590191 | 10.35 | ppbV | 100 |
| 36) n-Heptane | 4.920 | 43 | 1866612 | 10.50 | ppbV | 100 |
| 37) Benzene | 4.933 | 78 | 2414826 | 9.86 | ppbV | 100 |
| 38) 1,2-Dichloroethane | 5.094 | 62 | 1127298 | 10.27 | ppbV | 100 |
| 40) Trichloroethene | 5.435 | 130 | 1079500 | 9.38 | ppbV | 100 |
| 41) 2,2,4-Trimethylpentane | 4.846 | 57 | 2899901 | 10.09 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 1067336 | 10.31 | ppbV | 100 |
| 43) Bromodichloromethane | 5.946 | 83 | 1979492 | 10.98 | ppbV | 100 |
| 44) Methyl methacrylate | 6.091 | 41 | 1493887 | 11.22 | ppbV | 100 |
| 45) 1,4-Dioxane | 6.113 | 88 | 728333 | 11.41 | ppbV | 100 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 1744754 | 10.91 | ppbV | 100 |
| 47) Toluene | 6.772 | 91 | 3957437 | 10.88 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.136 | 43 | 2863824 | 10.90 | ppbV | 100 |
| 49) Tetrachloroethene | 7.161 | 166 | 1772265 | 10.84 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 1834063 | 11.63 | ppbV | 100 |
| 51) 1,1,2-Trichloroethane | 7.338 | 97 | 1345722 | 10.50 | ppbV | 100 |

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3404std03.D
Acq On : 15 Aug 2023 1:09 pm
Operator : jjw
Sample : 10 ppbv standard
Misc : EB0103704
ALS Vial : 4 Sample Multiplier: 1

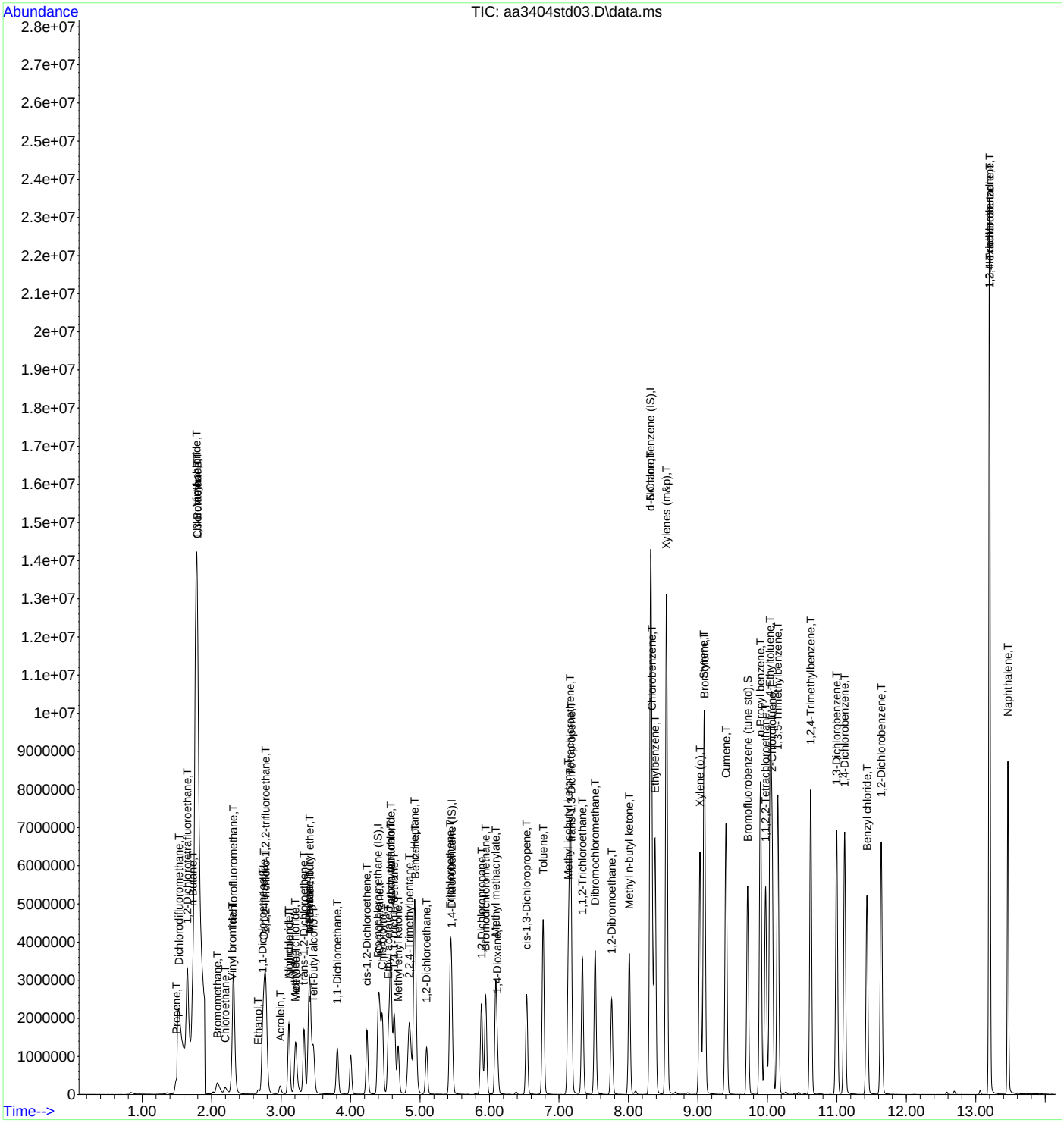
Quant Time: Aug 16 09:54:13 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 2376959 | 11.11 | ppbV | 100 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 2045235 | 10.91 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.013 | 43 | 2912111 | 11.83 | ppbV | 100 |
| 56) n-Nonane | 8.319 | 43 | 3534946 | 10.55 | ppbV | 100 |
| 57) Chlorobenzene | 8.338 | 112 | 3126708 | 10.43 | ppbV | 100 |
| 58) Ethylbenzene | 8.383 | 91 | 5864430 | 10.58 | ppbV | 100 |
| 59) Xylenes (m&p) | 8.547 | 91 | 8881004 | 22.23 | ppbV | 100 |
| 60) Xylene (o) | 9.029 | 91 | 4642943 | 10.46 | ppbV | 100 |
| 61) Styrene | 9.087 | 104 | 3380250 | 11.48 | ppbV | 100 |
| 62) Bromoform | 9.097 | 173 | 2491890 | 10.95 | ppbV | 100 |
| 63) Cumene | 9.406 | 105 | 5984852 | 10.35 | ppbV | 100 |
| 65) n-Propyl benzene | 9.901 | 91 | 8177614 | 10.85 | ppbV | 100 |
| 66) 1,1,2,2-Tetrachloroethane | 9.975 | 83 | 3547036 | 10.55 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 6733965 | 10.84 | ppbV | 100 |
| 68) 2-Chlorotoluene | 10.068 | 91 | 5305123 | 10.37 | ppbV | 100 |
| 69) 1,3,5-Trimethylbenzene | 10.152 | 105 | 5348299 | 10.64 | ppbV | 100 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 5481212 | 10.99 | ppbV | 100 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 3421975 | 10.35 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.113 | 146 | 3376978 | 10.63 | ppbV | 100 |
| 73) Benzyl chloride | 11.434 | 91 | 4675578 | 10.73 | ppbV | 100 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 3254751 | 10.40 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.200 | 225 | 2216471 | 9.88 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 2590387 | 10.53 | ppbV | 100 |
| 77) Naphthalene | 13.463 | 128 | 5257288 | 10.34 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3404std03.D
Acq On : 15 Aug 2023 1:09 pm
Operator : jjw
Sample : 10 ppbv standard
Misc : EB0103704
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 16 09:54:13 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3405std02.D
Acq On : 15 Aug 2023 3:12 pm
Operator : jjw
Sample : 20 ppbv standard
Misc : EB0103704
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 16 09:53:17 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.399 | 130 | 499473 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 2278768 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 2812211 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 2375515 | 10.15 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.499 | 41 | 770871 | 22.41 | ppbV | 99 |
| 3) Dichlorodifluoromethane | 1.533 | 85 | 2795748 | 22.15 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.657 | 85 | 3247750 | 17.89 | ppbV | 100 |
| 5) n-Butane | 1.736 | 43 | 1882829 | 23.14 | ppbV | 99 |
| 6) Chloromethane | 1.798 | 52 | 142733 | 24.42 | ppbV | 98 |
| 7) Vinyl chloride | 1.787 | 62 | 1083251 | 22.82 | ppbV | 99 |
| 8) 1,3-Butadiene | 1.801 | 39 | 1052739 | 21.69 | ppbV | 99 |
| 9) Bromomethane | 2.091 | 94 | 850633 | 21.34 | ppbV | 100 |
| 10) Chloroethane | 2.200 | 64 | 600686 | 23.27 | ppbV | 98 |
| 11) Vinyl bromide | 2.300 | 106 | 1097918 | 21.89 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.319 | 101 | 3715497 | 21.88 | ppbV | 100 |
| 13) Ethanol | 2.673 | 45 | 357760 | 17.89 | ppbV | 99 |
| 14) 1,1-Dichloroethene | 2.737 | 61 | 2414830 | 23.18 | ppbV | 100 |
| 15) Carbon disulfide | 2.756 | 76 | 3964880 | 23.15 | ppbV | 99 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.779 | 101 | 3255314 | 19.40 | ppbV | 100 |
| 17) Acrolein | 2.991 | 56 | 446408 | 20.80 | ppbV | 98 |
| 18) Allyl chloride | 3.113 | 76 | 664077 | 23.76 | ppbV | 100 |
| 19) Isopropanol | 3.113 | 45 | 2200207 | 19.06 | ppbV | 99 |
| 20) Methylene chloride | 3.207 | 49 | 1260244 | 19.99 | ppbV | 100 |
| 21) Acetone | 3.216 | 43 | 2038682 | 21.76 | ppbV | 100 |
| 22) trans-1,2-Dichloroethene | 3.332 | 61 | 2308104 | 24.59 | ppbV | 99 |
| 23) n-Pentane | 3.409 | 43 | 2302426 | 19.23 | ppbV | 99 |
| 24) n-Hexane | 3.412 | 57 | 3543404 | 21.18 | ppbV | 99 |
| 25) Methyl tert-butyl ether | 3.412 | 73 | 4774341 | 20.99 | ppbV | 99 |
| 26) Tert-butyl alcohol | 3.467 | 59 | 3269773 | 22.35 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.811 | 63 | 2864453 | 21.75 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.239 | 61 | 2160622 | 23.71 | ppbV | 100 |
| 29) Cyclohexane | 4.419 | 56 | 2552240 | 21.11 | ppbV | 100 |
| 30) Chloroform | 4.457 | 83 | 3608439 | 22.38 | ppbV | 99 |
| 31) Ethyl acetate | 4.544 | 61 | 573589 | 22.35 | ppbV | 98 |
| 32) Carbon tetrachloride | 4.579 | 117 | 3910518 | 20.23 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.576 | 42 | 2087668 | 23.05 | ppbV | 99 |
| 34) 1,1,1-Trichloroethane | 4.631 | 97 | 3456960 | 19.87 | ppbV | 100 |
| 35) Methyl ethyl ketone | 4.686 | 43 | 3340979 | 23.11 | ppbV | 100 |
| 36) n-Heptane | 4.920 | 43 | 3644916 | 21.78 | ppbV | 99 |
| 37) Benzene | 4.936 | 78 | 4942978 | 21.45 | ppbV | 99 |
| 38) 1,2-Dichloroethane | 5.097 | 62 | 2363649 | 22.89 | ppbV | 99 |
| 40) Trichloroethene | 5.435 | 130 | 2273330 | 19.66 | ppbV | 99 |
| 41) 2,2,4-Trimethylpentane | 4.846 | 57 | 5933707 | 20.56 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 2205432 | 21.21 | ppbV | 99 |
| 43) Bromodichloromethane | 5.946 | 83 | 4121290 | 22.75 | ppbV | 100 |
| 44) Methyl methacrylate | 6.091 | 41 | 3097965 | 23.17 | ppbV | 99 |
| 45) 1,4-Dioxane | 6.113 | 88 | 1493343 | 23.30 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.538 | 75 | 3649298 | 22.71 | ppbV | 100 |
| 47) Toluene | 6.772 | 91 | 7908022 | 21.65 | ppbV | 99 |
| 48) Methyl isobutyl ketone | 7.136 | 43 | 5805171 | 22.00 | ppbV | 99 |
| 49) Tetrachloroethene | 7.161 | 166 | 3535315 | 21.53 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 3830549 | 24.18 | ppbV | 98 |
| 51) 1,1,2-Trichloroethane | 7.338 | 97 | 2762664 | 21.45 | ppbV | 99 |

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3405std02.D
Acq On : 15 Aug 2023 3:12 pm
Operator : jjw
Sample : 20 ppbv standard
Misc : EB0103704
ALS Vial : 7 Sample Multiplier: 1

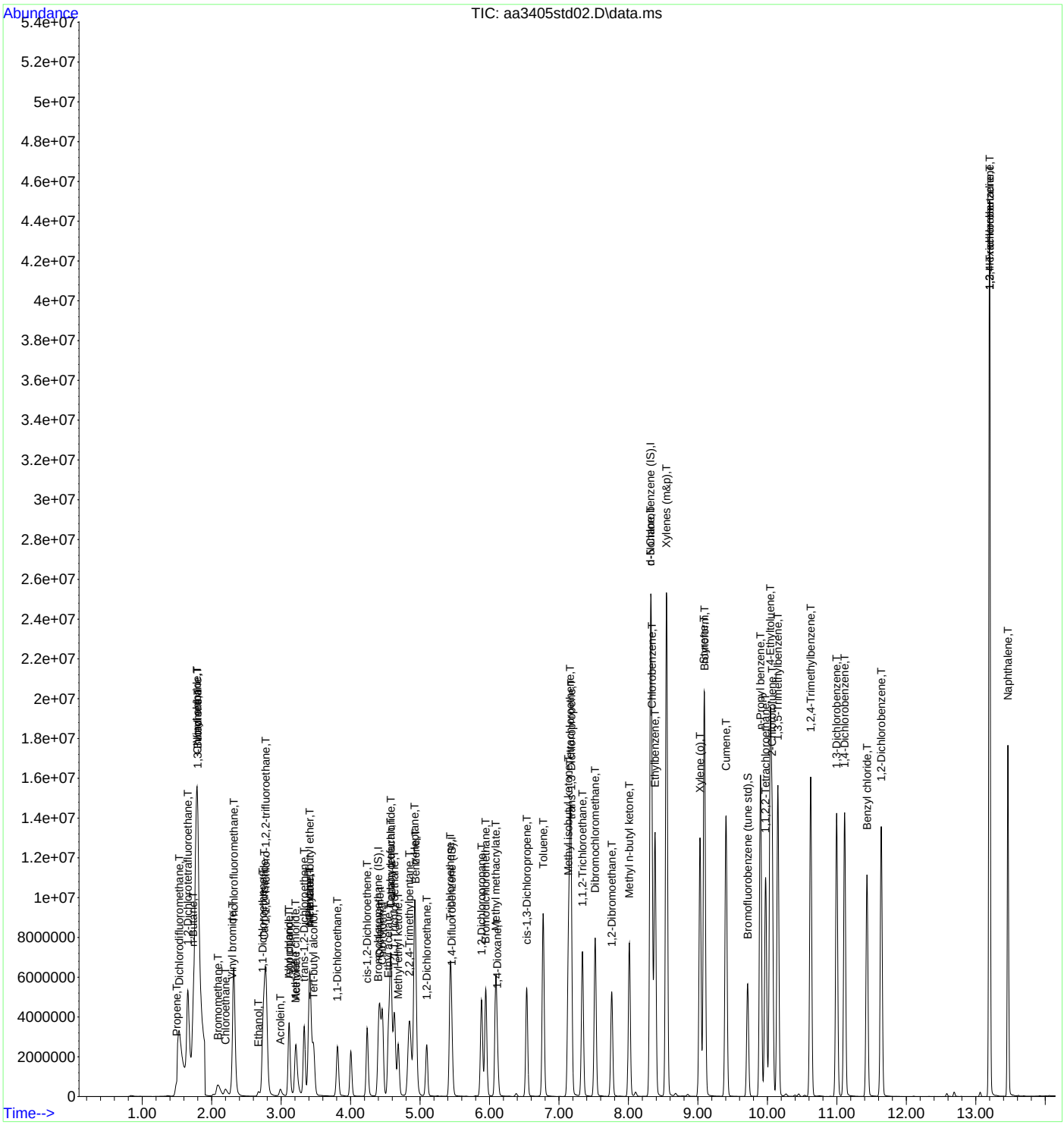
Quant Time: Aug 16 09:53:17 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 4920304 | 22.89 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 4277090 | 22.71 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.013 | 43 | 6056833 | 24.50 | ppbV | 99 |
| 56) n-Nonane | 8.319 | 43 | 7191778 | 20.90 | ppbV | 100 |
| 57) Chlorobenzene | 8.338 | 112 | 6300402 | 20.46 | ppbV | 99 |
| 58) Ethylbenzene | 8.383 | 91 | 11427551 | 20.06 | ppbV | 98 |
| 59) Xylenes (m&p) | 8.547 | 91 | 16612160 | 40.47 | ppbV | 96 |
| 60) Xylene (o) | 9.029 | 91 | 9308971 | 20.42 | ppbV | 99 |
| 61) Styrene | 9.087 | 104 | 6805349 | 22.50 | ppbV | 100 |
| 62) Bromoform | 9.097 | 173 | 5013505 | 21.45 | ppbV | 99 |
| 63) Cumene | 9.406 | 105 | 11708179 | 19.72 | ppbV | 98 |
| 65) n-Propyl benzene | 9.901 | 91 | 15630674 | 20.19 | ppbV | 97 |
| 66) 1,1,2,2-Tetrachloroethane | 9.975 | 83 | 7162257 | 20.73 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.042 | 105 | 13015117 | 20.39 | ppbV | 97 |
| 68) 2-Chlorotoluene | 10.068 | 91 | 10557525 | 20.10 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.152 | 105 | 10540320 | 20.40 | ppbV | 98 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 10891140 | 21.26 | ppbV | 98 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 6954730 | 20.48 | ppbV | 99 |
| 72) 1,4-Dichlorobenzene | 11.113 | 146 | 6870236 | 21.05 | ppbV | 99 |
| 73) Benzyl chloride | 11.434 | 91 | 9809727 | 21.92 | ppbV | 99 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 6519746 | 20.28 | ppbV | 99 |
| 75) 1,3-Hexachlorobutadiene | 13.200 | 225 | 4206699 | 18.25 | ppbV | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 5049468 | 19.98 | ppbV | 100 |
| 77) Naphthalene | 13.463 | 128 | 10176689 | 19.49 | ppbV | 98 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3405std02.D
Acq On : 15 Aug 2023 3:12 pm
Operator : jjw
Sample : 20 ppbv standard
Misc : EB0103704
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 16 09:53:17 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3406std01.D
Acq On : 15 Aug 2023 4:47 pm
Operator : jjw
Sample : 40 ppbv standard
Misc : EB0103704
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 16 09:52:28 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.406 | 130 | 487271 | 10.00 | ppbV | | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 2425798 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 2732166 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 2577792 | 11.34 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 1.512 | 41 | 1707516 | 50.87 | ppbV | | 99 |
| 3) Dichlorodifluoromethane | 1.536 | 85 | 5966633 | 48.46 | ppbV | | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.660 | 85 | 6899713 | 38.95 | ppbV | | 99 |
| 5) n-Butane | 1.739 | 43 | 3778324 | 47.60 | ppbV | | 100 |
| 6) Chloromethane | 1.798 | 52 | 321722 | 56.43 | ppbV | # | 1 |
| 7) Vinyl chloride | 1.791 | 62 | 2395758 | 51.74 | ppbV | | 99 |
| 8) 1,3-Butadiene | 1.801 | 39 | 2174685 | 45.93 | ppbV | | 97 |
| 9) Bromomethane | 2.097 | 94 | 1861404 | 47.86 | ppbV | | 100 |
| 10) Chloroethane | 2.200 | 64 | 1346794 | 53.48 | ppbV | | 100 |
| 11) Vinyl bromide | 2.300 | 106 | 2453541 | 50.15 | ppbV | | 100 |
| 12) Trichlorofluoromethane | 2.319 | 101 | 7717062 | 46.58 | ppbV | | 100 |
| 13) Ethanol | 2.673 | 45 | 877297 | 44.97 | ppbV | # | 88 |
| 14) 1,1-Dichloroethene | 2.737 | 61 | 4997972 | 49.17 | ppbV | | 100 |
| 15) Carbon disulfide | 2.763 | 76 | 8067769 | 48.28 | ppbV | | 99 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.782 | 101 | 6956660 | 42.50 | ppbV | | 100 |
| 17) Acrolein | 2.994 | 56 | 951140 | 45.44 | ppbV | | 98 |
| 18) Allyl chloride | 3.116 | 76 | 1369570 | 50.24 | ppbV | | 100 |
| 19) Isopropanol | 3.116 | 45 | 4505255 | 40.00 | ppbV | | 98 |
| 20) Methylene chloride | 3.206 | 49 | 2810050 | 45.70 | ppbV | | 100 |
| 21) Acetone | 3.222 | 43 | 4077485 | 44.60 | ppbV | | 100 |
| 22) trans-1,2-Dichloroethene | 3.332 | 61 | 4976980 | 54.35 | ppbV | | 98 |
| 23) n-Pentane | 3.412 | 43 | 5051897 | 43.24 | ppbV | | 99 |
| 24) n-Hexane | 3.412 | 57 | 7730831 | 47.37 | ppbV | | 99 |
| 25) Methyl tert-butyl ether | 3.412 | 73 | 10208419 | 46.00 | ppbV | | 97 |
| 26) Tert-butyl alcohol | 3.467 | 59 | 7080253 | 49.62 | ppbV | | 100 |
| 27) 1,1-Dichloroethane | 3.814 | 63 | 6120009 | 47.63 | ppbV | | 99 |
| 28) cis-1,2-Dichloroethene | 4.238 | 61 | 4615777 | 51.93 | ppbV | | 100 |
| 29) Cyclohexane | 4.419 | 56 | 5431445 | 46.06 | ppbV | | 100 |
| 30) Chloroform | 4.457 | 83 | 7598750 | 48.31 | ppbV | | 100 |
| 31) Ethyl acetate | 4.547 | 61 | 1228122 | 49.05 | ppbV | | 99 |
| 32) Carbon tetrachloride | 4.583 | 117 | 8430867 | 44.71 | ppbV | | 100 |
| 33) Tetrahydrofuran | 4.576 | 42 | 4398645 | 49.79 | ppbV | | 99 |
| 34) 1,1,1-Trichloroethane | 4.631 | 97 | 7362144 | 43.37 | ppbV | | 100 |
| 35) Methyl ethyl ketone | 4.685 | 43 | 7160721 | 50.77 | ppbV | | 99 |
| 36) n-Heptane | 4.920 | 43 | 7185919 | 44.02 | ppbV | | 100 |
| 37) Benzene | 4.936 | 78 | 10281932 | 45.73 | ppbV | | 98 |
| 38) 1,2-Dichloroethane | 5.097 | 62 | 5067261 | 50.30 | ppbV | | 99 |
| 40) Trichloroethene | 5.438 | 130 | 4836394 | 39.29 | ppbV | | 100 |
| 41) 2,2,4-Trimethylpentane | 4.849 | 57 | 13336894 | 43.41 | ppbV | | 98 |
| 42) 1,2-Dichloropropane | 5.888 | 63 | 4560844 | 41.21 | ppbV | | 99 |
| 43) Bromodichloromethane | 5.949 | 83 | 8574056 | 44.47 | ppbV | | 99 |
| 44) Methyl methacrylate | 6.090 | 41 | 6283616 | 44.15 | ppbV | | 100 |
| 45) 1,4-Dioxane | 6.116 | 88 | 3065935 | 44.93 | ppbV | | 99 |
| 46) cis-1,3-Dichloropropene | 6.537 | 75 | 7375814 | 43.13 | ppbV | | 99 |
| 47) Toluene | 6.772 | 91 | 14907224 | 38.33 | ppbV | | 96 |
| 48) Methyl isobutyl ketone | 7.135 | 43 | 11479037 | 40.87 | ppbV | | 98 |
| 49) Tetrachloroethene | 7.164 | 166 | 6808224 | 38.95 | ppbV | | 100 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 7633904 | 45.27 | ppbV | | 99 |
| 51) 1,1,2-Trichloroethane | 7.338 | 97 | 5566488 | 40.60 | ppbV | | 99 |

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3406std01.D
Acq On : 15 Aug 2023 4:47 pm
Operator : jjw
Sample : 40 ppbv standard
Misc : EB0103704
ALS Vial : 8 Sample Multiplier: 1

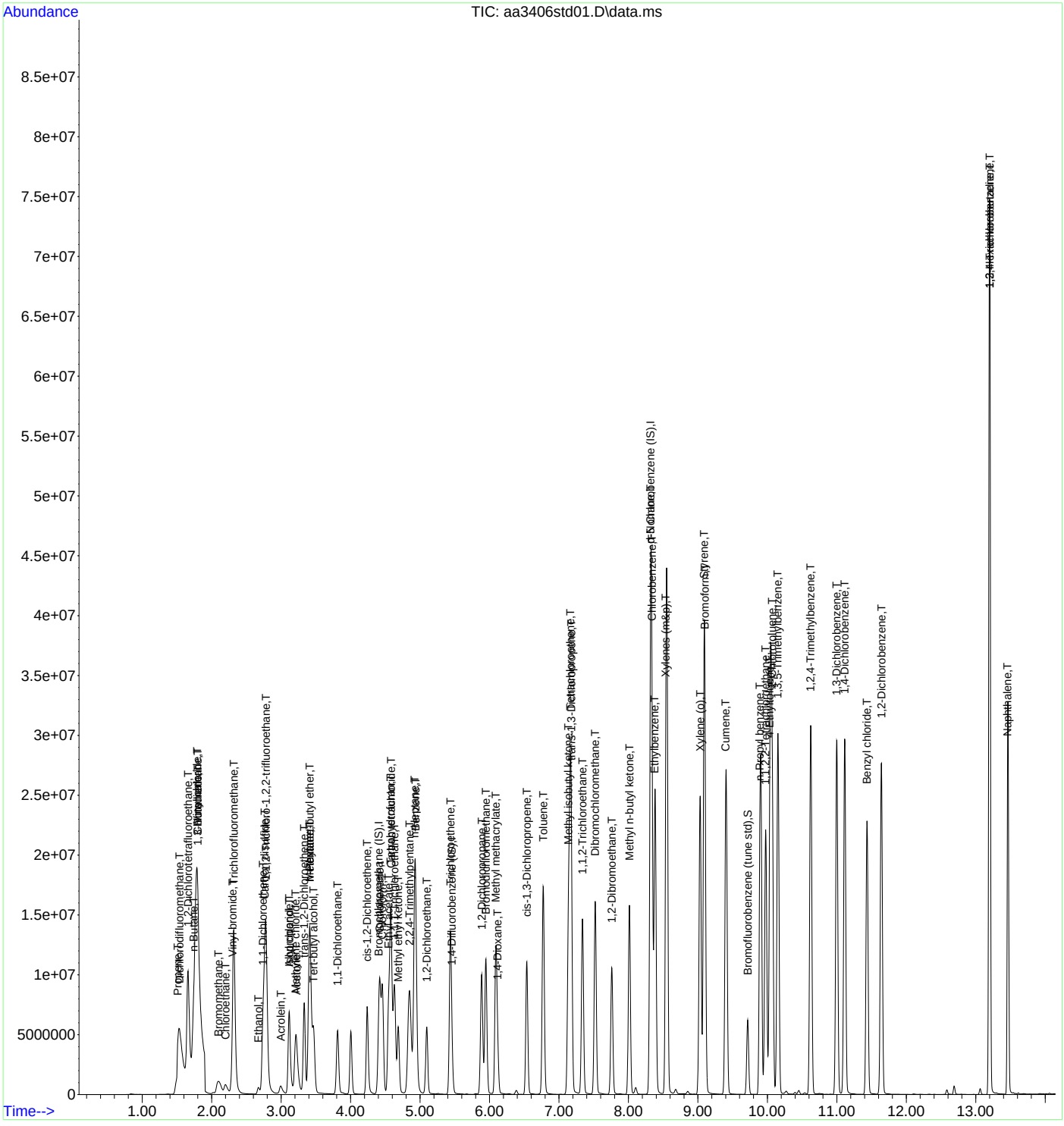
Quant Time: Aug 16 09:52:28 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 9886675 | 43.20 | ppbV | | 99 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 8609104 | 42.93 | ppbV | | 100 |
| 54) Methyl n-butyl ketone | 8.013 | 43 | 12284613 | 46.68 | ppbV | | 97 |
| 56) n-Nonane | 8.319 | 43 | 14182361 | 42.42 | ppbV | | 98 |
| 57) Chlorobenzene | 8.338 | 112 | 12196934 | 40.77 | ppbV | | 96 |
| 58) Ethylbenzene | 8.377 | 91 | 20355846 | 36.79 | ppbV | | 90 |
| 59) Xylenes (m&p) | 8.537 | 91 | 24199756 | 60.68 | ppbV | # | 74 |
| 60) Xylene (o) | 9.033 | 91 | 17688374 | 39.94 | ppbV | | 95 |
| 61) Styrene | 9.090 | 104 | 13186398 | 44.87 | ppbV | | 97 |
| 62) Bromoform | 9.100 | 173 | 9710978 | 42.77 | ppbV | | 98 |
| 63) Cumene | 9.399 | 105 | 21140296 | 36.64 | ppbV | | 91 |
| 65) n-Propyl benzene | 9.891 | 91 | 24008413 | 31.92 | ppbV | # | 80 |
| 66) 1,1,2,2-Tetrachloroethane | 9.975 | 83 | 14100555 | 42.01 | ppbV | | 97 |
| 67) 4-Ethyltoluene | 10.032 | 105 | 21664037 | 34.94 | ppbV | # | 84 |
| 68) 2-Chlorotoluene | 10.068 | 91 | 20299207 | 39.78 | ppbV | | 97 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 19633662 | 39.12 | ppbV | | 92 |
| 70) 1,2,4-Trimethylbenzene | 10.621 | 105 | 20118523 | 40.43 | ppbV | | 91 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 14030394 | 42.52 | ppbV | | 97 |
| 72) 1,4-Dichlorobenzene | 11.113 | 146 | 13876826 | 43.76 | ppbV | | 97 |
| 73) Benzyl chloride | 11.431 | 91 | 19339251 | 44.49 | ppbV | | 93 |
| 74) 1,2-Dichlorobenzene | 11.643 | 146 | 13190929 | 42.23 | ppbV | | 97 |
| 75) 1,3-Hexachlorobutadiene | 13.200 | 225 | 7629643 | 34.08 | ppbV | | 97 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 9392234 | 38.25 | ppbV | | 99 |
| 77) Naphthalene | 13.457 | 128 | 15939992 | 31.42 | ppbV | # | 83 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3406std01.D
Acq On : 15 Aug 2023 4:47 pm
Operator : jjw
Sample : 40 ppbv standard
Misc : EB0103704
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 16 09:52:28 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Initial Calibration Data Summary Report

**Initial Calibration Curve:** 10/10/2023 **Method ID:** 231009.M
**Instrument:** AA

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4131BFB] | 10/10/2023 10:13 |
| 0.2 PPBV STD [AA4132STD05] | 10/10/2023 10:40 |
| 2 PPBV STD [AA4133STD04] | 10/10/2023 11:46 |
| 10 PPBV STD [AA4134STD03] | 10/10/2023 12:21 |
| 20 PPBV STD [AA4135STD02] | 10/10/2023 12:55 |
| 40 PPBV STD [AA4136STD01] | 10/10/2023 14:05 |
| 10 PPBV ICVSS [AA4137ICVSS] | 10/10/2023 16:48 |

| | Parameter | RRF 0.2ppbv | RRF 2ppbv | RRF 10ppbv | RRF 20ppbv | RRF 40ppbv | Avg ppbv | % RSD |
|---|---|---|---|---|---|---|---|---|
| 1) | Bromochloromethane | ----------ISTD---------- | | | | | | |
| 3) | Dichlorodifluoromethane | 1.9 | 2.0 | 2.2 | 2.4 | 2.6 | 2.2 | 13 |
| 4) | 1,2-Dichlorotetrafluoroethane | 3.2 | 3.4 | 2.9 | 3.2 | 3.5 | 3.2 | 6.1 |
| 6) | Chloromethane | 0.085 | 0.098 | 0.11 | 0.12 | 0.14 | 0.11 | 18 |
| 7) | Vinyl chloride | 0.70 | 0.84 | 0.91 | 0.98 | 1.1 | 0.91 | 17 |
| 8) | 1,3-Butadiene | 0.87 | 0.82 | 0.80 | 0.84 | 0.91 | 0.85 | 4.8 |
| 9) | Bromomethane | 0.49 | 0.70 | 0.75 | 0.81 | 0.91 | 0.73 | 22 |
| 10) | Chloroethane | 0.24 | 0.45 | 0.50 | 0.55 | 0.63 | 0.48 | 31 |
| 11) | Vinyl bromide | 0.53 | 0.86 | 0.92 | 1.0 | 1.1 | 0.90 | 26 |
| 12) | Trichlorofluoromethane | 2.6 | 2.6 | 2.7 | 2.9 | 3.2 | 2.8 | 8.9 |
| 14) | 1,1-Dichloroethene | 1.4 | 1.5 | 1.9 | 2.1 | 2.3 | 1.9 | 21 |
| 15) | Carbon disulfide | 2.4 | 2.6 | 3.2 | 3.4 | 3.7 | 3.1 | 18 |
| 16) | 1,1,2-Trichloro-1,2,2-trifluoroethane | 2.8 | 3.0 | 2.5 | 2.7 | 3.0 | 2.8 | 7.4 |
| 17) | Acrolein | 0.39 | 0.33 | 0.43 | 0.45 | 0.49 | 0.42 | 15 |
| 18) | Allyl Chloride | 0.35 | 0.42 | 0.54 | 0.58 | 0.62 | 0.50 | 23 |
| 19) | Isopropanol | 1.6 | 1.7 | 2.1 | 2.3 | 2.4 | 2.0 | 17 |
| 20) | Methylene chloride | 1.7 | 0.97 | 1.0 | 1.1 | 1.3 | 1.2 | 25 |
| 21) | Acetone | 1.5 | 1.2 | 1.5 | 1.6 | 1.7 | 1.5 | 12 |
| 22) | 1,2-Dichloroethene (trans) | 1.4 | 1.3 | 1.8 | 2.0 | 2.2 | 1.7 | 21 |
| 24) | n-Hexane | 3.1 | 3.0 | 3.0 | 3.1 | 3.5 | 3.2 | 7.1 |
| 25) | Methyl tert-butyl ether | 3.5 | 4.1 | 3.6 | 3.9 | 4.3 | 3.9 | 8.5 |
| 26) | Tert-butyl alcohol | 2.3 | 2.5 | 2.5 | 2.7 | 3.0 | 2.6 | 11 |
| 27) | 1,1-Dichloroethane | 2.2 | 2.0 | 2.2 | 2.4 | 2.7 | 2.3 | 12 |
| 28) | 1,2-Dichloroethene (cis) | 1.3 | 1.4 | 1.7 | 1.8 | 2.0 | 1.6 | 18 |
| 29) | Cyclohexane | 2.1 | 2.2 | 2.1 | 2.2 | 2.4 | 2.2 | 6.8 |
| 30) | Chloroform | 2.2 | 2.3 | 2.6 | 2.9 | 3.2 | 2.7 | 15 |
| 32) | Carbon tetrachloride | 3.0 | 3.1 | 3.0 | 3.2 | 3.5 | 3.2 | 6.9 |
| 33) | Tetrahydrofuran | 1.5 | 1.3 | 1.5 | 1.6 | 1.7 | 1.5 | 9.4 |
| 34) | 1,1,1-Trichloroethane | 2.5 | 2.7 | 2.7 | 2.9 | 3.1 | 2.8 | 8.7 |
| 35) | Methyl ethyl ketone | 2.3 | 2.1 | 2.4 | 2.6 | 2.9 | 2.4 | 13 |
| 36) | n-Heptane | 2.6 | 2.6 | 2.9 | 2.9 | 2.9 | 2.8 | 6.9 |
| 37) | Benzene | 3.6 | 3.8 | 3.8 | 4.1 | 4.5 | 4.0 | 9.3 |
| 38) | 1,2-Dichloroethane | 1.3 | 1.5 | 1.7 | 1.8 | 2.0 | 1.7 | 17 |
| 39) | 1,4-Difluorobenzene | ----------ISTD---------- | | | | | | |
| 40) | Trichloroethene | 0.38 | 0.47 | 0.44 | 0.45 | 0.47 | 0.44 | 8.1 |
| 41) | 2,2,4-Trimethylpentane | 1.2 | 1.5 | 1.2 | 1.3 | 1.3 | 1.3 | 9.8 |
| 42) | 1,2-Dichloropropane | 0.38 | 0.40 | 0.39 | 0.39 | 0.39 | 0.39 | 2.1 |
| 43) | Bromodichloromethane | 0.59 | 0.68 | 0.66 | 0.68 | 0.68 | 0.66 | 6.0 |

***% RSD (Relative Standard Deviation) must be within 30%**
****An exception is made for 2 compounds that must be within 40%**
**RRF - Relative Response Factor**

# Initial Calibration Data Summary Report

**Initial Calibration Curve:** 10/10/2023 **Method ID:** 231009.M
**Instrument:** AA

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4131BFB] | 10/10/2023 10:13 |
| 0.2 PPBV STD [AA4132STD05] | 10/10/2023 10:40 |
| 2 PPBV STD [AA4133STD04] | 10/10/2023 11:46 |
| 10 PPBV STD [AA4134STD03] | 10/10/2023 12:21 |
| 20 PPBV STD [AA4135STD02] | 10/10/2023 12:55 |
| 40 PPBV STD [AA4136STD01] | 10/10/2023 14:05 |
| 10 PPBV ICVSS [AA4137ICVSS] | 10/10/2023 16:48 |

| | Parameter | RRF 0.2ppbv | RRF 2ppbv | RRF 10ppbv | RRF 20ppbv | RRF 40ppbv | Avg ppbv | % RSD |
|---|---|---|---|---|---|---|---|---|
| 44) | Methyl methacrylate | 0.42 | 0.46 | 0.50 | 0.50 | 0.48 | 0.47 | 6.8 |
| 45) | 1,4-Dioxane | 0.21 | 0.24 | 0.24 | 0.25 | 0.25 | 0.24 | 5.9 |
| 46) | 1,3-Dichloropropene (cis) | 0.55 | 0.59 | 0.63 | 0.63 | 0.62 | 0.60 | 5.6 |
| 47) | Toluene | 1.2 | 1.5 | 1.5 | 1.5 | 1.4 | 1.4 | 7.6 |
| 48) | Methyl isobutyl ketone | 0.76 | 0.92 | 0.95 | 0.93 | 0.86 | 0.88 | 8.6 |
| 49) | Tetrachloroethene | 0.53 | 0.61 | 0.63 | 0.64 | 0.61 | 0.61 | 7.1 |
| 50) | 1,3-Dichloropropene (trans) | 0.46 | 0.57 | 0.63 | 0.65 | 0.62 | 0.59 | 13 |
| 51) | 1,1,2-Trichloroethane | 0.40 | 0.48 | 0.49 | 0.51 | 0.50 | 0.48 | 9.3 |
| 52) | Dibromochloromethane | 0.64 | 0.78 | 0.83 | 0.86 | 0.85 | 0.79 | 12 |
| 53) | 1,2-Dibromoethane | 0.54 | 0.67 | 0.73 | 0.75 | 0.74 | 0.69 | 13 |
| 54) | Methyl n-butyl ketone | 0.70 | 0.78 | 0.93 | 0.93 | 0.90 | 0.85 | 12 |
| 55) | d-5 Chlorbenzene | ----------ISTD---------- | | | | | | |
| 57) | Chlorobenzene | 0.97 | 1.1 | 0.99 | 0.99 | 0.99 | 1.00 | 3.0 |
| 58) | Ethylbenzene | 1.8 | 2.0 | 1.9 | 1.8 | 1.8 | 1.8 | 4.5 |
| 59) | Xylenes (m&p) | 1.3 | 1.5 | 1.4 | 1.4 | 1.2 | 1.4 | 9.3 |
| 60) | Xylenes (o) | 1.4 | 1.6 | 1.5 | 1.5 | 1.5 | 1.5 | 5.0 |
| 61) | Styrene | 0.85 | 1.0 | 1.1 | 1.1 | 1.1 | 1.0 | 9.4 |
| 62) | Bromoform | 0.63 | 0.72 | 0.75 | 0.77 | 0.80 | 0.73 | 8.7 |
| 63) | Cumene | 1.8 | 2.2 | 2.0 | 1.9 | 1.9 | 1.9 | 7.1 |
| 66) | 1,1,2,2-Tetrachloroethane | 0.96 | 1.1 | 1.0 | 1.0 | 1.1 | 1.0 | 5.5 |
| 67) | 4-Ethyltoluene | 2.1 | 2.2 | 2.2 | 2.2 | 2.1 | 2.2 | 3.8 |
| 68) | 2-Chlorotoluene | 1.6 | 1.8 | 1.7 | 1.7 | 1.7 | 1.7 | 4.3 |
| 69) | 1,3,5-Trimethylbenzene | 1.5 | 1.9 | 1.8 | 1.8 | 1.7 | 1.7 | 7.6 |
| 70) | 1,2,4-Trimethylbenzene | 1.4 | 1.9 | 1.8 | 1.8 | 1.8 | 1.7 | 9.6 |
| 71) | 1,3-Dichlorobenzene | 1.0 | 1.0 | 1.1 | 1.1 | 1.1 | 1.1 | 4.2 |
| 72) | 1,4-Dichlorobenzene | 0.94 | 1.0 | 1.1 | 1.1 | 1.2 | 1.1 | 8.6 |
| 73) | Benzyl chloride | 1.2 | 1.4 | 1.6 | 1.7 | 1.7 | 1.5 | 15 |
| 74) | 1,2-Dichlorobenzene | 0.90 | 1.1 | 1.0 | 1.1 | 1.1 | 1.0 | 7.4 |
| 75) | 1,3-Hexachlorobutadiene | 0.73 | 0.78 | 0.70 | 0.69 | 0.66 | 0.71 | 6.1 |
| 76) | 1,2,4-Trichlorobenzene | 0.83 | 0.81 | 0.82 | 0.84 | 0.83 | 0.82 | 1.4 |
| 77) | Naphthalene | 2.0 | 1.9 | 1.9 | 1.9 | 1.7 | 1.9 | 4.8 |

***% RSD (Relative Standard Deviation) must be within 30%**
****An exception is made for 2 compounds that must be within 40%**
**RRF - Relative Response Factor**

Method Path : C:\msdchem\1\METHODS\
Method File : 231009.M
Title : TO-15 on the Agilent 7890A / 5975C
Last Update : Tue Oct 10 15:12:35 2023
Response Via : Initial Calibration

Calibration Files
0.2 =aa4132std05.D 2 =aa4133std04.D 10 =aa4134std03.D 20 =aa4135std02.D 40 =aa4136std01.D

| | | Compound | 0.2 | 2 | 10 | 20 | 40 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|
| 1) | I | Bromochloromethane... | ----------ISTD---------- | | | | | | |
| 2) | T | Propene | 0.779 | 0.688 | 0.601 | 0.651 | 0.751 | 0.694 | 10.44 |
| 3) | T | Dichlorodifluoro... | 1.907 | 1.983 | 2.168 | 2.390 | 2.633 | 2.216 | 13.46 |
| 4) | T | 1,2-Dichlorotetr... | 3.185 | 3.352 | 2.944 | 3.158 | 3.458 | 3.219 | 6.12 |
| 5) | T | n-Butane | 1.490 | 1.596 | 1.532 | 1.649 | 1.719 | 1.597 | 5.69 |
| 6) | T | Chloromethane | 0.085 | 0.098 | 0.113 | 0.121 | 0.137 | 0.111 | 18.16 |
| 7) | T | Vinyl chloride | 0.695 | 0.837 | 0.907 | 0.984 | 1.107 | 0.906 | 17.06 |
| 8) | T | 1,3-Butadiene | 0.868 | 0.820 | 0.800 | 0.839 | 0.905 | 0.846 | 4.88 |
| 9) | T | Bromomethane | 0.486 | 0.695 | 0.751 | 0.814 | 0.911 | 0.731 | 21.71 |
| 10) | T | Chloroethane | 0.242 | 0.451 | 0.502 | 0.547 | 0.634 | 0.475 | 30.85 |
| 11) | T | Vinyl bromide | 0.534 | 0.864 | 0.915 | 1.018 | 1.146 | 0.895 | 25.58 |
| 12) | T | Trichlorofluorom... | 2.621 | 2.609 | 2.656 | 2.932 | 3.178 | 2.799 | 8.92 |
| 13) | T | Ethanol | 0.278 | 0.262 | 0.269 | 0.289 | 0.366 | 0.293 | 14.44 |
| 14) | T | 1,1-Dichloroethene | 1.413 | 1.490 | 1.944 | 2.133 | 2.308 | 1.858 | 21.17 |
| 15) | T | Carbon disulfide | 2.407 | 2.574 | 3.227 | 3.426 | 3.653 | 3.058 | 17.73 |
| 16) | T | 1,1,2-Trichloro-... | 2.836 | 3.030 | 2.523 | 2.712 | 2.994 | 2.819 | 7.42 |
| 17) | T | Acrolein | 0.385 | 0.331 | 0.431 | 0.447 | 0.494 | 0.418 | 14.91 |
| 18) | T | Allyl chloride | 0.345 | 0.421 | 0.535 | 0.582 | 0.624 | 0.501 | 23.11 |
| 19) | T | Isopropanol | 1.617 | 1.677 | 2.082 | 2.254 | 2.397 | 2.005 | 17.28 |
| 20) | T | Methylene chloride | 1.726 | 0.973 | 1.020 | 1.121 | 1.307 | 1.229 | 24.89 |
| 21) | T | Acetone | 1.489 | 1.226 | 1.538 | 1.595 | 1.694 | 1.508 | 11.62 |
| 22) | T | trans-1,2-Dichlo... | 1.377 | 1.330 | 1.784 | 1.951 | 2.181 | 1.724 | 21.29 |
| 23) | T | n-Pentane | 2.223 | 2.305 | 2.173 | 2.308 | 2.616 | 2.325 | 7.41 |
| 24) | T | n-Hexane | 3.143 | 2.995 | 2.967 | 3.122 | 3.534 | 3.152 | 7.19 |
| 25) | T | Methyl tert-buty... | 3.476 | 4.059 | 3.641 | 3.875 | 4.310 | 3.872 | 8.54 |
| 26) | T | Tert-butyl alcohol | 2.280 | 2.528 | 2.502 | 2.698 | 3.027 | 2.607 | 10.66 |
| 27) | T | 1,1-Dichloroethane | 2.208 | 2.008 | 2.236 | 2.445 | 2.714 | 2.322 | 11.56 |
| 28) | T | cis-1,2-Dichloro... | 1.343 | 1.351 | 1.654 | 1.825 | 2.018 | 1.638 | 18.03 |
| 29) | t | Cyclohexane | 2.057 | 2.245 | 2.081 | 2.192 | 2.434 | 2.202 | 6.86 |
| 30) | T | Chloroform | 2.233 | 2.343 | 2.644 | 2.933 | 3.225 | 2.676 | 15.36 |
| 31) | T | Ethyl acetate | 0.310 | 0.390 | 0.450 | 0.493 | 0.533 | 0.435 | 20.09 |
| 32) | T | Carbon tetrachlo... | 2.964 | 3.097 | 3.048 | 3.232 | 3.528 | 3.174 | 6.95 |
| 33) | T | Tetrahydrofuran | 1.456 | 1.307 | 1.488 | 1.591 | 1.681 | 1.504 | 9.42 |
| 34) | T | 1,1,1-Trichloroe... | 2.481 | 2.746 | 2.667 | 2.869 | 3.137 | 2.780 | 8.79 |
| 35) | T | Methyl ethyl ketone | 2.291 | 2.066 | 2.372 | 2.620 | 2.862 | 2.442 | 12.58 |
| 36) | T | n-Heptane | 2.552 | 2.559 | 2.850 | 2.930 | 2.928 | 2.764 | 6.98 |
| 37) | T | Benzene | 3.627 | 3.758 | 3.801 | 4.128 | 4.544 | 3.972 | 9.30 |
| 38) | T | 1,2-Dichloroethane | 1.312 | 1.486 | 1.666 | 1.833 | 2.016 | 1.663 | 16.69 |
| 39) | I | 1,4-Difluorobenzen... | ----------ISTD---------- | | | | | | |
| 40) | T | Trichloroethene | 0.381 | 0.468 | 0.441 | 0.454 | 0.469 | 0.442 | 8.16 |
| 41) | T | 2,2,4-Trimethylp... | 1.199 | 1.522 | 1.226 | 1.268 | 1.298 | 1.303 | 9.87 |
| 42) | T | 1,2-Dichloropropane | 0.377 | 0.399 | 0.391 | 0.393 | 0.385 | 0.389 | 2.16 |
| 43) | T | Bromodichloromet... | 0.586 | 0.682 | 0.655 | 0.678 | 0.675 | 0.655 | 6.09 |
| 44) | T | Methyl methacrylate | 0.419 | 0.464 | 0.497 | 0.498 | 0.481 | 0.472 | 6.88 |
| 45) | T | 1,4-Dioxane | 0.214 | 0.238 | 0.243 | 0.249 | 0.248 | 0.238 | 5.94 |
| 46) | T | cis-1,3-Dichloro... | 0.549 | 0.592 | 0.626 | 0.634 | 0.615 | 0.603 | 5.69 |
| 47) | T | Toluene | 1.225 | 1.453 | 1.484 | 1.478 | 1.387 | 1.405 | 7.68 |
| 48) | T | Methyl isobutyl ... | 0.759 | 0.922 | 0.947 | 0.925 | 0.863 | 0.883 | 8.63 |
| 49) | T | Tetrachloroethene | 0.531 | 0.613 | 0.633 | 0.639 | 0.613 | 0.606 | 7.17 |
| 50) | T | trans-1,3-Dichlo... | 0.459 | 0.568 | 0.633 | 0.647 | 0.618 | 0.585 | 13.11 |
| 51) | T | 1,1,2-Trichloroe... | 0.399 | 0.475 | 0.494 | 0.506 | 0.500 | 0.475 | 9.30 |
| 52) | T | Dibromochloromet... | 0.636 | 0.778 | 0.834 | 0.857 | 0.849 | 0.791 | 11.62 |
| 53) | T | 1,2-Dibromoethane | 0.535 | 0.672 | 0.732 | 0.751 | 0.743 | 0.686 | 13.15 |
| 54) | T | Methyl n-butyl k... | 0.704 | 0.779 | 0.932 | 0.932 | 0.900 | 0.849 | 12.07 |
| 55) | I | d-5 Chlorobenzene ... | ----------ISTD---------- | | | | | | |
| 56) | T | n-Nonane | 0.927 | 1.067 | 1.027 | 0.986 | 0.955 | 0.992 | 5.62 |
| 57) | T | Chlorobenzene | 0.971 | 1.050 | 0.990 | 0.986 | 0.988 | 0.997 | 3.09 |
| 58) | T | Ethylbenzene | 1.789 | 1.981 | 1.852 | 1.820 | 1.771 | 1.843 | 4.51 |
| 59) | T | Xylenes (m&p) | 1.326 | 1.536 | 1.415 | 1.363 | 1.186 | 1.365 | 9.36 |
| 60) | T | Xylene (o) | 1.445 | 1.623 | 1.468 | 1.461 | 1.451 | 1.490 | 5.05 |

Method Path : C:\msdchem\1\METHODS\
Method File : 231009.M

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 61) | T | Styrene | 0.849 | 1.047 | 1.067 | 1.065 | 1.073 | 1.020 | 9.41 |
| 62) | T | Bromoform | 0.629 | 0.724 | 0.745 | 0.767 | 0.797 | 0.732 | 8.70 |
| 63) | T | Cumene | 1.783 | 2.168 | 1.955 | 1.932 | 1.897 | 1.947 | 7.18 |
| 64) | S | Bromofluorobenze... | 0.801 | 0.842 | 0.870 | 0.891 | 0.954 | 0.872 | 6.54 |
| 65) | T | n-Propyl benzene | 2.478 | 2.727 | 2.610 | 2.556 | 2.335 | 2.541 | 5.77 |
| 66) | T | 1,1,2,2-Tetrachl... | 0.959 | 1.120 | 1.040 | 1.040 | 1.055 | 1.043 | 5.50 |
| 67) | T | 4-Ethyltoluene | 2.059 | 2.245 | 2.204 | 2.174 | 2.073 | 2.151 | 3.80 |
| 68) | T | 2-Chlorotoluene | 1.626 | 1.829 | 1.701 | 1.690 | 1.690 | 1.707 | 4.35 |
| 69) | T | 1,3,5-Trimethylb... | 1.513 | 1.880 | 1.755 | 1.754 | 1.747 | 1.730 | 7.69 |
| 70) | T | 1,2,4-Trimethylb... | 1.441 | 1.880 | 1.785 | 1.775 | 1.764 | 1.729 | 9.68 |
| 71) | T | 1,3-Dichlorobenzene | 1.031 | 1.007 | 1.050 | 1.081 | 1.124 | 1.059 | 4.27 |
| 72) | T | 1,4-Dichlorobenzene | 0.943 | 1.005 | 1.082 | 1.123 | 1.174 | 1.065 | 8.65 |
| 73) | T | Benzyl chloride | 1.159 | 1.435 | 1.619 | 1.688 | 1.742 | 1.529 | 15.48 |
| 74) | T | 1,2-Dichlorobenzene | 0.895 | 1.065 | 1.034 | 1.054 | 1.089 | 1.027 | 7.47 |
| 75) | T | 1,3-Hexachlorobu... | 0.731 | 0.778 | 0.703 | 0.687 | 0.664 | 0.713 | 6.17 |
| 76) | T | 1,2,4-Trichlorob... | 0.829 | 0.807 | 0.819 | 0.838 | 0.828 | 0.824 | 1.43 |
| 77) | T | Naphthalene | 1.972 | 1.901 | 1.894 | 1.926 | 1.733 | 1.885 | 4.80 |

(#) = Out of Range

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4132std05.D
Acq On : 10 Oct 2023 10:40 am
Operator : jjw
Sample : 0.2 ppbv standard
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 10 15:08:52 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:03:48 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.380 | 130 | 335961 | 10.00 | ppbV | | -0.014 |
| 39) 1,4-Difluorobenzene (IS) | 5.444 | 114 | 1366548 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 1287551 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1031937 | 9.01 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 1.451 | 41 | 5709 | 0.25 | ppbV | | 95 |
| 3) Dichlorodifluoromethane | 1.499 | 85 | 13581 | 0.18 | ppbV | # | 83 |
| 4) 1,2-Dichlorotetrafluor... | 1.619 | 85 | 20971 | 0.19 | ppbV | | 99 |
| 5) n-Butane | 1.702 | 43 | 10916 | 0.20 | ppbV | # | 85 |
| 6) Chloromethane | 1.684 | 52 | 641 | 0.16 | ppbV | | 65 |
| 7) Vinyl chloride | 1.753 | 62 | 5046 | 0.16 | ppbV | # | 50 |
| 8) 1,3-Butadiene | 1.760 | 39 | 6239 | 0.22 | ppbV | | 75 |
| 9) Bromomethane | 2.059 | 94 | 3266 | 0.12 | ppbV | | 66 |
| 10) Chloroethane | 2.168 | 64 | 1724 | 0.10 | ppbV | | 80 |
| 11) Vinyl bromide | 2.261 | 106 | 3625 | 0.11 | ppbV | | 95 |
| 12) Trichlorofluoromethane | 2.287 | 101 | 19370 | 0.20 | ppbV | | 97 |
| 13) Ethanol | 2.654 | 45 | 1944 | 0.20 | ppbV | # | 47 |
| 14) 1,1-Dichloroethene | 2.708 | 61 | 9877 | 0.15 | ppbV | | 99 |
| 15) Carbon disulfide | 2.728 | 76 | 17305 | 0.16 | ppbV | | 100 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.750 | 101 | 20772 | 0.22 | ppbV | | 98 |
| 17) Acrolein | 2.969 | 56 | 2586 | 0.18 | ppbV | # | 42 |
| 18) Allyl chloride | 3.084 | 76 | 2500 | 0.14 | ppbV | | 100 |
| 19) Isopropanol | 3.094 | 45 | 9669 | 0.14 | ppbV | # | 84 |
| 20) Methylene chloride | 3.178 | 49 | 12526 | 0.34 | ppbV | | 92 |
| 21) Acetone | 3.194 | 43 | 10805 | 0.21 | ppbV | # | 83 |
| 22) trans-1,2-Dichloroethene | 3.306 | 61 | 10268 | 0.17 | ppbV | | 100 |
| 23) n-Pentane | 3.393 | 43 | 16132 | 0.20 | ppbV | | 92 |
| 24) n-Hexane | 3.380 | 57 | 23439 | 0.22 | ppbV | | 95 |
| 25) Methyl tert-butyl ether | 3.393 | 73 | 26157 | 0.20 | ppbV | | 89 |
| 26) Tert-butyl alcohol | 3.445 | 59 | 17620 | 0.20 | ppbV | | 100 |
| 27) 1,1-Dichloroethane | 3.792 | 63 | 15876 | 0.20 | ppbV | | 91 |
| 28) cis-1,2-Dichloroethene | 4.219 | 61 | 9833 | 0.17 | ppbV | | 98 |
| 29) Cyclohexane | 4.396 | 56 | 15483 | 0.21 | ppbV | | 99 |
| 30) Chloroform | 4.445 | 83 | 16203 | 0.17 | ppbV | | 96 |
| 31) Ethyl acetate | 4.535 | 61 | 2253 | 0.14 | ppbV | | 88 |
| 32) Carbon tetrachloride | 4.563 | 117 | 22109 | 0.20 | ppbV | | 100 |
| 33) Tetrahydrofuran | 4.570 | 42 | 10856 | 0.21 | ppbV | | 87 |
| 34) 1,1,1-Trichloroethane | 4.615 | 97 | 18169 | 0.19 | ppbV | | 97 |
| 35) Methyl ethyl ketone | 4.676 | 43 | 16932 | 0.20 | ppbV | | 91 |
| 36) n-Heptane | 4.911 | 43 | 19030 | 0.20 | ppbV | | 92 |
| 37) Benzene | 4.920 | 78 | 26320 | 0.19 | ppbV | | 98 |
| 38) 1,2-Dichloroethane | 5.078 | 62 | 9608 | 0.16 | ppbV | | 97 |
| 40) Trichloroethene | 5.428 | 130 | 10418 | 0.17 | ppbV | | 93 |
| 41) 2,2,4-Trimethylpentane | 4.827 | 57 | 35716 | 0.20 | ppbV | | 97 |
| 42) 1,2-Dichloropropane | 5.882 | 63 | 11430 | 0.21 | ppbV | | 90 |
| 43) Bromodichloromethane | 5.940 | 83 | 18430 | 0.20 | ppbV | | 98 |
| 44) Methyl methacrylate | 6.081 | 41 | 12606 | 0.19 | ppbV | | 96 |
| 45) 1,4-Dioxane | 6.116 | 88 | 6852 | 0.21 | ppbV | | 97 |
| 46) cis-1,3-Dichloropropene | 6.528 | 75 | 16642 | 0.20 | ppbV | | 95 |
| 47) Toluene | 6.766 | 91 | 36156 | 0.18 | ppbV | | 100 |
| 48) Methyl isobutyl ketone | 7.136 | 43 | 22603 | 0.18 | ppbV | | 98 |
| 49) Tetrachloroethene | 7.155 | 166 | 16259 | 0.19 | ppbV | | 100 |
| 50) trans-1,3-Dichloropropene | 7.174 | 75 | 13916 | 0.17 | ppbV | | 98 |
| 51) 1,1,2-Trichloroethane | 7.332 | 97 | 11763 | 0.17 | ppbV | | 94 |

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4132std05.D
Acq On : 10 Oct 2023 10:40 am
Operator : jjw
Sample : 0.2 ppbv standard
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

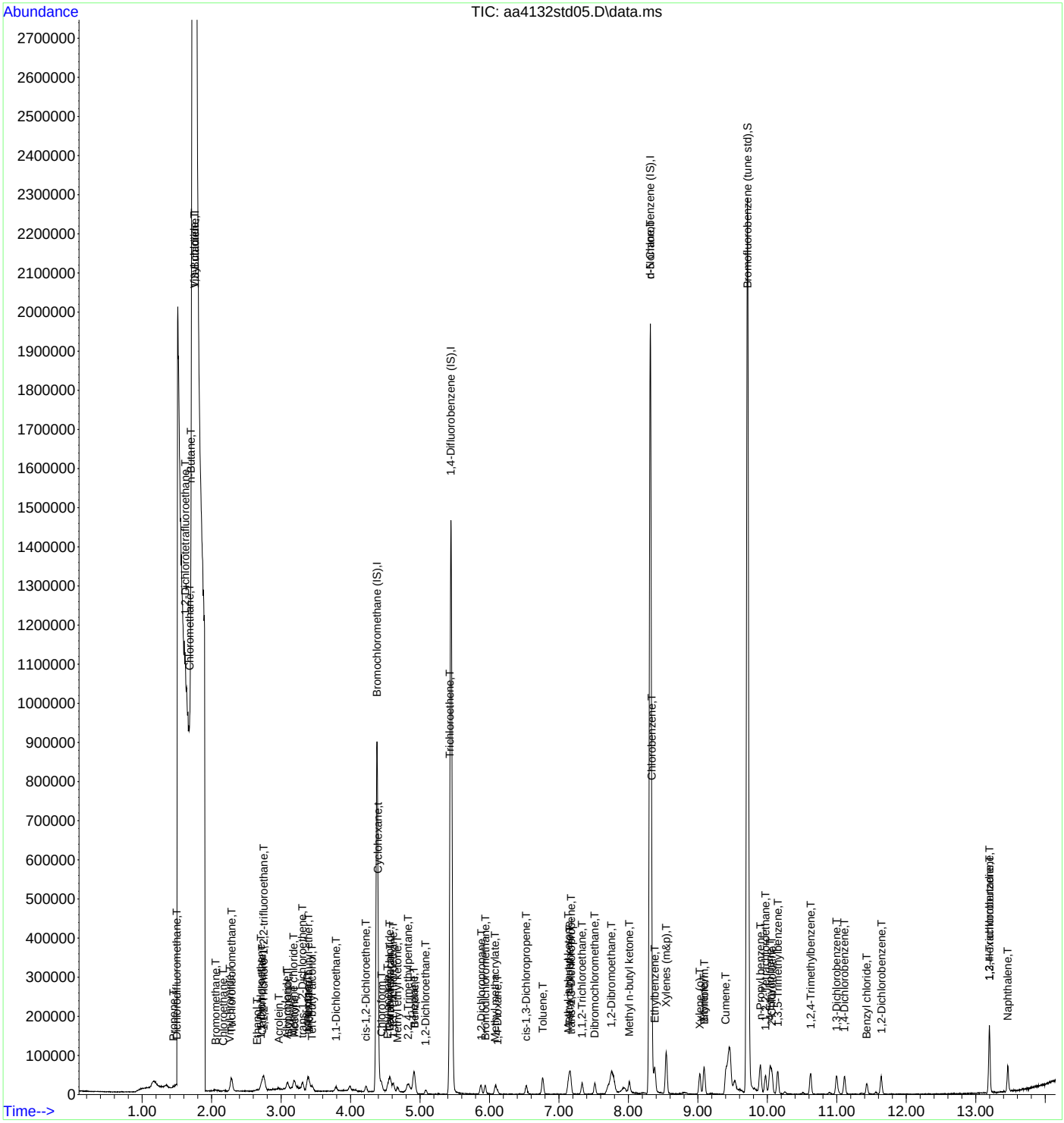
Quant Time: Oct 10 15:08:52 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:03:48 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.515 | 129 | 19465 | 0.17 | ppbV | | 100 |
| 53) 1,2-Dibromoethane | 7.753 | 107 | 15790 | 0.16 | ppbV | | 99 |
| 54) Methyl n-butyl ketone | 8.014 | 43 | 21755 | 0.18 | ppbV | | 91 |
| 56) n-Nonane | 8.316 | 43 | 26498 | 0.20 | ppbV | | 95 |
| 57) Chlorobenzene | 8.335 | 112 | 27757 | 0.21 | ppbV | # | 47 |
| 58) Ethylbenzene | 8.380 | 91 | 51133 | 0.21 | ppbV | | 99 |
| 59) Xylenes (m&p) | 8.544 | 91 | 76173 | 0.43 | ppbV | | 98 |
| 60) Xylene (o) | 9.026 | 91 | 40935 | 0.21 | ppbV | | 95 |
| 61) Styrene | 9.087 | 104 | 24712 | 0.18 | ppbV | | 97 |
| 62) Bromoform | 9.094 | 173 | 18307 | 0.19 | ppbV | | 99 |
| 63) Cumene | 9.399 | 105 | 49138 | 0.19 | ppbV | | 100 |
| 65) n-Propyl benzene | 9.901 | 91 | 68920 | 0.21 | ppbV | | 97 |
| 66) 1,1,2,2-Tetrachloroethane | 9.975 | 83 | 28157 | 0.21 | ppbV | | 96 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 57273 | 0.20 | ppbV | | 99 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 45637 | 0.21 | ppbV | | 98 |
| 69) 1,3,5-Trimethylbenzene | 10.152 | 105 | 42479 | 0.18 | ppbV | | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 40083 | 0.17 | ppbV | | 96 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 29481 | 0.21 | ppbV | | 95 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 25984 | 0.18 | ppbV | | 99 |
| 73) Benzyl chloride | 11.428 | 91 | 29858 | 0.14 | ppbV | | 95 |
| 74) 1,2-Dichlorobenzene | 11.644 | 146 | 24649 | 0.18 | ppbV | | 99 |
| 75) 1,3-Hexachlorobutadiene | 13.197 | 225 | 20901 | 0.23 | ppbV | | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.197 | 180 | 23485 | 0.22 | ppbV | | 97 |
| 77) Naphthalene | 13.460 | 128 | 50770 | 0.21 | ppbV | | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4132std05.D
Acq On : 10 Oct 2023 10:40 am
Operator : jjw
Sample : 0.2 ppbv standard
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 10 15:08:52 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:03:48 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4133std04.D
Acq On : 10 Oct 2023 11:46 am
Operator : jjw
Sample : 2.0 ppbv standard
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 10 15:14:52 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.378 | 130 | 266219 | 10.00 | ppbV | -0.016 |
| 39) 1,4-Difluorobenzene (IS) | 5.445 | 114 | 1004403 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.313 | 117 | 1028709 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.715 | 95 | 866440 | 9.66 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.454 | 41 | 39983 | 2.16 | ppbV | 100 |
| 3) Dichlorodifluoromethane | 1.496 | 85 | 111937 | 1.90 | ppbV | 99 |
| 4) 1,2-Dichlorotetrafluor... | 1.613 | 85 | 174894 | 2.04 | ppbV | 97 |
| 5) n-Butane | 1.699 | 43 | 92630 | 2.18 | ppbV | 97 |
| 6) Chloromethane | 1.767 | 52 | 6226 | 2.11 | ppbV | 99 |
| 7) Vinyl chloride | 1.761 | 62 | 48102 | 1.99 | ppbV | 99 |
| 8) 1,3-Butadiene | 1.764 | 39 | 46700 | 2.07 | ppbV | 98 |
| 9) Bromomethane | 2.046 | 94 | 37014 | 1.90 | ppbV | 98 |
| 10) Chloroethane | 2.172 | 64 | 25446 | 2.01 | ppbV | 97 |
| 11) Vinyl bromide | 2.262 | 106 | 46443 | 1.95 | ppbV | 99 |
| 12) Trichlorofluoromethane | 2.284 | 101 | 152810 | 2.05 | ppbV | 98 |
| 13) Ethanol | 2.641 | 45 | 14500 | 1.86 | ppbV | 99 |
| 14) 1,1-Dichloroethene | 2.706 | 61 | 82725 | 1.67 | ppbV | 100 |
| 15) Carbon disulfide | 2.728 | 76 | 146663 | 1.80 | ppbV | 96 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.747 | 101 | 175871 | 2.34 | ppbV | 99 |
| 17) Acrolein | 2.963 | 56 | 17616 | 1.58 | ppbV | 96 |
| 18) Allyl chloride | 3.091 | 76 | 24227 | 1.82 | ppbV | 100 |
| 19) Isopropanol | 3.088 | 45 | 79453 | 1.49 | ppbV | 96 |
| 20) Methylene chloride | 3.178 | 49 | 55923 | 1.71 | ppbV | 98 |
| 21) Acetone | 3.188 | 43 | 70498 | 1.76 | ppbV | 98 |
| 22) trans-1,2-Dichloroethene | 3.307 | 61 | 78613 | 1.71 | ppbV | 100 |
| 23) n-Pentane | 3.390 | 43 | 132521 | 2.14 | ppbV | 97 |
| 24) n-Hexane | 3.387 | 57 | 176979 | 2.11 | ppbV | 97 |
| 25) Methyl tert-butyl ether | 3.390 | 73 | 242041 | 2.35 | ppbV | 92 |
| 26) Tert-butyl alcohol | 3.442 | 59 | 154807 | 2.23 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.789 | 63 | 106902 | 1.73 | ppbV | 99 |
| 28) cis-1,2-Dichloroethene | 4.217 | 61 | 78716 | 1.80 | ppbV | 98 |
| 29) Cyclohexane | 4.397 | 56 | 133883 | 2.28 | ppbV | 98 |
| 30) Chloroform | 4.439 | 83 | 134737 | 1.89 | ppbV | 98 |
| 31) Ethyl acetate | 4.532 | 61 | 22449 | 1.94 | ppbV | 99 |
| 32) Carbon tetrachloride | 4.561 | 117 | 183055 | 2.17 | ppbV | 99 |
| 33) Tetrahydrofuran | 4.564 | 42 | 77218 | 1.93 | ppbV | 99 |
| 34) 1,1,1-Trichloroethane | 4.612 | 97 | 159351 | 2.15 | ppbV | 97 |
| 35) Methyl ethyl ketone | 4.670 | 43 | 121249 | 1.86 | ppbV | 100 |
| 36) n-Heptane | 4.905 | 43 | 151248 | 2.06 | ppbV | 99 |
| 37) Benzene | 4.921 | 78 | 216088 | 2.04 | ppbV | 99 |
| 38) 1,2-Dichloroethane | 5.079 | 62 | 86250 | 1.95 | ppbV | 100 |
| 40) Trichloroethene | 5.423 | 130 | 93973 | 2.11 | ppbV | 100 |
| 41) 2,2,4-Trimethylpentane | 4.828 | 57 | 337914 | 2.58 | ppbV | 98 |
| 42) 1,2-Dichloropropane | 5.873 | 63 | 89006 | 2.28 | ppbV | 98 |
| 43) Bromodichloromethane | 5.937 | 83 | 157497 | 2.39 | ppbV | 99 |
| 44) Methyl methacrylate | 6.082 | 41 | 102545 | 2.16 | ppbV | 96 |
| 45) 1,4-Dioxane | 6.107 | 88 | 55879 | 2.33 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.529 | 75 | 132030 | 2.18 | ppbV | 98 |
| 47) Toluene | 6.767 | 91 | 315155 | 2.23 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.133 | 43 | 201872 | 2.28 | ppbV | 98 |
| 49) Tetrachloroethene | 7.152 | 166 | 137965 | 2.27 | ppbV | 99 |
| 50) trans-1,3-Dichloropropene | 7.175 | 75 | 126648 | 2.16 | ppbV | 100 |
| 51) 1,1,2-Trichloroethane | 7.336 | 97 | 103047 | 2.16 | ppbV | 99 |

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4133std04.D
Acq On : 10 Oct 2023 11:46 am
Operator : jjw
Sample : 2.0 ppbv standard
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

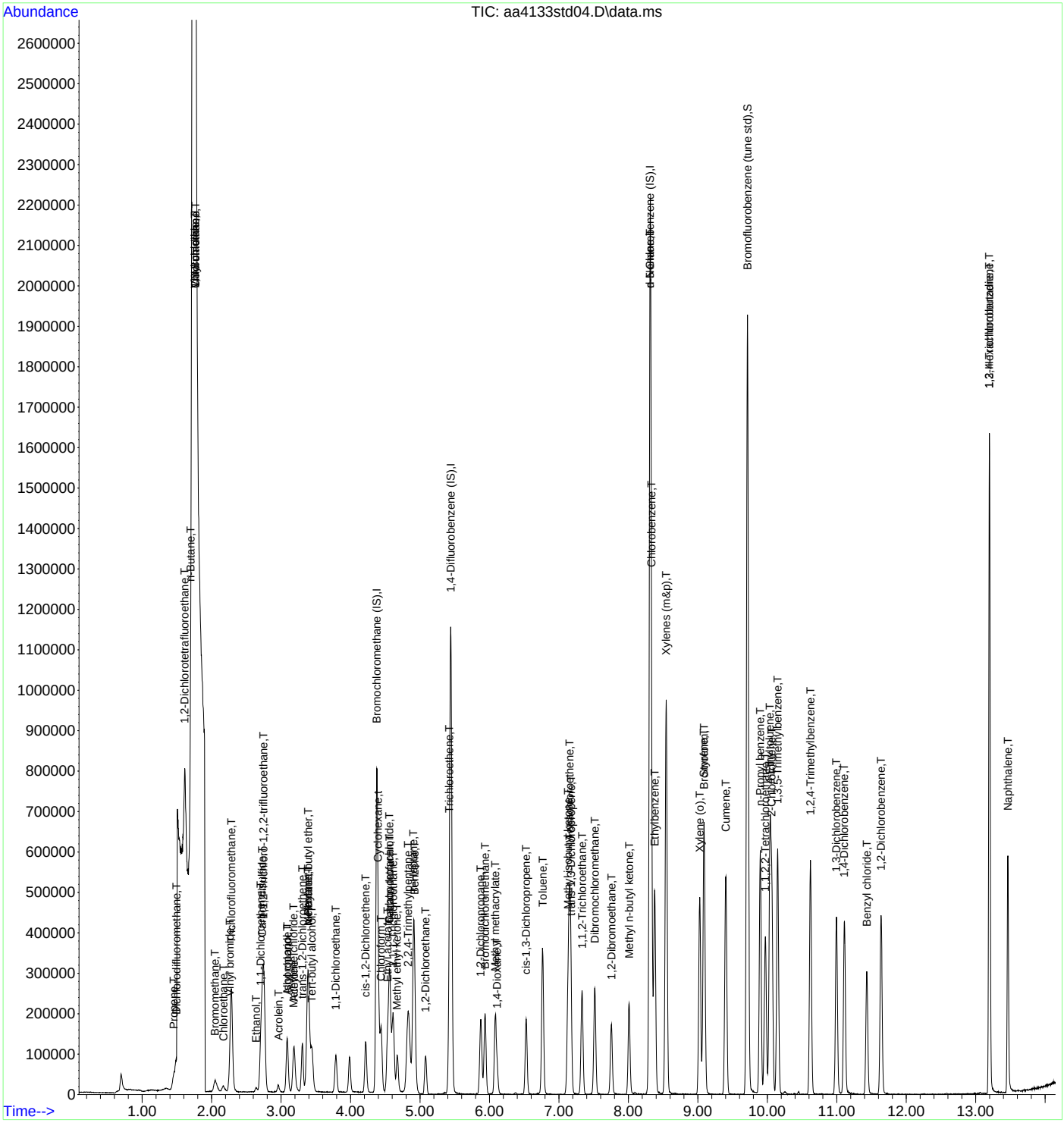
Quant Time: Oct 10 15:14:52 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.516 | 129 | 175087 | 2.20 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.757 | 107 | 145737 | 2.11 | ppbV | 99 |
| 54) Methyl n-butyl ketone | 8.011 | 43 | 176926 | 2.07 | ppbV | 99 |
| 56) n-Nonane | 8.313 | 43 | 243566 | 2.39 | ppbV | 99 |
| 57) Chlorobenzene | 8.332 | 112 | 239887 | 2.34 | ppbV | 96 |
| 58) Ethylbenzene | 8.381 | 91 | 452392 | 2.39 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.545 | 91 | 704842 | 5.02 | ppbV | 98 |
| 60) Xylene (o) | 9.027 | 91 | 367407 | 2.40 | ppbV | 99 |
| 61) Styrene | 9.088 | 104 | 243368 | 2.32 | ppbV | 99 |
| 62) Bromoform | 9.091 | 173 | 168245 | 2.23 | ppbV | 100 |
| 63) Cumene | 9.403 | 105 | 477213 | 2.38 | ppbV | 99 |
| 65) n-Propyl benzene | 9.898 | 91 | 606010 | 2.32 | ppbV | 98 |
| 66) 1,1,2,2-Tetrachloroethane | 9.972 | 83 | 262772 | 2.45 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.037 | 105 | 498880 | 2.25 | ppbV | 98 |
| 68) 2-Chlorotoluene | 10.062 | 91 | 410155 | 2.34 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.149 | 105 | 421510 | 2.37 | ppbV | 100 |
| 70) 1,2,4-Trimethylbenzene | 10.622 | 105 | 417786 | 2.35 | ppbV | 99 |
| 71) 1,3-Dichlorobenzene | 10.995 | 146 | 230016 | 2.11 | ppbV | 99 |
| 72) 1,4-Dichlorobenzene | 11.107 | 146 | 221287 | 2.02 | ppbV | 99 |
| 73) Benzyl chloride | 11.432 | 91 | 295275 | 1.88 | ppbV | 98 |
| 74) 1,2-Dichlorobenzene | 11.638 | 146 | 234385 | 2.22 | ppbV | 99 |
| 75) 1,3-Hexachlorobutadiene | 13.197 | 225 | 177745 | 2.42 | ppbV | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.197 | 180 | 182140 | 2.15 | ppbV | 99 |
| 77) Naphthalene | 13.464 | 128 | 391079 | 2.02 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4133std04.D
Acq On : 10 Oct 2023 11:46 am
Operator : jjw
Sample : 2.0 ppbv standard
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 10 15:14:52 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4134std03.D
Acq On : 10 Oct 2023 12:21 pm
Operator : jjw
Sample : 10 ppbv standard
Misc : EB0103704
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 10 15:20:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.394 | 130 | 393970 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.452 | 114 | 1695876 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 1964329 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.715 | 95 | 1708242 | 9.98 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.487 | 41 | 258254 | 9.44 | ppbV | 100 |
| 3) Dichlorodifluoromethane | 1.523 | 85 | 905524 | 10.37 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.644 | 85 | 1136761 | 8.96 | ppbV | 100 |
| 5) n-Butane | 1.730 | 43 | 657868 | 10.46 | ppbV | 100 |
| 6) Chloromethane | 1.792 | 52 | 50221 | 11.51 | ppbV | 98 |
| 7) Vinyl chloride | 1.781 | 62 | 385978 | 10.81 | ppbV | 100 |
| 8) 1,3-Butadiene | 1.792 | 39 | 337213 | 10.11 | ppbV | 100 |
| 9) Bromomethane | 2.082 | 94 | 295814 | 10.27 | ppbV | 100 |
| 10) Chloroethane | 2.195 | 64 | 209472 | 11.19 | ppbV | 100 |
| 11) Vinyl bromide | 2.288 | 106 | 363736 | 10.31 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.310 | 101 | 1152906 | 10.45 | ppbV | 100 |
| 13) Ethanol | 2.667 | 45 | 110171 | 9.55 | ppbV | 100 |
| 14) 1,1-Dichloroethene | 2.728 | 61 | 796558 | 10.88 | ppbV | 100 |
| 15) Carbon disulfide | 2.751 | 76 | 1360498 | 11.29 | ppbV | 100 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.776 | 101 | 1083429 | 9.75 | ppbV | 100 |
| 17) Acrolein | 2.982 | 56 | 169981 | 10.33 | ppbV | 100 |
| 18) Allyl chloride | 3.111 | 76 | 227552 | 11.52 | ppbV | 100 |
| 19) Isopropanol | 3.108 | 45 | 729204 | 9.23 | ppbV | 100 |
| 20) Methylene chloride | 3.204 | 49 | 433980 | 8.96 | ppbV | 100 |
| 21) Acetone | 3.211 | 43 | 654299 | 11.01 | ppbV | 100 |
| 22) trans-1,2-Dichloroethene | 3.326 | 61 | 780121 | 11.48 | ppbV | 100 |
| 23) n-Pentane | 3.407 | 43 | 924569 | 10.09 | ppbV | 100 |
| 24) n-Hexane | 3.403 | 57 | 1285851 | 10.35 | ppbV | 100 |
| 25) Methyl tert-butyl ether | 3.410 | 73 | 1606753 | 10.53 | ppbV | 100 |
| 26) Tert-butyl alcohol | 3.465 | 59 | 1133398 | 11.03 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.805 | 63 | 942517 | 10.30 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.230 | 61 | 719414 | 11.15 | ppbV | 99 |
| 29) Cyclohexane | 4.413 | 56 | 918448 | 10.59 | ppbV | 100 |
| 30) Chloroform | 4.455 | 83 | 1125163 | 10.67 | ppbV | 100 |
| 31) Ethyl acetate | 4.538 | 61 | 191456 | 11.17 | ppbV | 100 |
| 32) Carbon tetrachloride | 4.574 | 117 | 1320797 | 10.56 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.571 | 42 | 644824 | 10.88 | ppbV | 100 |
| 34) 1,1,1-Trichloroethane | 4.625 | 97 | 1145085 | 10.46 | ppbV | 100 |
| 35) Methyl ethyl ketone | 4.680 | 43 | 1033883 | 10.75 | ppbV | 100 |
| 36) n-Heptane | 4.918 | 43 | 1246184 | 11.45 | ppbV | 100 |
| 37) Benzene | 4.931 | 78 | 1617158 | 10.34 | ppbV | 100 |
| 38) 1,2-Dichloroethane | 5.091 | 62 | 715639 | 10.92 | ppbV | 100 |
| 40) Trichloroethene | 5.432 | 130 | 747440 | 9.96 | ppbV | 100 |
| 41) 2,2,4-Trimethylpentane | 4.844 | 57 | 2224941 | 10.07 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.882 | 63 | 729348 | 11.06 | ppbV | 100 |
| 43) Bromodichloromethane | 5.944 | 83 | 1277100 | 11.49 | ppbV | 100 |
| 44) Methyl methacrylate | 6.088 | 41 | 926458 | 11.58 | ppbV | 100 |
| 45) 1,4-Dioxane | 6.114 | 88 | 481882 | 11.92 | ppbV | 100 |
| 46) cis-1,3-Dichloropropene | 6.532 | 75 | 1178257 | 11.52 | ppbV | 100 |
| 47) Toluene | 6.770 | 91 | 2718261 | 11.40 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.133 | 43 | 1751107 | 11.69 | ppbV | 100 |
| 49) Tetrachloroethene | 7.159 | 166 | 1202779 | 11.70 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.175 | 75 | 1191758 | 12.01 | ppbV | 100 |
| 51) 1,1,2-Trichloroethane | 7.336 | 97 | 904123 | 11.23 | ppbV | 100 |

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4134std03.D
Acq On : 10 Oct 2023 12:21 pm
Operator : jjw
Sample : 10 ppbv standard
Misc : EB0103704
ALS Vial : 4 Sample Multiplier: 1

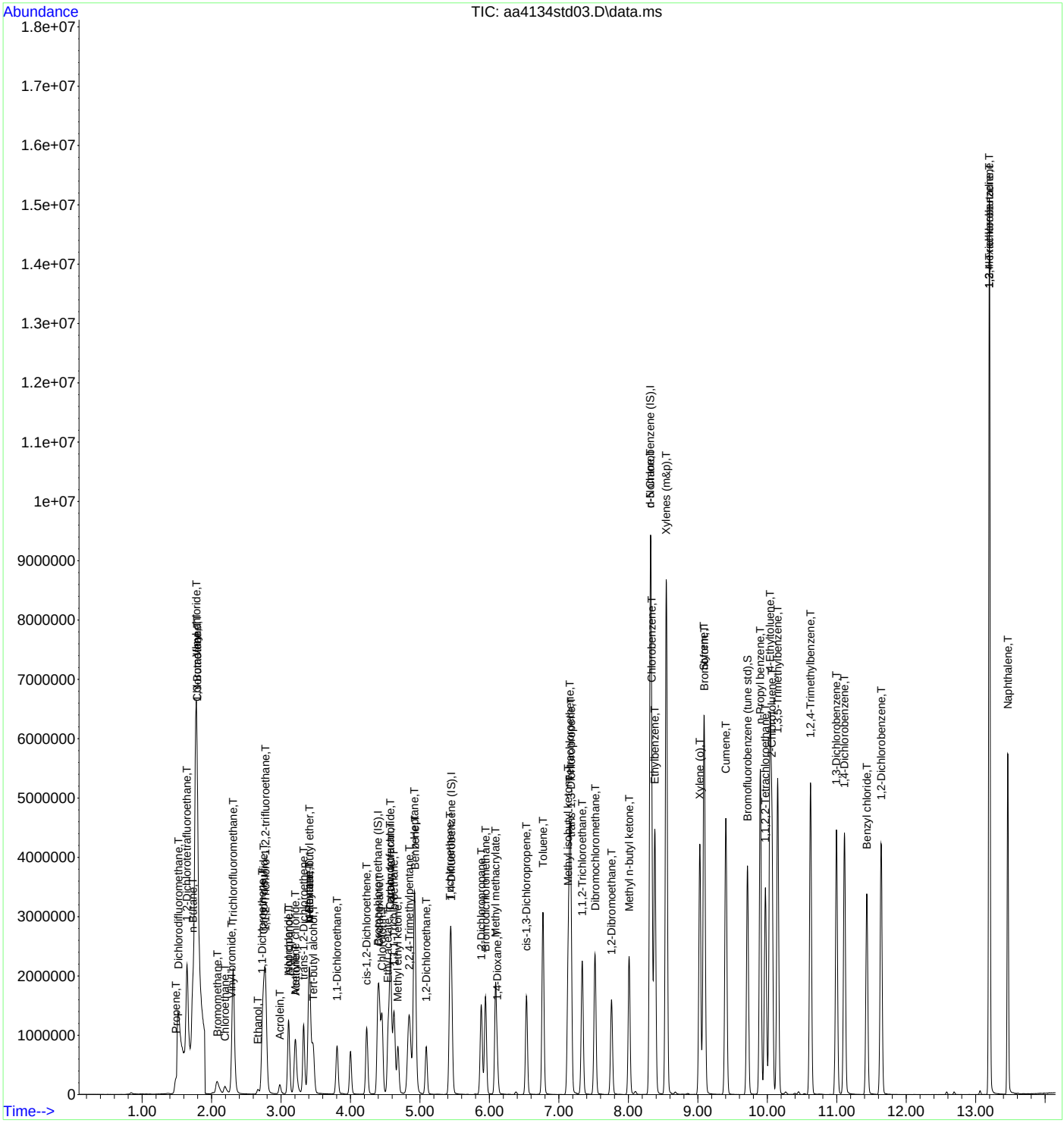
Quant Time: Oct 10 15:20:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.522 | 129 | 1584449 | 11.81 | ppbV | 100 |
| 53) 1,2-Dibromoethane | 7.757 | 107 | 1340384 | 11.51 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.011 | 43 | 1785511 | 12.39 | ppbV | 100 |
| 56) n-Nonane | 8.316 | 43 | 2220175 | 11.39 | ppbV | 100 |
| 57) Chlorobenzene | 8.336 | 112 | 2157593 | 11.02 | ppbV | 100 |
| 58) Ethylbenzene | 8.381 | 91 | 4038783 | 11.16 | ppbV | 100 |
| 59) Xylenes (m&p) | 8.545 | 91 | 6199781 | 23.12 | ppbV | 100 |
| 60) Xylene (o) | 9.027 | 91 | 3172411 | 10.84 | ppbV | 100 |
| 61) Styrene | 9.088 | 104 | 2368407 | 11.82 | ppbV | 100 |
| 62) Bromoform | 9.095 | 173 | 1652936 | 11.49 | ppbV | 100 |
| 63) Cumene | 9.403 | 105 | 4108750 | 10.74 | ppbV | 100 |
| 65) n-Propyl benzene | 9.898 | 91 | 5536013 | 11.09 | ppbV | 100 |
| 66) 1,1,2,2-Tetrachloroethane | 9.972 | 83 | 2329432 | 11.37 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.040 | 105 | 4675293 | 11.06 | ppbV | 100 |
| 68) 2-Chlorotoluene | 10.066 | 91 | 3642460 | 10.86 | ppbV | 100 |
| 69) 1,3,5-Trimethylbenzene | 10.149 | 105 | 3757367 | 11.06 | ppbV | 100 |
| 70) 1,2,4-Trimethylbenzene | 10.622 | 105 | 3786813 | 11.15 | ppbV | 100 |
| 71) 1,3-Dichlorobenzene | 10.995 | 146 | 2289894 | 11.01 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.111 | 146 | 2273891 | 10.87 | ppbV | 100 |
| 73) Benzyl chloride | 11.432 | 91 | 3179639 | 10.59 | ppbV | 100 |
| 74) 1,2-Dichlorobenzene | 11.641 | 146 | 2172244 | 10.77 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.197 | 225 | 1532545 | 10.95 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.197 | 180 | 1768989 | 10.93 | ppbV | 100 |
| 77) Naphthalene | 13.464 | 128 | 3720647 | 10.05 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4134std03.D
Acq On : 10 Oct 2023 12:21 pm
Operator : jjw
Sample : 10 ppbv standard
Misc : EB0103704
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 10 15:20:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4135std02.D
Acq On : 10 Oct 2023 12:55 pm
Operator : jjw
Sample : 20 ppbv standard
Misc : EB0103704
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 10 15:20:48 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.397 | 130 | 363381 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.455 | 114 | 1661895 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 1933627 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.715 | 95 | 1722328 | 10.22 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.490 | 41 | 515568 | 20.44 | ppbV | 98 |
| 3) Dichlorodifluoromethane | 1.530 | 85 | 1841081 | 22.86 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.650 | 85 | 2249237 | 19.23 | ppbV | 99 |
| 5) n-Butane | 1.730 | 43 | 1305900 | 22.50 | ppbV | 99 |
| 6) Chloromethane | 1.788 | 52 | 98143 | 24.39 | ppbV | 93 |
| 7) Vinyl chloride | 1.781 | 62 | 772248 | 23.46 | ppbV | 100 |
| 8) 1,3-Butadiene | 1.795 | 39 | 652429 | 21.21 | ppbV | 98 |
| 9) Bromomethane | 2.085 | 94 | 591691 | 22.26 | ppbV | 98 |
| 10) Chloroethane | 2.194 | 64 | 421571 | 24.42 | ppbV | 99 |
| 11) Vinyl bromide | 2.294 | 106 | 747200 | 22.97 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.313 | 101 | 2343589 | 23.04 | ppbV | 100 |
| 13) Ethanol | 2.667 | 45 | 218329 | 20.52 | ppbV | 96 |
| 14) 1,1-Dichloroethene | 2.735 | 61 | 1612191 | 23.88 | ppbV | 100 |
| 15) Carbon disulfide | 2.754 | 76 | 2664558 | 23.98 | ppbV | 100 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.776 | 101 | 2148248 | 20.97 | ppbV | 100 |
| 17) Acrolein | 2.989 | 56 | 325182 | 21.42 | ppbV | 99 |
| 18) Allyl chloride | 3.111 | 76 | 456662 | 25.07 | ppbV | 100 |
| 19) Isopropanol | 3.111 | 45 | 1457678 | 20.00 | ppbV | 99 |
| 20) Methylene chloride | 3.204 | 49 | 879522 | 19.69 | ppbV | 98 |
| 21) Acetone | 3.214 | 43 | 1252029 | 22.84 | ppbV | 99 |
| 22) trans-1,2-Dichloroethene | 3.326 | 61 | 1573792 | 25.11 | ppbV | 99 |
| 23) n-Pentane | 3.407 | 43 | 1811231 | 21.44 | ppbV | 99 |
| 24) n-Hexane | 3.407 | 57 | 2518540 | 21.99 | ppbV | 100 |
| 25) Methyl tert-butyl ether | 3.410 | 73 | 3154053 | 22.42 | ppbV | 100 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 2254575 | 23.80 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 1901162 | 22.53 | ppbV | 99 |
| 28) cis-1,2-Dichloroethene | 4.236 | 61 | 1445410 | 24.28 | ppbV | 99 |
| 29) Cyclohexane | 4.413 | 56 | 1783891 | 22.29 | ppbV | 99 |
| 30) Chloroform | 4.455 | 83 | 2301846 | 23.67 | ppbV | 99 |
| 31) Ethyl acetate | 4.542 | 61 | 386835 | 24.46 | ppbV | 99 |
| 32) Carbon tetrachloride | 4.577 | 117 | 2607121 | 22.61 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.574 | 42 | 1283380 | 23.48 | ppbV | 99 |
| 34) 1,1,1-Trichloroethane | 4.625 | 97 | 2272798 | 22.50 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.683 | 43 | 2094715 | 23.60 | ppbV | 100 |
| 36) n-Heptane | 4.918 | 43 | 2363613 | 23.53 | ppbV | 100 |
| 37) Benzene | 4.934 | 78 | 3240471 | 22.45 | ppbV | 100 |
| 38) 1,2-Dichloroethane | 5.091 | 62 | 1451918 | 24.03 | ppbV | 100 |
| 40) Trichloroethene | 5.432 | 130 | 1508747 | 20.52 | ppbV | 98 |
| 41) 2,2,4-Trimethylpentane | 4.841 | 57 | 4438426 | 20.50 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.886 | 63 | 1448431 | 22.41 | ppbV | 99 |
| 43) Bromodichloromethane | 5.943 | 83 | 2592041 | 23.80 | ppbV | 99 |
| 44) Methyl methacrylate | 6.088 | 41 | 1821528 | 23.23 | ppbV | 99 |
| 45) 1,4-Dioxane | 6.114 | 88 | 966504 | 24.40 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.535 | 75 | 2338061 | 23.33 | ppbV | 100 |
| 47) Toluene | 6.773 | 91 | 5305706 | 22.72 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.133 | 43 | 3350206 | 22.82 | ppbV | 99 |
| 49) Tetrachloroethene | 7.162 | 166 | 2379736 | 23.63 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.175 | 75 | 2387243 | 24.55 | ppbV | 98 |
| 51) 1,1,2-Trichloroethane | 7.339 | 97 | 1817644 | 23.04 | ppbV | 100 |

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4135std02.D
Acq On : 10 Oct 2023 12:55 pm
Operator : jjw
Sample : 20 ppbv standard
Misc : EB0103704
ALS Vial : 5 Sample Multiplier: 1

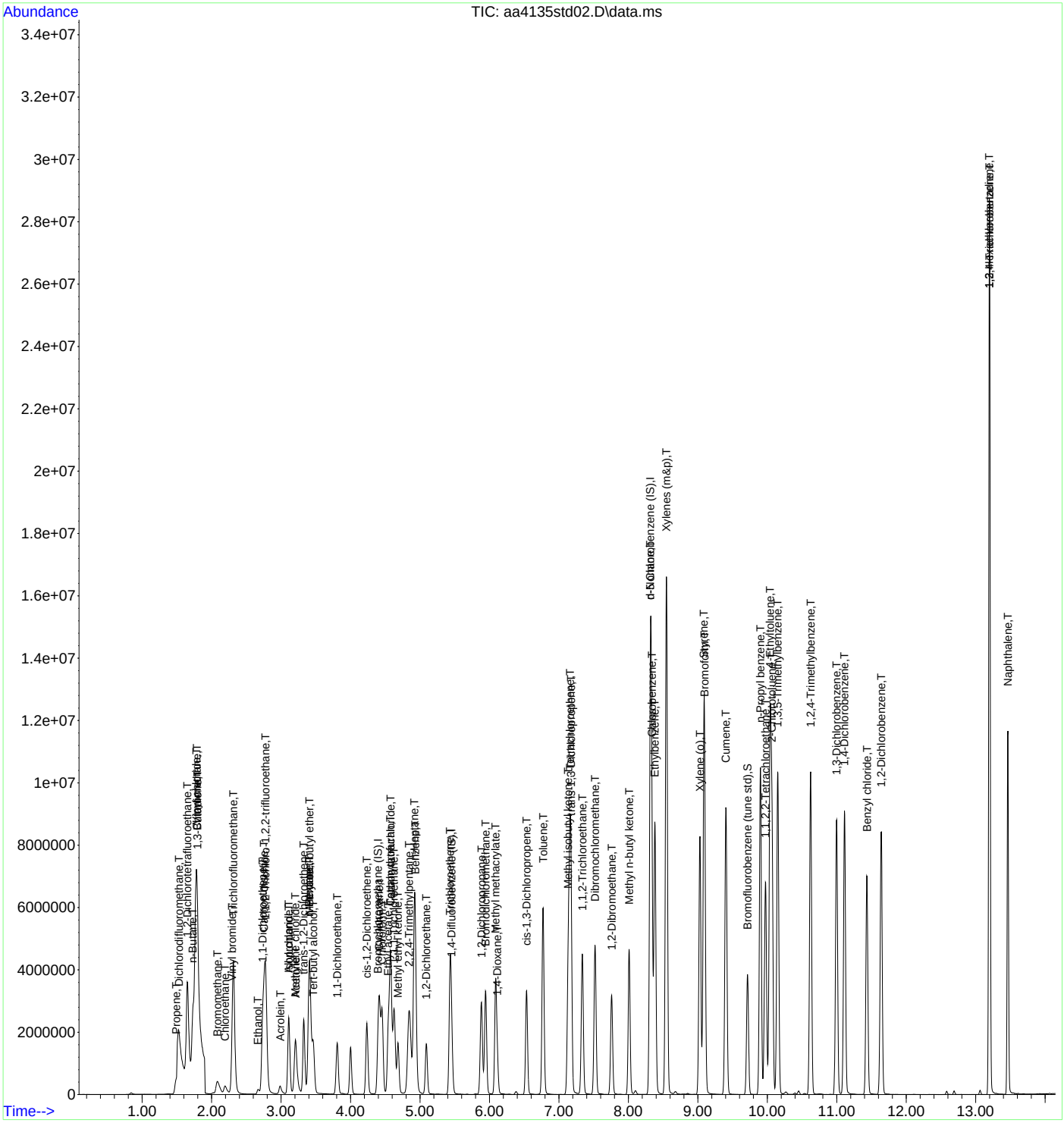
Quant Time: Oct 10 15:20:48 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.522 | 129 | 3189477 | 24.27 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.760 | 107 | 2695314 | 23.62 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.011 | 43 | 3500354 | 24.80 | ppbV | 100 |
| 56) n-Nonane | 8.316 | 43 | 4196367 | 21.87 | ppbV | 99 |
| 57) Chlorobenzene | 8.339 | 112 | 4231170 | 21.95 | ppbV | 100 |
| 58) Ethylbenzene | 8.381 | 91 | 7813775 | 21.93 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.548 | 91 | 11753861 | 44.52 | ppbV | 98 |
| 60) Xylene (o) | 9.030 | 91 | 6215156 | 21.57 | ppbV | 100 |
| 61) Styrene | 9.088 | 104 | 4654583 | 23.60 | ppbV | 99 |
| 62) Bromoform | 9.098 | 173 | 3352006 | 23.67 | ppbV | 99 |
| 63) Cumene | 9.403 | 105 | 7994834 | 21.23 | ppbV | 99 |
| 65) n-Propyl benzene | 9.901 | 91 | 10677156 | 21.73 | ppbV | 99 |
| 66) 1,1,2,2-Tetrachloroethane | 9.975 | 83 | 4583433 | 22.73 | ppbV | 99 |
| 67) 4-Ethyltoluene | 10.040 | 105 | 9079626 | 21.83 | ppbV | 99 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 7122967 | 21.58 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.149 | 105 | 7395052 | 22.11 | ppbV | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.625 | 105 | 7412335 | 22.17 | ppbV | 99 |
| 71) 1,3-Dichlorobenzene | 10.998 | 146 | 4641497 | 22.67 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 4645158 | 22.55 | ppbV | 100 |
| 73) Benzyl chloride | 11.435 | 91 | 6527364 | 22.08 | ppbV | 99 |
| 74) 1,2-Dichlorobenzene | 11.641 | 146 | 4361556 | 21.96 | ppbV | 99 |
| 75) 1,3-Hexachlorobutadiene | 13.197 | 225 | 2950129 | 21.41 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 3565503 | 22.37 | ppbV | 99 |
| 77) Naphthalene | 13.464 | 128 | 7448434 | 20.44 | ppbV | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4135std02.D
Acq On : 10 Oct 2023 12:55 pm
Operator : jjw
Sample : 20 ppbv standard
Misc : EB0103704
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 10 15:20:48 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4136std01.D
Acq On : 10 Oct 2023 2:05 pm
Operator : jjw
Sample : 40 ppbv standard
Misc : EB0103704
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 10 15:21:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.400 | 130 | 356266 | 10.00 | ppbV | | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.458 | 114 | 1769398 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 1970985 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.718 | 95 | 1881267 | 10.95 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 1.493 | 41 | 1166461 | 47.16 | ppbV | | 99 |
| 3) Dichlorodifluoromethane | 1.530 | 85 | 3976819 | 50.37 | ppbV | | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.654 | 85 | 4829984 | 42.11 | ppbV | | 100 |
| 5) n-Butane | 1.733 | 43 | 2669458 | 46.92 | ppbV | | 100 |
| 6) Chloromethane | 1.798 | 52 | 218685 | 55.44 | ppbV | # | 1 |
| 7) Vinyl chloride | 1.788 | 62 | 1703493 | 52.78 | ppbV | | 100 |
| 8) 1,3-Butadiene | 1.798 | 39 | 1380202 | 45.78 | ppbV | | 97 |
| 9) Bromomethane | 2.088 | 94 | 1297810 | 49.81 | ppbV | | 98 |
| 10) Chloroethane | 2.197 | 64 | 957066 | 56.55 | ppbV | | 99 |
| 11) Vinyl bromide | 2.294 | 106 | 1649730 | 51.72 | ppbV | | 99 |
| 12) Trichlorofluoromethane | 2.316 | 101 | 4982088 | 49.96 | ppbV | | 100 |
| 13) Ethanol | 2.670 | 45 | 542733 | 52.03 | ppbV | | 98 |
| 14) 1,1-Dichloroethene | 2.734 | 61 | 3420744 | 51.68 | ppbV | | 100 |
| 15) Carbon disulfide | 2.757 | 76 | 5570013 | 51.13 | ppbV | | 99 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.776 | 101 | 4651123 | 46.31 | ppbV | | 99 |
| 17) Acrolein | 2.991 | 56 | 704002 | 47.31 | ppbV | | 100 |
| 18) Allyl chloride | 3.114 | 76 | 960536 | 53.78 | ppbV | | 100 |
| 19) Isopropanol | 3.114 | 45 | 3040718 | 42.56 | ppbV | | 99 |
| 20) Methylene chloride | 3.204 | 49 | 2011731 | 45.94 | ppbV | | 99 |
| 21) Acetone | 3.217 | 43 | 2606931 | 48.51 | ppbV | | 99 |
| 22) trans-1,2-Dichloroethene | 3.329 | 61 | 3449388 | 56.15 | ppbV | | 99 |
| 23) n-Pentane | 3.409 | 43 | 4025985 | 48.61 | ppbV | | 99 |
| 24) n-Hexane | 3.409 | 57 | 5589811 | 49.78 | ppbV | | 100 |
| 25) Methyl tert-butyl ether | 3.409 | 73 | 6879864 | 49.87 | ppbV | | 99 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 4961423 | 53.42 | ppbV | | 100 |
| 27) 1,1-Dichloroethane | 3.811 | 63 | 4139076 | 50.03 | ppbV | | 98 |
| 28) cis-1,2-Dichloroethene | 4.236 | 61 | 3134852 | 53.71 | ppbV | | 99 |
| 29) Cyclohexane | 4.416 | 56 | 3885234 | 49.53 | ppbV | | 100 |
| 30) Chloroform | 4.454 | 83 | 4963958 | 52.07 | ppbV | | 99 |
| 31) Ethyl acetate | 4.541 | 61 | 819660 | 52.86 | ppbV | | 99 |
| 32) Carbon tetrachloride | 4.580 | 117 | 5580598 | 49.35 | ppbV | | 99 |
| 33) Tetrahydrofuran | 4.573 | 42 | 2658620 | 49.61 | ppbV | | 98 |
| 34) 1,1,1-Trichloroethane | 4.628 | 97 | 4872977 | 49.20 | ppbV | | 99 |
| 35) Methyl ethyl ketone | 4.686 | 43 | 4486611 | 51.57 | ppbV | | 99 |
| 36) n-Heptane | 4.921 | 43 | 4632338 | 47.05 | ppbV | | 99 |
| 37) Benzene | 4.933 | 78 | 6993711 | 49.43 | ppbV | | 100 |
| 38) 1,2-Dichloroethane | 5.094 | 62 | 3131902 | 52.87 | ppbV | | 100 |
| 40) Trichloroethene | 5.435 | 130 | 3316781 | 42.37 | ppbV | | 99 |
| 41) 2,2,4-Trimethylpentane | 4.843 | 57 | 9712768 | 42.14 | ppbV | | 98 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 3027090 | 43.98 | ppbV | | 99 |
| 43) Bromodichloromethane | 5.946 | 83 | 5494302 | 47.39 | ppbV | | 99 |
| 44) Methyl methacrylate | 6.088 | 41 | 3747387 | 44.88 | ppbV | | 99 |
| 45) 1,4-Dioxane | 6.114 | 88 | 2055391 | 48.74 | ppbV | | 98 |
| 46) cis-1,3-Dichloropropene | 6.535 | 75 | 4834720 | 45.30 | ppbV | | 99 |
| 47) Toluene | 6.773 | 91 | 10605745 | 42.65 | ppbV | | 98 |
| 48) Methyl isobutyl ketone | 7.133 | 43 | 6661468 | 42.63 | ppbV | | 99 |
| 49) Tetrachloroethene | 7.162 | 166 | 4858576 | 45.31 | ppbV | | 99 |
| 50) trans-1,3-Dichloropropene | 7.178 | 75 | 4856047 | 46.91 | ppbV | | 100 |
| 51) 1,1,2-Trichloroethane | 7.339 | 97 | 3819106 | 45.48 | ppbV | | 100 |

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4136std01.D
Acq On : 10 Oct 2023 2:05 pm
Operator : jjw
Sample : 40 ppbv standard
Misc : EB0103704
ALS Vial : 6 Sample Multiplier: 1

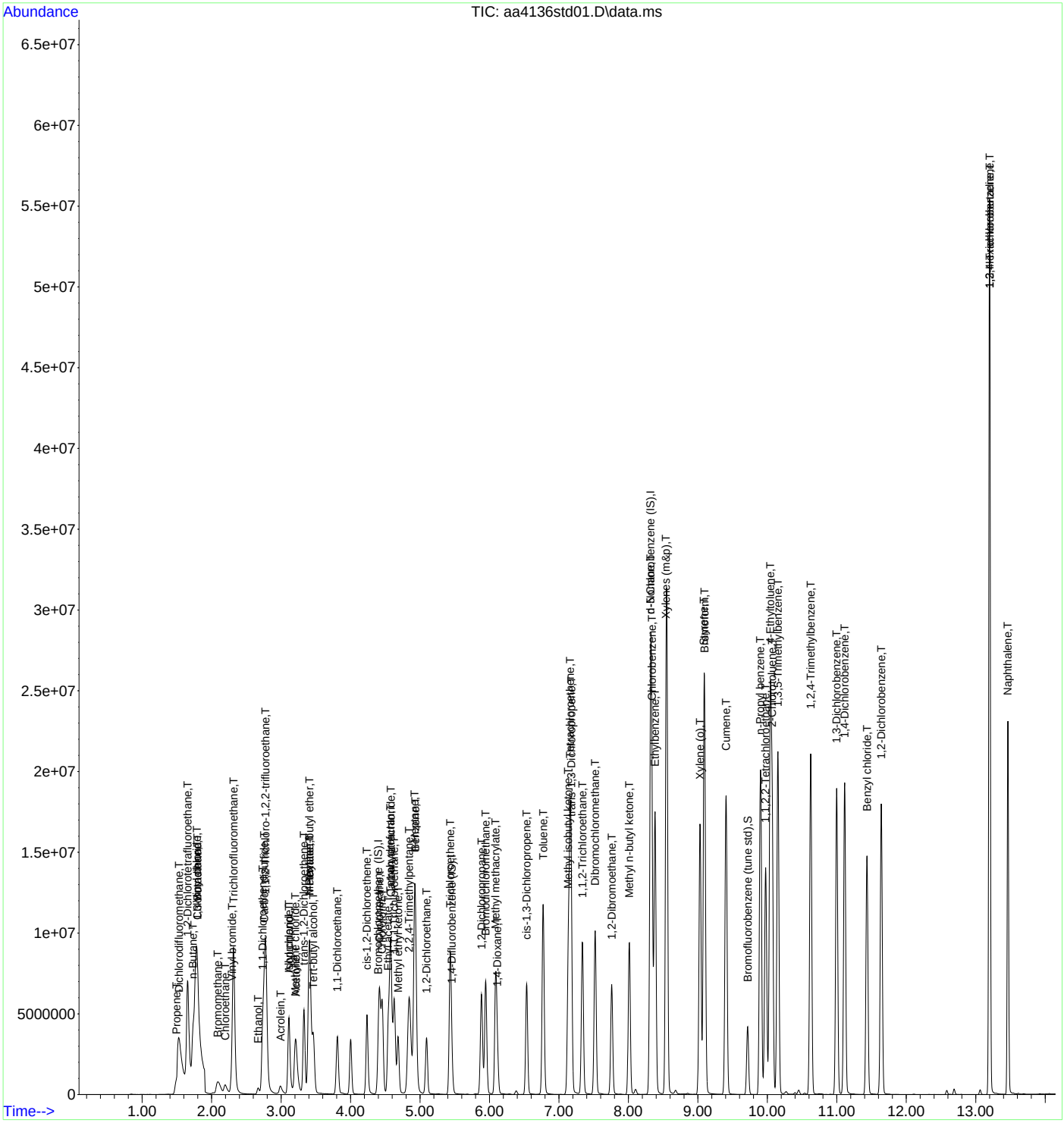
Quant Time: Oct 10 15:21:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.522 | 129 | 6730612 | 48.10 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.760 | 107 | 5679586 | 46.76 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.011 | 43 | 7194438 | 47.87 | ppbV | 98 |
| 56) n-Nonane | 8.319 | 43 | 8278410 | 42.32 | ppbV | 98 |
| 57) Chlorobenzene | 8.338 | 112 | 8642594 | 43.99 | ppbV | 100 |
| 58) Ethylbenzene | 8.384 | 91 | 15502498 | 42.68 | ppbV | 96 |
| 59) Xylenes (m&p) | 8.541 | 91 | 20852616 | 77.48 | ppbV | 89 |
| 60) Xylene (o) | 9.030 | 91 | 12586480 | 42.86 | ppbV | 98 |
| 61) Styrene | 9.088 | 104 | 9555594 | 47.52 | ppbV | 98 |
| 62) Bromoform | 9.097 | 173 | 7098495 | 49.18 | ppbV | 99 |
| 63) Cumene | 9.406 | 105 | 16006588 | 41.71 | ppbV | 96 |
| 65) n-Propyl benzene | 9.898 | 91 | 19885132 | 39.70 | ppbV | 93 |
| 66) 1,1,2,2-Tetrachloroethane | 9.975 | 83 | 9484025 | 46.14 | ppbV | 99 |
| 67) 4-Ethyltoluene | 10.043 | 105 | 17650930 | 41.63 | ppbV | 95 |
| 68) 2-Chlorotoluene | 10.068 | 91 | 14525182 | 43.17 | ppbV | 97 |
| 69) 1,3,5-Trimethylbenzene | 10.152 | 105 | 15012049 | 44.03 | ppbV | 96 |
| 70) 1,2,4-Trimethylbenzene | 10.625 | 105 | 15021608 | 44.08 | ppbV | 97 |
| 71) 1,3-Dichlorobenzene | 10.998 | 146 | 9832383 | 47.12 | ppbV | 99 |
| 72) 1,4-Dichlorobenzene | 11.113 | 146 | 9906545 | 47.18 | ppbV | 99 |
| 73) Benzyl chloride | 11.435 | 91 | 13735706 | 45.59 | ppbV | 96 |
| 74) 1,2-Dichlorobenzene | 11.641 | 146 | 9184158 | 45.37 | ppbV | 98 |
| 75) 1,3-Hexachlorobutadiene | 13.200 | 225 | 5812342 | 41.37 | ppbV | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 7183784 | 44.22 | ppbV | 99 |
| 77) Naphthalene | 13.460 | 128 | 13659104 | 36.76 | ppbV # | 93 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4136std01.D
Acq On : 10 Oct 2023 2:05 pm
Operator : jjw
Sample : 40 ppbv standard
Misc : EB0103704
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 10 15:21:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Initial Calibration Verification Sample Standard

**Lab Sample Name:** 10 PPBV ICVSS **Data File:** AA3407ICVSS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 8/15/2023

**Amount of standard injected (ml):** 50

Runs with this ICVSS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA3401BFB] | 08/15/2023 10:11 |
| 0.2 PPBV STD [AA3402STD05] | 08/15/2023 11:15 |
| 10 PPBV STANDARD STD [AA3404STD03] | 08/15/2023 13:09 |
| 2 PPBV STD [AA3403STD04] | 08/15/2023 13:45 |
| 20 PPBV STD [AA3405STD02] | 08/15/2023 15:12 |
| 40 PPBV STD [AA3406STD01] | 08/15/2023 16:47 |
| 10 PPBV ICVSS [AA3407ICVSS] | 08/15/2023 18:09 |

| Compound | CAS # | Injected Amount (ppbv) | Recovered Amount (ppbv) | % Recovery | QC Limit |
|---|---|---|---|---|---|
| Acetone | 67-64-1 | 11 | 10 | 95 | |
| Acrolein | 107-02-8 | 9.4 | 10.0 | 110 | |
| Allyl Chloride | 107-05-1 | 11 | 11 | 99 | |
| Benzene | 71-43-2 | 10 | 9.7 | 93 | |
| Benzyl chloride | 100-44-7 | 11 | 11 | 100 | |
| Bromodichloromethane | 75-27-4 | 11 | 11 | 100 | |
| Bromoform | 75-25-2 | 11 | 11 | 96 | |
| Bromomethane | 74-83-9 | 11 | 10 | 92 | |
| 1,3-Butadiene | 106-99-0 | 11 | 10 | 92 | |
| n-Butane | 106-97-8 | 11 | 11 | 100 | |
| Chlorobenzene | 108-90-7 | 10 | 11 | 110 | |
| Chloroethane | 75-00-3 | 9.8 | 11 | 110 | |
| Chloroform | 67-66-3 | 11 | 10 | 92 | |
| Chloromethane | 74-87-3 | 9.9 | 12 | 120 | |
| Carbon disulfide | 75-15-0 | 10 | 11 | 110 | |
| Carbon tetrachloride | 56-23-5 | 11 | 9.7 | 91 | |
| 2-Chlorotoluene | 95-49-8 | 11 | 10 | 91 | |
| Cumene | 98-82-8 | 10 | 10 | 99 | |
| Cyclohexane | 110-82-7 | 11 | 9.7 | 89 | |
| Dibromochloromethane | 124-48-1 | 11 | 11 | 100 | |
| 1,2-Dibromoethane | 106-93-4 | 11 | 11 | 100 | |
| 1,2-Dichlorobenzene | 95-50-1 | 10 | 10 | 97 | |
| 1,3-Dichlorobenzene | 541-73-1 | 10 | 10 | 96 | |
| 1,4-Dichlorobenzene | 106-46-7 | 10 | 11 | 110 | |
| Dichlorodifluoromethane | 75-71-8 | 11 | 10 | 92 | |
| 1,1-Dichloroethane | 75-34-3 | 11 | 9.7 | 92 | |
| 1,2-Dichloroethane | 107-06-2 | 11 | 10 | 95 | |
| 1,1-Dichloroethene | 75-35-4 | 11 | 11 | 100 | |
| 1,2-Dichloroethene (cis) | 156-59-2 | 10 | 11 | 110 | |
| 1,2-Dichloroethene (trans) | 156-60-5 | 11 | 11 | 100 | |
| 1,2-Dichloropropane | 78-87-5 | 11 | 10.0 | 95 | |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 9.9 | 11 | 110 | |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 11 | 11 | 100 | |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 11 | 8.6 | 77 | |
| 1,4-Dioxane | 123-91-1 | 11 | 11 | 98 | |
| Ethanol | 64-17-5 | 9.8 | 8.5 | 87 | |
| Ethyl acetate | 141-78-6 | 10 | 9.9 | 96 | |
| Ethylbenzene | 100-41-4 | 10 | 11 | 110 | |
| 4-Ethyltoluene | 622-96-8 | 11 | 11 | 100 | |
| n-Heptane | 142-82-5 | 11 | 10 | 92 | |

**ICVSS recovery must be within 70-130% of the spiked value for all compounds.**

*** Values outside of QC limits**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Initial Calibration Verification Sample Standard

**Lab Sample Name:** 10 PPBV ICVSS **Data File:** AA3407ICVSS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 8/15/2023

**Amount of standard injected (ml):** 50

Runs with this ICVSS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA3401BFB] | 08/15/2023 10:11 |
| 0.2 PPBV STD [AA3402STD05] | 08/15/2023 11:15 |
| 10 PPBV STANDARD STD [AA3404STD03] | 08/15/2023 13:09 |
| 2 PPBV STD [AA3403STD04] | 08/15/2023 13:45 |
| 20 PPBV STD [AA3405STD02] | 08/15/2023 15:12 |
| 40 PPBV STD [AA3406STD01] | 08/15/2023 16:47 |
| 10 PPBV ICVSS [AA3407ICVSS] | 08/15/2023 18:09 |

| Compound | CAS # | Injected Amount (ppbv) | Recovered Amount (ppbv) | % Recovery | QC Limit |
|---|---|---|---|---|---|
| 1,3-Hexachlorobutadiene | 87-68-3 | 9.8 | 9.8 | 100 | |
| n-Hexane | 110-54-3 | 11 | 9.7 | 90 | |
| Isopropanol | 67-63-0 | 8.1 | 8.8 | 110 | |
| Methylene chloride | 75-09-2 | 11 | 9.1 | 85 | |
| Methyl ethyl ketone | 78-93-3 | 11 | 10 | 92 | |
| Methyl isobutyl ketone | 108-10-1 | 10 | 11 | 110 | |
| Methyl methacrylate | 80-62-6 | 11 | 11 | 100 | |
| Methyl n-butyl ketone | 591-78-6 | 11 | 12 | 110 | |
| Methyl tert-butyl ether | 1634-04-4 | 11 | 9.9 | 91 | |
| Naphthalene | 91-20-3 | 11 | 10 | 93 | |
| n-Nonane | 111-84-2 | 11 | 10 | 89 | |
| n-Pentane | 109-66-0 | 11 | 9.1 | 82 | |
| Propene | 115-07-1 | 11 | 10 | 91 | |
| n-Propyl benzene | 103-65-1 | 11 | 11 | 100 | |
| Styrene | 100-42-5 | 11 | 12 | 110 | |
| Tert-butyl alcohol | 75-65-0 | 12 | 10 | 87 | |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 10 | 10 | 97 | |
| Tetrachloroethene | 127-18-4 | 12 | 11 | 93 | |
| Tetrahydrofuran | 109-99-9 | 11 | 10 | 93 | |
| Toluene | 108-88-3 | 11 | 11 | 100 | |
| 1,2,4-Trichlorobenzene | 120-82-1 | 10 | 10 | 100 | |
| 1,1,1-Trichloroethane | 71-55-6 | 11 | 9.4 | 88 | |
| 1,1,2-Trichloroethane | 79-00-5 | 11 | 10 | 93 | |
| Trichloroethene | 79-01-6 | 10 | 9.5 | 93 | |
| Trichlorofluoromethane | 75-69-4 | 11 | 10 | 94 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 11 | 9.1 | 83 | |
| 1,2,4-Trimethylbenzene | 95-63-6 | 10 | 11 | 100 | |
| 1,3,5-Trimethylbenzene | 108-67-8 | 10 | 11 | 110 | |
| 2,2,4-Trimethylpentane | 540-84-1 | 11 | 10 | 92 | |
| Vinyl bromide | 593-60-2 | 10 | 10 | 100 | |
| Vinyl chloride | 75-01-4 | 11 | 11 | 97 | |
| Xylenes (m&p) | 179601-23-1 | 21 | 22 | 110 | |
| Xylenes (o) | 95-47-6 | 10 | 11 | 110 | |

**ICVSS recovery must be within 70-130% of the spiked value for all compounds.**

*** Values outside of QC limits**

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3407icvss.D
Acq On : 15 Aug 2023 6:09 pm
Operator : jjw
Sample : 10 ppbv icvss
Misc : EB0116272
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 16 10:02:33 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.396 | 130 | 614925 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.454 | 114 | 2660514 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 3151139 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 2639252 | 10.07 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.486 | 41 | 437009 | 10.32 | ppbV | 100 |
| 3) Dichlorodifluoromethane | 1.526 | 85 | 1589571 | 10.23 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.646 | 85 | 1915451 | 8.57 | ppbV | 100 |
| 5) n-Butane | 1.729 | 43 | 1085164 | 10.79 | ppbV | 99 |
| 6) Chloromethane | 1.791 | 52 | 84692 | 11.77 | ppbV | 91 |
| 7) Vinyl chloride | 1.780 | 62 | 624265 | 10.68 | ppbV | 99 |
| 8) 1,3-Butadiene | 1.794 | 39 | 615975 | 10.31 | ppbV | 99 |
| 9) Bromomethane | 2.084 | 94 | 497818 | 10.14 | ppbV | 99 |
| 10) Chloroethane | 2.197 | 64 | 339826 | 10.69 | ppbV | 99 |
| 11) Vinyl bromide | 2.293 | 106 | 630457 | 10.21 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.312 | 101 | 2122221 | 10.15 | ppbV | 100 |
| 13) Ethanol | 2.669 | 45 | 210384 | 8.55 | ppbV | 99 |
| 14) 1,1-Dichloroethene | 2.734 | 61 | 1353018 | 10.54 | ppbV | 100 |
| 15) Carbon disulfide | 2.753 | 76 | 2291667 | 10.87 | ppbV | 99 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.776 | 101 | 1880237 | 9.10 | ppbV | 99 |
| 17) Acrolein | 2.984 | 56 | 263590 | 9.98 | ppbV | 99 |
| 18) Allyl chloride | 3.113 | 76 | 378917 | 11.01 | ppbV | 100 |
| 19) Isopropanol | 3.113 | 45 | 1247145 | 8.77 | ppbV | 99 |
| 20) Methylene chloride | 3.203 | 49 | 707555 | 9.12 | ppbV | 99 |
| 21) Acetone | 3.213 | 43 | 1199665 | 10.40 | ppbV | 99 |
| 22) trans-1,2-Dichloroethene | 3.329 | 61 | 1279551 | 11.07 | ppbV | 99 |
| 23) n-Pentane | 3.409 | 43 | 1345011 | 9.12 | ppbV | 99 |
| 24) n-Hexane | 3.409 | 57 | 2003979 | 9.73 | ppbV | 100 |
| 25) Methyl tert-butyl ether | 3.412 | 73 | 2769119 | 9.89 | ppbV | 99 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 1862648 | 10.34 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 1576537 | 9.72 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.235 | 61 | 1186018 | 10.57 | ppbV | 99 |
| 29) Cyclohexane | 4.415 | 56 | 1446092 | 9.72 | ppbV | 99 |
| 30) Chloroform | 4.454 | 83 | 2014411 | 10.15 | ppbV | 99 |
| 31) Ethyl acetate | 4.541 | 61 | 312517 | 9.89 | ppbV | 100 |
| 32) Carbon tetrachloride | 4.576 | 117 | 2310805 | 9.71 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.576 | 42 | 1135151 | 10.18 | ppbV | 99 |
| 34) 1,1,1-Trichloroethane | 4.631 | 97 | 2017204 | 9.42 | ppbV | 100 |
| 35) Methyl ethyl ketone | 4.685 | 43 | 1824867 | 10.25 | ppbV | 99 |
| 36) n-Heptane | 4.917 | 43 | 2119295 | 10.29 | ppbV | 99 |
| 37) Benzene | 4.933 | 78 | 2760579 | 9.73 | ppbV | 100 |
| 38) 1,2-Dichloroethane | 5.094 | 62 | 1306989 | 10.28 | ppbV | 99 |
| 40) Trichloroethene | 5.435 | 130 | 1277643 | 9.46 | ppbV | 100 |
| 41) 2,2,4-Trimethylpentane | 4.846 | 57 | 3384494 | 10.04 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.881 | 63 | 1210091 | 9.97 | ppbV | 99 |
| 43) Bromodichloromethane | 5.946 | 83 | 2297408 | 10.86 | ppbV | 100 |
| 44) Methyl methacrylate | 6.087 | 41 | 1707517 | 10.94 | ppbV | 100 |
| 45) 1,4-Dioxane | 6.113 | 88 | 839393 | 11.21 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 2028992 | 10.81 | ppbV | 99 |
| 47) Toluene | 6.772 | 91 | 4536523 | 10.63 | ppbV | 99 |
| 48) Methyl isobutyl ketone | 7.135 | 43 | 3266617 | 10.60 | ppbV | 100 |
| 49) Tetrachloroethene | 7.161 | 166 | 2057579 | 10.73 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 2121255 | 11.47 | ppbV | 99 |
| 51) 1,1,2-Trichloroethane | 7.338 | 97 | 1545574 | 10.28 | ppbV | 100 |

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3407icvss.D
Acq On : 15 Aug 2023 6:09 pm
Operator : jjw
Sample : 10 ppbv icvss
Misc : EB0116272
ALS Vial : 10 Sample Multiplier: 1

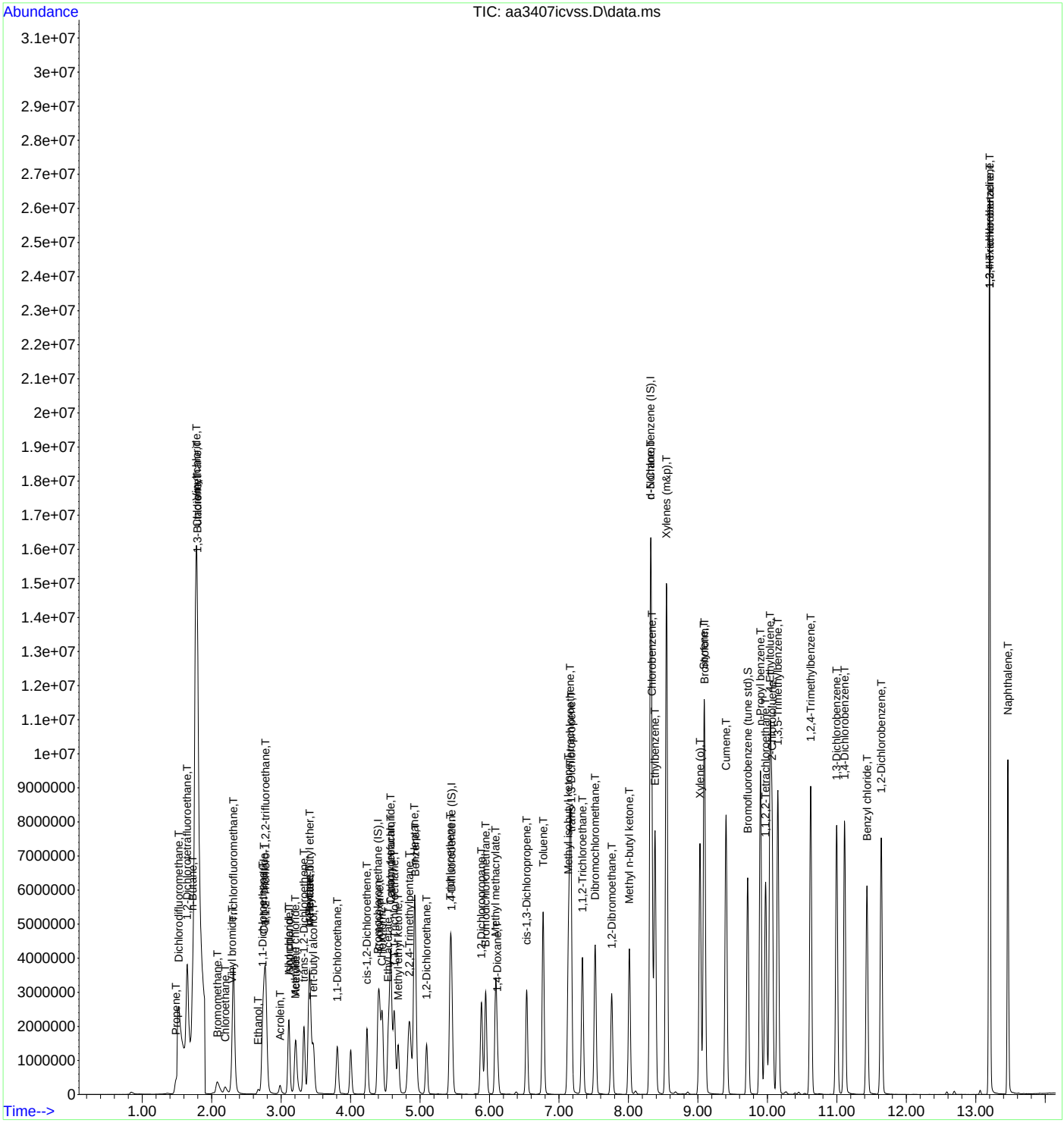
Quant Time: Aug 16 10:02:33 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 2775633 | 11.06 | ppbV | 100 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 2393720 | 10.88 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.013 | 43 | 3342265 | 11.58 | ppbV | 99 |
| 56) n-Nonane | 8.319 | 43 | 3980940 | 10.32 | ppbV | 99 |
| 57) Chlorobenzene | 8.338 | 112 | 3631305 | 10.52 | ppbV | 99 |
| 58) Ethylbenzene | 8.383 | 91 | 6749535 | 10.58 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.547 | 91 | 10243811 | 22.27 | ppbV | 100 |
| 60) Xylene (o) | 9.029 | 91 | 5367160 | 10.51 | ppbV | 100 |
| 61) Styrene | 9.087 | 104 | 3897707 | 11.50 | ppbV | 99 |
| 62) Bromoform | 9.097 | 173 | 2909911 | 11.11 | ppbV | 100 |
| 63) Cumene | 9.405 | 105 | 6858593 | 10.31 | ppbV | 100 |
| 65) n-Propyl benzene | 9.901 | 91 | 9335682 | 10.76 | ppbV | 99 |
| 66) 1,1,2,2-Tetrachloroethane | 9.975 | 83 | 4046668 | 10.45 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 7675301 | 10.73 | ppbV | 100 |
| 68) 2-Chlorotoluene | 10.068 | 91 | 6134373 | 10.42 | ppbV | 100 |
| 69) 1,3,5-Trimethylbenzene | 10.151 | 105 | 6150320 | 10.63 | ppbV | 100 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 6292442 | 10.96 | ppbV | 100 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 3955353 | 10.39 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.113 | 146 | 3900278 | 10.66 | ppbV | 99 |
| 73) Benzyl chloride | 11.434 | 91 | 5411364 | 10.79 | ppbV | 100 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 3729037 | 10.35 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.200 | 225 | 2519603 | 9.76 | ppbV | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 2920155 | 10.31 | ppbV | 100 |
| 77) Naphthalene | 13.463 | 128 | 6029829 | 10.31 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3407icvss.D
Acq On : 15 Aug 2023 6:09 pm
Operator : jjw
Sample : 10 ppbv icvss
Misc : EB0116272
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 16 10:02:33 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Initial Calibration Verification Sample Standard

**Lab Sample Name:** 10 PPBV ICVSS **Data File:** AA4137ICVSS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 10/10/2023

**Amount of standard injected (ml):** 50

Runs with this ICVSS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4131BFB] | 10/10/2023 10:13 |
| 0.2 PPBV STD [AA4132STD05] | 10/10/2023 10:40 |
| 2 PPBV STD [AA4133STD04] | 10/10/2023 11:46 |
| 10 PPBV STD [AA4134STD03] | 10/10/2023 12:21 |
| 20 PPBV STD [AA4135STD02] | 10/10/2023 12:55 |
| 40 PPBV STD [AA4136STD01] | 10/10/2023 14:05 |
| 10 PPBV ICVSS [AA4137ICVSS] | 10/10/2023 16:48 |
| 10 PPBV LCS [AA4138LCS] | 10/10/2023 17:39 |
| METHOD BLANK [AA4139BLK] | 10/10/2023 18:07 |
| 02 PPBV RLLCS [AA4140RLLCS] | 10/10/2023 18:35 |
| 10 PPBV CCCVS [AA4154CCCVS] | 10/11/2023 1:53 |

| Compound | CAS # | Injected Amount (ppbv) | Recovered Amount (ppbv) | % Recovery | QC Limit |
|---|---|---|---|---|---|
| Acetone | 67-64-1 | 11 | 10 | 95 | |
| Acrolein | 107-02-8 | 9.4 | 9.5 | 100 | |
| Allyl Chloride | 107-05-1 | 11 | 11 | 99 | |
| Benzene | 71-43-2 | 10 | 9.7 | 93 | |
| Benzyl chloride | 100-44-7 | 11 | 10 | 93 | |
| Bromodichloromethane | 75-27-4 | 11 | 11 | 100 | |
| Bromoform | 75-25-2 | 11 | 11 | 96 | |
| Bromomethane | 74-83-9 | 11 | 10 | 92 | |
| 1,3-Butadiene | 106-99-0 | 11 | 10 | 92 | |
| n-Butane | 106-97-8 | 11 | 10 | 94 | |
| Chlorobenzene | 108-90-7 | 10 | 10 | 96 | |
| Chloroethane | 75-00-3 | 9.8 | 11 | 110 | |
| Chloroform | 67-66-3 | 11 | 9.9 | 91 | |
| Chloromethane | 74-87-3 | 9.9 | 11 | 110 | |
| Carbon disulfide | 75-15-0 | 10 | 11 | 110 | |
| Carbon tetrachloride | 56-23-5 | 11 | 10 | 93 | |
| 2-Chlorotoluene | 95-49-8 | 11 | 10 | 91 | |
| Cumene | 98-82-8 | 10 | 10 | 99 | |
| Cyclohexane | 110-82-7 | 11 | 10 | 92 | |
| Dibromochloromethane | 124-48-1 | 11 | 12 | 110 | |
| 1,2-Dibromoethane | 106-93-4 | 11 | 11 | 100 | |
| 1,2-Dichlorobenzene | 95-50-1 | 10 | 10.0 | 97 | |
| 1,3-Dichlorobenzene | 541-73-1 | 10 | 10 | 96 | |
| 1,4-Dichlorobenzene | 106-46-7 | 10 | 10.0 | 97 | |
| Dichlorodifluoromethane | 75-71-8 | 11 | 10 | 92 | |
| 1,1-Dichloroethane | 75-34-3 | 11 | 9.4 | 90 | |
| 1,2-Dichloroethane | 107-06-2 | 11 | 10 | 95 | |
| 1,1-Dichloroethene | 75-35-4 | 11 | 10.0 | 93 | |
| 1,2-Dichloroethene (cis) | 156-59-2 | 10 | 10 | 97 | |
| 1,2-Dichloroethene (trans) | 156-60-5 | 11 | 11 | 100 | |
| 1,2-Dichloropropane | 78-87-5 | 11 | 10 | 95 | |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 9.9 | 11 | 110 | |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 11 | 11 | 100 | |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 11 | 9.0 | 80 | |
| 1,4-Dioxane | 123-91-1 | 11 | 11 | 98 | |

**ICVSS recovery must be within 70-130% of the spiked value for all compounds.**

*** Values outside of QC limits**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Initial Calibration Verification Sample Standard

**Lab Sample Name:** 10 PPBV ICVSS **Data File:** AA4137ICVSS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 10/10/2023

**Amount of standard injected (ml):** 50

Runs with this ICVSS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4131BFB] | 10/10/2023 10:13 |
| 0.2 PPBV STD [AA4132STD05] | 10/10/2023 10:40 |
| 2 PPBV STD [AA4133STD04] | 10/10/2023 11:46 |
| 10 PPBV STD [AA4134STD03] | 10/10/2023 12:21 |
| 20 PPBV STD [AA4135STD02] | 10/10/2023 12:55 |
| 40 PPBV STD [AA4136STD01] | 10/10/2023 14:05 |
| 10 PPBV ICVSS [AA4137ICVSS] | 10/10/2023 16:48 |
| 10 PPBV LCS [AA4138LCS] | 10/10/2023 17:39 |
| METHOD BLANK [AA4139BLK] | 10/10/2023 18:07 |
| 02 PPBV RLLCS [AA4140RLLCS] | 10/10/2023 18:35 |
| 10 PPBV CCCVS [AA4154CCCVS] | 10/11/2023 1:53 |

| Compound | CAS # | Injected Amount (ppbv) | Recovered Amount (ppbv) | % Recovery | QC Limit |
|---|---|---|---|---|---|
| Ethanol | 64-17-5 | 9.8 | 7.0 | 71 | |
| Ethyl acetate | 141-78-6 | 10 | 11 | 110 | |
| Ethylbenzene | 100-41-4 | 10 | 10 | 96 | |
| 4-Ethyltoluene | 622-96-8 | 11 | 11 | 100 | |
| n-Heptane | 142-82-5 | 11 | 11 | 100 | |
| 1,3-Hexachlorobutadiene | 87-68-3 | 9.8 | 9.8 | 100 | |
| n-Hexane | 110-54-3 | 11 | 10 | 93 | |
| Isopropanol | 67-63-0 | 8.1 | 8.4 | 100 | |
| Methylene chloride | 75-09-2 | 11 | 8.1 | 76 | |
| Methyl ethyl ketone | 78-93-3 | 11 | 10.0 | 92 | |
| Methyl isobutyl ketone | 108-10-1 | 10 | 11 | 110 | |
| Methyl methacrylate | 80-62-6 | 11 | 11 | 100 | |
| Methyl n-butyl ketone | 591-78-6 | 11 | 11 | 99 | |
| Methyl tert-butyl ether | 1634-04-4 | 11 | 10 | 92 | |
| Naphthalene | 91-20-3 | 11 | 9.7 | 91 | |
| n-Nonane | 111-84-2 | 11 | 11 | 97 | |
| n-Pentane | 109-66-0 | 11 | 9.7 | 87 | |
| Propene | 115-07-1 | 11 | 9.2 | 84 | |
| n-Propyl benzene | 103-65-1 | 11 | 11 | 100 | |
| Styrene | 100-42-5 | 11 | 11 | 100 | |
| Tert-butyl alcohol | 75-65-0 | 12 | 11 | 96 | |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 10 | 11 | 110 | |
| Tetrachloroethene | 127-18-4 | 12 | 11 | 93 | |
| Tetrahydrofuran | 109-99-9 | 11 | 10 | 93 | |
| Toluene | 108-88-3 | 11 | 11 | 100 | |
| 1,2,4-Trichlorobenzene | 120-82-1 | 10 | 9.7 | 97 | |
| 1,1,1-Trichloroethane | 71-55-6 | 11 | 10.0 | 93 | |
| 1,1,2-Trichloroethane | 79-00-5 | 11 | 11 | 100 | |
| Trichloroethene | 79-01-6 | 10 | 9.2 | 90 | |
| Trichlorofluoromethane | 75-69-4 | 11 | 10 | 94 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 11 | 9.3 | 85 | |
| 1,2,4-Trimethylbenzene | 95-63-6 | 10 | 10 | 100 | |
| 1,3,5-Trimethylbenzene | 108-67-8 | 10 | 10 | 96 | |
| 2,2,4-Trimethylpentane | 540-84-1 | 11 | 9.6 | 88 | |
| Vinyl bromide | 593-60-2 | 10 | 10 | 100 | |

**ICVSS recovery must be within 70-130% of the spiked value for all compounds.**

*** Values outside of QC limits**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Initial Calibration Verification Sample Standard

**Lab Sample Name:** **10 PPBV ICVSS** **Data File:** **AA4137ICVSS**

**Spike Amount:** **10 ppbv, except m&p-Xylenes at 20 ppbv** **Date Analyzed:** **10/10/2023**

**Amount of standard injected (ml):** **50**

Runs with this ICVSS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4131BFB] | 10/10/2023 10:13 |
| 0.2 PPBV STD [AA4132STD05] | 10/10/2023 10:40 |
| 2 PPBV STD [AA4133STD04] | 10/10/2023 11:46 |
| 10 PPBV STD [AA4134STD03] | 10/10/2023 12:21 |
| 20 PPBV STD [AA4135STD02] | 10/10/2023 12:55 |
| 40 PPBV STD [AA4136STD01] | 10/10/2023 14:05 |
| 10 PPBV ICVSS [AA4137ICVSS] | 10/10/2023 16:48 |
| 10 PPBV LCS [AA4138LCS] | 10/10/2023 17:39 |
| METHOD BLANK [AA4139BLK] | 10/10/2023 18:07 |
| 02 PPBV RLLCS [AA4140RLLCS] | 10/10/2023 18:35 |
| 10 PPBV CCCVS [AA4154CCCVS] | 10/11/2023 1:53 |

| Compound | CAS # | Injected Amount (ppbv) | Recovered Amount (ppbv) | % Recovery | QC Limit |
|---|---|---|---|---|---|
| Vinyl chloride | 75-01-4 | 11 | 11 | 97 | |
| Xylenes (m&p) | 179601-23-1 | 21 | 22 | 110 | |
| Xylenes (o) | 95-47-6 | 10 | 10 | 96 | |

**ICVSS recovery must be within 70-130% of the spiked value for all compounds.**

*** Values outside of QC limits**

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4137icvss.D
Acq On : 10 Oct 2023 4:48 pm
Operator : jjw
Sample : 10 ppbv icvss
Misc : EB0116272
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 11 12:34:17 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.394 | 130 | 450439 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.451 | 114 | 1936760 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 2279414 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.715 | 95 | 1999577 | 10.06 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.487 | 41 | 289233 | 9.25 | ppbV | 98 |
| 3) Dichlorodifluoromethane | 1.527 | 85 | 1032587 | 10.34 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.647 | 85 | 1304952 | 9.00 | ppbV | 100 |
| 5) n-Butane | 1.730 | 43 | 750417 | 10.43 | ppbV | 99 |
| 6) Chloromethane | 1.792 | 52 | 54388 | 10.90 | ppbV | 98 |
| 7) Vinyl chloride | 1.781 | 62 | 431150 | 10.57 | ppbV | 99 |
| 8) 1,3-Butadiene | 1.795 | 39 | 382252 | 10.03 | ppbV | 97 |
| 9) Bromomethane | 2.079 | 94 | 336675 | 10.22 | ppbV | 97 |
| 10) Chloroethane | 2.191 | 64 | 232639 | 10.87 | ppbV | 99 |
| 11) Vinyl bromide | 2.291 | 106 | 412014 | 10.22 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.313 | 101 | 1310652 | 10.39 | ppbV | 99 |
| 13) Ethanol | 2.664 | 45 | 92719 | 7.03 | ppbV | 99 |
| 14) 1,1-Dichloroethene | 2.731 | 61 | 835358 | 9.98 | ppbV | 99 |
| 15) Carbon disulfide | 2.751 | 76 | 1485573 | 10.79 | ppbV | 99 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.773 | 101 | 1177177 | 9.27 | ppbV | 100 |
| 17) Acrolein | 2.985 | 56 | 178709 | 9.50 | ppbV | 99 |
| 18) Allyl chloride | 3.111 | 76 | 250470 | 11.09 | ppbV | 100 |
| 19) Isopropanol | 3.111 | 45 | 759040 | 8.40 | ppbV | 100 |
| 20) Methylene chloride | 3.204 | 49 | 449695 | 8.12 | ppbV | 99 |
| 21) Acetone | 3.210 | 43 | 693658 | 10.21 | ppbV | 98 |
| 22) trans-1,2-Dichloroethene | 3.329 | 61 | 849185 | 10.93 | ppbV | 100 |
| 23) n-Pentane | 3.403 | 43 | 1018939 | 9.73 | ppbV | 98 |
| 24) n-Hexane | 3.403 | 57 | 1426750 | 10.05 | ppbV | 99 |
| 25) Methyl tert-butyl ether | 3.413 | 73 | 1803139 | 10.34 | ppbV | 99 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 1242393 | 10.58 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 977991 | 9.35 | ppbV | 99 |
| 28) cis-1,2-Dichloroethene | 4.233 | 61 | 755931 | 10.24 | ppbV | 99 |
| 29) Cyclohexane | 4.416 | 56 | 1026465 | 10.35 | ppbV | 99 |
| 30) Chloroform | 4.455 | 83 | 1194486 | 9.91 | ppbV | 99 |
| 31) Ethyl acetate | 4.545 | 61 | 208391 | 10.63 | ppbV | 99 |
| 32) Carbon tetrachloride | 4.577 | 117 | 1452418 | 10.16 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.574 | 42 | 693411 | 10.23 | ppbV | 100 |
| 34) 1,1,1-Trichloroethane | 4.625 | 97 | 1251697 | 10.00 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.683 | 43 | 1099463 | 9.99 | ppbV | 100 |
| 36) n-Heptane | 4.915 | 43 | 1406396 | 11.30 | ppbV | 100 |
| 37) Benzene | 4.934 | 78 | 1734004 | 9.69 | ppbV | 100 |
| 38) 1,2-Dichloroethane | 5.091 | 62 | 756182 | 10.10 | ppbV | 100 |
| 40) Trichloroethene | 5.432 | 130 | 792615 | 9.25 | ppbV | 97 |
| 41) 2,2,4-Trimethylpentane | 4.844 | 57 | 2425296 | 9.61 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.882 | 63 | 788220 | 10.46 | ppbV | 100 |
| 43) Bromodichloromethane | 5.943 | 83 | 1432936 | 11.29 | ppbV | 99 |
| 44) Methyl methacrylate | 6.088 | 41 | 1025399 | 11.22 | ppbV | 100 |
| 45) 1,4-Dioxane | 6.111 | 88 | 520094 | 11.27 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.535 | 75 | 1277949 | 10.94 | ppbV | 99 |
| 47) Toluene | 6.770 | 91 | 2952624 | 10.85 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.133 | 43 | 1919423 | 11.22 | ppbV | 99 |
| 49) Tetrachloroethene | 7.159 | 166 | 1314607 | 11.20 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.178 | 75 | 1281531 | 11.31 | ppbV | 97 |
| 51) 1,1,2-Trichloroethane | 7.336 | 97 | 989955 | 10.77 | ppbV | 99 |

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4137icvss.D
Acq On : 10 Oct 2023 4:48 pm
Operator : jjw
Sample : 10 ppbv icvss
Misc : EB0116272
ALS Vial : 7 Sample Multiplier: 1

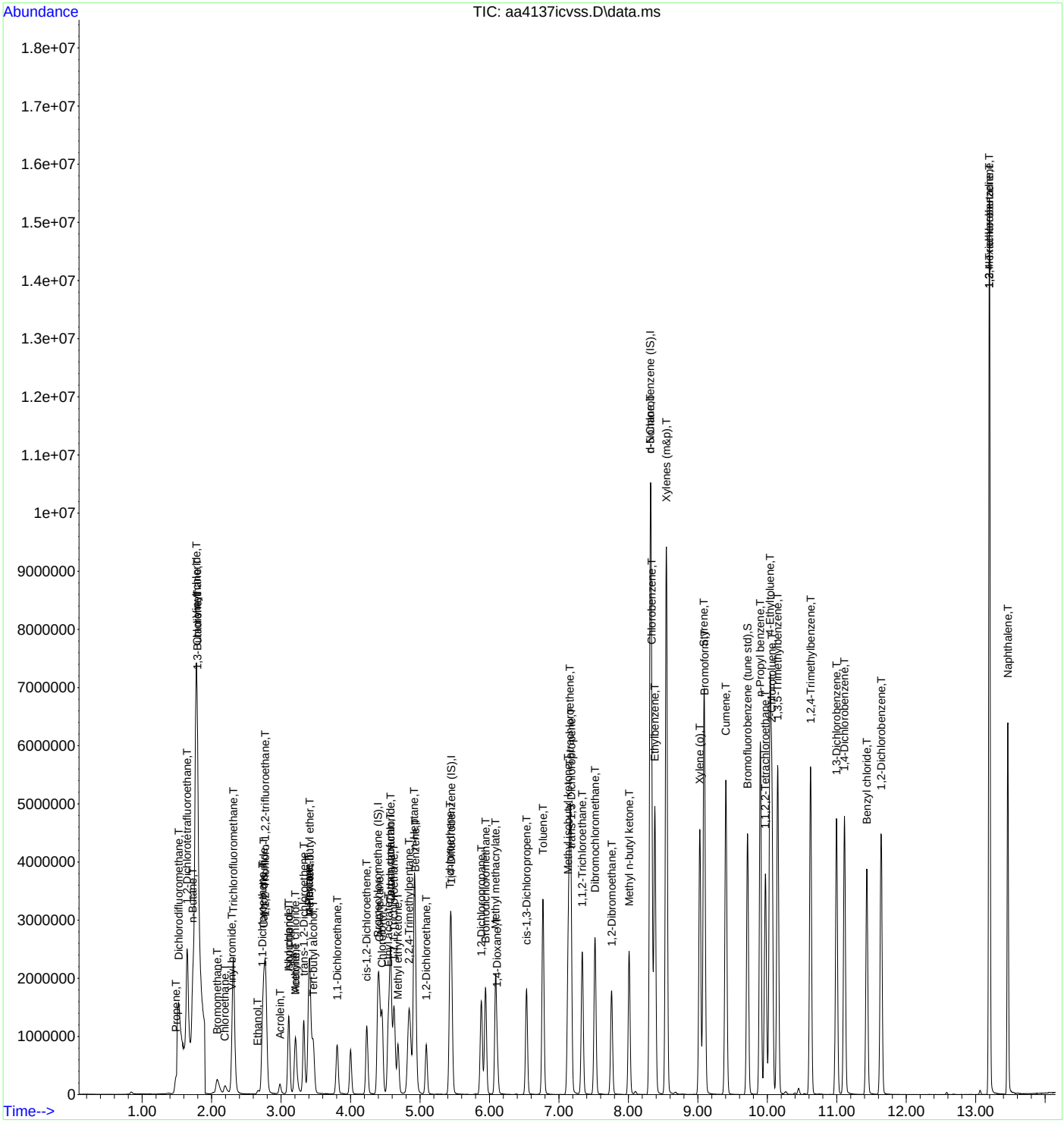
Quant Time: Oct 11 12:34:17 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.519 | 129 | 1775637 | 11.59 | ppbV | 100 |
| 53) 1,2-Dibromoethane | 7.760 | 107 | 1480875 | 11.14 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.011 | 43 | 1847140 | 11.23 | ppbV | 100 |
| 56) n-Nonane | 8.316 | 43 | 2482776 | 10.98 | ppbV | 100 |
| 57) Chlorobenzene | 8.336 | 112 | 2343720 | 10.31 | ppbV | 100 |
| 58) Ethylbenzene | 8.381 | 91 | 4399658 | 10.47 | ppbV | 100 |
| 59) Xylenes (m&p) | 8.548 | 91 | 6725199 | 21.61 | ppbV | 100 |
| 60) Xylene (o) | 9.027 | 91 | 3439926 | 10.13 | ppbV | 100 |
| 61) Styrene | 9.088 | 104 | 2542191 | 10.93 | ppbV | 98 |
| 62) Bromoform | 9.098 | 173 | 1858650 | 11.14 | ppbV | 100 |
| 63) Cumene | 9.403 | 105 | 4624440 | 10.42 | ppbV | 99 |
| 65) n-Propyl benzene | 9.898 | 91 | 6209527 | 10.72 | ppbV | 100 |
| 66) 1,1,2,2-Tetrachloroethane | 9.972 | 83 | 2517951 | 10.59 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.040 | 105 | 5225612 | 10.66 | ppbV | 100 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 4079374 | 10.48 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.149 | 105 | 4048872 | 10.27 | ppbV | 100 |
| 70) 1,2,4-Trimethylbenzene | 10.625 | 105 | 4049729 | 10.28 | ppbV | 100 |
| 71) 1,3-Dichlorobenzene | 10.998 | 146 | 2445218 | 10.13 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 2419709 | 9.96 | ppbV | 99 |
| 73) Benzyl chloride | 11.432 | 91 | 3624814 | 10.40 | ppbV | 100 |
| 74) 1,2-Dichlorobenzene | 11.641 | 146 | 2329520 | 9.95 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.197 | 225 | 1597275 | 9.83 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.197 | 180 | 1825252 | 9.71 | ppbV | 100 |
| 77) Naphthalene | 13.464 | 128 | 4147327 | 9.65 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4137icvss.D
Acq On : 10 Oct 2023 4:48 pm
Operator : jjw
Sample : 10 ppbv icvss
Misc : EB0116272
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 11 12:34:17 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Continuing Calibration Data Summary Report

**Initial Calibration Curve:** 8/15/2023
**Instrument:** AA
**Amount of standard injected (ml):** 50

**Date/Time of Calibration:** 9/28/2023 10:31
**Sample ID:** DCS
**Laboratory ID:** AA4072DCVS

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2164 [AA4076] | 09/28/2023 15:00 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 4870 [AA4077] | 09/28/2023 15:30 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 00:28 |

| Compound Name | Average RRF | Standard RRF | % Difference | PassFail | * |
|---|---|---|---|---|---|
| Acetone | 1.9 | 2.3 | -22 | PASS | |
| Benzene | 4.6 | 5.3 | -16 | PASS | |
| Bromodichloromethane | 0.80 | 0.86 | -8.4 | PASS | |
| Bromoform | 0.83 | 0.94 | -13 | PASS | |
| Bromomethane | 0.80 | 0.95 | -19 | PASS | |
| 1,3-Butadiene | 0.97 | 1.3 | -29 | PASS | |
| Chlorobenzene | 1.1 | 1.2 | -10 | PASS | |
| Chloroethane | 0.52 | 0.59 | -14 | PASS | |
| Chloroform | 3.2 | 3.9 | -22 | PASS | |
| Chloromethane | 0.12 | 0.13 | -14 | PASS | |
| Carbon disulfide | 3.4 | 3.9 | -14 | PASS | |
| Carbon tetrachloride | 3.9 | 3.9 | -0.40 | PASS | |
| Cyclohexane | 2.4 | 2.6 | -8.2 | PASS | |
| Dibromochloromethane | 0.94 | 0.96 | -1.2 | PASS | |
| 1,2-Dibromoethane | 0.83 | 0.86 | -4.5 | PASS | |
| 1,2-Dichlorobenzene | 1.1 | 1.3 | -14 | PASS | |
| 1,3-Dichlorobenzene | 1.2 | 1.4 | -12 | PASS | |
| 1,4-Dichlorobenzene | 1.2 | 1.4 | -20 | PASS | |
| Dichlorodifluoromethane | 2.5 | 3.1 | -22 | PASS | |
| 1,1-Dichloroethane | 2.6 | 3.2 | -23 | PASS | |
| 1,2-Dichloroethane | 2.1 | 2.6 | -24 | PASS | |
| 1,1-Dichloroethene | 2.1 | 2.2 | -6.4 | PASS | |
| 1,2-Dichloroethene (cis) | 1.8 | 2.4 | -30 | PASS | |
| 1,2-Dichloroethene (trans) | 1.9 | 2.4 | -28 | PASS | |
| 1,2-Dichloropropane | 0.46 | 0.48 | -5.7 | PASS | |
| 1,3-Dichloropropene (cis) | 0.71 | 0.75 | -6.8 | PASS | |
| 1,3-Dichloropropene (trans) | 0.70 | 0.79 | -14 | PASS | |
| 1,2-Dichlorotetrafluoroethane | 3.6 | 4.0 | -9.4 | PASS | |
| 1,4-Dioxane | 0.28 | 0.29 | -3.2 | PASS | |
| Ethylbenzene | 2.0 | 2.3 | -13 | PASS | |
| n-Heptane | 3.4 | 3.7 | -11 | PASS | |
| 1,3-Hexachlorobutadiene | 0.82 | 0.86 | -4.5 | PASS | |
| n-Hexane | 3.3 | 3.9 | -15 | PASS | |
| Methylene chloride | 1.3 | 1.5 | -21 | PASS | |
| Methyl ethyl ketone | 2.9 | 3.7 | -29 | PASS | |
| Methyl isobutyl ketone | 1.2 | 1.3 | -8.7 | PASS | |
| Methyl tert-butyl ether | 4.6 | 4.9 | -8.5 | PASS | |
| Styrene | 1.1 | 1.3 | -21 | PASS | |
| Tert-butyl alcohol | 2.9 | 3.3 | -13 | PASS | |
| 1,1,2,2-Tetrachloroethane | 1.2 | 1.3 | -8.6 | PASS | |
| Tetrachloroethene | 0.72 | 0.70 | 3.5 | PASS | |

***%Difference must be within +/- 30%**
**RRF - Relative Response Factor**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Continuing Calibration Data Summary Report

| | | | |
|---|---|---|---|
| **Initial Calibration Curve:** | **8/15/2023** | **Date/Time of Calibration:** | **9/28/2023 10:31** |
| **Instrument:** | **AA** | **Sample ID:** | **DCS** |
| **Amount of standard injected (ml):** | **50** | **Laboratory ID:** | **AA4072DCVS** |

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2164 [AA4076] | 09/28/2023 15:00 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 4870 [AA4077] | 09/28/2023 15:30 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 00:28 |

| Compound Name | Average RRF | Standard RRF | % Difference | PassFail | * |
|---|---|---|---|---|---|
| Toluene | 1.6 | 1.7 | -4.2 | PASS | |
| 1,2,4-Trichlorobenzene | 0.90 | 1.1 | -19 | PASS | |
| 1,1,1-Trichloroethane | 3.5 | 3.6 | -1.9 | PASS | |
| 1,1,2-Trichloroethane | 0.57 | 0.57 | -1.4 | PASS | |
| Trichloroethene | 0.51 | 0.51 | -0.60 | PASS | |
| Trichlorofluoromethane | 3.4 | 4.0 | -17 | PASS | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 3.4 | 3.4 | -1.3 | PASS | |
| 1,2,4-Trimethylbenzene | 1.8 | 2.2 | -20 | PASS | |
| 1,3,5-Trimethylbenzene | 1.8 | 2.1 | -13 | PASS | |
| 2,2,4-Trimethylpentane | 1.3 | 1.4 | -11 | PASS | |
| Vinyl bromide | 1.0 | 1.3 | -25 | PASS | |
| Vinyl chloride | 0.95 | 1.2 | -29 | PASS | |
| Xylenes (m&p) | 1.5 | 1.7 | -20 | PASS | |
| Xylenes (o) | 1.6 | 1.8 | -11 | PASS | |

***%Difference must be within +/- 30%**
**RRF - Relative Response Factor**

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4072dcvs.D
Acq On : 28 Sep 2023 10:31 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 05 12:20:58 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 0% Max. R.T. Dev 0.40min
Max. RRF Dev : 30% Max. Rel. Area : 500%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Bromochloromethane (IS) | 1.000 | 1.000 | 0.0 | 74 | 0.00 |
| 2 | T | Propene | 0.689 | 0.782 | -13.5 | 89 | 0.00 |
| 3 | T | Dichlorodifluoromethane | 2.527 | 3.082 | -22.0 | 95 | 0.00 |
| 4 | T | 1,2-Dichlorotetrafluoroetha | 3.636 | 3.979 | -9.4 | 93 | 0.00 |
| 5 | T | n-Butane | 1.635 | 1.772 | -8.4 | 82 | 0.00 |
| 6 | T | Chloromethane | 0.117 | 0.133 | -13.7 | 85 | 0.00 |
| 7 | T | Vinyl chloride | 0.950 | 1.223 | -28.7 | 97 | 0.00 |
| 8 | T | 1,3-Butadiene | 0.972 | 1.253 | -28.9 | 100 | 0.00 |
| 9 | T | Bromomethane | 0.798 | 0.946 | -18.5 | 90 | 0.00 |
| 10 | T | Chloroethane | 0.517 | 0.591 | -14.3 | 84 | 0.00 |
| 11 | T | Vinyl bromide | 1.004 | 1.257 | -25.2 | 94 | 0.00 |
| 12 | T | Trichlorofluoromethane | 3.400 | 3.990 | -17.4 | 96 | 0.00 |
| 13 | T | Ethanol | 0.400 | 0.423 | -5.7 | 97 | 0.00 |
| 14 | T | 1,1-Dichloroethene | 2.088 | 2.222 | -6.4 | 78 | 0.00 |
| 15 | T | Carbon disulfide | 3.429 | 3.921 | -14.3 | 83 | 0.00 |
| 16 | T | 1,1,2-Trichloro-1,2,2-trifl | 3.360 | 3.402 | -1.3 | 90 | 0.00 |
| 17 | T | Acrolein | 0.430 | 0.491 | -14.2 | 85 | 0.00 |
| 18 | T | Allyl chloride | 0.559 | 0.693 | -24.0 | 92 | 0.00 |
| 19 | T | Isopropanol | 2.312 | 2.922 | -26.4 | 96 | 0.00 |
| 20 | T | Methylene chloride | 1.262 | 1.521 | -20.5 | 107 | 0.00 |
| 21 | T | Acetone | 1.876 | 2.285 | -21.8 | 93 | 0.00 |
| 22 | T | trans-1,2-Dichloroethene | 1.879 | 2.400 | -27.7 | 95 | 0.00 |
| 23 | T | n-Pentane | 2.398 | 2.695 | -12.4 | 99 | 0.00 |
| 24 | T | n-Hexane | 3.349 | 3.850 | -15.0 | 95 | 0.00 |
| 25 | T | Methyl tert-butyl ether | 4.555 | 4.942 | -8.5 | 92 | 0.00 |
| 26 | T | Tert-butyl alcohol | 2.929 | 3.318 | -13.3 | 95 | 0.00 |
| 27 | T | 1,1-Dichloroethane | 2.637 | 3.242 | -22.9 | 100 | 0.00 |
| 28 | T | cis-1,2-Dichloroethene | 1.824 | 2.366 | -29.7 | 100 | 0.00 |
| 29 | t | Cyclohexane | 2.420 | 2.619 | -8.2 | 92 | 0.00 |
| 30 | T | Chloroform | 3.228 | 3.928 | -21.7 | 96 | 0.00 |
| 31 | T | Ethyl acetate | 0.514 | 0.617 | -20.0 | 96 | 0.00 |
| 32 | T | Carbon tetrachloride | 3.870 | 3.885 | -0.4 | 86 | 0.00 |
| 33 | T | Tetrahydrofuran | 1.813 | 2.046 | -12.9 | 88 | 0.00 |
| 34 | T | 1,1,1-Trichloroethane | 3.484 | 3.550 | -1.9 | 89 | 0.00 |
| 35 | T | Methyl ethyl ketone | 2.894 | 3.723 | -28.6 | 102 | 0.00 |
| 36 | T | n-Heptane | 3.350 | 3.721 | -11.1 | 87 | 0.00 |
| 37 | T | Benzene | 4.614 | 5.348 | -15.9 | 94 | 0.00 |
| 38 | T | 1,2-Dichloroethane | 2.067 | 2.563 | -24.0 | 98 | 0.00 |
| 39 | I | 1,4-Difluorobenzene (IS) | 1.000 | 1.000 | 0.0 | 81 | 0.00 |
| 40 | T | Trichloroethene | 0.508 | 0.511 | -0.6 | 87 | 0.00 |
| 41 | T | 2,2,4-Trimethylpentane | 1.267 | 1.406 | -11.0 | 98 | 0.00 |
| 42 | T | 1,2-Dichloropropane | 0.456 | 0.482 | -5.7 | 92 | 0.00 |
| 43 | T | Bromodichloromethane | 0.795 | 0.862 | -8.4 | 92 | 0.00 |
| 44 | T | Methyl methacrylate | 0.587 | 0.686 | -16.9 | 93 | 0.00 |
| 45 | T | 1,4-Dioxane | 0.281 | 0.290 | -3.2 | 86 | 0.00 |
| 46 | T | cis-1,3-Dichloropropene | 0.705 | 0.753 | -6.8 | 88 | 0.00 |
| 47 | T | Toluene | 1.603 | 1.670 | -4.2 | 84 | 0.00 |
| 48 | T | Methyl isobutyl ketone | 1.158 | 1.259 | -8.7 | 88 | 0.00 |
| 49 | T | Tetrachloroethene | 0.721 | 0.696 | 3.5 | 81 | 0.00 |
| 50 | T | trans-1,3-Dichloropropene | 0.695 | 0.791 | -13.8 | 88 | 0.00 |
| 51 | T | 1,1,2-Trichloroethane | 0.565 | 0.573 | -1.4 | 85 | 0.00 |
| 52 | T | Dibromochloromethane | 0.944 | 0.955 | -1.2 | 83 | 0.00 |
| 53 | T | 1,2-Dibromoethane | 0.827 | 0.864 | -4.5 | 84 | 0.00 |

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4072dcvs.D
Acq On : 28 Sep 2023 10:31 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 05 12:20:58 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 0% Max. R.T. Dev 0.40min
Max. RRF Dev : 30% Max. Rel. Area : 500%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 54 | T | Methyl n-butyl ketone | 1.085 | 1.314 | -21.1 | 94 | 0.00 |
| 55 | I | d-5 Chlorobenzene (IS) | 1.000 | 1.000 | 0.0 | 71 | 0.00 |
| 56 | T | n-Nonane | 1.224 | 1.455 | -18.9 | 89 | 0.00 |
| 57 | T | Chlorobenzene | 1.095 | 1.205 | -10.0 | 84 | 0.00 |
| 58 | T | Ethylbenzene | 2.025 | 2.281 | -12.6 | 84 | 0.00 |
| 59 | T | Xylenes (m&p) | 1.460 | 1.746 | -19.6 | 86 | 0.00 |
| 60 | T | Xylene (o) | 1.621 | 1.793 | -10.6 | 83 | 0.00 |
| 61 | T | Styrene | 1.076 | 1.301 | -20.9 | 85 | 0.00 |
| 62 | T | Bromoform | 0.831 | 0.940 | -13.1 | 83 | 0.00 |
| 63 | T | Cumene | 2.112 | 2.309 | -9.3 | 81 | 0.00 |
| 64 | S | Bromofluorobenzene (tune st | 0.832 | 1.037 | -24.6 | 91 | 0.00 |
| 65 | T | n-Propyl benzene | 2.753 | 3.313 | -20.3 | 86 | 0.00 |
| 66 | T | 1,1,2,2-Tetrachloroethane | 1.228 | 1.333 | -8.6 | 84 | 0.00 |
| 67 | T | 4-Ethyltoluene | 2.270 | 2.728 | -20.2 | 86 | 0.00 |
| 68 | T | 2-Chlorotoluene | 1.868 | 2.133 | -14.2 | 86 | 0.00 |
| 69 | T | 1,3,5-Trimethylbenzene | 1.837 | 2.075 | -13.0 | 83 | 0.00 |
| 70 | T | 1,2,4-Trimethylbenzene | 1.821 | 2.187 | -20.1 | 84 | 0.00 |
| 71 | T | 1,3-Dichlorobenzene | 1.208 | 1.351 | -11.8 | 86 | 0.00 |
| 72 | T | 1,4-Dichlorobenzene | 1.161 | 1.398 | -20.4 | 87 | 0.00 |
| 73 | T | Benzyl chloride | 1.591 | 2.051 | -28.9 | 86 | 0.00 |
| 74 | T | 1,2-Dichlorobenzene | 1.143 | 1.308 | -14.4 | 84 | 0.00 |
| 75 | T | 1,3-Hexachlorobutadiene | 0.820 | 0.857 | -4.5 | 84 | 0.00 |
| 76 | T | 1,2,4-Trichlorobenzene | 0.899 | 1.068 | -18.8 | 89 | 0.00 |
| 77 | T | Naphthalene | 1.857 | 2.352 | -26.7 | 88 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4072dcvs.D
Acq On : 28 Sep 2023 10:31 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 05 12:20:58 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.399 | 130 | 394533 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 1846241 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 1956014 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 2028598 | 12.47 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.492 | 41 | 336126 | 12.37 | ppbV | 99 |
| 3) Dichlorodifluoromethane | 1.533 | 85 | 1288817 | 12.93 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.650 | 85 | 1538324 | 10.72 | ppbV | 95 |
| 5) n-Butane | 1.729 | 43 | 762109 | 11.81 | ppbV | 100 |
| 6) Chloromethane | 1.791 | 52 | 58792 | 12.73 | ppbV | 99 |
| 7) Vinyl chloride | 1.784 | 62 | 521002 | 13.90 | ppbV | 100 |
| 8) 1,3-Butadiene | 1.794 | 39 | 528910 | 13.80 | ppbV | 94 |
| 9) Bromomethane | 2.091 | 94 | 373349 | 11.86 | ppbV | 100 |
| 10) Chloroethane | 2.200 | 64 | 247247 | 12.12 | ppbV | 97 |
| 11) Vinyl bromide | 2.293 | 106 | 500772 | 12.64 | ppbV | 99 |
| 12) Trichlorofluoromethane | 2.312 | 101 | 1731764 | 12.91 | ppbV | 100 |
| 13) Ethanol | 2.669 | 45 | 173409 | 10.98 | ppbV | 98 |
| 14) 1,1-Dichloroethene | 2.734 | 61 | 911565 | 11.06 | ppbV | 96 |
| 15) Carbon disulfide | 2.756 | 76 | 1655394 | 12.24 | ppbV | 98 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.775 | 101 | 1462822 | 11.04 | ppbV | 98 |
| 17) Acrolein | 2.988 | 56 | 193825 | 11.44 | ppbV | 99 |
| 18) Allyl chloride | 3.116 | 76 | 295490 | 13.39 | ppbV | 100 |
| 19) Isopropanol | 3.113 | 45 | 1026023 | 11.25 | ppbV | 98 |
| 20) Methylene chloride | 3.203 | 49 | 648001 | 13.02 | ppbV | 93 |
| 21) Acetone | 3.213 | 43 | 973812 | 13.16 | ppbV | 97 |
| 22) trans-1,2-Dichloroethene | 3.329 | 61 | 1051022 | 14.18 | ppbV | 94 |
| 23) n-Pentane | 3.412 | 43 | 1148262 | 12.14 | ppbV | 98 |
| 24) n-Hexane | 3.409 | 57 | 1670880 | 12.65 | ppbV | 94 |
| 25) Methyl tert-butyl ether | 3.412 | 73 | 2183824 | 12.15 | ppbV | 96 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 1505615 | 13.03 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 1368811 | 13.16 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.235 | 61 | 1017589 | 14.14 | ppbV | 95 |
| 29) Cyclohexane | 4.415 | 56 | 1157367 | 12.12 | ppbV | 95 |
| 30) Chloroform | 4.457 | 83 | 1673696 | 13.14 | ppbV | 99 |
| 31) Ethyl acetate | 4.544 | 61 | 262896 | 12.97 | ppbV | 96 |
| 32) Carbon tetrachloride | 4.576 | 117 | 1686035 | 11.04 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.576 | 42 | 888033 | 12.41 | ppbV | 98 |
| 34) 1,1,1-Trichloroethane | 4.628 | 97 | 1526804 | 11.11 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.685 | 43 | 1615518 | 14.15 | ppbV | 96 |
| 36) n-Heptane | 4.920 | 43 | 1629713 | 12.33 | ppbV | 95 |
| 37) Benzene | 4.933 | 78 | 2278943 | 12.52 | ppbV | 99 |
| 38) 1,2-Dichloroethane | 5.094 | 62 | 1102144 | 13.51 | ppbV | 100 |
| 40) Trichloroethene | 5.435 | 130 | 942528 | 10.06 | ppbV | 99 |
| 41) 2,2,4-Trimethylpentane | 4.846 | 57 | 2829737 | 12.10 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 978690 | 11.62 | ppbV | 99 |
| 43) Bromodichloromethane | 5.946 | 83 | 1830581 | 12.47 | ppbV | 98 |
| 44) Methyl methacrylate | 6.090 | 41 | 1393236 | 12.86 | ppbV | 96 |
| 45) 1,4-Dioxane | 6.113 | 88 | 626413 | 12.06 | ppbV | 95 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 1542564 | 11.85 | ppbV | 100 |
| 47) Toluene | 6.772 | 91 | 3329666 | 11.25 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.135 | 43 | 2533215 | 11.85 | ppbV | 97 |
| 49) Tetrachloroethene | 7.161 | 166 | 1439441 | 10.82 | ppbV | 99 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 1621869 | 12.63 | ppbV | 95 |
| 51) 1,1,2-Trichloroethane | 7.335 | 97 | 1143196 | 10.95 | ppbV | 98 |

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4072dcvs.D
Acq On : 28 Sep 2023 10:31 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

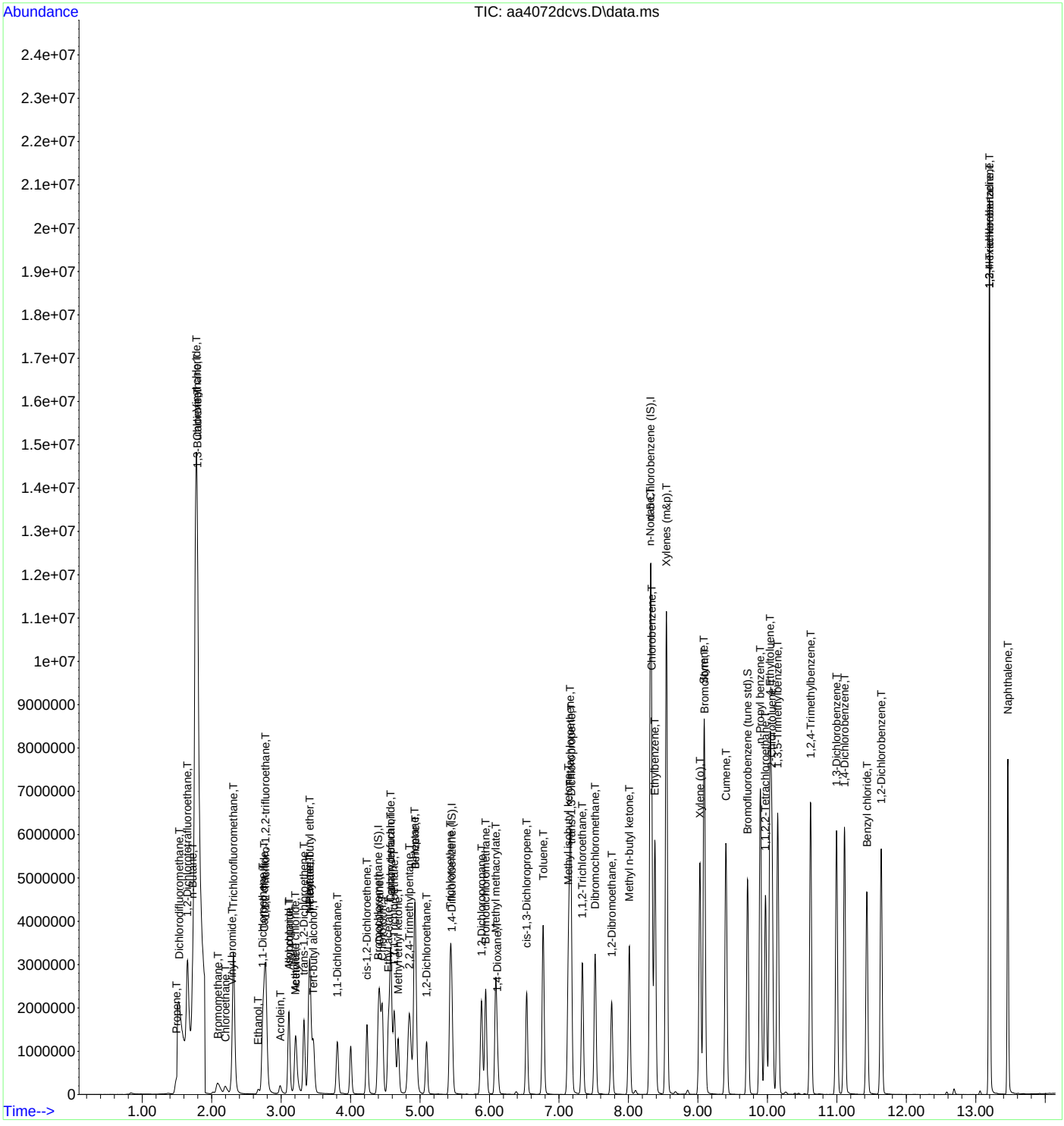
Quant Time: Oct 05 12:20:58 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 1974797 | 11.34 | ppbV | 100 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 1723352 | 11.29 | ppbV | 99 |
| 54) Methyl n-butyl ketone | 8.013 | 43 | 2740906 | 13.68 | ppbV | 97 |
| 56) n-Nonane | 8.315 | 43 | 3130203 | 13.08 | ppbV | 95 |
| 57) Chlorobenzene | 8.335 | 112 | 2616855 | 12.22 | ppbV | 96 |
| 58) Ethylbenzene | 8.380 | 91 | 4951669 | 12.50 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.547 | 91 | 7618001 | 26.68 | ppbV | 98 |
| 60) Xylene (o) | 9.029 | 91 | 3858864 | 12.17 | ppbV | 98 |
| 61) Styrene | 9.087 | 104 | 2876626 | 13.67 | ppbV | 100 |
| 62) Bromoform | 9.097 | 173 | 2077944 | 12.78 | ppbV | 100 |
| 63) Cumene | 9.405 | 105 | 4831919 | 11.70 | ppbV | 99 |
| 65) n-Propyl benzene | 9.897 | 91 | 6998521 | 12.99 | ppbV | 98 |
| 66) 1,1,2,2-Tetrachloroethane | 9.971 | 83 | 2971483 | 12.37 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 5763454 | 12.98 | ppbV | 98 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 4548166 | 12.45 | ppbV | 98 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 4424594 | 12.31 | ppbV | 98 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 4619816 | 12.97 | ppbV | 98 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 2933863 | 12.42 | ppbV | 99 |
| 72) 1,4-Dichlorobenzene | 11.113 | 146 | 2925919 | 12.89 | ppbV | 100 |
| 73) Benzyl chloride | 11.434 | 91 | 4012288 | 12.89 | ppbV | 98 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 2736550 | 12.24 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.196 | 225 | 1861511 | 11.61 | ppbV | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.196 | 180 | 2298365 | 13.07 | ppbV | 100 |
| 77) Naphthalene | 13.463 | 128 | 4601232 | 12.67 | ppbV | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4072dcvs.D
Acq On : 28 Sep 2023 10:31 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 05 12:20:58 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Continuing Calibration Data Summary Report

**Initial Calibration Curve:** 10/10/2023
**Instrument:** AA
**Amount of standard injected (ml):** 50

**Date/Time of Calibration:** 12/8/2023 10:50
**Sample ID:** DCS
**Laboratory ID:** AA4882DCVS

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05080-01 [AA4893] | 12/08/2023 18:08 |
| E23-05080-02 [AA4894] | 12/08/2023 18:39 |

| Compound Name | Average RRF | Standard RRF | % Difference | PassFail | * |
|---|---|---|---|---|---|
| Acetone | 1.5 | 1.5 | -0.30 | PASS | |
| Benzene | 4.0 | 3.4 | 15 | PASS | |
| Bromoform | 0.73 | 0.73 | 0.70 | PASS | |
| Bromomethane | 0.73 | 0.78 | -6.2 | PASS | |
| 1,3-Butadiene | 0.85 | 0.76 | 9.7 | PASS | |
| Chlorobenzene | 1.00 | 0.90 | 10 | PASS | |
| Chloroethane | 0.48 | 0.50 | -5.7 | PASS | |
| Chloroform | 2.7 | 2.4 | 8.5 | PASS | |
| Chloromethane | 0.11 | 0.11 | 3.6 | PASS | |
| Carbon disulfide | 3.1 | 3.0 | 1.4 | PASS | |
| Carbon tetrachloride | 3.2 | 2.9 | 7.1 | PASS | |
| Cyclohexane | 2.2 | 2.0 | 11 | PASS | |
| 1,2-Dibromoethane | 0.69 | 0.69 | -1.2 | PASS | |
| 1,2-Dichlorobenzene | 1.0 | 0.95 | 7.9 | PASS | |
| 1,3-Dichlorobenzene | 1.1 | 0.95 | 9.9 | PASS | |
| 1,4-Dichlorobenzene | 1.1 | 0.99 | 7.1 | PASS | |
| Dichlorodifluoromethane | 2.2 | 2.2 | 1.0 | PASS | |
| 1,1-Dichloroethane | 2.3 | 2.0 | 13 | PASS | |
| 1,2-Dichloroethane | 1.7 | 1.6 | 2.3 | PASS | |
| 1,1-Dichloroethene | 1.9 | 1.8 | 0.80 | PASS | |
| 1,2-Dichloroethene (cis) | 1.6 | 1.5 | 8.3 | PASS | |
| 1,2-Dichloroethene (trans) | 1.7 | 1.7 | 3.9 | PASS | |
| 1,2-Dichloropropane | 0.39 | 0.37 | 3.9 | PASS | |
| 1,3-Dichloropropene (cis) | 0.60 | 0.59 | 2.3 | PASS | |
| 1,3-Dichloropropene (trans) | 0.59 | 0.61 | -4.4 | PASS | |
| 1,2-Dichlorotetrafluoroethane | 3.2 | 2.9 | 11 | PASS | |
| 1,4-Dioxane | 0.24 | 0.24 | -0.40 | PASS | |
| Ethylbenzene | 1.8 | 1.7 | 7.2 | PASS | |
| n-Heptane | 2.8 | 2.6 | 4.3 | PASS | |
| 1,3-Hexachlorobutadiene | 0.71 | 0.66 | 8.1 | PASS | |
| n-Hexane | 3.2 | 2.8 | 12 | PASS | |
| Methylene chloride | 1.2 | 1.1 | 13 | PASS | |
| Methyl ethyl ketone | 2.4 | 2.2 | 8.0 | PASS | |
| Methyl isobutyl ketone | 0.88 | 0.96 | -8.5 | PASS | |
| Methyl tert-butyl ether | 3.9 | 3.5 | 9.8 | PASS | |
| Styrene | 1.0 | 0.95 | 6.9 | PASS | |
| Tert-butyl alcohol | 2.6 | 2.3 | 11 | PASS | |
| 1,1,2,2-Tetrachloroethane | 1.0 | 0.97 | 7.4 | PASS | |
| Tetrachloroethene | 0.61 | 0.59 | 3.1 | PASS | |
| Toluene | 1.4 | 1.4 | 2.8 | PASS | |
| 1,2,4-Trichlorobenzene | 0.82 | 0.78 | 5.5 | PASS | |
| 1,1,1-Trichloroethane | 2.8 | 2.6 | 7.2 | PASS | |
| 1,1,2-Trichloroethane | 0.48 | 0.46 | 2.7 | PASS | |
| Trichloroethene | 0.44 | 0.42 | 6.1 | PASS | |

***%Difference must be within +/- 30%**
**RRF - Relative Response Factor**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Continuing Calibration Data Summary Report

| | | | |
|---|---|---|---|
| **Initial Calibration Curve:** | **10/10/2023** | **Date/Time of Calibration:** | **12/8/2023 10:50** |
| **Instrument:** | **AA** | **Sample ID:** | **DCS** |
| **Amount of standard injected (ml):** | **50** | **Laboratory ID:** | **AA4882DCVS** |

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05080-01 [AA4893] | 12/08/2023 18:08 |
| E23-05080-02 [AA4894] | 12/08/2023 18:39 |

| Compound Name | Average RRF | Standard RRF | % Difference | PassFail | * |
|---|---|---|---|---|---|
| Trichlorofluoromethane | 2.8 | 2.8 | 1.6 | PASS | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 2.8 | 2.4 | 16 | PASS | |
| 1,2,4-Trimethylbenzene | 1.7 | 1.6 | 5.2 | PASS | |
| 1,3,5-Trimethylbenzene | 1.7 | 1.6 | 7.1 | PASS | |
| 2,2,4-Trimethylpentane | 1.3 | 1.3 | 2.8 | PASS | |
| Vinyl bromide | 0.90 | 0.89 | 0.80 | PASS | |
| Vinyl chloride | 0.91 | 0.87 | 4.1 | PASS | |
| Xylenes (m&p) | 1.4 | 1.3 | 4.2 | PASS | |
| Xylenes (o) | 1.5 | 1.4 | 9.2 | PASS | |

***%Difference must be within +/- 30%**
**RRF - Relative Response Factor**

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4882dcvs.D
Acq On : 8 Dec 2023 10:50 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 12 09:41:42 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 0% Max. R.T. Dev 0.40min
Max. RRF Dev : 30% Max. Rel. Area : 500%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Bromochloromethane (IS) | 1.000 | 1.000 | 0.0 | 126 | 0.00 |
| 2 | T | Propene | 0.694 | 0.600 | 13.5 | 126 | 0.00 |
| 3 | T | Dichlorodifluoromethane | 2.216 | 2.193 | 1.0 | 128 | 0.00 |
| 4 | T | 1,2-Dichlorotetrafluoroetha | 3.219 | 2.869 | 10.9 | 123 | 0.00 |
| 5 | T | n-Butane | 1.597 | 1.500 | 6.1 | 124 | 0.00 |
| 6 | T | Chloromethane | 0.111 | 0.107 | 3.6 | 120 | 0.00 |
| 7 | T | Vinyl chloride | 0.906 | 0.869 | 4.1 | 121 | 0.00 |
| 8 | T | 1,3-Butadiene | 0.846 | 0.764 | 9.7 | 121 | 0.00 |
| 9 | T | Bromomethane | 0.731 | 0.776 | -6.2 | 130 | 0.00 |
| 10 | T | Chloroethane | 0.475 | 0.502 | -5.7 | 126 | 0.00 |
| 11 | T | Vinyl bromide | 0.895 | 0.888 | 0.8 | 123 | 0.00 |
| 12 | T | Trichlorofluoromethane | 2.799 | 2.753 | 1.6 | 131 | 0.00 |
| 13 | T | Ethanol | 0.293 | 0.309 | -5.5 | 145 | 0.00 |
| 14 | T | 1,1-Dichloroethene | 1.858 | 1.844 | 0.8 | 120 | 0.00 |
| 15 | T | Carbon disulfide | 3.058 | 3.016 | 1.4 | 118 | 0.00 |
| 16 | T | 1,1,2-Trichloro-1,2,2-trifl | 2.819 | 2.364 | 16.1 | 118 | 0.00 |
| 17 | T | Acrolein | 0.418 | 0.406 | 2.9 | 119 | 0.00 |
| 18 | T | Allyl chloride | 0.501 | 0.485 | 3.2 | 114 | 0.00 |
| 19 | T | Isopropanol | 2.005 | 1.954 | 2.5 | 118 | 0.00 |
| 20 | T | Methylene chloride | 1.229 | 1.073 | 12.7 | 133 | 0.00 |
| 21 | T | Acetone | 1.508 | 1.512 | -0.3 | 124 | 0.00 |
| 22 | T | trans-1,2-Dichloroethene | 1.724 | 1.657 | 3.9 | 117 | 0.00 |
| 23 | T | n-Pentane | 2.325 | 2.146 | 7.7 | 125 | 0.00 |
| 24 | T | n-Hexane | 3.152 | 2.784 | 11.7 | 118 | 0.00 |
| 25 | T | Methyl tert-butyl ether | 3.872 | 3.493 | 9.8 | 121 | 0.00 |
| 26 | T | Tert-butyl alcohol | 2.607 | 2.316 | 11.2 | 117 | 0.00 |
| 27 | T | 1,1-Dichloroethane | 2.322 | 2.010 | 13.4 | 114 | 0.00 |
| 28 | T | cis-1,2-Dichloroethene | 1.638 | 1.502 | 8.3 | 115 | 0.00 |
| 29 | t | Cyclohexane | 2.202 | 1.965 | 10.8 | 119 | 0.00 |
| 30 | T | Chloroform | 2.676 | 2.449 | 8.5 | 117 | 0.00 |
| 31 | T | Ethyl acetate | 0.435 | 0.410 | 5.7 | 115 | 0.00 |
| 32 | T | Carbon tetrachloride | 3.174 | 2.948 | 7.1 | 122 | 0.00 |
| 33 | T | Tetrahydrofuran | 1.504 | 1.387 | 7.8 | 118 | 0.00 |
| 34 | T | 1,1,1-Trichloroethane | 2.780 | 2.579 | 7.2 | 122 | 0.00 |
| 35 | T | Methyl ethyl ketone | 2.442 | 2.246 | 8.0 | 120 | 0.00 |
| 36 | T | n-Heptane | 2.764 | 2.646 | 4.3 | 117 | 0.00 |
| 37 | T | Benzene | 3.972 | 3.382 | 14.9 | 112 | 0.00 |
| 38 | T | 1,2-Dichloroethane | 1.663 | 1.624 | 2.3 | 123 | 0.00 |
| 39 | I | 1,4-Difluorobenzene (IS) | 1.000 | 1.000 | 0.0 | 118 | 0.00 |
| 40 | T | Trichloroethene | 0.442 | 0.415 | 6.1 | 111 | 0.00 |
| 41 | T | 2,2,4-Trimethylpentane | 1.303 | 1.266 | 2.8 | 122 | 0.00 |
| 42 | T | 1,2-Dichloropropane | 0.389 | 0.374 | 3.9 | 113 | 0.00 |
| 43 | T | Bromodichloromethane | 0.655 | 0.674 | -2.9 | 121 | 0.00 |
| 44 | T | Methyl methacrylate | 0.472 | 0.490 | -3.8 | 116 | 0.00 |
| 45 | T | 1,4-Dioxane | 0.238 | 0.239 | -0.4 | 116 | 0.00 |
| 46 | T | cis-1,3-Dichloropropene | 0.603 | 0.589 | 2.3 | 111 | 0.00 |
| 47 | T | Toluene | 1.405 | 1.366 | 2.8 | 108 | 0.00 |
| 48 | T | Methyl isobutyl ketone | 0.883 | 0.958 | -8.5 | 119 | 0.00 |
| 49 | T | Tetrachloroethene | 0.606 | 0.587 | 3.1 | 109 | 0.00 |
| 50 | T | trans-1,3-Dichloropropene | 0.585 | 0.611 | -4.4 | 114 | 0.00 |
| 51 | T | 1,1,2-Trichloroethane | 0.475 | 0.462 | 2.7 | 110 | 0.00 |
| 52 | T | Dibromochloromethane | 0.791 | 0.812 | -2.7 | 115 | 0.00 |
| 53 | T | 1,2-Dibromoethane | 0.686 | 0.694 | -1.2 | 112 | 0.00 |

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4882dcvs.D
Acq On : 8 Dec 2023 10:50 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 12 09:41:42 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 0% Max. R.T. Dev 0.40min
Max. RRF Dev : 30% Max. Rel. Area : 500%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 54 | T | Methyl n-butyl ketone | 0.849 | 0.929 | -9.4 | 117 | 0.00 |
| 55 | I | d-5 Chlorobenzene (IS) | 1.000 | 1.000 | 0.0 | 119 | 0.00 |
| 56 | T | n-Nonane | 0.992 | 1.014 | -2.2 | 118 | 0.00 |
| 57 | T | Chlorobenzene | 0.997 | 0.897 | 10.0 | 108 | 0.00 |
| 58 | T | Ethylbenzene | 1.843 | 1.711 | 7.2 | 110 | 0.00 |
| 59 | T | Xylenes (m&p) | 1.365 | 1.308 | 4.2 | 110 | 0.00 |
| 60 | T | Xylene (o) | 1.490 | 1.353 | 9.2 | 110 | 0.00 |
| 61 | T | Styrene | 1.020 | 0.950 | 6.9 | 106 | 0.00 |
| 62 | T | Bromoform | 0.732 | 0.727 | 0.7 | 117 | 0.00 |
| 63 | T | Cumene | 1.947 | 1.854 | 4.8 | 113 | 0.00 |
| 64 | S | Bromofluorobenzene (tune st | 0.872 | 0.895 | -2.6 | 123 | 0.00 |
| 65 | T | n-Propyl benzene | 2.541 | 2.507 | 1.3 | 115 | 0.00 |
| 66 | T | 1,1,2,2-Tetrachloroethane | 1.043 | 0.966 | 7.4 | 111 | 0.00 |
| 67 | T | 4-Ethyltoluene | 2.151 | 2.065 | 4.0 | 112 | 0.00 |
| 68 | T | 2-Chlorotoluene | 1.707 | 1.639 | 4.0 | 115 | 0.00 |
| 69 | T | 1,3,5-Trimethylbenzene | 1.730 | 1.608 | 7.1 | 109 | 0.00 |
| 70 | T | 1,2,4-Trimethylbenzene | 1.729 | 1.639 | 5.2 | 109 | 0.00 |
| 71 | T | 1,3-Dichlorobenzene | 1.059 | 0.954 | 9.9 | 108 | 0.00 |
| 72 | T | 1,4-Dichlorobenzene | 1.065 | 0.989 | 7.1 | 109 | 0.00 |
| 73 | T | Benzyl chloride | 1.529 | 1.550 | -1.4 | 114 | 0.00 |
| 74 | T | 1,2-Dichlorobenzene | 1.027 | 0.946 | 7.9 | 109 | 0.00 |
| 75 | T | 1,3-Hexachlorobutadiene | 0.713 | 0.655 | 8.1 | 111 | 0.00 |
| 76 | T | 1,2,4-Trichlorobenzene | 0.824 | 0.779 | 5.5 | 113 | 0.00 |
| 77 | T | Naphthalene | 1.885 | 1.868 | 0.9 | 118 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4882dcvs.D
Acq On : 8 Dec 2023 10:50 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 12 09:41:42 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.390 | 130 | 497428 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.451 | 114 | 1995098 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.315 | 117 | 2342927 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 2097748 | 10.27 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.483 | 41 | 325585 | 9.43 | ppbV | 97 |
| 3) Dichlorodifluoromethane | 1.522 | 85 | 1156523 | 10.49 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.643 | 85 | 1398478 | 8.73 | ppbV | 97 |
| 5) n-Butane | 1.725 | 43 | 813377 | 10.24 | ppbV | 99 |
| 6) Chloromethane | 1.787 | 52 | 59773 | 10.85 | ppbV | 90 |
| 7) Vinyl chloride | 1.777 | 62 | 466932 | 10.36 | ppbV | 100 |
| 8) 1,3-Butadiene | 1.791 | 39 | 406894 | 9.67 | ppbV | 98 |
| 9) Bromomethane | 2.075 | 94 | 385826 | 10.61 | ppbV | 98 |
| 10) Chloroethane | 2.190 | 64 | 264511 | 11.19 | ppbV | 99 |
| 11) Vinyl bromide | 2.287 | 106 | 446119 | 10.02 | ppbV | 99 |
| 12) Trichlorofluoromethane | 2.306 | 101 | 1506447 | 10.82 | ppbV | 100 |
| 13) Ethanol | 2.666 | 45 | 159941 | 10.98 | ppbV | 98 |
| 14) 1,1-Dichloroethene | 2.727 | 61 | 954181 | 10.33 | ppbV | 96 |
| 15) Carbon disulfide | 2.747 | 76 | 1604997 | 10.55 | ppbV | 96 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.769 | 101 | 1281549 | 9.14 | ppbV | 99 |
| 17) Acrolein | 2.981 | 56 | 201838 | 9.71 | ppbV | 99 |
| 18) Allyl chloride | 3.110 | 76 | 260522 | 10.45 | ppbV | 100 |
| 19) Isopropanol | 3.107 | 45 | 865101 | 8.67 | ppbV | 97 |
| 20) Methylene chloride | 3.197 | 49 | 576215 | 9.42 | ppbV | 94 |
| 21) Acetone | 3.210 | 43 | 812442 | 10.83 | ppbV | 98 |
| 22) trans-1,2-Dichloroethene | 3.322 | 61 | 914937 | 10.67 | ppbV | 99 |
| 23) n-Pentane | 3.402 | 43 | 1153103 | 9.97 | ppbV | 98 |
| 24) n-Hexane | 3.402 | 57 | 1523505 | 9.72 | ppbV | 95 |
| 25) Methyl tert-butyl ether | 3.406 | 73 | 1946245 | 10.10 | ppbV | 98 |
| 26) Tert-butyl alcohol | 3.460 | 59 | 1324915 | 10.22 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.804 | 63 | 1070062 | 9.26 | ppbV | 99 |
| 28) cis-1,2-Dichloroethene | 4.232 | 61 | 814529 | 10.00 | ppbV | 97 |
| 29) Cyclohexane | 4.412 | 56 | 1094521 | 9.99 | ppbV | 99 |
| 30) Chloroform | 4.451 | 83 | 1315872 | 9.89 | ppbV | 100 |
| 31) Ethyl acetate | 4.544 | 61 | 220415 | 10.18 | ppbV | 96 |
| 32) Carbon tetrachloride | 4.573 | 117 | 1612899 | 10.22 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.570 | 42 | 759074 | 10.14 | ppbV | 98 |
| 34) 1,1,1-Trichloroethane | 4.624 | 97 | 1398155 | 10.11 | ppbV | 98 |
| 35) Methyl ethyl ketone | 4.682 | 43 | 1229080 | 10.12 | ppbV | 97 |
| 36) n-Heptane | 4.917 | 43 | 1460837 | 10.63 | ppbV | 97 |
| 37) Benzene | 4.930 | 78 | 1816777 | 9.20 | ppbV | 97 |
| 38) 1,2-Dichloroethane | 5.087 | 62 | 880596 | 10.65 | ppbV | 100 |
| 40) Trichloroethene | 5.431 | 130 | 827314 | 9.37 | ppbV | 99 |
| 41) 2,2,4-Trimethylpentane | 4.843 | 57 | 2753707 | 10.60 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.881 | 63 | 821769 | 10.59 | ppbV | 100 |
| 43) Bromodichloromethane | 5.943 | 83 | 1546117 | 11.83 | ppbV | 99 |
| 44) Methyl methacrylate | 6.084 | 41 | 1074952 | 11.42 | ppbV | 96 |
| 45) 1,4-Dioxane | 6.113 | 88 | 556955 | 11.71 | ppbV | 100 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 1304823 | 10.84 | ppbV | 100 |
| 47) Toluene | 6.769 | 91 | 2943669 | 10.50 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.129 | 43 | 2083775 | 11.83 | ppbV | 97 |
| 49) Tetrachloroethene | 7.158 | 166 | 1312474 | 10.86 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.174 | 75 | 1353861 | 11.60 | ppbV | 98 |
| 51) 1,1,2-Trichloroethane | 7.335 | 97 | 994836 | 10.51 | ppbV | 99 |

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4882dcvs.D
Acq On : 8 Dec 2023 10:50 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

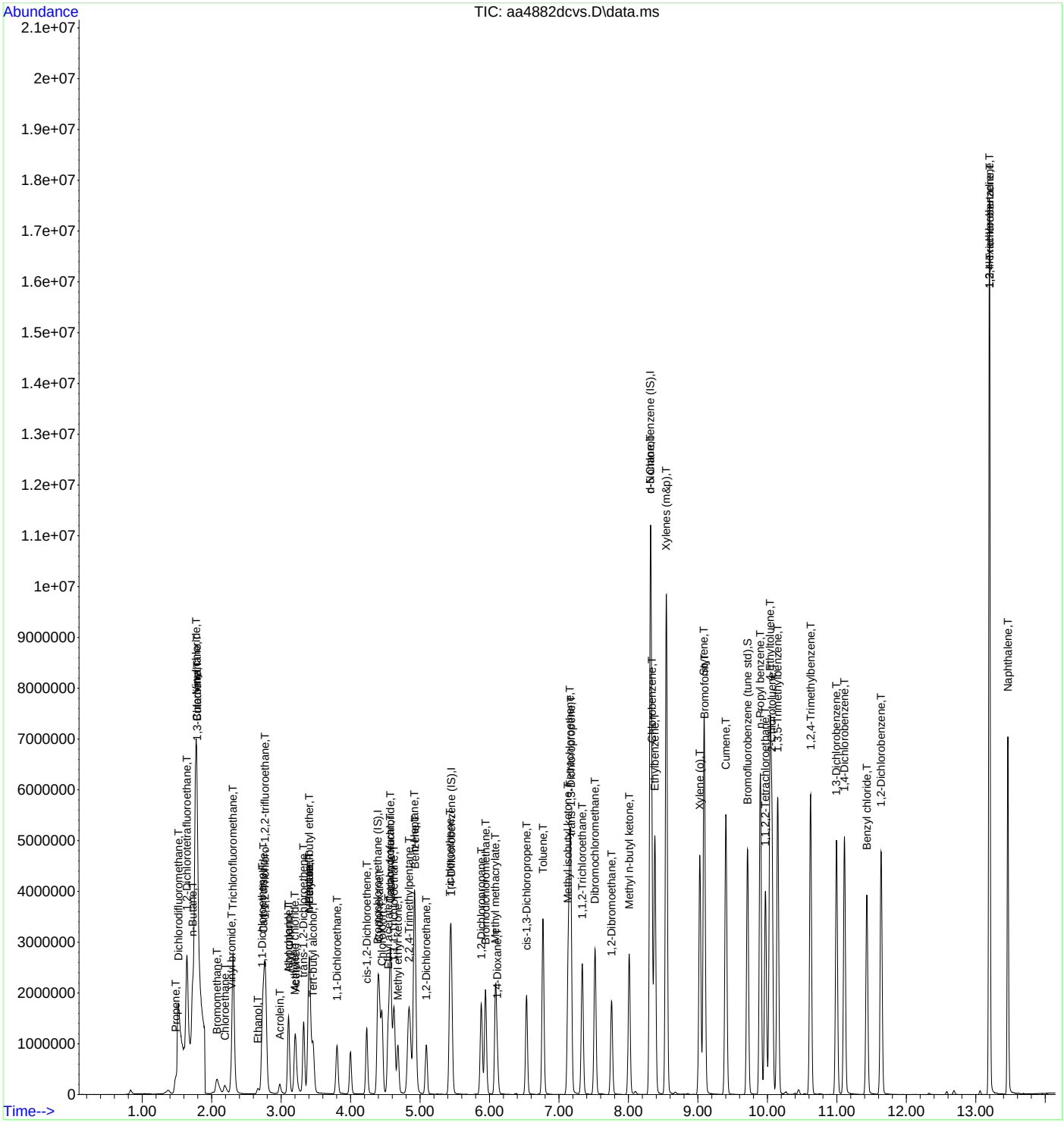
Quant Time: Dec 12 09:41:42 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.518 | 129 | 1815407 | 11.51 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.756 | 107 | 1495380 | 10.92 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.010 | 43 | 2094056 | 12.36 | ppbV | 97 |
| 56) n-Nonane | 8.315 | 43 | 2612956 | 11.24 | ppbV | 97 |
| 57) Chlorobenzene | 8.338 | 112 | 2332552 | 9.99 | ppbV | 97 |
| 58) Ethylbenzene | 8.380 | 91 | 4450991 | 10.31 | ppbV | 98 |
| 59) Xylenes (m&p) | 8.544 | 91 | 6834641 | 21.36 | ppbV | 99 |
| 60) Xylene (o) | 9.026 | 91 | 3488106 | 9.99 | ppbV | 98 |
| 61) Styrene | 9.087 | 104 | 2516387 | 10.53 | ppbV | 98 |
| 62) Bromoform | 9.097 | 173 | 1925681 | 11.22 | ppbV | 100 |
| 63) Cumene | 9.402 | 105 | 4647970 | 10.19 | ppbV | 100 |
| 65) n-Propyl benzene | 9.897 | 91 | 6343495 | 10.65 | ppbV | 98 |
| 66) 1,1,2,2-Tetrachloroethane | 9.971 | 83 | 2579002 | 10.55 | ppbV | 99 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 5223938 | 10.37 | ppbV | 100 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 4185953 | 10.47 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 4107061 | 10.13 | ppbV | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 4146495 | 10.24 | ppbV | 99 |
| 71) 1,3-Dichlorobenzene | 10.994 | 146 | 2479981 | 10.00 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 2478669 | 9.93 | ppbV | 99 |
| 73) Benzyl chloride | 11.431 | 91 | 3632702 | 10.14 | ppbV | 99 |
| 74) 1,2-Dichlorobenzene | 11.637 | 146 | 2370759 | 9.85 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.196 | 225 | 1704319 | 10.21 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.199 | 180 | 2007051 | 10.39 | ppbV | 99 |
| 77) Naphthalene | 13.463 | 128 | 4377391 | 9.91 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4882dcvs.D
Acq On : 8 Dec 2023 10:50 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 12 09:41:42 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Continuing Calibration Data Summary Report

**Initial Calibration Curve:** 10/10/2023
**Instrument:** AA
**Amount of standard injected (ml):** 50

**Date/Time of Calibration:** 12/11/2023 10:26
**Sample ID:** DCS
**Laboratory ID:** AA4902DCVS

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 09:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 1458 [AA4906] | 12/11/2023 12:50 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 1588 [AA4907] | 12/11/2023 13:19 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05080-01 [AA4911] | 12/11/2023 15:19 |
| E23-05080-02 [AA4912] | 12/11/2023 15:48 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 01:59 |

| Compound Name | Average RRF | Standard RRF | % Difference | PassFail | * |
|---|---|---|---|---|---|
| Acetone | 1.5 | 1.6 | -2.9 | PASS | |
| Benzene | 4.0 | 3.4 | 14 | PASS | |
| Bromoform | 0.73 | 0.73 | 0.10 | PASS | |
| Bromomethane | 0.73 | 0.76 | -4.4 | PASS | |
| 1,3-Butadiene | 0.85 | 0.80 | 5.7 | PASS | |
| Chlorobenzene | 1.00 | 0.92 | 7.3 | PASS | |
| Chloroethane | 0.48 | 0.52 | -9.3 | PASS | |
| Chloroform | 2.7 | 2.5 | 8.2 | PASS | |
| Chloromethane | 0.11 | 0.12 | -5.4 | PASS | |
| Carbon disulfide | 3.1 | 3.1 | -0.90 | PASS | |
| Carbon tetrachloride | 3.2 | 2.9 | 9.9 | PASS | |
| Cyclohexane | 2.2 | 2.0 | 7.9 | PASS | |
| 1,2-Dibromoethane | 0.69 | 0.69 | 0.10 | PASS | |
| 1,2-Dichlorobenzene | 1.0 | 0.97 | 5.6 | PASS | |
| 1,3-Dichlorobenzene | 1.1 | 0.98 | 7.4 | PASS | |
| 1,4-Dichlorobenzene | 1.1 | 1.0 | 4.5 | PASS | |
| Dichlorodifluoromethane | 2.2 | 2.2 | 1.3 | PASS | |
| 1,1-Dichloroethane | 2.3 | 2.1 | 10 | PASS | |
| 1,2-Dichloroethane | 1.7 | 1.6 | 3.6 | PASS | |
| 1,1-Dichloroethene | 1.9 | 1.9 | -1.0 | PASS | |
| 1,2-Dichloroethene (cis) | 1.6 | 1.6 | 3.8 | PASS | |
| 1,2-Dichloroethene (trans) | 1.7 | 1.7 | 0.20 | PASS | |
| 1,2-Dichloropropane | 0.39 | 0.37 | 4.6 | PASS | |
| 1,3-Dichloropropene (cis) | 0.60 | 0.59 | 2.7 | PASS | |
| 1,3-Dichloropropene (trans) | 0.59 | 0.60 | -2.6 | PASS | |
| 1,2-Dichlorotetrafluoroethane | 3.2 | 2.9 | 11 | PASS | |
| 1,4-Dioxane | 0.24 | 0.23 | 2.5 | PASS | |
| Ethylbenzene | 1.8 | 1.7 | 5.1 | PASS | |
| n-Heptane | 2.8 | 2.7 | 1.0 | PASS | |
| 1,3-Hexachlorobutadiene | 0.71 | 0.67 | 6.3 | PASS | |
| n-Hexane | 3.2 | 2.9 | 7.9 | PASS | |
| Methylene chloride | 1.2 | 1.1 | 12 | PASS | |
| Methyl ethyl ketone | 2.4 | 2.4 | 3.5 | PASS | |
| Methyl isobutyl ketone | 0.88 | 0.96 | -8.5 | PASS | |
| Methyl tert-butyl ether | 3.9 | 3.6 | 6.7 | PASS | |
| Styrene | 1.0 | 0.98 | 3.7 | PASS | |
| Tert-butyl alcohol | 2.6 | 2.4 | 6.1 | PASS | |
| 1,1,2,2-Tetrachloroethane | 1.0 | 1.00 | 4.3 | PASS | |
| Tetrachloroethene | 0.61 | 0.57 | 5.4 | PASS | |

***%Difference must be within +/- 30%**
**RRF - Relative Response Factor**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Continuing Calibration Data Summary Report

| | | | |
|---|---|---|---|
| **Initial Calibration Curve:** | **10/10/2023** | **Date/Time of Calibration:** | **12/11/2023 10:26** |
| **Instrument:** | **AA** | **Sample ID:** | **DCS** |
| **Amount of standard injected (ml):** | **50** | **Laboratory ID:** | **AA4902DCVS** |

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 09:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 1458 [AA4906] | 12/11/2023 12:50 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 1588 [AA4907] | 12/11/2023 13:19 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05080-01 [AA4911] | 12/11/2023 15:19 |
| E23-05080-02 [AA4912] | 12/11/2023 15:48 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 01:59 |

| Compound Name | Average RRF | Standard RRF | % Difference | PassFail | * |
|---|---|---|---|---|---|
| Toluene | 1.4 | 1.3 | 4.0 | PASS | |
| 1,2,4-Trichlorobenzene | 0.82 | 0.79 | 3.9 | PASS | |
| 1,1,1-Trichloroethane | 2.8 | 2.5 | 8.6 | PASS | |
| 1,1,2-Trichloroethane | 0.48 | 0.46 | 4.0 | PASS | |
| Trichloroethene | 0.44 | 0.41 | 8.4 | PASS | |
| Trichlorofluoromethane | 2.8 | 2.7 | 3.1 | PASS | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 2.8 | 2.4 | 15 | PASS | |
| 1,2,4-Trimethylbenzene | 1.7 | 1.7 | 3.1 | PASS | |
| 1,3,5-Trimethylbenzene | 1.7 | 1.7 | 4.2 | PASS | |
| 2,2,4-Trimethylpentane | 1.3 | 1.2 | 4.3 | PASS | |
| Vinyl bromide | 0.90 | 0.91 | -1.8 | PASS | |
| Vinyl chloride | 0.91 | 0.89 | 1.5 | PASS | |
| Xylenes (m&p) | 1.4 | 1.3 | 2.0 | PASS | |
| Xylenes (o) | 1.5 | 1.4 | 6.4 | PASS | |

***%Difference must be within +/- 30%**
**RRF - Relative Response Factor**

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4902dcvs.D
Acq On : 11 Dec 2023 10:26 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 11 10:45:53 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 0% Max. R.T. Dev 0.40min
Max. RRF Dev : 30% Max. Rel. Area : 500%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Bromochloromethane (IS) | 1.000 | 1.000 | 0.0 | 151 | 0.00 |
| 2 | T | Propene | 0.694 | 0.638 | 8.1 | 161 | 0.00 |
| 3 | T | Dichlorodifluoromethane | 2.216 | 2.188 | 1.3 | 153 | 0.00 |
| 4 | T | 1,2-Dichlorotetrafluoroetha | 3.219 | 2.870 | 10.8 | 147 | 0.00 |
| 5 | T | n-Butane | 1.597 | 1.560 | 2.3 | 154 | 0.00 |
| 6 | T | Chloromethane | 0.111 | 0.117 | -5.4 | 157 | 0.00 |
| 7 | T | Vinyl chloride | 0.906 | 0.892 | 1.5 | 149 | 0.00 |
| 8 | T | 1,3-Butadiene | 0.846 | 0.798 | 5.7 | 151 | 0.00 |
| 9 | T | Bromomethane | 0.731 | 0.763 | -4.4 | 154 | 0.00 |
| 10 | T | Chloroethane | 0.475 | 0.519 | -9.3 | 156 | 0.00 |
| 11 | T | Vinyl bromide | 0.895 | 0.911 | -1.8 | 151 | 0.00 |
| 12 | T | Trichlorofluoromethane | 2.799 | 2.713 | 3.1 | 155 | 0.00 |
| 13 | T | Ethanol | 0.293 | 0.325 | -10.9 | 183 | 0.00 |
| 14 | T | 1,1-Dichloroethene | 1.858 | 1.877 | -1.0 | 146 | 0.00 |
| 15 | T | Carbon disulfide | 3.058 | 3.087 | -0.9 | 145 | 0.00 |
| 16 | T | 1,1,2-Trichloro-1,2,2-trifl | 2.819 | 2.390 | 15.2 | 143 | 0.00 |
| 17 | T | Acrolein | 0.418 | 0.423 | -1.2 | 149 | 0.00 |
| 18 | T | Allyl chloride | 0.501 | 0.513 | -2.4 | 145 | 0.00 |
| 19 | T | Isopropanol | 2.005 | 2.110 | -5.2 | 153 | 0.00 |
| 20 | T | Methylene chloride | 1.229 | 1.083 | 11.9 | 161 | 0.00 |
| 21 | T | Acetone | 1.508 | 1.551 | -2.9 | 153 | 0.00 |
| 22 | T | trans-1,2-Dichloroethene | 1.724 | 1.721 | 0.2 | 146 | 0.00 |
| 23 | T | n-Pentane | 2.325 | 2.210 | 4.9 | 154 | 0.00 |
| 24 | T | n-Hexane | 3.152 | 2.903 | 7.9 | 148 | 0.00 |
| 25 | T | Methyl tert-butyl ether | 3.872 | 3.613 | 6.7 | 150 | 0.00 |
| 26 | T | Tert-butyl alcohol | 2.607 | 2.448 | 6.1 | 148 | 0.00 |
| 27 | T | 1,1-Dichloroethane | 2.322 | 2.083 | 10.3 | 141 | 0.00 |
| 28 | T | cis-1,2-Dichloroethene | 1.638 | 1.576 | 3.8 | 144 | 0.00 |
| 29 | t | Cyclohexane | 2.202 | 2.029 | 7.9 | 148 | 0.00 |
| 30 | T | Chloroform | 2.676 | 2.457 | 8.2 | 141 | 0.00 |
| 31 | T | Ethyl acetate | 0.435 | 0.434 | 0.2 | 146 | 0.00 |
| 32 | T | Carbon tetrachloride | 3.174 | 2.860 | 9.9 | 142 | 0.00 |
| 33 | T | Tetrahydrofuran | 1.504 | 1.466 | 2.5 | 149 | 0.00 |
| 34 | T | 1,1,1-Trichloroethane | 2.780 | 2.541 | 8.6 | 144 | 0.00 |
| 35 | T | Methyl ethyl ketone | 2.442 | 2.356 | 3.5 | 150 | 0.00 |
| 36 | T | n-Heptane | 2.764 | 2.735 | 1.0 | 145 | 0.00 |
| 37 | T | Benzene | 3.972 | 3.428 | 13.7 | 136 | 0.00 |
| 38 | T | 1,2-Dichloroethane | 1.663 | 1.603 | 3.6 | 146 | 0.00 |
| 39 | I | 1,4-Difluorobenzene (IS) | 1.000 | 1.000 | 0.0 | 147 | 0.00 |
| 40 | T | Trichloroethene | 0.442 | 0.405 | 8.4 | 135 | 0.00 |
| 41 | T | 2,2,4-Trimethylpentane | 1.303 | 1.247 | 4.3 | 149 | 0.00 |
| 42 | T | 1,2-Dichloropropane | 0.389 | 0.371 | 4.6 | 139 | 0.00 |
| 43 | T | Bromodichloromethane | 0.655 | 0.640 | 2.3 | 143 | 0.00 |
| 44 | T | Methyl methacrylate | 0.472 | 0.494 | -4.7 | 146 | 0.00 |
| 45 | T | 1,4-Dioxane | 0.238 | 0.232 | 2.5 | 140 | 0.00 |
| 46 | T | cis-1,3-Dichloropropene | 0.603 | 0.587 | 2.7 | 137 | 0.00 |
| 47 | T | Toluene | 1.405 | 1.349 | 4.0 | 133 | 0.00 |
| 48 | T | Methyl isobutyl ketone | 0.883 | 0.958 | -8.5 | 148 | 0.00 |
| 49 | T | Tetrachloroethene | 0.606 | 0.573 | 5.4 | 133 | 0.00 |
| 50 | T | trans-1,3-Dichloropropene | 0.585 | 0.600 | -2.6 | 139 | 0.00 |
| 51 | T | 1,1,2-Trichloroethane | 0.475 | 0.456 | 4.0 | 135 | 0.00 |
| 52 | T | Dibromochloromethane | 0.791 | 0.789 | 0.3 | 139 | 0.00 |
| 53 | T | 1,2-Dibromoethane | 0.686 | 0.685 | 0.1 | 137 | 0.00 |

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4902dcvs.D
Acq On : 11 Dec 2023 10:26 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 11 10:45:53 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 0% Max. R.T. Dev 0.40min
Max. RRF Dev : 30% Max. Rel. Area : 500%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 54 | T | Methyl n-butyl ketone | 0.849 | 0.947 | -11.5 | 149 | 0.00 |
| 55 | I | d-5 Chlorobenzene (IS) | 1.000 | 1.000 | 0.0 | 142 | 0.00 |
| 56 | T | n-Nonane | 0.992 | 1.053 | -6.1 | 146 | 0.00 |
| 57 | T | Chlorobenzene | 0.997 | 0.924 | 7.3 | 133 | 0.00 |
| 58 | T | Ethylbenzene | 1.843 | 1.749 | 5.1 | 134 | 0.00 |
| 59 | T | Xylenes (m&p) | 1.365 | 1.338 | 2.0 | 134 | 0.00 |
| 60 | T | Xylene (o) | 1.490 | 1.395 | 6.4 | 135 | 0.00 |
| 61 | T | Styrene | 1.020 | 0.982 | 3.7 | 131 | 0.00 |
| 62 | T | Bromoform | 0.732 | 0.731 | 0.1 | 139 | 0.00 |
| 63 | T | Cumene | 1.947 | 1.907 | 2.1 | 139 | 0.00 |
| 64 | S | Bromofluorobenzene (tune st | 0.872 | 0.871 | 0.1 | 142 | 0.00 |
| 65 | T | n-Propyl benzene | 2.541 | 2.576 | -1.4 | 140 | 0.00 |
| 66 | T | 1,1,2,2-Tetrachloroethane | 1.043 | 0.998 | 4.3 | 136 | 0.00 |
| 67 | T | 4-Ethyltoluene | 2.151 | 2.143 | 0.4 | 138 | 0.00 |
| 68 | T | 2-Chlorotoluene | 1.707 | 1.675 | 1.9 | 140 | 0.00 |
| 69 | T | 1,3,5-Trimethylbenzene | 1.730 | 1.657 | 4.2 | 134 | 0.00 |
| 70 | T | 1,2,4-Trimethylbenzene | 1.729 | 1.675 | 3.1 | 133 | 0.00 |
| 71 | T | 1,3-Dichlorobenzene | 1.059 | 0.981 | 7.4 | 133 | 0.00 |
| 72 | T | 1,4-Dichlorobenzene | 1.065 | 1.017 | 4.5 | 134 | 0.00 |
| 73 | T | Benzyl chloride | 1.529 | 1.639 | -7.2 | 144 | 0.00 |
| 74 | T | 1,2-Dichlorobenzene | 1.027 | 0.970 | 5.6 | 133 | 0.00 |
| 75 | T | 1,3-Hexachlorobutadiene | 0.713 | 0.668 | 6.3 | 135 | 0.00 |
| 76 | T | 1,2,4-Trichlorobenzene | 0.824 | 0.792 | 3.9 | 137 | 0.00 |
| 77 | T | Naphthalene | 1.885 | 1.937 | -2.8 | 145 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4902dcvs.D
Acq On : 11 Dec 2023 10:26 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 11 10:45:53 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.393 | 130 | 596109 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.454 | 114 | 2484518 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 2791354 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 2431677 | 9.99 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.486 | 41 | 414687 | 10.02 | ppbV | 98 |
| 3) Dichlorodifluoromethane | 1.522 | 85 | 1382298 | 10.46 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.646 | 85 | 1676477 | 8.74 | ppbV | 97 |
| 5) n-Butane | 1.729 | 43 | 1013335 | 10.64 | ppbV | 99 |
| 6) Chloromethane | 1.791 | 52 | 78218 | 11.85 | ppbV | 100 |
| 7) Vinyl chloride | 1.784 | 62 | 574429 | 10.64 | ppbV | 100 |
| 8) 1,3-Butadiene | 1.794 | 39 | 509282 | 10.09 | ppbV | 97 |
| 9) Bromomethane | 2.081 | 94 | 454826 | 10.43 | ppbV | 98 |
| 10) Chloroethane | 2.194 | 64 | 327772 | 11.57 | ppbV | 98 |
| 11) Vinyl bromide | 2.293 | 106 | 548259 | 10.27 | ppbV | 99 |
| 12) Trichlorofluoromethane | 2.309 | 101 | 1779124 | 10.66 | ppbV | 99 |
| 13) Ethanol | 2.666 | 45 | 201466 | 11.54 | ppbV | 97 |
| 14) 1,1-Dichloroethene | 2.731 | 61 | 1163954 | 10.51 | ppbV | 96 |
| 15) Carbon disulfide | 2.750 | 76 | 1969223 | 10.80 | ppbV | 97 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.772 | 101 | 1553181 | 9.24 | ppbV | 99 |
| 17) Acrolein | 2.985 | 56 | 252446 | 10.14 | ppbV | 100 |
| 18) Allyl chloride | 3.110 | 76 | 330196 | 11.05 | ppbV | 100 |
| 19) Isopropanol | 3.110 | 45 | 1119255 | 9.36 | ppbV | 100 |
| 20) Methylene chloride | 3.203 | 49 | 696985 | 9.51 | ppbV | 95 |
| 21) Acetone | 3.210 | 43 | 998590 | 11.11 | ppbV | 100 |
| 22) trans-1,2-Dichloroethene | 3.325 | 61 | 1138568 | 11.08 | ppbV | 98 |
| 23) n-Pentane | 3.409 | 43 | 1422770 | 10.27 | ppbV | 98 |
| 24) n-Hexane | 3.406 | 57 | 1903376 | 10.13 | ppbV | 98 |
| 25) Methyl tert-butyl ether | 3.409 | 73 | 2411960 | 10.45 | ppbV | 99 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 1678450 | 10.80 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 1328374 | 9.60 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.232 | 61 | 1023865 | 10.48 | ppbV | 96 |
| 29) Cyclohexane | 4.412 | 56 | 1354780 | 10.32 | ppbV | 97 |
| 30) Chloroform | 4.454 | 83 | 1581616 | 9.92 | ppbV | 99 |
| 31) Ethyl acetate | 4.541 | 61 | 279320 | 10.77 | ppbV | 96 |
| 32) Carbon tetrachloride | 4.576 | 117 | 1875059 | 9.91 | ppbV | 99 |
| 33) Tetrahydrofuran | 4.573 | 42 | 961491 | 10.72 | ppbV | 97 |
| 34) 1,1,1-Trichloroethane | 4.628 | 97 | 1650986 | 9.96 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.682 | 43 | 1545036 | 10.61 | ppbV | 98 |
| 36) n-Heptane | 4.914 | 43 | 1809408 | 10.98 | ppbV | 97 |
| 37) Benzene | 4.930 | 78 | 2206639 | 9.32 | ppbV | 97 |
| 38) 1,2-Dichloroethane | 5.091 | 62 | 1041657 | 10.51 | ppbV | 100 |
| 40) Trichloroethene | 5.431 | 130 | 1006216 | 9.15 | ppbV | 100 |
| 41) 2,2,4-Trimethylpentane | 4.846 | 57 | 3376289 | 10.43 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 1014651 | 10.50 | ppbV | 99 |
| 43) Bromodichloromethane | 5.943 | 83 | 1828286 | 11.23 | ppbV | 100 |
| 44) Methyl methacrylate | 6.087 | 41 | 1350577 | 11.52 | ppbV | 96 |
| 45) 1,4-Dioxane | 6.113 | 88 | 673669 | 11.38 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 1619348 | 10.81 | ppbV | 99 |
| 47) Toluene | 6.772 | 91 | 3618902 | 10.36 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.135 | 43 | 2595670 | 11.83 | ppbV | 98 |
| 49) Tetrachloroethene | 7.161 | 166 | 1595415 | 10.60 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 1655291 | 11.39 | ppbV | 98 |
| 51) 1,1,2-Trichloroethane | 7.335 | 97 | 1222341 | 10.37 | ppbV | 100 |

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4902dcvs.D
Acq On : 11 Dec 2023 10:26 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

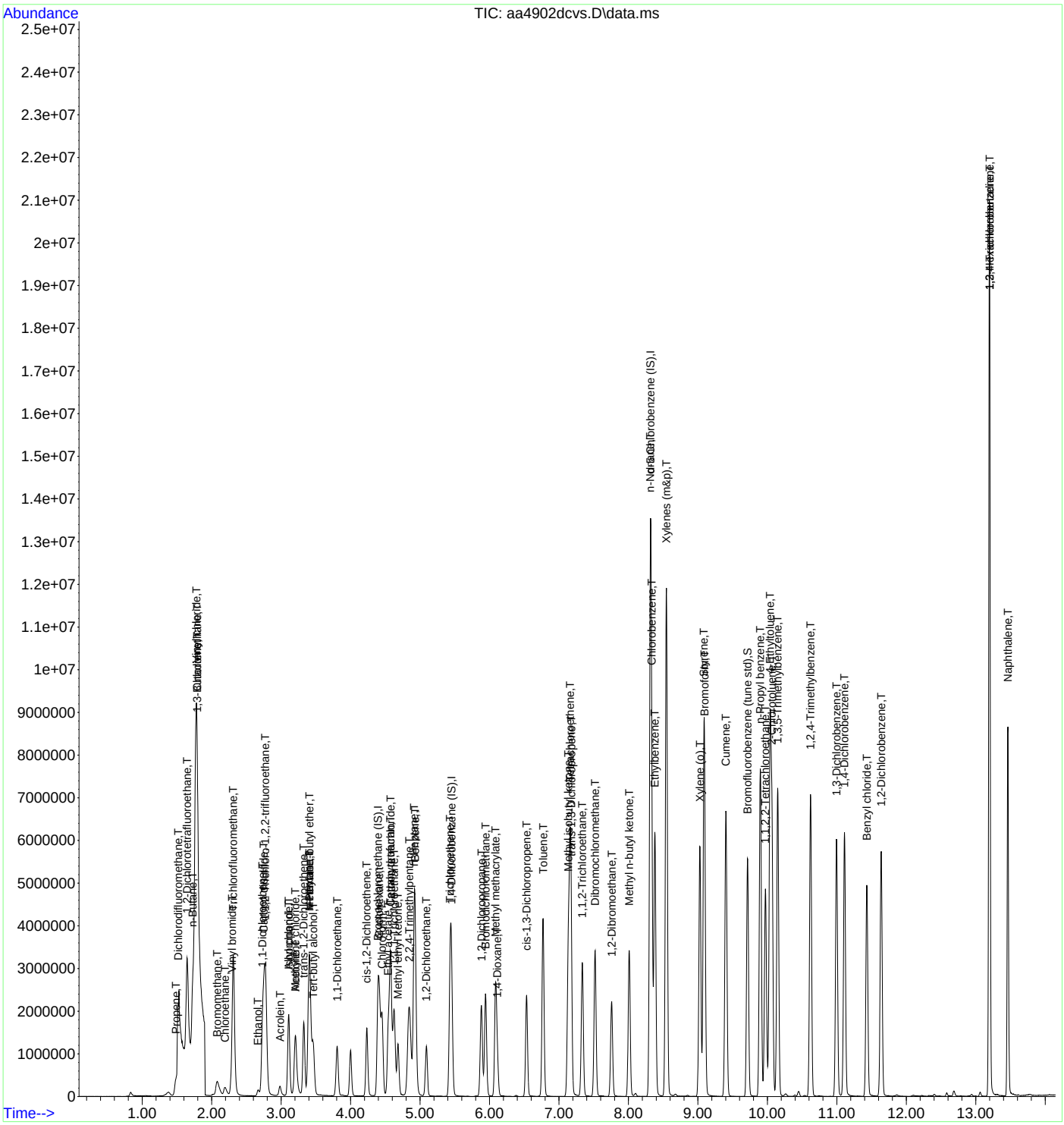
Quant Time: Dec 11 10:45:53 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 2194895 | 11.17 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 1838806 | 10.78 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.010 | 43 | 2657481 | 12.59 | ppbV | 97 |
| 56) n-Nonane | 8.316 | 43 | 3233636 | 11.67 | ppbV | 98 |
| 57) Chlorobenzene | 8.335 | 112 | 2863155 | 10.29 | ppbV | 98 |
| 58) Ethylbenzene | 8.380 | 91 | 5418295 | 10.53 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.547 | 91 | 8329861 | 21.86 | ppbV | 99 |
| 60) Xylene (o) | 9.029 | 91 | 4282583 | 10.30 | ppbV | 98 |
| 61) Styrene | 9.087 | 104 | 3096431 | 10.87 | ppbV | 99 |
| 62) Bromoform | 9.097 | 173 | 2305769 | 11.28 | ppbV | 100 |
| 63) Cumene | 9.402 | 105 | 5696839 | 10.48 | ppbV | 100 |
| 65) n-Propyl benzene | 9.897 | 91 | 7764284 | 10.95 | ppbV | 99 |
| 66) 1,1,2,2-Tetrachloroethane | 9.971 | 83 | 3175462 | 10.91 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 6460729 | 10.76 | ppbV | 99 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 5096400 | 10.69 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 5041969 | 10.44 | ppbV | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.621 | 105 | 5048160 | 10.46 | ppbV | 99 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 3039816 | 10.29 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 3038927 | 10.22 | ppbV | 99 |
| 73) Benzyl chloride | 11.431 | 91 | 4575705 | 10.72 | ppbV | 99 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 2896425 | 10.10 | ppbV | 99 |
| 75) 1,3-Hexachlorobutadiene | 13.200 | 225 | 2068735 | 10.40 | ppbV | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 2432158 | 10.57 | ppbV | 99 |
| 77) Naphthalene | 13.463 | 128 | 5407318 | 10.28 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4902dcvs.D
Acq On : 11 Dec 2023 10:26 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 11 10:45:53 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



# Section VIII: Raw Quality Control Data Package

**BFB Tune Spectra**

**Method Blank**

**Laboratory Control Sample**

**Laboratory Sample Duplicate**

**Instrument Run Logs**

**Pressure Gauge Readings (initial and final)**

**Example Calculations**

**Screening Data**

**Clean Canister Certification**

# BFB

**Data Path:** C:\DATA\2023\08-2023\08-15-2023\
**Data File:** AA3401BFB.D
**Acq On:** 8/15/2023 10:11:00AM
**Operator:** jls
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\230525.M
**Last Update:** Tue May 30 13:24:12 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 251499 | 18.7 |
| PASS | 75 | 95 | 30 | 66 | 703104 | 52.3 |
| PASS | 95 | 95 | 100 | 100 | 1345024 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 89525 | 6.7 |
| PASS | 173 | 174 | 0.00 | 2 | 8293 | 0.8 |
| PASS | 174 | 95 | 50 | 100 | 1069397 | 79.5 |
| PASS | 175 | 174 | 4 | 9 | 78181 | 7.3 |
| PASS | 176 | 174 | 93 | 101 | 1035413 | 96.8 |
| PASS | 177 | 176 | 5 | 9 | 68613 | 6.6 |

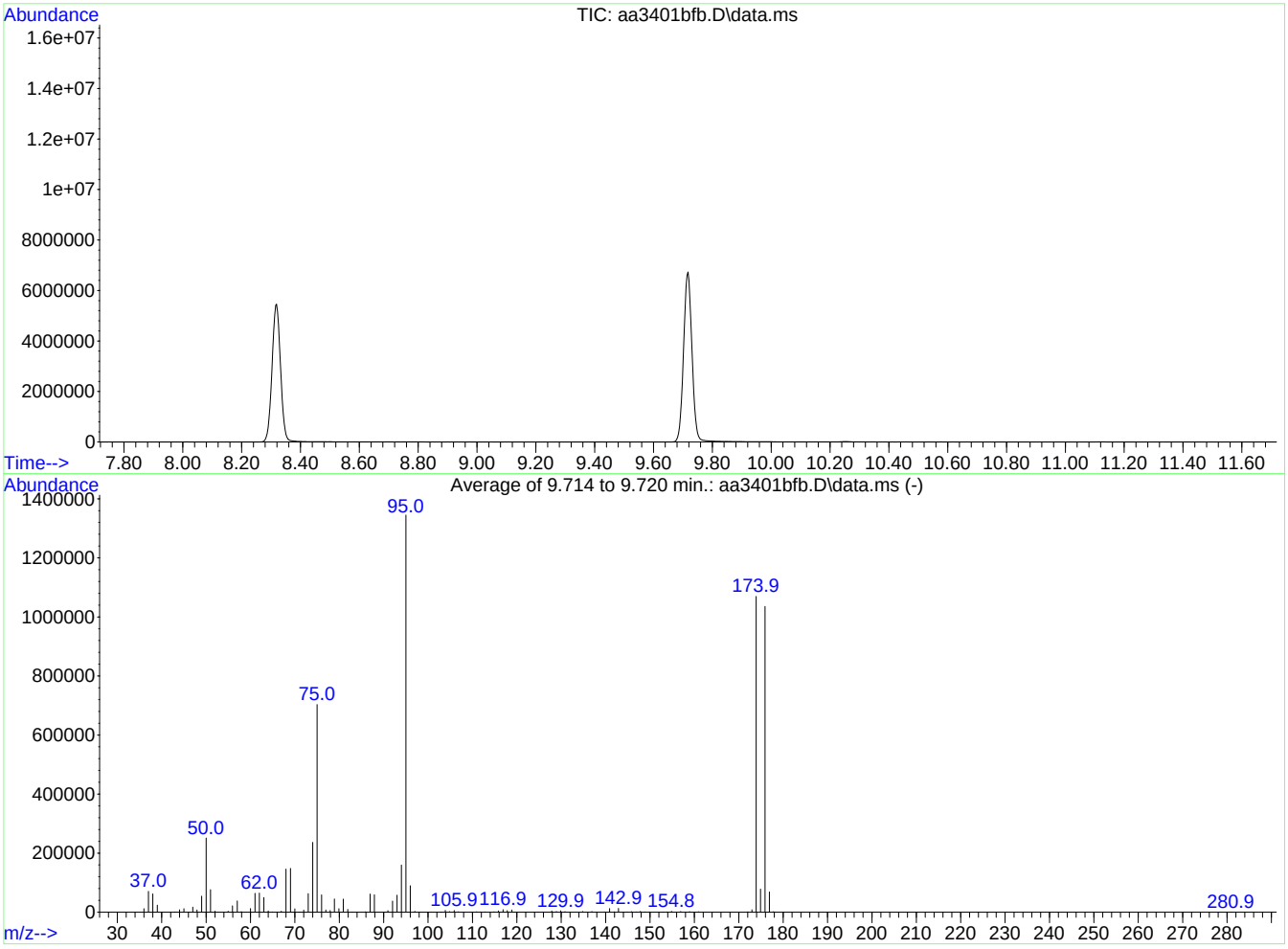
Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA3401BFB | NA | 8/15/2023 10:11:00 AM |
| 0.2 PPBV STD | AA3402STD05 | NA | 8/15/2023 11:15:00 AM |
| 10 PPBV STD | AA3404STD03 | NA | 8/15/2023 1:09:00 PM |
| 2 PPBV STD | AA3403STD04 | NA | 8/15/2023 1:45:00 PM |
| 20 PPBV STD | AA3405STD02 | NA | 8/15/2023 3:12:00 PM |
| 40 PPBV STD | AA3406STD01 | NA | 8/15/2023 4:47:00 PM |
| 10 PPBV ICVSS | AA3407ICVSS | NA | 8/15/2023 6:09:00 PM |

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3401bfb.D
Acq On : 15 Aug 2023 10:11 am
Operator : jjw
Sample : BFB
Misc : ALM018474
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\230525.M
Title : TO-15 on the Agilent 7890A / 5975C
Last Update : Tue May 30 13:24:12 2023




AutoFind: Scans 2982, 2983, 2984; Background Corrected with Scan 2964

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 18.7 | 251499 | PASS |
| 75 | 95 | 30 | 66 | 52.3 | 703104 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 1345024 | PASS |
| 96 | 95 | 5 | 9 | 6.7 | 89525 | PASS |
| 173 | 174 | 0.00 | 2 | 0.8 | 8293 | PASS |
| 174 | 95 | 50 | 100 | 79.5 | 1069397 | PASS |
| 175 | 174 | 4 | 9 | 7.3 | 78181 | PASS |
| 176 | 174 | 93 | 101 | 96.8 | 1035413 | PASS |
| 177 | 176 | 5 | 9 | 6.6 | 68613 | PASS |

# BFB

**Data Path:** C:\DATA\2023\09-2023\09-28-2023\
**Data File:** AA4071BFB.D
**Acq On:** 9/28/2023 10:01:00AM
**Operator:** jjw
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\230815.M
**Last Update:** Wed Aug 16 10:00:51 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 96931 | 19.9 |
| PASS | 75 | 95 | 30 | 66 | 265259 | 54.6 |
| PASS | 95 | 95 | 100 | 100 | 485931 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 33264 | 6.8 |
| PASS | 173 | 174 | 0.00 | 2 | 3017 | 0.8 |
| PASS | 174 | 95 | 50 | 100 | 366187 | 75.4 |
| PASS | 175 | 174 | 4 | 9 | 27080 | 7.4 |
| PASS | 176 | 174 | 93 | 101 | 360832 | 98.5 |
| PASS | 177 | 176 | 5 | 9 | 23088 | 6.4 |

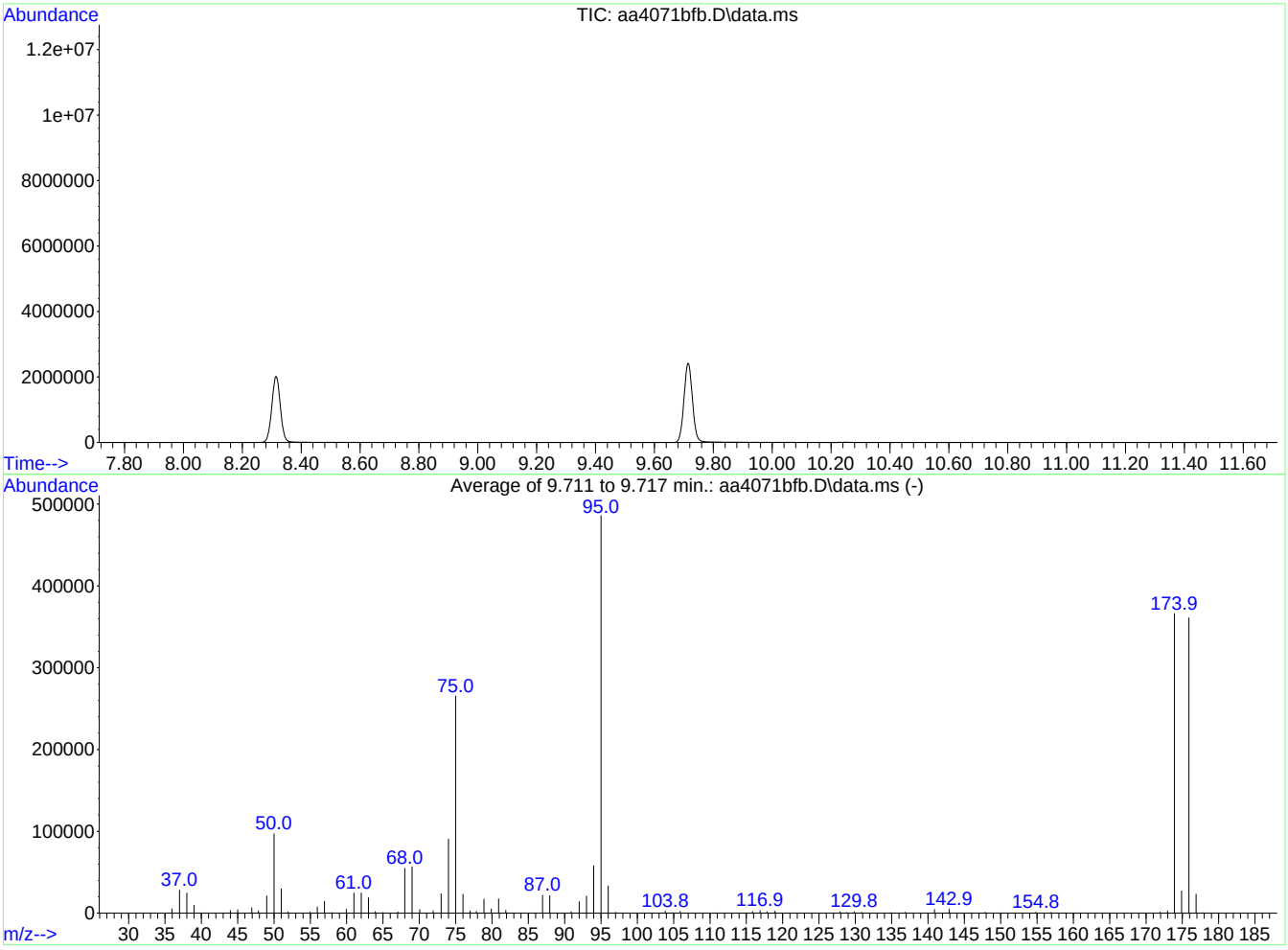
Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4071BFB | NA | 9/28/2023 10:01:00 AM |
| 10 PPBV DCVS | AA4072DCVS | NA | 9/28/2023 10:31:00 AM |
| 10 PPBV LCS | AA4073LCS | NA | 9/28/2023 11:19:00 AM |
| METHOD BLANK | AA4074BLK | NA | 9/28/2023 11:47:00 AM |
| 02 PPBV RLLCS | AA4075RLLCS | NA | 9/28/2023 1:22:00 PM |
| 2164 | AA4076 | NA | 9/28/2023 3:00:00 PM |
| 4870 | AA4077 | NA | 9/28/2023 3:30:00 PM |
| 2160 | AA4078 | NA | 9/28/2023 4:00:00 PM |
| 10 PPBV CCCVS | AA4093CCCVS | NA | 9/29/2023 12:28:00 AM |

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4071bfb.D
Acq On : 28 Sep 2023 10:01 am
Operator : jjw
Sample : BFB
Misc : ALM018474
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\230815.M
Title : TO-15 on the Agilent 7890A / 5975C
Last Update : Wed Aug 16 10:00:51 2023




AutoFind: Scans 2981, 2982, 2983; Background Corrected with Scan 2965

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 19.9 | 96931 | PASS |
| 75 | 95 | 30 | 66 | 54.6 | 265259 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 485931 | PASS |
| 96 | 95 | 5 | 9 | 6.8 | 33264 | PASS |
| 173 | 174 | 0.00 | 2 | 0.8 | 3017 | PASS |
| 174 | 95 | 50 | 100 | 75.4 | 366187 | PASS |
| 175 | 174 | 4 | 9 | 7.4 | 27080 | PASS |
| 176 | 174 | 93 | 101 | 98.5 | 360832 | PASS |
| 177 | 176 | 5 | 9 | 6.4 | 23088 | PASS |

# BFB

**Data Path:** C:\DATA\2023\10-2023\10-10-2023\
**Data File:** AA4131BFB.D
**Acq On:** 10/10/2023 10:13:00AM
**Operator:** jls
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\231009.M
**Last Update:** Tue Oct 10 09:54:56 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 65523 | 16.8 |
| PASS | 75 | 95 | 30 | 66 | 182571 | 46.8 |
| PASS | 95 | 95 | 100 | 100 | 389867 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 25643 | 6.6 |
| PASS | 173 | 174 | 0.00 | 2 | 0 | 0.0 |
| PASS | 174 | 95 | 50 | 100 | 293952 | 75.4 |
| PASS | 175 | 174 | 4 | 9 | 22269 | 7.6 |
| PASS | 176 | 174 | 93 | 101 | 282667 | 96.2 |
| PASS | 177 | 176 | 5 | 9 | 18629 | 6.6 |

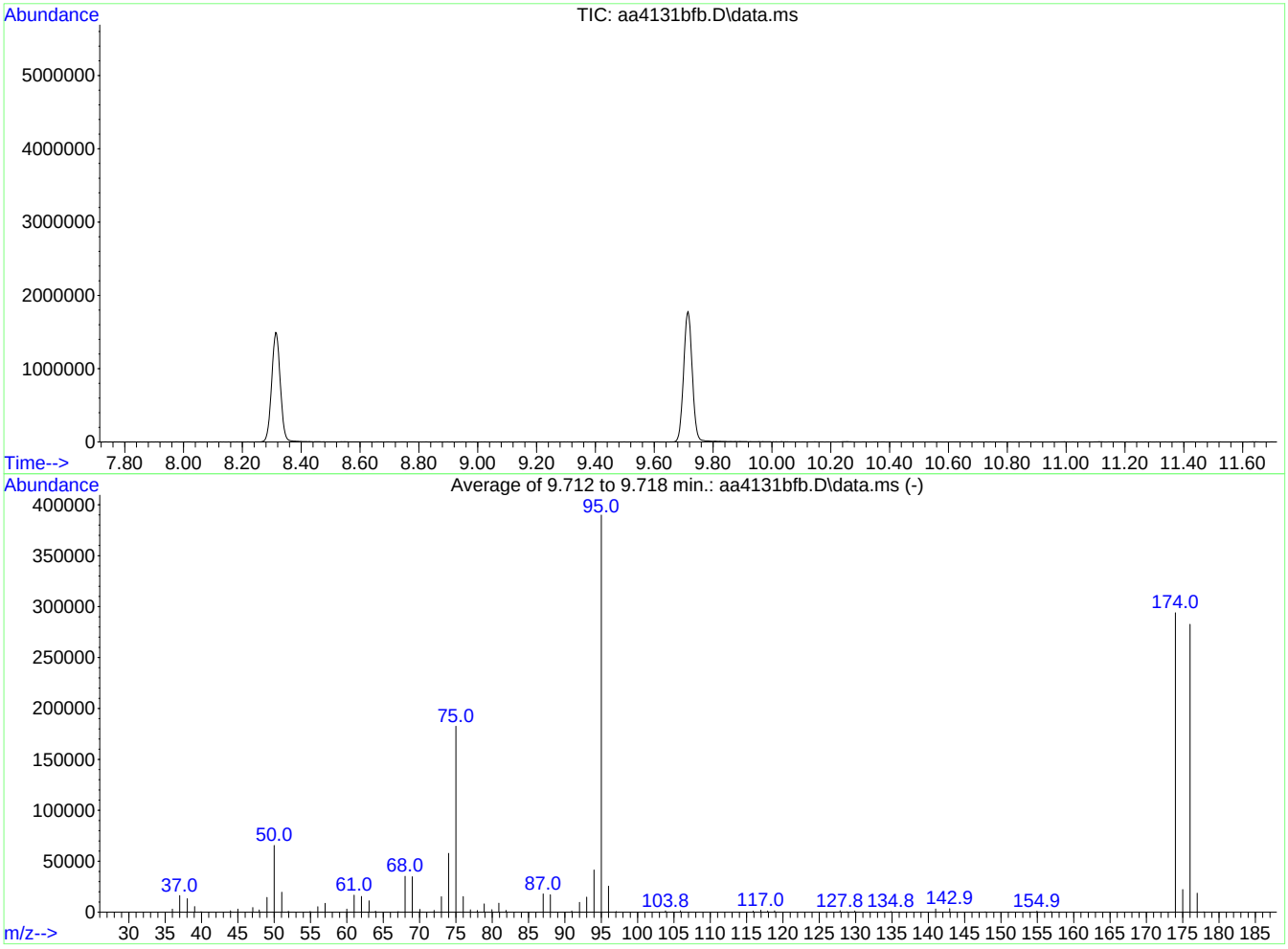
Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4131BFB | NA | 10/10/2023 10:13:00 AM |
| 0.2 PPBV STD | AA4132STD05 | NA | 10/10/2023 10:40:00 AM |
| 2 PPBV STD | AA4133STD04 | NA | 10/10/2023 11:46:00 AM |
| 10 PPBV STANDARD STD | AA4134STD03 | NA | 10/10/2023 12:21:00 PM |
| 20 PPBV STD | AA4135STD02 | NA | 10/10/2023 12:55:00 PM |
| 40 PPBV STD | AA4136STD01 | NA | 10/10/2023 2:05:00 PM |
| 10 PPBV ICVSS | AA4137ICVSS | NA | 10/10/2023 4:48:00 PM |
| 10 PPBV LCS | AA4138LCS | NA | 10/10/2023 5:39:00 PM |
| METHOD BLANK | AA4139BLK | NA | 10/10/2023 6:07:00 PM |
| 02 PPBV RLLCS | AA4140RLLCS | NA | 10/10/2023 6:35:00 PM |
| 5101 | AA4142 | NA | 10/10/2023 7:36:00 PM |
| 4869 | AA4143 | NA | 10/10/2023 8:06:00 PM |
| 2157 | AA4144 | NA | 10/10/2023 8:36:00 PM |
| 10 PPBV CCCVS | AA4154CCCVS | NA | 10/11/2023 1:53:00 AM |

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4131bfb.D
Acq On : 10 Oct 2023 10:13 am
Operator : jjw
Sample : BFB
Misc : ALM018474
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\231009.M
Title : TO-15 on the Agilent 7890A / 5975C
Last Update : Tue Oct 10 09:54:56 2023




AutoFind: Scans 2981, 2982, 2983; Background Corrected with Scan 2964

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 16.8 | 65523 | PASS |
| 75 | 95 | 30 | 66 | 46.8 | 182571 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 389867 | PASS |
| 96 | 95 | 5 | 9 | 6.6 | 25643 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 100 | 75.4 | 293952 | PASS |
| 175 | 174 | 4 | 9 | 7.6 | 22269 | PASS |
| 176 | 174 | 93 | 101 | 96.2 | 282667 | PASS |
| 177 | 176 | 5 | 9 | 6.6 | 18629 | PASS |

# BFB

**Data Path:** C:\DATA\2023\12-2023\12-08-2023\
**Data File:** AA4881BFB.D
**Acq On:** 12/8/2023 10:21:00AM
**Operator:** jjw
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\231009.M
**Last Update:** Tue Oct 10 15:12:35 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 185045 | 18.5 |
| PASS | 75 | 95 | 30 | 66 | 508523 | 50.7 |
| PASS | 95 | 95 | 100 | 100 | 1002688 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 66973 | 6.7 |
| PASS | 173 | 174 | 0.00 | 2 | 4685 | 0.6 |
| PASS | 174 | 95 | 50 | 100 | 744704 | 74.3 |
| PASS | 175 | 174 | 4 | 9 | 56251 | 7.6 |
| PASS | 176 | 174 | 93 | 101 | 716907 | 96.3 |
| PASS | 177 | 176 | 5 | 9 | 46309 | 6.5 |

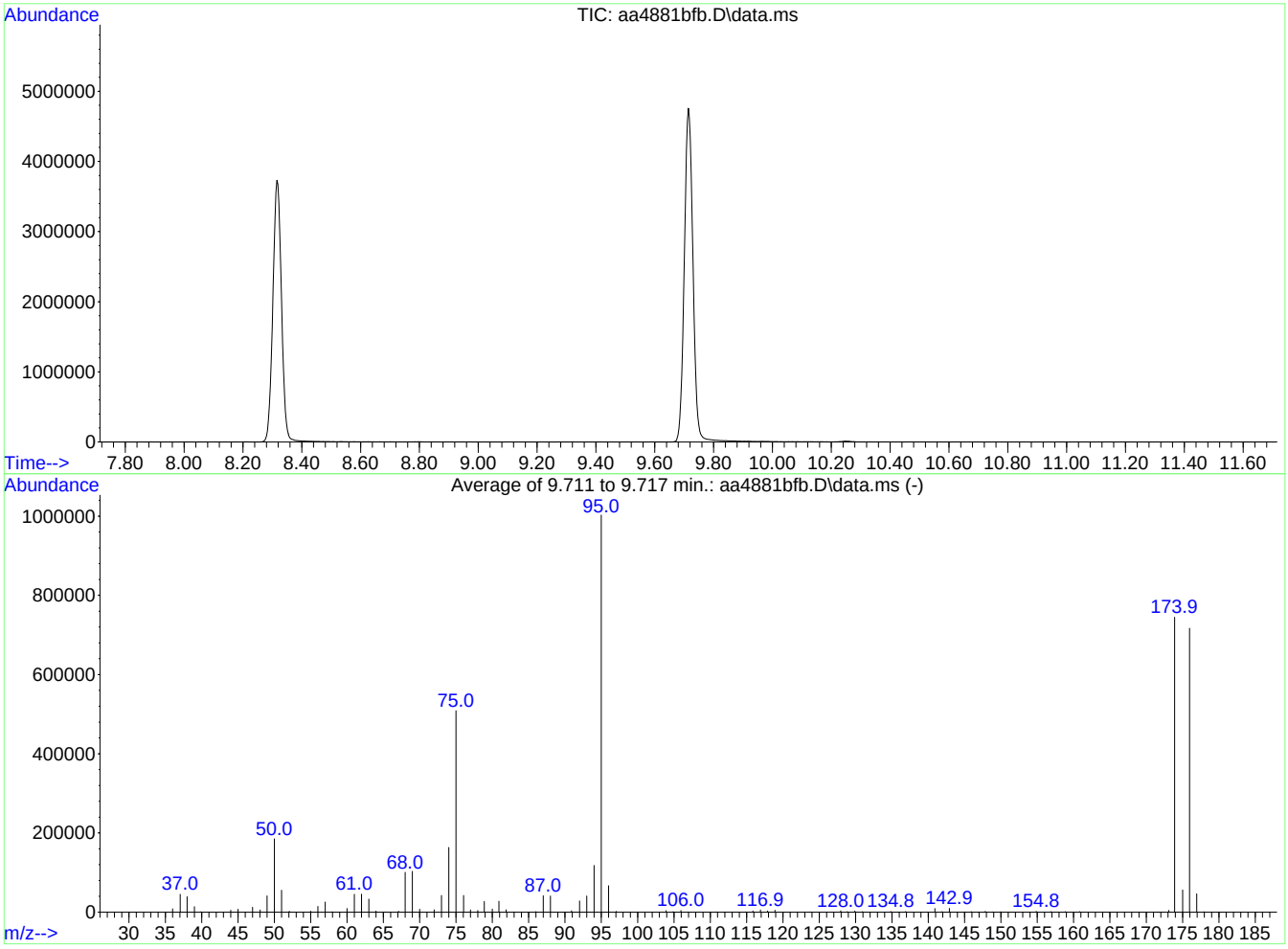
Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4881BFB | NA | 12/8/2023 10:21:00 AM |
| 10 PPBV DCVS | AA4882DCVS | NA | 12/8/2023 10:50:00 AM |
| 10 PPBV LCS | AA4883LCS | NA | 12/8/2023 11:21:00 AM |
| METHOD BLANK | AA4884BLK | NA | 12/8/2023 12:26:00 PM |
| E23-05080-01 | AA4893 | SV2 | 12/8/2023 6:08:00 PM |
| E23-05080-02 | AA4894 | SV3 | 12/8/2023 6:39:00 PM |

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4881bfb.D
Acq On : 8 Dec 2023 10:21 am
Operator : jjw
Sample : BFB
Misc : ALM018474
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\231009.M
Title : TO-15 on the Agilent 7890A / 5975C
Last Update : Tue Oct 10 15:12:35 2023




AutoFind: Scans 2981, 2982, 2983; Background Corrected with Scan 2964

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 18.5 | 185045 | PASS |
| 75 | 95 | 30 | 66 | 50.7 | 508523 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 1002688 | PASS |
| 96 | 95 | 5 | 9 | 6.7 | 66973 | PASS |
| 173 | 174 | 0.00 | 2 | 0.6 | 4685 | PASS |
| 174 | 95 | 50 | 100 | 74.3 | 744704 | PASS |
| 175 | 174 | 4 | 9 | 7.6 | 56251 | PASS |
| 176 | 174 | 93 | 101 | 96.3 | 716907 | PASS |
| 177 | 176 | 5 | 9 | 6.5 | 46309 | PASS |

# BFB

**Data Path:** C:\DATA\2023\12-2023\12-11-2023\
**Data File:** AA4901BFB.D
**Acq On:** 12/11/2023 9:24:00AM
**Operator:** jjw
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\231009.M
**Last Update:** Tue Oct 10 15:12:35 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 267904 | 18.4 |
| PASS | 75 | 95 | 30 | 66 | 717035 | 49.1 |
| PASS | 95 | 95 | 100 | 100 | 1459371 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 91040 | 6.2 |
| PASS | 173 | 174 | 0.00 | 2 | 10848 | 1.0 |
| PASS | 174 | 95 | 50 | 100 | 1053269 | 72.2 |
| PASS | 175 | 174 | 4 | 9 | 81547 | 7.7 |
| PASS | 176 | 174 | 93 | 101 | 1021824 | 97.0 |
| PASS | 177 | 176 | 5 | 9 | 65264 | 6.4 |

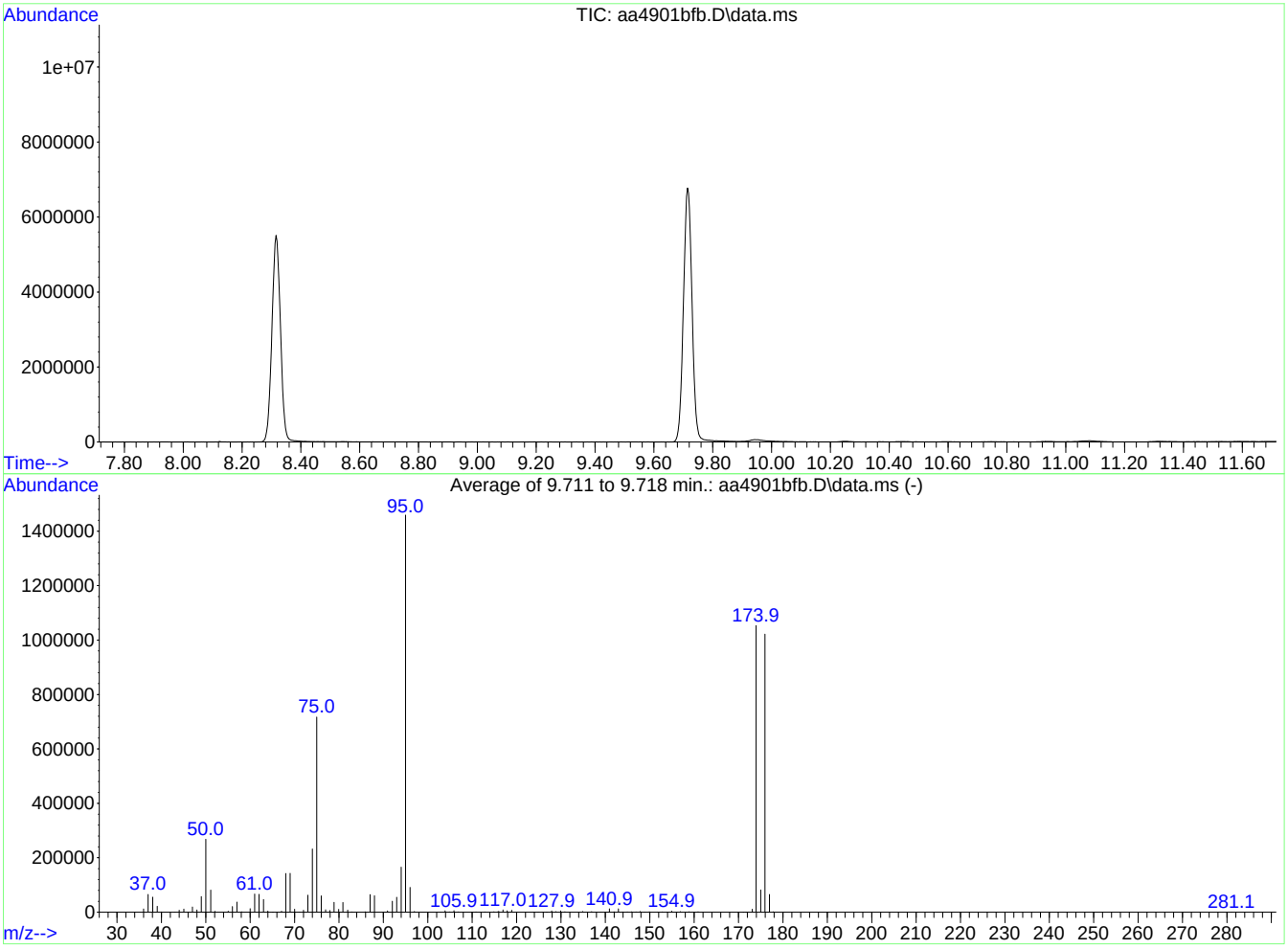
Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4901BFB | NA | 12/11/2023 9:24:00 AM |
| 10 PPBV DCVS | AA4902DCVS | NA | 12/11/2023 10:26:00 AM |
| 10 PPBV LCS | AA4903LCS | NA | 12/11/2023 10:57:00 AM |
| METHOD BLANK | AA4904BLK | NA | 12/11/2023 11:51:00 AM |
| 02 PPBV RLLCS | AA4905RLLCS | NA | 12/11/2023 12:18:00 PM |
| 1458 | AA4906 | NA | 12/11/2023 12:50:00 PM |
| 1588 | AA4907 | NA | 12/11/2023 1:19:00 PM |
| 3012 | AA4908 | NA | 12/11/2023 1:49:00 PM |
| E23-05080-01 | AA4911 | SV2 | 12/11/2023 3:19:00 PM |
| E23-05080-02 | AA4912 | SV3 | 12/11/2023 3:48:00 PM |
| 10 PPBV CCCVS | AA4931CCCVS | NA | 12/12/2023 1:59:00 AM |

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4901bfb.D
Acq On : 11 Dec 2023 9:24 am
Operator : jjw
Sample : BFB
Misc : ALM018474
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\231009.M
Title : TO-15 on the Agilent 7890A / 5975C
Last Update : Tue Oct 10 15:12:35 2023




AutoFind: Scans 2981, 2982, 2983; Background Corrected with Scan 2963

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 18.4 | 267904 | PASS |
| 75 | 95 | 30 | 66 | 49.1 | 717035 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 1459371 | PASS |
| 96 | 95 | 5 | 9 | 6.2 | 91040 | PASS |
| 173 | 174 | 0.00 | 2 | 1.0 | 10848 | PASS |
| 174 | 95 | 50 | 100 | 72.2 | 1053269 | PASS |
| 175 | 174 | 4 | 9 | 7.7 | 81547 | PASS |
| 176 | 174 | 93 | 101 | 97.0 | 1021824 | PASS |
| 177 | 176 | 5 | 9 | 6.4 | 65264 | PASS |

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4074BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **9/28/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| 2164 [AA4076] | 09/28/2023 15:00 |
| 4870 [AA4077] | 09/28/2023 15:30 |
| 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 0:28 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromodichloromethane | 75-27-4 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| Dibromochloromethane | 124-48-1 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.17 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.19 | ND |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.18 | ND |
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |
| n-Hexane | 110-54-3 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4074BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **9/28/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| 2164 [AA4076] | 09/28/2023 15:00 |
| 4870 [AA4077] | 09/28/2023 15:30 |
| 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 0:28 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Methylene chloride | 75-09-2 | 0.20 | ND |
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.17 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.17 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.20 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4074blk.D
Acq On : 28 Sep 2023 11:47 am
Operator : jjw
Sample : Method Blank
Misc : 1127
ALS Vial : 4 Sample Multiplier: 1

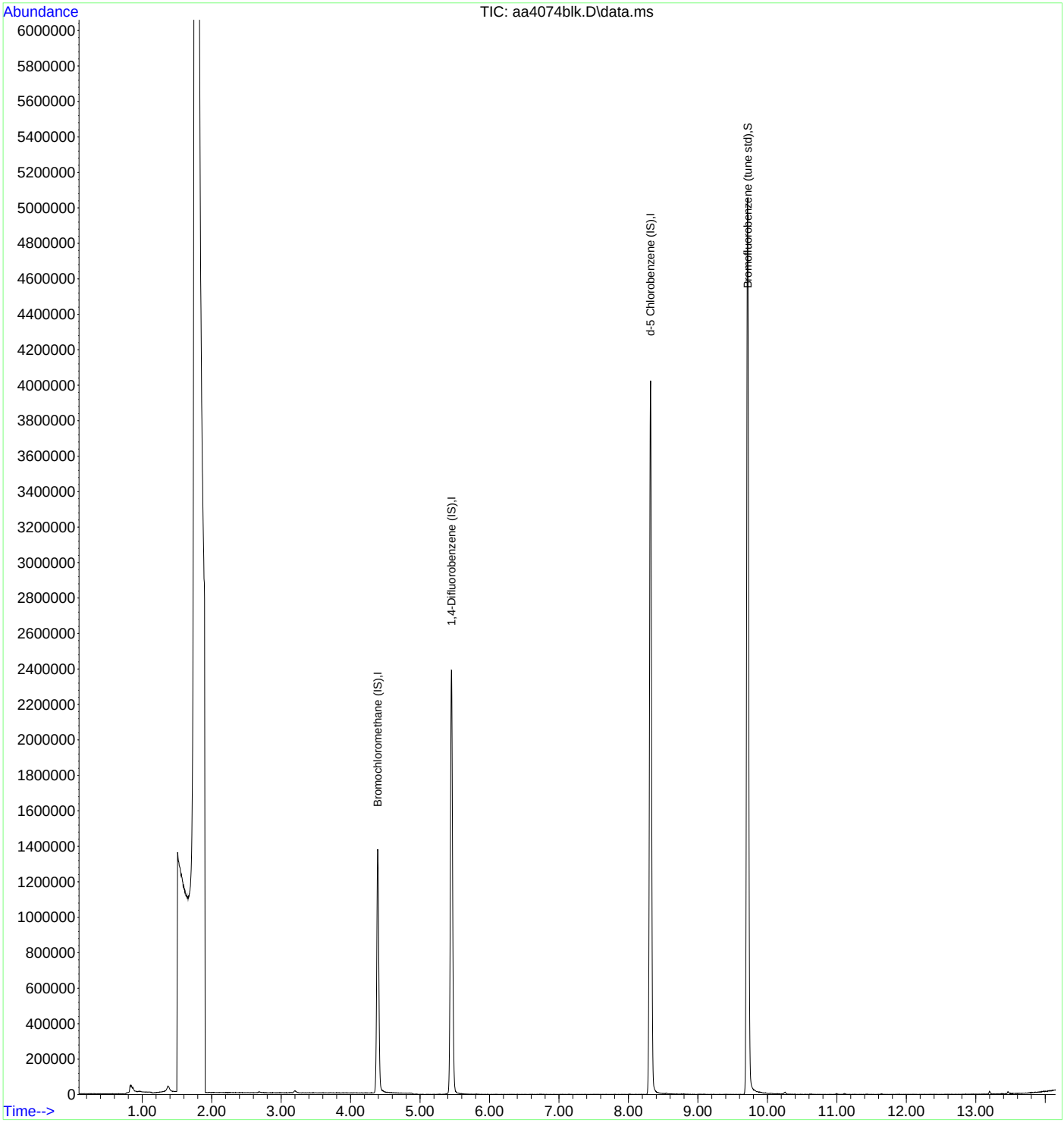
Quant Time: Sep 28 12:02:32 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.393 | 130 | 502187 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.454 | 114 | 2139413 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 2500606 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 2123353 | 10.21 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4074blk.D
Acq On : 28 Sep 2023 11:47 am
Operator : jjw
Sample : Method Blank
Misc : 1127
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 28 12:02:32 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4884BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/8/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05080-01 [AA4893] | 12/08/2023 18:08 |
| E23-05080-02 [AA4894] | 12/08/2023 18:39 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.17 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.19 | ND |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.18 | ND |
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |
| n-Hexane | 110-54-3 | 0.20 | ND |
| Methylene chloride | 75-09-2 | 0.20 | ND |
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4884BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/8/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05080-01 [AA4893] | 12/08/2023 18:08 |
| E23-05080-02 [AA4894] | 12/08/2023 18:39 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.17 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.17 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.20 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4884blk.D
Acq On : 8 Dec 2023 12:26 pm
Operator : jjw
Sample : Method Blank
Misc : 1127
ALS Vial : 4 Sample Multiplier: 1

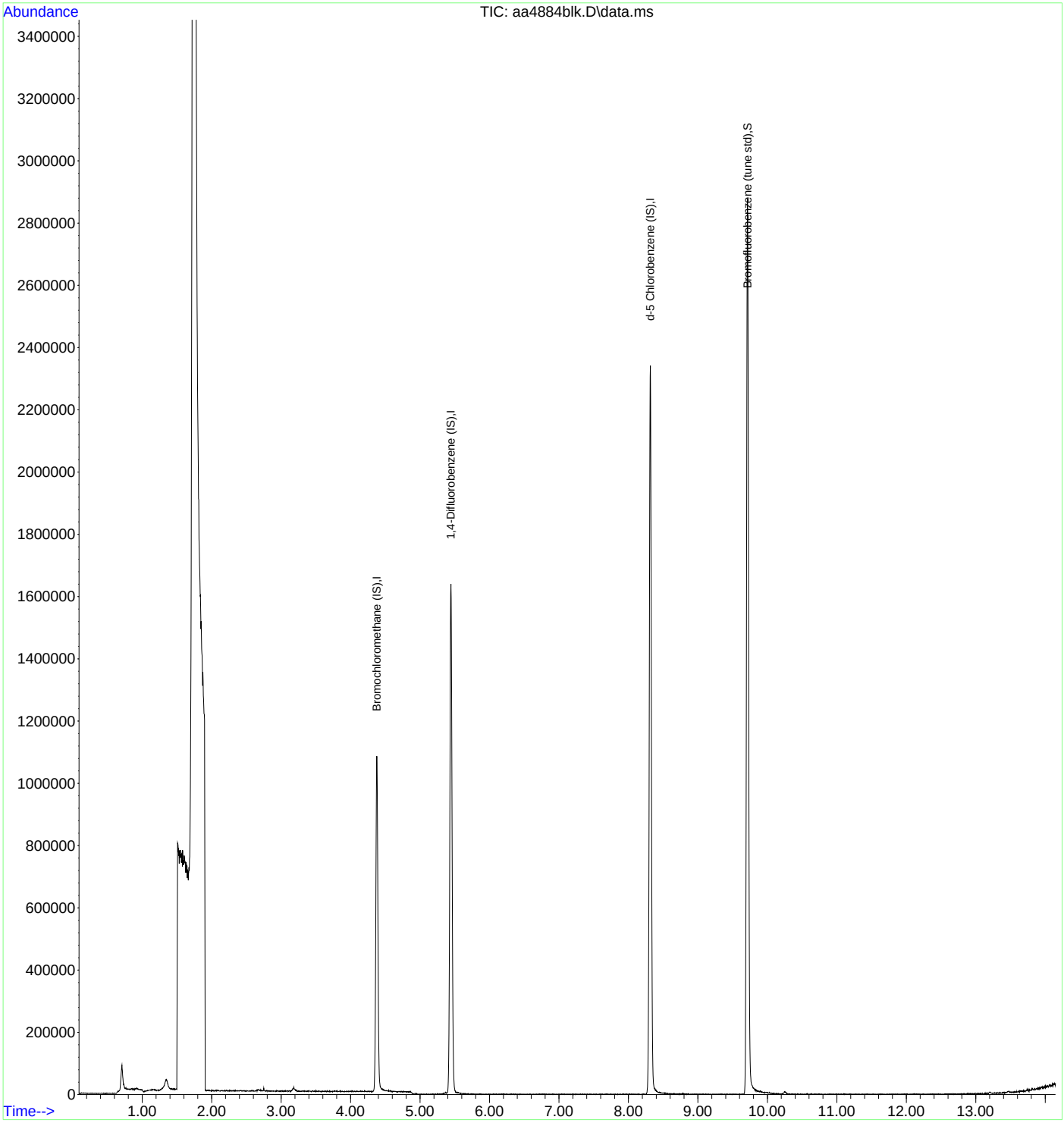
Quant Time: Dec 12 09:46:27 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.377 | 130 | 407142 | 10.00 | ppbV | -0.017 |
| 39) 1,4-Difluorobenzene (IS) | 5.444 | 114 | 1506485 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 1527551 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1276284 | 9.58 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4884blk.D
Acq On : 8 Dec 2023 12:26 pm
Operator : jjw
Sample : Method Blank
Misc : 1127
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 12 09:46:27 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4904BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/11/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05080-01 [AA4911] | 12/11/2023 15:19 |
| E23-05080-02 [AA4912] | 12/11/2023 15:48 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.17 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.19 | ND |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.18 | ND |
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4904BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/11/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05080-01 [AA4911] | 12/11/2023 15:19 |
| E23-05080-02 [AA4912] | 12/11/2023 15:48 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| n-Hexane | 110-54-3 | 0.20 | ND |
| Methylene chloride | 75-09-2 | 0.20 | ND |
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.17 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.17 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.20 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4904blk.D
Acq On : 11 Dec 2023 11:51 am
Operator : jjw
Sample : Method Blank
Misc : 1127
ALS Vial : 4 Sample Multiplier: 1

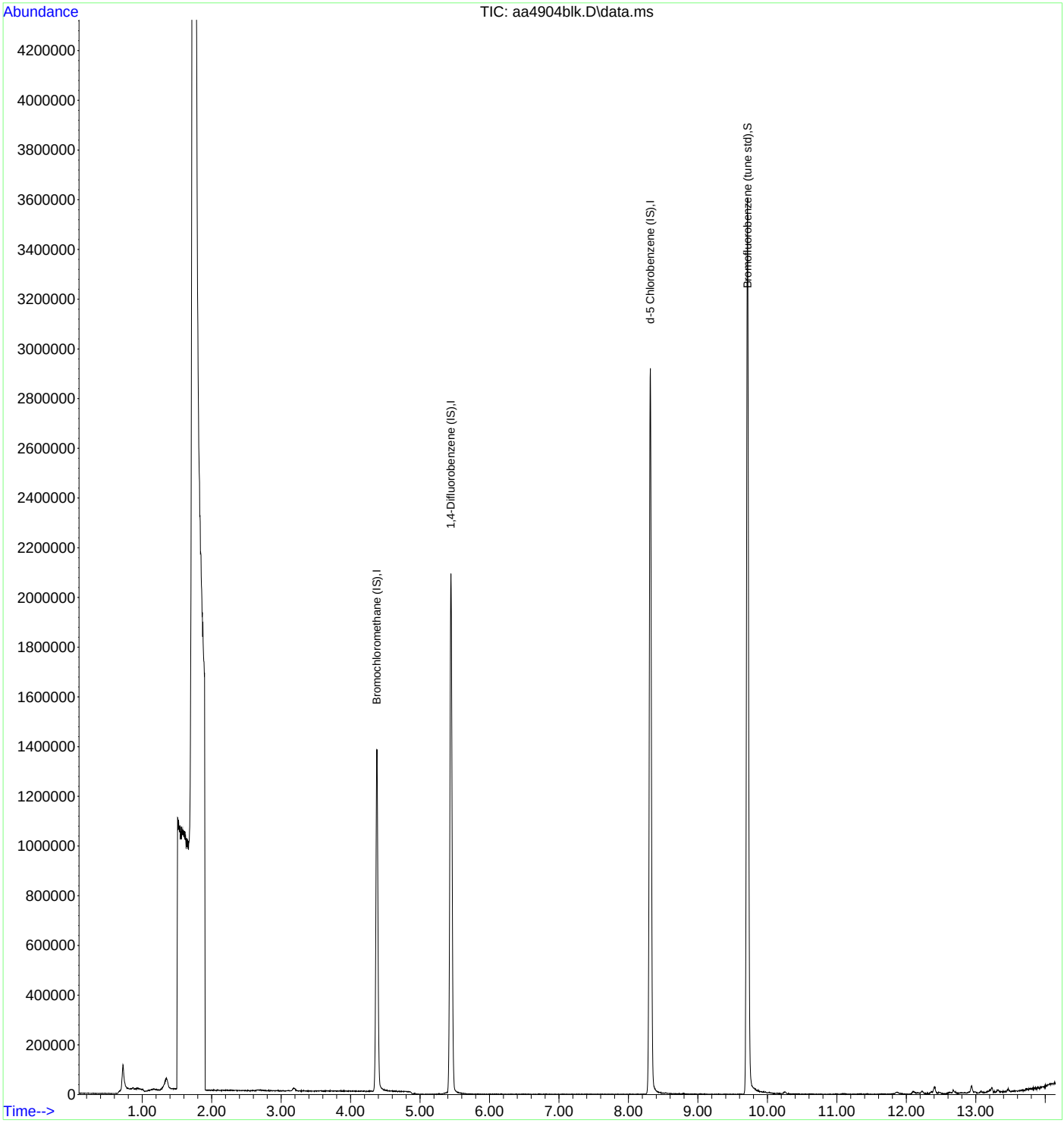
Quant Time: Dec 11 12:06:14 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.377 | 130 | 518939 | 10.00 | ppbV | -0.017 |
| 39) 1,4-Difluorobenzene (IS) | 5.444 | 114 | 1920464 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.315 | 117 | 1920350 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1609305 | 9.61 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4904blk.D
Acq On : 11 Dec 2023 11:51 am
Operator : jjw
Sample : Method Blank
Misc : 1127
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 11 12:06:14 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4073LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 9/28/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| 2164 [AA4076] | 09/28/2023 15:00 |
| 4870 [AA4077] | 09/28/2023 15:30 |
| 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 0:28 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Acetone | 67-64-1 | 13 | 120 |
| Benzene | 71-43-2 | 12 | 120 |
| Bromodichloromethane | 75-27-4 | 12 | 110 |
| Bromoform | 75-25-2 | 11 | 100 |
| Bromomethane | 74-83-9 | 12 | 110 |
| 1,3-Butadiene | 106-99-0 | 14 | 130 |
| Chlorobenzene | 108-90-7 | 10 | 100 |
| Chloroethane | 75-00-3 | 13 | 130 |
| Chloroform | 67-66-3 | 13 | 130 |
| Chloromethane | 74-87-3 | 14 | 120 |
| Carbon disulfide | 75-15-0 | 14 | 130 |
| Carbon tetrachloride | 56-23-5 | 11 | 110 |
| Cyclohexane | 110-82-7 | 12 | 120 |
| Dibromochloromethane | 124-48-1 | 11 | 100 |
| 1,2-Dibromoethane | 106-93-4 | 11 | 100 |
| 1,2-Dichlorobenzene | 95-50-1 | 10 | 91 |
| 1,3-Dichlorobenzene | 541-73-1 | 10 | 91 |
| 1,4-Dichlorobenzene | 106-46-7 | 11 | 100 |
| Dichlorodifluoromethane | 75-71-8 | 13 | 120 |
| 1,1-Dichloroethane | 75-34-3 | 13 | 120 |
| 1,2-Dichloroethane | 107-06-2 | 13 | 130 |
| 1,1-Dichloroethene | 75-35-4 | 13 | 120 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 14 | 130 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 14 | 130 |
| 1,2-Dichloropropane | 78-87-5 | 11 | 110 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 12 | 110 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 13 | 130 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 11 | 100 |
| 1,4-Dioxane | 123-91-1 | 12 | 100 |
| Ethylbenzene | 100-41-4 | 11 | 110 |
| n-Heptane | 142-82-5 | 12 | 120 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4073LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 9/28/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| 2164 [AA4076] | 09/28/2023 15:00 |
| 4870 [AA4077] | 09/28/2023 15:30 |
| 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 0:28 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| 1,3-Hexachlorobutadiene | 87-68-3 | 9.6 | 84 |
| n-Hexane | 110-54-3 | 13 | 130 |
| Methylene chloride | 75-09-2 | 13 | 120 |
| Methyl ethyl ketone | 78-93-3 | 14 | 120 |
| Methyl isobutyl ketone | 108-10-1 | 12 | 110 |
| Methyl tert-butyl ether | 1634-04-4 | 12 | 110 |
| Styrene | 100-42-5 | 11 | 100 |
| Tert-butyl alcohol | 75-65-0 | 13 | 110 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 10 | 91 |
| Tetrachloroethene | 127-18-4 | 11 | 110 |
| Toluene | 108-88-3 | 11 | 110 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 11 | 96 |
| 1,1,1-Trichloroethane | 71-55-6 | 11 | 110 |
| 1,1,2-Trichloroethane | 79-00-5 | 11 | 100 |
| Trichloroethene | 79-01-6 | 9.8 | 98 |
| Trichlorofluoromethane | 75-69-4 | 13 | 120 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 11 | 110 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 11 | 100 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 10 | 91 |
| 2,2,4-Trimethylpentane | 540-84-1 | 12 | 120 |
| Vinyl bromide | 593-60-2 | 12 | 120 |
| Vinyl chloride | 75-01-4 | 14 | 130 |
| Xylenes (m&p) | 179601-23-1 | 22 | 110 |
| Xylenes (o) | 95-47-6 | 10 | 100 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**
*** Values outside of QC limits* Values outside of 70-130% QC limits**

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4073lcs.D
Acq On : 28 Sep 2023 11:19 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 28 12:10:06 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.396 | 130 | 409432 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.454 | 114 | 1933513 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 2364904 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 2078765 | 10.57 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.486 | 41 | 371726 | 13.18 | ppbV | 100 |
| 3) Dichlorodifluoromethane | 1.529 | 85 | 1310888 | 12.67 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.650 | 85 | 1582960 | 10.63 | ppbV | 94 |
| 5) n-Butane | 1.729 | 43 | 904419 | 13.51 | ppbV | 100 |
| 6) Chloromethane | 1.791 | 52 | 67655 | 14.12 | ppbV | 94 |
| 7) Vinyl chloride | 1.780 | 62 | 531992 | 13.67 | ppbV | 100 |
| 8) 1,3-Butadiene | 1.794 | 39 | 550480 | 13.84 | ppbV | 93 |
| 9) Bromomethane | 2.091 | 94 | 397168 | 12.15 | ppbV | 100 |
| 10) Chloroethane | 2.194 | 64 | 271717 | 12.84 | ppbV | 98 |
| 11) Vinyl bromide | 2.297 | 106 | 511821 | 12.45 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.313 | 101 | 1773173 | 12.74 | ppbV | 99 |
| 13) Ethanol | 2.670 | 45 | 187147 | 11.42 | ppbV | 99 |
| 14) 1,1-Dichloroethene | 2.734 | 61 | 1143672 | 13.38 | ppbV | 95 |
| 15) Carbon disulfide | 2.753 | 76 | 1947574 | 13.87 | ppbV | 98 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.776 | 101 | 1493461 | 10.86 | ppbV | 98 |
| 17) Acrolein | 2.985 | 56 | 208388 | 11.85 | ppbV | 100 |
| 18) Allyl chloride | 3.110 | 76 | 311360 | 13.59 | ppbV | 100 |
| 19) Isopropanol | 3.110 | 45 | 1091138 | 11.53 | ppbV | 99 |
| 20) Methylene chloride | 3.200 | 49 | 664730 | 12.87 | ppbV | 93 |
| 21) Acetone | 3.213 | 43 | 1016794 | 13.24 | ppbV | 97 |
| 22) trans-1,2-Dichloroethene | 3.329 | 61 | 1107246 | 14.39 | ppbV | 95 |
| 23) n-Pentane | 3.409 | 43 | 1192108 | 12.14 | ppbV | 99 |
| 24) n-Hexane | 3.406 | 57 | 1715467 | 12.51 | ppbV | 94 |
| 25) Methyl tert-butyl ether | 3.409 | 73 | 2233934 | 11.98 | ppbV | 96 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 1556448 | 12.98 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 1410547 | 13.06 | ppbV | 99 |
| 28) cis-1,2-Dichloroethene | 4.232 | 61 | 1043309 | 13.97 | ppbV | 94 |
| 29) Cyclohexane | 4.419 | 56 | 1188304 | 11.99 | ppbV | 96 |
| 30) Chloroform | 4.454 | 83 | 1720861 | 13.02 | ppbV | 98 |
| 31) Ethyl acetate | 4.544 | 61 | 270686 | 12.87 | ppbV | 96 |
| 32) Carbon tetrachloride | 4.579 | 117 | 1731906 | 10.93 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.576 | 42 | 1055646 | 14.22 | ppbV | 95 |
| 34) 1,1,1-Trichloroethane | 4.628 | 97 | 1558554 | 10.93 | ppbV | 100 |
| 35) Methyl ethyl ketone | 4.682 | 43 | 1682004 | 14.19 | ppbV | 97 |
| 36) n-Heptane | 4.917 | 43 | 1673877 | 12.20 | ppbV | 95 |
| 37) Benzene | 4.933 | 78 | 2314027 | 12.25 | ppbV | 99 |
| 38) 1,2-Dichloroethane | 5.094 | 62 | 1125187 | 13.29 | ppbV | 100 |
| 40) Trichloroethene | 5.435 | 130 | 960270 | 9.78 | ppbV | 99 |
| 41) 2,2,4-Trimethylpentane | 4.846 | 57 | 2903918 | 11.86 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 987657 | 11.19 | ppbV | 99 |
| 43) Bromodichloromethane | 5.946 | 83 | 1869255 | 12.16 | ppbV | 100 |
| 44) Methyl methacrylate | 6.087 | 41 | 1444941 | 12.73 | ppbV | 95 |
| 45) 1,4-Dioxane | 6.113 | 88 | 646261 | 11.88 | ppbV | 95 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 1603607 | 11.76 | ppbV | 99 |
| 47) Toluene | 6.772 | 91 | 3435166 | 11.08 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.136 | 43 | 2598152 | 11.60 | ppbV | 97 |
| 49) Tetrachloroethene | 7.161 | 166 | 1477394 | 10.60 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 1686526 | 12.54 | ppbV | 95 |
| 51) 1,1,2-Trichloroethane | 7.335 | 97 | 1173769 | 10.74 | ppbV | 97 |

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4073lcs.D
Acq On : 28 Sep 2023 11:19 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

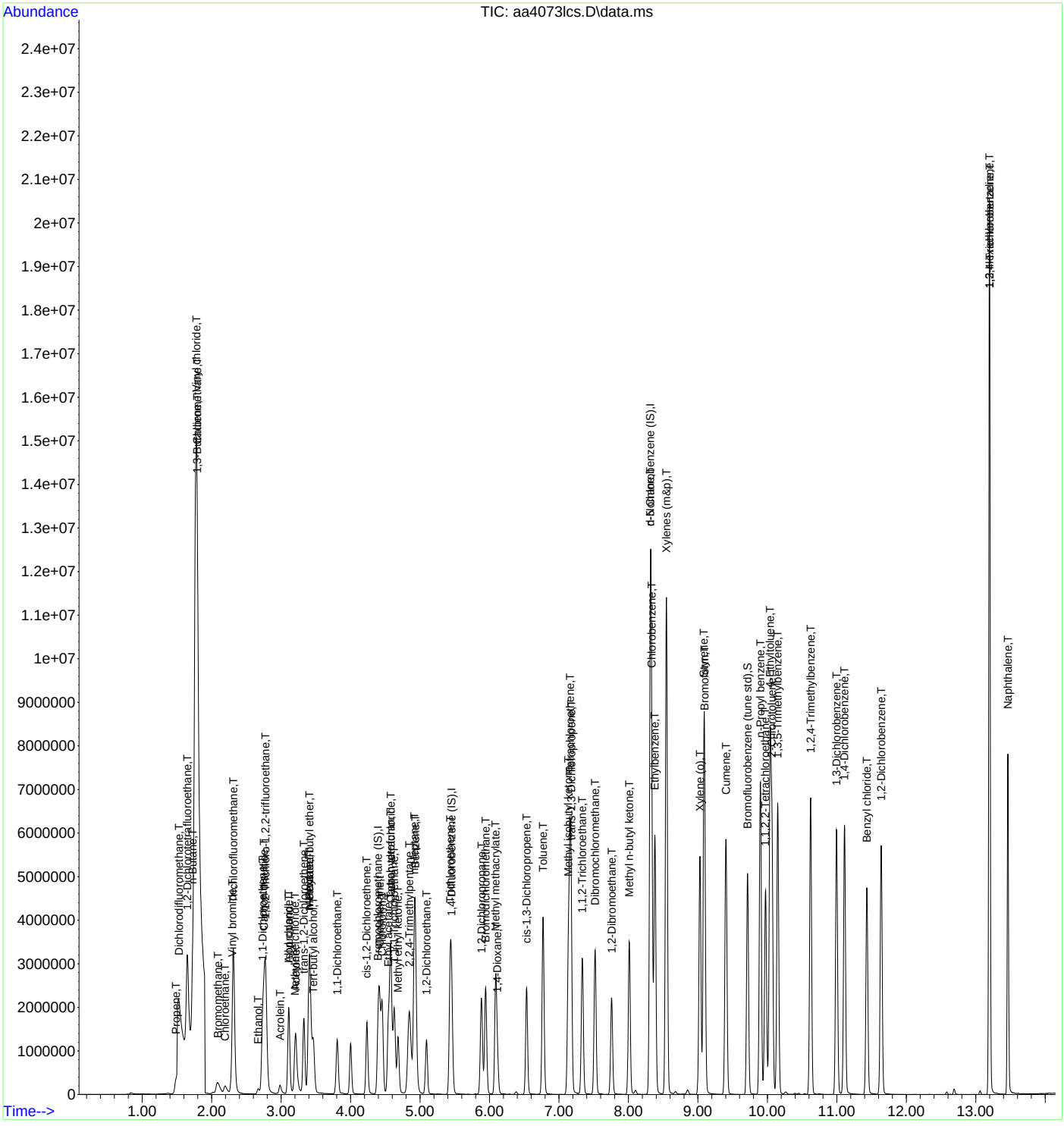
Quant Time: Sep 28 12:10:06 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 2046806 | 11.22 | ppbV | 100 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 1776029 | 11.11 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.010 | 43 | 2823122 | 13.46 | ppbV | 97 |
| 56) n-Nonane | 8.316 | 43 | 3181135 | 10.99 | ppbV | 95 |
| 57) Chlorobenzene | 8.335 | 112 | 2697259 | 10.41 | ppbV | 97 |
| 58) Ethylbenzene | 8.380 | 91 | 5055299 | 10.55 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.547 | 91 | 7753841 | 22.46 | ppbV | 98 |
| 60) Xylene (o) | 9.029 | 91 | 3909805 | 10.20 | ppbV | 99 |
| 61) Styrene | 9.087 | 104 | 2909338 | 11.44 | ppbV | 100 |
| 62) Bromoform | 9.097 | 173 | 2119263 | 10.78 | ppbV | 100 |
| 63) Cumene | 9.406 | 105 | 4907030 | 9.83 | ppbV | 98 |
| 65) n-Propyl benzene | 9.901 | 91 | 7047936 | 10.82 | ppbV | 98 |
| 66) 1,1,2,2-Tetrachloroethane | 9.971 | 83 | 3018168 | 10.39 | ppbV | 99 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 5768083 | 10.75 | ppbV | 98 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 4590640 | 10.39 | ppbV | 98 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 4460371 | 10.27 | ppbV | 98 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 4654164 | 10.80 | ppbV | 97 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 2940866 | 10.30 | ppbV | 99 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 2934826 | 10.69 | ppbV | 100 |
| 73) Benzyl chloride | 11.431 | 91 | 4169793 | 11.08 | ppbV | 98 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 2748354 | 10.17 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.196 | 225 | 1870014 | 9.65 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 2281637 | 10.73 | ppbV | 100 |
| 77) Naphthalene | 13.463 | 128 | 4616007 | 10.51 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4073lcs.D
Acq On : 28 Sep 2023 11:19 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 28 12:10:06 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration



# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4883LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 12/8/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05080-01 [AA4893] | 12/08/2023 18:08 |
| E23-05080-02 [AA4894] | 12/08/2023 18:39 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Acetone | 67-64-1 | 11 | 100 |
| Benzene | 71-43-2 | 9.3 | 93 |
| Bromoform | 75-25-2 | 11 | 100 |
| Bromomethane | 74-83-9 | 11 | 100 |
| 1,3-Butadiene | 106-99-0 | 9.9 | 99 |
| Chlorobenzene | 108-90-7 | 9.9 | 99 |
| Chloroethane | 75-00-3 | 11 | 110 |
| Chloroform | 67-66-3 | 10.0 | 100 |
| Chloromethane | 74-87-3 | 12 | 100 |
| Carbon disulfide | 75-15-0 | 11 | 100 |
| Carbon tetrachloride | 56-23-5 | 10 | 100 |
| Cyclohexane | 110-82-7 | 10 | 100 |
| 1,2-Dibromoethane | 106-93-4 | 11 | 100 |
| 1,2-Dichlorobenzene | 95-50-1 | 9.7 | 88 |
| 1,3-Dichlorobenzene | 541-73-1 | 9.8 | 89 |
| 1,4-Dichlorobenzene | 106-46-7 | 9.6 | 87 |
| Dichlorodifluoromethane | 75-71-8 | 11 | 100 |
| 1,1-Dichloroethane | 75-34-3 | 9.4 | 85 |
| 1,2-Dichloroethane | 107-06-2 | 11 | 110 |
| 1,1-Dichloroethene | 75-35-4 | 11 | 100 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 10 | 91 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 11 | 100 |
| 1,2-Dichloropropane | 78-87-5 | 11 | 110 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 11 | 100 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 12 | 120 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 9.0 | 82 |
| 1,4-Dioxane | 123-91-1 | 12 | 100 |
| Ethylbenzene | 100-41-4 | 10 | 100 |
| n-Heptane | 142-82-5 | 11 | 110 |
| 1,3-Hexachlorobutadiene | 87-68-3 | 10.0 | 88 |
| n-Hexane | 110-54-3 | 10.0 | 100 |
| Methylene chloride | 75-09-2 | 9.5 | 86 |
| Methyl ethyl ketone | 78-93-3 | 10 | 85 |
| Methyl isobutyl ketone | 108-10-1 | 12 | 110 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4883LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 12/8/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4881BFB] | 12/08/2023 10:21 |
| 10 PPBV DCVS [AA4882DCVS] | 12/08/2023 10:50 |
| 10 PPBV LCS [AA4883LCS] | 12/08/2023 11:21 |
| METHOD BLANK [AA4884BLK] | 12/08/2023 12:26 |
| E23-05080-01 [AA4893] | 12/08/2023 18:08 |
| E23-05080-02 [AA4894] | 12/08/2023 18:39 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Methyl tert-butyl ether | 1634-04-4 | 10 | 91 |
| Styrene | 100-42-5 | 10 | 91 |
| Tert-butyl alcohol | 75-65-0 | 11 | 93 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 10 | 91 |
| Tetrachloroethene | 127-18-4 | 11 | 110 |
| Toluene | 108-88-3 | 10 | 100 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 10 | 88 |
| 1,1,1-Trichloroethane | 71-55-6 | 10 | 100 |
| 1,1,2-Trichloroethane | 79-00-5 | 10 | 91 |
| Trichloroethene | 79-01-6 | 9.3 | 93 |
| Trichlorofluoromethane | 75-69-4 | 11 | 100 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 9.2 | 92 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 10.0 | 91 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 10 | 91 |
| 2,2,4-Trimethylpentane | 540-84-1 | 10 | 100 |
| Vinyl bromide | 593-60-2 | 10 | 100 |
| Vinyl chloride | 75-01-4 | 10 | 100 |
| Xylenes (m&p) | 179601-23-1 | 21 | 110 |
| Xylenes (o) | 95-47-6 | 9.9 | 99 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4883lcs.D
Acq On : 8 Dec 2023 11:21 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 08 11:44:48 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.390 | 130 | 505072 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.451 | 114 | 2076916 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 2432062 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 2156035 | 10.17 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.483 | 41 | 339866 | 9.69 | ppbV | 98 |
| 3) Dichlorodifluoromethane | 1.522 | 85 | 1193354 | 10.66 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.646 | 85 | 1455605 | 8.95 | ppbV | 97 |
| 5) n-Butane | 1.725 | 43 | 845634 | 10.48 | ppbV | 100 |
| 6) Chloromethane | 1.791 | 52 | 65331 | 11.68 | ppbV | 99 |
| 7) Vinyl chloride | 1.777 | 62 | 478632 | 10.46 | ppbV | 99 |
| 8) 1,3-Butadiene | 1.791 | 39 | 422824 | 9.89 | ppbV | 100 |
| 9) Bromomethane | 2.078 | 94 | 388679 | 10.52 | ppbV | 99 |
| 10) Chloroethane | 2.190 | 64 | 273833 | 11.41 | ppbV | 98 |
| 11) Vinyl bromide | 2.293 | 106 | 461478 | 10.21 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.309 | 101 | 1567568 | 11.09 | ppbV | 99 |
| 13) Ethanol | 2.663 | 45 | 169372 | 11.45 | ppbV | 98 |
| 14) 1,1-Dichloroethene | 2.727 | 61 | 987655 | 10.53 | ppbV | 95 |
| 15) Carbon disulfide | 2.750 | 76 | 1643881 | 10.64 | ppbV | 96 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.772 | 101 | 1310794 | 9.21 | ppbV | 99 |
| 17) Acrolein | 2.978 | 56 | 207019 | 9.81 | ppbV | 100 |
| 18) Allyl chloride | 3.110 | 76 | 275622 | 10.89 | ppbV | 100 |
| 19) Isopropanol | 3.107 | 45 | 904477 | 8.93 | ppbV | 98 |
| 20) Methylene chloride | 3.197 | 49 | 591035 | 9.52 | ppbV | 94 |
| 21) Acetone | 3.210 | 43 | 830614 | 10.90 | ppbV | 98 |
| 22) trans-1,2-Dichloroethene | 3.325 | 61 | 938844 | 10.78 | ppbV | 99 |
| 23) n-Pentane | 3.403 | 43 | 1185445 | 10.10 | ppbV | 97 |
| 24) n-Hexane | 3.403 | 57 | 1587921 | 9.97 | ppbV | 96 |
| 25) Methyl tert-butyl ether | 3.409 | 73 | 2034430 | 10.40 | ppbV | 97 |
| 26) Tert-butyl alcohol | 3.460 | 59 | 1390520 | 10.56 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.804 | 63 | 1101260 | 9.39 | ppbV | 98 |
| 28) cis-1,2-Dichloroethene | 4.232 | 61 | 832929 | 10.07 | ppbV | 98 |
| 29) Cyclohexane | 4.412 | 56 | 1127775 | 10.14 | ppbV | 98 |
| 30) Chloroform | 4.451 | 83 | 1346283 | 9.96 | ppbV | 99 |
| 31) Ethyl acetate | 4.541 | 61 | 230413 | 10.48 | ppbV | 97 |
| 32) Carbon tetrachloride | 4.576 | 117 | 1656389 | 10.33 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.570 | 42 | 788257 | 10.37 | ppbV | 98 |
| 34) 1,1,1-Trichloroethane | 4.624 | 97 | 1432554 | 10.20 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.682 | 43 | 1259095 | 10.21 | ppbV | 97 |
| 36) n-Heptane | 4.917 | 43 | 1499293 | 10.74 | ppbV | 98 |
| 37) Benzene | 4.930 | 78 | 1864968 | 9.30 | ppbV | 97 |
| 38) 1,2-Dichloroethane | 5.091 | 62 | 898599 | 10.70 | ppbV | 99 |
| 40) Trichloroethene | 5.431 | 130 | 856754 | 9.32 | ppbV | 99 |
| 41) 2,2,4-Trimethylpentane | 4.840 | 57 | 2788828 | 10.31 | ppbV | 99 |
| 42) 1,2-Dichloropropane | 5.882 | 63 | 862133 | 10.67 | ppbV | 97 |
| 43) Bromodichloromethane | 5.943 | 83 | 1584233 | 11.64 | ppbV | 98 |
| 44) Methyl methacrylate | 6.087 | 41 | 1124187 | 11.47 | ppbV | 97 |
| 45) 1,4-Dioxane | 6.110 | 88 | 569216 | 11.50 | ppbV | 98 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 1357719 | 10.84 | ppbV | 99 |
| 47) Toluene | 6.769 | 91 | 3039671 | 10.41 | ppbV | 99 |
| 48) Methyl isobutyl ketone | 7.132 | 43 | 2139470 | 11.66 | ppbV | 97 |
| 49) Tetrachloroethene | 7.158 | 166 | 1350560 | 10.73 | ppbV | 99 |
| 50) trans-1,3-Dichloropropene | 7.174 | 75 | 1400019 | 11.52 | ppbV | 98 |
| 51) 1,1,2-Trichloroethane | 7.335 | 97 | 1033705 | 10.49 | ppbV | 99 |

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4883lcs.D
Acq On : 8 Dec 2023 11:21 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

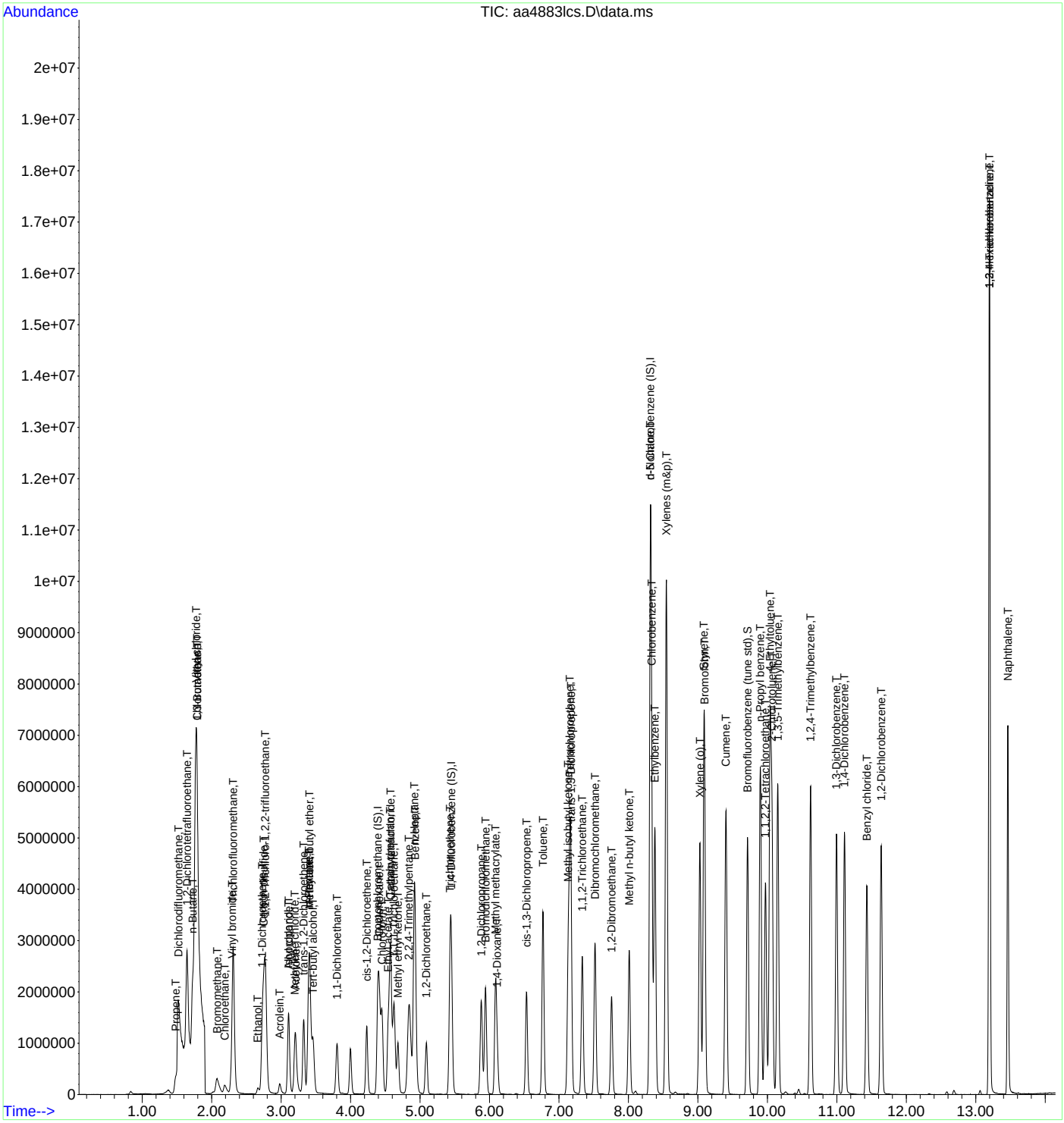
Quant Time: Dec 08 11:44:48 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 1892252 | 11.52 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.756 | 107 | 1547631 | 10.85 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.010 | 43 | 2159034 | 12.24 | ppbV | 97 |
| 56) n-Nonane | 8.316 | 43 | 2654309 | 11.00 | ppbV | 98 |
| 57) Chlorobenzene | 8.335 | 112 | 2403740 | 9.91 | ppbV | 97 |
| 58) Ethylbenzene | 8.380 | 91 | 4537964 | 10.13 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.547 | 91 | 7032687 | 21.18 | ppbV | 98 |
| 60) Xylene (o) | 9.029 | 91 | 3571722 | 9.86 | ppbV | 99 |
| 61) Styrene | 9.087 | 104 | 2552482 | 10.29 | ppbV | 99 |
| 62) Bromoform | 9.097 | 173 | 1990020 | 11.17 | ppbV | 100 |
| 63) Cumene | 9.402 | 105 | 4737625 | 10.00 | ppbV | 100 |
| 65) n-Propyl benzene | 9.897 | 91 | 6446429 | 10.43 | ppbV | 98 |
| 66) 1,1,2,2-Tetrachloroethane | 9.971 | 83 | 2658446 | 10.48 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 5335012 | 10.20 | ppbV | 99 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 4272712 | 10.29 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.152 | 105 | 4211249 | 10.01 | ppbV | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.621 | 105 | 4189424 | 9.96 | ppbV | 99 |
| 71) 1,3-Dichlorobenzene | 10.994 | 146 | 2515699 | 9.77 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 2495448 | 9.63 | ppbV | 100 |
| 73) Benzyl chloride | 11.431 | 91 | 3717594 | 10.00 | ppbV | 98 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 2414336 | 9.67 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.196 | 225 | 1728324 | 9.97 | ppbV | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.196 | 180 | 2026696 | 10.11 | ppbV | 99 |
| 77) Naphthalene | 13.463 | 128 | 4433251 | 9.67 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-08-2023\
Data File : aa4883lcs.D
Acq On : 8 Dec 2023 11:21 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 08 11:44:48 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



**INTEGRATED ANALYTICAL LABORATORIES, LLC**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4903LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 12/11/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05080-01 [AA4911] | 12/11/2023 15:19 |
| E23-05080-02 [AA4912] | 12/11/2023 15:48 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Acetone | 67-64-1 | 11 | 100 |
| Benzene | 71-43-2 | 9.5 | 95 |
| Bromoform | 75-25-2 | 11 | 100 |
| Bromomethane | 74-83-9 | 10 | 91 |
| 1,3-Butadiene | 106-99-0 | 10 | 100 |
| Chlorobenzene | 108-90-7 | 10 | 100 |
| Chloroethane | 75-00-3 | 11 | 110 |
| Chloroform | 67-66-3 | 10 | 100 |
| Chloromethane | 74-87-3 | 11 | 96 |
| Carbon disulfide | 75-15-0 | 11 | 100 |
| Carbon tetrachloride | 56-23-5 | 10 | 100 |
| Cyclohexane | 110-82-7 | 10 | 100 |
| 1,2-Dibromoethane | 106-93-4 | 11 | 100 |
| 1,2-Dichlorobenzene | 95-50-1 | 10 | 91 |
| 1,3-Dichlorobenzene | 541-73-1 | 10 | 91 |
| 1,4-Dichlorobenzene | 106-46-7 | 10 | 91 |
| Dichlorodifluoromethane | 75-71-8 | 11 | 100 |
| 1,1-Dichloroethane | 75-34-3 | 9.8 | 89 |
| 1,2-Dichloroethane | 107-06-2 | 11 | 110 |
| 1,1-Dichloroethene | 75-35-4 | 11 | 100 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 10 | 91 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 11 | 100 |
| 1,2-Dichloropropane | 78-87-5 | 10 | 100 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 11 | 100 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 11 | 110 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 8.8 | 80 |
| 1,4-Dioxane | 123-91-1 | 11 | 92 |
| Ethylbenzene | 100-41-4 | 11 | 110 |
| n-Heptane | 142-82-5 | 11 | 110 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4903LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 12/11/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05080-01 [AA4911] | 12/11/2023 15:19 |
| E23-05080-02 [AA4912] | 12/11/2023 15:48 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| 1,3-Hexachlorobutadiene | 87-68-3 | 10 | 88 |
| n-Hexane | 110-54-3 | 10 | 100 |
| Methylene chloride | 75-09-2 | 9.6 | 87 |
| Methyl ethyl ketone | 78-93-3 | 11 | 93 |
| Methyl isobutyl ketone | 108-10-1 | 12 | 110 |
| Methyl tert-butyl ether | 1634-04-4 | 11 | 100 |
| Styrene | 100-42-5 | 11 | 100 |
| Tert-butyl alcohol | 75-65-0 | 11 | 93 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 11 | 100 |
| Tetrachloroethene | 127-18-4 | 11 | 110 |
| Toluene | 108-88-3 | 10 | 100 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 11 | 96 |
| 1,1,1-Trichloroethane | 71-55-6 | 10 | 100 |
| 1,1,2-Trichloroethane | 79-00-5 | 10 | 91 |
| Trichloroethene | 79-01-6 | 9.1 | 91 |
| Trichlorofluoromethane | 75-69-4 | 11 | 100 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 9.4 | 94 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 11 | 100 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 11 | 100 |
| 2,2,4-Trimethylpentane | 540-84-1 | 10 | 100 |
| Vinyl bromide | 593-60-2 | 10 | 100 |
| Vinyl chloride | 75-01-4 | 11 | 110 |
| Xylenes (m&p) | 179601-23-1 | 22 | 110 |
| Xylenes (o) | 95-47-6 | 10 | 100 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4903lcs.D
Acq On : 11 Dec 2023 10:57 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 11 11:13:35 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.390 | 130 | 647607 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.454 | 114 | 2729004 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.315 | 117 | 3090532 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 2704486 | 10.04 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.486 | 41 | 448674 | 9.98 | ppbV | 100 |
| 3) Dichlorodifluoromethane | 1.522 | 85 | 1540061 | 10.73 | ppbV | 99 |
| 4) 1,2-Dichlorotetrafluor... | 1.650 | 85 | 1837270 | 8.81 | ppbV | 99 |
| 5) n-Butane | 1.729 | 43 | 1071383 | 10.36 | ppbV | 100 |
| 6) Chloromethane | 1.794 | 52 | 79721 | 11.12 | ppbV | 100 |
| 7) Vinyl chloride | 1.784 | 62 | 624707 | 10.65 | ppbV | 99 |
| 8) 1,3-Butadiene | 1.794 | 39 | 556597 | 10.16 | ppbV | 97 |
| 9) Bromomethane | 2.081 | 94 | 492205 | 10.39 | ppbV | 96 |
| 10) Chloroethane | 2.190 | 64 | 343138 | 11.15 | ppbV | 98 |
| 11) Vinyl bromide | 2.296 | 106 | 601925 | 10.38 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.309 | 101 | 1958992 | 10.81 | ppbV | 99 |
| 13) Ethanol | 2.669 | 45 | 223820 | 11.80 | ppbV | 98 |
| 14) 1,1-Dichloroethene | 2.730 | 61 | 1287938 | 10.71 | ppbV | 96 |
| 15) Carbon disulfide | 2.753 | 76 | 2170829 | 10.96 | ppbV | 98 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.775 | 101 | 1721921 | 9.43 | ppbV | 99 |
| 17) Acrolein | 2.981 | 56 | 275902 | 10.20 | ppbV | 98 |
| 18) Allyl chloride | 3.110 | 76 | 363800 | 11.21 | ppbV | 100 |
| 19) Isopropanol | 3.107 | 45 | 1249280 | 9.62 | ppbV | 99 |
| 20) Methylene chloride | 3.203 | 49 | 760938 | 9.56 | ppbV | 96 |
| 21) Acetone | 3.209 | 43 | 1102830 | 11.29 | ppbV | 100 |
| 22) trans-1,2-Dichloroethene | 3.325 | 61 | 1261504 | 11.30 | ppbV | 98 |
| 23) n-Pentane | 3.409 | 43 | 1563342 | 10.38 | ppbV | 98 |
| 24) n-Hexane | 3.409 | 57 | 2086837 | 10.22 | ppbV | 98 |
| 25) Methyl tert-butyl ether | 3.409 | 73 | 2641389 | 10.53 | ppbV | 99 |
| 26) Tert-butyl alcohol | 3.460 | 59 | 1870916 | 11.08 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 1473126 | 9.80 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.232 | 61 | 1109173 | 10.46 | ppbV | 97 |
| 29) Cyclohexane | 4.415 | 56 | 1494221 | 10.48 | ppbV | 98 |
| 30) Chloroform | 4.454 | 83 | 1763283 | 10.18 | ppbV | 99 |
| 31) Ethyl acetate | 4.544 | 61 | 310143 | 11.00 | ppbV | 98 |
| 32) Carbon tetrachloride | 4.576 | 117 | 2075194 | 10.10 | ppbV | 99 |
| 33) Tetrahydrofuran | 4.573 | 42 | 1055760 | 10.84 | ppbV | 98 |
| 34) 1,1,1-Trichloroethane | 4.627 | 97 | 1829339 | 10.16 | ppbV | 98 |
| 35) Methyl ethyl ketone | 4.682 | 43 | 1694596 | 10.71 | ppbV | 98 |
| 36) n-Heptane | 4.917 | 43 | 1984236 | 11.09 | ppbV | 98 |
| 37) Benzene | 4.933 | 78 | 2436463 | 9.47 | ppbV | 98 |
| 38) 1,2-Dichloroethane | 5.090 | 62 | 1158367 | 10.76 | ppbV | 100 |
| 40) Trichloroethene | 5.431 | 130 | 1104206 | 9.14 | ppbV | 98 |
| 41) 2,2,4-Trimethylpentane | 4.843 | 57 | 3701197 | 10.41 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 1110425 | 10.46 | ppbV | 100 |
| 43) Bromodichloromethane | 5.946 | 83 | 2026843 | 11.34 | ppbV | 100 |
| 44) Methyl methacrylate | 6.087 | 41 | 1477655 | 11.47 | ppbV | 97 |
| 45) 1,4-Dioxane | 6.113 | 88 | 746186 | 11.47 | ppbV | 98 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 1788041 | 10.86 | ppbV | 99 |
| 47) Toluene | 6.772 | 91 | 4000386 | 10.43 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.132 | 43 | 2867635 | 11.90 | ppbV | 98 |
| 49) Tetrachloroethene | 7.161 | 166 | 1771569 | 10.71 | ppbV | 99 |
| 50) trans-1,3-Dichloropropene | 7.174 | 75 | 1825213 | 11.43 | ppbV | 98 |
| 51) 1,1,2-Trichloroethane | 7.335 | 97 | 1347280 | 10.40 | ppbV | 99 |

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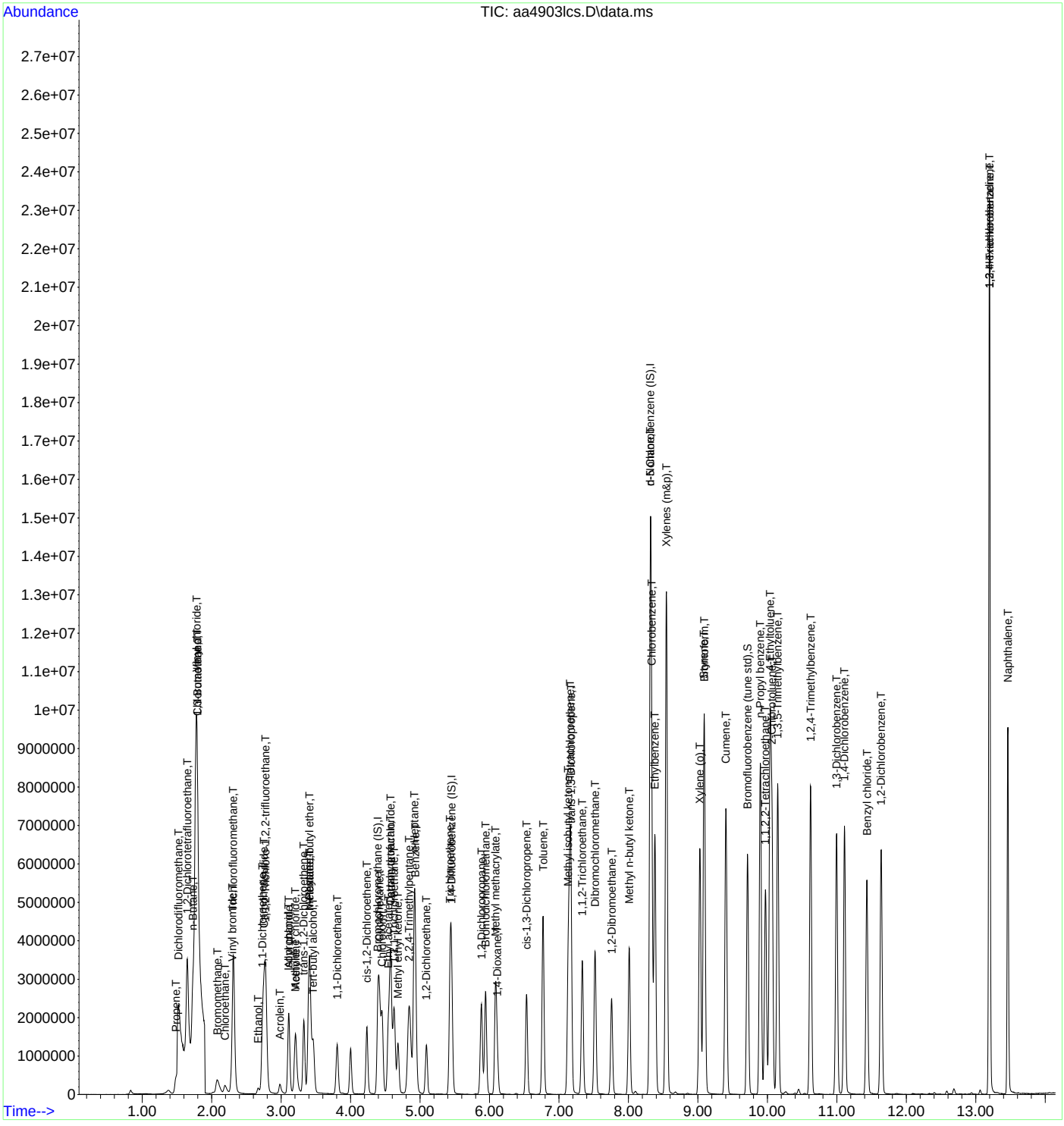
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 2436418 | 11.29 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 2033372 | 10.85 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.013 | 43 | 2915562 | 12.58 | ppbV | 98 |
| 56) n-Nonane | 8.315 | 43 | 3624209 | 11.82 | ppbV | 98 |
| 57) Chlorobenzene | 8.335 | 112 | 3170809 | 10.29 | ppbV | 98 |
| 58) Ethylbenzene | 8.380 | 91 | 6016260 | 10.56 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.547 | 91 | 9208112 | 21.82 | ppbV | 99 |
| 60) Xylene (o) | 9.026 | 91 | 4740095 | 10.29 | ppbV | 99 |
| 61) Styrene | 9.087 | 104 | 3439384 | 10.91 | ppbV | 100 |
| 62) Bromoform | 9.094 | 173 | 2568104 | 11.35 | ppbV | 100 |
| 63) Cumene | 9.402 | 105 | 6358038 | 10.57 | ppbV | 100 |
| 65) n-Propyl benzene | 9.897 | 91 | 8673958 | 11.04 | ppbV | 99 |
| 66) 1,1,2,2-Tetrachloroethane | 9.971 | 83 | 3528435 | 10.95 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 7191816 | 10.82 | ppbV | 100 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 5637797 | 10.69 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 5654494 | 10.58 | ppbV | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 5639014 | 10.55 | ppbV | 99 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 3401177 | 10.39 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.109 | 146 | 3376653 | 10.26 | ppbV | 99 |
| 73) Benzyl chloride | 11.434 | 91 | 5116198 | 10.83 | ppbV | 99 |
| 74) 1,2-Dichlorobenzene | 11.637 | 146 | 3236300 | 10.20 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.196 | 225 | 2308103 | 10.48 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.199 | 180 | 2718525 | 10.67 | ppbV | 100 |
| 77) Naphthalene | 13.463 | 128 | 6001329 | 10.30 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4903lcs.D
Acq On : 11 Dec 2023 10:57 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 11 11:13:35 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 9/13/23 |
| SDG Number: | E23-04122 | Date Analyzed: | 9/28/23,9/28/23 |
| IAL Sample ID: | E23-04122-06 | Lab Data File#: | AA4087,AA4088 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 1781 | Injection Volume: | 50ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-04122-06** | | **E23-04122-26** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Acetone | 67-64-1 | **50** | | **54** | | 4.0 | **-7.69%** |
| Allyl Chloride | 107-05-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Benzene | 71-43-2 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| Bromodichloromethane | 75-27-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Bromoform | 75-25-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Bromomethane | 74-83-9 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3-Butadiene | 106-99-0 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chlorobenzene | 108-90-7 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chloroethane | 75-00-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chloroform | 67-66-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chloromethane | 74-87-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Carbon disulfide | 75-15-0 | **10.0** | | **11** | | 4.0 | **-9.52%** |
| Carbon tetrachloride | 56-23-5 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 2-Chlorotoluene | 95-49-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Cyclohexane | 110-82-7 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Dibromochloromethane | 124-48-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dibromoethane | 106-93-4 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,2-Dichlorobenzene | 95-50-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3-Dichlorobenzene | 541-73-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,4-Dichlorobenzene | 106-46-7 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Dichlorodifluoromethane | 75-71-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1-Dichloroethane | 75-34-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloroethane | 107-06-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1-Dichloroethene | 75-35-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloroethene (cis) | 156-59-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloroethene (trans) | 156-60-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloropropane | 78-87-5 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Ethylbenzene | 100-41-4 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 4-Ethyltoluene | 622-96-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| n-Heptane | 142-82-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3-Hexachlorobutadiene | 87-68-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| n-Hexane | 110-54-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Methylene chloride | 75-09-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Methyl ethyl ketone | 78-93-3 | **8.1** | | **10** | | 4.0 | **-20.99%** |
| Methyl isobutyl ketone | 108-10-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 9/13/23 |
| SDG Number: | E23-04122 | Date Analyzed: | 9/28/23,9/28/23 |
| IAL Sample ID: | E23-04122-06 | Lab Data File#: | AA4087,AA4088 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 1781 | Injection Volume: | 50ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-04122-06** | | **E23-04122-26** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Methyl tert-butyl ether | 1634-04-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Styrene | 100-42-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Tert-butyl alcohol | 75-65-0 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Tetrachloroethene | 127-18-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Toluene | 108-88-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2,4-Trichlorobenzene | 120-82-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,1-Trichloroethane | 71-55-6 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,2-Trichloroethane | 79-00-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Trichloroethene | 79-01-6 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| Trichlorofluoromethane | 75-69-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2,4-Trimethylbenzene | 95-63-6 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3,5-Trimethylbenzene | 108-67-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 2,2,4-Trimethylpentane | 540-84-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Vinyl bromide | 593-60-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Vinyl chloride | 75-01-4 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| Xylenes (m&p) | 179601-23-1 | 4.0 | U | **4.2** | | 4.0 | **NC** |
| Xylenes (o) | 95-47-6 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |

**RPD must be <25% for all laboratory duplicate samples. Laboratory duplicate samples are run once daily.**
**NC = The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample.**

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4087.D
Acq On : 28 Sep 2023 9:29 pm
Operator : jjw
Sample : E23-04122-06x10 dil
Misc : 1781, 50cc
ALS Vial : 21 Sample Multiplier: 1

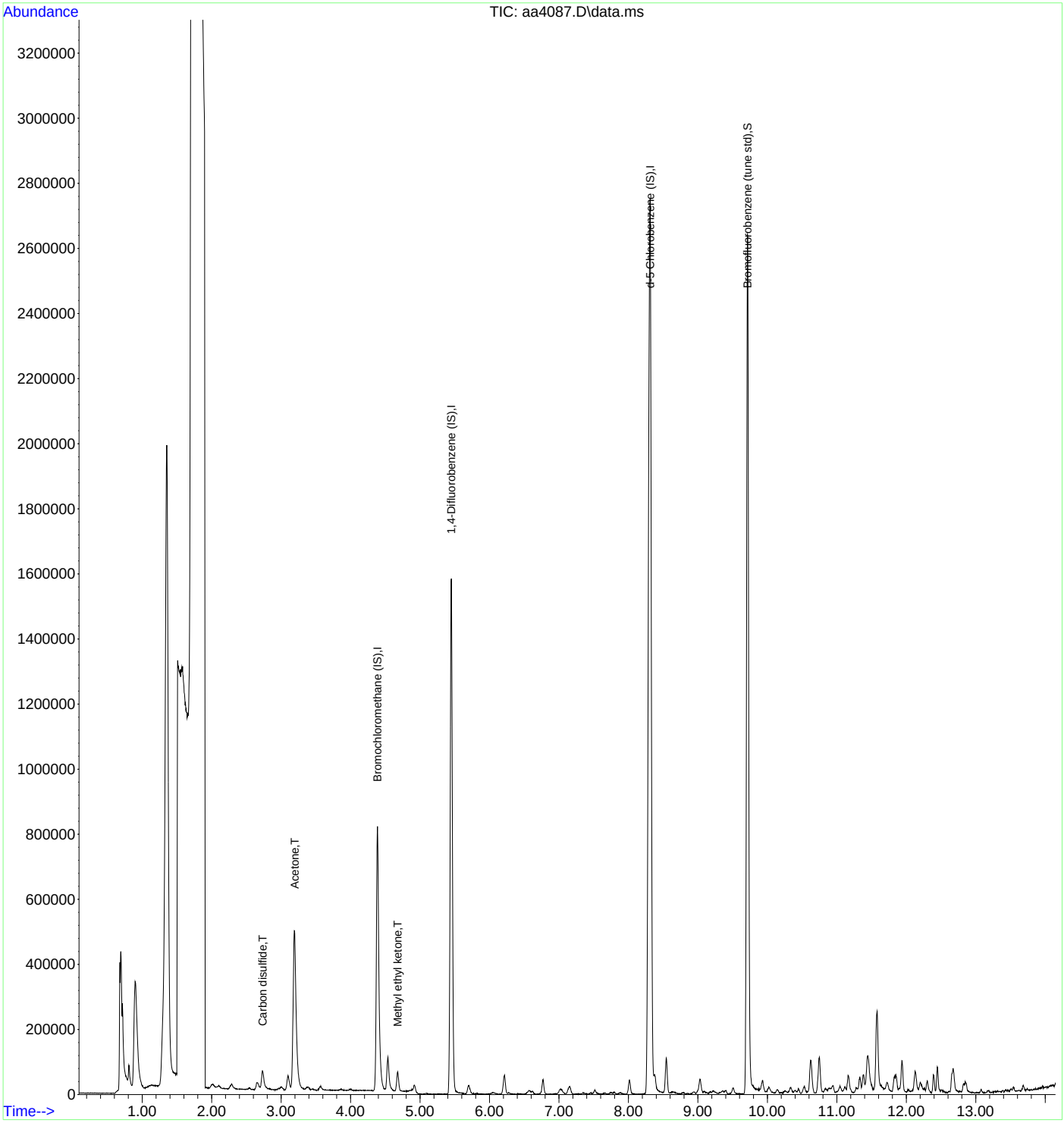
Quant Time: Oct 04 12:38:10 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

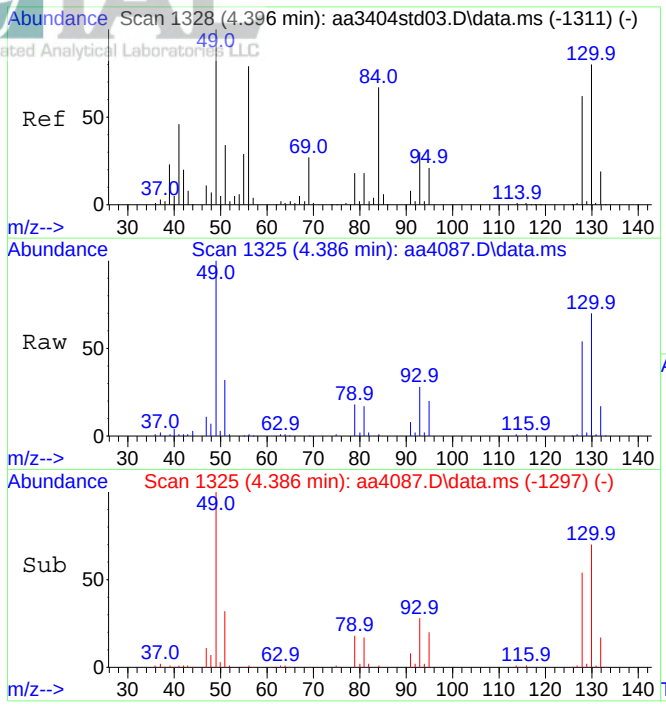
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.386 | 130 | 333645 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.451 | 114 | 1400704 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.315 | 117 | 1383190 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1064307 | 9.25 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 15) Carbon disulfide | 2.734 | 76 | 114195 | 1.00 | ppbV | 97 |
| 21) Acetone | 3.197 | 43 | 311157 | 4.97 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.679 | 43 | 78641 | 0.81 | ppbV | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4087.D
Acq On : 28 Sep 2023 9:29 pm
Operator : jjw
Sample : E23-04122-06x10 dil
Misc : 1781, 50cc
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Oct 04 12:38:10 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

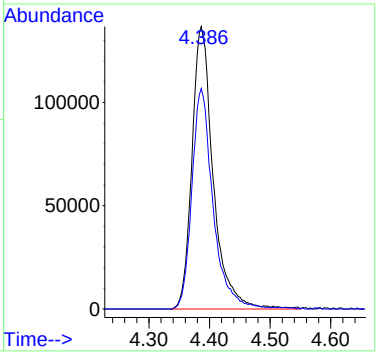


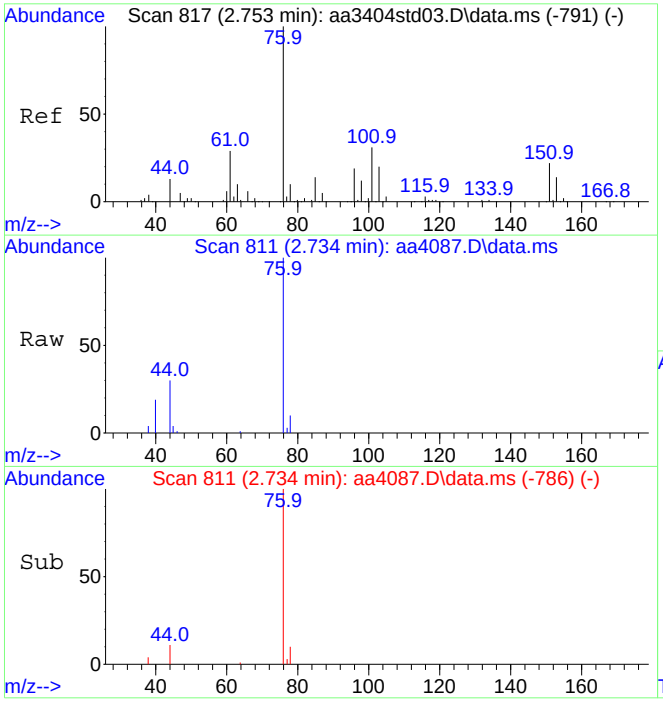



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.386 min Scan# 1325
Delta R.T. -0.010 min
Lab File: aa4087.D
Acq: 28 Sep 2023 9:29 pm

Tgt Ion:130 Resp: 333645

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 78.0 | 61.8 | 92.6 |

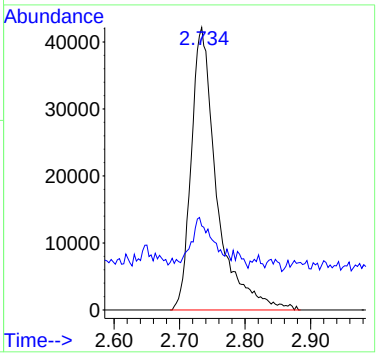


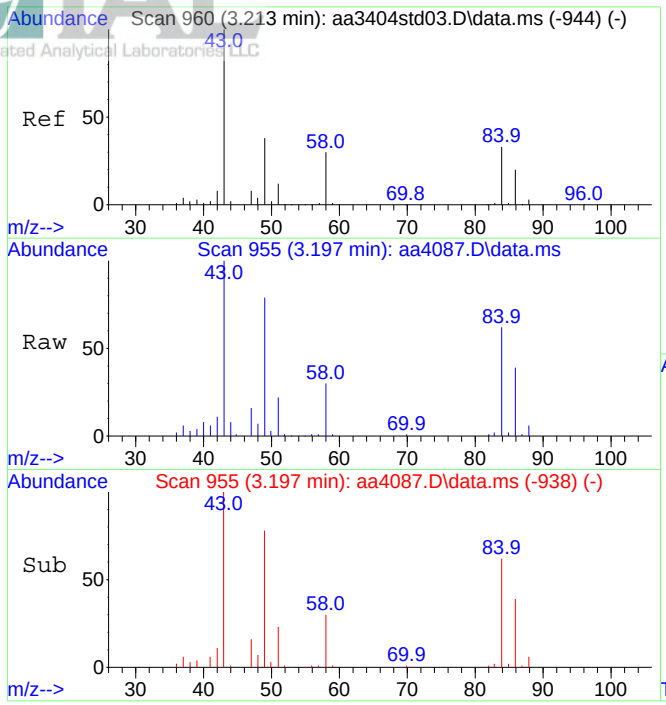




#15
Carbon disulfide
Concen: 1.00 ppbV
RT: 2.734 min Scan# 811
Delta R.T. -0.020 min
Lab File: aa4087.D
Acq: 28 Sep 2023 9:29 pm

Tgt Ion: 76 Resp: 114195

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 14.2 | 10.5 | 15.7 |

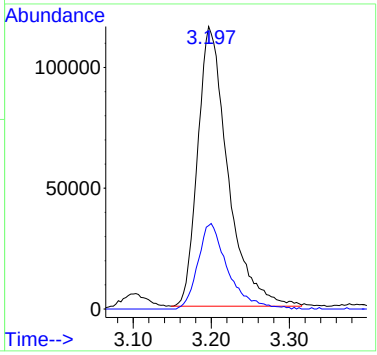


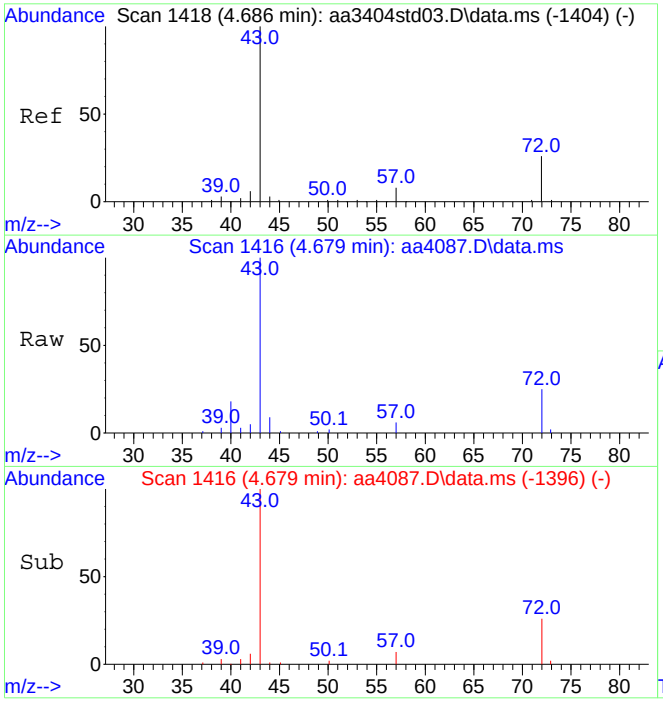



#21
Acetone
Concen: 4.97 ppbV
RT: 3.197 min Scan# 955
Delta R.T. -0.016 min
Lab File: aa4087.D
Acq: 28 Sep 2023 9:29 pm

Tgt Ion: 43 Resp: 311157

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 30.3 | 24.9 | 37.3 |

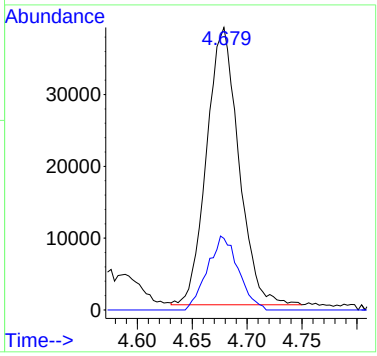


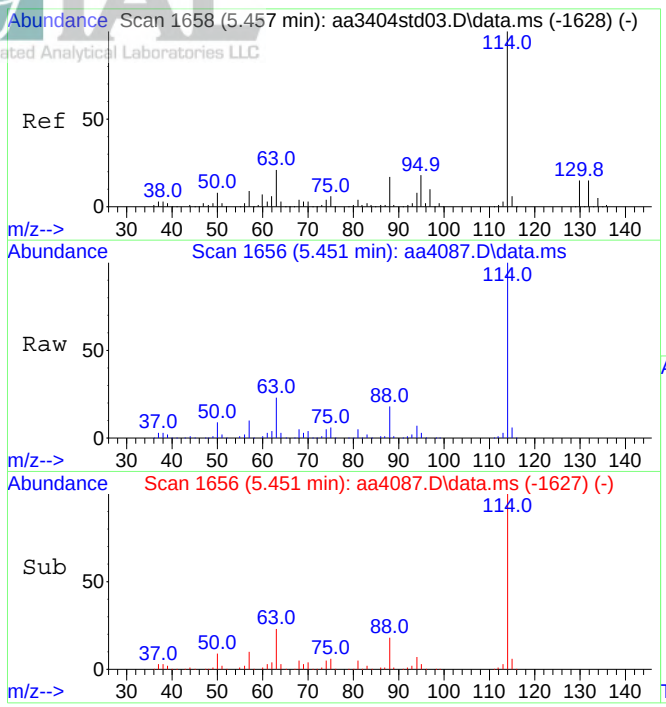




#35
Methyl ethyl ketone
Concen: 0.81 ppbV
RT: 4.679 min Scan# 1416
Delta R.T. -0.007 min
Lab File: aa4087.D
Acq: 28 Sep 2023 9:29 pm

Tgt Ion: 43 Resp: 78641

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 25.5 | 20.8 | 31.2 |

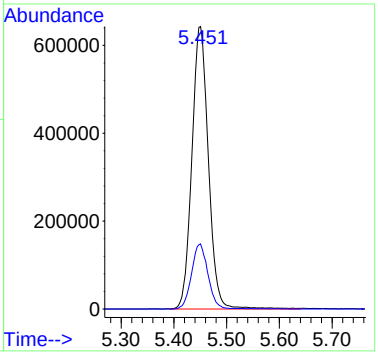


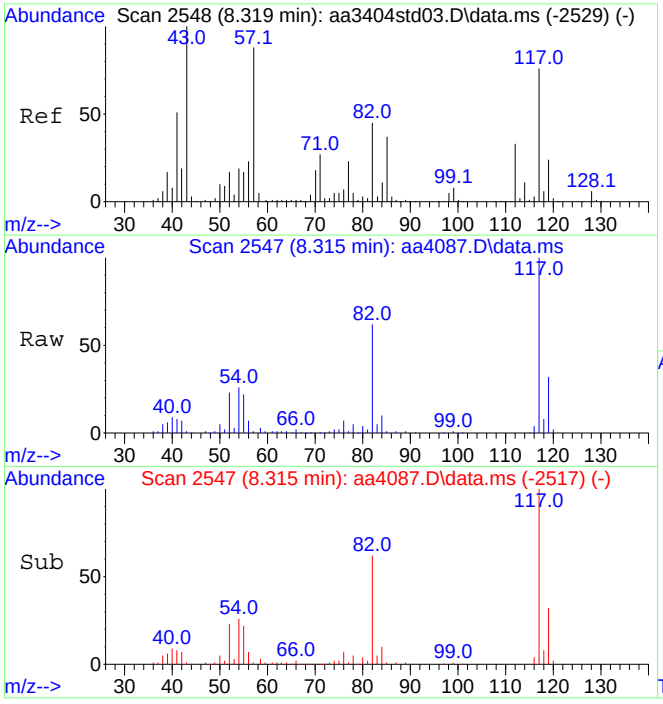



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.451 min Scan# 1656
Delta R.T. -0.006 min
Lab File: aa4087.D
Acq: 28 Sep 2023 9:29 pm

Tgt Ion:114 Resp: 1400704

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 23.0 | 17.4 | 26.2 |

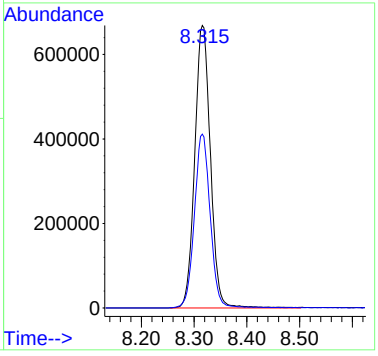


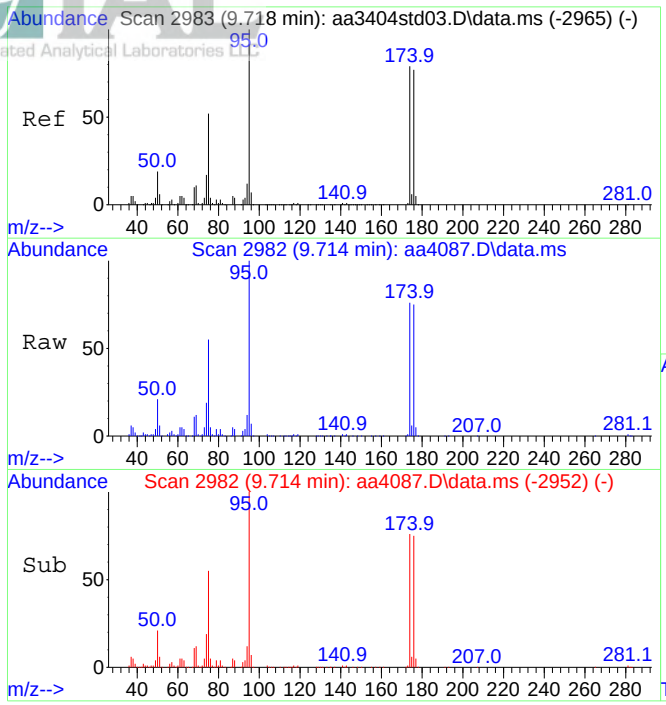




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.315 min Scan# 2547
Delta R.T. -0.004 min
Lab File: aa4087.D
Acq: 28 Sep 2023 9:29 pm

Tgt Ion:117 Resp: 1383190

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 62.2 | 47.4 | 71.0 |

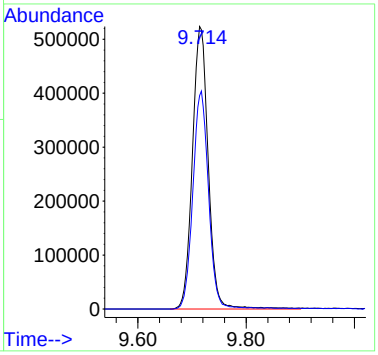





#64
Bromofluorobenzene (tune std)
Concen: 9.25 ppbV
RT: 9.714 min Scan# 2982
Delta R.T. -0.003 min
Lab File: aa4087.D
Acq: 28 Sep 2023 9:29 pm

Tgt Ion: 95 Resp: 1064307

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 77.0 | 62.9 | 94.3 |



Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4088.D
Acq On : 28 Sep 2023 10:00 pm
Operator : jjw
Sample : E23-04122-26x10 dil
Misc : Dup of E23-04122-06x10 dil, Can # 1781
ALS Vial : 22 Sample Multiplier: 1

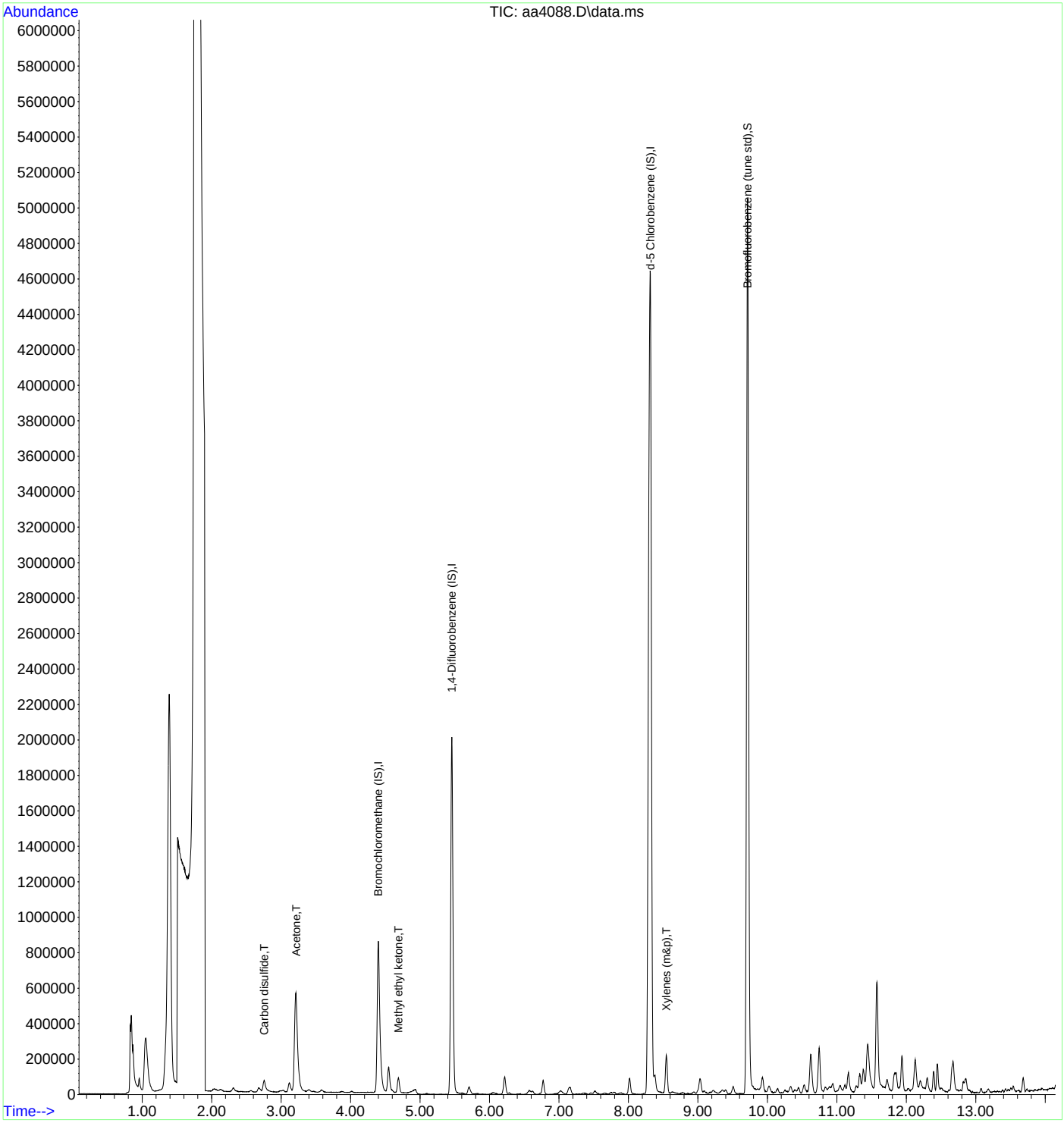
Quant Time: Oct 04 12:49:41 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

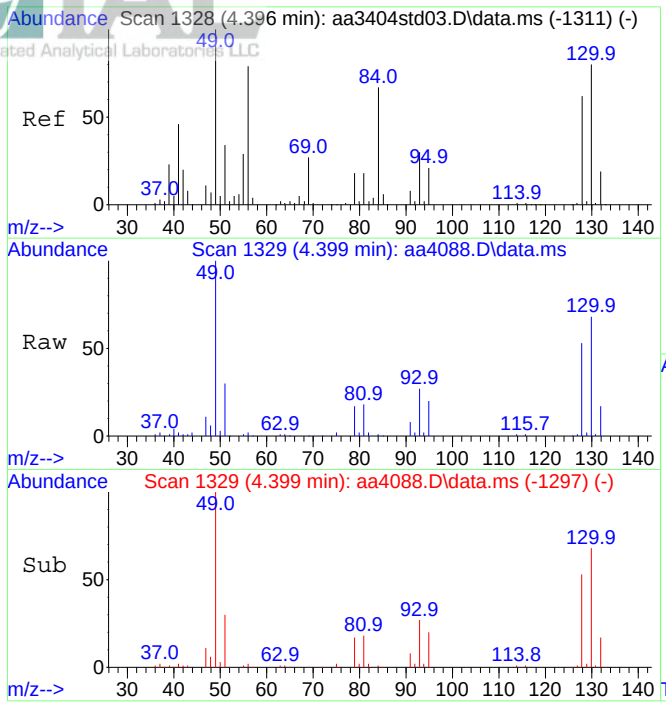
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.399 | 130 | 378421 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 1821981 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 2357353 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 2004719 | 10.22 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 15) Carbon disulfide | 2.756 | 76 | 137474 | 1.06 | ppbV | 97 |
| 21) Acetone | 3.219 | 43 | 384617 | 5.42 | ppbV | 98 |
| 35) Methyl ethyl ketone | 4.689 | 43 | 112963 | 1.03 | ppbV | 98 |
| 59) Xylenes (m&p) | 8.547 | 91 | 145250 | 0.42 | ppbV | 97 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4088.D
Acq On : 28 Sep 2023 10:00 pm
Operator : jjw
Sample : E23-04122-26x10 dil
Misc : Dup of E23-04122-06x10 dil, Can # 1781
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Oct 04 12:49:41 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

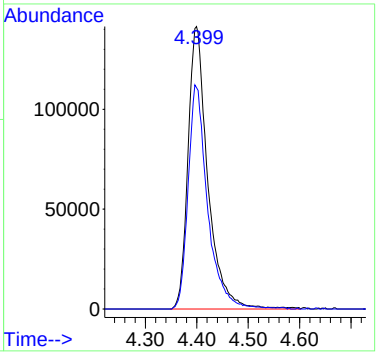


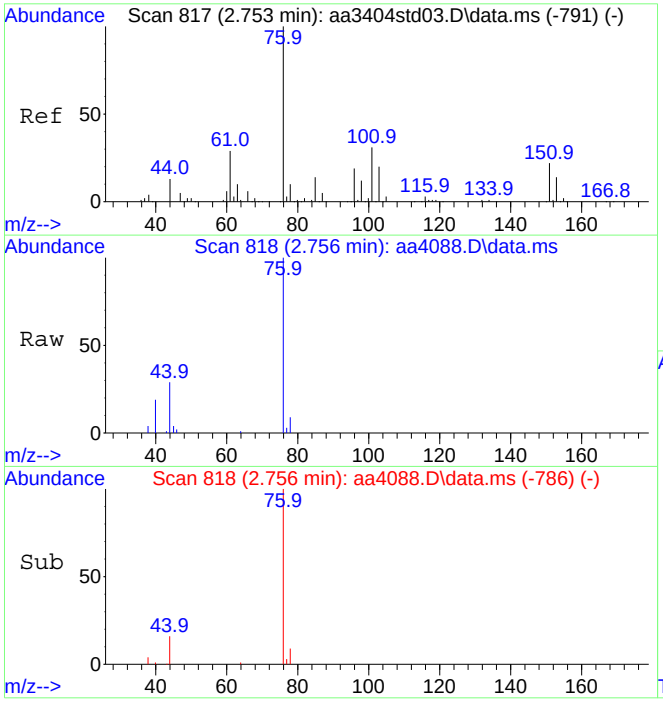



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.399 min Scan# 1329
Delta R.T. 0.003 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion:130 Resp: 378421

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 78.2 | 61.8 | 92.6 |

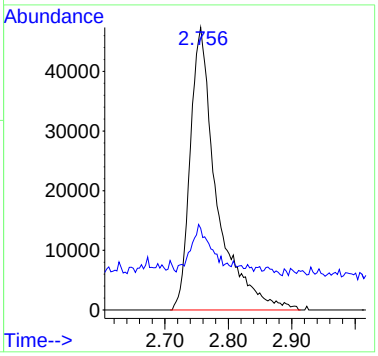


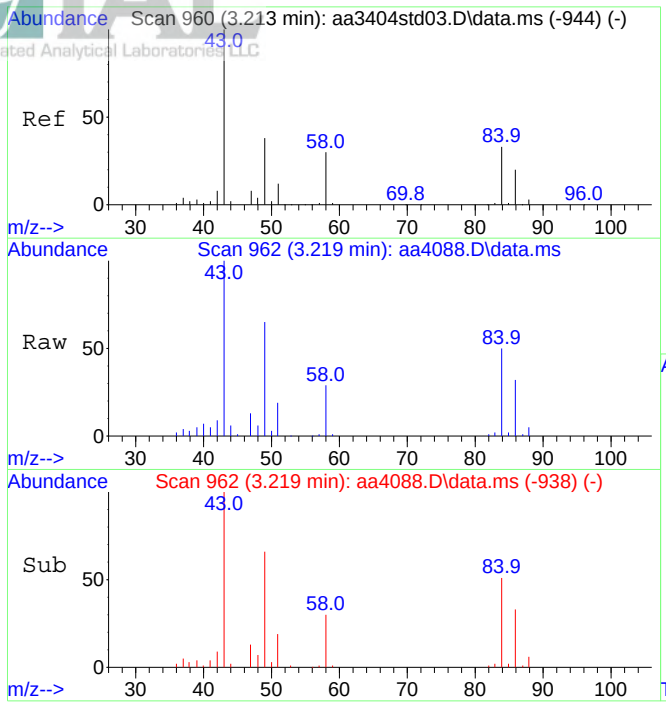




#15
Carbon disulfide
Concen: 1.06 ppbV
RT: 2.756 min Scan# 818
Delta R.T. 0.003 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion: 76 Resp: 137474

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 14.5 | 10.5 | 15.7 |

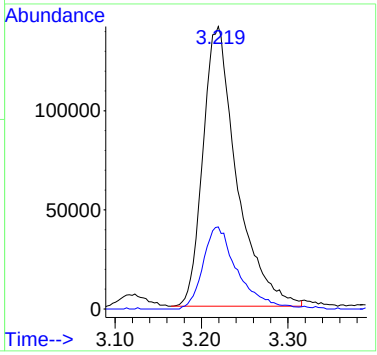


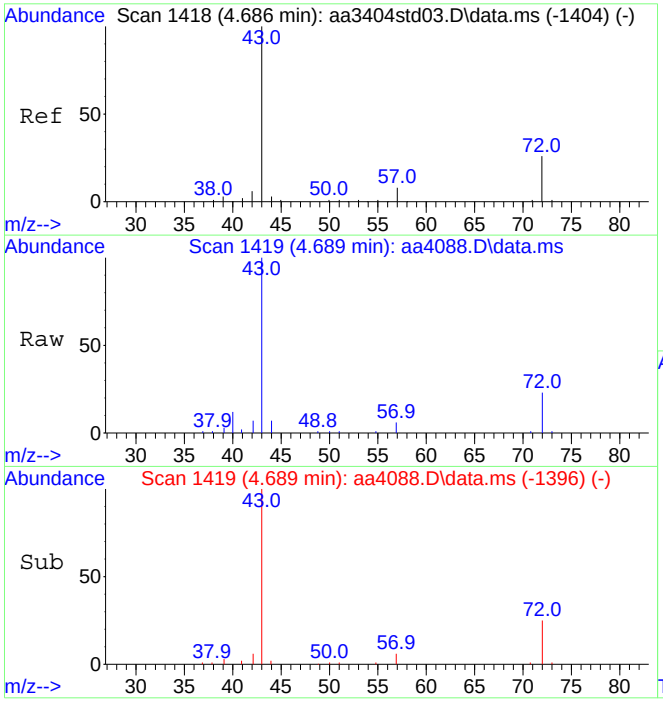



#21
Acetone
Concen: 5.42 ppbV
RT: 3.219 min Scan# 962
Delta R.T. 0.006 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion: 43 Resp: 384617

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 30.0 | 24.9 | 37.3 |

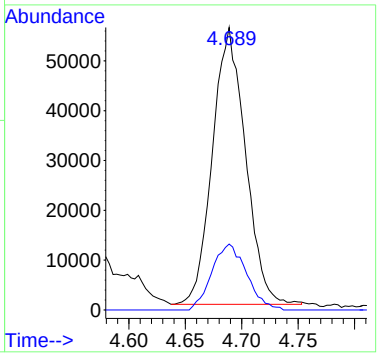


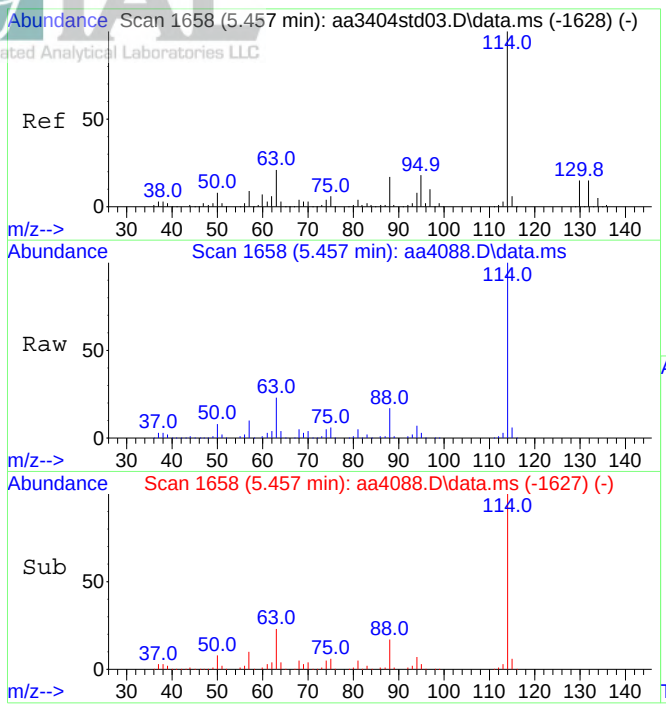




#35
Methyl ethyl ketone
Concen: 1.03 ppbV
RT: 4.689 min Scan# 1419
Delta R.T. 0.003 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion: 43 Resp: 112963

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 25.1 | 20.8 | 31.2 |

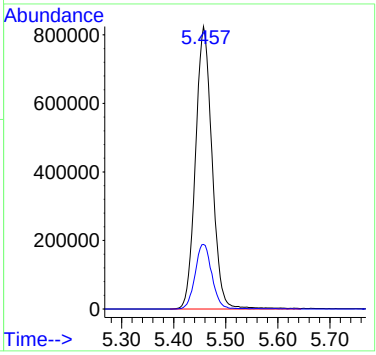


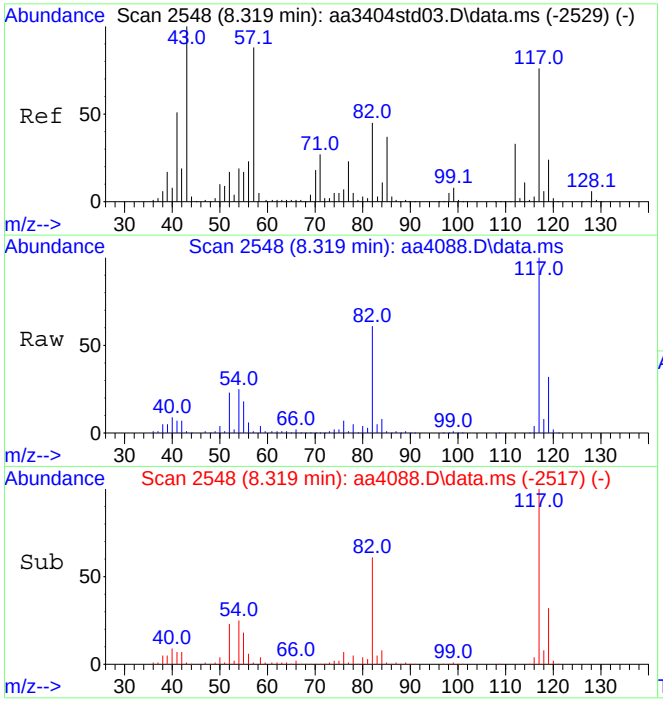



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.457 min Scan# 1658
Delta R.T. 0.000 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion:114 Resp: 1821981

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 23.3 | 17.4 | 26.2 |

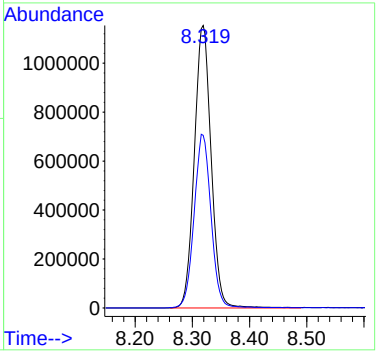


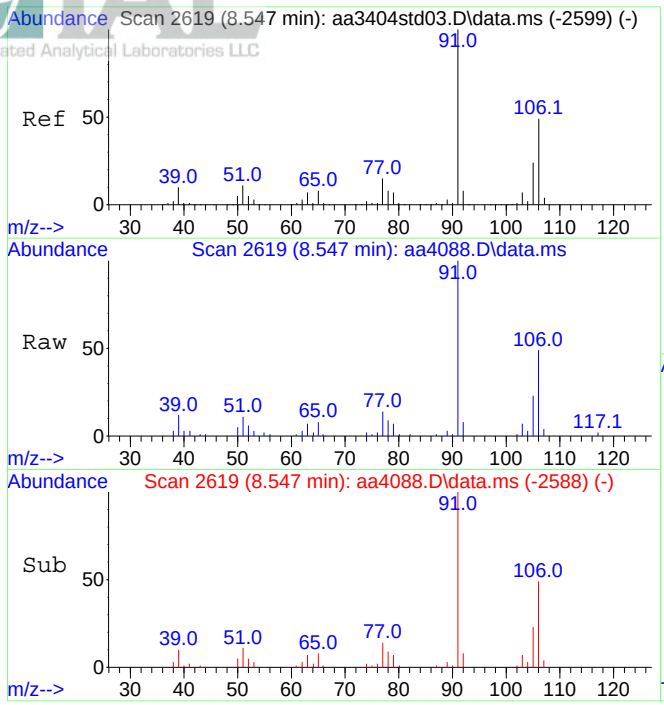




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.319 min Scan# 2548
Delta R.T. -0.000 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion:117 Resp: 2357353

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 61.9 | 47.4 | 71.0 |

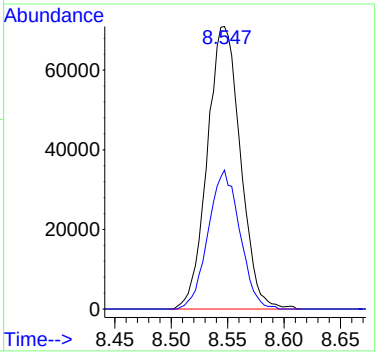


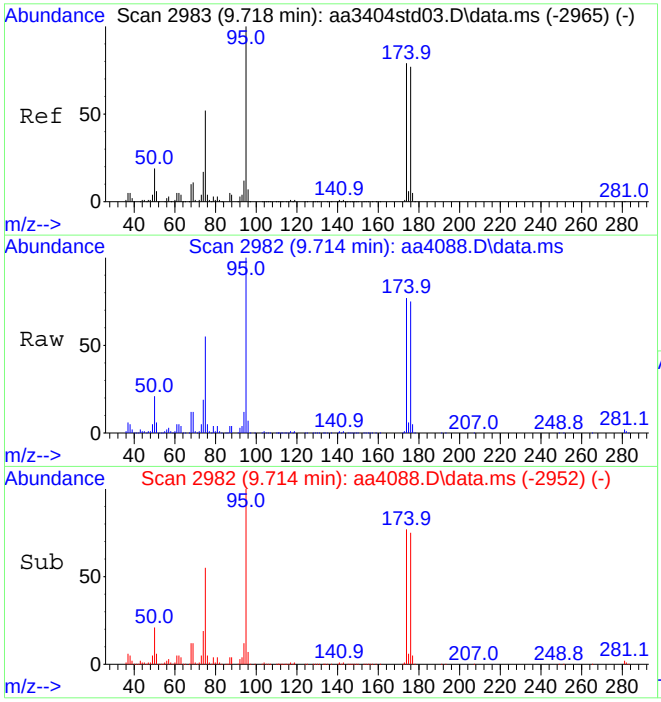



#59
Xylenes (m&p)
Concen: 0.42 ppbV
RT: 8.547 min Scan# 2619
Delta R.T. -0.000 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion: 91 Resp: 145250

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 46.9 | 39.2 | 58.8 |

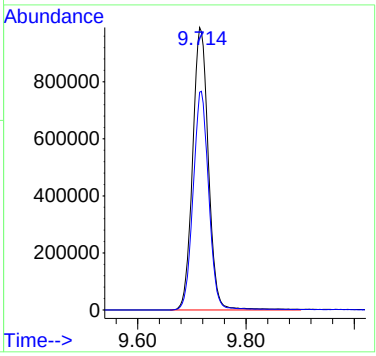



#64
Bromofluorobenzene (tune std)
Concen: 10.22 ppbV
RT: 9.714 min Scan# 2982
Delta R.T. -0.003 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion: 95 Resp: 2004719

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 76.8 | 62.9 | 94.3 |



**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 11/17/23 |
| SDG Number: | E23-05061 | Date Analyzed: | 12/7/23,12/7/23 |
| IAL Sample ID: | E23-05061-03 | Lab Data File#: | AA4869,AA4870 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 3045a | Injection Volume: | 500ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-05061-03** | | **E23-05061-23** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Acetone | 67-64-1 | **11** | | **11** | | 0.20 | **0.00%** |
| Allyl Chloride | 107-05-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Benzene | 71-43-2 | **2.6** | | **2.3** | | 0.20 | **12.24%** |
| Bromodichloromethane | 75-27-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Bromoform | 75-25-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Bromomethane | 74-83-9 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Butadiene | 106-99-0 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Chlorobenzene | 108-90-7 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Chloroethane | 75-00-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Chloroform | 67-66-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Chloromethane | 74-87-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Carbon disulfide | 75-15-0 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Carbon tetrachloride | 56-23-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 2-Chlorotoluene | 95-49-8 | 0.20 | U | **0.27** | | 0.20 | **NC** |
| Cyclohexane | 110-82-7 | **3.9** | | **3.4** | | 0.20 | **13.70%** |
| Dibromochloromethane | 124-48-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dibromoethane | 106-93-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,4-Dioxane | 123-91-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Ethanol | 64-17-5 | **10** | | 0.20 | U | 0.20 | **NC** |
| Ethylbenzene | 100-41-4 | **1.9** | | **1.6** | | 0.20 | **17.14%** |
| 4-Ethyltoluene | 622-96-8 | **1.9** | X | **1.4** | X | 0.20 | **30.30%** |
| n-Heptane | 142-82-5 | **3.7** | | **3.4** | | 0.20 | **8.45%** |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| n-Hexane | 110-54-3 | **4.4** | | **3.8** | | 0.20 | **14.63%** |
| Isopropanol | 67-63-0 | **2.7** | | 0.20 | U | 0.20 | **NC** |

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 11/17/23 |
| SDG Number: | E23-05061 | Date Analyzed: | 12/7/23,12/7/23 |
| IAL Sample ID: | E23-05061-03 | Lab Data File#: | AA4869,AA4870 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 3045a | Injection Volume: | 500ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-05061-03** | | **E23-05061-23** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Methylene chloride | 75-09-2 | **2.8** | | 0.20 | U | 0.20 | **NC** |
| Methyl ethyl ketone | 78-93-3 | **0.85** | | **0.83** | | 0.20 | **2.38%** |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | U | **0.24** | | 0.20 | **NC** |
| Methyl methacrylate | 80-62-6 | 0.20 | U | **3.4** | | 0.20 | **NC** |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Styrene | 100-42-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Tert-butyl alcohol | 75-65-0 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Tetrachloroethene | 127-18-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Tetrahydrofuran | 109-99-9 | **0.96** | | **0.90** | | 0.20 | **6.45%** |
| Toluene | 108-88-3 | **7.1** | | **7.1** | | 0.20 | **0.00%** |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1,1-Trichloroethane | 71-55-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Trichloroethene | 79-01-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Trichlorofluoromethane | 75-69-4 | **0.33** | | **0.33** | | 0.20 | **0.00%** |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2,4-Trimethylbenzene | 95-63-6 | **1.9** | | **1.5** | | 0.20 | **23.53%** |
| 1,3,5-Trimethylbenzene | 108-67-8 | **0.53** | | **0.45** | | 0.20 | **16.33%** |
| 2,2,4-Trimethylpentane | 540-84-1 | **6.9** | | **7.0** | | 0.20 | **-1.44%** |
| Vinyl bromide | 593-60-2 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Vinyl chloride | 75-01-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Xylenes (m&p) | 179601-23-1 | **7.0** | | **5.9** | | 0.40 | **17.05%** |
| Xylenes (o) | 95-47-6 | **2.3** | | **2.0** | | 0.20 | **13.95%** |

**RPD must be <25% for all laboratory duplicate samples. Laboratory duplicate samples are run once daily.**
**NC = The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample.**

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

Data Path : C:\DATA\2023\12-2023\12-07-2023\
Data File : aa4869.D
Acq On : 7 Dec 2023 7:50 pm
Operator : jjw
Sample : E23-05061-03
Misc : 3045A, 500cc
ALS Vial : 23 Sample Multiplier: 1

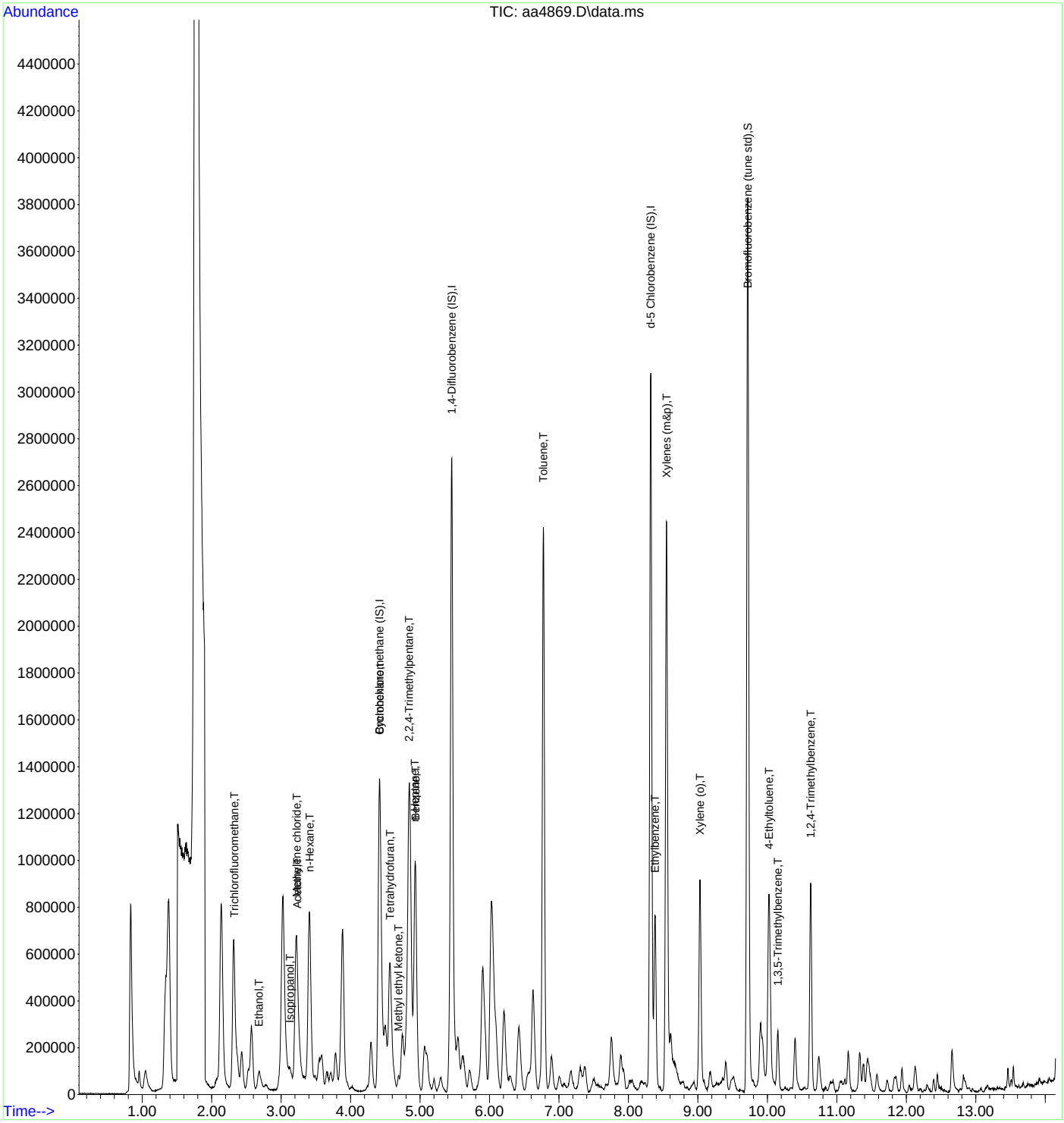
Quant Time: Dec 13 12:49:53 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

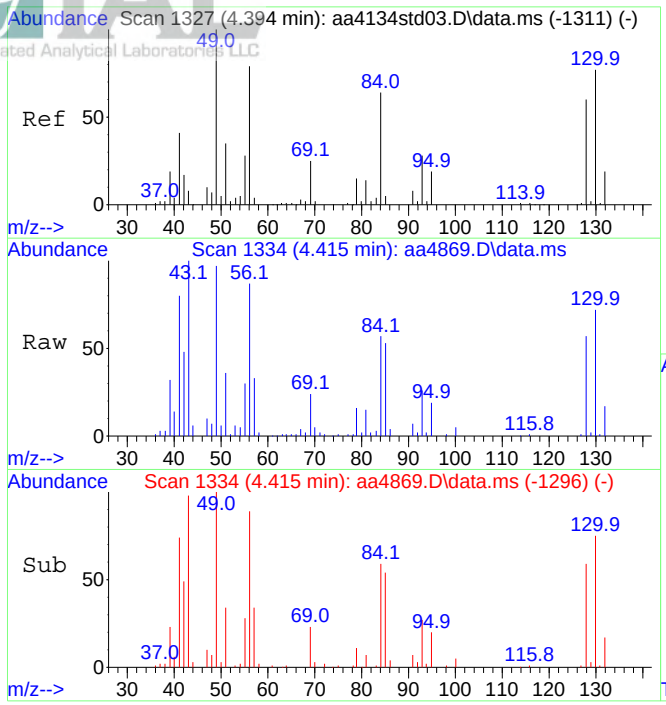
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.415 | 130 | 377969 | 10.00 | ppbV | | 0.021 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 2104054 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.322 | 117 | 1855524 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 1687506 | 10.43 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 12) Trichlorofluoromethane | 2.329 | 101 | 35340 | 0.33 | ppbV | | 84 |
| 13) Ethanol | 2.682 | 45 | 111256 | 10.05 | ppbV | | 96 |
| 19) Isopropanol | 3.129 | 45 | 208140 | 2.75 | ppbV | # | 74 |
| 20) Methylene chloride | 3.226 | 49 | 129701 | 2.79 | ppbV | | 90 |
| 21) Acetone | 3.232 | 43 | 610229 | 10.70 | ppbV | | 96 |
| 24) n-Hexane | 3.412 | 57 | 520146 | 4.37 | ppbV | | 97 |
| 29) Cyclohexane | 4.419 | 56 | 324297 | 3.90 | ppbV | # | 74 |
| 33) Tetrahydrofuran | 4.570 | 42 | 54848 | 0.96 | ppbV | # | 80 |
| 35) Methyl ethyl ketone | 4.689 | 43 | 78559 | 0.85 | ppbV | | 96 |
| 36) n-Heptane | 4.927 | 43 | 386594 | 3.70 | ppbV | | 97 |
| 37) Benzene | 4.936 | 78 | 388496 | 2.59 | ppbV | | 94 |
| 41) 2,2,4-Trimethylpentane | 4.843 | 57 | 1877837 | 6.85 | ppbV | | 96 |
| 47) Toluene | 6.775 | 91 | 2112833 | 7.14 | ppbV | | 100 |
| 58) Ethylbenzene | 8.383 | 91 | 655687 | 1.92 | ppbV | | 98 |
| 59) Xylenes (m&p) | 8.550 | 91 | 1780980 | 7.03 | ppbV | | 97 |
| 60) Xylene (o) | 9.029 | 91 | 648554 | 2.35 | ppbV | | 97 |
| 67) 4-Ethyltoluene | 10.023 | 105 | 762163 | 1.91 | ppbV | | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.151 | 105 | 170234 | 0.53 | ppbV | | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 614979 | 1.92 | ppbV | | 98 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-07-2023\
Data File : aa4869.D
Acq On : 7 Dec 2023 7:50 pm
Operator : jjw
Sample : E23-05061-03
Misc : 3045A, 500cc
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Dec 13 12:49:53 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

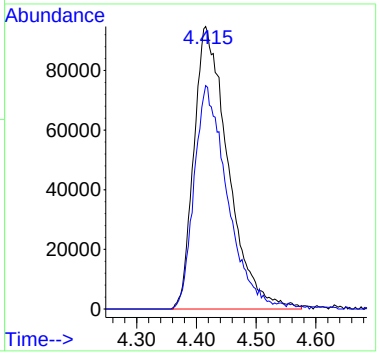


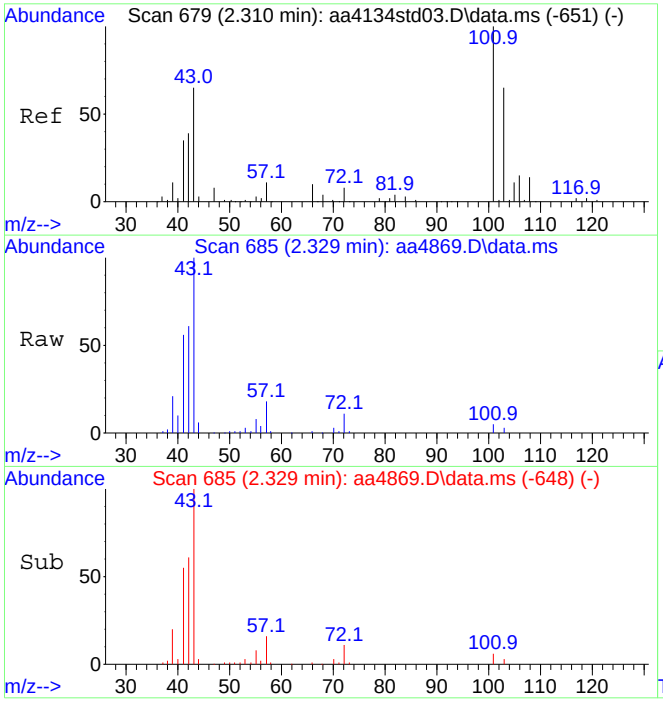



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.415 min Scan# 1334
Delta R.T. 0.021 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion:130 Resp: 377969

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 76.5 | 62.2 | 93.4 |

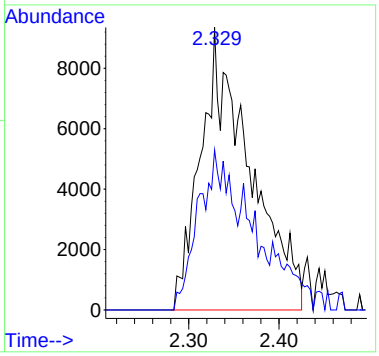


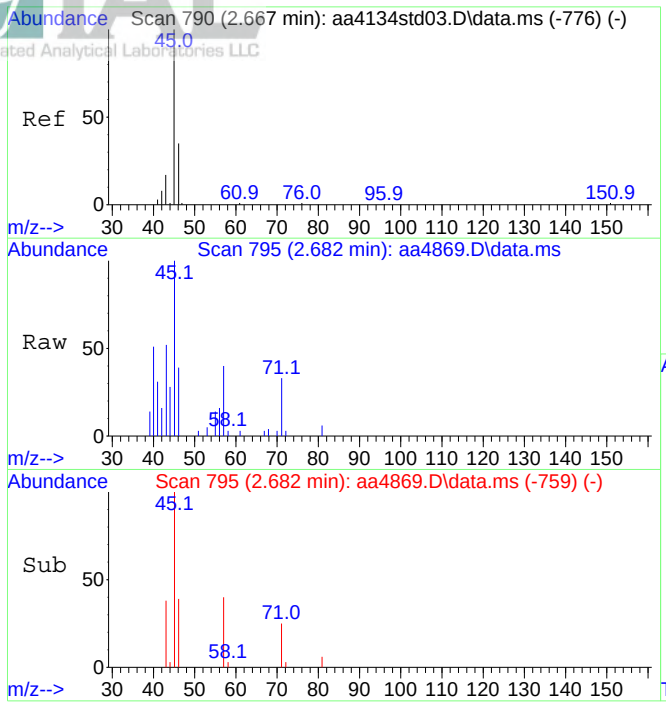




#12
Trichlorofluoromethane
Concen: 0.33 ppbV
RT: 2.329 min Scan# 685
Delta R.T. 0.018 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion:101 Resp: 35340

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 53.1 | 52.5 | 78.7 |

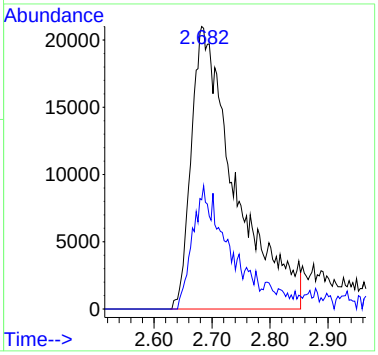


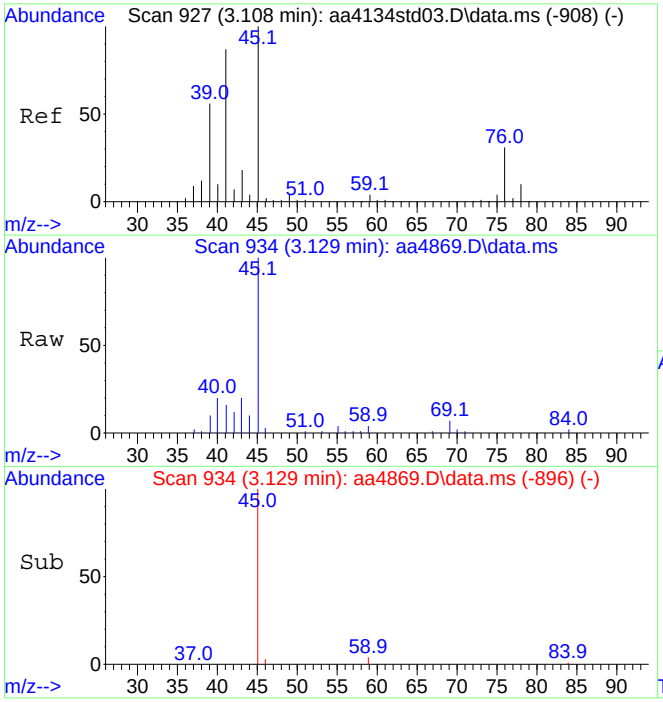



#13
Ethanol
Concen: 10.05 ppbV
RT: 2.682 min Scan# 795
Delta R.T. 0.015 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 45 Resp: 111256

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 46 | 35.3 | 30.0 | 45.0 |

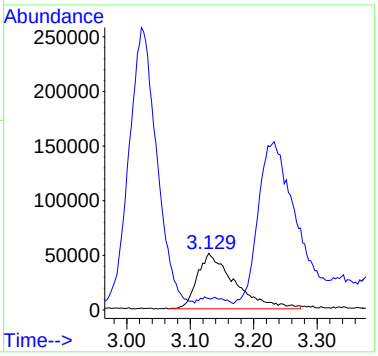


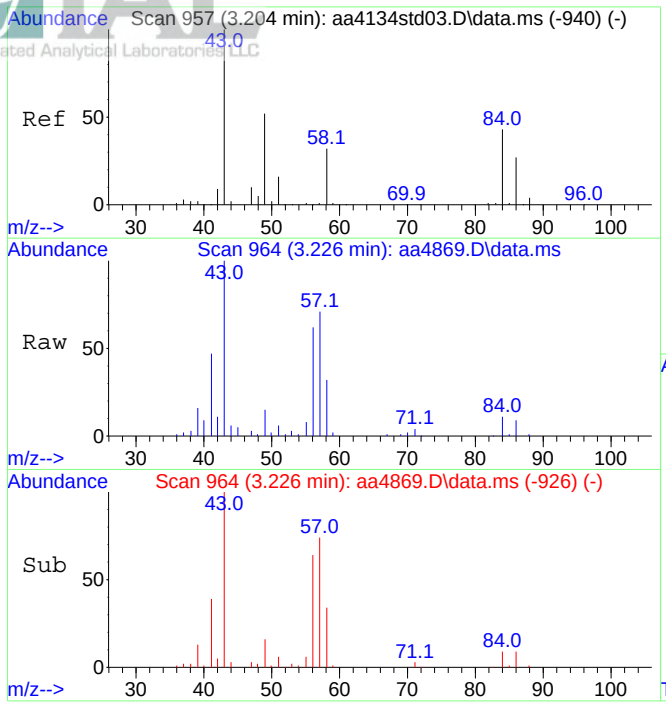




#19
Isopropanol
Concen: 2.75 ppbV
RT: 3.129 min Scan# 934
Delta R.T. 0.021 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 45 Resp: 208140

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 43 | 6.6 | 14.6 | 21.8# |

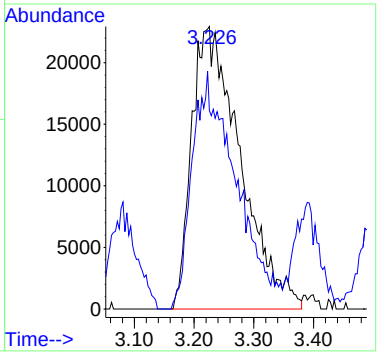


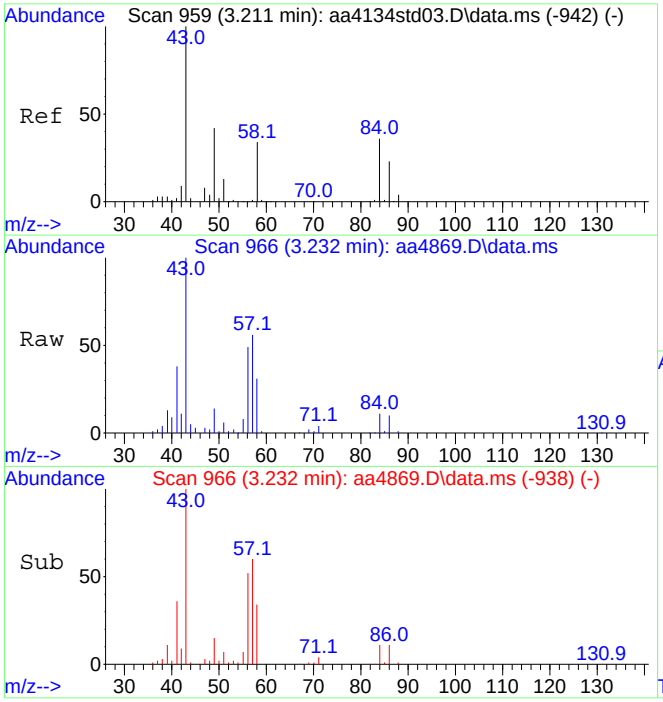



#20
Methylene chloride
Concen: 2.79 ppbV
RT: 3.226 min Scan# 964
Delta R.T. 0.022 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 49 Resp: 129701

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 75.6 | 64.8 | 104.8 |

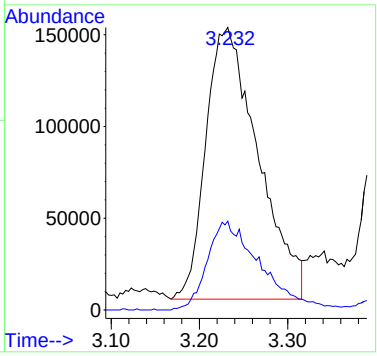


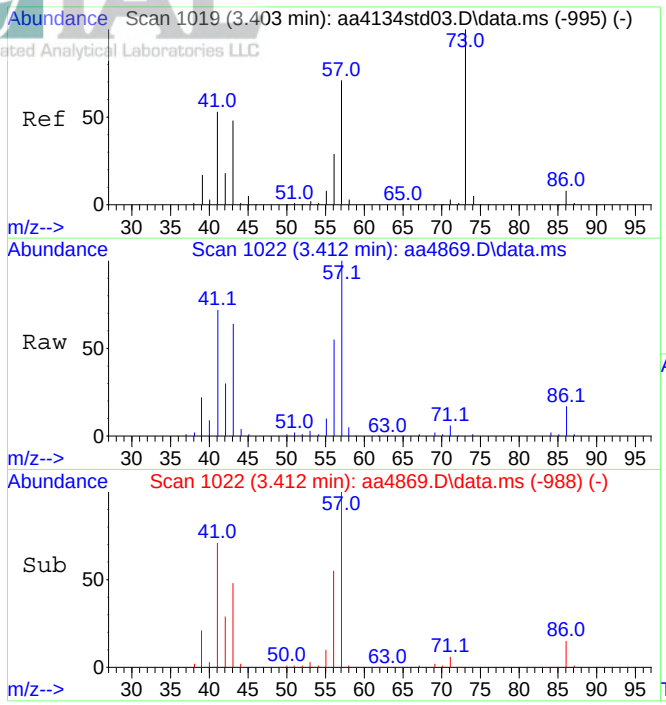




#21
Acetone
Concen: 10.70 ppbV
RT: 3.232 min Scan# 966
Delta R.T. 0.021 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 43 Resp: 610229

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 31.8 | 27.1 | 40.7 |

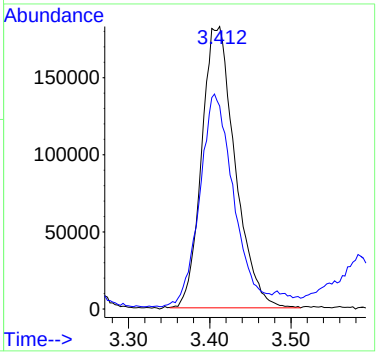


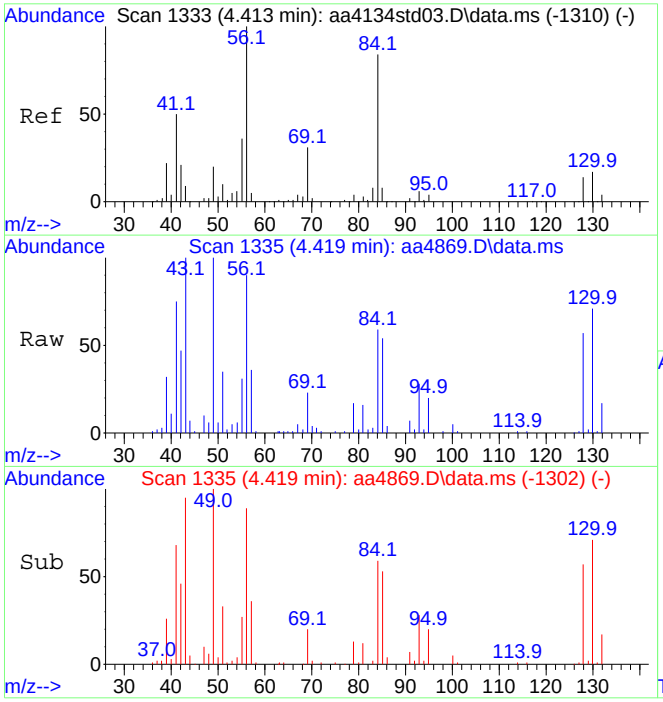



#24
n-Hexane
Concen: 4.37 ppbV
RT: 3.412 min Scan# 1022
Delta R.T. 0.009 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 57 Resp: 520146

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 41 | 80.4 | 66.4 | 99.6 |

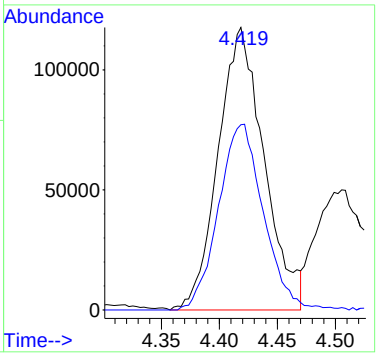


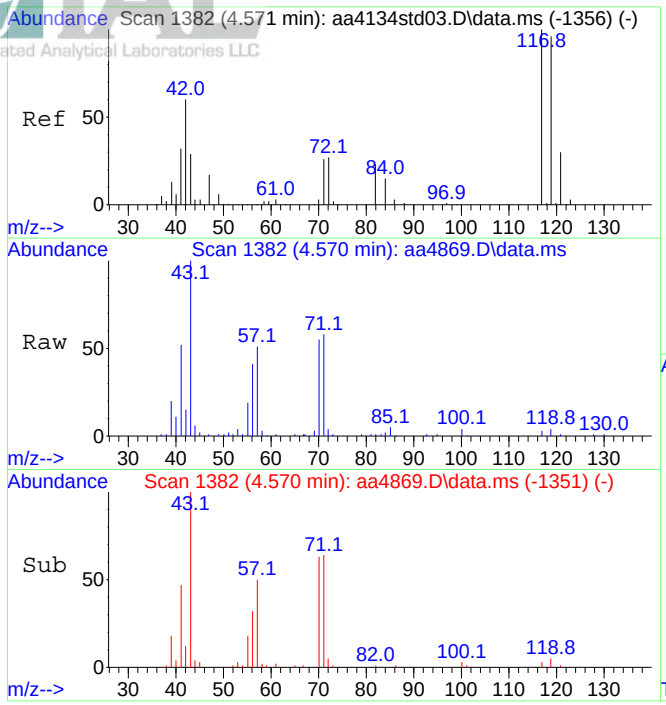




#29
Cyclohexane
Concen: 3.90 ppbV
RT: 4.419 min Scan# 1335
Delta R.T. 0.005 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 56 Resp: 324297

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 64.3 | 71.2 | 106.8# |

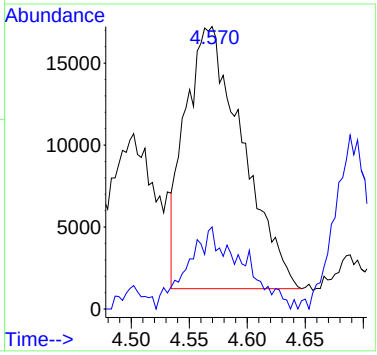


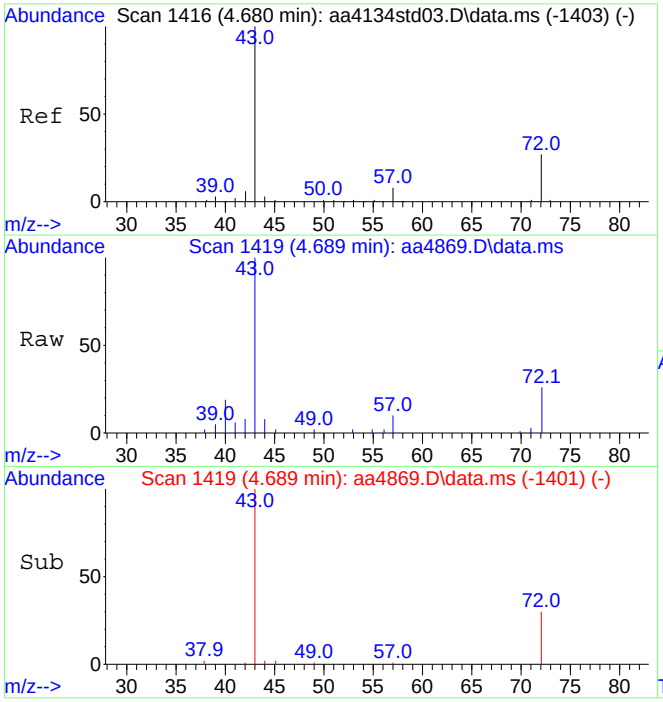



#33
Tetrahydrofuran
Concen: 0.96 ppbV
RT: 4.570 min Scan# 1382
Delta R.T. -0.001 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 42 Resp: 54848

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 42 | 100 | | |
| 72 | 29.9 | 33.8 | 50.8# |

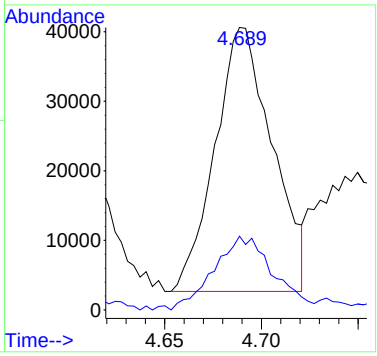


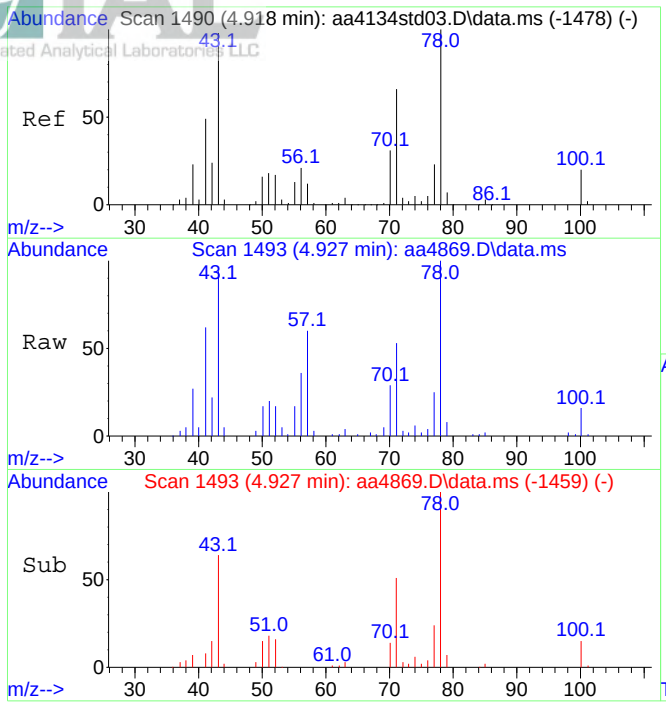




#35
Methyl ethyl ketone
Concen: 0.85 ppbV
RT: 4.689 min Scan# 1419
Delta R.T. 0.009 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 43 Resp: 78559

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 29.0 | 21.6 | 32.4 |

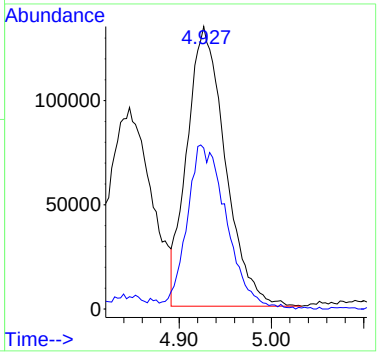


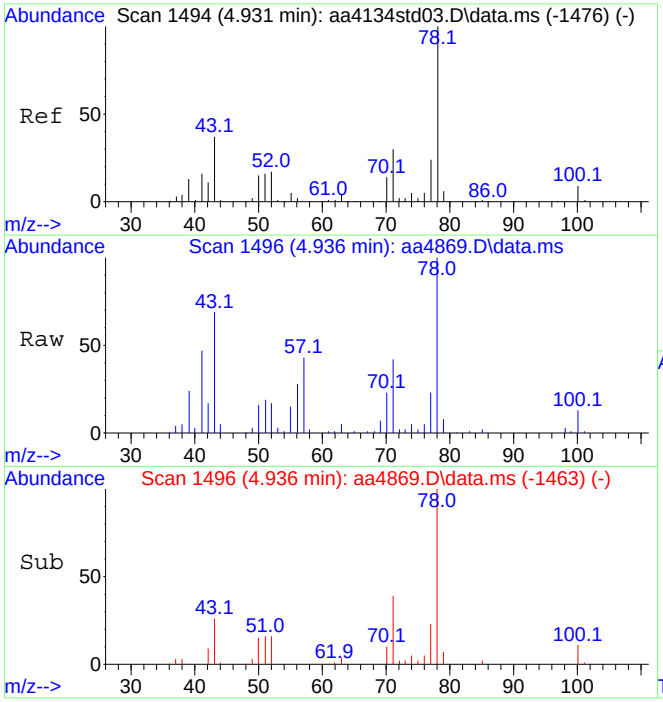



#36
n-Heptane
Concen: 3.70 ppbV
RT: 4.927 min Scan# 1493
Delta R.T. 0.009 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 43 Resp: 386594

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 71 | 60.7 | 50.5 | 75.7 |

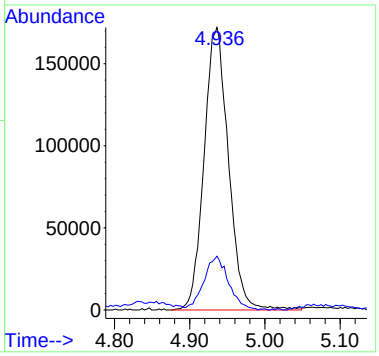


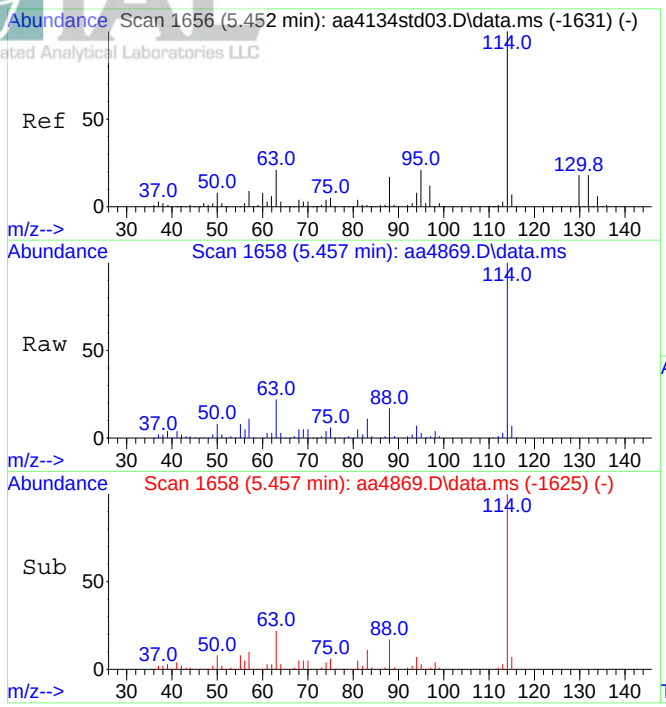




#37
Benzene
Concen: 2.59 ppbV
RT: 4.936 min Scan# 1496
Delta R.T. 0.005 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 78 Resp: 388496

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 19.2 | 13.4 | 20.0 |

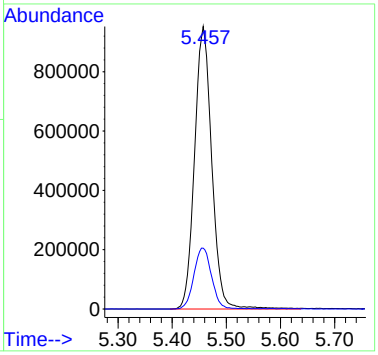


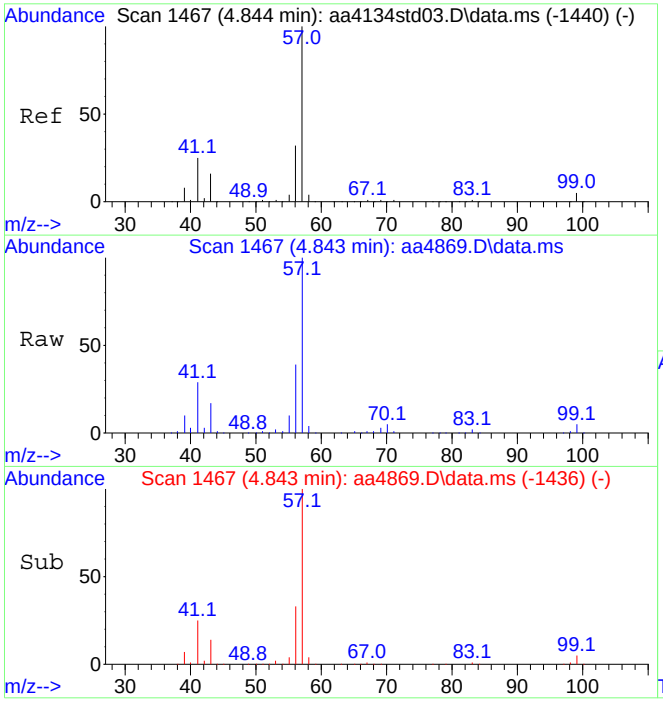



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.457 min Scan# 1658
Delta R.T. 0.005 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion:114 Resp: 2104054

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.1 | 17.0 | 25.6 |

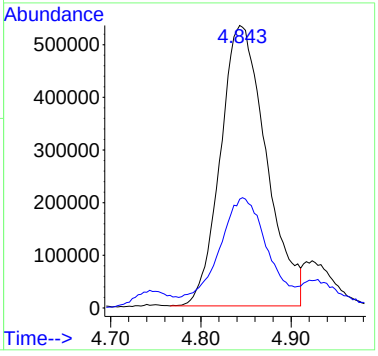


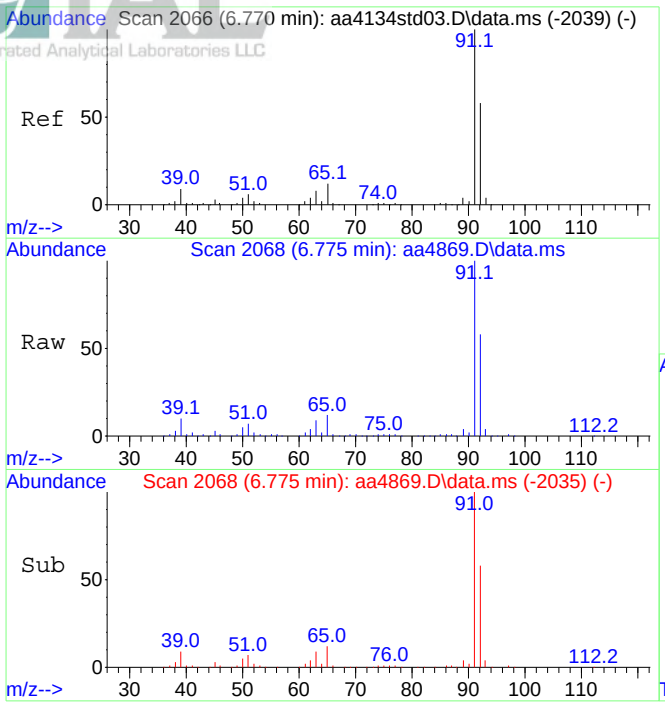




#41
2,2,4-Trimethylpentane
Concen: 6.85 ppbV
RT: 4.843 min Scan# 1467
Delta R.T. -0.001 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 57 Resp: 1877837

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 56 | 34.6 | 25.7 | 38.5 |

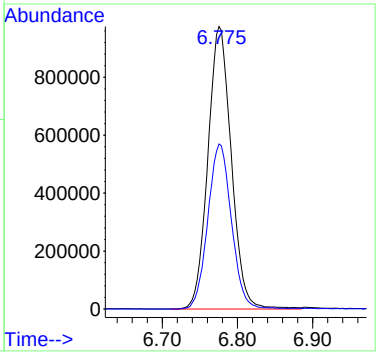


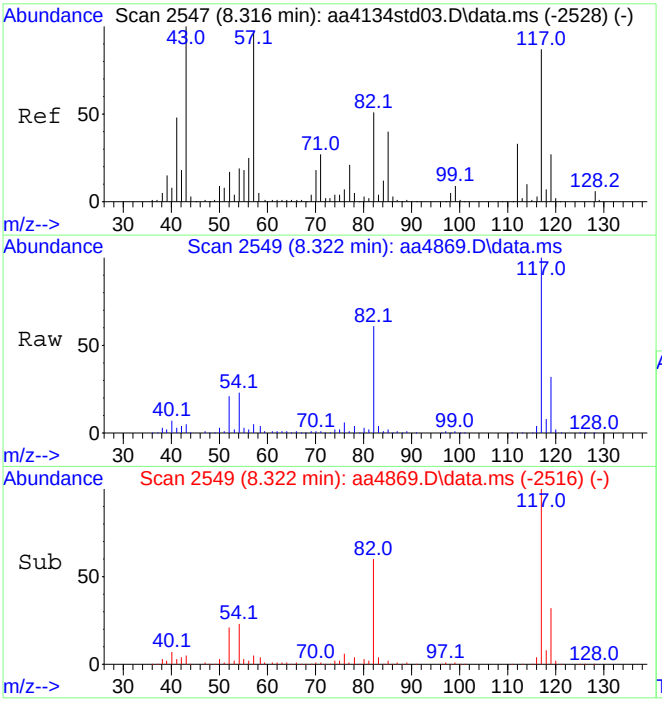



#47
Toluene
Concen: 7.14 ppbV
RT: 6.775 min Scan# 2068
Delta R.T. 0.005 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 91 Resp: 2112833

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 59.0 | 47.3 | 70.9 |

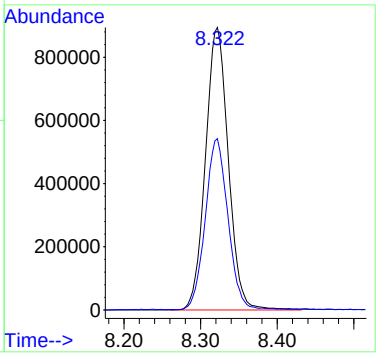


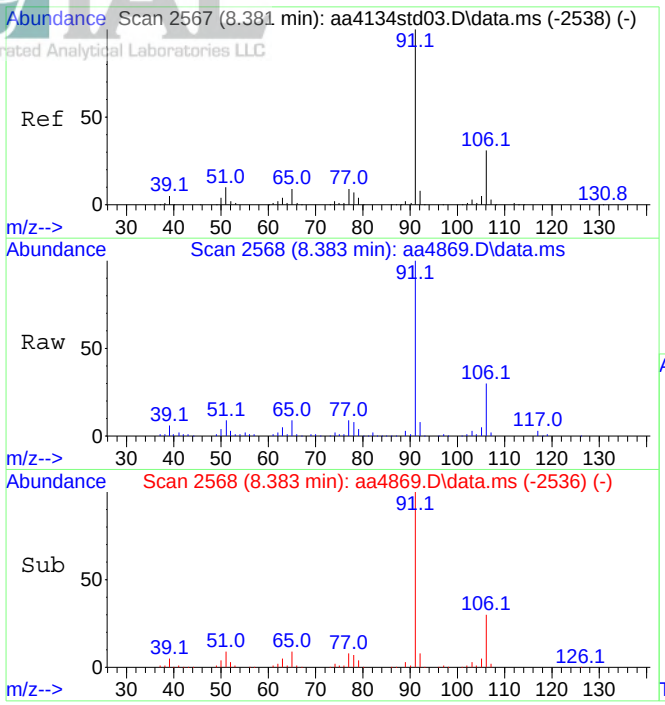




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.322 min Scan# 2549
Delta R.T. 0.005 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion:117 Resp: 1855524

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 60.2 | 47.0 | 70.4 |

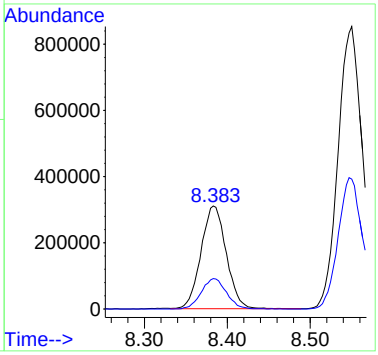


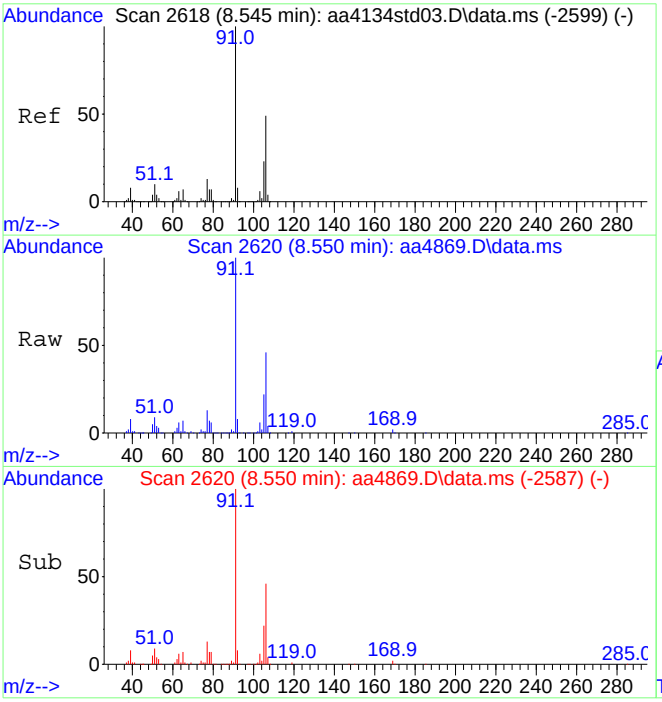



#58
Ethylbenzene
Concen: 1.92 ppbV
RT: 8.383 min Scan# 2568
Delta R.T. 0.002 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 91 Resp: 655687

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 29.4 | 24.6 | 36.8 |

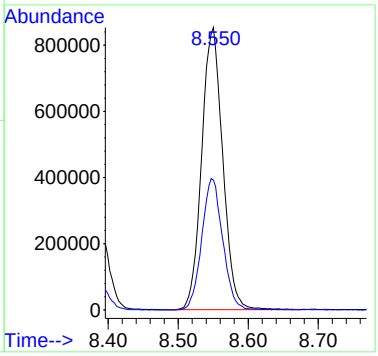


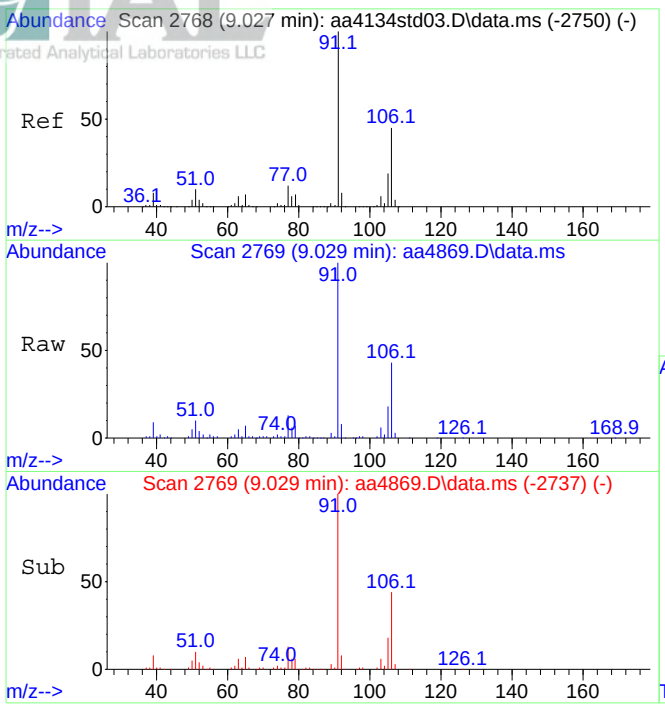




#59
Xylenes (m&p)
Concen: 7.03 ppbV
RT: 8.550 min Scan# 2620
Delta R.T. 0.005 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 91 Resp: 1780980

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 46.5 | 39.0 | 58.4 |

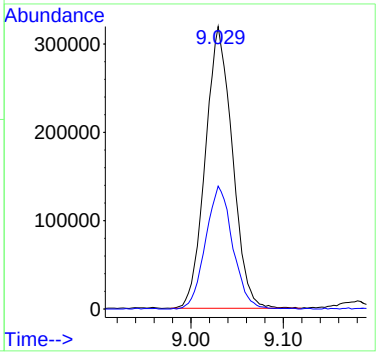


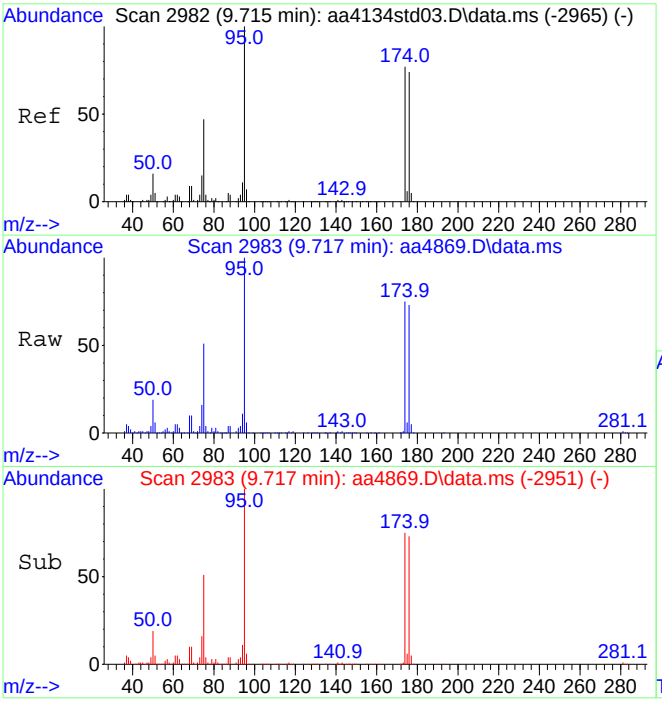



#60
Xylene (o)
Concen: 2.35 ppbV
RT: 9.029 min Scan# 2769
Delta R.T. 0.002 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 91 Resp: 648554

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 44.0 | 36.8 | 55.2 |

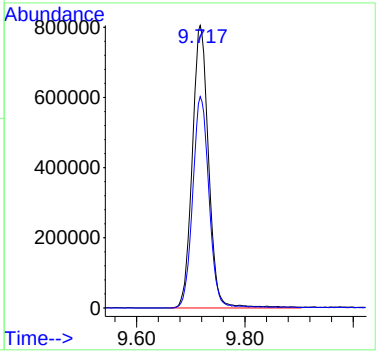


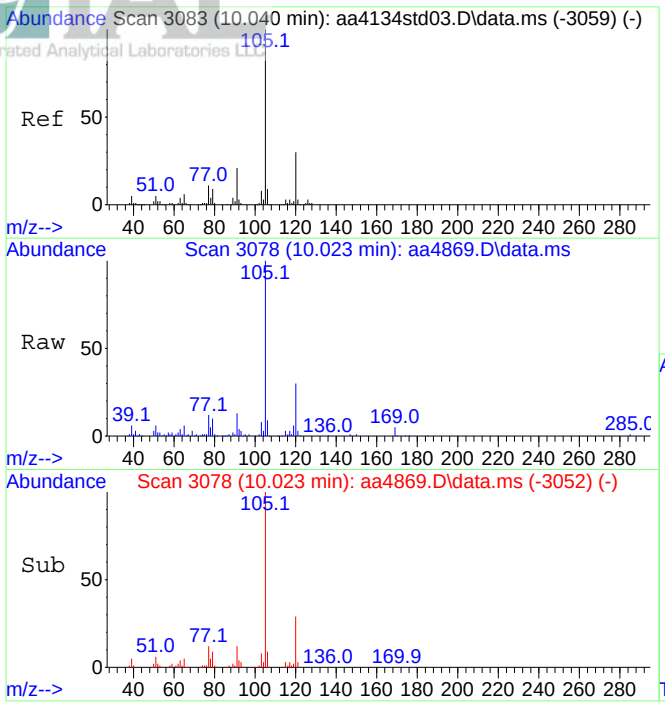




#64
Bromofluorobenzene (tune std)
Concen: 10.43 ppbV
RT: 9.717 min Scan# 2983
Delta R.T. 0.002 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion: 95 Resp: 1687506

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 75.1 | 61.1 | 91.7 |

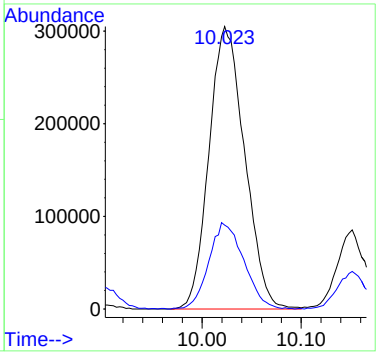


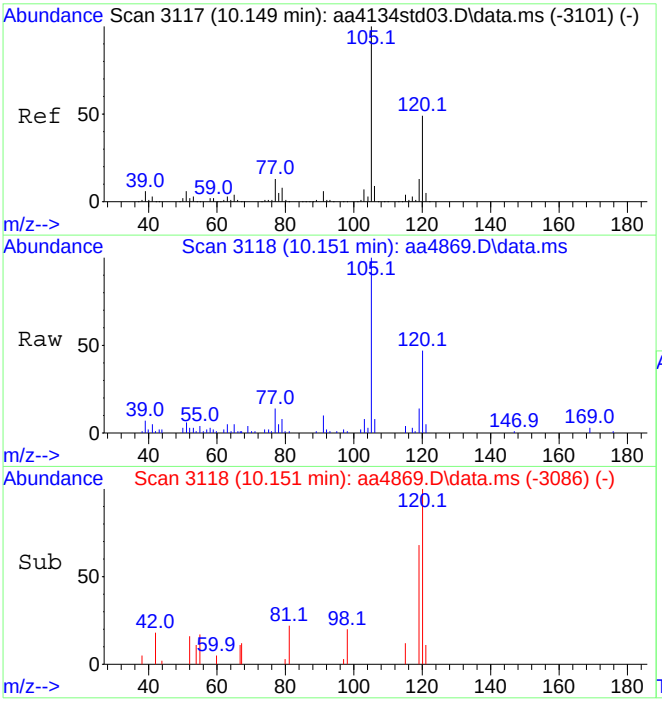



#67
4-Ethyltoluene
Concen: 1.91 ppbV
RT: 10.023 min Scan# 3078
Delta R.T. -0.017 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion:105 Resp: 762163

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 30.0 | 23.4 | 35.2 |

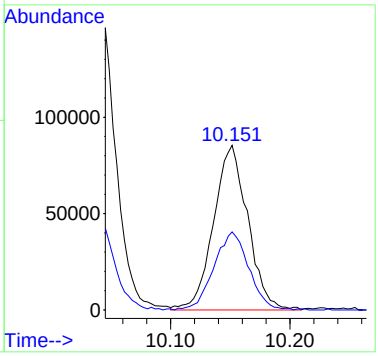


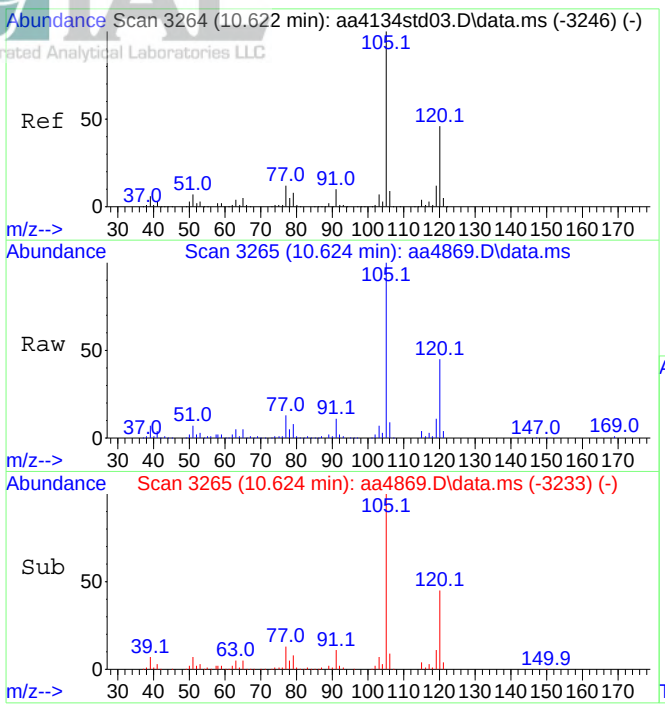




#69
1,3,5-Trimethylbenzene
Concen: 0.53 ppbV
RT: 10.151 min Scan# 3118
Delta R.T. 0.002 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion:105 Resp: 170234

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 48.2 | 38.9 | 58.3 |

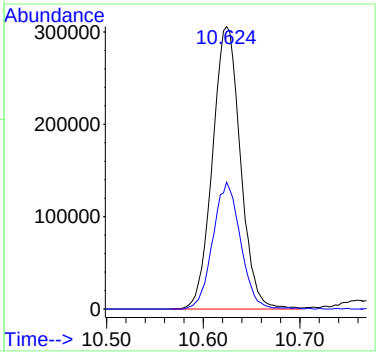





#70
1,2,4-Trimethylbenzene
Concen: 1.92 ppbV
RT: 10.624 min Scan# 3265
Delta R.T. 0.002 min
Lab File: aa4869.D
Acq: 7 Dec 2023 7:50 pm

Tgt Ion:105 Resp: 614979

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 44.4 | 36.3 | 54.5 |



Data Path : C:\DATA\2023\12-2023\12-07-2023\
Data File : aa4870.D
Acq On : 7 Dec 2023 8:30 pm
Operator : jjw
Sample : E23-05061-23
Misc : Dup of E23-05061-03, Can # 3045A
ALS Vial : 24 Sample Multiplier: 1

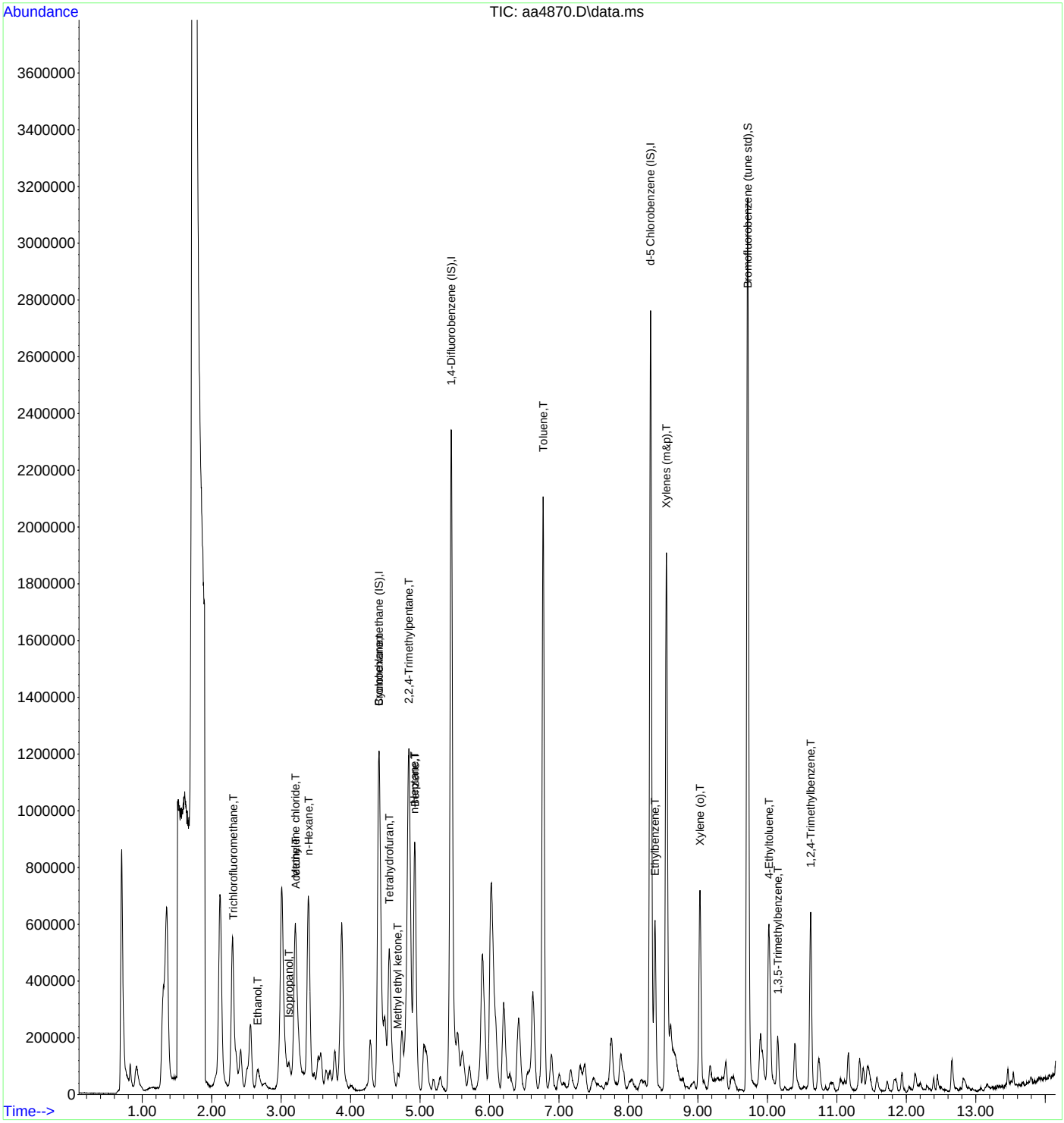
Quant Time: Dec 13 12:53:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

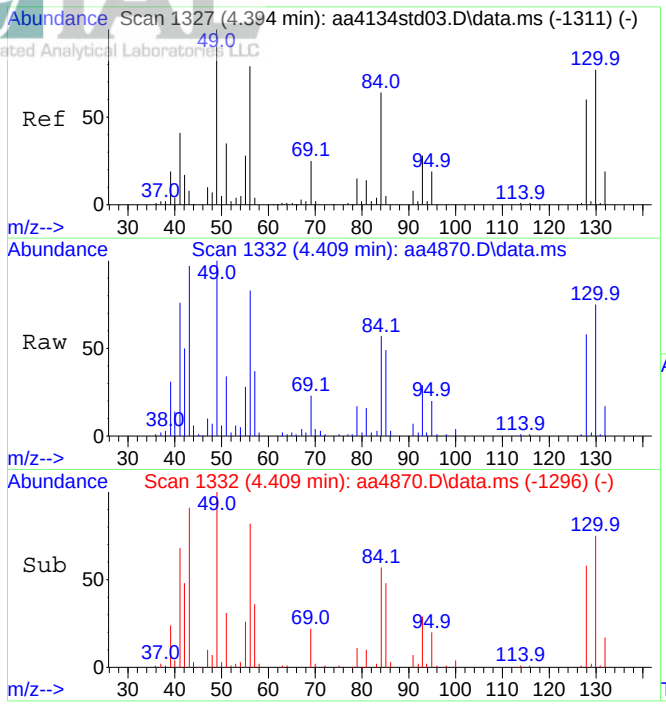
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.409 | 130 | 368396 | 10.00 | ppbV | | 0.015 |
| 39) 1,4-Difluorobenzene (IS) | 5.451 | 114 | 1818981 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 1692684 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 1387863 | 9.41 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 12) Trichlorofluoromethane | 2.313 | 101 | 33879 | 0.33 | ppbV | | 90 |
| 13) Ethanol | 2.663 | 45 | 109072 | 10.11 | ppbV | | 99 |
| 19) Isopropanol | 3.113 | 45 | 208075 | 2.82 | ppbV | # | 70 |
| 20) Methylene chloride | 3.206 | 49 | 125882 | 2.78 | ppbV | # | 7 |
| 21) Acetone | 3.213 | 43 | 562689 | 10.13 | ppbV | | 99 |
| 24) n-Hexane | 3.396 | 57 | 444919 | 3.83 | ppbV | | 97 |
| 29) Cyclohexane | 4.409 | 56 | 279096 | 3.44 | ppbV | # | 74 |
| 33) Tetrahydrofuran | 4.557 | 42 | 49663 | 0.90 | ppbV | # | 75 |
| 35) Methyl ethyl ketone | 4.679 | 43 | 75094 | 0.83 | ppbV | | 98 |
| 36) n-Heptane | 4.917 | 43 | 341229 | 3.35 | ppbV | | 97 |
| 37) Benzene | 4.930 | 78 | 338080 | 2.31 | ppbV | | 95 |
| 41) 2,2,4-Trimethylpentane | 4.840 | 57 | 1725941 | 7.28 | ppbV | | 95 |
| 47) Toluene | 6.772 | 91 | 1825367 | 7.14 | ppbV | | 100 |
| 58) Ethylbenzene | 8.383 | 91 | 499733 | 1.60 | ppbV | | 99 |
| 59) Xylenes (m&p) | 8.547 | 91 | 1368186 | 5.92 | ppbV | | 97 |
| 60) Xylene (o) | 9.029 | 91 | 512360 | 2.03 | ppbV | | 97 |
| 67) 4-Ethyltoluene | 10.023 | 105 | 521383 | 1.43 | ppbV | | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.151 | 105 | 130813 | 0.45 | ppbV | | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 434326 | 1.48 | ppbV | | 98 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-07-2023\
Data File : aa4870.D
Acq On : 7 Dec 2023 8:30 pm
Operator : jjw
Sample : E23-05061-23
Misc : Dup of E23-05061-03, Can # 3045A
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Dec 13 12:53:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

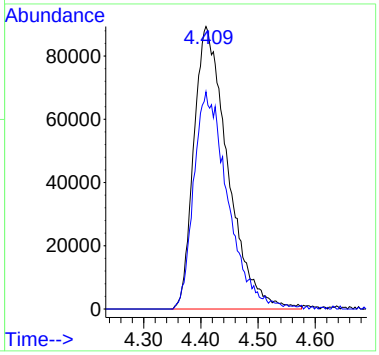


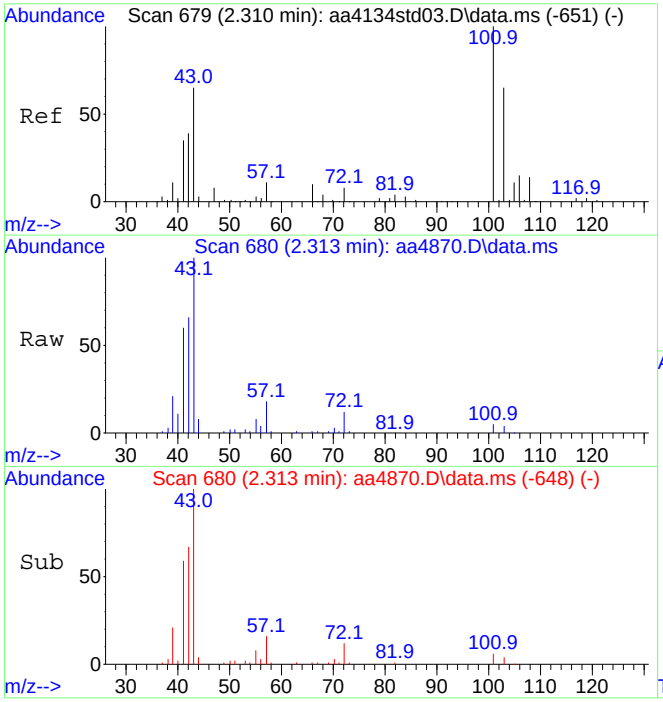



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.409 min Scan# 1332
Delta R.T. 0.015 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion:130 Resp: 368396

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 76.6 | 62.2 | 93.4 |

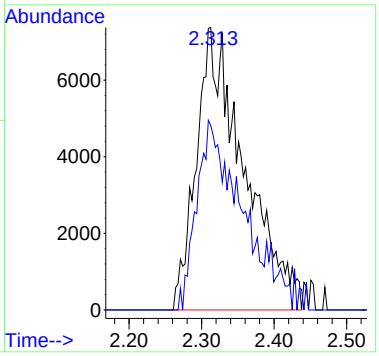


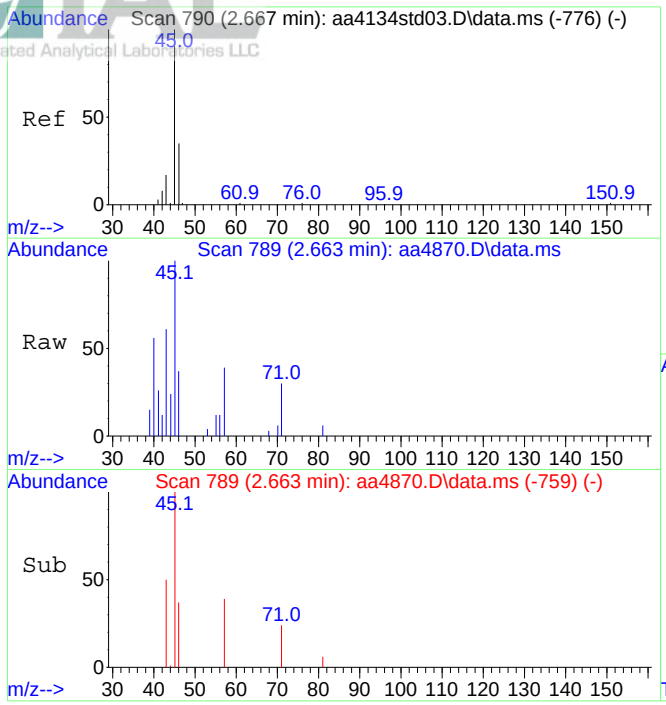




#12
Trichlorofluoromethane
Concen: 0.33 ppbV
RT: 2.313 min Scan# 680
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion:101 Resp: 33879

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 57.5 | 52.5 | 78.7 |

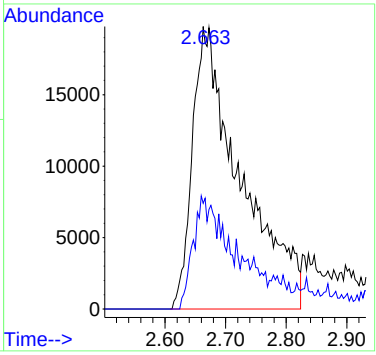


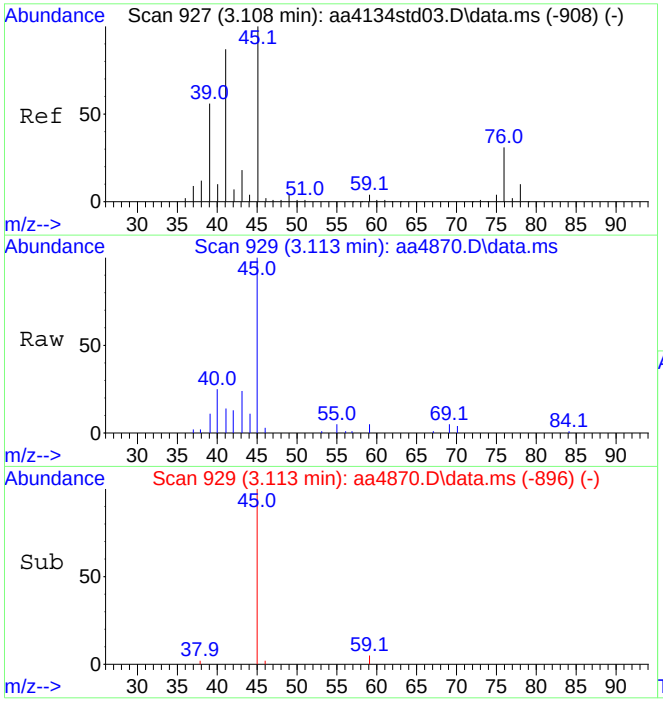



#13
Ethanol
Concen: 10.11 ppbV
RT: 2.663 min Scan# 789
Delta R.T. -0.004 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 45 Resp: 109072

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 46 | 37.9 | 30.0 | 45.0 |

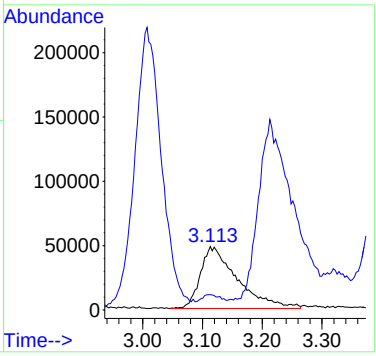


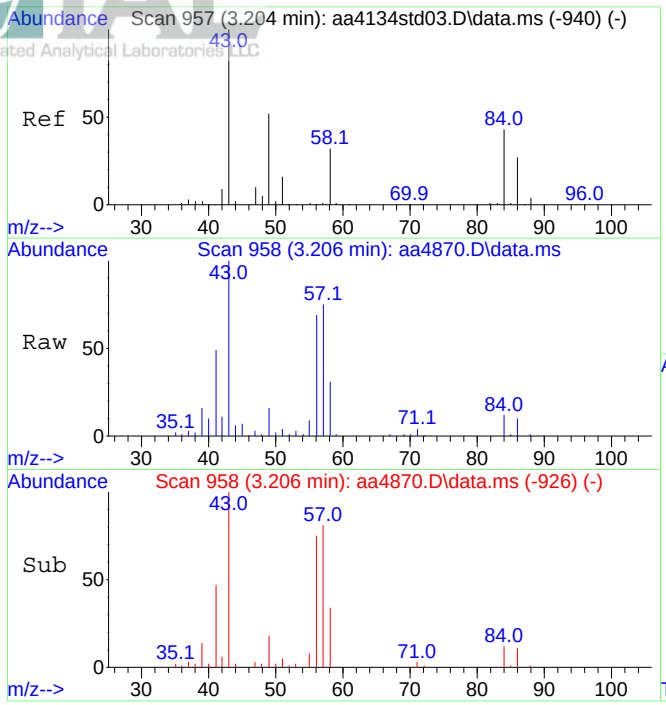




#19
Isopropanol
Concen: 2.82 ppbV
RT: 3.113 min Scan# 929
Delta R.T. 0.005 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 45 Resp: 208075

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 43 | 5.0 | 14.6 | 21.8# |

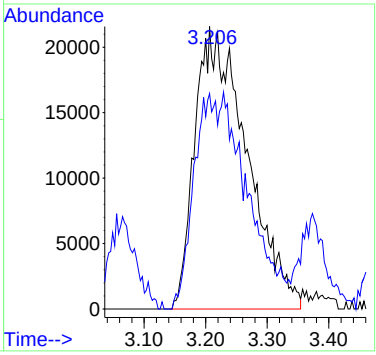


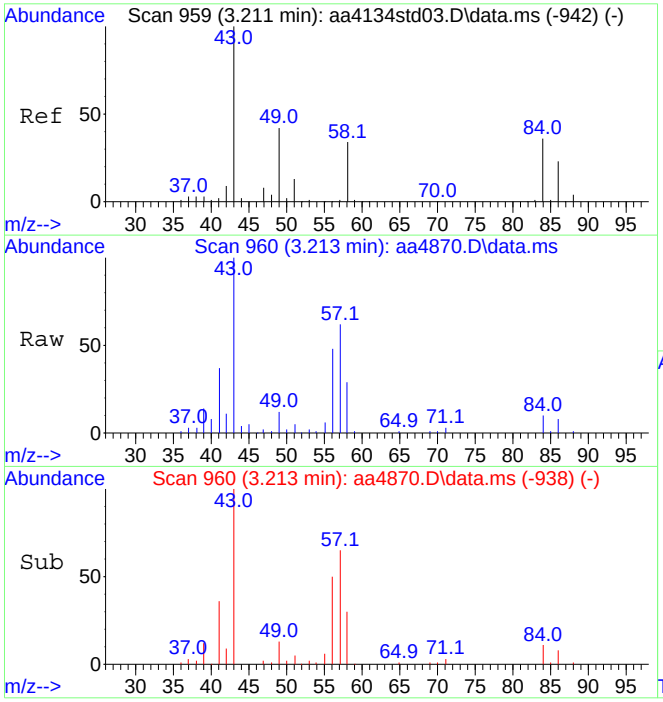



#20
Methylene chloride
Concen: 2.78 ppbV
RT: 3.206 min Scan# 958
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 49 Resp: 125882

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 0.0 | 64.8 | 104.8# |

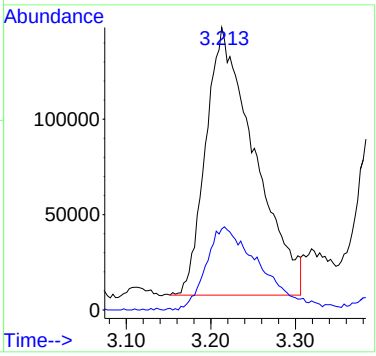


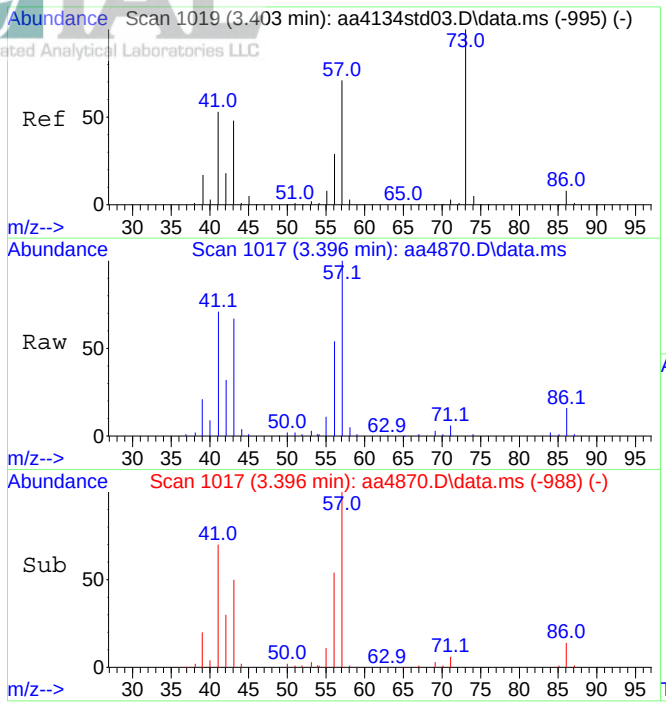




#21
Acetone
Concen: 10.13 ppbV
RT: 3.213 min Scan# 960
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 43 Resp: 562689

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 33.1 | 27.1 | 40.7 |

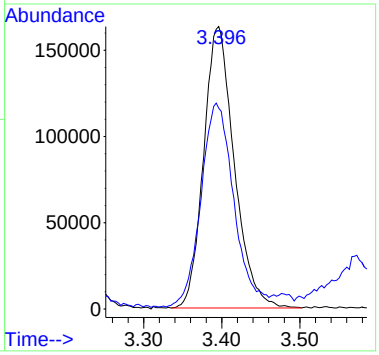


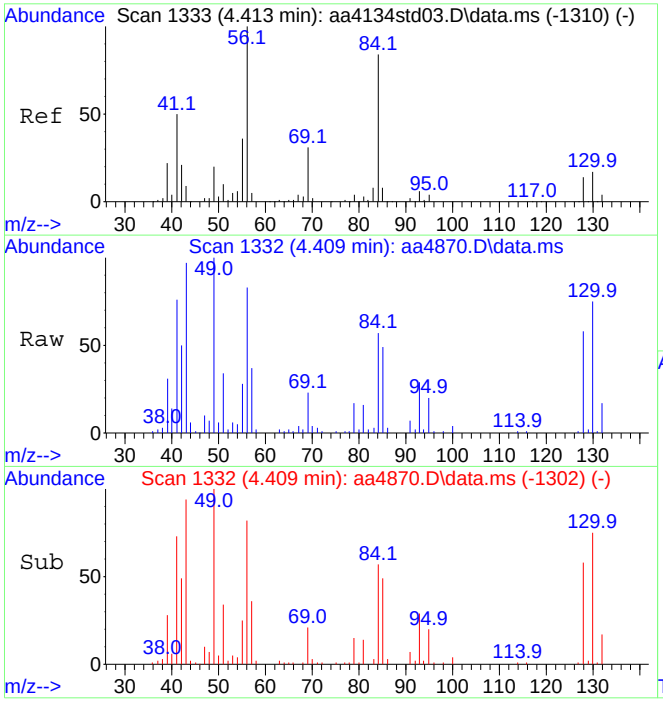



#24
n-Hexane
Concen: 3.83 ppbV
RT: 3.396 min Scan# 1017
Delta R.T. -0.007 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 57 Resp: 444919

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 41 | 80.6 | 66.4 | 99.6 |

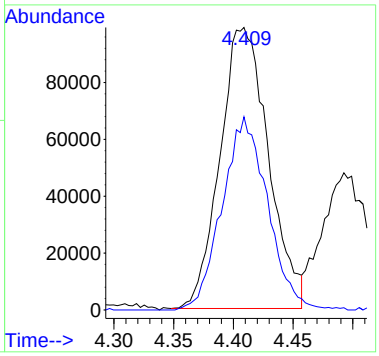


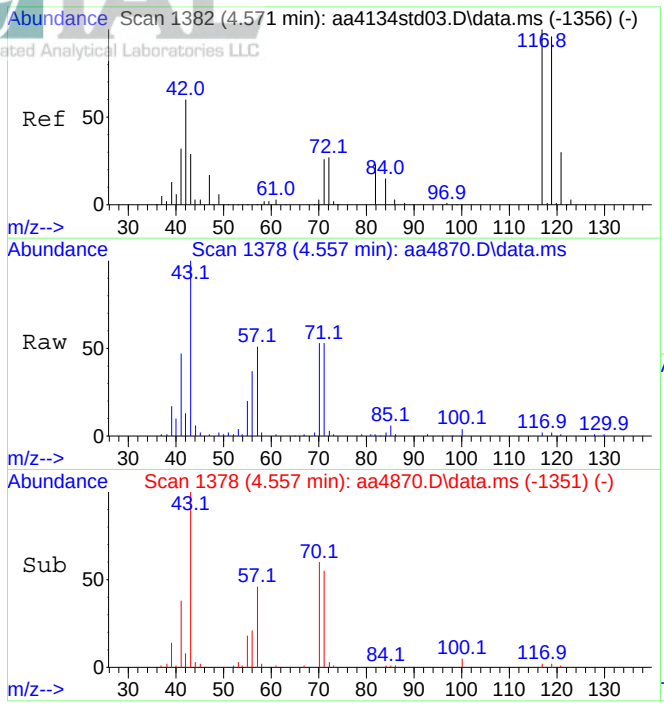




#29
Cyclohexane
Concen: 3.44 ppbV
RT: 4.409 min Scan# 1332
Delta R.T. -0.004 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 56 Resp: 279096

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 64.4 | 71.2 | 106.8# |

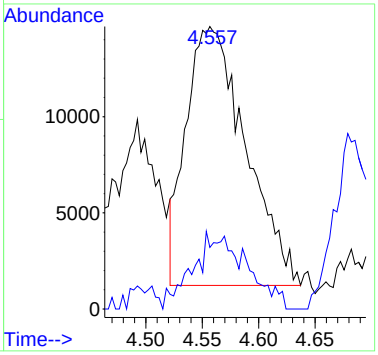


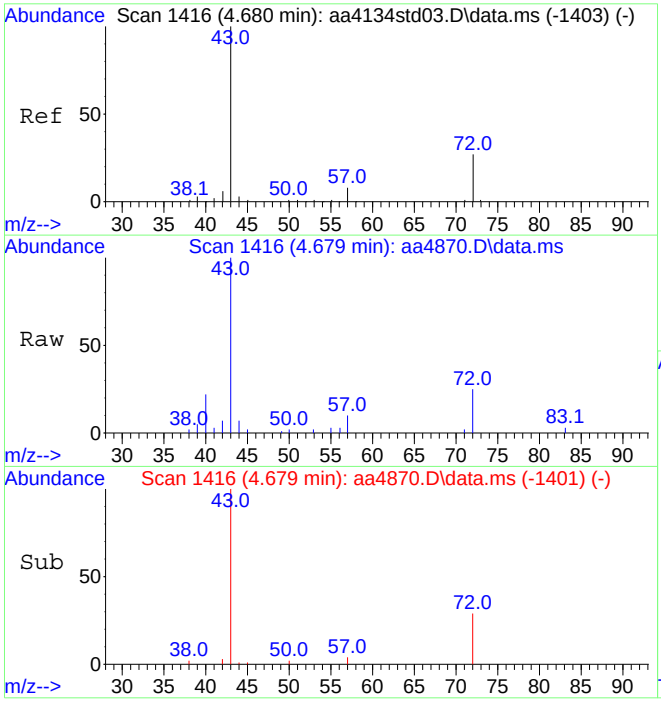



#33
Tetrahydrofuran
Concen: 0.90 ppbV
RT: 4.557 min Scan# 1378
Delta R.T. -0.014 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 42 Resp: 49663

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 42 | 100 | | |
| 72 | 26.4 | 33.8 | 50.8# |

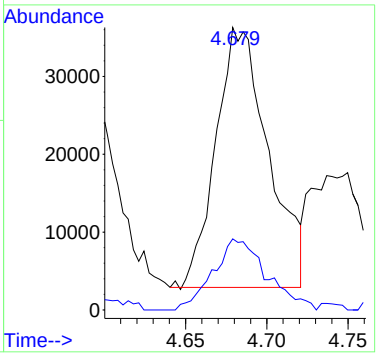


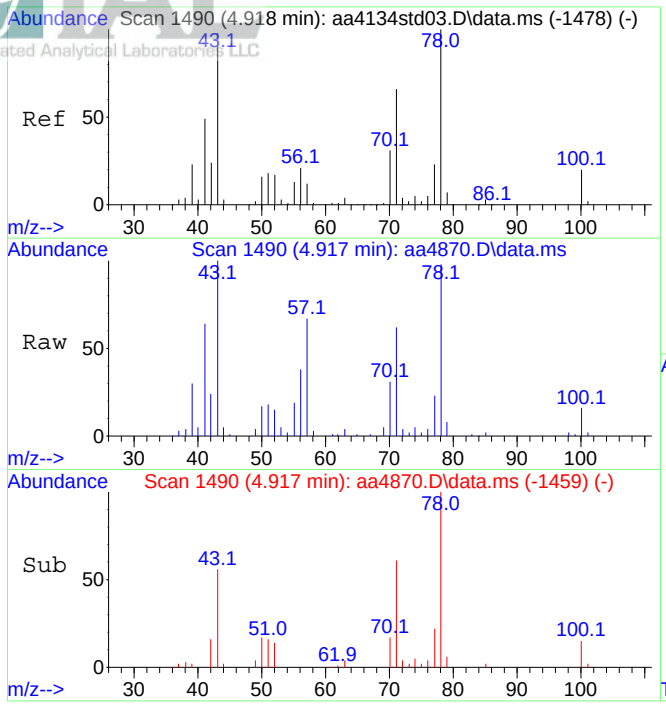




#35
Methyl ethyl ketone
Concen: 0.83 ppbV
RT: 4.679 min Scan# 1416
Delta R.T. -0.001 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 43 Resp: 75094

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 27.9 | 21.6 | 32.4 |

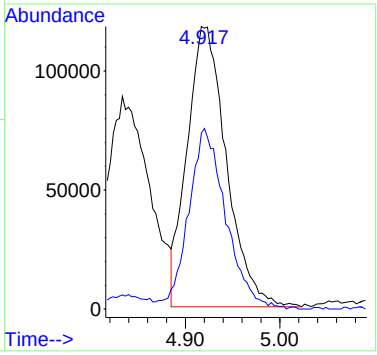


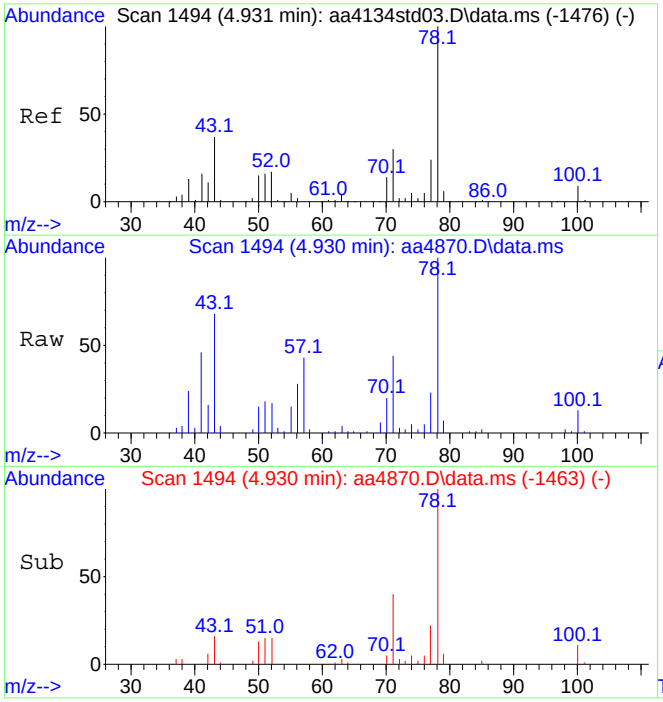



#36
n-Heptane
Concen: 3.35 ppbV
RT: 4.917 min Scan# 1490
Delta R.T. -0.001 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 43 Resp: 341229

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 71 | 61.1 | 50.5 | 75.7 |

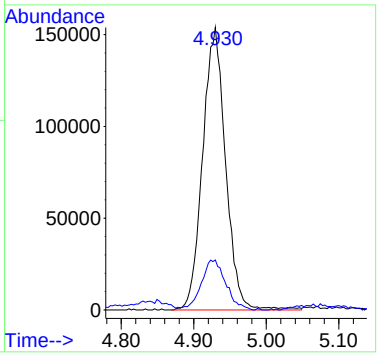


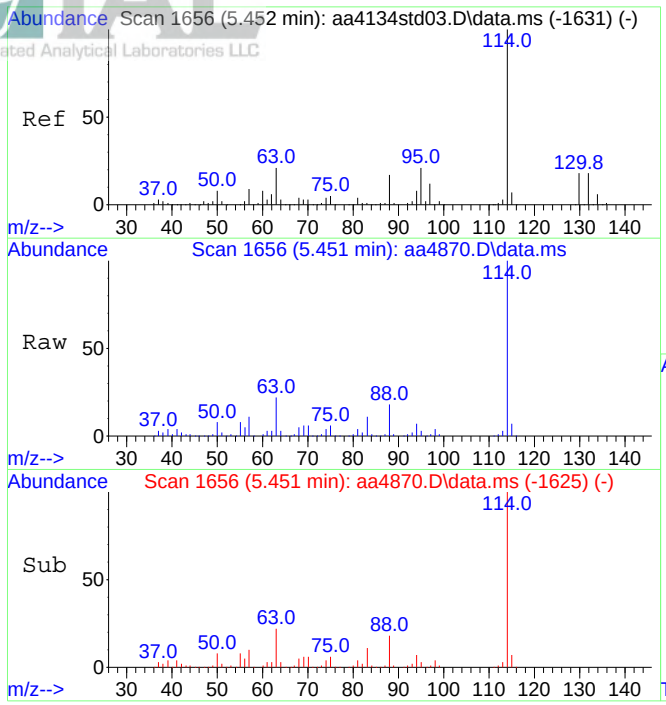




#37
Benzene
Concen: 2.31 ppbV
RT: 4.930 min Scan# 1494
Delta R.T. -0.001 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 78 Resp: 338080

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 18.8 | 13.4 | 20.0 |

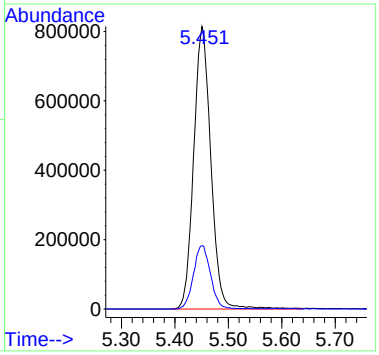


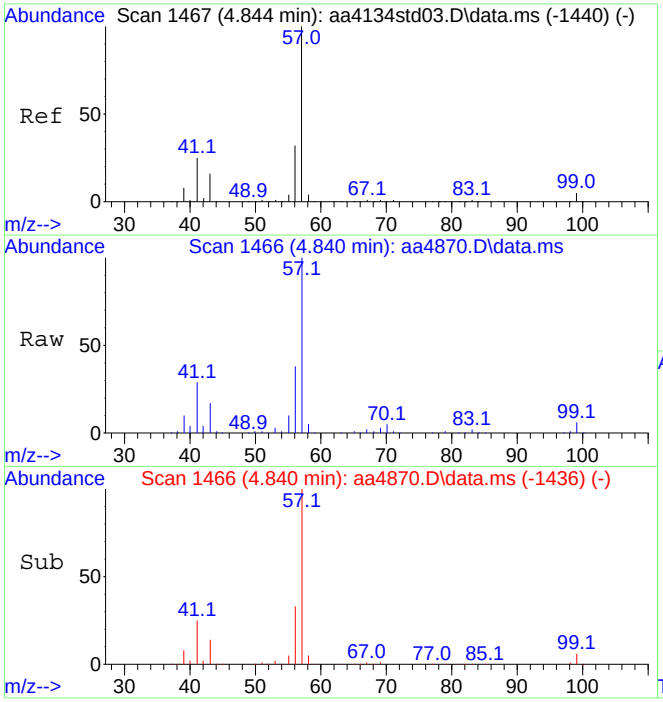



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.451 min Scan# 1656
Delta R.T. -0.001 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion:114 Resp: 1818981

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.3 | 17.0 | 25.6 |

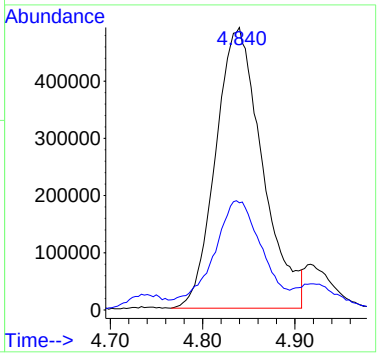


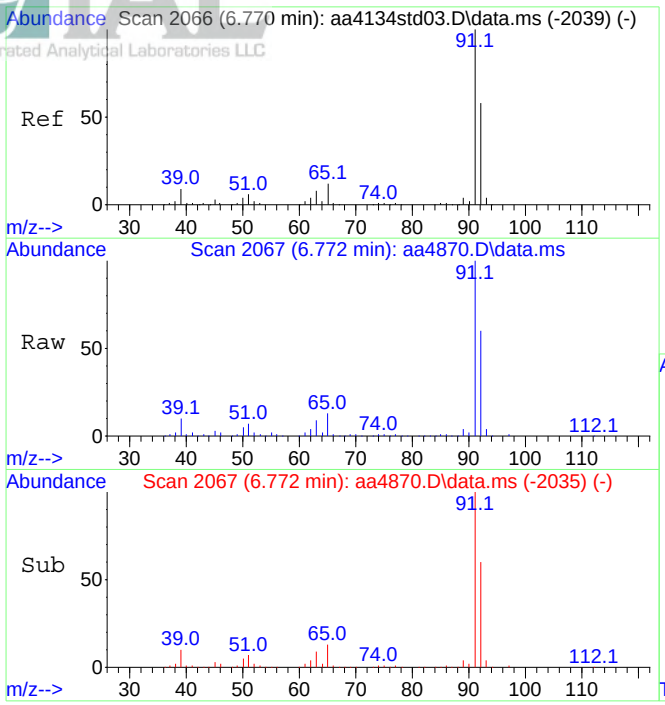




#41
2,2,4-Trimethylpentane
Concen: 7.28 ppbV
RT: 4.840 min Scan# 1466
Delta R.T. -0.004 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 57 Resp: 1725941

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 56 | 34.7 | 25.7 | 38.5 |

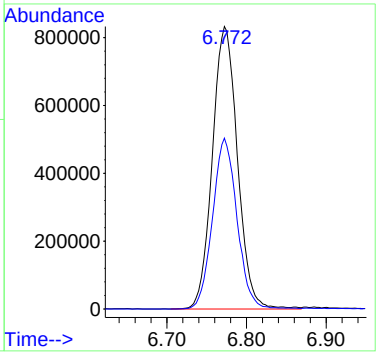


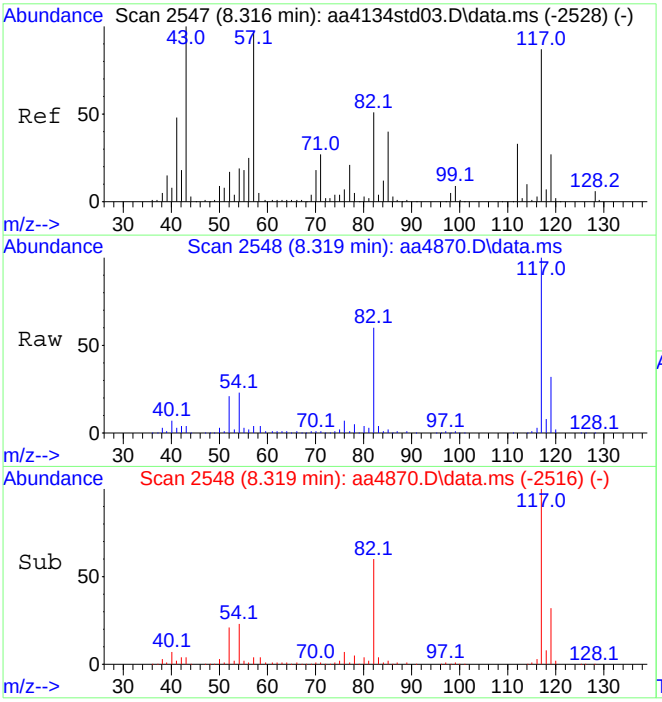



#47
Toluene
Concen: 7.14 ppbV
RT: 6.772 min Scan# 2067
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 91 Resp: 1825367

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 59.2 | 47.3 | 70.9 |

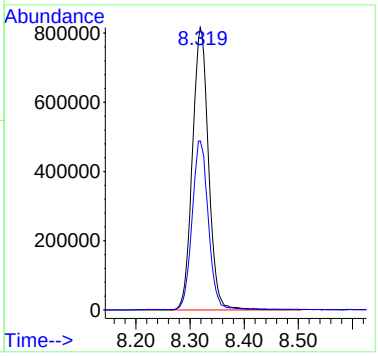


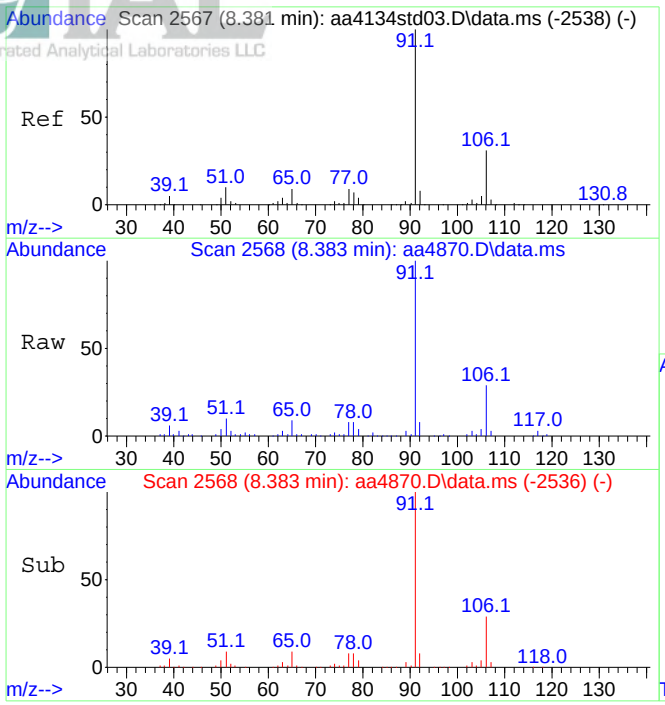




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.319 min Scan# 2548
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion:117 Resp: 1692684

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 59.7 | 47.0 | 70.4 |

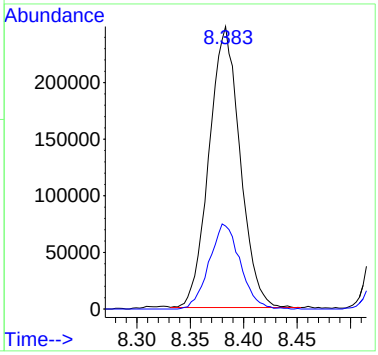


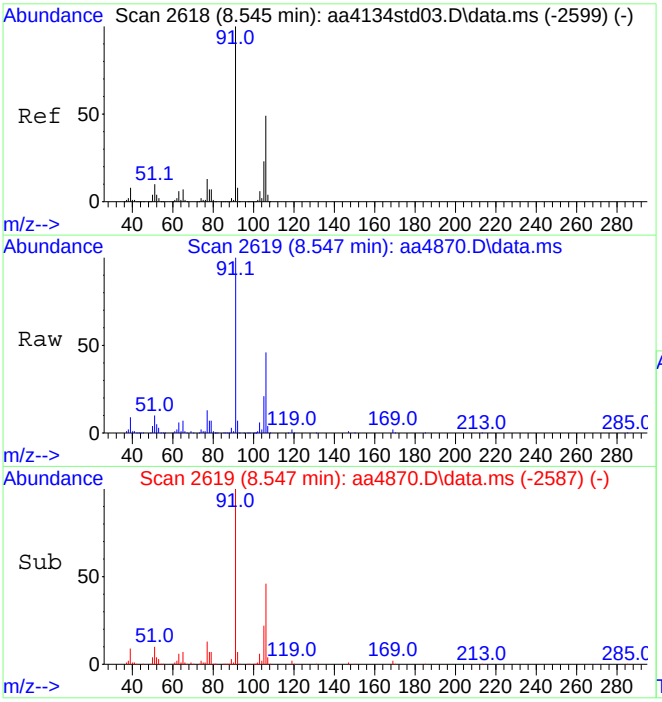



#58
Ethylbenzene
Concen: 1.60 ppbV
RT: 8.383 min Scan# 2568
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 91 Resp: 499733

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 30.4 | 24.6 | 36.8 |

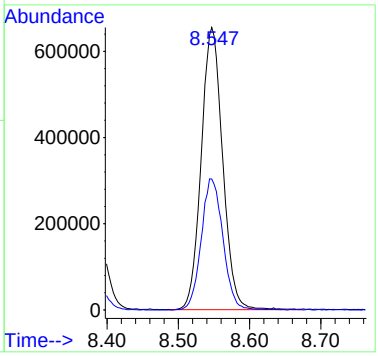


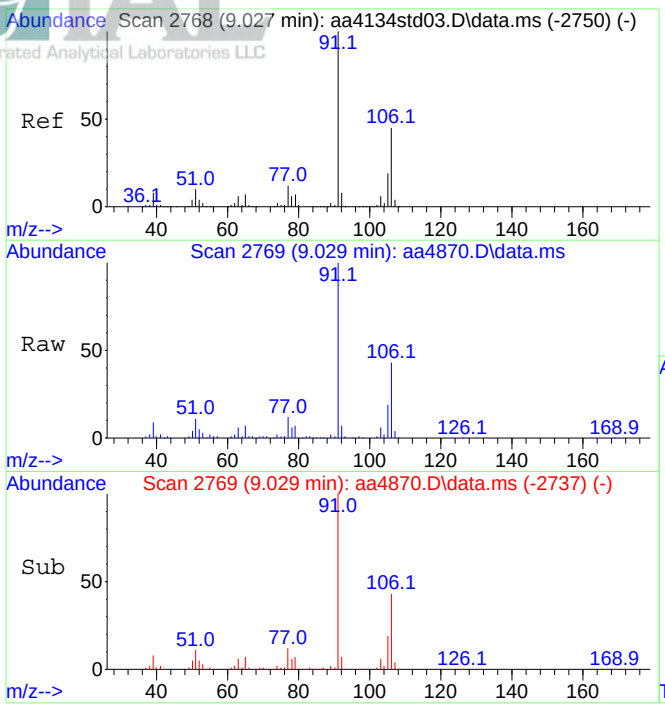




#59
Xylenes (m&p)
Concen: 5.92 ppbV
RT: 8.547 min Scan# 2619
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 91 Resp: 1368186

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 47.0 | 39.0 | 58.4 |

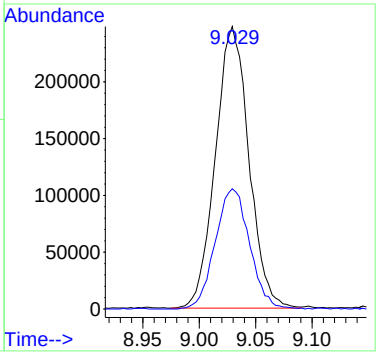


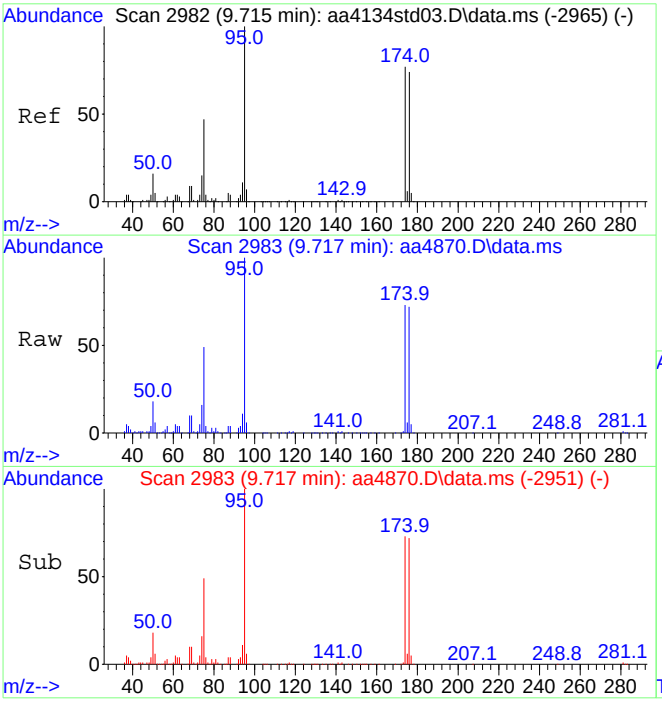



#60
Xylene (o)
Concen: 2.03 ppbV
RT: 9.029 min Scan# 2769
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 91 Resp: 512360

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 43.7 | 36.8 | 55.2 |

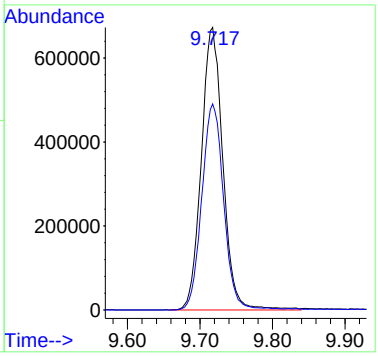


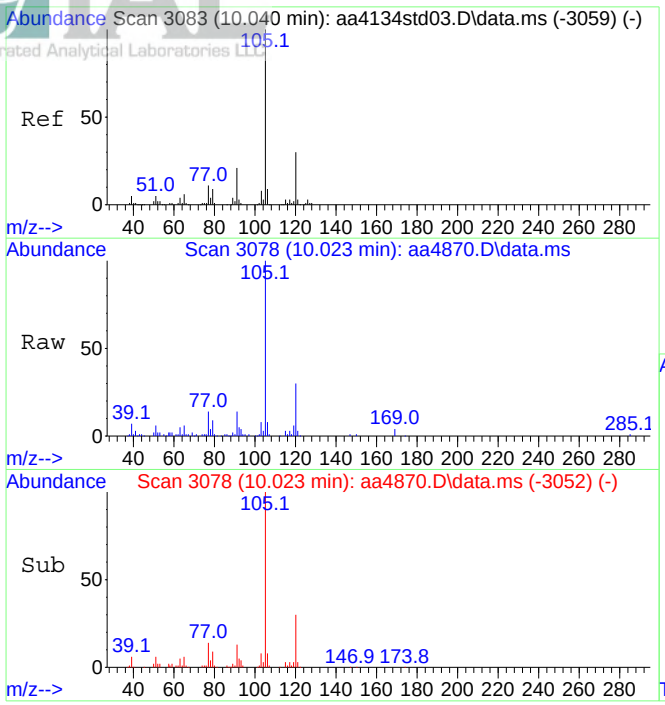




#64
Bromofluorobenzene (tune std)
Concen: 9.41 ppbV
RT: 9.717 min Scan# 2983
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion: 95 Resp: 1387863

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 74.3 | 61.1 | 91.7 |

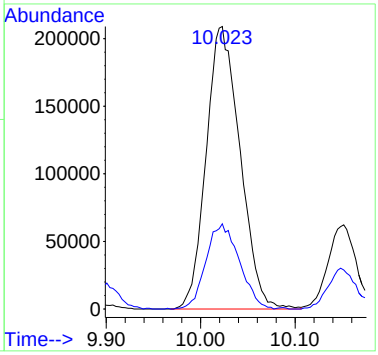


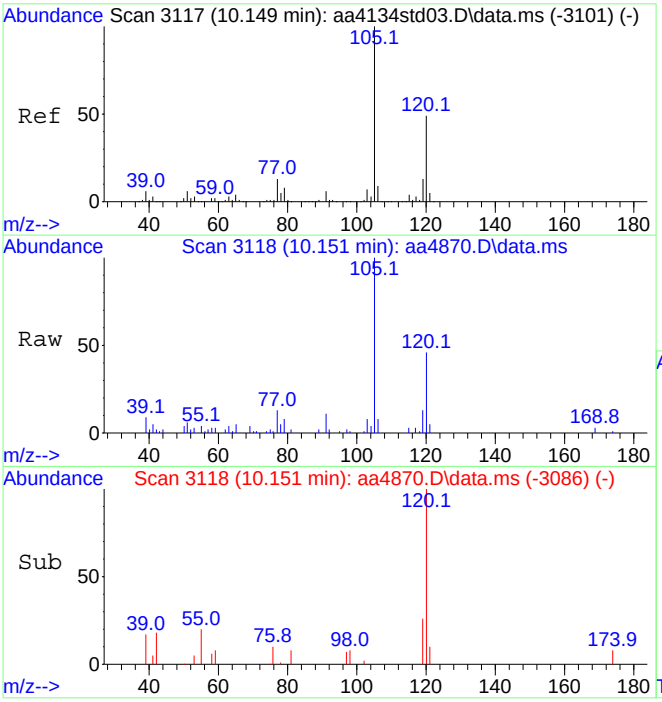



#67
4-Ethyltoluene
Concen: 1.43 ppbV
RT: 10.023 min Scan# 3078
Delta R.T. -0.017 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion:105 Resp: 521383

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 29.6 | 23.4 | 35.2 |

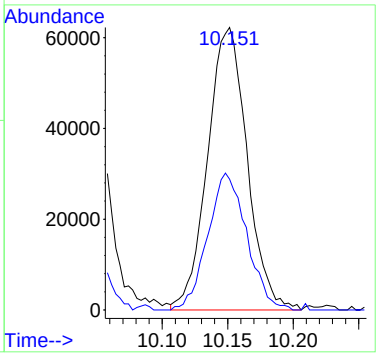


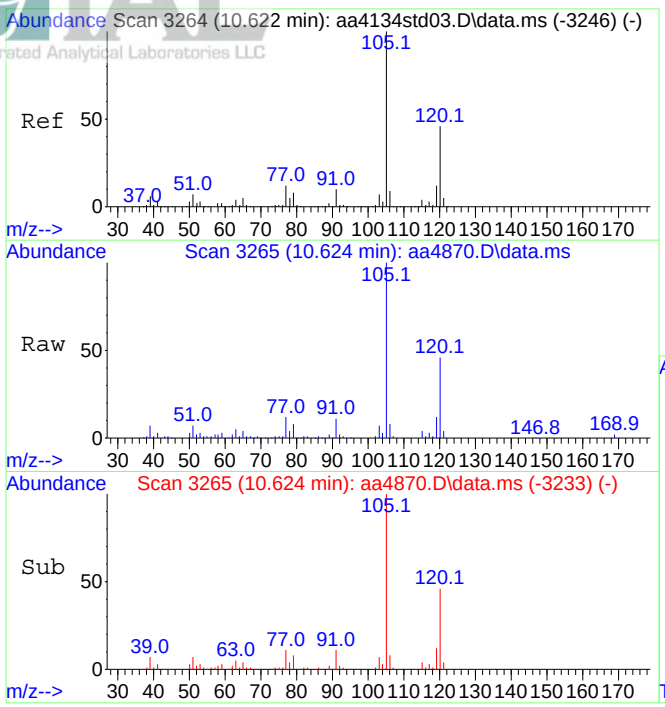




#69
1,3,5-Trimethylbenzene
Concen: 0.45 ppbV
RT: 10.151 min Scan# 3118
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion:105 Resp: 130813

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 47.7 | 38.9 | 58.3 |

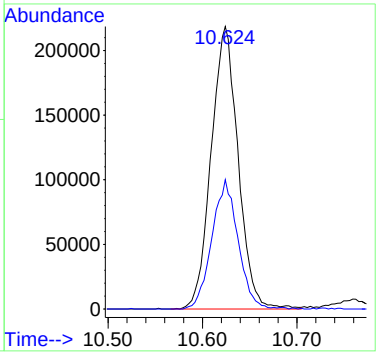





#70
1,2,4-Trimethylbenzene
Concen: 1.48 ppbV
RT: 10.624 min Scan# 3265
Delta R.T. 0.002 min
Lab File: aa4870.D
Acq: 7 Dec 2023 8:30 pm

Tgt Ion:105 Resp: 434326

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 44.2 | 36.3 | 54.5 |



**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 11/20/23 |
| SDG Number: | E23-05079 | Date Analyzed: | 12/12/23,12/12/23 |
| IAL Sample ID: | E23-05079-03 | Lab Data File#: | AA4929,AA4930 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 3830 | Injection Volume: | 500ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| Compound | CAS # | Sample E23-05079-03 Concentration Reported ppbv | Q | Sample Dup E23-05079-23 Concentration Reported ppbv | Q | Reporting Limits ppbv | RPD |
|---|---|---|---|---|---|---|---|
| Acetone | 67-64-1 | **6.1** | | **5.9** | | 0.40 | **3.33%** |
| Allyl Chloride | 107-05-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Benzene | 71-43-2 | **0.31** | | **0.32** | | 0.20 | **-3.17%** |
| Bromodichloromethane | 75-27-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Bromoform | 75-25-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Bromomethane | 74-83-9 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Butadiene | 106-99-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chlorobenzene | 108-90-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloroethane | 75-00-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloroform | 67-66-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloromethane | 74-87-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Carbon disulfide | 75-15-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Carbon tetrachloride | 56-23-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 2-Chlorotoluene | 95-49-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Cyclohexane | 110-82-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Dibromochloromethane | 124-48-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dibromoethane | 106-93-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorobenzene | 95-50-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Dichlorobenzene | 541-73-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,4-Dichlorobenzene | 106-46-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Dichlorodifluoromethane | 75-71-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1-Dichloroethane | 75-34-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethane | 107-06-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1-Dichloroethene | 75-35-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Ethylbenzene | 100-41-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 4-Ethyltoluene | 622-96-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| n-Heptane | 142-82-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| n-Hexane | 110-54-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Methylene chloride | 75-09-2 | **3.5** | | **3.4** | | 0.40 | **2.90%** |
| Methyl ethyl ketone | 78-93-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Methyl isobutyl ketone | 108-10-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 11/20/23 |
| SDG Number: | E23-05079 | Date Analyzed: | 12/12/23,12/12/23 |
| IAL Sample ID: | E23-05079-03 | Lab Data File#: | AA4929,AA4930 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 3830 | Injection Volume: | 500ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| Compound | CAS # | Sample E23-05079-03 Concentration Reported ppbv | Q | Sample Dup E23-05079-23 Concentration Reported ppbv | Q | Reporting Limits ppbv | RPD |
|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | 1634-04-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Styrene | 100-42-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Tert-butyl alcohol | 75-65-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Tetrachloroethene | 127-18-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Toluene | 108-88-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,1-Trichloroethane | 71-55-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2-Trichloroethane | 79-00-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Trichloroethene | 79-01-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Trichlorofluoromethane | 75-69-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Vinyl bromide | 593-60-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Vinyl chloride | 75-01-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Xylenes (m&p) | 179601-23-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Xylenes (o) | 95-47-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |

**RPD must be <25% for all laboratory duplicate samples. Laboratory duplicate samples are run once daily.**
**NC = The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample.**

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4929.D
Acq On : 12 Dec 2023 12:58 am
Operator : jjw
Sample : E23-05079-03
Misc : 3830, 500cc
ALS Vial : 32 Sample Multiplier: 1

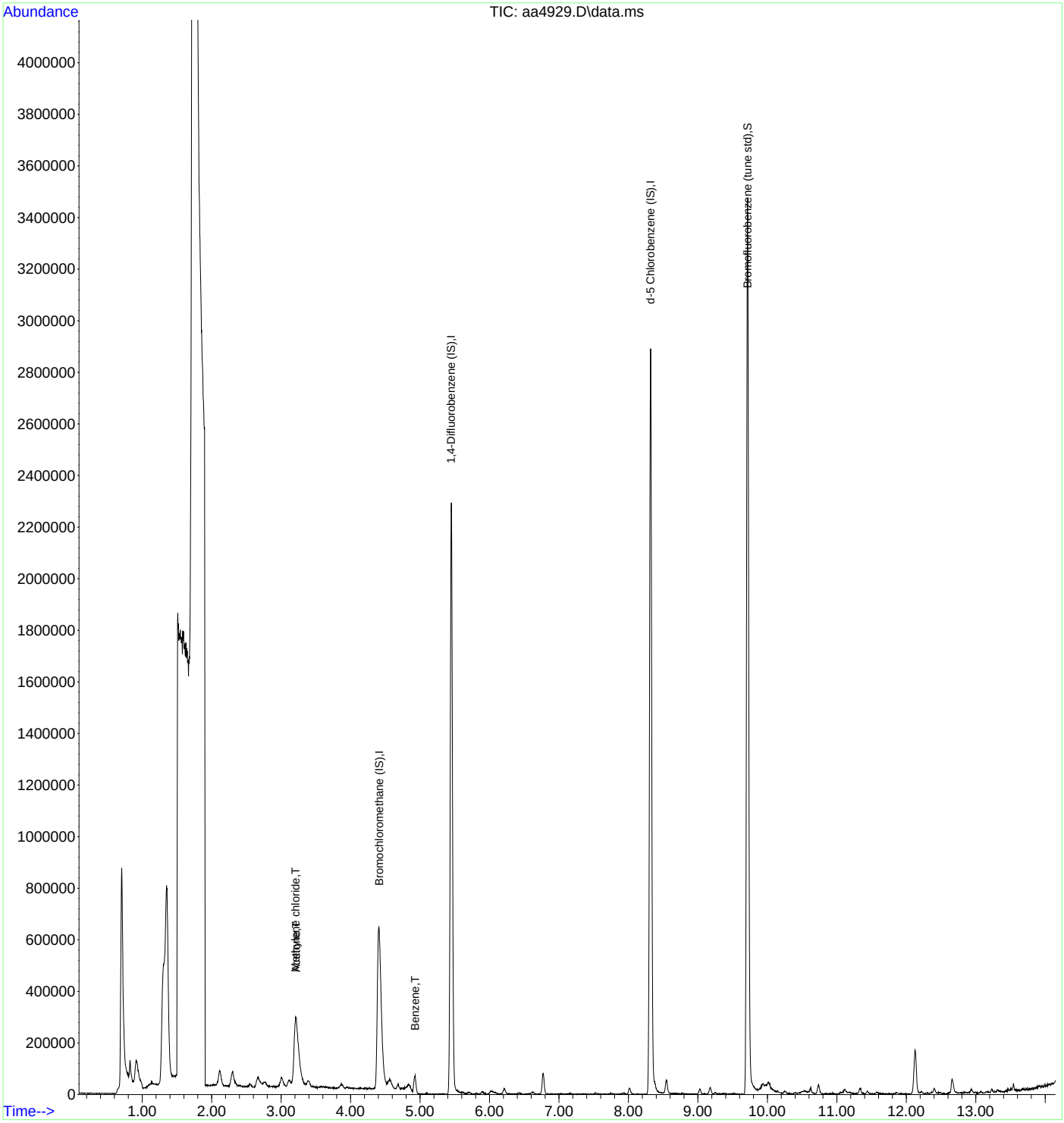
Quant Time: Dec 13 11:23:02 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

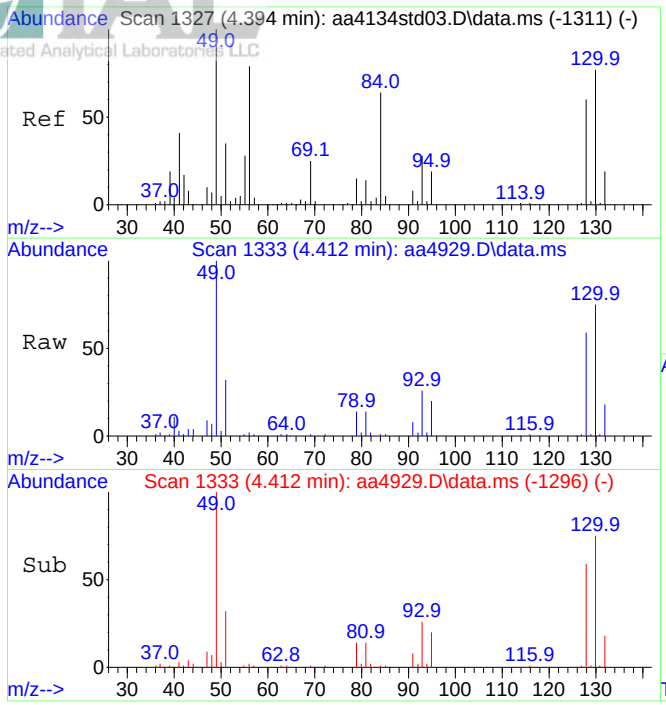
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.412 | 130 | 441232 | 10.00 | ppbV | 0.018 |
| 39) 1,4-Difluorobenzene (IS) | 5.448 | 114 | 2147334 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 1948898 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1597112 | 9.40 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 20) Methylene chloride | 3.210 | 49 | 190775 | 3.52 | ppbV | 93 |
| 21) Acetone | 3.216 | 43 | 404473 | 6.08 | ppbV | 99 |
| 37) Benzene | 4.930 | 78 | 54291 | 0.31 | ppbV | 97 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4929.D
Acq On : 12 Dec 2023 12:58 am
Operator : jjw
Sample : E23-05079-03
Misc : 3830, 500cc
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Dec 13 11:23:02 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

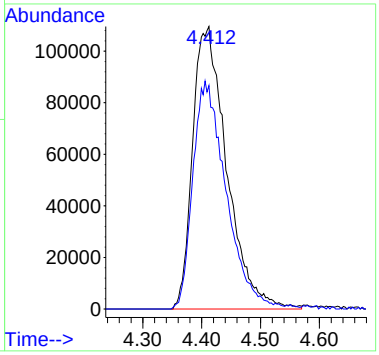


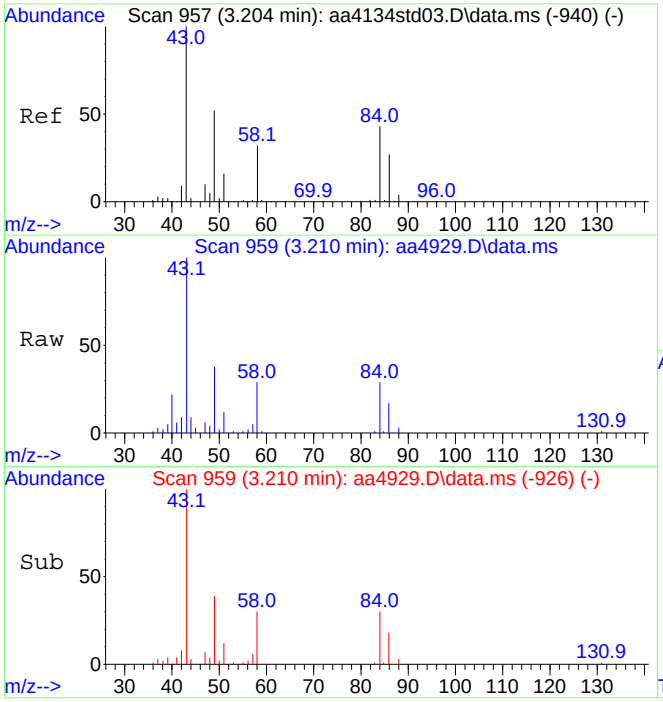



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.412 min Scan# 1333
Delta R.T. 0.018 min
Lab File: aa4929.D
Acq: 12 Dec 2023 12:58 am

Tgt Ion:130 Resp: 441232

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 78.4 | 62.2 | 93.4 |

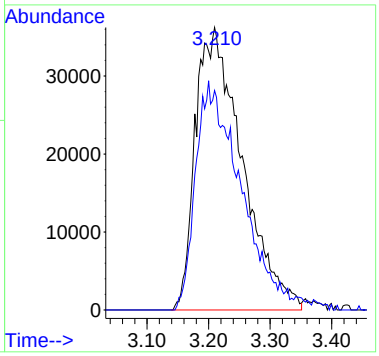


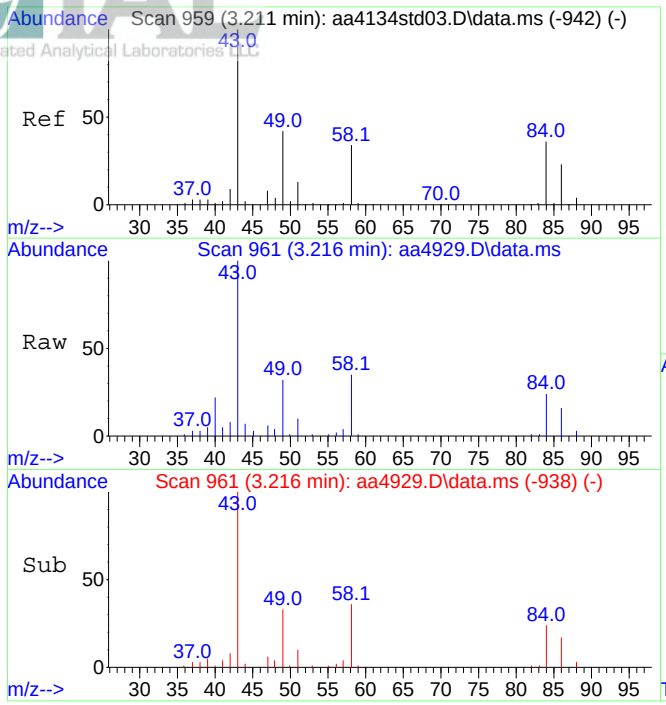




#20
Methylene chloride
Concen: 3.52 ppbV
RT: 3.210 min Scan# 959
Delta R.T. 0.006 min
Lab File: aa4929.D
Acq: 12 Dec 2023 12:58 am

Tgt Ion: 49 Resp: 190775

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 78.6 | 64.8 | 104.8 |

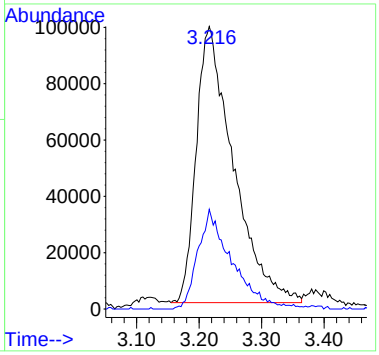


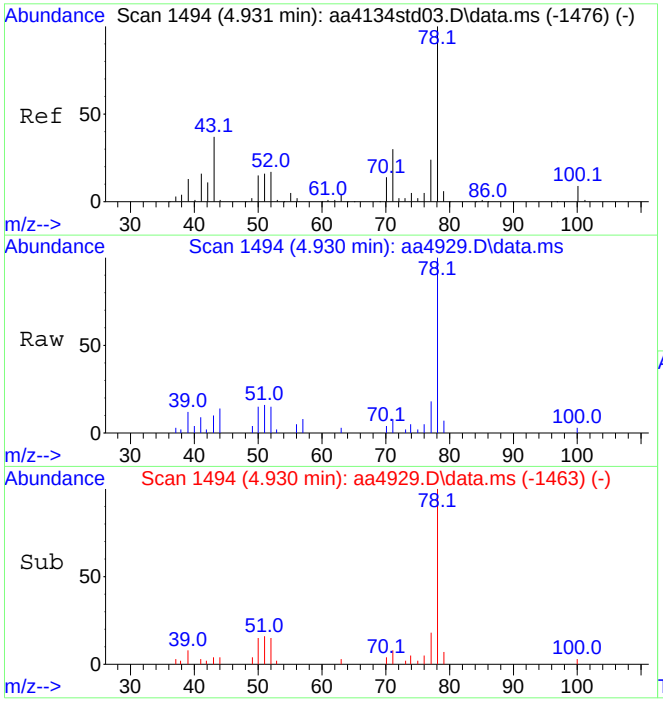



#21
Acetone
Concen: 6.08 ppbV
RT: 3.216 min Scan# 961
Delta R.T. 0.006 min
Lab File: aa4929.D
Acq: 12 Dec 2023 12:58 am

Tgt Ion: 43 Resp: 404473

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 33.2 | 27.1 | 40.7 |

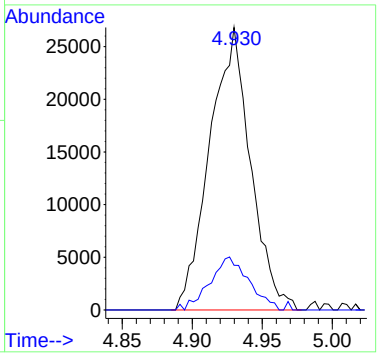


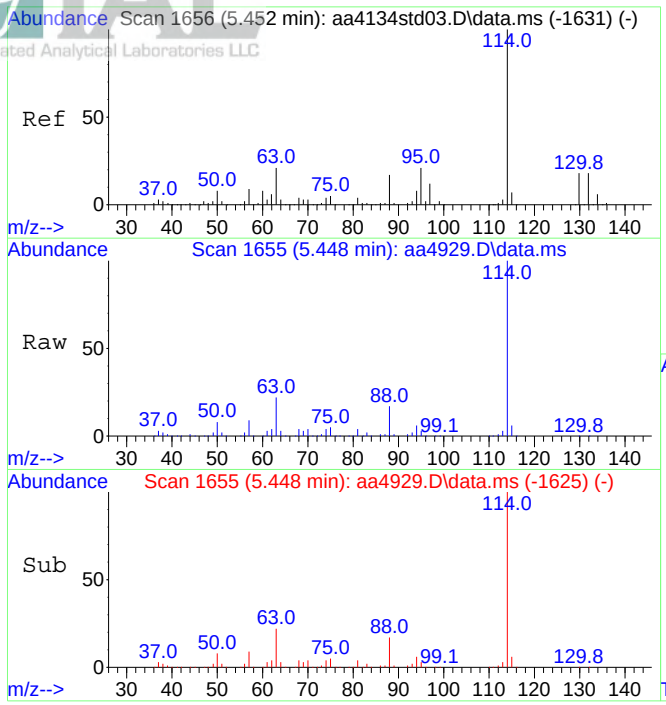




#37
Benzene
Concen: 0.31 ppbV
RT: 4.930 min Scan# 1494
Delta R.T. -0.001 min
Lab File: aa4929.D
Acq: 12 Dec 2023 12:58 am

Tgt Ion: 78 Resp: 54291

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 17.9 | 13.4 | 20.0 |

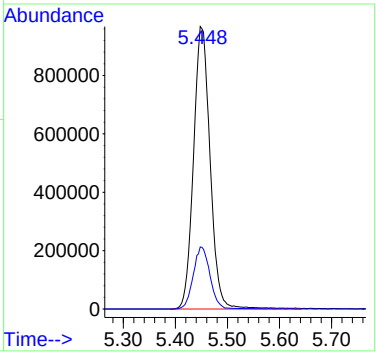


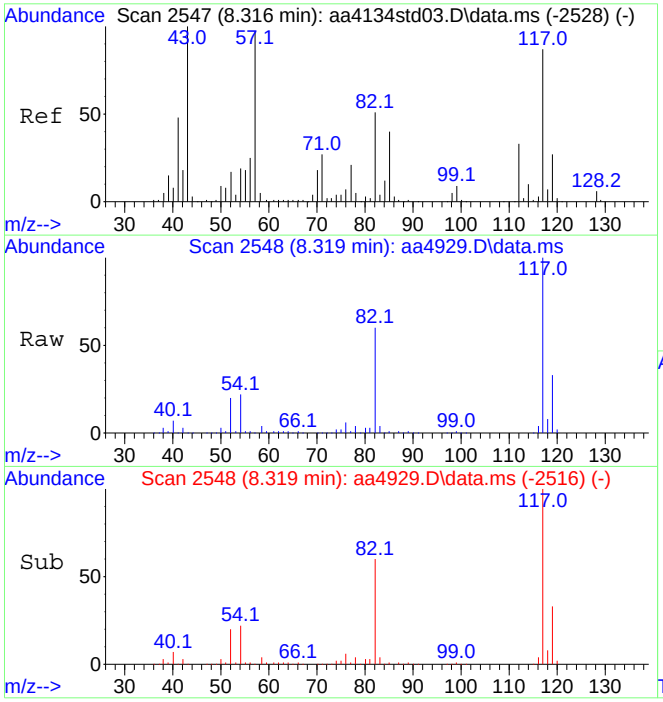



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.448 min Scan# 1655
Delta R.T. -0.004 min
Lab File: aa4929.D
Acq: 12 Dec 2023 12:58 am

Tgt Ion:114 Resp: 2147334

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.0 | 17.0 | 25.6 |

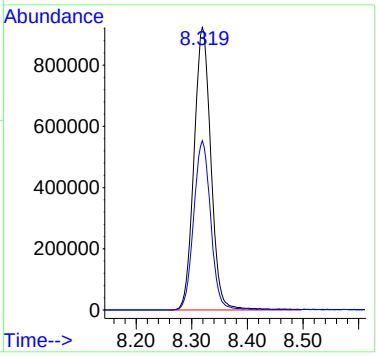


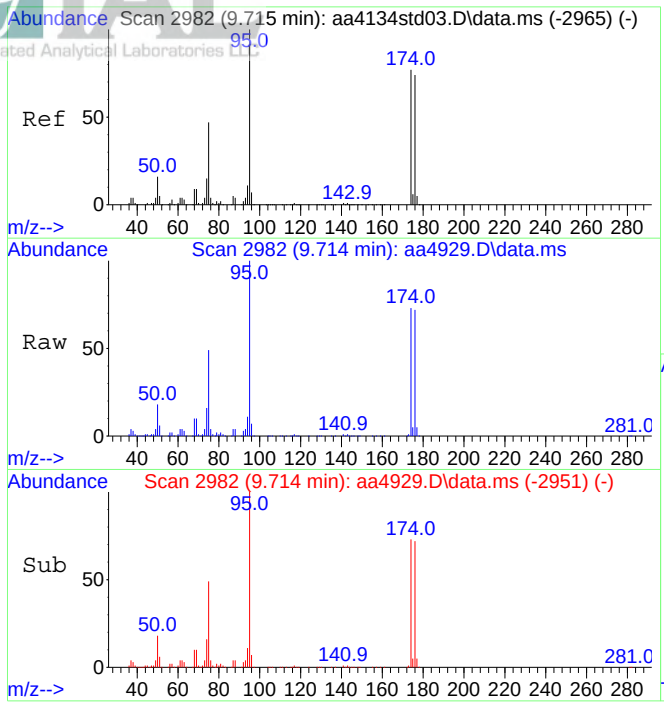




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.319 min Scan# 2548
Delta R.T. 0.002 min
Lab File: aa4929.D
Acq: 12 Dec 2023 12:58 am

Tgt Ion:117 Resp: 1948898

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 60.3 | 47.0 | 70.4 |

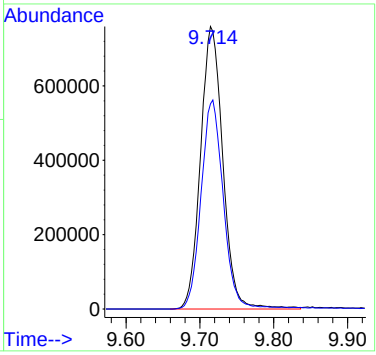





#64
Bromofluorobenzene (tune std)
Concen: 9.40 ppbV
RT: 9.714 min Scan# 2982
Delta R.T. -0.001 min
Lab File: aa4929.D
Acq: 12 Dec 2023 12:58 am

Tgt Ion: 95 Resp: 1597112

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 74.1 | 61.1 | 91.7 |



Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4930.D
Acq On : 12 Dec 2023 1:31 am
Operator : jjw
Sample : E23-05079-23
Misc : Dup of E23-05079-03, Can # 3830
ALS Vial : 33 Sample Multiplier: 1

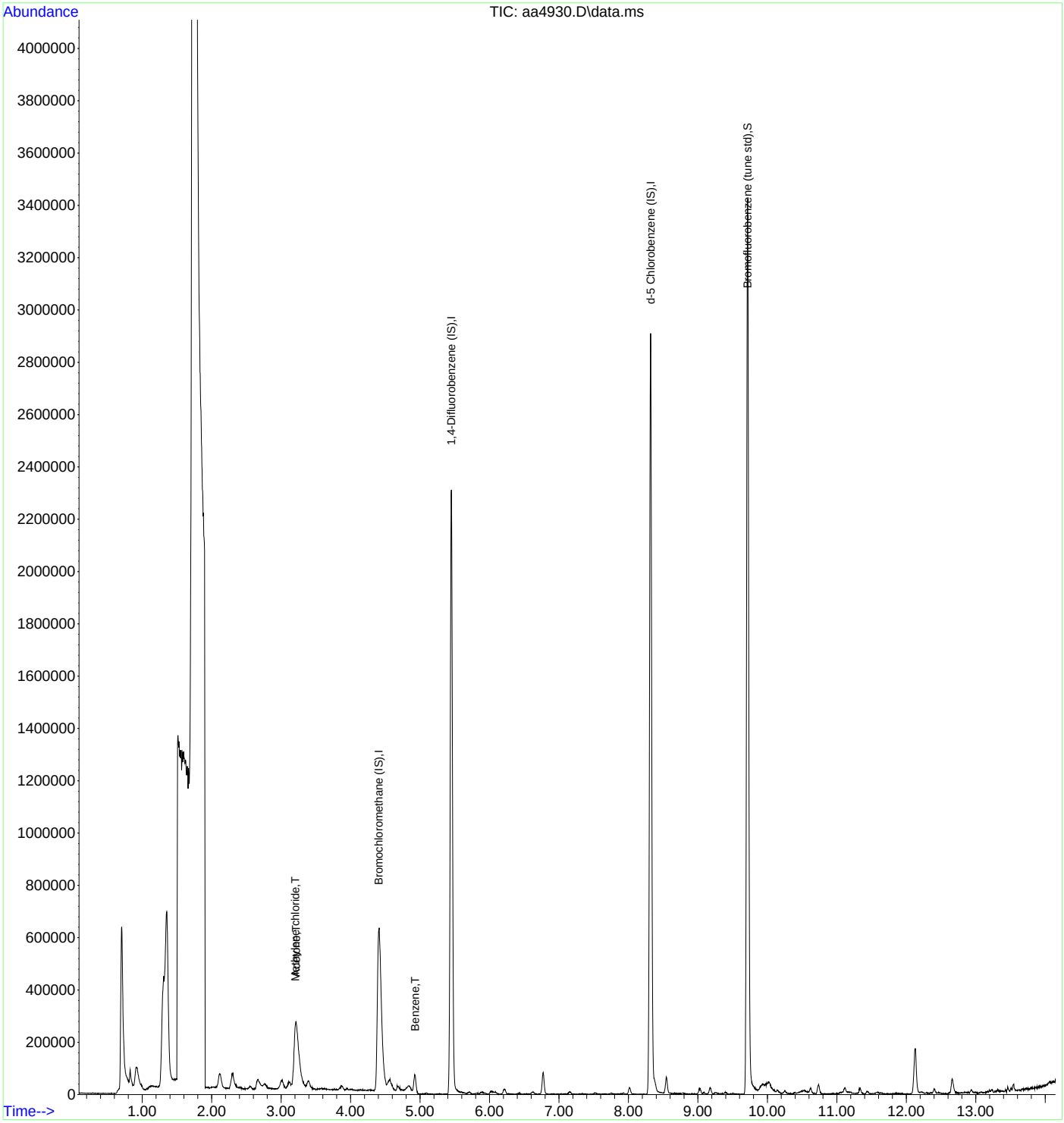
Quant Time: Dec 13 11:24:13 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

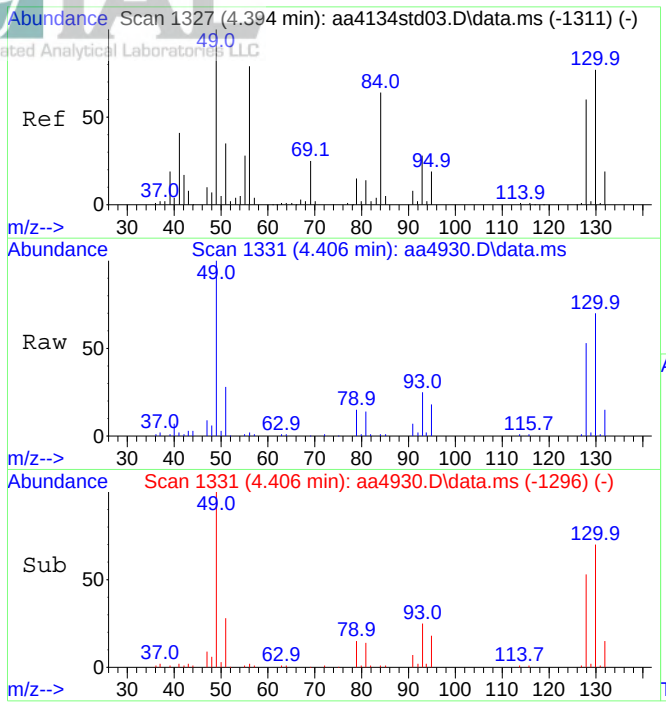
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.406 | 130 | 452291 | 10.00 | ppbV | 0.012 |
| 39) 1,4-Difluorobenzene (IS) | 5.451 | 114 | 2167232 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.322 | 117 | 1931386 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1574669 | 9.35 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 20) Methylene chloride | 3.203 | 49 | 191374 | 3.44 | ppbV | 90 |
| 21) Acetone | 3.216 | 43 | 399825 | 5.86 | ppbV | 99 |
| 37) Benzene | 4.930 | 78 | 56929 | 0.32 | ppbV | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4930.D
Acq On : 12 Dec 2023 1:31 am
Operator : jjw
Sample : E23-05079-23
Misc : Dup of E23-05079-03, Can # 3830
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Dec 13 11:24:13 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

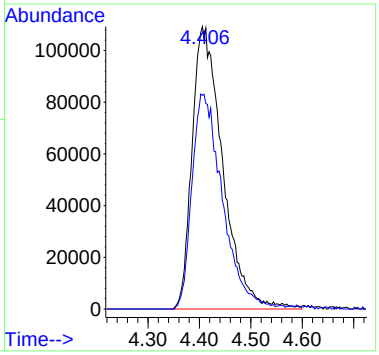


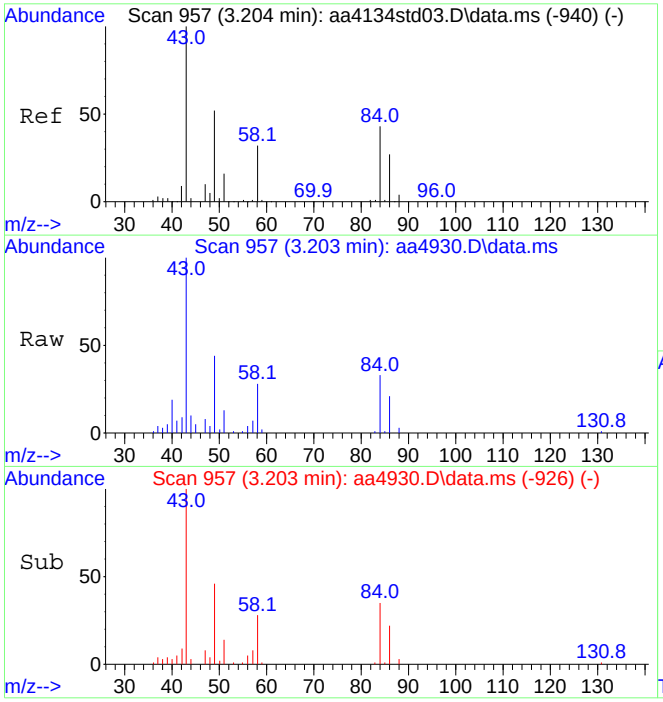



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.406 min Scan# 1331
Delta R.T. 0.012 min
Lab File: aa4930.D
Acq: 12 Dec 2023 1:31 am

Tgt Ion:130 Resp: 452291

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 75.9 | 62.2 | 93.4 |

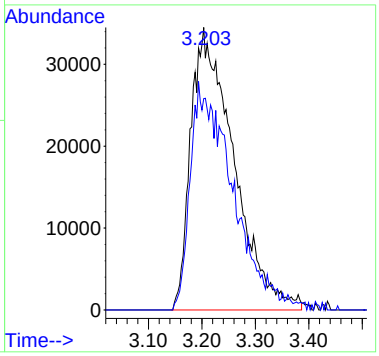


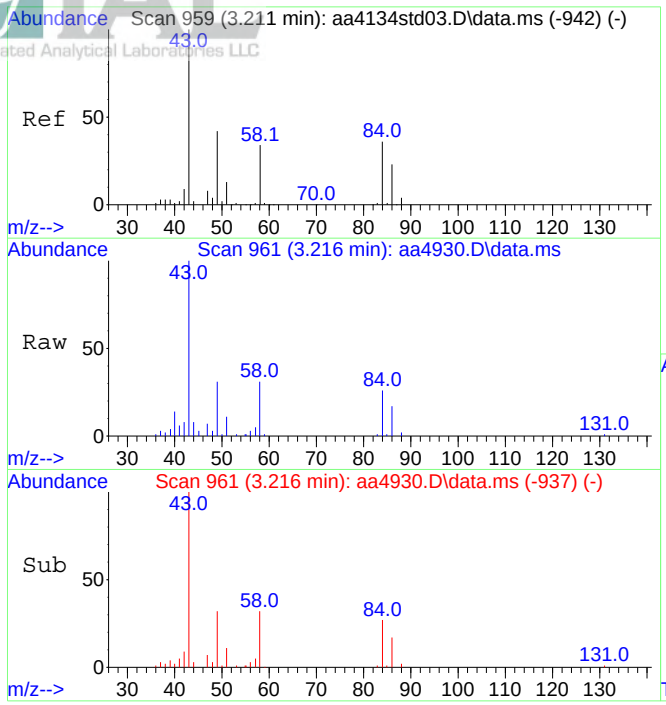




#20
Methylene chloride
Concen: 3.44 ppbV
RT: 3.203 min Scan# 957
Delta R.T. -0.001 min
Lab File: aa4930.D
Acq: 12 Dec 2023 1:31 am

Tgt Ion: 49 Resp: 191374

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 76.0 | 64.8 | 104.8 |

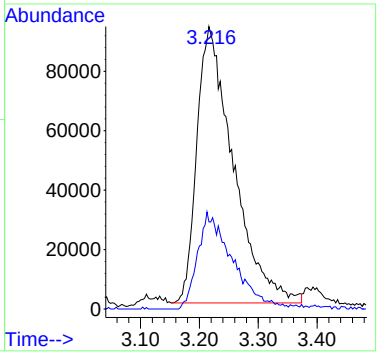


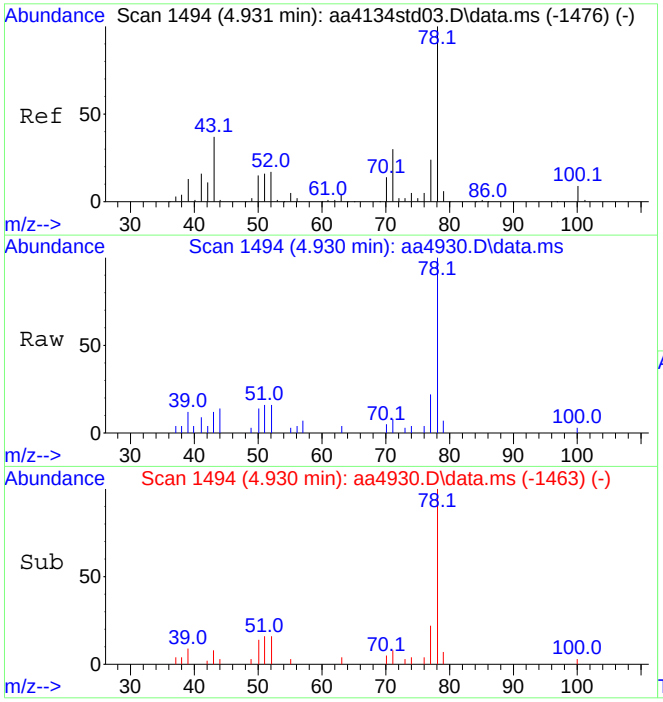



#21
Acetone
Concen: 5.86 ppbV
RT: 3.216 min Scan# 961
Delta R.T. 0.006 min
Lab File: aa4930.D
Acq: 12 Dec 2023 1:31 am

Tgt Ion: 43 Resp: 399825

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 33.3 | 27.1 | 40.7 |

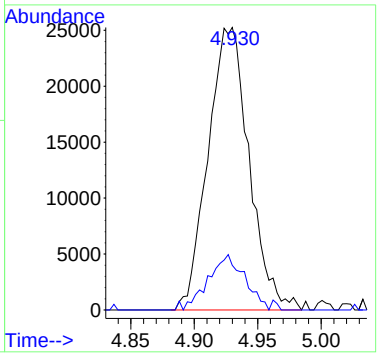


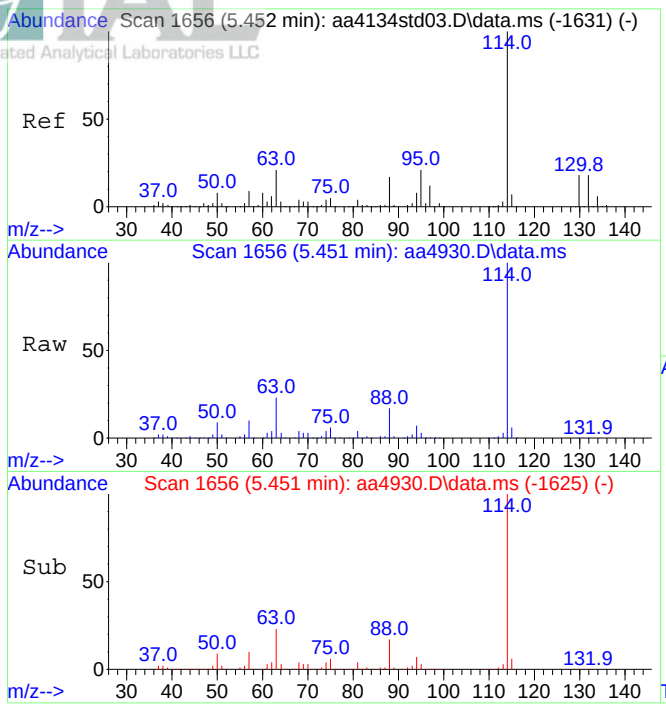




#37
Benzene
Concen: 0.32 ppbV
RT: 4.930 min Scan# 1494
Delta R.T. -0.001 min
Lab File: aa4930.D
Acq: 12 Dec 2023 1:31 am

Tgt Ion: 78 Resp: 56929

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 17.1 | 13.4 | 20.0 |

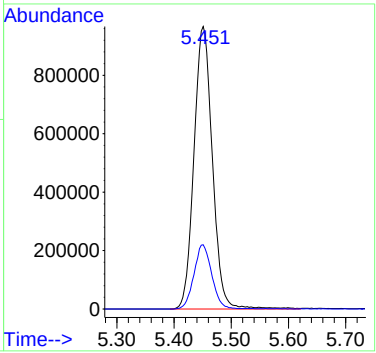


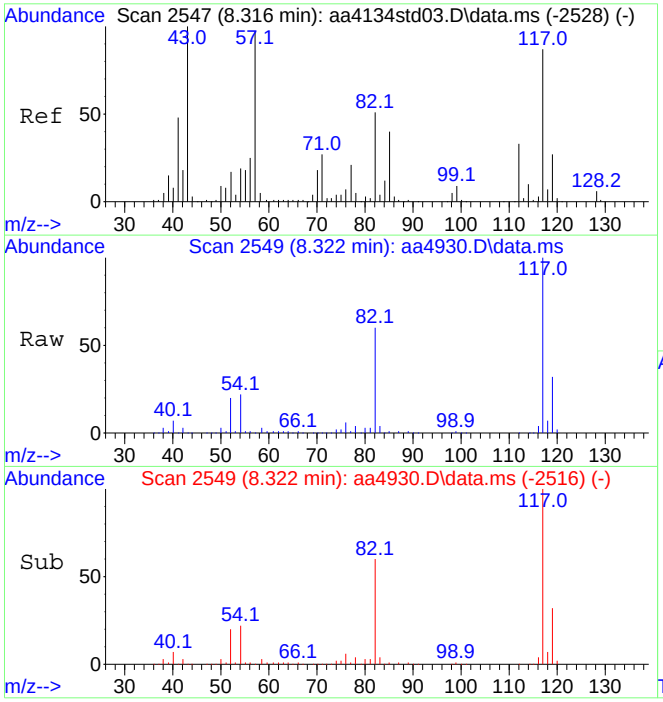



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.451 min Scan# 1656
Delta R.T. -0.001 min
Lab File: aa4930.D
Acq: 12 Dec 2023 1:31 am

Tgt Ion:114 Resp: 2167232

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.0 | 17.0 | 25.6 |

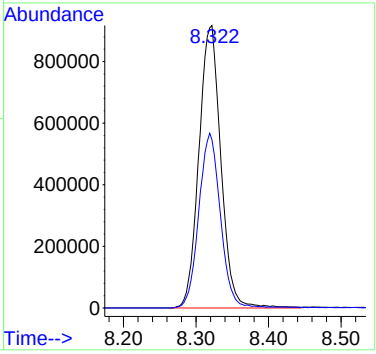


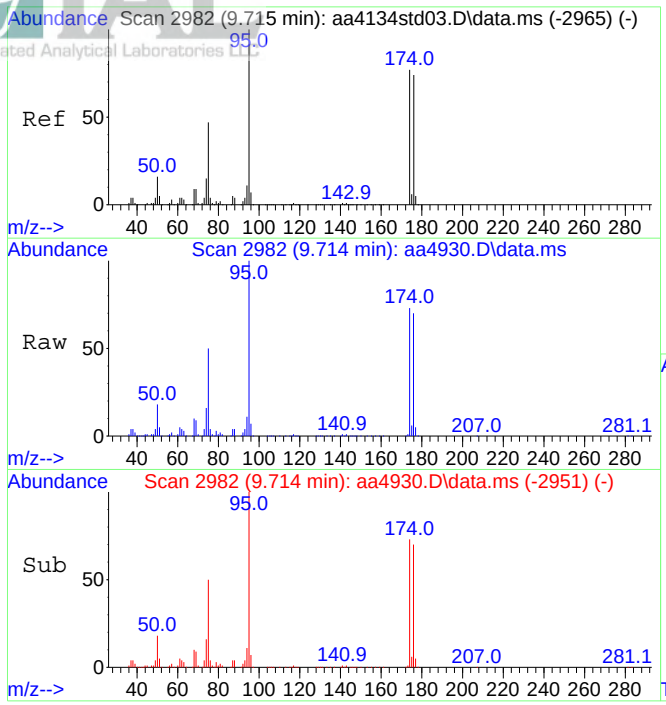




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.322 min Scan# 2549
Delta R.T. 0.006 min
Lab File: aa4930.D
Acq: 12 Dec 2023 1:31 am

Tgt Ion:117 Resp: 1931386

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 61.0 | 47.0 | 70.4 |

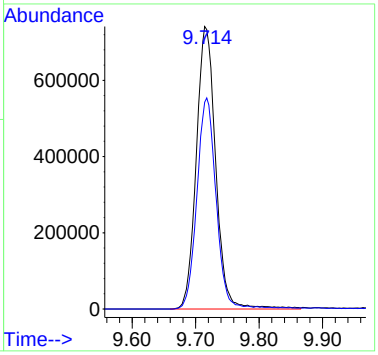





#64
Bromofluorobenzene (tune std)
Concen: 9.35 ppbV
RT: 9.714 min Scan# 2982
Delta R.T. -0.001 min
Lab File: aa4930.D
Acq: 12 Dec 2023 1:31 am

Tgt Ion: 95 Resp: 1574669

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 74.6 | 61.1 | 91.7 |



# INTEGRATED ANALYTICAL LABORATORIES, LLC

**Integrated Analytical Laboratories**

**GC/MS Run Log**

Instrument ID: Agilent 7890A / 5975C
Column: Restek RTX-1 SN 992567

Target Directory: D:\Agilent GCMS\

**Date of Analysis:** 12/8, 11/2023
**Date of Initial Calibration:** 8/15/2023, 10/10/2023
**SDG #:** E23-05080

| File # | Laboratory Sample ID | QC Check | Dilution Factor | Can # | Analyst | Injection Volume (cc) | Comments | *Make-up Air* | | *Acquisition* | | *Room* | | *TO-15 Standard* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Added to canister (cc) | Added for dilution | Date | Time | Temp | BP "Hg | Working ID | Vendor ID (Lot#) |
| aa3401bfb | BFB | ✓ | | ALM018474 | JJW | 0.5 | | | | **8/15/2023** | 10:11 | 70 | 30.30 | | 160-402352677-1 |
| aa3402std05 | 0.2 ppbv Std | ✓ | | EB0103704 | JJW | 1 | | | | | | | | 8/15/2023 | 160-402619255-1 |
| aa3403std04 | 2 ppbv Std | ✓ | | EB0103704 | JJW | 10 | | | | | | | | 8/15/2023 | 160-402619255-1 |
| aa3404std03 | 10 ppbv Std | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 8/15/2023 | 160-402619255-1 |
| aa3405std02 | 20 ppbv Std | ✓ | | EB0103704 | JJW | 100 | | | | | | | | 8/15/2023 | 160-402619255-1 |
| aa3406std01 | 40 ppbv Std | ✓ | | EB0103704 | JJW | 200 | | | | | | | | 8/15/2023 | 160-402619255-1 |
| aa3407icvss | 10 ppbv ICVSS | ✓ | | EB0116272 | JJW | 50 | | | | | | | | 8/15/2023 | 160-402744241-1 |

Analyst Name: J Walukiewicz

Signature: Joseph Walukiewicz

# INTEGRATED ANALYTICAL LABORATORIES, LLC

**Integrated Analytical Laboratories**
**GC/MS Run Log**

Instrument ID: Agilent 7890A / 5975C
Column: Restek RTX-1 SN 992567

Target Directory: D:\Agilent GCMS\

**Date of Analysis:** 12/8, 11/2023
**Date of Initial Calibration:** 8/15/2023, 10/10/2023
**SDG #:** E23-05080

| File # | Laboratory Sample ID | QC Check | Dilution Factor | Can # | Analyst | Injection Volume (cc) | Comments | *Make-up Air* | | *Acquisition* | | *Room* | | *TO-15 Standard* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Added to canister (cc) | Added for dilution | Date | Time | Temp | BP "Hg | Working ID | Vendor ID (Lot#) |
| aa4071bfb | BFB | ✓ | | ALM018474 | JJW | 0.5 | | | | **9/28/2023** | 10:01 | 70 | 30.54 | | 160-402352677-1 |
| aa4072dcvs | 10 ppbv DCVS | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 8/15/2023 | 160-401980152-1 |
| aa4073lcs | 10 ppbv LCS | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 8/15/2023 | 160-401980152-1 |
| aa4074blk | Method Blank | ✓ | | 1127 | JJW | 500 | | | | | | | | | |
| aa4075rllcs | 0.2 ppbv RLLCS | ✓ | | EB0103704 | JJW | 1 | | | | | | | | 8/15/2023 | 160-401980152-1 |
| aa4076 | 2164 | ✓ | | 8242301 | JJW | 500 | | | | | | | | | |
| aa4077 | 4870 | ✓ | | 9132301 | JJW | 500 | | | | | | | | | |
| aa4078 | 2160 | ✓ | | 9142301 | JJW | 500 | | | | | | | | | |
| aa4079 | E23-03970-01x5 dil | ✓ | 5 | 2881 | JJW | 100 | | | | | | | | | |
| aa4080 | E23-03970-02x5 dil | ✓ | 5 | 3025A | JJW | 100 | | | | | | | | | |
| aa4081 | E23-04122-02x10 dil | ✓ | 10 | 1068 | JJW | 50 | | | | | | | | | |
| aa4082 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4083 | E23-04122-03x10 dil | ✓ | 10 | 1571 | JJW | 50 | | | | | | | | | |
| aa4084 | E23-04122-04x10 dil | ✓ | 10 | 1366 | JJW | 50 | | | | | | | | | |
| aa4085 | E23-04122-05x10 dil | ✓ | 10 | 1596 | JJW | 50 | | | | | | | | | |
| aa4086 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4087 | E23-04122-06x10 dil | ✓ | 10 | 1781 | JJW | 50 | | | | | | | | | |
| aa4088 | E23-04122-26x10 dil | ✓ | 10 | 4122-06x10 d | JJW | 50 | | | | | | | | | |
| aa4089 | E23-04154-05x10 dil | ✓ | 10 | 1404 | JJW | 50 | | | | | | | | | |
| aa4090 | E23-04154-06x10 dil | ✓ | 10 | 1565 | JJW | 50 | | | | | | | | | |
| aa4091 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4092 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4093cccvs | 10 ppbv CCCVS | ✓ | | EB0103704 | JJW | 50 | | | | 9/29/2023 | 12:28 | | | 8/15/2023 | 160-402619255-1 |

Analyst Name: J Walukiewicz

Signature: Joseph Walukiewicz

# INTEGRATED ANALYTICAL LABORATORIES, LLC

**Integrated Analytical Laboratories**
**GC/MS Run Log**

Instrument ID: Agilent 7890A / 5975C
Column: Restek RTX-1 SN 992567

Target Directory: D:\Agilent GCMS\

**Date of Analysis:** 12/8, 11/2023
**Date of Initial Calibration:** 8/15/2023, 10/10/2023
**SDG #:** E23-05080

| File # | Laboratory Sample ID | QC Check | Dilution Factor | Can # | Analyst | Injection Volume (cc) | Comments | *Make-up Air* | | *Acquisition* | | *Room* | | *TO-15 Standard* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Added to canister (cc) | Added for dilution | Date | Time | Temp | BP "Hg | Working ID | Vendor ID (Lot#) |
| aa4131bfb | BFB | ✓ | | ALM018474 | JJW | 0.5 | | | | **10/10/2023** | 10:13 | 70 | 30.10 | | 160-402352677-1 |
| aa4132std05 | 0.2 ppbv Std | ✓ | | EB0103704 | JJW | 1 | | | | | | | | 10/10/2023 | 160-402619255-1 |
| aa4133std04 | 2 ppbv Std | ✓ | | EB0103704 | JJW | 10 | | | | | | | | 10/10/2023 | 160-402619255-1 |
| aa4134std03 | 10 ppbv Std | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 10/10/2023 | 160-402619255-1 |
| aa4135std02 | 20 ppbv Std | ✓ | | EB0103704 | JJW | 100 | | | | | | | | 10/10/2023 | 160-402619255-1 |
| aa4136std01 | 40 ppbv Std | ✓ | | EB0103704 | JJW | 200 | | | | | | | | 10/10/2023 | 160-402619255-1 |
| aa4137icvss | 10 ppbv ICVSS | ✓ | | EB0116272 | JJW | 50 | | | | | | | | 10/10/2023 | 160-402744241-1 |
| aa4138lcs | 10 ppbv LCS | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4139blk | Method Blank | ✓ | | 1127 | JJW | 500 | | | | | | | | | |
| aa4140rllcs | 0.2 ppbv RLLCS | ✓ | | EB0103704 | JJW | 1 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4141 | 5078 | ✓ | | 9252301 | JJW | 500 | | | | | | | | | |
| aa4142 | 5101 | ✓ | | 9262301 | JJW | 500 | | | | | | | | | |
| aa4143 | 4869 | ✓ | | 9272301 | JJW | 500 | | | | | | | | | |
| aa4144 | 2157 | ✓ | | 10022301 | JJW | 500 | | | | | | | | | |
| aa4145 | E23-04192-01 | ✓ | | 5100 | JJW | 500 | | | | | | | | | |
| aa4146 | E23-04192-02 | ✓ | | 2072 | JJW | 500 | | | | | | | | | |
| aa4147 | blank | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4148 | E23-04378-01 | ✓ | | 2033 | JJW | 500 | | | | | | | | | |
| aa4149 | E23-04378-02 | ✓ | | 5080 | JJW | 500 | | | | | | | | | |
| aa4150 | E23-04378-22 | ✓ | Dup of E23-04378-02, C | | JJW | 500 | | | | | | | | | |
| aa4151 | E23-04513-01 | ✓ | | 3814 | JJW | 500 | | | | | | | | | |
| aa4152 | blank | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4153 | blank | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4154cccvs | 10 ppbv CCCVS | ✓ | | EB0103704 | JJW | 50 | | | | 10/11/2023 | 1:53 | | | 10/10/2023 | 160-402619255-1 |

Analyst Name: J Walukiewicz

Signature: Joseph Walukiewicz

# INTEGRATED ANALYTICAL LABORATORIES, LLC

**Integrated Analytical Laboratories**

**GC/MS Run Log**

Instrument ID: Agilent 7890A / 5975C
Column: Restek RTX-1 SN 992567

Target Directory: D:\Agilent GCMS\

**Date of Analysis:** 12/8, 11/2023
**Date of Initial Calibration:** 8/15/2023, 10/10/2023
**SDG #:** E23-05080

| File # | Laboratory Sample ID | QC Check | Dilution Factor | Can # | Analyst | Injection Volume (cc) | Comments | *Make-up Air* | | *Acquisition* | | *Room* | | *TO-15 Standard* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Added to canister (cc) | Added for dilution | Date | Time | Temp | BP "Hg | Working ID | Vendor ID (Lot#) |
| aa4881bfb | BFB | ✓ | | ALM018474 | JJW | 0.5 | | | | **12/8/2023** | 10:21 | 68 | 30.46 | | 160-402352677-1 |
| aa4882dcvs | 10 ppbv DCVS | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4883lcs | 10 ppbv LCS | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4884blk | Method Blank | ✓ | | 1127 | JJW | 500 | | | | | | | | | |
| aa4885rllcs | 0.2 ppbv RLLCS | ✓ | | EB0103704 | JJW | 1 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4886 | E23-05047-01 | ✓ | | 2902 | JJW | 500 | | | | | | | | | |
| aa4887 | E23-05047-02 | ✓ | | 2037 | JJW | 500 | | | | | | | | | |
| aa4888 | E23-05047-03 | ✓ | | 3811 | JJW | 500 | | | | | | | | | |
| aa4889 | E23-05047-04 | ✓ | | 3283 | JJW | 500 | | | | | | | | | |
| aa4890 | E23-05047-05 | ✓ | | 2749 | JJW | 500 | | | | | | | | | |
| aa4891 | E23-05047-06 | ✓ | | 5091 | JJW | 500 | | | | | | | | | |
| aa4892 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4893 | E23-05080-01 | ✓ | | 3006 | JJW | 500 | | | | | | | | | |
| aa4894 | E23-05080-02 | ✓ | | 2155 | JJW | 500 | | | | | | | | | |
| aa4895 | E23-05093-01 | ✓ | | 3044A | JJW | 500 | | | | | | | | | |
| aa4896 | E23-05047-01x10 dil | ✓ | 10 | 2902 | JJW | 50 | | | | | | | | | |
| aa4897 | E23-05047-03x10 dil | ✓ | 10 | 3811 | JJW | 50 | | | | | | | | | |
| aa4898 | E23-05047-04x10 dil | ✓ | 10 | 3283 | JJW | 50 | | | | | | | | | |

Analyst Name: J Walukiewicz

Signature: Joseph Walukiewicz

# INTEGRATED ANALYTICAL LABORATORIES, LLC

**Integrated Analytical Laboratories**
**GC/MS Run Log**

Instrument ID: Agilent 7890A / 5975C
Column: Restek RTX-1 SN 992567

Target Directory: D:\Agilent GCMS\

**Date of Analysis:** 12/8, 11/2023
**Date of Initial Calibration:** 8/15/2023, 10/10/2023
**SDG #:** E23-05080

| File # | Laboratory Sample ID | QC Check | Dilution Factor | Can # | Analyst | Injection Volume (cc) | Comments | *Make-up Air* | | *Acquisition* | | *Room* | | *TO-15 Standard* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Added to canister (cc) | Added for dilution | Date | Time | Temp | BP "Hg | Working ID | Vendor ID (Lot#) |
| aa4901bfb | BFB | ✓ | | ALM018474 | JJW | 0.5 | | | | **12/11/2023** | 9:24 | 68 | 30.07 | | 160-402352677-1 |
| aa4902dcvs | 10 ppbv DCVS | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4903lcs | 10 ppbv LCS | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4904blk | Method Blank | ✓ | | 1127 | JJW | 500 | | | | | | | | | |
| aa4905rllcs | 0.2 ppbv RLLCS | ✓ | | EB0103704 | JJW | 1 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4906 | 1458 | ✓ | | 12062301 | JJW | 50 | | | | | | | | | |
| aa4907 | 1588 | ✓ | | 12082301 | JJW | 50 | | | | | | | | | |
| aa4908 | 3012 | ✓ | | 12072301 | JJW | 500 | | | | | | | | | |
| aa4909 | E23-05047-03x10 dil | ✓ | 10 | 3811 | JJW | 50 | | | | | | | | | |
| aa4910 | E23-05047-04x5 dil | ✓ | 5 | 3283 | JJW | 100 | | | | | | | | | |
| aa4911 | E23-05080-01x10 dil | ✓ | 10 | 3006 | JJW | 50 | | | | | | | | | |
| aa4912 | E23-05080-02x10 dil | ✓ | 10 | 2155 | JJW | 50 | | | | | | | | | |
| aa4913 | E23-05093-01x5 dil | ✓ | 5 | 3044Ac | JJW | 100 | | | | | | | | | |
| aa4914 | E23-05047-06x5 dil | ✓ | 5 | 5091 | JJW | 100 | | | | | | | | | |
| aa4915 | E23-05047-06 | ✓ | | 5091 | JJW | 500 | | | | | | | | | |
| aa4916 | E23-05081-01x5 dil | ✓ | 5 | 5073 | JJW | 100 | | | | | | | | | |
| aa4917 | E23-05081-01 | ✓ | | 5073 | JJW | 500 | | | | | | | | | |
| aa4918 | E23-05081-02x5 dil | ✓ | 5 | 2758 | JJW | 100 | | | | | | | | | |
| aa4919 | E23-05081-02 | ✓ | | 2758 | JJW | 500 | | | | | | | | | |
| aa4920 | E23-05081-03x5 dil | ✓ | 5 | 3809 | JJW | 100 | | | | | | | | | |
| aa4921 | E23-05081-03 | ✓ | | 3809 | JJW | 500 | | | | | | | | | |
| aa4922 | E23-05081-04x5 dil | ✓ | 5 | 2896B | JJW | 100 | | | | | | | | | |
| aa4923 | E23-05081-04 | ✓ | | 2896B | JJW | 500 | | | | | | | | | |
| aa4924 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4925 | E23-05007-01x10 dil | ✓ | 10 | 1543 | JJW | 50 | | | | | | | | | |
| aa4926 | E23-05007-02x10 dil | ✓ | 10 | 1601 | JJW | 50 | | | | | | | | | |
| aa4927 | E23-05007-03x10 dil | ✓ | 10 | 1773 | JJW | 50 | | | | | | | | | |
| aa4928 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4929 | E23-05079-03 | ✓ | | 3830 | JJW | 500 | | | | | | | | | |
| aa4930 | E23-05079-23 | ✓ | Dup of E23-05079-03, C | | JJW | 500 | | | | | | | | | |
| aa4931cccvs | 10 ppbv CCCVS | ✓ | | EB0103704 | JJW | 50 | | | | 12/12/2023 | 1:59 | | | 10/10/2023 | 160-401980152-1 |

Analyst Name: J Walukiewicz

Signature: Joseph Walukiewicz

Integrated Analytical Labs
273 Franklin Rd
Randolph, NJ 07869

# External Chain of Custody Record/ Field Test Data Sheet USEPA Method TO-15

Contact Us: 973 361-4252
fax: 973 366-5613
Web: www.ialonline.com

Carrier (check one): ____ IAL Courier ____ Client Courier ____ FedEx/UPS

pg 1 of 6

| Client Contact Information | Project Information | Invoice Information |
|---|---|---|
| Company: HK Engineering and Geology D.P.C. | Project Name: HK2661.2 | |
| Address: 1600 US 22 East | Project Location (State): NY | Attn: |
| Union, NJ 07083 | Project Manager: Chris Hirschmann | Address: |
| Phone: 908 -688-7800 | PM Signature: | |
| Fax: | PM E-Mail: chirschmann@hillmannconsulting.com | PO #: HK2661.2 |
| Report to: Chris Hirschmann | Sampler: D. Aponte | Quote #: |

Analysis Turnaround Time - IF NO TAT IS SPECIFIED, 2 WEEK TAT IS ASSUMED

IAL Standard: 2 weeks (10 business days)

Rush (**pre-approved by lab): 24hr** 48hr** 72hr** 96hr** 1wk**

Barometric Pressure: Start ____ Stop ____

| Sample Identification | Start DATE & TIME (24hr Clock) | End DATE & TIME (24hr Clock) | Starting Vacuum ("Hg) | Ending Vacuum ("Hg) | Starting Temp. (°F) | Ending Temp. (°F) | Outgoing Vacuum - Lab ("Hg) | Incoming Vacuum - Lab ("Hg) | Flow Regulator ID | Canister ID | Canister Size (1L or 6L) | Flow Controller Readout (cc/min) | EPA TO - 15 | NJDEP LLTO-15 (includes 30 TICs) | Library Search (10, 20, or 30 TICs) | Other (Explain in Comments) | Regulatory/ NY Cat B / Full (NJ Required) | Reduced / NY Cat A Data Package | Results Only | Indoor Air | Ambient / Outdoor Air | Sub Slab / Soil Gas / Near Slab (Circle One) | Stack Emission / SVE System | High Concentrations Expected |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SV2 | 11/16/23 - 12:10 | 11/16/23 - 14:35 | -30 | -7 | 50 | 64 | -29.0 | -6.5 | A0070621-6 | 3006 | 6L | 33.80 | X | | | | | | | | | | | |
| SV3 | 11/16/23 - 12:30 | 11/16/23 - 15:15 | -30 | -7 | 52 | 65 | -29.0 | -6.5 | 7337462 | 2155 | 6L | 33.30 | X | | | | | | | | | | | |

Comments/ Special Analysis Instructions / QC Requirements:

5 Day TAT Hard Copy and Verbal.

09142301 : 1, 2
092823aa : 2160

Note: Hold or contingent samples may be designated by writing an "H" or "C" in the appropriate analysis box.

**ALL FIELDS IN RED ARE REQUIRED**

Shipping Information / Canister Preparation (for laboratory use only)

*Individual Preparing Canisters / Title:* Desmond Flores / Air Department Sample Custodian

*Lab Affixed Seal Number(s):*

*Date/Time Shipping Container Sealed:* 1615 11/13/23

Laboratory Canister Certification

GC/MS Analyst Signature: Joseph J Walukiewicz III (IAL)

IAL 05080

External Chain of Custody

| Relinquished | Received | Date / Time | Reason for Change of External Custody |
|---|---|---|---|
| DW HK Dale Marlow | Dale Marlow | 11/17/23 1500 | shipment from laboratory to client |
| | Desmond Flores | 11-17-23 1634 | received at lab |
| | Joseph J Walukiewicz III (IAL) | 11/20/23 0920 | sample pressure check & storage |

Name/Title Resealing Shipping Container Name:

Date/Time Sample Shipping Container Resealed:

Date/Time Sample Shipping Container Opened: 11/17/23 1634

NJDEP Affixed Seal Number:

Individual Opening Sample Shipping Container: Joseph Walukiewicz/Desmond Flores

Date/Time Internal Chain of Custody Initiated: 11/20/23 0920

White and yellow - lab copies; Pink - client copy

Use appropriate care with IAL sampling equipment when sampling and packing for shipment. The client is responsible for all damage incurred to IAL equipment. Notify IAL if equipment is damaged upon receipt. Holding time before sampling is 15 days, after sampling is 30 days; failure to follow these times may result in data rejection by regulatory agencies. The lab will contact you if your COC is not clear, incomplete, or if discrepancies exist. The use of initials is not permitted on the COC except when correcting errors.

# Example Calculation (EPA TO-15)

$$\frac{\text{Area of Compound}}{\text{Area of Internal Standard}} \times \frac{\text{Concentration of Internal Standard (10 ppbv)}}{\text{Response Factor}} = \text{Concentration of Compound (ppbv)}$$

# Conversion from ppbv to µg/m $^3$

$$\frac{\text{Concentration of Compound (ppbv)} \times \text{Molecular Weight of Compound}}{24.45} = \text{Concentration of Compound (µg/m3)}$$

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Clean Canister Certification Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **Clean Canister, Batch Master 2160** | **Data File:** | **AA4078** |
| **Field Sample Name:** | **Canister 2160** | **Date Analyzed:** | **9/28/2023** |
| **Sample Volume:** | **500ml** | **Matrix:** | **Air** |

Canisters associated with this run: 2160, 3011, 5073, 4865, 2155 (used for E23-05080-02), 3809, 3006 (used for E23-05080-01), 3028

Runs with this Clean Canister Certification:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2164 [AA4076] | 09/28/2023 15:00 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 4870 [AA4077] | 09/28/2023 15:30 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 00:28 |

This canister has been certified clean, all compounds are below 0.2 ppbv.

| Compound | CAS # | RL (ppbv) | Calculated Amount (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromodichloromethane | 75-27-4 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| Dibromochloromethane | 124-48-1 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.20 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.20 | ND |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.20 | ND |
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |

# Clean Canister Certification Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **Clean Canister, Batch Master 2160** | **Data File:** | **AA4078** |
| **Field Sample Name:** | **Canister 2160** | **Date Analyzed:** | **9/28/2023** |
| **Sample Volume:** | **500ml** | **Matrix:** | **Air** |

Canisters associated with this run: 2160, 3011, 5073, 4865, 2155 (used for E23-05080-02), 3809, 3006 (used for E23-05080-01), 3028

Runs with this Clean Canister Certification:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2164 [AA4076] | 09/28/2023 15:00 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 4870 [AA4077] | 09/28/2023 15:30 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 00:28 |

This canister has been certified clean, all compounds are below 0.2 ppbv.

| Compound | CAS # | RL (ppbv) | Calculated Amount (ppbv) |
|---|---|---|---|
| n-Hexane | 110-54-3 | 0.20 | ND |
| Methylene chloride | 75-09-2 | 0.20 | ND |
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.20 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.20 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.40 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4078.D
Acq On : 28 Sep 2023 4:00 pm
Operator : jjw
Sample : 2160
Misc : 3011, 5073, 4865, 2155, 3809, 3006, 3028
ALS Vial : 11 Sample Multiplier: 1

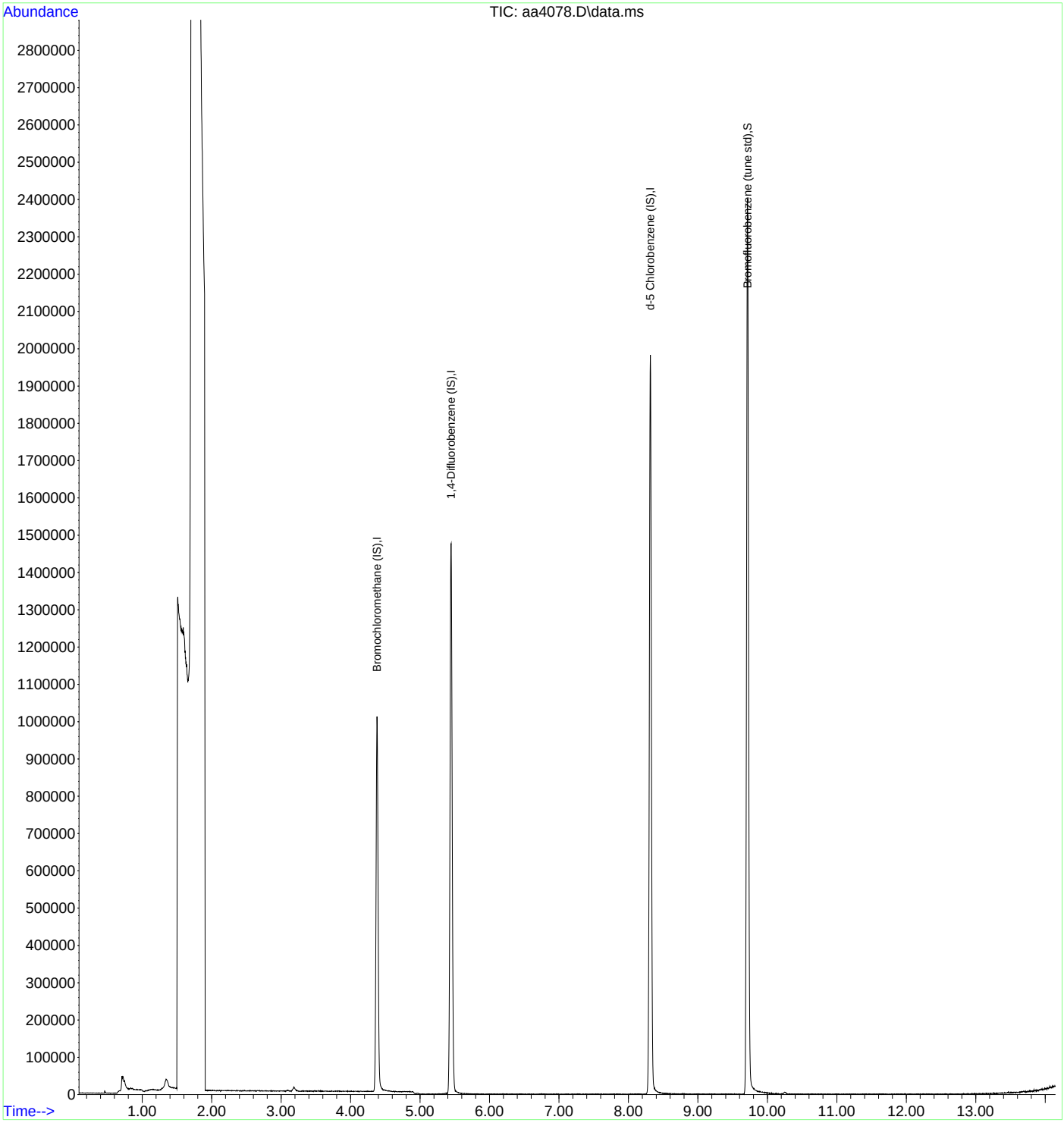
Quant Time: Oct 05 12:01:48 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.380 | 130 | 361668 | 10.00 | ppbV | -0.016 |
| 39) 1,4-Difluorobenzene (IS) | 5.448 | 114 | 1313235 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 1248229 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 997562 | 9.61 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4078.D
Acq On : 28 Sep 2023 4:00 pm
Operator : jjw
Sample : 2160
Misc : 3011, 5073, 4865, 2155, 3809, 3006, 3028
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 05 12:01:48 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4078.D
Acq On : 28 Sep 2023 4:00 pm
Operator : jjw
Sample : 2160
Misc : 3011, 5073, 4865, 2155, 3809, 3006, 3028
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\METHODS\230815.M
Title : TO-15 on the Agilent 7890A / 5975C

Signal : TIC: aa4078.D\data.ms

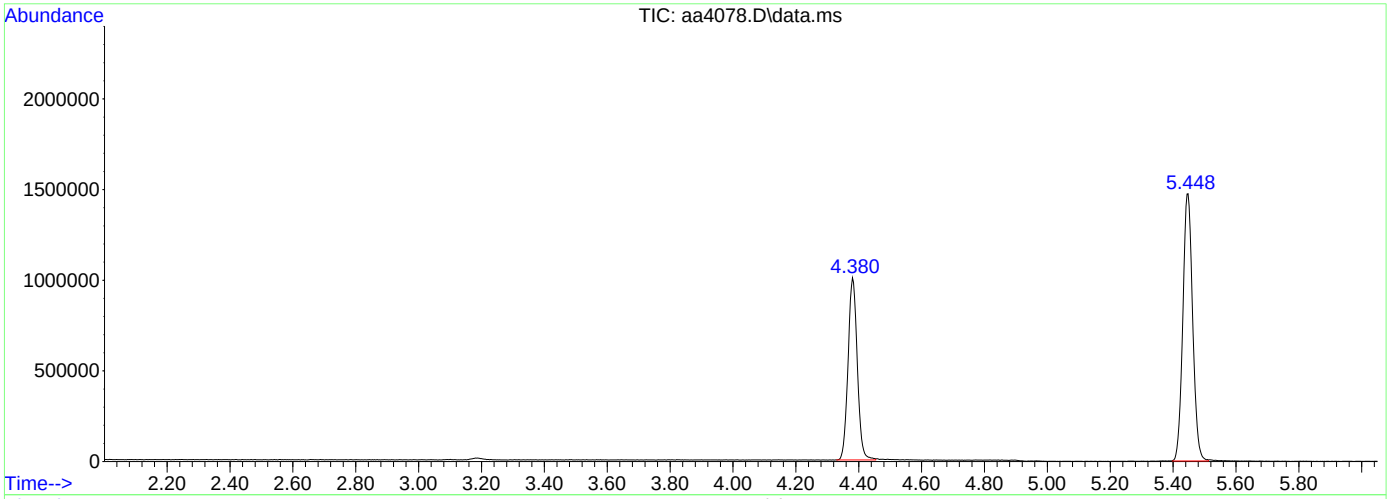
| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.380 | 1307 | 1323 | 1346 | rBV2 | 1005279 | 2047575 | 42.51% | 14.558% |
| 2 | 5.448 | 1639 | 1655 | 1675 | rBV | 1474469 | 3190803 | 66.24% | 22.685% |
| 3 | 8.316 | 2529 | 2547 | 2567 | rBV | 1981592 | 4010050 | 83.25% | 28.510% |
| 4 | 9.714 | 2967 | 2982 | 3008 | rBV | 2400669 | 4816990 | 100.00% | 34.247% |

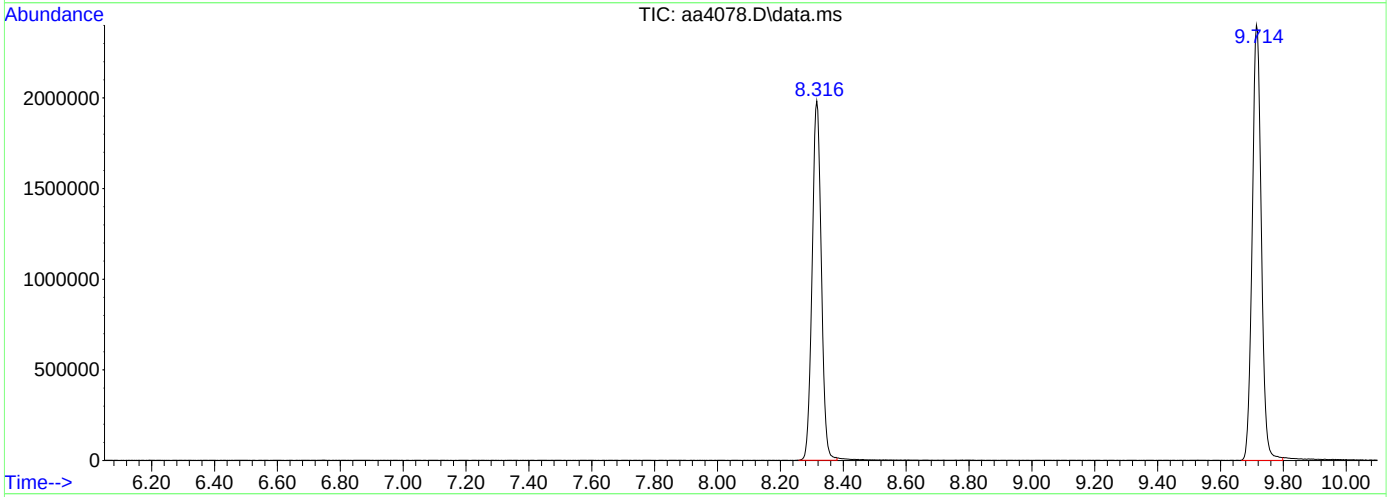
Sum of corrected areas: 14065418

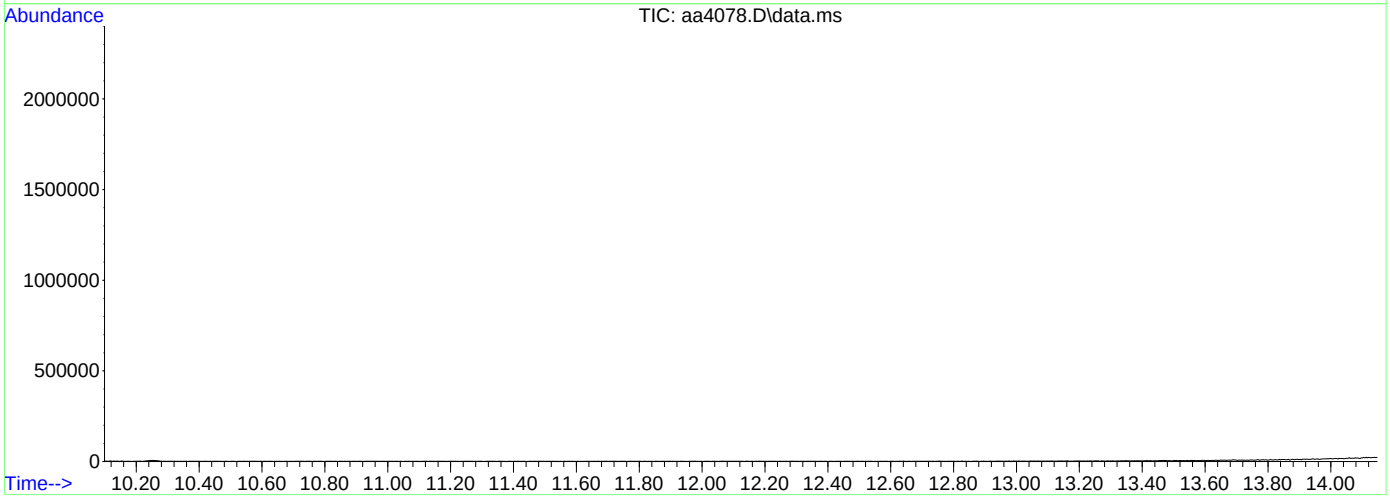
Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4078.D
Acq On : 28 Sep 2023 4:00 pm
Operator : jjw
Sample : 2160
Misc : 3011, 5073, 4865, 2155, 3809, 3006, 3028
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C

TIC Library : C:\Database\NIST05a.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4078.D
Acq On : 28 Sep 2023 4:00 pm
Operator : jjw
Sample : 2160
Misc : 3011, 5073, 4865, 2155, 3809, 3006, 3028
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C

TIC Library : C:\Database\NIST05a.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
**********

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4078.D
Acq On : 28 Sep 2023 4:00 pm
Operator : jjw
Sample : 2160
Misc : 3011, 5073, 4865, 2155, 3809, 3006, 3028
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C

TIC Library : C:\Database\NIST05a.L
TIC Integration Parameters: LSCINT.P

| | | | | | Internal Standard | | |
|---|---|---|---|---|---|---|---|
| TIC Top Hit name | RT | EstConc | Units | Response | # RT | Resp | Conc |

**LAST PAGE OF DOCUMENT**

# EPA TO-15 DATA PACKAGE

**ANALYTICAL DATA PACKAGE FOR THE**
**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**
**ALBANY NEW YORK 12233**

**Integrated Analytical Laboratories, LLC** — **Randolph, NJ 07869**
**Project#: HK2661.2** — **NY ELAP Certification#: 11402**
**SDG #: E23-05081** — **NJDEP (Primary AB) Certification#: 14751**
**Date of first sample receipt: 11/20/2023** — **Date of last sample receipt: 11/20/2023**

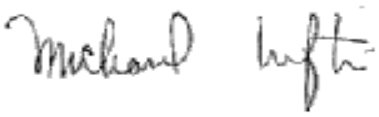
**Client:** HK Engineering+Geology, D.P.C.

**Project/Site:** HK2661.2/NY

| Client Sample Number | Laboratory Sample | Sample Location | Date/Time of Collection |
|---|---|---|---|
| SV1 | E23-05081-01 | NA | 11/17/2023 7:45 |
| SV4 | E23-05081-02 | NA | 11/17/2023 9:40 |
| SV9 | E23-05081-03 | NA | 11/17/2023 8:00 |
| SV8-401-Compactor Room | E23-05081-04 | NA | 11/17/2023 11:00 |



I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of data contained in this hardcopy data package and in the computer-readable data submitted on CD/diskette and by electronic mail has been authorized by the laboratory manager or his designee, as verified by the following signature.



Michael H. Leftin, Ph.D.
Laboratory Director

Date: December 20, 2023

Ming-Hwa Reitan
QA/QC Manager

Date: December 20, 2023

# EPA Method TO-15 Table of Contents

# Laboratory Acronyms

*The following is a list of laboratory acronyms commonly used in EPA Method TO-15 testing:*

| Acronym | Definition |
|---|---|
| BLK | Blank/Method Blank |
| BFB | 4-Bromofluorobenzene (Tuning Standard) |
| CAS Number | Chemical Abstract Service Registry Number |
| cc | cubic centimeters |
| CCCVS | Closing Calibration Check Verification Standard |
| COC | Chain of Custody |
| DCVS | Daily Calibration Verification Standard |
| DF | Dilution Factor |
| EPA | U. S. Environmental Protection Agency (aka USEPA) |
| "Hg | Inches of Mercury |
| IA | Indoor Air |
| IASL | Indoor Air Screening Level |
| ICAL | Initial Calibration |
| ICVSS | Initial Calibration Verification Standard |
| ISTD | Internal Standard |
| GC | Gas Chromatography |
| GC/MS | Gas Chromatography/Mass Spectrometry |
| LCS | Laboratory Control Sample/Spike |
| LLTO-15 | Low Level TO-15 |
| MDL | Method Detection Limit |
| MDLV | Method Detection Limit Verification |
| ml | milliliters |
| ND | Not Detected (at or above RL) |
| NJDEP | New Jersey Department of Environmental Protection |
| PM | Project Manager |
| ppbv | parts per billion, volume-to-volume ratio |
| PQL | Practical Quantitation Limit - MDLx3 |
| QA | Quality Assurance |
| QC | Quality Control |
| RAL | Rapid Action Limit |
| RL | Reporting Limit |
| RLLCS | Reporting Limit Laboratory Control Sample |
| RPD | Relative Percent Difference |
| RRF | Relative Response Factor |
| RSD | Relative Standard Deviation |
| SDG | Sample Delivery Group |
| SGSL | Soil Gas Screening Levels |
| SS | Sub Slab |
| TAT | Turnaround Time |
| TIC | Tentatively Identified Compound |
| µg/m3 | micrograms per cubic meter |

# Section I: Chain of Custody

Integrated Analytical Labs
273 Franklin Rd
Randolph, NJ 07869

# External Chain of Custody Record/ Field Test Data Sheet USEPA Method TO-15

Contact Us: 973 361-4252
fax: 973 366-5613
Web: www.ialonline.com

Carrier (check one): ____ IAL Courier ____Client Courier ____FedEx/UPS

pg 1 of 2

| Client Contact Information | Project Information | Invoice Information |
|---|---|---|
| Company: HK Engineering and Geology D.P.C. | Project Name: HK2661.2 | Attn: |
| Address: 1600 US 22 East | Project Location (State): NY | Address: |
| Union, NJ 07083 | Project Manager: Chris Hirschmann | |
| Phone: 908 -688-7800 | PM Signature: | PO #: HK2661.2 |
| Fax: | PM E-Mail: chirschmann@hillmannconsulting.com | Quote #: |
| Report to: Chris Hirschmann | Sampler: D. Aponte | |

Analysis Turnaround Time - IF NO TAT IS SPECIFIED, 2 WEEK TAT IS ASSUMED

IAL Standard: 2 weeks (10 business days)

Rush (**pre-approved by lab): 24hr** 48hr** 72hr** 96hr** 1wk**

| Sample Identification | Start DATE & TIME (24hr Clock) | End DATE & TIME (24hr Clock) | Starting Vacuum ("Hg) | Ending Vacuum ("Hg) | Starting Temp. (°F) | Ending Temp. (°F) | Outgoing Vacuum - Lab ("Hg) | Barometric Pressure Start: Incoming Vacuum - Lab ("Hg) | Flow Regulator ID | Barometric Pressure Stop: Canister ID | Canister Size (1L or 6L) | Flow Controller Readout (cc/min) | EPA TO - 15 | NJDEP LLTO-15 (includes 30 TICs) | Library Search (10, 20, or 30 TICs) | Other (Explain in Comments) | Regulatory/ NY Cat B / Full (NJ Required) | Reduced / NY Cat A Data Package | Results Only | Indoor Air | Ambient / Outdoor Air | Sub Slab / Soil Gas / Near Slab (Circle One) | Stack Emission / SVE System | High Concentrations Expected |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SV1 | 11/17/23 - 7:45 | 11/17/23 - 10:00 | -29 | -7 | 49 | 56 | -29.0 | -7.0 | A0121687-3 | 5073 | 6L | 32.70 | X | | | | | | | | | | | |
| SV4 | 11/17/23 - 9:40 | 11/17/23 - 11:55 | -28 | -6 | 56 | 64 | -29.0 | -6.0 | A0098643-4 | 2758 | 6L | 33.80 | X | | | | | | | | | | | |
| SV9 | 11/17/23 - 8:00 | 11/17/23 - 10:30 | -28 | -7 | 51 | 59 | -29.0 | -7.0 | A0098637-7 | 3809 | 6L | 33.40 | X | | | | | | | | | | | |
| SV8 - 401 - COMPACTOR ROOM | 11/17/23 - 11:00 | 11/17/23 - | -29 | -6 | 65 | 67 | -29.0 | -6.0 | A0160008-5 | 2896B | 6L | 33.30 | X | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |

Comments/ Special Analysis Instructions / QC Requirements:

5 Day TAT Hard Copy and Verbal.

09132301 10022301A 09142301 09282301A
2,4 3830 1,3 2160

Note: Hold or contingent samples may be designated by writing an "H" or "C" in the appropriate analysis box.

ALL FIELDS IN RED ARE REQUIRED

Shipping Information / Canister Preparation (for laboratory use only)

Individual Preparing Canisters / Title: (Desmond Flores) / Air Department Sample Custodian

Lab Affixed Seal Number(s):

Date/Time Shipping Container Sealed: 11/13/23 16:15

Laboratory Canister Certification

GC/MS Analyst Signature: Joseph J Walukiewicz III (IAL)

IAL 05081

External Chain of Custody

| Relinquished | Received | Date / Time | Reason for Change of External Custody |
|---|---|---|---|
| Dale Mont HK | Dale Mont | 11/17/23 (5:00 | shipment from laboratory to client |
| Dale Mont | Desmond Flores | 11/17/23 1634 | received at lab |
| | Joseph J Walukiewicz III (IAL) | 11/20/23 09:20 | sample storage & pressure check |

Name/Title Resealing Shipping Container Name:

Date/Time Sample Shipping Container Resealed:

Date/Time Sample Shipping Container Opened: 11/17/23 1634

NJDEP Affixed Seal Number:

Individual Opening Sample Shipping Container: Joseph Walukiewicz/Desmond Flores

Date/Time Internal Chain of Custody Initiated: 11/20/23 09:20

White and yellow - lab copies; Pink - client copy

se appropriate care with IAL sampling equipment when sampling and packing for shipment. The client is responsible for all damage incurred to IAL equipment. Notify IAL if equipment is damaged upon receipt. Holding time before sampling is 15 days, ter sampling is 30 days; failure to follow these times may result in data rejection by regulatory agencies. The lab will contact you if your COC is not clear, incomplete, or if discrepancies exist. The use of initials is not permitted on the COC except hen correcting errors.

# PROJECT INFORMATION

RUSH

## E23-05081: HK2661.2

**To:** Chris Hirschmann
HK Engineering & Geology, D.P.C.
Fax: 908-377-8909 cell
EMail: chirschmann@hillmannconsulting.com;rpowell@hillmanngroup.com

**Report To**

HK Engineering & Geology, D.P.C.
1600 Route 22 East
Union, NJ 07083
Attn: Chris Hirschmann

**Bill To**

HK Engineering & Geology, D.P.C.
1600 Route 22 East
Union, NJ 07083
Attn: Chris Hirschmann

| Report Format | P.O. # | Received At Lab | PHC Due | Verbal Due | Hardcopy Due | |
|---|---|---|---|---|---|---|
| Air Regulatory | HK2661.2 | Nov 17, 2023 @ 16:34 | NA | Nov 28, 2023 | Nov 29, 2023 | * |

* Any ***Conditional or Hold*** status will delay final hardcopy report sent date.

**Diskette Req.** Not Required

| Lab ID | Client Sample ID | Depth | Sampling Time | Matrix | Unit | Field pH/Temp |
|---|---|---|---|---|---|---|
| 05081-001 | SV1 | NA | 11/17/23@10:00 | Air-Indoor | ppbV | |
| 05081-002 | SV4 | NA | 11/17/23@11:55 | Air-Indoor | ppbV | |
| 05081-003 | SB9 | NA | 11/17/23@10:30 | Air-Indoor | ppbV | |
| 05081-004 | SV8 - 401 - COMPACTOR ROOM | NA | 11/17/23@13:00 | Air-Indoor | ppbV | |

* No Cert = IAL does not hold certification for this test/method

| Sample # | Test | Status | Analytical Method | TAT | Holding Time Expires |
|---|---|---|---|---|---|
| 001 | EPA TO-15 | Analyze | TO-15 | RUSH 1 WK | 12/17/2023 |
| 002 | EPA TO-15 | Analyze | TO-15 | RUSH 1 WK | 12/17/2023 |
| 003 | EPA TO-15 | Analyze | TO-15 | RUSH 1 WK | 12/17/2023 |
| 004 | EPA TO-15 | Analyze | TO-15 | RUSH 1 WK | 12/17/2023 |

**Project Notes:**

**NOTE 1 taken by kfalconer on 11/20/2023 01:00**
CLIENT DID NOT RECORD BAROMETRIC PRESSURE.



273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
www.ialonline.com

# Internal Chain of Custody

**Instructions:** Use 1 form for each 20 samples of aliquot.

| Laboratory Person Accepting Responsibility for Sample(s) | | | |
|---|---|---|---|
| Laboratory: | Integrated Analytical Laboratories | Location: | 273 Franklin Rd Randolph, NJ 07869 |
| Name: | Joseph Walukiewicz | Title: | Air Department Receiving |
| Case No.: | E23-05081 | Analytical Parameter/Fraction: (check one) | ____ NJDEP LLTO-15<br>__X__ EPA TO-15 |

| Sample No. | Aliquot/Extract No. |
|---|---|
| SV1 | E23-05081-01 |
| " 4 | E23- " -02 |
| " 9 | E23- " -03 |
| " B-401-Compactor Room | E23- " -04 |
| | E23- |
| | E23 |
| | E23- |
| | E23- |
| | E23- |
| | E23- |

| Sample No. | Aliquot/Extract No. |
|---|---|
| | E23- |
| | E23- |
| | E23- |
| | E23- |
| | E23- |
| | E23- |
| | E23- |
| | E23- |
| | E23- |
| | E23- |

| Date | Time | Relinquished By | Received By | Purpose of Change of Custody |
|---|---|---|---|---|
| 11 20 23 | 0900 | SIGNATURE<br>PRINTED NAME | SIGNATURE Joseph Walukiewicz<br>PRINTED NAME JOSEPH WALUKIEWICZ | 1. Sample log-in<br>2. Pressure Check<br>3. Pre-analysis storage |
| 11 20 23 | 0930 | SIGNATURE Joseph Walukiewicz<br>PRINTED NAME JOSEPH WALUKIEWICZ | SIGNATURE<br>PRINTED NAME | Placement in TO-15 sample storage area until ready for analysis |
| 12 12 23 | 1055 | SIGNATURE<br>PRINTED NAME | SIGNATURE Joseph Walukiewicz<br>PRINTED NAME JOSEPH WALUKIEWICZ | TO-15 analysis on:<br>05081-01 to -04 |
| | | | | |
| | | SIGNATURE<br>PRINTED NAME | SIGNATURE Joseph Walukiewicz<br>PRINTED NAME JOSEPH WALUKIEWICZ | TO-15 analysis on: |
| | | SIGNATURE<br>PRINTED NAME | SIGNATURE<br>PRINTED NAME | |
| | | SIGNATURE<br>PRINTED NAME | SIGNATURE<br>PRINTED NAME | |
| | | SIGNATURE<br>PRINTED NAME | SIGNATURE<br>PRINTED NAME | |
| | | SIGNATURE<br>PRINTED NAME | SIGNATURE<br>PRINTED NAME | |

Rev. 12/16

# Section II: Methodology Review

# Methodology Summary for Air Collected from Hazardous Waste Site Contract

| | | | |
|---|---|---|---|
| **Laboratory:** | **Integrated Analytical Lab, LLC** | **Project No:** | **HK2661.2** |
| **Location:** | **Randolph, NJ** | **SDG No:** | **E23-05081** |

| Name | Required Methodology | Indicate Method |
|---|---|---|
| Volatile Organics | US EPA TO-15 | US EPA Method TO-15 |

# Section III: Case Narrative

# CASE NARRATIVE

**Integrated Analytical Laboratories, LLC** — **Randolph, NJ 07869**
**Project #: HK2661.2** — **NJDEP (Primary AB) Certification#: 14751**
**SDG #: E23-05081** — **NY ELAP Certification #: 11402**
**CT DPH Certification#: PH-0699**
**Analytical Method: EPA Method TO-15** — **PADEP Certification#: 68-00773**

**Date of first sample receipt: 11/20/2023** — **Date of last sample receipt: 11/20/2023**

**Client: HK Engineering+Geology, D.P.C.**
**Project/Site: HK2661.2 / NY**

| Client ID | Lab ID | Receipt Date | Analysis Date | DF | Diluted For |
|---|---|---|---|---|---|
| SV1 | E23-05081-01 | 11/20/2023 | 12/11/2023 | 5.0 | Ethylbenzene<br>Xylenes (m&p)<br>Xylenes (o) |
| SV1 | E23-05081-01 | 11/20/2023 | 12/11/2023 | 1.0 | NA |
| SV4 | E23-05081-02 | 11/20/2023 | 12/11/2023 | 1.0 | NA |
| SV9 | E23-05081-03 | 11/20/2023 | 12/11/2023 | 5.0 | Ethylbenzene<br>Xylenes (m&p) |
| SV9 | E23-05081-03 | 11/20/2023 | 12/11/2023 | 1.0 | NA |
| SV8-401-Compactor Room | E23-05081-04 | 11/20/2023 | 12/11/2023 | 5.0 | Xylenes (m&p) |
| SV8-401-Compactor Room | E23-05081-04 | 11/20/2023 | 12/11/2023 | 1.0 | NA |

| IAL Sample ID | Canister ID | Outgoing Pressure ("Hg) | Incoming Pressure ("Hg) | Flow Controller ID | Outgoing Flow Rate (cc/min) | Incoming Flow Rate (cc/min) | Flow Rate RPD* |
|---|---|---|---|---|---|---|---|
| E23-05081-01 | 5073 | -29 | -7 | A0121687-3 | 32.70 | 32.30 | 1.23 |
| E23-05081-02 | 2758 | -29 | -6 | A0098643-4 | 33.80 | 33.30 | 1.49 |
| E23-05081-03 | 3809 | -29 | -7 | A0098637-7 | 33.40 | 32.80 | 1.81 |
| E23-05081-04 | 2896B | -29 | -6 | A0160008-5 | 33.30 | 32.70 | 1.82 |

*Pre-sampling and Post-sampling Flow Controller calibration check RPD ≤ 20%

Flow Controller Note: none

***Sample Receipt:*** Samples were received in good condition. Documentation was in order.
Samples were received at IAL by: Joseph Walukiewicz

***Sample Preparation:*** None required.

***Sample Analysis:***
*Hold Time:* All within recommended hold times.
*Instrument Calibration:* Meets method criteria.
*Analysis performed by:* jjw
*SDG Non-Conformances:* none

# CASE NARRATIVE

**Integrated Analytical Laboratories, LLC** — **Randolph, NJ 07869**
**Project #: HK2661.2** — **NJDEP (Primary AB) Certification#: 14751**
**SDG #: E23-05081** — **NY ELAP Certification #: 11402**
**CT DPH Certification#: PH-0699**
**Analytical Method: EPA Method TO-15** — **PADEP Certification#: 68-00773**

**Date of first sample receipt: 11/20/2023** — **Date of last sample receipt: 11/20/2023**

**Client: HK Engineering+Geology, D.P.C.**
**Project/Site: HK2661.2 / NY**

*Tentatively Identified Compounds:* Tentatively Identified Compounds (TICs) are determined using a NIST library search. TICs are reported at 10% of the applicable internal standard. Dilution factors are calculated into the final reported result. Since the compounds found are tentatively identified, the conversion from ppbv to ug/m3 may not be made.

*Canister-to-Canister dilutions:* none

*Dilutions:* Dilutions, if necessary, will be conducted directly on the instrument up to a 500x dilution. When dilutions of 1000x or higher are necessary, the laboratory must inject a volume of sample into another certified clean canister and add humidified Z-1 zero air to the remainder of the canister volume. Tedlar bags are not used for dilutions.

If a sample is received with historically high levels of analytes, a 100x can-to-can dilution my be used from the start. A 100x canister-to-canister dilution may be also be used at the analyst's discretion.

*On-instrument dilutions are conducted as follows:*

| Dilution Factor | Sample Volume Injected (cc) |
|---|---|
| 1 | 500 |
| 2.5 | 200 |
| 5 | 100 |
| 10 | 50 |
| 20 | 25 |
| 25 | 20 |
| 50 | 10 |
| 100 | 5 |
| 200 | 2.5 |
| 250 | 2 |
| 500 | 1 |

*Canister-to-canister dilutions are conducted as follows:*

A certified clean canister is obtained and evacuated to approximately -30"Hg. Both the clean/dilution canister and sample canister are fitted with a ¼" Swagelok® nut fitting equipped with septa. Depending on dilution factor necessary, a sample aliquot is removed from the canister and injected into the clean canister using 30cc Multifit gas-tight syringe. Once the correct sample aliquot has been transferred, the dilution canister should be connected to the humidified Z-1 zero air supply and filled to ambient pressure (0"Hg).

| Dilution Factor | Sample Aliquot | Z-1 Make-up Added |
|---|---|---|
| 100 | 60ml | 5940ml |
| 1000 | 6ml | 5994ml |

# CASE NARRATIVE

**Integrated Analytical Laboratories, LLC** — **Randolph, NJ 07869**
**Project #: HK2661.2** — **NJDEP (Primary AB) Certification#: 14751**
**SDG #: E23-05081** — **NY ELAP Certification #: 11402**
**CT DPH Certification#: PH-0699**
**Analytical Method: EPA Method TO-15** — **PADEP Certification#: 68-00773**

**Date of first sample receipt: 11/20/2023** — **Date of last sample receipt: 11/20/2023**

**Client: HK Engineering+Geology, D.P.C.**
**Project/Site: HK2661.2 / NY**

If further dilutions need to be made from the dilution canister, they may be made on-instrument. Using a 100x dilution canister, the following on-instrument dilutions can be produced:

| Dilution Factor | Sample Volume Injected |
|---|---|
| 100 | 500ml |
| 250 | 200ml |
| 500 | 100ml |
| 1000 | 50ml |
| 2000 | 25ml |
| 2500 | 20ml |
| 5000 | 10ml |

Using a 1000x dilution canister, the following on-instrument dilutions can be produced:

| Dilution Factor | Sample Volume Injected |
|---|---|
| 1000 | 500ml |
| 2500 | 200ml |
| 5000 | 100ml |
| 10,000 | 50ml |
| 20,000 | 25ml |
| 25,000 | 20ml |
| 50,000 | 10ml |

If further dilutions need to be made from the dilution canister, beyond 50,000x, a subsequent canister-to-canister dilution must be made using the above prescribed protocol.

***GC Column and ID:*** RTX-1 SN 1119138, RTX-VMS SN 1586881, or equivalent

***Calibration Standards:*** Only gas phase standards were used. Primary and second-source standards provided by Scott Specialty Gases or Airgas Specialty Gases/ Air Liquide

***Working Standards:*** Primary source standards* are created from:
- Airgas Specialty Gases #EB0103704, valid 1/18/2021 through 12/30/2024, @ approximately 100ppb per compound, with exception of m&p-xylenes @ 200ppb. Standard is directly introduced into the instrument for all calibration standard concentrations. Dilutions are made accordingly, on instrument. The 10ppbv standard is also used for the Daily Calibration Verification Standard (DCVS), the Laboratory Control Sample (LCS) and Closing Calibration Verification Standard (CCCVS).

The second source standard*, used as the Initial Calibration Verification Standard (ICVSS), is introduced into the instrument in the same manner as the primary source standard, using:

# CASE NARRATIVE

**Integrated Analytical Laboratories, LLC** | **Randolph, NJ 07869**
**Project #: HK2661.2** | **NJDEP (Primary AB) Certification#: 14751**
**SDG #: E23-05081** | **NY ELAP Certification #: 11402**
**CT DPH Certification#: PH-0699**
**Analytical Method: EPA Method TO-15** | **PADEP Certification#: 68-00773**

**Date of first sample receipt: 11/20/2023** | **Date of last sample receipt: 11/20/2023**

**Client: HK Engineering+Geology, D.P.C.**
**Project/Site: HK2661.2 / NY**

- Airgas Specialty Gases Cylinder #EB0116272, valid 7/28/2021 through 5/12/2025, @ approximately 100ppb per compound, with exception of m&p-xylenes @ 200ppb.

Internal standards* are created from:
- Airgas Specialty Gases Cylinder #ALM018474, valid 2/24/2022 through 2/24/2025. @ 5ppm per compound. Standard is directly introduced into the instrument to reach the 10ppbv concentrations. 1cc of internal standard is added to every standard, method blank, instrument blank, and sample run.

*Standard may be used past its expiration date provided that concentrations are verified by a current/unexpired second source standard.

**08/15/2023**
- 100 ppbv internal standard mix (AA3401BFB) - prepared in cylinder #ALM018474
  - 10 ppbv per standard/sample - 50 ml injected
- 100 ppbv calibration standard (aa3406std01) - prepared in cylinder #EB0103704
  - 40 ppbv standard - 200 ml injected
  - 20 ppbv standard - 100 ml injected
  - 10 ppbv standard* - 50 ml injected
    - *Standard also used for CCCVS
  - 2 ppbv standard - 10 ml injected
  - 0.20 ppbv standard* - 1 ml injected
    - *Standard also used for RLLCS

**09/28/2023**
- 100 ppbv internal standard mix (AA4071BFB) - prepared in cylinder #ALM018474
  - 10 ppbv per standard/sample - 50 ml injected
- 100 ppbv calibration standard (AA4072DCVS) - prepared in cylinder #EB0103704
  - 10 ppbv standard* - 50 ml injected
    - *Standard also used for DCVS & CCCVS
  - 0.20 ppbv standard* - 1 ml injected
    - *Standard also used for RLLCS
- Method Blank (AA4074BLK) - prepared in canister #1127
  - 500 ml injected

**10/10/2023**
- 100 ppbv internal standard mix (AA4131BFB) - prepared in cylinder #ALM018474
  - 10 ppbv per standard/sample - 50 ml injected
- 100 ppbv calibration standard (aa4136std01) - prepared in cylinder #EB0103704
  - 40 ppbv standard - 200 ml injected
  - 20 ppbv standard - 100 ml injected
  - 10 ppbv standard* - 50 ml injected
    - *Standard also used for CCCVS
  - 2 ppbv standard - 10 ml injected

# CASE NARRATIVE

**Integrated Analytical Laboratories, LLC** — **Randolph, NJ 07869**
**Project #: HK2661.2** — **NJDEP (Primary AB) Certification#: 14751**
**SDG #: E23-05081** — **NY ELAP Certification #: 11402**
**CT DPH Certification#: PH-0699**
**Analytical Method: EPA Method TO-15** — **PADEP Certification#: 68-00773**

**Date of first sample receipt: 11/20/2023** — **Date of last sample receipt: 11/20/2023**

**Client: HK Engineering+Geology, D.P.C.**
**Project/Site: HK2661.2 / NY**

**10/10/2023**

0.20 ppbv standard* - 1 ml injected
*Standard also used for RLLCS
0.20 ppbv standard* - 1 ml injected
*Standard also used for RLLCS
Method Blank (AA4139BLK) - prepared in canister #1127
500 ml injected

**12/11/2023**

100 ppbv internal standard mix (AA4901BFB) - prepared in cylinder #ALM018474
10 ppbv per standard/sample - 50 ml injected
100 ppbv calibration standard (AA4902DCVS) - prepared in cylinder #EB0103704
10 ppbv standard* - 50 ml injected
*Standard also used for DCVS & CCCVS
0.20 ppbv standard* - 1 ml injected
*Standard also used for RLLCS
Method Blank (AA4904BLK) - prepared in canister #1127
500 ml injected
Sample E23-05081-01 (AA4916) - sample taken in canister #5073
100 ml sample volume injected, 5x dilution
Sample E23-05081-01 (AA4917) - sample taken in canister #5073
500 ml sample volume injected, 1x dilution
Sample E23-05081-02 (AA4919) - sample taken in canister #2758
500 ml sample volume injected, 1x dilution
Sample E23-05081-03 (AA4920) - sample taken in canister #3809
100 ml sample volume injected, 5x dilution
Sample E23-05081-03 (AA4921) - sample taken in canister #3809
500 ml sample volume injected, 1x dilution
Sample E23-05081-04 (AA4922) - sample taken in canister #2896B
100 ml sample volume injected, 5x dilution
Sample E23-05081-04 (AA4923) - sample taken in canister #2896B
500 ml sample volume injected, 1x dilution

# CASE NARRATIVE

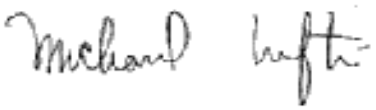
**Integrated Analytical Laboratories, LLC** — **Randolph, NJ 07869**
**Project #: HK2661.2** — **NJDEP (Primary AB) Certification#: 14751**
**SDG #: E23-05081** — **NY ELAP Certification #: 11402**
**CT DPH Certification#: PH-0699**
**Analytical Method: EPA Method TO-15** — **PADEP Certification#: 68-00773**

**Date of first sample receipt: 11/20/2023** — **Date of last sample receipt: 11/20/2023**

**Client: HK Engineering+Geology, D.P.C.**
**Project/Site: HK2661.2 / NY**

All work recorded herein has been done in accordance with normal professional standards using accepted testing methodologies, quality assurance and quality control procedures except where otherwise agreed to by the client and testing company in writing. All conversions are based upon a room temperature of 77°F(25°C) and room pressure of 101.325 kPa (1atm).

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of data contained in this hardcopy data package and in the computer-readable data submitted on CD/diskette and by electronic mail has been authorized by the laboratory manager or his designee, as verified by the following signature.



Michael H. Leftin, Ph.D.
Laboratory Director

December 20, 2023
Date

Integrated Analytical Laboratories LLC

Airgas
an Air Liquide company

R 362

Received 01/06/2023

**Airgas Specialty Gases**
Airgas USA LLC
6141 Easton Road
Plumsteadville, PA 18949
Airgas.com

# CERTIFICATE OF ANALYSIS

## Grade of Product: CERTIFIED HYDROCARBON

| | | | |
|---|---|---|---|
| Customer: | INTEGRATED ANALYTICAL LABS | | |
| Part Number: | X76NI99C15AC001 | | |
| Cylinder Number: | EB0103704 | Reference Number: | 160-402619255-1 |
| Laboratory: | 124 - Plumsteadville - PA | Cylinder Volume: | 101.0 CF |
| Analysis Date: | Dec 30, 2022 | Cylinder Pressure: | 1400 PSIG |
| Lot Number: | 160-402619255-1 | Valve Outlet: | 350SS |
| | | Expiration Date: | Dec 30, 2024 |

Traceability Statement: Hydrocarbon Process standards are NIST traceable either directly by weight or by comparison to Airgas laboratory standards that are directly NIST traceable by weight.

### CERTIFIED CONCENTRATIONS

| Component | Requested Concentration | Reported Mole % | Accuracy |
|---|---|---|---|
| 1,1 DICHLOROETHANE | 100.000 PPB | 107.000 PPB | +/- 10% |
| 1,1 DICHLOROETHYLENE | 100.000 PPB | 104.000 PPB | +/- 10% |
| 1,1,1 TRICHLOROETHANE | 100.000 PPB | 109.000 PPB | +/- 10% |
| 1,1,2 TRICHLORO ETHANE | 100.000 PPB | 108.000 PPB | +/- 10% |
| 1,1,2,2 TETRACHLOROETHANE | 100.000 PPB | 114.000 PPB | +/- 10% |
| 1,2 DIBROMO ETHANE | 100.000 PPB | 108.000 PPB | +/- 10% |
| 1,2 DICHLORO PROPANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| 1,2 DICHLOROBENZENE | 100.000 PPB | 107.000 PPB | +/- 10% |
| 1,2 DICHLOROETHANE | 100.000 PPB | 109.000 PPB | +/- 10% |
| 1,2,4 TRICHLOROBENZENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| 1,2,4 TRIMETHYLBENZENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| 1,3 BUTADIENE | 100.000 PPB | 107.000 PPB | +/- 10% |
| 1,3 DICHLORO BENZENE | 100.000 PPB | 111.000 PPB | +/- 10% |
| 1,3,5 TRIMETHYL BENZENE | 100.000 PPB | 109.000 PPB | +/- 10% |
| 1,4 DICHLOROBENZENE | 100.000 PPB | 107.000 PPB | +/- 10% |
| 1,4 DIOXANE | 100.000 PPB | 117.000 PPB | +/- 10% |
| 2 CHLOROTOLUENE | 100.000 PPB | 109.000 PPB | +/- 10% |
| 3 CHLOROPROPYLENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| 4 ETHYL TOLUENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| ACETONE | 100.000 PPB | 108.000 PPB | +/- 10% |
| ACROLEIN | 100.000 PPB | 100.000 PPB | +/- 10% |
| BENZENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| BENZYL CHLORIDE | 100.000 PPB | 100.000 PPB | +/- 10% |
| BROMO DICHLORO METHANE | 100.000 PPB | 115.000 PPB | +/- 10% |
| BROMOFORM | 100.000 PPB | 113.000 PPB | +/- 10% |
| CARBON DISULFIDE | 100.000 PPB | 107.000 PPB | +/- 10% |
| CARBON TETRACHLORIDE | 100.000 PPB | 110.000 PPB | +/- 10% |
| CHLORO DIBROMO METHANE | 100.000 PPB | 112.000 PPB | +/- 10% |
| CHLOROBENZENE | 100.000 PPB | 111.000 PPB | +/- 10% |
| CHLOROFORM | 100.000 PPB | 108.000 PPB | +/- 10% |
| CIS 1,2 DICHLOROETHYLENE | 100.000 PPB | 109.000 PPB | +/- 10% |
| CIS 1,3 DICHLOROPROPENE | 100.000 PPB | 111.000 PPB | +/- 10% |
| CUMENE | 100.000 PPB | 107.000 PPB | +/- 10% |
| CYCLOHEXANE | 100.000 PPB | 112.000 PPB | +/- 10% |
| ETHANOL | 100.000 PPB | 104.000 PPB | +/- 10% |
| ETHYL ACETATE | 100.000 PPB | 108.000 PPB | +/- 10% |
| ETHYL BENZENE | 100.000 PPB | 111.000 PPB | +/- 10% |
| ETHYL CHLORIDE | 100.000 PPB | 106.000 PPB | +/- 10% |
| HEXACHLORO 1,3 BUTADIENE | 100.000 PPB | 111.000 PPB | +/- 10% |

Approved for Release

Integrated Analytical Laboratories LLC

Airgas
an Air Liquide company

**Airgas Specialty Gases**
Airgas USA LLC
6141 Easton Road
Plumsteadville, PA 18949
Airgas.com

| | | | |
|---|---|---|---|
| HEXANE | 100.000 PPB | 111.000 PPB | +/- 10% |
| ISOOCTANE | 100.000 PPB | 109.000 PPB | +/- 10% |
| ISOPROPYL ALCOHOL | 100.000 PPB | 89.000 PPB | +/- 10% |
| M XYLENE | 100.000 PPB | 112.000 PPB | +/- 10% |
| METHYL BROMIDE | 100.000 PPB | 100.000 PPB | +/- 10% |
| METHYL BUTYL KETONE | 100.000 PPB | 113.000 PPB | +/- 10% |
| METHYL CHLORIDE | 100.000 PPB | 112.000 PPB | +/- 10% |
| METHYL ETHYL KETONE | 100.000 PPB | 110.000 PPB | +/- 10% |
| METHYL ISOBUTYL KETONE | 100.000 PPB | 109.000 PPB | +/- 10% |
| METHYL METHACRYLATE | 100.000 PPB | 110.000 PPB | +/- 10% |
| METHYL TERT BUTYL ETHER | 100.000 PPB | 112.000 PPB | +/- 10% |
| METHYLENE CHLORIDE | 100.000 PPB | 108.000 PPB | +/- 10% |
| N BUTANE | 100.000 PPB | 109.000 PPB | +/- 10% |
| N HEPTANE | 100.000 PPB | 111.000 PPB | +/- 10% |
| N NONANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| N PENTANE | 100.000 PPB | 108.000 PPB | +/- 10% |
| N PROPYL BENZENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| NAPHTHALENE | 100.000 PPB | 100.000 PPB | +/- 10% |
| O XYLENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| P XYLENE | 100.000 PPB | 111.000 PPB | +/- 10% |
| PERCHLOROETHYLENE | 100.000 PPB | 112.000 PPB | +/- 10% |
| PROPYLENE | 100.000 PPB | 109.000 PPB | +/- 10% |
| R11 TRICHLOROFLUOROMETHANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| R113 TRICHLOROTRIFLUOROETHANE | 100.000 PPB | 109.000 PPB | +/- 10% |
| R114 DICHLOROTETRAFLUOROETHANE | 100.000 PPB | 98.000 PPB | +/- 10% |
| R12 DICHLORODIFLUOROMETHANE | 100.000 PPB | 106.000 PPB | +/- 10% |
| STYRENE | 100.000 PPB | 113.000 PPB | +/- 10% |
| TERT BUTANOL | 100.000 PPB | 115.000 PPB | +/- 10% |
| TETRAHYDROFURAN | 100.000 PPB | 110.000 PPB | +/- 10% |
| TOLUENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| TRANS 1,2 DICHLOROETHYLENE | 100.000 PPB | 111.000 PPB | +/- 10% |
| TRANS 1,3 DICHLOROPROPENE | 100.000 PPB | 111.000 PPB | +/- 10% |
| TRICHLOROETHYLENE | 100.000 PPB | 100.000 PPB | +/- 10% |
| VINYL ACETATE | 100.000 PPB | 110.000 PPB | +/- 10% |
| VINYL BROMIDE | 100.000 PPB | 101.000 PPB | +/- 10% |
| VINYL CHLORIDE | 100.000 PPB | 108.000 PPB | +/- 10% |
| NITROGEN | 99.99925 % | 99.999187 % | +/- 10% |

**Permanent Notes:**CUSTOM TO MIX - TO-15/17 MODIFIED NJ STD + NAPHTHALENE

**Notes:**PO number: 22578

Approved for Release

Integrated Analytical Laboratories LLC

Airgas
an Air Liquide company

**Airgas Specialty Gases**
Airgas USA LLC
6141 Easton Road
Plumsteadville, PA 18949
Airgas.com

R 366

# CERTIFICATE OF ANALYSIS

## Grade of Product: CERTIFIED HYDROCARBON

| | | | |
|---|---|---|---|
| Customer: | INTEGRATED ANALYTICAL LABS | | |
| Part Number: | X76NI99C15AC001 | Reference Number: | 160-402744241-1 |
| Cylinder Number: | EB0116272 | Cylinder Volume: | 146.0 CF |
| Laboratory: | 124 - Plumsteadville - PA | Cylinder Pressure: | 2050 PSIG |
| Analysis Date: | May 12, 2023 | Valve Outlet: | 350SS |
| Lot Number: | 160-402744241-1 | Expiration Date: | May 12, 2025 |

Traceability Statement: Hydrocarbon Process standards are NIST traceable either directly by weight or by comparison to Airgas laboratory standards that are directly NIST traceable by weight.

### CERTIFIED CONCENTRATIONS

| Component | Requested Concentration | Reported Mole % | Accuracy |
|---|---|---|---|
| 1,1 DICHLOROETHANE | 100.000 PPB | 100.000 PPB | +/- 10% |
| 1,1 DICHLOROETHYLENE | 100.000 PPB | 100.000 PPB | +/- 10% |
| 1,1,1 TRICHLOROETHANE | 100.000 PPB | 104.000 PPB | +/- 10% |
| 1,1,2 TRICHLORO ETHANE | 100.000 PPB | 101.000 PPB | +/- 10% |
| 1,1,2,2 TETRACHLOROETHANE | 100.000 PPB | 104.000 PPB | +/- 10% |
| 1,2 DIBROMO ETHANE | 100.000 PPB | 103.000 PPB | +/- 10% |
| 1,2 DICHLORO PROPANE | 100.000 PPB | 103.000 PPB | +/- 10% |
| 1,2 DICHLOROBENZENE | 100.000 PPB | 101.000 PPB | +/- 10% |
| 1,2 DICHLOROETHANE | 100.000 PPB | 102.000 PPB | +/- 10% |
| 1,2,4 TRICHLOROBENZENE | 100.000 PPB | 100.000 PPB | +/- 10% |
| 1,2,4 TRIMETHYLBENZENE | 100.000 PPB | 102.000 PPB | +/- 10% |
| 1,3 BUTADIENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| 1,3 DICHLORO BENZENE | 100.000 PPB | 105.000 PPB | +/- 10% |
| 1,3,5 TRIMETHYL BENZENE | 100.000 PPB | 103.000 PPB | +/- 10% |
| 1,4 DICHLOROBENZENE | 100.000 PPB | 100.000 PPB | +/- 10% |
| 1,4 DIOXANE | 100.000 PPB | 113.000 PPB | +/- 10% |
| 2 CHLOROTOLUENE | 100.000 PPB | 107.000 PPB | +/- 10% |
| 3 CHLOROPROPYLENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| 4 ETHYL TOLUENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| ACETONE | 100.000 PPB | 108.000 PPB | +/- 10% |
| ACROLEIN | 100.000 PPB | 105.000 PPB | +/- 10% |
| BENZENE | 100.000 PPB | 103.000 PPB | +/- 10% |
| BENZYL CHLORIDE | 100.000 PPB | 102.000 PPB | +/- 10% |
| BROMO DICHLORO METHANE | 100.000 PPB | 112.000 PPB | +/- 10% |
| BROMOFORM | 100.000 PPB | 113.000 PPB | +/- 10% |
| CARBON DISULFIDE | 100.000 PPB | 95.000 PPB | +/- 10% |
| CARBON TETRACHLORIDE | 100.000 PPB | 107.000 PPB | +/- 10% |
| CHLORO DIBROMO METHANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| CHLOROBENZENE | 100.000 PPB | 104.000 PPB | +/- 10% |
| CHLOROFORM | 100.000 PPB | 106.000 PPB | +/- 10% |
| CIS 1,2 DICHLOROETHYLENE | 100.000 PPB | 102.000 PPB | +/- 10% |
| CIS 1,3 DICHLOROPROPENE | 100.000 PPB | 94.000 PPB | +/- 10% |
| CUMENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| CYCLOHEXANE | 100.000 PPB | 109.000 PPB | +/- 10% |
| ETHANOL | 100.000 PPB | 98.000 PPB | +/- 10% |
| ETHYL ACETATE | 100.000 PPB | 104.000 PPB | +/- 10% |
| ETHYL BENZENE | 100.000 PPB | 105.000 PPB | +/- 10% |
| ETHYL CHLORIDE | 100.000 PPB | 104.000 PPB | +/- 10% |
| HEXACHLORO 1,3 BUTADIENE | 100.000 PPB | 101.000 PPB | +/- 10% |

Approved for Release

Integrated Analytical Laboratories LLC

Airgas
an Air Liquide company

**Airgas Specialty Gases**
Airgas USA LLC
6141 Easton Road
Plumsteadville, PA 18949
Airgas.com

| | | | |
|---|---|---|---|
| HEXANE | 100.000 PPB | 107.000 PPB | +/- 10% |
| ISOOCTANE | 100.000 PPB | 106.000 PPB | +/- 10% |
| ISOPROPYL ALCOHOL | 100.000 PPB | 95.000 PPB | +/- 10% |
| M XYLENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| METHYL BROMIDE | 100.000 PPB | 103.000 PPB | +/- 10% |
| METHYL BUTYL KETONE | 100.000 PPB | 109.000 PPB | +/- 10% |
| METHYL CHLORIDE | 100.000 PPB | 108.000 PPB | +/- 10% |
| METHYL ETHYL KETONE | 100.000 PPB | 105.000 PPB | +/- 10% |
| METHYL ISOBUTYL KETONE | 100.000 PPB | 105.000 PPB | +/- 10% |
| METHYL METHACRYLATE | 100.000 PPB | 106.000 PPB | +/- 10% |
| METHYL TERT BUTYL ETHER | 100.000 PPB | 107.000 PPB | +/- 10% |
| METHYLENE CHLORIDE | 100.000 PPB | 101.000 PPB | +/- 10% |
| N BUTANE | 100.000 PPB | 107.000 PPB | +/- 10% |
| N HEPTANE | 100.000 PPB | 107.000 PPB | +/- 10% |
| N NONANE | 100.000 PPB | 108.000 PPB | +/- 10% |
| N PENTANE | 100.000 PPB | 105.000 PPB | +/- 10% |
| N PROPYL BENZENE | 100.000 PPB | 112.000 PPB | +/- 10% |
| NAPHTHALENE | 100.000 PPB | 101.000 PPB | +/- 10% |
| O XYLENE | 100.000 PPB | 102.000 PPB | +/- 10% |
| P XYLENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| PERCHLOROETHYLENE | 100.000 PPB | 104.000 PPB | +/- 10% |
| PROPYLENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| R11 TRICHLOROFLUOROMETHANE | 100.000 PPB | 106.000 PPB | +/- 10% |
| R113 TRICHLOROTRIFLUOROETHANE | 100.000 PPB | 102.000 PPB | +/- 10% |
| R114 DICHLOROTETRAFLUOROETHANE | 100.000 PPB | 99.000 PPB | +/- 10% |
| R12 DICHLORODIFLUOROMETHANE | 100.000 PPB | 109.000 PPB | +/- 10% |
| STYRENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| TERT BUTANOL | 100.000 PPB | 111.000 PPB | +/- 10% |
| TETRAHYDROFURAN | 100.000 PPB | 106.000 PPB | +/- 10% |
| TOLUENE | 100.000 PPB | 101.000 PPB | +/- 10% |
| TRANS 1,2 DICHLOROETHYLENE | 100.000 PPB | 108.000 PPB | +/- 10% |
| TRANS 1,3 DICHLOROPROPENE | 100.000 PPB | 106.000 PPB | +/- 10% |
| TRICHLOROETHYLENE | 100.000 PPB | 102.000 PPB | +/- 10% |
| VINYL ACETATE | 100.000 PPB | 105.000 PPB | +/- 10% |
| VINYL BROMIDE | 100.000 PPB | 100.000 PPB | +/- 10% |
| VINYL CHLORIDE | 100.000 PPB | 107.000 PPB | +/- 10% |
| NITROGEN | 99.99925 % | 99.999216 % | |

**Permanent Notes:** CUSTOM TO MIX - TO-15/17 MODIFIED NJ STD + NAPHTHALENE

**Notes:** PO Number: 22896

Approved for Release

# Section IV: Method Detection Limit Summary

# INTEGRATED ANALYTICAL LABORATORIES, LLC
# REPORTING METHOD DETECTION LIMIT (MDL) REPORT

Integrated Analytical Laboratories - Randolph, NJ

Matrix: Air
MDL Effective Date: 8/16/2023
Column ID: Restek RtX-VMS, 30 meter, 0.32mm ID, 1.8 um DF
Instrument ID: GC - Agilent 7890A / MS - Agilent 5975C (IAL ID: *Instrument AA* )
Analyst: Joe Waluliewicz
Report Prepared by: Joe Waluliewicz

| Compound Name | CAS # | Molecular Weight | MDL ppbv | MDL µg/m$^3$ | PQL ppbv | RL ppbv | RL µg/m$^3$ | True value/ MDL |
|---|---|---|---|---|---|---|---|---|
| Propene | 115-07-1 | 42.08 | 0.18 | 0.31 | 0.54 | 0.20 | 0.34 | 1 |
| Dichlorodifluoromethane | 75-71-8 | 120.9 | 0.081 | 0.40 | 0.24 | 0.20 | 0.99 | 3 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 170.9 | 0.071 | 0.50 | 0.21 | 0.20 | 1.4 | 3 |
| n-Butane | 106-97-8 | 58 | 0.13 | 0.32 | 0.40 | 0.20 | 0.47 | 2 |
| Chloromethane | 74-87-3 | 50.49 | 0.15 | 0.30 | 0.44 | 0.20 | 0.41 | 1 |
| Vinyl chloride | 75-01-4 | 62.5 | 0.11 | 0.29 | 0.34 | 0.20 | 0.51 | 2 |
| 1,3-Butadiene | 106-99-0 | 54.09 | 0.12 | 0.27 | 0.37 | 0.20 | 0.44 | 2 |
| Bromomethane | 74-83-9 | 94.94 | 0.12 | 0.46 | 0.36 | 0.20 | 0.78 | 2 |
| Chloroethane | 75-00-3 | 64.52 | 0.12 | 0.32 | 0.36 | 0.20 | 0.53 | 2 |
| Vinyl bromide | 593-60-2 | 106.9 | 0.080 | 0.35 | 0.24 | 0.20 | 0.87 | 3 |
| Trichlorofluoromethane | 75-69-4 | 137.4 | 0.068 | 0.38 | 0.20 | 0.20 | 1.1 | 3 |
| Ethanol | 64-17-5 | 46.07 | 0.17 | 0.32 | 0.51 | 0.20 | 0.38 | 1 |
| 1,1-Dichloroethene | 75-35-4 | 96.94 | 0.086 | 0.34 | 0.26 | 0.20 | 0.79 | 3 |
| Carbon disulfide | 75-15-0 | 76.14 | 0.076 | 0.24 | 0.23 | 0.20 | 0.62 | 3 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 187.40 | 0.087 | 0.66 | 0.26 | 0.20 | 1.5 | 3 |
| Acrolein | 107-02-8 | 56.06 | 0.15 | 0.34 | 0.44 | 0.20 | 0.46 | 2 |
| Allyl Chloride | 107-05-1 | 76.53 | 0.088 | 0.27 | 0.26 | 0.20 | 0.63 | 3 |
| Isopropanol | 67-63-0 | 60.1 | 0.10 | 0.25 | 0.30 | 0.20 | 0.49 | 2 |
| Methylene chloride | 75-09-2 | 84.94 | 0.10 | 0.36 | 0.31 | 0.20 | 0.69 | 2 |
| Acetone | 67-64-1 | 58.08 | 0.12 | 0.28 | 0.36 | 0.20 | 0.48 | 2 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 96.94 | 0.080 | 0.32 | 0.24 | 0.20 | 0.79 | 3 |
| n-Pentane | 109-66-0 | 72.15 | 0.16 | 0.48 | 0.49 | 0.20 | 0.59 | 1 |
| n-Hexane | 110-54-3 | 86.17 | 0.087 | 0.31 | 0.26 | 0.20 | 0.70 | 3 |
| Methyl tert-butyl ether | 1634-04-4 | 88.15 | 0.080 | 0.29 | 0.24 | 0.20 | 0.72 | 3 |
| Tert-butyl alcohol | 75-65-0 | 74.12 | 0.14 | 0.44 | 0.43 | 0.20 | 0.61 | 2 |
| 1,1-Dichloroethane | 75-34-3 | 98.96 | 0.079 | 0.32 | 0.24 | 0.20 | 0.81 | 3 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 96.94 | 0.083 | 0.33 | 0.25 | 0.20 | 0.79 | 3 |
| Cyclohexane | 110-82-7 | 84.16 | 0.078 | 0.27 | 0.23 | 0.20 | 0.69 | 3 |
| Chloroform | 67-66-3 | 119.4 | 0.077 | 0.38 | 0.23 | 0.20 | 0.98 | 3 |
| Ethyl acetate | 141-78-6 | 88.11 | 0.11 | 0.40 | 0.33 | 0.20 | 0.72 | 2 |
| Carbon tetrachloride | 56-23-5 | 153.8 | 0.080 | 0.50 | 0.24 | 0.20 | 1.3 | 3 |
| Tetrahydrofuran | 109-99-9 | 72.11 | 0.11 | 0.31 | 0.32 | 0.20 | 0.59 | 2 |
| 1,1,1-Trichloroethane | 71-55-6 | 133.4 | 0.071 | 0.39 | 0.21 | 0.20 | 1.1 | 3 |
| Methyl ethyl ketone | 78-93-3 | 72.11 | 0.11 | 0.31 | 0.32 | 0.20 | 0.59 | 2 |
| n-Heptane | 142-82-5 | 100.2 | 0.090 | 0.37 | 0.27 | 0.20 | 0.82 | 2 |
| Benzene | 71-43-2 | 78.11 | 0.076 | 0.24 | 0.23 | 0.20 | 0.64 | 3 |
| 1,2-Dichloroethane | 107-06-2 | 98.96 | 0.079 | 0.32 | 0.24 | 0.20 | 0.81 | 3 |
| Trichloroethene | 79-01-6 | 131.4 | 0.064 | 0.34 | 0.19 | 0.20 | 1.1 | 3 |
| 2,2,4-Trimethylpentane | 540-84-1 | 114.2 | 0.085 | 0.40 | 0.26 | 0.20 | 0.93 | 3 |
| 1,2-Dichloropropane | 78-87-5 | 113 | 0.085 | 0.39 | 0.25 | 0.20 | 0.92 | 3 |
| Bromodichloromethane | 75-27-4 | 163.8 | 0.066 | 0.44 | 0.20 | 0.20 | 1.3 | 3 |
| Methyl methacrylate | 80-62-6 | 100.12 | 0.079 | 0.32 | 0.24 | 0.20 | 0.82 | 3 |
| 1,4-Dioxane | 123-91-1 | 88.12 | 0.092 | 0.33 | 0.28 | 0.20 | 0.72 | 2 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 111.0 | 0.070 | 0.32 | 0.21 | 0.20 | 0.91 | 3 |
| Toluene | 108-88-3 | 92.14 | 0.064 | 0.24 | 0.19 | 0.20 | 0.75 | 3 |
| Methyl isobutyl ketone | 108-10-1 | 100.2 | 0.11 | 0.43 | 0.32 | 0.20 | 0.82 | 2 |
| Tetrachloroethene | 127-18-4 | 165.8 | 0.063 | 0.43 | 0.19 | 0.20 | 1.4 | 3 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 111 | 0.077 | 0.35 | 0.23 | 0.20 | 0.91 | 3 |
| 1,1,2-Trichloroethane | 79-00-5 | 133.4 | 0.075 | 0.41 | 0.22 | 0.20 | 1.1 | 3 |
| Dibromochloromethane | 124-48-1 | 208.3 | 0.073 | 0.62 | 0.22 | 0.20 | 1.7 | 3 |
| 1,2-Dibromoethane | 106-93-4 | 187.9 | 0.067 | 0.52 | 0.20 | 0.20 | 1.5 | 3 |
| Methyl n-butyl ketone | 591-78-6 | 100.16 | 0.13 | 0.54 | 0.40 | 0.20 | 0.82 | 2 |
| n-Nonane | 111-84-2 | 128.2 | 0.10 | 0.52 | 0.30 | 0.20 | 1.0 | 2 |
| Chlorobenzene | 108-90-7 | 112.6 | 0.073 | 0.34 | 0.22 | 0.20 | 0.92 | 3 |
| Ethylbenzene | 100-41-4 | 106.2 | 0.067 | 0.29 | 0.20 | 0.20 | 0.9 | 3 |
| Xylenes (m&p) | 179601-23-1 | 106.2 | 0.15 | 0.64 | 0.44 | 0.40 | 1.74 | 3 |
| Xylene (o) | 79-34-5 | 167.9 | 0.073 | 0.50 | 0.22 | 0.20 | 1.4 | 3 |
| Styrene | 100-42-5 | 104.1 | 0.072 | 0.31 | 0.22 | 0.20 | 0.85 | 3 |
| Bromoform | 75-25-2 | 252.8 | 0.075 | 0.77 | 0.22 | 0.20 | 2.1 | 3 |
| Cumene (Isopropylbenzene) | 98-82-8 | 120.2 | 0.069 | 0.34 | 0.21 | 0.20 | 0.98 | 3 |
| n-Propyl benzene | 103-65-1 | 120.19 | 0.085 | 0.42 | 0.25 | 0.20 | 0.98 | 3 |
| 1,1,2,2-Tetrachloroethane | 95-47-6 | 106.2 | 0.069 | 0.30 | 0.21 | 0.20 | 0.87 | 3 |
| 4-Ethyltoluene | 622-96-8 | 120.2 | 0.090 | 0.44 | 0.27 | 0.20 | 0.98 | 2 |
| 2-Chlorotoluene | 95-49-8 | 126.6 | 0.077 | 0.40 | 0.23 | 0.20 | 1.0 | 3 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 120.2 | 0.076 | 0.37 | 0.23 | 0.20 | 0.98 | 3 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 120.2 | 0.080 | 0.39 | 0.24 | 0.20 | 0.98 | 3 |

# INTEGRATED ANALYTICAL LABORATORIES, LLC
# REPORTING METHOD DETECTION LIMIT (MDL) REPORT

Integrated Analytical Laboratories - Randolph, NJ

Matrix: Air
MDL Effective Date: 8/16/2023
Column ID: Restek RtX-VMS, 30 meter, 0.32mm ID, 1.8 um DF
Instrument ID: GC - Agilent 7890A / MS - Agilent 5975C (IAL ID: *Instrument AA* )
Analyst: Joe Waluliewicz
Report Prepared by: Joe Waluliewicz

| Compound Name | CAS # | Molecular Weight | MDL ppbv | MDL µg/m$^3$ | PQL ppbv | RL ppbv | RL µg/m$^3$ | True value/ MDL |
|---|---|---|---|---|---|---|---|---|
| 1,3-Dichlorobenzene | 541-73-1 | 147 | 0.086 | 0.52 | 0.26 | 0.20 | 1.2 | 3 |
| 1,4-Dichlorobenzene | 106-46-7 | 147.0 | 0.089 | 0.54 | 0.27 | 0.20 | 1.2 | 2 |
| Benzyl chloride | 100-44-7 | 126.6 | 0.064 | 0.33 | 0.19 | 0.20 | 1.0 | 3 |
| 1,2-Dichlorobenzene | 95-50-1 | 147.0 | 0.083 | 0.50 | 0.25 | 0.20 | 1.2 | 3 |
| 1,3-Hexachlorobutadiene | 87-68-3 | 260.8 | 0.096 | 1.03 | 0.29 | 0.20 | 2.1 | 2 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 181.5 | 0.12 | 0.89 | 0.36 | 0.20 | 1.5 | 2 |
| Naphthalene | 91-20-3 | 128 | 0.15 | 0.79 | 0.45 | 0.20 | 1.0 | 2 |

Where:
MDL is defined as the higher of the MDL Spike and MDL Blank
PQL is MDLx3
RL is defined as the lowest point of the calibration curve
ppbv is parts per billion by volume and is how results come off the instrument
µg/m$^3$ = ppbv x molecular weight / 24.45

Location of this file: P:\PAL Reports\LLTO-15 and TO-15 Common Files\Agilent MDL

Instrument used for Clean Canister Certification Analysis? YES

Michael Leftin, Ph.D.
Laboratory Director

Date: August 16, 2023

# INTEGRATED ANALYTICAL LABORATORIES, LLC
# METHOD DETECTION LIMIT VERIFICATION (MDLV) REPORT

Integrated Analytical Laboratories - Randolph, NJ

| | |
|---|---|
| Analysis Level: | 0.20 ppbv, 0.40 for m&p-xylenes |
| Matrix: | Air |
| Column ID: | RTX-VMS, 30-meter, 0.32 mm ID, 1.8 µm $d_f$ |
| Instrument Identification: | AA |
| Date of Verification Study: | 8/16/2023 |
| Study Identification File #: | aa3415rllcs |
| Analyst: | Joe Walukiewicz |
| Analysis/Processing Method: | C:\MSDCHEM\1\METHODS\230815.M |
| Cylinder ID: | EB0103704 |

Michael Leftin, Ph.D.
Laboratory Director

Date: August 16, 2023

| Compound Name | CAS # | MDLV (ppbv) | RL (ppbv) | RL/MDLV Ratio |
|---|---|---|---|---|
| Propene | 115-07-1 | 0.23 | 0.20 | 1 |
| Dichlorodifluoromethane | 124-48-1 | 0.24 | 0.20 | 1 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.26 | 0.20 | 1 |
| n-Butane | 106-97-8 | 0.23 | 0.20 | 1 |
| Chloromethane | 74-87-3 | 0.24 | 0.20 | 1 |
| Vinyl chloride | 75-01-4 | 0.26 | 0.20 | 1 |
| 1,3-Butadiene | 106-99-0 | 0.23 | 0.20 | 1 |
| Bromomethane | 74-83-9 | 0.23 | 0.20 | 1 |
| Chloroethane | 75-00-3 | 0.22 | 0.20 | 1 |
| Vinyl bromide | 593-60-2 | 0.23 | 0.20 | 1 |
| Trichlorofluoromethane | 75-69-4 | 0.26 | 0.20 | 1 |
| Ethanol | 64-17-5 | 0.30 | 0.20 | 2 |
| 1,1-Dichloroethene | 75-35-4 | 0.22 | 0.20 | 1 |
| Carbon disulfide | 75-15-0 | 0.22 | 0.20 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.27 | 0.20 | 1 |
| Acrolein | 107-02-8 | 0.24 | 0.20 | 1 |
| Allyl Chloride | 107-05-1 | 0.22 | 0.20 | 1 |
| Isopropanol | 67-63-0 | 0.20 | 0.20 | 1 |
| Methylene chloride | 75-09-2 | 0.35 | 0.20 | 2 |
| Acetone | 67-64-1 | 0.27 | 0.20 | 1 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.22 | 0.20 | 1 |
| n-Pentane | 109-66-0 | 0.25 | 0.20 | 1 |
| n-Hexane | 110-54-3 | 0.26 | 0.20 | 1 |
| Methyl tert-butyl ether | 1634-04-4 | 0.25 | 0.20 | 1 |
| Tert-butyl alcohol | 75-65-0 | 0.24 | 0.20 | 1 |
| 1,1-Dichloroethane | 75-34-3 | 0.24 | 0.20 | 1 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.21 | 0.20 | 1 |
| Cyclohexane | 110-82-7 | 0.24 | 0.20 | 1 |
| Chloroform | 67-66-3 | 0.23 | 0.20 | 1 |
| Ethyl acetate | 141-78-6 | 0.23 | 0.20 | 1 |
| Carbon tetrachloride | 56-23-5 | 0.26 | 0.20 | 1 |
| Tetrahydrofuran | 109-99-9 | 0.23 | 0.20 | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | 0.24 | 0.20 | 1 |
| Methyl ethyl ketone | 78-93-3 | 0.24 | 0.20 | 1 |
| n-Heptane | 142-82-5 | 0.23 | 0.20 | 1 |
| Benzene | 71-43-2 | 0.24 | 0.20 | 1 |
| 1,2-Dichloroethane | 106-93-4 | 0.23 | 0.20 | 1 |
| Trichloroethene | 79-01-6 | 0.25 | 0.20 | 1 |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.29 | 0.20 | 1 |
| 1,2-Dichloropropane | 78-87-5 | 0.26 | 0.20 | 1 |
| Bromodichloromethane | 75-27-4 | 0.28 | 0.20 | 1 |
| Methyl methacrylate | 80-62-6 | 0.22 | 0.20 | 1 |
| 1,4-Dioxane | 123-91-1 | 0.28 | 0.20 | 1 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.25 | 0.20 | 1 |
| Toluene | 108-88-3 | 0.24 | 0.20 | 1 |
| Methyl isobutyl ketone | 108-10-1 | 0.22 | 0.20 | 1 |
| Tetrachloroethene | 127-18-4 | 0.26 | 0.20 | 1 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.24 | 0.20 | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | 0.23 | 0.20 | 1 |
| Dibromochloromethane | 75-71-8 | 0.24 | 0.20 | 1 |
| 1,2-Dibromoethane | 107-06-2 | 0.22 | 0.20 | 1 |
| Methyl n-butyl ketone | 591-78-6 | 0.21 | 0.20 | 1 |

# INTEGRATED ANALYTICAL LABORATORIES, LLC
# METHOD DETECTION LIMIT VERIFICATION (MDLV) REPORT

Integrated Analytical Laboratories - Randolph, NJ

| | |
|---|---|
| Analysis Level: | 0.20 ppbv, 0.40 for m&p-xylenes |
| Matrix: | Air |
| Column ID: | RTX-VMS, 30-meter, 0.32 mm ID, 1.8 µm $d_f$ |
| Instrument Identification: | AA |
| Date of Verification Study: | 8/16/2023 |
| Study Identification File #: | aa3415rllcs |
| Analyst: | Joe Walukiewicz |
| Analysis/Processing Method: | C:\MSDCHEM\1\METHODS\230815.M |
| Cylinder ID: | EB0103704 |

Michael Leftin, Ph.D.
Laboratory Director

Date: August 16, 2023

| Compound Name | CAS # | MDLV (ppbv) | RL (ppbv) | RL/MDLV Ratio |
|---|---|---|---|---|
| n-Nonane | 111-84-2 | 0.21 | 0.20 | 1 |
| Chlorobenzene | 108-90-7 | 0.28 | 0.20 | 1 |
| Ethylbenzene | 100-41-4 | 0.26 | 0.20 | 1 |
| Xylenes (m&p) | 179601-23-1 | 0.54 | 0.40 | 1 |
| Xylene (o) | 95-47-6 | 0.26 | 0.20 | 1 |
| Styrene | 100-42-5 | 0.23 | 0.20 | 1 |
| Bromoform | 75-25-2 | 0.26 | 0.20 | 1 |
| Cumene | 98-82-8 | 0.24 | 0.20 | 1 |
| n-Propyl benzene | 103-65-1 | 0.25 | 0.20 | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.25 | 0.20 | 1 |
| 4-Ethyltoluene | 622-96-8 | 0.24 | 0.20 | 1 |
| 2-Chlorotoluene | 95-49-8 | 0.25 | 0.20 | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.24 | 0.20 | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.22 | 0.20 | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | 0.27 | 0.20 | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | 0.24 | 0.20 | 1 |
| Benzyl chloride | 100-44-7 | 0.17 | 0.20 | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | 0.25 | 0.20 | 1 |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.31 | 0.20 | 2 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.25 | 0.20 | 1 |
| Naphthalene | 91-20-3 | 0.28 | 0.20 | 1 |

# Section V: Quality Control Data Summary

**BFB Tune Summary**

**Method Blank**

**Laboratory Control Sample**

**Laboratory Sample Duplicate**

**Internal Standard Area Summary**

# BFB

**Data Path:** C:\DATA\2023\08-2023\08-15-2023\
**Data File:** AA3401BFB.D
**Acq On:** 8/15/2023 10:11:00AM
**Operator:** jls
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\230525.M
**Last Update:** Tue May 30 13:24:12 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 251499 | 18.7 |
| PASS | 75 | 95 | 30 | 66 | 703104 | 52.3 |
| PASS | 95 | 95 | 100 | 100 | 1345024 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 89525 | 6.7 |
| PASS | 173 | 174 | 0.00 | 2 | 8293 | 0.8 |
| PASS | 174 | 95 | 50 | 100 | 1069397 | 79.5 |
| PASS | 175 | 174 | 4 | 9 | 78181 | 7.3 |
| PASS | 176 | 174 | 93 | 101 | 1035413 | 96.8 |
| PASS | 177 | 176 | 5 | 9 | 68613 | 6.6 |

Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA3401BFB | NA | 8/15/2023 10:11:00 AM |
| 0.2 PPBV STD | AA3402STD05 | NA | 8/15/2023 11:15:00 AM |
| 10 PPBV STD | AA3404STD03 | NA | 8/15/2023 1:09:00 PM |
| 2 PPBV STD | AA3403STD04 | NA | 8/15/2023 1:45:00 PM |
| 20 PPBV STD | AA3405STD02 | NA | 8/15/2023 3:12:00 PM |
| 40 PPBV STD | AA3406STD01 | NA | 8/15/2023 4:47:00 PM |
| 10 PPBV ICVSS | AA3407ICVSS | NA | 8/15/2023 6:09:00 PM |

# BFB

**Data Path:** C:\DATA\2023\09-2023\09-28-2023\
**Data File:** AA4071BFB.D
**Acq On:** 9/28/2023 10:01:00AM
**Operator:** jjw
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\230815.M
**Last Update:** Wed Aug 16 10:00:51 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 96931 | 19.9 |
| PASS | 75 | 95 | 30 | 66 | 265259 | 54.6 |
| PASS | 95 | 95 | 100 | 100 | 485931 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 33264 | 6.8 |
| PASS | 173 | 174 | 0.00 | 2 | 3017 | 0.8 |
| PASS | 174 | 95 | 50 | 100 | 366187 | 75.4 |
| PASS | 175 | 174 | 4 | 9 | 27080 | 7.4 |
| PASS | 176 | 174 | 93 | 101 | 360832 | 98.5 |
| PASS | 177 | 176 | 5 | 9 | 23088 | 6.4 |

Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4071BFB | NA | 9/28/2023 10:01:00 AM |
| 10 PPBV DCVS | AA4072DCVS | NA | 9/28/2023 10:31:00 AM |
| 10 PPBV LCS | AA4073LCS | NA | 9/28/2023 11:19:00 AM |
| METHOD BLANK | AA4074BLK | NA | 9/28/2023 11:47:00 AM |
| 02 PPBV RLLCS | AA4075RLLCS | NA | 9/28/2023 1:22:00 PM |
| 2164 | AA4076 | NA | 9/28/2023 3:00:00 PM |
| 4870 | AA4077 | NA | 9/28/2023 3:30:00 PM |
| 2160 | AA4078 | NA | 9/28/2023 4:00:00 PM |
| 10 PPBV CCCVS | AA4093CCCVS | NA | 9/29/2023 12:28:00 AM |

# BFB

**Data Path:** C:\DATA\2023\10-2023\10-10-2023\

**Data File:** AA4131BFB.D

**Acq On:** 10/10/2023 10:13:00AM

**Operator:** jls

**Sample:** BFB

**Misc:** ALM018474

**ALS Vial:** 1 **Multiplier:** 1

**Integration File:** rteint.p

**Method:** C:\msdchem\1\METHODS\231009.M

**Last Update:** Tue Oct 10 09:54:56 2023

**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 65523 | 16.8 |
| PASS | 75 | 95 | 30 | 66 | 182571 | 46.8 |
| PASS | 95 | 95 | 100 | 100 | 389867 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 25643 | 6.6 |
| PASS | 173 | 174 | 0.00 | 2 | 0 | 0.0 |
| PASS | 174 | 95 | 50 | 100 | 293952 | 75.4 |
| PASS | 175 | 174 | 4 | 9 | 22269 | 7.6 |
| PASS | 176 | 174 | 93 | 101 | 282667 | 96.2 |
| PASS | 177 | 176 | 5 | 9 | 18629 | 6.6 |

Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4131BFB | NA | 10/10/2023 10:13:00 AM |
| 0.2 PPBV STD | AA4132STD05 | NA | 10/10/2023 10:40:00 AM |
| 2 PPBV STD | AA4133STD04 | NA | 10/10/2023 11:46:00 AM |
| 10 PPBV STANDARD STD | AA4134STD03 | NA | 10/10/2023 12:21:00 PM |
| 20 PPBV STD | AA4135STD02 | NA | 10/10/2023 12:55:00 PM |
| 40 PPBV STD | AA4136STD01 | NA | 10/10/2023 2:05:00 PM |
| 10 PPBV ICVSS | AA4137ICVSS | NA | 10/10/2023 4:48:00 PM |
| 10 PPBV LCS | AA4138LCS | NA | 10/10/2023 5:39:00 PM |
| METHOD BLANK | AA4139BLK | NA | 10/10/2023 6:07:00 PM |
| 02 PPBV RLLCS | AA4140RLLCS | NA | 10/10/2023 6:35:00 PM |
| 5101 | AA4142 | NA | 10/10/2023 7:36:00 PM |
| 4869 | AA4143 | NA | 10/10/2023 8:06:00 PM |
| 2157 | AA4144 | NA | 10/10/2023 8:36:00 PM |
| 10 PPBV CCCVS | AA4154CCCVS | NA | 10/11/2023 1:53:00 AM |

# BFB

**Data Path:** C:\DATA\2023\12-2023\12-11-2023\

**Data File:** AA4901BFB.D

**Acq On:** 12/11/2023 9:24:00AM

**Operator:** jjw

**Sample:** BFB

**Misc:** ALM018474

**ALS Vial:** 1 **Multiplier:** 1

**Integration File:** rteint.p

**Method:** C:\msdchem\1\METHODS\231009.M

**Last Update:** Tue Oct 10 15:12:35 2023

**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 267904 | 18.4 |
| PASS | 75 | 95 | 30 | 66 | 717035 | 49.1 |
| PASS | 95 | 95 | 100 | 100 | 1459371 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 91040 | 6.2 |
| PASS | 173 | 174 | 0.00 | 2 | 10848 | 1.0 |
| PASS | 174 | 95 | 50 | 100 | 1053269 | 72.2 |
| PASS | 175 | 174 | 4 | 9 | 81547 | 7.7 |
| PASS | 176 | 174 | 93 | 101 | 1021824 | 97.0 |
| PASS | 177 | 176 | 5 | 9 | 65264 | 6.4 |

Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4901BFB | NA | 12/11/2023 9:24:00 AM |
| 10 PPBV DCVS | AA4902DCVS | NA | 12/11/2023 10:26:00 AM |
| 10 PPBV LCS | AA4903LCS | NA | 12/11/2023 10:57:00 AM |
| METHOD BLANK | AA4904BLK | NA | 12/11/2023 11:51:00 AM |
| 02 PPBV RLLCS | AA4905RLLCS | NA | 12/11/2023 12:18:00 PM |
| 1458 | AA4906 | NA | 12/11/2023 12:50:00 PM |
| 1588 | AA4907 | NA | 12/11/2023 1:19:00 PM |
| 3012 | AA4908 | NA | 12/11/2023 1:49:00 PM |
| E23-05081-01 | AA4916 | SV1 | 12/11/2023 6:15:00 PM |
| E23-05081-01 | AA4917 | SV1 | 12/11/2023 6:47:00 PM |
| E23-05081-02 | AA4919 | SV4 | 12/11/2023 7:52:00 PM |
| E23-05081-03 | AA4920 | SV9 | 12/11/2023 8:24:00 PM |
| E23-05081-03 | AA4921 | SV9 | 12/11/2023 9:04:00 PM |
| E23-05081-04 | AA4922 | SV8-401-Compactor Room | 12/11/2023 9:35:00 PM |
| E23-05081-04 | AA4923 | SV8-401-Compactor Room | 12/11/2023 10:07:00 PM |

# BFB

**Data Path:** C:\DATA\2023\12-2023\12-11-2023\
**Data File:** AA4901BFB.D
**Acq On:** 12/11/2023 9:24:00AM
**Operator:** jjw
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\231009.M
**Last Update:** Tue Oct 10 15:12:35 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 267904 | 18.4 |
| PASS | 75 | 95 | 30 | 66 | 717035 | 49.1 |
| PASS | 95 | 95 | 100 | 100 | 1459371 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 91040 | 6.2 |
| PASS | 173 | 174 | 0.00 | 2 | 10848 | 1.0 |
| PASS | 174 | 95 | 50 | 100 | 1053269 | 72.2 |
| PASS | 175 | 174 | 4 | 9 | 81547 | 7.7 |
| PASS | 176 | 174 | 93 | 101 | 1021824 | 97.0 |
| PASS | 177 | 176 | 5 | 9 | 65264 | 6.4 |

Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| 10 PPBV CCCVS | AA4931CCCVS | NA | 12/12/2023 1:59:00 AM |

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4074BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **9/28/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| 2164 [AA4076] | 09/28/2023 15:00 |
| 4870 [AA4077] | 09/28/2023 15:30 |
| 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 0:28 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromodichloromethane | 75-27-4 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| Dibromochloromethane | 124-48-1 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.17 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.19 | ND |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.18 | ND |
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |
| n-Hexane | 110-54-3 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4074BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **9/28/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| 2164 [AA4076] | 09/28/2023 15:00 |
| 4870 [AA4077] | 09/28/2023 15:30 |
| 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 0:28 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Methylene chloride | 75-09-2 | 0.20 | ND |
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.17 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.17 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.20 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4904BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/11/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05081-01 [AA4916] | 12/11/2023 18:15 |
| E23-05081-01 [AA4917] | 12/11/2023 18:47 |
| E23-05081-02 [AA4919] | 12/11/2023 19:52 |
| E23-05081-03 [AA4920] | 12/11/2023 20:24 |
| E23-05081-03 [AA4921] | 12/11/2023 21:04 |
| E23-05081-04 [AA4922] | 12/11/2023 21:35 |
| E23-05081-04 [AA4923] | 12/11/2023 22:07 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.17 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.19 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4904BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/11/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05081-01 [AA4916] | 12/11/2023 18:15 |
| E23-05081-01 [AA4917] | 12/11/2023 18:47 |
| E23-05081-02 [AA4919] | 12/11/2023 19:52 |
| E23-05081-03 [AA4920] | 12/11/2023 20:24 |
| E23-05081-03 [AA4921] | 12/11/2023 21:04 |
| E23-05081-04 [AA4922] | 12/11/2023 21:35 |
| E23-05081-04 [AA4923] | 12/11/2023 22:07 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.18 | ND |
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |
| n-Hexane | 110-54-3 | 0.20 | ND |
| Methylene chloride | 75-09-2 | 0.20 | ND |
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.17 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.17 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4904BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/11/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05081-01 [AA4916] | 12/11/2023 18:15 |
| E23-05081-01 [AA4917] | 12/11/2023 18:47 |
| E23-05081-02 [AA4919] | 12/11/2023 19:52 |
| E23-05081-03 [AA4920] | 12/11/2023 20:24 |
| E23-05081-03 [AA4921] | 12/11/2023 21:04 |
| E23-05081-04 [AA4922] | 12/11/2023 21:35 |
| E23-05081-04 [AA4923] | 12/11/2023 22:07 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.20 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4073LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 9/28/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| 2164 [AA4076] | 09/28/2023 15:00 |
| 4870 [AA4077] | 09/28/2023 15:30 |
| 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 0:28 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Acetone | 67-64-1 | 13 | 120 |
| Benzene | 71-43-2 | 12 | 120 |
| Bromodichloromethane | 75-27-4 | 12 | 110 |
| Bromoform | 75-25-2 | 11 | 100 |
| Bromomethane | 74-83-9 | 12 | 110 |
| 1,3-Butadiene | 106-99-0 | 14 | 130 |
| Chlorobenzene | 108-90-7 | 10 | 100 |
| Chloroethane | 75-00-3 | 13 | 130 |
| Chloroform | 67-66-3 | 13 | 130 |
| Chloromethane | 74-87-3 | 14 | 120 |
| Carbon disulfide | 75-15-0 | 14 | 130 |
| Carbon tetrachloride | 56-23-5 | 11 | 110 |
| Cyclohexane | 110-82-7 | 12 | 120 |
| Dibromochloromethane | 124-48-1 | 11 | 100 |
| 1,2-Dibromoethane | 106-93-4 | 11 | 100 |
| 1,2-Dichlorobenzene | 95-50-1 | 10 | 91 |
| 1,3-Dichlorobenzene | 541-73-1 | 10 | 91 |
| 1,4-Dichlorobenzene | 106-46-7 | 11 | 100 |
| Dichlorodifluoromethane | 75-71-8 | 13 | 120 |
| 1,1-Dichloroethane | 75-34-3 | 13 | 120 |
| 1,2-Dichloroethane | 107-06-2 | 13 | 130 |
| 1,1-Dichloroethene | 75-35-4 | 13 | 120 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 14 | 130 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 14 | 130 |
| 1,2-Dichloropropane | 78-87-5 | 11 | 110 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 12 | 110 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 13 | 130 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 11 | 100 |
| 1,4-Dioxane | 123-91-1 | 12 | 100 |
| Ethylbenzene | 100-41-4 | 11 | 110 |
| n-Heptane | 142-82-5 | 12 | 120 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4073LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 9/28/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| 2164 [AA4076] | 09/28/2023 15:00 |
| 4870 [AA4077] | 09/28/2023 15:30 |
| 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 0:28 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| 1,3-Hexachlorobutadiene | 87-68-3 | 9.6 | 84 |
| n-Hexane | 110-54-3 | 13 | 130 |
| Methylene chloride | 75-09-2 | 13 | 120 |
| Methyl ethyl ketone | 78-93-3 | 14 | 120 |
| Methyl isobutyl ketone | 108-10-1 | 12 | 110 |
| Methyl tert-butyl ether | 1634-04-4 | 12 | 110 |
| Styrene | 100-42-5 | 11 | 100 |
| Tert-butyl alcohol | 75-65-0 | 13 | 110 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 10 | 91 |
| Tetrachloroethene | 127-18-4 | 11 | 110 |
| Toluene | 108-88-3 | 11 | 110 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 11 | 96 |
| 1,1,1-Trichloroethane | 71-55-6 | 11 | 110 |
| 1,1,2-Trichloroethane | 79-00-5 | 11 | 100 |
| Trichloroethene | 79-01-6 | 9.8 | 98 |
| Trichlorofluoromethane | 75-69-4 | 13 | 120 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 11 | 110 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 11 | 100 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 10 | 91 |
| 2,2,4-Trimethylpentane | 540-84-1 | 12 | 120 |
| Vinyl bromide | 593-60-2 | 12 | 120 |
| Vinyl chloride | 75-01-4 | 14 | 130 |
| Xylenes (m&p) | 179601-23-1 | 22 | 110 |
| Xylenes (o) | 95-47-6 | 10 | 100 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4903LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 12/11/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05081-01 [AA4916] | 12/11/2023 18:15 |
| E23-05081-01 [AA4917] | 12/11/2023 18:47 |
| E23-05081-02 [AA4919] | 12/11/2023 19:52 |
| E23-05081-03 [AA4920] | 12/11/2023 20:24 |
| E23-05081-03 [AA4921] | 12/11/2023 21:04 |
| E23-05081-04 [AA4922] | 12/11/2023 21:35 |
| E23-05081-04 [AA4923] | 12/11/2023 22:07 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Acetone | 67-64-1 | 11 | 100 |
| Benzene | 71-43-2 | 9.5 | 95 |
| Bromoform | 75-25-2 | 11 | 100 |
| Bromomethane | 74-83-9 | 10 | 91 |
| 1,3-Butadiene | 106-99-0 | 10 | 100 |
| Chlorobenzene | 108-90-7 | 10 | 100 |
| Chloroethane | 75-00-3 | 11 | 110 |
| Chloroform | 67-66-3 | 10 | 100 |
| Chloromethane | 74-87-3 | 11 | 96 |
| Carbon disulfide | 75-15-0 | 11 | 100 |
| Carbon tetrachloride | 56-23-5 | 10 | 100 |
| Cyclohexane | 110-82-7 | 10 | 100 |
| 1,2-Dibromoethane | 106-93-4 | 11 | 100 |
| 1,2-Dichlorobenzene | 95-50-1 | 10 | 91 |
| 1,3-Dichlorobenzene | 541-73-1 | 10 | 91 |
| 1,4-Dichlorobenzene | 106-46-7 | 10 | 91 |
| Dichlorodifluoromethane | 75-71-8 | 11 | 100 |
| 1,1-Dichloroethane | 75-34-3 | 9.8 | 89 |
| 1,2-Dichloroethane | 107-06-2 | 11 | 110 |
| 1,1-Dichloroethene | 75-35-4 | 11 | 100 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 10 | 91 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 11 | 100 |
| 1,2-Dichloropropane | 78-87-5 | 10 | 100 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 11 | 100 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4903LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 12/11/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05081-01 [AA4916] | 12/11/2023 18:15 |
| E23-05081-01 [AA4917] | 12/11/2023 18:47 |
| E23-05081-02 [AA4919] | 12/11/2023 19:52 |
| E23-05081-03 [AA4920] | 12/11/2023 20:24 |
| E23-05081-03 [AA4921] | 12/11/2023 21:04 |
| E23-05081-04 [AA4922] | 12/11/2023 21:35 |
| E23-05081-04 [AA4923] | 12/11/2023 22:07 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| 1,3-Dichloropropene (trans) | 10061-02-6 | 11 | 110 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 8.8 | 80 |
| 1,4-Dioxane | 123-91-1 | 11 | 92 |
| Ethylbenzene | 100-41-4 | 11 | 110 |
| n-Heptane | 142-82-5 | 11 | 110 |
| 1,3-Hexachlorobutadiene | 87-68-3 | 10 | 88 |
| n-Hexane | 110-54-3 | 10 | 100 |
| Methylene chloride | 75-09-2 | 9.6 | 87 |
| Methyl ethyl ketone | 78-93-3 | 11 | 93 |
| Methyl isobutyl ketone | 108-10-1 | 12 | 110 |
| Methyl tert-butyl ether | 1634-04-4 | 11 | 100 |
| Styrene | 100-42-5 | 11 | 100 |
| Tert-butyl alcohol | 75-65-0 | 11 | 93 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 11 | 100 |
| Tetrachloroethene | 127-18-4 | 11 | 110 |
| Toluene | 108-88-3 | 10 | 100 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 11 | 96 |
| 1,1,1-Trichloroethane | 71-55-6 | 10 | 100 |
| 1,1,2-Trichloroethane | 79-00-5 | 10 | 91 |
| Trichloroethene | 79-01-6 | 9.1 | 91 |
| Trichlorofluoromethane | 75-69-4 | 11 | 100 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 9.4 | 94 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 11 | 100 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 11 | 100 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4903LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 12/11/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05081-01 [AA4916] | 12/11/2023 18:15 |
| E23-05081-01 [AA4917] | 12/11/2023 18:47 |
| E23-05081-02 [AA4919] | 12/11/2023 19:52 |
| E23-05081-03 [AA4920] | 12/11/2023 20:24 |
| E23-05081-03 [AA4921] | 12/11/2023 21:04 |
| E23-05081-04 [AA4922] | 12/11/2023 21:35 |
| E23-05081-04 [AA4923] | 12/11/2023 22:07 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| 2,2,4-Trimethylpentane | 540-84-1 | 10 | 100 |
| Vinyl bromide | 593-60-2 | 10 | 100 |
| Vinyl chloride | 75-01-4 | 11 | 110 |
| Xylenes (m&p) | 179601-23-1 | 22 | 110 |
| Xylenes (o) | 95-47-6 | 10 | 100 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 9/13/23 |
| SDG Number: | E23-04122 | Date Analyzed: | 9/28/23,9/28/23 |
| IAL Sample ID: | E23-04122-06 | Lab Data File#: | AA4087,AA4088 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 1781 | Injection Volume: | 50ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-04122-06** | | **E23-04122-26** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Acetone | 67-64-1 | **50** | | **54** | | 4.0 | **-7.69%** |
| Allyl Chloride | 107-05-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Benzene | 71-43-2 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| Bromodichloromethane | 75-27-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Bromoform | 75-25-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Bromomethane | 74-83-9 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3-Butadiene | 106-99-0 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chlorobenzene | 108-90-7 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chloroethane | 75-00-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chloroform | 67-66-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chloromethane | 74-87-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Carbon disulfide | 75-15-0 | **10.0** | | **11** | | 4.0 | **-9.52%** |
| Carbon tetrachloride | 56-23-5 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 2-Chlorotoluene | 95-49-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Cyclohexane | 110-82-7 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Dibromochloromethane | 124-48-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dibromoethane | 106-93-4 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,2-Dichlorobenzene | 95-50-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3-Dichlorobenzene | 541-73-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,4-Dichlorobenzene | 106-46-7 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Dichlorodifluoromethane | 75-71-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1-Dichloroethane | 75-34-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloroethane | 107-06-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1-Dichloroethene | 75-35-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloroethene (cis) | 156-59-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloroethene (trans) | 156-60-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloropropane | 78-87-5 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Ethylbenzene | 100-41-4 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 4-Ethyltoluene | 622-96-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| n-Heptane | 142-82-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3-Hexachlorobutadiene | 87-68-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| n-Hexane | 110-54-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Methylene chloride | 75-09-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Methyl ethyl ketone | 78-93-3 | **8.1** | | **10** | | 4.0 | **-20.99%** |
| Methyl isobutyl ketone | 108-10-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 9/13/23 |
| SDG Number: | E23-04122 | Date Analyzed: | 9/28/23,9/28/23 |
| IAL Sample ID: | E23-04122-06 | Lab Data File#: | AA4087,AA4088 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 1781 | Injection Volume: | 50ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-04122-06** | | **E23-04122-26** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Methyl tert-butyl ether | 1634-04-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Styrene | 100-42-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Tert-butyl alcohol | 75-65-0 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Tetrachloroethene | 127-18-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Toluene | 108-88-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2,4-Trichlorobenzene | 120-82-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,1-Trichloroethane | 71-55-6 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,2-Trichloroethane | 79-00-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Trichloroethene | 79-01-6 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| Trichlorofluoromethane | 75-69-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2,4-Trimethylbenzene | 95-63-6 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3,5-Trimethylbenzene | 108-67-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 2,2,4-Trimethylpentane | 540-84-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Vinyl bromide | 593-60-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Vinyl chloride | 75-01-4 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| Xylenes (m&p) | 179601-23-1 | 4.0 | U | **4.2** | | 4.0 | **NC** |
| Xylenes (o) | 95-47-6 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |

**RPD must be <25% for all laboratory duplicate samples. Laboratory duplicate samples are run once daily.**
**NC = The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample.**

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

SDG Number: E23-05079
IAL Sample ID: E23-05079-03
Matrix: Air
Summa ID: 3830

Date Received: 11/20/23
Date Analyzed: 12/12/23,12/12/23
Lab Data File#: AA4929,AA4930
Dilution Factor: 1
Injection Volume: 500ml
GC/MS Column: RTX-1, 0.32 mmID

| Compound | CAS # | Sample E23-05079-03 Concentration Reported ppbv | Q | Sample Dup E23-05079-23 Concentration Reported ppbv | Q | Reporting Limits ppbv | RPD |
|---|---|---|---|---|---|---|---|
| Acetone | 67-64-1 | **6.1** | | **5.9** | | 0.40 | **3.33%** |
| Allyl Chloride | 107-05-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Benzene | 71-43-2 | **0.31** | | **0.32** | | 0.20 | **-3.17%** |
| Bromodichloromethane | 75-27-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Bromoform | 75-25-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Bromomethane | 74-83-9 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Butadiene | 106-99-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chlorobenzene | 108-90-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloroethane | 75-00-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloroform | 67-66-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloromethane | 74-87-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Carbon disulfide | 75-15-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Carbon tetrachloride | 56-23-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 2-Chlorotoluene | 95-49-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Cyclohexane | 110-82-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Dibromochloromethane | 124-48-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dibromoethane | 106-93-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorobenzene | 95-50-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Dichlorobenzene | 541-73-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,4-Dichlorobenzene | 106-46-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Dichlorodifluoromethane | 75-71-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1-Dichloroethane | 75-34-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethane | 107-06-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1-Dichloroethene | 75-35-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Ethylbenzene | 100-41-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 4-Ethyltoluene | 622-96-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| n-Heptane | 142-82-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| n-Hexane | 110-54-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Methylene chloride | 75-09-2 | **3.5** | | **3.4** | | 0.40 | **2.90%** |
| Methyl ethyl ketone | 78-93-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Methyl isobutyl ketone | 108-10-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 11/20/23 |
| SDG Number: | E23-05079 | Date Analyzed: | 12/12/23,12/12/23 |
| IAL Sample ID: | E23-05079-03 | Lab Data File#: | AA4929,AA4930 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 3830 | Injection Volume: | 500ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| Compound | CAS # | Sample E23-05079-03 Concentration Reported ppbv | Q | Sample Dup E23-05079-23 Concentration Reported ppbv | Q | Reporting Limits ppbv | RPD |
|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | 1634-04-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Styrene | 100-42-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Tert-butyl alcohol | 75-65-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Tetrachloroethene | 127-18-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Toluene | 108-88-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,1-Trichloroethane | 71-55-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2-Trichloroethane | 79-00-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Trichloroethene | 79-01-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Trichlorofluoromethane | 75-69-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Vinyl bromide | 593-60-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Vinyl chloride | 75-01-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Xylenes (m&p) | 179601-23-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Xylenes (o) | 95-47-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |

**RPD must be <25% for all laboratory duplicate samples. Laboratory duplicate samples are run once daily.**
**NC = The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample.**

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

## Initial Calibration Curve Internal Standard Area and Retention Time Summary

**Instrument:** AA **ICAL Date:** 8/15/2023

| | | BROMOCHLOROMETHANE | | | | 1,4-DIFLUOROBENZENE | | | | D-5 CHLOROBENZENE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Area # | | RT | | Area # | | RT | | Area # | | RT | |
| AVERAGE OF CALIBRATION STANDARDS | | 520465 | | 4.395 | | 2280663 | | 5.455 | | 2627605 | | 8.318 | |
| UPPER LIMIT | | 728651 | | 4.725 | | 3192928 | | 5.785 | | 3678646 | | 8.648 | |
| LOWER LIMIT | | 312279 | | 4.065 | | 1368398 | | 5.125 | | 1576563 | | 7.988 | |
| Lab ID | | Area # | % | RT | +/- | Area # | % | RT | +/- | Area # | % | RT | +/- |
| 40 PPBV STD | AA 3406 STD01 | 487271 | -6.38 | 4.406 | 0.01 | 2425798 | 6.36 | 5.457 | 0.00 | 2732166 | 3.98 | 8.319 | 0.00 |
| 20 PPBV STD | AA 3405 STD02 | 499473 | -4.03 | 4.399 | 0.00 | 2278768 | -0.08 | 5.457 | 0.00 | 2812211 | 7.03 | 8.319 | 0.00 |
| 10 PPBV STD | AA 3404 STD03 | 530723 | 1.97 | 4.396 | 0.00 | 2268530 | -0.53 | 5.457 | 0.00 | 2737620 | 4.19 | 8.319 | 0.00 |
| 2 PPBV STD | AA 3403 STD04 | 541075 | 3.96 | 4.393 | 0.00 | 2325427 | 1.96 | 5.454 | 0.00 | 2787489 | 6.08 | 8.319 | 0.00 |
| 0.2 PPBV STD | AA 3402 STD05 | 543782 | 4.48 | 4.380 | -0.01 | 2104790 | -7.71 | 5.448 | 0.01 | 2068537 | -21.28 | 8.316 | 0.00 |
| ICVSS | AA 3407 ICVSS | 614925 | 18.15 | 4.396 | 0.00 | 2660514 | 16.66 | 5.454 | 0.00 | 3151139 | 19.92 | 8.319 | 0.00 |

Difference of Internal Area must be within +/- 40%; Retention Times must be within +/- 0.33 minute.

* Values outsite QC limits.

# Internal Standard Area and Retention Time Summary

**Lab File ID (Standard):** AA4072DCVS **Date Analyzed:** 9/28/2023

**Instrument:** AA **ICAL Date:** 8/15/2023

| | | | BROMOCHLOROMETHANE | | | | 1,4-DIFLUOROBENZENE | | | | D-5 CHLOROBENZENE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Area # | | RT | | Area # | | RT | | Area # | | RT | |
| | CALIBRATION STANDARD | | 394533 | | 4.399 | | 1846241 | | 5.457 | | 1956014 | | 8.319 | |
| | UPPER LIMIT | | 552346 | | 4.73 | | 2584737 | | 5.79 | | 2738420 | | 8.65 | |
| | LOWER LIMIT | | 236720 | | 4.07 | | 1107745 | | 5.13 | | 1173608 | | 7.99 | |
| Lab ID | | DF | Area # | % | RT | +/- | Area # | % | RT | +/- | Area # | % | RT | +/- |
| Method Blank | AA4074BLK | 1.0 | 502187 | 27.29 | 4.393 | -0.01 | 2139413 | 15.88 | 5.454 | 0.00 | 2500606 | 27.84 | 8.319 | 0.00 |
| Reporting Limit Laboratory Control Standard | AA4075RLLCS | 1.0 | 400577 | 1.53 | 4.380 | -0.02 | 1566223 | -15.17 | 5.447 | -0.01 | 1477412 | -24.47 | 8.316 | 0.00 |
| 2164 | AA4076 | 1.0 | 481338 | 22.00 | 4.393 | -0.01 | 2110781 | 14.33 | 5.454 | 0.00 | 2516144 | 28.64 | 8.319 | 0.00 |
| 4870 | AA4077 | 1.0 | 360790 | -8.55 | 4.383 | -0.02 | 1388747 | -24.78 | 5.447 | -0.01 | 1279774 | -34.57 | 8.316 | 0.00 |
| 2160 | AA4078 | 1.0 | 361668 | -8.33 | 4.380 | -0.02 | 1313235 | -28.87 | 5.448 | -0.01 | 1248229 | -36.19 | 8.316 | 0.00 |
| Closing Calibration | AA4093CCCVS | 1.0 | 393835 | -0.18 | 4.399 | 0.00 | 1857833 | 0.63 | 5.457 | 0.00 | 2315299 | 18.37 | 8.319 | 0.00 |

Difference of Internal Area must be within +/- 40%; Retention Times must be within +/- 0.33 minute.
* Values outsite QC limits.

## Initial Calibration Curve Internal Standard Area and Retention Time Summary

**Instrument:** AA **ICAL Date:** 10/10/2023

| | | BROMOCHLOROMETHANE | | | | 1,4-DIFLUOROBENZENE | | | | D-5 CHLOROBENZENE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Area # | | RT | | Area # | | RT | | Area # | | RT | |
| AVERAGE OF CALIBRATION STANDARDS | | 343159 | | 4.390 | | 1499624 | | 5.451 | | 1637040 | | 8.316 | |
| UPPER LIMIT | | 480423 | | 4.720 | | 2099474 | | 5.781 | | 2291856 | | 8.646 | |
| LOWER LIMIT | | 205896 | | 4.060 | | 899774 | | 5.121 | | 982224 | | 7.986 | |
| Lab ID | | Area # | % | RT | +/- | Area # | % | RT | +/- | Area # | % | RT | +/- |
| 40 PPBV STD | AA 4136 STD01 | 356266 | 3.82 | 4.400 | 0.01 | 1769398 | 17.99 | 5.458 | -0.01 | 1970985 | 20.40 | 8.319 | 0.00 |
| 20 PPBV STD | AA 4135 STD02 | 363381 | 5.89 | 4.397 | 0.01 | 1661895 | 10.82 | 5.455 | 0.00 | 1933627 | 18.12 | 8.316 | 0.00 |
| 10 PPBV STD | AA 4134 STD03 | 393970 | 14.81 | 4.394 | 0.00 | 1695876 | 13.09 | 5.452 | 0.00 | 1964329 | 19.99 | 8.316 | 0.00 |
| 2 PPBV STD | AA 4133 STD04 | 266219 | -22.42 | 4.378 | -0.01 | 1004403 | -33.02 | 5.445 | 0.01 | 1028709 | -37.16 | 8.313 | 0.00 |
| 0.2 PPBV STD | AA 4132 STD05 | 335961 | -2.10 | 4.380 | -0.01 | 1366548 | -8.87 | 5.444 | 0.01 | 1287551 | -21.35 | 8.316 | 0.00 |
| ICVSS | AA 4137 ICVSS | 450439 | 31.26 | 4.394 | 0.00 | 1936760 | 29.15 | 5.451 | 0.00 | 2279414 | 39.24 | 8.316 | 0.00 |

Difference of Internal Area must be within +/- 40%; Retention Times must be within +/- 0.33 minute.

* Values outsite QC limits.

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Internal Standard Area and Retention Time Summary

**Lab File ID (Standard):** AA4902DCVS **Date Analyzed:** 12/11/2023

**Instrument:** AA **ICAL Date:** 10/10/2023

| | | | BROMOCHLOROMETHANE | | | | 1,4-DIFLUOROBENZENE | | | | D-5 CHLOROBENZENE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Area # | | RT | | Area # | | RT | | Area # | | RT | |
| | CALIBRATION STANDARD | | 596109 | | 4.393 | | 2484518 | | 5.454 | | 2791354 | | 8.319 | |
| | UPPER LIMIT | | 834553 | | 4.72 | | 3478325 | | 5.78 | | 3907896 | | 8.65 | |
| | LOWER LIMIT | | 357665 | | 4.06 | | 1490711 | | 5.12 | | 1674812 | | 7.99 | |
| Lab ID | | DF | Area # | % | RT | +/- | Area # | % | RT | +/- | Area # | % | RT | +/- |
| Method Blank | AA4904BLK | 1.0 | 518939 | -12.95 | 4.377 | -0.02 | 1920464 | -22.70 | 5.444 | -0.01 | 1920350 | -31.20 | 8.315 | 0.00 |
| Reporting Limit Laboratory Control Standard | AA4905RLLCS | 1.0 | 566007 | -5.05 | 4.380 | -0.01 | 2290490 | -7.81 | 5.447 | -0.01 | 2210970 | -20.79 | 8.315 | 0.00 |
| 1458 | AA4906 | 1.0 | 809785 | 35.85 | 4.393 | 0.00 | 3431480 | 38.11 | 5.451 | 0.00 | 3836872 | 37.46 | 8.316 | 0.00 |
| 1588 | AA4907 | 1.0 | 706799 | 18.57 | 4.393 | 0.00 | 3079067 | 23.93 | 5.454 | 0.00 | 3708162 | 32.84 | 8.316 | 0.00 |
| 3012 | AA4908 | 1.0 | 589784 | -1.06 | 4.380 | -0.01 | 2099848 | -15.48 | 5.444 | -0.01 | 2006025 | -28.13 | 8.316 | 0.00 |
| E23-05081-01 | AA4916 | 5.0 | 518793 | -12.97 | 4.402 | 0.01 | 2789837 | 12.29 | 5.457 | 0.00 | 3170366 | 13.58 | 8.319 | 0.00 |
| E23-05081-01 | AA4917 | 1.0 | 454287 | -23.79 | 4.409 | 0.02 | 2219413 | -10.67 | 5.451 | 0.00 | 1989521 | -28.73 | 8.319 | 0.00 |
| E23-05081-02 | AA4919 | 1.0 | 480922 | -19.32 | 4.415 | 0.02 | 2600665 | 4.67 | 5.457 | 0.00 | 2272991 | -18.57 | 8.322 | 0.00 |
| E23-05081-03 | AA4920 | 5.0 | 514731 | -13.65 | 4.406 | 0.01 | 2776988 | 11.77 | 5.457 | 0.00 | 3081592 | 10.40 | 8.319 | 0.00 |
| E23-05081-03 | AA4921 | 1.0 | 460173 | -22.80 | 4.419 | 0.03 | 2604286 | 4.82 | 5.457 | 0.00 | 2267933 | -18.75 | 8.322 | 0.00 |
| E23-05081-04 | AA4922 | 5.0 | 536382 | -10.02 | 4.403 | 0.01 | 2778333 | 11.83 | 5.454 | 0.00 | 3352079 | 20.09 | 8.316 | 0.00 |
| E23-05081-04 | AA4923 | 1.0 | 495105 | -16.94 | 4.412 | 0.02 | 2648087 | 6.58 | 5.457 | 0.00 | 2297485 | -17.69 | 8.322 | 0.00 |

# Internal Standard Area and Retention Time Summary

**Lab File ID (Standard):** AA4902DCVS **Date Analyzed:** 12/11/2023

**Instrument:** AA **ICAL Date:** 10/10/2023

| | | | BROMOCHLOROMETHANE | | | | 1,4-DIFLUOROBENZENE | | | | D-5 CHLOROBENZENE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Area # | | RT | | Area # | | RT | | Area # | | RT | |
| | CALIBRATION STANDARD | | 596109 | | 4.393 | | 2484518 | | 5.454 | | 2791354 | | 8.319 | |
| | UPPER LIMIT | | 834553 | | 4.72 | | 3478325 | | 5.78 | | 3907896 | | 8.65 | |
| | LOWER LIMIT | | 357665 | | 4.06 | | 1490711 | | 5.12 | | 1674812 | | 7.99 | |
| Lab ID | | DF | Area # | % | RT | +/- | Area # | % | RT | +/- | Area # | % | RT | +/- |
| Closing Calibration | AA4931CCCVS | 1.0 | 737975 | 23.80 | 4.393 | 0.00 | 3126526 | 25.84 | 5.454 | 0.00 | 3543265 | 26.94 | 8.316 | 0.00 |

Difference of Internal Area must be within +/- 40%; Retention Times must be within +/- 0.33 minute.
* Values outsite QC limits.

# Section VI: Sample Data Summary

**Certificate of Analysis**

**Summary of Results**

**Quantitation Reports, Chromatograms,
and Peak Integration Reports**

# CERTIFICATE OF ANALYSIS

**ANALYTICAL DATA PACKAGE FOR THE**
**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**
**ALBANY NEW YORK 12233**

**Integrated Analytical Laboratories, LLC** — **Randolph, NJ 07869**
**Project#: HK2661.2** — **NY ELAP Certification#: 11402**
**SDG #: E23-05081** — **NJDEP (Primary AB) Certification#: 14751**
**Date of first sample receipt: 11/20/2023** — **Date of last sample receipt: 11/20/2023**

*Client:* HK Engineering+Geology, D.P.C.
1600 US Route 22 East
Union, NJ 07083
*Attention:* Attention: Chris Hirschmann

*Project/Site:* HK2661.2/NY

*Analysis conducted at:* Integrated Analytical Laboratories, LLC
273 Franklin Road
Randolph, NJ 07869
*Contact:* Michael H. Leftin, Ph.D.

*Sample(s):*
E23-05081-01
E23-05081-02
E23-05081-03
E23-05081-04

Samples for this analysis were received in good condition with a chain of custody.

All work recorded herein has been done in accordance with normal professional standards using accepted testing methodologies, quality assurance and quality control procedures except where otherwise agreed to by the client and testing company in writing. Once analysis has been performed on canisters that meets regulatory criteria, samples are recycled for future use, unless other provisions have been made by the client.

Michael H. Leftin, Ph.D.
Laboratory Director

Date: December 20, 2023

Volatile Organic Compounds by EPA Method TO-15
Summary of Results

| | | | |
|---|---|---|---|
| Lab ID: | E23-05081-01 | Instrument ID: | AA |
| Client ID: | SV1 | GC/MS Column: | RTX-1, 0.32 mmID |
| Date Sampled: | 11/17/2023 07:45 | Injection Volmue: | 500ml, 100ml |
| Date Received: | 11/20/2023 | Matrix: | Air-Other |
| Date Analyzed: | 12/11/2023 18:47, 12/11/2023 18:15 | % Moisture: | NA |
| Data File: | AA4917, AA4916 | Dilution Factor: | 1, 5 |
| Summa ID: | 5073 | Analyst: | J. Walukiewicz |

| | | | Concentration Reported | | Reporting Limits | |
|---|---|---|---|---|---|---|
| **Compound** | **CAS #** | **Q** | **ppbv** | **ug/m3** | **ppbv** | **ug/m3** |
| Acetone | 67-64-1 | | 20 | 46 | 0.20 | 0.48 |
| Benzene | 71-43-2 | | 0.82 | 2.6 | 0.20 | 0.64 |
| Bromodichloromethane | 75-27-4 | | ND | ND | 0.20 | 1.3 |
| Bromoform | 75-25-2 | | ND | ND | 0.20 | 2.1 |
| Bromomethane | 74-83-9 | | ND | ND | 0.20 | 0.78 |
| 1,3-Butadiene | 106-99-0 | | ND | ND | 0.20 | 0.44 |
| Chlorobenzene | 108-90-7 | | ND | ND | 0.20 | 0.92 |
| Chloroethane | 75-00-3 | | ND | ND | 0.20 | 0.53 |
| Chloroform | 67-66-3 | | 1.8 | 8.7 | 0.20 | 0.98 |
| Chloromethane | 74-87-3 | | ND | ND | 0.20 | 0.41 |
| Carbon disulfide | 75-15-0 | | 2.0 | 6.2 | 0.20 | 0.62 |
| Carbon tetrachloride | 56-23-5 | | ND | ND | 0.040 | 0.25 |
| Cyclohexane | 110-82-7 | | 0.85 | 2.9 | 0.20 | 0.69 |
| Dibromochloromethane | 124-48-1 | | ND | ND | 0.20 | 1.7 |
| 1,2-Dibromoethane | 106-93-4 | | ND | ND | 0.20 | 1.5 |
| 1,2-Dichlorobenzene | 95-50-1 | | ND | ND | 0.20 | 1.2 |
| 1,3-Dichlorobenzene | 541-73-1 | | ND | ND | 0.20 | 1.2 |
| 1,4-Dichlorobenzene | 106-46-7 | | ND | ND | 0.20 | 1.2 |
| Dichlorodifluoromethane | 75-71-8 | | ND | ND | 0.20 | 0.99 |
| 1,1-Dichloroethane | 75-34-3 | | ND | ND | 0.20 | 0.81 |
| 1,2-Dichloroethane | 107-06-2 | | ND | ND | 0.20 | 0.81 |
| 1,1-Dichloroethene | 75-35-4 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloroethene (cis) | 156-59-2 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloroethene (trans) | 156-60-5 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloropropane | 78-87-5 | | ND | ND | 0.20 | 0.92 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | | ND | ND | 0.20 | 0.91 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | | ND | ND | 0.20 | 0.91 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | | ND | ND | 0.20 | 1.4 |
| 1,4-Dioxane | 123-91-1 | | ND | ND | 0.20 | 0.72 |
| Ethylbenzene | 100-41-4 | D | 65 | 280 | 1.0 | 4.3 |
| n-Heptane | 142-82-5 | | 2.9 | 12 | 0.20 | 0.82 |
| 1,3-Hexachlorobutadiene | 87-68-3 | | ND | ND | 0.20 | 2.1 |
| n-Hexane | 110-54-3 | | ND | ND | 0.20 | 0.70 |
| Methylene chloride | 75-09-2 | | ND | ND | 0.20 | 0.69 |
| Methyl ethyl ketone | 78-93-3 | | 2.0 | 5.8 | 0.20 | 0.59 |
| Methyl isobutyl ketone | 108-10-1 | | ND | ND | 0.20 | 0.82 |
| Methyl tert-butyl ether | 1634-04-4 | | ND | ND | 0.20 | 0.72 |
| Styrene | 100-42-5 | | 0.44 | 1.9 | 0.20 | 0.85 |
| Tert-butyl alcohol | 75-65-0 | | 8.0 | 24 | 0.20 | 0.61 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | ND | ND | 0.20 | 1.4 |
| Tetrachloroethene | 127-18-4 | | 6.4 | 43 | 0.20 | 1.4 |
| Toluene | 108-88-3 | | 2.2 | 8.2 | 0.20 | 0.75 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | ND | ND | 0.20 | 1.5 |
| 1,1,1-Trichloroethane | 71-55-6 | | ND | ND | 0.20 | 1.1 |
| 1,1,2-Trichloroethane | 79-00-5 | | ND | ND | 0.20 | 1.1 |

Qualifiers:
D = Dilution required

Volatile Organic Compounds by EPA Method TO-15
Summary of Results

| | | | |
|---|---|---|---|
| Lab ID: | E23-05081-01 | Instrument ID: | AA |
| Client ID: | SV1 | GC/MS Column: | RTX-1, 0.32 mmID |
| Date Sampled: | 11/17/2023 07:45 | Injection Volmue: | 500ml, 100ml |
| Date Received: | 11/20/2023 | Matrix: | Air-Other |
| Date Analyzed: | 12/11/2023 18:47, 12/11/2023 18:15 | % Moisture: | NA |
| Data File: | AA4917, AA4916 | Dilution Factor: | 1, 5 |
| Summa ID: | 5073 | Analyst: | J. Walukiewicz |

| | | | Concentration Reported | | Reporting Limits | |
|---|---|---|---|---|---|---|
| **Compound** | **CAS #** | **Q** | **ppbv** | **ug/m3** | **ppbv** | **ug/m3** |
| Trichloroethene | 79-01-6 | | ND | ND | 0.046 | 0.25 |
| Trichlorofluoromethane | 75-69-4 | | 0.31 | 1.7 | 0.20 | 1.1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | | ND | ND | 0.20 | 1.5 |
| 1,2,4-Trimethylbenzene | 95-63-6 | | 1.4 | 6.7 | 0.20 | 0.98 |
| 1,3,5-Trimethylbenzene | 108-67-8 | | 0.45 | 2.2 | 0.20 | 0.98 |
| 2,2,4-Trimethylpentane | 540-84-1 | | ND | ND | 0.20 | 0.93 |
| Vinyl bromide | 593-60-2 | | ND | ND | 0.20 | 0.87 |
| Vinyl chloride | 75-01-4 | | ND | ND | 0.20 | 0.51 |
| Xylenes (m&p) | 179601-23-1 | D | 240 | 1000 | 1.0 | 4.3 |
| Xylenes (o) | 95-47-6 | D | 50 | 220 | 1.0 | 4.3 |

Qualifiers:
D = Dilution required

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4917.D
Acq On : 11 Dec 2023 6:47 pm
Operator : jjw
Sample : E23-05081-01
Misc : 5073, 500cc
ALS Vial : 20 Sample Multiplier: 1

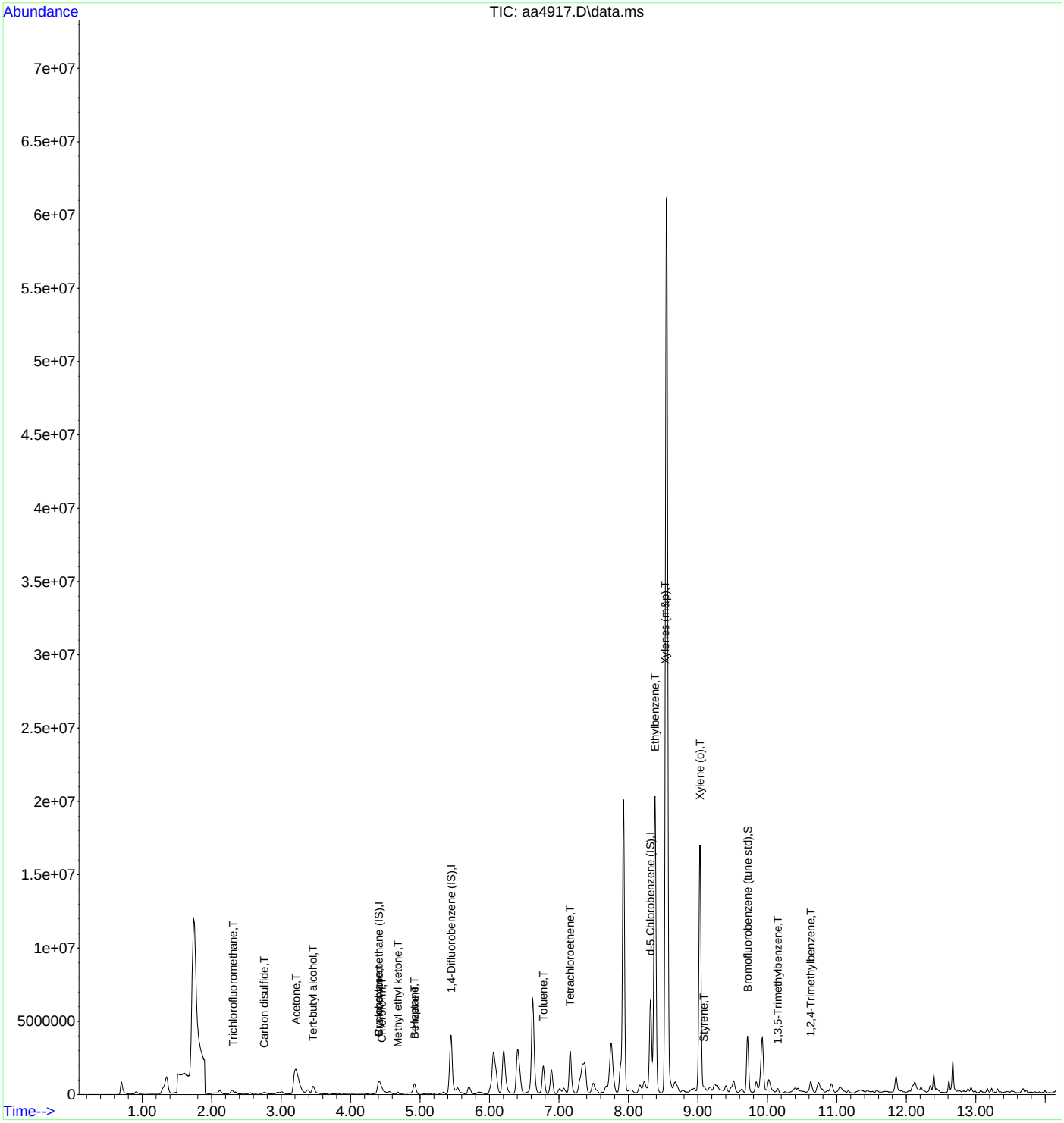
Quant Time: Dec 12 10:55:20 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

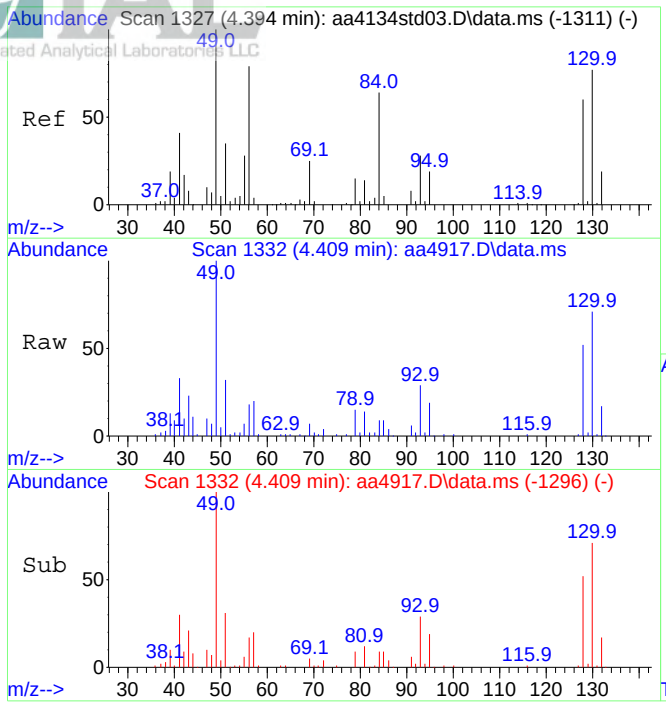
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.409 | 130 | 454287 | 10.00 | ppbV | | 0.015 |
| 39) 1,4-Difluorobenzene (IS) | 5.451 | 114 | 2219413 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 1989521 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 1666637 | 9.61 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 12) Trichlorofluoromethane | 2.309 | 101 | 39545 | 0.31 | ppbV | | 94 |
| 15) Carbon disulfide | 2.756 | 76 | 278085 | 2.00 | ppbV | # | 89 |
| 21) Acetone | 3.216 | 43 | 1340526 | 19.56 | ppbV | | 98 |
| 26) Tert-butyl alcohol | 3.460 | 59 | 952941 | 8.05 | ppbV | | 100 |
| 29) Cyclohexane | 4.406 | 56 | 84792 | 0.85 | ppbV | # | 68 |
| 30) Chloroform | 4.454 | 83 | 215809 | 1.78 | ppbV | | 97 |
| 35) Methyl ethyl ketone | 4.682 | 43 | 219859 | 1.98 | ppbV | | 98 |
| 36) n-Heptane | 4.917 | 43 | 363051 | 2.89 | ppbV | | 97 |
| 37) Benzene | 4.923 | 78 | 147494 | 0.82 | ppbV | # | 87 |
| 47) Toluene | 6.775 | 91 | 678167 | 2.17 | ppbV | | 100 |
| 49) Tetrachloroethene | 7.161 | 166 | 854931 | 6.36 | ppbV | | 99 |
| 58) Ethylbenzene | 8.383 | 91 | 18486538 | 50.42 | ppbV | | 98 |
| 59) Xylenes (m&p) | 8.528 | 91 | 29738951 | 109.47 | ppbV | # | 56 |
| 60) Xylene (o) | 9.029 | 91 | 12584226 | 42.46 | ppbV | | 99 |
| 61) Styrene | 9.087 | 104 | 89857 | 0.44 | ppbV | | 86 |
| 69) 1,3,5-Trimethylbenzene | 10.152 | 105 | 156189 | 0.45 | ppbV | | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 467714 | 1.36 | ppbV | | 98 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4917.D
Acq On : 11 Dec 2023 6:47 pm
Operator : jjw
Sample : E23-05081-01
Misc : 5073, 500cc
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Dec 12 10:55:20 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

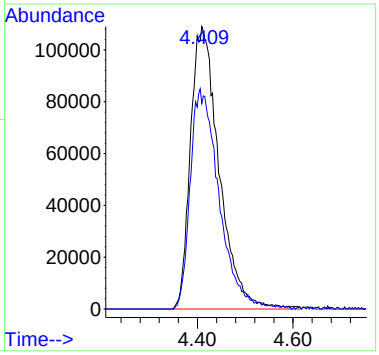


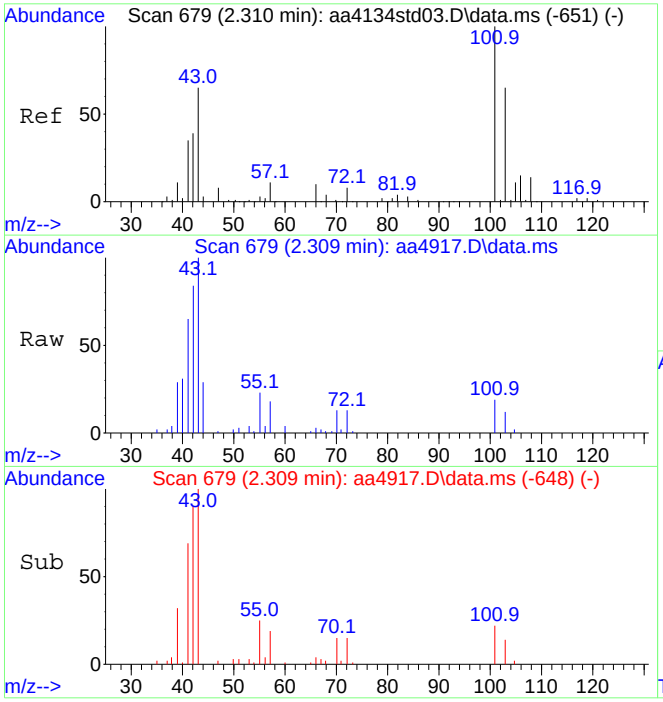



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.409 min Scan# 1332
Delta R.T. 0.015 min
Lab File: aa4917.D
Acq: 11 Dec 2023 6:47 pm

Tgt Ion:130 Resp: 454287

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 77.9 | 62.2 | 93.4 |

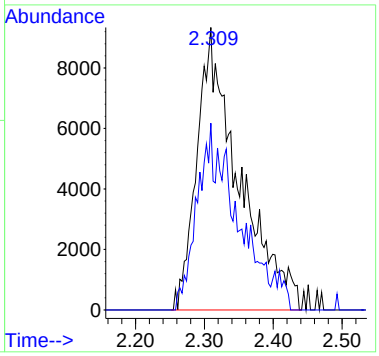


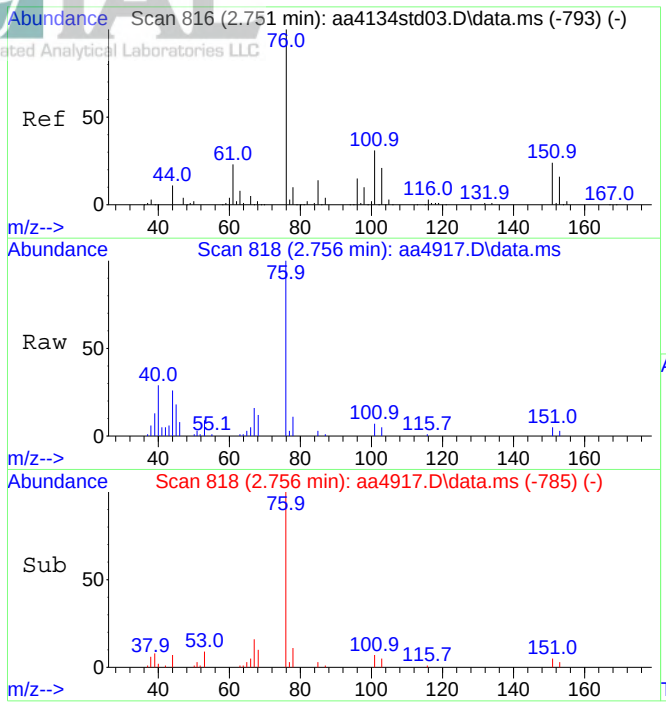




#12
Trichlorofluoromethane
Concen: 0.31 ppbV
RT: 2.309 min Scan# 679
Delta R.T. -0.001 min
Lab File: aa4917.D
Acq: 11 Dec 2023 6:47 pm

Tgt Ion:101 Resp: 39545

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 61.0 | 52.5 | 78.7 |

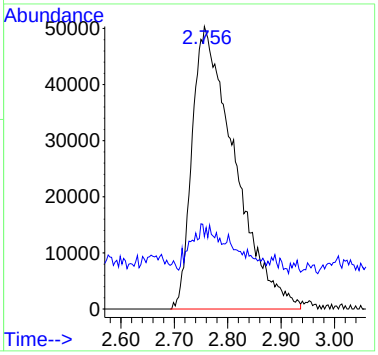


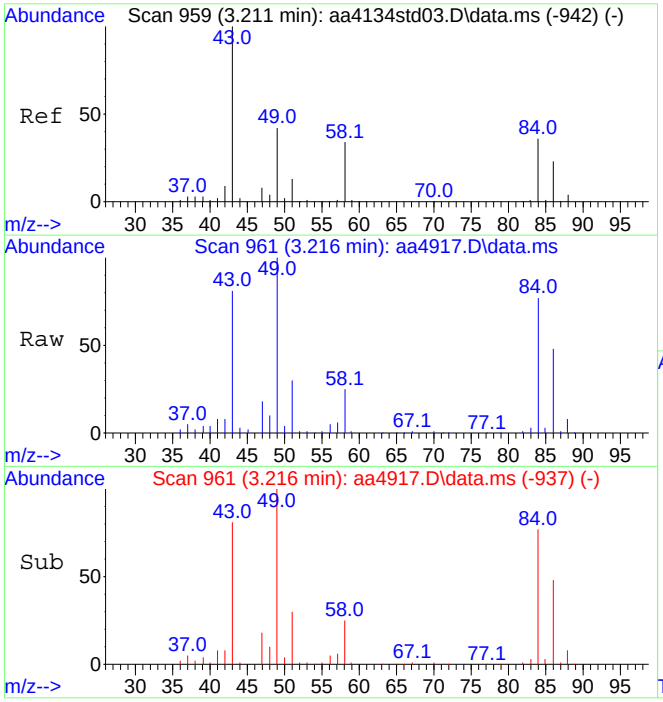



#15
Carbon disulfide
Concen: 2.00 ppbV
RT: 2.756 min Scan# 818
Delta R.T. 0.006 min
Lab File: aa4917.D
Acq: 11 Dec 2023 6:47 pm

Tgt Ion: 76 Resp: 278085

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 15.5 | 9.0 | 13.4# |

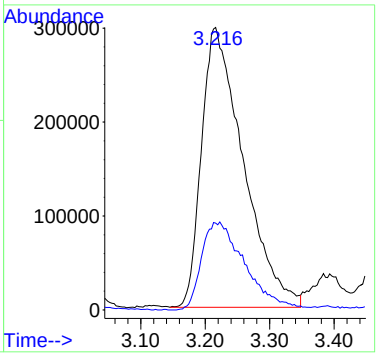


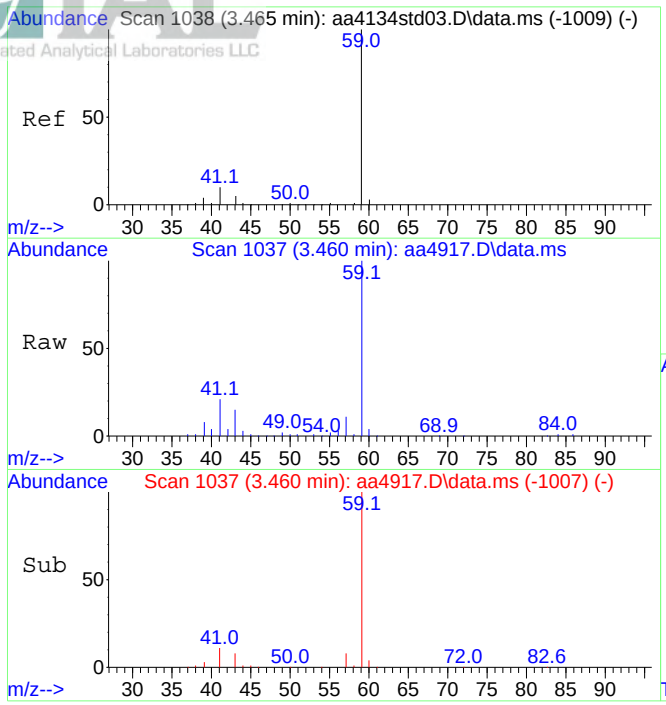




#21
Acetone
Concen: 19.56 ppbV
RT: 3.216 min Scan# 961
Delta R.T. 0.006 min
Lab File: aa4917.D
Acq: 11 Dec 2023 6:47 pm

Tgt Ion: 43 Resp: 1340526

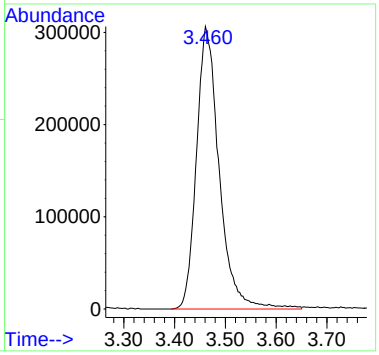
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 33.0 | 27.1 | 40.7 |

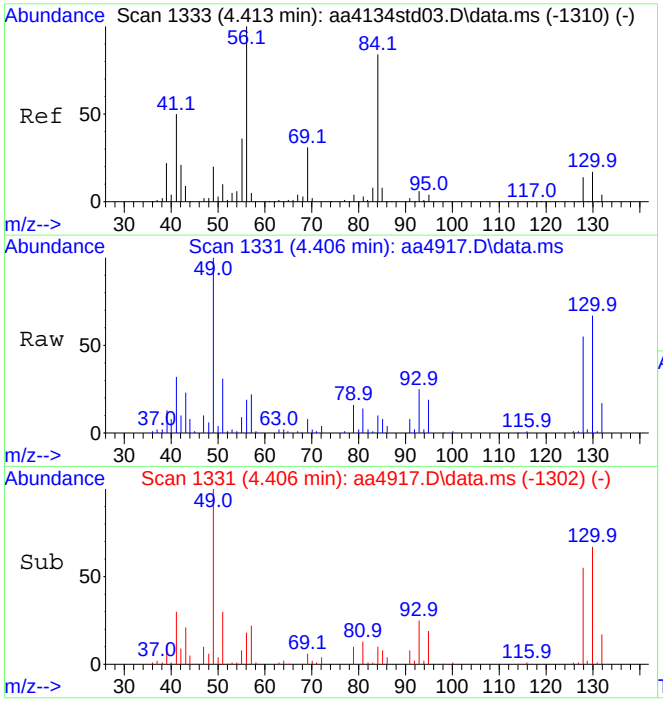





#26
Tert-butyl alcohol
Concen: 8.05 ppbV
RT: 3.460 min Scan# 1037
Delta R.T. -0.005 min
Lab File: aa4917.D
Acq: 11 Dec 2023 6:47 pm

Tgt Ion: 59 Resp: 952941

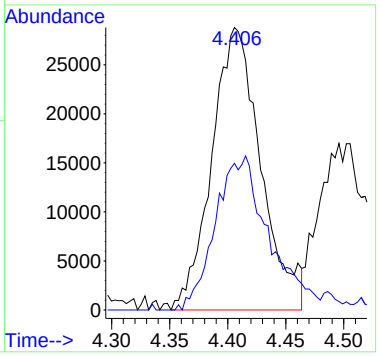


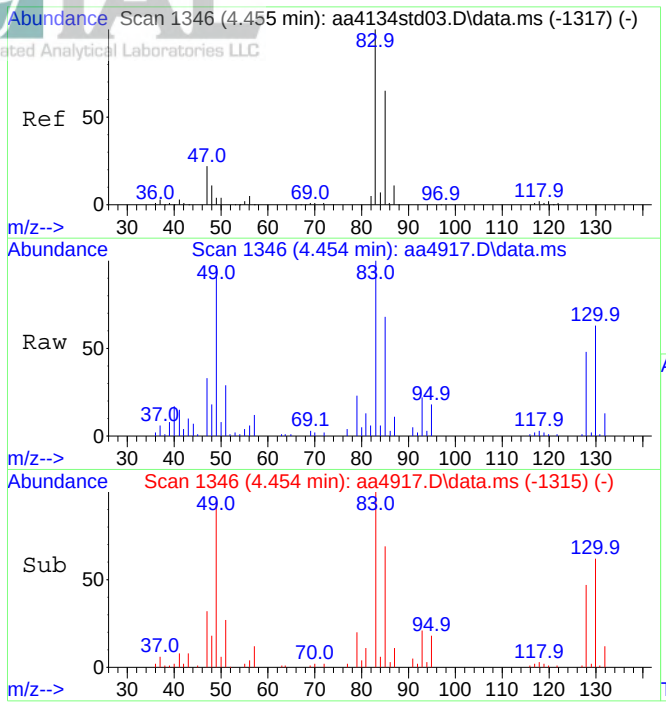




#29
Cyclohexane
Concen: 0.85 ppbV
RT: 4.406 min Scan# 1331
Delta R.T. -0.007 min
Lab File: aa4917.D
Acq: 11 Dec 2023 6:47 pm

Tgt Ion: 56 Resp: 84792

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 59.1 | 71.2 | 106.8# |

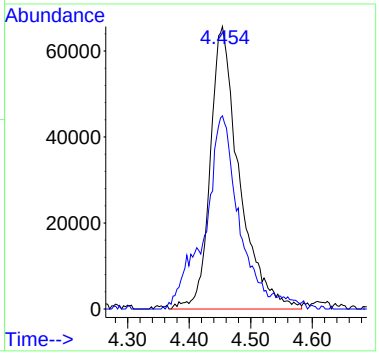


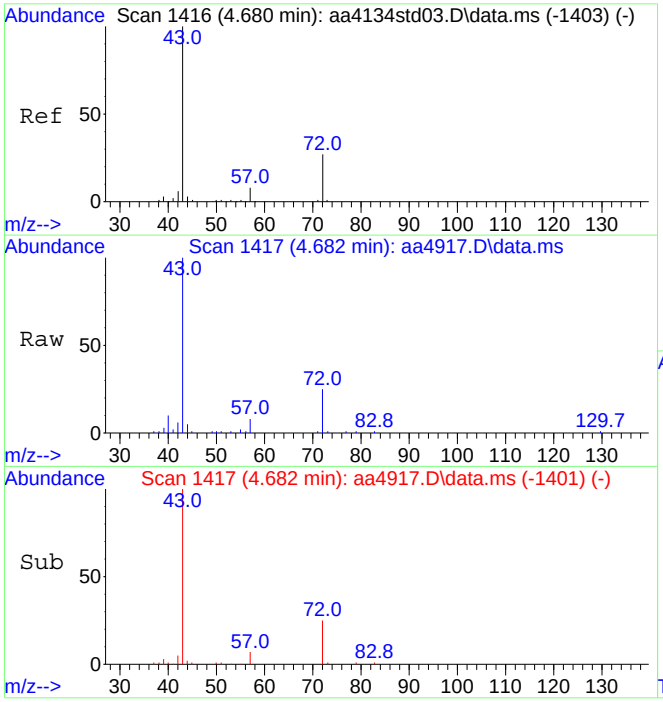



#30
Chloroform
Concen: 1.78 ppbV
RT: 4.454 min Scan# 1346
Delta R.T. -0.001 min
Lab File: aa4917.D
Acq: 11 Dec 2023 6:47 pm

Tgt Ion: 83 Resp: 215809

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 69.8 | 53.9 | 80.9 |

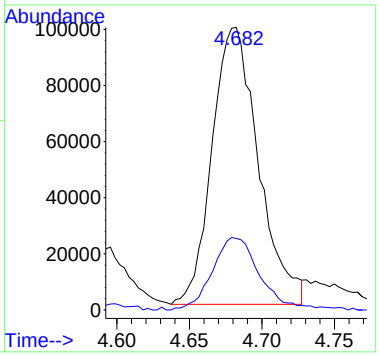


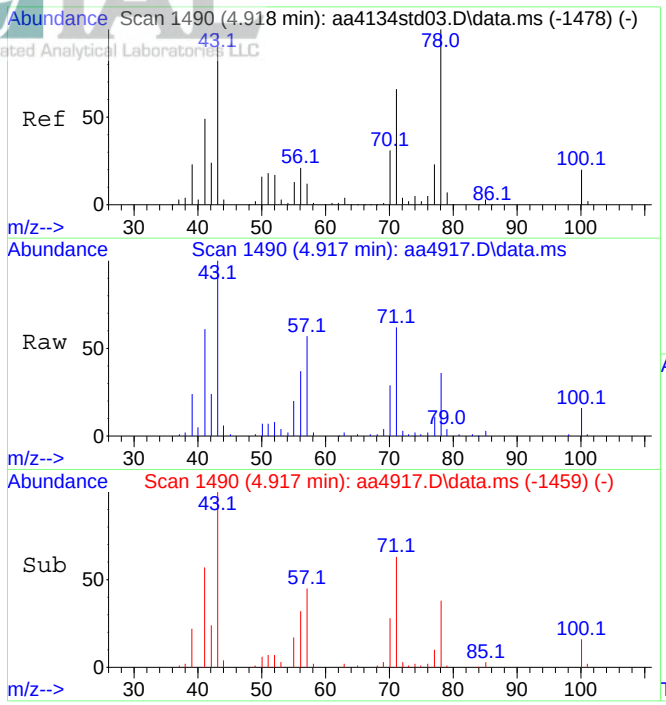




#35
Methyl ethyl ketone
Concen: 1.98 ppbV
RT: 4.682 min Scan# 1417
Delta R.T. 0.002 min
Lab File: aa4917.D
Acq: 11 Dec 2023 6:47 pm

Tgt Ion: 43 Resp: 219859

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 25.9 | 21.6 | 32.4 |

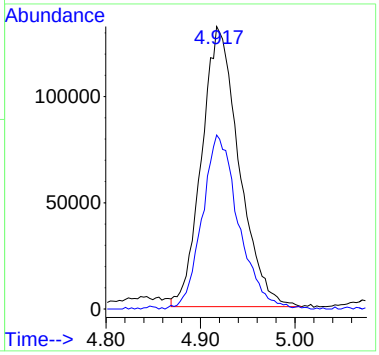


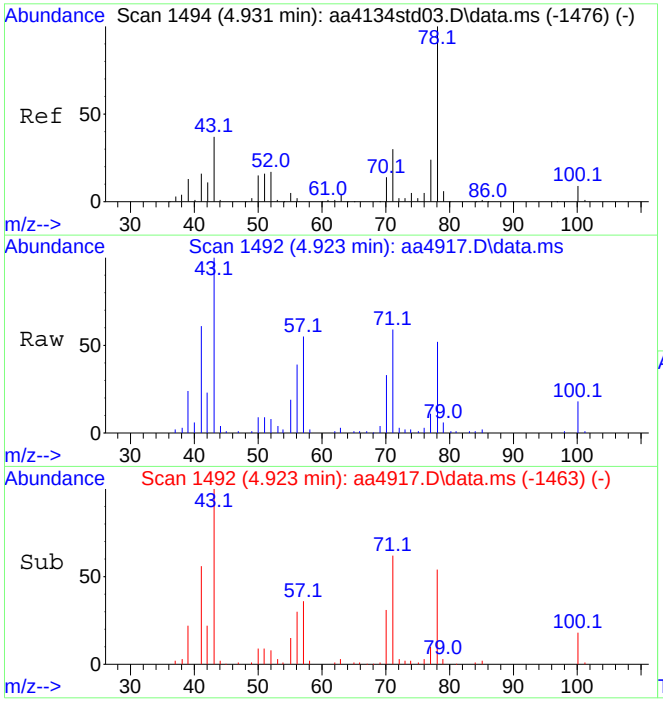



#36
n-Heptane
Concen: 2.89 ppbV
RT: 4.917 min Scan# 1490
Delta R.T. -0.001 min
Lab File: aa4917.D
Acq: 11 Dec 2023 6:47 pm

Tgt Ion: 43 Resp: 363051

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 71 | 60.6 | 50.5 | 75.7 |

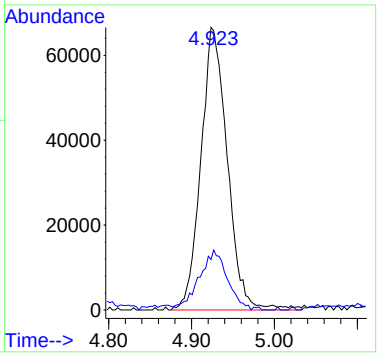


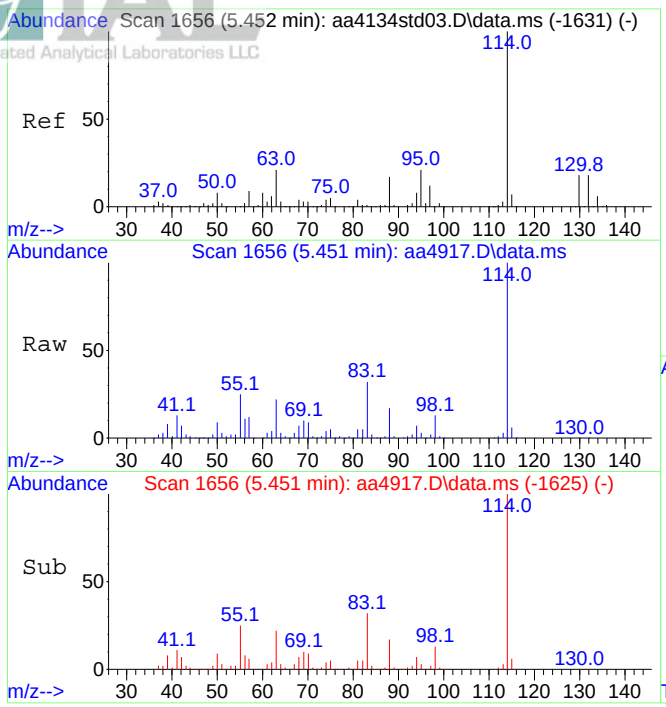




#37
Benzene
Concen: 0.82 ppbV
RT: 4.923 min Scan# 1492
Delta R.T. -0.007 min
Lab File: aa4917.D
Acq: 11 Dec 2023 6:47 pm

Tgt Ion: 78 Resp: 147494

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 22.4 | 13.4 | 20.0# |

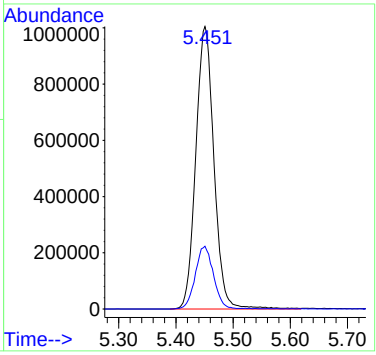


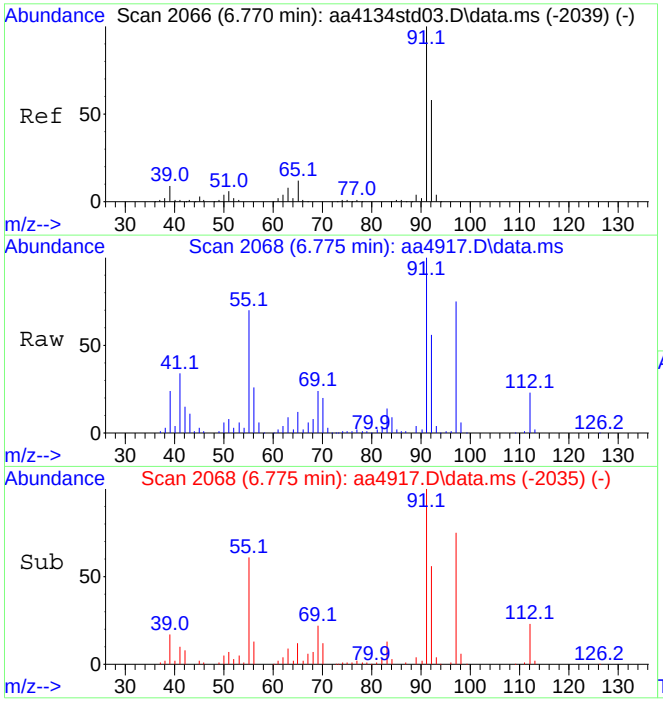



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.451 min Scan# 1656
Delta R.T. -0.001 min
Lab File: aa4917.D
Acq: 11 Dec 2023 6:47 pm

Tgt Ion:114 Resp: 2219413

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.5 | 17.0 | 25.6 |

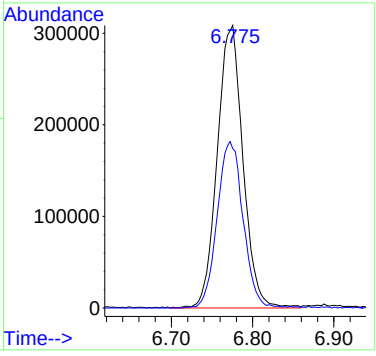


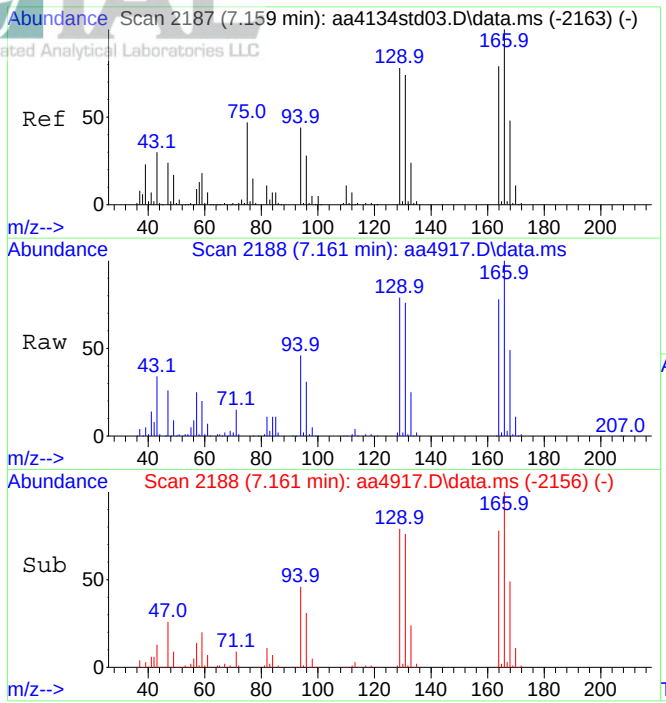




#47
Toluene
Concen: 2.17 ppbV
RT: 6.775 min Scan# 2068
Delta R.T. 0.006 min
Lab File: aa4917.D
Acq: 11 Dec 2023 6:47 pm

Tgt Ion: 91 Resp: 678167

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 59.4 | 47.3 | 70.9 |

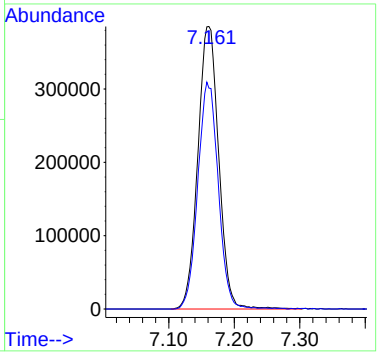


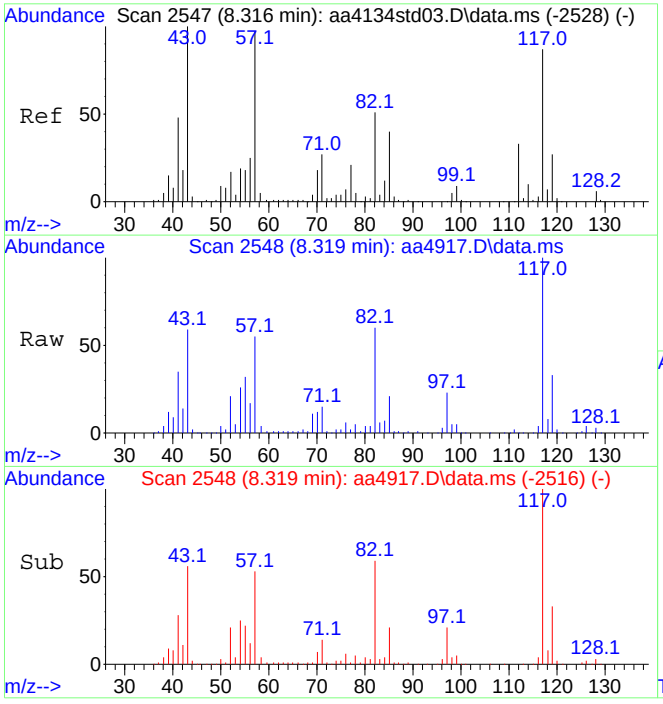



#49
Tetrachloroethene
Concen: 6.36 ppbV
RT: 7.161 min Scan# 2188
Delta R.T. 0.002 min
Lab File: aa4917.D
Acq: 11 Dec 2023 6:47 pm

Tgt Ion:166 Resp: 854931

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 78.6 | 62.3 | 93.5 |

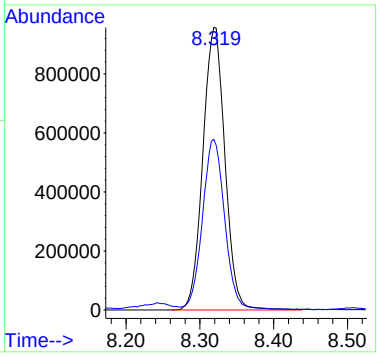


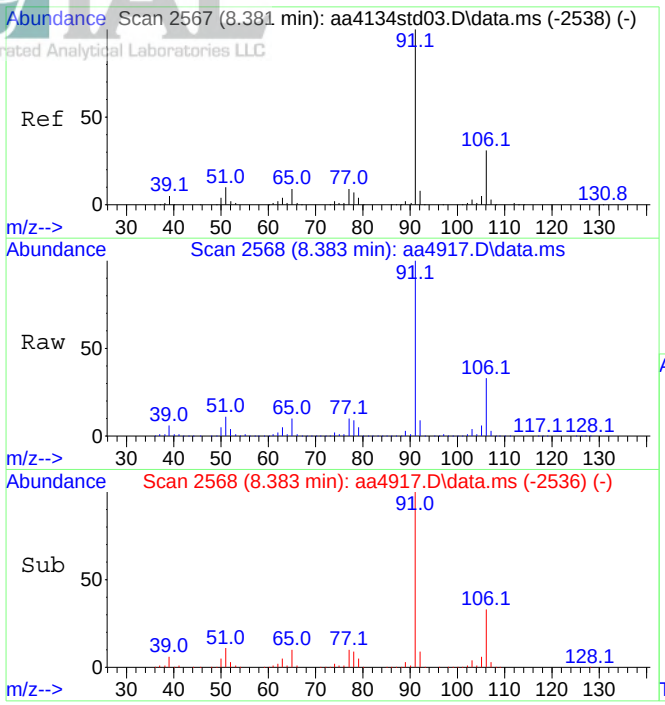




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.319 min Scan# 2548
Delta R.T. 0.002 min
Lab File: aa4917.D
Acq: 11 Dec 2023 6:47 pm

Tgt Ion:117 Resp: 1989521

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 60.4 | 47.0 | 70.4 |

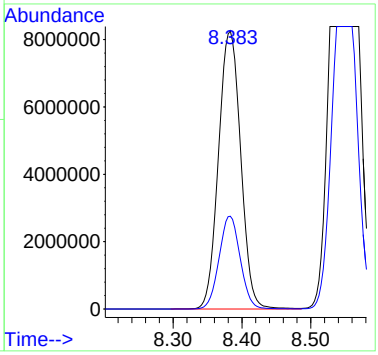


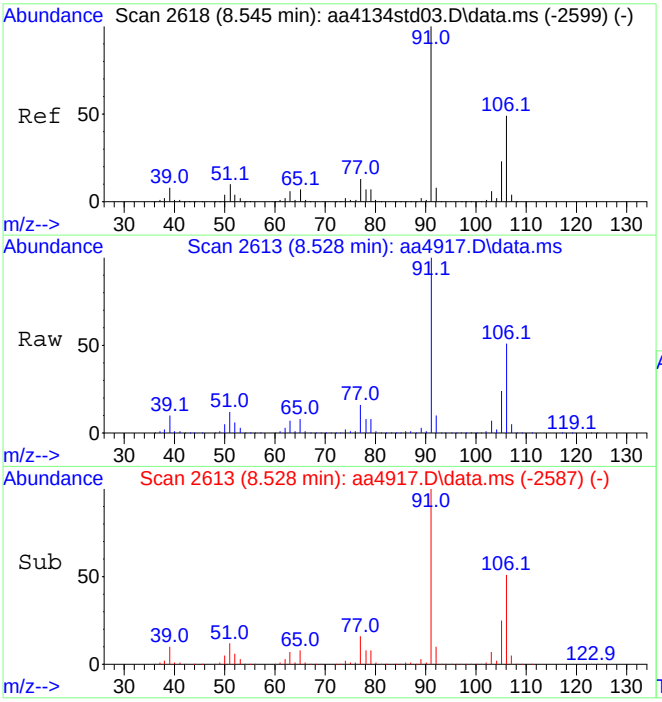



#58
Ethylbenzene
Concen: 50.42 ppbV
RT: 8.383 min Scan# 2568
Delta R.T. 0.002 min
Lab File: aa4917.D
Acq: 11 Dec 2023 6:47 pm

Tgt Ion: 91 Resp:18486538

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 31.9 | 24.6 | 36.8 |

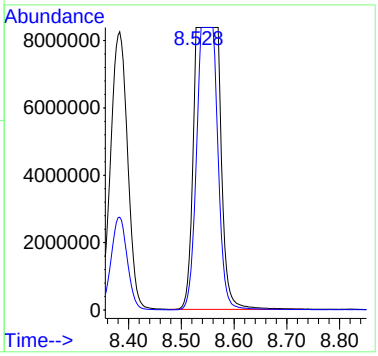


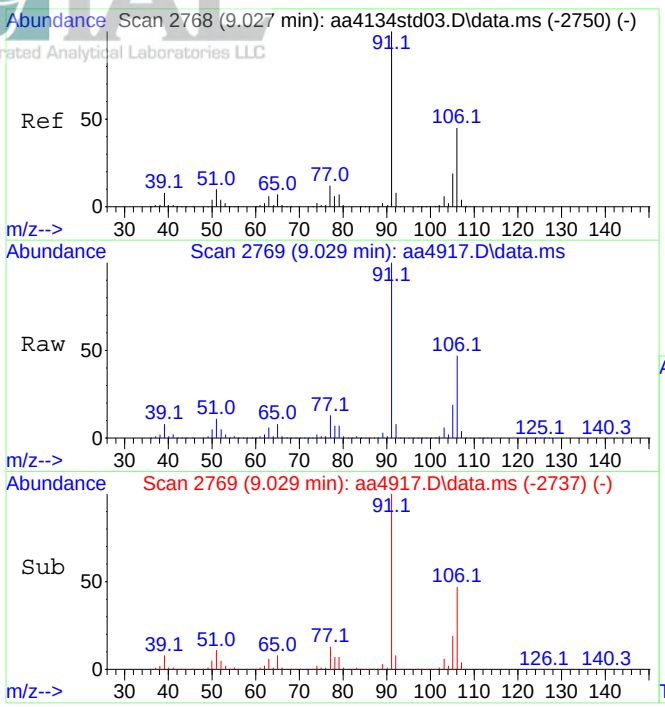




#59
Xylenes (m&p)
Concen: 109.47 ppbV
RT: 8.528 min Scan# 2613
Delta R.T. -0.017 min
Lab File: aa4917.D
Acq: 11 Dec 2023 6:47 pm

Tgt Ion: 91 Resp:29738951

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 78.3 | 39.0 | 58.4# |

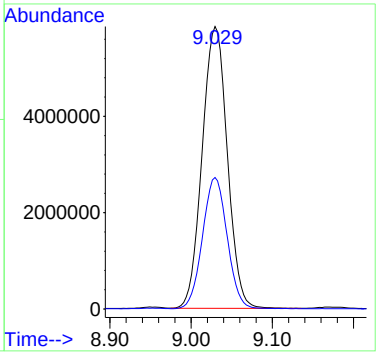


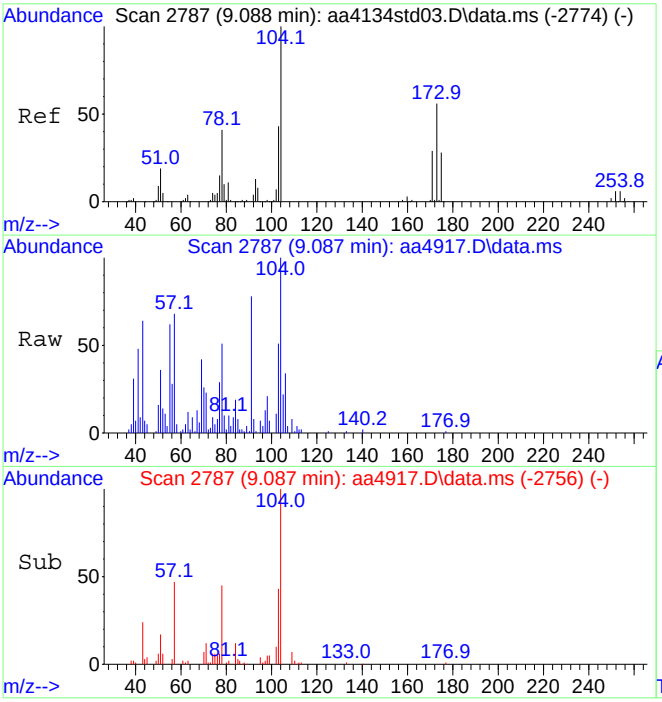



#60
Xylene (o)
Concen: 42.46 ppbV
RT: 9.029 min Scan# 2769
Delta R.T. 0.002 min
Lab File: aa4917.D
Acq: 11 Dec 2023 6:47 pm

Tgt Ion: 91 Resp:12584226

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 45.6 | 36.8 | 55.2 |

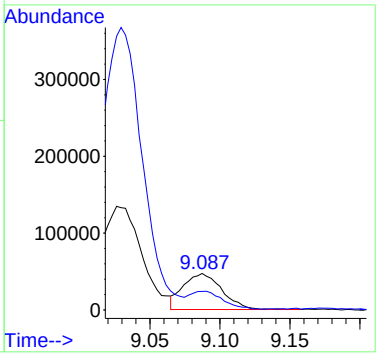


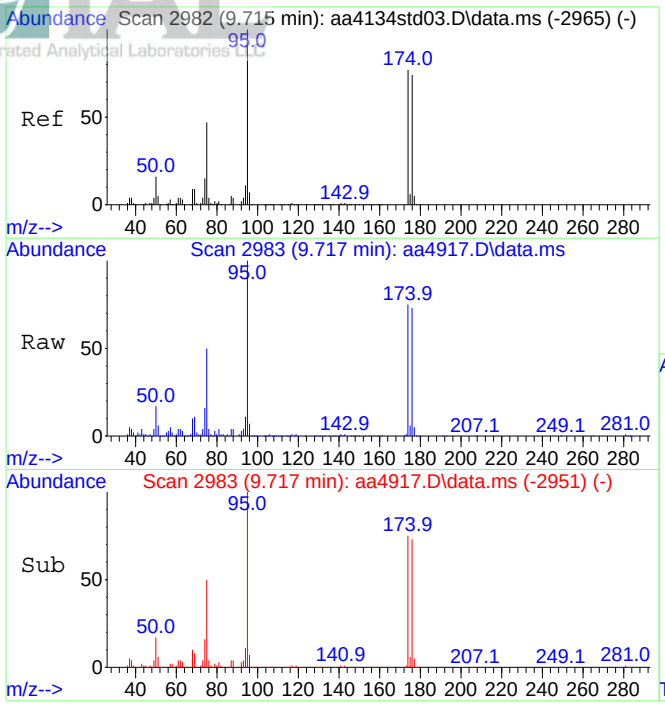




#61
Styrene
Concen: 0.44 ppbV
RT: 9.087 min Scan# 2787
Delta R.T. -0.001 min
Lab File: aa4917.D
Acq: 11 Dec 2023 6:47 pm

Tgt Ion:104 Resp: 89857

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 104 | 100 | | |
| 103 | 38.1 | 37.8 | 56.6 |

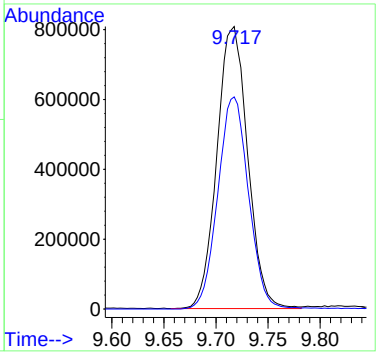


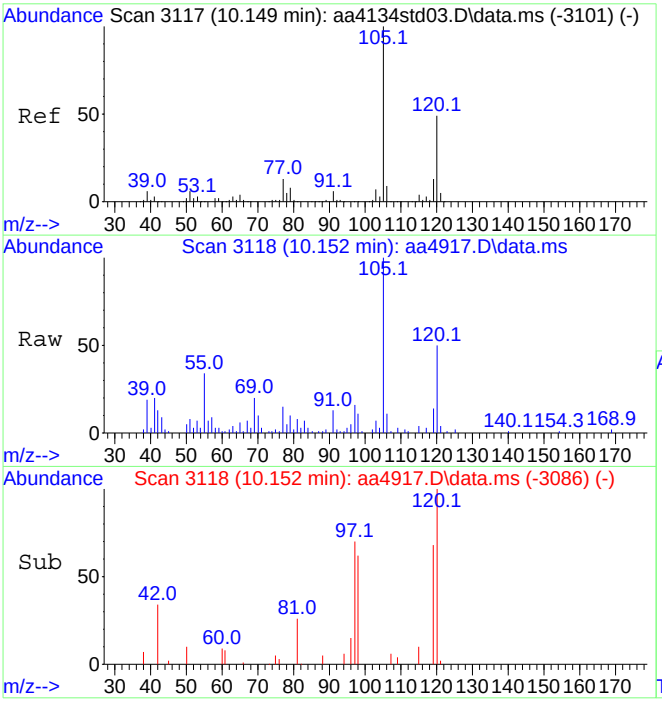



#64
Bromofluorobenzene (tune std)
Concen: 9.61 ppbV
RT: 9.717 min Scan# 2983
Delta R.T. 0.002 min
Lab File: aa4917.D
Acq: 11 Dec 2023 6:47 pm

Tgt Ion: 95 Resp: 1666637

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 75.3 | 61.1 | 91.7 |

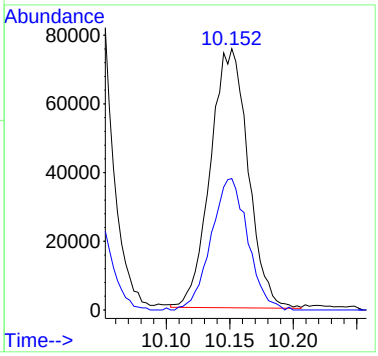


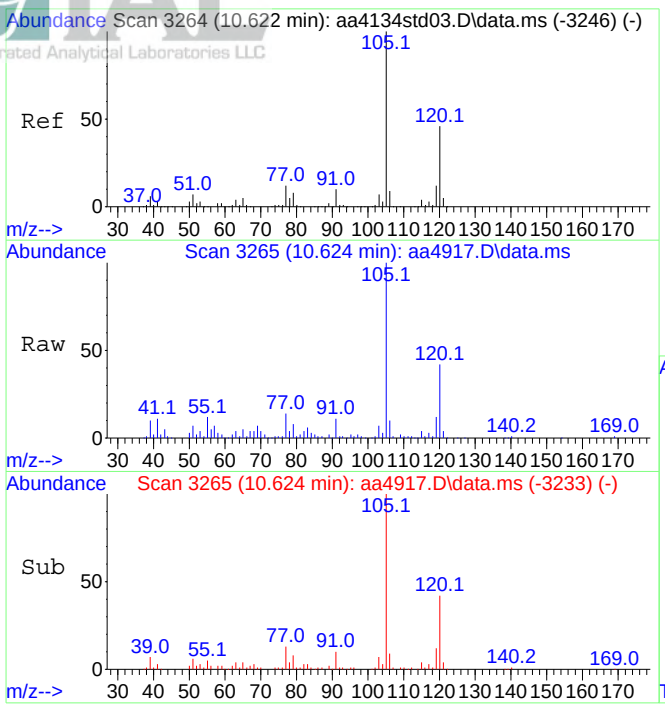




#69
1,3,5-Trimethylbenzene
Concen: 0.45 ppbV
RT: 10.152 min Scan# 3118
Delta R.T. 0.002 min
Lab File: aa4917.D
Acq: 11 Dec 2023 6:47 pm

Tgt Ion:105 Resp: 156189

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 49.2 | 38.9 | 58.3 |

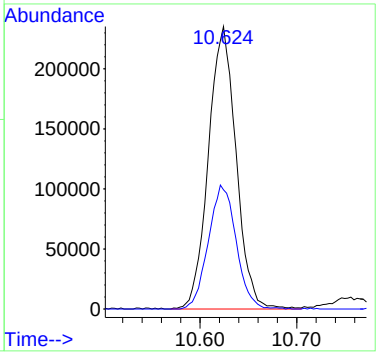





#70
1,2,4-Trimethylbenzene
Concen: 1.36 ppbV
RT: 10.624 min Scan# 3265
Delta R.T. 0.002 min
Lab File: aa4917.D
Acq: 11 Dec 2023 6:47 pm

Tgt Ion:105 Resp: 467714

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 44.0 | 36.3 | 54.5 |



Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4916.D
Acq On : 11 Dec 2023 6:15 pm
Operator : jjw
Sample : E23-05081-01x5 dil
Misc : 5073, 100cc
ALS Vial : 19 Sample Multiplier: 1

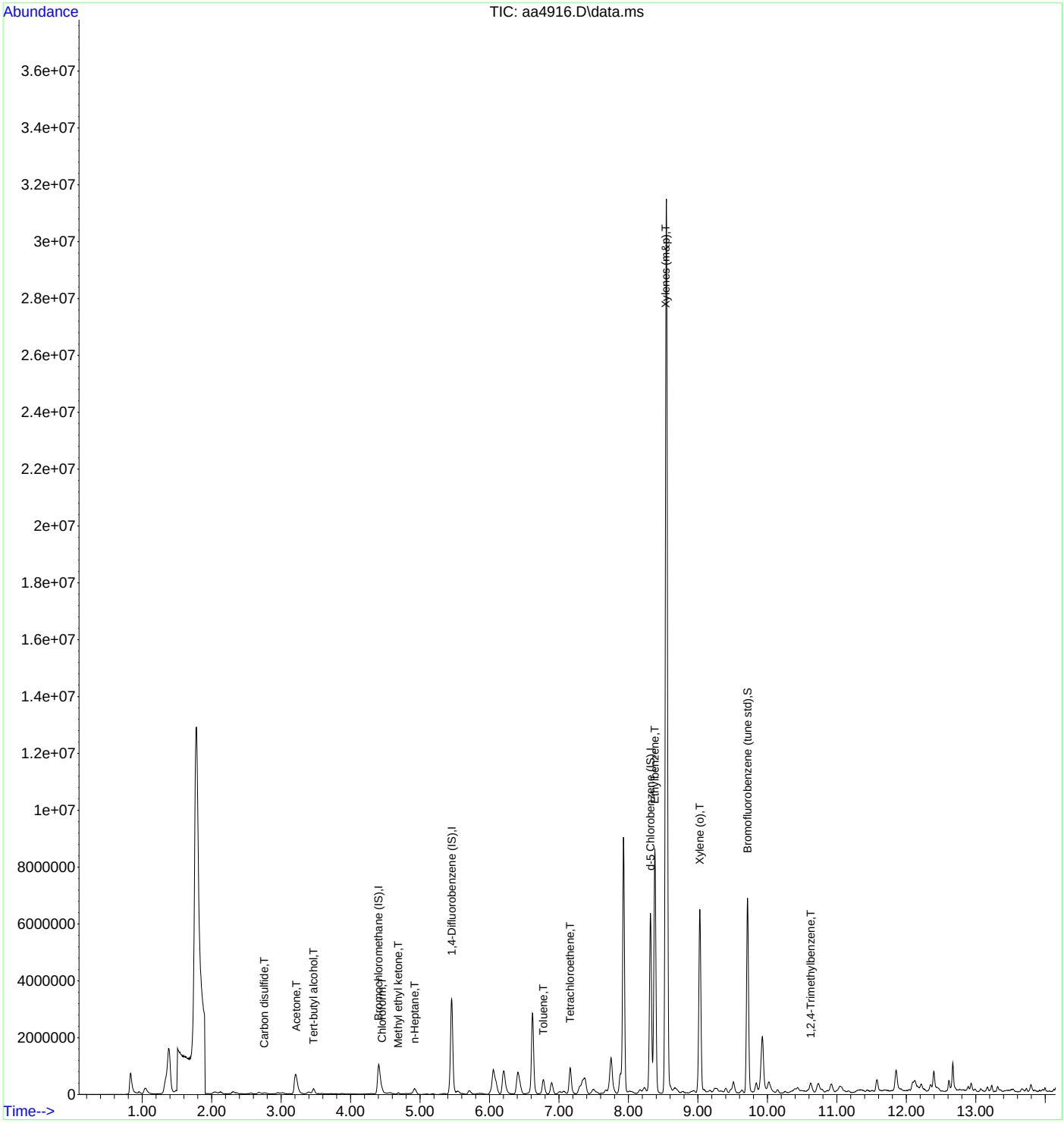
Quant Time: Dec 12 10:57:17 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

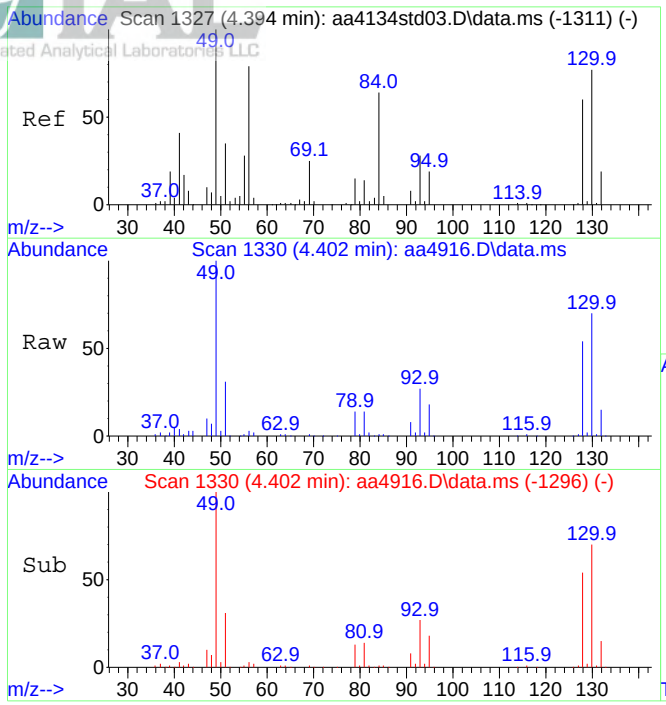
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.402 | 130 | 518793 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 2789837 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 3170366 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 2965341 | 10.73 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 15) Carbon disulfide | 2.756 | 76 | 65210 | 0.41 | ppbV | # 87 |
| 21) Acetone | 3.219 | 43 | 352926 | 4.51 | ppbV | 96 |
| 26) Tert-butyl alcohol | 3.467 | 59 | 260895 | 1.93 | ppbV | 100 |
| 30) Chloroform | 4.454 | 83 | 59559 | 0.43 | ppbV | 98 |
| 35) Methyl ethyl ketone | 4.685 | 43 | 64084 | 0.51 | ppbV | 98 |
| 36) n-Heptane | 4.920 | 43 | 103925 | 0.72 | ppbV | 98 |
| 47) Toluene | 6.772 | 91 | 217388 | 0.55 | ppbV | 100 |
| 49) Tetrachloroethene | 7.161 | 166 | 266016 | 1.57 | ppbV | 100 |
| 58) Ethylbenzene | 8.380 | 91 | 7559119 | 12.94 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.537 | 91 | 20706134 | 47.83 | ppbV | 92 |
| 60) Xylene (o) | 9.026 | 91 | 4714295 | 9.98 | ppbV | 98 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 178438 | 0.33 | ppbV | 96 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4916.D
Acq On : 11 Dec 2023 6:15 pm
Operator : jjw
Sample : E23-05081-01x5 dil
Misc : 5073, 100cc
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Dec 12 10:57:17 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

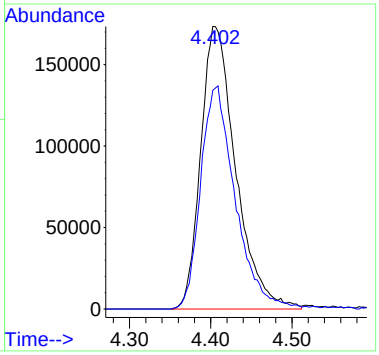


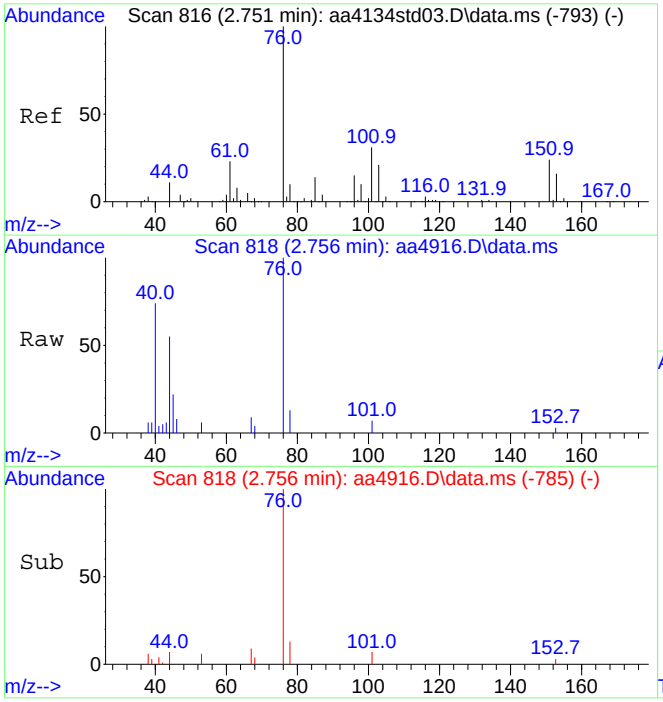



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.402 min Scan# 1330
Delta R.T. 0.008 min
Lab File: aa4916.D
Acq: 11 Dec 2023 6:15 pm

Tgt Ion:130 Resp: 518793

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 77.9 | 62.2 | 93.4 |

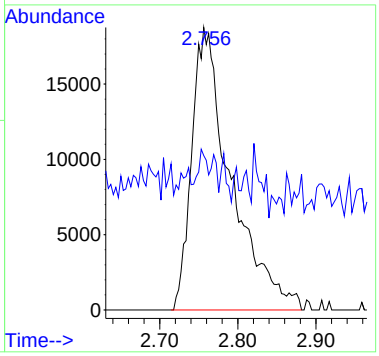


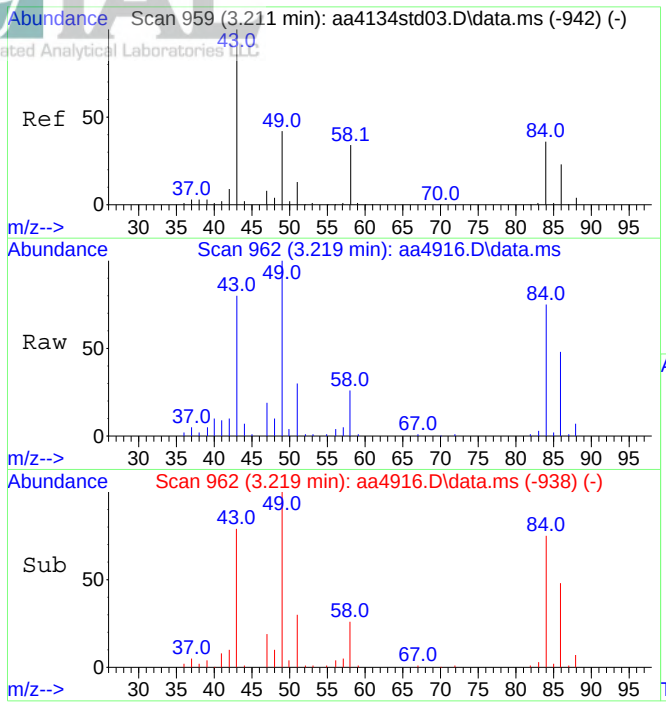




#15
Carbon disulfide
Concen: 0.41 ppbV
RT: 2.756 min Scan# 818
Delta R.T. 0.006 min
Lab File: aa4916.D
Acq: 11 Dec 2023 6:15 pm

Tgt Ion: 76 Resp: 65210

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 6.3 | 9.0 | 13.4# |

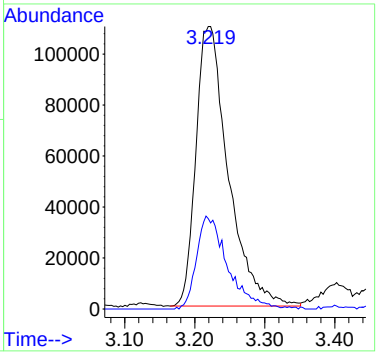


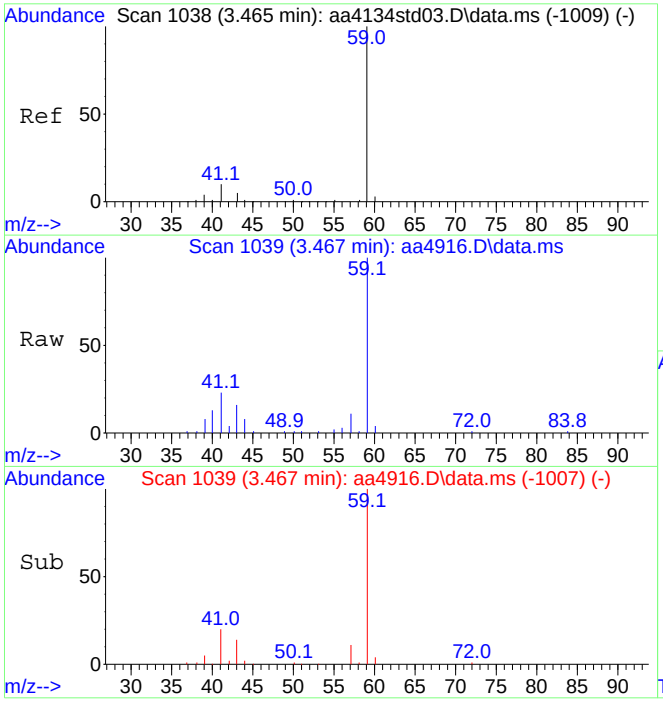



#21
Acetone
Concen: 4.51 ppbV
RT: 3.219 min Scan# 962
Delta R.T. 0.009 min
Lab File: aa4916.D
Acq: 11 Dec 2023 6:15 pm

Tgt Ion: 43 Resp: 352926

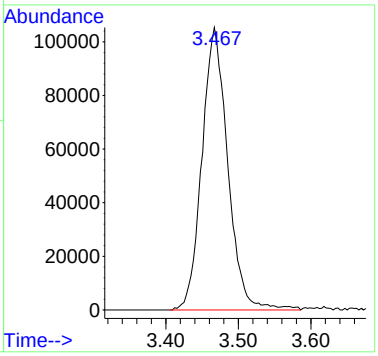
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 31.7 | 27.1 | 40.7 |

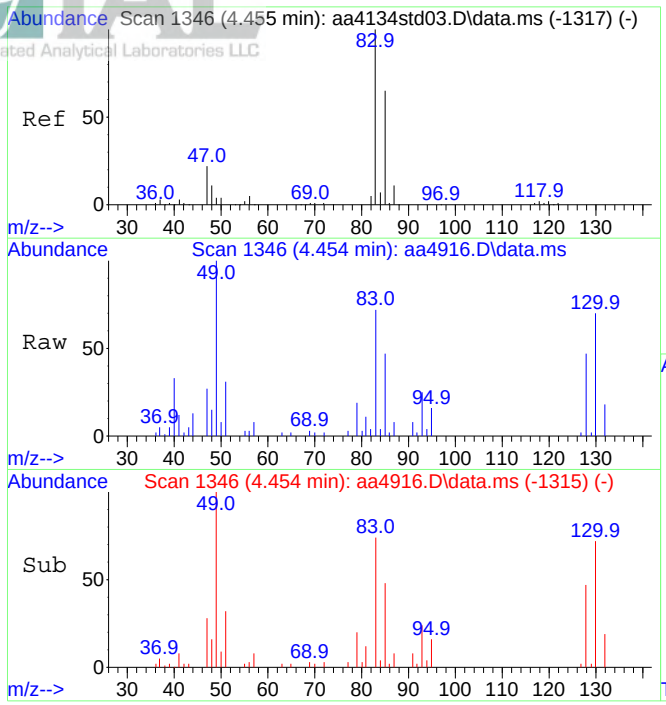



#26
Tert-butyl alcohol
Concen: 1.93 ppbV
RT: 3.467 min Scan# 1039
Delta R.T. 0.002 min
Lab File: aa4916.D
Acq: 11 Dec 2023 6:15 pm

Tgt Ion: 59 Resp: 260895

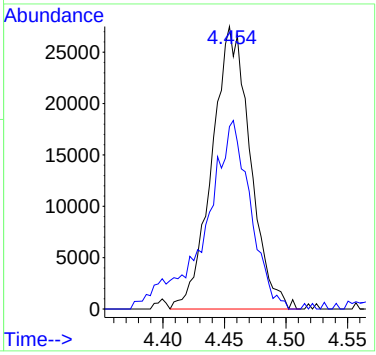


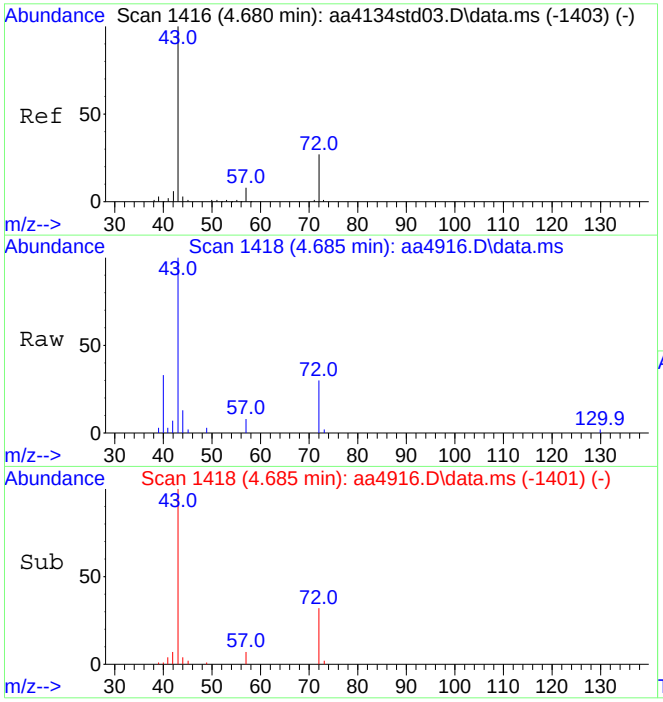



#30
Chloroform
Concen: 0.43 ppbV
RT: 4.454 min Scan# 1346
Delta R.T. -0.001 min
Lab File: aa4916.D
Acq: 11 Dec 2023 6:15 pm

Tgt Ion: 83 Resp: 59559

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 68.9 | 53.9 | 80.9 |

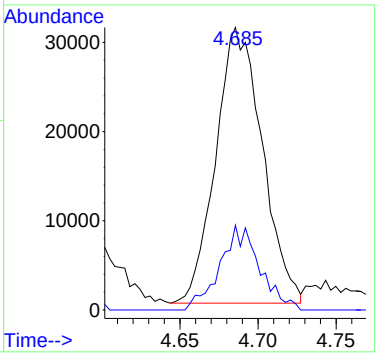


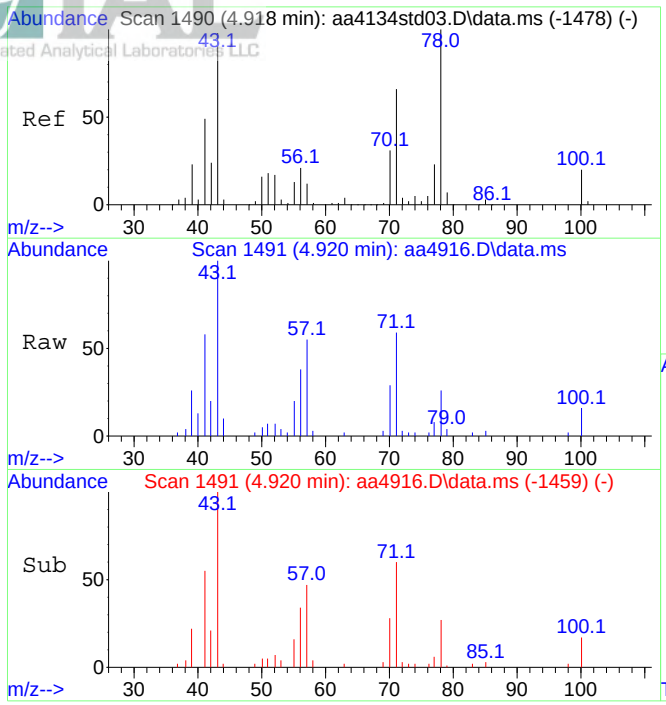




#35
Methyl ethyl ketone
Concen: 0.51 ppbV
RT: 4.685 min Scan# 1418
Delta R.T. 0.005 min
Lab File: aa4916.D
Acq: 11 Dec 2023 6:15 pm

Tgt Ion: 43 Resp: 64084

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 26.0 | 21.6 | 32.4 |

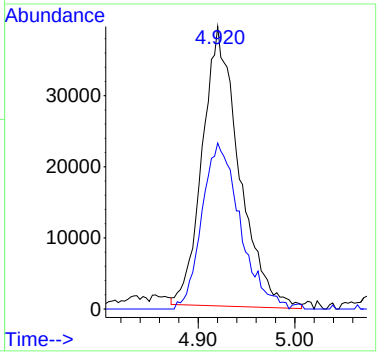


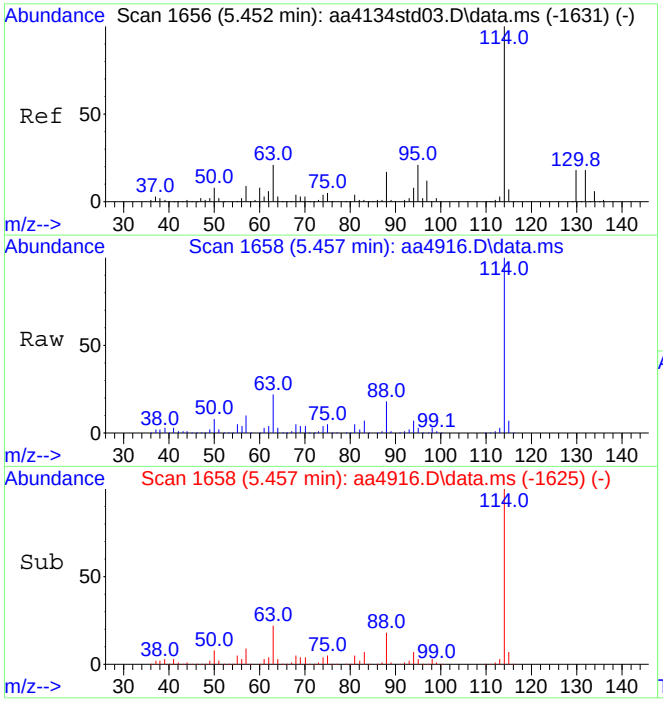



#36
n-Heptane
Concen: 0.72 ppbV
RT: 4.920 min Scan# 1491
Delta R.T. 0.002 min
Lab File: aa4916.D
Acq: 11 Dec 2023 6:15 pm

Tgt Ion: 43 Resp: 103925

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 71 | 61.5 | 50.5 | 75.7 |

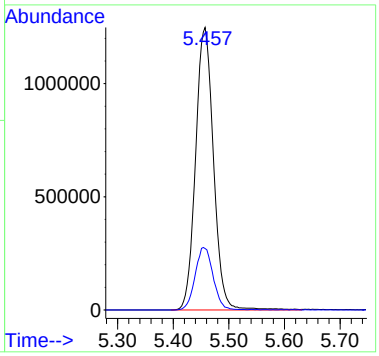


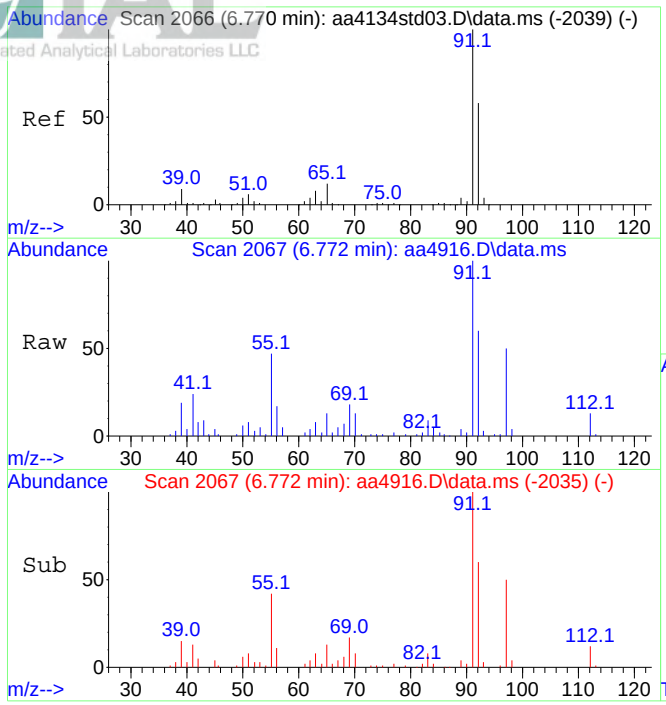




#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.457 min Scan# 1658
Delta R.T. 0.005 min
Lab File: aa4916.D
Acq: 11 Dec 2023 6:15 pm

Tgt Ion:114 Resp: 2789837

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.2 | 17.0 | 25.6 |

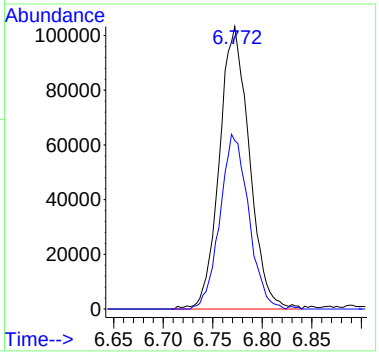


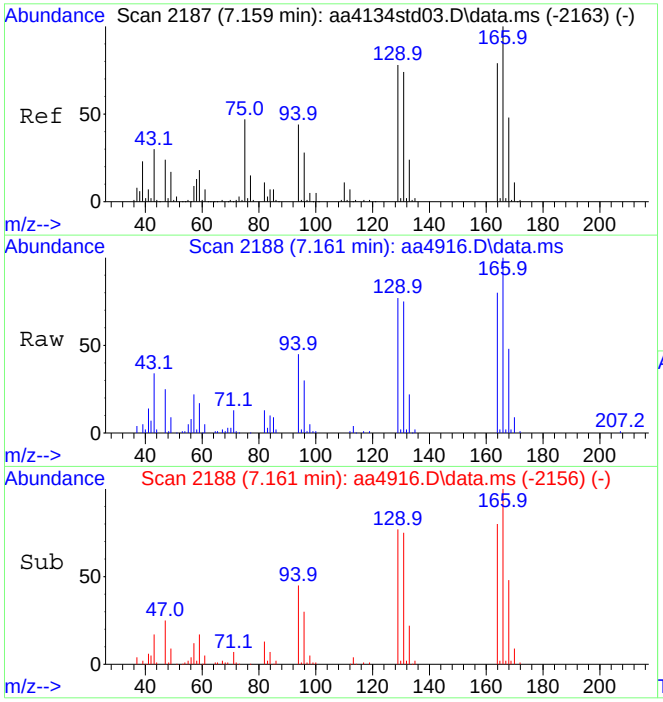



#47
Toluene
Concen: 0.55 ppbV
RT: 6.772 min Scan# 2067
Delta R.T. 0.002 min
Lab File: aa4916.D
Acq: 11 Dec 2023 6:15 pm

Tgt Ion: 91 Resp: 217388

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 59.1 | 47.3 | 70.9 |

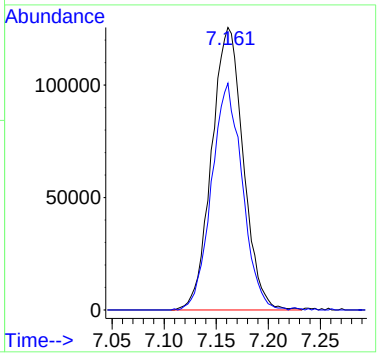


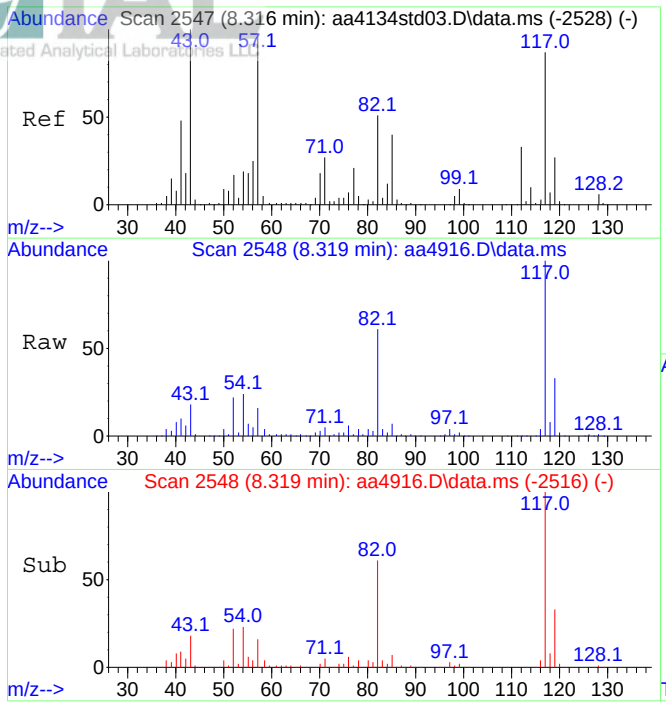




#49
Tetrachloroethene
Concen: 1.57 ppbV
RT: 7.161 min Scan# 2188
Delta R.T. 0.002 min
Lab File: aa4916.D
Acq: 11 Dec 2023 6:15 pm

Tgt Ion:166 Resp: 266016

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 78.0 | 62.3 | 93.5 |

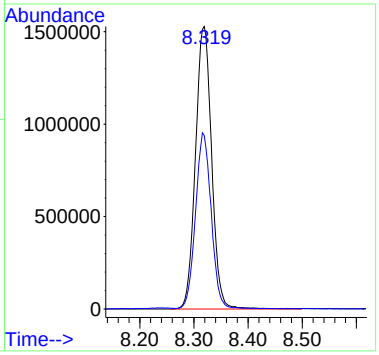


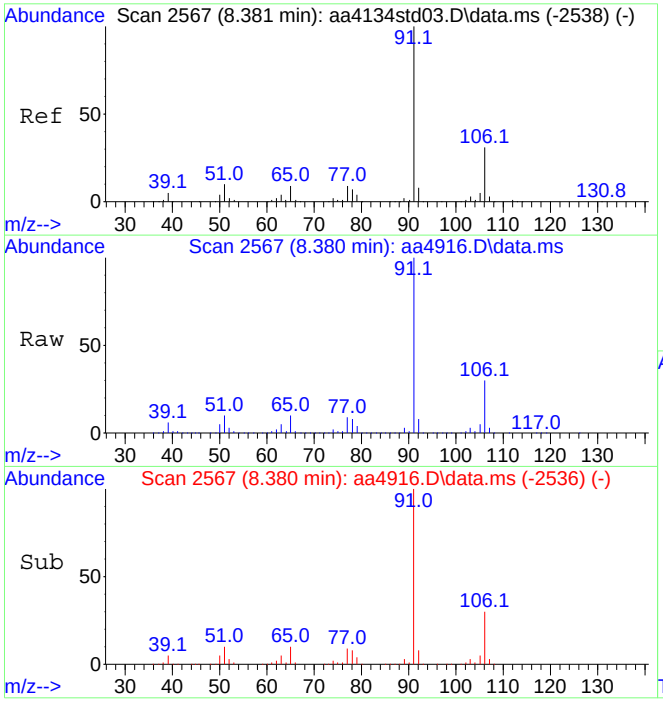



#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.319 min Scan# 2548
Delta R.T. 0.002 min
Lab File: aa4916.D
Acq: 11 Dec 2023 6:15 pm

Tgt Ion:117 Resp: 3170366

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 60.2 | 47.0 | 70.4 |

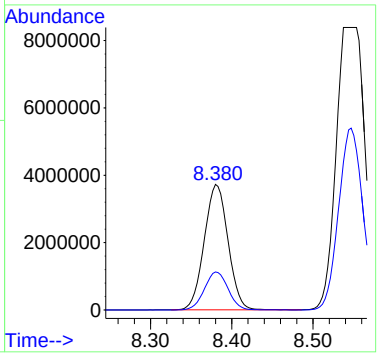


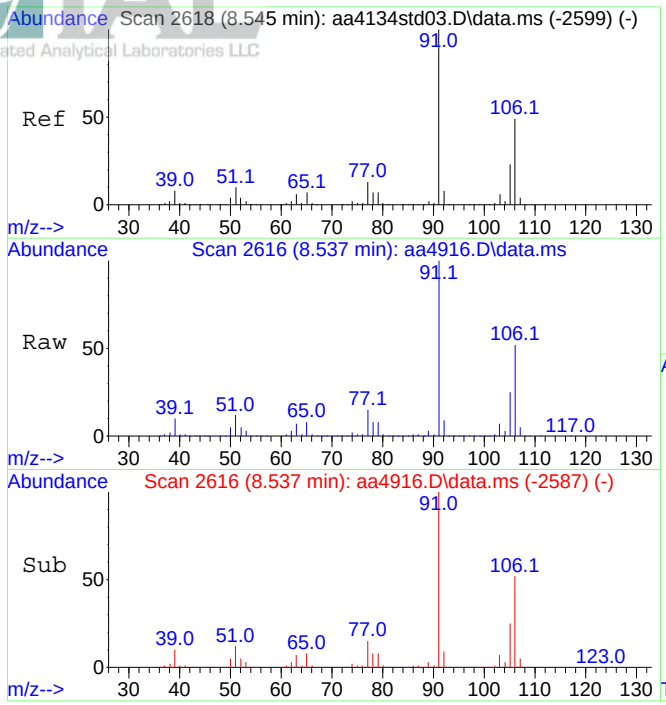




#58
Ethylbenzene
Concen: 12.94 ppbV
RT: 8.380 min Scan# 2567
Delta R.T. -0.001 min
Lab File: aa4916.D
Acq: 11 Dec 2023 6:15 pm

Tgt Ion: 91 Resp: 7559119

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 30.4 | 24.6 | 36.8 |

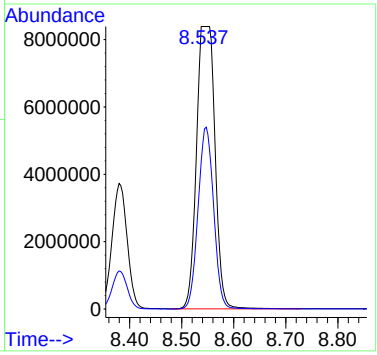


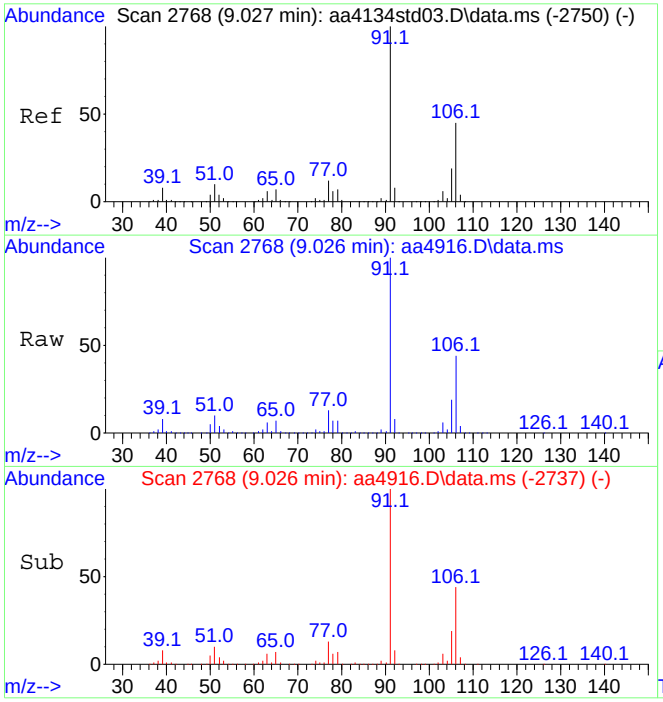



#59
Xylenes (m&p)
Concen: 47.83 ppbV
RT: 8.537 min Scan# 2616
Delta R.T. -0.007 min
Lab File: aa4916.D
Acq: 11 Dec 2023 6:15 pm

Tgt Ion: 91 Resp:20706134

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 54.2 | 39.0 | 58.4 |

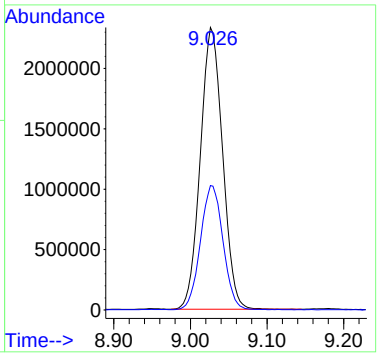


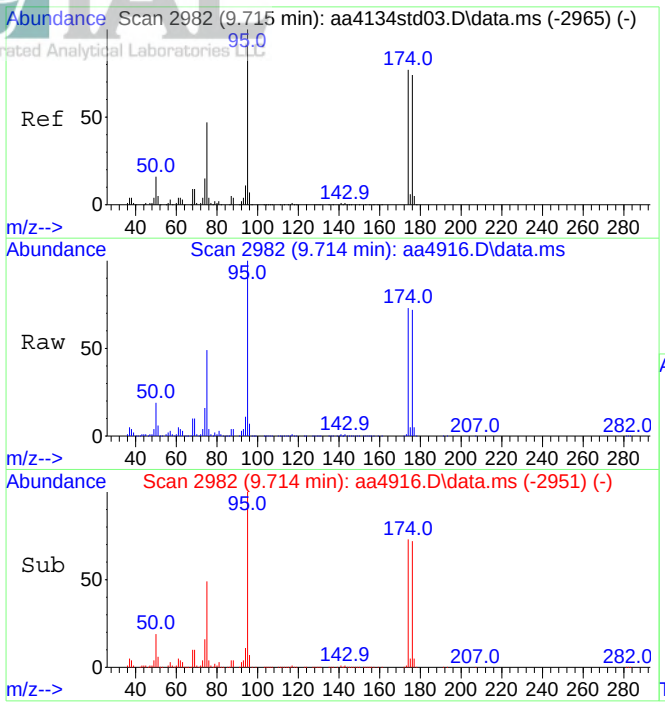




#60
Xylene (o)
Concen: 9.98 ppbV
RT: 9.026 min Scan# 2768
Delta R.T. -0.001 min
Lab File: aa4916.D
Acq: 11 Dec 2023 6:15 pm

Tgt Ion: 91 Resp: 4714295

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 44.7 | 36.8 | 55.2 |

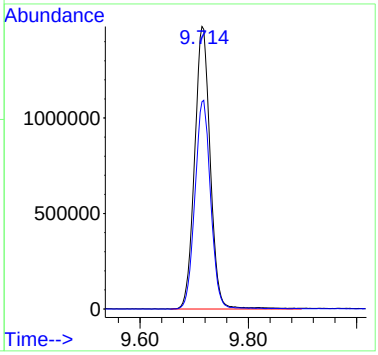


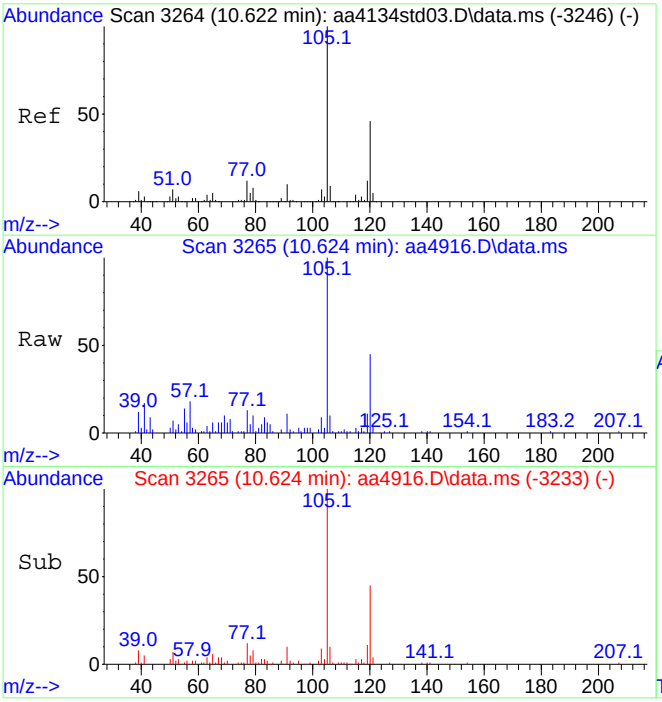



#64
Bromofluorobenzene (tune std)
Concen: 10.73 ppbV
RT: 9.714 min Scan# 2982
Delta R.T. -0.001 min
Lab File: aa4916.D
Acq: 11 Dec 2023 6:15 pm

Tgt Ion: 95 Resp: 2965341

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 74.5 | 61.1 | 91.7 |

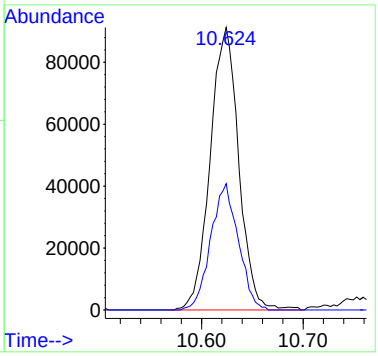



#70
1,2,4-Trimethylbenzene
Concen: 0.33 ppbV
RT: 10.624 min Scan# 3265
Delta R.T. 0.002 min
Lab File: aa4916.D
Acq: 11 Dec 2023 6:15 pm

Tgt Ion:105 Resp: 178438

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 43.1 | 36.3 | 54.5 |



**INTEGRATED ANALYTICAL LABORATORIES, LLC**
***Integrated Analytical Laboratories LLC***

Volatile Organic Compounds by EPA Method TO-15
Summary of Results

| | | | |
|---|---|---|---|
| Lab ID: | E23-05081-02 | Instrument ID: | AA |
| Client ID: | SV4 | GC/MS Column: | RTX-1, 0.32 mmID |
| Date Sampled: | 11/17/2023 09:40 | Injection Volmue: | 500ml |
| Date Received: | 11/20/2023 | Matrix: | Air-Other |
| Date Analyzed: | 12/11/2023 19:52 | % Moisture: | NA |
| Data File: | AA4919 | Dilution Factor: | 1 |
| Summa ID: | 2758 | Analyst: | J. Walukiewicz |

| | | | Concentration Reported | | Reporting Limits | |
|---|---|---|---|---|---|---|
| **Compound** | **CAS #** | **Q** | **ppbv** | **ug/m3** | **ppbv** | **ug/m3** |
| Acetone | 67-64-1 | | 22 | 53 | 0.20 | 0.48 |
| Benzene | 71-43-2 | | 2.9 | 9.2 | 0.20 | 0.64 |
| Bromodichloromethane | 75-27-4 | | ND | ND | 0.20 | 1.3 |
| Bromoform | 75-25-2 | | ND | ND | 0.20 | 2.1 |
| Bromomethane | 74-83-9 | | ND | ND | 0.20 | 0.78 |
| 1,3-Butadiene | 106-99-0 | | ND | ND | 0.20 | 0.44 |
| Chlorobenzene | 108-90-7 | | ND | ND | 0.20 | 0.92 |
| Chloroethane | 75-00-3 | | ND | ND | 0.20 | 0.53 |
| Chloroform | 67-66-3 | | ND | ND | 0.20 | 0.98 |
| Chloromethane | 74-87-3 | | ND | ND | 0.20 | 0.41 |
| Carbon disulfide | 75-15-0 | | 1.1 | 3.4 | 0.20 | 0.62 |
| Carbon tetrachloride | 56-23-5 | | ND | ND | 0.040 | 0.25 |
| Cyclohexane | 110-82-7 | | 1.3 | 4.5 | 0.20 | 0.69 |
| Dibromochloromethane | 124-48-1 | | ND | ND | 0.20 | 1.7 |
| 1,2-Dibromoethane | 106-93-4 | | ND | ND | 0.20 | 1.5 |
| 1,2-Dichlorobenzene | 95-50-1 | | ND | ND | 0.20 | 1.2 |
| 1,3-Dichlorobenzene | 541-73-1 | | ND | ND | 0.20 | 1.2 |
| 1,4-Dichlorobenzene | 106-46-7 | | ND | ND | 0.20 | 1.2 |
| Dichlorodifluoromethane | 75-71-8 | | ND | ND | 0.20 | 0.99 |
| 1,1-Dichloroethane | 75-34-3 | | ND | ND | 0.20 | 0.81 |
| 1,2-Dichloroethane | 107-06-2 | | ND | ND | 0.20 | 0.81 |
| 1,1-Dichloroethene | 75-35-4 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloroethene (cis) | 156-59-2 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloroethene (trans) | 156-60-5 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloropropane | 78-87-5 | | ND | ND | 0.20 | 0.92 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | | ND | ND | 0.20 | 0.91 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | | ND | ND | 0.20 | 0.91 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | | ND | ND | 0.20 | 1.4 |
| 1,4-Dioxane | 123-91-1 | | ND | ND | 0.20 | 0.72 |
| Ethylbenzene | 100-41-4 | | 0.94 | 4.1 | 0.20 | 0.87 |
| n-Heptane | 142-82-5 | | 2.2 | 9.2 | 0.20 | 0.82 |
| 1,3-Hexachlorobutadiene | 87-68-3 | | ND | ND | 0.20 | 2.1 |
| n-Hexane | 110-54-3 | | 2.9 | 10 | 0.20 | 0.70 |
| Methylene chloride | 75-09-2 | | ND | ND | 0.20 | 0.69 |
| Methyl ethyl ketone | 78-93-3 | | 1.4 | 4.1 | 0.20 | 0.59 |
| Methyl isobutyl ketone | 108-10-1 | | ND | ND | 0.20 | 0.82 |
| Methyl tert-butyl ether | 1634-04-4 | | ND | ND | 0.20 | 0.72 |
| Styrene | 100-42-5 | | 0.38 | 1.6 | 0.20 | 0.85 |
| Tert-butyl alcohol | 75-65-0 | | 2.6 | 7.9 | 0.20 | 0.61 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | ND | ND | 0.20 | 1.4 |
| Tetrachloroethene | 127-18-4 | | 7.2 | 49 | 0.20 | 1.4 |
| Toluene | 108-88-3 | | 2.4 | 8.9 | 0.20 | 0.75 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | ND | ND | 0.20 | 1.5 |
| 1,1,1-Trichloroethane | 71-55-6 | | ND | ND | 0.20 | 1.1 |
| 1,1,2-Trichloroethane | 79-00-5 | | ND | ND | 0.20 | 1.1 |

Qualifiers:
D = Dilution required

Volatile Organic Compounds by EPA Method TO-15
Summary of Results

| | | | |
|---|---|---|---|
| Lab ID: | E23-05081-02 | Instrument ID: | AA |
| Client ID: | SV4 | GC/MS Column: | RTX-1, 0.32 mmID |
| Date Sampled: | 11/17/2023 09:40 | Injection Volmue: | 500ml |
| Date Received: | 11/20/2023 | Matrix: | Air-Other |
| Date Analyzed: | 12/11/2023 19:52 | % Moisture: | NA |
| Data File: | AA4919 | Dilution Factor: | 1 |
| Summa ID: | 2758 | Analyst: | J. Walukiewicz |

| | | | Concentration Reported | | Reporting Limits | |
|---|---|---|---|---|---|---|
| **Compound** | **CAS #** | **Q** | **ppbv** | **ug/m3** | **ppbv** | **ug/m3** |
| Trichloroethene | 79-01-6 | | ND | ND | 0.046 | 0.25 |
| Trichlorofluoromethane | 75-69-4 | | 0.33 | 1.9 | 0.20 | 1.1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | | ND | ND | 0.20 | 1.5 |
| 1,2,4-Trimethylbenzene | 95-63-6 | | 0.65 | 3.2 | 0.20 | 0.98 |
| 1,3,5-Trimethylbenzene | 108-67-8 | | 0.21 | 1.0 | 0.20 | 0.98 |
| 2,2,4-Trimethylpentane | 540-84-1 | | ND | ND | 0.20 | 0.93 |
| Vinyl bromide | 593-60-2 | | ND | ND | 0.20 | 0.87 |
| Vinyl chloride | 75-01-4 | | ND | ND | 0.20 | 0.51 |
| Xylenes (m&p) | 179601-23-1 | | 3.7 | 16 | 0.20 | 0.87 |
| Xylenes (o) | 95-47-6 | | 2.0 | 8.9 | 0.20 | 0.87 |

Qualifiers:
D = Dilution required

Quantitation Report (QT Reviewed)

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4919.D
Acq On : 11 Dec 2023 7:52 pm
Operator : jjw
Sample : E23-05081-02
Misc : 2758, 500cc
ALS Vial : 22 Sample Multiplier: 1

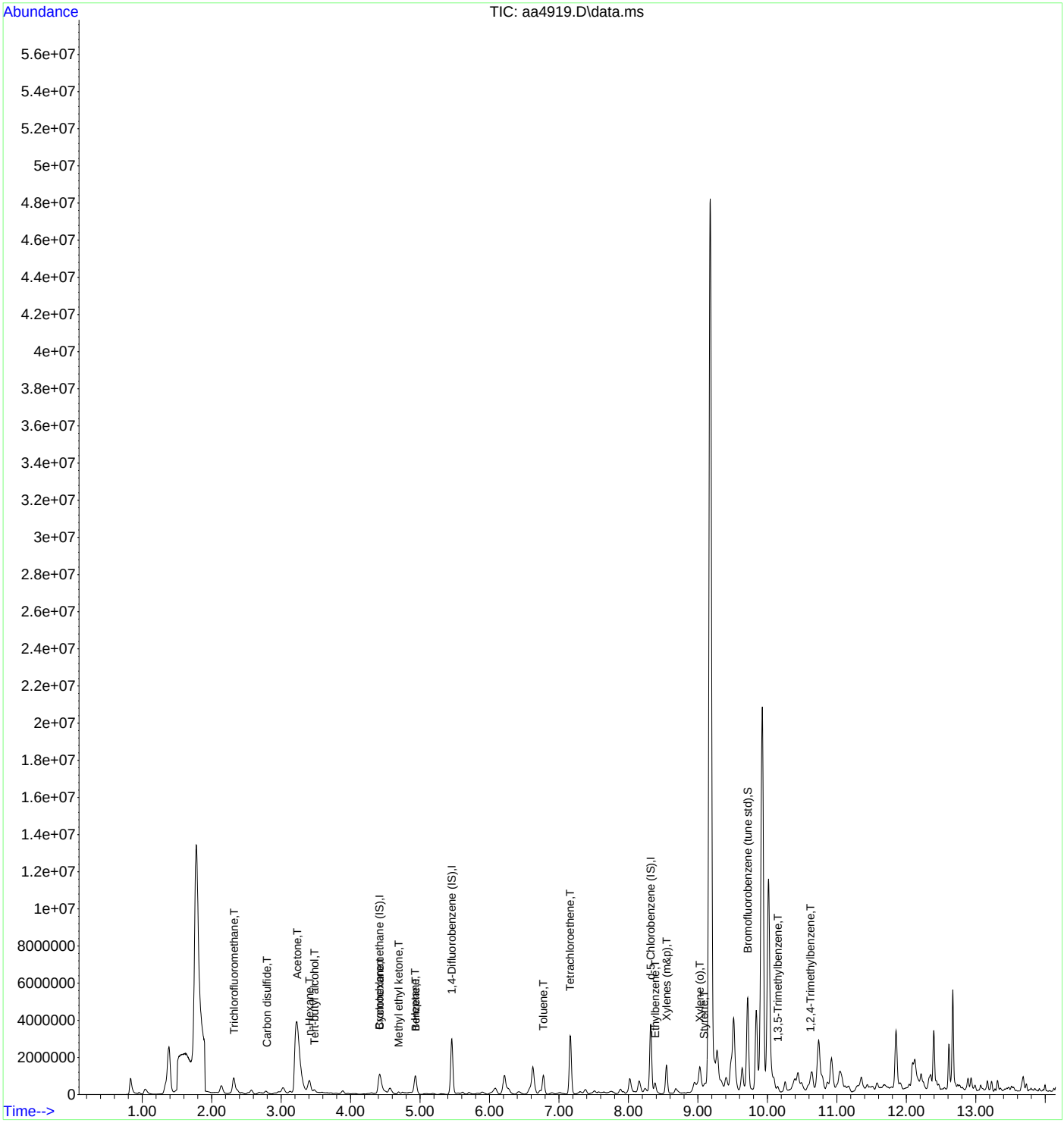
Quant Time: Dec 12 11:02:52 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

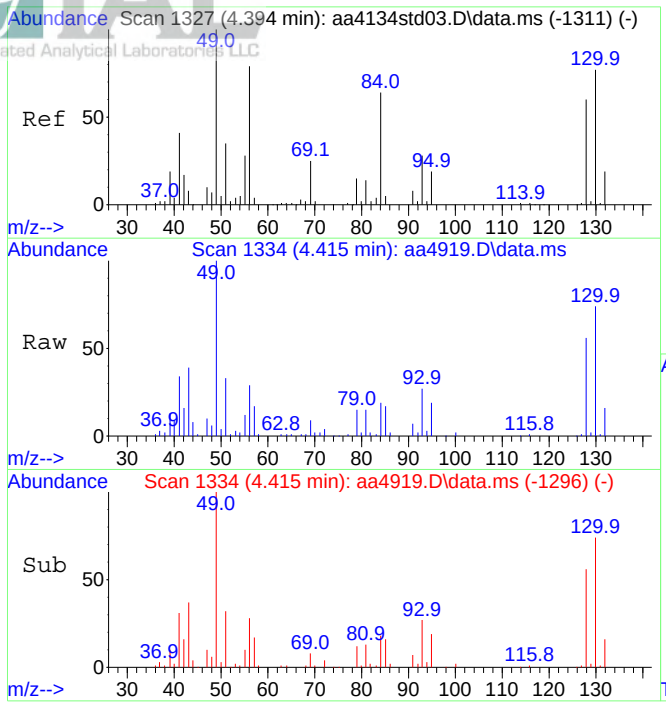
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.415 | 130 | 480922 | 10.00 | ppbV | | 0.021 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 2600665 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.322 | 117 | 2272991 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 2045815 | 10.33 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 12) Trichlorofluoromethane | 2.325 | 101 | 44394 | 0.33 | ppbV | | 98 |
| 15) Carbon disulfide | 2.798 | 76 | 161725 | 1.10 | ppbV | # | 83 |
| 21) Acetone | 3.232 | 43 | 1613731 | 22.25 | ppbV | | 99 |
| 24) n-Hexane | 3.409 | 57 | 443494 | 2.93 | ppbV | | 92 |
| 26) Tert-butyl alcohol | 3.480 | 59 | 325566 | 2.60 | ppbV | | 100 |
| 29) Cyclohexane | 4.419 | 56 | 139338 | 1.32 | ppbV | # | 73 |
| 35) Methyl ethyl ketone | 4.692 | 43 | 164465 | 1.40 | ppbV | | 98 |
| 36) n-Heptane | 4.930 | 43 | 298361 | 2.24 | ppbV | | 96 |
| 37) Benzene | 4.936 | 78 | 547852 | 2.87 | ppbV | | 98 |
| 47) Toluene | 6.775 | 91 | 863092 | 2.36 | ppbV | | 100 |
| 49) Tetrachloroethene | 7.161 | 166 | 1134119 | 7.20 | ppbV | | 100 |
| 58) Ethylbenzene | 8.386 | 91 | 391744 | 0.94 | ppbV | | 99 |
| 59) Xylenes (m&p) | 8.550 | 91 | 1147853 | 3.70 | ppbV | | 98 |
| 60) Xylene (o) | 9.026 | 91 | 694215 | 2.05 | ppbV | # | 78 |
| 61) Styrene | 9.090 | 104 | 87051 | 0.38 | ppbV | | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.152 | 105 | 82081 | 0.21 | ppbV | | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.621 | 105 | 255974 | 0.65 | ppbV | | 95 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4919.D
Acq On : 11 Dec 2023 7:52 pm
Operator : jjw
Sample : E23-05081-02
Misc : 2758, 500cc
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Dec 12 11:02:52 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

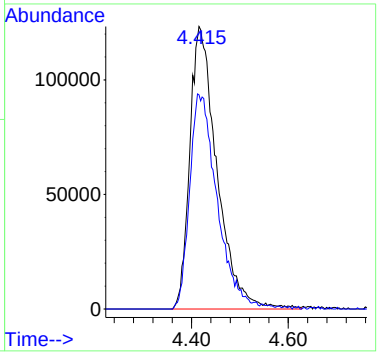


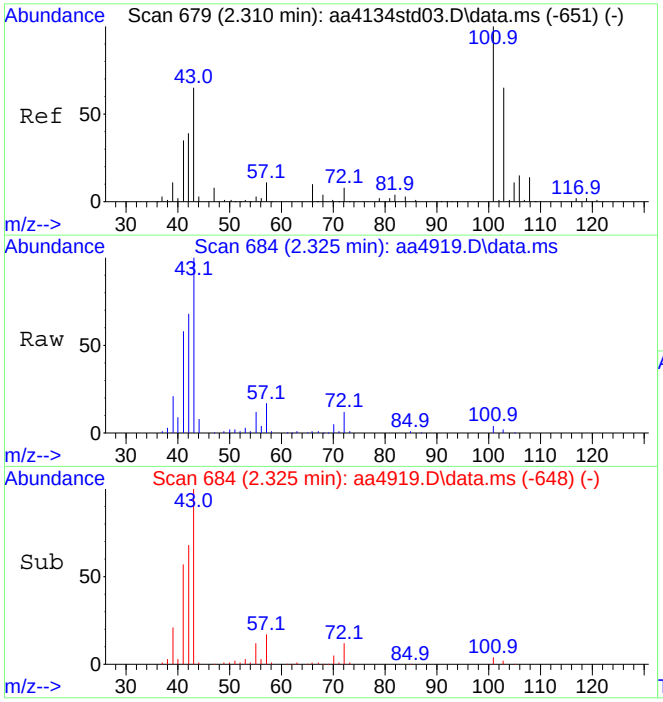



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.415 min Scan# 1334
Delta R.T. 0.021 min
Lab File: aa4919.D
Acq: 11 Dec 2023 7:52 pm

Tgt Ion:130 Resp: 480922

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 76.5 | 62.2 | 93.4 |

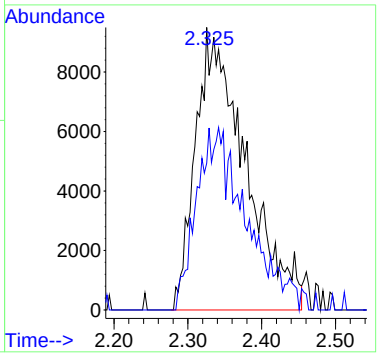


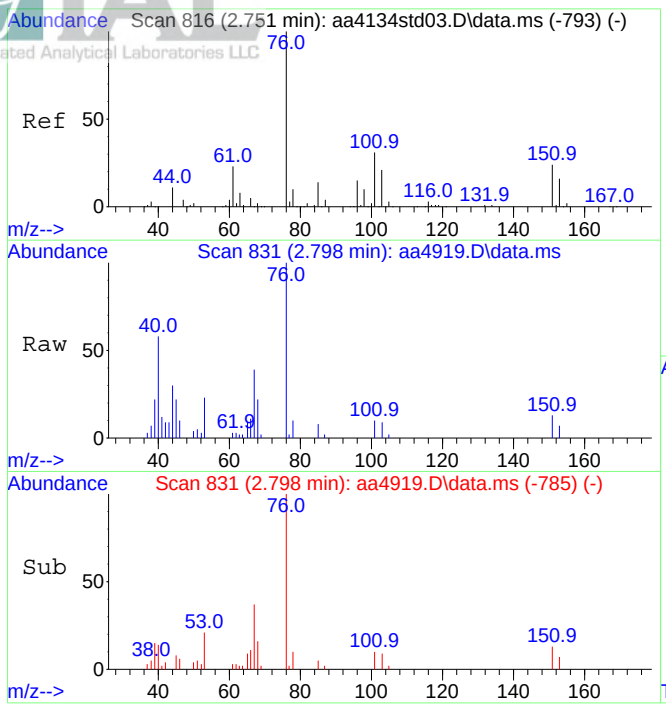




#12
Trichlorofluoromethane
Concen: 0.33 ppbV
RT: 2.325 min Scan# 684
Delta R.T. 0.015 min
Lab File: aa4919.D
Acq: 11 Dec 2023 7:52 pm

Tgt Ion:101 Resp: 44394

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 64.1 | 52.5 | 78.7 |

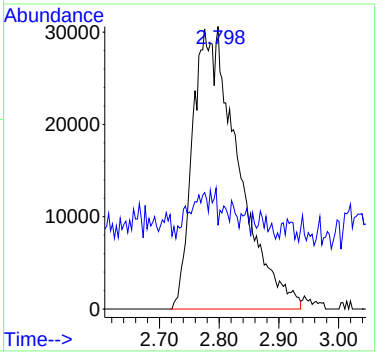


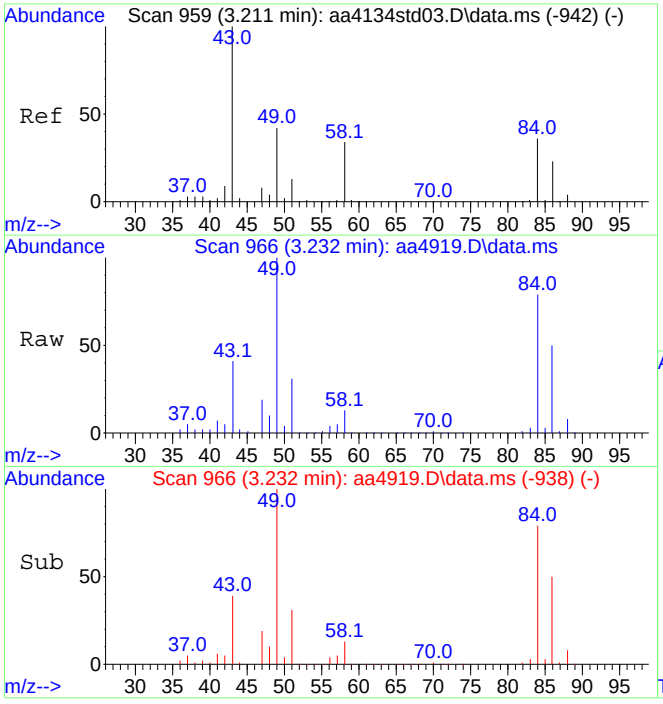



#15
Carbon disulfide
Concen: 1.10 ppbV
RT: 2.798 min Scan# 831
Delta R.T. 0.047 min
Lab File: aa4919.D
Acq: 11 Dec 2023 7:52 pm

Tgt Ion: 76 Resp: 161725

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 4.7 | 9.0 | 13.4# |

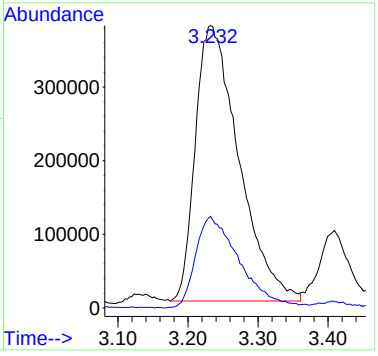


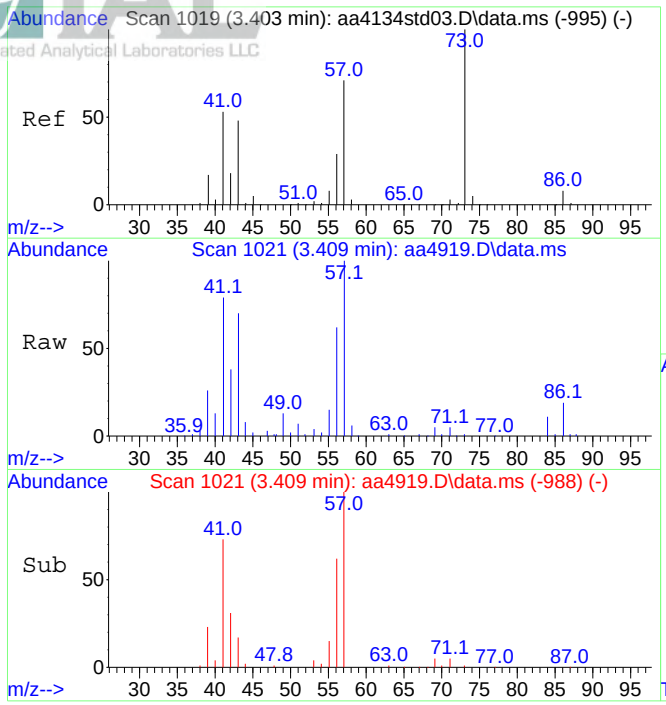




#21
Acetone
Concen: 22.25 ppbV
RT: 3.232 min Scan# 966
Delta R.T. 0.022 min
Lab File: aa4919.D
Acq: 11 Dec 2023 7:52 pm

Tgt Ion: 43 Resp: 1613731

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 33.6 | 27.1 | 40.7 |

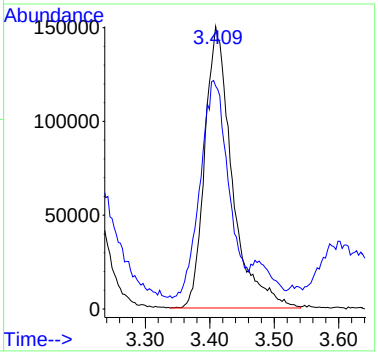


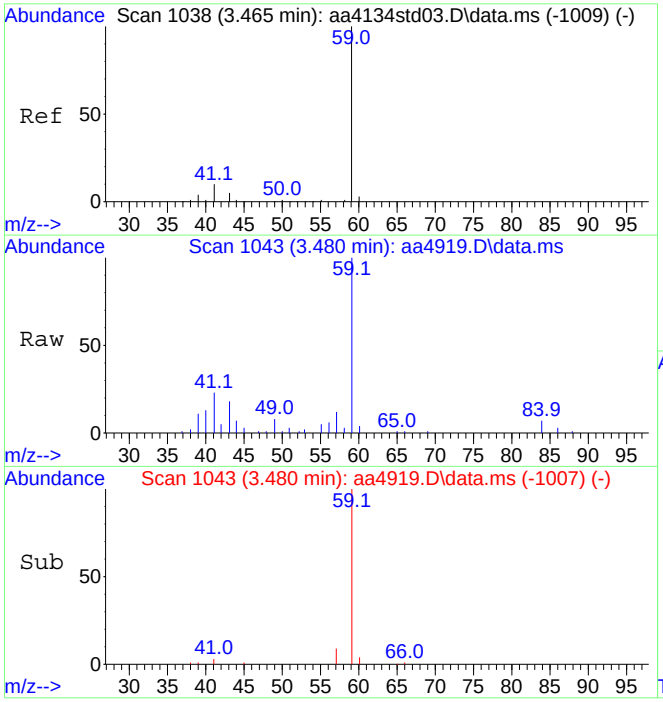



#24
n-Hexane
Concen: 2.93 ppbV
RT: 3.409 min Scan# 1021
Delta R.T. 0.006 min
Lab File: aa4919.D
Acq: 11 Dec 2023 7:52 pm

Tgt Ion: 57 Resp: 443494

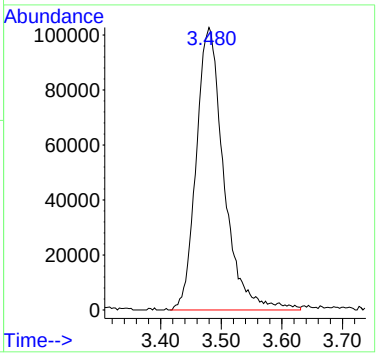
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 41 | 90.3 | 66.4 | 99.6 |

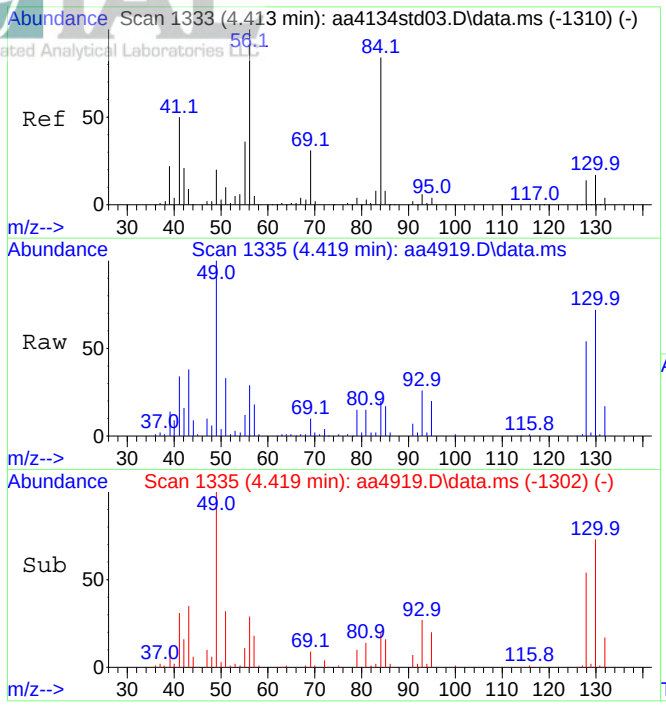



#26
Tert-butyl alcohol
Concen: 2.60 ppbV
RT: 3.480 min Scan# 1043
Delta R.T. 0.015 min
Lab File: aa4919.D
Acq: 11 Dec 2023 7:52 pm

Tgt Ion: 59 Resp: 325566

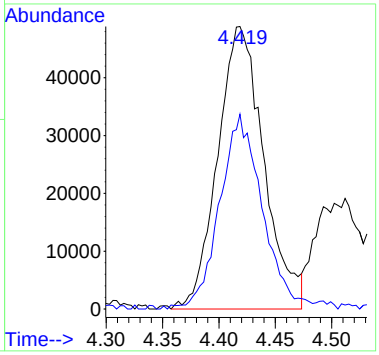


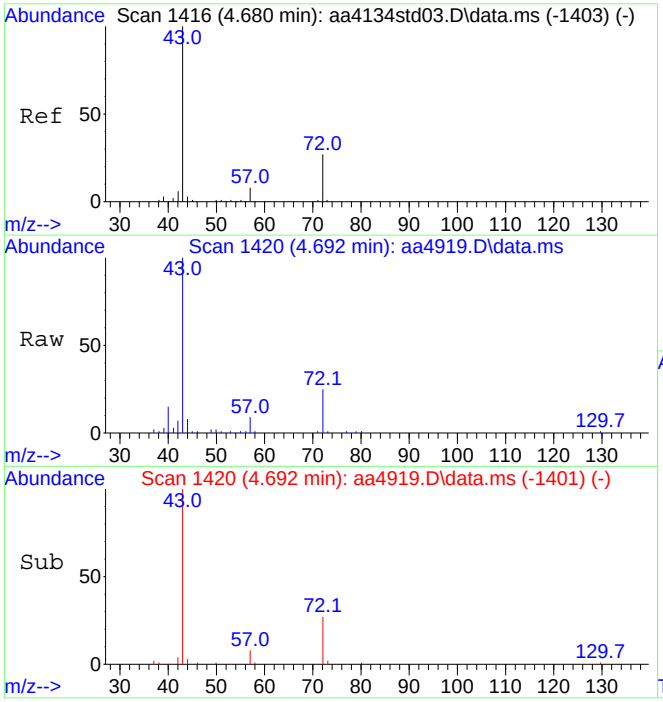



#29
Cyclohexane
Concen: 1.32 ppbV
RT: 4.419 min Scan# 1335
Delta R.T. 0.006 min
Lab File: aa4919.D
Acq: 11 Dec 2023 7:52 pm

Tgt Ion: 56 Resp: 139338

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 64.0 | 71.2 | 106.8# |

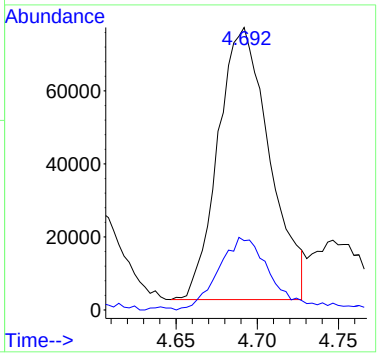


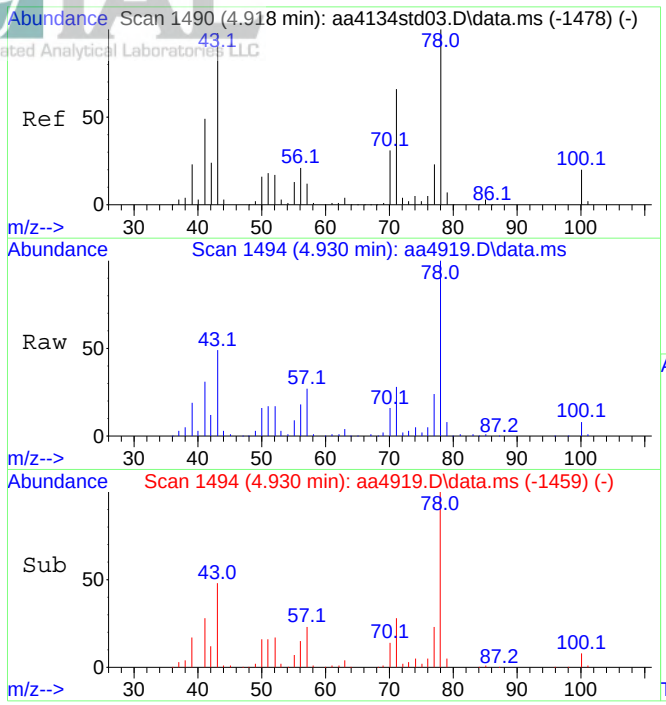




#35
Methyl ethyl ketone
Concen: 1.40 ppbV
RT: 4.692 min Scan# 1420
Delta R.T. 0.012 min
Lab File: aa4919.D
Acq: 11 Dec 2023 7:52 pm

Tgt Ion: 43 Resp: 164465

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 25.8 | 21.6 | 32.4 |

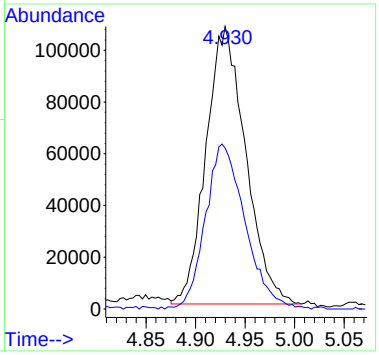


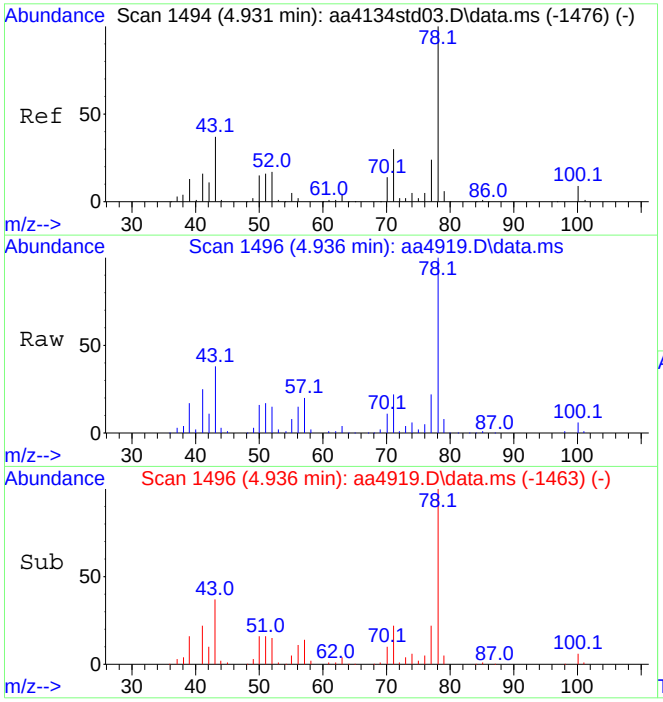



#36
n-Heptane
Concen: 2.24 ppbV
RT: 4.930 min Scan# 1494
Delta R.T. 0.012 min
Lab File: aa4919.D
Acq: 11 Dec 2023 7:52 pm

Tgt Ion: 43 Resp: 298361

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 71 | 59.7 | 50.5 | 75.7 |

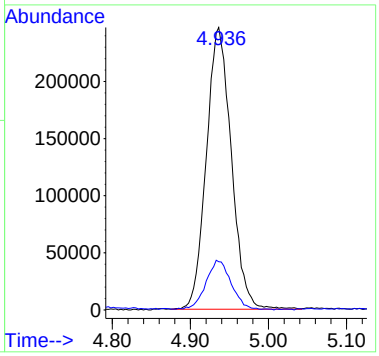


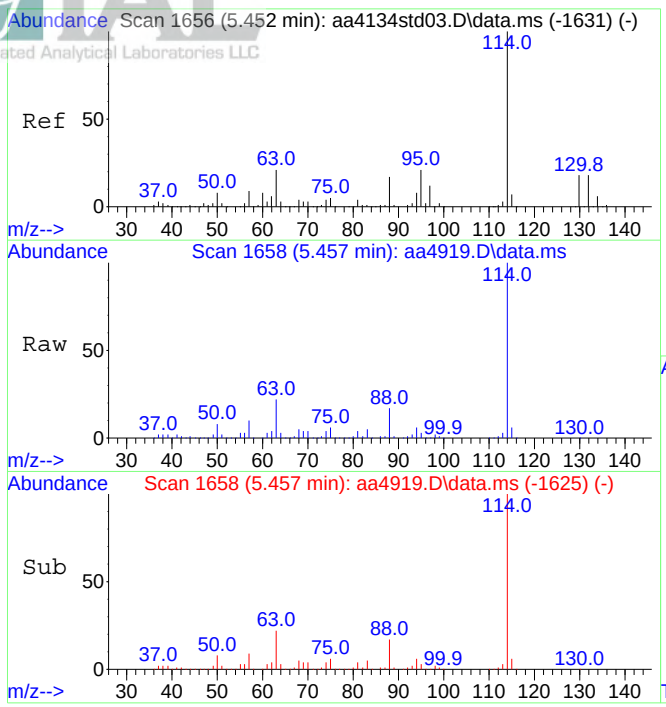




#37
Benzene
Concen: 2.87 ppbV
RT: 4.936 min Scan# 1496
Delta R.T. 0.006 min
Lab File: aa4919.D
Acq: 11 Dec 2023 7:52 pm

Tgt Ion: 78 Resp: 547852

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 17.3 | 13.4 | 20.0 |

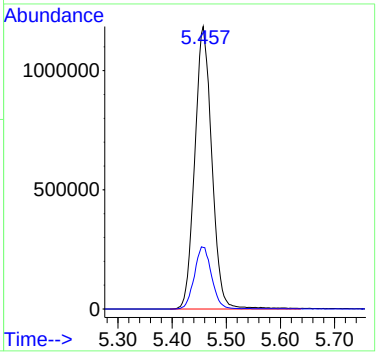


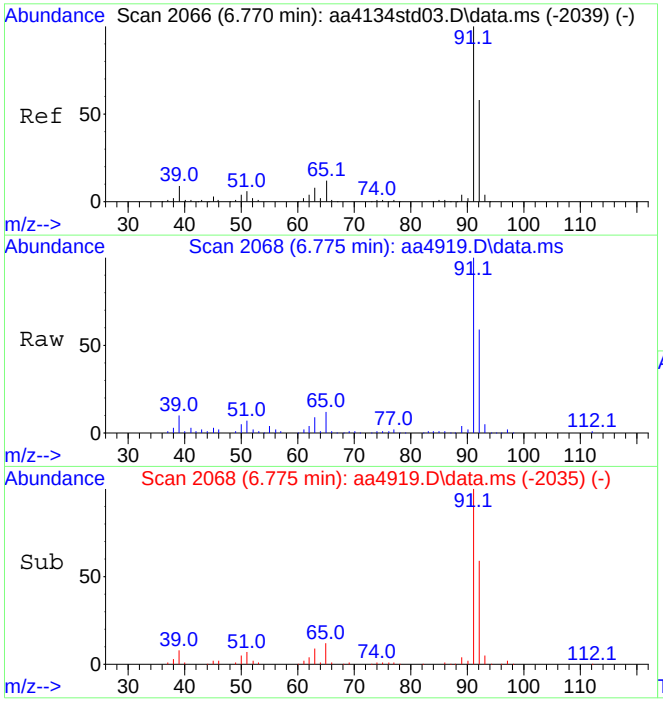



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.457 min Scan# 1658
Delta R.T. 0.005 min
Lab File: aa4919.D
Acq: 11 Dec 2023 7:52 pm

Tgt Ion:114 Resp: 2600665

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.1 | 17.0 | 25.6 |

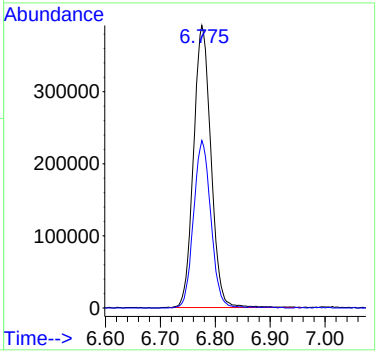


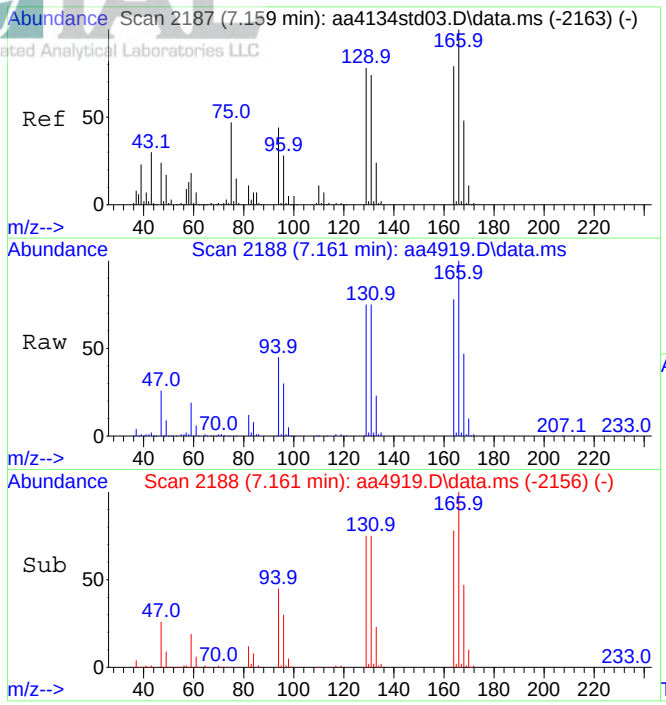




#47
Toluene
Concen: 2.36 ppbV
RT: 6.775 min Scan# 2068
Delta R.T. 0.006 min
Lab File: aa4919.D
Acq: 11 Dec 2023 7:52 pm

Tgt Ion: 91 Resp: 863092

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 58.8 | 47.3 | 70.9 |

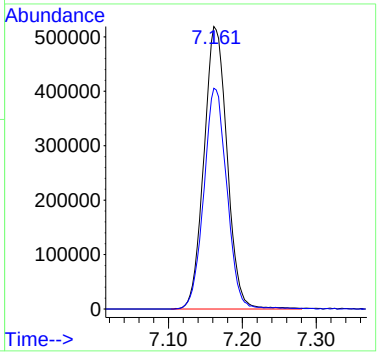


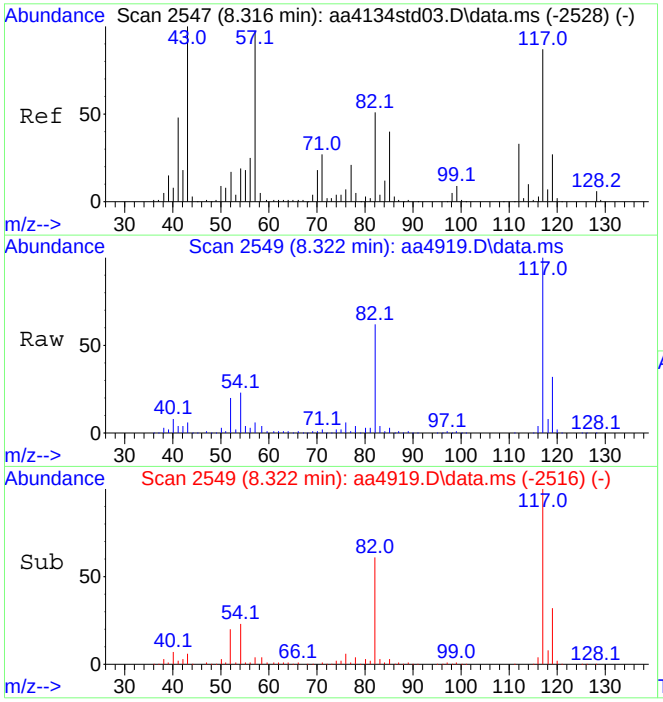



#49
Tetrachloroethene
Concen: 7.20 ppbV
RT: 7.161 min Scan# 2188
Delta R.T. 0.002 min
Lab File: aa4919.D
Acq: 11 Dec 2023 7:52 pm

Tgt Ion:166 Resp: 1134119

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 77.8 | 62.3 | 93.5 |

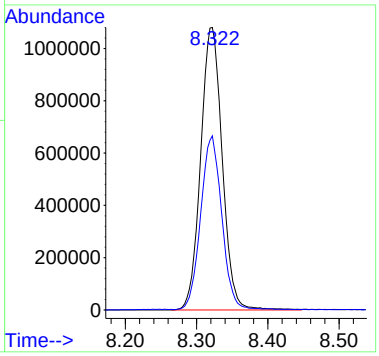


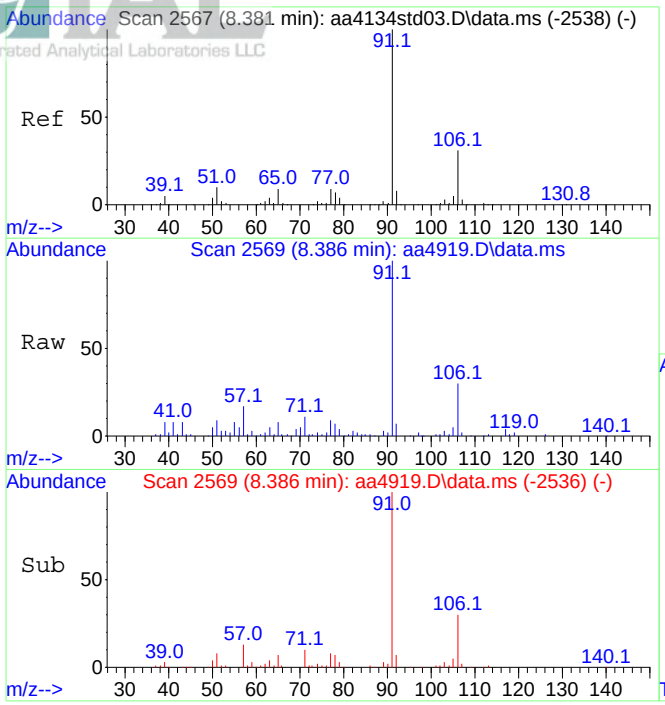




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.322 min Scan# 2549
Delta R.T. 0.006 min
Lab File: aa4919.D
Acq: 11 Dec 2023 7:52 pm

Tgt Ion:117 Resp: 2272991

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 59.7 | 47.0 | 70.4 |

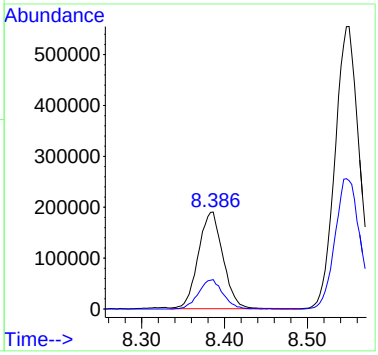


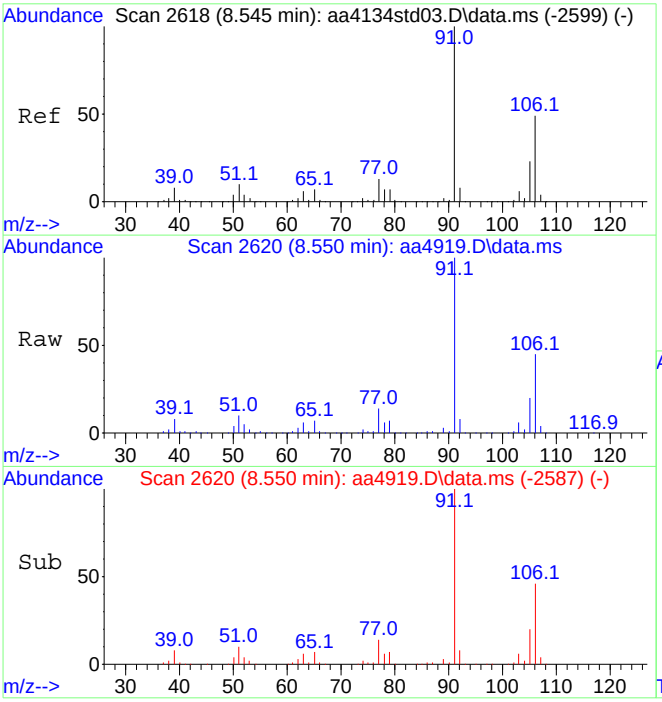



#58
Ethylbenzene
Concen: 0.94 ppbV
RT: 8.386 min Scan# 2569
Delta R.T. 0.006 min
Lab File: aa4919.D
Acq: 11 Dec 2023 7:52 pm

Tgt Ion: 91 Resp: 391744

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 30.2 | 24.6 | 36.8 |

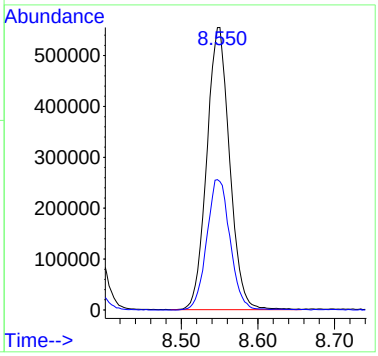


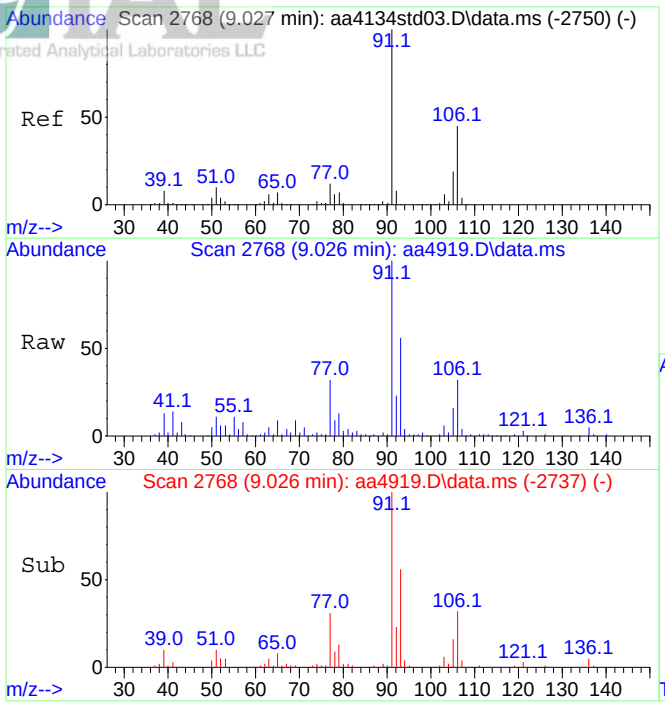




#59
Xylenes (m&p)
Concen: 3.70 ppbV
RT: 8.550 min Scan# 2620
Delta R.T. 0.006 min
Lab File: aa4919.D
Acq: 11 Dec 2023 7:52 pm

Tgt Ion: 91 Resp: 1147853

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 47.0 | 39.0 | 58.4 |

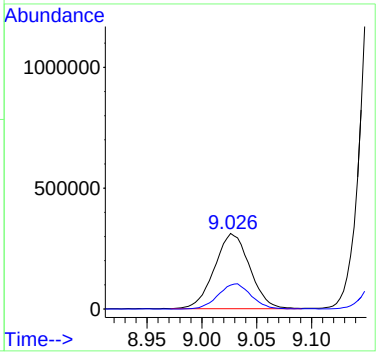


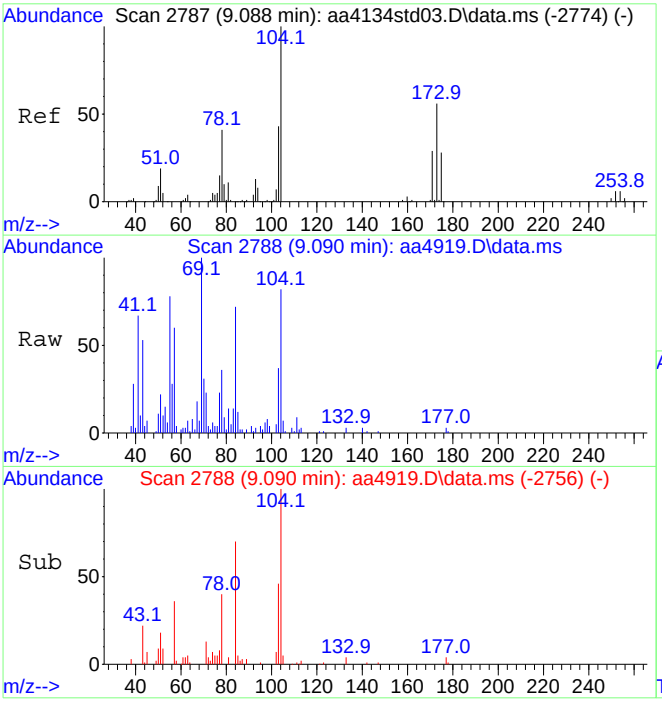



#60
Xylene (o)
Concen: 2.05 ppbV
RT: 9.026 min Scan# 2768
Delta R.T. -0.001 min
Lab File: aa4919.D
Acq: 11 Dec 2023 7:52 pm

Tgt Ion: 91 Resp: 694215

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 31.3 | 36.8 | 55.2# |

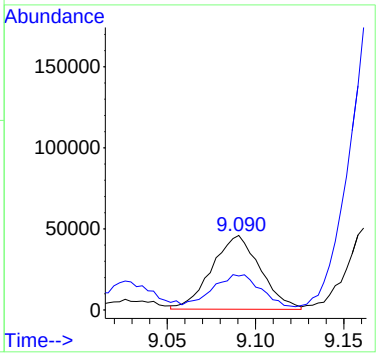


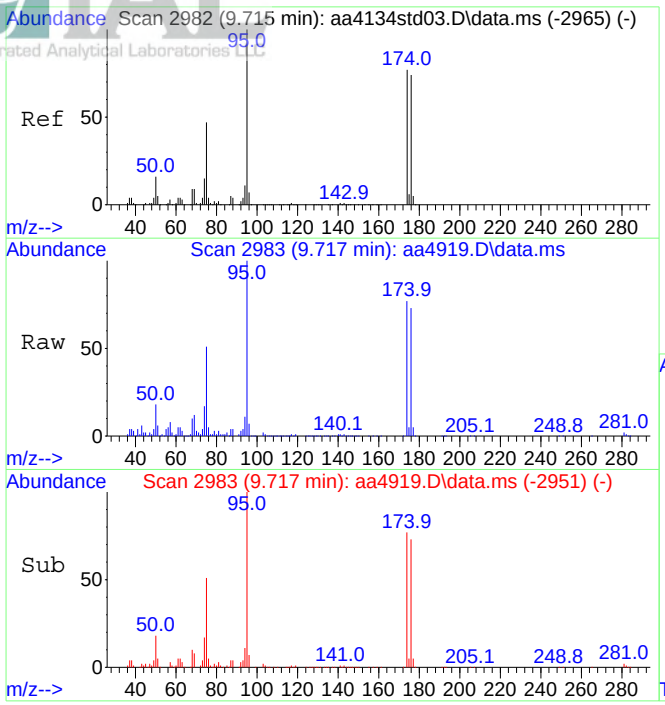




#61
Styrene
Concen: 0.38 ppbV
RT: 9.090 min Scan# 2788
Delta R.T. 0.002 min
Lab File: aa4919.D
Acq: 11 Dec 2023 7:52 pm

Tgt Ion:104 Resp: 87051

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 104 | 100 | | |
| 103 | 48.1 | 37.8 | 56.6 |

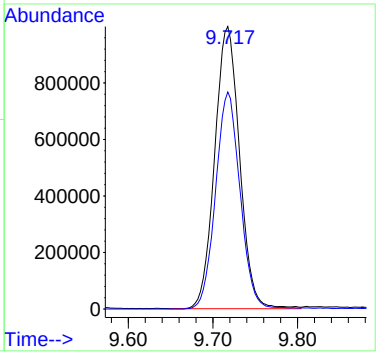


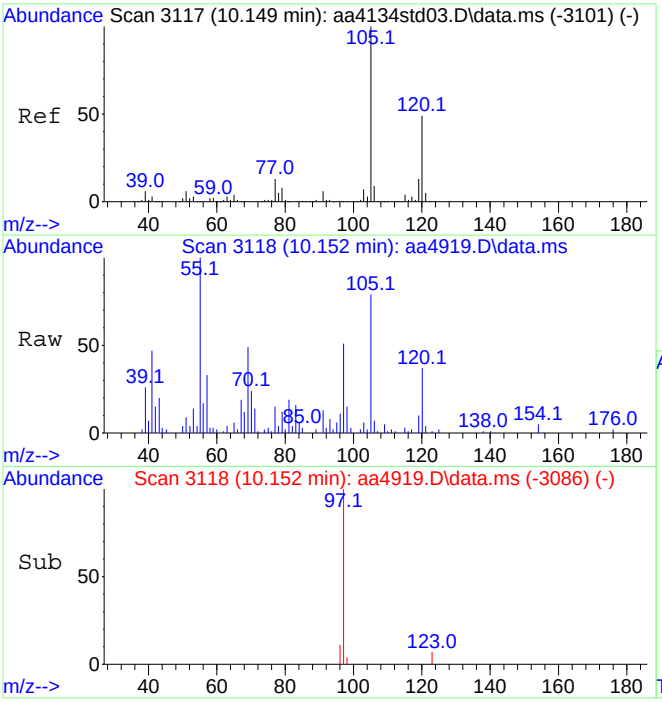



#64
Bromofluorobenzene (tune std)
Concen: 10.33 ppbV
RT: 9.717 min Scan# 2983
Delta R.T. 0.002 min
Lab File: aa4919.D
Acq: 11 Dec 2023 7:52 pm

Tgt Ion: 95 Resp: 2045815

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 76.2 | 61.1 | 91.7 |

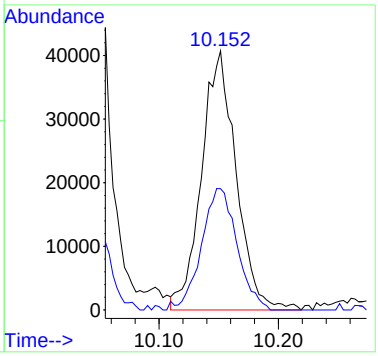


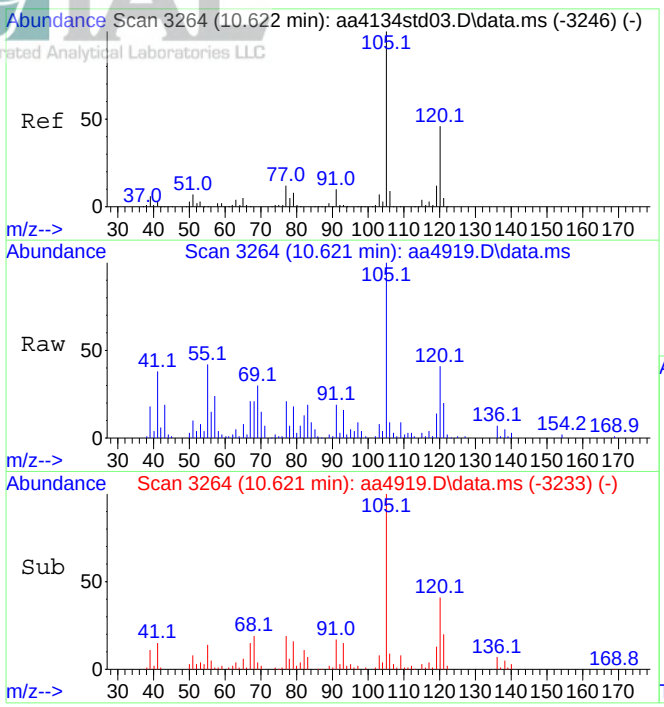




#69
1,3,5-Trimethylbenzene
Concen: 0.21 ppbV
RT: 10.152 min Scan# 3118
Delta R.T. 0.002 min
Lab File: aa4919.D
Acq: 11 Dec 2023 7:52 pm

Tgt Ion:105 Resp: 82081

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 48.0 | 38.9 | 58.3 |

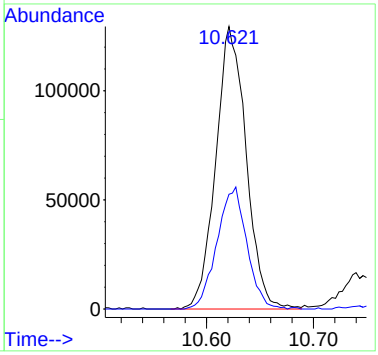





#70
1,2,4-Trimethylbenzene
Concen: 0.65 ppbV
RT: 10.621 min Scan# 3264
Delta R.T. -0.001 min
Lab File: aa4919.D
Acq: 11 Dec 2023 7:52 pm

Tgt Ion:105 Resp: 255974

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 42.3 | 36.3 | 54.5 |



**INTEGRATED ANALYTICAL LABORATORIES, LLC**
***Integrated Analytical Laboratories LLC***

Volatile Organic Compounds by EPA Method TO-15
Summary of Results

| | | | |
|---|---|---|---|
| Lab ID: | E23-05081-03 | Instrument ID: | AA |
| Client ID: | SV9 | GC/MS Column: | RTX-1, 0.32 mmID |
| Date Sampled: | 11/17/2023 08:00 | Injection Volmue: | 500ml, 100ml |
| Date Received: | 11/20/2023 | Matrix: | Air-Other |
| Date Analyzed: | 12/11/2023 21:04, 12/11/2023 20:24 | % Moisture: | NA |
| Data File: | AA4921, AA4920 | Dilution Factor: | 1, 5 |
| Summa ID: | 3809 | Analyst: | J. Walukiewicz |

| | | | Concentration Reported | | Reporting Limits | |
|---|---|---|---|---|---|---|
| **Compound** | **CAS #** | **Q** | **ppbv** | **ug/m3** | **ppbv** | **ug/m3** |
| Acetone | 67-64-1 | | 15 | 35 | 0.20 | 0.48 |
| Benzene | 71-43-2 | | 0.43 | 1.4 | 0.20 | 0.64 |
| Bromodichloromethane | 75-27-4 | | ND | ND | 0.20 | 1.3 |
| Bromoform | 75-25-2 | | ND | ND | 0.20 | 2.1 |
| Bromomethane | 74-83-9 | | ND | ND | 0.20 | 0.78 |
| 1,3-Butadiene | 106-99-0 | | ND | ND | 0.20 | 0.44 |
| Chlorobenzene | 108-90-7 | | ND | ND | 0.20 | 0.92 |
| Chloroethane | 75-00-3 | | ND | ND | 0.20 | 0.53 |
| Chloroform | 67-66-3 | | ND | ND | 0.20 | 0.98 |
| Chloromethane | 74-87-3 | | ND | ND | 0.20 | 0.41 |
| Carbon disulfide | 75-15-0 | | 1.5 | 4.6 | 0.20 | 0.62 |
| Carbon tetrachloride | 56-23-5 | | ND | ND | 0.040 | 0.25 |
| Cyclohexane | 110-82-7 | | 0.66 | 2.3 | 0.20 | 0.69 |
| Dibromochloromethane | 124-48-1 | | ND | ND | 0.20 | 1.7 |
| 1,2-Dibromoethane | 106-93-4 | | ND | ND | 0.20 | 1.5 |
| 1,2-Dichlorobenzene | 95-50-1 | | ND | ND | 0.20 | 1.2 |
| 1,3-Dichlorobenzene | 541-73-1 | | ND | ND | 0.20 | 1.2 |
| 1,4-Dichlorobenzene | 106-46-7 | | ND | ND | 0.20 | 1.2 |
| Dichlorodifluoromethane | 75-71-8 | | ND | ND | 0.20 | 0.99 |
| 1,1-Dichloroethane | 75-34-3 | | ND | ND | 0.20 | 0.81 |
| 1,2-Dichloroethane | 107-06-2 | | ND | ND | 0.20 | 0.81 |
| 1,1-Dichloroethene | 75-35-4 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloroethene (cis) | 156-59-2 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloroethene (trans) | 156-60-5 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloropropane | 78-87-5 | | ND | ND | 0.20 | 0.92 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | | ND | ND | 0.20 | 0.91 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | | ND | ND | 0.20 | 0.91 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | | ND | ND | 0.20 | 1.4 |
| 1,4-Dioxane | 123-91-1 | | ND | ND | 0.20 | 0.72 |
| Ethylbenzene | 100-41-4 | D | 48 | 210 | 1.0 | 4.3 |
| n-Heptane | 142-82-5 | | 2.7 | 11 | 0.20 | 0.82 |
| 1,3-Hexachlorobutadiene | 87-68-3 | | ND | ND | 0.20 | 2.1 |
| n-Hexane | 110-54-3 | | 2.5 | 8.7 | 0.20 | 0.70 |
| Methylene chloride | 75-09-2 | | ND | ND | 0.20 | 0.69 |
| Methyl ethyl ketone | 78-93-3 | | 1.1 | 3.1 | 0.20 | 0.59 |
| Methyl isobutyl ketone | 108-10-1 | | ND | ND | 0.20 | 0.82 |
| Methyl tert-butyl ether | 1634-04-4 | | ND | ND | 0.20 | 0.72 |
| Styrene | 100-42-5 | | 0.49 | 2.1 | 0.20 | 0.85 |
| Tert-butyl alcohol | 75-65-0 | | 5.8 | 18 | 0.20 | 0.61 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | ND | ND | 0.20 | 1.4 |
| Tetrachloroethene | 127-18-4 | | 9.8 | 66 | 0.20 | 1.4 |
| Toluene | 108-88-3 | | 1.7 | 6.4 | 0.20 | 0.75 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | ND | ND | 0.20 | 1.5 |
| 1,1,1-Trichloroethane | 71-55-6 | | ND | ND | 0.20 | 1.1 |
| 1,1,2-Trichloroethane | 79-00-5 | | ND | ND | 0.20 | 1.1 |

Qualifiers:
D = Dilution required

Volatile Organic Compounds by EPA Method TO-15
Summary of Results

| | | | |
|---|---|---|---|
| Lab ID: | E23-05081-03 | Instrument ID: | AA |
| Client ID: | SV9 | GC/MS Column: | RTX-1, 0.32 mmID |
| Date Sampled: | 11/17/2023 08:00 | Injection Volmue: | 500ml, 100ml |
| Date Received: | 11/20/2023 | Matrix: | Air-Other |
| Date Analyzed: | 12/11/2023 21:04, 12/11/2023 20:24 | % Moisture: | NA |
| Data File: | AA4921, AA4920 | Dilution Factor: | 1, 5 |
| Summa ID: | 3809 | Analyst: | J. Walukiewicz |

| | | | Concentration Reported | | Reporting Limits | |
|---|---|---|---|---|---|---|
| **Compound** | **CAS #** | **Q** | **ppbv** | **ug/m3** | **ppbv** | **ug/m3** |
| Trichloroethene | 79-01-6 | | ND | ND | 0.046 | 0.25 |
| Trichlorofluoromethane | 75-69-4 | | 0.32 | 1.8 | 0.20 | 1.1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | | ND | ND | 0.20 | 1.5 |
| 1,2,4-Trimethylbenzene | 95-63-6 | | 2.7 | 13 | 0.20 | 0.98 |
| 1,3,5-Trimethylbenzene | 108-67-8 | | 1.0 | 5.1 | 0.20 | 0.98 |
| 2,2,4-Trimethylpentane | 540-84-1 | | 0.21 | 0.97 | 0.20 | 0.93 |
| Vinyl bromide | 593-60-2 | | ND | ND | 0.20 | 0.87 |
| Vinyl chloride | 75-01-4 | | ND | ND | 0.20 | 0.51 |
| Xylenes (m&p) | 179601-23-1 | D | 210 | 890 | 1.0 | 4.3 |
| Xylenes (o) | 95-47-6 | | 38 | 170 | 0.20 | 0.87 |

Qualifiers:
D = Dilution required

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4921.D
Acq On : 11 Dec 2023 9:04 pm
Operator : jjw
Sample : E23-05081-03
Misc : 3809, 500cc
ALS Vial : 24 Sample Multiplier: 1

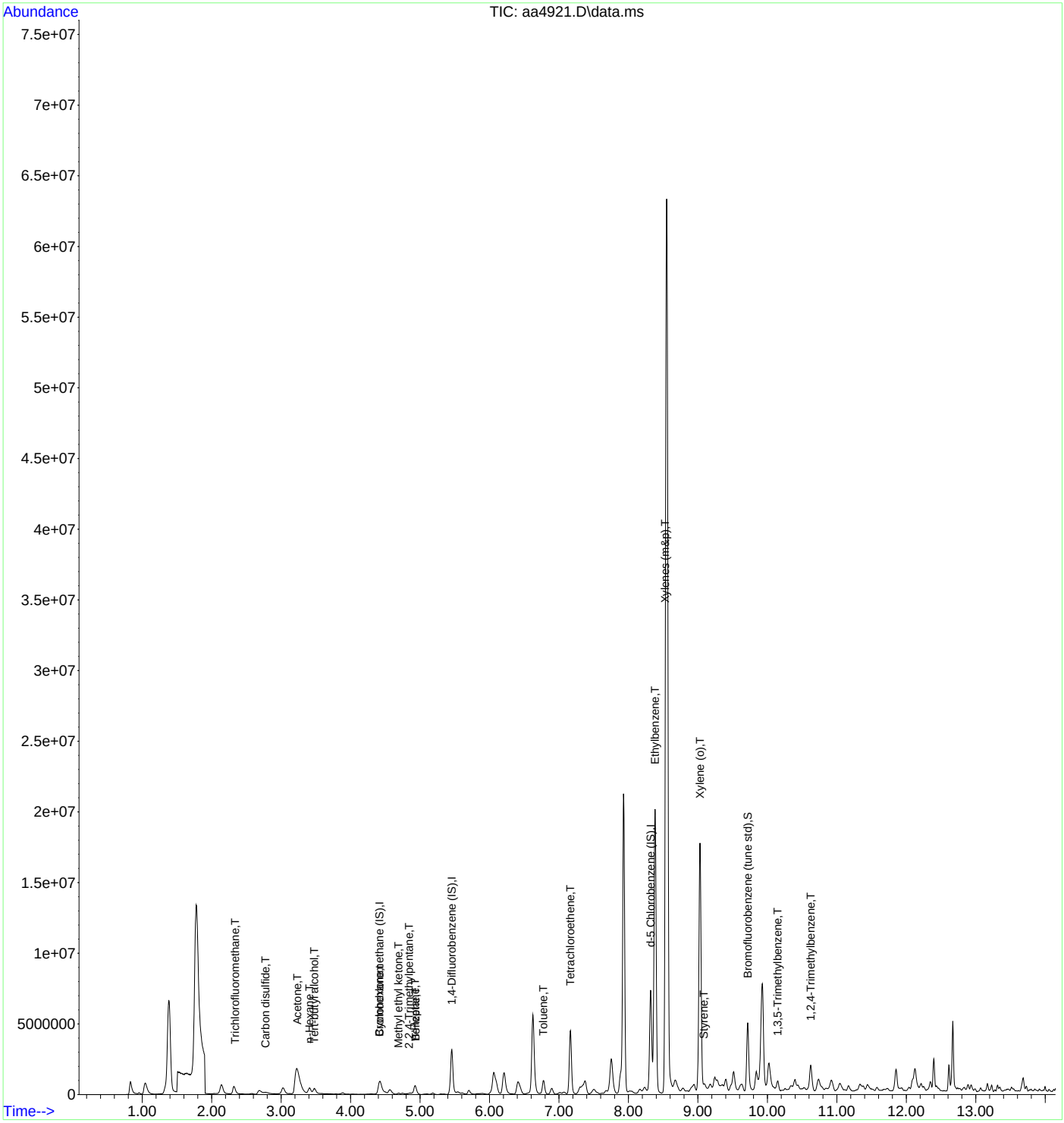
Quant Time: Dec 12 11:06:14 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

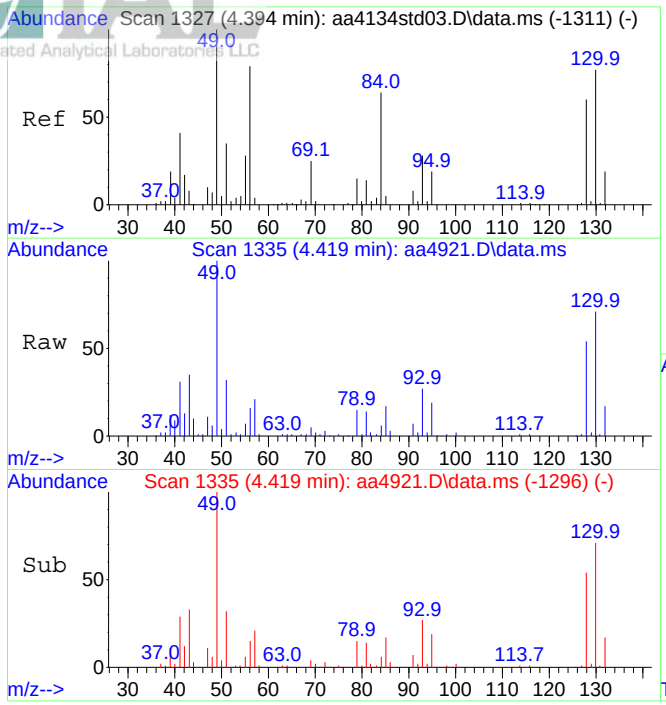
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.419 | 130 | 460173 | 10.00 | ppbV | | 0.025 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 2604286 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.322 | 117 | 2267933 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 2022524 | 10.23 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 12) Trichlorofluoromethane | 2.338 | 101 | 41519 | 0.32 | ppbV | | 98 |
| 15) Carbon disulfide | 2.776 | 76 | 208427 | 1.48 | ppbV | # | 84 |
| 21) Acetone | 3.235 | 43 | 1030652 | 14.85 | ppbV | | 98 |
| 24) n-Hexane | 3.409 | 57 | 358220 | 2.47 | ppbV | # | 75 |
| 26) Tert-butyl alcohol | 3.477 | 59 | 697696 | 5.82 | ppbV | | 100 |
| 29) Cyclohexane | 4.419 | 56 | 66885 | 0.66 | ppbV | # | 56 |
| 35) Methyl ethyl ketone | 4.692 | 43 | 118672 | 1.06 | ppbV | | 100 |
| 36) n-Heptane | 4.930 | 43 | 337223 | 2.65 | ppbV | | 98 |
| 37) Benzene | 4.936 | 78 | 77965 | 0.43 | ppbV | # | 80 |
| 41) 2,2,4-Trimethylpentane | 4.843 | 57 | 70177 | 0.21 | ppbV | # | 58 |
| 47) Toluene | 6.775 | 91 | 617420 | 1.69 | ppbV | | 99 |
| 49) Tetrachloroethene | 7.164 | 166 | 1540760 | 9.76 | ppbV | | 100 |
| 58) Ethylbenzene | 8.383 | 91 | 18470313 | 44.19 | ppbV | | 98 |
| 59) Xylenes (m&p) | 8.531 | 91 | 29895342 | 96.54 | ppbV | # | 55 |
| 60) Xylene (o) | 9.029 | 91 | 12984045 | 38.43 | ppbV | | 100 |
| 61) Styrene | 9.087 | 104 | 112436 | 0.49 | ppbV | | 88 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 409205 | 1.04 | ppbV | | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 1054476 | 2.69 | ppbV | | 97 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4921.D
Acq On : 11 Dec 2023 9:04 pm
Operator : jjw
Sample : E23-05081-03
Misc : 3809, 500cc
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Dec 12 11:06:14 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

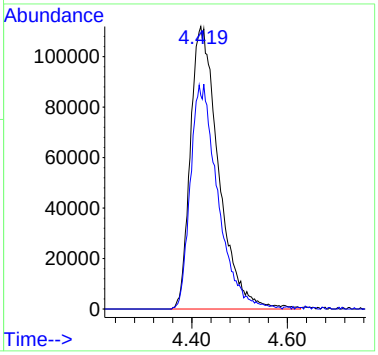


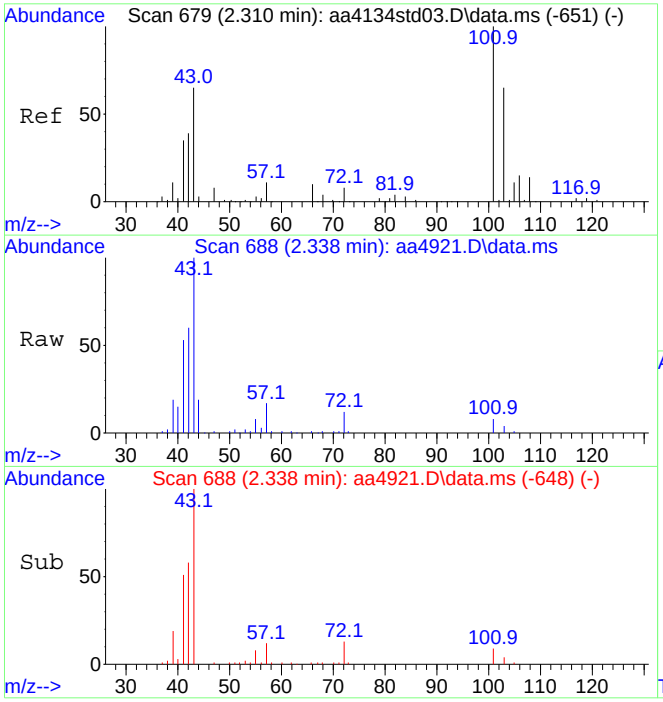



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.419 min Scan# 1335
Delta R.T. 0.025 min
Lab File: aa4921.D
Acq: 11 Dec 2023 9:04 pm

Tgt Ion:130 Resp: 460173

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 77.3 | 62.2 | 93.4 |

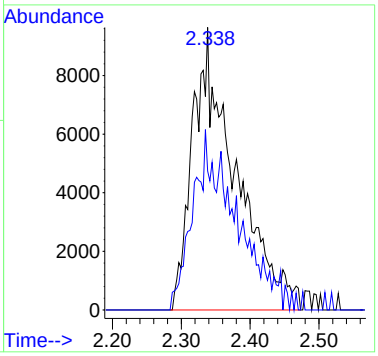


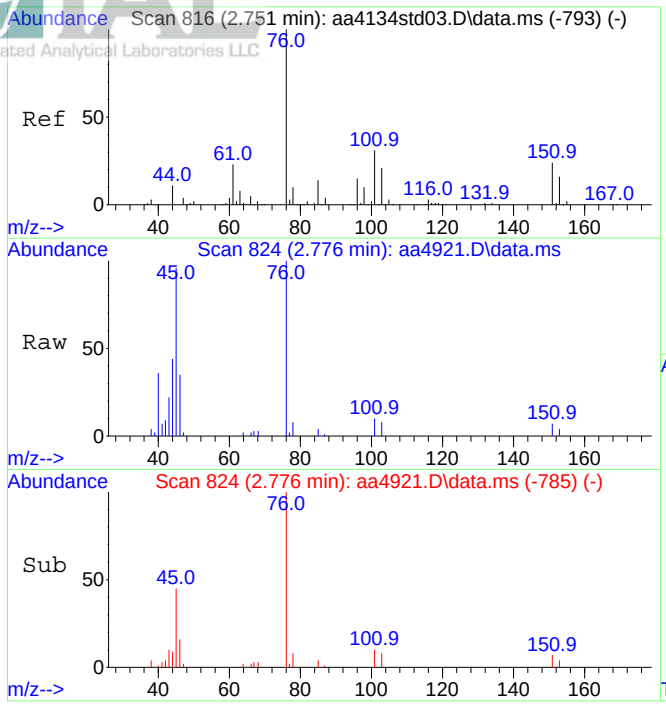




#12
Trichlorofluoromethane
Concen: 0.32 ppbV
RT: 2.338 min Scan# 688
Delta R.T. 0.028 min
Lab File: aa4921.D
Acq: 11 Dec 2023 9:04 pm

Tgt Ion:101 Resp: 41519

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 63.9 | 52.5 | 78.7 |

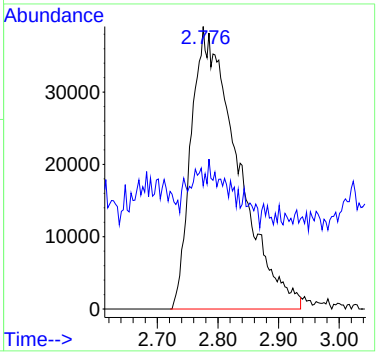


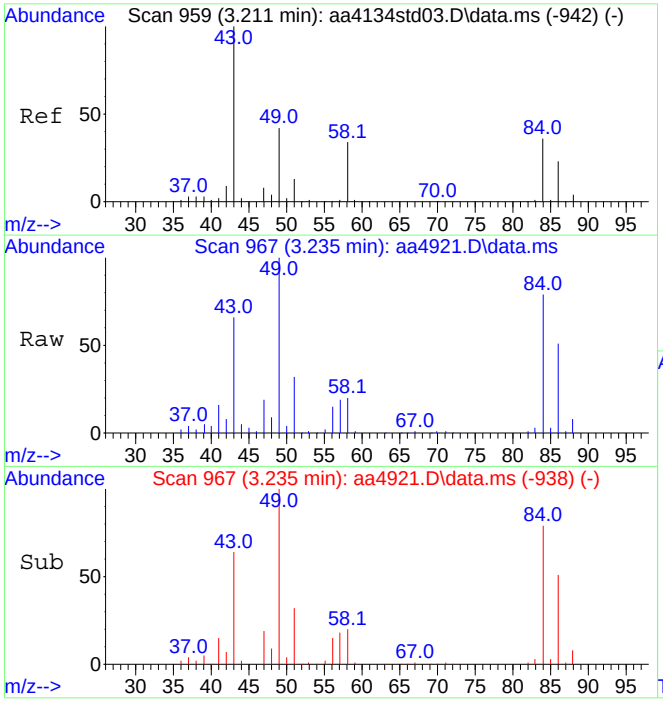



#15
Carbon disulfide
Concen: 1.48 ppbV
RT: 2.776 min Scan# 824
Delta R.T. 0.025 min
Lab File: aa4921.D
Acq: 11 Dec 2023 9:04 pm

Tgt Ion: 76 Resp: 208427

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 17.4 | 9.0 | 13.4# |

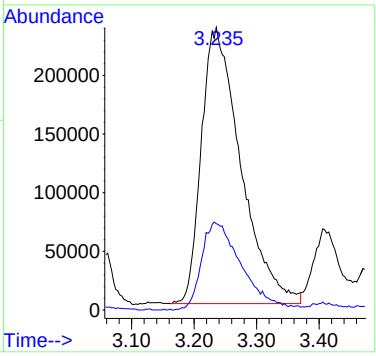


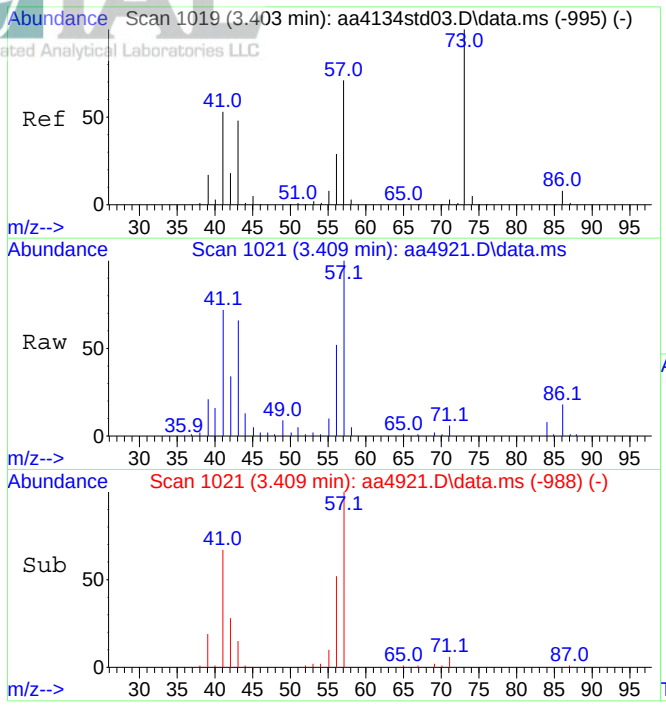




#21
Acetone
Concen: 14.85 ppbV
RT: 3.235 min Scan# 967
Delta R.T. 0.025 min
Lab File: aa4921.D
Acq: 11 Dec 2023 9:04 pm

Tgt Ion: 43 Resp: 1030652

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 32.5 | 27.1 | 40.7 |

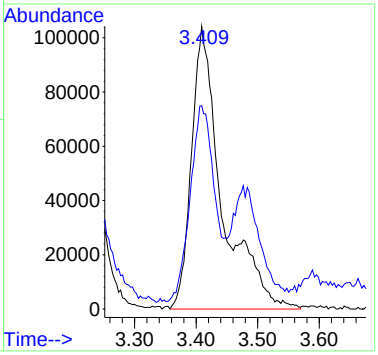


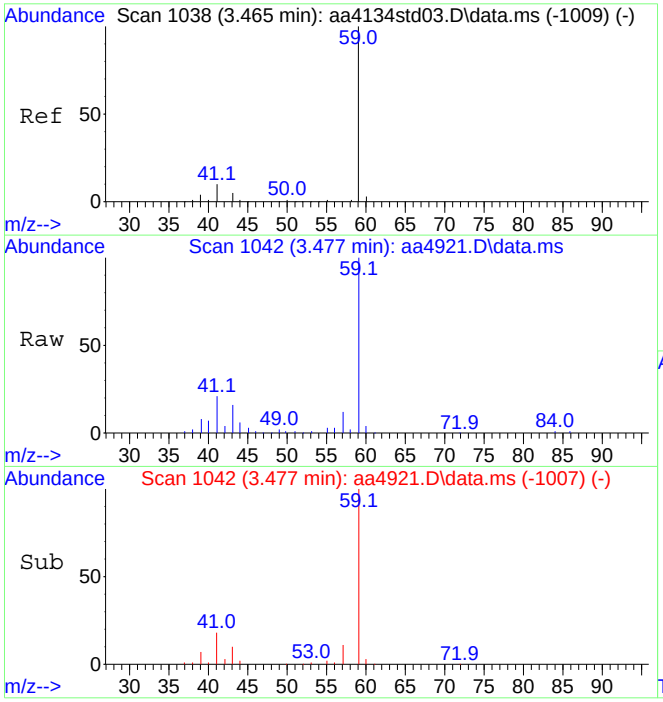



#24
n-Hexane
Concen: 2.47 ppbV
RT: 3.409 min Scan# 1021
Delta R.T. 0.006 min
Lab File: aa4921.D
Acq: 11 Dec 2023 9:04 pm

Tgt Ion: 57 Resp: 358220

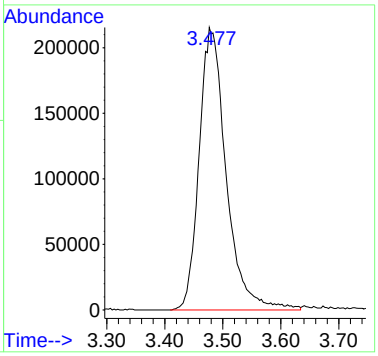
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 41 | 60.1 | 66.4 | 99.6# |

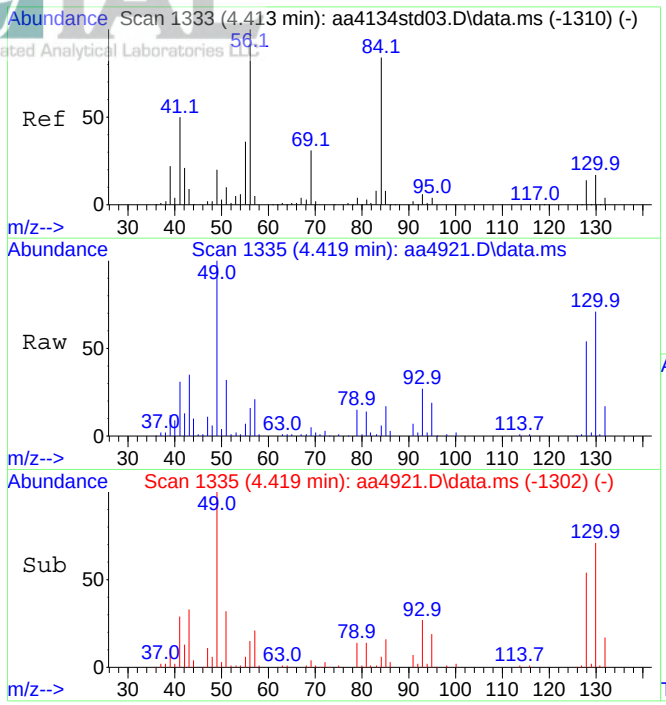



#26
Tert-butyl alcohol
Concen: 5.82 ppbV
RT: 3.477 min Scan# 1042
Delta R.T. 0.012 min
Lab File: aa4921.D
Acq: 11 Dec 2023 9:04 pm

Tgt Ion: 59 Resp: 697696

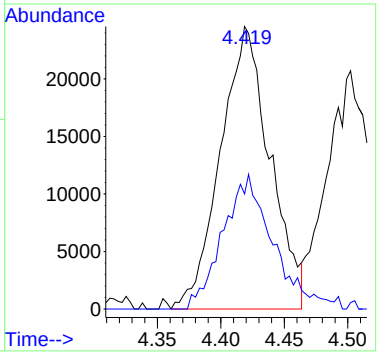


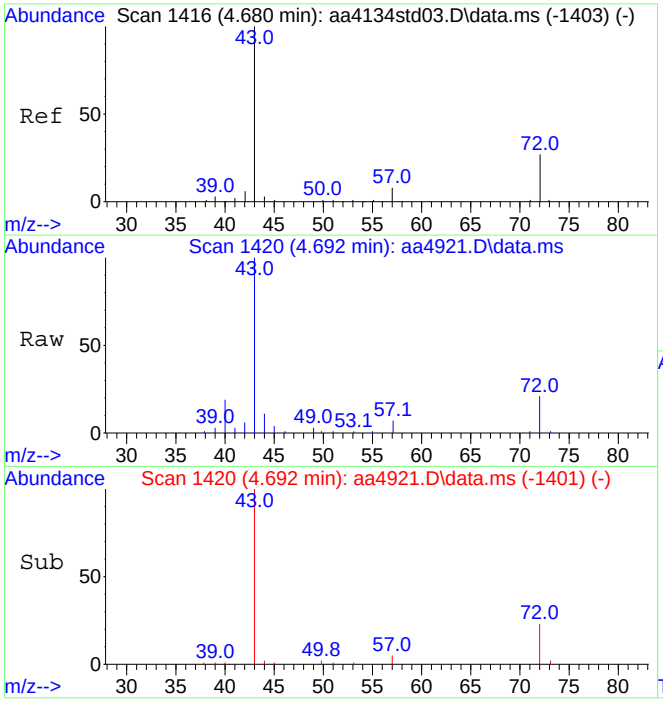



#29
Cyclohexane
Concen: 0.66 ppbV
RT: 4.419 min Scan# 1335
Delta R.T. 0.006 min
Lab File: aa4921.D
Acq: 11 Dec 2023 9:04 pm

Tgt Ion: 56 Resp: 66885

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 48.0 | 71.2 | 106.8# |

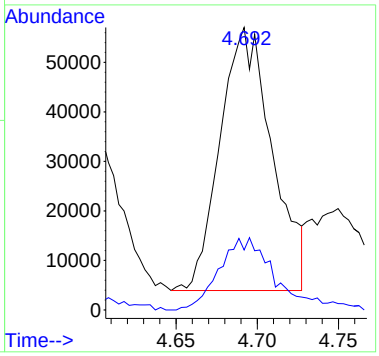


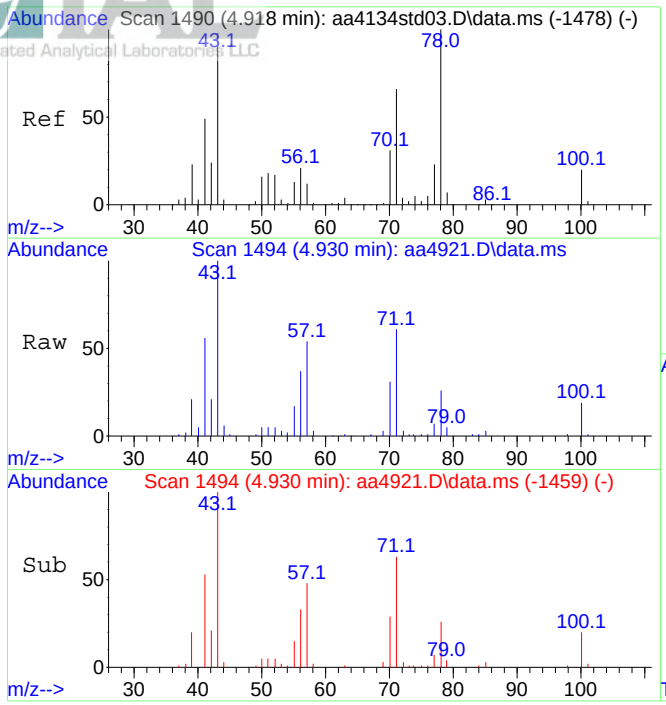




#35
Methyl ethyl ketone
Concen: 1.06 ppbV
RT: 4.692 min Scan# 1420
Delta R.T. 0.012 min
Lab File: aa4921.D
Acq: 11 Dec 2023 9:04 pm

Tgt Ion: 43 Resp: 118672

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 27.1 | 21.6 | 32.4 |

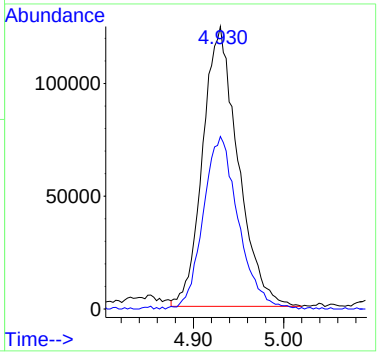


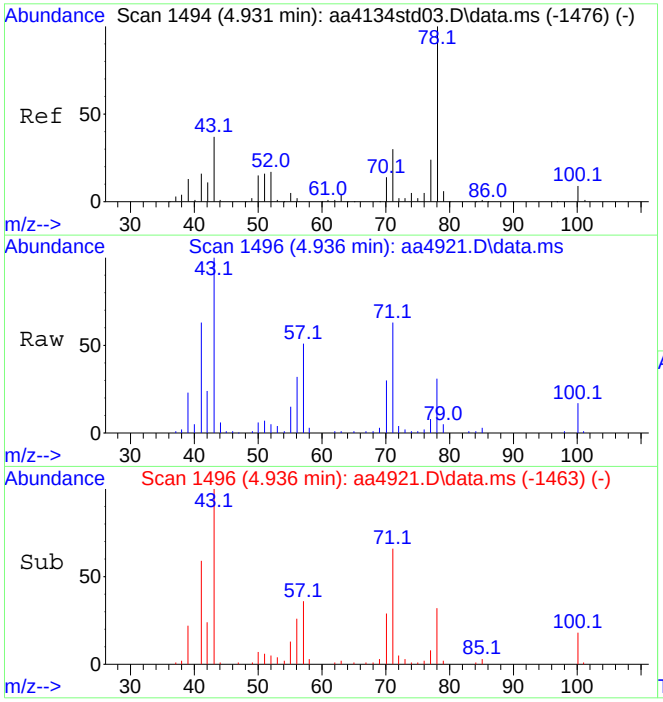



#36
n-Heptane
Concen: 2.65 ppbV
RT: 4.930 min Scan# 1494
Delta R.T. 0.012 min
Lab File: aa4921.D
Acq: 11 Dec 2023 9:04 pm

Tgt Ion: 43 Resp: 337223

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 71 | 61.5 | 50.5 | 75.7 |

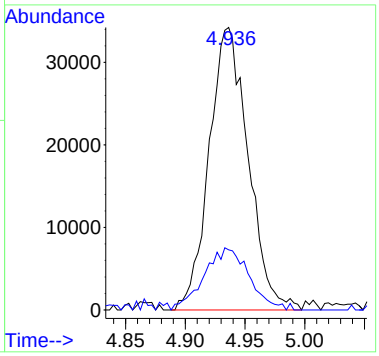


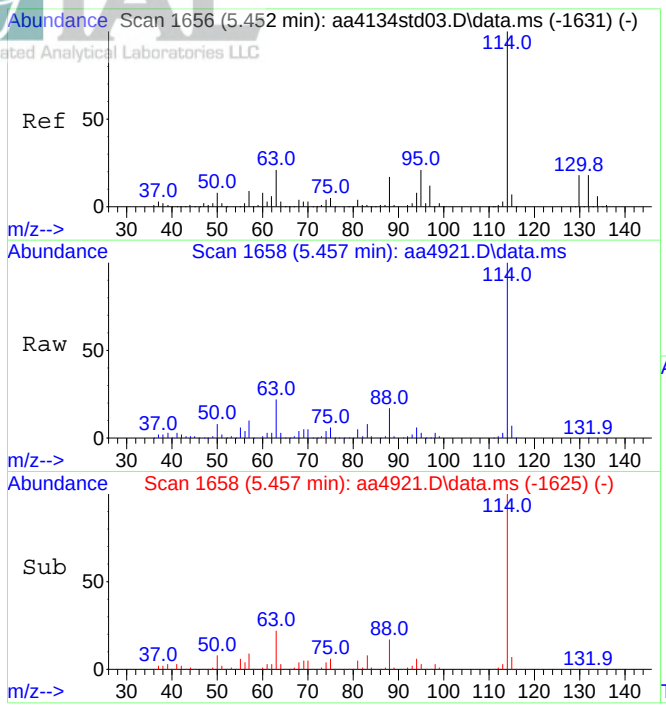




#37
Benzene
Concen: 0.43 ppbV
RT: 4.936 min Scan# 1496
Delta R.T. 0.006 min
Lab File: aa4921.D
Acq: 11 Dec 2023 9:04 pm

Tgt Ion: 78 Resp: 77965

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 25.3 | 13.4 | 20.0# |

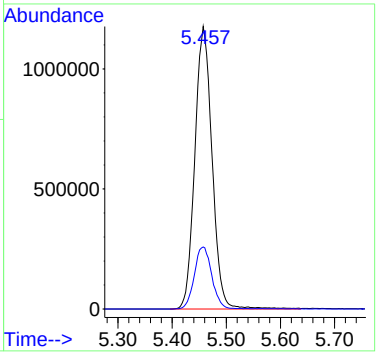


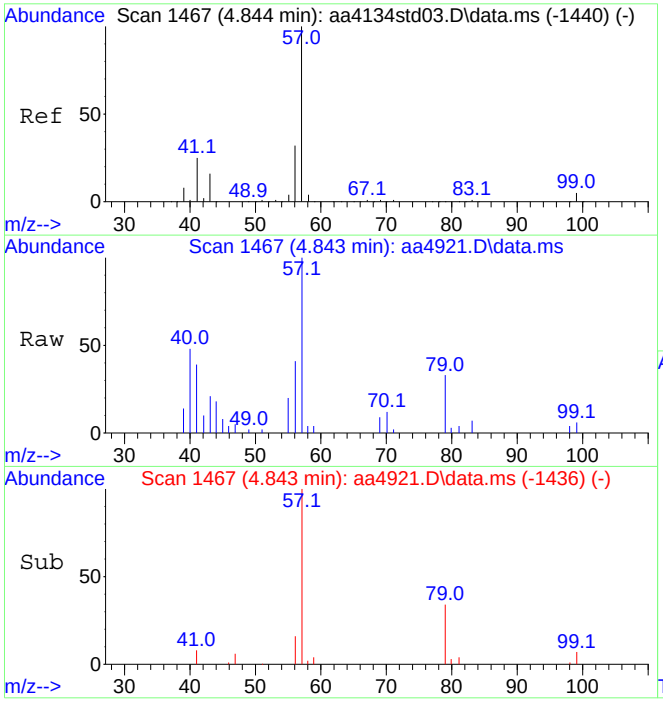



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.457 min Scan# 1658
Delta R.T. 0.005 min
Lab File: aa4921.D
Acq: 11 Dec 2023 9:04 pm

Tgt Ion:114 Resp: 2604286

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.3 | 17.0 | 25.6 |

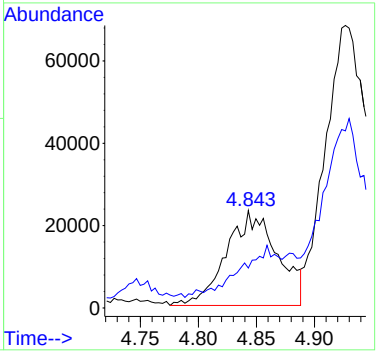


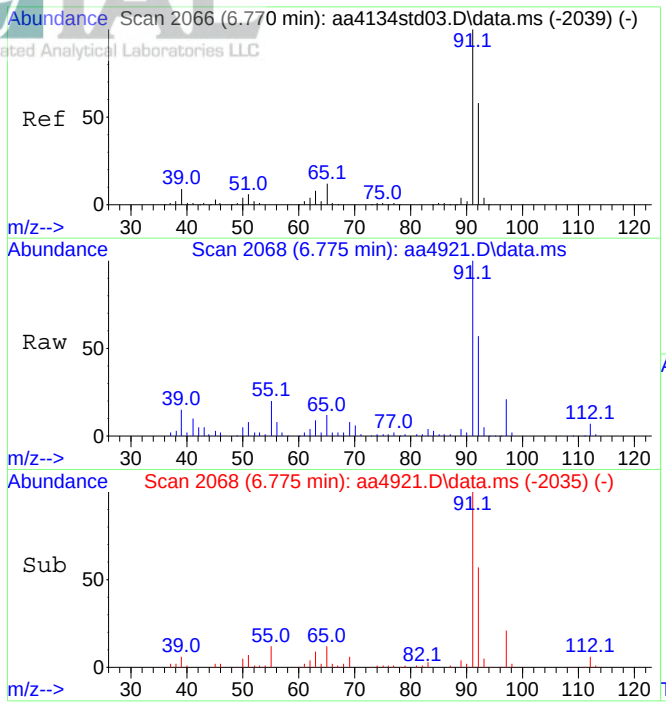




#41
2,2,4-Trimethylpentane
Concen: 0.21 ppbV
RT: 4.843 min Scan# 1467
Delta R.T. -0.001 min
Lab File: aa4921.D
Acq: 11 Dec 2023 9:04 pm

Tgt Ion: 57 Resp: 70177

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 56 | 55.5 | 25.7 | 38.5# |

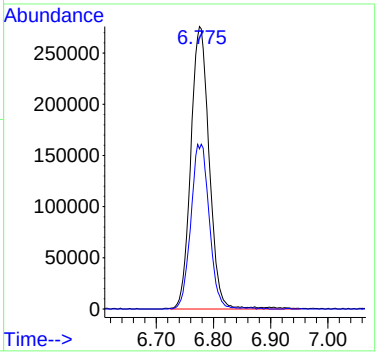


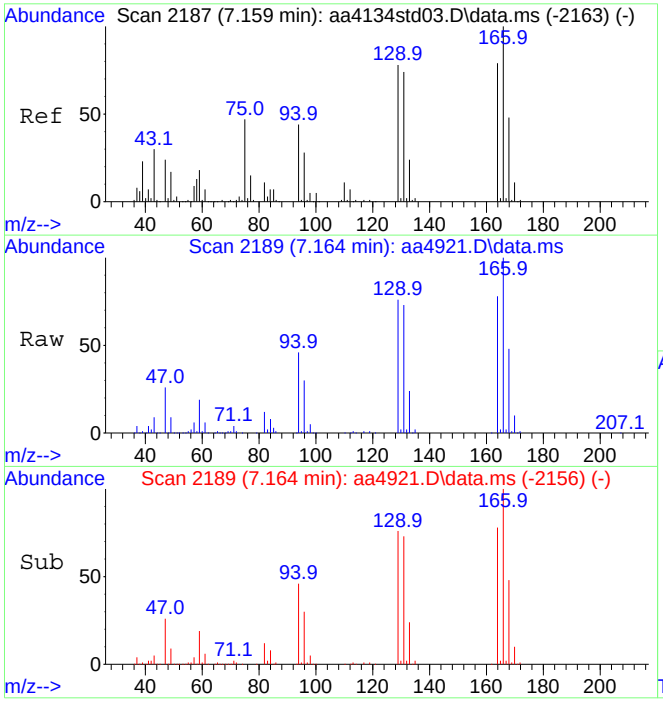



#47
Toluene
Concen: 1.69 ppbV
RT: 6.775 min Scan# 2068
Delta R.T. 0.006 min
Lab File: aa4921.D
Acq: 11 Dec 2023 9:04 pm

Tgt Ion: 91 Resp: 617420

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 58.2 | 47.3 | 70.9 |

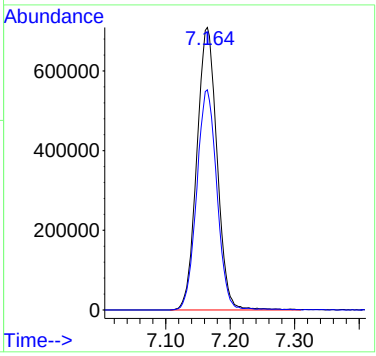


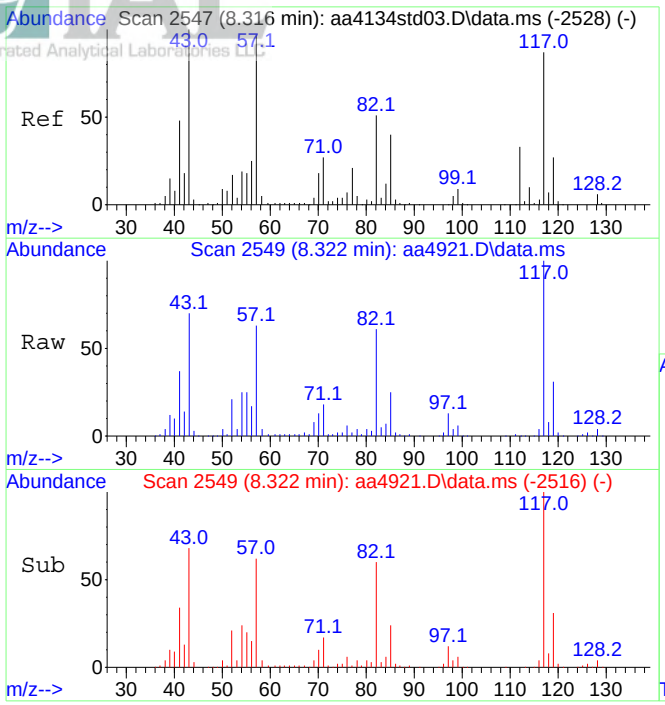




#49
Tetrachloroethene
Concen: 9.76 ppbV
RT: 7.164 min Scan# 2189
Delta R.T. 0.006 min
Lab File: aa4921.D
Acq: 11 Dec 2023 9:04 pm

Tgt Ion:166 Resp: 1540760

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 77.7 | 62.3 | 93.5 |

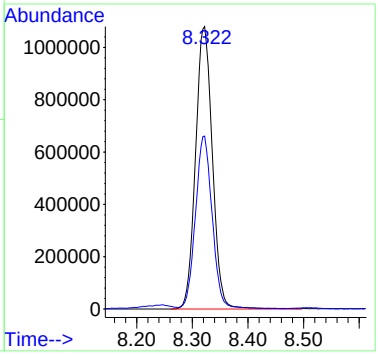


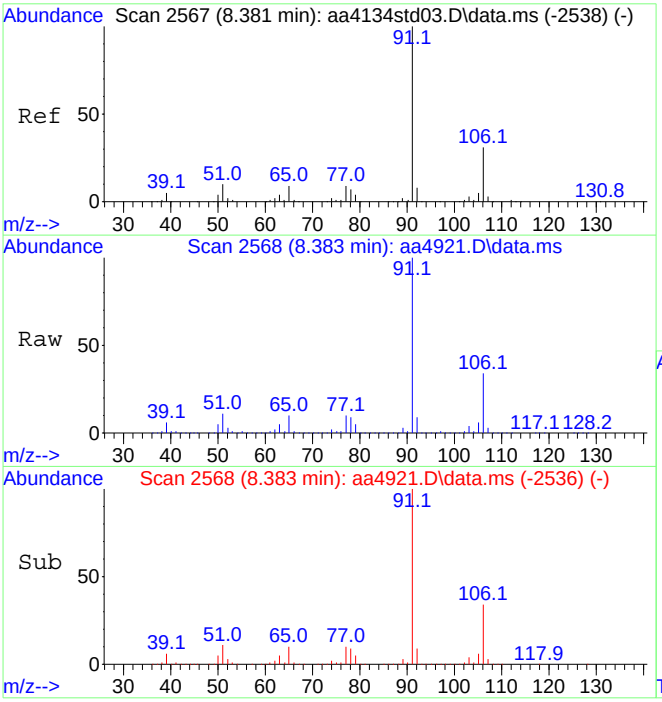



#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.322 min Scan# 2549
Delta R.T. 0.006 min
Lab File: aa4921.D
Acq: 11 Dec 2023 9:04 pm

Tgt Ion:117 Resp: 2267933

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 60.2 | 47.0 | 70.4 |

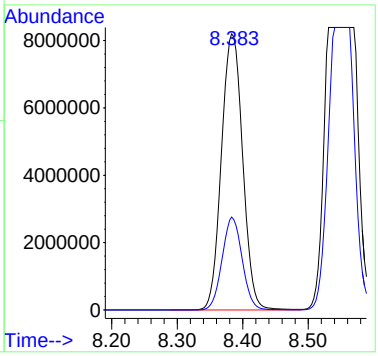


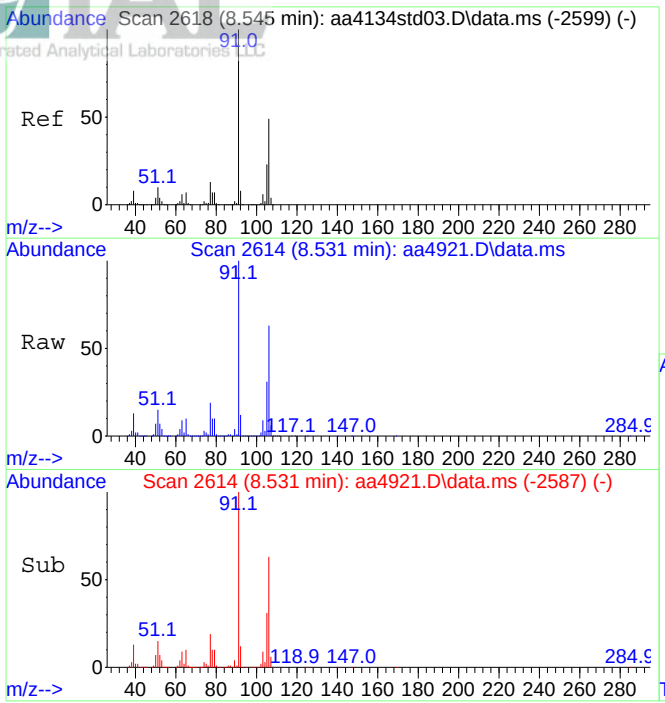




#58
Ethylbenzene
Concen: 44.19 ppbV
RT: 8.383 min Scan# 2568
Delta R.T. 0.002 min
Lab File: aa4921.D
Acq: 11 Dec 2023 9:04 pm

Tgt Ion: 91 Resp:18470313

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 31.7 | 24.6 | 36.8 |

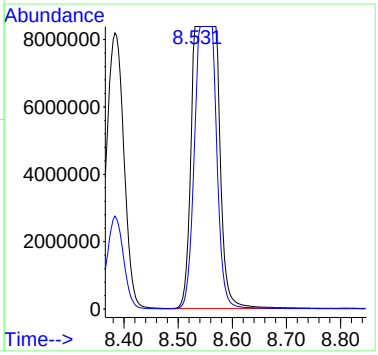


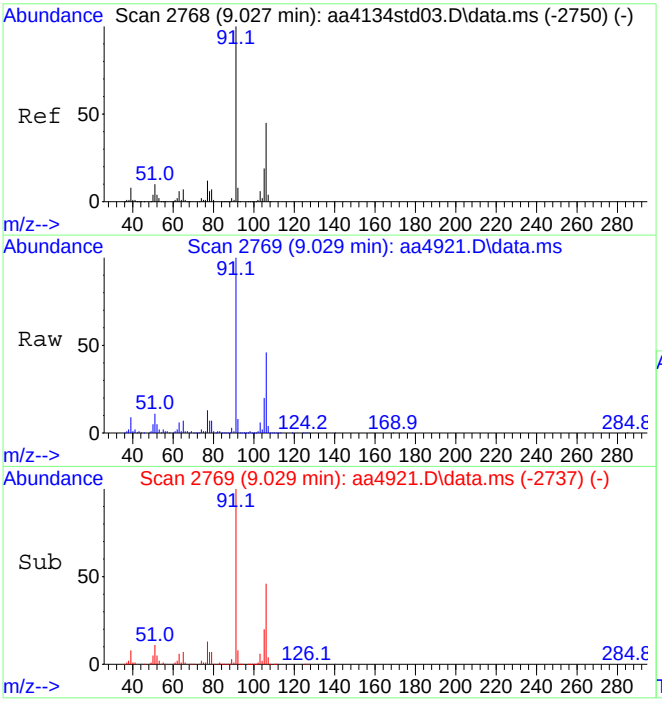



#59
Xylenes (m&p)
Concen: 96.54 ppbV
RT: 8.531 min Scan# 2614
Delta R.T. -0.014 min
Lab File: aa4921.D
Acq: 11 Dec 2023 9:04 pm

Tgt Ion: 91 Resp:29895342

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 79.2 | 39.0 | 58.4# |

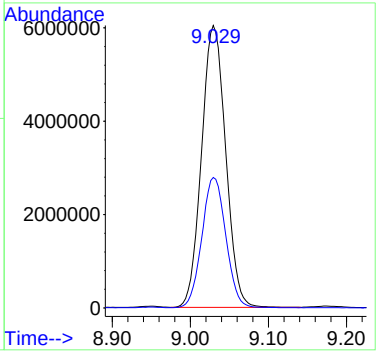


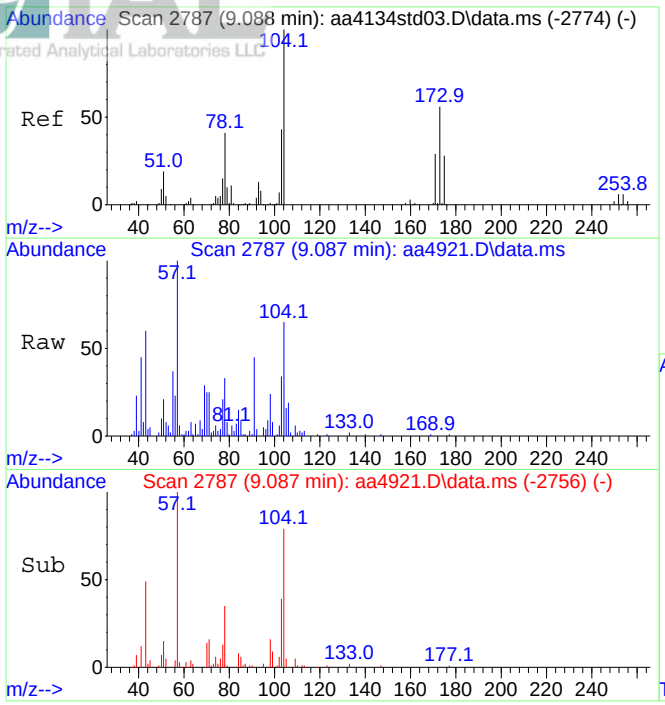




#60
Xylene (o)
Concen: 38.43 ppbV
RT: 9.029 min Scan# 2769
Delta R.T. 0.002 min
Lab File: aa4921.D
Acq: 11 Dec 2023 9:04 pm

Tgt Ion: 91 Resp:12984045

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 45.8 | 36.8 | 55.2 |

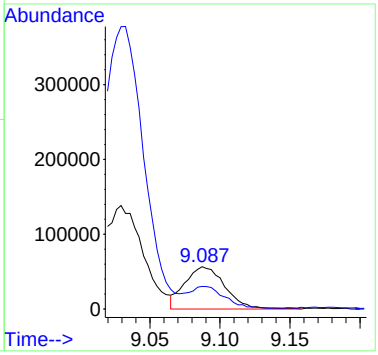


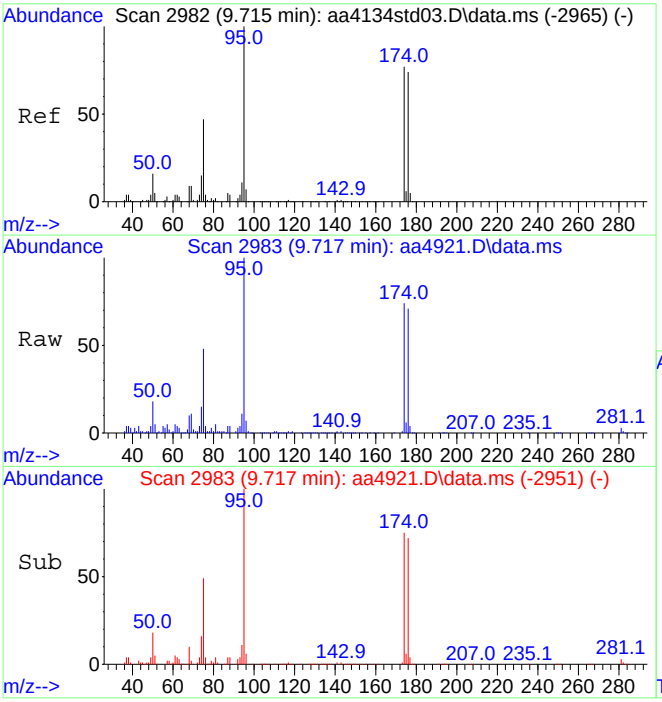



#61
Styrene
Concen: 0.49 ppbV
RT: 9.087 min Scan# 2787
Delta R.T. -0.001 min
Lab File: aa4921.D
Acq: 11 Dec 2023 9:04 pm

Tgt Ion:104 Resp: 112436

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 104 | 100 | | |
| 103 | 39.1 | 37.8 | 56.6 |

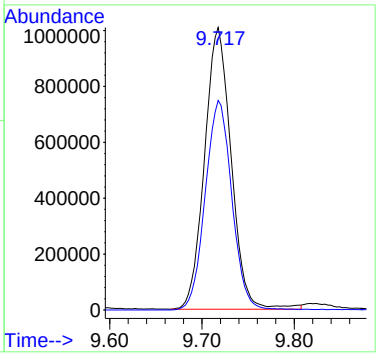


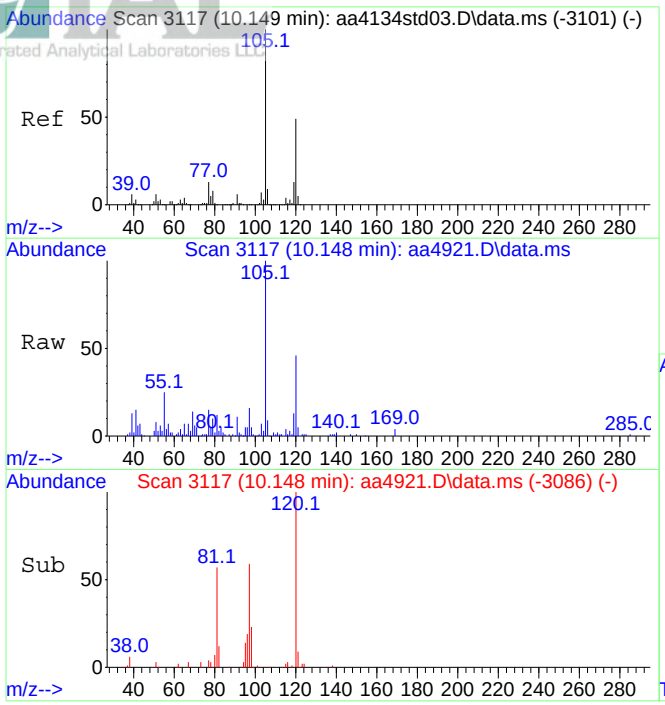




#64
Bromofluorobenzene (tune std)
Concen: 10.23 ppbV
RT: 9.717 min Scan# 2983
Delta R.T. 0.002 min
Lab File: aa4921.D
Acq: 11 Dec 2023 9:04 pm

Tgt Ion: 95 Resp: 2022524

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 74.3 | 61.1 | 91.7 |

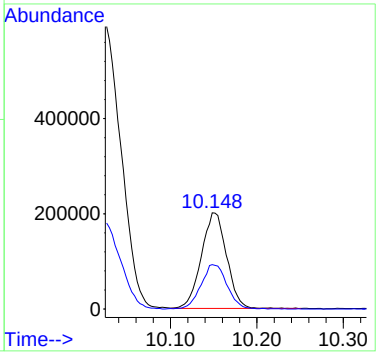


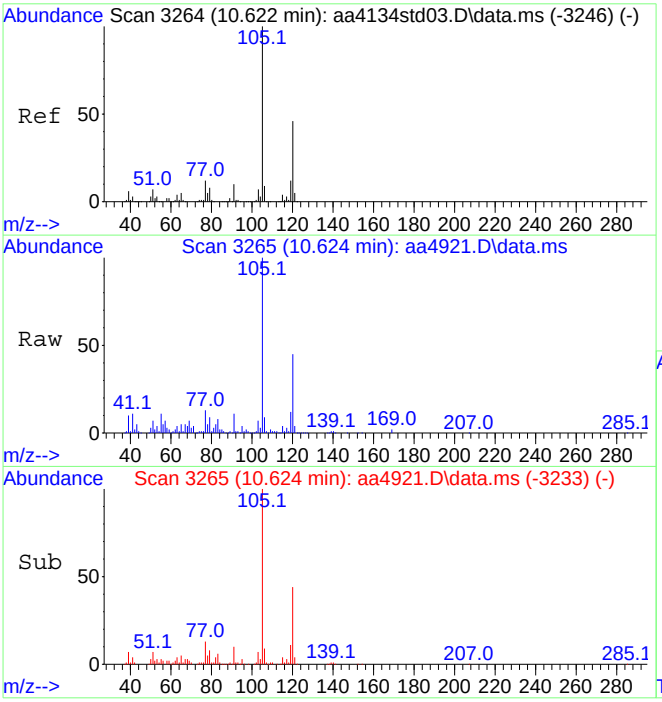



#69
1,3,5-Trimethylbenzene
Concen: 1.04 ppbV
RT: 10.148 min Scan# 3117
Delta R.T. -0.001 min
Lab File: aa4921.D
Acq: 11 Dec 2023 9:04 pm

Tgt Ion:105 Resp: 409205

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 47.7 | 38.9 | 58.3 |

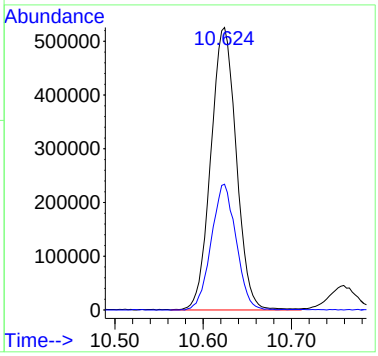



#70
1,2,4-Trimethylbenzene
Concen: 2.69 ppbV
RT: 10.624 min Scan# 3265
Delta R.T. 0.002 min
Lab File: aa4921.D
Acq: 11 Dec 2023 9:04 pm

Tgt Ion:105 Resp: 1054476

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 43.5 | 36.3 | 54.5 |



Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4920.D
Acq On : 11 Dec 2023 8:24 pm
Operator : jjw
Sample : E23-05081-03x5 dil
Misc : 3809, 100cc
ALS Vial : 23 Sample Multiplier: 1

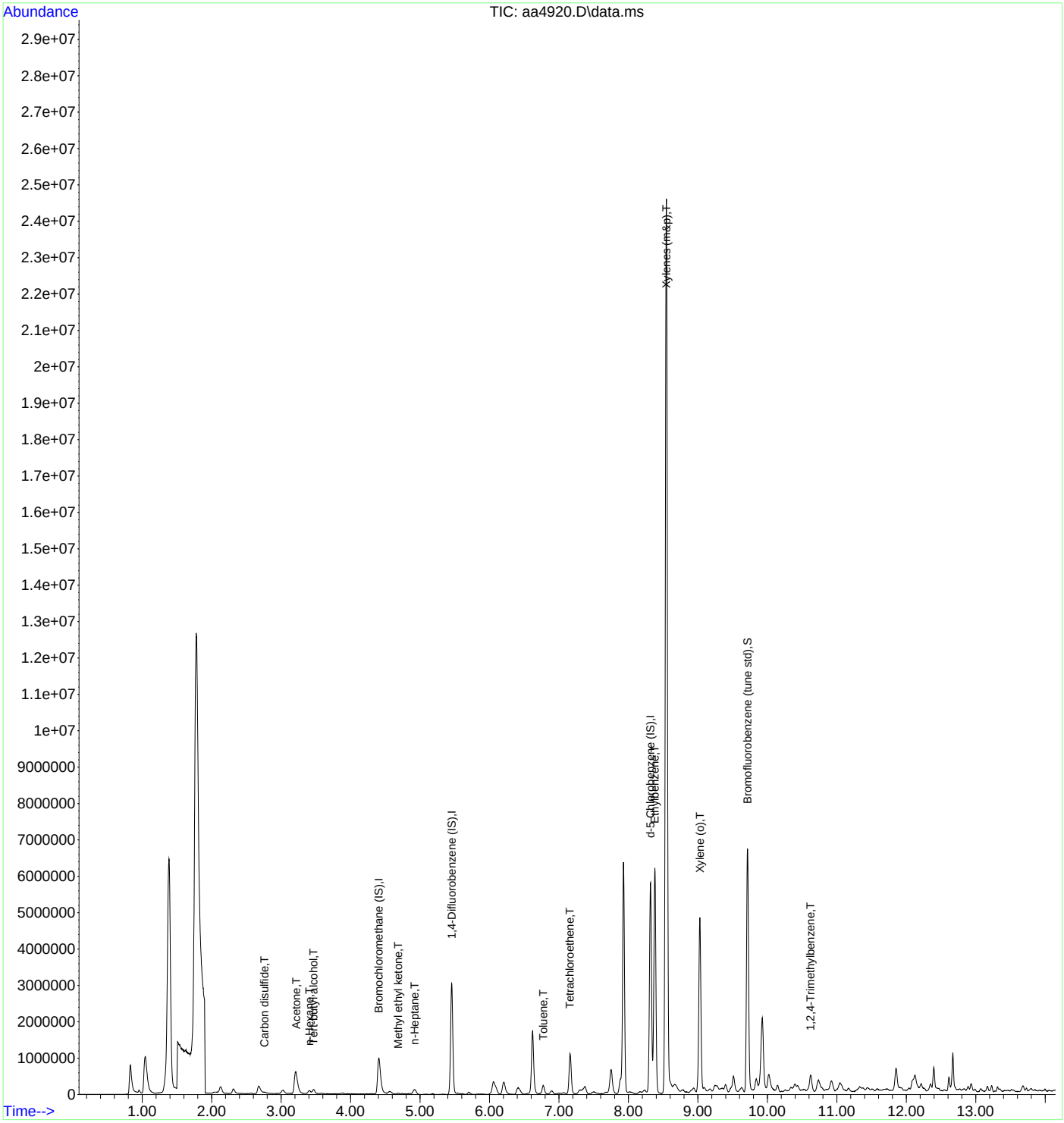
Quant Time: Dec 12 11:06:44 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

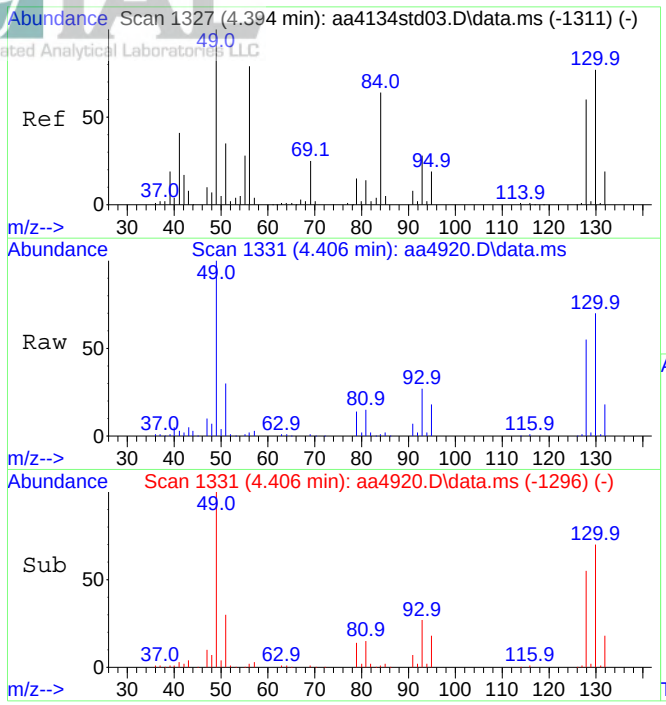
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.406 | 130 | 514731 | 10.00 | ppbV | | 0.012 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 2776988 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 3081592 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 2945791 | 10.97 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 15) Carbon disulfide | 2.763 | 76 | 45146 | 0.29 | ppbV | | 97 |
| 21) Acetone | 3.219 | 43 | 236314 | 3.04 | ppbV | | 97 |
| 24) n-Hexane | 3.409 | 57 | 76444 | 0.47 | ppbV | # | 81 |
| 26) Tert-butyl alcohol | 3.467 | 59 | 165848 | 1.24 | ppbV | | 100 |
| 35) Methyl ethyl ketone | 4.686 | 43 | 31923 | 0.25 | ppbV | | 96 |
| 36) n-Heptane | 4.920 | 43 | 74529 | 0.52 | ppbV | | 99 |
| 47) Toluene | 6.772 | 91 | 153157 | 0.39 | ppbV | | 99 |
| 49) Tetrachloroethene | 7.158 | 166 | 380691 | 2.26 | ppbV | | 99 |
| 58) Ethylbenzene | 8.380 | 91 | 5478786 | 9.65 | ppbV | | 98 |
| 59) Xylenes (m&p) | 8.547 | 91 | 17266223 | 41.04 | ppbV | | 99 |
| 60) Xylene (o) | 9.029 | 91 | 3468551 | 7.56 | ppbV | | 98 |
| 70) 1,2,4-Trimethylbenzene | 10.621 | 105 | 254285 | 0.48 | ppbV | | 95 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4920.D
Acq On : 11 Dec 2023 8:24 pm
Operator : jjw
Sample : E23-05081-03x5 dil
Misc : 3809, 100cc
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Dec 12 11:06:44 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

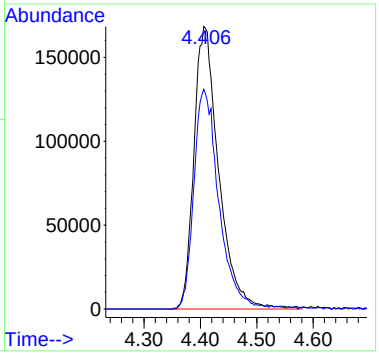


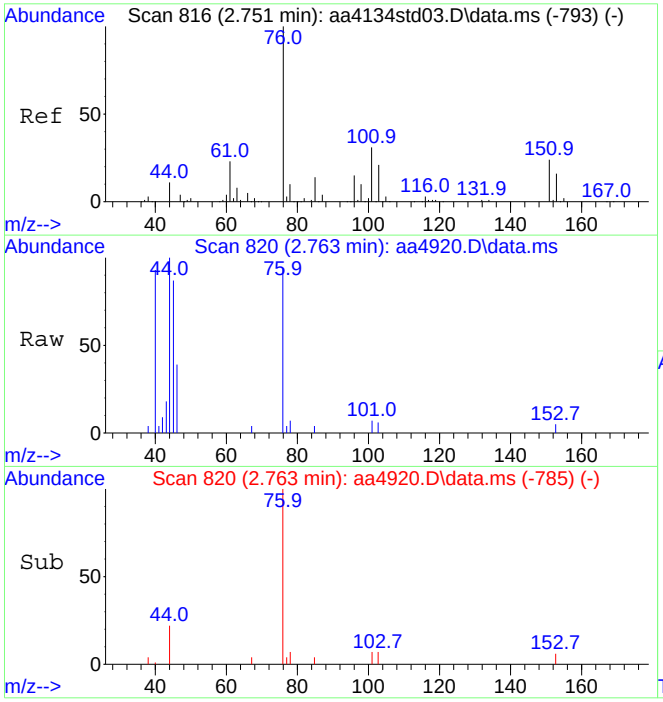



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.406 min Scan# 1331
Delta R.T. 0.012 min
Lab File: aa4920.D
Acq: 11 Dec 2023 8:24 pm

Tgt Ion:130 Resp: 514731

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 77.8 | 62.2 | 93.4 |

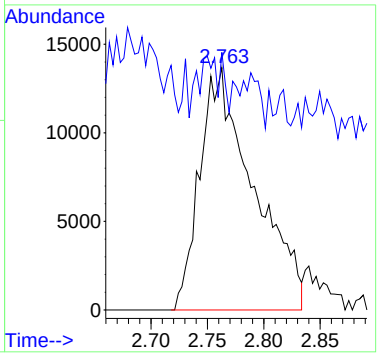


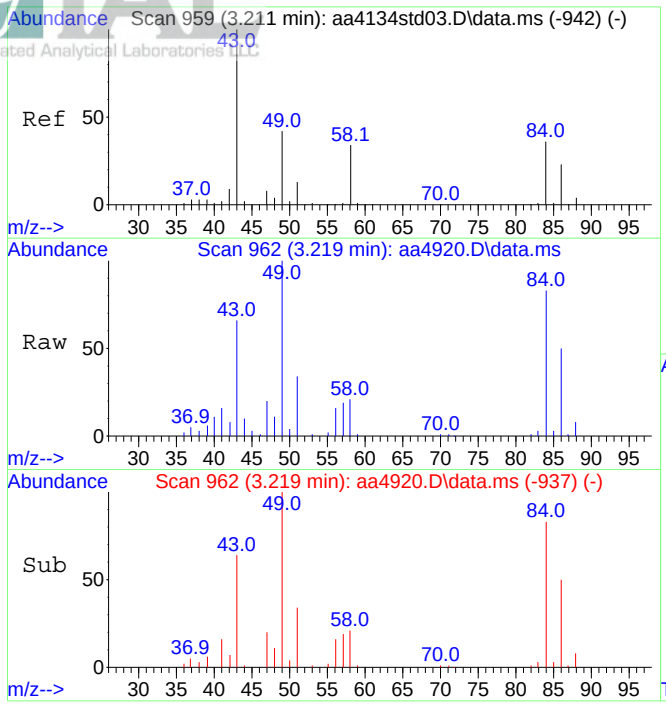




#15
Carbon disulfide
Concen: 0.29 ppbV
RT: 2.763 min Scan# 820
Delta R.T. 0.012 min
Lab File: aa4920.D
Acq: 11 Dec 2023 8:24 pm

Tgt Ion: 76 Resp: 45146

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 12.2 | 9.0 | 13.4 |

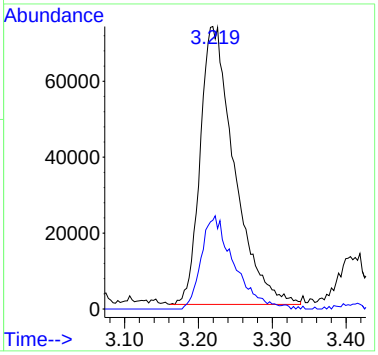


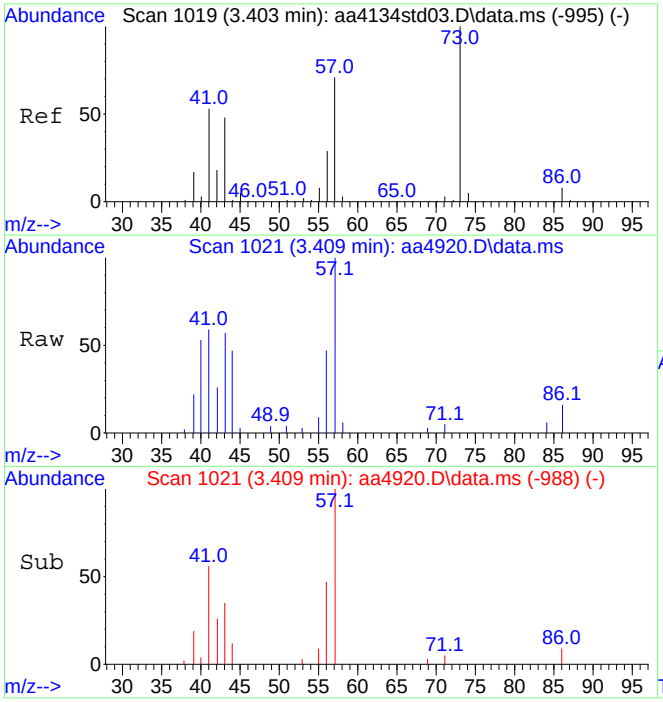



#21
Acetone
Concen: 3.04 ppbV
RT: 3.219 min Scan# 962
Delta R.T. 0.009 min
Lab File: aa4920.D
Acq: 11 Dec 2023 8:24 pm

Tgt Ion: 43 Resp: 236314

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 32.0 | 27.1 | 40.7 |

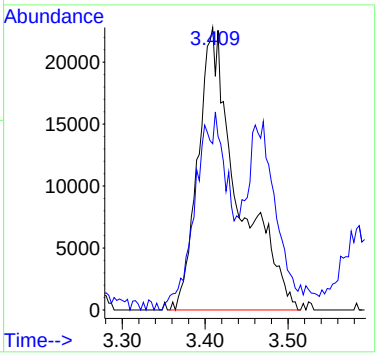


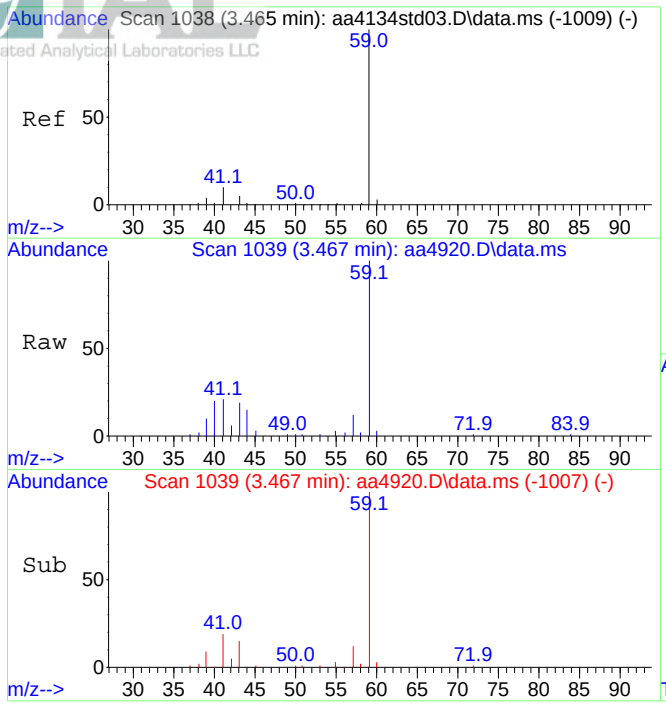




#24
n-Hexane
Concen: 0.47 ppbV
RT: 3.409 min Scan# 1021
Delta R.T. 0.006 min
Lab File: aa4920.D
Acq: 11 Dec 2023 8:24 pm

Tgt Ion: 57 Resp: 76444

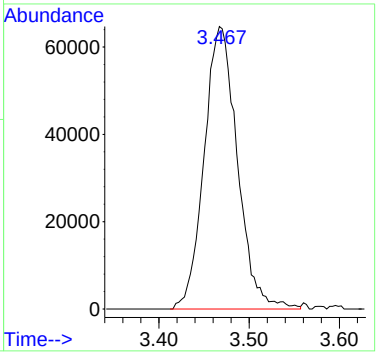
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 41 | 65.6 | 66.4 | 99.6# |

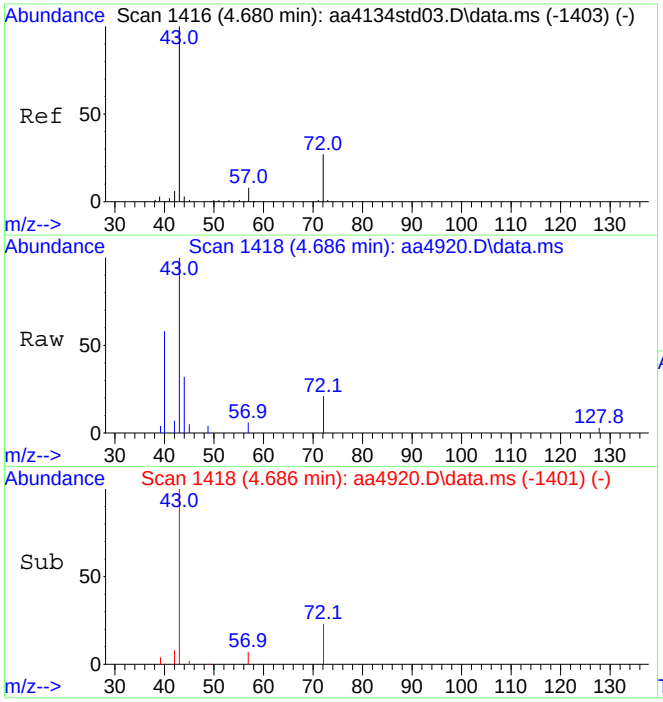





#26
Tert-butyl alcohol
Concen: 1.24 ppbV
RT: 3.467 min Scan# 1039
Delta R.T. 0.002 min
Lab File: aa4920.D
Acq: 11 Dec 2023 8:24 pm

Tgt Ion: 59 Resp: 165848

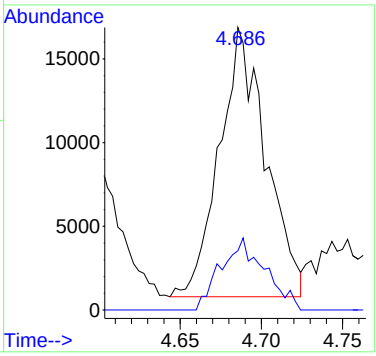


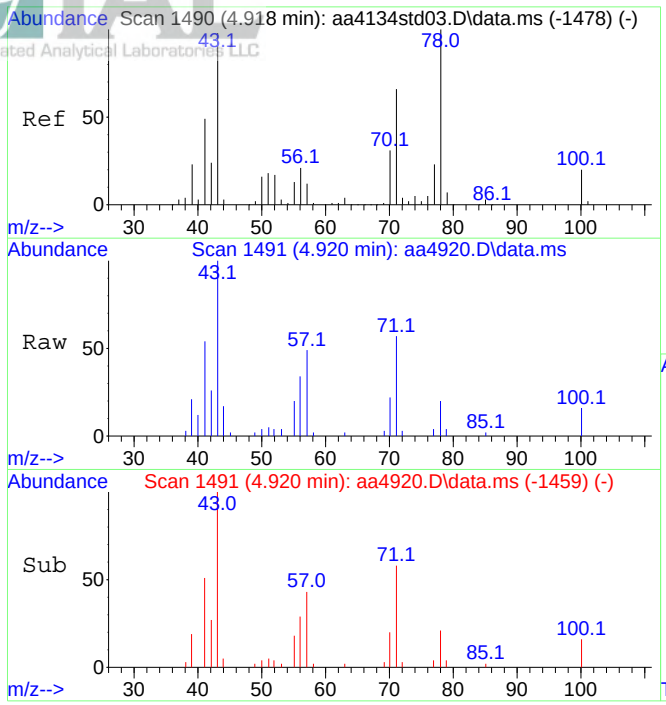




#35
Methyl ethyl ketone
Concen: 0.25 ppbV
RT: 4.686 min Scan# 1418
Delta R.T. 0.006 min
Lab File: aa4920.D
Acq: 11 Dec 2023 8:24 pm

Tgt Ion: 43 Resp: 31923

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 25.2 | 21.6 | 32.4 |

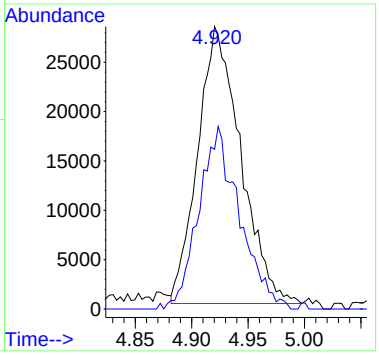


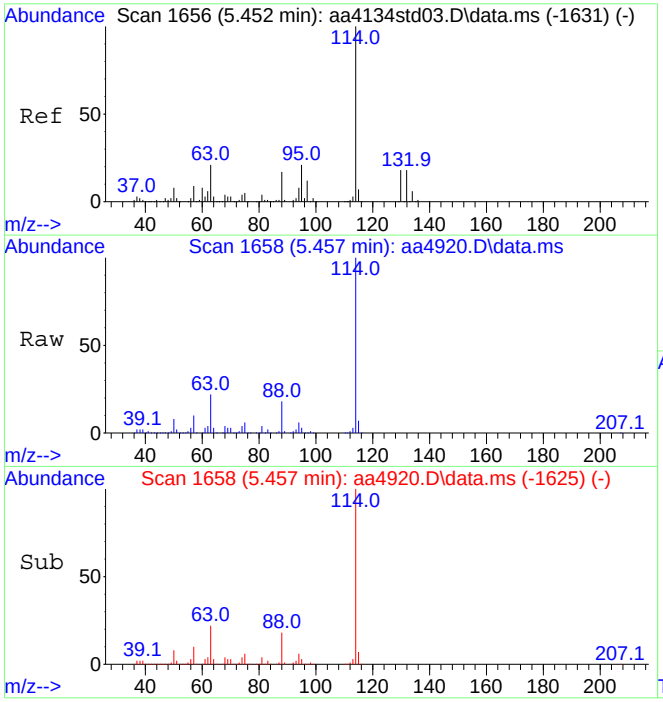



#36
n-Heptane
Concen: 0.52 ppbV
RT: 4.920 min Scan# 1491
Delta R.T. 0.002 min
Lab File: aa4920.D
Acq: 11 Dec 2023 8:24 pm

Tgt Ion: 43 Resp: 74529

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 71 | 62.3 | 50.5 | 75.7 |

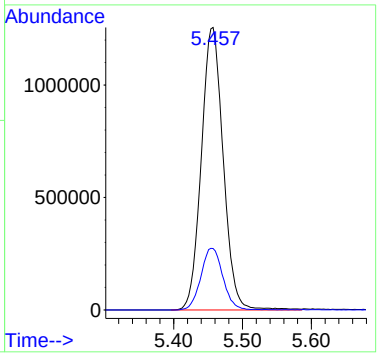


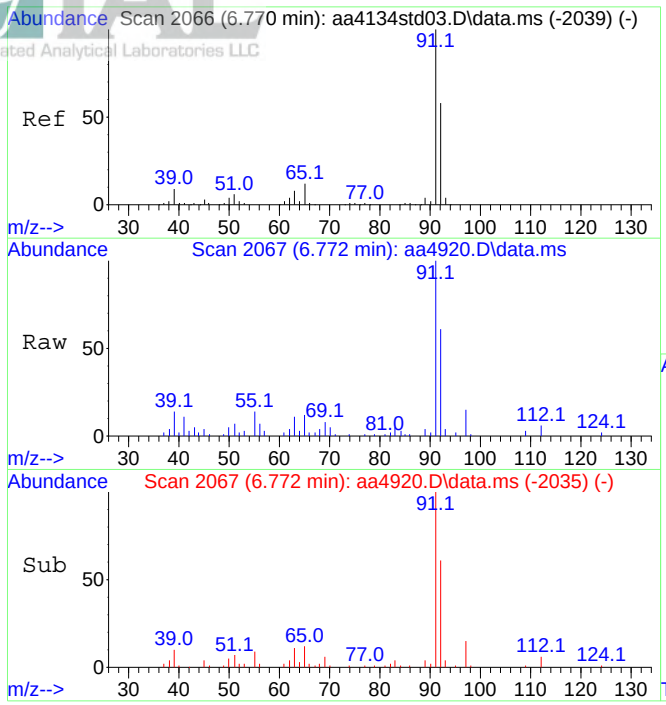




#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.457 min Scan# 1658
Delta R.T. 0.005 min
Lab File: aa4920.D
Acq: 11 Dec 2023 8:24 pm

Tgt Ion:114 Resp: 2776988

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.1 | 17.0 | 25.6 |

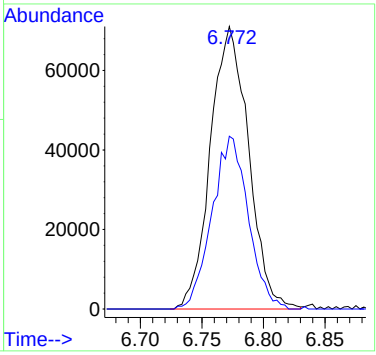


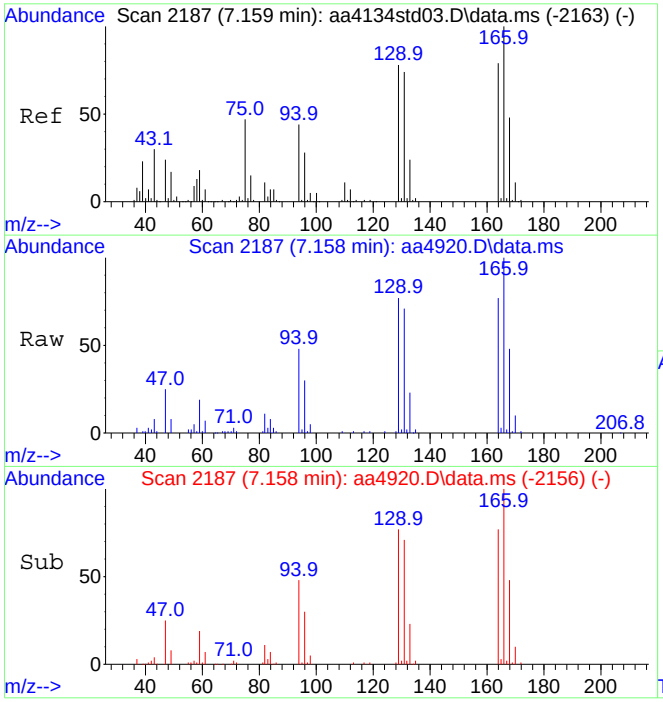



#47
Toluene
Concen: 0.39 ppbV
RT: 6.772 min Scan# 2067
Delta R.T. 0.002 min
Lab File: aa4920.D
Acq: 11 Dec 2023 8:24 pm

Tgt Ion: 91 Resp: 153157

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 58.1 | 47.3 | 70.9 |

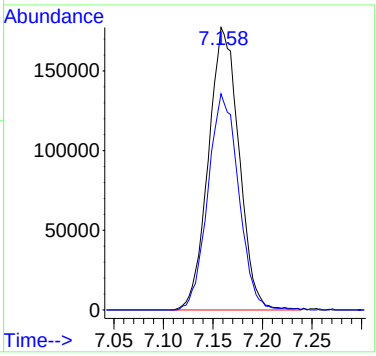


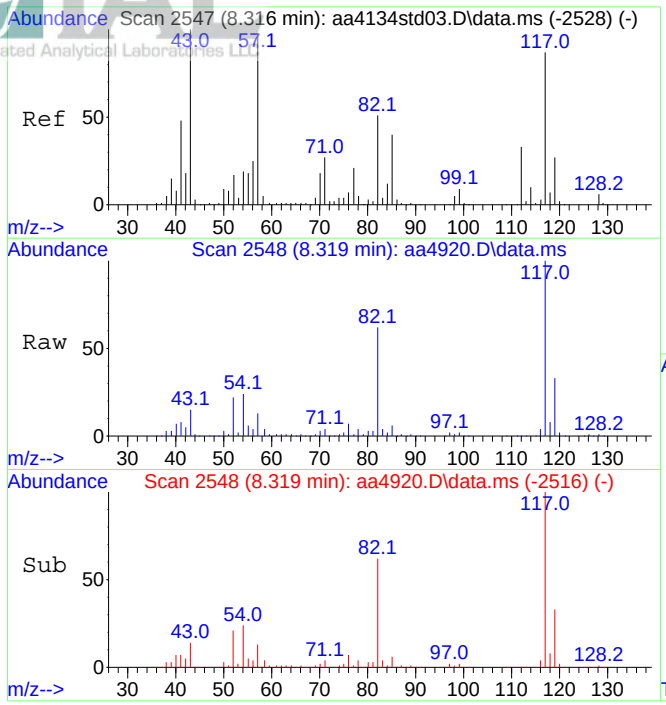




#49
Tetrachloroethene
Concen: 2.26 ppbV
RT: 7.158 min Scan# 2187
Delta R.T. -0.001 min
Lab File: aa4920.D
Acq: 11 Dec 2023 8:24 pm

Tgt Ion:166 Resp: 380691

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 76.8 | 62.3 | 93.5 |

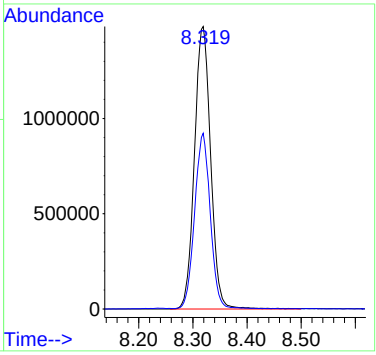


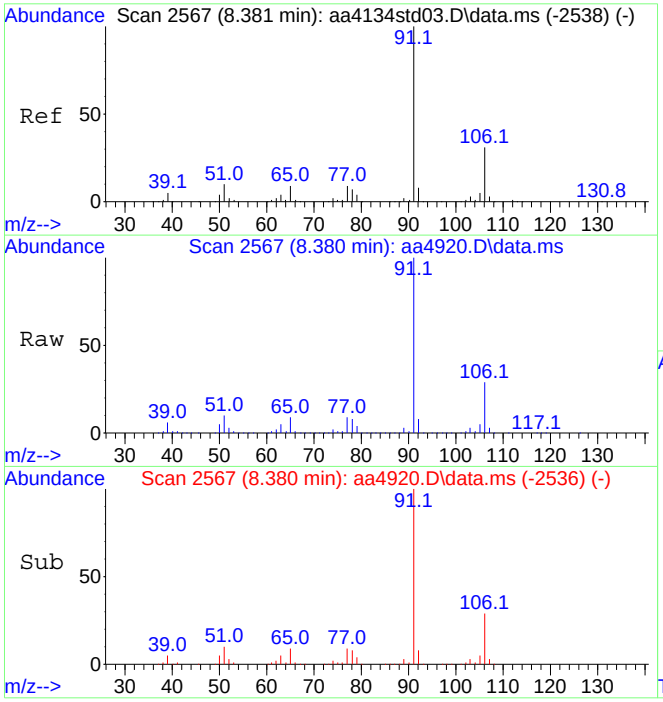



#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.319 min Scan# 2548
Delta R.T. 0.002 min
Lab File: aa4920.D
Acq: 11 Dec 2023 8:24 pm

Tgt Ion:117 Resp: 3081592

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 59.7 | 47.0 | 70.4 |

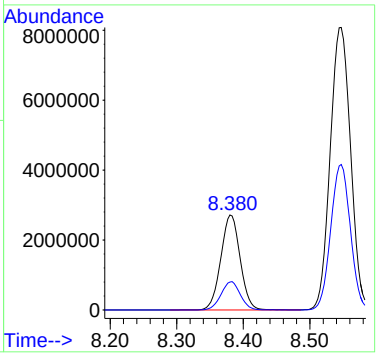


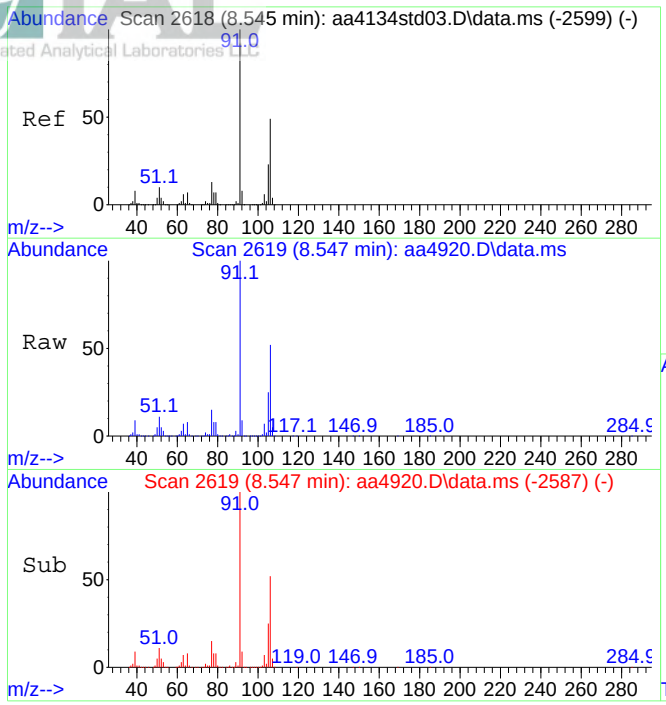




#58
Ethylbenzene
Concen: 9.65 ppbV
RT: 8.380 min Scan# 2567
Delta R.T. -0.001 min
Lab File: aa4920.D
Acq: 11 Dec 2023 8:24 pm

Tgt Ion: 91 Resp: 5478786

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 29.8 | 24.6 | 36.8 |

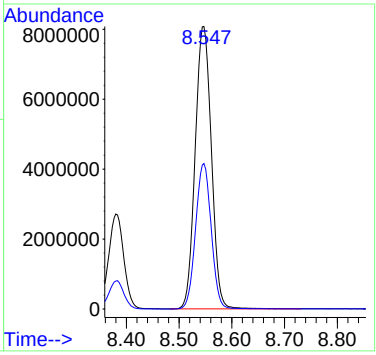


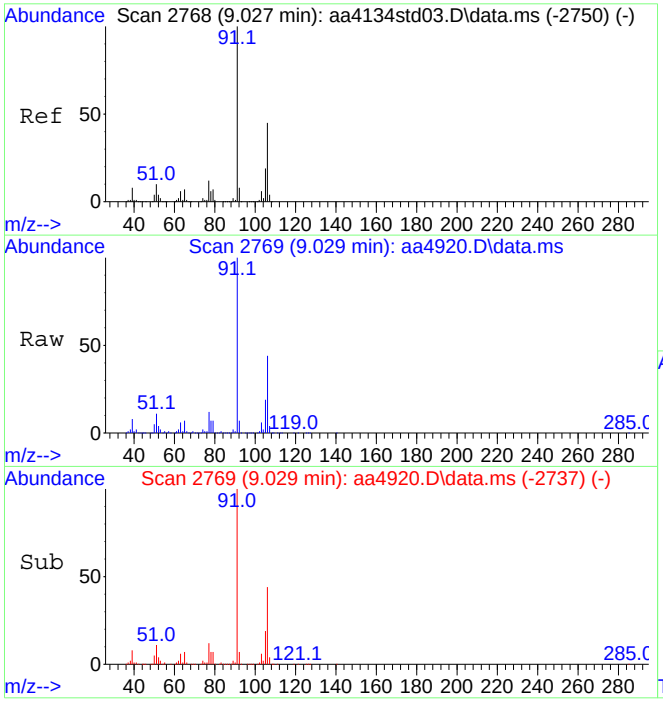



#59
Xylenes (m&p)
Concen: 41.04 ppbV
RT: 8.547 min Scan# 2619
Delta R.T. 0.002 min
Lab File: aa4920.D
Acq: 11 Dec 2023 8:24 pm

Tgt Ion: 91 Resp:17266223

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 49.7 | 39.0 | 58.4 |

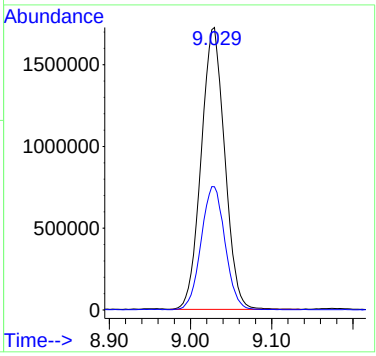


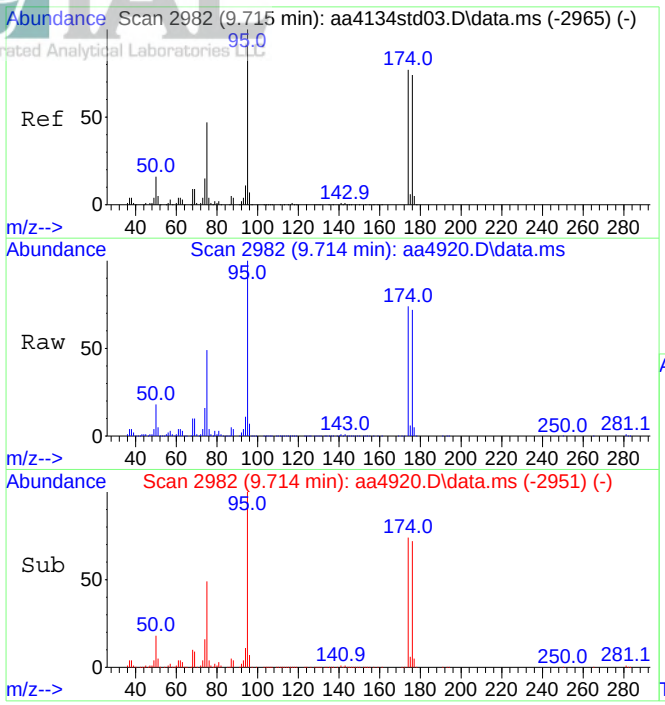




#60
Xylene (o)
Concen: 7.56 ppbV
RT: 9.029 min Scan# 2769
Delta R.T. 0.002 min
Lab File: aa4920.D
Acq: 11 Dec 2023 8:24 pm

Tgt Ion: 91 Resp: 3468551

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 44.5 | 36.8 | 55.2 |

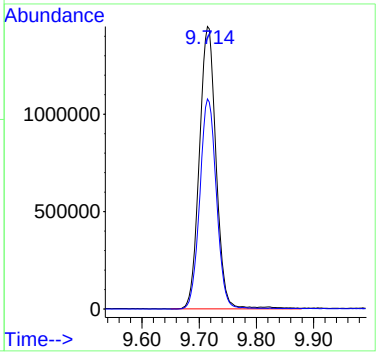


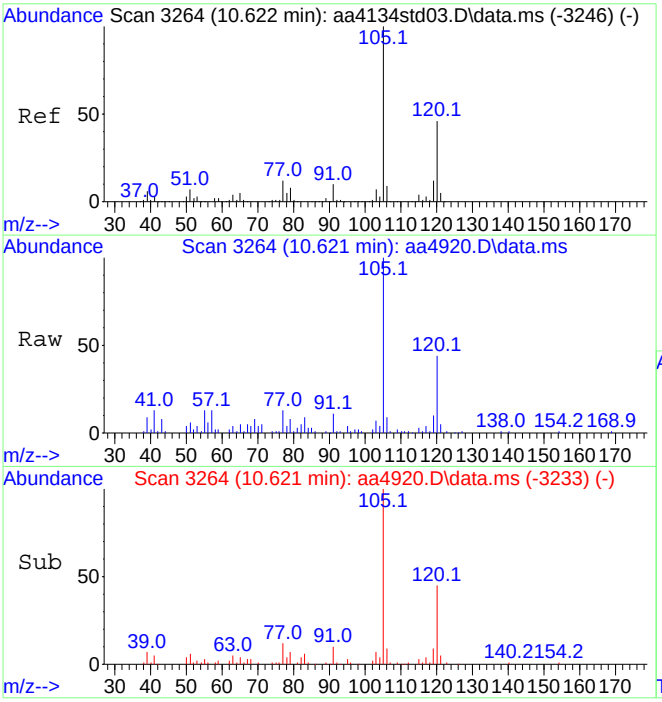



#64
Bromofluorobenzene (tune std)
Concen: 10.97 ppbV
RT: 9.714 min Scan# 2982
Delta R.T. -0.001 min
Lab File: aa4920.D
Acq: 11 Dec 2023 8:24 pm

Tgt Ion: 95 Resp: 2945791

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 74.3 | 61.1 | 91.7 |

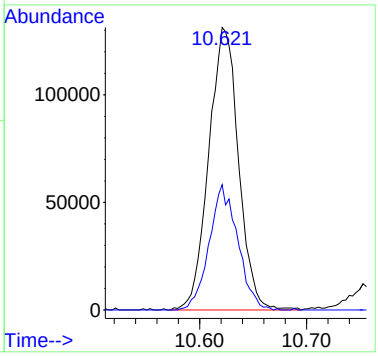



#70
1,2,4-Trimethylbenzene
Concen: 0.48 ppbV
RT: 10.621 min Scan# 3264
Delta R.T. -0.001 min
Lab File: aa4920.D
Acq: 11 Dec 2023 8:24 pm

Tgt Ion:105 Resp: 254285

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 42.4 | 36.3 | 54.5 |



**INTEGRATED ANALYTICAL LABORATORIES, LLC**
***Integrated Analytical Laboratories LLC***

Volatile Organic Compounds by EPA Method TO-15
Summary of Results

| | | | |
|---|---|---|---|
| Lab ID: | E23-05081-04 | Instrument ID: | AA |
| Client ID: | SV8-401-Compactor Room | GC/MS Column: | RTX-1, 0.32 mmID |
| Date Sampled: | 11/17/2023 11:00 | Injection Volmue: | 500ml, 100ml |
| Date Received: | 11/20/2023 | Matrix: | Air-Other |
| Date Analyzed: | 12/11/2023 22:07, 12/11/2023 21:35 | % Moisture: | NA |
| Data File: | AA4923, AA4922 | Dilution Factor: | 1, 5 |
| Summa ID: | 2896B | Analyst: | J. Walukiewicz |

| | | | Concentration Reported | | Reporting Limits | |
|---|---|---|---|---|---|---|
| **Compound** | **CAS #** | **Q** | **ppbv** | **ug/m3** | **ppbv** | **ug/m3** |
| Acetone | 67-64-1 | | 15 | 35 | 0.20 | 0.48 |
| Benzene | 71-43-2 | | 0.30 | 0.96 | 0.20 | 0.64 |
| Bromodichloromethane | 75-27-4 | | ND | ND | 0.20 | 1.3 |
| Bromoform | 75-25-2 | | ND | ND | 0.20 | 2.1 |
| Bromomethane | 74-83-9 | | ND | ND | 0.20 | 0.78 |
| 1,3-Butadiene | 106-99-0 | | ND | ND | 0.20 | 0.44 |
| Chlorobenzene | 108-90-7 | | ND | ND | 0.20 | 0.92 |
| Chloroethane | 75-00-3 | | ND | ND | 0.20 | 0.53 |
| Chloroform | 67-66-3 | | ND | ND | 0.20 | 0.98 |
| Chloromethane | 74-87-3 | | ND | ND | 0.20 | 0.41 |
| Carbon disulfide | 75-15-0 | | 0.46 | 1.4 | 0.20 | 0.62 |
| Carbon tetrachloride | 56-23-5 | | ND | ND | 0.040 | 0.25 |
| Cyclohexane | 110-82-7 | | ND | ND | 0.20 | 0.69 |
| Dibromochloromethane | 124-48-1 | | ND | ND | 0.20 | 1.7 |
| 1,2-Dibromoethane | 106-93-4 | | ND | ND | 0.20 | 1.5 |
| 1,2-Dichlorobenzene | 95-50-1 | | ND | ND | 0.20 | 1.2 |
| 1,3-Dichlorobenzene | 541-73-1 | | ND | ND | 0.20 | 1.2 |
| 1,4-Dichlorobenzene | 106-46-7 | | ND | ND | 0.20 | 1.2 |
| Dichlorodifluoromethane | 75-71-8 | | ND | ND | 0.20 | 0.99 |
| 1,1-Dichloroethane | 75-34-3 | | ND | ND | 0.20 | 0.81 |
| 1,2-Dichloroethane | 107-06-2 | | ND | ND | 0.20 | 0.81 |
| 1,1-Dichloroethene | 75-35-4 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloroethene (cis) | 156-59-2 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloroethene (trans) | 156-60-5 | | ND | ND | 0.20 | 0.79 |
| 1,2-Dichloropropane | 78-87-5 | | ND | ND | 0.20 | 0.92 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | | ND | ND | 0.20 | 0.91 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | | ND | ND | 0.20 | 0.91 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | | ND | ND | 0.20 | 1.4 |
| 1,4-Dioxane | 123-91-1 | | ND | ND | 0.20 | 0.72 |
| Ethylbenzene | 100-41-4 | | 24 | 100 | 0.20 | 0.87 |
| n-Heptane | 142-82-5 | | 0.83 | 3.4 | 0.20 | 0.82 |
| 1,3-Hexachlorobutadiene | 87-68-3 | | ND | ND | 0.20 | 2.1 |
| n-Hexane | 110-54-3 | | 0.23 | 0.80 | 0.20 | 0.70 |
| Methylene chloride | 75-09-2 | | ND | ND | 0.20 | 0.69 |
| Methyl ethyl ketone | 78-93-3 | | 0.55 | 1.6 | 0.20 | 0.59 |
| Methyl isobutyl ketone | 108-10-1 | | ND | ND | 0.20 | 0.82 |
| Methyl tert-butyl ether | 1634-04-4 | | ND | ND | 0.20 | 0.72 |
| Styrene | 100-42-5 | | 0.26 | 1.1 | 0.20 | 0.85 |
| Tert-butyl alcohol | 75-65-0 | | 1.6 | 4.8 | 0.20 | 0.61 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | ND | ND | 0.20 | 1.4 |
| Tetrachloroethene | 127-18-4 | | 1.8 | 12 | 0.20 | 1.4 |
| Toluene | 108-88-3 | | 0.90 | 3.4 | 0.20 | 0.75 |
| 1,2,4-Trichlorobenzene | 120-82-1 | | ND | ND | 0.20 | 1.5 |
| 1,1,1-Trichloroethane | 71-55-6 | | ND | ND | 0.20 | 1.1 |
| 1,1,2-Trichloroethane | 79-00-5 | | ND | ND | 0.20 | 1.1 |

Qualifiers:
D = Dilution required

Volatile Organic Compounds by EPA Method TO-15
Summary of Results

| | | | |
|---|---|---|---|
| Lab ID: | E23-05081-04 | Instrument ID: | AA |
| Client ID: | SV8-401-Compactor Room | GC/MS Column: | RTX-1, 0.32 mmID |
| Date Sampled: | 11/17/2023 11:00 | Injection Volmue: | 500ml, 100ml |
| Date Received: | 11/20/2023 | Matrix: | Air-Other |
| Date Analyzed: | 12/11/2023 22:07, 12/11/2023 21:35 | % Moisture: | NA |
| Data File: | AA4923, AA4922 | Dilution Factor: | 1, 5 |
| Summa ID: | 2896B | Analyst: | J. Walukiewicz |

| | | | Concentration Reported | | Reporting Limits | |
|---|---|---|---|---|---|---|
| **Compound** | **CAS #** | **Q** | **ppbv** | **ug/m3** | **ppbv** | **ug/m3** |
| Trichloroethene | 79-01-6 | | ND | ND | 0.046 | 0.25 |
| Trichlorofluoromethane | 75-69-4 | | 0.31 | 1.7 | 0.20 | 1.1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | | ND | ND | 0.20 | 1.5 |
| 1,2,4-Trimethylbenzene | 95-63-6 | | 1.5 | 7.1 | 0.20 | 0.98 |
| 1,3,5-Trimethylbenzene | 108-67-8 | | 0.44 | 2.1 | 0.20 | 0.98 |
| 2,2,4-Trimethylpentane | 540-84-1 | | ND | ND | 0.20 | 0.93 |
| Vinyl bromide | 593-60-2 | | ND | ND | 0.20 | 0.87 |
| Vinyl chloride | 75-01-4 | | ND | ND | 0.20 | 0.51 |
| Xylenes (m&p) | 179601-23-1 | D | 150 | 650 | 1.0 | 4.3 |
| Xylenes (o) | 95-47-6 | | 21 | 90 | 0.20 | 0.87 |

Qualifiers:
D = Dilution required

Quantitation Report (QT Reviewed)

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4923.D
Acq On : 11 Dec 2023 10:07 pm
Operator : jjw
Sample : E23-05081-04
Misc : 2896B, 500cc
ALS Vial : 26 Sample Multiplier: 1

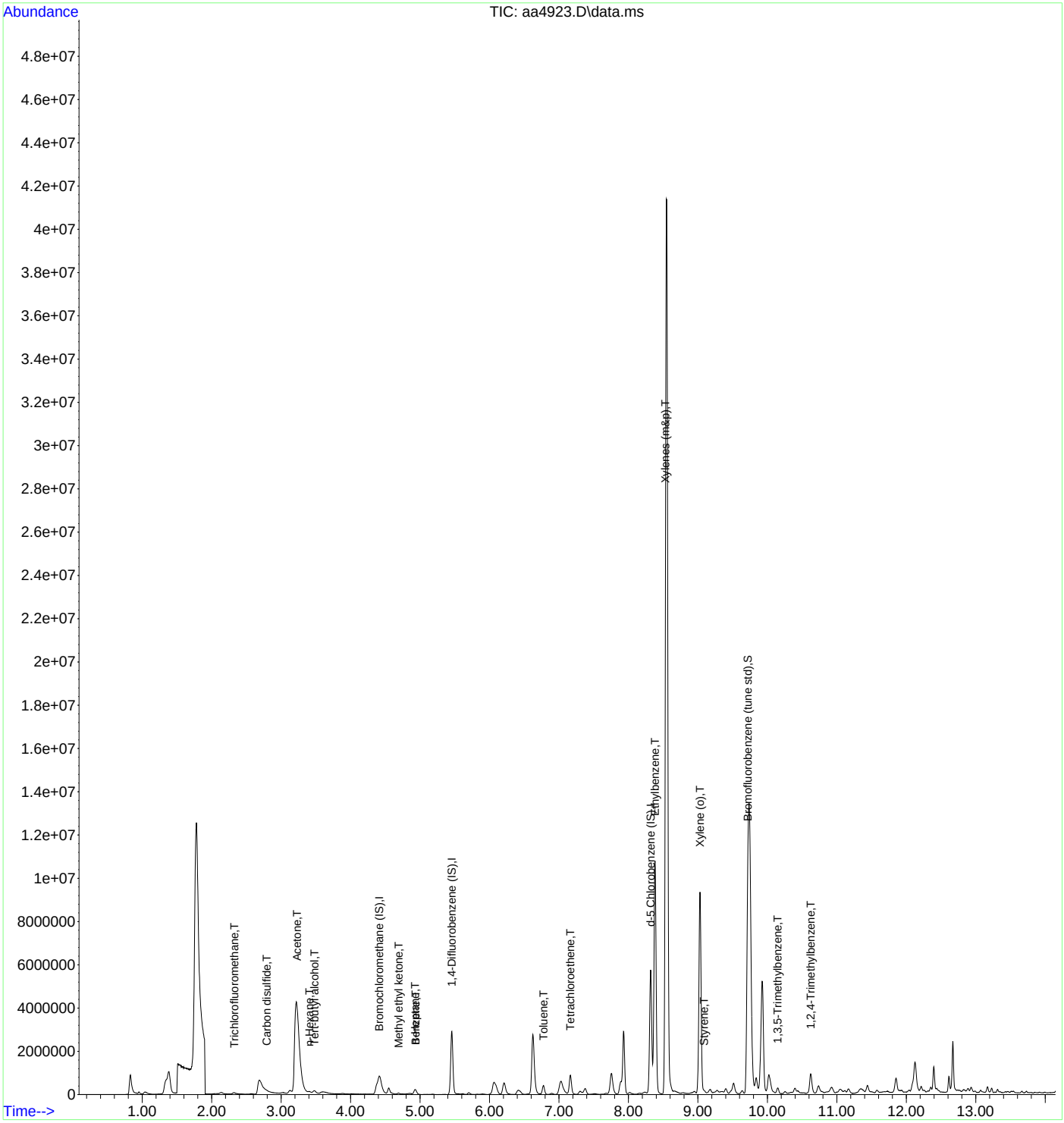
Quant Time: Dec 12 11:19:14 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

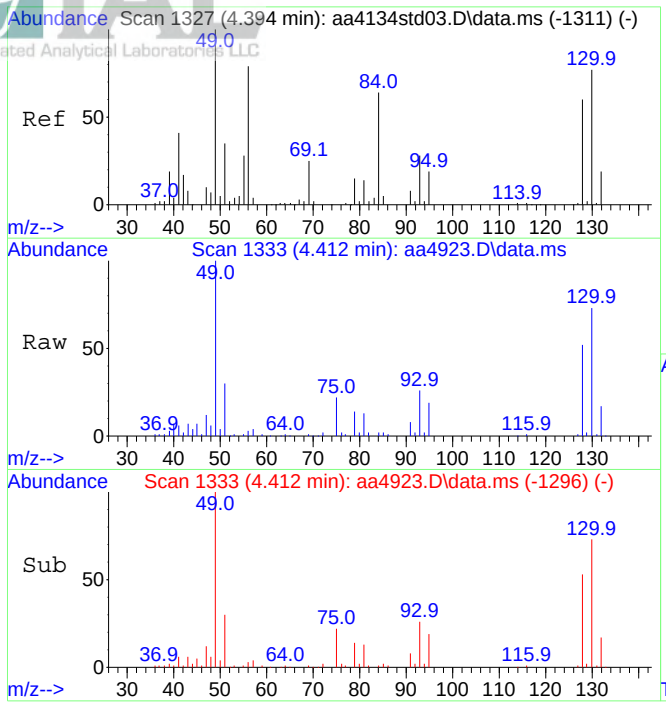
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.412 | 130 | 495105 | 10.00 | ppbV | | 0.018 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 2648087 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.322 | 117 | 2297485 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 2131744 | 10.64 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 12) Trichlorofluoromethane | 2.329 | 101 | 42496 | 0.31 | ppbV | | 100 |
| 15) Carbon disulfide | 2.795 | 76 | 69775 | 0.46 | ppbV | # | 71 |
| 21) Acetone | 3.229 | 43 | 1093292 | 14.64 | ppbV | | 99 |
| 24) n-Hexane | 3.409 | 57 | 35503 | 0.23 | ppbV | # | 78 |
| 26) Tert-butyl alcohol | 3.480 | 59 | 206263 | 1.60 | ppbV | | 100 |
| 35) Methyl ethyl ketone | 4.692 | 43 | 66775 | 0.55 | ppbV | | 98 |
| 36) n-Heptane | 4.930 | 43 | 113828 | 0.83 | ppbV | | 97 |
| 37) Benzene | 4.936 | 78 | 59266 | 0.30 | ppbV | # | 90 |
| 47) Toluene | 6.779 | 91 | 335581 | 0.90 | ppbV | | 100 |
| 49) Tetrachloroethene | 7.164 | 166 | 292927 | 1.83 | ppbV | | 99 |
| 58) Ethylbenzene | 8.383 | 91 | 9965075 | 23.54 | ppbV | | 99 |
| 59) Xylenes (m&p) | 8.534 | 91 | 25143885 | 80.15 | ppbV | # | 77 |
| 60) Xylene (o) | 9.029 | 91 | 7094421 | 20.73 | ppbV | | 98 |
| 61) Styrene | 9.090 | 104 | 61618 | 0.26 | ppbV | # | 29 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 172803 | 0.43 | ppbV | | 100 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 576370 | 1.45 | ppbV | | 97 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4923.D
Acq On : 11 Dec 2023 10:07 pm
Operator : jjw
Sample : E23-05081-04
Misc : 2896B, 500cc
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Dec 12 11:19:14 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

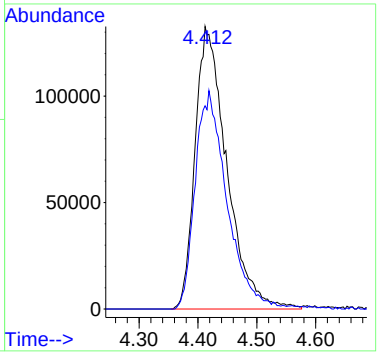


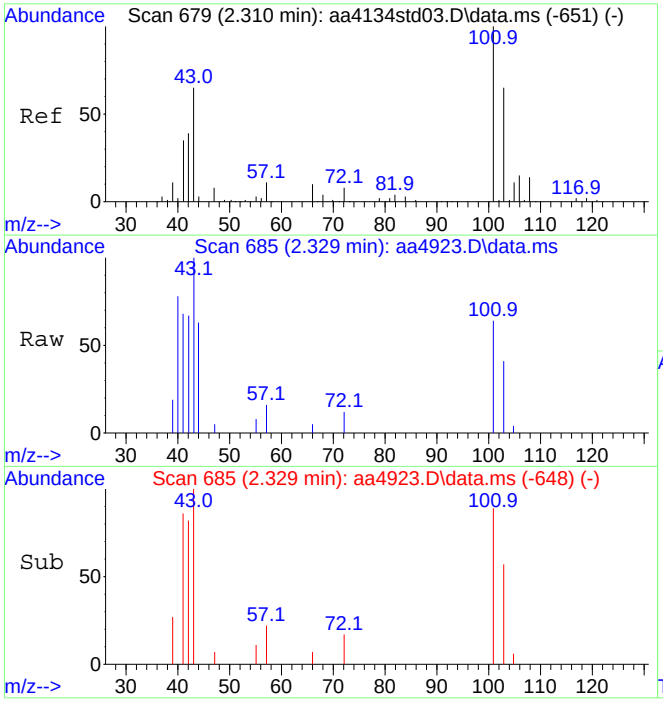



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.412 min Scan# 1333
Delta R.T. 0.018 min
Lab File: aa4923.D
Acq: 11 Dec 2023 10:07 pm

Tgt Ion:130 Resp: 495105

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 77.9 | 62.2 | 93.4 |

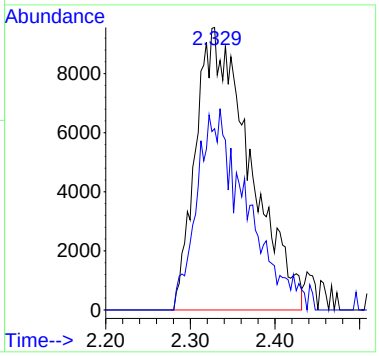


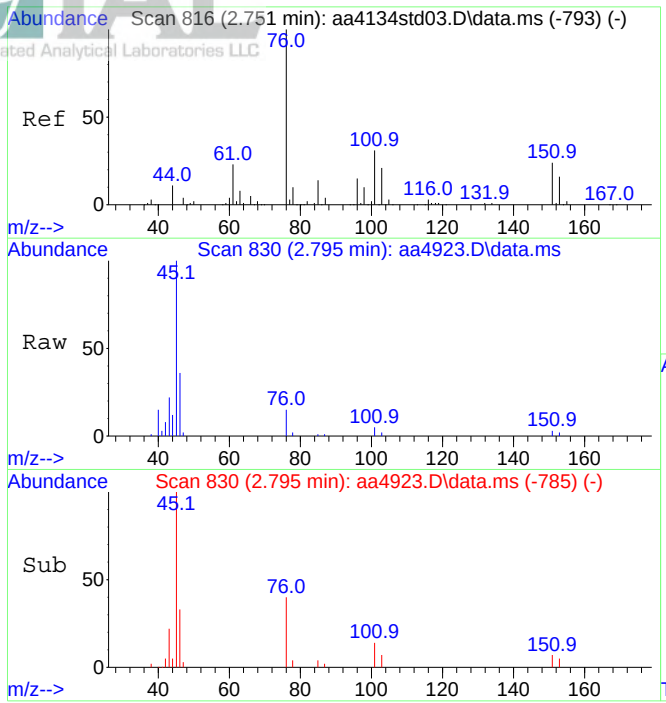




#12
Trichlorofluoromethane
Concen: 0.31 ppbV
RT: 2.329 min Scan# 685
Delta R.T. 0.018 min
Lab File: aa4923.D
Acq: 11 Dec 2023 10:07 pm

Tgt Ion:101 Resp: 42496

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 65.4 | 52.5 | 78.7 |

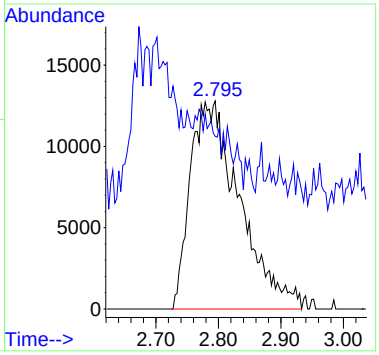


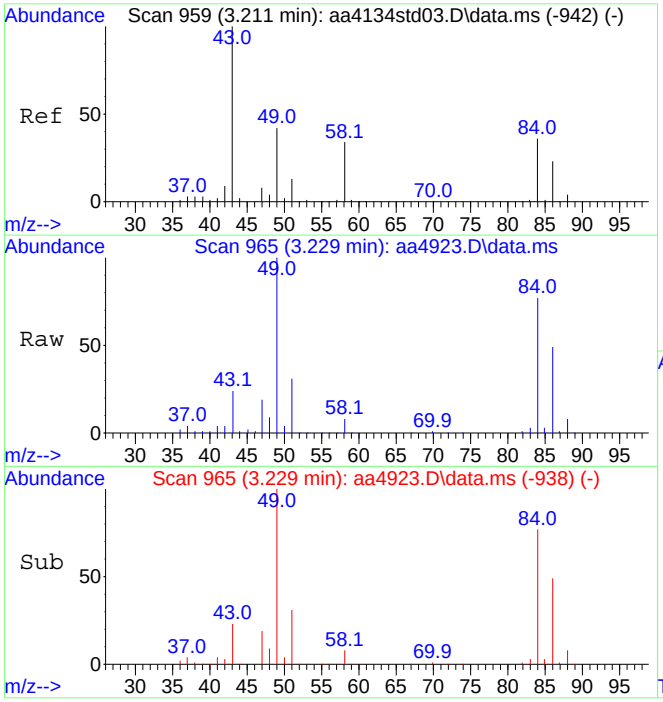



#15
Carbon disulfide
Concen: 0.46 ppbV
RT: 2.795 min Scan# 830
Delta R.T. 0.044 min
Lab File: aa4923.D
Acq: 11 Dec 2023 10:07 pm

Tgt Ion: 76 Resp: 69775

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 0.0 | 9.0 | 13.4# |

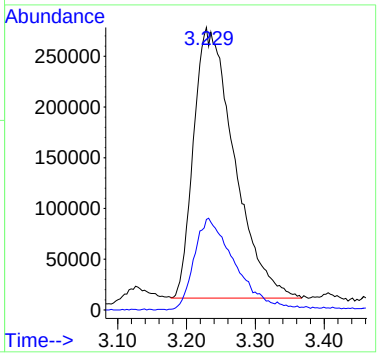


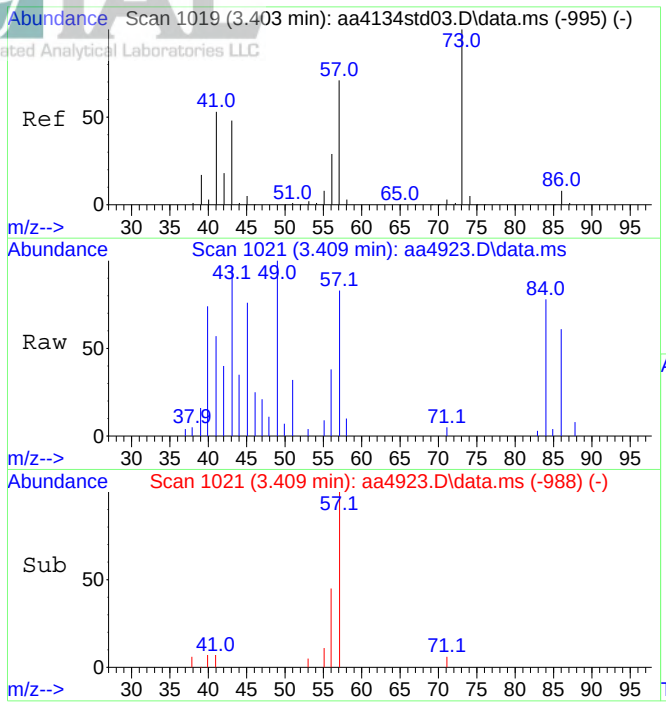




#21
Acetone
Concen: 14.64 ppbV
RT: 3.229 min Scan# 965
Delta R.T. 0.018 min
Lab File: aa4923.D
Acq: 11 Dec 2023 10:07 pm

Tgt Ion: 43 Resp: 1093292

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 34.4 | 27.1 | 40.7 |

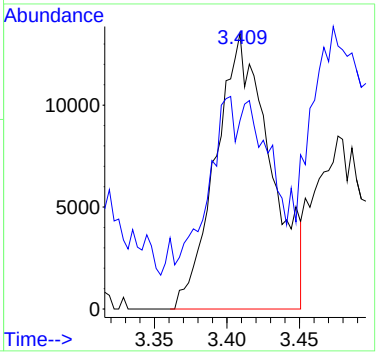


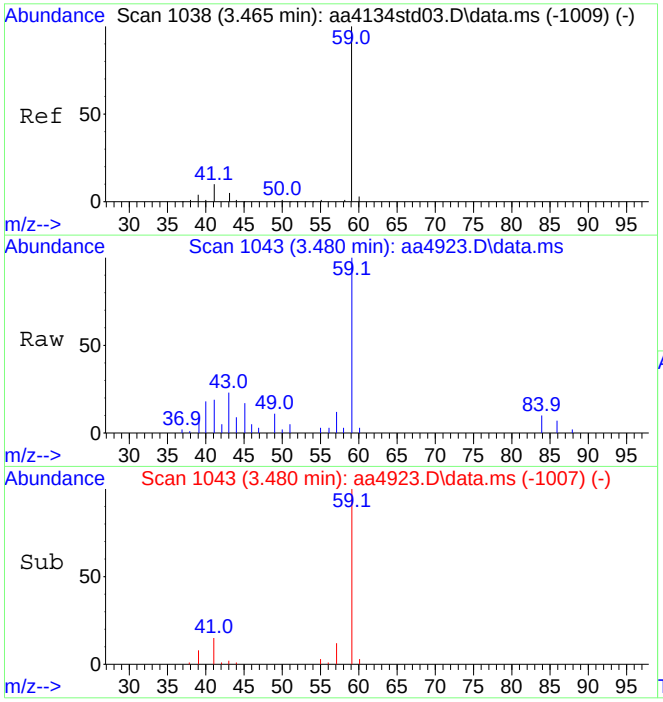



#24
n-Hexane
Concen: 0.23 ppbV
RT: 3.409 min Scan# 1021
Delta R.T. 0.006 min
Lab File: aa4923.D
Acq: 11 Dec 2023 10:07 pm

Tgt Ion: 57 Resp: 35503

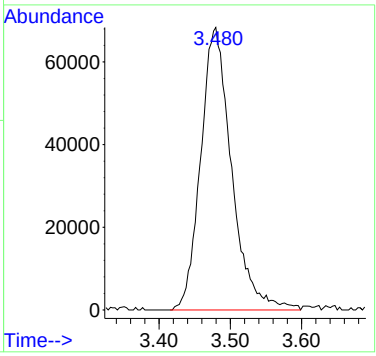
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 41 | 63.4 | 66.4 | 99.6# |

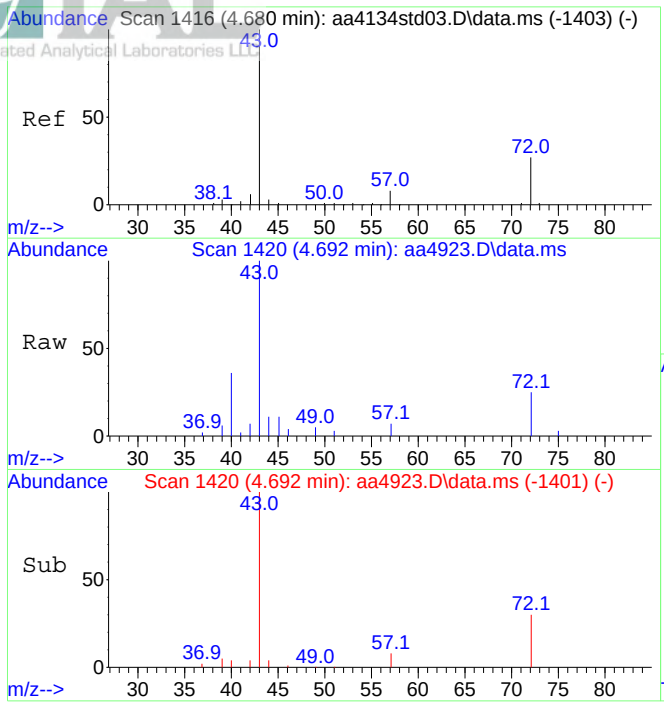



#26
Tert-butyl alcohol
Concen: 1.60 ppbV
RT: 3.480 min Scan# 1043
Delta R.T. 0.015 min
Lab File: aa4923.D
Acq: 11 Dec 2023 10:07 pm

Tgt Ion: 59 Resp: 206263

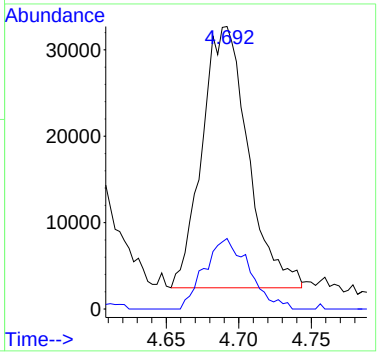


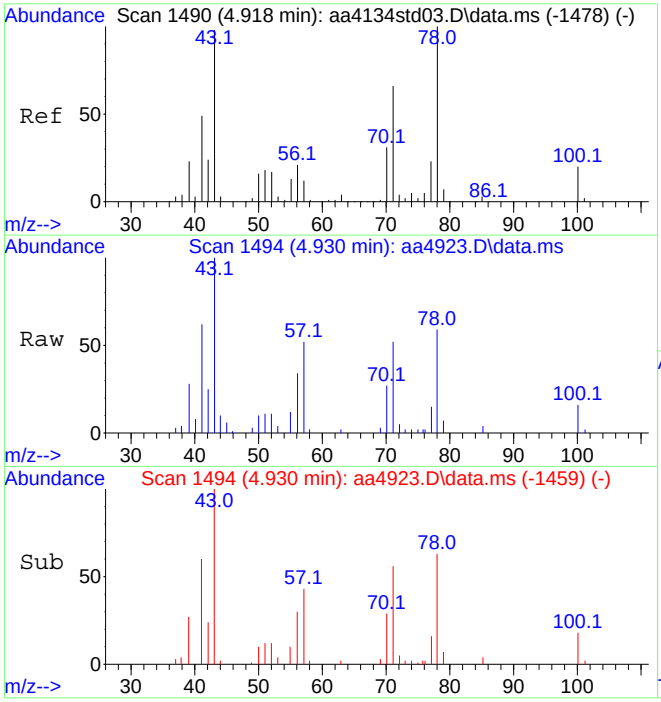



#35
Methyl ethyl ketone
Concen: 0.55 ppbV
RT: 4.692 min Scan# 1420
Delta R.T. 0.012 min
Lab File: aa4923.D
Acq: 11 Dec 2023 10:07 pm

Tgt Ion: 43 Resp: 66775

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 26.2 | 21.6 | 32.4 |

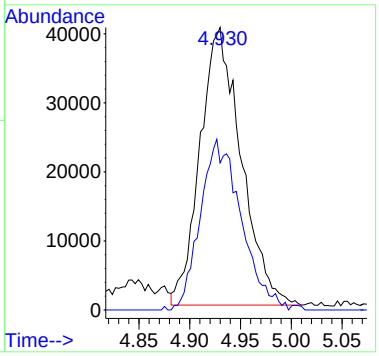


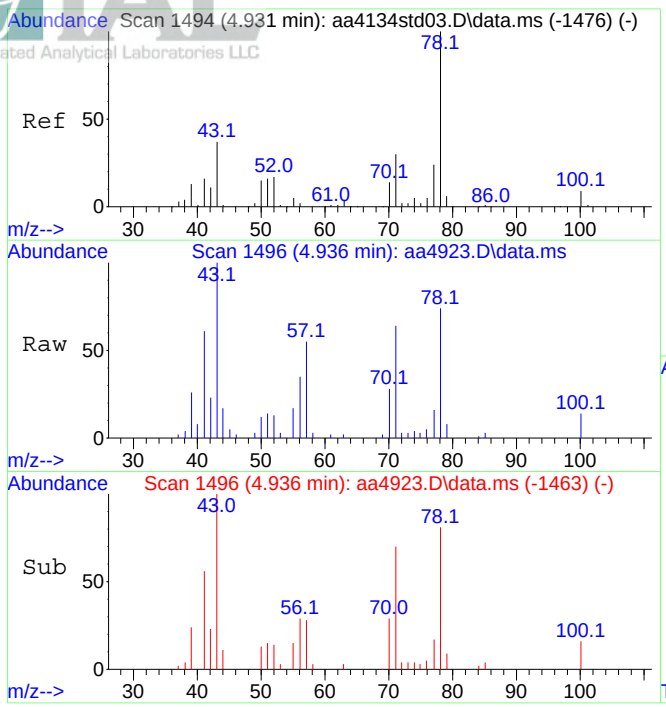




#36
n-Heptane
Concen: 0.83 ppbV
RT: 4.930 min Scan# 1494
Delta R.T. 0.012 min
Lab File: aa4923.D
Acq: 11 Dec 2023 10:07 pm

Tgt Ion: 43 Resp: 113828

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 71 | 60.7 | 50.5 | 75.7 |

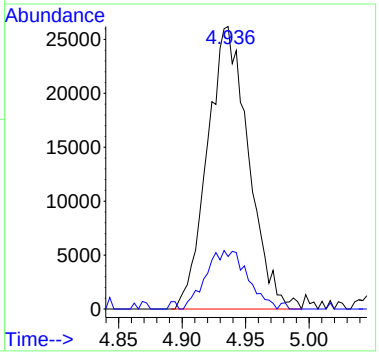


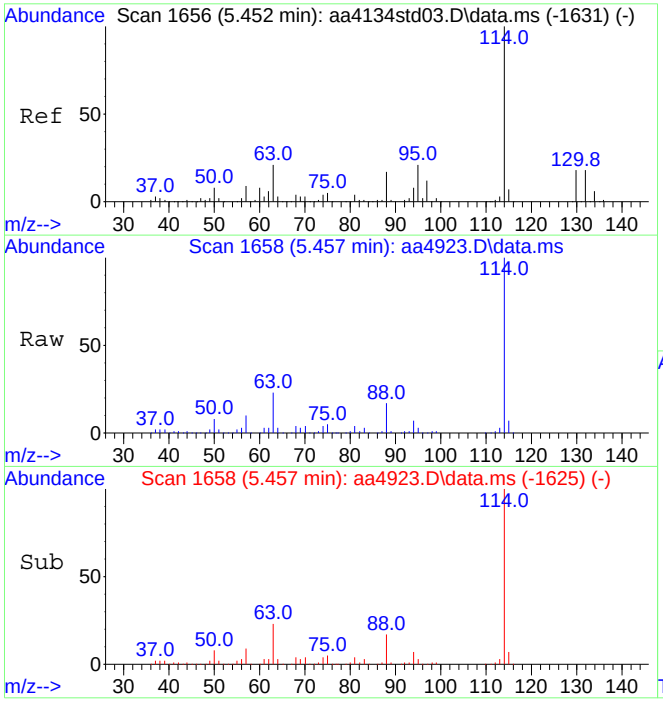



#37
Benzene
Concen: 0.30 ppbV
RT: 4.936 min Scan# 1496
Delta R.T. 0.005 min
Lab File: aa4923.D
Acq: 11 Dec 2023 10:07 pm

Tgt Ion: 78 Resp: 59266

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 20.8 | 13.4 | 20.0# |

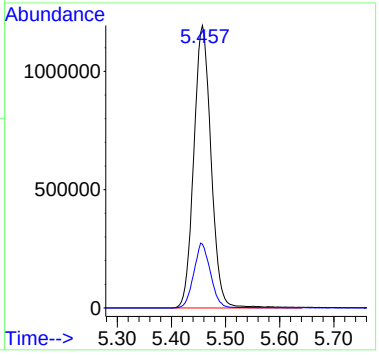


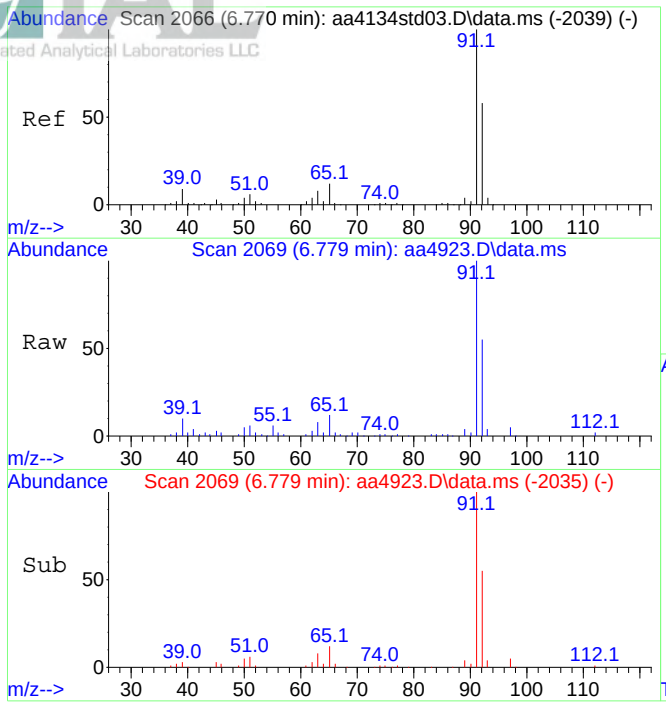




#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.457 min Scan# 1658
Delta R.T. 0.005 min
Lab File: aa4923.D
Acq: 11 Dec 2023 10:07 pm

Tgt Ion:114 Resp: 2648087

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.2 | 17.0 | 25.6 |

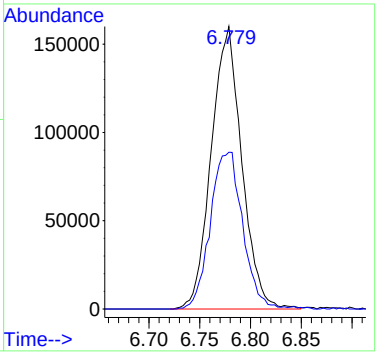


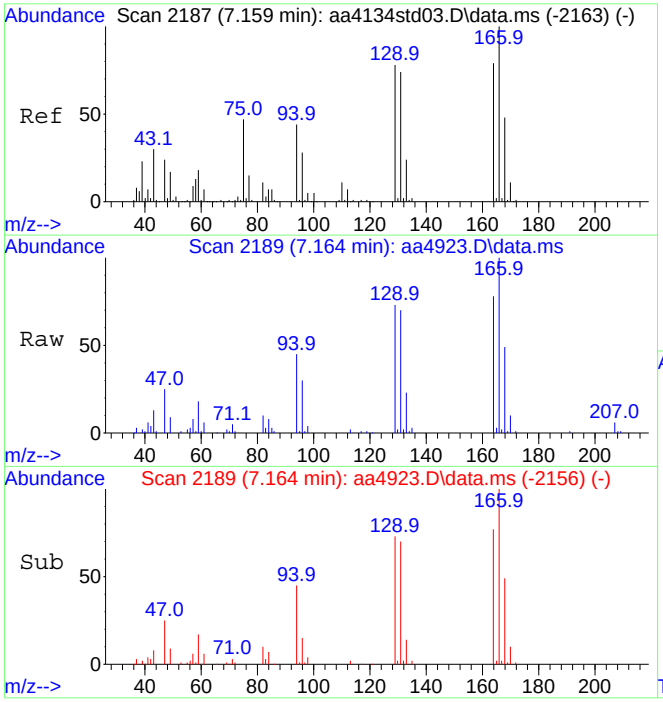



#47
Toluene
Concen: 0.90 ppbV
RT: 6.779 min Scan# 2069
Delta R.T. 0.009 min
Lab File: aa4923.D
Acq: 11 Dec 2023 10:07 pm

Tgt Ion: 91 Resp: 335581

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 59.1 | 47.3 | 70.9 |

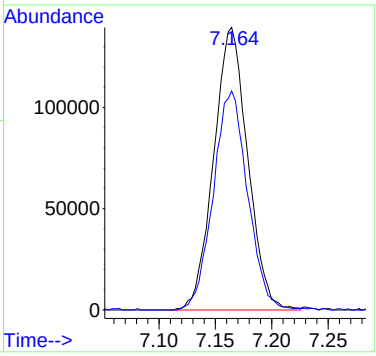


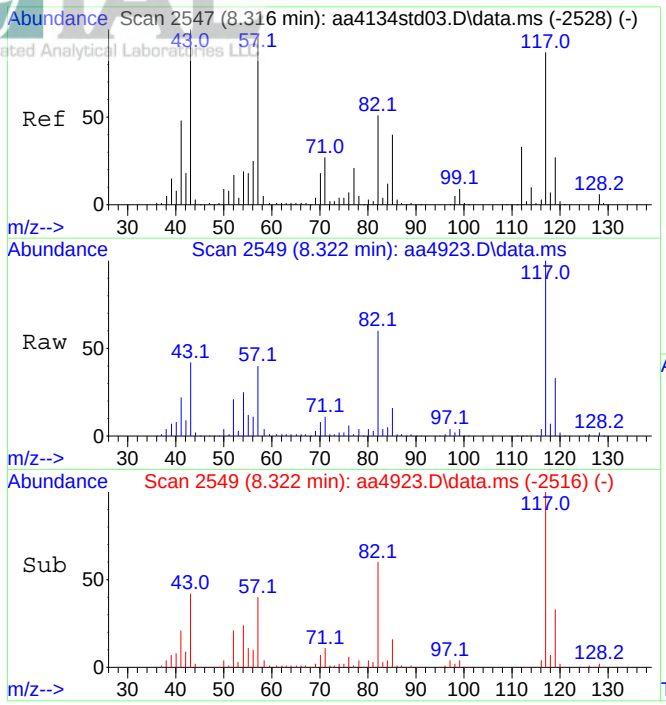




#49
Tetrachloroethene
Concen: 1.83 ppbV
RT: 7.164 min Scan# 2189
Delta R.T. 0.005 min
Lab File: aa4923.D
Acq: 11 Dec 2023 10:07 pm

Tgt Ion:166 Resp: 292927

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 78.4 | 62.3 | 93.5 |

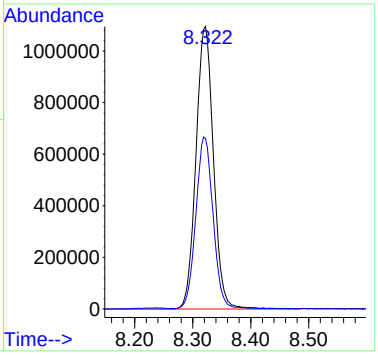


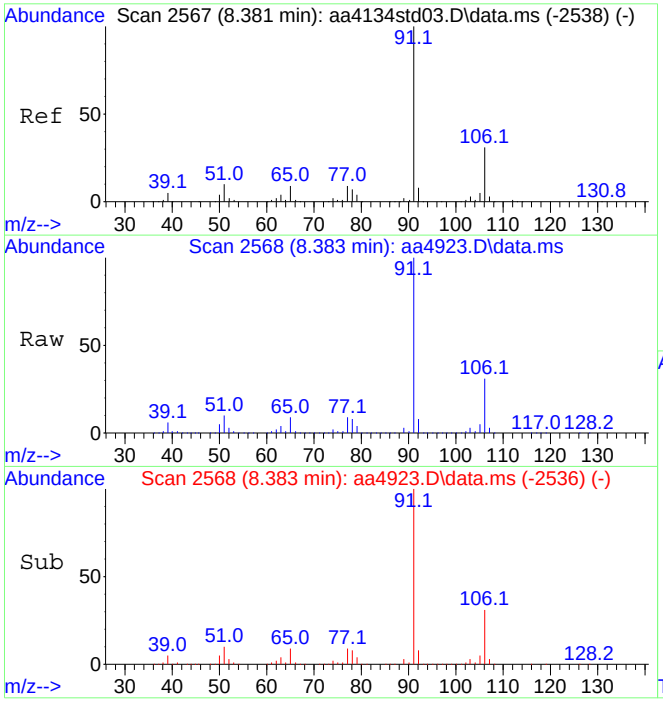



#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.322 min Scan# 2549
Delta R.T. 0.005 min
Lab File: aa4923.D
Acq: 11 Dec 2023 10:07 pm

Tgt Ion:117 Resp: 2297485

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 59.6 | 47.0 | 70.4 |

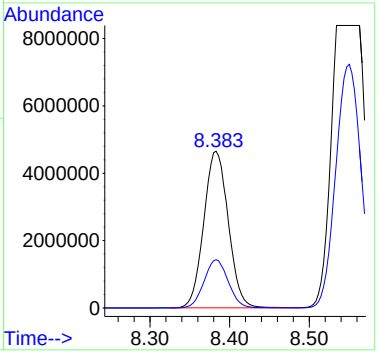


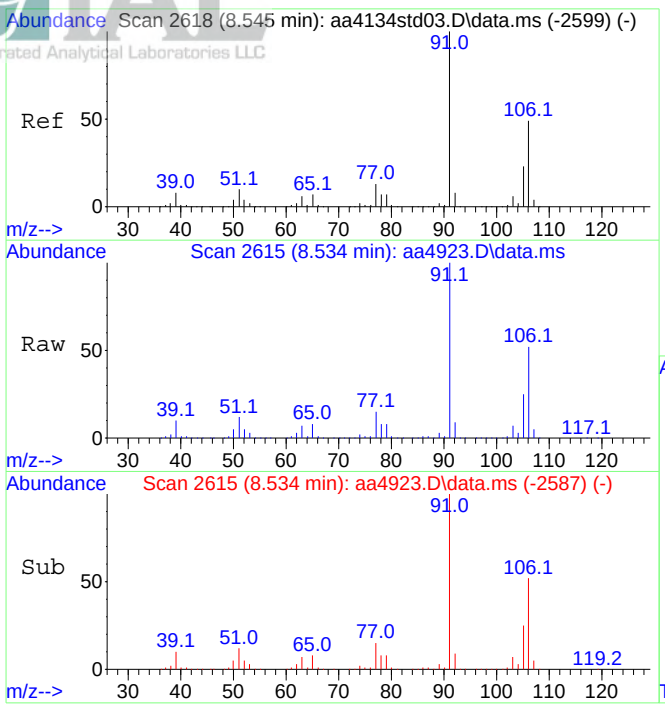




#58
Ethylbenzene
Concen: 23.54 ppbV
RT: 8.383 min Scan# 2568
Delta R.T. 0.002 min
Lab File: aa4923.D
Acq: 11 Dec 2023 10:07 pm

Tgt Ion: 91 Resp: 9965075

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 30.4 | 24.6 | 36.8 |

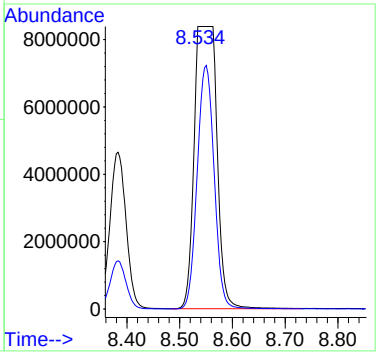


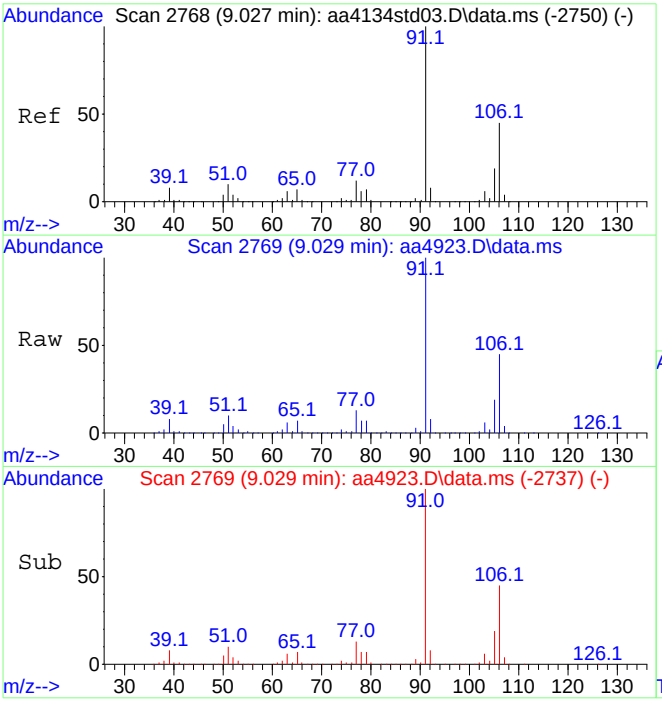



#59
Xylenes (m&p)
Concen: 80.15 ppbV
RT: 8.534 min Scan# 2615
Delta R.T. -0.011 min
Lab File: aa4923.D
Acq: 11 Dec 2023 10:07 pm

Tgt Ion: 91 Resp:25143885

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 64.4 | 39.0 | 58.4# |

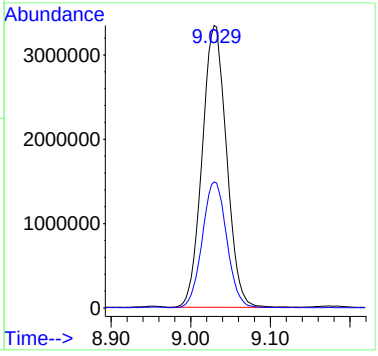


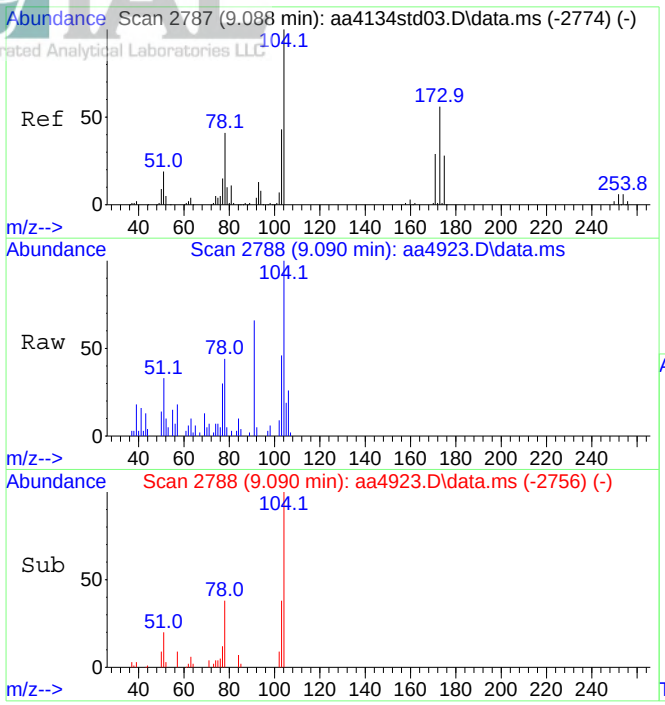




#60
Xylene (o)
Concen: 20.73 ppbV
RT: 9.029 min Scan# 2769
Delta R.T. 0.002 min
Lab File: aa4923.D
Acq: 11 Dec 2023 10:07 pm

Tgt Ion: 91 Resp: 7094421

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 44.9 | 36.8 | 55.2 |

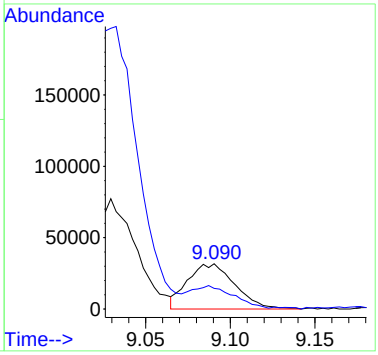


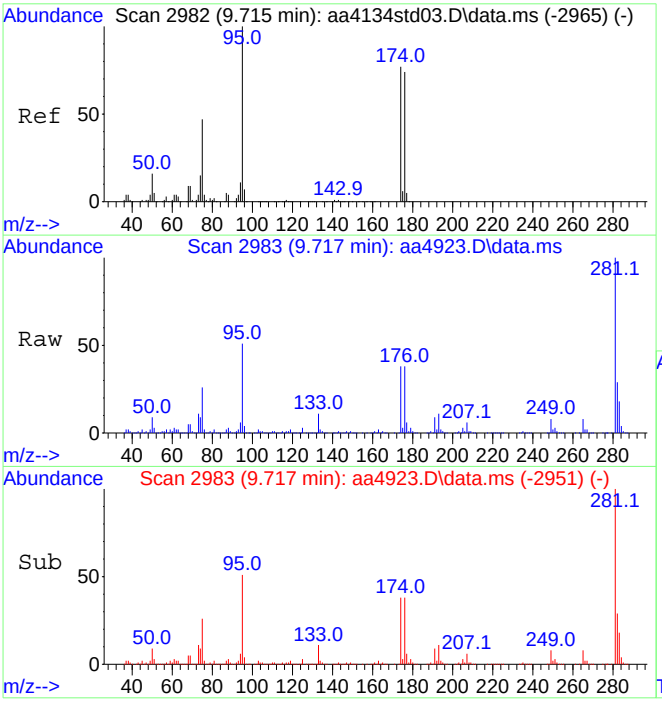



#61
Styrene
Concen: 0.26 ppbV
RT: 9.090 min Scan# 2788
Delta R.T. 0.002 min
Lab File: aa4923.D
Acq: 11 Dec 2023 10:07 pm

Tgt Ion:104 Resp: 61618

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 104 | 100 | | |
| 103 | 0.0 | 37.8 | 56.6# |

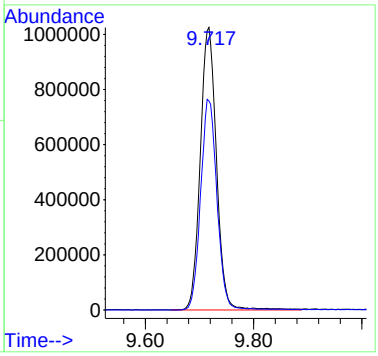


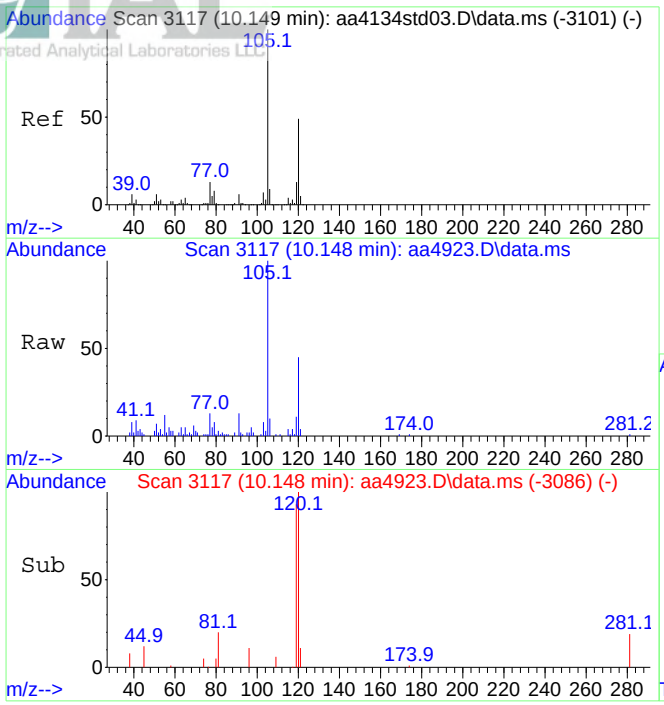




#64
Bromofluorobenzene (tune std)
Concen: 10.64 ppbV
RT: 9.717 min Scan# 2983
Delta R.T. 0.002 min
Lab File: aa4923.D
Acq: 11 Dec 2023 10:07 pm

Tgt Ion: 95 Resp: 2131744

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 75.4 | 61.1 | 91.7 |

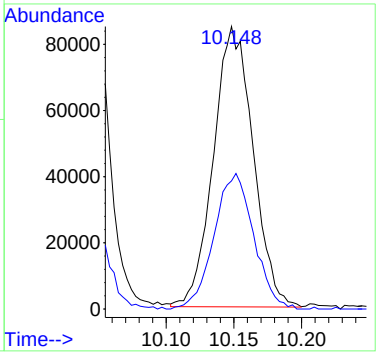


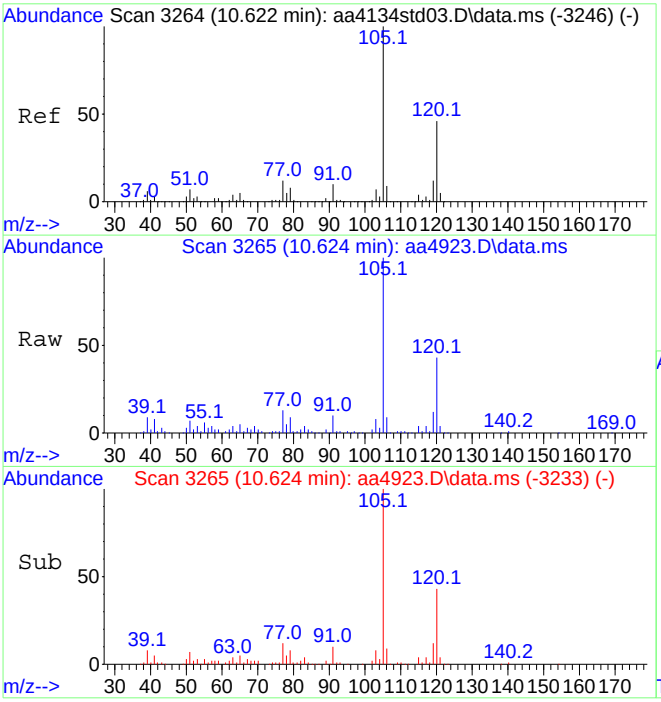



#69
1,3,5-Trimethylbenzene
Concen: 0.43 ppbV
RT: 10.148 min Scan# 3117
Delta R.T. -0.001 min
Lab File: aa4923.D
Acq: 11 Dec 2023 10:07 pm

Tgt Ion:105 Resp: 172803

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 48.3 | 38.9 | 58.3 |

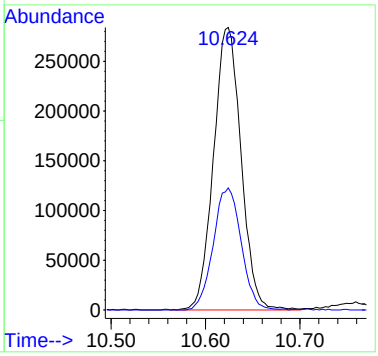



#70
1,2,4-Trimethylbenzene
Concen: 1.45 ppbV
RT: 10.624 min Scan# 3265
Delta R.T. 0.002 min
Lab File: aa4923.D
Acq: 11 Dec 2023 10:07 pm

Tgt Ion:105 Resp: 576370

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 43.7 | 36.3 | 54.5 |



Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4922.D
Acq On : 11 Dec 2023 9:35 pm
Operator : jjw
Sample : E23-05081-04x5 dil
Misc : 2896B, 100cc
ALS Vial : 25 Sample Multiplier: 1

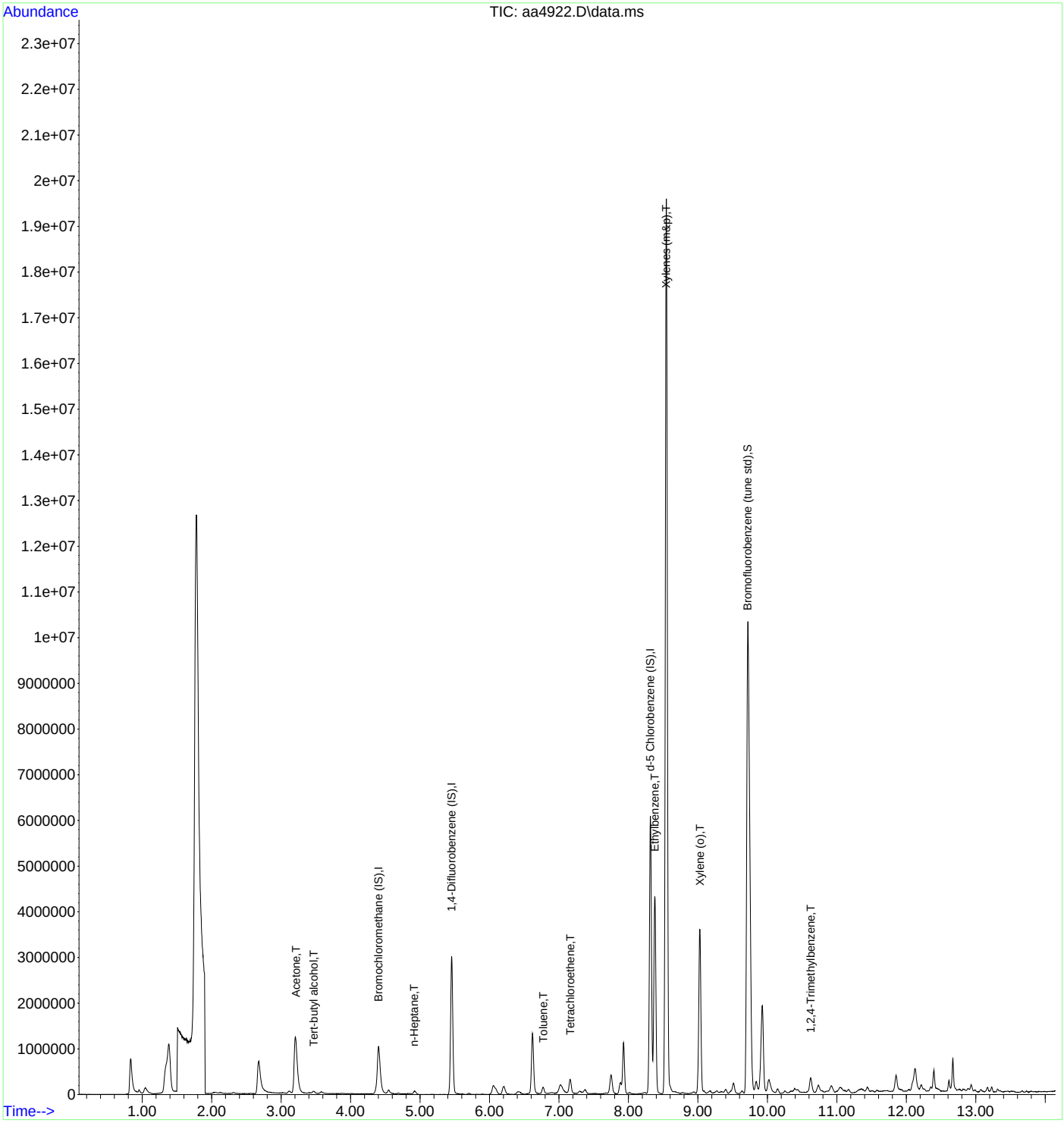
Quant Time: Dec 12 11:15:46 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

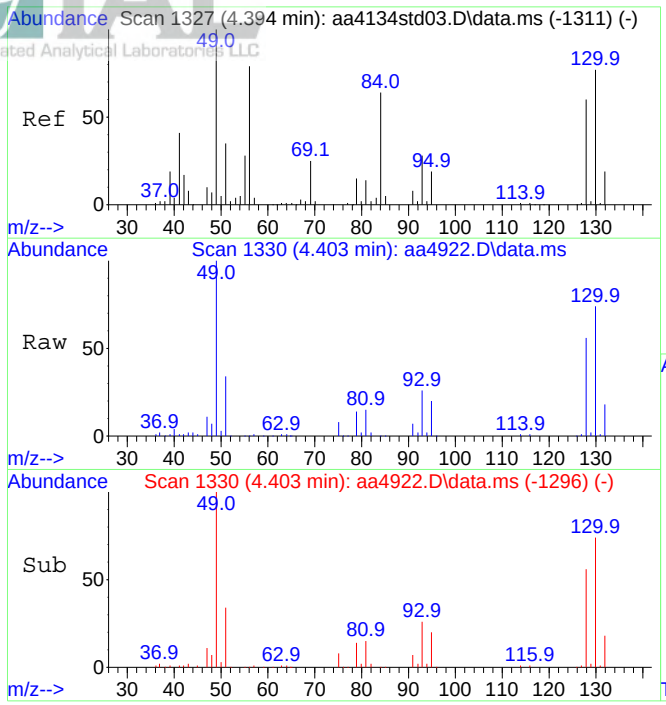
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.403 | 130 | 536382 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.454 | 114 | 2778333 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 3352079 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 3060568 | 10.47 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 21) Acetone | 3.216 | 43 | 307745 | 3.80 | ppbV | 99 |
| 26) Tert-butyl alcohol | 3.470 | 59 | 70343 | 0.50 | ppbV | 100 |
| 36) n-Heptane | 4.914 | 43 | 39659 | 0.27 | ppbV | 89 |
| 47) Toluene | 6.775 | 91 | 112438 | 0.29 | ppbV | 99 |
| 49) Tetrachloroethene | 7.165 | 166 | 101537 | 0.60 | ppbV | 99 |
| 58) Ethylbenzene | 8.380 | 91 | 3910465 | 6.33 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.544 | 91 | 13790854 | 30.13 | ppbV | 100 |
| 60) Xylene (o) | 9.029 | 91 | 2676039 | 5.36 | ppbV | 98 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 193620 | 0.33 | ppbV | 98 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4922.D
Acq On : 11 Dec 2023 9:35 pm
Operator : jjw
Sample : E23-05081-04x5 dil
Misc : 2896B, 100cc
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Dec 12 11:15:46 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

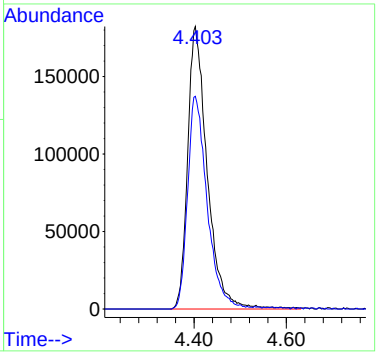


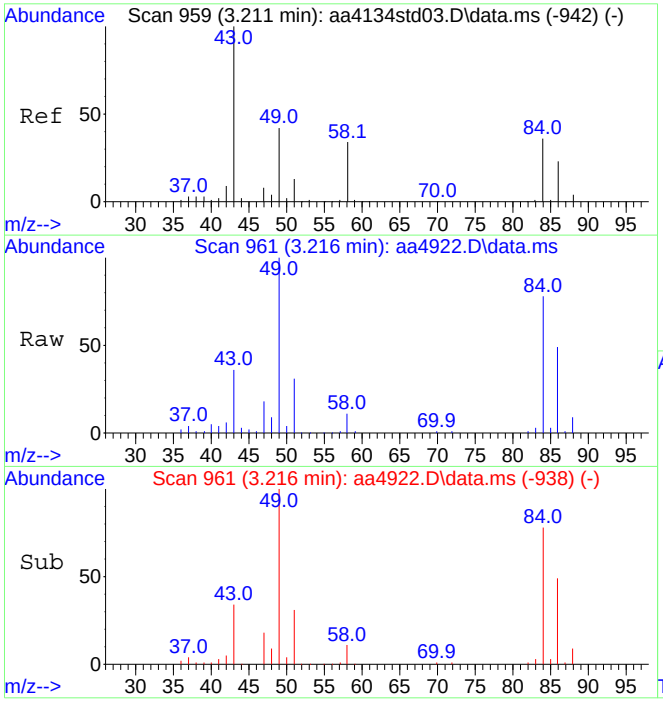



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.403 min Scan# 1330
Delta R.T. 0.009 min
Lab File: aa4922.D
Acq: 11 Dec 2023 9:35 pm

Tgt Ion:130 Resp: 536382

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 75.4 | 62.2 | 93.4 |

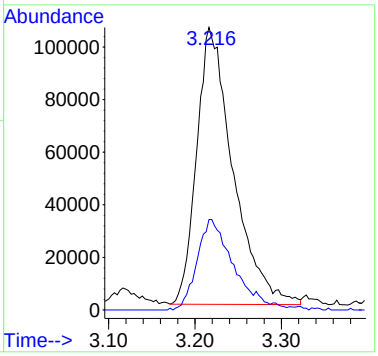


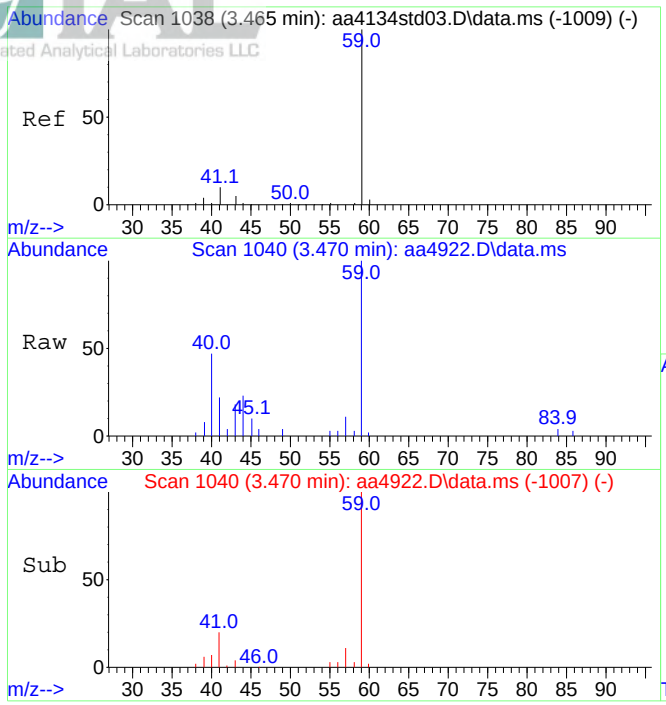




#21
Acetone
Concen: 3.80 ppbV
RT: 3.216 min Scan# 961
Delta R.T. 0.006 min
Lab File: aa4922.D
Acq: 11 Dec 2023 9:35 pm

Tgt Ion: 43 Resp: 307745

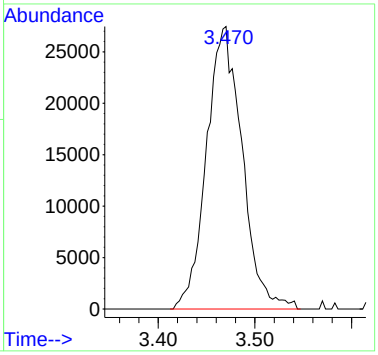
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 33.3 | 27.1 | 40.7 |

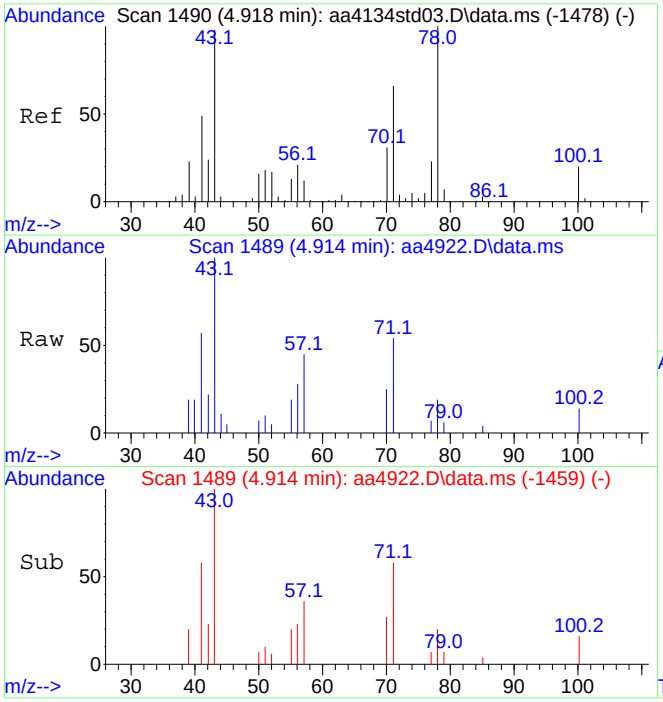





#26
Tert-butyl alcohol
Concen: 0.50 ppbV
RT: 3.470 min Scan# 1040
Delta R.T. 0.006 min
Lab File: aa4922.D
Acq: 11 Dec 2023 9:35 pm

Tgt Ion: 59 Resp: 70343

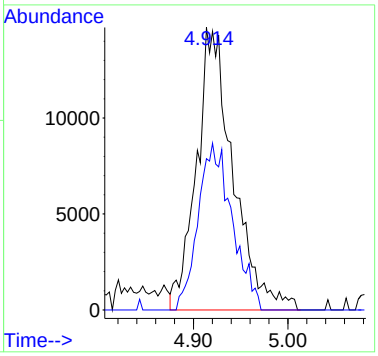


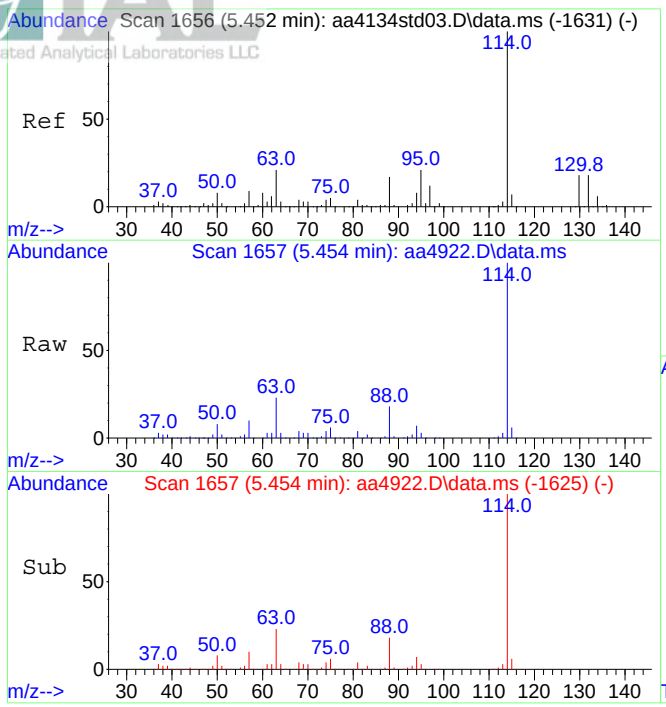




#36
n-Heptane
Concen: 0.27 ppbV
RT: 4.914 min Scan# 1489
Delta R.T. -0.004 min
Lab File: aa4922.D
Acq: 11 Dec 2023 9:35 pm

Tgt Ion: 43 Resp: 39659

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 71 | 54.6 | 50.5 | 75.7 |

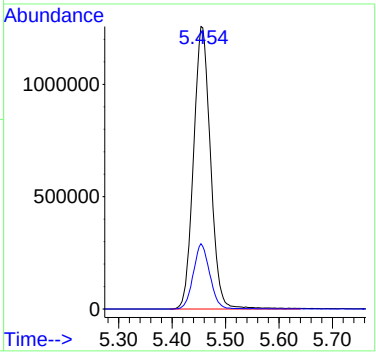


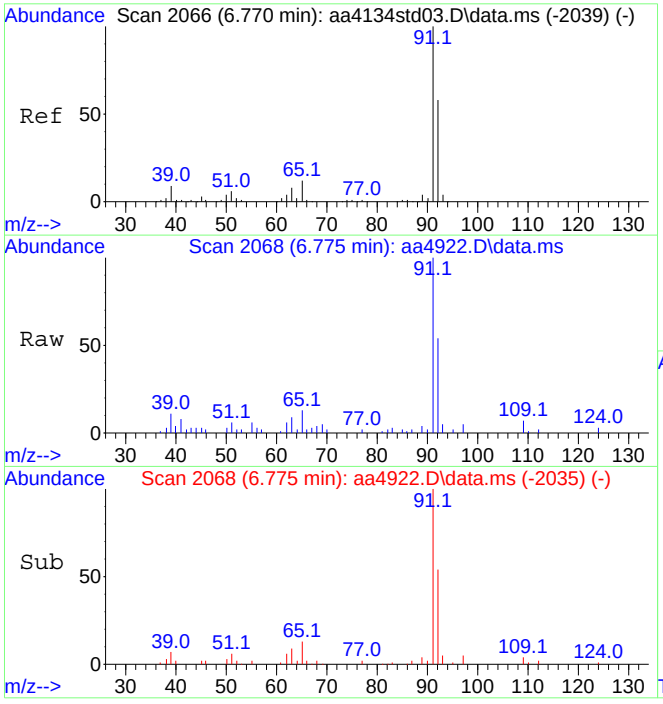



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.454 min Scan# 1657
Delta R.T. 0.002 min
Lab File: aa4922.D
Acq: 11 Dec 2023 9:35 pm

Tgt Ion:114 Resp: 2778333

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.3 | 17.0 | 25.6 |

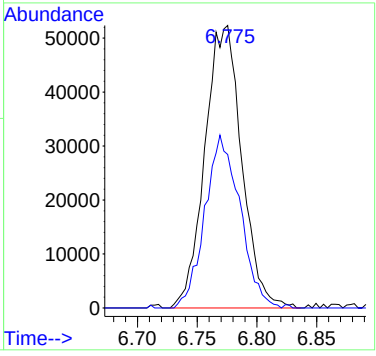


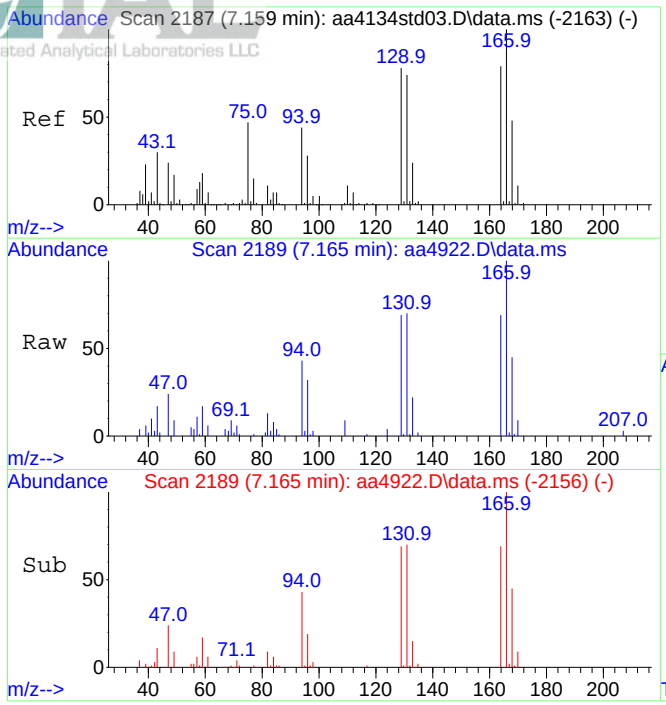




#47
Toluene
Concen: 0.29 ppbV
RT: 6.775 min Scan# 2068
Delta R.T. 0.006 min
Lab File: aa4922.D
Acq: 11 Dec 2023 9:35 pm

Tgt Ion: 91 Resp: 112438

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 58.0 | 47.3 | 70.9 |

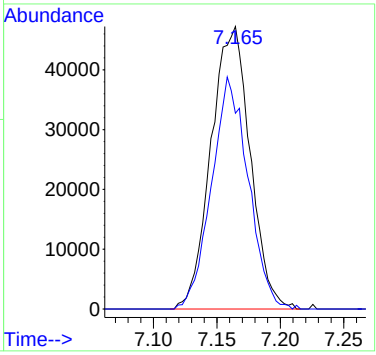


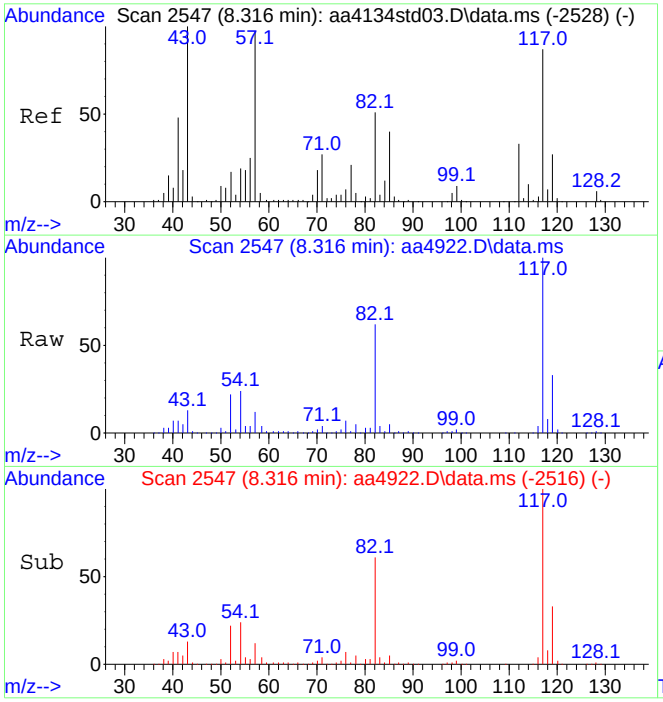



#49
Tetrachloroethene
Concen: 0.60 ppbV
RT: 7.165 min Scan# 2189
Delta R.T. 0.006 min
Lab File: aa4922.D
Acq: 11 Dec 2023 9:35 pm

Tgt Ion:166 Resp: 101537

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 76.8 | 62.3 | 93.5 |

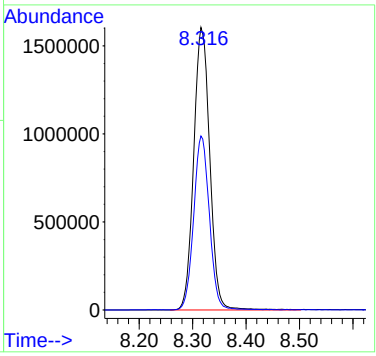


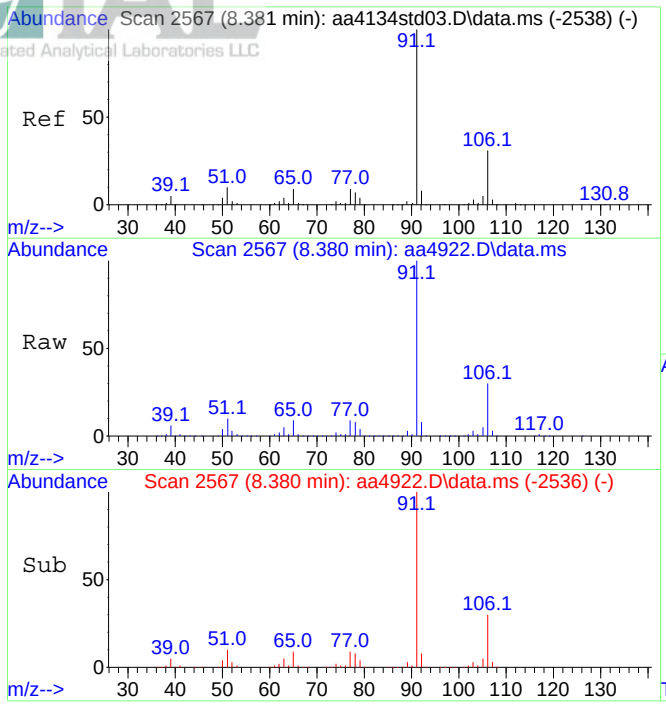




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.316 min Scan# 2547
Delta R.T. -0.001 min
Lab File: aa4922.D
Acq: 11 Dec 2023 9:35 pm

Tgt Ion:117 Resp: 3352079

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 59.9 | 47.0 | 70.4 |

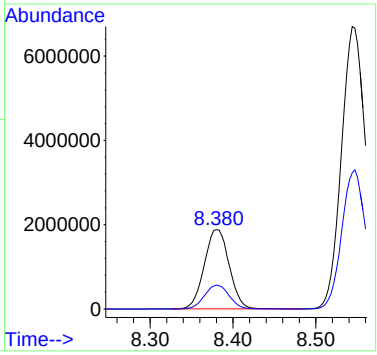


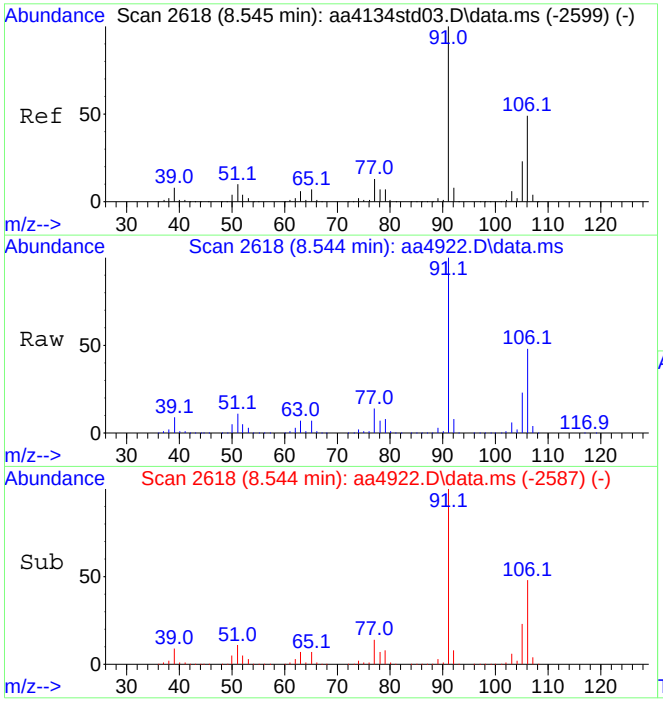



#58
Ethylbenzene
Concen: 6.33 ppbV
RT: 8.380 min Scan# 2567
Delta R.T. -0.001 min
Lab File: aa4922.D
Acq: 11 Dec 2023 9:35 pm

Tgt Ion: 91 Resp: 3910465

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 30.1 | 24.6 | 36.8 |

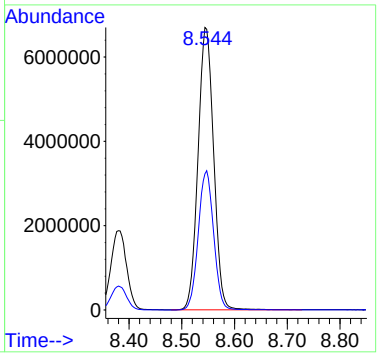


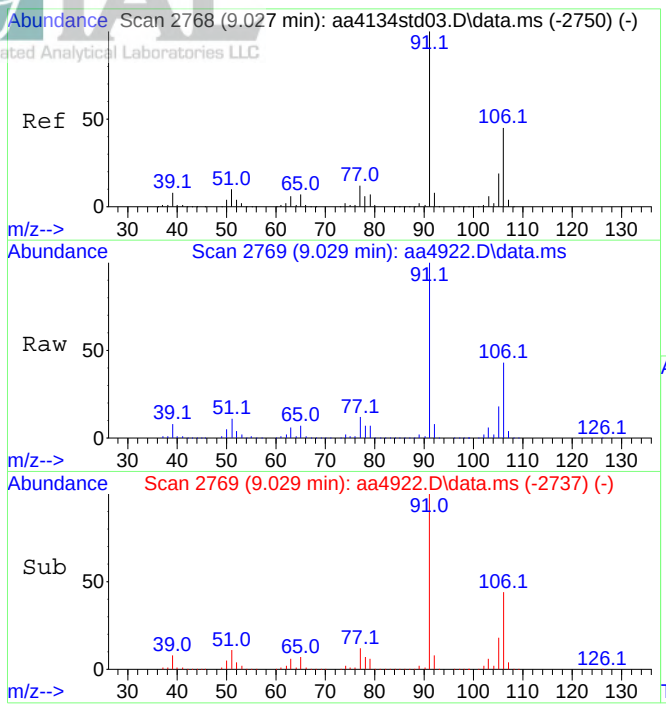




#59
Xylenes (m&p)
Concen: 30.13 ppbV
RT: 8.544 min Scan# 2618
Delta R.T. -0.001 min
Lab File: aa4922.D
Acq: 11 Dec 2023 9:35 pm

Tgt Ion: 91 Resp:13790854

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 48.5 | 39.0 | 58.4 |

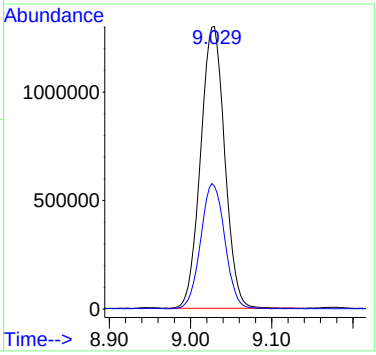


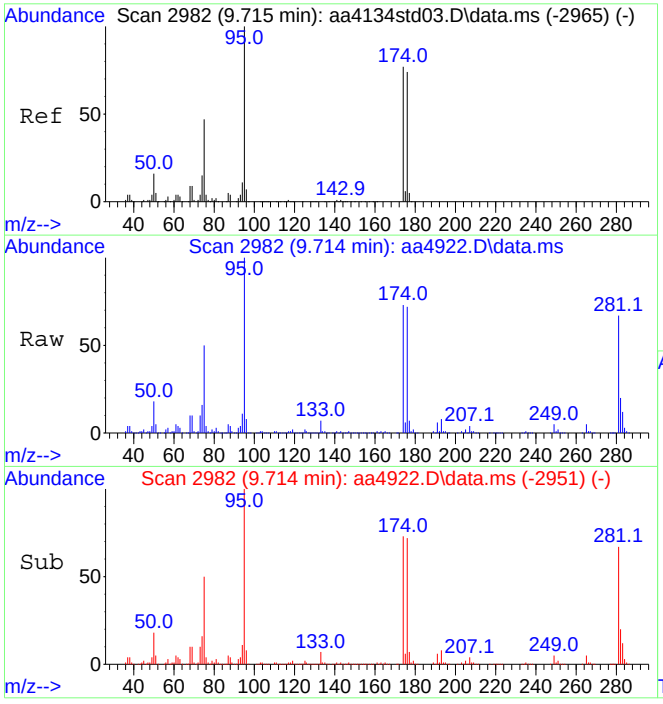



#60
Xylene (o)
Concen: 5.36 ppbV
RT: 9.029 min Scan# 2769
Delta R.T. 0.002 min
Lab File: aa4922.D
Acq: 11 Dec 2023 9:35 pm

Tgt Ion: 91 Resp: 2676039

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 44.5 | 36.8 | 55.2 |

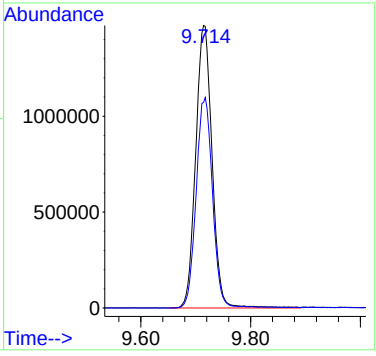


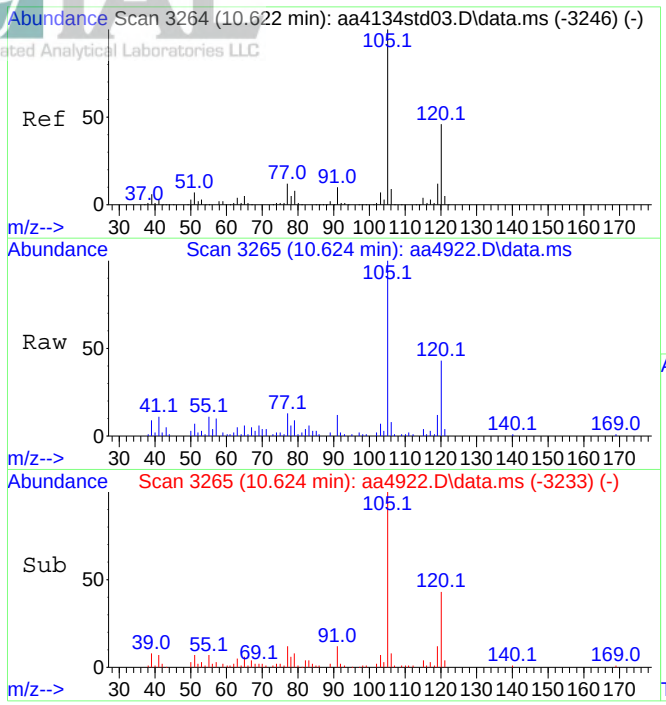




#64
Bromofluorobenzene (tune std)
Concen: 10.47 ppbV
RT: 9.714 min Scan# 2982
Delta R.T. -0.001 min
Lab File: aa4922.D
Acq: 11 Dec 2023 9:35 pm

Tgt Ion: 95 Resp: 3060568

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 74.9 | 61.1 | 91.7 |

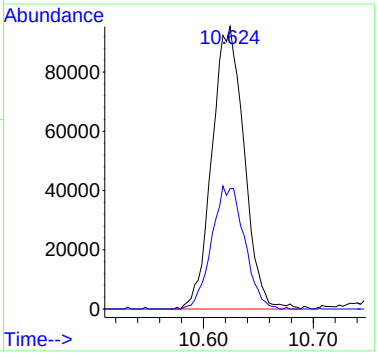





#70
1,2,4-Trimethylbenzene
Concen: 0.33 ppbV
RT: 10.624 min Scan# 3265
Delta R.T. 0.002 min
Lab File: aa4922.D
Acq: 11 Dec 2023 9:35 pm

Tgt Ion:105 Resp: 193620

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 44.3 | 36.3 | 54.5 |



# Section VII: Standards Data

## Initial Calibration Data

## Initial Calibration Verification Data

## Continuing Calibration Data

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Initial Calibration Data Summary Report

**Initial Calibration Curve:** 8/15/2023 **Method ID:** 230815.M
**Instrument:** AA

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA3401BFB] | 08/15/2023 10:11 |
| 0.2 PPBV STD [AA3402STD05] | 08/15/2023 11:15 |
| 10 PPBV STD [AA3404STD03] | 08/15/2023 13:09 |
| 2 PPBV STD [AA3403STD04] | 08/15/2023 13:45 |
| 20 PPBV STD [AA3405STD02] | 08/15/2023 15:12 |
| 40 PPBV STD [AA3406STD01] | 08/15/2023 16:47 |
| 10 PPBV ICVSS [AA3407ICVSS] | 08/15/2023 18:09 |

| | Parameter | RRF 0.2ppbv | RRF 2ppbv | RRF 10ppbv | RRF 20ppbv | RRF 40ppbv | Avg ppbv | % RSD |
|---|---|---|---|---|---|---|---|---|
| 1) | Bromochloromethane | ----------ISTD---------- | | | | | | |
| 3) | Dichlorodifluoromethane | 2.6 | 2.1 | 2.4 | 2.6 | 2.9 | 2.5 | 12 |
| 4) | 1,2-Dichlorotetrafluoroethane | 4.7 | 3.4 | 3.2 | 3.3 | 3.6 | 3.6 | 17 |
| 6) | Chloromethane | 0.073 | 0.12 | 0.12 | 0.13 | 0.15 | 0.12 | 23 |
| 7) | Vinyl chloride | 0.87 | 0.81 | 0.94 | 1.0 | 1.1 | 0.95 | 14 |
| 8) | 1,3-Butadiene | 0.94 | 0.96 | 0.93 | 0.99 | 1.0 | 0.97 | 4.6 |
| 9) | Bromomethane | 0.75 | 0.65 | 0.78 | 0.85 | 0.96 | 0.80 | 14 |
| 10) | Chloroethane | 0.44 | 0.40 | 0.52 | 0.57 | 0.65 | 0.52 | 19 |
| 11) | Vinyl bromide | 0.89 | 0.81 | 0.99 | 1.1 | 1.2 | 1.0 | 17 |
| 12) | Trichlorofluoromethane | 3.8 | 3.2 | 3.1 | 3.4 | 3.6 | 3.4 | 8.1 |
| 14) | 1,1-Dichloroethene | 1.8 | 1.7 | 2.1 | 2.3 | 2.5 | 2.1 | 15 |
| 15) | Carbon disulfide | 3.2 | 2.8 | 3.5 | 3.7 | 3.9 | 3.4 | 12 |
| 16) | 1,1,2-Trichloro-1,2,2-trifluoroethane | 4.1 | 3.6 | 2.8 | 3.0 | 3.3 | 3.4 | 16 |
| 17) | Acrolein | 0.45 | 0.34 | 0.43 | 0.45 | 0.49 | 0.43 | 13 |
| 18) | Allyl Chloride | 0.51 | 0.46 | 0.56 | 0.62 | 0.65 | 0.56 | 14 |
| 19) | Isopropanol | 2.2 | 2.0 | 2.3 | 2.5 | 2.6 | 2.3 | 10 |
| 20) | Methylene chloride | 1.9 | 0.89 | 1.1 | 1.2 | 1.3 | 1.3 | 29 |
| 21) | Acetone | 2.2 | 1.5 | 1.8 | 1.9 | 1.9 | 1.9 | 14 |
| 22) | 1,2-Dichloroethene (trans) | 1.6 | 1.5 | 1.9 | 2.1 | 2.3 | 1.9 | 17 |
| 24) | n-Hexane | 3.6 | 3.4 | 3.0 | 3.2 | 3.6 | 3.3 | 7.2 |
| 25) | Methyl tert-butyl ether | 4.7 | 5.1 | 4.0 | 4.3 | 4.7 | 4.6 | 9.5 |
| 26) | Tert-butyl alcohol | 2.9 | 3.2 | 2.6 | 2.8 | 3.2 | 2.9 | 8.1 |
| 27) | 1,1-Dichloroethane | 2.9 | 2.3 | 2.4 | 2.7 | 2.9 | 2.6 | 11 |
| 28) | 1,2-Dichloroethene (cis) | 1.7 | 1.5 | 1.8 | 2.0 | 2.2 | 1.8 | 14 |
| 29) | Cyclohexane | 2.5 | 2.7 | 2.1 | 2.3 | 2.5 | 2.4 | 9.8 |
| 30) | Chloroform | 3.3 | 2.8 | 3.0 | 3.3 | 3.6 | 3.2 | 9.6 |
| 32) | Carbon tetrachloride | 4.2 | 4.4 | 3.4 | 3.5 | 3.9 | 3.9 | 11 |
| 33) | Tetrahydrofuran | 1.8 | 1.6 | 1.7 | 1.9 | 2.0 | 1.8 | 8.7 |
| 34) | 1,1,1-Trichloroethane | 3.8 | 4.0 | 3.0 | 3.2 | 3.5 | 3.5 | 12 |
| 35) | Methyl ethyl ketone | 2.9 | 2.5 | 2.7 | 3.0 | 3.3 | 2.9 | 11 |
| 36) | n-Heptane | 3.0 | 4.0 | 3.2 | 3.3 | 3.3 | 3.4 | 11 |
| 37) | Benzene | 5.1 | 4.3 | 4.2 | 4.6 | 4.9 | 4.6 | 8.4 |
| 38) | 1,2-Dichloroethane | 2.0 | 1.8 | 1.9 | 2.2 | 2.4 | 2.1 | 11 |
| 39) | 1,4-Difluorobenzene | ----------ISTD---------- | | | | | | |
| 40) | Trichloroethene | 0.60 | 0.46 | 0.48 | 0.50 | 0.50 | 0.51 | 11 |
| 41) | 2,2,4-Trimethylpentane | 1.4 | 1.3 | 1.2 | 1.2 | 1.3 | 1.3 | 7.7 |
| 42) | 1,2-Dichloropropane | 0.54 | 0.45 | 0.43 | 0.44 | 0.42 | 0.46 | 11 |
| 43) | Bromodichloromethane | 0.91 | 0.75 | 0.76 | 0.79 | 0.77 | 0.80 | 8.1 |

***% RSD (Relative Standard Deviation) must be within 30%**
****An exception is made for 2 compounds that must be within 40%**
**RRF - Relative Response Factor**

# Initial Calibration Data Summary Report

**Initial Calibration Curve:** 8/15/2023 **Method ID:** 230815.M
**Instrument:** AA

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA3401BFB] | 08/15/2023 10:11 |
| 0.2 PPBV STD [AA3402STD05] | 08/15/2023 11:15 |
| 10 PPBV STD [AA3404STD03] | 08/15/2023 13:09 |
| 2 PPBV STD [AA3403STD04] | 08/15/2023 13:45 |
| 20 PPBV STD [AA3405STD02] | 08/15/2023 15:12 |
| 40 PPBV STD [AA3406STD01] | 08/15/2023 16:47 |
| 10 PPBV ICVSS [AA3407ICVSS] | 08/15/2023 18:09 |

| | Parameter | RRF 0.2ppbv | RRF 2ppbv | RRF 10ppbv | RRF 20ppbv | RRF 40ppbv | Avg ppbv | % RSD |
|---|---|---|---|---|---|---|---|---|
| 44) | Methyl methacrylate | 0.53 | 0.60 | 0.60 | 0.62 | 0.59 | 0.59 | 5.4 |
| 45) | 1,4-Dioxane | 0.30 | 0.29 | 0.27 | 0.28 | 0.27 | 0.28 | 3.5 |
| 46) | 1,3-Dichloropropene (cis) | 0.76 | 0.67 | 0.69 | 0.72 | 0.69 | 0.71 | 4.8 |
| 47) | Toluene | 1.6 | 1.8 | 1.6 | 1.6 | 1.4 | 1.6 | 7.6 |
| 48) | Methyl isobutyl ketone | 1.0 | 1.4 | 1.2 | 1.2 | 1.1 | 1.2 | 11 |
| 49) | Tetrachloroethene | 0.80 | 0.79 | 0.70 | 0.69 | 0.63 | 0.72 | 10 |
| 50) | 1,3-Dichloropropene (trans) | 0.59 | 0.70 | 0.73 | 0.76 | 0.71 | 0.70 | 9.3 |
| 51) | 1,1,2-Trichloroethane | 0.60 | 0.58 | 0.55 | 0.56 | 0.53 | 0.57 | 4.9 |
| 52) | Dibromochloromethane | 0.94 | 0.97 | 0.94 | 0.96 | 0.91 | 0.94 | 2.5 |
| 53) | 1,2-Dibromoethane | 0.77 | 0.84 | 0.84 | 0.87 | 0.82 | 0.83 | 4.3 |
| 54) | Methyl n-butyl ketone | 0.82 | 1.2 | 1.1 | 1.2 | 1.1 | 1.1 | 14 |
| 55) | d-5 Chlorbenzene | ----------ISTD---------- | | | | | | |
| 57) | Chlorobenzene | 1.3 | 1.1 | 1.0 | 1.0 | 1.0 | 1.1 | 11 |
| 58) | Ethylbenzene | 2.3 | 2.4 | 1.9 | 1.8 | 1.7 | 2.0 | 15 |
| 59) | Xylenes (m&p) | 1.7 | 1.8 | 1.5 | 1.3 | 0.99 | 1.5 | 22 |
| 60) | Xylenes (o) | 1.7 | 1.9 | 1.5 | 1.5 | 1.5 | 1.6 | 11 |
| 61) | Styrene | 0.95 | 1.2 | 1.1 | 1.1 | 1.1 | 1.1 | 8.3 |
| 62) | Bromoform | 0.90 | 0.87 | 0.81 | 0.79 | 0.79 | 0.83 | 6.3 |
| 63) | Cumene | 2.2 | 2.6 | 2.0 | 1.9 | 1.8 | 2.1 | 14 |
| 66) | 1,1,2,2-Tetrachloroethane | 1.4 | 1.4 | 1.1 | 1.1 | 1.1 | 1.2 | 11 |
| 67) | 4-Ethyltoluene | 2.4 | 2.7 | 2.3 | 2.1 | 1.8 | 2.3 | 14 |
| 68) | 2-Chlorotoluene | 2.0 | 2.2 | 1.8 | 1.7 | 1.7 | 1.9 | 11 |
| 69) | 1,3,5-Trimethylbenzene | 1.8 | 2.2 | 1.8 | 1.7 | 1.6 | 1.8 | 12 |
| 70) | 1,2,4-Trimethylbenzene | 1.6 | 2.2 | 1.9 | 1.8 | 1.7 | 1.8 | 13 |
| 71) | 1,3-Dichlorobenzene | 1.5 | 1.2 | 1.1 | 1.1 | 1.2 | 1.2 | 12 |
| 72) | 1,4-Dichlorobenzene | 1.2 | 1.2 | 1.2 | 1.1 | 1.2 | 1.2 | 1.4 |
| 73) | Benzyl chloride | 1.2 | 1.6 | 1.7 | 1.7 | 1.8 | 1.6 | 16 |
| 74) | 1,2-Dichlorobenzene | 1.2 | 1.2 | 1.1 | 1.1 | 1.1 | 1.1 | 4.8 |
| 75) | 1,3-Hexachlorobutadiene | 1.2 | 0.86 | 0.73 | 0.67 | 0.63 | 0.82 | 29 |
| 76) | 1,2,4-Trichlorobenzene | 1.2 | 0.85 | 0.86 | 0.82 | 0.78 | 0.90 | 18 |
| 77) | Naphthalene | 2.3 | 1.8 | 1.9 | 1.8 | 1.5 | 1.9 | 16 |

***% RSD (Relative Standard Deviation) must be within 30%**
****An exception is made for 2 compounds that must be within 40%**
**RRF - Relative Response Factor**

Method Path : C:\msdchem\1\METHODS\
Method File : 230815.M
Title : TO-15 on the Agilent 7890A / 5975C
Last Update : Wed Aug 16 10:00:51 2023
Response Via : Initial Calibration

Calibration Files
0.2 =aa3402std05.D 2 =aa3403std04.D 10 =aa3404std03.D 20 =aa3405std02.D 40 =aa3406std01.D

| | | Compound | 0.2 | 2 | 10 | 20 | 40 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|
| 1) | I | Bromochloromethane... | ----------ISTD---------- | | | | | | |
| 2) | T | Propene | 0.693 | 0.590 | 0.649 | 0.708 | 0.804 | 0.689 | 11.46 |
| 3) | T | Dichlorodifluoro... | 2.627 | 2.060 | 2.419 | 2.640 | 2.888 | 2.527 | 12.25 |
| 4) | T | 1,2-Dichlorotetr... | 4.698 | 3.379 | 3.171 | 3.318 | 3.612 | 3.636 | 16.92 |
| 5) | T | n-Butane | 1.529 | 1.686 | 1.607 | 1.650 | 1.703 | 1.635 | 4.27 |
| 6) | T | Chloromethane | 0.073 | 0.121 | 0.116 | 0.128 | 0.147 | 0.117 | 23.33 |
| 7) | T | Vinyl chloride | 0.866 | 0.806 | 0.938 | 1.004 | 1.138 | 0.950 | 13.56 |
| 8) | T | 1,3-Butadiene | 0.939 | 0.962 | 0.929 | 0.985 | 1.043 | 0.972 | 4.66 |
| 9) | T | Bromomethane | 0.754 | 0.650 | 0.781 | 0.852 | 0.955 | 0.798 | 14.26 |
| 10) | T | Chloroethane | 0.437 | 0.404 | 0.524 | 0.567 | 0.652 | 0.517 | 19.32 |
| 11) | T | Vinyl bromide | 0.891 | 0.806 | 0.989 | 1.088 | 1.246 | 1.004 | 17.12 |
| 12) | T | Trichlorofluorom... | 3.753 | 3.179 | 3.089 | 3.381 | 3.599 | 3.400 | 8.19 |
| 13) | T | Ethanol | 0.566 | 0.336 | 0.323 | 0.344 | 0.433 | 0.400 | 25.53 |
| 14) | T | 1,1-Dichloroethene | 1.836 | 1.703 | 2.114 | 2.324 | 2.466 | 2.088 | 15.36 |
| 15) | T | Carbon disulfide | 3.198 | 2.847 | 3.522 | 3.709 | 3.868 | 3.429 | 11.95 |
| 16) | T | 1,1,2-Trichloro-... | 4.138 | 3.589 | 2.807 | 2.990 | 3.274 | 3.360 | 15.67 |
| 17) | T | Acrolein | 0.446 | 0.337 | 0.430 | 0.447 | 0.488 | 0.430 | 13.07 |
| 18) | T | Allyl chloride | 0.510 | 0.458 | 0.563 | 0.616 | 0.651 | 0.559 | 13.89 |
| 19) | T | Isopropanol | 2.218 | 2.002 | 2.266 | 2.475 | 2.597 | 2.312 | 10.02 |
| 20) | T | Methylene chloride | 1.853 | 0.894 | 1.059 | 1.168 | 1.335 | 1.262 | 29.12 |
| 21) | T | Acetone | 2.238 | 1.490 | 1.826 | 1.890 | 1.937 | 1.876 | 14.27 |
| 22) | T | trans-1,2-Dichlo... | 1.626 | 1.515 | 1.873 | 2.082 | 2.300 | 1.879 | 17.14 |
| 23) | T | n-Pentane | 2.737 | 2.398 | 2.021 | 2.278 | 2.555 | 2.398 | 11.35 |
| 24) | T | n-Hexane | 3.560 | 3.405 | 3.010 | 3.196 | 3.573 | 3.349 | 7.26 |
| 25) | T | Methyl tert-buty... | 4.721 | 5.118 | 3.992 | 4.267 | 4.676 | 4.555 | 9.56 |
| 26) | T | Tert-butyl alcohol | 2.872 | 3.165 | 2.601 | 2.846 | 3.159 | 2.929 | 8.11 |
| 27) | T | 1,1-Dichloroethane | 2.886 | 2.279 | 2.406 | 2.680 | 2.935 | 2.637 | 10.96 |
| 28) | T | cis-1,2-Dichloro... | 1.666 | 1.532 | 1.766 | 1.984 | 2.173 | 1.824 | 14.01 |
| 29) | t | Cyclohexane | 2.480 | 2.742 | 2.109 | 2.281 | 2.488 | 2.420 | 9.87 |
| 30) | T | Chloroform | 3.341 | 2.813 | 3.029 | 3.345 | 3.610 | 3.228 | 9.60 |
| 31) | T | Ethyl acetate | 0.519 | 0.459 | 0.476 | 0.532 | 0.583 | 0.514 | 9.56 |
| 32) | T | Carbon tetrachlo... | 4.190 | 4.380 | 3.355 | 3.527 | 3.897 | 3.870 | 11.16 |
| 33) | T | Tetrahydrofuran | 1.813 | 1.612 | 1.725 | 1.883 | 2.033 | 1.813 | 8.79 |
| 34) | T | 1,1,1-Trichloroe... | 3.831 | 3.967 | 2.981 | 3.175 | 3.465 | 3.484 | 12.03 |
| 35) | T | Methyl ethyl ketone | 2.907 | 2.461 | 2.724 | 3.040 | 3.340 | 2.894 | 11.42 |
| 36) | T | n-Heptane | 3.009 | 3.965 | 3.169 | 3.287 | 3.321 | 3.350 | 10.89 |
| 37) | T | Benzene | 5.118 | 4.274 | 4.213 | 4.582 | 4.885 | 4.614 | 8.43 |
| 38) | T | 1,2-Dichloroethane | 2.033 | 1.799 | 1.949 | 2.171 | 2.385 | 2.067 | 10.78 |
| 39) | I | 1,4-Difluorobenzen... | ----------ISTD---------- | | | | | | |
| 40) | T | Trichloroethene | 0.604 | 0.461 | 0.476 | 0.499 | 0.498 | 0.508 | 11.08 |
| 41) | T | 2,2,4-Trimethylp... | 1.422 | 1.283 | 1.173 | 1.194 | 1.261 | 1.267 | 7.75 |
| 42) | T | 1,2-Dichloropropane | 0.544 | 0.451 | 0.428 | 0.436 | 0.423 | 0.456 | 10.95 |
| 43) | T | Bromodichloromet... | 0.909 | 0.753 | 0.759 | 0.786 | 0.768 | 0.795 | 8.19 |
| 44) | T | Methyl methacrylate | 0.533 | 0.595 | 0.599 | 0.618 | 0.589 | 0.587 | 5.41 |
| 45) | T | 1,4-Dioxane | 0.295 | 0.288 | 0.274 | 0.280 | 0.270 | 0.281 | 3.52 |
| 46) | T | cis-1,3-Dichloro... | 0.756 | 0.671 | 0.693 | 0.721 | 0.685 | 0.705 | 4.82 |
| 47) | T | Toluene | 1.603 | 1.770 | 1.615 | 1.607 | 1.423 | 1.603 | 7.69 |
| 48) | T | Methyl isobutyl ... | 1.020 | 1.358 | 1.158 | 1.169 | 1.085 | 1.158 | 10.96 |
| 49) | T | Tetrachloroethene | 0.802 | 0.785 | 0.698 | 0.693 | 0.626 | 0.721 | 10.04 |
| 50) | T | trans-1,3-Dichlo... | 0.586 | 0.696 | 0.728 | 0.757 | 0.709 | 0.695 | 9.37 |
| 51) | T | 1,1,2-Trichloroe... | 0.602 | 0.582 | 0.549 | 0.561 | 0.531 | 0.565 | 4.93 |
| 52) | T | Dibromochloromet... | 0.941 | 0.968 | 0.936 | 0.964 | 0.910 | 0.944 | 2.50 |
| 53) | T | 1,2-Dibromoethane | 0.770 | 0.838 | 0.835 | 0.869 | 0.822 | 0.827 | 4.35 |
| 54) | T | Methyl n-butyl k... | 0.821 | 1.172 | 1.136 | 1.176 | 1.120 | 1.085 | 13.80 |
| 55) | I | d-5 Chlorobenzene ... | ----------ISTD---------- | | | | | | |
| 56) | T | n-Nonane | 1.127 | 1.476 | 1.174 | 1.162 | 1.180 | 1.224 | 11.64 |
| 57) | T | Chlorobenzene | 1.289 | 1.143 | 1.029 | 1.009 | 1.005 | 1.095 | 11.15 |
| 58) | T | Ethylbenzene | 2.334 | 2.354 | 1.930 | 1.830 | 1.678 | 2.025 | 15.04 |
| 59) | T | Xylenes (m&p) | 1.738 | 1.788 | 1.455 | 1.324 | 0.993 | 1.460 | 22.23 |
| 60) | T | Xylene (o) | 1.710 | 1.878 | 1.542 | 1.505 | 1.471 | 1.621 | 10.51 |

Method Path : C:\msdchem\1\METHODS\
Method File : 230815.M

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 61) | T | Styrene | 0.947 | 1.200 | 1.093 | 1.071 | 1.068 | 1.076 | 8.35 |
| 62) | T | Bromoform | 0.903 | 0.872 | 0.806 | 0.789 | 0.786 | 0.831 | 6.38 |
| 63) | T | Cumene | 2.186 | 2.576 | 2.043 | 1.945 | 1.808 | 2.112 | 13.92 |
| 64) | S | Bromofluorobenze... | 0.736 | 0.817 | 0.818 | 0.845 | 0.943 | 0.832 | 8.94 |
| 65) | T | n-Propyl benzene | 2.996 | 3.397 | 2.766 | 2.573 | 2.034 | 2.753 | 18.37 |
| 66) | T | 1,1,2,2-Tetrachl... | 1.381 | 1.376 | 1.137 | 1.117 | 1.132 | 1.228 | 11.16 |
| 67) | T | 4-Ethyltoluene | 2.355 | 2.737 | 2.278 | 2.143 | 1.835 | 2.270 | 14.45 |
| 68) | T | 2-Chlorotoluene | 1.964 | 2.171 | 1.778 | 1.722 | 1.704 | 1.868 | 10.62 |
| 69) | T | 1,3,5-Trimethylb... | 1.800 | 2.225 | 1.792 | 1.719 | 1.648 | 1.837 | 12.28 |
| 70) | T | 1,2,4-Trimethylb... | 1.568 | 2.188 | 1.854 | 1.793 | 1.705 | 1.821 | 12.71 |
| 71) | T | 1,3-Dichlorobenzene | 1.459 | 1.183 | 1.126 | 1.114 | 1.157 | 1.208 | 11.85 |
| 72) | T | 1,4-Dichlorobenzene | 1.161 | 1.161 | 1.153 | 1.142 | 1.187 | 1.161 | 1.43 |
| 73) | T | Benzyl chloride | 1.168 | 1.566 | 1.708 | 1.744 | 1.770 | 1.591 | 15.67 |
| 74) | T | 1,2-Dichlorobenzene | 1.169 | 1.225 | 1.111 | 1.083 | 1.128 | 1.143 | 4.82 |
| 75) | T | 1,3-Hexachlorobu... | 1.209 | 0.857 | 0.729 | 0.674 | 0.629 | 0.820 | 28.53 |
| 76) | T | 1,2,4-Trichlorob... | 1.191 | 0.845 | 0.860 | 0.816 | 0.781 | 0.899 | 18.48 |
| 77) | T | Naphthalene | 2.270 | 1.826 | 1.920 | 1.809 | 1.459 | 1.857 | 15.61 |

(#) = Out of Range

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3402std05.D
Acq On : 15 Aug 2023 11:15 am
Operator : jjw
Sample : 0.2 ppbv standard
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 15 17:16:53 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:15:22 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.380 | 130 | 543782 | 10.00 | ppbV | | -0.016 |
| 39) 1,4-Difluorobenzene (IS) | 5.448 | 114 | 2104790 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 2068537 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1523370 | 8.85 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 1.454 | 41 | 8216 | 0.22 | ppbV | # | 67 |
| 3) Dichlorodifluoromethane | 1.492 | 85 | 30288 | 0.22 | ppbV | | 99 |
| 4) 1,2-Dichlorotetrafluor... | 1.626 | 85 | 50076 | 0.25 | ppbV | | 96 |
| 5) n-Butane | 1.698 | 43 | 18121 | 0.20 | ppbV | | 97 |
| 6) Chloromethane | 1.763 | 52 | 890 | 0.14 | ppbV | | 54 |
| 7) Vinyl chloride | 1.760 | 62 | 10168 | 0.20 | ppbV | | 97 |
| 8) 1,3-Butadiene | 1.767 | 39 | 10931 | 0.21 | ppbV | | 84 |
| 9) Bromomethane | 2.049 | 94 | 8195 | 0.19 | ppbV | | 87 |
| 10) Chloroethane | 2.171 | 64 | 5038 | 0.18 | ppbV | # | 73 |
| 11) Vinyl bromide | 2.271 | 106 | 9786 | 0.18 | ppbV | | 94 |
| 12) Trichlorofluoromethane | 2.287 | 101 | 44897 | 0.24 | ppbV | | 99 |
| 13) Ethanol | 2.650 | 45 | 6400 | 0.29 | ppbV | # | 53 |
| 14) 1,1-Dichloroethene | 2.711 | 61 | 20761 | 0.18 | ppbV | | 99 |
| 15) Carbon disulfide | 2.731 | 76 | 37217 | 0.20 | ppbV | # | 87 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.750 | 101 | 49053 | 0.27 | ppbV | | 100 |
| 17) Acrolein | 2.956 | 56 | 4855 | 0.21 | ppbV | | 84 |
| 18) Allyl chloride | 3.091 | 76 | 5995 | 0.20 | ppbV | | 100 |
| 19) Isopropanol | 3.097 | 45 | 21471 | 0.17 | ppbV | # | 78 |
| 20) Methylene chloride | 3.184 | 49 | 21768 | 0.31 | ppbV | | 94 |
| 21) Acetone | 3.194 | 43 | 26290 | 0.26 | ppbV | # | 87 |
| 22) trans-1,2-Dichloroethene | 3.309 | 61 | 19630 | 0.19 | ppbV | | 99 |
| 23) n-Pentane | 3.393 | 43 | 32143 | 0.25 | ppbV | | 94 |
| 24) n-Hexane | 3.387 | 57 | 42982 | 0.24 | ppbV | | 89 |
| 25) Methyl tert-butyl ether | 3.396 | 73 | 57505 | 0.23 | ppbV | | 99 |
| 26) Tert-butyl alcohol | 3.454 | 59 | 35922 | 0.23 | ppbV | | 100 |
| 27) 1,1-Dichloroethane | 3.798 | 63 | 33581 | 0.23 | ppbV | | 93 |
| 28) cis-1,2-Dichloroethene | 4.223 | 61 | 19745 | 0.20 | ppbV | | 100 |
| 29) Cyclohexane | 4.396 | 56 | 30214 | 0.23 | ppbV | | 97 |
| 30) Chloroform | 4.441 | 83 | 39248 | 0.22 | ppbV | | 97 |
| 31) Ethyl acetate | 4.534 | 61 | 6099 | 0.22 | ppbV | | 99 |
| 32) Carbon tetrachloride | 4.560 | 117 | 50587 | 0.24 | ppbV | | 99 |
| 33) Tetrahydrofuran | 4.567 | 42 | 21884 | 0.22 | ppbV | | 96 |
| 34) 1,1,1-Trichloroethane | 4.608 | 97 | 45414 | 0.24 | ppbV | | 97 |
| 35) Methyl ethyl ketone | 4.676 | 43 | 34778 | 0.22 | ppbV | | 96 |
| 36) n-Heptane | 4.907 | 43 | 36329 | 0.20 | ppbV | | 98 |
| 37) Benzene | 4.923 | 78 | 60118 | 0.24 | ppbV | | 100 |
| 38) 1,2-Dichloroethane | 5.087 | 62 | 24098 | 0.21 | ppbV | | 100 |
| 40) Trichloroethene | 5.425 | 130 | 25424 | 0.24 | ppbV | | 97 |
| 41) 2,2,4-Trimethylpentane | 4.833 | 57 | 65257 | 0.24 | ppbV | | 99 |
| 42) 1,2-Dichloropropane | 5.875 | 63 | 25405 | 0.26 | ppbV | | 97 |
| 43) Bromodichloromethane | 5.943 | 83 | 44017 | 0.26 | ppbV | | 100 |
| 44) Methyl methacrylate | 6.081 | 41 | 24702 | 0.20 | ppbV | | 95 |
| 45) 1,4-Dioxane | 6.116 | 88 | 14508 | 0.25 | ppbV | | 92 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 35333 | 0.24 | ppbV | | 100 |
| 47) Toluene | 6.769 | 91 | 72857 | 0.22 | ppbV | | 97 |
| 48) Methyl isobutyl ketone | 7.132 | 43 | 46816 | 0.19 | ppbV | | 96 |
| 49) Tetrachloroethene | 7.161 | 166 | 37803 | 0.25 | ppbV | | 99 |
| 50) trans-1,3-Dichloropropene | 7.174 | 75 | 27399 | 0.19 | ppbV | | 93 |
| 51) 1,1,2-Trichloroethane | 7.335 | 97 | 27389 | 0.23 | ppbV | | 98 |

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3402std05.D
Acq On : 15 Aug 2023 11:15 am
Operator : jjw
Sample : 0.2 ppbv standard
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

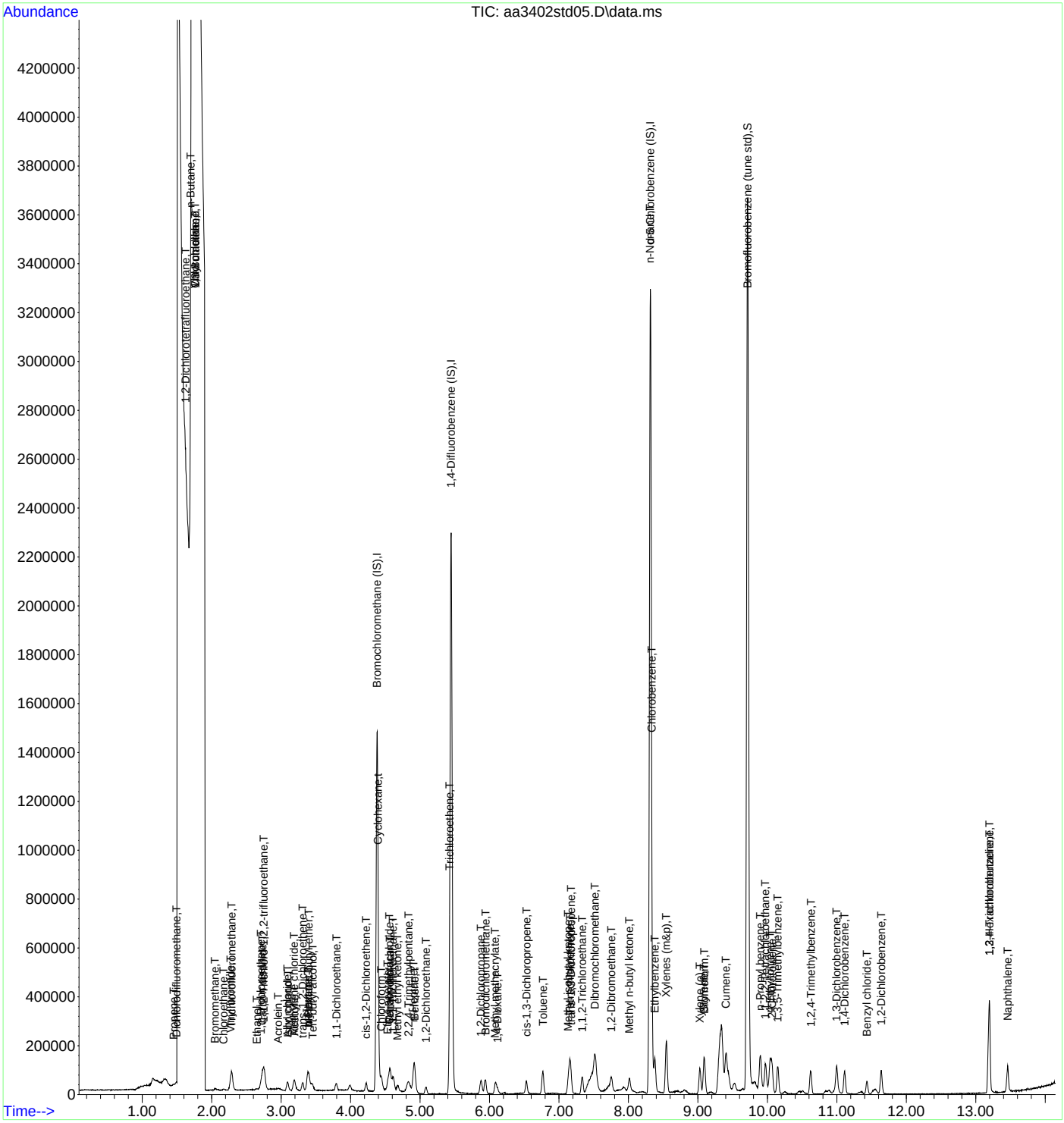
Quant Time: Aug 15 17:16:53 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:15:22 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.518 | 129 | 44365 | 0.22 | ppbV | | 98 |
| 53) 1,2-Dibromoethane | 7.753 | 107 | 35025 | 0.20 | ppbV | | 99 |
| 54) Methyl n-butyl ketone | 8.010 | 43 | 39036 | 0.17 | ppbV | | 94 |
| 56) n-Nonane | 8.312 | 43 | 51740 | 0.20 | ppbV | | 94 |
| 57) Chlorobenzene | 8.335 | 112 | 59186 | 0.26 | ppbV | # | 57 |
| 58) Ethylbenzene | 8.380 | 91 | 107190 | 0.26 | ppbV | | 98 |
| 59) Xylenes (m&p) | 8.544 | 91 | 160319 | 0.53 | ppbV | | 96 |
| 60) Xylene (o) | 9.026 | 91 | 77796 | 0.23 | ppbV | | 100 |
| 61) Styrene | 9.087 | 104 | 44277 | 0.20 | ppbV | | 97 |
| 62) Bromoform | 9.094 | 173 | 42204 | 0.25 | ppbV | | 99 |
| 63) Cumene | 9.402 | 105 | 96781 | 0.22 | ppbV | | 99 |
| 65) n-Propyl benzene | 9.898 | 91 | 133875 | 0.24 | ppbV | | 91 |
| 66) 1,1,2,2-Tetrachloroethane | 9.968 | 83 | 65139 | 0.26 | ppbV | | 99 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 105229 | 0.22 | ppbV | | 94 |
| 68) 2-Chlorotoluene | 10.068 | 91 | 88564 | 0.23 | ppbV | | 100 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 81154 | 0.21 | ppbV | | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.627 | 105 | 70043 | 0.19 | ppbV | | 100 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 67007 | 0.27 | ppbV | | 97 |
| 72) 1,4-Dichlorobenzene | 11.113 | 146 | 51408 | 0.21 | ppbV | | 98 |
| 73) Benzyl chloride | 11.431 | 91 | 48312 | 0.15 | ppbV | | 99 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 51755 | 0.22 | ppbV | | 97 |
| 75) 1,3-Hexachlorobutadiene | 13.196 | 225 | 55512 | 0.33 | ppbV | | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.196 | 180 | 54202 | 0.29 | ppbV | | 99 |
| 77) Naphthalene | 13.460 | 128 | 93896 | 0.24 | ppbV | | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3402std05.D
Acq On : 15 Aug 2023 11:15 am
Operator : jjw
Sample : 0.2 ppbv standard
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 15 17:16:53 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:15:22 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3403std04.D
Acq On : 15 Aug 2023 1:45 pm
Operator : jjw
Sample : 2.0 ppbv standard
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 16 09:55:55 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.393 | 130 | 541075 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.454 | 114 | 2325427 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 2787489 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 2277207 | 9.82 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.486 | 41 | 69587 | 1.87 | ppbV | 98 |
| 3) Dichlorodifluoromethane | 1.529 | 85 | 236252 | 1.73 | ppbV | 99 |
| 4) 1,2-Dichlorotetrafluor... | 1.650 | 85 | 358355 | 1.82 | ppbV | 100 |
| 5) n-Butane | 1.729 | 43 | 199054 | 2.26 | ppbV | 98 |
| 6) Chloromethane | 1.791 | 52 | 14658 | 2.32 | ppbV | 76 |
| 7) Vinyl chloride | 1.780 | 62 | 94169 | 1.83 | ppbV | 96 |
| 8) 1,3-Butadiene | 1.794 | 39 | 111420 | 2.12 | ppbV | 99 |
| 9) Bromomethane | 2.081 | 94 | 70289 | 1.63 | ppbV | 99 |
| 10) Chloroethane | 2.190 | 64 | 46371 | 1.66 | ppbV | 96 |
| 11) Vinyl bromide | 2.296 | 106 | 88069 | 1.62 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.313 | 101 | 378425 | 2.06 | ppbV | 100 |
| 13) Ethanol | 2.676 | 45 | 37762 | 1.74 | ppbV | 98 |
| 14) 1,1-Dichloroethene | 2.731 | 61 | 191611 | 1.70 | ppbV | 99 |
| 15) Carbon disulfide | 2.753 | 76 | 329694 | 1.78 | ppbV | 99 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.776 | 101 | 423345 | 2.33 | ppbV | 99 |
| 17) Acrolein | 2.985 | 56 | 36438 | 1.57 | ppbV | 98 |
| 18) Allyl chloride | 3.110 | 76 | 53539 | 1.77 | ppbV | 100 |
| 19) Isopropanol | 3.113 | 45 | 192840 | 1.54 | ppbV | 99 |
| 20) Methylene chloride | 3.203 | 49 | 104527 | 1.53 | ppbV | 97 |
| 21) Acetone | 3.213 | 43 | 174115 | 1.72 | ppbV | 100 |
| 22) trans-1,2-Dichloroethene | 3.325 | 61 | 182032 | 1.79 | ppbV | 100 |
| 23) n-Pentane | 3.406 | 43 | 280301 | 2.16 | ppbV | 97 |
| 24) n-Hexane | 3.403 | 57 | 408984 | 2.26 | ppbV | 97 |
| 25) Methyl tert-butyl ether | 3.409 | 73 | 620249 | 2.52 | ppbV | 91 |
| 26) Tert-butyl alcohol | 3.460 | 59 | 393824 | 2.49 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 246573 | 1.73 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.239 | 61 | 180663 | 1.83 | ppbV | 99 |
| 29) Cyclohexane | 4.409 | 56 | 332356 | 2.54 | ppbV | 100 |
| 30) Chloroform | 4.454 | 83 | 328798 | 1.88 | ppbV | 100 |
| 31) Ethyl acetate | 4.544 | 61 | 53660 | 1.93 | ppbV | 98 |
| 32) Carbon tetrachloride | 4.573 | 117 | 526172 | 2.51 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.576 | 42 | 193630 | 1.97 | ppbV | 100 |
| 34) 1,1,1-Trichloroethane | 4.624 | 97 | 467891 | 2.48 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.685 | 43 | 292932 | 1.87 | ppbV | 98 |
| 36) n-Heptane | 4.917 | 43 | 476323 | 2.63 | ppbV | 99 |
| 37) Benzene | 4.933 | 78 | 499517 | 2.00 | ppbV | 99 |
| 38) 1,2-Dichloroethane | 5.094 | 62 | 212238 | 1.90 | ppbV | 100 |
| 40) Trichloroethene | 5.435 | 130 | 214306 | 1.82 | ppbV | 99 |
| 41) 2,2,4-Trimethylpentane | 4.837 | 57 | 650366 | 2.21 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 232645 | 2.19 | ppbV | 99 |
| 43) Bromodichloromethane | 5.946 | 83 | 402522 | 2.18 | ppbV | 98 |
| 44) Methyl methacrylate | 6.091 | 41 | 304586 | 2.23 | ppbV | 100 |
| 45) 1,4-Dioxane | 6.113 | 88 | 156518 | 2.39 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 346212 | 2.11 | ppbV | 100 |
| 47) Toluene | 6.772 | 91 | 889263 | 2.39 | ppbV | 98 |
| 48) Methyl isobutyl ketone | 7.136 | 43 | 688572 | 2.56 | ppbV | 99 |
| 49) Tetrachloroethene | 7.161 | 166 | 408926 | 2.44 | ppbV | 99 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 359255 | 2.22 | ppbV | 99 |
| 51) 1,1,2-Trichloroethane | 7.338 | 97 | 292415 | 2.23 | ppbV | 99 |

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3403std04.D
Acq On : 15 Aug 2023 1:45 pm
Operator : jjw
Sample : 2.0 ppbv standard
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

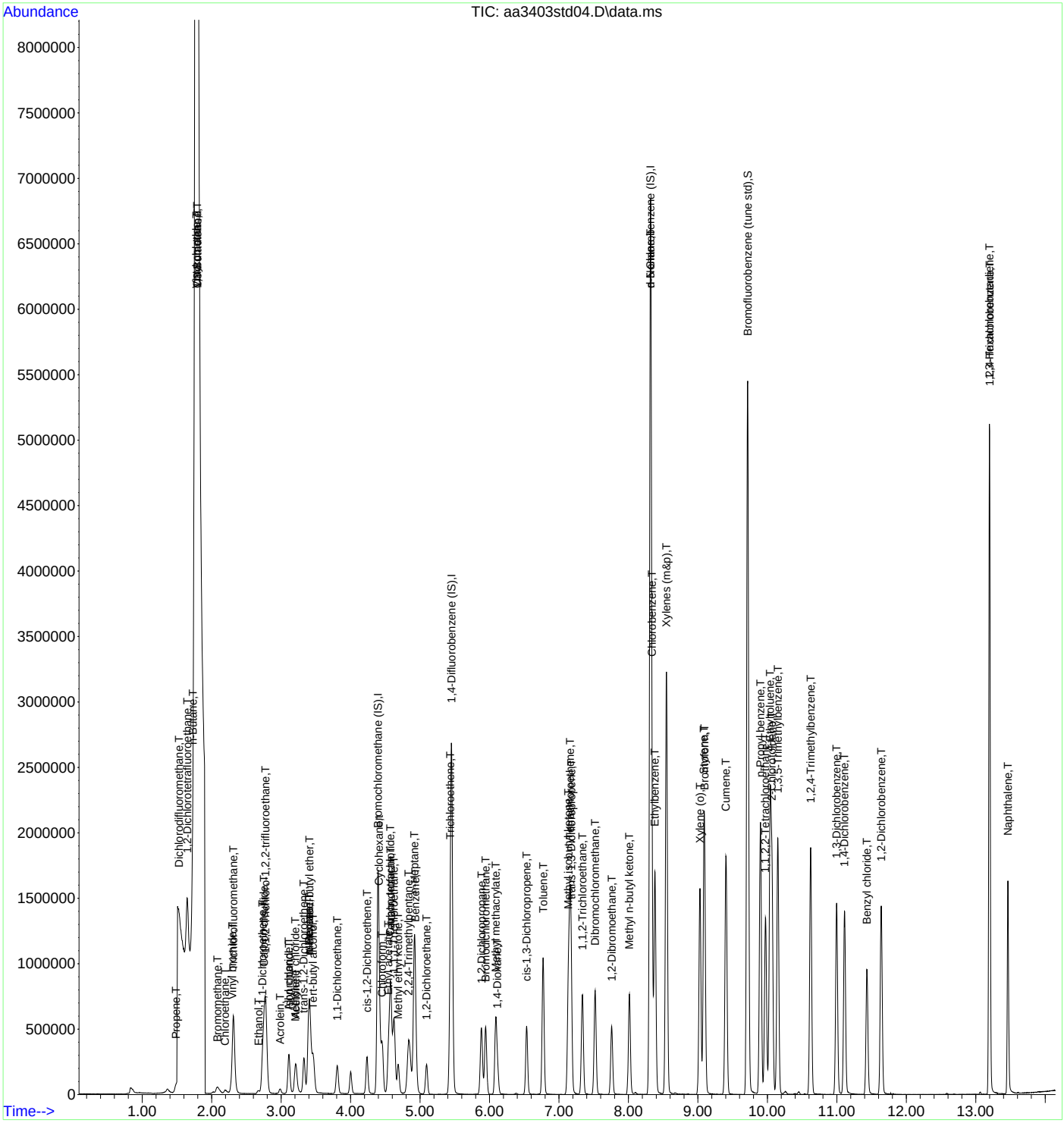
Quant Time: Aug 16 09:55:55 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 504182 | 2.30 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 421042 | 2.19 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.013 | 43 | 615992 | 2.44 | ppbV | 99 |
| 56) n-Nonane | 8.319 | 43 | 913232 | 2.68 | ppbV | 98 |
| 57) Chlorobenzene | 8.338 | 112 | 707397 | 2.32 | ppbV | 96 |
| 58) Ethylbenzene | 8.380 | 91 | 1456927 | 2.58 | ppbV | 100 |
| 59) Xylenes (m&p) | 8.547 | 91 | 2222904 | 5.46 | ppbV | 99 |
| 60) Xylene (o) | 9.029 | 91 | 1151590 | 2.55 | ppbV | 99 |
| 61) Styrene | 9.087 | 104 | 755721 | 2.52 | ppbV | 98 |
| 62) Bromoform | 9.097 | 173 | 549148 | 2.37 | ppbV | 100 |
| 63) Cumene | 9.402 | 105 | 1536381 | 2.61 | ppbV | 99 |
| 65) n-Propyl benzene | 9.901 | 91 | 2045481 | 2.67 | ppbV | 99 |
| 66) 1,1,2,2-Tetrachloroethane | 9.971 | 83 | 874245 | 2.55 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 1647910 | 2.60 | ppbV | 99 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 1319338 | 2.53 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.151 | 105 | 1352228 | 2.64 | ppbV | 100 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 1317527 | 2.59 | ppbV | 99 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 732133 | 2.17 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 692835 | 2.14 | ppbV | 99 |
| 73) Benzyl chloride | 11.431 | 91 | 873022 | 1.97 | ppbV | 99 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 730471 | 2.29 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.196 | 225 | 530064 | 2.32 | ppbV | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 518457 | 2.07 | ppbV | 100 |
| 77) Naphthalene | 13.463 | 128 | 1018158 | 1.97 | ppbV | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3403std04.D
Acq On : 15 Aug 2023 1:45 pm
Operator : jjw
Sample : 2.0 ppbv standard
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 16 09:55:55 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3404std03.D
Acq On : 15 Aug 2023 1:09 pm
Operator : jjw
Sample : 10 ppbv standard
Misc : EB0103704
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 16 09:54:13 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.396 | 130 | 530723 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 2268530 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 2737620 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.718 | 95 | 2240242 | 9.84 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.492 | 41 | 375623 | 10.28 | ppbV | 100 |
| 3) Dichlorodifluoromethane | 1.529 | 85 | 1361127 | 10.15 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.650 | 85 | 1649087 | 8.55 | ppbV | 100 |
| 5) n-Butane | 1.732 | 43 | 929570 | 10.75 | ppbV | 98 |
| 6) Chloromethane | 1.794 | 52 | 69017 | 11.11 | ppbV | 100 |
| 7) Vinyl chloride | 1.784 | 62 | 537570 | 10.66 | ppbV | 100 |
| 8) 1,3-Butadiene | 1.794 | 39 | 527528 | 10.23 | ppbV | 100 |
| 9) Bromomethane | 2.084 | 94 | 414507 | 9.79 | ppbV | 100 |
| 10) Chloroethane | 2.197 | 64 | 294705 | 10.74 | ppbV | 100 |
| 11) Vinyl bromide | 2.297 | 106 | 529947 | 9.94 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.313 | 101 | 1803210 | 9.99 | ppbV | 100 |
| 13) Ethanol | 2.670 | 45 | 178190 | 8.39 | ppbV | 100 |
| 14) 1,1-Dichloroethene | 2.734 | 61 | 1166579 | 10.54 | ppbV | 100 |
| 15) Carbon disulfide | 2.753 | 76 | 2000133 | 10.99 | ppbV | 100 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.779 | 101 | 1623708 | 9.11 | ppbV | 100 |
| 17) Acrolein | 2.988 | 56 | 228259 | 10.01 | ppbV | 100 |
| 18) Allyl chloride | 3.113 | 76 | 322565 | 10.86 | ppbV | 100 |
| 19) Isopropanol | 3.113 | 45 | 1070426 | 8.72 | ppbV | 100 |
| 20) Methylene chloride | 3.203 | 49 | 607018 | 9.06 | ppbV | 100 |
| 21) Acetone | 3.213 | 43 | 1046415 | 10.51 | ppbV | 100 |
| 22) trans-1,2-Dichloroethene | 3.329 | 61 | 1103133 | 11.06 | ppbV | 100 |
| 23) n-Pentane | 3.409 | 43 | 1158219 | 9.10 | ppbV | 100 |
| 24) n-Hexane | 3.406 | 57 | 1757143 | 9.89 | ppbV | 100 |
| 25) Methyl tert-butyl ether | 3.412 | 73 | 2372793 | 9.82 | ppbV | 100 |
| 26) Tert-butyl alcohol | 3.467 | 59 | 1587668 | 10.21 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.811 | 63 | 1366393 | 9.76 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.235 | 61 | 1021823 | 10.55 | ppbV | 100 |
| 29) Cyclohexane | 4.415 | 56 | 1253558 | 9.76 | ppbV | 100 |
| 30) Chloroform | 4.457 | 83 | 1736397 | 10.14 | ppbV | 100 |
| 31) Ethyl acetate | 4.544 | 61 | 272622 | 10.00 | ppbV | 100 |
| 32) Carbon tetrachloride | 4.579 | 117 | 1958808 | 9.54 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.576 | 42 | 1006885 | 10.46 | ppbV | 100 |
| 34) 1,1,1-Trichloroethane | 4.628 | 97 | 1724281 | 9.33 | ppbV | 100 |
| 35) Methyl ethyl ketone | 4.686 | 43 | 1590191 | 10.35 | ppbV | 100 |
| 36) n-Heptane | 4.920 | 43 | 1866612 | 10.50 | ppbV | 100 |
| 37) Benzene | 4.933 | 78 | 2414826 | 9.86 | ppbV | 100 |
| 38) 1,2-Dichloroethane | 5.094 | 62 | 1127298 | 10.27 | ppbV | 100 |
| 40) Trichloroethene | 5.435 | 130 | 1079500 | 9.38 | ppbV | 100 |
| 41) 2,2,4-Trimethylpentane | 4.846 | 57 | 2899901 | 10.09 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 1067336 | 10.31 | ppbV | 100 |
| 43) Bromodichloromethane | 5.946 | 83 | 1979492 | 10.98 | ppbV | 100 |
| 44) Methyl methacrylate | 6.091 | 41 | 1493887 | 11.22 | ppbV | 100 |
| 45) 1,4-Dioxane | 6.113 | 88 | 728333 | 11.41 | ppbV | 100 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 1744754 | 10.91 | ppbV | 100 |
| 47) Toluene | 6.772 | 91 | 3957437 | 10.88 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.136 | 43 | 2863824 | 10.90 | ppbV | 100 |
| 49) Tetrachloroethene | 7.161 | 166 | 1772265 | 10.84 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 1834063 | 11.63 | ppbV | 100 |
| 51) 1,1,2-Trichloroethane | 7.338 | 97 | 1345722 | 10.50 | ppbV | 100 |

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3404std03.D
Acq On : 15 Aug 2023 1:09 pm
Operator : jjw
Sample : 10 ppbv standard
Misc : EB0103704
ALS Vial : 4 Sample Multiplier: 1

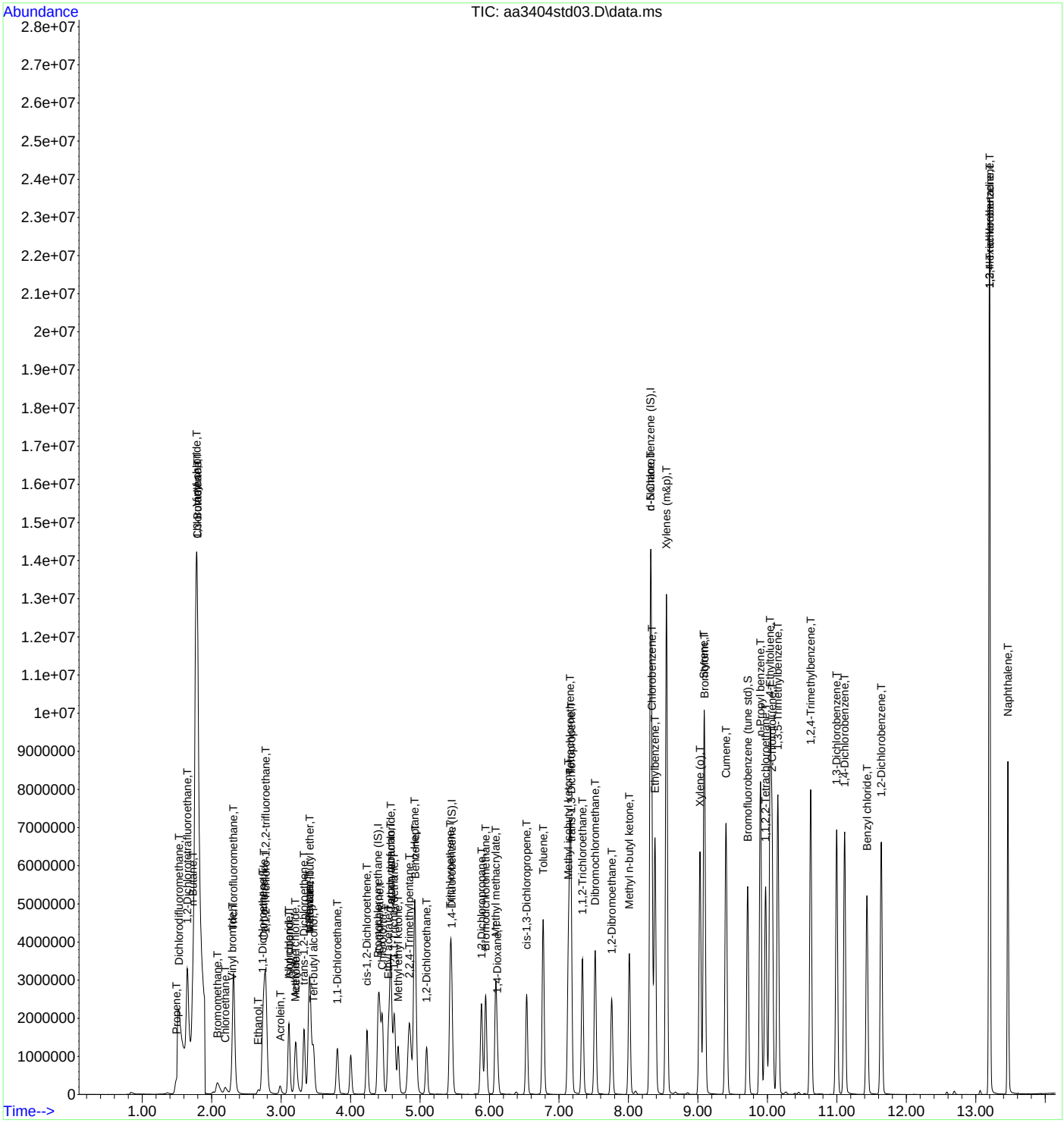
Quant Time: Aug 16 09:54:13 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 2376959 | 11.11 | ppbV | 100 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 2045235 | 10.91 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.013 | 43 | 2912111 | 11.83 | ppbV | 100 |
| 56) n-Nonane | 8.319 | 43 | 3534946 | 10.55 | ppbV | 100 |
| 57) Chlorobenzene | 8.338 | 112 | 3126708 | 10.43 | ppbV | 100 |
| 58) Ethylbenzene | 8.383 | 91 | 5864430 | 10.58 | ppbV | 100 |
| 59) Xylenes (m&p) | 8.547 | 91 | 8881004 | 22.23 | ppbV | 100 |
| 60) Xylene (o) | 9.029 | 91 | 4642943 | 10.46 | ppbV | 100 |
| 61) Styrene | 9.087 | 104 | 3380250 | 11.48 | ppbV | 100 |
| 62) Bromoform | 9.097 | 173 | 2491890 | 10.95 | ppbV | 100 |
| 63) Cumene | 9.406 | 105 | 5984852 | 10.35 | ppbV | 100 |
| 65) n-Propyl benzene | 9.901 | 91 | 8177614 | 10.85 | ppbV | 100 |
| 66) 1,1,2,2-Tetrachloroethane | 9.975 | 83 | 3547036 | 10.55 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 6733965 | 10.84 | ppbV | 100 |
| 68) 2-Chlorotoluene | 10.068 | 91 | 5305123 | 10.37 | ppbV | 100 |
| 69) 1,3,5-Trimethylbenzene | 10.152 | 105 | 5348299 | 10.64 | ppbV | 100 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 5481212 | 10.99 | ppbV | 100 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 3421975 | 10.35 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.113 | 146 | 3376978 | 10.63 | ppbV | 100 |
| 73) Benzyl chloride | 11.434 | 91 | 4675578 | 10.73 | ppbV | 100 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 3254751 | 10.40 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.200 | 225 | 2216471 | 9.88 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 2590387 | 10.53 | ppbV | 100 |
| 77) Naphthalene | 13.463 | 128 | 5257288 | 10.34 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3404std03.D
Acq On : 15 Aug 2023 1:09 pm
Operator : jjw
Sample : 10 ppbv standard
Misc : EB0103704
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 16 09:54:13 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3405std02.D
Acq On : 15 Aug 2023 3:12 pm
Operator : jjw
Sample : 20 ppbv standard
Misc : EB0103704
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 16 09:53:17 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.399 | 130 | 499473 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 2278768 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 2812211 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 2375515 | 10.15 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.499 | 41 | 770871 | 22.41 | ppbV | 99 |
| 3) Dichlorodifluoromethane | 1.533 | 85 | 2795748 | 22.15 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.657 | 85 | 3247750 | 17.89 | ppbV | 100 |
| 5) n-Butane | 1.736 | 43 | 1882829 | 23.14 | ppbV | 99 |
| 6) Chloromethane | 1.798 | 52 | 142733 | 24.42 | ppbV | 98 |
| 7) Vinyl chloride | 1.787 | 62 | 1083251 | 22.82 | ppbV | 99 |
| 8) 1,3-Butadiene | 1.801 | 39 | 1052739 | 21.69 | ppbV | 99 |
| 9) Bromomethane | 2.091 | 94 | 850633 | 21.34 | ppbV | 100 |
| 10) Chloroethane | 2.200 | 64 | 600686 | 23.27 | ppbV | 98 |
| 11) Vinyl bromide | 2.300 | 106 | 1097918 | 21.89 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.319 | 101 | 3715497 | 21.88 | ppbV | 100 |
| 13) Ethanol | 2.673 | 45 | 357760 | 17.89 | ppbV | 99 |
| 14) 1,1-Dichloroethene | 2.737 | 61 | 2414830 | 23.18 | ppbV | 100 |
| 15) Carbon disulfide | 2.756 | 76 | 3964880 | 23.15 | ppbV | 99 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.779 | 101 | 3255314 | 19.40 | ppbV | 100 |
| 17) Acrolein | 2.991 | 56 | 446408 | 20.80 | ppbV | 98 |
| 18) Allyl chloride | 3.113 | 76 | 664077 | 23.76 | ppbV | 100 |
| 19) Isopropanol | 3.113 | 45 | 2200207 | 19.06 | ppbV | 99 |
| 20) Methylene chloride | 3.207 | 49 | 1260244 | 19.99 | ppbV | 100 |
| 21) Acetone | 3.216 | 43 | 2038682 | 21.76 | ppbV | 100 |
| 22) trans-1,2-Dichloroethene | 3.332 | 61 | 2308104 | 24.59 | ppbV | 99 |
| 23) n-Pentane | 3.409 | 43 | 2302426 | 19.23 | ppbV | 99 |
| 24) n-Hexane | 3.412 | 57 | 3543404 | 21.18 | ppbV | 99 |
| 25) Methyl tert-butyl ether | 3.412 | 73 | 4774341 | 20.99 | ppbV | 99 |
| 26) Tert-butyl alcohol | 3.467 | 59 | 3269773 | 22.35 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.811 | 63 | 2864453 | 21.75 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.239 | 61 | 2160622 | 23.71 | ppbV | 100 |
| 29) Cyclohexane | 4.419 | 56 | 2552240 | 21.11 | ppbV | 100 |
| 30) Chloroform | 4.457 | 83 | 3608439 | 22.38 | ppbV | 99 |
| 31) Ethyl acetate | 4.544 | 61 | 573589 | 22.35 | ppbV | 98 |
| 32) Carbon tetrachloride | 4.579 | 117 | 3910518 | 20.23 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.576 | 42 | 2087668 | 23.05 | ppbV | 99 |
| 34) 1,1,1-Trichloroethane | 4.631 | 97 | 3456960 | 19.87 | ppbV | 100 |
| 35) Methyl ethyl ketone | 4.686 | 43 | 3340979 | 23.11 | ppbV | 100 |
| 36) n-Heptane | 4.920 | 43 | 3644916 | 21.78 | ppbV | 99 |
| 37) Benzene | 4.936 | 78 | 4942978 | 21.45 | ppbV | 99 |
| 38) 1,2-Dichloroethane | 5.097 | 62 | 2363649 | 22.89 | ppbV | 99 |
| 40) Trichloroethene | 5.435 | 130 | 2273330 | 19.66 | ppbV | 99 |
| 41) 2,2,4-Trimethylpentane | 4.846 | 57 | 5933707 | 20.56 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 2205432 | 21.21 | ppbV | 99 |
| 43) Bromodichloromethane | 5.946 | 83 | 4121290 | 22.75 | ppbV | 100 |
| 44) Methyl methacrylate | 6.091 | 41 | 3097965 | 23.17 | ppbV | 99 |
| 45) 1,4-Dioxane | 6.113 | 88 | 1493343 | 23.30 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.538 | 75 | 3649298 | 22.71 | ppbV | 100 |
| 47) Toluene | 6.772 | 91 | 7908022 | 21.65 | ppbV | 99 |
| 48) Methyl isobutyl ketone | 7.136 | 43 | 5805171 | 22.00 | ppbV | 99 |
| 49) Tetrachloroethene | 7.161 | 166 | 3535315 | 21.53 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 3830549 | 24.18 | ppbV | 98 |
| 51) 1,1,2-Trichloroethane | 7.338 | 97 | 2762664 | 21.45 | ppbV | 99 |

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3405std02.D
Acq On : 15 Aug 2023 3:12 pm
Operator : jjw
Sample : 20 ppbv standard
Misc : EB0103704
ALS Vial : 7 Sample Multiplier: 1

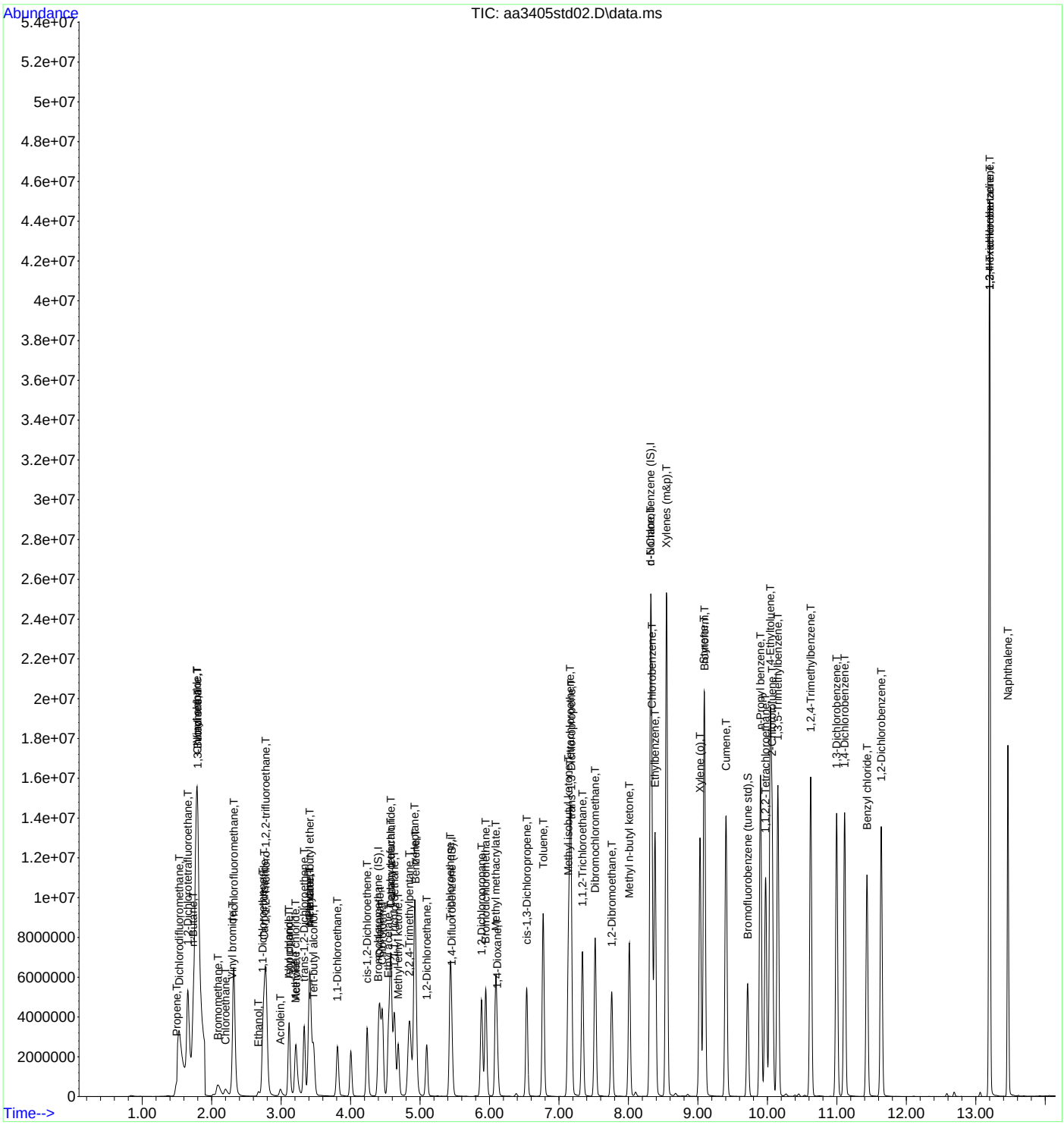
Quant Time: Aug 16 09:53:17 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 4920304 | 22.89 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 4277090 | 22.71 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.013 | 43 | 6056833 | 24.50 | ppbV | 99 |
| 56) n-Nonane | 8.319 | 43 | 7191778 | 20.90 | ppbV | 100 |
| 57) Chlorobenzene | 8.338 | 112 | 6300402 | 20.46 | ppbV | 99 |
| 58) Ethylbenzene | 8.383 | 91 | 11427551 | 20.06 | ppbV | 98 |
| 59) Xylenes (m&p) | 8.547 | 91 | 16612160 | 40.47 | ppbV | 96 |
| 60) Xylene (o) | 9.029 | 91 | 9308971 | 20.42 | ppbV | 99 |
| 61) Styrene | 9.087 | 104 | 6805349 | 22.50 | ppbV | 100 |
| 62) Bromoform | 9.097 | 173 | 5013505 | 21.45 | ppbV | 99 |
| 63) Cumene | 9.406 | 105 | 11708179 | 19.72 | ppbV | 98 |
| 65) n-Propyl benzene | 9.901 | 91 | 15630674 | 20.19 | ppbV | 97 |
| 66) 1,1,2,2-Tetrachloroethane | 9.975 | 83 | 7162257 | 20.73 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.042 | 105 | 13015117 | 20.39 | ppbV | 97 |
| 68) 2-Chlorotoluene | 10.068 | 91 | 10557525 | 20.10 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.152 | 105 | 10540320 | 20.40 | ppbV | 98 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 10891140 | 21.26 | ppbV | 98 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 6954730 | 20.48 | ppbV | 99 |
| 72) 1,4-Dichlorobenzene | 11.113 | 146 | 6870236 | 21.05 | ppbV | 99 |
| 73) Benzyl chloride | 11.434 | 91 | 9809727 | 21.92 | ppbV | 99 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 6519746 | 20.28 | ppbV | 99 |
| 75) 1,3-Hexachlorobutadiene | 13.200 | 225 | 4206699 | 18.25 | ppbV | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 5049468 | 19.98 | ppbV | 100 |
| 77) Naphthalene | 13.463 | 128 | 10176689 | 19.49 | ppbV | 98 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3405std02.D
Acq On : 15 Aug 2023 3:12 pm
Operator : jjw
Sample : 20 ppbv standard
Misc : EB0103704
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 16 09:53:17 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3406std01.D
Acq On : 15 Aug 2023 4:47 pm
Operator : jjw
Sample : 40 ppbv standard
Misc : EB0103704
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 16 09:52:28 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.406 | 130 | 487271 | 10.00 | ppbV | | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 2425798 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 2732166 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 2577792 | 11.34 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 1.512 | 41 | 1707516 | 50.87 | ppbV | | 99 |
| 3) Dichlorodifluoromethane | 1.536 | 85 | 5966633 | 48.46 | ppbV | | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.660 | 85 | 6899713 | 38.95 | ppbV | | 99 |
| 5) n-Butane | 1.739 | 43 | 3778324 | 47.60 | ppbV | | 100 |
| 6) Chloromethane | 1.798 | 52 | 321722 | 56.43 | ppbV | # | 1 |
| 7) Vinyl chloride | 1.791 | 62 | 2395758 | 51.74 | ppbV | | 99 |
| 8) 1,3-Butadiene | 1.801 | 39 | 2174685 | 45.93 | ppbV | | 97 |
| 9) Bromomethane | 2.097 | 94 | 1861404 | 47.86 | ppbV | | 100 |
| 10) Chloroethane | 2.200 | 64 | 1346794 | 53.48 | ppbV | | 100 |
| 11) Vinyl bromide | 2.300 | 106 | 2453541 | 50.15 | ppbV | | 100 |
| 12) Trichlorofluoromethane | 2.319 | 101 | 7717062 | 46.58 | ppbV | | 100 |
| 13) Ethanol | 2.673 | 45 | 877297 | 44.97 | ppbV | # | 88 |
| 14) 1,1-Dichloroethene | 2.737 | 61 | 4997972 | 49.17 | ppbV | | 100 |
| 15) Carbon disulfide | 2.763 | 76 | 8067769 | 48.28 | ppbV | | 99 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.782 | 101 | 6956660 | 42.50 | ppbV | | 100 |
| 17) Acrolein | 2.994 | 56 | 951140 | 45.44 | ppbV | | 98 |
| 18) Allyl chloride | 3.116 | 76 | 1369570 | 50.24 | ppbV | | 100 |
| 19) Isopropanol | 3.116 | 45 | 4505255 | 40.00 | ppbV | | 98 |
| 20) Methylene chloride | 3.206 | 49 | 2810050 | 45.70 | ppbV | | 100 |
| 21) Acetone | 3.222 | 43 | 4077485 | 44.60 | ppbV | | 100 |
| 22) trans-1,2-Dichloroethene | 3.332 | 61 | 4976980 | 54.35 | ppbV | | 98 |
| 23) n-Pentane | 3.412 | 43 | 5051897 | 43.24 | ppbV | | 99 |
| 24) n-Hexane | 3.412 | 57 | 7730831 | 47.37 | ppbV | | 99 |
| 25) Methyl tert-butyl ether | 3.412 | 73 | 10208419 | 46.00 | ppbV | | 97 |
| 26) Tert-butyl alcohol | 3.467 | 59 | 7080253 | 49.62 | ppbV | | 100 |
| 27) 1,1-Dichloroethane | 3.814 | 63 | 6120009 | 47.63 | ppbV | | 99 |
| 28) cis-1,2-Dichloroethene | 4.238 | 61 | 4615777 | 51.93 | ppbV | | 100 |
| 29) Cyclohexane | 4.419 | 56 | 5431445 | 46.06 | ppbV | | 100 |
| 30) Chloroform | 4.457 | 83 | 7598750 | 48.31 | ppbV | | 100 |
| 31) Ethyl acetate | 4.547 | 61 | 1228122 | 49.05 | ppbV | | 99 |
| 32) Carbon tetrachloride | 4.583 | 117 | 8430867 | 44.71 | ppbV | | 100 |
| 33) Tetrahydrofuran | 4.576 | 42 | 4398645 | 49.79 | ppbV | | 99 |
| 34) 1,1,1-Trichloroethane | 4.631 | 97 | 7362144 | 43.37 | ppbV | | 100 |
| 35) Methyl ethyl ketone | 4.685 | 43 | 7160721 | 50.77 | ppbV | | 99 |
| 36) n-Heptane | 4.920 | 43 | 7185919 | 44.02 | ppbV | | 100 |
| 37) Benzene | 4.936 | 78 | 10281932 | 45.73 | ppbV | | 98 |
| 38) 1,2-Dichloroethane | 5.097 | 62 | 5067261 | 50.30 | ppbV | | 99 |
| 40) Trichloroethene | 5.438 | 130 | 4836394 | 39.29 | ppbV | | 100 |
| 41) 2,2,4-Trimethylpentane | 4.849 | 57 | 13336894 | 43.41 | ppbV | | 98 |
| 42) 1,2-Dichloropropane | 5.888 | 63 | 4560844 | 41.21 | ppbV | | 99 |
| 43) Bromodichloromethane | 5.949 | 83 | 8574056 | 44.47 | ppbV | | 99 |
| 44) Methyl methacrylate | 6.090 | 41 | 6283616 | 44.15 | ppbV | | 100 |
| 45) 1,4-Dioxane | 6.116 | 88 | 3065935 | 44.93 | ppbV | | 99 |
| 46) cis-1,3-Dichloropropene | 6.537 | 75 | 7375814 | 43.13 | ppbV | | 99 |
| 47) Toluene | 6.772 | 91 | 14907224 | 38.33 | ppbV | | 96 |
| 48) Methyl isobutyl ketone | 7.135 | 43 | 11479037 | 40.87 | ppbV | | 98 |
| 49) Tetrachloroethene | 7.164 | 166 | 6808224 | 38.95 | ppbV | | 100 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 7633904 | 45.27 | ppbV | | 99 |
| 51) 1,1,2-Trichloroethane | 7.338 | 97 | 5566488 | 40.60 | ppbV | | 99 |

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3406std01.D
Acq On : 15 Aug 2023 4:47 pm
Operator : jjw
Sample : 40 ppbv standard
Misc : EB0103704
ALS Vial : 8 Sample Multiplier: 1

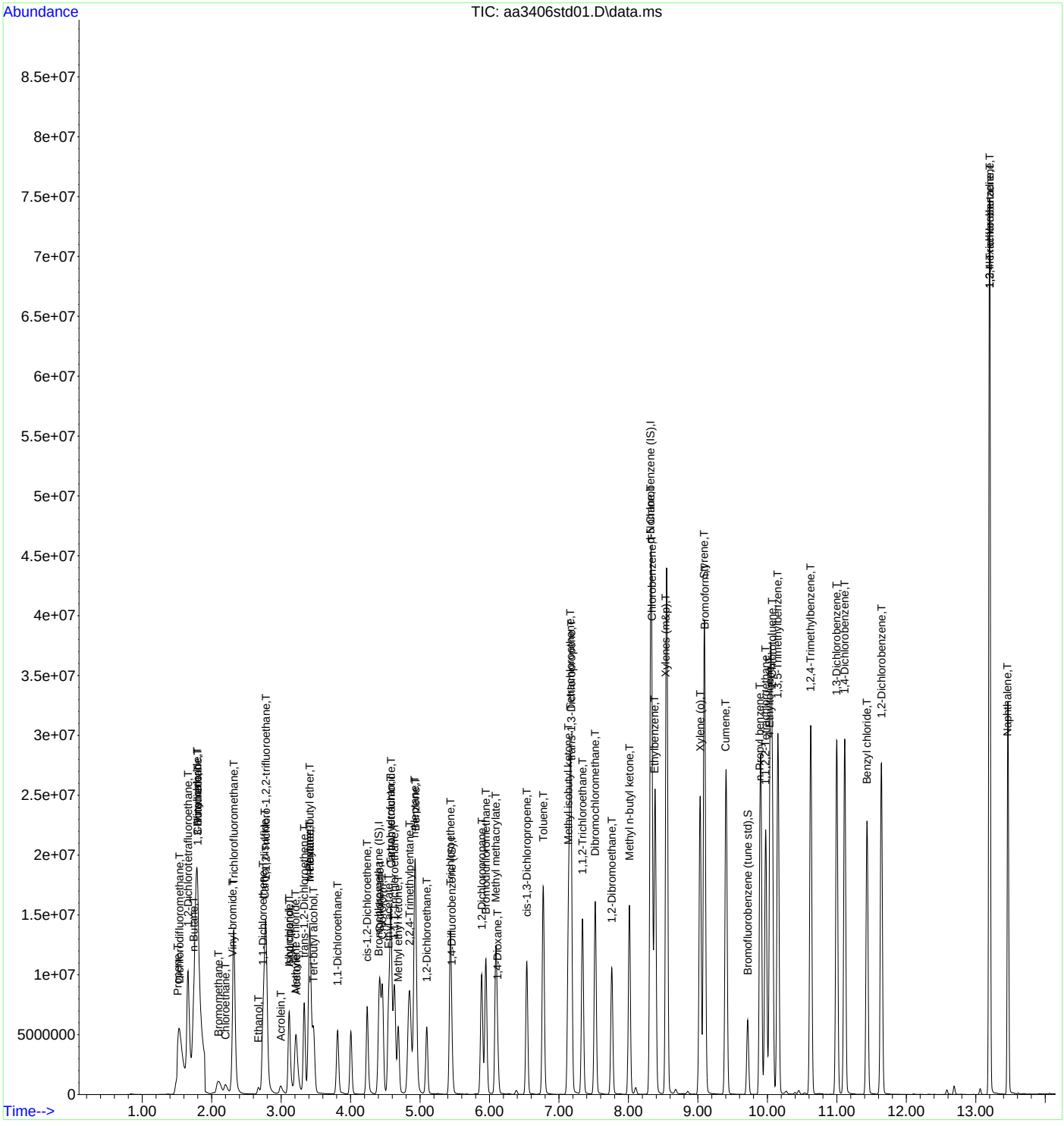
Quant Time: Aug 16 09:52:28 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 9886675 | 43.20 | ppbV | | 99 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 8609104 | 42.93 | ppbV | | 100 |
| 54) Methyl n-butyl ketone | 8.013 | 43 | 12284613 | 46.68 | ppbV | | 97 |
| 56) n-Nonane | 8.319 | 43 | 14182361 | 42.42 | ppbV | | 98 |
| 57) Chlorobenzene | 8.338 | 112 | 12196934 | 40.77 | ppbV | | 96 |
| 58) Ethylbenzene | 8.377 | 91 | 20355846 | 36.79 | ppbV | | 90 |
| 59) Xylenes (m&p) | 8.537 | 91 | 24199756 | 60.68 | ppbV | # | 74 |
| 60) Xylene (o) | 9.033 | 91 | 17688374 | 39.94 | ppbV | | 95 |
| 61) Styrene | 9.090 | 104 | 13186398 | 44.87 | ppbV | | 97 |
| 62) Bromoform | 9.100 | 173 | 9710978 | 42.77 | ppbV | | 98 |
| 63) Cumene | 9.399 | 105 | 21140296 | 36.64 | ppbV | | 91 |
| 65) n-Propyl benzene | 9.891 | 91 | 24008413 | 31.92 | ppbV | # | 80 |
| 66) 1,1,2,2-Tetrachloroethane | 9.975 | 83 | 14100555 | 42.01 | ppbV | | 97 |
| 67) 4-Ethyltoluene | 10.032 | 105 | 21664037 | 34.94 | ppbV | # | 84 |
| 68) 2-Chlorotoluene | 10.068 | 91 | 20299207 | 39.78 | ppbV | | 97 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 19633662 | 39.12 | ppbV | | 92 |
| 70) 1,2,4-Trimethylbenzene | 10.621 | 105 | 20118523 | 40.43 | ppbV | | 91 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 14030394 | 42.52 | ppbV | | 97 |
| 72) 1,4-Dichlorobenzene | 11.113 | 146 | 13876826 | 43.76 | ppbV | | 97 |
| 73) Benzyl chloride | 11.431 | 91 | 19339251 | 44.49 | ppbV | | 93 |
| 74) 1,2-Dichlorobenzene | 11.643 | 146 | 13190929 | 42.23 | ppbV | | 97 |
| 75) 1,3-Hexachlorobutadiene | 13.200 | 225 | 7629643 | 34.08 | ppbV | | 97 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 9392234 | 38.25 | ppbV | | 99 |
| 77) Naphthalene | 13.457 | 128 | 15939992 | 31.42 | ppbV | # | 83 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3406std01.D
Acq On : 15 Aug 2023 4:47 pm
Operator : jjw
Sample : 40 ppbv standard
Misc : EB0103704
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 16 09:52:28 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Aug 15 17:18:05 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Initial Calibration Data Summary Report

**Initial Calibration Curve:** 10/10/2023 **Method ID:** 231009.M

**Instrument:** AA

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4131BFB] | 10/10/2023 10:13 |
| 0.2 PPBV STD [AA4132STD05] | 10/10/2023 10:40 |
| 2 PPBV STD [AA4133STD04] | 10/10/2023 11:46 |
| 10 PPBV STD [AA4134STD03] | 10/10/2023 12:21 |
| 20 PPBV STD [AA4135STD02] | 10/10/2023 12:55 |
| 40 PPBV STD [AA4136STD01] | 10/10/2023 14:05 |
| 10 PPBV ICVSS [AA4137ICVSS] | 10/10/2023 16:48 |

| | Parameter | RRF 0.2ppbv | RRF 2ppbv | RRF 10ppbv | RRF 20ppbv | RRF 40ppbv | Avg ppbv | % RSD |
|---|---|---|---|---|---|---|---|---|
| 1) | Bromochloromethane | ----------ISTD---------- | | | | | | |
| 3) | Dichlorodifluoromethane | 1.9 | 2.0 | 2.2 | 2.4 | 2.6 | 2.2 | 13 |
| 4) | 1,2-Dichlorotetrafluoroethane | 3.2 | 3.4 | 2.9 | 3.2 | 3.5 | 3.2 | 6.1 |
| 6) | Chloromethane | 0.085 | 0.098 | 0.11 | 0.12 | 0.14 | 0.11 | 18 |
| 7) | Vinyl chloride | 0.70 | 0.84 | 0.91 | 0.98 | 1.1 | 0.91 | 17 |
| 8) | 1,3-Butadiene | 0.87 | 0.82 | 0.80 | 0.84 | 0.91 | 0.85 | 4.8 |
| 9) | Bromomethane | 0.49 | 0.70 | 0.75 | 0.81 | 0.91 | 0.73 | 22 |
| 10) | Chloroethane | 0.24 | 0.45 | 0.50 | 0.55 | 0.63 | 0.48 | 31 |
| 11) | Vinyl bromide | 0.53 | 0.86 | 0.92 | 1.0 | 1.1 | 0.90 | 26 |
| 12) | Trichlorofluoromethane | 2.6 | 2.6 | 2.7 | 2.9 | 3.2 | 2.8 | 8.9 |
| 14) | 1,1-Dichloroethene | 1.4 | 1.5 | 1.9 | 2.1 | 2.3 | 1.9 | 21 |
| 15) | Carbon disulfide | 2.4 | 2.6 | 3.2 | 3.4 | 3.7 | 3.1 | 18 |
| 16) | 1,1,2-Trichloro-1,2,2-trifluoroethane | 2.8 | 3.0 | 2.5 | 2.7 | 3.0 | 2.8 | 7.4 |
| 17) | Acrolein | 0.39 | 0.33 | 0.43 | 0.45 | 0.49 | 0.42 | 15 |
| 18) | Allyl Chloride | 0.35 | 0.42 | 0.54 | 0.58 | 0.62 | 0.50 | 23 |
| 19) | Isopropanol | 1.6 | 1.7 | 2.1 | 2.3 | 2.4 | 2.0 | 17 |
| 20) | Methylene chloride | 1.7 | 0.97 | 1.0 | 1.1 | 1.3 | 1.2 | 25 |
| 21) | Acetone | 1.5 | 1.2 | 1.5 | 1.6 | 1.7 | 1.5 | 12 |
| 22) | 1,2-Dichloroethene (trans) | 1.4 | 1.3 | 1.8 | 2.0 | 2.2 | 1.7 | 21 |
| 24) | n-Hexane | 3.1 | 3.0 | 3.0 | 3.1 | 3.5 | 3.2 | 7.1 |
| 25) | Methyl tert-butyl ether | 3.5 | 4.1 | 3.6 | 3.9 | 4.3 | 3.9 | 8.5 |
| 26) | Tert-butyl alcohol | 2.3 | 2.5 | 2.5 | 2.7 | 3.0 | 2.6 | 11 |
| 27) | 1,1-Dichloroethane | 2.2 | 2.0 | 2.2 | 2.4 | 2.7 | 2.3 | 12 |
| 28) | 1,2-Dichloroethene (cis) | 1.3 | 1.4 | 1.7 | 1.8 | 2.0 | 1.6 | 18 |
| 29) | Cyclohexane | 2.1 | 2.2 | 2.1 | 2.2 | 2.4 | 2.2 | 6.8 |
| 30) | Chloroform | 2.2 | 2.3 | 2.6 | 2.9 | 3.2 | 2.7 | 15 |
| 32) | Carbon tetrachloride | 3.0 | 3.1 | 3.0 | 3.2 | 3.5 | 3.2 | 6.9 |
| 33) | Tetrahydrofuran | 1.5 | 1.3 | 1.5 | 1.6 | 1.7 | 1.5 | 9.4 |
| 34) | 1,1,1-Trichloroethane | 2.5 | 2.7 | 2.7 | 2.9 | 3.1 | 2.8 | 8.7 |
| 35) | Methyl ethyl ketone | 2.3 | 2.1 | 2.4 | 2.6 | 2.9 | 2.4 | 13 |
| 36) | n-Heptane | 2.6 | 2.6 | 2.9 | 2.9 | 2.9 | 2.8 | 6.9 |
| 37) | Benzene | 3.6 | 3.8 | 3.8 | 4.1 | 4.5 | 4.0 | 9.3 |
| 38) | 1,2-Dichloroethane | 1.3 | 1.5 | 1.7 | 1.8 | 2.0 | 1.7 | 17 |
| 39) | 1,4-Difluorobenzene | ----------ISTD---------- | | | | | | |
| 40) | Trichloroethene | 0.38 | 0.47 | 0.44 | 0.45 | 0.47 | 0.44 | 8.1 |
| 41) | 2,2,4-Trimethylpentane | 1.2 | 1.5 | 1.2 | 1.3 | 1.3 | 1.3 | 9.8 |
| 42) | 1,2-Dichloropropane | 0.38 | 0.40 | 0.39 | 0.39 | 0.39 | 0.39 | 2.1 |
| 43) | Bromodichloromethane | 0.59 | 0.68 | 0.66 | 0.68 | 0.68 | 0.66 | 6.0 |

***% RSD (Relative Standard Deviation) must be within 30%**

****An exception is made for 2 compounds that must be within 40%**

**RRF - Relative Response Factor**

# Initial Calibration Data Summary Report

**Initial Calibration Curve:** 10/10/2023 **Method ID:** 231009.M
**Instrument:** AA

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4131BFB] | 10/10/2023 10:13 |
| 0.2 PPBV STD [AA4132STD05] | 10/10/2023 10:40 |
| 2 PPBV STD [AA4133STD04] | 10/10/2023 11:46 |
| 10 PPBV STD [AA4134STD03] | 10/10/2023 12:21 |
| 20 PPBV STD [AA4135STD02] | 10/10/2023 12:55 |
| 40 PPBV STD [AA4136STD01] | 10/10/2023 14:05 |
| 10 PPBV ICVSS [AA4137ICVSS] | 10/10/2023 16:48 |

| | Parameter | RRF 0.2ppbv | RRF 2ppbv | RRF 10ppbv | RRF 20ppbv | RRF 40ppbv | Avg ppbv | % RSD |
|---|---|---|---|---|---|---|---|---|
| 44) | Methyl methacrylate | 0.42 | 0.46 | 0.50 | 0.50 | 0.48 | 0.47 | 6.8 |
| 45) | 1,4-Dioxane | 0.21 | 0.24 | 0.24 | 0.25 | 0.25 | 0.24 | 5.9 |
| 46) | 1,3-Dichloropropene (cis) | 0.55 | 0.59 | 0.63 | 0.63 | 0.62 | 0.60 | 5.6 |
| 47) | Toluene | 1.2 | 1.5 | 1.5 | 1.5 | 1.4 | 1.4 | 7.6 |
| 48) | Methyl isobutyl ketone | 0.76 | 0.92 | 0.95 | 0.93 | 0.86 | 0.88 | 8.6 |
| 49) | Tetrachloroethene | 0.53 | 0.61 | 0.63 | 0.64 | 0.61 | 0.61 | 7.1 |
| 50) | 1,3-Dichloropropene (trans) | 0.46 | 0.57 | 0.63 | 0.65 | 0.62 | 0.59 | 13 |
| 51) | 1,1,2-Trichloroethane | 0.40 | 0.48 | 0.49 | 0.51 | 0.50 | 0.48 | 9.3 |
| 52) | Dibromochloromethane | 0.64 | 0.78 | 0.83 | 0.86 | 0.85 | 0.79 | 12 |
| 53) | 1,2-Dibromoethane | 0.54 | 0.67 | 0.73 | 0.75 | 0.74 | 0.69 | 13 |
| 54) | Methyl n-butyl ketone | 0.70 | 0.78 | 0.93 | 0.93 | 0.90 | 0.85 | 12 |
| 55) | d-5 Chlorbenzene | ----------ISTD---------- | | | | | | |
| 57) | Chlorobenzene | 0.97 | 1.1 | 0.99 | 0.99 | 0.99 | 1.00 | 3.0 |
| 58) | Ethylbenzene | 1.8 | 2.0 | 1.9 | 1.8 | 1.8 | 1.8 | 4.5 |
| 59) | Xylenes (m&p) | 1.3 | 1.5 | 1.4 | 1.4 | 1.2 | 1.4 | 9.3 |
| 60) | Xylenes (o) | 1.4 | 1.6 | 1.5 | 1.5 | 1.5 | 1.5 | 5.0 |
| 61) | Styrene | 0.85 | 1.0 | 1.1 | 1.1 | 1.1 | 1.0 | 9.4 |
| 62) | Bromoform | 0.63 | 0.72 | 0.75 | 0.77 | 0.80 | 0.73 | 8.7 |
| 63) | Cumene | 1.8 | 2.2 | 2.0 | 1.9 | 1.9 | 1.9 | 7.1 |
| 66) | 1,1,2,2-Tetrachloroethane | 0.96 | 1.1 | 1.0 | 1.0 | 1.1 | 1.0 | 5.5 |
| 67) | 4-Ethyltoluene | 2.1 | 2.2 | 2.2 | 2.2 | 2.1 | 2.2 | 3.8 |
| 68) | 2-Chlorotoluene | 1.6 | 1.8 | 1.7 | 1.7 | 1.7 | 1.7 | 4.3 |
| 69) | 1,3,5-Trimethylbenzene | 1.5 | 1.9 | 1.8 | 1.8 | 1.7 | 1.7 | 7.6 |
| 70) | 1,2,4-Trimethylbenzene | 1.4 | 1.9 | 1.8 | 1.8 | 1.8 | 1.7 | 9.6 |
| 71) | 1,3-Dichlorobenzene | 1.0 | 1.0 | 1.1 | 1.1 | 1.1 | 1.1 | 4.2 |
| 72) | 1,4-Dichlorobenzene | 0.94 | 1.0 | 1.1 | 1.1 | 1.2 | 1.1 | 8.6 |
| 73) | Benzyl chloride | 1.2 | 1.4 | 1.6 | 1.7 | 1.7 | 1.5 | 15 |
| 74) | 1,2-Dichlorobenzene | 0.90 | 1.1 | 1.0 | 1.1 | 1.1 | 1.0 | 7.4 |
| 75) | 1,3-Hexachlorobutadiene | 0.73 | 0.78 | 0.70 | 0.69 | 0.66 | 0.71 | 6.1 |
| 76) | 1,2,4-Trichlorobenzene | 0.83 | 0.81 | 0.82 | 0.84 | 0.83 | 0.82 | 1.4 |
| 77) | Naphthalene | 2.0 | 1.9 | 1.9 | 1.9 | 1.7 | 1.9 | 4.8 |

***% RSD (Relative Standard Deviation) must be within 30%**
****An exception is made for 2 compounds that must be within 40%**
**RRF - Relative Response Factor**

Method Path : C:\msdchem\1\METHODS\
Method File : 231009.M
Title : TO-15 on the Agilent 7890A / 5975C
Last Update : Tue Oct 10 15:12:35 2023
Response Via : Initial Calibration

Calibration Files
0.2 =aa4132std05.D 2 =aa4133std04.D 10 =aa4134std03.D 20 =aa4135std02.D 40 =aa4136std01.D

| | | Compound | 0.2 | 2 | 10 | 20 | 40 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|
| 1) | I | Bromochloromethane... | ----------ISTD---------- | | | | | | |
| 2) | T | Propene | 0.779 | 0.688 | 0.601 | 0.651 | 0.751 | 0.694 | 10.44 |
| 3) | T | Dichlorodifluoro... | 1.907 | 1.983 | 2.168 | 2.390 | 2.633 | 2.216 | 13.46 |
| 4) | T | 1,2-Dichlorotetr... | 3.185 | 3.352 | 2.944 | 3.158 | 3.458 | 3.219 | 6.12 |
| 5) | T | n-Butane | 1.490 | 1.596 | 1.532 | 1.649 | 1.719 | 1.597 | 5.69 |
| 6) | T | Chloromethane | 0.085 | 0.098 | 0.113 | 0.121 | 0.137 | 0.111 | 18.16 |
| 7) | T | Vinyl chloride | 0.695 | 0.837 | 0.907 | 0.984 | 1.107 | 0.906 | 17.06 |
| 8) | T | 1,3-Butadiene | 0.868 | 0.820 | 0.800 | 0.839 | 0.905 | 0.846 | 4.88 |
| 9) | T | Bromomethane | 0.486 | 0.695 | 0.751 | 0.814 | 0.911 | 0.731 | 21.71 |
| 10) | T | Chloroethane | 0.242 | 0.451 | 0.502 | 0.547 | 0.634 | 0.475 | 30.85 |
| 11) | T | Vinyl bromide | 0.534 | 0.864 | 0.915 | 1.018 | 1.146 | 0.895 | 25.58 |
| 12) | T | Trichlorofluorom... | 2.621 | 2.609 | 2.656 | 2.932 | 3.178 | 2.799 | 8.92 |
| 13) | T | Ethanol | 0.278 | 0.262 | 0.269 | 0.289 | 0.366 | 0.293 | 14.44 |
| 14) | T | 1,1-Dichloroethene | 1.413 | 1.490 | 1.944 | 2.133 | 2.308 | 1.858 | 21.17 |
| 15) | T | Carbon disulfide | 2.407 | 2.574 | 3.227 | 3.426 | 3.653 | 3.058 | 17.73 |
| 16) | T | 1,1,2-Trichloro-... | 2.836 | 3.030 | 2.523 | 2.712 | 2.994 | 2.819 | 7.42 |
| 17) | T | Acrolein | 0.385 | 0.331 | 0.431 | 0.447 | 0.494 | 0.418 | 14.91 |
| 18) | T | Allyl chloride | 0.345 | 0.421 | 0.535 | 0.582 | 0.624 | 0.501 | 23.11 |
| 19) | T | Isopropanol | 1.617 | 1.677 | 2.082 | 2.254 | 2.397 | 2.005 | 17.28 |
| 20) | T | Methylene chloride | 1.726 | 0.973 | 1.020 | 1.121 | 1.307 | 1.229 | 24.89 |
| 21) | T | Acetone | 1.489 | 1.226 | 1.538 | 1.595 | 1.694 | 1.508 | 11.62 |
| 22) | T | trans-1,2-Dichlo... | 1.377 | 1.330 | 1.784 | 1.951 | 2.181 | 1.724 | 21.29 |
| 23) | T | n-Pentane | 2.223 | 2.305 | 2.173 | 2.308 | 2.616 | 2.325 | 7.41 |
| 24) | T | n-Hexane | 3.143 | 2.995 | 2.967 | 3.122 | 3.534 | 3.152 | 7.19 |
| 25) | T | Methyl tert-buty... | 3.476 | 4.059 | 3.641 | 3.875 | 4.310 | 3.872 | 8.54 |
| 26) | T | Tert-butyl alcohol | 2.280 | 2.528 | 2.502 | 2.698 | 3.027 | 2.607 | 10.66 |
| 27) | T | 1,1-Dichloroethane | 2.208 | 2.008 | 2.236 | 2.445 | 2.714 | 2.322 | 11.56 |
| 28) | T | cis-1,2-Dichloro... | 1.343 | 1.351 | 1.654 | 1.825 | 2.018 | 1.638 | 18.03 |
| 29) | t | Cyclohexane | 2.057 | 2.245 | 2.081 | 2.192 | 2.434 | 2.202 | 6.86 |
| 30) | T | Chloroform | 2.233 | 2.343 | 2.644 | 2.933 | 3.225 | 2.676 | 15.36 |
| 31) | T | Ethyl acetate | 0.310 | 0.390 | 0.450 | 0.493 | 0.533 | 0.435 | 20.09 |
| 32) | T | Carbon tetrachlo... | 2.964 | 3.097 | 3.048 | 3.232 | 3.528 | 3.174 | 6.95 |
| 33) | T | Tetrahydrofuran | 1.456 | 1.307 | 1.488 | 1.591 | 1.681 | 1.504 | 9.42 |
| 34) | T | 1,1,1-Trichloroe... | 2.481 | 2.746 | 2.667 | 2.869 | 3.137 | 2.780 | 8.79 |
| 35) | T | Methyl ethyl ketone | 2.291 | 2.066 | 2.372 | 2.620 | 2.862 | 2.442 | 12.58 |
| 36) | T | n-Heptane | 2.552 | 2.559 | 2.850 | 2.930 | 2.928 | 2.764 | 6.98 |
| 37) | T | Benzene | 3.627 | 3.758 | 3.801 | 4.128 | 4.544 | 3.972 | 9.30 |
| 38) | T | 1,2-Dichloroethane | 1.312 | 1.486 | 1.666 | 1.833 | 2.016 | 1.663 | 16.69 |
| 39) | I | 1,4-Difluorobenzen... | ----------ISTD---------- | | | | | | |
| 40) | T | Trichloroethene | 0.381 | 0.468 | 0.441 | 0.454 | 0.469 | 0.442 | 8.16 |
| 41) | T | 2,2,4-Trimethylp... | 1.199 | 1.522 | 1.226 | 1.268 | 1.298 | 1.303 | 9.87 |
| 42) | T | 1,2-Dichloropropane | 0.377 | 0.399 | 0.391 | 0.393 | 0.385 | 0.389 | 2.16 |
| 43) | T | Bromodichloromet... | 0.586 | 0.682 | 0.655 | 0.678 | 0.675 | 0.655 | 6.09 |
| 44) | T | Methyl methacrylate | 0.419 | 0.464 | 0.497 | 0.498 | 0.481 | 0.472 | 6.88 |
| 45) | T | 1,4-Dioxane | 0.214 | 0.238 | 0.243 | 0.249 | 0.248 | 0.238 | 5.94 |
| 46) | T | cis-1,3-Dichloro... | 0.549 | 0.592 | 0.626 | 0.634 | 0.615 | 0.603 | 5.69 |
| 47) | T | Toluene | 1.225 | 1.453 | 1.484 | 1.478 | 1.387 | 1.405 | 7.68 |
| 48) | T | Methyl isobutyl ... | 0.759 | 0.922 | 0.947 | 0.925 | 0.863 | 0.883 | 8.63 |
| 49) | T | Tetrachloroethene | 0.531 | 0.613 | 0.633 | 0.639 | 0.613 | 0.606 | 7.17 |
| 50) | T | trans-1,3-Dichlo... | 0.459 | 0.568 | 0.633 | 0.647 | 0.618 | 0.585 | 13.11 |
| 51) | T | 1,1,2-Trichloroe... | 0.399 | 0.475 | 0.494 | 0.506 | 0.500 | 0.475 | 9.30 |
| 52) | T | Dibromochloromet... | 0.636 | 0.778 | 0.834 | 0.857 | 0.849 | 0.791 | 11.62 |
| 53) | T | 1,2-Dibromoethane | 0.535 | 0.672 | 0.732 | 0.751 | 0.743 | 0.686 | 13.15 |
| 54) | T | Methyl n-butyl k... | 0.704 | 0.779 | 0.932 | 0.932 | 0.900 | 0.849 | 12.07 |
| 55) | I | d-5 Chlorobenzene ... | ----------ISTD---------- | | | | | | |
| 56) | T | n-Nonane | 0.927 | 1.067 | 1.027 | 0.986 | 0.955 | 0.992 | 5.62 |
| 57) | T | Chlorobenzene | 0.971 | 1.050 | 0.990 | 0.986 | 0.988 | 0.997 | 3.09 |
| 58) | T | Ethylbenzene | 1.789 | 1.981 | 1.852 | 1.820 | 1.771 | 1.843 | 4.51 |
| 59) | T | Xylenes (m&p) | 1.326 | 1.536 | 1.415 | 1.363 | 1.186 | 1.365 | 9.36 |
| 60) | T | Xylene (o) | 1.445 | 1.623 | 1.468 | 1.461 | 1.451 | 1.490 | 5.05 |

Method Path : C:\msdchem\1\METHODS\
Method File : 231009.M

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 61) | T | Styrene | 0.849 | 1.047 | 1.067 | 1.065 | 1.073 | 1.020 | 9.41 |
| 62) | T | Bromoform | 0.629 | 0.724 | 0.745 | 0.767 | 0.797 | 0.732 | 8.70 |
| 63) | T | Cumene | 1.783 | 2.168 | 1.955 | 1.932 | 1.897 | 1.947 | 7.18 |
| 64) | S | Bromofluorobenze... | 0.801 | 0.842 | 0.870 | 0.891 | 0.954 | 0.872 | 6.54 |
| 65) | T | n-Propyl benzene | 2.478 | 2.727 | 2.610 | 2.556 | 2.335 | 2.541 | 5.77 |
| 66) | T | 1,1,2,2-Tetrachl... | 0.959 | 1.120 | 1.040 | 1.040 | 1.055 | 1.043 | 5.50 |
| 67) | T | 4-Ethyltoluene | 2.059 | 2.245 | 2.204 | 2.174 | 2.073 | 2.151 | 3.80 |
| 68) | T | 2-Chlorotoluene | 1.626 | 1.829 | 1.701 | 1.690 | 1.690 | 1.707 | 4.35 |
| 69) | T | 1,3,5-Trimethylb... | 1.513 | 1.880 | 1.755 | 1.754 | 1.747 | 1.730 | 7.69 |
| 70) | T | 1,2,4-Trimethylb... | 1.441 | 1.880 | 1.785 | 1.775 | 1.764 | 1.729 | 9.68 |
| 71) | T | 1,3-Dichlorobenzene | 1.031 | 1.007 | 1.050 | 1.081 | 1.124 | 1.059 | 4.27 |
| 72) | T | 1,4-Dichlorobenzene | 0.943 | 1.005 | 1.082 | 1.123 | 1.174 | 1.065 | 8.65 |
| 73) | T | Benzyl chloride | 1.159 | 1.435 | 1.619 | 1.688 | 1.742 | 1.529 | 15.48 |
| 74) | T | 1,2-Dichlorobenzene | 0.895 | 1.065 | 1.034 | 1.054 | 1.089 | 1.027 | 7.47 |
| 75) | T | 1,3-Hexachlorobu... | 0.731 | 0.778 | 0.703 | 0.687 | 0.664 | 0.713 | 6.17 |
| 76) | T | 1,2,4-Trichlorob... | 0.829 | 0.807 | 0.819 | 0.838 | 0.828 | 0.824 | 1.43 |
| 77) | T | Naphthalene | 1.972 | 1.901 | 1.894 | 1.926 | 1.733 | 1.885 | 4.80 |

(#) = Out of Range

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4132std05.D
Acq On : 10 Oct 2023 10:40 am
Operator : jjw
Sample : 0.2 ppbv standard
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 10 15:08:52 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:03:48 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.380 | 130 | 335961 | 10.00 | ppbV | | -0.014 |
| 39) 1,4-Difluorobenzene (IS) | 5.444 | 114 | 1366548 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 1287551 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1031937 | 9.01 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 1.451 | 41 | 5709 | 0.25 | ppbV | | 95 |
| 3) Dichlorodifluoromethane | 1.499 | 85 | 13581 | 0.18 | ppbV | # | 83 |
| 4) 1,2-Dichlorotetrafluor... | 1.619 | 85 | 20971 | 0.19 | ppbV | | 99 |
| 5) n-Butane | 1.702 | 43 | 10916 | 0.20 | ppbV | # | 85 |
| 6) Chloromethane | 1.684 | 52 | 641 | 0.16 | ppbV | | 65 |
| 7) Vinyl chloride | 1.753 | 62 | 5046 | 0.16 | ppbV | # | 50 |
| 8) 1,3-Butadiene | 1.760 | 39 | 6239 | 0.22 | ppbV | | 75 |
| 9) Bromomethane | 2.059 | 94 | 3266 | 0.12 | ppbV | | 66 |
| 10) Chloroethane | 2.168 | 64 | 1724 | 0.10 | ppbV | | 80 |
| 11) Vinyl bromide | 2.261 | 106 | 3625 | 0.11 | ppbV | | 95 |
| 12) Trichlorofluoromethane | 2.287 | 101 | 19370 | 0.20 | ppbV | | 97 |
| 13) Ethanol | 2.654 | 45 | 1944 | 0.20 | ppbV | # | 47 |
| 14) 1,1-Dichloroethene | 2.708 | 61 | 9877 | 0.15 | ppbV | | 99 |
| 15) Carbon disulfide | 2.728 | 76 | 17305 | 0.16 | ppbV | | 100 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.750 | 101 | 20772 | 0.22 | ppbV | | 98 |
| 17) Acrolein | 2.969 | 56 | 2586 | 0.18 | ppbV | # | 42 |
| 18) Allyl chloride | 3.084 | 76 | 2500 | 0.14 | ppbV | | 100 |
| 19) Isopropanol | 3.094 | 45 | 9669 | 0.14 | ppbV | # | 84 |
| 20) Methylene chloride | 3.178 | 49 | 12526 | 0.34 | ppbV | | 92 |
| 21) Acetone | 3.194 | 43 | 10805 | 0.21 | ppbV | # | 83 |
| 22) trans-1,2-Dichloroethene | 3.306 | 61 | 10268 | 0.17 | ppbV | | 100 |
| 23) n-Pentane | 3.393 | 43 | 16132 | 0.20 | ppbV | | 92 |
| 24) n-Hexane | 3.380 | 57 | 23439 | 0.22 | ppbV | | 95 |
| 25) Methyl tert-butyl ether | 3.393 | 73 | 26157 | 0.20 | ppbV | | 89 |
| 26) Tert-butyl alcohol | 3.445 | 59 | 17620 | 0.20 | ppbV | | 100 |
| 27) 1,1-Dichloroethane | 3.792 | 63 | 15876 | 0.20 | ppbV | | 91 |
| 28) cis-1,2-Dichloroethene | 4.219 | 61 | 9833 | 0.17 | ppbV | | 98 |
| 29) Cyclohexane | 4.396 | 56 | 15483 | 0.21 | ppbV | | 99 |
| 30) Chloroform | 4.445 | 83 | 16203 | 0.17 | ppbV | | 96 |
| 31) Ethyl acetate | 4.535 | 61 | 2253 | 0.14 | ppbV | | 88 |
| 32) Carbon tetrachloride | 4.563 | 117 | 22109 | 0.20 | ppbV | | 100 |
| 33) Tetrahydrofuran | 4.570 | 42 | 10856 | 0.21 | ppbV | | 87 |
| 34) 1,1,1-Trichloroethane | 4.615 | 97 | 18169 | 0.19 | ppbV | | 97 |
| 35) Methyl ethyl ketone | 4.676 | 43 | 16932 | 0.20 | ppbV | | 91 |
| 36) n-Heptane | 4.911 | 43 | 19030 | 0.20 | ppbV | | 92 |
| 37) Benzene | 4.920 | 78 | 26320 | 0.19 | ppbV | | 98 |
| 38) 1,2-Dichloroethane | 5.078 | 62 | 9608 | 0.16 | ppbV | | 97 |
| 40) Trichloroethene | 5.428 | 130 | 10418 | 0.17 | ppbV | | 93 |
| 41) 2,2,4-Trimethylpentane | 4.827 | 57 | 35716 | 0.20 | ppbV | | 97 |
| 42) 1,2-Dichloropropane | 5.882 | 63 | 11430 | 0.21 | ppbV | | 90 |
| 43) Bromodichloromethane | 5.940 | 83 | 18430 | 0.20 | ppbV | | 98 |
| 44) Methyl methacrylate | 6.081 | 41 | 12606 | 0.19 | ppbV | | 96 |
| 45) 1,4-Dioxane | 6.116 | 88 | 6852 | 0.21 | ppbV | | 97 |
| 46) cis-1,3-Dichloropropene | 6.528 | 75 | 16642 | 0.20 | ppbV | | 95 |
| 47) Toluene | 6.766 | 91 | 36156 | 0.18 | ppbV | | 100 |
| 48) Methyl isobutyl ketone | 7.136 | 43 | 22603 | 0.18 | ppbV | | 98 |
| 49) Tetrachloroethene | 7.155 | 166 | 16259 | 0.19 | ppbV | | 100 |
| 50) trans-1,3-Dichloropropene | 7.174 | 75 | 13916 | 0.17 | ppbV | | 98 |
| 51) 1,1,2-Trichloroethane | 7.332 | 97 | 11763 | 0.17 | ppbV | | 94 |

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4132std05.D
Acq On : 10 Oct 2023 10:40 am
Operator : jjw
Sample : 0.2 ppbv standard
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

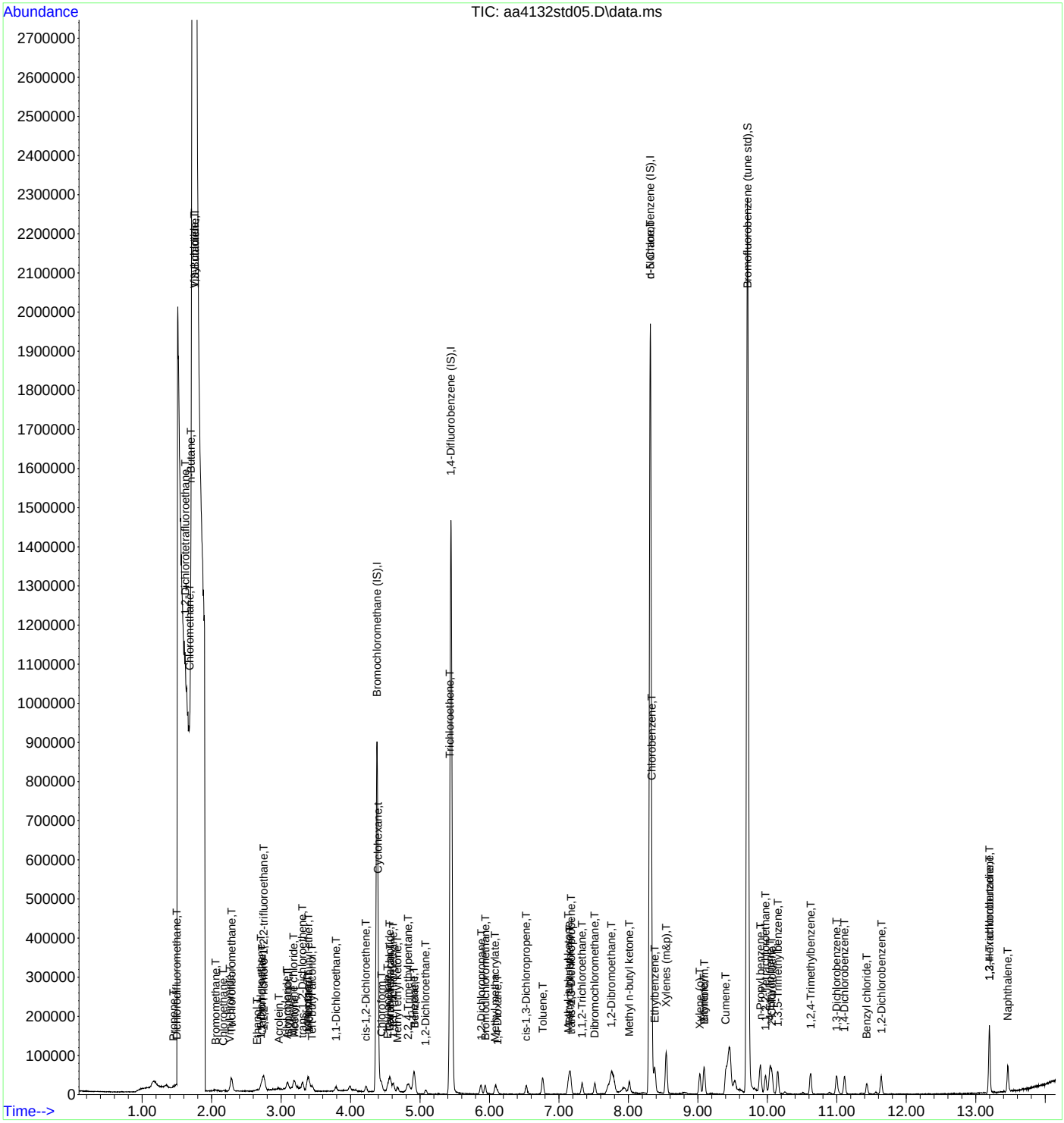
Quant Time: Oct 10 15:08:52 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:03:48 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.515 | 129 | 19465 | 0.17 | ppbV | | 100 |
| 53) 1,2-Dibromoethane | 7.753 | 107 | 15790 | 0.16 | ppbV | | 99 |
| 54) Methyl n-butyl ketone | 8.014 | 43 | 21755 | 0.18 | ppbV | | 91 |
| 56) n-Nonane | 8.316 | 43 | 26498 | 0.20 | ppbV | | 95 |
| 57) Chlorobenzene | 8.335 | 112 | 27757 | 0.21 | ppbV | # | 47 |
| 58) Ethylbenzene | 8.380 | 91 | 51133 | 0.21 | ppbV | | 99 |
| 59) Xylenes (m&p) | 8.544 | 91 | 76173 | 0.43 | ppbV | | 98 |
| 60) Xylene (o) | 9.026 | 91 | 40935 | 0.21 | ppbV | | 95 |
| 61) Styrene | 9.087 | 104 | 24712 | 0.18 | ppbV | | 97 |
| 62) Bromoform | 9.094 | 173 | 18307 | 0.19 | ppbV | | 99 |
| 63) Cumene | 9.399 | 105 | 49138 | 0.19 | ppbV | | 100 |
| 65) n-Propyl benzene | 9.901 | 91 | 68920 | 0.21 | ppbV | | 97 |
| 66) 1,1,2,2-Tetrachloroethane | 9.975 | 83 | 28157 | 0.21 | ppbV | | 96 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 57273 | 0.20 | ppbV | | 99 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 45637 | 0.21 | ppbV | | 98 |
| 69) 1,3,5-Trimethylbenzene | 10.152 | 105 | 42479 | 0.18 | ppbV | | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 40083 | 0.17 | ppbV | | 96 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 29481 | 0.21 | ppbV | | 95 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 25984 | 0.18 | ppbV | | 99 |
| 73) Benzyl chloride | 11.428 | 91 | 29858 | 0.14 | ppbV | | 95 |
| 74) 1,2-Dichlorobenzene | 11.644 | 146 | 24649 | 0.18 | ppbV | | 99 |
| 75) 1,3-Hexachlorobutadiene | 13.197 | 225 | 20901 | 0.23 | ppbV | | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.197 | 180 | 23485 | 0.22 | ppbV | | 97 |
| 77) Naphthalene | 13.460 | 128 | 50770 | 0.21 | ppbV | | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4132std05.D
Acq On : 10 Oct 2023 10:40 am
Operator : jjw
Sample : 0.2 ppbv standard
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 10 15:08:52 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:03:48 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4133std04.D
Acq On : 10 Oct 2023 11:46 am
Operator : jjw
Sample : 2.0 ppbv standard
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 10 15:14:52 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.378 | 130 | 266219 | 10.00 | ppbV | -0.016 |
| 39) 1,4-Difluorobenzene (IS) | 5.445 | 114 | 1004403 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.313 | 117 | 1028709 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.715 | 95 | 866440 | 9.66 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.454 | 41 | 39983 | 2.16 | ppbV | 100 |
| 3) Dichlorodifluoromethane | 1.496 | 85 | 111937 | 1.90 | ppbV | 99 |
| 4) 1,2-Dichlorotetrafluor... | 1.613 | 85 | 174894 | 2.04 | ppbV | 97 |
| 5) n-Butane | 1.699 | 43 | 92630 | 2.18 | ppbV | 97 |
| 6) Chloromethane | 1.767 | 52 | 6226 | 2.11 | ppbV | 99 |
| 7) Vinyl chloride | 1.761 | 62 | 48102 | 1.99 | ppbV | 99 |
| 8) 1,3-Butadiene | 1.764 | 39 | 46700 | 2.07 | ppbV | 98 |
| 9) Bromomethane | 2.046 | 94 | 37014 | 1.90 | ppbV | 98 |
| 10) Chloroethane | 2.172 | 64 | 25446 | 2.01 | ppbV | 97 |
| 11) Vinyl bromide | 2.262 | 106 | 46443 | 1.95 | ppbV | 99 |
| 12) Trichlorofluoromethane | 2.284 | 101 | 152810 | 2.05 | ppbV | 98 |
| 13) Ethanol | 2.641 | 45 | 14500 | 1.86 | ppbV | 99 |
| 14) 1,1-Dichloroethene | 2.706 | 61 | 82725 | 1.67 | ppbV | 100 |
| 15) Carbon disulfide | 2.728 | 76 | 146663 | 1.80 | ppbV | 96 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.747 | 101 | 175871 | 2.34 | ppbV | 99 |
| 17) Acrolein | 2.963 | 56 | 17616 | 1.58 | ppbV | 96 |
| 18) Allyl chloride | 3.091 | 76 | 24227 | 1.82 | ppbV | 100 |
| 19) Isopropanol | 3.088 | 45 | 79453 | 1.49 | ppbV | 96 |
| 20) Methylene chloride | 3.178 | 49 | 55923 | 1.71 | ppbV | 98 |
| 21) Acetone | 3.188 | 43 | 70498 | 1.76 | ppbV | 98 |
| 22) trans-1,2-Dichloroethene | 3.307 | 61 | 78613 | 1.71 | ppbV | 100 |
| 23) n-Pentane | 3.390 | 43 | 132521 | 2.14 | ppbV | 97 |
| 24) n-Hexane | 3.387 | 57 | 176979 | 2.11 | ppbV | 97 |
| 25) Methyl tert-butyl ether | 3.390 | 73 | 242041 | 2.35 | ppbV | 92 |
| 26) Tert-butyl alcohol | 3.442 | 59 | 154807 | 2.23 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.789 | 63 | 106902 | 1.73 | ppbV | 99 |
| 28) cis-1,2-Dichloroethene | 4.217 | 61 | 78716 | 1.80 | ppbV | 98 |
| 29) Cyclohexane | 4.397 | 56 | 133883 | 2.28 | ppbV | 98 |
| 30) Chloroform | 4.439 | 83 | 134737 | 1.89 | ppbV | 98 |
| 31) Ethyl acetate | 4.532 | 61 | 22449 | 1.94 | ppbV | 99 |
| 32) Carbon tetrachloride | 4.561 | 117 | 183055 | 2.17 | ppbV | 99 |
| 33) Tetrahydrofuran | 4.564 | 42 | 77218 | 1.93 | ppbV | 99 |
| 34) 1,1,1-Trichloroethane | 4.612 | 97 | 159351 | 2.15 | ppbV | 97 |
| 35) Methyl ethyl ketone | 4.670 | 43 | 121249 | 1.86 | ppbV | 100 |
| 36) n-Heptane | 4.905 | 43 | 151248 | 2.06 | ppbV | 99 |
| 37) Benzene | 4.921 | 78 | 216088 | 2.04 | ppbV | 99 |
| 38) 1,2-Dichloroethane | 5.079 | 62 | 86250 | 1.95 | ppbV | 100 |
| 40) Trichloroethene | 5.423 | 130 | 93973 | 2.11 | ppbV | 100 |
| 41) 2,2,4-Trimethylpentane | 4.828 | 57 | 337914 | 2.58 | ppbV | 98 |
| 42) 1,2-Dichloropropane | 5.873 | 63 | 89006 | 2.28 | ppbV | 98 |
| 43) Bromodichloromethane | 5.937 | 83 | 157497 | 2.39 | ppbV | 99 |
| 44) Methyl methacrylate | 6.082 | 41 | 102545 | 2.16 | ppbV | 96 |
| 45) 1,4-Dioxane | 6.107 | 88 | 55879 | 2.33 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.529 | 75 | 132030 | 2.18 | ppbV | 98 |
| 47) Toluene | 6.767 | 91 | 315155 | 2.23 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.133 | 43 | 201872 | 2.28 | ppbV | 98 |
| 49) Tetrachloroethene | 7.152 | 166 | 137965 | 2.27 | ppbV | 99 |
| 50) trans-1,3-Dichloropropene | 7.175 | 75 | 126648 | 2.16 | ppbV | 100 |
| 51) 1,1,2-Trichloroethane | 7.336 | 97 | 103047 | 2.16 | ppbV | 99 |

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4133std04.D
Acq On : 10 Oct 2023 11:46 am
Operator : jjw
Sample : 2.0 ppbv standard
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

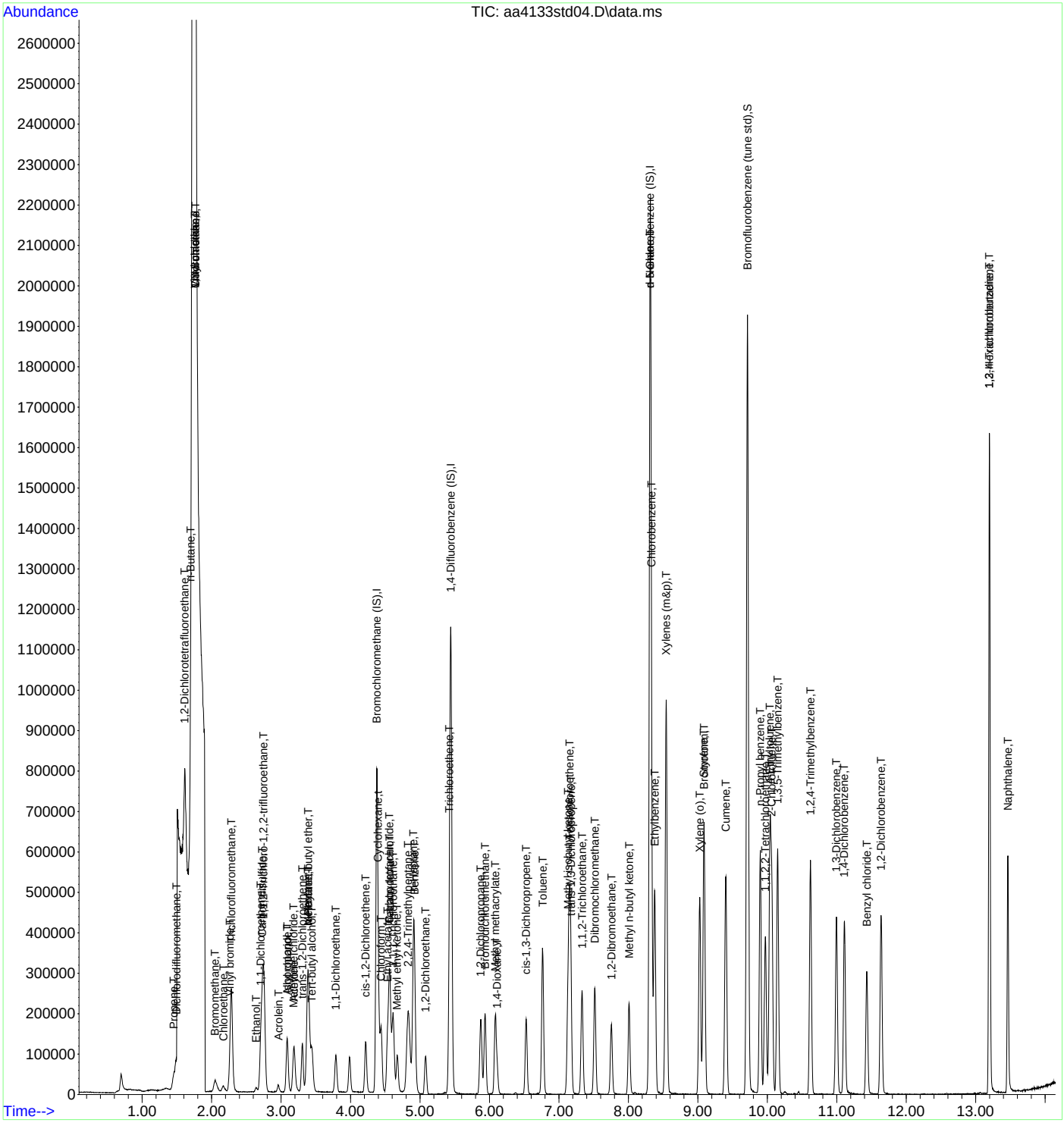
Quant Time: Oct 10 15:14:52 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.516 | 129 | 175087 | 2.20 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.757 | 107 | 145737 | 2.11 | ppbV | 99 |
| 54) Methyl n-butyl ketone | 8.011 | 43 | 176926 | 2.07 | ppbV | 99 |
| 56) n-Nonane | 8.313 | 43 | 243566 | 2.39 | ppbV | 99 |
| 57) Chlorobenzene | 8.332 | 112 | 239887 | 2.34 | ppbV | 96 |
| 58) Ethylbenzene | 8.381 | 91 | 452392 | 2.39 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.545 | 91 | 704842 | 5.02 | ppbV | 98 |
| 60) Xylene (o) | 9.027 | 91 | 367407 | 2.40 | ppbV | 99 |
| 61) Styrene | 9.088 | 104 | 243368 | 2.32 | ppbV | 99 |
| 62) Bromoform | 9.091 | 173 | 168245 | 2.23 | ppbV | 100 |
| 63) Cumene | 9.403 | 105 | 477213 | 2.38 | ppbV | 99 |
| 65) n-Propyl benzene | 9.898 | 91 | 606010 | 2.32 | ppbV | 98 |
| 66) 1,1,2,2-Tetrachloroethane | 9.972 | 83 | 262772 | 2.45 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.037 | 105 | 498880 | 2.25 | ppbV | 98 |
| 68) 2-Chlorotoluene | 10.062 | 91 | 410155 | 2.34 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.149 | 105 | 421510 | 2.37 | ppbV | 100 |
| 70) 1,2,4-Trimethylbenzene | 10.622 | 105 | 417786 | 2.35 | ppbV | 99 |
| 71) 1,3-Dichlorobenzene | 10.995 | 146 | 230016 | 2.11 | ppbV | 99 |
| 72) 1,4-Dichlorobenzene | 11.107 | 146 | 221287 | 2.02 | ppbV | 99 |
| 73) Benzyl chloride | 11.432 | 91 | 295275 | 1.88 | ppbV | 98 |
| 74) 1,2-Dichlorobenzene | 11.638 | 146 | 234385 | 2.22 | ppbV | 99 |
| 75) 1,3-Hexachlorobutadiene | 13.197 | 225 | 177745 | 2.42 | ppbV | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.197 | 180 | 182140 | 2.15 | ppbV | 99 |
| 77) Naphthalene | 13.464 | 128 | 391079 | 2.02 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4133std04.D
Acq On : 10 Oct 2023 11:46 am
Operator : jjw
Sample : 2.0 ppbv standard
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 10 15:14:52 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4134std03.D
Acq On : 10 Oct 2023 12:21 pm
Operator : jjw
Sample : 10 ppbv standard
Misc : EB0103704
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 10 15:20:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.394 | 130 | 393970 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.452 | 114 | 1695876 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 1964329 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.715 | 95 | 1708242 | 9.98 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.487 | 41 | 258254 | 9.44 | ppbV | 100 |
| 3) Dichlorodifluoromethane | 1.523 | 85 | 905524 | 10.37 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.644 | 85 | 1136761 | 8.96 | ppbV | 100 |
| 5) n-Butane | 1.730 | 43 | 657868 | 10.46 | ppbV | 100 |
| 6) Chloromethane | 1.792 | 52 | 50221 | 11.51 | ppbV | 98 |
| 7) Vinyl chloride | 1.781 | 62 | 385978 | 10.81 | ppbV | 100 |
| 8) 1,3-Butadiene | 1.792 | 39 | 337213 | 10.11 | ppbV | 100 |
| 9) Bromomethane | 2.082 | 94 | 295814 | 10.27 | ppbV | 100 |
| 10) Chloroethane | 2.195 | 64 | 209472 | 11.19 | ppbV | 100 |
| 11) Vinyl bromide | 2.288 | 106 | 363736 | 10.31 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.310 | 101 | 1152906 | 10.45 | ppbV | 100 |
| 13) Ethanol | 2.667 | 45 | 110171 | 9.55 | ppbV | 100 |
| 14) 1,1-Dichloroethene | 2.728 | 61 | 796558 | 10.88 | ppbV | 100 |
| 15) Carbon disulfide | 2.751 | 76 | 1360498 | 11.29 | ppbV | 100 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.776 | 101 | 1083429 | 9.75 | ppbV | 100 |
| 17) Acrolein | 2.982 | 56 | 169981 | 10.33 | ppbV | 100 |
| 18) Allyl chloride | 3.111 | 76 | 227552 | 11.52 | ppbV | 100 |
| 19) Isopropanol | 3.108 | 45 | 729204 | 9.23 | ppbV | 100 |
| 20) Methylene chloride | 3.204 | 49 | 433980 | 8.96 | ppbV | 100 |
| 21) Acetone | 3.211 | 43 | 654299 | 11.01 | ppbV | 100 |
| 22) trans-1,2-Dichloroethene | 3.326 | 61 | 780121 | 11.48 | ppbV | 100 |
| 23) n-Pentane | 3.407 | 43 | 924569 | 10.09 | ppbV | 100 |
| 24) n-Hexane | 3.403 | 57 | 1285851 | 10.35 | ppbV | 100 |
| 25) Methyl tert-butyl ether | 3.410 | 73 | 1606753 | 10.53 | ppbV | 100 |
| 26) Tert-butyl alcohol | 3.465 | 59 | 1133398 | 11.03 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.805 | 63 | 942517 | 10.30 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.230 | 61 | 719414 | 11.15 | ppbV | 99 |
| 29) Cyclohexane | 4.413 | 56 | 918448 | 10.59 | ppbV | 100 |
| 30) Chloroform | 4.455 | 83 | 1125163 | 10.67 | ppbV | 100 |
| 31) Ethyl acetate | 4.538 | 61 | 191456 | 11.17 | ppbV | 100 |
| 32) Carbon tetrachloride | 4.574 | 117 | 1320797 | 10.56 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.571 | 42 | 644824 | 10.88 | ppbV | 100 |
| 34) 1,1,1-Trichloroethane | 4.625 | 97 | 1145085 | 10.46 | ppbV | 100 |
| 35) Methyl ethyl ketone | 4.680 | 43 | 1033883 | 10.75 | ppbV | 100 |
| 36) n-Heptane | 4.918 | 43 | 1246184 | 11.45 | ppbV | 100 |
| 37) Benzene | 4.931 | 78 | 1617158 | 10.34 | ppbV | 100 |
| 38) 1,2-Dichloroethane | 5.091 | 62 | 715639 | 10.92 | ppbV | 100 |
| 40) Trichloroethene | 5.432 | 130 | 747440 | 9.96 | ppbV | 100 |
| 41) 2,2,4-Trimethylpentane | 4.844 | 57 | 2224941 | 10.07 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.882 | 63 | 729348 | 11.06 | ppbV | 100 |
| 43) Bromodichloromethane | 5.944 | 83 | 1277100 | 11.49 | ppbV | 100 |
| 44) Methyl methacrylate | 6.088 | 41 | 926458 | 11.58 | ppbV | 100 |
| 45) 1,4-Dioxane | 6.114 | 88 | 481882 | 11.92 | ppbV | 100 |
| 46) cis-1,3-Dichloropropene | 6.532 | 75 | 1178257 | 11.52 | ppbV | 100 |
| 47) Toluene | 6.770 | 91 | 2718261 | 11.40 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.133 | 43 | 1751107 | 11.69 | ppbV | 100 |
| 49) Tetrachloroethene | 7.159 | 166 | 1202779 | 11.70 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.175 | 75 | 1191758 | 12.01 | ppbV | 100 |
| 51) 1,1,2-Trichloroethane | 7.336 | 97 | 904123 | 11.23 | ppbV | 100 |

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4134std03.D
Acq On : 10 Oct 2023 12:21 pm
Operator : jjw
Sample : 10 ppbv standard
Misc : EB0103704
ALS Vial : 4 Sample Multiplier: 1

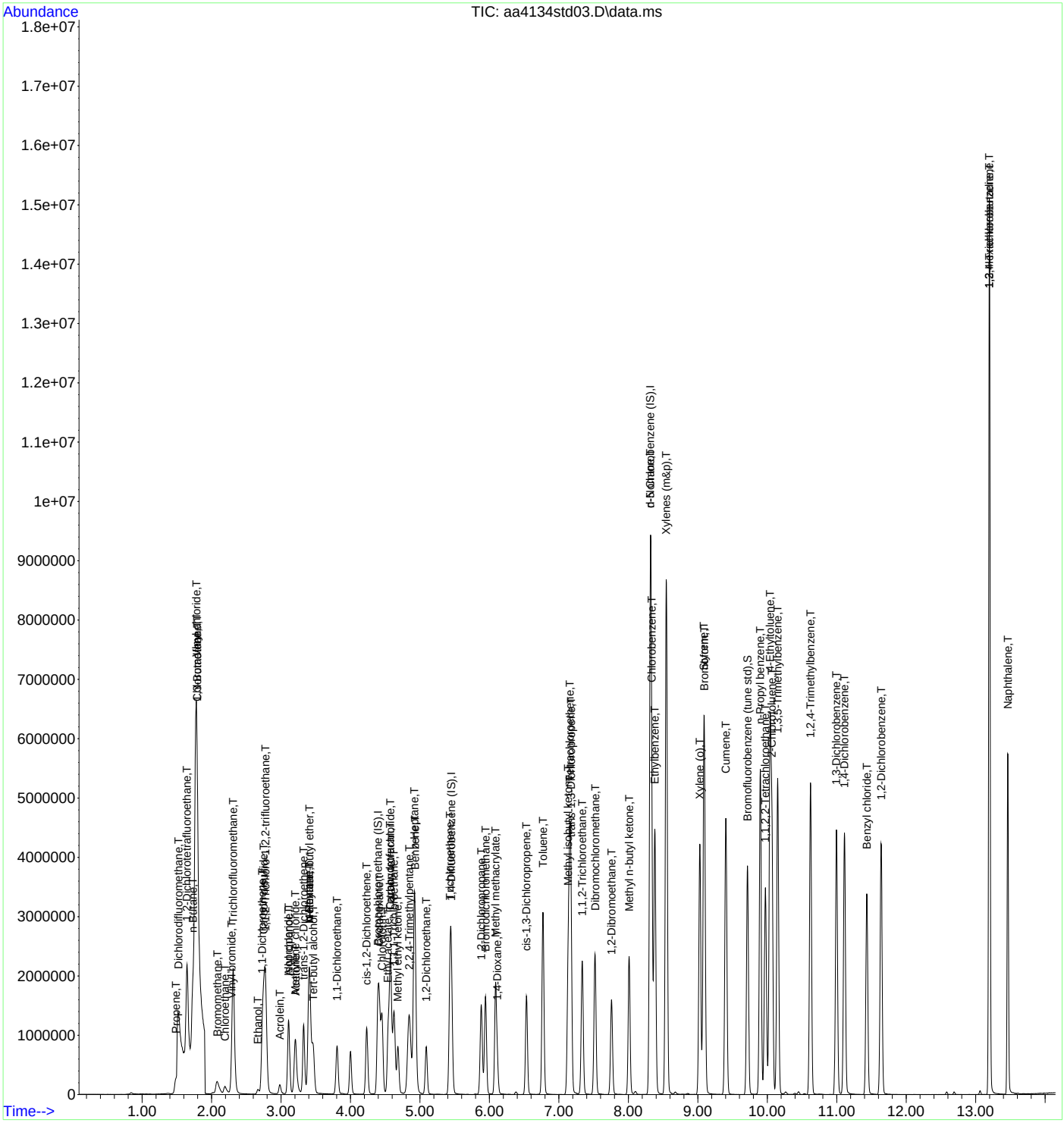
Quant Time: Oct 10 15:20:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.522 | 129 | 1584449 | 11.81 | ppbV | 100 |
| 53) 1,2-Dibromoethane | 7.757 | 107 | 1340384 | 11.51 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.011 | 43 | 1785511 | 12.39 | ppbV | 100 |
| 56) n-Nonane | 8.316 | 43 | 2220175 | 11.39 | ppbV | 100 |
| 57) Chlorobenzene | 8.336 | 112 | 2157593 | 11.02 | ppbV | 100 |
| 58) Ethylbenzene | 8.381 | 91 | 4038783 | 11.16 | ppbV | 100 |
| 59) Xylenes (m&p) | 8.545 | 91 | 6199781 | 23.12 | ppbV | 100 |
| 60) Xylene (o) | 9.027 | 91 | 3172411 | 10.84 | ppbV | 100 |
| 61) Styrene | 9.088 | 104 | 2368407 | 11.82 | ppbV | 100 |
| 62) Bromoform | 9.095 | 173 | 1652936 | 11.49 | ppbV | 100 |
| 63) Cumene | 9.403 | 105 | 4108750 | 10.74 | ppbV | 100 |
| 65) n-Propyl benzene | 9.898 | 91 | 5536013 | 11.09 | ppbV | 100 |
| 66) 1,1,2,2-Tetrachloroethane | 9.972 | 83 | 2329432 | 11.37 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.040 | 105 | 4675293 | 11.06 | ppbV | 100 |
| 68) 2-Chlorotoluene | 10.066 | 91 | 3642460 | 10.86 | ppbV | 100 |
| 69) 1,3,5-Trimethylbenzene | 10.149 | 105 | 3757367 | 11.06 | ppbV | 100 |
| 70) 1,2,4-Trimethylbenzene | 10.622 | 105 | 3786813 | 11.15 | ppbV | 100 |
| 71) 1,3-Dichlorobenzene | 10.995 | 146 | 2289894 | 11.01 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.111 | 146 | 2273891 | 10.87 | ppbV | 100 |
| 73) Benzyl chloride | 11.432 | 91 | 3179639 | 10.59 | ppbV | 100 |
| 74) 1,2-Dichlorobenzene | 11.641 | 146 | 2172244 | 10.77 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.197 | 225 | 1532545 | 10.95 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.197 | 180 | 1768989 | 10.93 | ppbV | 100 |
| 77) Naphthalene | 13.464 | 128 | 3720647 | 10.05 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4134std03.D
Acq On : 10 Oct 2023 12:21 pm
Operator : jjw
Sample : 10 ppbv standard
Misc : EB0103704
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 10 15:20:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4135std02.D
Acq On : 10 Oct 2023 12:55 pm
Operator : jjw
Sample : 20 ppbv standard
Misc : EB0103704
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 10 15:20:48 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.397 | 130 | 363381 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.455 | 114 | 1661895 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 1933627 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.715 | 95 | 1722328 | 10.22 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.490 | 41 | 515568 | 20.44 | ppbV | 98 |
| 3) Dichlorodifluoromethane | 1.530 | 85 | 1841081 | 22.86 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.650 | 85 | 2249237 | 19.23 | ppbV | 99 |
| 5) n-Butane | 1.730 | 43 | 1305900 | 22.50 | ppbV | 99 |
| 6) Chloromethane | 1.788 | 52 | 98143 | 24.39 | ppbV | 93 |
| 7) Vinyl chloride | 1.781 | 62 | 772248 | 23.46 | ppbV | 100 |
| 8) 1,3-Butadiene | 1.795 | 39 | 652429 | 21.21 | ppbV | 98 |
| 9) Bromomethane | 2.085 | 94 | 591691 | 22.26 | ppbV | 98 |
| 10) Chloroethane | 2.194 | 64 | 421571 | 24.42 | ppbV | 99 |
| 11) Vinyl bromide | 2.294 | 106 | 747200 | 22.97 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.313 | 101 | 2343589 | 23.04 | ppbV | 100 |
| 13) Ethanol | 2.667 | 45 | 218329 | 20.52 | ppbV | 96 |
| 14) 1,1-Dichloroethene | 2.735 | 61 | 1612191 | 23.88 | ppbV | 100 |
| 15) Carbon disulfide | 2.754 | 76 | 2664558 | 23.98 | ppbV | 100 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.776 | 101 | 2148248 | 20.97 | ppbV | 100 |
| 17) Acrolein | 2.989 | 56 | 325182 | 21.42 | ppbV | 99 |
| 18) Allyl chloride | 3.111 | 76 | 456662 | 25.07 | ppbV | 100 |
| 19) Isopropanol | 3.111 | 45 | 1457678 | 20.00 | ppbV | 99 |
| 20) Methylene chloride | 3.204 | 49 | 879522 | 19.69 | ppbV | 98 |
| 21) Acetone | 3.214 | 43 | 1252029 | 22.84 | ppbV | 99 |
| 22) trans-1,2-Dichloroethene | 3.326 | 61 | 1573792 | 25.11 | ppbV | 99 |
| 23) n-Pentane | 3.407 | 43 | 1811231 | 21.44 | ppbV | 99 |
| 24) n-Hexane | 3.407 | 57 | 2518540 | 21.99 | ppbV | 100 |
| 25) Methyl tert-butyl ether | 3.410 | 73 | 3154053 | 22.42 | ppbV | 100 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 2254575 | 23.80 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 1901162 | 22.53 | ppbV | 99 |
| 28) cis-1,2-Dichloroethene | 4.236 | 61 | 1445410 | 24.28 | ppbV | 99 |
| 29) Cyclohexane | 4.413 | 56 | 1783891 | 22.29 | ppbV | 99 |
| 30) Chloroform | 4.455 | 83 | 2301846 | 23.67 | ppbV | 99 |
| 31) Ethyl acetate | 4.542 | 61 | 386835 | 24.46 | ppbV | 99 |
| 32) Carbon tetrachloride | 4.577 | 117 | 2607121 | 22.61 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.574 | 42 | 1283380 | 23.48 | ppbV | 99 |
| 34) 1,1,1-Trichloroethane | 4.625 | 97 | 2272798 | 22.50 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.683 | 43 | 2094715 | 23.60 | ppbV | 100 |
| 36) n-Heptane | 4.918 | 43 | 2363613 | 23.53 | ppbV | 100 |
| 37) Benzene | 4.934 | 78 | 3240471 | 22.45 | ppbV | 100 |
| 38) 1,2-Dichloroethane | 5.091 | 62 | 1451918 | 24.03 | ppbV | 100 |
| 40) Trichloroethene | 5.432 | 130 | 1508747 | 20.52 | ppbV | 98 |
| 41) 2,2,4-Trimethylpentane | 4.841 | 57 | 4438426 | 20.50 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.886 | 63 | 1448431 | 22.41 | ppbV | 99 |
| 43) Bromodichloromethane | 5.943 | 83 | 2592041 | 23.80 | ppbV | 99 |
| 44) Methyl methacrylate | 6.088 | 41 | 1821528 | 23.23 | ppbV | 99 |
| 45) 1,4-Dioxane | 6.114 | 88 | 966504 | 24.40 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.535 | 75 | 2338061 | 23.33 | ppbV | 100 |
| 47) Toluene | 6.773 | 91 | 5305706 | 22.72 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.133 | 43 | 3350206 | 22.82 | ppbV | 99 |
| 49) Tetrachloroethene | 7.162 | 166 | 2379736 | 23.63 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.175 | 75 | 2387243 | 24.55 | ppbV | 98 |
| 51) 1,1,2-Trichloroethane | 7.339 | 97 | 1817644 | 23.04 | ppbV | 100 |

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4135std02.D
Acq On : 10 Oct 2023 12:55 pm
Operator : jjw
Sample : 20 ppbv standard
Misc : EB0103704
ALS Vial : 5 Sample Multiplier: 1

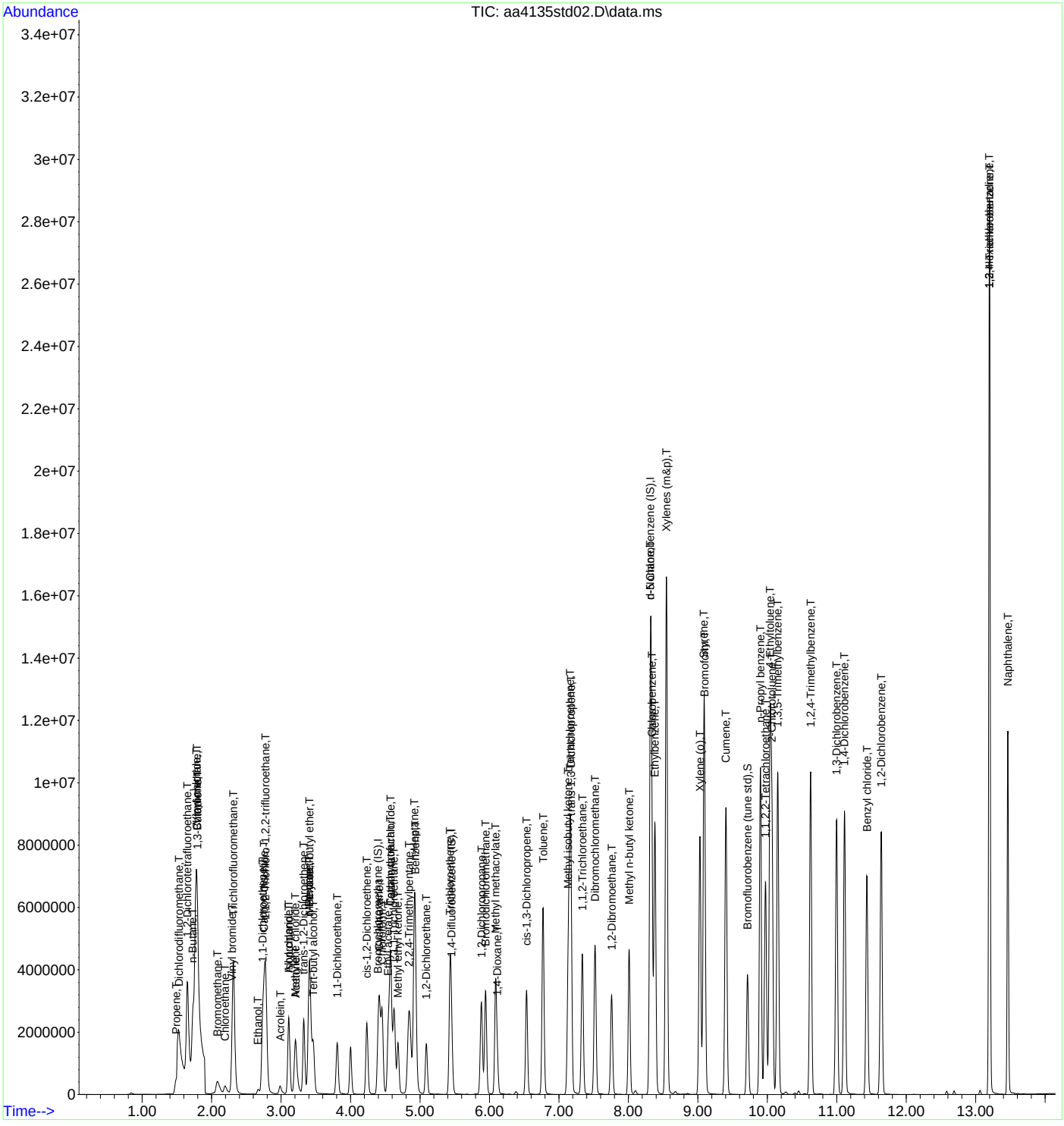
Quant Time: Oct 10 15:20:48 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.522 | 129 | 3189477 | 24.27 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.760 | 107 | 2695314 | 23.62 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.011 | 43 | 3500354 | 24.80 | ppbV | 100 |
| 56) n-Nonane | 8.316 | 43 | 4196367 | 21.87 | ppbV | 99 |
| 57) Chlorobenzene | 8.339 | 112 | 4231170 | 21.95 | ppbV | 100 |
| 58) Ethylbenzene | 8.381 | 91 | 7813775 | 21.93 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.548 | 91 | 11753861 | 44.52 | ppbV | 98 |
| 60) Xylene (o) | 9.030 | 91 | 6215156 | 21.57 | ppbV | 100 |
| 61) Styrene | 9.088 | 104 | 4654583 | 23.60 | ppbV | 99 |
| 62) Bromoform | 9.098 | 173 | 3352006 | 23.67 | ppbV | 99 |
| 63) Cumene | 9.403 | 105 | 7994834 | 21.23 | ppbV | 99 |
| 65) n-Propyl benzene | 9.901 | 91 | 10677156 | 21.73 | ppbV | 99 |
| 66) 1,1,2,2-Tetrachloroethane | 9.975 | 83 | 4583433 | 22.73 | ppbV | 99 |
| 67) 4-Ethyltoluene | 10.040 | 105 | 9079626 | 21.83 | ppbV | 99 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 7122967 | 21.58 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.149 | 105 | 7395052 | 22.11 | ppbV | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.625 | 105 | 7412335 | 22.17 | ppbV | 99 |
| 71) 1,3-Dichlorobenzene | 10.998 | 146 | 4641497 | 22.67 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 4645158 | 22.55 | ppbV | 100 |
| 73) Benzyl chloride | 11.435 | 91 | 6527364 | 22.08 | ppbV | 99 |
| 74) 1,2-Dichlorobenzene | 11.641 | 146 | 4361556 | 21.96 | ppbV | 99 |
| 75) 1,3-Hexachlorobutadiene | 13.197 | 225 | 2950129 | 21.41 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 3565503 | 22.37 | ppbV | 99 |
| 77) Naphthalene | 13.464 | 128 | 7448434 | 20.44 | ppbV | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4135std02.D
Acq On : 10 Oct 2023 12:55 pm
Operator : jjw
Sample : 20 ppbv standard
Misc : EB0103704
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 10 15:20:48 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4136std01.D
Acq On : 10 Oct 2023 2:05 pm
Operator : jjw
Sample : 40 ppbv standard
Misc : EB0103704
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 10 15:21:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Bromochloromethane (IS) | 4.400 | 130 | 356266 | 10.00 | ppbV | | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.458 | 114 | 1769398 | 10.00 | ppbV | | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 1970985 | 10.00 | ppbV | | 0.000 |
| System Monitoring Compounds | | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.718 | 95 | 1881267 | 10.95 | ppbV | | 0.000 |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 1.493 | 41 | 1166461 | 47.16 | ppbV | | 99 |
| 3) Dichlorodifluoromethane | 1.530 | 85 | 3976819 | 50.37 | ppbV | | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.654 | 85 | 4829984 | 42.11 | ppbV | | 100 |
| 5) n-Butane | 1.733 | 43 | 2669458 | 46.92 | ppbV | | 100 |
| 6) Chloromethane | 1.798 | 52 | 218685 | 55.44 | ppbV | # | 1 |
| 7) Vinyl chloride | 1.788 | 62 | 1703493 | 52.78 | ppbV | | 100 |
| 8) 1,3-Butadiene | 1.798 | 39 | 1380202 | 45.78 | ppbV | | 97 |
| 9) Bromomethane | 2.088 | 94 | 1297810 | 49.81 | ppbV | | 98 |
| 10) Chloroethane | 2.197 | 64 | 957066 | 56.55 | ppbV | | 99 |
| 11) Vinyl bromide | 2.294 | 106 | 1649730 | 51.72 | ppbV | | 99 |
| 12) Trichlorofluoromethane | 2.316 | 101 | 4982088 | 49.96 | ppbV | | 100 |
| 13) Ethanol | 2.670 | 45 | 542733 | 52.03 | ppbV | | 98 |
| 14) 1,1-Dichloroethene | 2.734 | 61 | 3420744 | 51.68 | ppbV | | 100 |
| 15) Carbon disulfide | 2.757 | 76 | 5570013 | 51.13 | ppbV | | 99 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.776 | 101 | 4651123 | 46.31 | ppbV | | 99 |
| 17) Acrolein | 2.991 | 56 | 704002 | 47.31 | ppbV | | 100 |
| 18) Allyl chloride | 3.114 | 76 | 960536 | 53.78 | ppbV | | 100 |
| 19) Isopropanol | 3.114 | 45 | 3040718 | 42.56 | ppbV | | 99 |
| 20) Methylene chloride | 3.204 | 49 | 2011731 | 45.94 | ppbV | | 99 |
| 21) Acetone | 3.217 | 43 | 2606931 | 48.51 | ppbV | | 99 |
| 22) trans-1,2-Dichloroethene | 3.329 | 61 | 3449388 | 56.15 | ppbV | | 99 |
| 23) n-Pentane | 3.409 | 43 | 4025985 | 48.61 | ppbV | | 99 |
| 24) n-Hexane | 3.409 | 57 | 5589811 | 49.78 | ppbV | | 100 |
| 25) Methyl tert-butyl ether | 3.409 | 73 | 6879864 | 49.87 | ppbV | | 99 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 4961423 | 53.42 | ppbV | | 100 |
| 27) 1,1-Dichloroethane | 3.811 | 63 | 4139076 | 50.03 | ppbV | | 98 |
| 28) cis-1,2-Dichloroethene | 4.236 | 61 | 3134852 | 53.71 | ppbV | | 99 |
| 29) Cyclohexane | 4.416 | 56 | 3885234 | 49.53 | ppbV | | 100 |
| 30) Chloroform | 4.454 | 83 | 4963958 | 52.07 | ppbV | | 99 |
| 31) Ethyl acetate | 4.541 | 61 | 819660 | 52.86 | ppbV | | 99 |
| 32) Carbon tetrachloride | 4.580 | 117 | 5580598 | 49.35 | ppbV | | 99 |
| 33) Tetrahydrofuran | 4.573 | 42 | 2658620 | 49.61 | ppbV | | 98 |
| 34) 1,1,1-Trichloroethane | 4.628 | 97 | 4872977 | 49.20 | ppbV | | 99 |
| 35) Methyl ethyl ketone | 4.686 | 43 | 4486611 | 51.57 | ppbV | | 99 |
| 36) n-Heptane | 4.921 | 43 | 4632338 | 47.05 | ppbV | | 99 |
| 37) Benzene | 4.933 | 78 | 6993711 | 49.43 | ppbV | | 100 |
| 38) 1,2-Dichloroethane | 5.094 | 62 | 3131902 | 52.87 | ppbV | | 100 |
| 40) Trichloroethene | 5.435 | 130 | 3316781 | 42.37 | ppbV | | 99 |
| 41) 2,2,4-Trimethylpentane | 4.843 | 57 | 9712768 | 42.14 | ppbV | | 98 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 3027090 | 43.98 | ppbV | | 99 |
| 43) Bromodichloromethane | 5.946 | 83 | 5494302 | 47.39 | ppbV | | 99 |
| 44) Methyl methacrylate | 6.088 | 41 | 3747387 | 44.88 | ppbV | | 99 |
| 45) 1,4-Dioxane | 6.114 | 88 | 2055391 | 48.74 | ppbV | | 98 |
| 46) cis-1,3-Dichloropropene | 6.535 | 75 | 4834720 | 45.30 | ppbV | | 99 |
| 47) Toluene | 6.773 | 91 | 10605745 | 42.65 | ppbV | | 98 |
| 48) Methyl isobutyl ketone | 7.133 | 43 | 6661468 | 42.63 | ppbV | | 99 |
| 49) Tetrachloroethene | 7.162 | 166 | 4858576 | 45.31 | ppbV | | 99 |
| 50) trans-1,3-Dichloropropene | 7.178 | 75 | 4856047 | 46.91 | ppbV | | 100 |
| 51) 1,1,2-Trichloroethane | 7.339 | 97 | 3819106 | 45.48 | ppbV | | 100 |

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4136std01.D
Acq On : 10 Oct 2023 2:05 pm
Operator : jjw
Sample : 40 ppbv standard
Misc : EB0103704
ALS Vial : 6 Sample Multiplier: 1

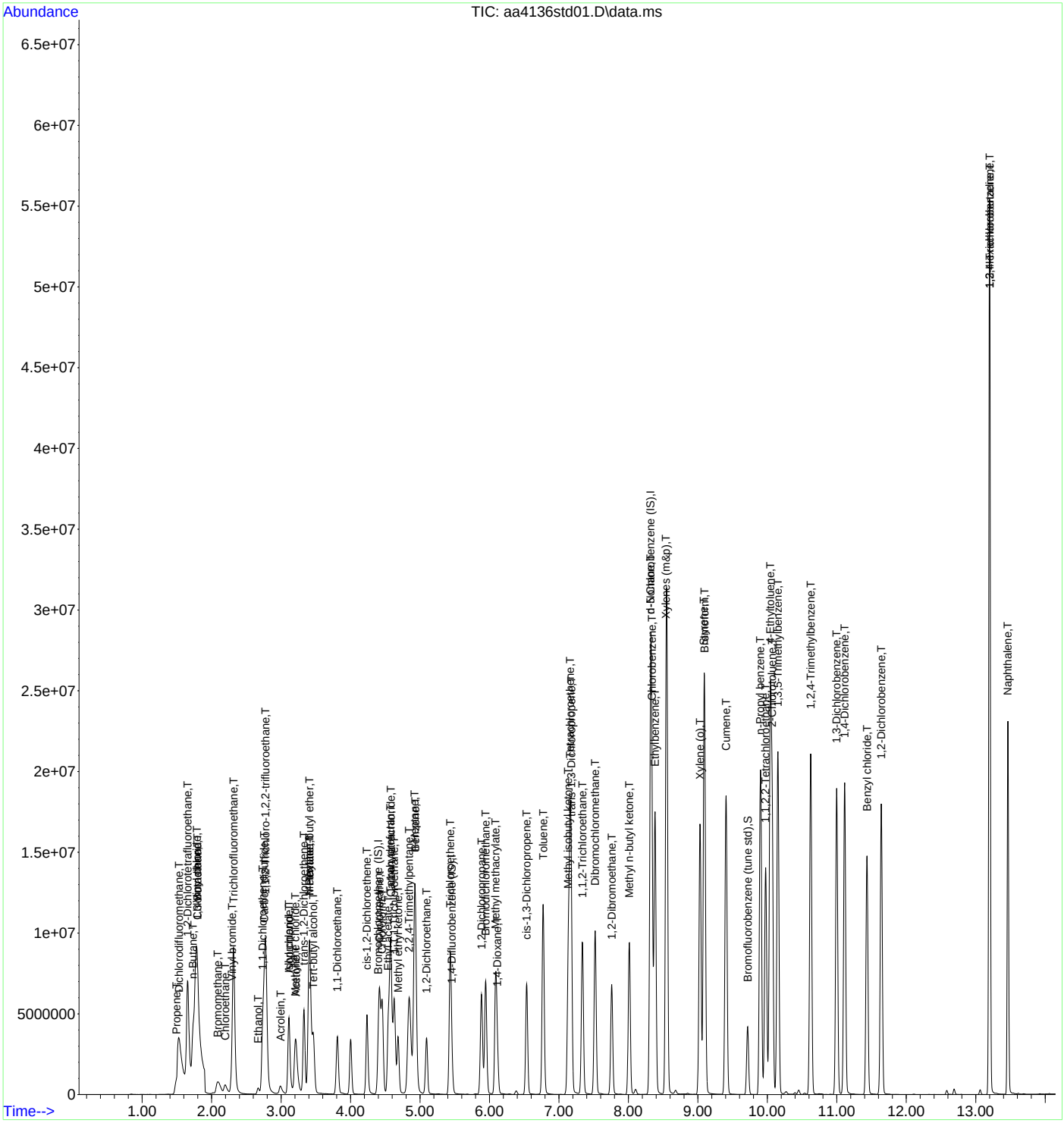
Quant Time: Oct 10 15:21:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.522 | 129 | 6730612 | 48.10 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.760 | 107 | 5679586 | 46.76 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.011 | 43 | 7194438 | 47.87 | ppbV | 98 |
| 56) n-Nonane | 8.319 | 43 | 8278410 | 42.32 | ppbV | 98 |
| 57) Chlorobenzene | 8.338 | 112 | 8642594 | 43.99 | ppbV | 100 |
| 58) Ethylbenzene | 8.384 | 91 | 15502498 | 42.68 | ppbV | 96 |
| 59) Xylenes (m&p) | 8.541 | 91 | 20852616 | 77.48 | ppbV | 89 |
| 60) Xylene (o) | 9.030 | 91 | 12586480 | 42.86 | ppbV | 98 |
| 61) Styrene | 9.088 | 104 | 9555594 | 47.52 | ppbV | 98 |
| 62) Bromoform | 9.097 | 173 | 7098495 | 49.18 | ppbV | 99 |
| 63) Cumene | 9.406 | 105 | 16006588 | 41.71 | ppbV | 96 |
| 65) n-Propyl benzene | 9.898 | 91 | 19885132 | 39.70 | ppbV | 93 |
| 66) 1,1,2,2-Tetrachloroethane | 9.975 | 83 | 9484025 | 46.14 | ppbV | 99 |
| 67) 4-Ethyltoluene | 10.043 | 105 | 17650930 | 41.63 | ppbV | 95 |
| 68) 2-Chlorotoluene | 10.068 | 91 | 14525182 | 43.17 | ppbV | 97 |
| 69) 1,3,5-Trimethylbenzene | 10.152 | 105 | 15012049 | 44.03 | ppbV | 96 |
| 70) 1,2,4-Trimethylbenzene | 10.625 | 105 | 15021608 | 44.08 | ppbV | 97 |
| 71) 1,3-Dichlorobenzene | 10.998 | 146 | 9832383 | 47.12 | ppbV | 99 |
| 72) 1,4-Dichlorobenzene | 11.113 | 146 | 9906545 | 47.18 | ppbV | 99 |
| 73) Benzyl chloride | 11.435 | 91 | 13735706 | 45.59 | ppbV | 96 |
| 74) 1,2-Dichlorobenzene | 11.641 | 146 | 9184158 | 45.37 | ppbV | 98 |
| 75) 1,3-Hexachlorobutadiene | 13.200 | 225 | 5812342 | 41.37 | ppbV | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 7183784 | 44.22 | ppbV | 99 |
| 77) Naphthalene | 13.460 | 128 | 13659104 | 36.76 | ppbV # | 93 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4136std01.D
Acq On : 10 Oct 2023 2:05 pm
Operator : jjw
Sample : 40 ppbv standard
Misc : EB0103704
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 10 15:21:12 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Initial Calibration Verification Sample Standard

**Lab Sample Name:** 10 PPBV ICVSS **Data File:** AA3407ICVSS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 8/15/2023

**Amount of standard injected (ml):** 50

Runs with this ICVSS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA3401BFB] | 08/15/2023 10:11 |
| 0.2 PPBV STD [AA3402STD05] | 08/15/2023 11:15 |
| 10 PPBV STANDARD STD [AA3404STD03] | 08/15/2023 13:09 |
| 2 PPBV STD [AA3403STD04] | 08/15/2023 13:45 |
| 20 PPBV STD [AA3405STD02] | 08/15/2023 15:12 |
| 40 PPBV STD [AA3406STD01] | 08/15/2023 16:47 |
| 10 PPBV ICVSS [AA3407ICVSS] | 08/15/2023 18:09 |

| Compound | CAS # | Injected Amount (ppbv) | Recovered Amount (ppbv) | % Recovery | QC Limit |
|---|---|---|---|---|---|
| Acetone | 67-64-1 | 11 | 10 | 95 | |
| Acrolein | 107-02-8 | 9.4 | 10.0 | 110 | |
| Allyl Chloride | 107-05-1 | 11 | 11 | 99 | |
| Benzene | 71-43-2 | 10 | 9.7 | 93 | |
| Benzyl chloride | 100-44-7 | 11 | 11 | 100 | |
| Bromodichloromethane | 75-27-4 | 11 | 11 | 100 | |
| Bromoform | 75-25-2 | 11 | 11 | 96 | |
| Bromomethane | 74-83-9 | 11 | 10 | 92 | |
| 1,3-Butadiene | 106-99-0 | 11 | 10 | 92 | |
| n-Butane | 106-97-8 | 11 | 11 | 100 | |
| Chlorobenzene | 108-90-7 | 10 | 11 | 110 | |
| Chloroethane | 75-00-3 | 9.8 | 11 | 110 | |
| Chloroform | 67-66-3 | 11 | 10 | 92 | |
| Chloromethane | 74-87-3 | 9.9 | 12 | 120 | |
| Carbon disulfide | 75-15-0 | 10 | 11 | 110 | |
| Carbon tetrachloride | 56-23-5 | 11 | 9.7 | 91 | |
| 2-Chlorotoluene | 95-49-8 | 11 | 10 | 91 | |
| Cumene | 98-82-8 | 10 | 10 | 99 | |
| Cyclohexane | 110-82-7 | 11 | 9.7 | 89 | |
| Dibromochloromethane | 124-48-1 | 11 | 11 | 100 | |
| 1,2-Dibromoethane | 106-93-4 | 11 | 11 | 100 | |
| 1,2-Dichlorobenzene | 95-50-1 | 10 | 10 | 97 | |
| 1,3-Dichlorobenzene | 541-73-1 | 10 | 10 | 96 | |
| 1,4-Dichlorobenzene | 106-46-7 | 10 | 11 | 110 | |
| Dichlorodifluoromethane | 75-71-8 | 11 | 10 | 92 | |
| 1,1-Dichloroethane | 75-34-3 | 11 | 9.7 | 92 | |
| 1,2-Dichloroethane | 107-06-2 | 11 | 10 | 95 | |
| 1,1-Dichloroethene | 75-35-4 | 11 | 11 | 100 | |
| 1,2-Dichloroethene (cis) | 156-59-2 | 10 | 11 | 110 | |
| 1,2-Dichloroethene (trans) | 156-60-5 | 11 | 11 | 100 | |
| 1,2-Dichloropropane | 78-87-5 | 11 | 10.0 | 95 | |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 9.9 | 11 | 110 | |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 11 | 11 | 100 | |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 11 | 8.6 | 77 | |
| 1,4-Dioxane | 123-91-1 | 11 | 11 | 98 | |
| Ethanol | 64-17-5 | 9.8 | 8.5 | 87 | |
| Ethyl acetate | 141-78-6 | 10 | 9.9 | 96 | |
| Ethylbenzene | 100-41-4 | 10 | 11 | 110 | |
| 4-Ethyltoluene | 622-96-8 | 11 | 11 | 100 | |
| n-Heptane | 142-82-5 | 11 | 10 | 92 | |

**ICVSS recovery must be within 70-130% of the spiked value for all compounds.**

*** Values outside of QC limits**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Initial Calibration Verification Sample Standard

**Lab Sample Name:** 10 PPBV ICVSS **Data File:** AA3407ICVSS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 8/15/2023

**Amount of standard injected (ml):** 50

Runs with this ICVSS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA3401BFB] | 08/15/2023 10:11 |
| 0.2 PPBV STD [AA3402STD05] | 08/15/2023 11:15 |
| 10 PPBV STANDARD STD [AA3404STD03] | 08/15/2023 13:09 |
| 2 PPBV STD [AA3403STD04] | 08/15/2023 13:45 |
| 20 PPBV STD [AA3405STD02] | 08/15/2023 15:12 |
| 40 PPBV STD [AA3406STD01] | 08/15/2023 16:47 |
| 10 PPBV ICVSS [AA3407ICVSS] | 08/15/2023 18:09 |

| Compound | CAS # | Injected Amount (ppbv) | Recovered Amount (ppbv) | % Recovery | QC Limit |
|---|---|---|---|---|---|
| 1,3-Hexachlorobutadiene | 87-68-3 | 9.8 | 9.8 | 100 | |
| n-Hexane | 110-54-3 | 11 | 9.7 | 90 | |
| Isopropanol | 67-63-0 | 8.1 | 8.8 | 110 | |
| Methylene chloride | 75-09-2 | 11 | 9.1 | 85 | |
| Methyl ethyl ketone | 78-93-3 | 11 | 10 | 92 | |
| Methyl isobutyl ketone | 108-10-1 | 10 | 11 | 110 | |
| Methyl methacrylate | 80-62-6 | 11 | 11 | 100 | |
| Methyl n-butyl ketone | 591-78-6 | 11 | 12 | 110 | |
| Methyl tert-butyl ether | 1634-04-4 | 11 | 9.9 | 91 | |
| Naphthalene | 91-20-3 | 11 | 10 | 93 | |
| n-Nonane | 111-84-2 | 11 | 10 | 89 | |
| n-Pentane | 109-66-0 | 11 | 9.1 | 82 | |
| Propene | 115-07-1 | 11 | 10 | 91 | |
| n-Propyl benzene | 103-65-1 | 11 | 11 | 100 | |
| Styrene | 100-42-5 | 11 | 12 | 110 | |
| Tert-butyl alcohol | 75-65-0 | 12 | 10 | 87 | |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 10 | 10 | 97 | |
| Tetrachloroethene | 127-18-4 | 12 | 11 | 93 | |
| Tetrahydrofuran | 109-99-9 | 11 | 10 | 93 | |
| Toluene | 108-88-3 | 11 | 11 | 100 | |
| 1,2,4-Trichlorobenzene | 120-82-1 | 10 | 10 | 100 | |
| 1,1,1-Trichloroethane | 71-55-6 | 11 | 9.4 | 88 | |
| 1,1,2-Trichloroethane | 79-00-5 | 11 | 10 | 93 | |
| Trichloroethene | 79-01-6 | 10 | 9.5 | 93 | |
| Trichlorofluoromethane | 75-69-4 | 11 | 10 | 94 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 11 | 9.1 | 83 | |
| 1,2,4-Trimethylbenzene | 95-63-6 | 10 | 11 | 100 | |
| 1,3,5-Trimethylbenzene | 108-67-8 | 10 | 11 | 110 | |
| 2,2,4-Trimethylpentane | 540-84-1 | 11 | 10 | 92 | |
| Vinyl bromide | 593-60-2 | 10 | 10 | 100 | |
| Vinyl chloride | 75-01-4 | 11 | 11 | 97 | |
| Xylenes (m&p) | 179601-23-1 | 21 | 22 | 110 | |
| Xylenes (o) | 95-47-6 | 10 | 11 | 110 | |

**ICVSS recovery must be within 70-130% of the spiked value for all compounds.**

*** Values outside of QC limits**

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3407icvss.D
Acq On : 15 Aug 2023 6:09 pm
Operator : jjw
Sample : 10 ppbv icvss
Misc : EB0116272
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 16 10:02:33 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.396 | 130 | 614925 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.454 | 114 | 2660514 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 3151139 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 2639252 | 10.07 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.486 | 41 | 437009 | 10.32 | ppbV | 100 |
| 3) Dichlorodifluoromethane | 1.526 | 85 | 1589571 | 10.23 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.646 | 85 | 1915451 | 8.57 | ppbV | 100 |
| 5) n-Butane | 1.729 | 43 | 1085164 | 10.79 | ppbV | 99 |
| 6) Chloromethane | 1.791 | 52 | 84692 | 11.77 | ppbV | 91 |
| 7) Vinyl chloride | 1.780 | 62 | 624265 | 10.68 | ppbV | 99 |
| 8) 1,3-Butadiene | 1.794 | 39 | 615975 | 10.31 | ppbV | 99 |
| 9) Bromomethane | 2.084 | 94 | 497818 | 10.14 | ppbV | 99 |
| 10) Chloroethane | 2.197 | 64 | 339826 | 10.69 | ppbV | 99 |
| 11) Vinyl bromide | 2.293 | 106 | 630457 | 10.21 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.312 | 101 | 2122221 | 10.15 | ppbV | 100 |
| 13) Ethanol | 2.669 | 45 | 210384 | 8.55 | ppbV | 99 |
| 14) 1,1-Dichloroethene | 2.734 | 61 | 1353018 | 10.54 | ppbV | 100 |
| 15) Carbon disulfide | 2.753 | 76 | 2291667 | 10.87 | ppbV | 99 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.776 | 101 | 1880237 | 9.10 | ppbV | 99 |
| 17) Acrolein | 2.984 | 56 | 263590 | 9.98 | ppbV | 99 |
| 18) Allyl chloride | 3.113 | 76 | 378917 | 11.01 | ppbV | 100 |
| 19) Isopropanol | 3.113 | 45 | 1247145 | 8.77 | ppbV | 99 |
| 20) Methylene chloride | 3.203 | 49 | 707555 | 9.12 | ppbV | 99 |
| 21) Acetone | 3.213 | 43 | 1199665 | 10.40 | ppbV | 99 |
| 22) trans-1,2-Dichloroethene | 3.329 | 61 | 1279551 | 11.07 | ppbV | 99 |
| 23) n-Pentane | 3.409 | 43 | 1345011 | 9.12 | ppbV | 99 |
| 24) n-Hexane | 3.409 | 57 | 2003979 | 9.73 | ppbV | 100 |
| 25) Methyl tert-butyl ether | 3.412 | 73 | 2769119 | 9.89 | ppbV | 99 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 1862648 | 10.34 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 1576537 | 9.72 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.235 | 61 | 1186018 | 10.57 | ppbV | 99 |
| 29) Cyclohexane | 4.415 | 56 | 1446092 | 9.72 | ppbV | 99 |
| 30) Chloroform | 4.454 | 83 | 2014411 | 10.15 | ppbV | 99 |
| 31) Ethyl acetate | 4.541 | 61 | 312517 | 9.89 | ppbV | 100 |
| 32) Carbon tetrachloride | 4.576 | 117 | 2310805 | 9.71 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.576 | 42 | 1135151 | 10.18 | ppbV | 99 |
| 34) 1,1,1-Trichloroethane | 4.631 | 97 | 2017204 | 9.42 | ppbV | 100 |
| 35) Methyl ethyl ketone | 4.685 | 43 | 1824867 | 10.25 | ppbV | 99 |
| 36) n-Heptane | 4.917 | 43 | 2119295 | 10.29 | ppbV | 99 |
| 37) Benzene | 4.933 | 78 | 2760579 | 9.73 | ppbV | 100 |
| 38) 1,2-Dichloroethane | 5.094 | 62 | 1306989 | 10.28 | ppbV | 99 |
| 40) Trichloroethene | 5.435 | 130 | 1277643 | 9.46 | ppbV | 100 |
| 41) 2,2,4-Trimethylpentane | 4.846 | 57 | 3384494 | 10.04 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.881 | 63 | 1210091 | 9.97 | ppbV | 99 |
| 43) Bromodichloromethane | 5.946 | 83 | 2297408 | 10.86 | ppbV | 100 |
| 44) Methyl methacrylate | 6.087 | 41 | 1707517 | 10.94 | ppbV | 100 |
| 45) 1,4-Dioxane | 6.113 | 88 | 839393 | 11.21 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 2028992 | 10.81 | ppbV | 99 |
| 47) Toluene | 6.772 | 91 | 4536523 | 10.63 | ppbV | 99 |
| 48) Methyl isobutyl ketone | 7.135 | 43 | 3266617 | 10.60 | ppbV | 100 |
| 49) Tetrachloroethene | 7.161 | 166 | 2057579 | 10.73 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 2121255 | 11.47 | ppbV | 99 |
| 51) 1,1,2-Trichloroethane | 7.338 | 97 | 1545574 | 10.28 | ppbV | 100 |

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3407icvss.D
Acq On : 15 Aug 2023 6:09 pm
Operator : jjw
Sample : 10 ppbv icvss
Misc : EB0116272
ALS Vial : 10 Sample Multiplier: 1

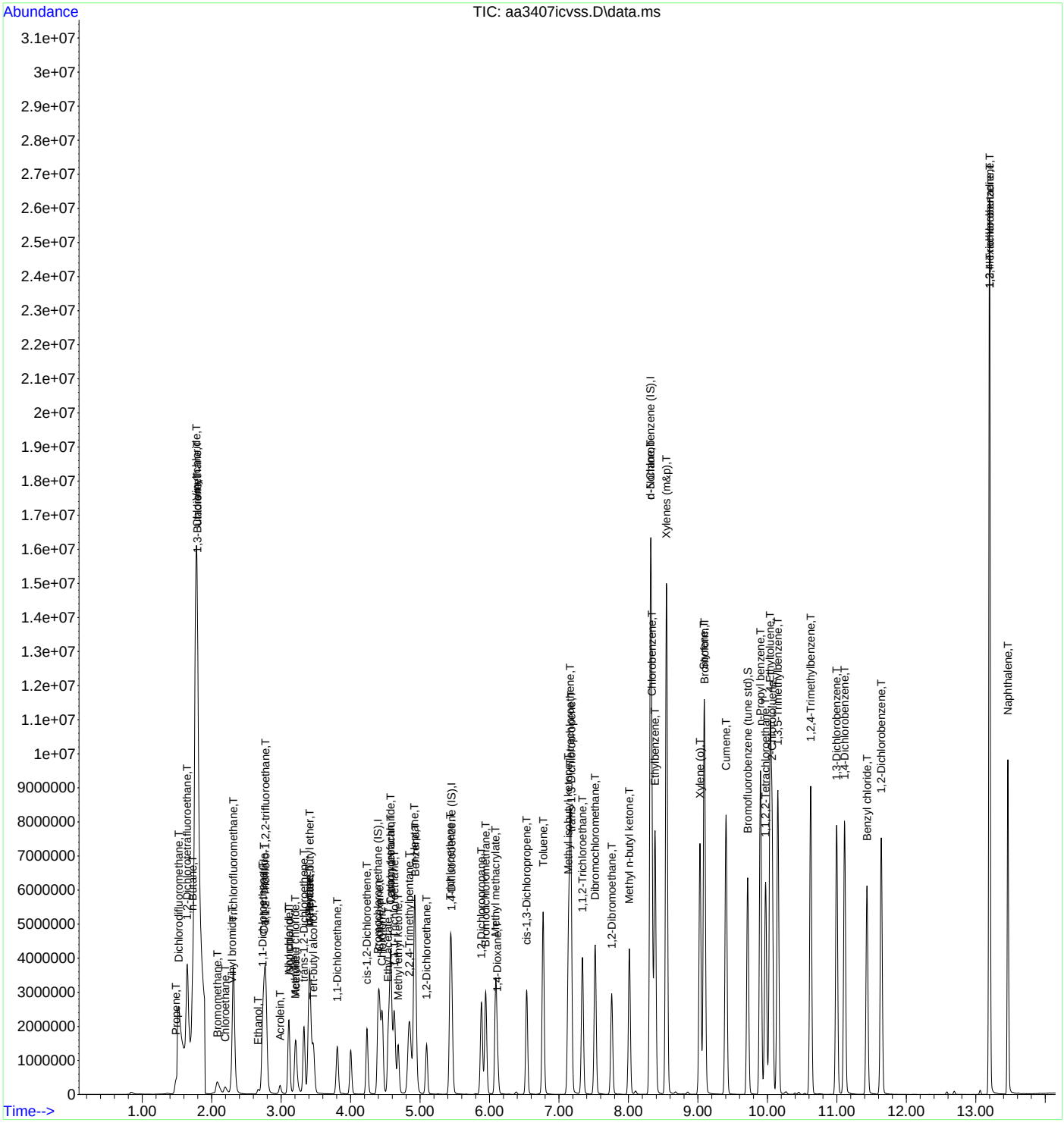
Quant Time: Aug 16 10:02:33 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 2775633 | 11.06 | ppbV | 100 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 2393720 | 10.88 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.013 | 43 | 3342265 | 11.58 | ppbV | 99 |
| 56) n-Nonane | 8.319 | 43 | 3980940 | 10.32 | ppbV | 99 |
| 57) Chlorobenzene | 8.338 | 112 | 3631305 | 10.52 | ppbV | 99 |
| 58) Ethylbenzene | 8.383 | 91 | 6749535 | 10.58 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.547 | 91 | 10243811 | 22.27 | ppbV | 100 |
| 60) Xylene (o) | 9.029 | 91 | 5367160 | 10.51 | ppbV | 100 |
| 61) Styrene | 9.087 | 104 | 3897707 | 11.50 | ppbV | 99 |
| 62) Bromoform | 9.097 | 173 | 2909911 | 11.11 | ppbV | 100 |
| 63) Cumene | 9.405 | 105 | 6858593 | 10.31 | ppbV | 100 |
| 65) n-Propyl benzene | 9.901 | 91 | 9335682 | 10.76 | ppbV | 99 |
| 66) 1,1,2,2-Tetrachloroethane | 9.975 | 83 | 4046668 | 10.45 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 7675301 | 10.73 | ppbV | 100 |
| 68) 2-Chlorotoluene | 10.068 | 91 | 6134373 | 10.42 | ppbV | 100 |
| 69) 1,3,5-Trimethylbenzene | 10.151 | 105 | 6150320 | 10.63 | ppbV | 100 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 6292442 | 10.96 | ppbV | 100 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 3955353 | 10.39 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.113 | 146 | 3900278 | 10.66 | ppbV | 99 |
| 73) Benzyl chloride | 11.434 | 91 | 5411364 | 10.79 | ppbV | 100 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 3729037 | 10.35 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.200 | 225 | 2519603 | 9.76 | ppbV | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 2920155 | 10.31 | ppbV | 100 |
| 77) Naphthalene | 13.463 | 128 | 6029829 | 10.31 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3407icvss.D
Acq On : 15 Aug 2023 6:09 pm
Operator : jjw
Sample : 10 ppbv icvss
Misc : EB0116272
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 16 10:02:33 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Initial Calibration Verification Sample Standard

**Lab Sample Name:** 10 PPBV ICVSS **Data File:** AA4137ICVSS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 10/10/2023

**Amount of standard injected (ml):** 50

Runs with this ICVSS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4131BFB] | 10/10/2023 10:13 |
| 0.2 PPBV STD [AA4132STD05] | 10/10/2023 10:40 |
| 2 PPBV STD [AA4133STD04] | 10/10/2023 11:46 |
| 10 PPBV STD [AA4134STD03] | 10/10/2023 12:21 |
| 20 PPBV STD [AA4135STD02] | 10/10/2023 12:55 |
| 40 PPBV STD [AA4136STD01] | 10/10/2023 14:05 |
| 10 PPBV ICVSS [AA4137ICVSS] | 10/10/2023 16:48 |
| 10 PPBV LCS [AA4138LCS] | 10/10/2023 17:39 |
| METHOD BLANK [AA4139BLK] | 10/10/2023 18:07 |
| 02 PPBV RLLCS [AA4140RLLCS] | 10/10/2023 18:35 |
| 10 PPBV CCCVS [AA4154CCCVS] | 10/11/2023 1:53 |

| Compound | CAS # | Injected Amount (ppbv) | Recovered Amount (ppbv) | % Recovery | QC Limit |
|---|---|---|---|---|---|
| Acetone | 67-64-1 | 11 | 10 | 95 | |
| Acrolein | 107-02-8 | 9.4 | 9.5 | 100 | |
| Allyl Chloride | 107-05-1 | 11 | 11 | 99 | |
| Benzene | 71-43-2 | 10 | 9.7 | 93 | |
| Benzyl chloride | 100-44-7 | 11 | 10 | 93 | |
| Bromodichloromethane | 75-27-4 | 11 | 11 | 100 | |
| Bromoform | 75-25-2 | 11 | 11 | 96 | |
| Bromomethane | 74-83-9 | 11 | 10 | 92 | |
| 1,3-Butadiene | 106-99-0 | 11 | 10 | 92 | |
| n-Butane | 106-97-8 | 11 | 10 | 94 | |
| Chlorobenzene | 108-90-7 | 10 | 10 | 96 | |
| Chloroethane | 75-00-3 | 9.8 | 11 | 110 | |
| Chloroform | 67-66-3 | 11 | 9.9 | 91 | |
| Chloromethane | 74-87-3 | 9.9 | 11 | 110 | |
| Carbon disulfide | 75-15-0 | 10 | 11 | 110 | |
| Carbon tetrachloride | 56-23-5 | 11 | 10 | 93 | |
| 2-Chlorotoluene | 95-49-8 | 11 | 10 | 91 | |
| Cumene | 98-82-8 | 10 | 10 | 99 | |
| Cyclohexane | 110-82-7 | 11 | 10 | 92 | |
| Dibromochloromethane | 124-48-1 | 11 | 12 | 110 | |
| 1,2-Dibromoethane | 106-93-4 | 11 | 11 | 100 | |
| 1,2-Dichlorobenzene | 95-50-1 | 10 | 10.0 | 97 | |
| 1,3-Dichlorobenzene | 541-73-1 | 10 | 10 | 96 | |
| 1,4-Dichlorobenzene | 106-46-7 | 10 | 10.0 | 97 | |
| Dichlorodifluoromethane | 75-71-8 | 11 | 10 | 92 | |
| 1,1-Dichloroethane | 75-34-3 | 11 | 9.4 | 90 | |
| 1,2-Dichloroethane | 107-06-2 | 11 | 10 | 95 | |
| 1,1-Dichloroethene | 75-35-4 | 11 | 10.0 | 93 | |
| 1,2-Dichloroethene (cis) | 156-59-2 | 10 | 10 | 97 | |
| 1,2-Dichloroethene (trans) | 156-60-5 | 11 | 11 | 100 | |
| 1,2-Dichloropropane | 78-87-5 | 11 | 10 | 95 | |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 9.9 | 11 | 110 | |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 11 | 11 | 100 | |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 11 | 9.0 | 80 | |
| 1,4-Dioxane | 123-91-1 | 11 | 11 | 98 | |

**ICVSS recovery must be within 70-130% of the spiked value for all compounds.**

*** Values outside of QC limits**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Initial Calibration Verification Sample Standard

**Lab Sample Name:** 10 PPBV ICVSS **Data File:** AA4137ICVSS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 10/10/2023

**Amount of standard injected (ml):** 50

Runs with this ICVSS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4131BFB] | 10/10/2023 10:13 |
| 0.2 PPBV STD [AA4132STD05] | 10/10/2023 10:40 |
| 2 PPBV STD [AA4133STD04] | 10/10/2023 11:46 |
| 10 PPBV STD [AA4134STD03] | 10/10/2023 12:21 |
| 20 PPBV STD [AA4135STD02] | 10/10/2023 12:55 |
| 40 PPBV STD [AA4136STD01] | 10/10/2023 14:05 |
| 10 PPBV ICVSS [AA4137ICVSS] | 10/10/2023 16:48 |
| 10 PPBV LCS [AA4138LCS] | 10/10/2023 17:39 |
| METHOD BLANK [AA4139BLK] | 10/10/2023 18:07 |
| 02 PPBV RLLCS [AA4140RLLCS] | 10/10/2023 18:35 |
| 10 PPBV CCCVS [AA4154CCCVS] | 10/11/2023 1:53 |

| Compound | CAS # | Injected Amount (ppbv) | Recovered Amount (ppbv) | % Recovery | QC Limit |
|---|---|---|---|---|---|
| Ethanol | 64-17-5 | 9.8 | 7.0 | 71 | |
| Ethyl acetate | 141-78-6 | 10 | 11 | 110 | |
| Ethylbenzene | 100-41-4 | 10 | 10 | 96 | |
| 4-Ethyltoluene | 622-96-8 | 11 | 11 | 100 | |
| n-Heptane | 142-82-5 | 11 | 11 | 100 | |
| 1,3-Hexachlorobutadiene | 87-68-3 | 9.8 | 9.8 | 100 | |
| n-Hexane | 110-54-3 | 11 | 10 | 93 | |
| Isopropanol | 67-63-0 | 8.1 | 8.4 | 100 | |
| Methylene chloride | 75-09-2 | 11 | 8.1 | 76 | |
| Methyl ethyl ketone | 78-93-3 | 11 | 10.0 | 92 | |
| Methyl isobutyl ketone | 108-10-1 | 10 | 11 | 110 | |
| Methyl methacrylate | 80-62-6 | 11 | 11 | 100 | |
| Methyl n-butyl ketone | 591-78-6 | 11 | 11 | 99 | |
| Methyl tert-butyl ether | 1634-04-4 | 11 | 10 | 92 | |
| Naphthalene | 91-20-3 | 11 | 9.7 | 91 | |
| n-Nonane | 111-84-2 | 11 | 11 | 97 | |
| n-Pentane | 109-66-0 | 11 | 9.7 | 87 | |
| Propene | 115-07-1 | 11 | 9.2 | 84 | |
| n-Propyl benzene | 103-65-1 | 11 | 11 | 100 | |
| Styrene | 100-42-5 | 11 | 11 | 100 | |
| Tert-butyl alcohol | 75-65-0 | 12 | 11 | 96 | |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 10 | 11 | 110 | |
| Tetrachloroethene | 127-18-4 | 12 | 11 | 93 | |
| Tetrahydrofuran | 109-99-9 | 11 | 10 | 93 | |
| Toluene | 108-88-3 | 11 | 11 | 100 | |
| 1,2,4-Trichlorobenzene | 120-82-1 | 10 | 9.7 | 97 | |
| 1,1,1-Trichloroethane | 71-55-6 | 11 | 10.0 | 93 | |
| 1,1,2-Trichloroethane | 79-00-5 | 11 | 11 | 100 | |
| Trichloroethene | 79-01-6 | 10 | 9.2 | 90 | |
| Trichlorofluoromethane | 75-69-4 | 11 | 10 | 94 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 11 | 9.3 | 85 | |
| 1,2,4-Trimethylbenzene | 95-63-6 | 10 | 10 | 100 | |
| 1,3,5-Trimethylbenzene | 108-67-8 | 10 | 10 | 96 | |
| 2,2,4-Trimethylpentane | 540-84-1 | 11 | 9.6 | 88 | |
| Vinyl bromide | 593-60-2 | 10 | 10 | 100 | |

**ICVSS recovery must be within 70-130% of the spiked value for all compounds.**

*** Values outside of QC limits**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Initial Calibration Verification Sample Standard

**Lab Sample Name:** **10 PPBV ICVSS** **Data File:** **AA4137ICVSS**

**Spike Amount:** **10 ppbv, except m&p-Xylenes at 20 ppbv** **Date Analyzed:** **10/10/2023**

**Amount of standard injected (ml):** **50**

Runs with this ICVSS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4131BFB] | 10/10/2023 10:13 |
| 0.2 PPBV STD [AA4132STD05] | 10/10/2023 10:40 |
| 2 PPBV STD [AA4133STD04] | 10/10/2023 11:46 |
| 10 PPBV STD [AA4134STD03] | 10/10/2023 12:21 |
| 20 PPBV STD [AA4135STD02] | 10/10/2023 12:55 |
| 40 PPBV STD [AA4136STD01] | 10/10/2023 14:05 |
| 10 PPBV ICVSS [AA4137ICVSS] | 10/10/2023 16:48 |
| 10 PPBV LCS [AA4138LCS] | 10/10/2023 17:39 |
| METHOD BLANK [AA4139BLK] | 10/10/2023 18:07 |
| 02 PPBV RLLCS [AA4140RLLCS] | 10/10/2023 18:35 |
| 10 PPBV CCCVS [AA4154CCCVS] | 10/11/2023 1:53 |

| Compound | CAS # | Injected Amount (ppbv) | Recovered Amount (ppbv) | % Recovery | QC Limit |
|---|---|---|---|---|---|
| Vinyl chloride | 75-01-4 | 11 | 11 | 97 | |
| Xylenes (m&p) | 179601-23-1 | 21 | 22 | 110 | |
| Xylenes (o) | 95-47-6 | 10 | 10 | 96 | |

**ICVSS recovery must be within 70-130% of the spiked value for all compounds.**

*** Values outside of QC limits**

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4137icvss.D
Acq On : 10 Oct 2023 4:48 pm
Operator : jjw
Sample : 10 ppbv icvss
Misc : EB0116272
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 11 12:34:17 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.394 | 130 | 450439 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.451 | 114 | 1936760 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 2279414 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.715 | 95 | 1999577 | 10.06 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.487 | 41 | 289233 | 9.25 | ppbV | 98 |
| 3) Dichlorodifluoromethane | 1.527 | 85 | 1032587 | 10.34 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.647 | 85 | 1304952 | 9.00 | ppbV | 100 |
| 5) n-Butane | 1.730 | 43 | 750417 | 10.43 | ppbV | 99 |
| 6) Chloromethane | 1.792 | 52 | 54388 | 10.90 | ppbV | 98 |
| 7) Vinyl chloride | 1.781 | 62 | 431150 | 10.57 | ppbV | 99 |
| 8) 1,3-Butadiene | 1.795 | 39 | 382252 | 10.03 | ppbV | 97 |
| 9) Bromomethane | 2.079 | 94 | 336675 | 10.22 | ppbV | 97 |
| 10) Chloroethane | 2.191 | 64 | 232639 | 10.87 | ppbV | 99 |
| 11) Vinyl bromide | 2.291 | 106 | 412014 | 10.22 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.313 | 101 | 1310652 | 10.39 | ppbV | 99 |
| 13) Ethanol | 2.664 | 45 | 92719 | 7.03 | ppbV | 99 |
| 14) 1,1-Dichloroethene | 2.731 | 61 | 835358 | 9.98 | ppbV | 99 |
| 15) Carbon disulfide | 2.751 | 76 | 1485573 | 10.79 | ppbV | 99 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.773 | 101 | 1177177 | 9.27 | ppbV | 100 |
| 17) Acrolein | 2.985 | 56 | 178709 | 9.50 | ppbV | 99 |
| 18) Allyl chloride | 3.111 | 76 | 250470 | 11.09 | ppbV | 100 |
| 19) Isopropanol | 3.111 | 45 | 759040 | 8.40 | ppbV | 100 |
| 20) Methylene chloride | 3.204 | 49 | 449695 | 8.12 | ppbV | 99 |
| 21) Acetone | 3.210 | 43 | 693658 | 10.21 | ppbV | 98 |
| 22) trans-1,2-Dichloroethene | 3.329 | 61 | 849185 | 10.93 | ppbV | 100 |
| 23) n-Pentane | 3.403 | 43 | 1018939 | 9.73 | ppbV | 98 |
| 24) n-Hexane | 3.403 | 57 | 1426750 | 10.05 | ppbV | 99 |
| 25) Methyl tert-butyl ether | 3.413 | 73 | 1803139 | 10.34 | ppbV | 99 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 1242393 | 10.58 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 977991 | 9.35 | ppbV | 99 |
| 28) cis-1,2-Dichloroethene | 4.233 | 61 | 755931 | 10.24 | ppbV | 99 |
| 29) Cyclohexane | 4.416 | 56 | 1026465 | 10.35 | ppbV | 99 |
| 30) Chloroform | 4.455 | 83 | 1194486 | 9.91 | ppbV | 99 |
| 31) Ethyl acetate | 4.545 | 61 | 208391 | 10.63 | ppbV | 99 |
| 32) Carbon tetrachloride | 4.577 | 117 | 1452418 | 10.16 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.574 | 42 | 693411 | 10.23 | ppbV | 100 |
| 34) 1,1,1-Trichloroethane | 4.625 | 97 | 1251697 | 10.00 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.683 | 43 | 1099463 | 9.99 | ppbV | 100 |
| 36) n-Heptane | 4.915 | 43 | 1406396 | 11.30 | ppbV | 100 |
| 37) Benzene | 4.934 | 78 | 1734004 | 9.69 | ppbV | 100 |
| 38) 1,2-Dichloroethane | 5.091 | 62 | 756182 | 10.10 | ppbV | 100 |
| 40) Trichloroethene | 5.432 | 130 | 792615 | 9.25 | ppbV | 97 |
| 41) 2,2,4-Trimethylpentane | 4.844 | 57 | 2425296 | 9.61 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.882 | 63 | 788220 | 10.46 | ppbV | 100 |
| 43) Bromodichloromethane | 5.943 | 83 | 1432936 | 11.29 | ppbV | 99 |
| 44) Methyl methacrylate | 6.088 | 41 | 1025399 | 11.22 | ppbV | 100 |
| 45) 1,4-Dioxane | 6.111 | 88 | 520094 | 11.27 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.535 | 75 | 1277949 | 10.94 | ppbV | 99 |
| 47) Toluene | 6.770 | 91 | 2952624 | 10.85 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.133 | 43 | 1919423 | 11.22 | ppbV | 99 |
| 49) Tetrachloroethene | 7.159 | 166 | 1314607 | 11.20 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.178 | 75 | 1281531 | 11.31 | ppbV | 97 |
| 51) 1,1,2-Trichloroethane | 7.336 | 97 | 989955 | 10.77 | ppbV | 99 |

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4137icvss.D
Acq On : 10 Oct 2023 4:48 pm
Operator : jjw
Sample : 10 ppbv icvss
Misc : EB0116272
ALS Vial : 7 Sample Multiplier: 1

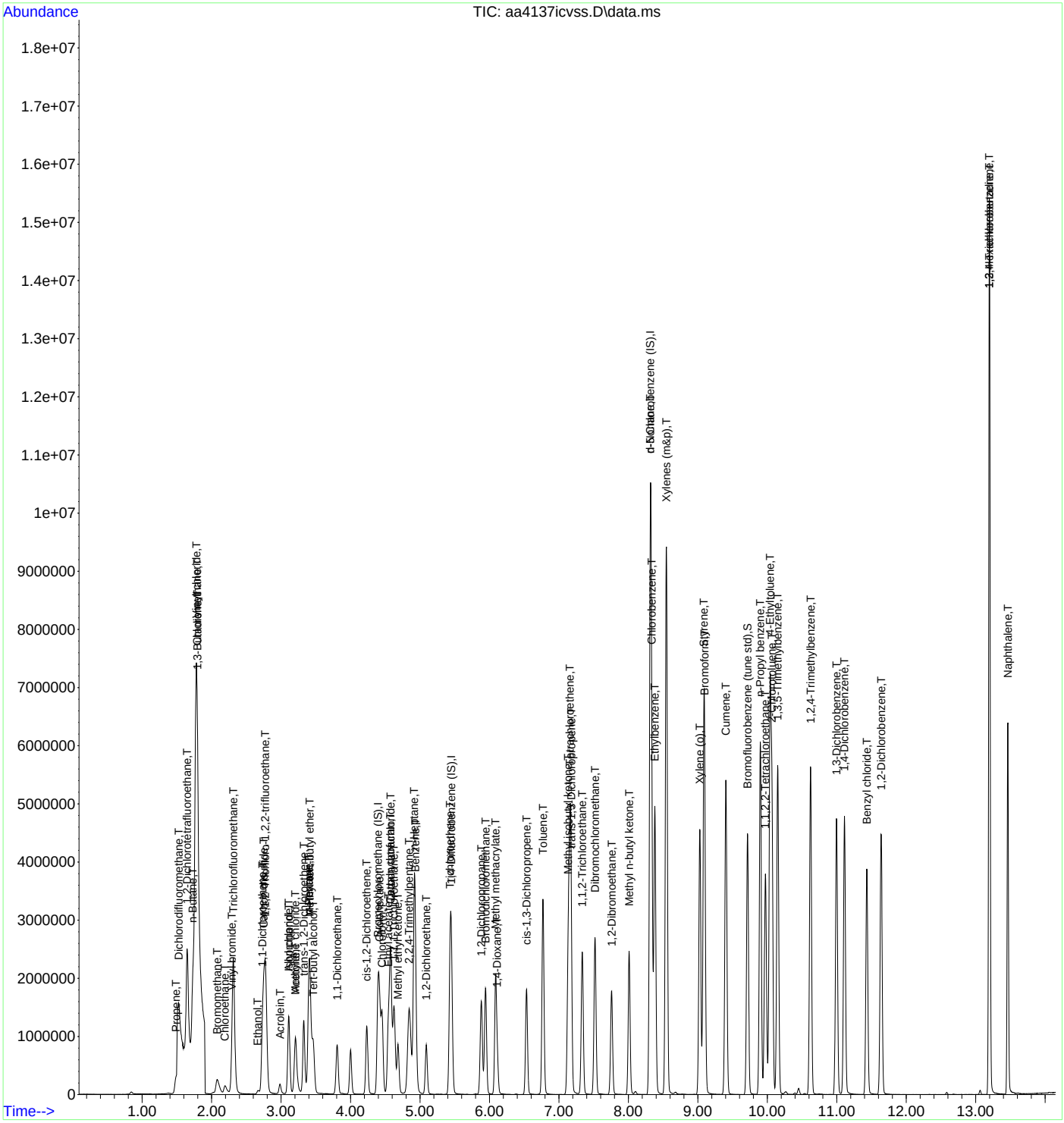
Quant Time: Oct 11 12:34:17 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.519 | 129 | 1775637 | 11.59 | ppbV | 100 |
| 53) 1,2-Dibromoethane | 7.760 | 107 | 1480875 | 11.14 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.011 | 43 | 1847140 | 11.23 | ppbV | 100 |
| 56) n-Nonane | 8.316 | 43 | 2482776 | 10.98 | ppbV | 100 |
| 57) Chlorobenzene | 8.336 | 112 | 2343720 | 10.31 | ppbV | 100 |
| 58) Ethylbenzene | 8.381 | 91 | 4399658 | 10.47 | ppbV | 100 |
| 59) Xylenes (m&p) | 8.548 | 91 | 6725199 | 21.61 | ppbV | 100 |
| 60) Xylene (o) | 9.027 | 91 | 3439926 | 10.13 | ppbV | 100 |
| 61) Styrene | 9.088 | 104 | 2542191 | 10.93 | ppbV | 98 |
| 62) Bromoform | 9.098 | 173 | 1858650 | 11.14 | ppbV | 100 |
| 63) Cumene | 9.403 | 105 | 4624440 | 10.42 | ppbV | 99 |
| 65) n-Propyl benzene | 9.898 | 91 | 6209527 | 10.72 | ppbV | 100 |
| 66) 1,1,2,2-Tetrachloroethane | 9.972 | 83 | 2517951 | 10.59 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.040 | 105 | 5225612 | 10.66 | ppbV | 100 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 4079374 | 10.48 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.149 | 105 | 4048872 | 10.27 | ppbV | 100 |
| 70) 1,2,4-Trimethylbenzene | 10.625 | 105 | 4049729 | 10.28 | ppbV | 100 |
| 71) 1,3-Dichlorobenzene | 10.998 | 146 | 2445218 | 10.13 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 2419709 | 9.96 | ppbV | 99 |
| 73) Benzyl chloride | 11.432 | 91 | 3624814 | 10.40 | ppbV | 100 |
| 74) 1,2-Dichlorobenzene | 11.641 | 146 | 2329520 | 9.95 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.197 | 225 | 1597275 | 9.83 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.197 | 180 | 1825252 | 9.71 | ppbV | 100 |
| 77) Naphthalene | 13.464 | 128 | 4147327 | 9.65 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4137icvss.D
Acq On : 10 Oct 2023 4:48 pm
Operator : jjw
Sample : 10 ppbv icvss
Misc : EB0116272
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 11 12:34:17 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Continuing Calibration Data Summary Report

**Initial Calibration Curve:** 8/15/2023
**Instrument:** AA
**Amount of standard injected (ml):** 50

**Date/Time of Calibration:** 9/28/2023 10:31
**Sample ID:** DCS
**Laboratory ID:** AA4072DCVS

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2164 [AA4076] | 09/28/2023 15:00 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 4870 [AA4077] | 09/28/2023 15:30 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 00:28 |

| Compound Name | Average RRF | Standard RRF | % Difference | PassFail | * |
|---|---|---|---|---|---|
| Acetone | 1.9 | 2.3 | -22 | PASS | |
| Benzene | 4.6 | 5.3 | -16 | PASS | |
| Bromodichloromethane | 0.80 | 0.86 | -8.4 | PASS | |
| Bromoform | 0.83 | 0.94 | -13 | PASS | |
| Bromomethane | 0.80 | 0.95 | -19 | PASS | |
| 1,3-Butadiene | 0.97 | 1.3 | -29 | PASS | |
| Chlorobenzene | 1.1 | 1.2 | -10 | PASS | |
| Chloroethane | 0.52 | 0.59 | -14 | PASS | |
| Chloroform | 3.2 | 3.9 | -22 | PASS | |
| Chloromethane | 0.12 | 0.13 | -14 | PASS | |
| Carbon disulfide | 3.4 | 3.9 | -14 | PASS | |
| Carbon tetrachloride | 3.9 | 3.9 | -0.40 | PASS | |
| Cyclohexane | 2.4 | 2.6 | -8.2 | PASS | |
| Dibromochloromethane | 0.94 | 0.96 | -1.2 | PASS | |
| 1,2-Dibromoethane | 0.83 | 0.86 | -4.5 | PASS | |
| 1,2-Dichlorobenzene | 1.1 | 1.3 | -14 | PASS | |
| 1,3-Dichlorobenzene | 1.2 | 1.4 | -12 | PASS | |
| 1,4-Dichlorobenzene | 1.2 | 1.4 | -20 | PASS | |
| Dichlorodifluoromethane | 2.5 | 3.1 | -22 | PASS | |
| 1,1-Dichloroethane | 2.6 | 3.2 | -23 | PASS | |
| 1,2-Dichloroethane | 2.1 | 2.6 | -24 | PASS | |
| 1,1-Dichloroethene | 2.1 | 2.2 | -6.4 | PASS | |
| 1,2-Dichloroethene (cis) | 1.8 | 2.4 | -30 | PASS | |
| 1,2-Dichloroethene (trans) | 1.9 | 2.4 | -28 | PASS | |
| 1,2-Dichloropropane | 0.46 | 0.48 | -5.7 | PASS | |
| 1,3-Dichloropropene (cis) | 0.71 | 0.75 | -6.8 | PASS | |
| 1,3-Dichloropropene (trans) | 0.70 | 0.79 | -14 | PASS | |
| 1,2-Dichlorotetrafluoroethane | 3.6 | 4.0 | -9.4 | PASS | |
| 1,4-Dioxane | 0.28 | 0.29 | -3.2 | PASS | |
| Ethylbenzene | 2.0 | 2.3 | -13 | PASS | |
| n-Heptane | 3.4 | 3.7 | -11 | PASS | |
| 1,3-Hexachlorobutadiene | 0.82 | 0.86 | -4.5 | PASS | |
| n-Hexane | 3.3 | 3.9 | -15 | PASS | |
| Methylene chloride | 1.3 | 1.5 | -21 | PASS | |
| Methyl ethyl ketone | 2.9 | 3.7 | -29 | PASS | |
| Methyl isobutyl ketone | 1.2 | 1.3 | -8.7 | PASS | |
| Methyl tert-butyl ether | 4.6 | 4.9 | -8.5 | PASS | |
| Styrene | 1.1 | 1.3 | -21 | PASS | |
| Tert-butyl alcohol | 2.9 | 3.3 | -13 | PASS | |
| 1,1,2,2-Tetrachloroethane | 1.2 | 1.3 | -8.6 | PASS | |
| Tetrachloroethene | 0.72 | 0.70 | 3.5 | PASS | |

***%Difference must be within +/- 30%**
**RRF - Relative Response Factor**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Continuing Calibration Data Summary Report

| | | | |
|---|---|---|---|
| **Initial Calibration Curve:** | **8/15/2023** | **Date/Time of Calibration:** | **9/28/2023 10:31** |
| **Instrument:** | **AA** | **Sample ID:** | **DCS** |
| **Amount of standard injected (ml):** | **50** | **Laboratory ID:** | **AA4072DCVS** |

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2164 [AA4076] | 09/28/2023 15:00 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 4870 [AA4077] | 09/28/2023 15:30 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 00:28 |

| Compound Name | Average RRF | Standard RRF | % Difference | PassFail | * |
|---|---|---|---|---|---|
| Toluene | 1.6 | 1.7 | -4.2 | PASS | |
| 1,2,4-Trichlorobenzene | 0.90 | 1.1 | -19 | PASS | |
| 1,1,1-Trichloroethane | 3.5 | 3.6 | -1.9 | PASS | |
| 1,1,2-Trichloroethane | 0.57 | 0.57 | -1.4 | PASS | |
| Trichloroethene | 0.51 | 0.51 | -0.60 | PASS | |
| Trichlorofluoromethane | 3.4 | 4.0 | -17 | PASS | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 3.4 | 3.4 | -1.3 | PASS | |
| 1,2,4-Trimethylbenzene | 1.8 | 2.2 | -20 | PASS | |
| 1,3,5-Trimethylbenzene | 1.8 | 2.1 | -13 | PASS | |
| 2,2,4-Trimethylpentane | 1.3 | 1.4 | -11 | PASS | |
| Vinyl bromide | 1.0 | 1.3 | -25 | PASS | |
| Vinyl chloride | 0.95 | 1.2 | -29 | PASS | |
| Xylenes (m&p) | 1.5 | 1.7 | -20 | PASS | |
| Xylenes (o) | 1.6 | 1.8 | -11 | PASS | |

***%Difference must be within +/- 30%**
**RRF - Relative Response Factor**

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4072dcvs.D
Acq On : 28 Sep 2023 10:31 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 05 12:20:58 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 0% Max. R.T. Dev 0.40min
Max. RRF Dev : 30% Max. Rel. Area : 500%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Bromochloromethane (IS) | 1.000 | 1.000 | 0.0 | 74 | 0.00 |
| 2 | T | Propene | 0.689 | 0.782 | -13.5 | 89 | 0.00 |
| 3 | T | Dichlorodifluoromethane | 2.527 | 3.082 | -22.0 | 95 | 0.00 |
| 4 | T | 1,2-Dichlorotetrafluoroetha | 3.636 | 3.979 | -9.4 | 93 | 0.00 |
| 5 | T | n-Butane | 1.635 | 1.772 | -8.4 | 82 | 0.00 |
| 6 | T | Chloromethane | 0.117 | 0.133 | -13.7 | 85 | 0.00 |
| 7 | T | Vinyl chloride | 0.950 | 1.223 | -28.7 | 97 | 0.00 |
| 8 | T | 1,3-Butadiene | 0.972 | 1.253 | -28.9 | 100 | 0.00 |
| 9 | T | Bromomethane | 0.798 | 0.946 | -18.5 | 90 | 0.00 |
| 10 | T | Chloroethane | 0.517 | 0.591 | -14.3 | 84 | 0.00 |
| 11 | T | Vinyl bromide | 1.004 | 1.257 | -25.2 | 94 | 0.00 |
| 12 | T | Trichlorofluoromethane | 3.400 | 3.990 | -17.4 | 96 | 0.00 |
| 13 | T | Ethanol | 0.400 | 0.423 | -5.7 | 97 | 0.00 |
| 14 | T | 1,1-Dichloroethene | 2.088 | 2.222 | -6.4 | 78 | 0.00 |
| 15 | T | Carbon disulfide | 3.429 | 3.921 | -14.3 | 83 | 0.00 |
| 16 | T | 1,1,2-Trichloro-1,2,2-trifl | 3.360 | 3.402 | -1.3 | 90 | 0.00 |
| 17 | T | Acrolein | 0.430 | 0.491 | -14.2 | 85 | 0.00 |
| 18 | T | Allyl chloride | 0.559 | 0.693 | -24.0 | 92 | 0.00 |
| 19 | T | Isopropanol | 2.312 | 2.922 | -26.4 | 96 | 0.00 |
| 20 | T | Methylene chloride | 1.262 | 1.521 | -20.5 | 107 | 0.00 |
| 21 | T | Acetone | 1.876 | 2.285 | -21.8 | 93 | 0.00 |
| 22 | T | trans-1,2-Dichloroethene | 1.879 | 2.400 | -27.7 | 95 | 0.00 |
| 23 | T | n-Pentane | 2.398 | 2.695 | -12.4 | 99 | 0.00 |
| 24 | T | n-Hexane | 3.349 | 3.850 | -15.0 | 95 | 0.00 |
| 25 | T | Methyl tert-butyl ether | 4.555 | 4.942 | -8.5 | 92 | 0.00 |
| 26 | T | Tert-butyl alcohol | 2.929 | 3.318 | -13.3 | 95 | 0.00 |
| 27 | T | 1,1-Dichloroethane | 2.637 | 3.242 | -22.9 | 100 | 0.00 |
| 28 | T | cis-1,2-Dichloroethene | 1.824 | 2.366 | -29.7 | 100 | 0.00 |
| 29 | t | Cyclohexane | 2.420 | 2.619 | -8.2 | 92 | 0.00 |
| 30 | T | Chloroform | 3.228 | 3.928 | -21.7 | 96 | 0.00 |
| 31 | T | Ethyl acetate | 0.514 | 0.617 | -20.0 | 96 | 0.00 |
| 32 | T | Carbon tetrachloride | 3.870 | 3.885 | -0.4 | 86 | 0.00 |
| 33 | T | Tetrahydrofuran | 1.813 | 2.046 | -12.9 | 88 | 0.00 |
| 34 | T | 1,1,1-Trichloroethane | 3.484 | 3.550 | -1.9 | 89 | 0.00 |
| 35 | T | Methyl ethyl ketone | 2.894 | 3.723 | -28.6 | 102 | 0.00 |
| 36 | T | n-Heptane | 3.350 | 3.721 | -11.1 | 87 | 0.00 |
| 37 | T | Benzene | 4.614 | 5.348 | -15.9 | 94 | 0.00 |
| 38 | T | 1,2-Dichloroethane | 2.067 | 2.563 | -24.0 | 98 | 0.00 |
| 39 | I | 1,4-Difluorobenzene (IS) | 1.000 | 1.000 | 0.0 | 81 | 0.00 |
| 40 | T | Trichloroethene | 0.508 | 0.511 | -0.6 | 87 | 0.00 |
| 41 | T | 2,2,4-Trimethylpentane | 1.267 | 1.406 | -11.0 | 98 | 0.00 |
| 42 | T | 1,2-Dichloropropane | 0.456 | 0.482 | -5.7 | 92 | 0.00 |
| 43 | T | Bromodichloromethane | 0.795 | 0.862 | -8.4 | 92 | 0.00 |
| 44 | T | Methyl methacrylate | 0.587 | 0.686 | -16.9 | 93 | 0.00 |
| 45 | T | 1,4-Dioxane | 0.281 | 0.290 | -3.2 | 86 | 0.00 |
| 46 | T | cis-1,3-Dichloropropene | 0.705 | 0.753 | -6.8 | 88 | 0.00 |
| 47 | T | Toluene | 1.603 | 1.670 | -4.2 | 84 | 0.00 |
| 48 | T | Methyl isobutyl ketone | 1.158 | 1.259 | -8.7 | 88 | 0.00 |
| 49 | T | Tetrachloroethene | 0.721 | 0.696 | 3.5 | 81 | 0.00 |
| 50 | T | trans-1,3-Dichloropropene | 0.695 | 0.791 | -13.8 | 88 | 0.00 |
| 51 | T | 1,1,2-Trichloroethane | 0.565 | 0.573 | -1.4 | 85 | 0.00 |
| 52 | T | Dibromochloromethane | 0.944 | 0.955 | -1.2 | 83 | 0.00 |
| 53 | T | 1,2-Dibromoethane | 0.827 | 0.864 | -4.5 | 84 | 0.00 |

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4072dcvs.D
Acq On : 28 Sep 2023 10:31 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 05 12:20:58 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 0% Max. R.T. Dev 0.40min
Max. RRF Dev : 30% Max. Rel. Area : 500%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 54 | T | Methyl n-butyl ketone | 1.085 | 1.314 | -21.1 | 94 | 0.00 |
| 55 | I | d-5 Chlorobenzene (IS) | 1.000 | 1.000 | 0.0 | 71 | 0.00 |
| 56 | T | n-Nonane | 1.224 | 1.455 | -18.9 | 89 | 0.00 |
| 57 | T | Chlorobenzene | 1.095 | 1.205 | -10.0 | 84 | 0.00 |
| 58 | T | Ethylbenzene | 2.025 | 2.281 | -12.6 | 84 | 0.00 |
| 59 | T | Xylenes (m&p) | 1.460 | 1.746 | -19.6 | 86 | 0.00 |
| 60 | T | Xylene (o) | 1.621 | 1.793 | -10.6 | 83 | 0.00 |
| 61 | T | Styrene | 1.076 | 1.301 | -20.9 | 85 | 0.00 |
| 62 | T | Bromoform | 0.831 | 0.940 | -13.1 | 83 | 0.00 |
| 63 | T | Cumene | 2.112 | 2.309 | -9.3 | 81 | 0.00 |
| 64 | S | Bromofluorobenzene (tune st | 0.832 | 1.037 | -24.6 | 91 | 0.00 |
| 65 | T | n-Propyl benzene | 2.753 | 3.313 | -20.3 | 86 | 0.00 |
| 66 | T | 1,1,2,2-Tetrachloroethane | 1.228 | 1.333 | -8.6 | 84 | 0.00 |
| 67 | T | 4-Ethyltoluene | 2.270 | 2.728 | -20.2 | 86 | 0.00 |
| 68 | T | 2-Chlorotoluene | 1.868 | 2.133 | -14.2 | 86 | 0.00 |
| 69 | T | 1,3,5-Trimethylbenzene | 1.837 | 2.075 | -13.0 | 83 | 0.00 |
| 70 | T | 1,2,4-Trimethylbenzene | 1.821 | 2.187 | -20.1 | 84 | 0.00 |
| 71 | T | 1,3-Dichlorobenzene | 1.208 | 1.351 | -11.8 | 86 | 0.00 |
| 72 | T | 1,4-Dichlorobenzene | 1.161 | 1.398 | -20.4 | 87 | 0.00 |
| 73 | T | Benzyl chloride | 1.591 | 2.051 | -28.9 | 86 | 0.00 |
| 74 | T | 1,2-Dichlorobenzene | 1.143 | 1.308 | -14.4 | 84 | 0.00 |
| 75 | T | 1,3-Hexachlorobutadiene | 0.820 | 0.857 | -4.5 | 84 | 0.00 |
| 76 | T | 1,2,4-Trichlorobenzene | 0.899 | 1.068 | -18.8 | 89 | 0.00 |
| 77 | T | Naphthalene | 1.857 | 2.352 | -26.7 | 88 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4072dcvs.D
Acq On : 28 Sep 2023 10:31 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 05 12:20:58 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.399 | 130 | 394533 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 1846241 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 1956014 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 2028598 | 12.47 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.492 | 41 | 336126 | 12.37 | ppbV | 99 |
| 3) Dichlorodifluoromethane | 1.533 | 85 | 1288817 | 12.93 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.650 | 85 | 1538324 | 10.72 | ppbV | 95 |
| 5) n-Butane | 1.729 | 43 | 762109 | 11.81 | ppbV | 100 |
| 6) Chloromethane | 1.791 | 52 | 58792 | 12.73 | ppbV | 99 |
| 7) Vinyl chloride | 1.784 | 62 | 521002 | 13.90 | ppbV | 100 |
| 8) 1,3-Butadiene | 1.794 | 39 | 528910 | 13.80 | ppbV | 94 |
| 9) Bromomethane | 2.091 | 94 | 373349 | 11.86 | ppbV | 100 |
| 10) Chloroethane | 2.200 | 64 | 247247 | 12.12 | ppbV | 97 |
| 11) Vinyl bromide | 2.293 | 106 | 500772 | 12.64 | ppbV | 99 |
| 12) Trichlorofluoromethane | 2.312 | 101 | 1731764 | 12.91 | ppbV | 100 |
| 13) Ethanol | 2.669 | 45 | 173409 | 10.98 | ppbV | 98 |
| 14) 1,1-Dichloroethene | 2.734 | 61 | 911565 | 11.06 | ppbV | 96 |
| 15) Carbon disulfide | 2.756 | 76 | 1655394 | 12.24 | ppbV | 98 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.775 | 101 | 1462822 | 11.04 | ppbV | 98 |
| 17) Acrolein | 2.988 | 56 | 193825 | 11.44 | ppbV | 99 |
| 18) Allyl chloride | 3.116 | 76 | 295490 | 13.39 | ppbV | 100 |
| 19) Isopropanol | 3.113 | 45 | 1026023 | 11.25 | ppbV | 98 |
| 20) Methylene chloride | 3.203 | 49 | 648001 | 13.02 | ppbV | 93 |
| 21) Acetone | 3.213 | 43 | 973812 | 13.16 | ppbV | 97 |
| 22) trans-1,2-Dichloroethene | 3.329 | 61 | 1051022 | 14.18 | ppbV | 94 |
| 23) n-Pentane | 3.412 | 43 | 1148262 | 12.14 | ppbV | 98 |
| 24) n-Hexane | 3.409 | 57 | 1670880 | 12.65 | ppbV | 94 |
| 25) Methyl tert-butyl ether | 3.412 | 73 | 2183824 | 12.15 | ppbV | 96 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 1505615 | 13.03 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 1368811 | 13.16 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.235 | 61 | 1017589 | 14.14 | ppbV | 95 |
| 29) Cyclohexane | 4.415 | 56 | 1157367 | 12.12 | ppbV | 95 |
| 30) Chloroform | 4.457 | 83 | 1673696 | 13.14 | ppbV | 99 |
| 31) Ethyl acetate | 4.544 | 61 | 262896 | 12.97 | ppbV | 96 |
| 32) Carbon tetrachloride | 4.576 | 117 | 1686035 | 11.04 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.576 | 42 | 888033 | 12.41 | ppbV | 98 |
| 34) 1,1,1-Trichloroethane | 4.628 | 97 | 1526804 | 11.11 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.685 | 43 | 1615518 | 14.15 | ppbV | 96 |
| 36) n-Heptane | 4.920 | 43 | 1629713 | 12.33 | ppbV | 95 |
| 37) Benzene | 4.933 | 78 | 2278943 | 12.52 | ppbV | 99 |
| 38) 1,2-Dichloroethane | 5.094 | 62 | 1102144 | 13.51 | ppbV | 100 |
| 40) Trichloroethene | 5.435 | 130 | 942528 | 10.06 | ppbV | 99 |
| 41) 2,2,4-Trimethylpentane | 4.846 | 57 | 2829737 | 12.10 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 978690 | 11.62 | ppbV | 99 |
| 43) Bromodichloromethane | 5.946 | 83 | 1830581 | 12.47 | ppbV | 98 |
| 44) Methyl methacrylate | 6.090 | 41 | 1393236 | 12.86 | ppbV | 96 |
| 45) 1,4-Dioxane | 6.113 | 88 | 626413 | 12.06 | ppbV | 95 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 1542564 | 11.85 | ppbV | 100 |
| 47) Toluene | 6.772 | 91 | 3329666 | 11.25 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.135 | 43 | 2533215 | 11.85 | ppbV | 97 |
| 49) Tetrachloroethene | 7.161 | 166 | 1439441 | 10.82 | ppbV | 99 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 1621869 | 12.63 | ppbV | 95 |
| 51) 1,1,2-Trichloroethane | 7.335 | 97 | 1143196 | 10.95 | ppbV | 98 |

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4072dcvs.D
Acq On : 28 Sep 2023 10:31 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

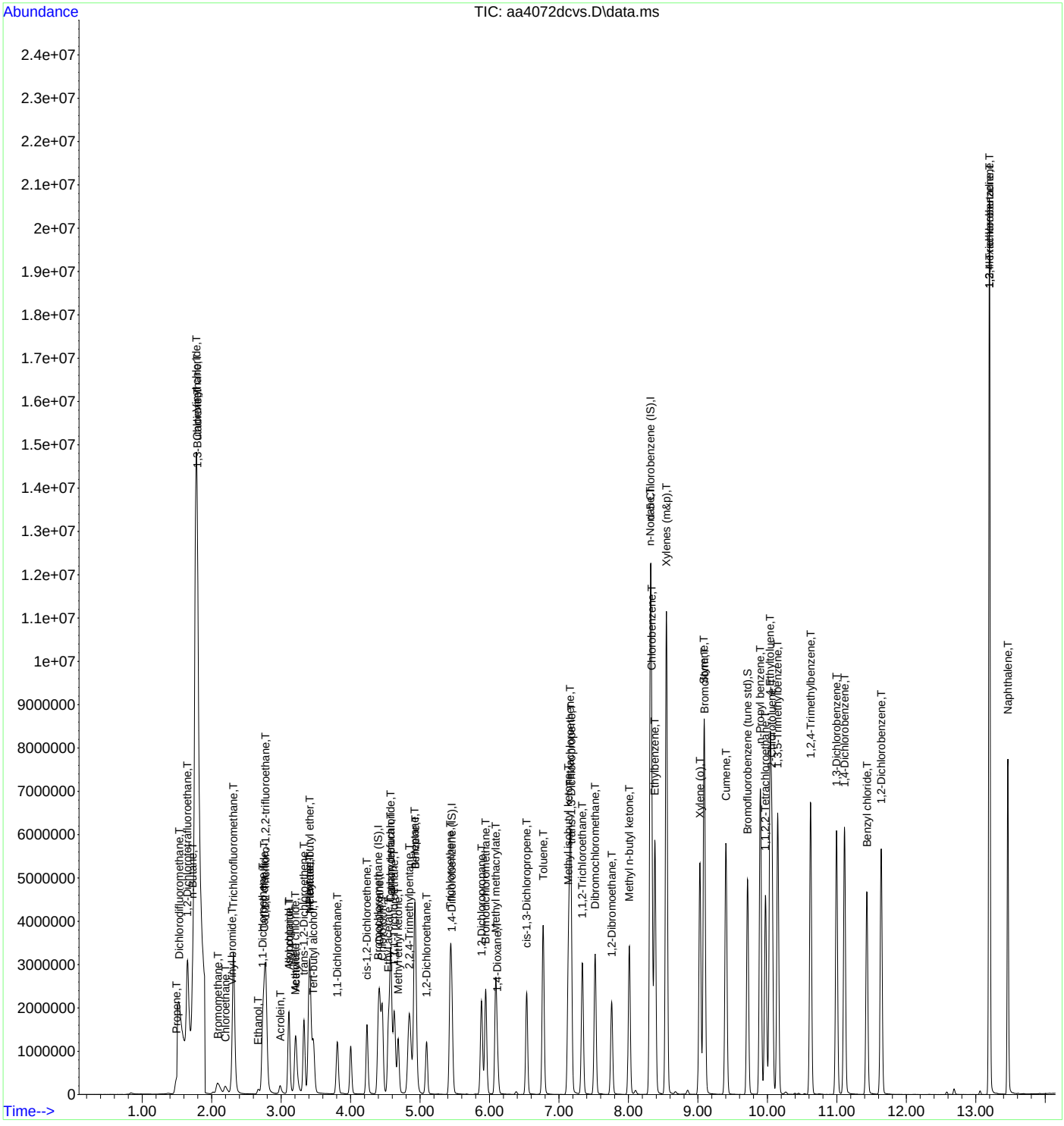
Quant Time: Oct 05 12:20:58 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 1974797 | 11.34 | ppbV | 100 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 1723352 | 11.29 | ppbV | 99 |
| 54) Methyl n-butyl ketone | 8.013 | 43 | 2740906 | 13.68 | ppbV | 97 |
| 56) n-Nonane | 8.315 | 43 | 3130203 | 13.08 | ppbV | 95 |
| 57) Chlorobenzene | 8.335 | 112 | 2616855 | 12.22 | ppbV | 96 |
| 58) Ethylbenzene | 8.380 | 91 | 4951669 | 12.50 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.547 | 91 | 7618001 | 26.68 | ppbV | 98 |
| 60) Xylene (o) | 9.029 | 91 | 3858864 | 12.17 | ppbV | 98 |
| 61) Styrene | 9.087 | 104 | 2876626 | 13.67 | ppbV | 100 |
| 62) Bromoform | 9.097 | 173 | 2077944 | 12.78 | ppbV | 100 |
| 63) Cumene | 9.405 | 105 | 4831919 | 11.70 | ppbV | 99 |
| 65) n-Propyl benzene | 9.897 | 91 | 6998521 | 12.99 | ppbV | 98 |
| 66) 1,1,2,2-Tetrachloroethane | 9.971 | 83 | 2971483 | 12.37 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 5763454 | 12.98 | ppbV | 98 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 4548166 | 12.45 | ppbV | 98 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 4424594 | 12.31 | ppbV | 98 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 4619816 | 12.97 | ppbV | 98 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 2933863 | 12.42 | ppbV | 99 |
| 72) 1,4-Dichlorobenzene | 11.113 | 146 | 2925919 | 12.89 | ppbV | 100 |
| 73) Benzyl chloride | 11.434 | 91 | 4012288 | 12.89 | ppbV | 98 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 2736550 | 12.24 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.196 | 225 | 1861511 | 11.61 | ppbV | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.196 | 180 | 2298365 | 13.07 | ppbV | 100 |
| 77) Naphthalene | 13.463 | 128 | 4601232 | 12.67 | ppbV | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4072dcvs.D
Acq On : 28 Sep 2023 10:31 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 05 12:20:58 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Continuing Calibration Data Summary Report

**Initial Calibration Curve:** 10/10/2023
**Instrument:** AA
**Amount of standard injected (ml):** 50

**Date/Time of Calibration:** 12/11/2023 10:26
**Sample ID:** DCS
**Laboratory ID:** AA4902DCVS

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 09:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 1458 [AA4906] | 12/11/2023 12:50 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 1588 [AA4907] | 12/11/2023 13:19 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05081-01 [AA4916] | 12/11/2023 18:15 |
| E23-05081-01 [AA4917] | 12/11/2023 18:47 |
| E23-05081-02 [AA4919] | 12/11/2023 19:52 |
| E23-05081-03 [AA4920] | 12/11/2023 20:24 |
| E23-05081-03 [AA4921] | 12/11/2023 21:04 |
| E23-05081-04 [AA4922] | 12/11/2023 21:35 |
| E23-05081-04 [AA4923] | 12/11/2023 22:07 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 01:59 |

| Compound Name | Average RRF | Standard RRF | % Difference | PassFail | * |
|---|---|---|---|---|---|
| Acetone | 1.5 | 1.6 | -2.9 | PASS | |
| Benzene | 4.0 | 3.4 | 14 | PASS | |
| Bromoform | 0.73 | 0.73 | 0.10 | PASS | |
| Bromomethane | 0.73 | 0.76 | -4.4 | PASS | |
| 1,3-Butadiene | 0.85 | 0.80 | 5.7 | PASS | |
| Chlorobenzene | 1.00 | 0.92 | 7.3 | PASS | |
| Chloroethane | 0.48 | 0.52 | -9.3 | PASS | |
| Chloroform | 2.7 | 2.5 | 8.2 | PASS | |
| Chloromethane | 0.11 | 0.12 | -5.4 | PASS | |
| Carbon disulfide | 3.1 | 3.1 | -0.90 | PASS | |
| Carbon tetrachloride | 3.2 | 2.9 | 9.9 | PASS | |
| Cyclohexane | 2.2 | 2.0 | 7.9 | PASS | |
| 1,2-Dibromoethane | 0.69 | 0.69 | 0.10 | PASS | |
| 1,2-Dichlorobenzene | 1.0 | 0.97 | 5.6 | PASS | |
| 1,3-Dichlorobenzene | 1.1 | 0.98 | 7.4 | PASS | |
| 1,4-Dichlorobenzene | 1.1 | 1.0 | 4.5 | PASS | |
| Dichlorodifluoromethane | 2.2 | 2.2 | 1.3 | PASS | |
| 1,1-Dichloroethane | 2.3 | 2.1 | 10 | PASS | |
| 1,2-Dichloroethane | 1.7 | 1.6 | 3.6 | PASS | |
| 1,1-Dichloroethene | 1.9 | 1.9 | -1.0 | PASS | |
| 1,2-Dichloroethene (cis) | 1.6 | 1.6 | 3.8 | PASS | |
| 1,2-Dichloroethene (trans) | 1.7 | 1.7 | 0.20 | PASS | |
| 1,2-Dichloropropane | 0.39 | 0.37 | 4.6 | PASS | |
| 1,3-Dichloropropene (cis) | 0.60 | 0.59 | 2.7 | PASS | |
| 1,3-Dichloropropene (trans) | 0.59 | 0.60 | -2.6 | PASS | |
| 1,2-Dichlorotetrafluoroethane | 3.2 | 2.9 | 11 | PASS | |
| 1,4-Dioxane | 0.24 | 0.23 | 2.5 | PASS | |
| Ethylbenzene | 1.8 | 1.7 | 5.1 | PASS | |
| n-Heptane | 2.8 | 2.7 | 1.0 | PASS | |
| 1,3-Hexachlorobutadiene | 0.71 | 0.67 | 6.3 | PASS | |
| n-Hexane | 3.2 | 2.9 | 7.9 | PASS | |
| Methylene chloride | 1.2 | 1.1 | 12 | PASS | |
| Methyl ethyl ketone | 2.4 | 2.4 | 3.5 | PASS | |
| Methyl isobutyl ketone | 0.88 | 0.96 | -8.5 | PASS | |

***%Difference must be within +/- 30%**
**RRF - Relative Response Factor**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Continuing Calibration Data Summary Report

| | | | |
|---|---|---|---|
| **Initial Calibration Curve:** | **10/10/2023** | **Date/Time of Calibration:** | **12/11/2023 10:26** |
| **Instrument:** | **AA** | **Sample ID:** | **DCS** |
| **Amount of standard injected (ml):** | **50** | **Laboratory ID:** | **AA4902DCVS** |

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 09:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 1458 [AA4906] | 12/11/2023 12:50 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 1588 [AA4907] | 12/11/2023 13:19 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05081-01 [AA4916] | 12/11/2023 18:15 |
| E23-05081-01 [AA4917] | 12/11/2023 18:47 |
| E23-05081-02 [AA4919] | 12/11/2023 19:52 |
| E23-05081-03 [AA4920] | 12/11/2023 20:24 |
| E23-05081-03 [AA4921] | 12/11/2023 21:04 |
| E23-05081-04 [AA4922] | 12/11/2023 21:35 |
| E23-05081-04 [AA4923] | 12/11/2023 22:07 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 01:59 |

| Compound Name | Average RRF | Standard RRF | % Difference | PassFail | * |
|---|---|---|---|---|---|
| Methyl tert-butyl ether | 3.9 | 3.6 | 6.7 | PASS | |
| Styrene | 1.0 | 0.98 | 3.7 | PASS | |
| Tert-butyl alcohol | 2.6 | 2.4 | 6.1 | PASS | |
| 1,1,2,2-Tetrachloroethane | 1.0 | 1.00 | 4.3 | PASS | |
| Tetrachloroethene | 0.61 | 0.57 | 5.4 | PASS | |
| Toluene | 1.4 | 1.3 | 4.0 | PASS | |
| 1,2,4-Trichlorobenzene | 0.82 | 0.79 | 3.9 | PASS | |
| 1,1,1-Trichloroethane | 2.8 | 2.5 | 8.6 | PASS | |
| 1,1,2-Trichloroethane | 0.48 | 0.46 | 4.0 | PASS | |
| Trichloroethene | 0.44 | 0.41 | 8.4 | PASS | |
| Trichlorofluoromethane | 2.8 | 2.7 | 3.1 | PASS | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 2.8 | 2.4 | 15 | PASS | |
| 1,2,4-Trimethylbenzene | 1.7 | 1.7 | 3.1 | PASS | |
| 1,3,5-Trimethylbenzene | 1.7 | 1.7 | 4.2 | PASS | |
| 2,2,4-Trimethylpentane | 1.3 | 1.2 | 4.3 | PASS | |
| Vinyl bromide | 0.90 | 0.91 | -1.8 | PASS | |
| Vinyl chloride | 0.91 | 0.89 | 1.5 | PASS | |
| Xylenes (m&p) | 1.4 | 1.3 | 2.0 | PASS | |
| Xylenes (o) | 1.5 | 1.4 | 6.4 | PASS | |

***%Difference must be within +/- 30%**
**RRF - Relative Response Factor**

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4902dcvs.D
Acq On : 11 Dec 2023 10:26 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 11 10:45:53 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 0% Max. R.T. Dev 0.40min
Max. RRF Dev : 30% Max. Rel. Area : 500%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Bromochloromethane (IS) | 1.000 | 1.000 | 0.0 | 151 | 0.00 |
| 2 | T | Propene | 0.694 | 0.638 | 8.1 | 161 | 0.00 |
| 3 | T | Dichlorodifluoromethane | 2.216 | 2.188 | 1.3 | 153 | 0.00 |
| 4 | T | 1,2-Dichlorotetrafluoroetha | 3.219 | 2.870 | 10.8 | 147 | 0.00 |
| 5 | T | n-Butane | 1.597 | 1.560 | 2.3 | 154 | 0.00 |
| 6 | T | Chloromethane | 0.111 | 0.117 | -5.4 | 157 | 0.00 |
| 7 | T | Vinyl chloride | 0.906 | 0.892 | 1.5 | 149 | 0.00 |
| 8 | T | 1,3-Butadiene | 0.846 | 0.798 | 5.7 | 151 | 0.00 |
| 9 | T | Bromomethane | 0.731 | 0.763 | -4.4 | 154 | 0.00 |
| 10 | T | Chloroethane | 0.475 | 0.519 | -9.3 | 156 | 0.00 |
| 11 | T | Vinyl bromide | 0.895 | 0.911 | -1.8 | 151 | 0.00 |
| 12 | T | Trichlorofluoromethane | 2.799 | 2.713 | 3.1 | 155 | 0.00 |
| 13 | T | Ethanol | 0.293 | 0.325 | -10.9 | 183 | 0.00 |
| 14 | T | 1,1-Dichloroethene | 1.858 | 1.877 | -1.0 | 146 | 0.00 |
| 15 | T | Carbon disulfide | 3.058 | 3.087 | -0.9 | 145 | 0.00 |
| 16 | T | 1,1,2-Trichloro-1,2,2-trifl | 2.819 | 2.390 | 15.2 | 143 | 0.00 |
| 17 | T | Acrolein | 0.418 | 0.423 | -1.2 | 149 | 0.00 |
| 18 | T | Allyl chloride | 0.501 | 0.513 | -2.4 | 145 | 0.00 |
| 19 | T | Isopropanol | 2.005 | 2.110 | -5.2 | 153 | 0.00 |
| 20 | T | Methylene chloride | 1.229 | 1.083 | 11.9 | 161 | 0.00 |
| 21 | T | Acetone | 1.508 | 1.551 | -2.9 | 153 | 0.00 |
| 22 | T | trans-1,2-Dichloroethene | 1.724 | 1.721 | 0.2 | 146 | 0.00 |
| 23 | T | n-Pentane | 2.325 | 2.210 | 4.9 | 154 | 0.00 |
| 24 | T | n-Hexane | 3.152 | 2.903 | 7.9 | 148 | 0.00 |
| 25 | T | Methyl tert-butyl ether | 3.872 | 3.613 | 6.7 | 150 | 0.00 |
| 26 | T | Tert-butyl alcohol | 2.607 | 2.448 | 6.1 | 148 | 0.00 |
| 27 | T | 1,1-Dichloroethane | 2.322 | 2.083 | 10.3 | 141 | 0.00 |
| 28 | T | cis-1,2-Dichloroethene | 1.638 | 1.576 | 3.8 | 144 | 0.00 |
| 29 | t | Cyclohexane | 2.202 | 2.029 | 7.9 | 148 | 0.00 |
| 30 | T | Chloroform | 2.676 | 2.457 | 8.2 | 141 | 0.00 |
| 31 | T | Ethyl acetate | 0.435 | 0.434 | 0.2 | 146 | 0.00 |
| 32 | T | Carbon tetrachloride | 3.174 | 2.860 | 9.9 | 142 | 0.00 |
| 33 | T | Tetrahydrofuran | 1.504 | 1.466 | 2.5 | 149 | 0.00 |
| 34 | T | 1,1,1-Trichloroethane | 2.780 | 2.541 | 8.6 | 144 | 0.00 |
| 35 | T | Methyl ethyl ketone | 2.442 | 2.356 | 3.5 | 150 | 0.00 |
| 36 | T | n-Heptane | 2.764 | 2.735 | 1.0 | 145 | 0.00 |
| 37 | T | Benzene | 3.972 | 3.428 | 13.7 | 136 | 0.00 |
| 38 | T | 1,2-Dichloroethane | 1.663 | 1.603 | 3.6 | 146 | 0.00 |
| 39 | I | 1,4-Difluorobenzene (IS) | 1.000 | 1.000 | 0.0 | 147 | 0.00 |
| 40 | T | Trichloroethene | 0.442 | 0.405 | 8.4 | 135 | 0.00 |
| 41 | T | 2,2,4-Trimethylpentane | 1.303 | 1.247 | 4.3 | 149 | 0.00 |
| 42 | T | 1,2-Dichloropropane | 0.389 | 0.371 | 4.6 | 139 | 0.00 |
| 43 | T | Bromodichloromethane | 0.655 | 0.640 | 2.3 | 143 | 0.00 |
| 44 | T | Methyl methacrylate | 0.472 | 0.494 | -4.7 | 146 | 0.00 |
| 45 | T | 1,4-Dioxane | 0.238 | 0.232 | 2.5 | 140 | 0.00 |
| 46 | T | cis-1,3-Dichloropropene | 0.603 | 0.587 | 2.7 | 137 | 0.00 |
| 47 | T | Toluene | 1.405 | 1.349 | 4.0 | 133 | 0.00 |
| 48 | T | Methyl isobutyl ketone | 0.883 | 0.958 | -8.5 | 148 | 0.00 |
| 49 | T | Tetrachloroethene | 0.606 | 0.573 | 5.4 | 133 | 0.00 |
| 50 | T | trans-1,3-Dichloropropene | 0.585 | 0.600 | -2.6 | 139 | 0.00 |
| 51 | T | 1,1,2-Trichloroethane | 0.475 | 0.456 | 4.0 | 135 | 0.00 |
| 52 | T | Dibromochloromethane | 0.791 | 0.789 | 0.3 | 139 | 0.00 |
| 53 | T | 1,2-Dibromoethane | 0.686 | 0.685 | 0.1 | 137 | 0.00 |

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4902dcvs.D
Acq On : 11 Dec 2023 10:26 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 11 10:45:53 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 0% Max. R.T. Dev 0.40min
Max. RRF Dev : 30% Max. Rel. Area : 500%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 54 | T | Methyl n-butyl ketone | 0.849 | 0.947 | -11.5 | 149 | 0.00 |
| 55 | I | d-5 Chlorobenzene (IS) | 1.000 | 1.000 | 0.0 | 142 | 0.00 |
| 56 | T | n-Nonane | 0.992 | 1.053 | -6.1 | 146 | 0.00 |
| 57 | T | Chlorobenzene | 0.997 | 0.924 | 7.3 | 133 | 0.00 |
| 58 | T | Ethylbenzene | 1.843 | 1.749 | 5.1 | 134 | 0.00 |
| 59 | T | Xylenes (m&p) | 1.365 | 1.338 | 2.0 | 134 | 0.00 |
| 60 | T | Xylene (o) | 1.490 | 1.395 | 6.4 | 135 | 0.00 |
| 61 | T | Styrene | 1.020 | 0.982 | 3.7 | 131 | 0.00 |
| 62 | T | Bromoform | 0.732 | 0.731 | 0.1 | 139 | 0.00 |
| 63 | T | Cumene | 1.947 | 1.907 | 2.1 | 139 | 0.00 |
| 64 | S | Bromofluorobenzene (tune st | 0.872 | 0.871 | 0.1 | 142 | 0.00 |
| 65 | T | n-Propyl benzene | 2.541 | 2.576 | -1.4 | 140 | 0.00 |
| 66 | T | 1,1,2,2-Tetrachloroethane | 1.043 | 0.998 | 4.3 | 136 | 0.00 |
| 67 | T | 4-Ethyltoluene | 2.151 | 2.143 | 0.4 | 138 | 0.00 |
| 68 | T | 2-Chlorotoluene | 1.707 | 1.675 | 1.9 | 140 | 0.00 |
| 69 | T | 1,3,5-Trimethylbenzene | 1.730 | 1.657 | 4.2 | 134 | 0.00 |
| 70 | T | 1,2,4-Trimethylbenzene | 1.729 | 1.675 | 3.1 | 133 | 0.00 |
| 71 | T | 1,3-Dichlorobenzene | 1.059 | 0.981 | 7.4 | 133 | 0.00 |
| 72 | T | 1,4-Dichlorobenzene | 1.065 | 1.017 | 4.5 | 134 | 0.00 |
| 73 | T | Benzyl chloride | 1.529 | 1.639 | -7.2 | 144 | 0.00 |
| 74 | T | 1,2-Dichlorobenzene | 1.027 | 0.970 | 5.6 | 133 | 0.00 |
| 75 | T | 1,3-Hexachlorobutadiene | 0.713 | 0.668 | 6.3 | 135 | 0.00 |
| 76 | T | 1,2,4-Trichlorobenzene | 0.824 | 0.792 | 3.9 | 137 | 0.00 |
| 77 | T | Naphthalene | 1.885 | 1.937 | -2.8 | 145 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4902dcvs.D
Acq On : 11 Dec 2023 10:26 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 11 10:45:53 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.393 | 130 | 596109 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.454 | 114 | 2484518 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 2791354 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 2431677 | 9.99 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.486 | 41 | 414687 | 10.02 | ppbV | 98 |
| 3) Dichlorodifluoromethane | 1.522 | 85 | 1382298 | 10.46 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.646 | 85 | 1676477 | 8.74 | ppbV | 97 |
| 5) n-Butane | 1.729 | 43 | 1013335 | 10.64 | ppbV | 99 |
| 6) Chloromethane | 1.791 | 52 | 78218 | 11.85 | ppbV | 100 |
| 7) Vinyl chloride | 1.784 | 62 | 574429 | 10.64 | ppbV | 100 |
| 8) 1,3-Butadiene | 1.794 | 39 | 509282 | 10.09 | ppbV | 97 |
| 9) Bromomethane | 2.081 | 94 | 454826 | 10.43 | ppbV | 98 |
| 10) Chloroethane | 2.194 | 64 | 327772 | 11.57 | ppbV | 98 |
| 11) Vinyl bromide | 2.293 | 106 | 548259 | 10.27 | ppbV | 99 |
| 12) Trichlorofluoromethane | 2.309 | 101 | 1779124 | 10.66 | ppbV | 99 |
| 13) Ethanol | 2.666 | 45 | 201466 | 11.54 | ppbV | 97 |
| 14) 1,1-Dichloroethene | 2.731 | 61 | 1163954 | 10.51 | ppbV | 96 |
| 15) Carbon disulfide | 2.750 | 76 | 1969223 | 10.80 | ppbV | 97 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.772 | 101 | 1553181 | 9.24 | ppbV | 99 |
| 17) Acrolein | 2.985 | 56 | 252446 | 10.14 | ppbV | 100 |
| 18) Allyl chloride | 3.110 | 76 | 330196 | 11.05 | ppbV | 100 |
| 19) Isopropanol | 3.110 | 45 | 1119255 | 9.36 | ppbV | 100 |
| 20) Methylene chloride | 3.203 | 49 | 696985 | 9.51 | ppbV | 95 |
| 21) Acetone | 3.210 | 43 | 998590 | 11.11 | ppbV | 100 |
| 22) trans-1,2-Dichloroethene | 3.325 | 61 | 1138568 | 11.08 | ppbV | 98 |
| 23) n-Pentane | 3.409 | 43 | 1422770 | 10.27 | ppbV | 98 |
| 24) n-Hexane | 3.406 | 57 | 1903376 | 10.13 | ppbV | 98 |
| 25) Methyl tert-butyl ether | 3.409 | 73 | 2411960 | 10.45 | ppbV | 99 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 1678450 | 10.80 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 1328374 | 9.60 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.232 | 61 | 1023865 | 10.48 | ppbV | 96 |
| 29) Cyclohexane | 4.412 | 56 | 1354780 | 10.32 | ppbV | 97 |
| 30) Chloroform | 4.454 | 83 | 1581616 | 9.92 | ppbV | 99 |
| 31) Ethyl acetate | 4.541 | 61 | 279320 | 10.77 | ppbV | 96 |
| 32) Carbon tetrachloride | 4.576 | 117 | 1875059 | 9.91 | ppbV | 99 |
| 33) Tetrahydrofuran | 4.573 | 42 | 961491 | 10.72 | ppbV | 97 |
| 34) 1,1,1-Trichloroethane | 4.628 | 97 | 1650986 | 9.96 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.682 | 43 | 1545036 | 10.61 | ppbV | 98 |
| 36) n-Heptane | 4.914 | 43 | 1809408 | 10.98 | ppbV | 97 |
| 37) Benzene | 4.930 | 78 | 2206639 | 9.32 | ppbV | 97 |
| 38) 1,2-Dichloroethane | 5.091 | 62 | 1041657 | 10.51 | ppbV | 100 |
| 40) Trichloroethene | 5.431 | 130 | 1006216 | 9.15 | ppbV | 100 |
| 41) 2,2,4-Trimethylpentane | 4.846 | 57 | 3376289 | 10.43 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 1014651 | 10.50 | ppbV | 99 |
| 43) Bromodichloromethane | 5.943 | 83 | 1828286 | 11.23 | ppbV | 100 |
| 44) Methyl methacrylate | 6.087 | 41 | 1350577 | 11.52 | ppbV | 96 |
| 45) 1,4-Dioxane | 6.113 | 88 | 673669 | 11.38 | ppbV | 99 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 1619348 | 10.81 | ppbV | 99 |
| 47) Toluene | 6.772 | 91 | 3618902 | 10.36 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.135 | 43 | 2595670 | 11.83 | ppbV | 98 |
| 49) Tetrachloroethene | 7.161 | 166 | 1595415 | 10.60 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 1655291 | 11.39 | ppbV | 98 |
| 51) 1,1,2-Trichloroethane | 7.335 | 97 | 1222341 | 10.37 | ppbV | 100 |

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4902dcvs.D
Acq On : 11 Dec 2023 10:26 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

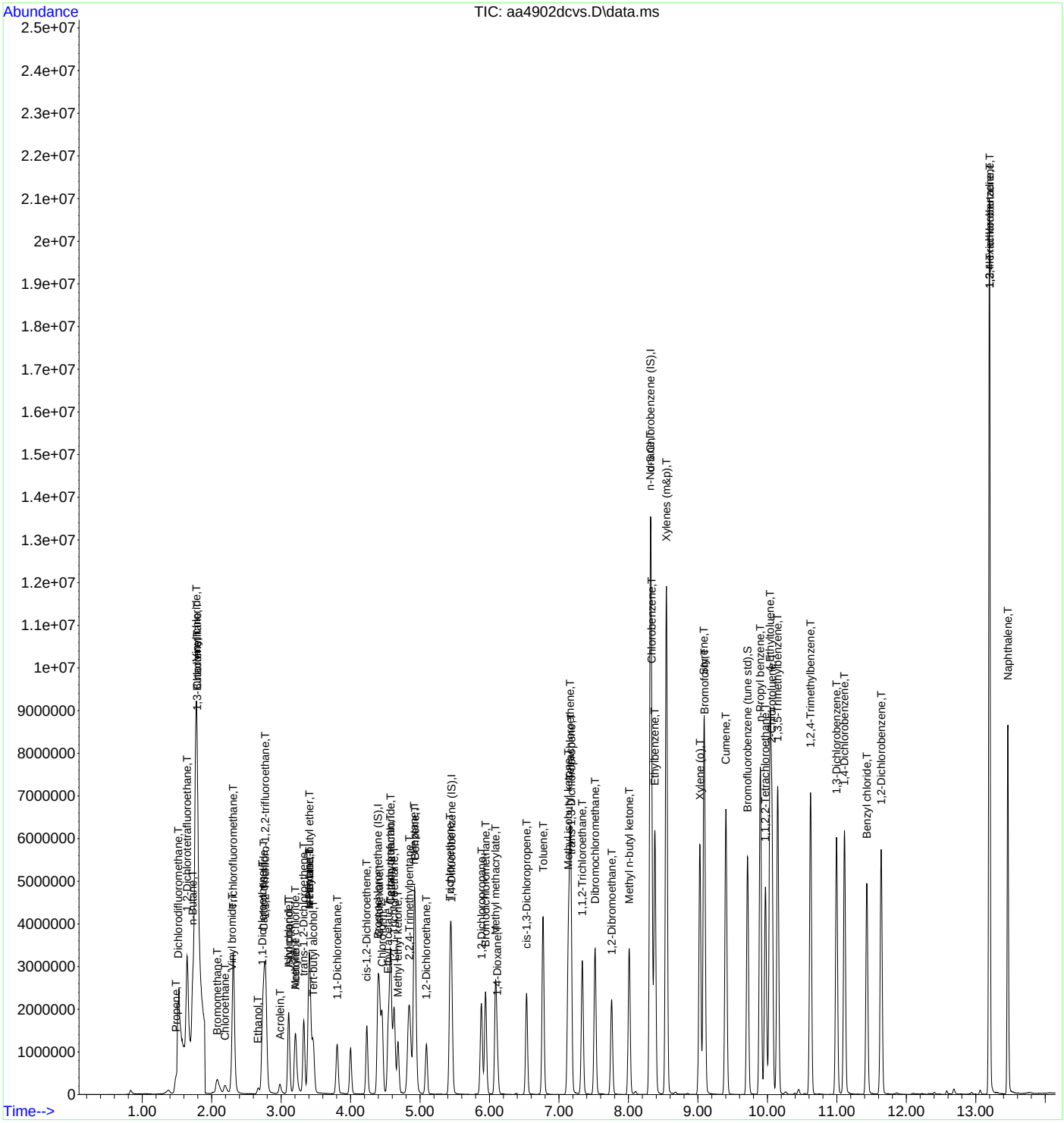
Quant Time: Dec 11 10:45:53 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 2194895 | 11.17 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 1838806 | 10.78 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.010 | 43 | 2657481 | 12.59 | ppbV | 97 |
| 56) n-Nonane | 8.316 | 43 | 3233636 | 11.67 | ppbV | 98 |
| 57) Chlorobenzene | 8.335 | 112 | 2863155 | 10.29 | ppbV | 98 |
| 58) Ethylbenzene | 8.380 | 91 | 5418295 | 10.53 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.547 | 91 | 8329861 | 21.86 | ppbV | 99 |
| 60) Xylene (o) | 9.029 | 91 | 4282583 | 10.30 | ppbV | 98 |
| 61) Styrene | 9.087 | 104 | 3096431 | 10.87 | ppbV | 99 |
| 62) Bromoform | 9.097 | 173 | 2305769 | 11.28 | ppbV | 100 |
| 63) Cumene | 9.402 | 105 | 5696839 | 10.48 | ppbV | 100 |
| 65) n-Propyl benzene | 9.897 | 91 | 7764284 | 10.95 | ppbV | 99 |
| 66) 1,1,2,2-Tetrachloroethane | 9.971 | 83 | 3175462 | 10.91 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 6460729 | 10.76 | ppbV | 99 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 5096400 | 10.69 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 5041969 | 10.44 | ppbV | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.621 | 105 | 5048160 | 10.46 | ppbV | 99 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 3039816 | 10.29 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 3038927 | 10.22 | ppbV | 99 |
| 73) Benzyl chloride | 11.431 | 91 | 4575705 | 10.72 | ppbV | 99 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 2896425 | 10.10 | ppbV | 99 |
| 75) 1,3-Hexachlorobutadiene | 13.200 | 225 | 2068735 | 10.40 | ppbV | 99 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 2432158 | 10.57 | ppbV | 99 |
| 77) Naphthalene | 13.463 | 128 | 5407318 | 10.28 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4902dcvs.D
Acq On : 11 Dec 2023 10:26 am
Operator : jjw
Sample : 10 ppbv DCVS
Misc : EB0103704
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 11 10:45:53 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



# Section VIII: Raw Quality Control Data Package

**BFB Tune Spectra**

**Method Blank**

**Laboratory Control Sample**

**Laboratory Sample Duplicate**

**Instrument Run Logs**

**Pressure Gauge Readings (initial and final)**

**Example Calculations**

**Screening Data**

**Clean Canister Certification**

# BFB

**Data Path:** C:\DATA\2023\08-2023\08-15-2023\
**Data File:** AA3401BFB.D
**Acq On:** 8/15/2023 10:11:00AM
**Operator:** jls
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\230525.M
**Last Update:** Tue May 30 13:24:12 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 251499 | 18.7 |
| PASS | 75 | 95 | 30 | 66 | 703104 | 52.3 |
| PASS | 95 | 95 | 100 | 100 | 1345024 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 89525 | 6.7 |
| PASS | 173 | 174 | 0.00 | 2 | 8293 | 0.8 |
| PASS | 174 | 95 | 50 | 100 | 1069397 | 79.5 |
| PASS | 175 | 174 | 4 | 9 | 78181 | 7.3 |
| PASS | 176 | 174 | 93 | 101 | 1035413 | 96.8 |
| PASS | 177 | 176 | 5 | 9 | 68613 | 6.6 |

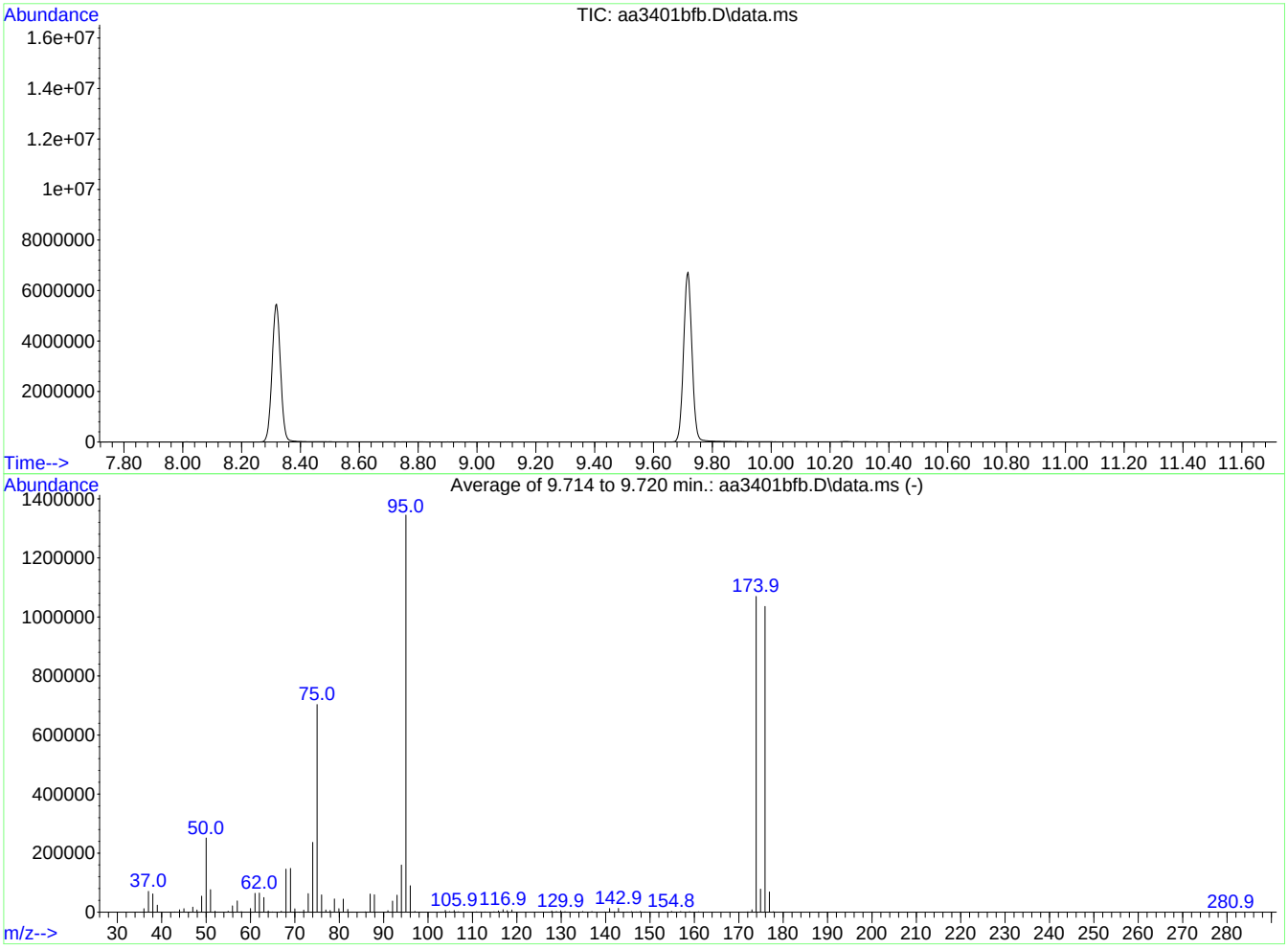
Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA3401BFB | NA | 8/15/2023 10:11:00 AM |
| 0.2 PPBV STD | AA3402STD05 | NA | 8/15/2023 11:15:00 AM |
| 10 PPBV STD | AA3404STD03 | NA | 8/15/2023 1:09:00 PM |
| 2 PPBV STD | AA3403STD04 | NA | 8/15/2023 1:45:00 PM |
| 20 PPBV STD | AA3405STD02 | NA | 8/15/2023 3:12:00 PM |
| 40 PPBV STD | AA3406STD01 | NA | 8/15/2023 4:47:00 PM |
| 10 PPBV ICVSS | AA3407ICVSS | NA | 8/15/2023 6:09:00 PM |

Data Path : C:\DATA\2023\08-2023\08-15-2023\
Data File : aa3401bfb.D
Acq On : 15 Aug 2023 10:11 am
Operator : jjw
Sample : BFB
Misc : ALM018474
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\230525.M
Title : TO-15 on the Agilent 7890A / 5975C
Last Update : Tue May 30 13:24:12 2023




AutoFind: Scans 2982, 2983, 2984; Background Corrected with Scan 2964

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 18.7 | 251499 | PASS |
| 75 | 95 | 30 | 66 | 52.3 | 703104 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 1345024 | PASS |
| 96 | 95 | 5 | 9 | 6.7 | 89525 | PASS |
| 173 | 174 | 0.00 | 2 | 0.8 | 8293 | PASS |
| 174 | 95 | 50 | 100 | 79.5 | 1069397 | PASS |
| 175 | 174 | 4 | 9 | 7.3 | 78181 | PASS |
| 176 | 174 | 93 | 101 | 96.8 | 1035413 | PASS |
| 177 | 176 | 5 | 9 | 6.6 | 68613 | PASS |

# BFB

**Data Path:** C:\DATA\2023\09-2023\09-28-2023\
**Data File:** AA4071BFB.D
**Acq On:** 9/28/2023 10:01:00AM
**Operator:** jjw
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\230815.M
**Last Update:** Wed Aug 16 10:00:51 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 96931 | 19.9 |
| PASS | 75 | 95 | 30 | 66 | 265259 | 54.6 |
| PASS | 95 | 95 | 100 | 100 | 485931 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 33264 | 6.8 |
| PASS | 173 | 174 | 0.00 | 2 | 3017 | 0.8 |
| PASS | 174 | 95 | 50 | 100 | 366187 | 75.4 |
| PASS | 175 | 174 | 4 | 9 | 27080 | 7.4 |
| PASS | 176 | 174 | 93 | 101 | 360832 | 98.5 |
| PASS | 177 | 176 | 5 | 9 | 23088 | 6.4 |

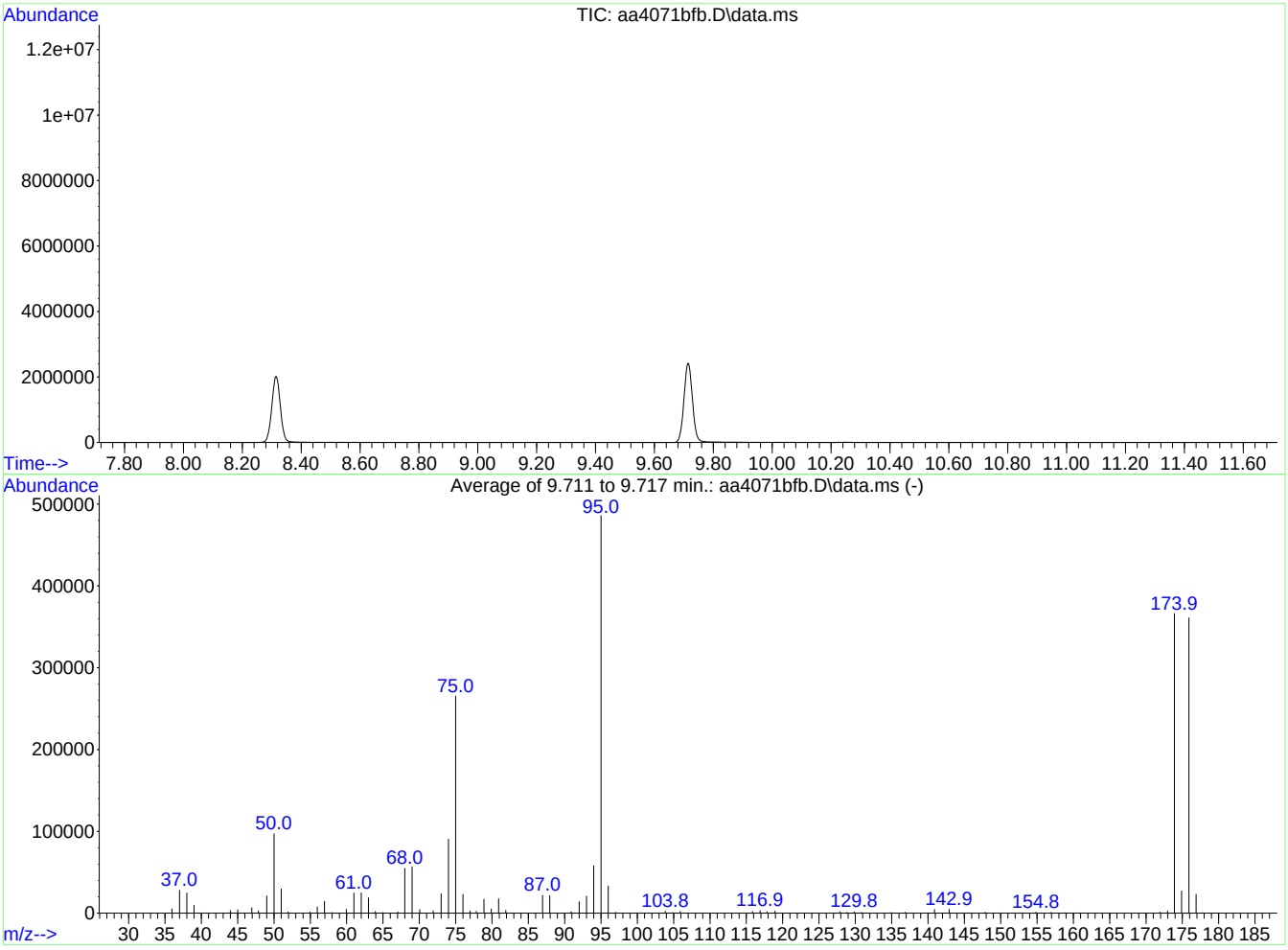
Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4071BFB | NA | 9/28/2023 10:01:00 AM |
| 10 PPBV DCVS | AA4072DCVS | NA | 9/28/2023 10:31:00 AM |
| 10 PPBV LCS | AA4073LCS | NA | 9/28/2023 11:19:00 AM |
| METHOD BLANK | AA4074BLK | NA | 9/28/2023 11:47:00 AM |
| 02 PPBV RLLCS | AA4075RLLCS | NA | 9/28/2023 1:22:00 PM |
| 2164 | AA4076 | NA | 9/28/2023 3:00:00 PM |
| 4870 | AA4077 | NA | 9/28/2023 3:30:00 PM |
| 2160 | AA4078 | NA | 9/28/2023 4:00:00 PM |
| 10 PPBV CCCVS | AA4093CCCVS | NA | 9/29/2023 12:28:00 AM |

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4071bfb.D
Acq On : 28 Sep 2023 10:01 am
Operator : jjw
Sample : BFB
Misc : ALM018474
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\230815.M
Title : TO-15 on the Agilent 7890A / 5975C
Last Update : Wed Aug 16 10:00:51 2023




AutoFind: Scans 2981, 2982, 2983; Background Corrected with Scan 2965

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 19.9 | 96931 | PASS |
| 75 | 95 | 30 | 66 | 54.6 | 265259 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 485931 | PASS |
| 96 | 95 | 5 | 9 | 6.8 | 33264 | PASS |
| 173 | 174 | 0.00 | 2 | 0.8 | 3017 | PASS |
| 174 | 95 | 50 | 100 | 75.4 | 366187 | PASS |
| 175 | 174 | 4 | 9 | 7.4 | 27080 | PASS |
| 176 | 174 | 93 | 101 | 98.5 | 360832 | PASS |
| 177 | 176 | 5 | 9 | 6.4 | 23088 | PASS |

# BFB

**Data Path:** C:\DATA\2023\10-2023\10-10-2023\
**Data File:** AA4131BFB.D
**Acq On:** 10/10/2023 10:13:00AM
**Operator:** jls
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\231009.M
**Last Update:** Tue Oct 10 09:54:56 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 65523 | 16.8 |
| PASS | 75 | 95 | 30 | 66 | 182571 | 46.8 |
| PASS | 95 | 95 | 100 | 100 | 389867 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 25643 | 6.6 |
| PASS | 173 | 174 | 0.00 | 2 | 0 | 0.0 |
| PASS | 174 | 95 | 50 | 100 | 293952 | 75.4 |
| PASS | 175 | 174 | 4 | 9 | 22269 | 7.6 |
| PASS | 176 | 174 | 93 | 101 | 282667 | 96.2 |
| PASS | 177 | 176 | 5 | 9 | 18629 | 6.6 |

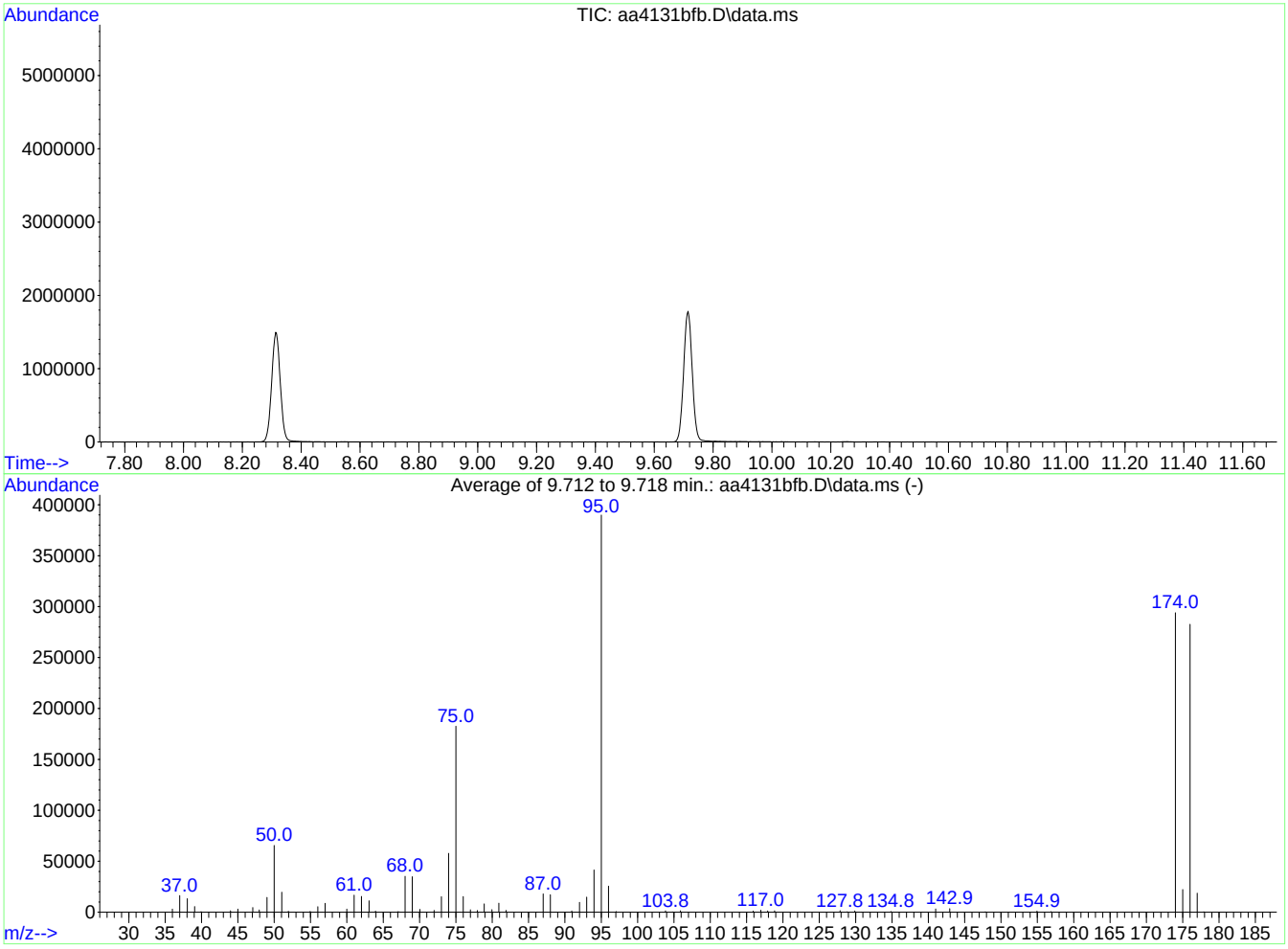
Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4131BFB | NA | 10/10/2023 10:13:00 AM |
| 0.2 PPBV STD | AA4132STD05 | NA | 10/10/2023 10:40:00 AM |
| 2 PPBV STD | AA4133STD04 | NA | 10/10/2023 11:46:00 AM |
| 10 PPBV STANDARD STD | AA4134STD03 | NA | 10/10/2023 12:21:00 PM |
| 20 PPBV STD | AA4135STD02 | NA | 10/10/2023 12:55:00 PM |
| 40 PPBV STD | AA4136STD01 | NA | 10/10/2023 2:05:00 PM |
| 10 PPBV ICVSS | AA4137ICVSS | NA | 10/10/2023 4:48:00 PM |
| 10 PPBV LCS | AA4138LCS | NA | 10/10/2023 5:39:00 PM |
| METHOD BLANK | AA4139BLK | NA | 10/10/2023 6:07:00 PM |
| 02 PPBV RLLCS | AA4140RLLCS | NA | 10/10/2023 6:35:00 PM |
| 5101 | AA4142 | NA | 10/10/2023 7:36:00 PM |
| 4869 | AA4143 | NA | 10/10/2023 8:06:00 PM |
| 2157 | AA4144 | NA | 10/10/2023 8:36:00 PM |
| 10 PPBV CCCVS | AA4154CCCVS | NA | 10/11/2023 1:53:00 AM |

Data Path : C:\DATA\2023\10-2023\10-10-2023\
Data File : aa4131bfb.D
Acq On : 10 Oct 2023 10:13 am
Operator : jjw
Sample : BFB
Misc : ALM018474
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\231009.M
Title : TO-15 on the Agilent 7890A / 5975C
Last Update : Tue Oct 10 09:54:56 2023




AutoFind: Scans 2981, 2982, 2983; Background Corrected with Scan 2964

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 16.8 | 65523 | PASS |
| 75 | 95 | 30 | 66 | 46.8 | 182571 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 389867 | PASS |
| 96 | 95 | 5 | 9 | 6.6 | 25643 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 100 | 75.4 | 293952 | PASS |
| 175 | 174 | 4 | 9 | 7.6 | 22269 | PASS |
| 176 | 174 | 93 | 101 | 96.2 | 282667 | PASS |
| 177 | 176 | 5 | 9 | 6.6 | 18629 | PASS |

# BFB

**Data Path:** C:\DATA\2023\12-2023\12-11-2023\

**Data File:** AA4901BFB.D

**Acq On:** 12/11/2023 9:24:00AM

**Operator:** jjw

**Sample:** BFB

**Misc:** ALM018474

**ALS Vial:** 1 **Multiplier:** 1

**Integration File:** rteint.p

**Method:** C:\msdchem\1\METHODS\231009.M

**Last Update:** Tue Oct 10 15:12:35 2023

**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 267904 | 18.4 |
| PASS | 75 | 95 | 30 | 66 | 717035 | 49.1 |
| PASS | 95 | 95 | 100 | 100 | 1459371 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 91040 | 6.2 |
| PASS | 173 | 174 | 0.00 | 2 | 10848 | 1.0 |
| PASS | 174 | 95 | 50 | 100 | 1053269 | 72.2 |
| PASS | 175 | 174 | 4 | 9 | 81547 | 7.7 |
| PASS | 176 | 174 | 93 | 101 | 1021824 | 97.0 |
| PASS | 177 | 176 | 5 | 9 | 65264 | 6.4 |

Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| BFB | AA4901BFB | NA | 12/11/2023 9:24:00 AM |
| 10 PPBV DCVS | AA4902DCVS | NA | 12/11/2023 10:26:00 AM |
| 10 PPBV LCS | AA4903LCS | NA | 12/11/2023 10:57:00 AM |
| METHOD BLANK | AA4904BLK | NA | 12/11/2023 11:51:00 AM |
| 02 PPBV RLLCS | AA4905RLLCS | NA | 12/11/2023 12:18:00 PM |
| 1458 | AA4906 | NA | 12/11/2023 12:50:00 PM |
| 1588 | AA4907 | NA | 12/11/2023 1:19:00 PM |
| 3012 | AA4908 | NA | 12/11/2023 1:49:00 PM |
| E23-05081-01 | AA4916 | SV1 | 12/11/2023 6:15:00 PM |
| E23-05081-01 | AA4917 | SV1 | 12/11/2023 6:47:00 PM |
| E23-05081-02 | AA4919 | SV4 | 12/11/2023 7:52:00 PM |
| E23-05081-03 | AA4920 | SV9 | 12/11/2023 8:24:00 PM |
| E23-05081-03 | AA4921 | SV9 | 12/11/2023 9:04:00 PM |
| E23-05081-04 | AA4922 | SV8-401-Compactor Room | 12/11/2023 9:35:00 PM |
| E23-05081-04 | AA4923 | SV8-401-Compactor Room | 12/11/2023 10:07:00 PM |

# BFB

**Data Path:** C:\DATA\2023\12-2023\12-11-2023\
**Data File:** AA4901BFB.D
**Acq On:** 12/11/2023 9:24:00AM
**Operator:** jjw
**Sample:** BFB
**Misc:** ALM018474
**ALS Vial:** 1 **Multiplier:** 1
**Integration File:** rteint.p
**Method:** C:\msdchem\1\METHODS\231009.M
**Last Update:** Tue Oct 10 15:12:35 2023
**Spectrum Information:**

| PassFail | Target Mass | Rel. to Mass | Lower Limit % | Higher Limit % | Raw Abundance | % Relative Abundance |
|---|---|---|---|---|---|---|
| PASS | 50 | 95 | 8 | 40 | 267904 | 18.4 |
| PASS | 75 | 95 | 30 | 66 | 717035 | 49.1 |
| PASS | 95 | 95 | 100 | 100 | 1459371 | 100.0 |
| PASS | 96 | 95 | 5 | 9 | 91040 | 6.2 |
| PASS | 173 | 174 | 0.00 | 2 | 10848 | 1.0 |
| PASS | 174 | 95 | 50 | 100 | 1053269 | 72.2 |
| PASS | 175 | 174 | 4 | 9 | 81547 | 7.7 |
| PASS | 176 | 174 | 93 | 101 | 1021824 | 97.0 |
| PASS | 177 | 176 | 5 | 9 | 65264 | 6.4 |

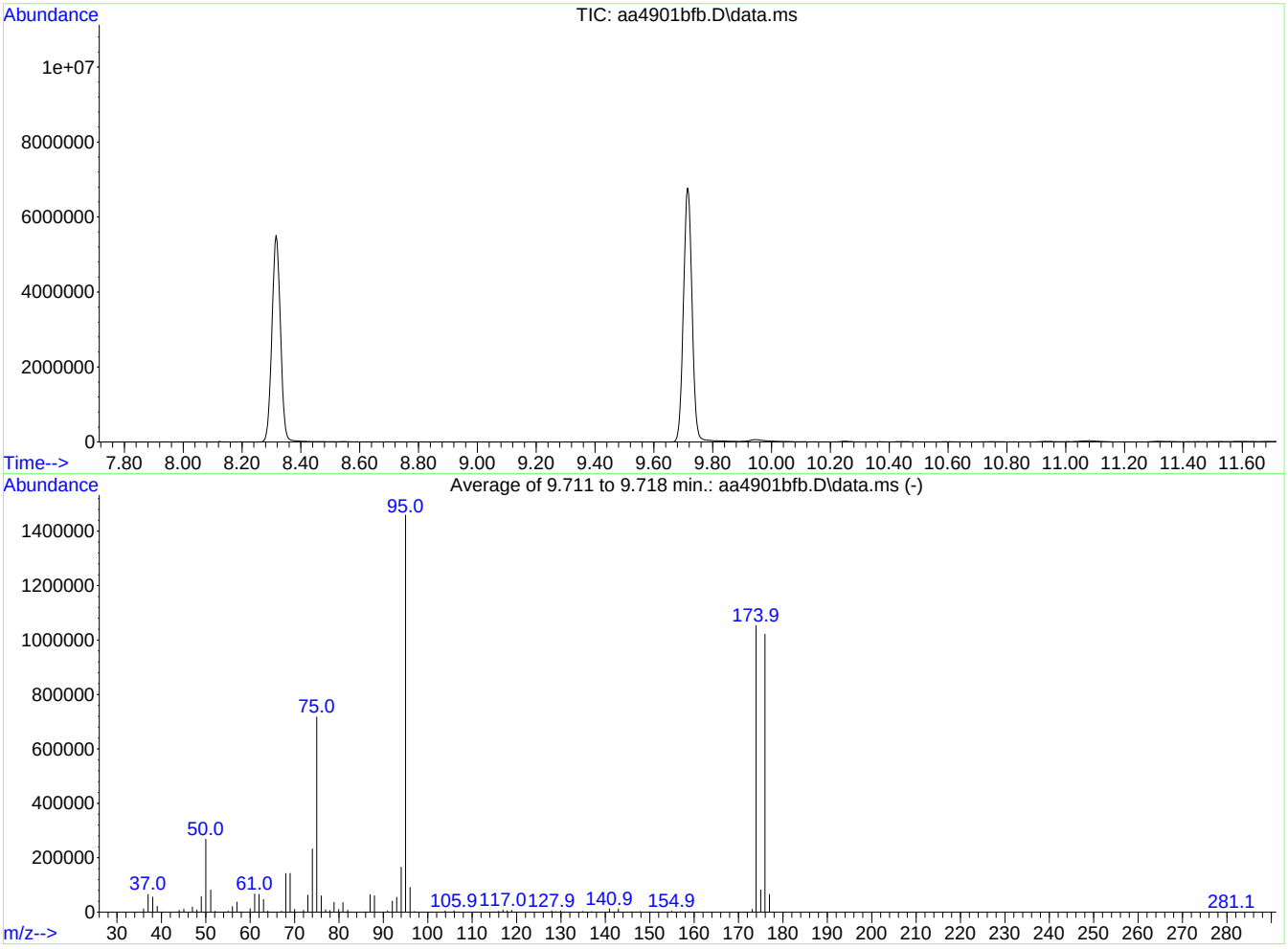
Runs with this BFB:

| Lab Sample Number | Date File | Field Sample | Date/Time of Sample/Standard Analysis |
|---|---|---|---|
| 10 PPBV CCCVS | AA4931CCCVS | NA | 12/12/2023 1:59:00 AM |

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4901bfb.D
Acq On : 11 Dec 2023 9:24 am
Operator : jjw
Sample : BFB
Misc : ALM018474
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\231009.M
Title : TO-15 on the Agilent 7890A / 5975C
Last Update : Tue Oct 10 15:12:35 2023




AutoFind: Scans 2981, 2982, 2983; Background Corrected with Scan 2963

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 18.4 | 267904 | PASS |
| 75 | 95 | 30 | 66 | 49.1 | 717035 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 1459371 | PASS |
| 96 | 95 | 5 | 9 | 6.2 | 91040 | PASS |
| 173 | 174 | 0.00 | 2 | 1.0 | 10848 | PASS |
| 174 | 95 | 50 | 100 | 72.2 | 1053269 | PASS |
| 175 | 174 | 4 | 9 | 7.7 | 81547 | PASS |
| 176 | 174 | 93 | 101 | 97.0 | 1021824 | PASS |
| 177 | 176 | 5 | 9 | 6.4 | 65264 | PASS |

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4074BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **9/28/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| 2164 [AA4076] | 09/28/2023 15:00 |
| 4870 [AA4077] | 09/28/2023 15:30 |
| 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 0:28 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromodichloromethane | 75-27-4 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| Dibromochloromethane | 124-48-1 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.17 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.19 | ND |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.18 | ND |
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |
| n-Hexane | 110-54-3 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4074BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **9/28/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| 2164 [AA4076] | 09/28/2023 15:00 |
| 4870 [AA4077] | 09/28/2023 15:30 |
| 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 0:28 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Methylene chloride | 75-09-2 | 0.20 | ND |
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.17 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.17 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.20 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4074blk.D
Acq On : 28 Sep 2023 11:47 am
Operator : jjw
Sample : Method Blank
Misc : 1127
ALS Vial : 4 Sample Multiplier: 1

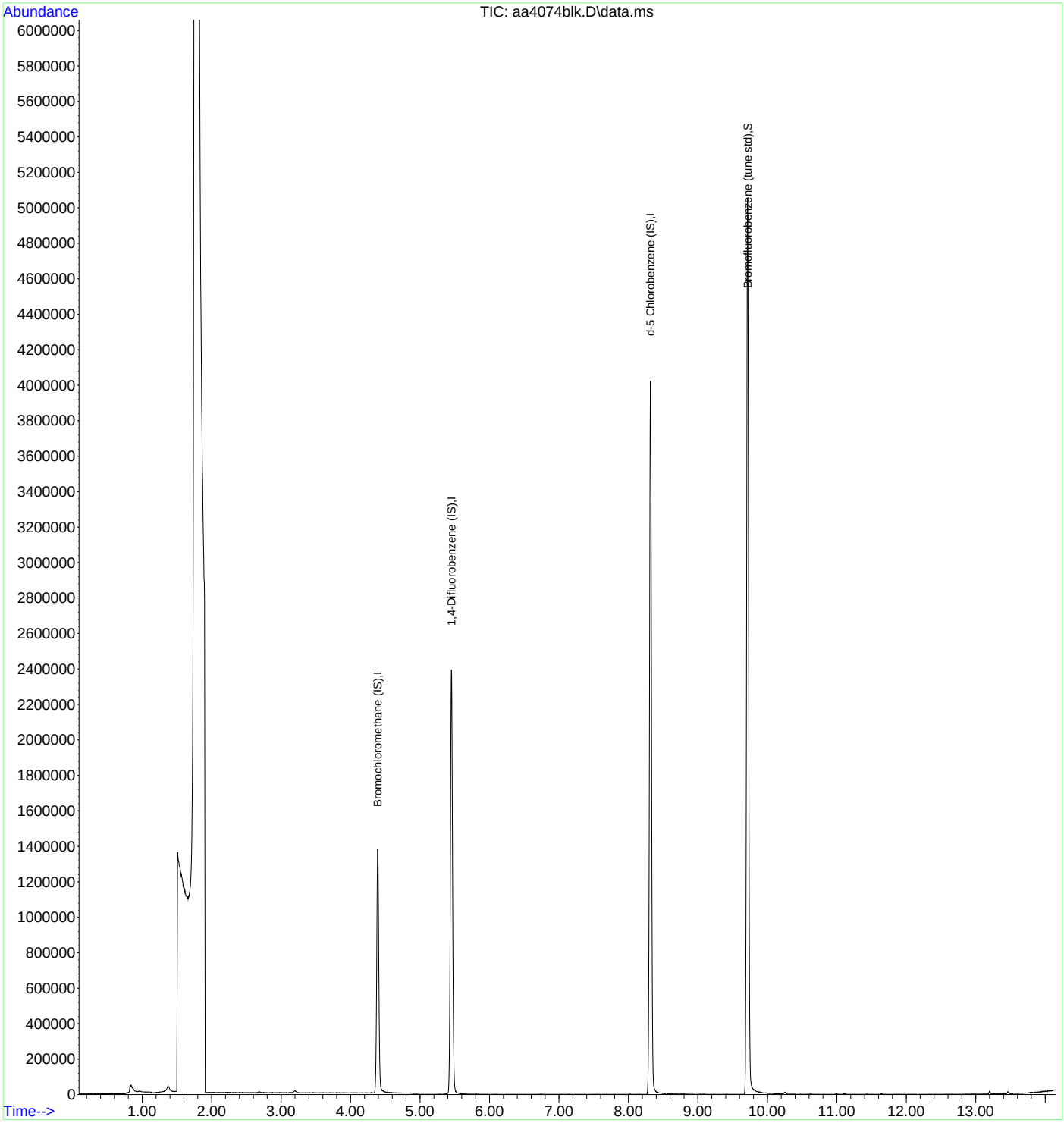
Quant Time: Sep 28 12:02:32 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.393 | 130 | 502187 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.454 | 114 | 2139413 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 2500606 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.717 | 95 | 2123353 | 10.21 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4074blk.D
Acq On : 28 Sep 2023 11:47 am
Operator : jjw
Sample : Method Blank
Misc : 1127
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 28 12:02:32 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4904BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/11/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05081-01 [AA4916] | 12/11/2023 18:15 |
| E23-05081-01 [AA4917] | 12/11/2023 18:47 |
| E23-05081-02 [AA4919] | 12/11/2023 19:52 |
| E23-05081-03 [AA4920] | 12/11/2023 20:24 |
| E23-05081-03 [AA4921] | 12/11/2023 21:04 |
| E23-05081-04 [AA4922] | 12/11/2023 21:35 |
| E23-05081-04 [AA4923] | 12/11/2023 22:07 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.17 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.19 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4904BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/11/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05081-01 [AA4916] | 12/11/2023 18:15 |
| E23-05081-01 [AA4917] | 12/11/2023 18:47 |
| E23-05081-02 [AA4919] | 12/11/2023 19:52 |
| E23-05081-03 [AA4920] | 12/11/2023 20:24 |
| E23-05081-03 [AA4921] | 12/11/2023 21:04 |
| E23-05081-04 [AA4922] | 12/11/2023 21:35 |
| E23-05081-04 [AA4923] | 12/11/2023 22:07 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.18 | ND |
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |
| n-Hexane | 110-54-3 | 0.20 | ND |
| Methylene chloride | 75-09-2 | 0.20 | ND |
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.17 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.17 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Method Blank Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **METHOD BLANK** | **Data File:** | **AA4904BLK** |
| **Field Sample Name:** | **METHOD BLANK** | **Date Analyzed:** | **12/11/2023** |
| **Matrix:** | **Air** | **Sample Volume:** | **500ml** |
| **Dilution Factor:** | **1** | **GC/MS Column:** | **RTX-1, 0.32 mmID** |

Runs with this Method Blank:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05081-01 [AA4916] | 12/11/2023 18:15 |
| E23-05081-01 [AA4917] | 12/11/2023 18:47 |
| E23-05081-02 [AA4919] | 12/11/2023 19:52 |
| E23-05081-03 [AA4920] | 12/11/2023 20:24 |
| E23-05081-03 [AA4921] | 12/11/2023 21:04 |
| E23-05081-04 [AA4922] | 12/11/2023 21:35 |
| E23-05081-04 [AA4923] | 12/11/2023 22:07 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Reporting Limit (ppbv) | Concentration (ppbv) |
|---|---|---|---|
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.20 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

**Method Blank must be less than the Practical Quantitation Limit (PQL).**

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4904blk.D
Acq On : 11 Dec 2023 11:51 am
Operator : jjw
Sample : Method Blank
Misc : 1127
ALS Vial : 4 Sample Multiplier: 1

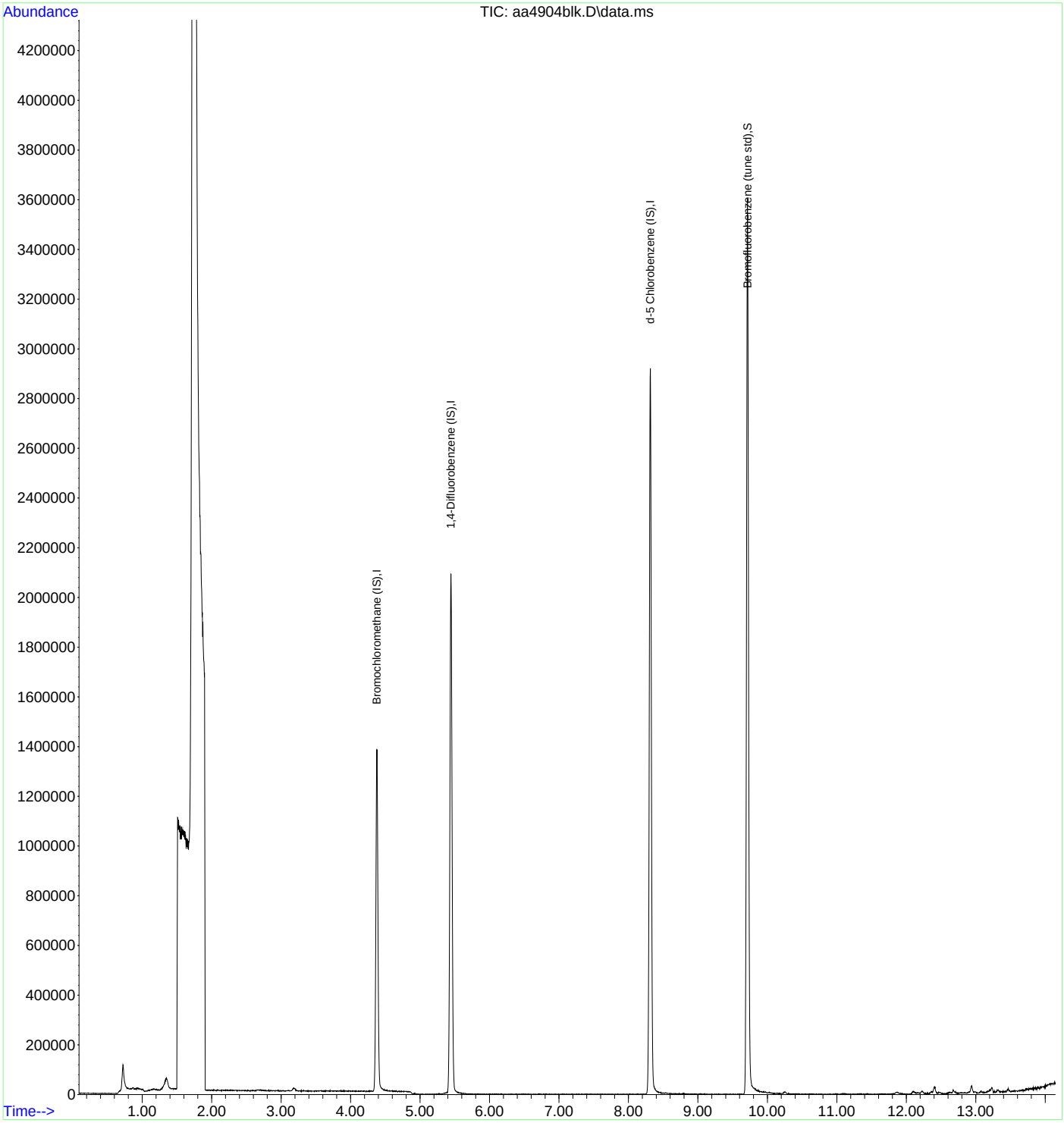
Quant Time: Dec 11 12:06:14 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.377 | 130 | 518939 | 10.00 | ppbV | -0.017 |
| 39) 1,4-Difluorobenzene (IS) | 5.444 | 114 | 1920464 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.315 | 117 | 1920350 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1609305 | 9.61 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4904blk.D
Acq On : 11 Dec 2023 11:51 am
Operator : jjw
Sample : Method Blank
Misc : 1127
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 11 12:06:14 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4073LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 9/28/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| 2164 [AA4076] | 09/28/2023 15:00 |
| 4870 [AA4077] | 09/28/2023 15:30 |
| 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 0:28 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Acetone | 67-64-1 | 13 | 120 |
| Benzene | 71-43-2 | 12 | 120 |
| Bromodichloromethane | 75-27-4 | 12 | 110 |
| Bromoform | 75-25-2 | 11 | 100 |
| Bromomethane | 74-83-9 | 12 | 110 |
| 1,3-Butadiene | 106-99-0 | 14 | 130 |
| Chlorobenzene | 108-90-7 | 10 | 100 |
| Chloroethane | 75-00-3 | 13 | 130 |
| Chloroform | 67-66-3 | 13 | 130 |
| Chloromethane | 74-87-3 | 14 | 120 |
| Carbon disulfide | 75-15-0 | 14 | 130 |
| Carbon tetrachloride | 56-23-5 | 11 | 110 |
| Cyclohexane | 110-82-7 | 12 | 120 |
| Dibromochloromethane | 124-48-1 | 11 | 100 |
| 1,2-Dibromoethane | 106-93-4 | 11 | 100 |
| 1,2-Dichlorobenzene | 95-50-1 | 10 | 91 |
| 1,3-Dichlorobenzene | 541-73-1 | 10 | 91 |
| 1,4-Dichlorobenzene | 106-46-7 | 11 | 100 |
| Dichlorodifluoromethane | 75-71-8 | 13 | 120 |
| 1,1-Dichloroethane | 75-34-3 | 13 | 120 |
| 1,2-Dichloroethane | 107-06-2 | 13 | 130 |
| 1,1-Dichloroethene | 75-35-4 | 13 | 120 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 14 | 130 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 14 | 130 |
| 1,2-Dichloropropane | 78-87-5 | 11 | 110 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 12 | 110 |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 13 | 130 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 11 | 100 |
| 1,4-Dioxane | 123-91-1 | 12 | 100 |
| Ethylbenzene | 100-41-4 | 11 | 110 |
| n-Heptane | 142-82-5 | 12 | 120 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4073LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 9/28/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| 2164 [AA4076] | 09/28/2023 15:00 |
| 4870 [AA4077] | 09/28/2023 15:30 |
| 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 0:28 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| 1,3-Hexachlorobutadiene | 87-68-3 | 9.6 | 84 |
| n-Hexane | 110-54-3 | 13 | 130 |
| Methylene chloride | 75-09-2 | 13 | 120 |
| Methyl ethyl ketone | 78-93-3 | 14 | 120 |
| Methyl isobutyl ketone | 108-10-1 | 12 | 110 |
| Methyl tert-butyl ether | 1634-04-4 | 12 | 110 |
| Styrene | 100-42-5 | 11 | 100 |
| Tert-butyl alcohol | 75-65-0 | 13 | 110 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 10 | 91 |
| Tetrachloroethene | 127-18-4 | 11 | 110 |
| Toluene | 108-88-3 | 11 | 110 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 11 | 96 |
| 1,1,1-Trichloroethane | 71-55-6 | 11 | 110 |
| 1,1,2-Trichloroethane | 79-00-5 | 11 | 100 |
| Trichloroethene | 79-01-6 | 9.8 | 98 |
| Trichlorofluoromethane | 75-69-4 | 13 | 120 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 11 | 110 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 11 | 100 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 10 | 91 |
| 2,2,4-Trimethylpentane | 540-84-1 | 12 | 120 |
| Vinyl bromide | 593-60-2 | 12 | 120 |
| Vinyl chloride | 75-01-4 | 14 | 130 |
| Xylenes (m&p) | 179601-23-1 | 22 | 110 |
| Xylenes (o) | 95-47-6 | 10 | 100 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4073lcs.D
Acq On : 28 Sep 2023 11:19 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 28 12:10:06 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.396 | 130 | 409432 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.454 | 114 | 1933513 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 2364904 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 2078765 | 10.57 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.486 | 41 | 371726 | 13.18 | ppbV | 100 |
| 3) Dichlorodifluoromethane | 1.529 | 85 | 1310888 | 12.67 | ppbV | 100 |
| 4) 1,2-Dichlorotetrafluor... | 1.650 | 85 | 1582960 | 10.63 | ppbV | 94 |
| 5) n-Butane | 1.729 | 43 | 904419 | 13.51 | ppbV | 100 |
| 6) Chloromethane | 1.791 | 52 | 67655 | 14.12 | ppbV | 94 |
| 7) Vinyl chloride | 1.780 | 62 | 531992 | 13.67 | ppbV | 100 |
| 8) 1,3-Butadiene | 1.794 | 39 | 550480 | 13.84 | ppbV | 93 |
| 9) Bromomethane | 2.091 | 94 | 397168 | 12.15 | ppbV | 100 |
| 10) Chloroethane | 2.194 | 64 | 271717 | 12.84 | ppbV | 98 |
| 11) Vinyl bromide | 2.297 | 106 | 511821 | 12.45 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.313 | 101 | 1773173 | 12.74 | ppbV | 99 |
| 13) Ethanol | 2.670 | 45 | 187147 | 11.42 | ppbV | 99 |
| 14) 1,1-Dichloroethene | 2.734 | 61 | 1143672 | 13.38 | ppbV | 95 |
| 15) Carbon disulfide | 2.753 | 76 | 1947574 | 13.87 | ppbV | 98 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.776 | 101 | 1493461 | 10.86 | ppbV | 98 |
| 17) Acrolein | 2.985 | 56 | 208388 | 11.85 | ppbV | 100 |
| 18) Allyl chloride | 3.110 | 76 | 311360 | 13.59 | ppbV | 100 |
| 19) Isopropanol | 3.110 | 45 | 1091138 | 11.53 | ppbV | 99 |
| 20) Methylene chloride | 3.200 | 49 | 664730 | 12.87 | ppbV | 93 |
| 21) Acetone | 3.213 | 43 | 1016794 | 13.24 | ppbV | 97 |
| 22) trans-1,2-Dichloroethene | 3.329 | 61 | 1107246 | 14.39 | ppbV | 95 |
| 23) n-Pentane | 3.409 | 43 | 1192108 | 12.14 | ppbV | 99 |
| 24) n-Hexane | 3.406 | 57 | 1715467 | 12.51 | ppbV | 94 |
| 25) Methyl tert-butyl ether | 3.409 | 73 | 2233934 | 11.98 | ppbV | 96 |
| 26) Tert-butyl alcohol | 3.464 | 59 | 1556448 | 12.98 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 1410547 | 13.06 | ppbV | 99 |
| 28) cis-1,2-Dichloroethene | 4.232 | 61 | 1043309 | 13.97 | ppbV | 94 |
| 29) Cyclohexane | 4.419 | 56 | 1188304 | 11.99 | ppbV | 96 |
| 30) Chloroform | 4.454 | 83 | 1720861 | 13.02 | ppbV | 98 |
| 31) Ethyl acetate | 4.544 | 61 | 270686 | 12.87 | ppbV | 96 |
| 32) Carbon tetrachloride | 4.579 | 117 | 1731906 | 10.93 | ppbV | 100 |
| 33) Tetrahydrofuran | 4.576 | 42 | 1055646 | 14.22 | ppbV | 95 |
| 34) 1,1,1-Trichloroethane | 4.628 | 97 | 1558554 | 10.93 | ppbV | 100 |
| 35) Methyl ethyl ketone | 4.682 | 43 | 1682004 | 14.19 | ppbV | 97 |
| 36) n-Heptane | 4.917 | 43 | 1673877 | 12.20 | ppbV | 95 |
| 37) Benzene | 4.933 | 78 | 2314027 | 12.25 | ppbV | 99 |
| 38) 1,2-Dichloroethane | 5.094 | 62 | 1125187 | 13.29 | ppbV | 100 |
| 40) Trichloroethene | 5.435 | 130 | 960270 | 9.78 | ppbV | 99 |
| 41) 2,2,4-Trimethylpentane | 4.846 | 57 | 2903918 | 11.86 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 987657 | 11.19 | ppbV | 99 |
| 43) Bromodichloromethane | 5.946 | 83 | 1869255 | 12.16 | ppbV | 100 |
| 44) Methyl methacrylate | 6.087 | 41 | 1444941 | 12.73 | ppbV | 95 |
| 45) 1,4-Dioxane | 6.113 | 88 | 646261 | 11.88 | ppbV | 95 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 1603607 | 11.76 | ppbV | 99 |
| 47) Toluene | 6.772 | 91 | 3435166 | 11.08 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.136 | 43 | 2598152 | 11.60 | ppbV | 97 |
| 49) Tetrachloroethene | 7.161 | 166 | 1477394 | 10.60 | ppbV | 100 |
| 50) trans-1,3-Dichloropropene | 7.177 | 75 | 1686526 | 12.54 | ppbV | 95 |
| 51) 1,1,2-Trichloroethane | 7.335 | 97 | 1173769 | 10.74 | ppbV | 97 |

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4073lcs.D
Acq On : 28 Sep 2023 11:19 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

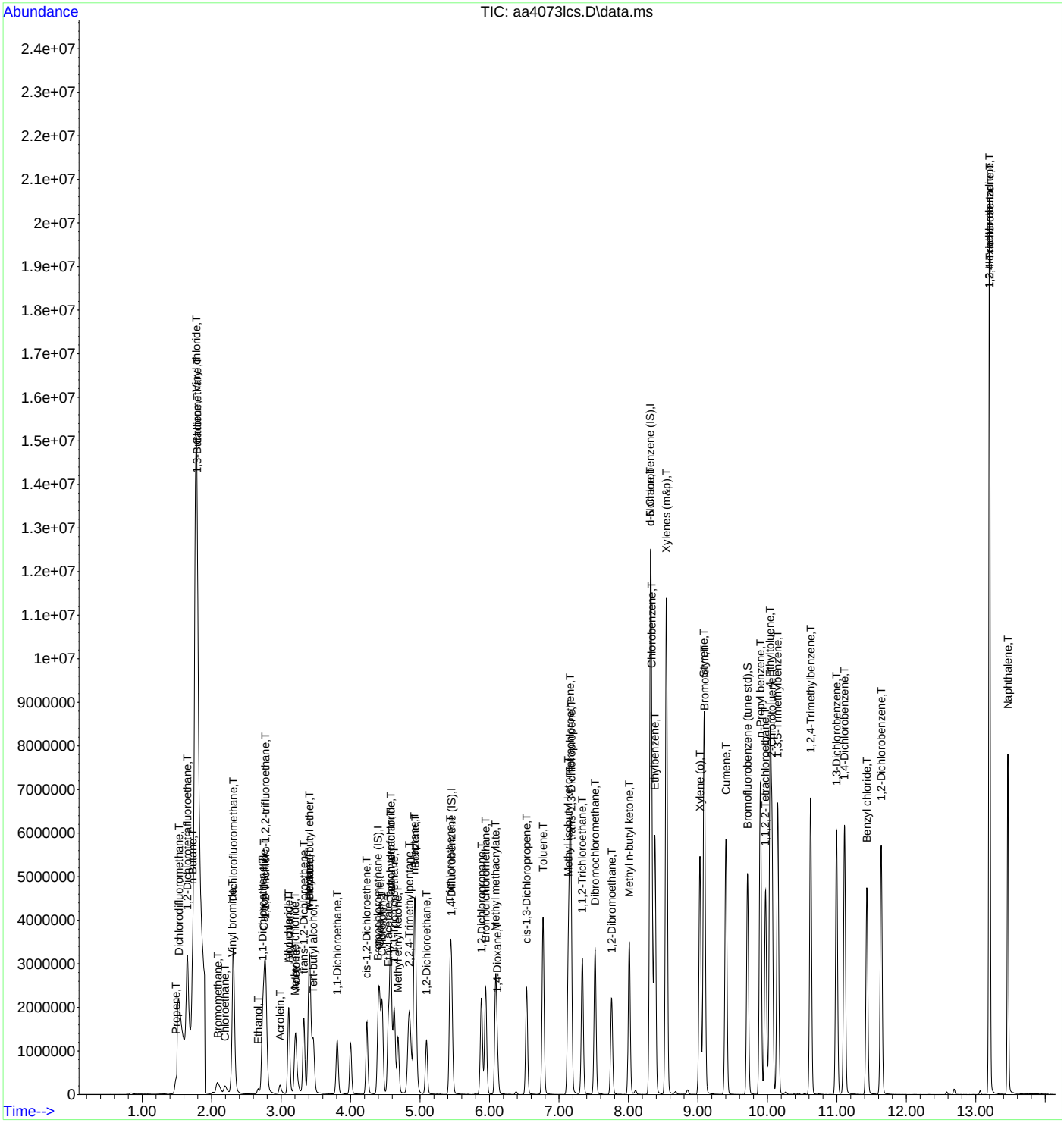
Quant Time: Sep 28 12:10:06 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 2046806 | 11.22 | ppbV | 100 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 1776029 | 11.11 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.010 | 43 | 2823122 | 13.46 | ppbV | 97 |
| 56) n-Nonane | 8.316 | 43 | 3181135 | 10.99 | ppbV | 95 |
| 57) Chlorobenzene | 8.335 | 112 | 2697259 | 10.41 | ppbV | 97 |
| 58) Ethylbenzene | 8.380 | 91 | 5055299 | 10.55 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.547 | 91 | 7753841 | 22.46 | ppbV | 98 |
| 60) Xylene (o) | 9.029 | 91 | 3909805 | 10.20 | ppbV | 99 |
| 61) Styrene | 9.087 | 104 | 2909338 | 11.44 | ppbV | 100 |
| 62) Bromoform | 9.097 | 173 | 2119263 | 10.78 | ppbV | 100 |
| 63) Cumene | 9.406 | 105 | 4907030 | 9.83 | ppbV | 98 |
| 65) n-Propyl benzene | 9.901 | 91 | 7047936 | 10.82 | ppbV | 98 |
| 66) 1,1,2,2-Tetrachloroethane | 9.971 | 83 | 3018168 | 10.39 | ppbV | 99 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 5768083 | 10.75 | ppbV | 98 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 4590640 | 10.39 | ppbV | 98 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 4460371 | 10.27 | ppbV | 98 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 4654164 | 10.80 | ppbV | 97 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 2940866 | 10.30 | ppbV | 99 |
| 72) 1,4-Dichlorobenzene | 11.110 | 146 | 2934826 | 10.69 | ppbV | 100 |
| 73) Benzyl chloride | 11.431 | 91 | 4169793 | 11.08 | ppbV | 98 |
| 74) 1,2-Dichlorobenzene | 11.640 | 146 | 2748354 | 10.17 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.196 | 225 | 1870014 | 9.65 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.200 | 180 | 2281637 | 10.73 | ppbV | 100 |
| 77) Naphthalene | 13.463 | 128 | 4616007 | 10.51 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4073lcs.D
Acq On : 28 Sep 2023 11:19 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 28 12:10:06 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4903LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 12/11/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05081-01 [AA4916] | 12/11/2023 18:15 |
| E23-05081-01 [AA4917] | 12/11/2023 18:47 |
| E23-05081-02 [AA4919] | 12/11/2023 19:52 |
| E23-05081-03 [AA4920] | 12/11/2023 20:24 |
| E23-05081-03 [AA4921] | 12/11/2023 21:04 |
| E23-05081-04 [AA4922] | 12/11/2023 21:35 |
| E23-05081-04 [AA4923] | 12/11/2023 22:07 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| Acetone | 67-64-1 | 11 | 100 |
| Benzene | 71-43-2 | 9.5 | 95 |
| Bromoform | 75-25-2 | 11 | 100 |
| Bromomethane | 74-83-9 | 10 | 91 |
| 1,3-Butadiene | 106-99-0 | 10 | 100 |
| Chlorobenzene | 108-90-7 | 10 | 100 |
| Chloroethane | 75-00-3 | 11 | 110 |
| Chloroform | 67-66-3 | 10 | 100 |
| Chloromethane | 74-87-3 | 11 | 96 |
| Carbon disulfide | 75-15-0 | 11 | 100 |
| Carbon tetrachloride | 56-23-5 | 10 | 100 |
| Cyclohexane | 110-82-7 | 10 | 100 |
| 1,2-Dibromoethane | 106-93-4 | 11 | 100 |
| 1,2-Dichlorobenzene | 95-50-1 | 10 | 91 |
| 1,3-Dichlorobenzene | 541-73-1 | 10 | 91 |
| 1,4-Dichlorobenzene | 106-46-7 | 10 | 91 |
| Dichlorodifluoromethane | 75-71-8 | 11 | 100 |
| 1,1-Dichloroethane | 75-34-3 | 9.8 | 89 |
| 1,2-Dichloroethane | 107-06-2 | 11 | 110 |
| 1,1-Dichloroethene | 75-35-4 | 11 | 100 |
| 1,2-Dichloroethene (cis) | 156-59-2 | 10 | 91 |
| 1,2-Dichloroethene (trans) | 156-60-5 | 11 | 100 |
| 1,2-Dichloropropane | 78-87-5 | 10 | 100 |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 11 | 100 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4903LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 12/11/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05081-01 [AA4916] | 12/11/2023 18:15 |
| E23-05081-01 [AA4917] | 12/11/2023 18:47 |
| E23-05081-02 [AA4919] | 12/11/2023 19:52 |
| E23-05081-03 [AA4920] | 12/11/2023 20:24 |
| E23-05081-03 [AA4921] | 12/11/2023 21:04 |
| E23-05081-04 [AA4922] | 12/11/2023 21:35 |
| E23-05081-04 [AA4923] | 12/11/2023 22:07 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| 1,3-Dichloropropene (trans) | 10061-02-6 | 11 | 110 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 8.8 | 80 |
| 1,4-Dioxane | 123-91-1 | 11 | 92 |
| Ethylbenzene | 100-41-4 | 11 | 110 |
| n-Heptane | 142-82-5 | 11 | 110 |
| 1,3-Hexachlorobutadiene | 87-68-3 | 10 | 88 |
| n-Hexane | 110-54-3 | 10 | 100 |
| Methylene chloride | 75-09-2 | 9.6 | 87 |
| Methyl ethyl ketone | 78-93-3 | 11 | 93 |
| Methyl isobutyl ketone | 108-10-1 | 12 | 110 |
| Methyl tert-butyl ether | 1634-04-4 | 11 | 100 |
| Styrene | 100-42-5 | 11 | 100 |
| Tert-butyl alcohol | 75-65-0 | 11 | 93 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 11 | 100 |
| Tetrachloroethene | 127-18-4 | 11 | 110 |
| Toluene | 108-88-3 | 10 | 100 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 11 | 96 |
| 1,1,1-Trichloroethane | 71-55-6 | 10 | 100 |
| 1,1,2-Trichloroethane | 79-00-5 | 10 | 91 |
| Trichloroethene | 79-01-6 | 9.1 | 91 |
| Trichlorofluoromethane | 75-69-4 | 11 | 100 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 9.4 | 94 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 11 | 100 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 11 | 100 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Laboratory Control Spike

**Lab Sample Name:** 10 PPBV LCS **Data File:** AA4903LCS

**Spike Amount:** 10 ppbv, except m&p-Xylenes at 20 ppbv **Date Analyzed:** 12/11/2023

Runs with this LCS:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4901BFB] | 12/11/2023 9:24 |
| 10 PPBV DCVS [AA4902DCVS] | 12/11/2023 10:26 |
| 10 PPBV LCS [AA4903LCS] | 12/11/2023 10:57 |
| METHOD BLANK [AA4904BLK] | 12/11/2023 11:51 |
| 02 PPBV RLLCS [AA4905RLLCS] | 12/11/2023 12:18 |
| 1458 [AA4906] | 12/11/2023 12:50 |
| 1588 [AA4907] | 12/11/2023 13:19 |
| 3012 [AA4908] | 12/11/2023 13:49 |
| E23-05081-01 [AA4916] | 12/11/2023 18:15 |
| E23-05081-01 [AA4917] | 12/11/2023 18:47 |
| E23-05081-02 [AA4919] | 12/11/2023 19:52 |
| E23-05081-03 [AA4920] | 12/11/2023 20:24 |
| E23-05081-03 [AA4921] | 12/11/2023 21:04 |
| E23-05081-04 [AA4922] | 12/11/2023 21:35 |
| E23-05081-04 [AA4923] | 12/11/2023 22:07 |
| 10 PPBV CCCVS [AA4931CCCVS] | 12/12/2023 1:59 |

| Compound | CAS # | Calculated Amount (ppbv) | % Recovery |
|---|---|---|---|
| 2,2,4-Trimethylpentane | 540-84-1 | 10 | 100 |
| Vinyl bromide | 593-60-2 | 10 | 100 |
| Vinyl chloride | 75-01-4 | 11 | 110 |
| Xylenes (m&p) | 179601-23-1 | 22 | 110 |
| Xylenes (o) | 95-47-6 | 10 | 100 |

**LCS recovery must be within 70-130% of the spiked value for all compounds except Acetone, Dioxane (1,4-), Hexachlorobutadiene, Naphthalene, and 1,2,4-Trichlorobenzene. These compounds must be within 40-160%.**

*** Values outside of QC limits* Values outside of 70-130% QC limits**

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4903lcs.D
Acq On : 11 Dec 2023 10:57 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 11 11:13:35 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.390 | 130 | 647607 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.454 | 114 | 2729004 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.315 | 117 | 3090532 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 2704486 | 10.04 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 2) Propene | 1.486 | 41 | 448674 | 9.98 | ppbV | 100 |
| 3) Dichlorodifluoromethane | 1.522 | 85 | 1540061 | 10.73 | ppbV | 99 |
| 4) 1,2-Dichlorotetrafluor... | 1.650 | 85 | 1837270 | 8.81 | ppbV | 99 |
| 5) n-Butane | 1.729 | 43 | 1071383 | 10.36 | ppbV | 100 |
| 6) Chloromethane | 1.794 | 52 | 79721 | 11.12 | ppbV | 100 |
| 7) Vinyl chloride | 1.784 | 62 | 624707 | 10.65 | ppbV | 99 |
| 8) 1,3-Butadiene | 1.794 | 39 | 556597 | 10.16 | ppbV | 97 |
| 9) Bromomethane | 2.081 | 94 | 492205 | 10.39 | ppbV | 96 |
| 10) Chloroethane | 2.190 | 64 | 343138 | 11.15 | ppbV | 98 |
| 11) Vinyl bromide | 2.296 | 106 | 601925 | 10.38 | ppbV | 100 |
| 12) Trichlorofluoromethane | 2.309 | 101 | 1958992 | 10.81 | ppbV | 99 |
| 13) Ethanol | 2.669 | 45 | 223820 | 11.80 | ppbV | 98 |
| 14) 1,1-Dichloroethene | 2.730 | 61 | 1287938 | 10.71 | ppbV | 96 |
| 15) Carbon disulfide | 2.753 | 76 | 2170829 | 10.96 | ppbV | 98 |
| 16) 1,1,2-Trichloro-1,2,2-... | 2.775 | 101 | 1721921 | 9.43 | ppbV | 99 |
| 17) Acrolein | 2.981 | 56 | 275902 | 10.20 | ppbV | 98 |
| 18) Allyl chloride | 3.110 | 76 | 363800 | 11.21 | ppbV | 100 |
| 19) Isopropanol | 3.107 | 45 | 1249280 | 9.62 | ppbV | 99 |
| 20) Methylene chloride | 3.203 | 49 | 760938 | 9.56 | ppbV | 96 |
| 21) Acetone | 3.209 | 43 | 1102830 | 11.29 | ppbV | 100 |
| 22) trans-1,2-Dichloroethene | 3.325 | 61 | 1261504 | 11.30 | ppbV | 98 |
| 23) n-Pentane | 3.409 | 43 | 1563342 | 10.38 | ppbV | 98 |
| 24) n-Hexane | 3.409 | 57 | 2086837 | 10.22 | ppbV | 98 |
| 25) Methyl tert-butyl ether | 3.409 | 73 | 2641389 | 10.53 | ppbV | 99 |
| 26) Tert-butyl alcohol | 3.460 | 59 | 1870916 | 11.08 | ppbV | 100 |
| 27) 1,1-Dichloroethane | 3.808 | 63 | 1473126 | 9.80 | ppbV | 100 |
| 28) cis-1,2-Dichloroethene | 4.232 | 61 | 1109173 | 10.46 | ppbV | 97 |
| 29) Cyclohexane | 4.415 | 56 | 1494221 | 10.48 | ppbV | 98 |
| 30) Chloroform | 4.454 | 83 | 1763283 | 10.18 | ppbV | 99 |
| 31) Ethyl acetate | 4.544 | 61 | 310143 | 11.00 | ppbV | 98 |
| 32) Carbon tetrachloride | 4.576 | 117 | 2075194 | 10.10 | ppbV | 99 |
| 33) Tetrahydrofuran | 4.573 | 42 | 1055760 | 10.84 | ppbV | 98 |
| 34) 1,1,1-Trichloroethane | 4.627 | 97 | 1829339 | 10.16 | ppbV | 98 |
| 35) Methyl ethyl ketone | 4.682 | 43 | 1694596 | 10.71 | ppbV | 98 |
| 36) n-Heptane | 4.917 | 43 | 1984236 | 11.09 | ppbV | 98 |
| 37) Benzene | 4.933 | 78 | 2436463 | 9.47 | ppbV | 98 |
| 38) 1,2-Dichloroethane | 5.090 | 62 | 1158367 | 10.76 | ppbV | 100 |
| 40) Trichloroethene | 5.431 | 130 | 1104206 | 9.14 | ppbV | 98 |
| 41) 2,2,4-Trimethylpentane | 4.843 | 57 | 3701197 | 10.41 | ppbV | 100 |
| 42) 1,2-Dichloropropane | 5.885 | 63 | 1110425 | 10.46 | ppbV | 100 |
| 43) Bromodichloromethane | 5.946 | 83 | 2026843 | 11.34 | ppbV | 100 |
| 44) Methyl methacrylate | 6.087 | 41 | 1477655 | 11.47 | ppbV | 97 |
| 45) 1,4-Dioxane | 6.113 | 88 | 746186 | 11.47 | ppbV | 98 |
| 46) cis-1,3-Dichloropropene | 6.534 | 75 | 1788041 | 10.86 | ppbV | 99 |
| 47) Toluene | 6.772 | 91 | 4000386 | 10.43 | ppbV | 100 |
| 48) Methyl isobutyl ketone | 7.132 | 43 | 2867635 | 11.90 | ppbV | 98 |
| 49) Tetrachloroethene | 7.161 | 166 | 1771569 | 10.71 | ppbV | 99 |
| 50) trans-1,3-Dichloropropene | 7.174 | 75 | 1825213 | 11.43 | ppbV | 98 |
| 51) 1,1,2-Trichloroethane | 7.335 | 97 | 1347280 | 10.40 | ppbV | 99 |

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4903lcs.D
Acq On : 11 Dec 2023 10:57 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

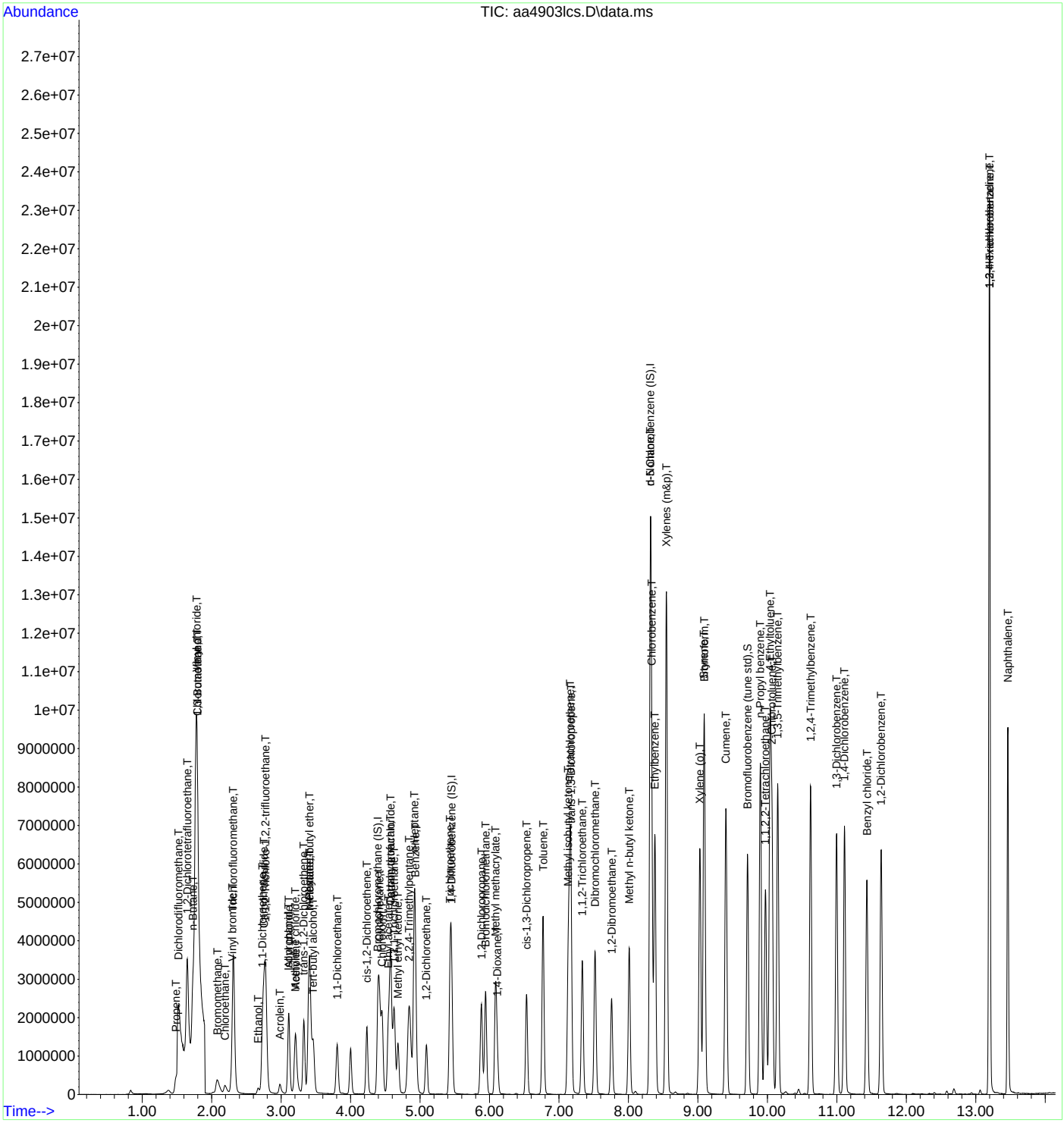
Quant Time: Dec 11 11:13:35 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) Dibromochloromethane | 7.521 | 129 | 2436418 | 11.29 | ppbV | 99 |
| 53) 1,2-Dibromoethane | 7.759 | 107 | 2033372 | 10.85 | ppbV | 100 |
| 54) Methyl n-butyl ketone | 8.013 | 43 | 2915562 | 12.58 | ppbV | 98 |
| 56) n-Nonane | 8.315 | 43 | 3624209 | 11.82 | ppbV | 98 |
| 57) Chlorobenzene | 8.335 | 112 | 3170809 | 10.29 | ppbV | 98 |
| 58) Ethylbenzene | 8.380 | 91 | 6016260 | 10.56 | ppbV | 99 |
| 59) Xylenes (m&p) | 8.547 | 91 | 9208112 | 21.82 | ppbV | 99 |
| 60) Xylene (o) | 9.026 | 91 | 4740095 | 10.29 | ppbV | 99 |
| 61) Styrene | 9.087 | 104 | 3439384 | 10.91 | ppbV | 100 |
| 62) Bromoform | 9.094 | 173 | 2568104 | 11.35 | ppbV | 100 |
| 63) Cumene | 9.402 | 105 | 6358038 | 10.57 | ppbV | 100 |
| 65) n-Propyl benzene | 9.897 | 91 | 8673958 | 11.04 | ppbV | 99 |
| 66) 1,1,2,2-Tetrachloroethane | 9.971 | 83 | 3528435 | 10.95 | ppbV | 100 |
| 67) 4-Ethyltoluene | 10.039 | 105 | 7191816 | 10.82 | ppbV | 100 |
| 68) 2-Chlorotoluene | 10.065 | 91 | 5637797 | 10.69 | ppbV | 99 |
| 69) 1,3,5-Trimethylbenzene | 10.148 | 105 | 5654494 | 10.58 | ppbV | 99 |
| 70) 1,2,4-Trimethylbenzene | 10.624 | 105 | 5639014 | 10.55 | ppbV | 99 |
| 71) 1,3-Dichlorobenzene | 10.997 | 146 | 3401177 | 10.39 | ppbV | 100 |
| 72) 1,4-Dichlorobenzene | 11.109 | 146 | 3376653 | 10.26 | ppbV | 99 |
| 73) Benzyl chloride | 11.434 | 91 | 5116198 | 10.83 | ppbV | 99 |
| 74) 1,2-Dichlorobenzene | 11.637 | 146 | 3236300 | 10.20 | ppbV | 100 |
| 75) 1,3-Hexachlorobutadiene | 13.196 | 225 | 2308103 | 10.48 | ppbV | 100 |
| 76) 1,2,4-Trichlorobenzene | 13.199 | 180 | 2718525 | 10.67 | ppbV | 100 |
| 77) Naphthalene | 13.463 | 128 | 6001329 | 10.30 | ppbV | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4903lcs.D
Acq On : 11 Dec 2023 10:57 am
Operator : jjw
Sample : 10 ppbv LCS
Misc : EB0103704
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 11 11:13:35 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration



**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 9/13/23 |
| SDG Number: | E23-04122 | Date Analyzed: | 9/28/23,9/28/23 |
| IAL Sample ID: | E23-04122-06 | Lab Data File#: | AA4087,AA4088 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 1781 | Injection Volume: | 50ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-04122-06** | | **E23-04122-26** | | | |
| | | **Concentration** | | **Concentration** | | **Reporting** | |
| | | **Reported** | | **Reported** | | **Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Acetone | 67-64-1 | **50** | | **54** | | 4.0 | **-7.69%** |
| Allyl Chloride | 107-05-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Benzene | 71-43-2 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| Bromodichloromethane | 75-27-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Bromoform | 75-25-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Bromomethane | 74-83-9 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3-Butadiene | 106-99-0 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chlorobenzene | 108-90-7 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chloroethane | 75-00-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chloroform | 67-66-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Chloromethane | 74-87-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Carbon disulfide | 75-15-0 | **10.0** | | **11** | | 4.0 | **-9.52%** |
| Carbon tetrachloride | 56-23-5 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 2-Chlorotoluene | 95-49-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Cyclohexane | 110-82-7 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Dibromochloromethane | 124-48-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dibromoethane | 106-93-4 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,2-Dichlorobenzene | 95-50-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3-Dichlorobenzene | 541-73-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,4-Dichlorobenzene | 106-46-7 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Dichlorodifluoromethane | 75-71-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1-Dichloroethane | 75-34-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloroethane | 107-06-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1-Dichloroethene | 75-35-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloroethene (cis) | 156-59-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloroethene (trans) | 156-60-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2-Dichloropropane | 78-87-5 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Ethylbenzene | 100-41-4 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| 4-Ethyltoluene | 622-96-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| n-Heptane | 142-82-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3-Hexachlorobutadiene | 87-68-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| n-Hexane | 110-54-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Methylene chloride | 75-09-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Methyl ethyl ketone | 78-93-3 | **8.1** | | **10** | | 4.0 | **-20.99%** |
| Methyl isobutyl ketone | 108-10-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 9/13/23 |
| SDG Number: | E23-04122 | Date Analyzed: | 9/28/23,9/28/23 |
| IAL Sample ID: | E23-04122-06 | Lab Data File#: | AA4087,AA4088 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 1781 | Injection Volume: | 50ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-04122-06** | | **E23-04122-26** | | | |
| | | **Concentration Reported** | | **Concentration Reported** | | **Reporting Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Methyl tert-butyl ether | 1634-04-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Styrene | 100-42-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Tert-butyl alcohol | 75-65-0 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Tetrachloroethene | 127-18-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Toluene | 108-88-3 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2,4-Trichlorobenzene | 120-82-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,1-Trichloroethane | 71-55-6 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,2-Trichloroethane | 79-00-5 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Trichloroethene | 79-01-6 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| Trichlorofluoromethane | 75-69-4 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,2,4-Trimethylbenzene | 95-63-6 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 1,3,5-Trimethylbenzene | 108-67-8 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| 2,2,4-Trimethylpentane | 540-84-1 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Vinyl bromide | 593-60-2 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |
| Vinyl chloride | 75-01-4 | 2.0 | U | 2.0 | U | 2.0 | 0.00% |
| Xylenes (m&p) | 179601-23-1 | 4.0 | U | **4.2** | | 4.0 | **NC** |
| Xylenes (o) | 95-47-6 | 4.0 | U | 4.0 | U | 4.0 | 0.00% |

**RPD must be <25% for all laboratory duplicate samples. Laboratory duplicate samples are run once daily.**
**NC = The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample.**

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4087.D
Acq On : 28 Sep 2023 9:29 pm
Operator : jjw
Sample : E23-04122-06x10 dil
Misc : 1781, 50cc
ALS Vial : 21 Sample Multiplier: 1

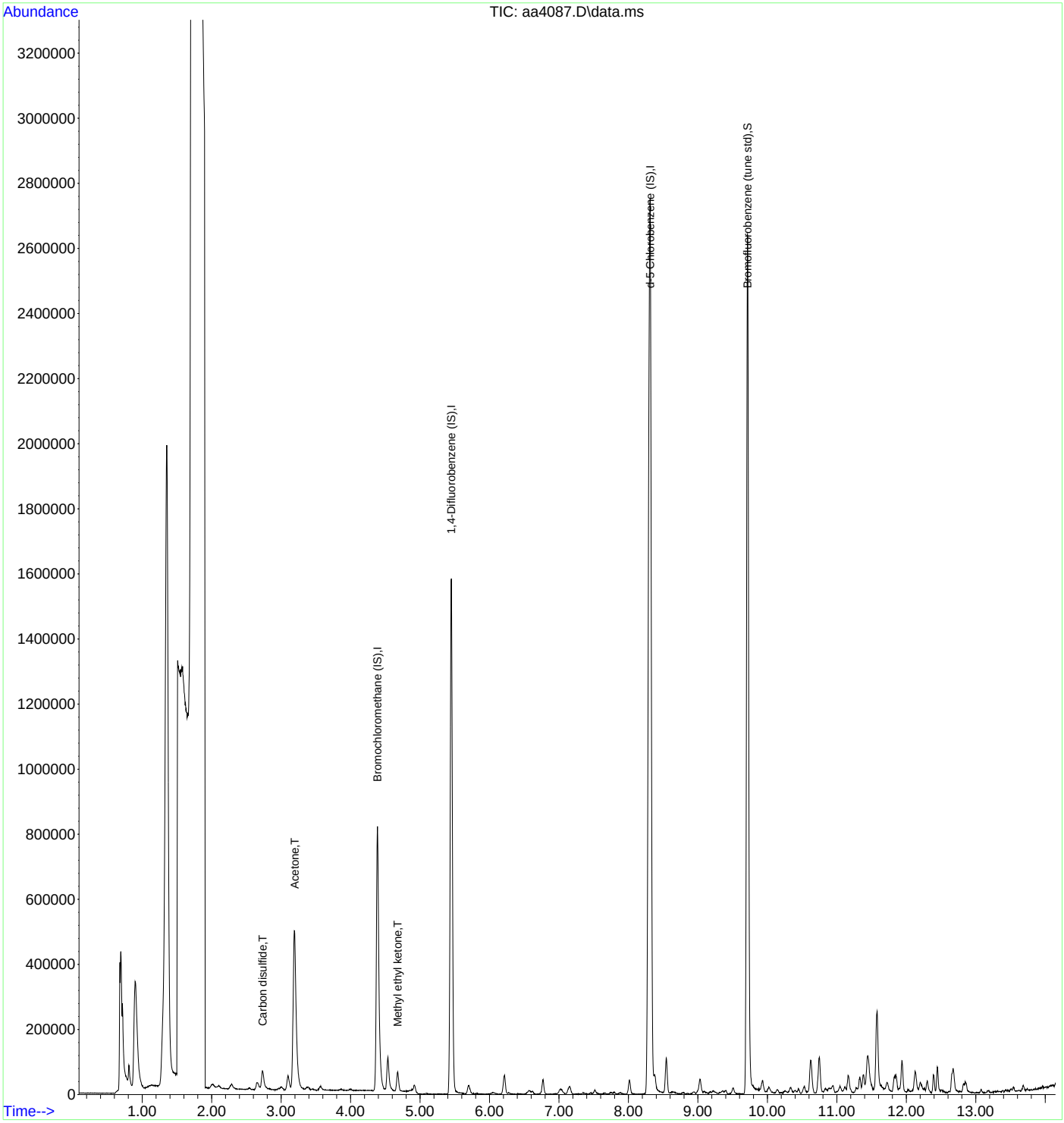
Quant Time: Oct 04 12:38:10 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

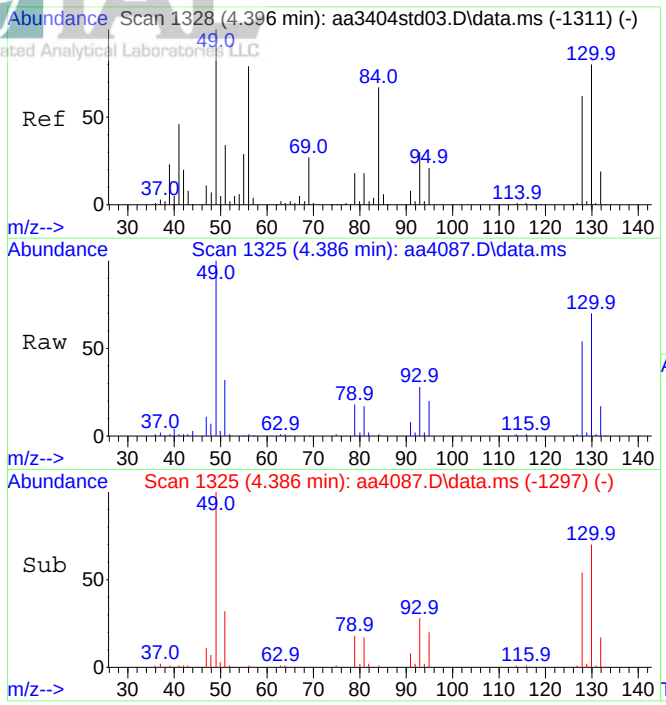
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.386 | 130 | 333645 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.451 | 114 | 1400704 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.315 | 117 | 1383190 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1064307 | 9.25 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 15) Carbon disulfide | 2.734 | 76 | 114195 | 1.00 | ppbV | 97 |
| 21) Acetone | 3.197 | 43 | 311157 | 4.97 | ppbV | 99 |
| 35) Methyl ethyl ketone | 4.679 | 43 | 78641 | 0.81 | ppbV | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4087.D
Acq On : 28 Sep 2023 9:29 pm
Operator : jjw
Sample : E23-04122-06x10 dil
Misc : 1781, 50cc
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Oct 04 12:38:10 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

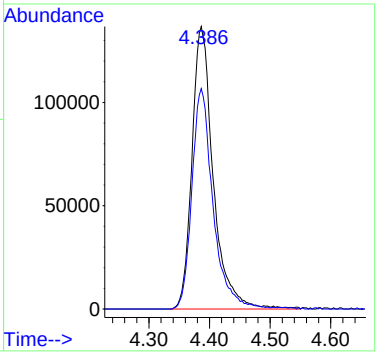


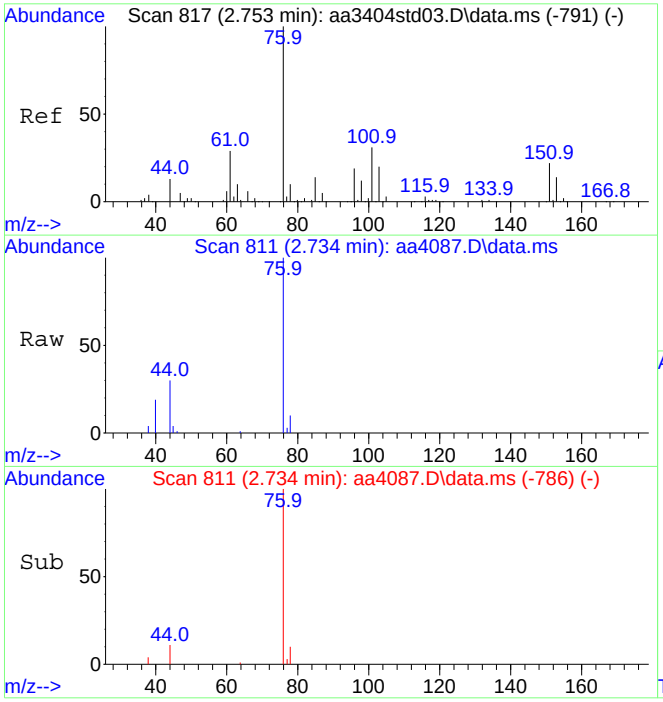



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.386 min Scan# 1325
Delta R.T. -0.010 min
Lab File: aa4087.D
Acq: 28 Sep 2023 9:29 pm

Tgt Ion:130 Resp: 333645

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 78.0 | 61.8 | 92.6 |

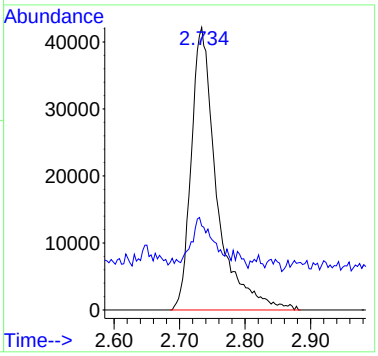


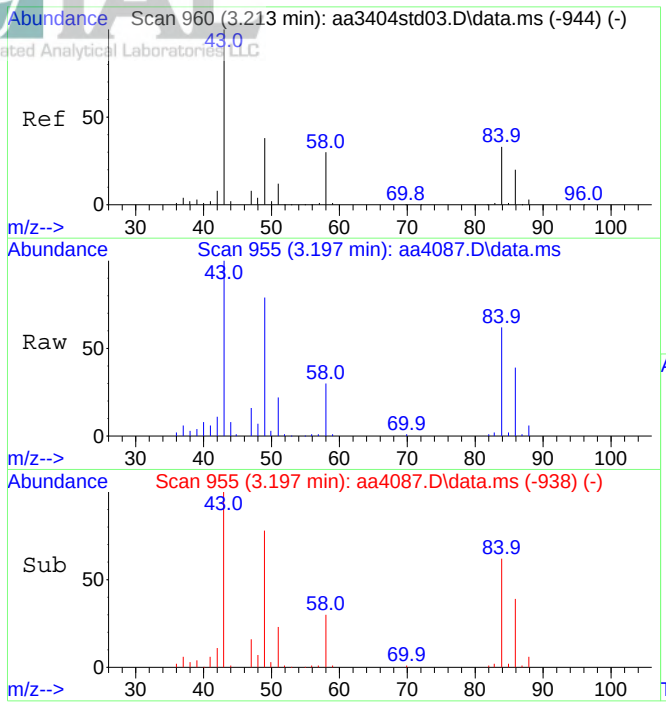




#15
Carbon disulfide
Concen: 1.00 ppbV
RT: 2.734 min Scan# 811
Delta R.T. -0.020 min
Lab File: aa4087.D
Acq: 28 Sep 2023 9:29 pm

Tgt Ion: 76 Resp: 114195

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 14.2 | 10.5 | 15.7 |

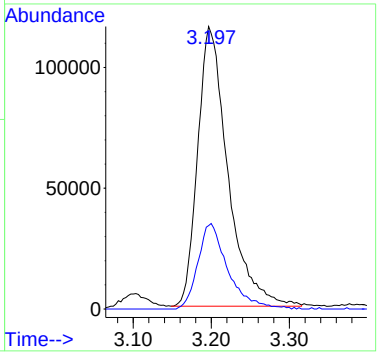


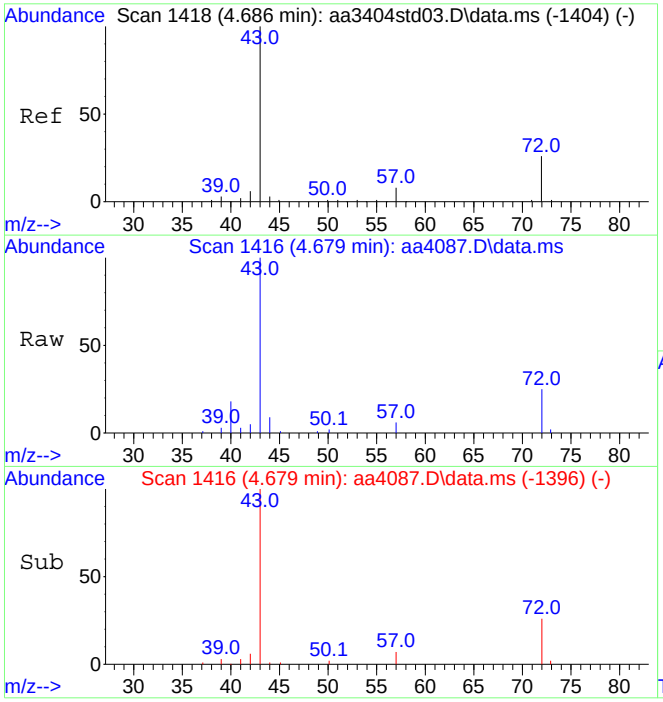



#21
Acetone
Concen: 4.97 ppbV
RT: 3.197 min Scan# 955
Delta R.T. -0.016 min
Lab File: aa4087.D
Acq: 28 Sep 2023 9:29 pm

Tgt Ion: 43 Resp: 311157

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 30.3 | 24.9 | 37.3 |

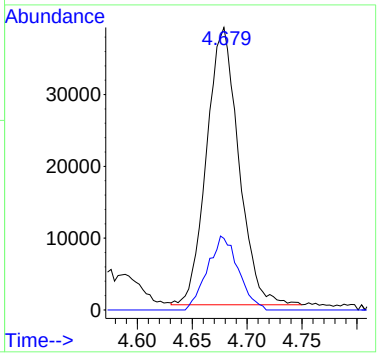


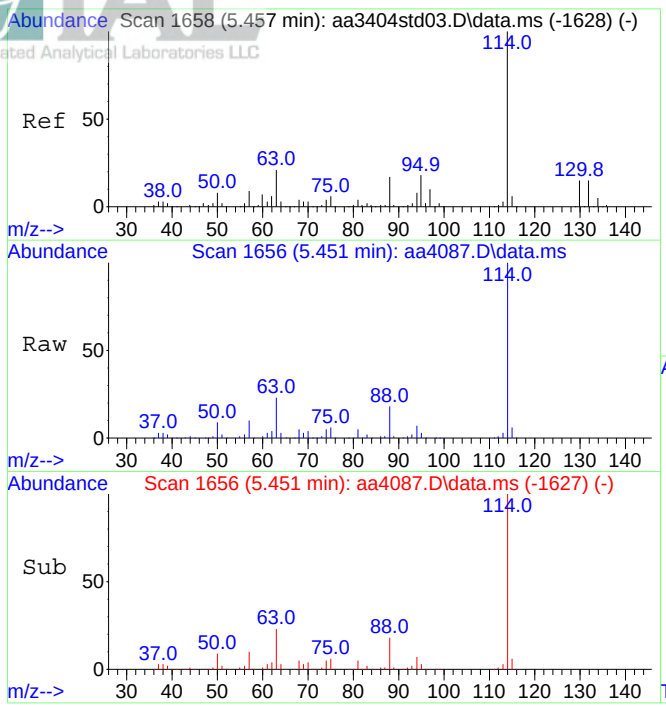




#35
Methyl ethyl ketone
Concen: 0.81 ppbV
RT: 4.679 min Scan# 1416
Delta R.T. -0.007 min
Lab File: aa4087.D
Acq: 28 Sep 2023 9:29 pm

Tgt Ion: 43 Resp: 78641

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 25.5 | 20.8 | 31.2 |

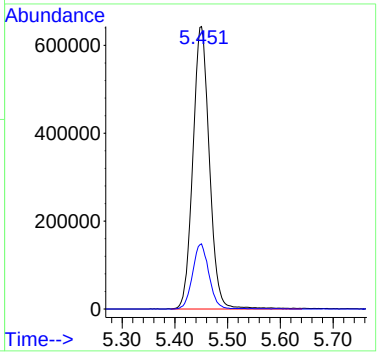


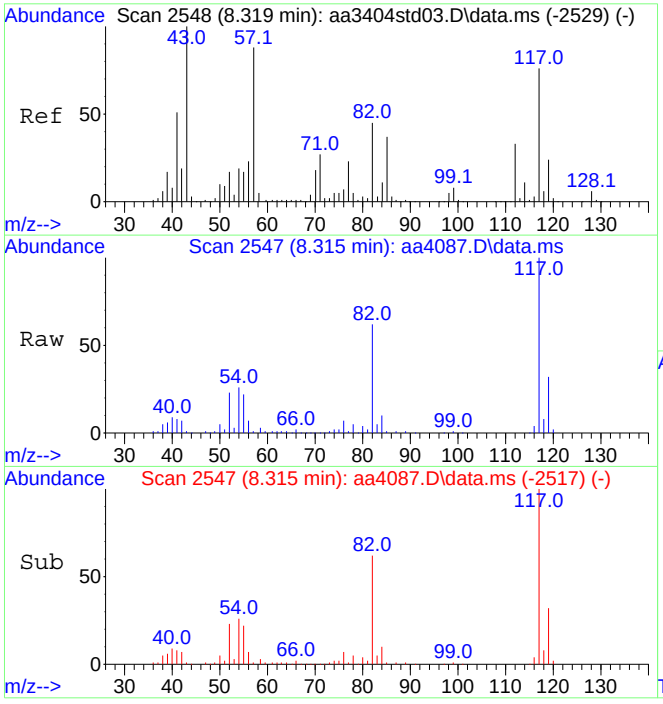



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.451 min Scan# 1656
Delta R.T. -0.006 min
Lab File: aa4087.D
Acq: 28 Sep 2023 9:29 pm

Tgt Ion:114 Resp: 1400704

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 23.0 | 17.4 | 26.2 |

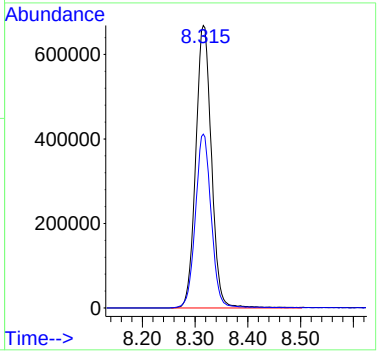


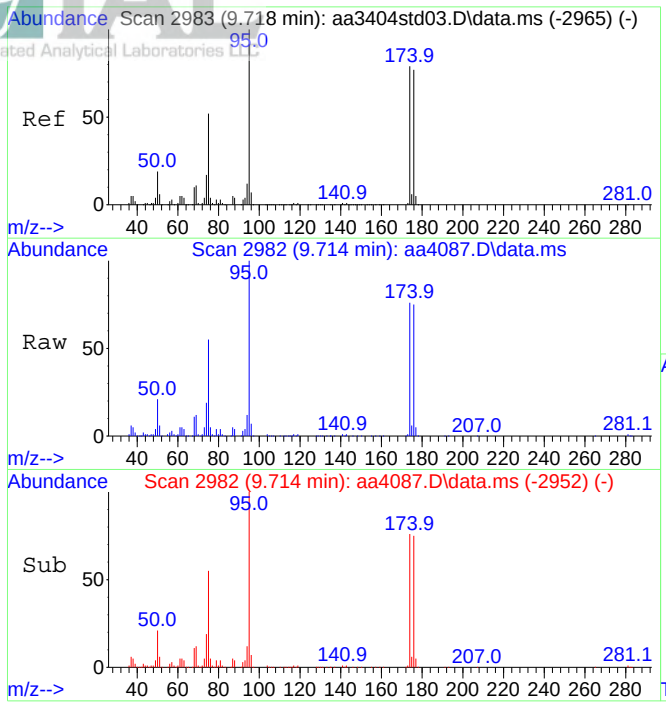




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.315 min Scan# 2547
Delta R.T. -0.004 min
Lab File: aa4087.D
Acq: 28 Sep 2023 9:29 pm

Tgt Ion:117 Resp: 1383190

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 62.2 | 47.4 | 71.0 |

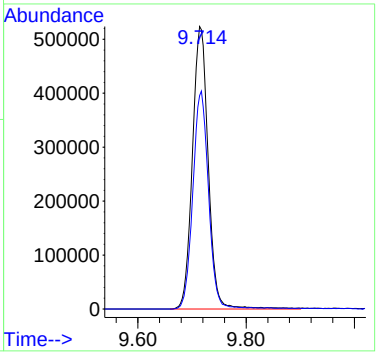





#64
Bromofluorobenzene (tune std)
Concen: 9.25 ppbV
RT: 9.714 min Scan# 2982
Delta R.T. -0.003 min
Lab File: aa4087.D
Acq: 28 Sep 2023 9:29 pm

Tgt Ion: 95 Resp: 1064307

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 77.0 | 62.9 | 94.3 |



Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4088.D
Acq On : 28 Sep 2023 10:00 pm
Operator : jjw
Sample : E23-04122-26x10 dil
Misc : Dup of E23-04122-06x10 dil, Can # 1781
ALS Vial : 22 Sample Multiplier: 1

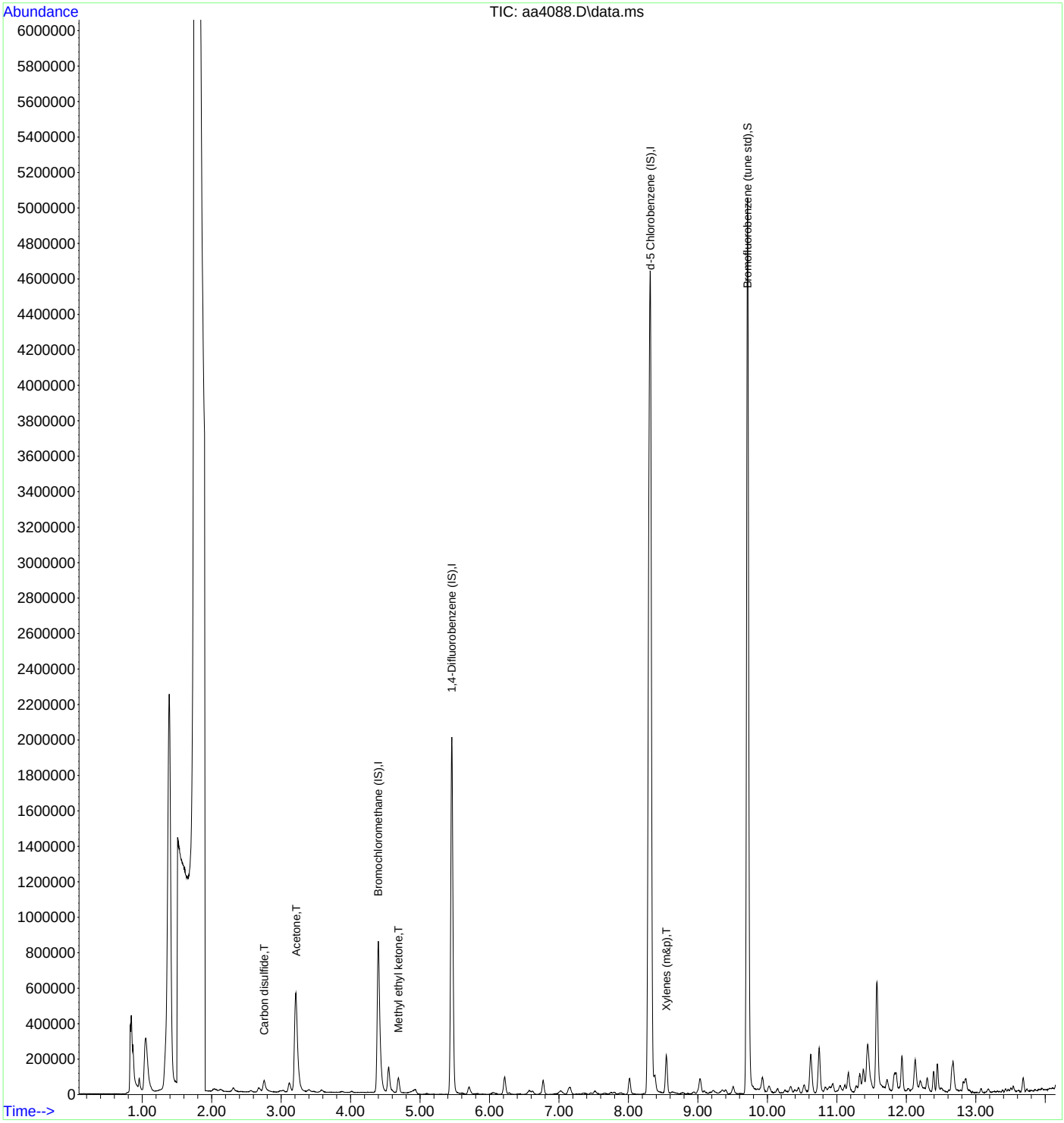
Quant Time: Oct 04 12:49:41 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

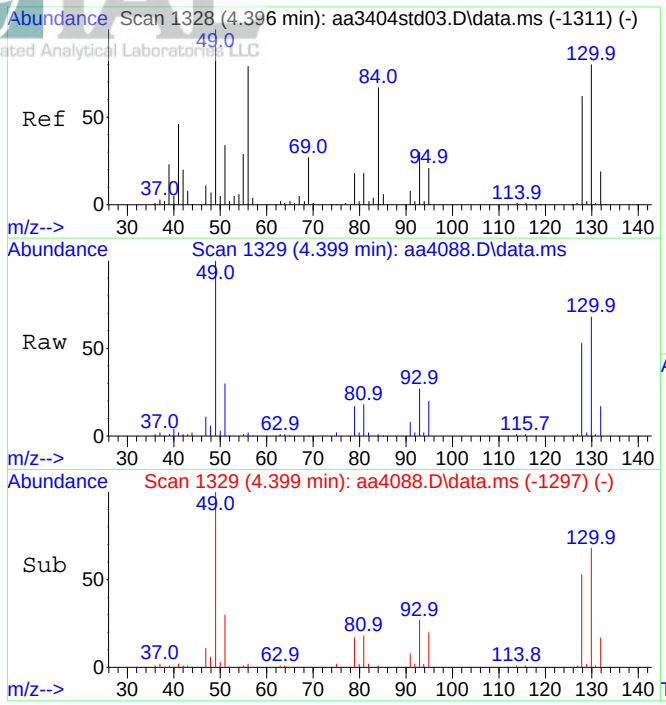
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.399 | 130 | 378421 | 10.00 | ppbV | 0.000 |
| 39) 1,4-Difluorobenzene (IS) | 5.457 | 114 | 1821981 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 2357353 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 2004719 | 10.22 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 15) Carbon disulfide | 2.756 | 76 | 137474 | 1.06 | ppbV | 97 |
| 21) Acetone | 3.219 | 43 | 384617 | 5.42 | ppbV | 98 |
| 35) Methyl ethyl ketone | 4.689 | 43 | 112963 | 1.03 | ppbV | 98 |
| 59) Xylenes (m&p) | 8.547 | 91 | 145250 | 0.42 | ppbV | 97 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4088.D
Acq On : 28 Sep 2023 10:00 pm
Operator : jjw
Sample : E23-04122-26x10 dil
Misc : Dup of E23-04122-06x10 dil, Can # 1781
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Oct 04 12:49:41 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

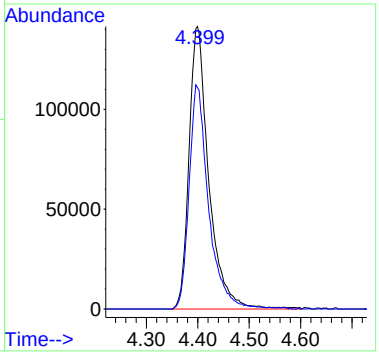


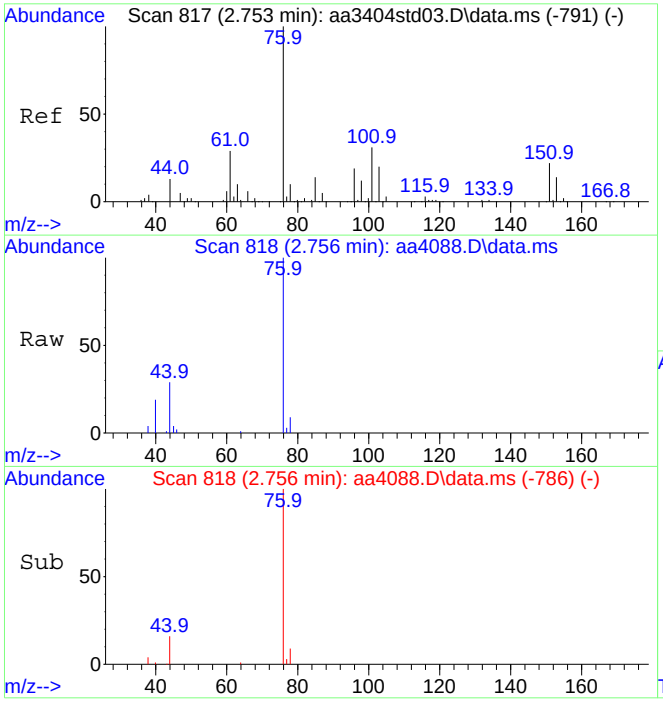



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.399 min Scan# 1329
Delta R.T. 0.003 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion:130 Resp: 378421

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 78.2 | 61.8 | 92.6 |

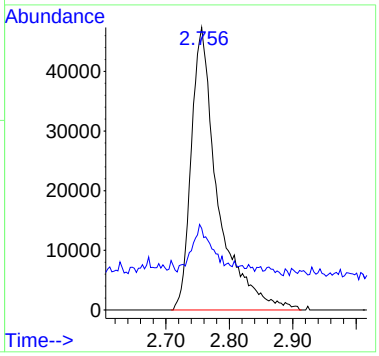


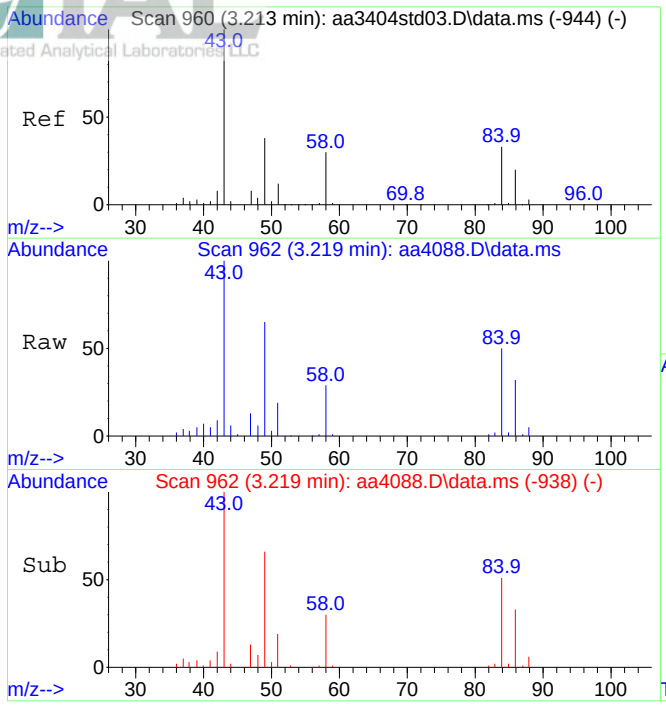




#15
Carbon disulfide
Concen: 1.06 ppbV
RT: 2.756 min Scan# 818
Delta R.T. 0.003 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion: 76 Resp: 137474

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 14.5 | 10.5 | 15.7 |

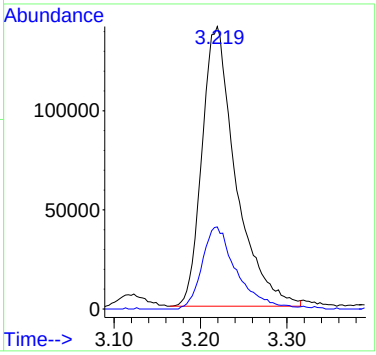


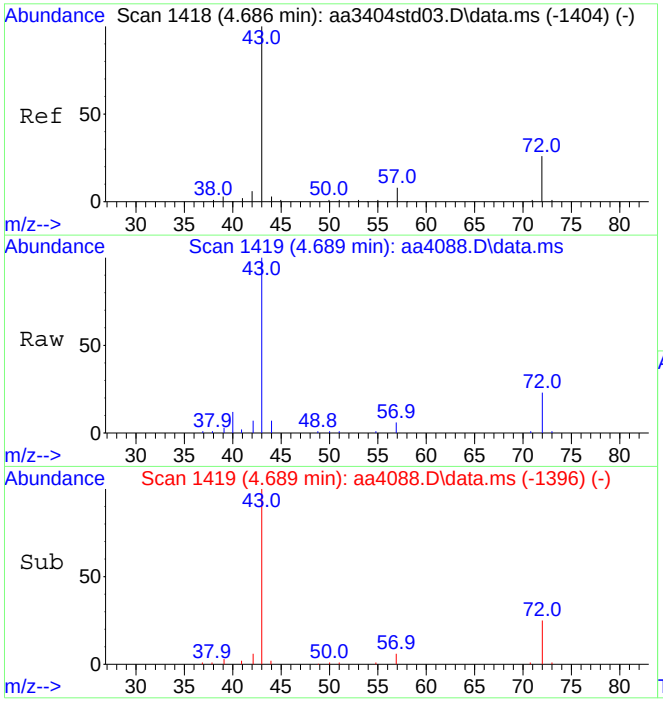



#21
Acetone
Concen: 5.42 ppbV
RT: 3.219 min Scan# 962
Delta R.T. 0.006 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion: 43 Resp: 384617

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 30.0 | 24.9 | 37.3 |

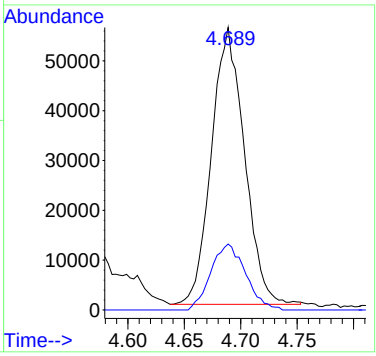


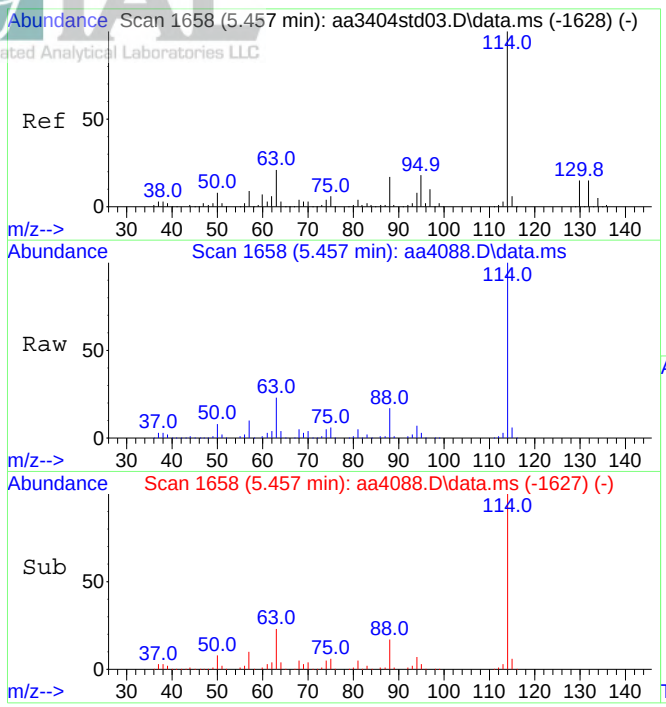




#35
Methyl ethyl ketone
Concen: 1.03 ppbV
RT: 4.689 min Scan# 1419
Delta R.T. 0.003 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion: 43 Resp: 112963

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 25.1 | 20.8 | 31.2 |

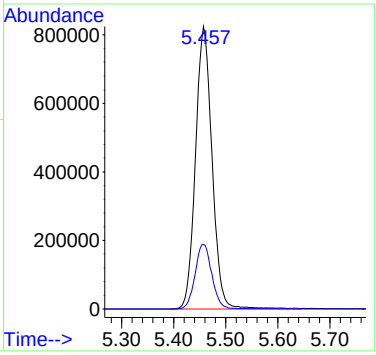


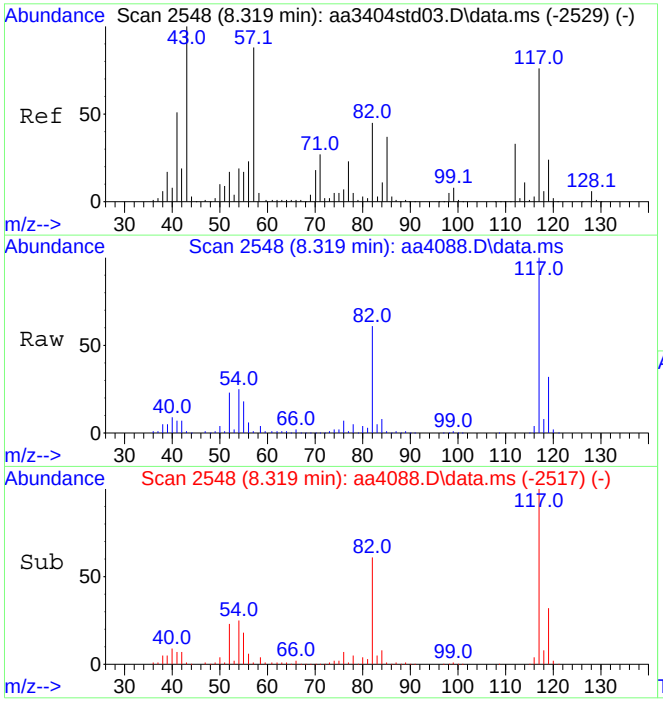



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.457 min Scan# 1658
Delta R.T. 0.000 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion:114 Resp: 1821981

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 23.3 | 17.4 | 26.2 |

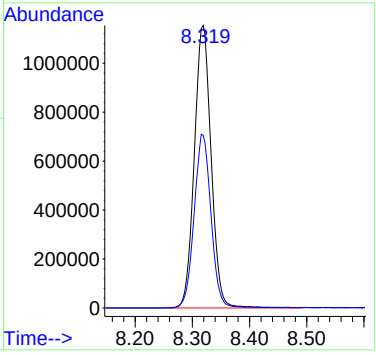


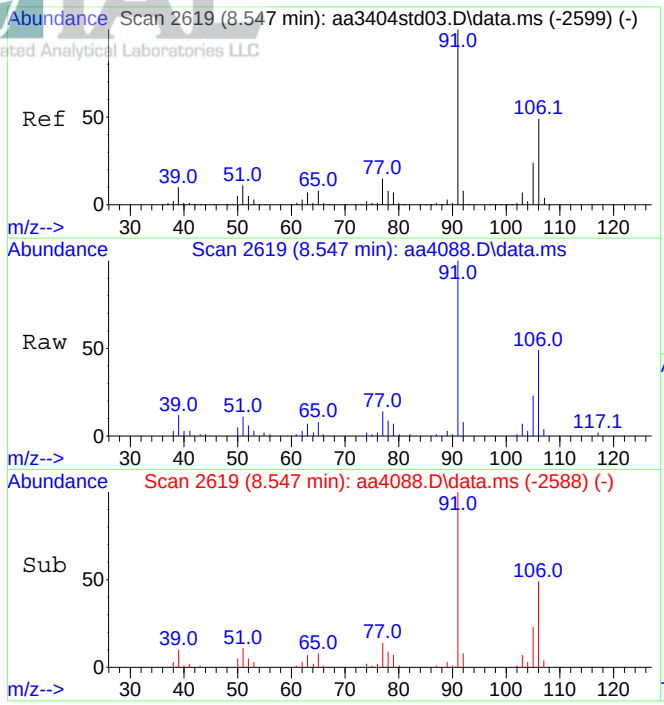




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.319 min Scan# 2548
Delta R.T. -0.000 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion:117 Resp: 2357353

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 61.9 | 47.4 | 71.0 |

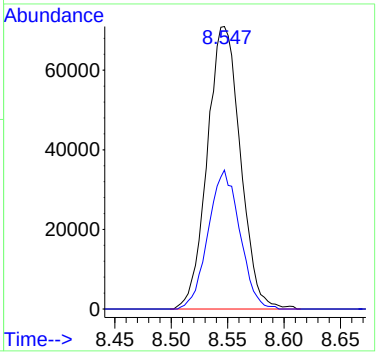


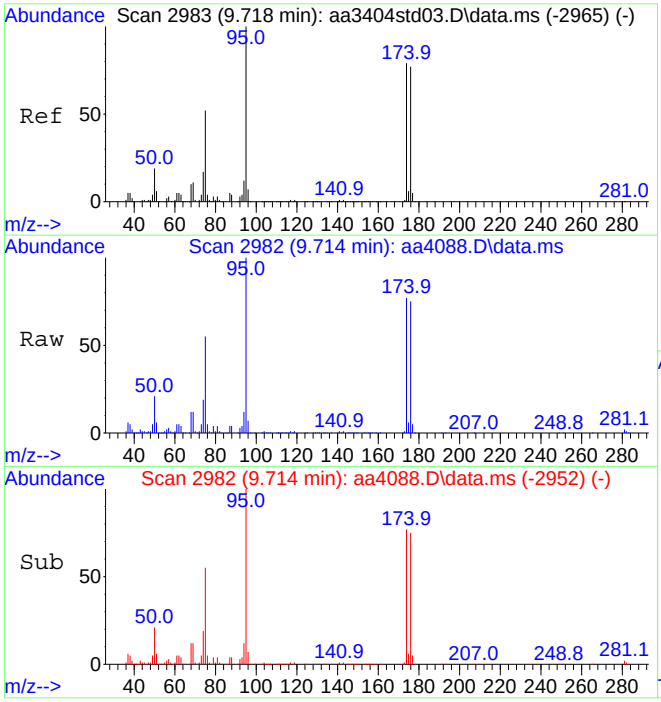



#59
Xylenes (m&p)
Concen: 0.42 ppbV
RT: 8.547 min Scan# 2619
Delta R.T. -0.000 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion: 91 Resp: 145250

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 46.9 | 39.2 | 58.8 |

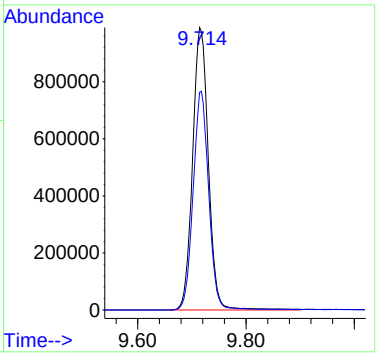



#64
Bromofluorobenzene (tune std)
Concen: 10.22 ppbV
RT: 9.714 min Scan# 2982
Delta R.T. -0.003 min
Lab File: aa4088.D
Acq: 28 Sep 2023 10:00 pm

Tgt Ion: 95 Resp: 2004719

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 76.8 | 62.9 | 94.3 |



**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

| | | | |
|---|---|---|---|
| | | Date Received: | 11/20/23 |
| SDG Number: | E23-05079 | Date Analyzed: | 12/12/23,12/12/23 |
| IAL Sample ID: | E23-05079-03 | Lab Data File#: | AA4929,AA4930 |
| Matrix: | Air | Dilution Factor: | 1 |
| Summa ID: | 3830 | Injection Volume: | 500ml |
| | | GC/MS Column: | RTX-1, 0.32 mmID |

| | | Sample | | Sample Dup | | | |
|---|---|---|---|---|---|---|---|
| | | **E23-05079-03** | | **E23-05079-23** | | | |
| | | **Concentration Reported** | | **Concentration Reported** | | **Reporting Limits** | |
| **Compound** | **CAS #** | **ppbv** | **Q** | **ppbv** | **Q** | **ppbv** | **RPD** |
| Acetone | 67-64-1 | **6.1** | | **5.9** | | 0.40 | **3.33%** |
| Allyl Chloride | 107-05-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Benzene | 71-43-2 | **0.31** | | **0.32** | | 0.20 | **-3.17%** |
| Bromodichloromethane | 75-27-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Bromoform | 75-25-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Bromomethane | 74-83-9 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Butadiene | 106-99-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chlorobenzene | 108-90-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloroethane | 75-00-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloroform | 67-66-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Chloromethane | 74-87-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Carbon disulfide | 75-15-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Carbon tetrachloride | 56-23-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 2-Chlorotoluene | 95-49-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Cyclohexane | 110-82-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Dibromochloromethane | 124-48-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dibromoethane | 106-93-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorobenzene | 95-50-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Dichlorobenzene | 541-73-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,4-Dichlorobenzene | 106-46-7 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Dichlorodifluoromethane | 75-71-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1-Dichloroethane | 75-34-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethane | 107-06-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1-Dichloroethene | 75-35-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Ethylbenzene | 100-41-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| 4-Ethyltoluene | 622-96-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| n-Heptane | 142-82-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| n-Hexane | 110-54-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Methylene chloride | 75-09-2 | **3.5** | | **3.4** | | 0.40 | **2.90%** |
| Methyl ethyl ketone | 78-93-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Methyl isobutyl ketone | 108-10-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

**Analysis: Volatile Organic Compounds by EPA Method TO-15**
**Laboratory Sample Duplicate Report**

SDG Number: E23-05079
IAL Sample ID: E23-05079-03
Matrix: Air
Summa ID: 3830

Date Received: 11/20/23
Date Analyzed: 12/12/23,12/12/23
Lab Data File#: AA4929,AA4930
Dilution Factor: 1
Injection Volume: 500ml
GC/MS Column: RTX-1, 0.32 mmID

| Compound | CAS # | Sample E23-05079-03 Concentration Reported ppbv | Q | Sample Dup E23-05079-23 Concentration Reported ppbv | Q | Reporting Limits ppbv | RPD |
|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | 1634-04-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Styrene | 100-42-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Tert-butyl alcohol | 75-65-0 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Tetrachloroethene | 127-18-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Toluene | 108-88-3 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,1-Trichloroethane | 71-55-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2-Trichloroethane | 79-00-5 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Trichloroethene | 79-01-6 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Trichlorofluoromethane | 75-69-4 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Vinyl bromide | 593-60-2 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Vinyl chloride | 75-01-4 | 0.20 | U | 0.20 | U | 0.20 | 0.00% |
| Xylenes (m&p) | 179601-23-1 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |
| Xylenes (o) | 95-47-6 | 0.40 | U | 0.40 | U | 0.40 | 0.00% |

**RPD must be <25% for all laboratory duplicate samples. Laboratory duplicate samples are run once daily.**
**NC = The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample.**

Qualifiers:
E=Concentration exceeds upper level of calibration range for instrument.
D=Extra dilution required for this compound. X=Duplicate samples do not met RPD criteria.
U=Compound ND or under reporting limit.

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4929.D
Acq On : 12 Dec 2023 12:58 am
Operator : jjw
Sample : E23-05079-03
Misc : 3830, 500cc
ALS Vial : 32 Sample Multiplier: 1

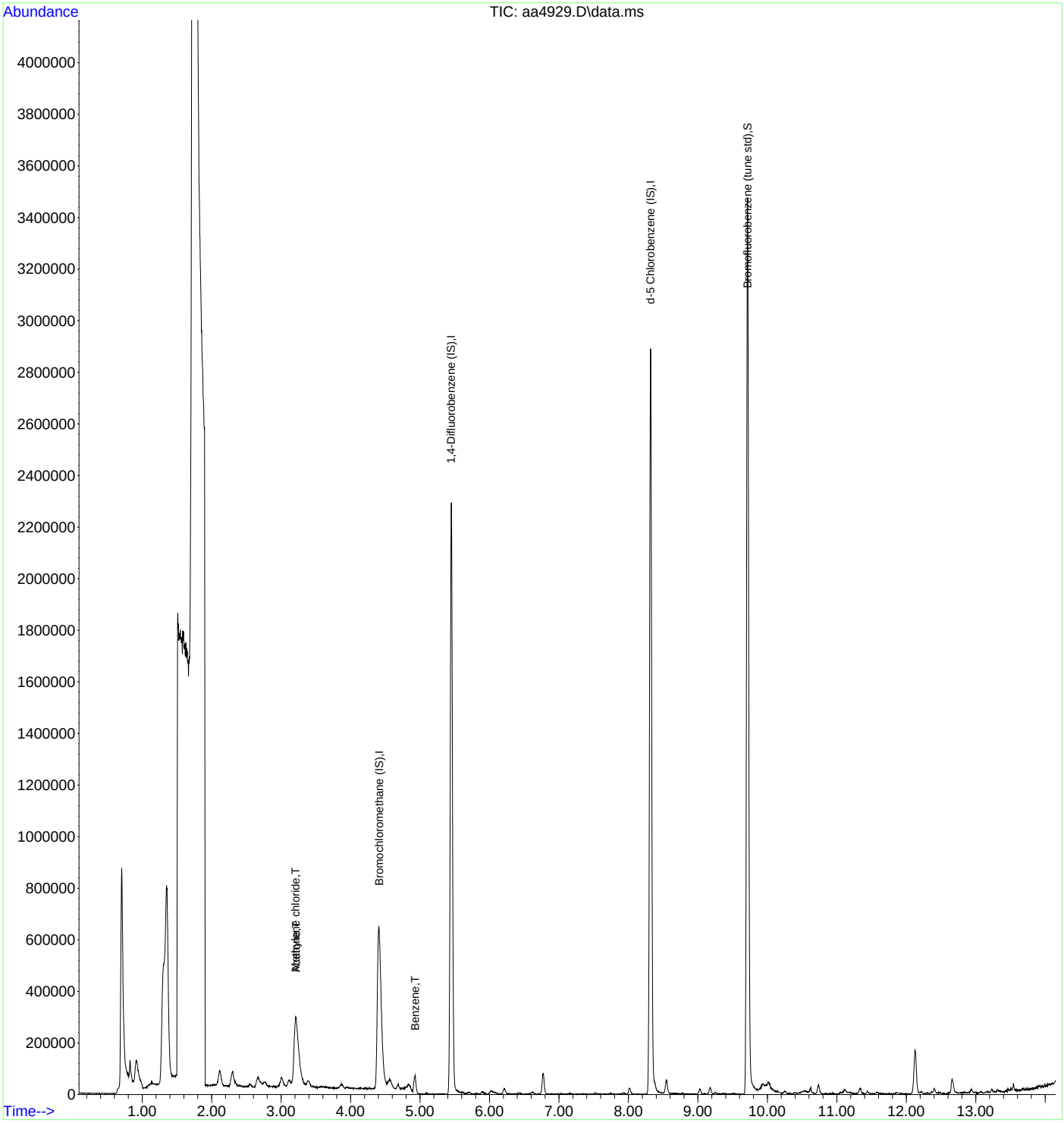
Quant Time: Dec 13 11:23:02 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

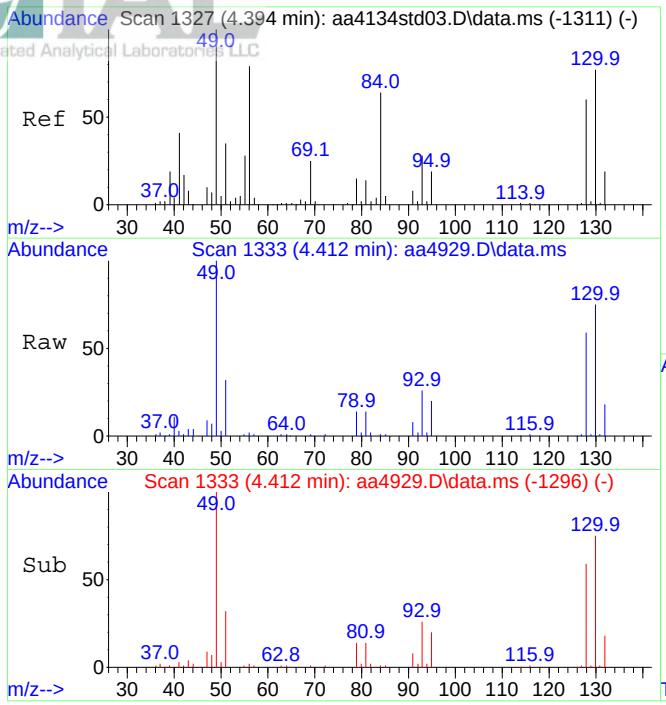
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.412 | 130 | 441232 | 10.00 | ppbV | 0.018 |
| 39) 1,4-Difluorobenzene (IS) | 5.448 | 114 | 2147334 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.319 | 117 | 1948898 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1597112 | 9.40 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 20) Methylene chloride | 3.210 | 49 | 190775 | 3.52 | ppbV | 93 |
| 21) Acetone | 3.216 | 43 | 404473 | 6.08 | ppbV | 99 |
| 37) Benzene | 4.930 | 78 | 54291 | 0.31 | ppbV | 97 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4929.D
Acq On : 12 Dec 2023 12:58 am
Operator : jjw
Sample : E23-05079-03
Misc : 3830, 500cc
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Dec 13 11:23:02 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

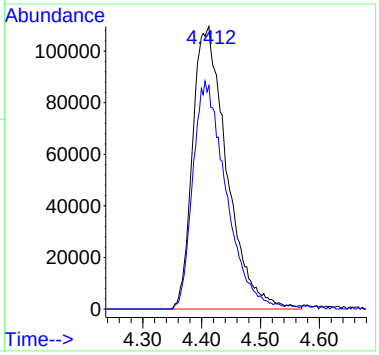


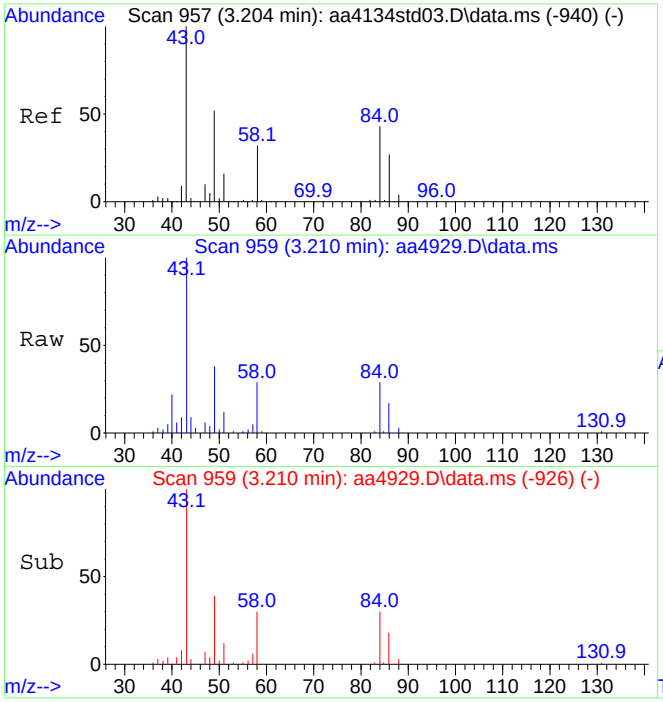



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.412 min Scan# 1333
Delta R.T. 0.018 min
Lab File: aa4929.D
Acq: 12 Dec 2023 12:58 am

Tgt Ion:130 Resp: 441232

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 78.4 | 62.2 | 93.4 |

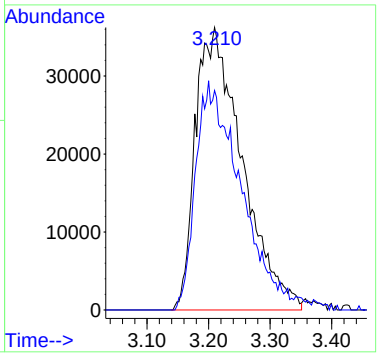


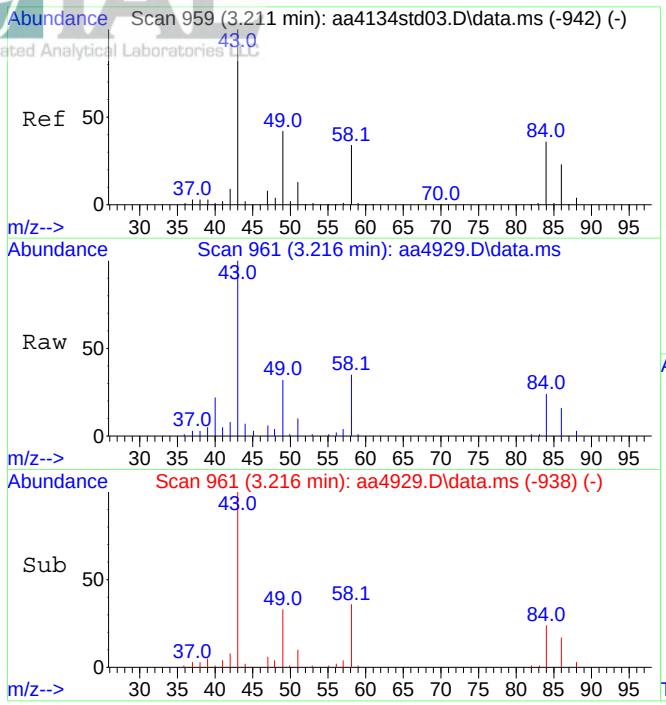




#20
Methylene chloride
Concen: 3.52 ppbV
RT: 3.210 min Scan# 959
Delta R.T. 0.006 min
Lab File: aa4929.D
Acq: 12 Dec 2023 12:58 am

Tgt Ion: 49 Resp: 190775

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 78.6 | 64.8 | 104.8 |

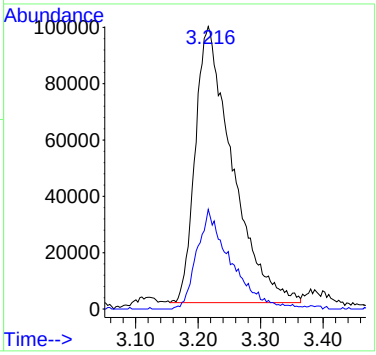


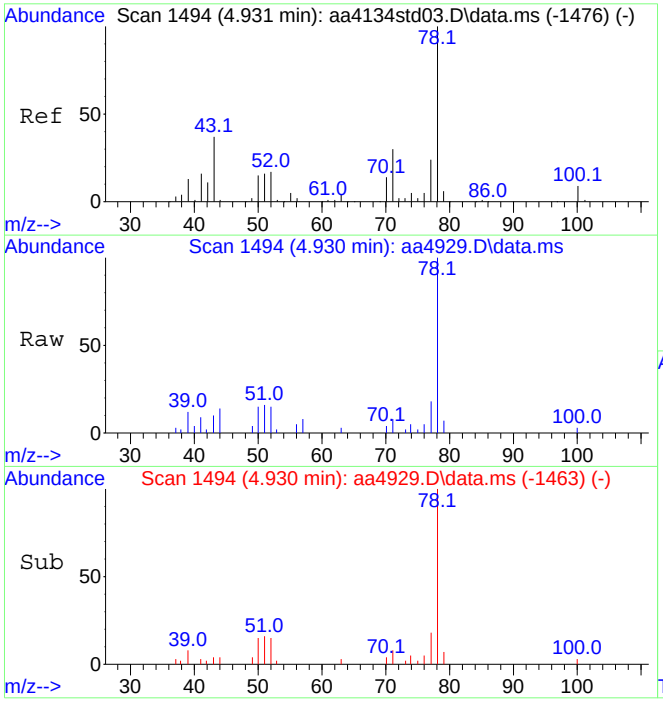



#21
Acetone
Concen: 6.08 ppbV
RT: 3.216 min Scan# 961
Delta R.T. 0.006 min
Lab File: aa4929.D
Acq: 12 Dec 2023 12:58 am

Tgt Ion: 43 Resp: 404473

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 33.2 | 27.1 | 40.7 |

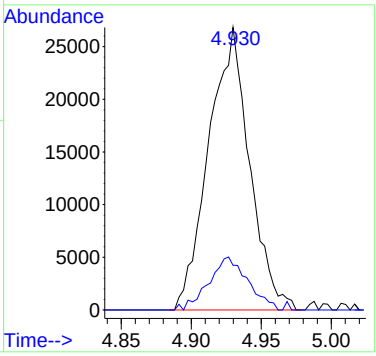


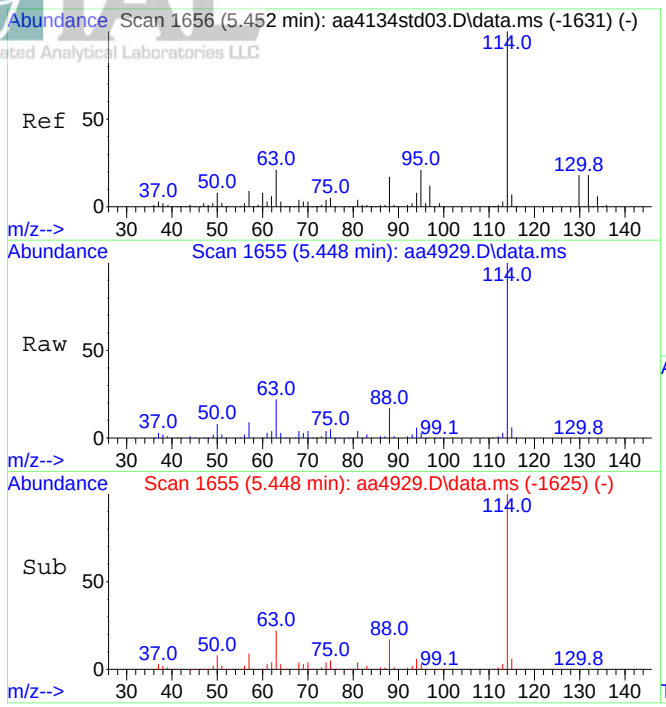




#37
Benzene
Concen: 0.31 ppbV
RT: 4.930 min Scan# 1494
Delta R.T. -0.001 min
Lab File: aa4929.D
Acq: 12 Dec 2023 12:58 am

Tgt Ion: 78 Resp: 54291

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 17.9 | 13.4 | 20.0 |

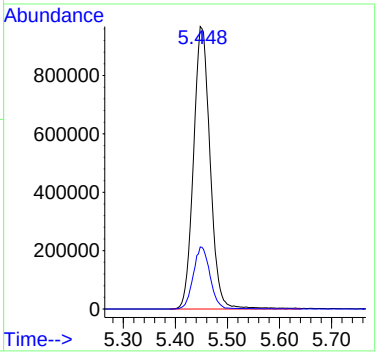


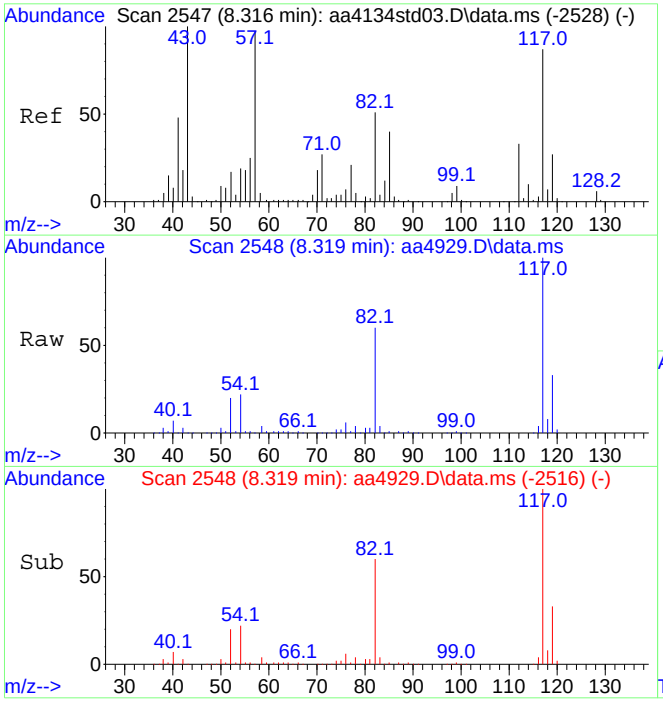



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.448 min Scan# 1655
Delta R.T. -0.004 min
Lab File: aa4929.D
Acq: 12 Dec 2023 12:58 am

Tgt Ion:114 Resp: 2147334

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.0 | 17.0 | 25.6 |

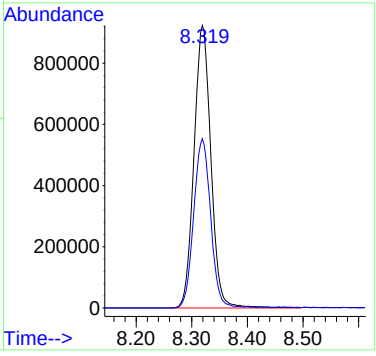


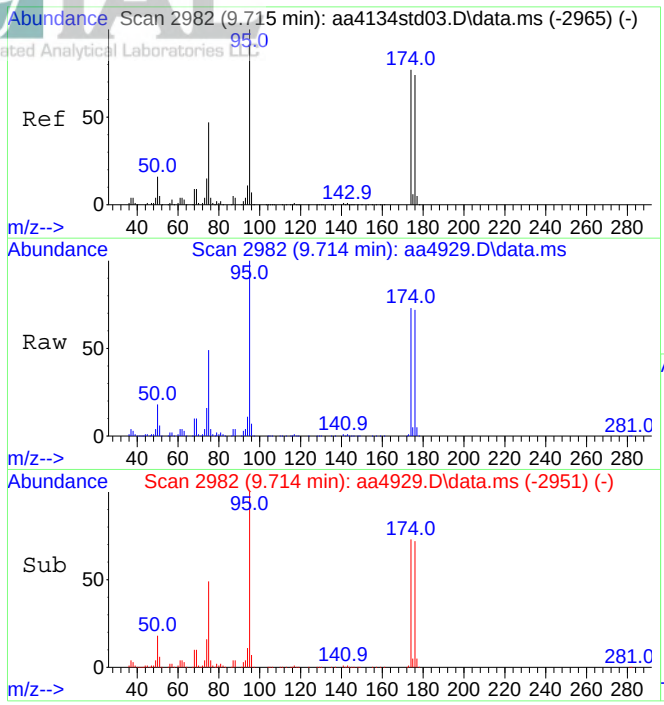




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.319 min Scan# 2548
Delta R.T. 0.002 min
Lab File: aa4929.D
Acq: 12 Dec 2023 12:58 am

Tgt Ion:117 Resp: 1948898

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 60.3 | 47.0 | 70.4 |

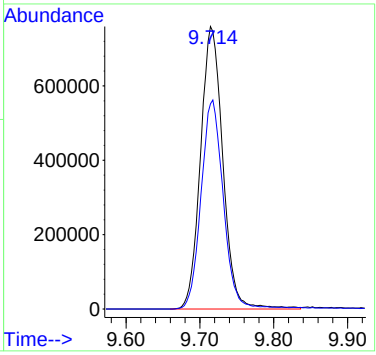





#64
Bromofluorobenzene (tune std)
Concen: 9.40 ppbV
RT: 9.714 min Scan# 2982
Delta R.T. -0.001 min
Lab File: aa4929.D
Acq: 12 Dec 2023 12:58 am

Tgt Ion: 95 Resp: 1597112

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 74.1 | 61.1 | 91.7 |



Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4930.D
Acq On : 12 Dec 2023 1:31 am
Operator : jjw
Sample : E23-05079-23
Misc : Dup of E23-05079-03, Can # 3830
ALS Vial : 33 Sample Multiplier: 1

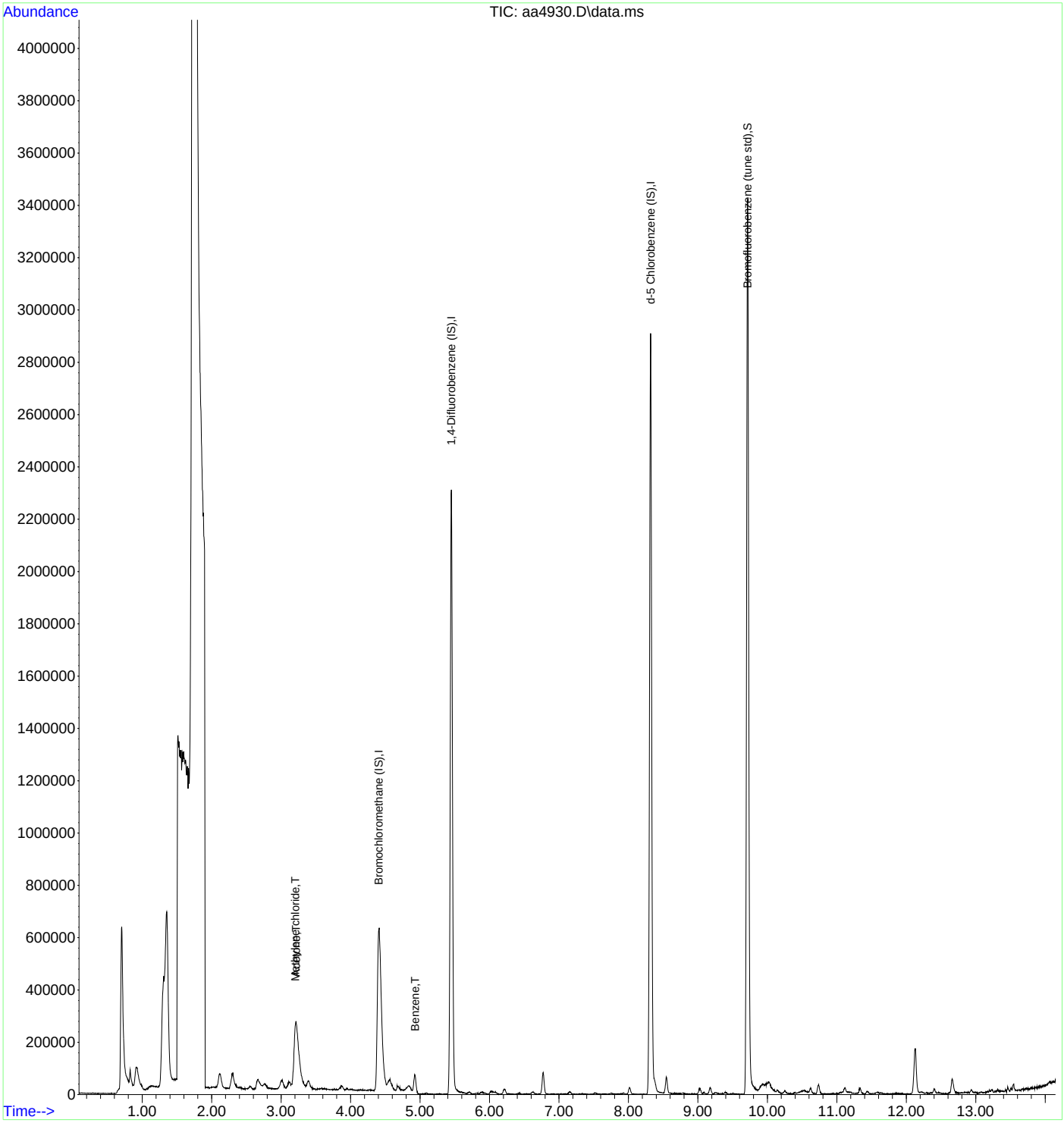
Quant Time: Dec 13 11:24:13 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

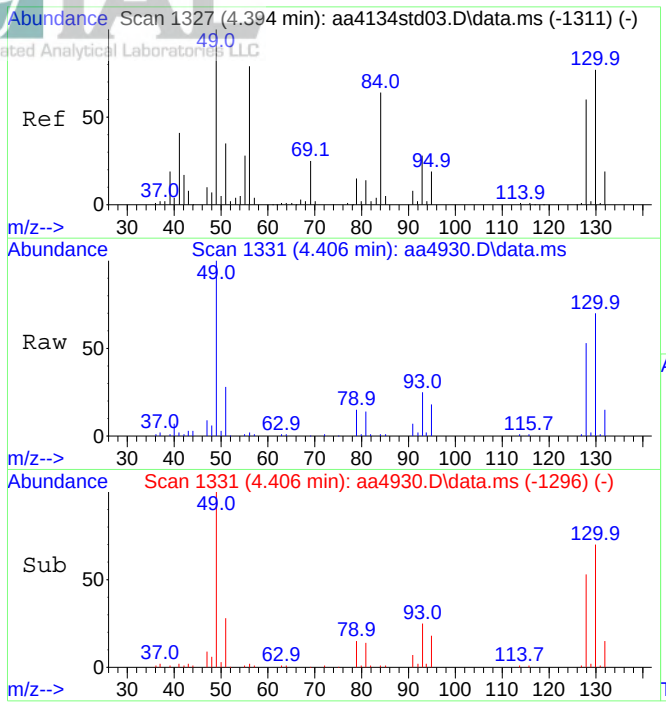
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.406 | 130 | 452291 | 10.00 | ppbV | 0.012 |
| 39) 1,4-Difluorobenzene (IS) | 5.451 | 114 | 2167232 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.322 | 117 | 1931386 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1574669 | 9.35 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |
| 20) Methylene chloride | 3.203 | 49 | 191374 | 3.44 | ppbV | 90 |
| 21) Acetone | 3.216 | 43 | 399825 | 5.86 | ppbV | 99 |
| 37) Benzene | 4.930 | 78 | 56929 | 0.32 | ppbV | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\12-2023\12-11-2023\
Data File : aa4930.D
Acq On : 12 Dec 2023 1:31 am
Operator : jjw
Sample : E23-05079-23
Misc : Dup of E23-05079-03, Can # 3830
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Dec 13 11:24:13 2023
Quant Method : C:\msdchem\1\METHODS\231009.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Tue Oct 10 15:12:35 2023
Response via : Initial Calibration

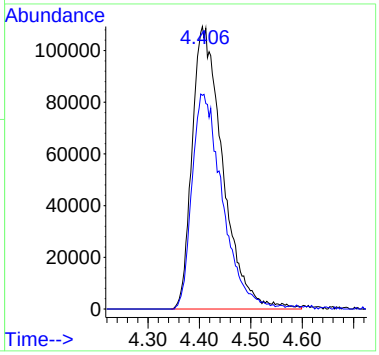


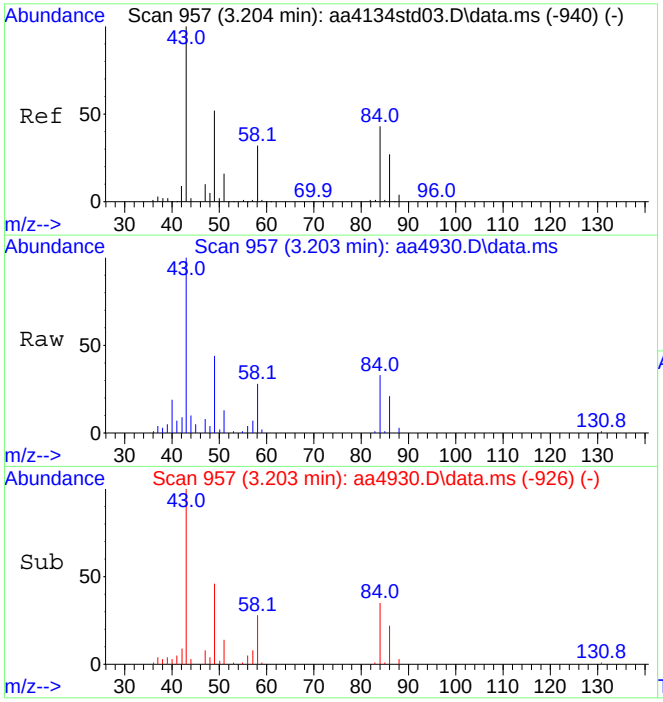



#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 4.406 min Scan# 1331
Delta R.T. 0.012 min
Lab File: aa4930.D
Acq: 12 Dec 2023 1:31 am

Tgt Ion:130 Resp: 452291

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 128 | 75.9 | 62.2 | 93.4 |

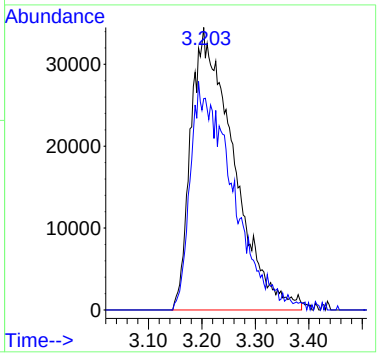


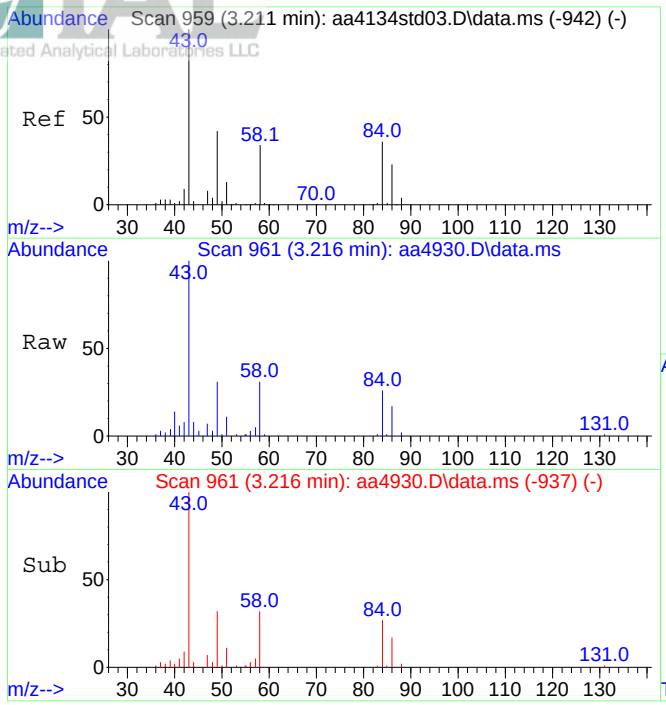




#20
Methylene chloride
Concen: 3.44 ppbV
RT: 3.203 min Scan# 957
Delta R.T. -0.001 min
Lab File: aa4930.D
Acq: 12 Dec 2023 1:31 am

Tgt Ion: 49 Resp: 191374

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 76.0 | 64.8 | 104.8 |

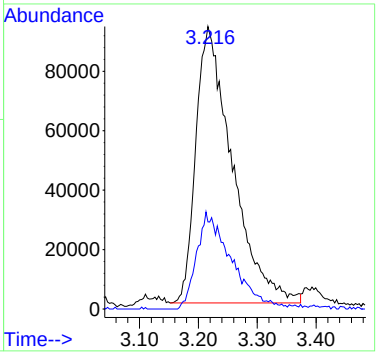


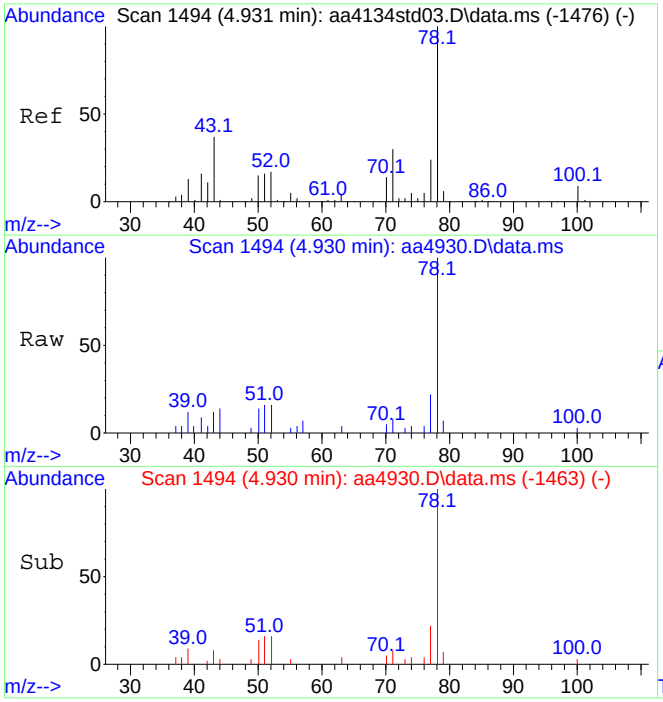



#21
Acetone
Concen: 5.86 ppbV
RT: 3.216 min Scan# 961
Delta R.T. 0.006 min
Lab File: aa4930.D
Acq: 12 Dec 2023 1:31 am

Tgt Ion: 43 Resp: 399825

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 33.3 | 27.1 | 40.7 |

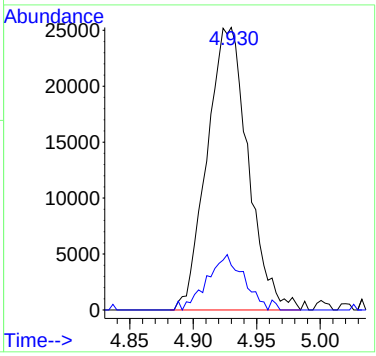


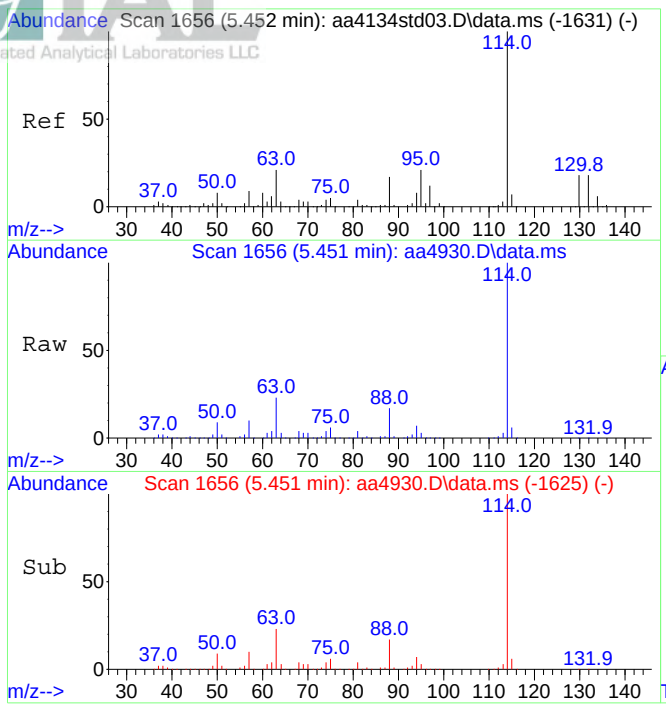




#37
Benzene
Concen: 0.32 ppbV
RT: 4.930 min Scan# 1494
Delta R.T. -0.001 min
Lab File: aa4930.D
Acq: 12 Dec 2023 1:31 am

Tgt Ion: 78 Resp: 56929

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 51 | 17.1 | 13.4 | 20.0 |

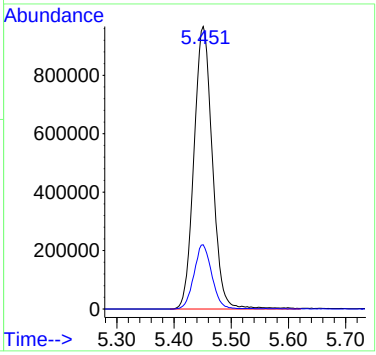


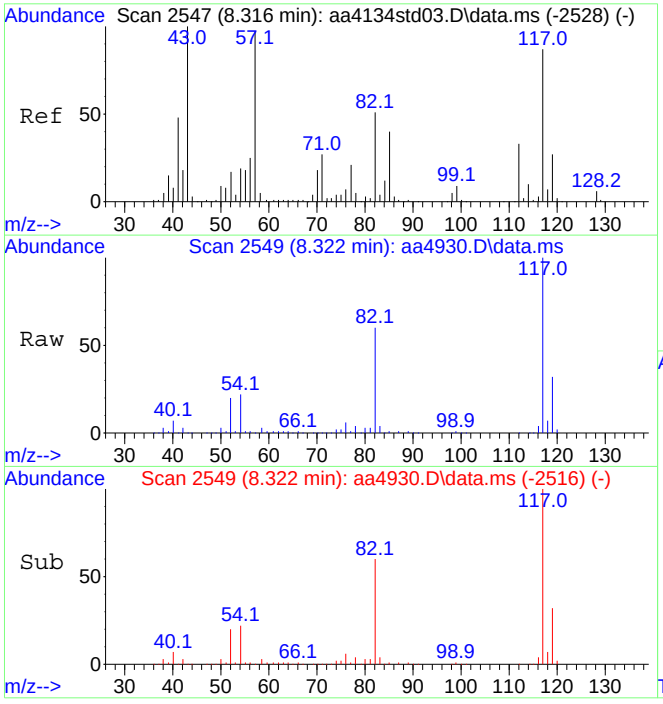



#39
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 5.451 min Scan# 1656
Delta R.T. -0.001 min
Lab File: aa4930.D
Acq: 12 Dec 2023 1:31 am

Tgt Ion:114 Resp: 2167232

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 22.0 | 17.0 | 25.6 |

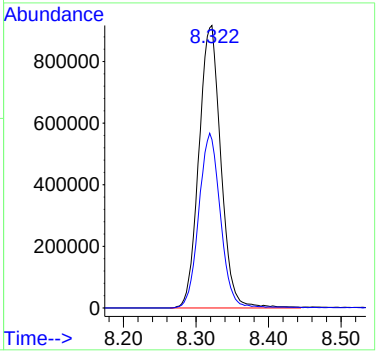


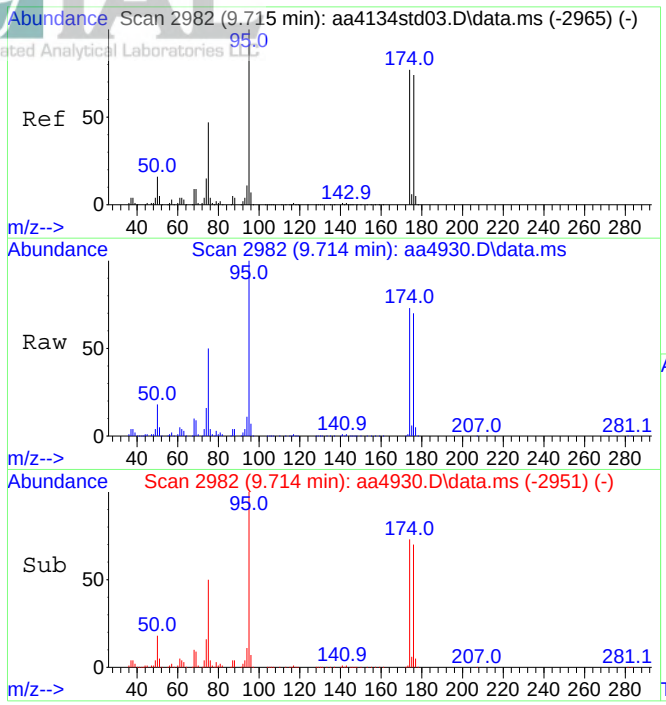




#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 8.322 min Scan# 2549
Delta R.T. 0.006 min
Lab File: aa4930.D
Acq: 12 Dec 2023 1:31 am

Tgt Ion:117 Resp: 1931386

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 61.0 | 47.0 | 70.4 |

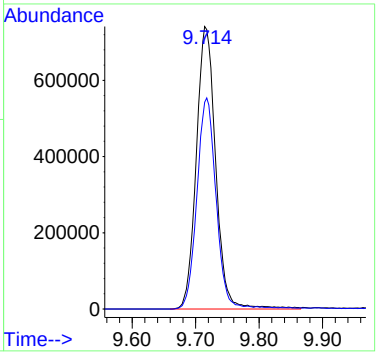





#64
Bromofluorobenzene (tune std)
Concen: 9.35 ppbV
RT: 9.714 min Scan# 2982
Delta R.T. -0.001 min
Lab File: aa4930.D
Acq: 12 Dec 2023 1:31 am

Tgt Ion: 95 Resp: 1574669

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 74.6 | 61.1 | 91.7 |



# INTEGRATED ANALYTICAL LABORATORIES, LLC

**Integrated Analytical Laboratories**

**GC/MS Run Log**

Instrument ID: Agilent 7890A / 5975C
Column: Restek RTX-1 SN 992567

Target Directory: D:\Agilent GCMS\

**Date of Analysis:** 12/11/2023
**Date of Initial Calibration:** 8/15/2023, 10/10/2023
**SDG #:** E23-05081

| File # | Laboratory Sample ID | QC Check | Dilution Factor | Can # | Analyst | Injection Volume (cc) | Comments | *Make-up Air* | | *Acquisition* | | *Room* | | *TO-15 Standard* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Added to canister (cc) | Added for dilution | Date | Time | Temp | BP "Hg | Working ID | Vendor ID (Lot#) |
| aa3401bfb | BFB | ✓ | | ALM018474 | JJW | 0.5 | | | | **8/15/2023** | 10:11 | 70 | 30.30 | | 160-402352677-1 |
| aa3402std05 | 0.2 ppbv Std | ✓ | | EB0103704 | JJW | 1 | | | | | | | | 8/15/2023 | 160-402619255-1 |
| aa3403std04 | 2 ppbv Std | ✓ | | EB0103704 | JJW | 10 | | | | | | | | 8/15/2023 | 160-402619255-1 |
| aa3404std03 | 10 ppbv Std | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 8/15/2023 | 160-402619255-1 |
| aa3405std02 | 20 ppbv Std | ✓ | | EB0103704 | JJW | 100 | | | | | | | | 8/15/2023 | 160-402619255-1 |
| aa3406std01 | 40 ppbv Std | ✓ | | EB0103704 | JJW | 200 | | | | | | | | 8/15/2023 | 160-402619255-1 |
| aa3407icvss | 10 ppbv ICVSS | ✓ | | EB0116272 | JJW | 50 | | | | | | | | 8/15/2023 | 160-402744241-1 |

Analyst Name: J Walukiewicz

Signature: Joseph Walukiewicz

# INTEGRATED ANALYTICAL LABORATORIES, LLC

**Integrated Analytical Laboratories**
**GC/MS Run Log**

Instrument ID: Agilent 7890A / 5975C
Column: Restek RTX-1 SN 992567

Target Directory: D:\Agilent GCMS\

**Date of Analysis:** 12/11/2023
**Date of Initial Calibration:** 8/15/2023, 10/10/2023
**SDG #:** E23-05081

| File # | Laboratory Sample ID | QC Check | Dilution Factor | Can # | Analyst | Injection Volume (cc) | Comments | *Make-up Air* | | *Acquisition* | | *Room* | | *TO-15 Standard* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Added to canister (cc) | Added for dilution | Date | Time | Temp | BP "Hg | Working ID | Vendor ID (Lot#) |
| aa4071bfb | BFB | ✓ | | ALM018474 | JJW | 0.5 | | | | **9/28/2023** | 10:01 | 70 | 30.54 | | 160-402352677-1 |
| aa4072dcvs | 10 ppbv DCVS | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 8/15/2023 | 160-401980152-1 |
| aa4073lcs | 10 ppbv LCS | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 8/15/2023 | 160-401980152-1 |
| aa4074blk | Method Blank | ✓ | | 1127 | JJW | 500 | | | | | | | | | |
| aa4075rllcs | 0.2 ppbv RLLCS | ✓ | | EB0103704 | JJW | 1 | | | | | | | | 8/15/2023 | 160-401980152-1 |
| aa4076 | 2164 | ✓ | | 8242301 | JJW | 500 | | | | | | | | | |
| aa4077 | 4870 | ✓ | | 9132301 | JJW | 500 | | | | | | | | | |
| aa4078 | 2160 | ✓ | | 9142301 | JJW | 500 | | | | | | | | | |
| aa4079 | E23-03970-01x5 dil | ✓ | 5 | 2881 | JJW | 100 | | | | | | | | | |
| aa4080 | E23-03970-02x5 dil | ✓ | 5 | 3025A | JJW | 100 | | | | | | | | | |
| aa4081 | E23-04122-02x10 dil | ✓ | 10 | 1068 | JJW | 50 | | | | | | | | | |
| aa4082 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4083 | E23-04122-03x10 dil | ✓ | 10 | 1571 | JJW | 50 | | | | | | | | | |
| aa4084 | E23-04122-04x10 dil | ✓ | 10 | 1366 | JJW | 50 | | | | | | | | | |
| aa4085 | E23-04122-05x10 dil | ✓ | 10 | 1596 | JJW | 50 | | | | | | | | | |
| aa4086 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4087 | E23-04122-06x10 dil | ✓ | 10 | 1781 | JJW | 50 | | | | | | | | | |
| aa4088 | E23-04122-26x10 dil | ✓ | 10 | 4122-06x10 d | JJW | 50 | | | | | | | | | |
| aa4089 | E23-04154-05x10 dil | ✓ | 10 | 1404 | JJW | 50 | | | | | | | | | |
| aa4090 | E23-04154-06x10 dil | ✓ | 10 | 1565 | JJW | 50 | | | | | | | | | |
| aa4091 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4092 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4093cccvs | 10 ppbv CCCVS | ✓ | | EB0103704 | JJW | 50 | | | | 9/29/2023 | 12:28 | | | 8/15/2023 | 160-402619255-1 |

Analyst Name: J Walukiewicz

Signature: Joseph Walukiewicz

# INTEGRATED ANALYTICAL LABORATORIES, LLC

**Integrated Analytical Laboratories**
**GC/MS Run Log**

Instrument ID: Agilent 7890A / 5975C
Column: Restek RTX-1 SN 992567

Target Directory: D:\Agilent GCMS\

**Date of Analysis:** 12/11/2023
**Date of Initial Calibration:** 8/15/2023, 10/10/2023
**SDG #:** E23-05081

| File # | Laboratory Sample ID | QC Check | Dilution Factor | Can # | Analyst | Injection Volume (cc) | Comments | *Make-up Air* | | *Acquisition* | | *Room* | | *TO-15 Standard* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Added to canister (cc) | Added for dilution | Date | Time | Temp | BP "Hg | Working ID | Vendor ID (Lot#) |
| aa4131bfb | BFB | ✓ | | ALM018474 | JJW | 0.5 | | | | **10/10/2023** | 10:13 | 70 | 30.10 | | 160-402352677-1 |
| aa4132std05 | 0.2 ppbv Std | ✓ | | EB0103704 | JJW | 1 | | | | | | | | 10/10/2023 | 160-402619255-1 |
| aa4133std04 | 2 ppbv Std | ✓ | | EB0103704 | JJW | 10 | | | | | | | | 10/10/2023 | 160-402619255-1 |
| aa4134std03 | 10 ppbv Std | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 10/10/2023 | 160-402619255-1 |
| aa4135std02 | 20 ppbv Std | ✓ | | EB0103704 | JJW | 100 | | | | | | | | 10/10/2023 | 160-402619255-1 |
| aa4136std01 | 40 ppbv Std | ✓ | | EB0103704 | JJW | 200 | | | | | | | | 10/10/2023 | 160-402619255-1 |
| aa4137icvss | 10 ppbv ICVSS | ✓ | | EB0116272 | JJW | 50 | | | | | | | | 10/10/2023 | 160-402744241-1 |
| aa4138lcs | 10 ppbv LCS | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4139blk | Method Blank | ✓ | | 1127 | JJW | 500 | | | | | | | | | |
| aa4140rllcs | 0.2 ppbv RLLCS | ✓ | | EB0103704 | JJW | 1 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4141 | 5078 | ✓ | | 9252301 | JJW | 500 | | | | | | | | | |
| aa4142 | 5101 | ✓ | | 9262301 | JJW | 500 | | | | | | | | | |
| aa4143 | 4869 | ✓ | | 9272301 | JJW | 500 | | | | | | | | | |
| aa4144 | 2157 | ✓ | | 10022301 | JJW | 500 | | | | | | | | | |
| aa4145 | E23-04192-01 | ✓ | | 5100 | JJW | 500 | | | | | | | | | |
| aa4146 | E23-04192-02 | ✓ | | 2072 | JJW | 500 | | | | | | | | | |
| aa4147 | blank | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4148 | E23-04378-01 | ✓ | | 2033 | JJW | 500 | | | | | | | | | |
| aa4149 | E23-04378-02 | ✓ | | 5080 | JJW | 500 | | | | | | | | | |
| aa4150 | E23-04378-22 | ✓ | Dup of E23-04378-02, C | | JJW | 500 | | | | | | | | | |
| aa4151 | E23-04513-01 | ✓ | | 3814 | JJW | 500 | | | | | | | | | |
| aa4152 | blank | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4153 | blank | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4154cccvs | 10 ppbv CCCVS | ✓ | | EB0103704 | JJW | 50 | | | | 10/11/2023 | 1:53 | | | 10/10/2023 | 160-402619255-1 |

Analyst Name: J Walukiewicz

Signature: Joseph Walukiewicz

# INTEGRATED ANALYTICAL LABORATORIES, LLC

**Integrated Analytical Laboratories**
**GC/MS Run Log**

Instrument ID: Agilent 7890A / 5975C
Column: Restek RTX-1 SN 992567

Target Directory: D:\Agilent GCMS\

**Date of Analysis:** 12/11/2023
**Date of Initial Calibration:** 8/15/2023, 10/10/2023
**SDG #:** E23-05081

| File # | Laboratory Sample ID | QC Check | Dilution Factor | Can # | Analyst | Injection Volume (cc) | Comments | *Make-up Air* | | *Acquisition* | | *Room* | | *TO-15 Standard* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Added to canister (cc) | Added for dilution | Date | Time | Temp | BP "Hg | Working ID | Vendor ID (Lot#) |
| aa4901bfb | BFB | ✓ | | ALM018474 | JJW | 0.5 | | | | **12/11/2023** | 9:24 | 68 | 30.07 | | 160-402352677-1 |
| aa4902dcvs | 10 ppbv DCVS | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4903lcs | 10 ppbv LCS | ✓ | | EB0103704 | JJW | 50 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4904blk | Method Blank | ✓ | | 1127 | JJW | 500 | | | | | | | | | |
| aa4905rllcs | 0.2 ppbv RLLCS | ✓ | | EB0103704 | JJW | 1 | | | | | | | | 10/10/2023 | 160-401980152-1 |
| aa4906 | 1458 | ✓ | | 12062301 | JJW | 50 | | | | | | | | | |
| aa4907 | 1588 | ✓ | | 12082301 | JJW | 50 | | | | | | | | | |
| aa4908 | 3012 | ✓ | | 12072301 | JJW | 500 | | | | | | | | | |
| aa4909 | E23-05047-03x10 dil | ✓ | 10 | 3811 | JJW | 50 | | | | | | | | | |
| aa4910 | E23-05047-04x5 dil | ✓ | 5 | 3283 | JJW | 100 | | | | | | | | | |
| aa4911 | E23-05080-01x10 dil | ✓ | 10 | 3006 | JJW | 50 | | | | | | | | | |
| aa4912 | E23-05080-02x10 dil | ✓ | 10 | 2155 | JJW | 50 | | | | | | | | | |
| aa4913 | E23-05093-01x5 dil | ✓ | 5 | 3044Ac | JJW | 100 | | | | | | | | | |
| aa4914 | E23-05047-06x5 dil | ✓ | 5 | 5091 | JJW | 100 | | | | | | | | | |
| aa4915 | E23-05047-06 | ✓ | | 5091 | JJW | 500 | | | | | | | | | |
| aa4916 | E23-05081-01x5 dil | ✓ | 5 | 5073 | JJW | 100 | | | | | | | | | |
| aa4917 | E23-05081-01 | ✓ | | 5073 | JJW | 500 | | | | | | | | | |
| aa4918 | E23-05081-02x5 dil | ✓ | 5 | 2758 | JJW | 100 | | | | | | | | | |
| aa4919 | E23-05081-02 | ✓ | | 2758 | JJW | 500 | | | | | | | | | |
| aa4920 | E23-05081-03x5 dil | ✓ | 5 | 3809 | JJW | 100 | | | | | | | | | |
| aa4921 | E23-05081-03 | ✓ | | 3809 | JJW | 500 | | | | | | | | | |
| aa4922 | E23-05081-04x5 dil | ✓ | 5 | 2896B | JJW | 100 | | | | | | | | | |
| aa4923 | E23-05081-04 | ✓ | | 2896B | JJW | 500 | | | | | | | | | |
| aa4924 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4925 | E23-05007-01x10 dil | ✓ | 10 | 1543 | JJW | 50 | | | | | | | | | |
| aa4926 | E23-05007-02x10 dil | ✓ | 10 | 1601 | JJW | 50 | | | | | | | | | |
| aa4927 | E23-05007-03x10 dil | ✓ | 10 | 1773 | JJW | 50 | | | | | | | | | |
| aa4928 | blk | ✓ | | x | JJW | 500 | | | | | | | | | |
| aa4929 | E23-05079-03 | ✓ | | 3830 | JJW | 500 | | | | | | | | | |
| aa4930 | E23-05079-23 | ✓ | Dup of E23-05079-03, C | | JJW | 500 | | | | | | | | | |
| aa4931cccvs | 10 ppbv CCCVS | ✓ | | EB0103704 | JJW | 50 | | | | 12/12/2023 | 1:59 | | | 10/10/2023 | 160-401980152-1 |

Analyst Name: J Walukiewicz

Signature: Joseph Walukiewicz

Integrated Analytical Labs
273 Franklin Rd
Randolph, NJ 07869

# External Chain of Custody Record/ Field Test Data Sheet USEPA Method TO-15

Contact Us: 973 361-4252
fax: 973 366-5613
Web: www.ialonline.com

Carrier (check one): ____ IAL Courier ____Client Courier ____FedEx/UPS

pg __1__ of __2__

| Client Contact Information | Project Information | Invoice Information |
|---|---|---|
| Company: HK Engineering and Geology D.P.C. | Project Name: HK2661.2 | Attn: |
| Address: 1600 US 22 East | Project Location (State): NY | Address: |
| Union, NJ 07083 | Project Manager: Chris Hirschmann | |
| Phone: 908 -688-7800 | PM Signature: | PO #: HK2661.2 |
| Fax: | PM E-Mail: chirschmann@hillmannconsulting.com | Quote #: |
| Report to: Chris Hirschmann | Sampler: D. Aponte | |

Analysis Turnaround Time - IF NO TAT IS SPECIFIED, 2 WEEK TAT IS ASSUMED

IAL Standard: 2 weeks (10 business days)

Rush (**pre-approved by lab): 24hr** 48hr** 72hr** 96hr** 1wk**

| Sample Identification | Start DATE & TIME (24hr Clock) | End DATE & TIME (24hr Clock) | Starting Vacuum ("Hg) | Ending Vacuum ("Hg) | Starting Temp. (°F) | Ending Temp. (°F) | Outgoing Vacuum - Lab ("Hg) | Barometric Pressure: Start — Incoming Vacuum - Lab ("Hg) | Flow Regulator ID | Barometric Pressure: Stop — Canister ID | Canister Size (1L or 6L) | Flow Controller Readout (cc/min) | EPA TO - 15 | NJDEP LLTO-15 (includes 30 TICs) | Library Search (10, 20, or 30 TICs) | Other (Explain in Comments) | Regulatory/ NY Cat B / Full (NJ Required) | Reduced / NY Cat A Data Package | Results Only | Indoor Air | Ambient / Outdoor Air | Sub Slab / Soil Gas / Near Slab (Circle One) | Stack Emission / SVE System | High Concentrations Expected |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SV1 | 11/17/23 - 7:45 | 11/17/23 - 10:00 | -29 | -7 | 49 | 56 | -29.0 | -7.0 | A0121687-3 | 5073 | 6L | 32.70 | X | | | | | | | | | | | |
| SV4 | 11/17/23 - 9:40 | 11/17/23 - 11:55 | -28 | -6 | 56 | 64 | -29.0 | -6.0 | A0098643-4 | 2758 | 6L | 33.80 | X | | | | | | | | | | | |
| SV9 | 11/17/23 - 8:00 | 11/17/23 - 10:30 | -28 | -7 | 51 | 59 | -29.0 | -7.0 | A0098637-7 | 3809 | 6L | 33.40 | X | | | | | | | | | | | |
| SV8 - 401 - COMPACTOR ROOM | 11/17/23 - 11:00 | 11/17/23 - | -29 | -6 | 65 | 67 | -29.0 | -6.0 | A0160008-5 | 2896B | 6L | 33.30 | X | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |

Comments/ Special Analysis Instructions / QC Requirements:

5 Day TAT Hard Copy and Verbal.

09132301 10022301A 09142301 09282301A
2,4 3830 1,3 2160

Note: Hold or contingent samples may be designated by writing an "H" or "C" in the appropriate analysis box.

ALL FIELDS IN RED ARE REQUIRED

IAL 05081

Shipping Information / Canister Preparation (for laboratory use only)

Individual Preparing Canisters / Title: Desmond Flores / Air Department Sample Custodian

Lab Affixed Seal Number(s):

Date/Time Shipping Container Sealed: 11/13/23 16:15

Laboratory Canister Certification

GC/MS Analyst Signature: Joseph J Walukiewicz III (IAL)

External Chain of Custody

| Relinquished | Received | Date / Time | Reason for Change of External Custody |
|---|---|---|---|
| Dale Mont HK | Dale Mont | 11/17/23 (5:00 | shipment from laboratory to client |
| Dale Mont | Desmond Flores | 11/17/23 1634 | received at lab |
| | Joseph J Walukiewicz III (IAL) | 11/20/23 09:20 | sample storage & pressure check |

Name/Title Resealing Shipping Container Name:

Date/Time Sample Shipping Container Resealed:

Date/Time Sample Shipping Container Opened: 11/17/23 1634

NJDEP Affixed Seal Number:

Individual Opening Sample Shipping Container: Joseph Walukiewicz/Desmond Flores

Date/Time Internal Chain of Custody Initiated: 11/20/23 09:20

White and yellow - lab copies; Pink - client copy

se appropriate care with IAL sampling equipment when sampling and packing for shipment. The client is responsible for all damage incurred to IAL equipment. Notify IAL if equipment is damaged upon receipt. Holding time before sampling is 15 days, ter sampling is 30 days; failure to follow these times may result in data rejection by regulatory agencies. The lab will contact you if your COC is not clear, incomplete, or if discrepancies exist. The use of initials is not permitted on the COC except hen correcting errors.

# Example Calculation (EPA TO-15)

$$\frac{\text{Area of Compound}}{\text{Area of Internal Standard}} \times \frac{\text{Concentration of Internal Standard (10 ppbv)}}{\text{Response Factor}} = \text{Concentration of Compound (ppbv)}$$

# Conversion from ppbv to µg/m $^3$

$$\frac{\text{Concentration of Compound (ppbv)} \times \text{Molecular Weight of Compound}}{24.45} = \text{Concentration of Compound (µg/m3)}$$

INTEGRATED ANALYTICAL LABORATORIES, LLC

# Clean Canister Certification Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **Clean Canister, Batch Master 4870** | **Data File:** | **AA4077** |
| **Field Sample Name:** | **Canister 4870** | **Date Analyzed:** | **9/28/2023** |
| **Sample Volume:** | **500ml** | **Matrix:** | **Air** |

Canisters associated with this run: 4870, 2896B (used for E23-05081-04), 5086, 2890, 2758 (used for E23-05081-02), 3041A, 3045A, 2902

Runs with this Clean Canister Certification:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2164 [AA4076] | 09/28/2023 15:00 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 4870 [AA4077] | 09/28/2023 15:30 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 00:28 |

This canister has been certified clean, all compounds are below 0.2 ppbv.

| Compound | CAS # | RL (ppbv) | Calculated Amount (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromodichloromethane | 75-27-4 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| Dibromochloromethane | 124-48-1 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.20 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.20 | ND |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.20 | ND |
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |

# Clean Canister Certification Report

**Lab Sample Name:** Clean Canister, Batch Master 4870
**Field Sample Name:** Canister 4870
**Sample Volume:** 500ml
**Data File:** AA4077
**Date Analyzed:** 9/28/2023
**Matrix:** Air

Canisters associated with this run: 4870, 2896B (used for E23-05081-04), 5086, 2890, 2758 (used for E23-05081-02), 3041A, 3045A, 2902

Runs with this Clean Canister Certification:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2164 [AA4076] | 09/28/2023 15:00 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 4870 [AA4077] | 09/28/2023 15:30 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 00:28 |

This canister has been certified clean, all compounds are below 0.2 ppbv.

| Compound | CAS # | RL (ppbv) | Calculated Amount (ppbv) |
|---|---|---|---|
| n-Hexane | 110-54-3 | 0.20 | ND |
| Methylene chloride | 75-09-2 | 0.20 | ND |
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.20 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.20 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.40 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4077.D
Acq On : 28 Sep 2023 3:30 pm
Operator : jjw
Sample : 4870
Misc : 2902, 3044A, 3041A, 2758, 2890, 2896B, 5086
ALS Vial : 10 Sample Multiplier: 1

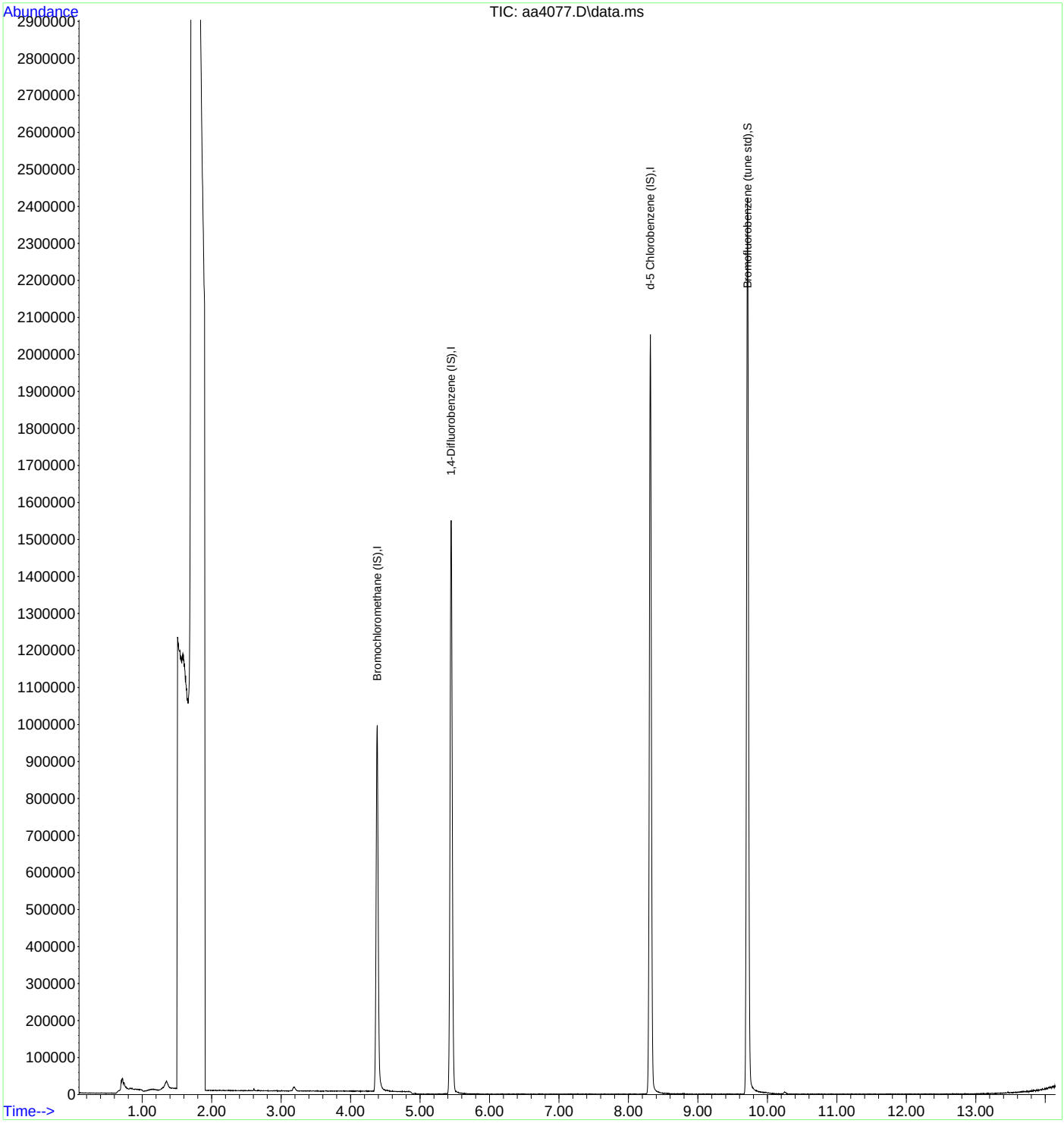
Quant Time: Sep 28 16:47:17 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.383 | 130 | 360790 | 10.00 | ppbV | -0.013 |
| 39) 1,4-Difluorobenzene (IS) | 5.447 | 114 | 1388747 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 1279774 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 1010735 | 9.49 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4077.D
Acq On : 28 Sep 2023 3:30 pm
Operator : jjw
Sample : 4870
Misc : 2902, 3044A, 3041A, 2758, 2890, 2896B, 5086
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 28 16:47:17 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES, LLC

# Clean Canister Certification Report

| | | | |
|---|---|---|---|
| **Lab Sample Name:** | **Clean Canister, Batch Master 2160** | **Data File:** | **AA4078** |
| **Field Sample Name:** | **Canister 2160** | **Date Analyzed:** | **9/28/2023** |
| **Sample Volume:** | **500ml** | **Matrix:** | **Air** |

Canisters associated with this run: 2160, 3011, 5073 (used for E23-05081-01), 4865, 2155, 3809 (used for E23-05081-03), 3006, 3028

Runs with this Clean Canister Certification:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2164 [AA4076] | 09/28/2023 15:00 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 4870 [AA4077] | 09/28/2023 15:30 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 00:28 |

This canister has been certified clean, all compounds are below 0.2 ppbv.

| Compound | CAS # | RL (ppbv) | Calculated Amount (ppbv) |
|---|---|---|---|
| Acetone | 67-64-1 | 0.20 | ND |
| Benzene | 71-43-2 | 0.20 | ND |
| Bromodichloromethane | 75-27-4 | 0.20 | ND |
| Bromoform | 75-25-2 | 0.20 | ND |
| Bromomethane | 74-83-9 | 0.20 | ND |
| 1,3-Butadiene | 106-99-0 | 0.20 | ND |
| Chlorobenzene | 108-90-7 | 0.20 | ND |
| Chloroethane | 75-00-3 | 0.20 | ND |
| Chloroform | 67-66-3 | 0.20 | ND |
| Chloromethane | 74-87-3 | 0.20 | ND |
| Carbon disulfide | 75-15-0 | 0.20 | ND |
| Carbon tetrachloride | 56-23-5 | 0.20 | ND |
| Cyclohexane | 110-82-7 | 0.20 | ND |
| Dibromochloromethane | 124-48-1 | 0.20 | ND |
| 1,2-Dibromoethane | 106-93-4 | 0.20 | ND |
| 1,2-Dichlorobenzene | 95-50-1 | 0.20 | ND |
| 1,3-Dichlorobenzene | 541-73-1 | 0.20 | ND |
| 1,4-Dichlorobenzene | 106-46-7 | 0.20 | ND |
| Dichlorodifluoromethane | 75-71-8 | 0.20 | ND |
| 1,1-Dichloroethane | 75-34-3 | 0.20 | ND |
| 1,2-Dichloroethane | 107-06-2 | 0.20 | ND |
| 1,1-Dichloroethene | 75-35-4 | 0.20 | ND |
| 1,2-Dichloroethene (cis) | 156-59-2 | 0.20 | ND |
| 1,2-Dichloroethene (trans) | 156-60-5 | 0.20 | ND |
| 1,2-Dichloropropane | 78-87-5 | 0.20 | ND |
| 1,3-Dichloropropene (cis) | 10061-01-5 | 0.20 | ND |
| 1,3-Dichloropropene (trans) | 10061-02-6 | 0.20 | ND |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.20 | ND |
| 1,4-Dioxane | 123-91-1 | 0.20 | ND |
| Ethylbenzene | 100-41-4 | 0.20 | ND |
| n-Heptane | 142-82-5 | 0.20 | ND |
| 1,3-Hexachlorobutadiene | 87-68-3 | 0.20 | ND |

# Clean Canister Certification Report

**Lab Sample Name:** Clean Canister, Batch Master 2160
**Field Sample Name:** Canister 2160
**Sample Volume:** 500ml
**Data File:** AA4078
**Date Analyzed:** 9/28/2023
**Matrix:** Air

Canisters associated with this run: 2160, 3011, 5073 (used for E23-05081-01), 4865, 2155, 3809 (used for E23-05081-03), 3006, 3028

Runs with this Clean Canister Certification:

| Standard/Sample Run | Date/Time of Sample/Standard Injection |
|---|---|
| BFB [AA4071BFB] | 09/28/2023 10:01 |
| 10 PPBV DCVS [AA4072DCVS] | 09/28/2023 10:31 |
| 10 PPBV LCS [AA4073LCS] | 09/28/2023 11:19 |
| METHOD BLANK [AA4074BLK] | 09/28/2023 11:47 |
| 02 PPBV RLLCS [AA4075RLLCS] | 09/28/2023 13:22 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2164 [AA4076] | 09/28/2023 15:00 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 4870 [AA4077] | 09/28/2023 15:30 |
| CLEAN CAN CERTIFICATION, BATCH MASTER 2160 [AA4078] | 09/28/2023 16:00 |
| 10 PPBV CCCVS [AA4093CCCVS] | 09/29/2023 00:28 |

This canister has been certified clean, all compounds are below 0.2 ppbv.

| Compound | CAS # | RL (ppbv) | Calculated Amount (ppbv) |
|---|---|---|---|
| n-Hexane | 110-54-3 | 0.20 | ND |
| Methylene chloride | 75-09-2 | 0.20 | ND |
| Methyl ethyl ketone | 78-93-3 | 0.20 | ND |
| Methyl isobutyl ketone | 108-10-1 | 0.20 | ND |
| Methyl tert-butyl ether | 1634-04-4 | 0.20 | ND |
| Styrene | 100-42-5 | 0.20 | ND |
| Tert-butyl alcohol | 75-65-0 | 0.20 | ND |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.20 | ND |
| Tetrachloroethene | 127-18-4 | 0.20 | ND |
| Toluene | 108-88-3 | 0.20 | ND |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.20 | ND |
| 1,1,1-Trichloroethane | 71-55-6 | 0.20 | ND |
| 1,1,2-Trichloroethane | 79-00-5 | 0.20 | ND |
| Trichloroethene | 79-01-6 | 0.20 | ND |
| Trichlorofluoromethane | 75-69-4 | 0.20 | ND |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.20 | ND |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.20 | ND |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.20 | ND |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.20 | ND |
| Vinyl bromide | 593-60-2 | 0.20 | ND |
| Vinyl chloride | 75-01-4 | 0.20 | ND |
| Xylenes (m&p) | 179601-23-1 | 0.40 | ND |
| Xylenes (o) | 95-47-6 | 0.20 | ND |

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4078.D
Acq On : 28 Sep 2023 4:00 pm
Operator : jjw
Sample : 2160
Misc : 3011, 5073, 4865, 2155, 3809, 3006, 3028
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 05 12:01:48 2023
Quant Method : C:\msdchem\1\METHODS\230815.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Aug 16 10:00:51 2023
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Bromochloromethane (IS) | 4.380 | 130 | 361668 | 10.00 | ppbV | -0.016 |
| 39) 1,4-Difluorobenzene (IS) | 5.448 | 114 | 1313235 | 10.00 | ppbV | 0.000 |
| 55) d-5 Chlorobenzene (IS) | 8.316 | 117 | 1248229 | 10.00 | ppbV | 0.000 |
| System Monitoring Compounds | | | | | | |
| 64) Bromofluorobenzene (tu... | 9.714 | 95 | 997562 | 9.61 | ppbV | 0.000 |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\DATA\2023\09-2023\09-28-2023\
Data File : aa4078.D
Acq On : 28 Sep 2023 4:00 pm
Operator : jjw
Sample : 2160
Misc : 3011, 5073, 4865, 2155, 3809, 3006, 3028
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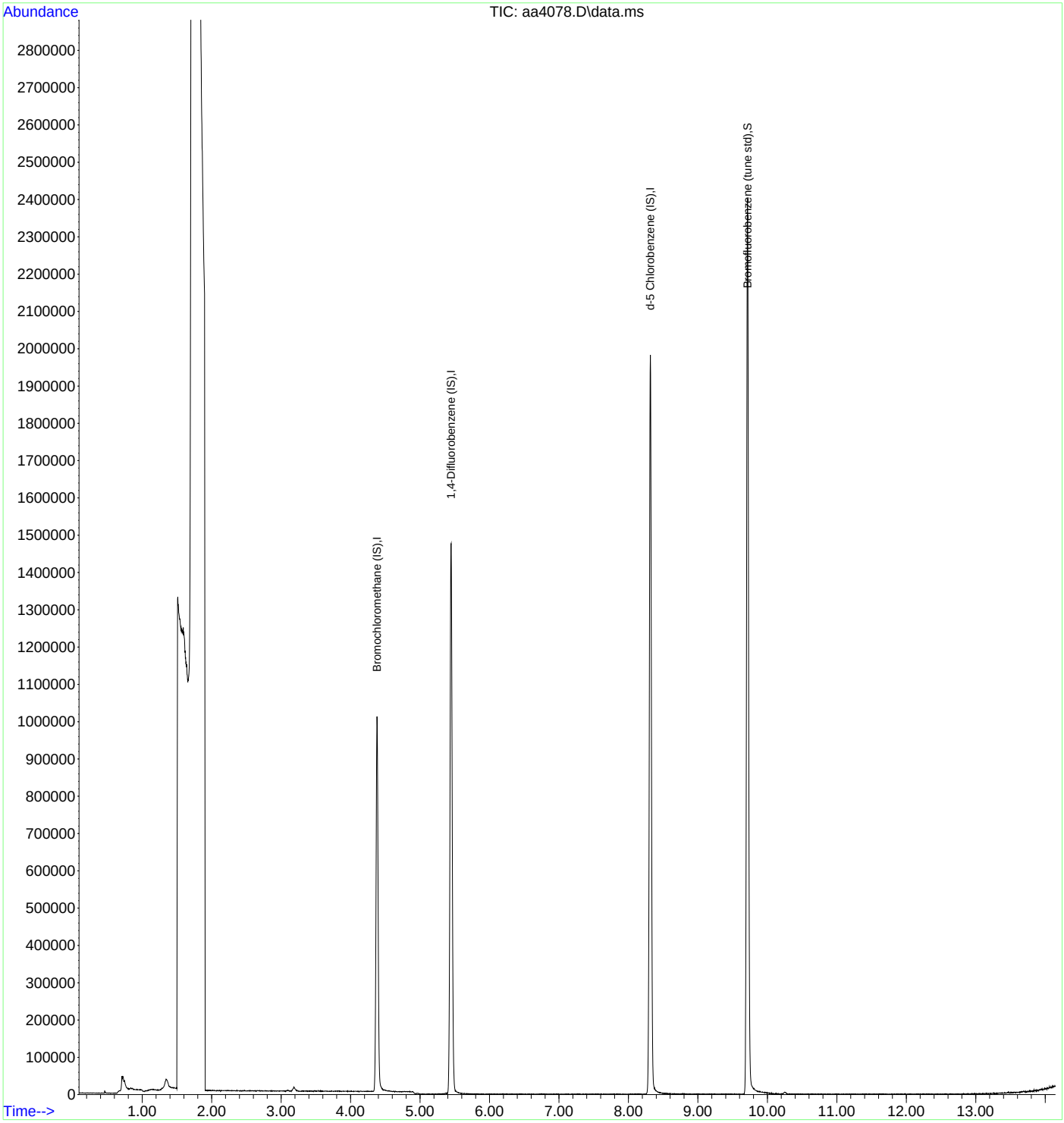

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