

**FMMI Supplement Submission to EPA**

**Attachment B**

**2023 FMMI Non-Metal HAPs Test Report, January 2024**



# USEPA Proposed Amendments to Primary Copper Smelting NESHAP: Non-Metal HAPs Performance Test Report

## Primary Copper Smelting

### Freeport-McMoRan Miami Inc.

5701 New Street, Claypool, Arizona, 85532

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SLR Project No.: 118.01290.00025

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## Summary Information

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Units Sampled		Vent Fume
		Aisle Scrubber
		Acid Plant Tail Gas
Primary Methods Performed		Method 18, Method 23 and Method 26A
Purpose		Primary Copper Smelting Sector Facilities Residual Risk and Technology Review
Sampling Equipment		Method 18, and Methods 23 and 26A isokinetic sampling systems
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Test Dates		November 27 through December 7, 2023

## Executive Summary

Freeport-McMoRan Miami Inc. (FMMI) owns and operates a copper smelting facility located at 5701 New Street, Claypool, Arizona 85532. The FMMI facility is authorized to operate under Arizona Department of Environmental Quality (ADEQ), Air Quality Control Permit No. Air Quality Control Permit No. 95046 issued September 6, 2023 (Permit) and revised by Minor Permit Revision No. 98711 issued November 1, 2023. The facility sources are subject to requirements under the Code of Federal Regulations Title 40, Part 63 (40 CFR 63) Subpart QQQ—National Emission Standards for Hazardous Air Pollutants for Primary Copper Smelting (Copper Smelting NESHAP) and ADEQ rules and regulations.

The US Environmental Protection Agency (USEPA) has proposed amendments to the Copper Smelting NESHAP including additional hazardous air pollutant (HAP) standards for the following pollutants: benzene, toluene, hydrogen chloride (HCl), Chlorine (Cl<sub>2</sub>), polycyclic aromatic hydrocarbons (PAH), naphthalene and dioxins/furans (D/F).

In an effort to gather additional data for consideration by the USEPA toward revising the proposed emissions standards in the Copper Smelting NESHAP, FMMI requested that an emissions test program be performed at the Vent Fume, Aisle Scrubber and Acid Plant Tail Gas (APTG) stacks for the determination of the following:

- Benzene and toluene by USEPA Method 18, reporting results in terms of mg/dscm, lb/hr, and lb/ton concentrated ore fed.
- Hydrochloric acid and chlorine by USEPA Method 26A, reporting results in terms of mg/dscm, lb/hr, and lb/ton concentrated ore fed.
- Naphthalene and polycyclic aromatic hydrocarbons excluding naphthalene by USEPA Method 23, reporting results in terms of ng/dscm and lb/ton concentrated ore fed.
- Dioxins, and furans by USEPA Method 23, reporting results in terms of ng/dscm and ngTEQ/Mg concentrated ore fed for each D/F congener, and total D/Fs.

This report provides the results of the requested emissions measurements.

**Table ES- 1** lists the average emission rate results for the Aisle Scrubber, Vent Fume and APTG stacks. Also listed in **Table ES- 1** are the test parameter, test method and result designation and proposed Copper NESHAP emission limits. For results that are flagged below detection level (BDL), the method detection level (MDL) was used to calculate the concentration and emission rate of each sample run and the sample run results were averaged and flagged BDL. For average results where one but not all results are BDL, the MDL based result(s) and above detection level (ADL) result(s) were summed or averaged and flagged detection level limited (DLL). For average results where all samples were ADL the average results are flagged ADL.

**Table ES- 1 Average HAPs Results**

Source ID	Test Method	Parameter	Results Designation	Average Results	Proposed Emission Limit	Units of Measure
Aisle Scrubber Vent Fume APTG	18	Benzene	BDL BDL BDL	3.97E-04 8.91E-05 5.19E-05	1.7E-03	lb/ton concentrated ore fed
Aisle Scrubber Vent Fume APTG	18	Toluene	BDL BDL BDL	2.16E-04 4.86E-05 2.83E-05	8.4E-04	lb/ton concentrated ore fed
Aisle Scrubber Vent Fume APTG	26A	HCl	ADL DLL ADL	2.18E-04 1.42E-05 1.90E-04	1.5E-03	lb/ton concentrated ore fed
Aisle Scrubber Vent Fume APTG	26A	Chlorine	ADL ADL ADL	2.11E-04 1.82E-04 1.70E-04	5.4E-03	lb/ton concentrated ore fed
Aisle Scrubber Vent Fume APTG	23	PAHs (excluding Naphthalene)	DLL DLL DLL	8.00E-06 1.71E-06 3.27E-07	1.0E-04	lb/ton concentrated ore fed
Aisle Scrubber Vent Fume APTG	23	Naphthalene	ADL ADL BDL	1.12E-05 2.30E-06 1.95E-07	2.8E-04	lb/ton concentrated ore fed
Aisle Scrubber Vent Fume APTG	23	Dioxins and Furans	DLL DLL DLL	39.9 5.4 1.1	60	ng TEQ/Mg concentrated ore fed

BDL = Below the Detection Limit

DLL = Detection Level Limited – at least one but not all analytical values used to calculate the sample mass are less than the laboratory's reported detection limit(s)

ADL = Above Detection Level – the analytical value(s) used to calculate the sample mass is greater than the laboratory's reported detection level(s)

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<b>Appendix B</b>	<b>Calibration Data</b>
<b>Appendix C</b>	<b>Process Operations Data</b>
<b>Appendix D</b>	<b>Process Flow Diagram</b>





## 1.0 Introduction

### 1.1 Purpose

Freeport-McMoRan Miami Inc. (FMMI) owns and operates a copper smelting facility located at 5701 New Street, Claypool, Arizona 85532. The FMMI facility is authorized to operate under Arizona Department of Environmental Quality (ADEQ), Air Quality Control Permit No. Air Quality Control Permit No. 95046 issued September 6, 2023 (Permit) and revised by Minor Permit Revision No. 98711 issued November 1, 2023. The facility sources are subject to requirements under the Code of Federal Regulations Title 40, Part 63 (40 CFR 63) Subpart QQQ—National Emission Standards for Hazardous Air Pollutants for Primary Copper Smelting (Copper NESHAP) and ADEQ rules and regulations.

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In an effort to gather additional data for consideration by the USEPA toward revising the proposed emissions standards in the Copper Smelting NESHAP, FMMI requested that an emissions test program be performed at the Vent Fume, Aisle Scrubber and Acid Plant Tail Gas (APTG) stacks for the determination of the following:

- Benzene and toluene by USEPA Method 18, reporting results in terms of mg/dscm, lb/hr, and lb/ton concentrated ore fed.
- Hydrochloric acid and chlorine by USEPA Method 26A, reporting results in terms of mg/dscm, lb/hr, and lb/ton concentrated ore fed.
- Naphthalene and polycyclic aromatic hydrocarbons excluding naphthalene by USEPA Method 23, reporting results in terms of ng/dscm, lb/hr, and lb/ton concentrated ore fed.
- Dioxins, and furans by USEPA Method 23, reporting results in terms of ng/dscm and ngTEQ/Mg concentrated ore fed for each D/F congener, and total D/Fs.

This report provides the results of the requested emissions measurements.

### 1.2 Responsibilities

FMMI retained SLR International Corporation (SLR) to perform the requested test measurements. SLR is located at 1612 Specht Point Road, Suite 119, Fort Collins, Colorado 80525. Mr. Doug Bopray, SLR Associate Scientist, is the Project Manager for this test program. Mr. Bopray can be reached by telephone at (970) 999-3980 or by e-mail at [dbopray@slrconsulting.com](mailto:dbopray@slrconsulting.com). Ms. Julie Lishner, of FMMI, is responsible for the coordination of the test program and collection of process data. Ms. Lishner can be reached by telephone at (928) 200-3548 or by e-mail at [jlshner@fmi.com](mailto:jlshner@fmi.com).

### 1.3 Organization

This test report is organized as follows: The test approach and results are provided in Chapter 2. A description of the process is provided in Chapter 3. The source test methodology is presented in Chapter 4. Chapter 5 includes a concise description of the quality assurance/quality control (QA/QC) procedures implemented.



## 2.0 Test Approach

### 2.1 Purpose and Schedule

This test report lists the specific methods and procedures followed to complete the HAPs emissions test program at the Vent Fume, Aisle Scrubber and APTG stacks. This test report also includes the results, source operations during testing, a description of the test methods and sample locations, and quality assurance / quality control procedures implemented.

The field measurements reported herein were conducted to obtain representative HAPs concentration and emission rate results for the Vent Fume, Aisle Scrubber and APTG stack exhausts. Testing at the Vent Fume, Aisle Scrubber and APTG stacks, began on November 30, 2023, and concluded on December 7, 2023.

### 2.2 Methodology and Test Matrix

For this test program, the quality assurance procedures of the USEPA's *Quality Assurance Handbook for Air Pollution Measurement Systems, Volume III, Stationary Source-Specific Methods* were adhered to. Specifically, the test program was performed in accordance with the following USEPA promulgated methods:

Method 1	Sample and Velocity Traverses for Stationary Sources
Method 2	Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube)
Method 3	Gas Analysis for the Determination of Dry Molecular Weight
Method 4	Determination of Moisture Content in Stack Gases
Method 18	Measurement of Gaseous Organic Compound Emissions by Gas Chromatography
Method 23	Measurement of Polychlorinated Dibenzo-p-Dioxins, Polychlorinated Dibenzofurans, Polychlorinated Biphenyls, and Polycyclic Aromatic Hydrocarbons from Stationary Sources
Method 26A	Determination of Hydrogen Halide and Halogen Emissions from Stationary Sources Isokinetic Method

The procedures listed above are described in detail in Chapter 4 of this test report.

**Table 2-1** provides a test matrix for the three sources tested, test parameters, methods followed, number of sample runs, run duration and engineering units of the results.



The effluent of the Vent Fume System and Aisle Scrubber stacks are at nearly ambient conditions. Therefore, gas analysis for the determination of effluent molecular weight was not necessary at these sources. As stated in 40 CFR 60, Appendix A, Method 2, Section 8.6, “For processes emitting essentially air, an analysis need not be conducted; use a dry molecular weight of 29.”<sup>1</sup>

**Table 2-1 Test Matrix**

Sources	Test Method	Parameter	No. of Sample Runs	Minimum Run Duration	Engineering Units
Vent Fume Aisle Scrubber APTG	Method 2	Effluent flow rate	3	120 mins	acfm, scfm & dscfm
	Method 3A	O <sub>2</sub> and CO <sub>2</sub>	3	120 mins	% by volume
	Method 4	Effluent moisture content	3	120 mins	% by volume
	Method 18	Benzene, toluene	3	120 mins	mg/dscm, lb/hr, and lb/ton concentrated ore fed
	Method 23	Naphthalene	3	180 mins	ng/dscm and lb/ton concentrated ore fed
		PAHs excluding naphthalene			ng/dscm and lb/ton concentrated ore fed
		Dioxins and furans (D/Fs)			ng/dscm and ngTEQ/Mg concentrated ore fed
Method 26A	Hydrochloric acid (HCl) and chlorine (Cl <sub>2</sub> )	3	120 mins	mg/dscm, lb/hr, and lb/ton concentrated ore fed	

The target analyte lists from Method 23 were used, Table 23-1 for dioxins and furans (D/Fs) and Table 23-2 for naphthalene and PAHs excluding naphthalene. These tables are contained in the revised version of Method 23 that was finalized on March 20, 2023.

Copper smelter production is measured using the concentrate feed rate to the process as the unit of measure. All process units downstream of IsaSmelt® Furnace are batch in nature and must be in operation if concentrate is being fed to the IsaSmelt® Furnace. If units downstream of the IsaSmelt® Furnace are not operating, concentrate feed will be discontinued eventually. Process rate is reported in tons of concentrated ore fed per hour. Process rate basis results are reported in terms of pound of pollutant per ton of concentrate ore fed (lb/ton concentrated ore fed).

<sup>1</sup> See Section 8.6 of 40 CFR 50, Appendix A, Method 2.



## 2.3 Data Quality and Reporting

The detection status of the analytical mass results, calculated concentrations and emission rates determined for Methods 18, 23 and 26A are provided in the results tables below. If an analyte's measured value is below detection limit (BDL), the result is flagged BDL. The method detection limit (MDL) for the analyte is substituted when calculating concentration and emission rate. If an analyte's measured value is above the detection limit (ADL), the results are flagged ADL and the reported mass is used for the calculated results. If at least one but not all of the analytical mass values used to calculate the sample mass are BDL for test methods which have multiple sample fractions that are summed for the final result, the summed result is flagged detection level limited (DLL).

For the average test result of a sample series where all sample results are BDL the average result is flagged BDL. For the average test result of a sample series where all sample results are ADL, the average result is flagged ADL. For the average result of a sample series where one but not all results are BDL, the average result is flagged DLL.

In addition to this test report and at a later date, the test program results will be reported using USEPA's Electronic Reporting Tool (ERT) Version 6. The ERT is a Microsoft Access® database application that is downloaded prior to data entry. The ERT test results file will be renamed according to USEPA's naming convention prior to submitting the file.

## 2.4 Support Measurements Results

Methods 2 (velocity), 3 (molecular weight) and 4 (moisture content) were performed in support of the pollutant measurements. The results of these test procedures allowed for the determination of effluent velocity and subsequent calculation of volumetric flow rate. The volumetric flow rate, determined for each sample run, allowed for resultant mass emission rates to be calculated for each of the selected pollutants. Method 2 and 4 were incorporated into and performed in conjunction with each Method 23 and Method 26A sample run. Method 3 was performed simultaneously with each APTG Method 23 and Method 26A sample run. Integrated bag samples were collected at the APTG stack and subjected to Fyrite instrument for analyses following Method 3. The results of the diluent O<sub>2</sub> and CO<sub>2</sub> analysis were used to determine the effluent gas dry molecular weight for each Method 23 and Method 26A sample run. The support measurements results were applied to each corresponding Method 18, Method 23 and Method 26A run to determine mass emission rates.

## 2.5 Emissions Measurements Results

For each Method 18 sample run at each of the three sources, paired charcoal sorbent tubes (one containing benzene and toluene spikes) were used to collect benzene and toluene samples. The sample rate for the charcoal samplers were set at a rate of approximately 2 to 4 standard liters per minute (lpm) for a period of 120 minutes. Prior to and upon completion of each sample run, the sample rate of each sampler was verified using a BIOS primary standard. The average of the pre and post sample verifications was multiplied by the corresponding sample duration to obtain the sample volume of each sample.

Method 23 was followed for determining PAHs and D/F concentrations and emission rates at the three sources. Each sample consisted of a filter, acetone rinses, toluene rinses, XAD-2 resin, and impinger water. All sample fractions were analyzed for PAHs and D/Fs. The target analyte lists from Method 23 were used, Table 23-1 for dioxins and furans (D/Fs) and



Table 23-2 for PAHs. These tables are contained in the revised version of Method 23 that was finalized on March 20, 2023.

Hydrochloric acid (HCl) and chlorine (Cl<sub>2</sub>) samples were collected isokinetically at the three stack test locations following Method 26A. The condenser train included two impingers with 100 ml each of sulfuric acid (H<sub>2</sub>SO<sub>4</sub>) solution followed by two impingers with 100 ml each of sodium hydroxide (NaOH) solution. The H<sub>2</sub>SO<sub>4</sub> fraction of each sample train was analyzed for chloride ion and reported as HCl. The NaOH fraction of each sample train was analyzed for chloride content and reported as Cl<sub>2</sub>.

## 2.5.1 Method 18 Benzene and Toluene Results

For each Method 18 sample run, paired charcoal sorbent tubes (one containing benzene and toluene spikes) were used to collect benzene and toluene samples. The sample rate for the charcoal samplers was set prior to calibration verification and operated for a period of 120 minutes. Prior to and upon completion each sample run, the sample rate (standard liters per minute, std L/min) of each sampler was verified using a BIOS primary standard. The average of the pre and post sample verifications was multiplied by the corresponding sample duration to obtain the sample volume of each sample.

### 2.5.1.1 Aisle Scrubber Stack Method 18 Results

**Table 2-2** lists the Aisle Scrubber Stack Method 18 sample results. Benzene results are BDL for all three sample runs. The average benzene emission rate is 4.0E-04 pounds per ton of concentrated ore fed (lb/ton). Toluene results are BDL for all three sample runs. The average toluene emission rate at the MDL is 2.2E-04 lb/ton.

**Table 2-2 Aisle Scrubber Stack Method 18 Results**

Sample Parameter	AS18-1 1135-1335 12/2/23	AS18-2 1236-1436 12/3/23	AS18-3 0904-1104 12/5/23	Average
Effluent Flow Rate (dscfm)	1,030,272	1,017,256	1,104,574	1,050,701
Concentrate Feed Rate (ton/hr)	125.0	125.0	125.0	125
<b>Benzene</b>				
Sample Volume (std L)	440.4	428.4	440.4	
MDL (ug)	5.5	5.5	5.5	
Sample Result (ug/sample)	5.5 BDL	5.5 BDL	5.5 BDL	
Sample Result Total (ug/sample)	5.5 BDL	5.5 BDL	5.5 BDL	
Benzene Conc. (mg/dscm)	1.2E-02 BDL	1.3E-02 BDL	1.2E-02 BDL	1.3E-02 BDL
Benzene Emission Rate (lb/hr)	4.8E-02 BDL	4.9E-02 BDL	5.2E-02 BDL	5.0E-02 BDL
Benzene Emission Rate (lb/ton)	3.9E-04 BDL	3.9E-04 BDL	4.1E-04 BDL	4.0E-04 BDL
<b>Toluene</b>				
Sample Volume (std L)	440.4	428.4	440.4	
MDL (ug)	3.0	3.0	3.0	
Sample Result (ug/sample)	3.0 BDL	3.0 BDL	3.0 BDL	
Sample Result Total (ug/sample)	3.0 BDL	3.0 BDL	3.0 BDL	
Toluene Conc. (mg/dscm)	6.8E-03 BDL	7.0E-03 BDL	6.8E-03 BDL	6.9E-03 BDL
Toluene Emission Rate (lb/hr)	2.6E-02 BDL	2.7E-02 BDL	2.8E-02 BDL	2.7E-02 BDL
Toluene Emission Rate (lb/ton)	2.1E-04 BDL	2.1E-04 BDL	2.3E-04 BDL	2.2E-04 BDL

BDL = Below the Detection Limit



### 2.5.1.2 Vent Fume Stack Method 18 Results

**Table 2-3** lists the Vent Fume Stack Method 18 sample results. Benzene results are BDL for all three sample runs. The average benzene emission rate is 8.9E-05 lb/ton. Toluene results are BDL for all three sample runs. The average toluene emission rate at the MDL is 4.9E-05 lb/ton.

**Table 2-3 Vent Fume Stack Method 18 Results**

Sample Parameter	VF18-1 1135-1335 12/2/23	VF18-2 1236-1436 12/3/23	VF18-4 0904-1104 12/5/23	Average
Effluent Flow Rate (dscfm)	249,868	240,220	240,682	243,590
Concentrate Feed Rate (ton/hr)	125.0	125.0	125.0	125.0
<b>Benzene</b>				
Sample Volume (std L)	447.6	456.0	448.8	
MDL (ug)	5.5	5.5	5.5	
Sample Result (ug/sample)	5.5 BDL	5.5 BDL	5.5 BDL	
Sample Result Total (ug/sample)	5.5 BDL	5.5 BDL	5.5 BDL	
Benzene Conc. (mg/dscm)	1.2E-02 BDL	1.2E-02 BDL	1.2E-02 BDL	1.2E-02 BDL
Benzene Emission Rate (lb/hr)	1.2E-02 BDL	1.1E-02 BDL	1.1E-02 BDL	1.1E-02 BDL
Benzene Emission Rate (lb/ton)	9.2E-05 BDL	8.7E-05 BDL	8.8E-05 BDL	8.9E-05 BDL
<b>Toluene</b>				
Sample Volume (std L)	447.6	456.0	448.8	
MDL (ug)	3.0	3.0	3.0	
Sample Result (ug/sample)	3.0 BDL	3.0 BDL	3.0 BDL	
Sample Result Total (ug/sample)	3.0 BDL	3.0 BDL	3.0 BDL	
Toluene Conc. (mg/dscm)	6.7E-03 BDL	6.6E-03 BDL	6.7E-03 BDL	6.7E-03 BDL
Toluene Emission Rate (lb/hr)	6.3E-03 BDL	5.9E-03 BDL	6.0E-03 BDL	6.1E-03 BDL
Toluene Emission Rate (lb/ton)	5.0E-05 BDL	4.7E-05 BDL	4.8E-05 BDL	4.9E-05 BDL

BDL = Below the Detection Limit

### 2.5.1.3 Acid Plant Tail Gas Stack Method 18 Results

**Table 2-4** lists the APTG Method 18 sample results. Benzene results are BDL for all three sample runs. The average benzene emission rate is 5.2E-05 lb/ton. Toluene results are BDL for all three sample runs. The average toluene emission rate at the MDL is 2.8E-05 lb/ton.



**Table 2-4 Acid Plant Tail Gas Stack Method 18 Results**

Sample Parameter	APTG-1 0840-1040 12/6/23	APTG-2 1230-1430 12/6/23	APTG-3 0828-1028 12/7/23	Average
Effluent Flow Rate (dscfm)	145,337	146,530	143,002	144,956
Concentrate Feed Rate (ton/hr)	125.0	125.0	125.0	125.0
<b>Benzene</b>				
Sample Volume (std L)	466.8	483.0	433.8	
MDL (ug)	5.5	5.5	5.5	
Sample Result (ug/sample)	5.5 BDL	5.5 BDL	5.5 BDL	
Sample Result Total (ug/sample)	5.5 BDL	5.5 BDL	5.5 BDL	
Benzene Conc. (mg/dscm)	1.2E-02 BDL	1.1E-02 BDL	1.3E-02 BDL	1.2E-02 BDL
Benzene Emission Rate (lb/hr)	6.4E-03 BDL	6.2E-03 BDL	6.8E-03 BDL	6.5E-03 BDL
Benzene Emission Rate (lb/ton)	5.1E-05 BDL	5.0E-05 BDL	5.4E-05 BDL	5.2E-05 BDL
<b>Toluene</b>				
Sample Volume (std L)	466.8	483	433.8	
MDL (ug)	3.0	3.0	3.0	
Sample Result (ug/sample)	3.0 BDL	3.0 BDL	3.0 BDL	
Sample Result Total (ug/sample)	3.0 BDL	3.0 BDL	3.0 BDL	
Toluene Conc. (mg/dscm)	6.4E-03 BDL	6.2E-03 BDL	6.9E-03 BDL	6.5E-03 BDL
Toluene Emission Rate (lb/hr)	3.5E-03 BDL	3.4E-03 BDL	3.7E-03 BDL	3.5E-03 BDL
Toluene Emission Rate (lb/ton)	2.8E-05 BDL	2.7E-05 BDL	3.0E-05 BDL	2.8E-05 BDL

BDL = Below the Detection Limit



## 2.5.2 Method 23 PAHs and D/Fs Results

The D/F results are expressed in terms of total mass basis and 2,3,7,8-TCDD toxic equivalents (TEQ). The D/F congener results (tetra, hepta, hexa, and octa) were converted to TEQ using the 2005 World Health Organization (WHO) toxicity equivalence factors (TEFs) adopted by USEPA in 2009, as the summation of each congener mass multiplied by its respective TEF.

If a target compound was measured at or below the estimated detection limit (EDL), the EDL was substituted for purposes of calculating sample results including D/F TEQ, as specified in Method 23 (§9.1.7.2).

### 2.5.2.1 Aisle Scrubber Stack Method 23 Results

Three 192-minute samples were collected at the Aisle Scrubber Stack following Method 23. **Table 2-5**, **Table 2-6**, and **Table 2-7** present the Aisle Scrubber Stack naphthalene and PAHs excluding naphthalene results for sample runs 1 through 3 respectively. **Table 2-8** provides the average Aisle Scrubber Stack PAHs results. The PAHs results tables include concentration (ng/dscm), and emission rate (lb/ton concentrated ore fed) results. **Table 2-9**, **Table 2-10**, and **Table 2-11** list the Aisle Scrubber Stack D/F results for sample runs 1 through 3 respectively. The average Aisle Scrubber Stack D/F results are listed in **Table 2-12**. The D/F results tables include concentration (ng/dscm, ng TEQ/dscm), and emission rate (ng TEQ/Mg concentrated ore fed) results.





**Table 2-5 Aisle Scrubber Stack Method 23, Run 1 PAHs Results**

Run No.		AS23-1					
Date		11/30/2023					
Time		1430-1747					
Sample Volume	dscf	118.551					
Sample Volume	m <sup>3</sup>	3.36					
Moisture Content	% v/v	2.2					
O <sub>2</sub> Concentration	% v/v (dry)	20.90					
CO <sub>2</sub> Concentration	% v/v (dry)	0.00					
Isokinetics	%	99.8					
Feed Rate	ton/hr	125.0					
Stack Flowrate	dscfm	1,042,896					
PAHs Parameters	MDL	Mass	Laboratory	Concentration	Emission Rate		
	ng	ng	Qualifier	ng/m <sup>3</sup>	lb/ton concentrated ore fed		
Naphthalene	162	1230	B	ADL	366.4	1.15E-05	
2-Methylnaphthalene	54.0	136		ADL	40.5	1.27E-06	
Acenaphthene	12.8	19.0	J	ADL	5.7	1.77E-07	
Acenaphthylene	3.80	154		ADL	45.9	1.43E-06	
Flourene	11.6	66.2		ADL	19.7	6.16E-07	
Phenanthrene	40.0	249		ADL	74.2	2.32E-06	
Anthracene	5.60	19.6	J	ADL	5.8	1.82E-07	
Fluoranthene	13.8	84		ADL	24.9	7.78E-07	
Pyrene	10.6	91	J	ADL	27.2	8.49E-07	
Benzo(a)anthracene	5.80	5.80		BDL	1.7	5.40E-08	
Chrysene	7.60	12.3		ADL	3.7	1.15E-07	
Benzo(b)fluoranthene	19.6	19.6		BDL	5.8	1.82E-07	
Benzo(k)fluoranthene	4.80	4.80		BDL	1.4	4.47E-08	
Benzo(e)pyrene	3.40	20.9		ADL	6.2	1.95E-07	
Benzo(a)pyrene	3.40	4.06	J	ADL	1.2	3.78E-08	
Perylene	2.20	9.77	J	ADL	2.9	9.10E-08	
Indeno(1,2,3-c,d)pyrene	3.80	11.6	J	ADL	3.5	1.08E-07	
Dibenz(a,h)anthracene	5.40	5.40		BDL	1.6	5.03E-08	
Benzo(g,h,i)perylene	12.0	60.9		ADL	18.1	5.67E-07	
<b>Total PAHs Excluding Naphthalene</b>				DLL	290.1	9.07E-06	

MDL = Method Detection Limit

BDL = Below the Detection Limit

DLL = Detection Level Limited – at least one but not all analytical values used to calculate the sample mass are less than the laboratory's reported detection limit(s)

ADL = Above Detection Level – the analytical value(s) used to calculate the sample mass is greater than the laboratory's detection level(s)

**Laboratory Qualifiers**

B = Compound was found in the laboratory blank and sample.

CI = The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

I = Value is EMPC (estimated maximum possible concentration).

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q = The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio.

The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.



**Table 2-6 Aisle Scrubber Stack Method 23, Run 2 PAHs Results**

Run No. Date Time		AS23-2 12/1/2023 0936-1355					
Sample Volume	dscf	121.113					
Sample Volume	m <sup>3</sup>	3.43					
Moisture Content	% v/v	2.3					
O <sub>2</sub> Concentration	% v/v (dry)	20.90					
CO <sub>2</sub> Concentration	% v/v (dry)	0.00					
Isokinetics	%	100.2					
Feed Rate	ton/hr	125.0					
Stack Flowrate	dscfm	1,061,121					
PAHs Parameters	MDL ng	Mass ng	Laboratory Qualifier	Designation	Concentration ng/m <sup>3</sup>	Emission Rate lb/ton concentrated ore fed	
Naphthalene	162	1820	B	ADL	530.7	1.69E-05	
2-Methylnaphthalene	54.0	76		ADL	22.2	7.07E-07	
Acenaphthene	12.8	12.8	J	BDL	3.7	1.19E-07	
Acenaphthylene	3.80	270		ADL	78.7	2.50E-06	
Flourene	11.6	26.5		ADL	7.7	2.46E-07	
Phenanthrene	40.0	237		ADL	69.1	2.20E-06	
Anthracene	5.60	16.1	J	ADL	4.7	1.49E-07	
Fluoranthene	13.8	78.1	B	ADL	22.8	7.24E-07	
Pyrene	10.6	161		ADL	46.9	1.49E-06	
Benzo(a)anthracene	5.80	5.80	J	BDL	1.7	5.38E-08	
Chrysene	7.60	7.60	J	BDL	2.2	7.05E-08	
Benzo(b)fluoranthene	19.6	19.6		BDL	5.7	1.82E-07	
Benzo(k)fluoranthene	4.80	4.80		BDL	1.4	4.45E-08	
Benzo(e)pyrene	3.40	15.3	JB	ADL	4.5	1.42E-07	
Benzo(a)pyrene	3.40	5.30	J	ADL	1.5	4.91E-08	
Perylene	2.20	6.30		ADL	1.8	5.84E-08	
Indeno(1,2,3-c,d)pyrene	3.80	6.35	J	ADL	1.9	5.89E-08	
Dibenz(a,h)anthracene	5.40	5.40		BDL	1.6	5.01E-08	
Benzo(g,h,i)perylene	12.0	35.7	B	ADL	10.4	3.31E-07	
<b>Total PAHs Excluding Naphthalene</b>				DLL	288.6	9.18E-06	

MDL = Method Detection Limit

BDL = Below the Detection Limit

DLL = Detection Level Limited – at least one but not all analytical values used to calculate the sample mass are less than the laboratory's reported detection limit(s)

ADL = Above Detection Level – the analytical value(s) used to calculate the sample mass is greater than the laboratory's detection level(s)

**Laboratory Qualifiers**

B = Compound was found in the laboratory blank and sample.

CI = The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

I = Value is EMPC (estimated maximum possible concentration).

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q = The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio.

The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.



**Table 2-7 Aisle Scrubber Stack Method 23, Run 3 PAHs Results**

		AS23-3					
Run No.		12/1/2023					
Date		1336-1656					
Time							
Sample Volume	dscf	125.770					
Sample Volume	m <sup>3</sup>	3.56					
Moisture Content	% v/v	2.2					
O <sub>2</sub> Concentration	% v/v (dry)	20.90					
CO <sub>2</sub> Concentration	% v/v (dry)	0.00					
Isokinetics	%	100.5					
Feed Rate	ton/hr	125.0					
Stack Flowrate	dscfm	1,097,990					
PAHs Parameters		MDL ng	Mass ng	Laboratory Qualifier	Designation	Concentration ng/m <sup>3</sup>	Emission Rate lb/ton concentrated ore fed
Naphthalene		162.0	559	J	ADL	157.0	5.16E-06
2-Methylnaphthalene		54.0	96.5	J	ADL	27.1	8.92E-07
Acenaphthene		12.8	12.8		BDL	3.6	1.18E-07
Acenaphthylene		3.80	38.9	J	ADL	10.9	3.59E-07
Flourene		11.60	27.8		ADL	7.8	2.57E-07
Phenanthrene		40.0	146		ADL	41.0	1.35E-06
Anthracene		5.60	5.60		BDL	1.6	5.17E-08
Fluoranthene		13.80	67.6		ADL	19.0	6.25E-07
Pyrene		10.6	87.4	J	ADL	24.5	8.08E-07
Benzo(a)anthracene		5.80	5.80		BDL	1.6	5.36E-08
Chrysene		7.60	7.60		BDL	2.1	7.02E-08
Benzo(b)fluoranthene		19.6	19.6		BDL	5.5	1.81E-07
Benzo(k)fluoranthene		4.80	4.80		BDL	1.3	4.43E-08
Benzo(e)pyrene		3.40	18.5	J	ADL	5.2	1.71E-07
Benzo(a)pyrene		3.40	4.72	J	ADL	1.3	4.36E-08
Perylene		2.20	7.46	J	ADL	2.1	6.89E-08
Indeno(1,2,3-c,d)pyrene		3.80	10.4	J	ADL	2.9	9.61E-08
Dibenz(a,h)anthracene		5.40	5.40		BDL	1.5	4.99E-08
Benzo(g,h,i)perylene		12.0	57.0		ADL	16.0	5.27E-07
<b>Total PAHs Excluding Naphthalene</b>					DLL	175.2	5.76E-06

MDL = Method Detection Limit

BDL = Below the Detection Limit

DLL = Detection Level Limited – at least one but not all analytical values used to calculate the sample mass are less than the laboratory's reported detection limit(s)

ADL = Above Detection Level – the analytical value(s) used to calculate the sample mass is greater than the laboratory's detection level(s)

**Laboratory Qualifiers**

B = Compound was found in the laboratory blank and sample.

CI = The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

I = Value is EMPC (estimated maximum possible concentration).

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q = The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio.

The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.



**Table 2-8 Aisle Scrubber Stack Method 23, Average PAHs Results**

	Run No. Date Time	Aisle Scrubber Average			
Sample Volume	dscf	121.811			
Sample Volume	m <sup>3</sup>	3.45			
Moisture Content	% v/v	2.2			
O <sub>2</sub> Concentration	% v/v (dry)	20.90			
CO <sub>2</sub> Concentration	% v/v (dry)	0.00			
Isokinetics	%	100.2			
Feed Rate	ton/hr	125.0			
Stack Flowrate	dscfm	1,067,335			
PAHs Parameters	Mass pg	Designation	Concentration ng/m3	Emission Rate lb/ton concentrated ore fed	
Naphthalene	1203	ADL	351.3	1.12E-05	
2-Methylnaphthalene	103	ADL	30.0	9.55E-07	
Acenaphthene	14.9	DLL	4.3	1.38E-07	
Acenaphthylene	154	ADL	45.2	1.43E-06	
Flourene	40.2	ADL	11.8	3.73E-07	
Phenanthrene	211	ADL	61.4	1.95E-06	
Anthracene	13.8	DLL	4.0	1.28E-07	
Fluoranthene	76	ADL	22.2	7.09E-07	
Pyrene	113	ADL	32.9	1.05E-06	
Benzo(a)anthracene	5.80	BDL	1.7	5.38E-08	
Chrysene	9.2	DLL	2.7	8.51E-08	
Benzo(b)fluoranthene	19.6	BDL	5.7	1.82E-07	
Benzo(k)fluoranthene	4.8	BDL	1.4	4.45E-08	
Benzo(e)pyrene	18.2	ADL	5.3	1.69E-07	
Benzo(a)pyrene	4.69	ADL	1.4	4.35E-08	
Perylene	7.84	ADL	2.3	7.28E-08	
Indeno(1,2,3-c,d)pyrene	9.5	ADL	2.7	8.77E-08	
Dibenz(a,h)anthracene	5.40	BDL	1.6	5.01E-08	
Benzo(g,h,i)perylene	51.2	ADL	14.9	4.75E-07	
<b>Total PAHs Excluding Naphthalene</b>		DLL	251.3	8.00E-06	

MDL = Method Detection Limit

BDL = Below the Detection Limit

DLL = Detection Level Limited – at least one but not all analytical values used to calculate the sample mass are less than the laboratory's reported detection limit(s)

ADL = Above Detection Level – the analytical value(s) used to calculate the sample mass is greater than the laboratory's detection level(s)

**Laboratory Qualifiers**

B = Compound was found in the laboratory blank and sample.

CI = The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

I = Value is EMPC (estimated maximum possible concentration).

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q = The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.



**Table 2-9 Aisle Scrubber Stack Method 23, Run 1 D/F Results**

Run No.		AS23-1						
Date		11/30/2023						
Time		1430-1747						
Sample Volume	dscf	118,551						
Sample Volume	m <sup>3</sup>	3.36						
Moisture Content	% v/v	2.2						
O <sub>2</sub> Concentration	% v/v (dry)	20.90						
CO <sub>2</sub> Concentration	% v/v (dry)	0.00						
Isokinetics	%	99.8						
Feed Rate	ton/hr	125.0						
Stack Flowrate	dscfm	1,042,896						
PCDD / PCDF Parameters	TEF (a)	EDL pg	Mass pg	Laboratory Qualifier	Designation	Concentration ng/m3	Concentration ng TEQ/m3	Emission Rate ng TEQ/Mg concentrated ore fed
2,3,7,8-TCDD	1	0.794	1.04	Jq	ADL	3.10E-04	3.10E-04	4.8
1,2,3,7,8-PeCDD	1	0.502	3.51	Jq	ADL	1.05E-03	1.05E-03	16.3
1,2,3,4,7,8-HxCDD	0.1	1.010	5.03	J	ADL	1.50E-03	1.50E-04	2.3
1,2,3,6,7,8-HxCDD	0.1	0.960	3.96	J	ADL	1.18E-03	1.18E-04	1.8
1,2,3,7,8,9-HxCDD	0.1	0.941	6.00	J	ADL	1.79E-03	1.79E-04	2.8
1,2,3,4,6,7,8-HpCDD	0.01	0.931	21.40	J	ADL	6.37E-03	6.37E-05	1.0
OCDD	0.0003	0.894	44.9	JBq	ADL	1.34E-02	4.01E-06	0.1
2,3,7,8-TCDF	0.1	0.883	11.30	J	ADL	3.37E-03	3.37E-04	5.3
1,2,3,7,8-PeCDF	0.03	0.761	3.63	J	ADL	1.08E-03	3.24E-05	0.5
2,3,4,7,8-PeCDF	0.3	0.749	10.0	J	ADL	2.98E-03	8.94E-04	14.0
1,2,3,4,7,8-HxCDF	0.1	0.837	13.70	Jq	ADL	4.08E-03	4.08E-04	6.4
1,2,3,6,7,8-HxCDF	0.1	0.769	5.18	Jq	ADL	1.54E-03	1.54E-04	2.4
2,3,4,6,7,8-HxCDF	0.1	0.829	6.66	Jq	ADL	1.98E-03	1.98E-04	3.1
1,2,3,7,8,9-HxCDF	0.1	0.903	0.903		BDL	2.69E-04	2.69E-05	0.4
1,2,3,4,6,7,8-HpCDF	0.01	0.361	13.20	J	ADL	3.93E-03	3.93E-05	0.6
1,2,3,4,7,8,9-HpCDF	0.01	0.434	2.21	J	ADL	6.58E-04	6.58E-06	0.1
OCDF	0.0003	0.290	8.05	JB	ADL	2.40E-03	7.19E-07	0.0
<b>Total D/F</b>					DLL	0.216	3.97E-03	62.0

**a = U.S.EPA (2010) Toxic Equivalency Factor (TEF)**

EDL = Estimated Detection Limit

BDL = Below the Detection Limit

DLL = Detection Level Limited – at least one but not all analytical values used to calculate the sample mass are less than the laboratory's reported detection limit(s)

ADL = Above Detection Level – the analytical value(s) used to calculate the sample mass is greater than the laboratory's reported detection level(s)

**Laboratory Qualifiers**

B = Compound was found in the laboratory blank and sample.

CI = The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

I = Value is EMPC (estimated maximum possible concentration).

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q = The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.



**Table 2-10 Aisle Scrubber Stack Method 23, Run 2 D/F Results**

Run No. Date Time		AS23-2 45261.00 0936-1355						
Sample Volume	dscf	121.113						
Sample Volume	m <sup>3</sup>	3.43						
Moisture Content	% v/v	2.3						
O <sub>2</sub> Concentration	% v/v (dry)	20.90						
CO <sub>2</sub> Concentration	% v/v (dry)	0.00						
Isokinetics	%	100.2						
Feed Rate	ton/hr	125.0						
Stack Flowrate	dscfm	1,061,121						
PCDD / PCDF Parameters	TEF (a)	EDL pg	Mass pg	Laboratory Qualifier	Designation	Concentration ng/m3	Concentration ng TEQ/m3	Emission Rate ng TEQ/Mg concentrated ore fed
2,3,7,8-TCDD	1	0.242	0.242		BDL	7.06E-05	7.06E-05	1.1
1,2,3,7,8-PeCDD	1	0.397	0.397		BDL	1.16E-04	1.16E-04	1.8
1,2,3,4,7,8-HxCDD	0.1	0.675	3.56	J	ADL	1.04E-03	1.04E-04	1.7
1,2,3,6,7,8-HxCDD	0.1	0.639	1.30	J	ADL	3.79E-04	3.79E-05	0.6
1,2,3,7,8,9-HxCDD	0.1	0.626	1.41	Jq	ADL	4.11E-04	4.11E-05	0.7
1,2,3,4,6,7,8-HpCDD	0.01	1.46	3.85	Jq	ADL	1.12E-03	1.12E-05	0.2
OCDD	0.0003	0.699	6.5	JBq	ADL	1.88E-03	5.65E-07	0.0
2,3,7,8-TCDF	0.1	0.412	14.3	J	ADL	4.17E-03	4.17E-04	6.6
1,2,3,7,8-PeCDF	0.03	0.833	1.71	Jq	ADL	4.99E-04	1.50E-05	0.2
2,3,4,7,8-PeCDF	0.3	0.819	3.76	Jq	ADL	1.10E-03	3.29E-04	5.2
1,2,3,4,7,8-HxCDF	0.1	0.691	7.25	Jq	ADL	2.11E-03	2.11E-04	3.4
1,2,3,6,7,8-HxCDF	0.1	0.634	2.52	Jiq	ADL	7.35E-04	7.35E-05	1.2
2,3,4,6,7,8-HxCDF	0.1	0.384	2.84	J	ADL	8.28E-04	8.28E-05	1.3
1,2,3,7,8,9-HxCDF	0.1	0.745	0.745		BDL	2.17E-04	2.17E-05	0.3
1,2,3,4,6,7,8-HpCDF	0.01	0.521	8.13	J	ADL	2.37E-03	2.37E-05	0.4
1,2,3,4,7,8,9-HpCDF	0.01	0.626	0.63		BDL	1.83E-04	1.83E-06	0.0
OCDF	0.0003	4.620	18.10	JBq	ADL	5.28E-03	1.58E-06	0.0
<b>Total D/F</b>					DLL	6.90E-02	1.56E-03	24.8

a = U.S.EPA (2010) Toxic Equivalency Factor (TEF)

EDL = Estimated Detection Limit

BDL = Below the Detection Limit

DLL = Detection Level Limited – at least one but not all analytical values used to calculate the sample mass are less than the laboratory's reported detection limit(s)

ADL = Above Detection Level – the analytical value(s) used to calculate the sample mass is greater than the laboratory's reported detection level(s)

**Laboratory Qualifiers**

B = Compound was found in the laboratory blank and sample.

CI = The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

I = Value is EMPC (estimated maximum possible concentration).

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q = The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.



**Table 2-11 Aisle Scrubber Stack Method 23, Run 3 D/F Results**

Run No.	AS23-3							
Date	45261.00							
Time	1336-1656							
Sample Volume	dscf	125.770						
Sample Volume	m <sup>3</sup>	3.56						
Moisture Content	% v/v	2.2						
O <sub>2</sub> Concentration	% v/v (dry)	20.90						
CO <sub>2</sub> Concentration	% v/v (dry)	0.00						
Isokinetics	%	100.5						
Feed Rate	ton/hr	125.0						
Stack Flowrate	dscfm	1,097,990						
PCDD / PCDF Parameters	TEF (a)	EDL pg	Mass pg	Laboratory Qualifier	Designation	Concentration ng/m3	Concentration ng TEQ/m3	Emission Rate ng TEQ/Mg concentrated ore fed
2,3,7,8-TCDD	1	0.399	0.699	Jq	ADL	1.96E-04	1.96E-04	3.2
1,2,3,7,8-PeCDD	1	0.310	0.800	Jq	ADL	2.25E-04	2.25E-04	3.7
1,2,3,4,7,8-HxCDD	0.1	0.451	3.67	J	ADL	1.03E-03	1.03E-04	1.7
1,2,3,6,7,8-HxCDD	0.1	0.427	1.13	J	ADL	3.17E-04	3.17E-05	0.5
1,2,3,7,8,9-HxCDD	0.1	0.418	2.38	Jq	ADL	6.68E-04	6.68E-05	1.1
1,2,3,4,6,7,8-HpCDD	0.01	0.97	4.22	Jq	ADL	1.18E-03	1.18E-05	0.2
OCDD	0.0003	0.346	10.7	JBq	ADL	3.00E-03	9.01E-07	0.0
2,3,7,8-TCDF	0.1	0.366	17.7	J	ADL	4.97E-03	4.97E-04	8.2
1,2,3,7,8-PeCDF	0.03	0.425	2.56	JI	ADL	7.19E-04	2.16E-05	0.4
2,3,4,7,8-PeCDF	0.3	0.418	4.75	Jq	ADL	1.33E-03	4.00E-04	6.6
1,2,3,4,7,8-HxCDF	0.1	0.472	7.67	J	ADL	2.15E-03	2.15E-04	3.5
1,2,3,6,7,8-HxCDF	0.1	0.433	3.02	J	ADL	8.48E-04	8.48E-05	1.4
2,3,4,6,7,8-HxCDF	0.1	0.467	3.51	J	ADL	9.86E-04	9.86E-05	1.6
1,2,3,7,8,9-HxCDF	0.1	0.508	0.508		BDL	1.43E-04	1.43E-05	0.2
1,2,3,4,6,7,8-HpCDF	0.01	0.205	10.3	Jq	ADL	2.89E-03	2.89E-05	0.5
1,2,3,4,7,8,9-HpCDF	0.01	0.246	1.66	Jq	ADL	4.66E-04	4.66E-06	0.1
OCDF	0.0003	0.207	49.60	JBq	ADL	1.39E-02	4.18E-06	0.1
<b>Total D/F</b>					DLL	9.50E-02	2.00E-03	33.0

a = U.S.EPA (2010) Toxic Equivalency Factor (TEF)

EDL = Estimated Detection Limit

BDL = Below the Detection Limit

DLL = Detection Level Limited – at least one but not all analytical values used to calculate the sample mass are less than the laboratory's reported detection limit(s)

ADL = Above Detection Level – the analytical value(s) used to calculate the sample mass is greater than the laboratory's reported detection level(s)

**Laboratory Qualifiers**

B = Compound was found in the laboratory blank and sample.

CI = The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

I = Value is EMPC (estimated maximum possible concentration).

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q = The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.



**Table 2-12 Aisle Scrubber Stack Method 23, Average D/F Results**

Run No. Date Time		Aisle Scrubber Average				
Sample Volume	dscf	121.811				
Sample Volume	m <sup>3</sup>	3.45				
Moisture Content	% v/v	2.2				
O <sub>2</sub> Concentration	% v/v (dry)	20.90				
CO <sub>2</sub> Concentration	% v/v (dry)	0.00				
Isokinetics	%	100.2				
Feed Rate	ton/hr	125.0				
Stack Flowrate	dscfm	1,067,335				
PCDD / PCDF Parameters	TEF (a)	Mass pg	Designation	Concentration ng/m <sup>3</sup>	Concentration ng TEQ/m <sup>3</sup>	Emission Rate ng TEQ/Mg concentrated ore fed
2,3,7,8-TCDD	1	0.66	DLL	1.92E-04	1.92E-04	3.1
1,2,3,7,8-PeCDD	1	1.57	DLL	4.62E-04	4.62E-04	7.3
1,2,3,4,7,8-HxCDD	0.1	4.09	ADL	1.19E-03	1.19E-04	1.9
1,2,3,6,7,8-HxCDD	0.1	2.13	ADL	6.25E-04	6.25E-05	1.0
1,2,3,7,8,9-HxCDD	0.1	3.26	ADL	9.56E-04	9.56E-05	1.5
1,2,3,4,6,7,8-HpCDD	0.01	9.82	ADL	2.89E-03	2.89E-05	0.5
OCDD	0.0003	20.69	ADL	6.09E-03	1.83E-06	0.0
2,3,7,8-TCDF	0.1	14.43	ADL	4.17E-03	4.17E-04	6.7
1,2,3,7,8-PeCDF	0.03	2.6	ADL	7.66E-04	2.30E-05	0.4
2,3,4,7,8-PeCDF	0.3	6.17	ADL	1.80E-03	5.41E-04	8.6
1,2,3,4,7,8-HxCDF	0.1	9.5	ADL	2.78E-03	2.78E-04	4.4
1,2,3,6,7,8-HxCDF	0.1	3.6	ADL	1.04E-03	1.04E-04	1.7
2,3,4,6,7,8-HxCDF	0.1	4.3	ADL	1.27E-03	1.27E-04	2.0
1,2,3,7,8,9-HxCDF	0.1	0.7	BDL	2.10E-04	2.10E-05	0.3
1,2,3,4,6,7,8-HpCDF	0.01	10.5	ADL	3.06E-03	3.06E-05	0.5
1,2,3,4,7,8,9-HpCDF	0.01	1.5	DLL	4.36E-04	4.36E-06	0.1
OCDF	0.0003	25.3	ADL	7.20E-03	2.16E-06	0.0
<b>Total D/F</b>			DLL	0.127	2.51E-03	39.9

**a = U.S.EPA (2010) Toxic Equivalency Factor (TEF)**

- EDL = Estimated Detection Limit
- BDL = Below the Detection Limit
- DLL = Detection Level Limited – at least one but not all analytical values used to calculate the sample mass are less than the laboratory's reported detection limit(s)
- ADL = Above Detection Level – the analytical value(s) used to calculate the sample mass is greater than the laboratory's reported detection level(s)

**Laboratory Qualifiers**

- B = Compound was found in the laboratory blank and sample.
- CI = The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.
- I = Value is EMPC (estimated maximum possible concentration).
- J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
- q = The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.





### 2.5.2.2 Vent Fume Stack Method 23 Results

Three 180-minute samples were collected at the Vent Fume Stack following Method 23. **Table 2-13**, **Table 2-14**, and **Table 2-15** present the Vent Fume naphthalene and PAHs excluding naphthalene results for sample runs 1 through 3 respectively. **Table 2-16** provides the average Vent Fume PAHs results. The PAHs results tables include concentration (ng/dscm), and emission rate (lb/ton concentrated ore fed) results. **Table 2-17**, **Table 2-18**, and **Table 2-19** list the Vent Fume D/F results for sample runs 1 through 3 respectively. The average Vent Fume D/F results are listed in **Table 2-20**. The D/F results tables include concentration (ng/dscm, ng TEQ/dscm), and emission rate (ng TEQ/MG concentrated ore fed) results.

**Table 2-13 Vent Fume Stack Method 23, Run 1 PAHs Results**

Run No.		VF23-1				
Date		12/2/2023				
Time		1135-1443				
Sample Volume	dscf	134.145				
Sample Volume	m <sup>3</sup>	3.80				
Moisture Content	% v/v	2.0				
O <sub>2</sub> Concentration	% v/v (dry)	20.90				
CO <sub>2</sub> Concentration	% v/v (dry)	0.00				
Isokinetics	%	101.4				
Feed Rate	ton/hr	125.0				
Stack Flowrate	dscfm	243,763				
PAHs Parameters	MDL ng	Mass ng	Laboratory Qualifier	Designation	Concentration ng/m <sup>3</sup>	Emission Rate lb/ton concentrated ore fed
Naphthalene	162	1680		ADL	442.3	3.23E-06
2-Methylnaphthalene	54.0	253		ADL	66.6	4.87E-07
Acenaphthene	12.80	23.5	J	ADL	6.2	4.52E-08
Acenaphthylene	3.80	77		ADL	20.3	1.48E-07
Flourene	11.60	97.6		ADL	25.7	1.88E-07
Phenanthrene	40.0	327		ADL	86.1	6.29E-07
Anthracene	5.60	5.60		BDL	1.5	1.08E-08
Fluoranthene	13.8	83	J	ADL	21.8	1.59E-07
Pyrene	10.6	26		ADL	6.9	5.02E-08
Benzo(a)anthracene	5.80	5.8		BDL	1.5	1.12E-08
Chrysene	7.60	7.6		BDL	2.0	1.46E-08
Benzo(b)fluoranthene	19.6	19.6		BDL	5.2	3.77E-08
Benzo(k)fluoranthene	4.8	4.8		BDL	1.3	9.23E-09
Benzo(e)pyrene	3.40	5.8	J	ADL	1.5	1.11E-08
Benzo(a)pyrene	3.40	4.18	J	ADL	1.1	8.04E-09
Perylene	2.20	8.60	J	ADL	2.3	1.65E-08
Indeno(1,2,3-c,d)pyrene	3.80	3.8		BDL	1.0	7.31E-09
Dibenz(a,h)anthracene	5.40	5.40		BDL	1.4	1.04E-08
Benzo(g,h,i)perylene	12.0	12.0		BDL	3.2	2.31E-08
<b>Total PAHs Excluding Naphthalene</b>				DLL	255.4	1.87E-06

MDL = Method Detection Limit

BDL = Below the Detection Limit

DLL = Detection Level Limited – at least one but not all analytical values used to calculate the sample mass are less than the laboratory's reported detection limit(s)

ADL = Above Detection Level – the analytical value(s) used to calculate the sample mass is greater than the laboratory's detection level(s)

**Laboratory Qualifiers**

B = Compound was found in the laboratory blank and sample.

CI = The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

I = Value is EMPC (estimated maximum possible concentration).

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q = The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.



**Table 2-14 Vent Fume Stack Method 23, Run 2 PAHs Results**

Run No. Date Time		VF23-2 12/3/2023 1236-1544					
Sample Volume	dscf	133.866					
Sample Volume	m <sup>3</sup>	3.79					
Moisture Content	% v/v	2.5					
O <sub>2</sub> Concentration	% v/v (dry)	20.90					
CO <sub>2</sub> Concentration	% v/v (dry)	0.00					
Isokinetics	%	101.6					
Feed Rate	ton/hr	125.0					
Stack Flowrate	dscfm	242,892					
PAHs Parameters	MDL ng	Mass ng	Laboratory Qualifier	Designation	Concentration ng/m <sup>3</sup>	Emission Rate lb/ton concentrated ore fed	
Naphthalene	162.0	944		ADL	249.0	1.81E-06	
2-Methylnaphthalene	54.0	302		ADL	79.7	5.80E-07	
Acenaphthene	12.80	30.1	J	ADL	7.9	5.78E-08	
Acenaphthylene	3.80	36.8	J	ADL	9.7	7.07E-08	
Flourene	11.60	97.0		ADL	25.6	1.86E-07	
Phenanthrene	40.0	390		ADL	102.9	7.49E-07	
Anthracene	5.60	5.60		BDL	1.5	1.08E-08	
Fluoranthene	13.8	90.9		ADL	24.0	1.75E-07	
Pyrene	10.6	25	J	ADL	6.7	4.88E-08	
Benzo(a)anthracene	5.80	5.80		BDL	1.5	1.11E-08	
Chrysene	7.60	7.60		BDL	2.0	1.46E-08	
Benzo(b)fluoranthene	19.6	19.6		BDL	5.2	3.76E-08	
Benzo(k)fluoranthene	4.8	4.8		BDL	1.3	9.22E-09	
Benzo(e)pyrene	3.40	3.8	J	ADL	1.0	7.35E-09	
Benzo(a)pyrene	3.40	3.40		BDL	0.9	6.53E-09	
Perylene	2.20	3.88	J	ADL	1.0	7.45E-09	
Indeno(1,2,3-c,d)pyrene	3.80	3.80		BDL	1.0	7.30E-09	
Dibenz(a,h)anthracene	5.40	5.40		BDL	1.4	1.04E-08	
Benzo(g,h,i)perylene	12.0	12.0		BDL	3.2	2.30E-08	
<b>Total PAHs Excluding Naphthalene</b>				DLL	276.4	2.01E-06	

MDL = Method Detection Limit

BDL = Below the Detection Limit

DLL = Detection Level Limited – at least one but not all analytical values used to calculate the sample mass are less than the laboratory's reported detection limit(s)

ADL = Above Detection Level – the analytical value(s) used to calculate the sample mass is greater than the laboratory's detection level(s)

**Laboratory Qualifiers**

B = Compound was found in the laboratory blank and sample.

CI = The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

I = Value is EMPC (estimated maximum possible concentration).

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q = The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.



**Table 2-15 Vent Fume Stack Method 23, Run 3 PAHs Results**

Run No. Date Time		VF23-4 12/5/2023 0904-1210					
Sample Volume	dscf	137.556					
Sample Volume	m <sup>3</sup>	3.90					
Moisture Content	% v/v	2.0					
O <sub>2</sub> Concentration	% v/v (dry)	20.90					
CO <sub>2</sub> Concentration	% v/v (dry)	0.00					
Isokinetics	%	100.5					
Feed Rate	ton/hr	125.0					
Stack Flowrate	dscfm	252.207					
PAHs Parameters	MDL ng	Mass ng	Laboratory Qualifier	Designation	Concentration ng/m <sup>3</sup>	Emission Rate lb/ton concentrated ore fed	
Naphthalene	162.0	964		ADL	247.5	1.87E-06	
2-Methylnaphthalene	54.0	242		ADL	62.1	4.70E-07	
Acenaphthene	12.80	17.4	J	ADL	4.5	3.38E-08	
Acenaphthylene	3.80	21.0	J	ADL	5.4	4.07E-08	
Flourene	11.60	58.3		ADL	15.0	1.13E-07	
Phenanthrene	40.0	179		ADL	46.0	3.47E-07	
Anthracene	5.60	5.60		BDL	1.4	1.09E-08	
Fluoranthene	13.8	44.7		ADL	11.5	8.67E-08	
Pyrene	10.6	11.2	J	ADL	2.9	2.17E-08	
Benzo(a)anthracene	5.80	5.80		BDL	1.5	1.13E-08	
Chrysene	7.60	7.60		BDL	2.0	1.47E-08	
Benzo(b)fluoranthene	19.6	19.6		BDL	5.0	3.80E-08	
Benzo(k)fluoranthene	4.8	4.8		BDL	1.2	9.31E-09	
Benzo(e)pyrene	3.40	3.40		BDL	0.9	6.60E-09	
Benzo(a)pyrene	3.40	3.40		BDL	0.9	6.60E-09	
Perylene	2.20	4.11	J	ADL	1.1	7.98E-09	
Indeno(1,2,3-c,d)pyrene	3.80	3.80		BDL	1.0	7.37E-09	
Dibenz(a,h)anthracene	5.40	5.40		BDL	1.4	1.05E-08	
Benzo(g,h,i)perylene	12.0	12.0		BDL	3.1	2.33E-08	
<b>Total PAHs Excluding Naphthalene</b>				DLL	166.6	1.26E-06	

MDL = Method Detection Limit

BDL = Below the Detection Limit

DLL = Detection Level Limited – at least one but not all analytical values used to calculate the sample mass are less than the laboratory's reported detection limit(s)

ADL = Above Detection Level – the analytical value(s) used to calculate the sample mass is greater than the laboratory's detection level(s)

**Laboratory Qualifiers**

B = Compound was found in the laboratory blank and sample.

CI = The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

I = Value is EMPC (estimated maximum possible concentration).

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q = The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.



**Table 2-16 Vent Fume Stack Method 23, Average PAHs Results**

	Run No. Date Time	Vent Fume Average			
Sample Volume	dscf	135.189			
Sample Volume	m <sup>3</sup>	3.83			
Moisture Content	% v/v	2.2			
O <sub>2</sub> Concentration	% v/v (dry)	20.90			
CO <sub>2</sub> Concentration	% v/v (dry)	0.00			
Isokinetics	%	101.2			
Feed Rate	ton/hr	125.0			
Stack Flowrate	dscfm	246.287			
PAHs Parameters	Mass pg	Designation	Concentration ng/m3	Emission Rate lb/ton concentrated ore fed	
Naphthalene	1196	ADL	312.9	2.30E-06	
2-Methylnaphthalene	266	ADL	69.5	5.12E-07	
Acenaphthene	23.7	ADL	6.2	4.56E-08	
Acenaphthylene	45	ADL	11.8	8.66E-08	
Flourene	84.3	ADL	22.1	1.62E-07	
Phenanthrene	299	ADL	78.3	5.75E-07	
Anthracene	5.6	BDL	1.5	1.08E-08	
Fluoranthene	73	ADL	19.1	1.40E-07	
Pyrene	21	ADL	5.5	4.02E-08	
Benzo(a)anthracene	5.80	BDL	1.5	1.12E-08	
Chrysene	7.6	BDL	2.0	1.47E-08	
Benzo(b)fluoranthene	19.6	BDL	5.1	3.78E-08	
Benzo(k)fluoranthene	4.8	BDL	1.3	9.25E-09	
Benzo(e)pyrene	4.3	DLL	1.1	8.36E-09	
Benzo(a)pyrene	3.66	DLL	1.0	7.06E-09	
Perylene	5.53	ADL	1.4	1.07E-08	
Indeno(1,2,3-c,d)pyrene	3.8	BDL	1.0	7.33E-09	
Dibenz(a,h)anthracene	5.40	BDL	1.4	1.04E-08	
Benzo(g,h,i)perylene	12.0	BDL	3.1	2.31E-08	
<b>Total PAHs Excluding Naphthalene</b>		DLL	232.8	1.71E-06	

MDL = Method Detection Limit

BDL = Below the Detection Limit

DLL = Detection Level Limited – at least one but not all analytical values used to calculate the sample mass are less than the laboratory's reported detection limit(s)

ADL = Above Detection Level – the analytical value(s) used to calculate the sample mass is greater than the laboratory's detection level(s)

**Laboratory Qualifiers**

B = Compound was found in the laboratory blank and sample.

CI = The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

I = Value is EMPC (estimated maximum possible concentration).

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q = The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.



**Table 2-17 Vent Fume Stack Method 23, Run 1 D/F Results**

Run No. Date Time		VF23-1 12/2/2023 1135-1443							
Sample Volume	dscf	134.145							
Sample Volume	m <sup>3</sup>	3.80							
Moisture Content	% v/v	2.0							
O <sub>2</sub> Concentration	% v/v (dry)	20.90							
CO <sub>2</sub> Concentration	% v/v (dry)	0.00							
Isokinetics	%	101.4							
Feed Rate	ton/hr	125.0							
Stack Flowrate	dscfm	243,763							
PCDD / PCDF Parameters	TEF (a)	EDL pg	Mass pg	Laboratory Qualifier	Designation	Concentration ng/m3	Concentration ng TEQ/m3	Emission Rate ng TEQ/Mg concentrated ore fed	
2,3,7,8-TCDD	1	0.241	0.910	Jq	ADL	2.40E-04	2.40E-04	0.9	
1,2,3,7,8-PeCDD	1	0.368	0.368		BDL	9.69E-05	9.69E-05	0.4	
1,2,3,4,7,8-HxCDD	0.1	0.495	3.65	J	ADL	9.61E-04	9.61E-05	0.4	
1,2,3,6,7,8-HxCDD	0.1	0.468	0.87	Jq	ADL	2.29E-04	2.29E-05	0.1	
1,2,3,7,8,9-HxCDD	0.1	0.459	0.85	Jq	ADL	2.24E-04	2.24E-05	0.1	
1,2,3,4,6,7,8-HpCDD	0.01	0.861	0.861		BDL	2.27E-04	2.27E-06	0.0	
OCDD	0.0003	0.466	29.4	JB	ADL	7.74E-03	2.32E-06	0.0	
2,3,7,8-TCDF	0.1	0.861	8.59	J	ADL	2.26E-03	2.26E-04	0.8	
1,2,3,7,8-PeCDF	0.03	0.575	4.92	Jl	ADL	1.30E-03	3.89E-05	0.1	
2,3,4,7,8-PeCDF	0.3	0.566	10.6	Jl	ADL	2.79E-03	8.37E-04	3.1	
1,2,3,4,7,8-HxCDF	0.1	0.597	13.0	J	ADL	3.42E-03	3.42E-04	1.3	
1,2,3,6,7,8-HxCDF	0.1	0.548	4.85	Jl	ADL	1.28E-03	1.28E-04	0.5	
2,3,4,6,7,8-HxCDF	0.1	0.591	2.71	Jq	ADL	7.13E-04	7.13E-05	0.3	
1,2,3,7,8,9-HxCDF	0.1	0.644	0.644		BDL	1.70E-04	1.70E-05	0.1	
1,2,3,4,6,7,8-HpCDF	0.01	0.252	5.85	Jq	ADL	1.54E-03	1.54E-05	0.1	
1,2,3,4,7,8,9-HpCDF	0.01	0.302	0.302		BDL	7.95E-05	7.95E-07	0.0	
OCDF	0.0003	0.327	3.96	JqB	ADL	1.04E-03	3.13E-07	0.0	
<b>Total D/F</b>					DLL	0.193	2.16E-03	7.9	

a = U.S.EPA (2010) Toxic Equivalency Factor (TEF)

EDL = Estimated Detection Limit

BDL = Below the Detection Limit

DLL = Detection Level Limited – at least one but not all analytical values used to calculate the sample mass are less than the laboratory's reported detection limit(s)

ADL = Above Detection Level – the analytical value(s) used to calculate the sample mass is greater than the laboratory's detection level(s)

**Laboratory Qualifiers**

B = Compound was found in the laboratory blank and sample.

CI = The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

I = Value is EMPC (estimated maximum possible concentration).

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q = The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.



**Table 2-18 Vent Fume Stack Method 23, Run 2 D/F Results**

	Run No. Date Time	VF23-2 12/3/2023 1236-1544							
Sample Volume	dscf	133.866							
Sample Volume	m <sup>3</sup>	3.79							
Moisture Content	% v/v	2.5							
O <sub>2</sub> Concentration	% v/v (dry)	20.90							
CO <sub>2</sub> Concentration	% v/v (dry)	0.00							
Isokinetics	%	101.6							
Feed Rate	ton/hr	125.0							
Stack Flowrate	dscfm	242,892							
PCDD / PCDF Parameters	TEF (a)	EDL pg	Mass pg	Laboratory Qualifier	Designation	Concentration ng/m <sup>3</sup>	Concentration ng TEQ/m <sup>3</sup>	Emission Rate ng TEQ/Mg concentrated ore fed	
2,3,7,8-TCDD	1	0.159	0.425	Jq	ADL	1.12E-04	1.12E-04	0.4	
1,2,3,7,8-PeCDD	1	0.218	0.650	Jq	ADL	1.71E-04	1.71E-04	0.6	
1,2,3,4,7,8-HxCDD	0.1	0.460	3.70	J	ADL	9.76E-04	9.76E-05	0.4	
1,2,3,6,7,8-HxCDD	0.1	0.435	0.435		BDL	1.15E-04	1.15E-05	0.0	
1,2,3,7,8,9-HxCDD	0.1	0.427	0.427		BDL	1.13E-04	1.13E-05	0.0	
1,2,3,4,6,7,8-HpCDD	0.01	0.326	0.803	Jq	ADL	2.12E-04	2.12E-06	0.0	
OCDD	0.0003	0.354	2.19	JB	ADL	5.78E-04	1.73E-07	0.0	
2,3,7,8-TCDF	0.1	0.439	4.64	J	ADL	1.22E-03	1.22E-04	0.4	
1,2,3,7,8-PeCDF	0.03	0.494	2.09	J	ADL	5.51E-04	1.65E-05	0.1	
2,3,4,7,8-PeCDF	0.3	0.486	3.74	J	ADL	9.87E-04	2.96E-04	1.1	
1,2,3,4,7,8-HxCDF	0.1	0.367	4.68	J	ADL	1.23E-03	1.23E-04	0.4	
1,2,3,6,7,8-HxCDF	0.1	0.337	1.30	Jq	ADL	3.43E-04	3.43E-05	0.1	
2,3,4,6,7,8-HxCDF	0.1	0.363	1.21	Jq	ADL	3.19E-04	3.19E-05	0.1	
1,2,3,7,8,9-HxCDF	0.1	0.395	0.395		BDL	1.04E-04	1.04E-05	0.0	
1,2,3,4,6,7,8-HpCDF	0.01	0.272	1.59	Jq	ADL	4.19E-04	4.19E-06	0.0	
1,2,3,4,7,8,9-HpCDF	0.01	0.327	0.327		BDL	8.63E-05	8.63E-07	0.0	
OCDF	0.0003	0.142	1.66	JBq	ADL	4.38E-04	1.31E-07	0.0	
<b>Total D/F</b>					DLL	8.20E-02	1.05E-03	3.8	

a = U.S.EPA (2010) Toxic Equivalency Factor (TEF)

EDL = Estimated Detection Limit

BDL = Below the Detection Limit

DLL = Detection Level Limited – at least one but not all analytical values used to calculate the sample mass are less than the laboratory's reported detection limit(s)

ADL = Above Detection Level – the analytical value(s) used to calculate the sample mass is greater than the laboratory's detection level(s)

**Laboratory Qualifiers**

B = Compound was found in the laboratory blank and sample.

CI = The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

I = Value is EMPC (estimated maximum possible concentration).

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q = The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.



**Table 2-19 Vent Fume Stack Method 23, Run 4 D/F Results**

Run No.	VF23-4							
Date	12/5/2023							
Time	0904-1210							
Sample Volume	dscf	137.556						
Sample Volume	m <sup>3</sup>	3.90						
Moisture Content	% v/v	2.0						
O <sub>2</sub> Concentration	% v/v (dry)	20.90						
CO <sub>2</sub> Concentration	% v/v (dry)	0.00						
Isokinetics	%	100.5						
Feed Rate	ton/hr	125.0						
Stack Flowrate	dscfm	252.207						
PCDD / PCDF Parameters	TEF (a)	EDL pg	Mass pg	Laboratory Qualifier	Designation	Concentration ng/m3	Concentration ng TEQ/m3	Emission Rate ng TEQ/Mg concentrated ore fed
2,3,7,8-TCDD	1	0.600	0.600		BDL	1.54E-04	1.54E-04	0.6
1,2,3,7,8-PeCDD	1	0.396	0.396		BDL	1.02E-04	1.02E-04	0.4
1,2,3,4,7,8-HxCDD	0.1	0.474	2.98	Jq	ADL	7.65E-04	7.65E-05	0.3
1,2,3,6,7,8-HxCDD	0.1	0.449	0.62	J	ADL	1.58E-04	1.58E-05	0.1
1,2,3,7,8,9-HxCDD	0.1	0.440	1.21	Jq	ADL	3.11E-04	3.11E-05	0.1
1,2,3,4,6,7,8-HpCDD	0.01	2.10	2.10		BDL	5.39E-04	5.39E-06	0.0
OCDD	0.0003	0.681	2.4	JB	ADL	6.19E-04	1.86E-07	0.0
2,3,7,8-TCDF	0.1	1.470	3.6	Jq	ADL	9.29E-04	9.29E-05	0.4
1,2,3,7,8-PeCDF	0.03	0.594	2.43	Jiq	ADL	6.24E-04	1.87E-05	0.1
2,3,4,7,8-PeCDF	0.3	0.585	5.07	JI	ADL	1.30E-03	3.90E-04	1.5
1,2,3,4,7,8-HxCDF	0.1	0.412	8.02	J	ADL	2.06E-03	2.06E-04	0.8
1,2,3,6,7,8-HxCDF	0.1	0.378	1.96	Jq	ADL	5.03E-04	5.03E-05	0.2
2,3,4,6,7,8-HxCDF	0.1	0.408	2.04	J	ADL	5.24E-04	5.24E-05	0.2
1,2,3,7,8,9-HxCDF	0.1	0.444	0.444		BDL	1.14E-04	1.14E-05	0.0
1,2,3,4,6,7,8-HpCDF	0.01	0.353	5.48	J	ADL	1.41E-03	1.41E-05	0.1
1,2,3,4,7,8,9-HpCDF	0.01	0.425	0.425		BDL	1.09E-04	1.09E-06	0.0
OCDF	0.0003	0.335	1.55	JB	ADL	3.98E-04	1.19E-07	0.0
<b>Total D/F</b>					DLL	1.31E-01	1.22E-03	4.6

a = U.S.EPA (2010) Toxic Equivalency Factor (TEF)

EDL = Estimated Detection Limit

BDL = Below the Detection Limit

DLL = Detection Level Limited – at least one but not all analytical values used to calculate the sample mass are less than the laboratory's reported detection limit(s)

ADL = Above Detection Level – the analytical value(s) used to calculate the sample mass is greater than the laboratory's detection level(s)

**Laboratory Qualifiers**

B = Compound was found in the laboratory blank and sample.

CI = The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

I = Value is EMPC (estimated maximum possible concentration).

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q = The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.



**Table 2-20 Vent Fume Stack Method 23, Average D/F Results**

Run No. Date Time		Vent Fume Average				
Sample Volume	dscf	135.189				
Sample Volume	m <sup>3</sup>	3.83				
Moisture Content	% v/v	2.2				
O <sub>2</sub> Concentration	% v/v (dry)	20.90				
CO <sub>2</sub> Concentration	% v/v (dry)	0.00				
Isokinetics	%	101.2				
Feed Rate	ton/hr	125.0				
Stack Flowrate	dscfm	246,287				
PCDD / PCDF Parameters	TEF (a)	Mass pg	Designation	Concentration ng/m <sup>3</sup>	Concentration ng TEQ/m <sup>3</sup>	Emission Rate ng TEQ/Mg concentrated ore fed
2,3,7,8-TCDD	1	0.65	DLL	1.69E-04	1.69E-04	0.6
1,2,3,7,8-PeCDD	1	0.47	DLL	1.23E-04	1.23E-04	0.5
1,2,3,4,7,8-HxCDD	0.1	3.44	ADL	9.01E-04	9.01E-05	0.3
1,2,3,6,7,8-HxCDD	0.1	0.64	DLL	1.67E-04	1.67E-05	0.1
1,2,3,7,8,9-HxCDD	0.1	0.83	DLL	2.16E-04	2.16E-05	0.1
1,2,3,4,6,7,8-HpCDD	0.01	1.25	DLL	3.26E-04	3.26E-06	0.0
OCDD	0.0003	11.33	ADL	2.98E-03	8.94E-07	0.0
2,3,7,8-TCDF	0.1	5.62	ADL	1.47E-03	1.47E-04	0.5
1,2,3,7,8-PeCDF	0.03	3.1	ADL	8.23E-04	2.47E-05	0.1
2,3,4,7,8-PeCDF	0.3	6.47	ADL	1.69E-03	5.08E-04	1.9
1,2,3,4,7,8-HxCDF	0.1	8.6	ADL	2.24E-03	2.24E-04	0.8
1,2,3,6,7,8-HxCDF	0.1	2.7	ADL	7.08E-04	7.08E-05	0.3
2,3,4,6,7,8-HxCDF	0.1	2.0	ADL	5.19E-04	5.19E-05	0.2
1,2,3,7,8,9-HxCDF	0.1	0.5	BDL	1.29E-04	1.29E-05	0.0
1,2,3,4,6,7,8-HpCDF	0.01	4.3	ADL	1.12E-03	1.12E-05	0.0
1,2,3,4,7,8,9-HpCDF	0.01	0.4	BDL	9.16E-05	9.16E-07	0.0
OCDF	0.0003	2.4	ADL	6.26E-04	1.88E-07	0.0
<b>Total D/F</b>			DLL	0.135	1.48E-03	5.4

a = U.S.EPA (2010) Toxic Equivalency Factor (TEF)

EDL = Estimated Detection Limit

BDL = Below the Detection Limit

DLL = Detection Level Limited – at least one but not all analytical values used to calculate the sample mass are less than the laboratory's reported detection limit(s)

ADL = Above Detection Level – the analytical value(s) used to calculate the sample mass is greater than the laboratory's detection level(s)

**Laboratory Qualifiers**

B = Compound was found in the laboratory blank and sample.

CI = The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

I = Value is EMPC (estimated maximum possible concentration).

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q = The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.





### 2.5.2.3 Acid Plant Tail Gas Stack Method 23 Results

Three 180-minute samples were collected at the APTG Stack following Method 23. **Table 2-21**, **Table 2-22**, and **Table 2-23** present the APTG Stack naphthalene and PAHs excluding naphthalene results for sample runs 1 through 3 respectively. **Table 2-24** provides the average APTG Stack PAHs results. The PAHs results tables include concentration (ng/dscm), and emission rate (lb/ton concentrated ore fed) results. **Table 2-25**, **Table 2-26**, and **Table 2-27** list the APTG Stack D/F results for sample runs 1 through 3 respectively. The average APTG Stack D/F results are listed in **Table 2-28**. The D/F results tables include concentration (ng/dscm, ng TEQ/dscm), and emission rate (ng TEQ/MG concentrated ore fed) results.

**Table 2-21 Acid Plant Tail Gas Stack Method 23, Run 1 PAHs Results**

		AP23-1				
		12/6/2023				
		0840-1147				
Sample Volume	dscf	128.587				
Sample Volume	m <sup>3</sup>	3.64				
Moisture Content	% v/v	3.7				
O <sub>2</sub> Concentration	% v/v (dry)	12.00				
CO <sub>2</sub> Concentration	% v/v (dry)	0.50				
Isokinetics	%	101.1				
Feed Rate	ton/hr	125.0				
Stack Flowrate	dscfm	145,148				
PAHs Parameters	MDL ng	Mass ng	Laboratory Qualifier	Designation	Concentration ng/m <sup>3</sup>	Emission Rate lb/ton concentrated ore fed
Naphthalene	162	162		BDL	44.5	1.94E-07
2-Methylnaphthalene	54.0	54.0		BDL	14.8	6.45E-08
Acenaphthene	12.8	12.8		BDL	3.5	1.53E-08
Acenaphthylene	3.80	3.80		BDL	1.0	4.54E-09
Flourene	11.6	11.6		BDL	3.2	1.39E-08
Phenanthrene	40.0	42.2	J	ADL	11.6	5.04E-08
Anthracene	5.60	7.13	J	ADL	2.0	8.52E-09
Fluoranthene	13.8	16.3	J	ADL	4.5	1.95E-08
Pyrene	10.6	18.5	J	ADL	5.1	2.21E-08
Benzo(a)anthracene	5.80	5.80		BDL	1.6	6.93E-09
Chrysene	7.60	7.60		BDL	2.1	9.08E-09
Benzo(b)fluoranthene	19.6	19.6		BDL	5.4	2.34E-08
Benzo(k)fluoranthene	4.80	4.80		BDL	1.3	5.73E-09
Benzo(e)pyrene	3.40	5.81	J	ADL	1.6	6.94E-09
Benzo(a)pyrene	3.40	3.40		BDL	0.9	4.06E-09
Perylene	2.20	3.37	J	ADL	0.9	4.03E-09
Indeno(1,2,3-c,d)pyrene	3.80	3.80		BDL	1.0	4.54E-09
Dibenz(a,h)anthracene	5.40	5.40		BDL	1.5	6.45E-09
Benzo(g,h,i)perylene	12.0	12.0		BDL	3.3	1.43E-08
<b>Total PAHs Excluding Naphthalene</b>				DLL	65.3	2.84E-07

MDL = Method Detection Limit

BDL = Below the Detection Limit

DLL = Detection Level Limited – at least one but not all analytical values used to calculate the sample mass are less than the laboratory's reported detection limit(s)

ADL = Above Detection Level – the analytical value(s) used to calculate the sample mass is greater than the laboratory's detection level(s)

**Laboratory Qualifiers**

B = Compound was found in the laboratory blank and sample.

CI = The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

I = Value is EMPC (estimated maximum possible concentration).

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q = The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.



**Table 2-22 Acid Plant Tail Gas Stack Method 23, Run 2 PAHs Results**

		AP23-2 12/6/2023 1230-1538					
Sample Volume	dscf	129.999					
Sample Volume	m <sup>3</sup>	3.68					
Moisture Content	% v/v	3.6					
O <sub>2</sub> Concentration	% v/v (dry)	11.00					
CO <sub>2</sub> Concentration	% v/v (dry)	0.50					
Isokinetics	%	100.4					
Feed Rate	ton/hr	125.0					
Stack Flowrate	dscfm	147,811					
PAHs Parameters	MDL ng	Mass ng	Laboratory Qualifier	Designation	Concentration ng/m <sup>3</sup>	Emission Rate lb/ton concentrated ore fed	
Naphthalene	162	162	B	BDL	44.0	1.95E-07	
2-Methylnaphthalene	54.0	54.0		BDL	14.7	6.50E-08	
Acenaphthene	12.8	12.8		BDL	3.5	1.54E-08	
Acenaphthylene	3.80	3.80		BDL	1.0	4.57E-09	
Flourene	11.6	12.6	J	ADL	3.4	1.52E-08	
Phenanthrene	40.0	45	J	ADL	12.3	5.44E-08	
Anthracene	5.60	5.60		BDL	1.5	6.74E-09	
Fluoranthene	13.8	28.6		ADL	7.8	3.44E-08	
Pyrene	10.6	41.1	J	ADL	11.2	4.95E-08	
Benzo(a)anthracene	5.80	5.80		BDL	1.6	6.98E-09	
Chrysene	7.60	7.60		BDL	2.1	9.15E-09	
Benzo(b)fluoranthene	19.6	19.6		BDL	5.3	2.36E-08	
Benzo(k)fluoranthene	4.80	4.80		BDL	1.3	5.78E-09	
Benzo(e)pyrene	3.40	29.7		ADL	8.1	3.57E-08	
Benzo(a)pyrene	3.40	3.40		BDL	0.9	4.09E-09	
Perylene	2.20	4.12	J	ADL	1.1	4.96E-09	
Indeno(1,2,3-c,d)pyrene	3.80	11.0	J	ADL	3.0	1.32E-08	
Dibenz(a,h)anthracene	5.40	5.40		BDL	1.5	6.50E-09	
Benzo(g,h,i)perylene	12.0	61.4		ADL	16.7	7.39E-08	
<b>Total PAHs Excluding Naphthalene</b>				DLL	96.8	4.29E-07	

MDL = Method Detection Limit

BDL = Below the Detection Limit

DLL = Detection Level Limited – at least one but not all analytical values used to calculate the sample mass are less than the laboratory's reported detection limit(s)

ADL = Above Detection Level – the analytical value(s) used to calculate the sample mass is greater than the laboratory's detection level(s)

**Laboratory Qualifiers**

B = Compound was found in the laboratory blank and sample.

CI = The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

I = Value is EMPC (estimated maximum possible concentration).

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q = The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.



**Table 2-23 Acid Plant Tail Gas Stack Method 23, Run 3 PAHs Results**

Run No. Date Time	AP23-3 12/7/2023 0828-1137					
Sample Volume	dscf	130.482				
Sample Volume	m <sup>3</sup>	3.69				
Moisture Content	% v/v	3.8				
O <sub>2</sub> Concentration	% v/v (dry)	9.00				
CO <sub>2</sub> Concentration	% v/v (dry)	1.00				
Isokinetics	%	100.3				
Feed Rate	ton/hr	125.0				
Stack Flowrate	dscfm	148,432				
PAHs Parameters	MDL ng	Mass ng	Laboratory Qualifier	Designation	Concentration ng/m <sup>3</sup>	Emission Rate lb/ton concentrated ore fed
Naphthalene	162	162		BDL	43.8	1.95E-07
2-Methylnaphthalene	54.0	54.0		BDL	14.6	6.50E-08
Acenaphthene	12.8	12.8		BDL	3.5	1.54E-08
Acenaphthylene	3.80	3.80		BDL	1.0	4.57E-09
Flourene	11.6	11.6		BDL	3.1	1.40E-08
Phenanthrene	40.0	40.0		BDL	10.8	4.82E-08
Anthracene	5.60	5.60		BDL	1.5	6.74E-09
Fluoranthene	13.8	13.8		BDL	3.7	1.66E-08
Pyrene	10.6	11.4	J	ADL	3.1	1.37E-08
Benzo(a)anthracene	5.80	5.80		BDL	1.6	6.98E-09
Chrysene	7.60	7.60		BDL	2.1	9.15E-09
Benzo(b)fluoranthene	19.6	19.6		BDL	5.3	2.36E-08
Benzo(k)fluoranthene	4.80	4.80		BDL	1.3	5.78E-09
Benzo(e)pyrene	3.40	3.40		BDL	0.9	4.09E-09
Benzo(a)pyrene	3.40	4.94	J	ADL	1.3	5.95E-09
Perylene	2.20	2.20		BDL	0.6	2.65E-09
Indeno(1,2,3-c,d)pyrene	3.80	3.80		BDL	1.0	4.57E-09
Dibenz(a,h)anthracene	5.40	5.40		BDL	1.5	6.50E-09
Benzo(g,h,i)perylene	12.0	12.0		BDL	3.2	1.44E-08
<b>Total PAHs Excluding Naphthalene</b>				DLL	60.2	2.68E-07

MDL = Method Detection Limit

BDL = Below the Detection Limit

DLL = Detection Level Limited – at least one but not all analytical values used to calculate the sample mass are less than the laboratory's reported detection limit(s)

ADL = Above Detection Level – the analytical value(s) used to calculate the sample mass is greater than the laboratory's detection level(s)

**Laboratory Qualifiers**

B = Compound was found in the laboratory blank and sample.

CI = The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

I = Value is EMPC (estimated maximum possible concentration).

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q = The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio.

The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.



**Table 2-24 Acid Plant Tail Gas Stack Method 23, Average PAHs Results**

	Run No. Date Time	Acid Plant Tail Gas Average			
Sample Volume	dscf	129.689			
Sample Volume	m <sup>3</sup>	3.67			
Moisture Content	% v/v	3.7			
O <sub>2</sub> Concentration	% v/v (dry)	10.67			
CO <sub>2</sub> Concentration	% v/v (dry)	0.67			
Isokinetics	%	100.6			
Feed Rate	ton/hr	125.0			
Stack Flowrate	dscfm	147,131			
PAHs Parameters	Mass pg	Designation	Concentration ng/m3	Emission Rate lb/ton concentrated ore fed	
Naphthalene	162	BDL	44.1	1.95E-07	
2-Methylnaphthalene	54	BDL	14.7	6.48E-08	
Acenaphthene	12.8	BDL	3.5	1.54E-08	
Acenaphthylene	4	BDL	1.0	4.56E-09	
Flourene	11.9	DLL	3.2	1.43E-08	
Phenanthrene	42	DLL	11.6	5.10E-08	
Anthracene	6.1	DLL	1.7	7.33E-09	
Fluoranthene	20	DLL	5.3	2.35E-08	
Pyrene	24	ADL	6.4	2.84E-08	
Benzo(a)anthracene	5.80	BDL	1.6	6.96E-09	
Chrysene	7.6	BDL	2.1	9.12E-09	
Benzo(b)fluoranthene	19.6	BDL	5.3	2.35E-08	
Benzo(k)fluoranthene	4.8	BDL	1.3	5.76E-09	
Benzo(e)pyrene	13.0	DLL	3.5	1.56E-08	
Benzo(a)pyrene	3.91	DLL	1.1	4.70E-09	
Perylene	3.23	DLL	0.9	3.88E-09	
Indeno(1,2,3-c,d)pyrene	6.2	DLL	1.7	7.45E-09	
Dibenz(a,h)anthracene	5.40	BDL	1.5	6.48E-09	
Benzo(g,h,i)perylene	28.5	DLL	7.7	3.42E-08	
<b>Total PAHs Excluding Naphthalene</b>		DLL	74.1	3.27E-07	

MDL = Method Detection Limit

BDL = Below the Detection Limit

DLL = Detection Level Limited – at least one but not all analytical values used to calculate the sample mass are less than the laboratory's reported detection limit(s)

ADL = Above Detection Level – the analytical value(s) used to calculate the sample mass is greater than the laboratory's detection level(s)

**Laboratory Qualifiers**

B = Compound was found in the laboratory blank and sample.

CI = The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

I = Value is EMPC (estimated maximum possible concentration).

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q = The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio.

The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.



**Table 2-25 Acid Plant Tail Gas Stack Method 23, Run 1 D/F Results**

Run No. Date Time		AP23-1 12/6/2023 0840-1147							
Sample Volume	dscf	128,587							
Sample Volume	m <sup>3</sup>	3.64							
Moisture Content	% v/v	3.7							
O <sub>2</sub> Concentration	% v/v (dry)	12.00							
CO <sub>2</sub> Concentration	% v/v (dry)	0.50							
Isokinetics	%	101.1							
Feed Rate	ton/hr	125.0							
Stack Flowrate	dscfm	145,148							
PCDD / PCDF Parameters	TEF (a)	EDL pg	Mass pg	Laboratory Qualifier	Designation	Concentration ng/m3	Concentration ng TEQ/m3	Emission Rate ng TEQ/Mg concentrated ore fed	
2,3,7,8-TCDD	1	0.161	0.161		BDL	4.42E-05	4.42E-05	0.1	
1,2,3,7,8-PeCDD	1	0.439	0.439		BDL	1.21E-04	1.21E-04	0.3	
1,2,3,4,7,8-HxCDD	0.1	0.614	3.06	J	ADL	8.40E-04	8.40E-05	0.2	
1,2,3,6,7,8-HxCDD	0.1	0.581	0.581		BDL	1.60E-04	1.60E-05	0.0	
1,2,3,7,8,9-HxCDD	0.1	0.569	0.569		BDL	1.56E-04	1.56E-05	0.0	
1,2,3,4,6,7,8-HpCDD	0.01	0.458	0.458		BDL	1.26E-04	1.26E-06	0.0	
OCDD	0.0003	0.553	2.55	JB	ADL	7.00E-04	2.10E-07	0.0	
2,3,7,8-TCDF	0.1	0.301	1.76	Jq	ADL	4.83E-04	4.83E-05	0.1	
1,2,3,7,8-PeCDF	0.03	0.546	0.55		BDL	1.50E-04	4.50E-06	0.0	
2,3,4,7,8-PeCDF	0.3	0.537	0.729	Jq	ADL	2.00E-04	6.01E-05	0.1	
1,2,3,4,7,8-HxCDF	0.1	0.418	1.24	J	ADL	3.41E-04	3.41E-05	0.1	
1,2,3,6,7,8-HxCDF	0.1	0.384	0.38		BDL	1.05E-04	1.05E-05	0.0	
2,3,4,6,7,8-HxCDF	0.1	0.414	0.41		BDL	1.14E-04	1.14E-05	0.0	
1,2,3,7,8,9-HxCDF	0.1	0.451	0.45		BDL	1.24E-04	1.24E-05	0.0	
1,2,3,4,6,7,8-HpCDF	0.01	0.271	0.955	Jq	ADL	2.62E-04	2.62E-06	0.0	
1,2,3,4,7,8,9-HpCDF	0.01	0.326	0.33		BDL	8.95E-05	8.95E-07	0.0	
OCDF	0.0003	0.351	1.25	J	ADL	3.43E-04	1.03E-07	0.0	
<b>Total D/F</b>					DLL	0.012	4.67E-04	1.0	

a = U.S.EPA (2010) Toxic Equivalency Factor (TEF)

EDL = Estimated Detection Limit

BDL = Below the Detection Limit

DLL = Detection Level Limited – at least one but not all analytical values used to calculate the sample mass are less than the laboratory's reported detection limit(s)

ADL = Above Detection Level – the analytical value(s) used to calculate the sample mass is greater than the laboratory's detection level(s)

**Laboratory Qualifiers**

B = Compound was found in the laboratory blank and sample.

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I = Value is EMPC (estimated maximum possible concentration).

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q = The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.



**Table 2-26 Acid Plant Tail Gas Stack Method 23, Run 2 D/F Results**

Run No.		AP23-2							
Date		12/6/2023							
Time		1230-1538							
Sample Volume	dscf	129.999							
Sample Volume	m <sup>3</sup>	3.68							
Moisture Content	% v/v	3.6							
O <sub>2</sub> Concentration	% v/v (dry)	11.00							
CO <sub>2</sub> Concentration	% v/v (dry)	0.50							
Isokinetics	%	100.4							
Feed Rate	ton/hr	125.0							
Stack Flowrate	dscfm	147.811							
PCDD / PCDF Parameters	TEF (a)	EDL pg	Mass pg	Laboratory Qualifier	Designation	Concentration ng/m <sup>3</sup>	Concentration ng TEQ/m <sup>3</sup>	Emission Rate ng TEQ/Mg concentrated ore fed	
2,3,7,8-TCDD	1	0.143	0.307	Jq	ADL	8.34E-05	8.34E-05	0.2	
1,2,3,7,8-PeCDD	1	0.298	0.30		BDL	8.10E-05	8.10E-05	0.2	
1,2,3,4,7,8-HxCDD	0.1	0.473	3.26	J	ADL	8.86E-04	8.86E-05	0.2	
1,2,3,6,7,8-HxCDD	0.1	0.448	0.448		BDL	1.22E-04	1.22E-05	0.0	
1,2,3,7,8,9-HxCDD	0.1	0.439	0.439		BDL	1.19E-04	1.19E-05	0.0	
1,2,3,4,6,7,8-HpCDD	0.01	2.12	2.12		BDL	5.76E-04	5.76E-06	0.0	
OCDD	0.0003	0.555	4.40	JqB	ADL	1.20E-03	3.59E-07	0.0	
2,3,7,8-TCDF	0.1	0.230	1.60	J	ADL	4.35E-04	4.35E-05	0.1	
1,2,3,7,8-PeCDF	0.03	0.449	0.449		BDL	1.22E-04	3.66E-06	0.0	
2,3,4,7,8-PeCDF	0.3	0.442	0.442		BDL	1.20E-04	3.60E-05	0.1	
1,2,3,4,7,8-HxCDF	0.1	0.587	0.587		BDL	1.59E-04	1.59E-05	0.0	
1,2,3,6,7,8-HxCDF	0.1	0.538	0.538		BDL	1.46E-04	1.46E-05	0.0	
2,3,4,6,7,8-HxCDF	0.1	0.581	0.581		BDL	1.58E-04	1.58E-05	0.0	
1,2,3,7,8,9-HxCDF	0.1	0.632	0.632		BDL	1.72E-04	1.72E-05	0.0	
1,2,3,4,6,7,8-HpCDF	0.01	0.379	0.878	Jq	ADL	2.39E-04	2.39E-06	0.0	
1,2,3,4,7,8,9-HpCDF	0.01	0.455	0.455		BDL	1.24E-04	1.24E-06	0.0	
OCDF	0.0003	0.197	1.62	JB	ADL	4.40E-04	1.32E-07	0.0	
<b>Total D/F</b>					DLL	8.49E-03	4.34E-04	1.0	

a = U.S.EPA (2010) Toxic Equivalency Factor (TEF)

EDL = Estimated Detection Limit

BDL = Below the Detection Limit

DLL = Detection Level Limited – at least one but not all analytical values used to calculate the sample mass are less than the laboratory's reported detection limit(s)

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**Laboratory Qualifiers**

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I = Value is EMPC (estimated maximum possible concentration).

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q = The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio.

The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.



**Table 2-27 Acid Plant Tail Gas Stack Method 23, Run 3 D/F Results**

Run No.	AP23-3							
Date	12/7/2023							
Time	0828-1137							
Sample Volume	dscf	130.482						
Sample Volume	m <sup>3</sup>	3.69						
Moisture Content	% v/v	3.8						
O <sub>2</sub> Concentration	% v/v (dry)	9.00						
CO <sub>2</sub> Concentration	% v/v (dry)	1.00						
Isokinetics	%	100.3						
Feed Rate	ton/hr	125.0						
Stack Flowrate	dscfm	148,432						
PCDD / PCDF Parameters	TEF (a)	EDL pg	Mass pg	Laboratory Qualifier	Designation	Concentration ng/m3	Concentration ng TEQ/m3	Emission Rate ng TEQ/Mg concentrated ore fed
2,3,7,8-TCDD	1	0.732	0.732		BDL	1.98E-04	1.98E-04	0.4
1,2,3,7,8-PeCDD	1	0.440	0.440		BDL	1.19E-04	1.19E-04	0.3
1,2,3,4,7,8-HxCDD	0.1	0.517	3.21	J	ADL	8.69E-04	8.69E-05	0.2
1,2,3,6,7,8-HxCDD	0.1	0.489	0.489		BDL	1.32E-04	1.32E-05	0.0
1,2,3,7,8,9-HxCDD	0.1	0.480	0.480		BDL	1.30E-04	1.30E-05	0.0
1,2,3,4,6,7,8-HpCDD	0.01	1.83	1.83		BDL	4.95E-04	4.95E-06	0.0
OCDD	0.0003	0.544	2.11	JB	ADL	5.71E-04	1.71E-07	0.0
2,3,7,8-TCDF	0.1	0.271	2.14	J	ADL	5.79E-04	5.79E-05	0.1
1,2,3,7,8-PeCDF	0.03	0.538	0.538		BDL	1.46E-04	4.37E-06	0.0
2,3,4,7,8-PeCDF	0.3	0.527	0.527		BDL	1.43E-04	4.28E-05	0.1
1,2,3,4,7,8-HxCDF	0.1	0.350	0.350		BDL	9.47E-05	9.47E-06	0.0
1,2,3,6,7,8-HxCDF	0.1	0.322	0.322		BDL	8.71E-05	8.71E-06	0.0
2,3,4,6,7,8-HxCDF	0.1	0.347	0.347		BDL	9.39E-05	9.39E-06	0.0
1,2,3,7,8,9-HxCDF	0.1	0.378	0.378		BDL	1.02E-04	1.02E-05	0.0
1,2,3,4,6,7,8-HpCDF	0.01	0.351	0.474	J	ADL	1.28E-04	1.28E-06	0.0
1,2,3,4,7,8,9-HpCDF	0.01	0.421	0.421		BDL	1.14E-04	1.14E-06	0.0
OCDF	0.0003	0.355	0.747	JqB	ADL	2.02E-04	6.07E-08	0.0
<b>Total D/F</b>					DLL	7.87E-02	5.81E-04	1.3

a = U.S.EPA (2010) Toxic Equivalency Factor (TEF)

EDL = Estimated Detection Limit

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**Laboratory Qualifiers**

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**Table 2-28 Acid Plant Tail Gas Stack Method 23, Average D/F Results**

Run No. Date Time		Acid Plant Tail Gas Average					
Sample Volume	dscf	129.689					
Sample Volume	m <sup>3</sup>	3.67					
Moisture Content	% v/v	3.7					
O <sub>2</sub> Concentration	% v/v (dry)	10.67					
CO <sub>2</sub> Concentration	% v/v (dry)	0.67					
Isokinetics	%	100.6					
Feed Rate	ton/hr	125.0					
Stack Flowrate	dscfm	147,131					
PCDD / PCDF Parameters	TEF (a)	Mass pg	Designation	Concentration ng/m <sup>3</sup>	Concentration ng TEQ/m <sup>3</sup>	Emission Rate ng TEQ/Mg concentrated ore fed	
2,3,7,8-TCDD	1	0.40	DLL	1.09E-04	1.09E-04	0.2	
1,2,3,7,8-PeCDD	1	0.39	BDL	1.07E-04	1.07E-04	0.2	
1,2,3,4,7,8-HxCDD	0.1	3.18	ADL	8.65E-04	8.65E-05	0.2	
1,2,3,6,7,8-HxCDD	0.1	0.51	BDL	1.38E-04	1.38E-05	0.0	
1,2,3,7,8,9-HxCDD	0.1	0.50	BDL	1.35E-04	1.35E-05	0.0	
1,2,3,4,6,7,8-HpCDD	0.01	1.47	BDL	3.99E-04	3.99E-06	0.0	
OCDD	0.0003	3.02	ADL	8.22E-04	2.47E-07	0.0	
2,3,7,8-TCDF	0.1	1.83	ADL	4.99E-04	4.99E-05	0.1	
1,2,3,7,8-PeCDF	0.03	0.5	BDL	1.39E-04	4.18E-06	0.0	
2,3,4,7,8-PeCDF	0.3	0.57	ADL	1.54E-04	4.63E-05	0.1	
1,2,3,4,7,8-HxCDF	0.1	0.7	BDL	1.98E-04	1.98E-05	0.0	
1,2,3,6,7,8-HxCDF	0.1	0.4	BDL	1.13E-04	1.13E-05	0.0	
2,3,4,6,7,8-HxCDF	0.1	0.4	BDL	1.22E-04	1.22E-05	0.0	
1,2,3,7,8,9-HxCDF	0.1	0.5	BDL	1.33E-04	1.33E-05	0.0	
1,2,3,4,6,7,8-HpCDF	0.01	0.8	ADL	2.10E-04	2.10E-06	0.0	
1,2,3,4,7,8,9-HpCDF	0.01	0.4	BDL	1.09E-04	1.09E-06	0.0	
OCDF	0.0003	1.2	ADL	3.29E-04	9.86E-08	0.0	
<b>Total D/F</b>			DLL	0.033	4.94E-04	1.1	

**a = U.S.EPA (2010) Toxic Equivalency Factor (TEF)**

EDL = Estimated Detection Limit

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### 2.5.3 Method 26A HCl and Chlorine Results

Hydrochloric acid (HCl) and chlorine (Cl<sub>2</sub>) samples were collected isokinetically at the Aisle Scrubber, Vent Fume and APTG Stack test locations following Method 26A.

#### 2.5.3.1 Aisle Scrubber Stack Method 26A Results

Three 120-minute sample runs were collected at the Aisle Scrubber Stack for the determination of HCl and Cl<sub>2</sub> content. All three samples were ADL for HCl having an average concentration of 0.0069 mg/dscm. Cl<sub>2</sub> was ADL for all three samples with an average concentration of 0.01 mg/dscm. **Table 2-29** provides the Aisle Scrubber Stack Method 26A results. The table lists the concentration, emission rate (lb/hr) and production-based emission rate (lb/ton concentrated ore fed) for each sample run as well as the overall averages.

#### 2.5.3.2 Vent Fume Stack Method 26A Results

Three 120-minute sample runs were collected at the Vent Fume Stack for the determination of HCl and Cl<sub>2</sub> content. Detectable (ADL) quantities of HCl Samples were measured in Run 1 and Run 2 samples and Run 3 was BDL for HCl. Blank corrections for Run 1 and Run 3 resulted in negative values. The blank corrected mass for both runs were reported as zero and the average concentration is 0.002 mg/dscm. Cl<sub>2</sub> was ADL for all three samples with an average concentration of 0.03 mg/dscm. **Table 2-30** provides the Vent Fume Stack Method 26A results. The table lists the concentration, emission rate (lb/hr) and production-based emission rate (lb/ton concentrated ore fed) for each sample run as well as the overall averages.



**Table 2-29 Aisle Scrubber Stack Method 26A Results**

Test Parameters	AS26A-1 11/30/23 1430-1640	AS26A-2 12/01/23 0936-1142	AS26A-3 12/01/23 1338-1541	Average
Sample Time (min)	120	120	120	120
Vol meter (acf)	83.270	82.476	90.601	85.449
Ave. SQRT dP (in WC) <sup>1/4</sup>	0.47	0.47	0.51	0.48
dH (in WC)	1.39	1.36	1.60	1.45
T stack (F)	64.1	66.8	68.9	66.6
T meter (F)	66.3	68.3	78.0	70.9
P static (in WC)	0.62	0.61	0.62	0.62
P bar (in Hg)	26.05	26.15	26.15	26.12
P stack (in WC)	26.10	26.19	26.20	26.16
H <sub>2</sub> O Mass Gain (g)	40.5	41.6	40.9	41.0
Yd (meter coef.)	1.0347	1.0347	1.0347	1.0347
dH @ (in WC)	1.8246	1.8246	1.8246	1.8246
Cp (pitot coef.)	0.84	0.84	0.84	0.84
Dia stack (in)	359.5	359.5	359.5	359.5
Dia nozzle (in)	0.276	0.276	0.276	0.276
CO <sub>2</sub> (%)	0.00	0.00	0.00	0.00
O <sub>2</sub> (%)	20.92	20.90	20.90	20.91
Vol meter (std) (dscf)	75.523	74.793	80.746	77.021
Vol meter (std) (dscm)	2.1	2.1	2.3	2.2
Md (lb/lb-mole)	28.84	28.84	28.84	28.84
Ms (lb/lb-mole)	28.57	28.56	28.58	28.57
Vwc	1.91	1.96	1.93	1.93
H <sub>2</sub> O (%)	2.5	2.6	2.3	2.4
ISO (%)	103.7	104.0	103.4	103.7
Concentrate Feed Rate (ton/hr)	125.0	125.0	125.0	125.0
Flow Rate				
Velocity (ft/s)	28.4	28.1	30.6	29.0
Vol. Flow Rate (acfm)	1,202,192	1,189,704	1,293,941	1,228,612
Vol. Flow Rate (wscfm)	1,056,278	1,043,888	1,130,909	1,077,025
Vol. Flow Rate (dscfm)	1,030,272	1,017,256	1,104,574	1,050,701
HCl Results				
HCl MDL (ug)	26.5	26.5	27.0	26.7
HCl Mass (ug)	46.4 ADL	41.3 ADL	51.2 ADL	46.3 ADL
HCl Blank Mass (ug)	31.2 J	31.2 J	31.2 J	31.2 J
HCl Blank Corrected Mass (ug)	15.2 ADL	10.1 ADL	20.0 ADL	15.1 ADL
HCl Concentration (mg/dscm)	7.1E-03 ADL	4.8E-03 ADL	8.7E-03 ADL	6.9E-03 ADL
HCl Concentration (lb/dscf)	4.4E-10 ADL	3.0E-10 ADL	5.5E-10 ADL	4.3E-10 ADL
HCl Emission Rate (lb/hr)	0.03 ADL	0.02 ADL	0.04 ADL	0.03 ADL
HCl Emission Rate (lb/ton)	2.2E-04 ADL	1.5E-04 ADL	2.9E-04 ADL	2.2E-04 ADL
Chlorine Results				
Cl MDL (ug)	58.8	58.8	61.3	59.6
Cl Mass (ug)	92 ADL	91 ADL	80.4 ADL	87.9 ADL
Cl Blank Mass (ug)	73.3 J	73.3 J	73.3 J	73.3 J
Cl Blank Corrected Mass (ug)	18.9 ADL	17.9 ADL	7.1 ADL	14.6 ADL
Cl Concentration (mg/dscm)	0.01 ADL	0.01 ADL	0.00 ADL	0.01 ADL
Cl Concentration (lb/dscf)	5.52E-10 ADL	5.28E-10 ADL	1.94E-10 ADL	4.24E-10 ADL
Cl Emission Rate (lb/hr)	0.03 ADL	0.03 ADL	0.01 ADL	0.03 ADL
Cl Emission Rate (lb/ton)	2.7E-04 ADL	2.6E-04 ADL	1.0E-04 ADL	2.1E-04 ADL

MDL = Method Detection Limit

BDL = Below the Detection Limit

DLL = Detection Level Limited – at least one but not all analytical values used to calculate the sample mass are less than the laboratory's reported detection limit(s)

ADL = Above Detection Level – the analytical value(s) used to calculate the sample mass is greater than the laboratory's reported detection level(s)

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Note: Blank corrections resulting in a negative value are reported as zero.



**Table 2-30 Vent Fume Stack Method 26A Results**

Test Parameters	VF26A-1 12/02/23 1135-1342	VF26A-2 12/03/23 1236-1441	VF26A-4 12/05/23 0904-1108	Average
Sample Time (min)	120	120	120	120
Vol meter (acf)	99.829	97.274	96.277	97.793
Ave. SQRT dP (in WC) <sup>1/2</sup>	0.58	0.56	0.56	0.57
dH (in WC)	2.05	1.91	1.90	1.96
T stack (F)	68.3	69.6	69.2	69.0
T meter (F)	69.8	71.3	69.2	70.1
P static (in WC)	0.82	0.81	0.81	0.81
P bar (in Hg)	26.30	26.30	26.35	26.32
P stack (in WC)	26.36	26.36	26.41	26.38
H <sub>2</sub> O Mass Gain (g)	41.9	47.2	40.7	43.3
Yd (meter coef.)	1.0347	1.0347	1.0347	1.0347
dH @ (in WC)	1.8246	1.8246	1.8246	1.8246
Cp (pitot coef.)	0.84	0.84	0.84	0.84
Dia stack (in)	159.5	159.5	159.5	159.5
Dia nozzle (in)	0.276	0.276	0.276	0.276
CO <sub>2</sub> (%)	0.00	0.00	0.00	0.00
O <sub>2</sub> (%)	20.90	20.90	20.90	20.90
Vol meter (std) (dscf)	90.978	88.351	87.958	89.096
Vol meter (std) (dscm)	2.6	2.5	2.5	2.5
Md (lb/lb-mole)	28.84	28.84	28.84	28.84
Ms (lb/lb-mole)	28.61	28.57	28.61	28.59
Vwc	1.97	2.22	1.92	2.04
H <sub>2</sub> O (%)	2.1	2.5	2.1	2.2
ISO (%)	101.4	102.4	101.8	101.9
Concentrate Feed Rate (ton/hr)	125.0	125.0	125.0	125.0
Flow Rate				
Velocity (ft/s)	34.8	33.7	33.5	34.0
Vol. Flow Rate (acfm)	289,918	280,383	279,251	283,184
Vol. Flow Rate (wscfm)	255,284	246,260	245,924	249,156
Vol. Flow Rate (dscfm)	249,868	240,220	240,682	243,590
HCl Results				
HCl MDL (ug)	27.0	27.0	26.5	26.8
HCl Mass (ug)	28.1 ADL	46.0 ADL	26.5 BDL	33.5 DLL
HCl Blank Mass (ug)	31.2 J	31.2 J	31.2 J	31.2 J
HCl Blank Corrected Mass (ug)	0.0 ADL	14.8 ADL	0.0 BDL	4.9 DLL
HCl Concentration (mg/dscm)	0.0E+00 ADL	5.9E-03 ADL	0.0E+00 BDL	2.0E-03 DLL
HCl Concentration (lb/dscf)	0.0E+00 ADL	3.7E-10 ADL	0.0E+00 BDL	1.2E-10 DLL
HCl Emission Rate (lb/hr)	0.00 ADL	0.01 ADL	0.00 BDL	0.00 DLL
HCl Emission Rate (lb/ton)	0.0E+00 ADL	4.3E-05 ADL	0.0E+00 BDL	1.4E-05 DLL
Chlorine Results				
Cl MDL (ug)	61.3	61.3	61.3	61.3
Cl Mass (ug)	104 ADL	212 ADL	92.8 ADL	136.3 ADL
Cl Blank Mass (ug)	73.3 J	73.3 J	73.3 J	73.3 J
Cl Blank Corrected Mass (ug)	30.7 ADL	138.7 ADL	19.5 ADL	63.0 ADL
Cl Concentration (mg/dscm)	0.01 ADL	0.06 ADL	0.01 ADL	0.03 ADL
Cl Concentration (lb/dscf)	7.44E-10 ADL	3.46E-09 ADL	4.89E-10 ADL	1.56E-09 ADL
Cl Emission Rate (lb/hr)	0.01 ADL	0.05 ADL	0.01 ADL	0.02 ADL
Cl Emission Rate (lb/ton)	8.9E-05 ADL	4.0E-04 ADL	5.6E-05 ADL	1.8E-04 ADL

MDL = Method Detection Limit

BDL = Below the Detection Limit

DLL = Detection Level Limited – at least one but not all analytical values used to calculate the sample mass are less than the laboratory's reported detection limit(s)

ADL = Above Detection Level – the analytical value(s) used to calculate the sample mass is greater than the laboratory's reported detection level(s)

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Note: Blank corrections resulting in a negative value are reported as zero.



### 2.5.3.3 Acid Plant Tail Gas Stack Method 26A Results

Three 120-minute sample runs were collected at the APTG Stack for the determination of HCl and Cl<sub>2</sub> content. All three samples had detectable (ADL) quantities of HCl with an average concentration of 0.044 mg/dscm. Cl<sub>2</sub> was ADL for all three samples with an average concentration of 0.0002 mg/dscm. **Table 2-31** provides the APTG Stack Method 26A results. The table lists the concentration, emission rate (lb/hr) and production-based emission rate (lb/ton concentrated ore fed) for each sample run as well as the overall averages.



**Table 2-31 Acid Plant Tail Gas Stack Method 26A Results**

Test Parameters	AP26A-1 12/06/23 0840-1044	AP26A-2 12/06/23 1230-1436	AP26A-3 12/07/23 1832-2035	Average
Sample Time (min)	120	120	120	120
Vol meter (acf)	95.943	98.303	95.171	96.472
Ave. SQRT dP (in WC) <sup>1/4</sup>	0.554	0.560	0.548	0.554
dH (in WC)	1.83	1.91	1.80	1.85
T stack (F)	79.1	80.3	79.9	79.8
T meter (F)	73.3	85.9	74.4	77.9
P static (in WC)	0.32	0.32	0.32	0.32
P bar (in Hg)	26.35	26.35	26.25	26.32
P stack (in WC)	26.37	26.37	26.27	26.34
H <sub>2</sub> O Mass Gain (g)	68.3	73.8	74.0	72.0
Yd (meter coef.)	1.0347	1.0347	1.0347	1.0347
dH @ (in WC)	1.8246	1.8246	1.8246	1.8246
Cp (pitot coef.)	0.84	0.84	0.84	0.84
Dia stack (in)	125.5	125.5	125.5	125.5
Dia nozzle (in)	0.276	0.276	0.276	0.276
CO <sub>2</sub> (%)	0.50	0.50	1.00	0.67
O <sub>2</sub> (%)	12.00	11.00	9.00	10.67
Vol meter (std) (dscf)	86.961	87.074	85.752	86.596
Vol meter (std) (dscm)	2.5	2.5	2.4	2.5
Md (lb/lb-mole)	28.56	28.52	28.52	28.53
Ms (lb/lb-mole)	28.18	28.12	28.11	28.14
Vwc	3.21	3.47	3.48	3.39
H <sub>2</sub> O (%)	3.6	3.8	3.9	3.8
ISO (%)	102.9	102.4	103.4	102.9
Concentrate Feed Rate (ton/hr)	125.0	125.0	125.0	125.0
<b>Flow Rate</b>				
Velocity (ft/s)	33.9	34.3	33.6	33.9
Vol. Flow Rate (acfm)	174,579	176,876	173,275	174,910
Vol. Flow Rate (wscfm)	150,710	152,375	148,810	150,632
Vol. Flow Rate (dscfm)	145,337	146,530	143,002	144,956
<b>HCl Results</b>				
HCl MDL (ug)	27.6	28.1	33.4	29.7
HCl Mass (ug)	137 ADL	159 ADL	119 ADL	138 ADL
HCl Blank Mass (ug)	31.2 J	31.2 J	31.2 J	31.2 J
HCl Blank Corrected Mass (ug)	105.8 ADL	127.8 ADL	87.8 ADL	107.1 ADL
HCl Concentration (mg/dscm)	4.3E-02 ADL	5.2E-02 ADL	3.6E-02 ADL	4.4E-02 ADL
HCl Concentration (lb/dscf)	2.68E-09 ADL	3.24E-09 ADL	2.26E-09 ADL	2.73E-09 ADL
HCl Emission Rate (lb/hr)	0.02 ADL	0.03 ADL	0.02 ADL	0.02 ADL
HCl Emission Rate (lb/ton)	1.9E-04 ADL	2.3E-04 ADL	1.5E-04 ADL	1.9E-04 ADL
<b>Chlorine Results</b>				
Cl MDL (ug)	60.0	60.0	62.5	60.8
Cl Mass (ug)	86 ADL	97 ADL	88.3 ADL	90.3 ADL
Cl Blank Mass (ug)	73.3 J	73.3 J	73.3 J	73.3 J
Cl Blank Corrected Mass (ug)	12.6 ADL	23.3 ADL	15.0 ADL	17.0 ADL
Cl Concentration (mg/dscm)	1.4E-04 ADL	2.7E-04 ADL	1.7E-04 ADL	2.0E-04 ADL
Cl Concentration (lb/dscf)	2.31E-09 ADL	4.67E-09 ADL	3.67E-09 ADL	3.55E-09 ADL
Cl Emission Rate (lb/hr)	0.02 ADL	0.04 ADL	0.03 ADL	0.03 ADL
Cl Emission Rate (lb/ton)	1.7E-04 ADL	3.4E-04 ADL	0.0 ADL	1.7E-04 ADL

MDL = Method Detection Limit

BDL = Below the Detection Limit

DLL = Detection Level Limited – at least one but not all analytical values used to calculate the sample mass are less than the laboratory's reported detection limit(s)

ADL = Above Detection Level – the analytical value(s) used to calculate the sample mass is greater than the laboratory's reported detection level(s)

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Note: Blank corrections resulting in a negative value are reported as zero.



## 3.0 Process Description

### 3.1 Smelter Operation

All measurement procedures at the Vent Fume, Aisle Scrubber and APTG stacks were performed at a normal and representative IsaSmelt® Furnace feed rate; nominally not less than 120 tons per hour. All measurements were conducted with at least one converter operating. If a converter was rolled out to skim during a sample run, it was not considered cause to halt testing.

During testing, all required pertinent process, air pollution control device (APCD) and Continuous Parameter Monitoring System (CPMS) operations data was monitored and recorded. The data recorded includes:

- Process rate in tons of concentrated ore fed introduced to the IsaSmelt® furnace per hour.
- If process units of a different type have combined emissions prior to the sampling location, a description of each process unit contributing was recorded.
- For baghouses, pressure drop across the baghouse; flue gas inlet temperature; maximum temperature and minimum temperature during test.
- For wet scrubbers and dynamic wet scrubbers the water flow rate; flow rate and identification of any additive in the scrubber water; pH; and pressure drop across the scrubber or the fan amperage; and scrubber discharge gas temperature; and average outlet gas temperature for each scrubber.
- Key design or operational characteristics of the APCD including if any sorbents or bag coatings were used in a baghouse or if alkali was added to wet control device liquids.

**Table 3-1** lists the average IsaSmelt® vessel feed rate (dry ton concentrated ore fed per hour) recorded during each of the samples collected at the Aisle Scrubber, Vent Fume and APTG stack exhausts. Process operation data for the time periods during which testing was conducted is stored on FMMI's local servers and can be accessed by the data acquisition system.

**Table 3-1 IsaSmelt® Furnace Feed Rate**

Date	Time	Source ID	Run Number	IsaSmelt® Feed Rate (dry ton concentrated ore fed/hr)
11/30/2023	1430-1747	Aisle Scrubber	1	125.0
12/1/2023	0936-1255		2	125.0
12/1/2023	1336-1656		3	125.0
12/2/2023	1135-1443	Vent Fume	1	125.0
12/3/2023	1236-1544		2	125.0
12/5/2023	0904-1210		4	125.0
12/6/2023	0840-1147	APTG	1	125.0
12/6/2023	1230-1538		2	125.0
12/7/2023	0828-1137		3	125.0



## 3.2 Smelter Process Description

The following is a brief description of the smelter process. A process flow diagram showing the process units and control devices is included in the appendices of this report.

### 3.2.1 Materials Handling, Blending, and Bedding Plants

Copper concentrate is delivered by truck and railcar to the bedding and blending plants where stockpiles are built up and prepared for feed to the IsaSmelt® Furnace. The blended copper concentrate is conveyed to the copper concentrate bin, where it is then conveyed to the paddle mixer to be combined with fluxes, external copper bearing feeds, and internal copper bearing streams (reverts, acid plant solids, etc.), which is then fed to the IsaSmelt® Furnace.

### 3.2.2 IsaSmelt® Furnace

The IsaSmelt® Furnace is the primary smelting furnace at the Miami Smelter. Concentrate is fed with oxygen-enriched air and fuel (natural gas, coal, metallurgical coke, etc.) into a closed vessel to produce copper matte and slag. The furnace is aerated to facilitate oxidation of the charge for utilization of residual heat. The furnace is then tapped, and the resulting mixture of copper matte and slag is fed to the Electric Furnace via launders for separation of slag.

Process off-gases produced by the IsaSmelt® Furnace are captured and routed to the waste heat boiler, electrostatic precipitator, and acid plant for removal of particulate matter and metals followed by conversion of sulfur dioxide (SO<sub>2</sub>) to sulfuric acid (H<sub>2</sub>SO<sub>4</sub>). The remaining gases from the acid plant are routed to the tail gas caustic scrubber for removal of residual SO<sub>2</sub> before being vented to the APTG Stack.

Fugitive gases from furnace tapping and transfer of molten copper matte and slag to the electric furnace are captured by the vent fume system and routed to the vent fume caustic scrubber for removal of SO<sub>2</sub>, followed by two stages of wet electrostatic precipitators (WESPs) for removal of particulate matter and metals, before being vented to the Vent Fume Stack.

Uncaptured gases from the IsaSmelt® Furnace and transfer of molten copper matte and slag exit exhaust to the atmosphere primarily through the roofline vents located above the IsaSmelt® vessel and Electric Furnace roofline.

### 3.2.3 Electric Furnace

The Electric Furnace serves as a slag separation device for mixed copper matte and slag transferred periodically by launder from the IsaSmelt® Furnace. Copper matte settles to the bottom of the electric furnace before being tapped in batches into ladles, which are then transported by crane to one of the four Hoboken Converters. The remaining slag layer in the electric furnace bath is removed in batches by a slag tapping launder and is transported by slag hauler to the slag storage area. A natural gas burner is utilized as needed to maintain heat for the bath during periods of maintenance or shut down.

Process off-gases produced by the Electric Furnace are captured and routed to the acid plant for removal of particulate matter before SO<sub>2</sub> in the gas stream is converted to H<sub>2</sub>SO<sub>4</sub> in the acid plant. The remaining gases from the acid plant are routed to the tail gas caustic scrubber for removal of residual SO<sub>2</sub> before being vented to the APTG Stack.

Gases from the molten matte and slag laundering are captured by the vent fume system, routed to the vent fume caustic scrubber for removal of SO<sub>2</sub>, followed by two stages of WESPs for removal of particulate matter and metals, and vented the Vent Fume Stack.



Uncaptured fugitive gases from the electric furnace exhaust to the atmosphere primarily through the roofline vent located above the electric furnace.

### **3.2.4 Copper Converters**

Copper matte from the electric furnace is fed to the Hoboken Batch Copper Converters by ladle, where it is injected with air to further remove iron and other impurities, skimmed for slag by ladle, and injected with air again to removal residual sulfur from the molten bath. The resulting product, known as blister copper, is transferred in batches by ladle to the anode barrel or a holding vessel (also known as mold barrel). Slag skimmed from the converters is transferred by ladle to the Electric Furnace for recovery of entrained copper. Each converter utilizes two natural gas burners on an as-needed basis to warm vessels after cold startup or to burn out any copper deposits that have formed inside the vessel and are interfering with operations.

Process off-gases produced in the batch copper converters are vented to the acid plant for removal of particulate matter before  $\text{SO}_2$  in the gas stream is converted to  $\text{H}_2\text{SO}_4$ . The remaining gases from the acid plant are routed to the tail gas caustic scrubber for removal of residual  $\text{SO}_2$  before being vented to the APTG Stack.

The batch copper converters utilize mouth covers to minimize fugitive gases and a canopy roofline collection system to facilitate the capture of fugitive gases that do occur. Captured gases are routed to the caustic aisle scrubber for removal of  $\text{SO}_2$  before being vented to the Aisle Scrubber Stack.

Uncaptured fugitive gases from the copper converters exhaust into the atmosphere primarily through the roofline vent located above the converters.

### **3.2.5 Anode Furnaces and Utility Vessel**

Blister copper from the copper converters is transferred by ladle to the anode vessels to be refined to anode copper, or utility vessel for holding blister copper when the anode furnaces are full. Anode refining consists of oxidizing the bath to remove trace sulfur remaining in the blister copper, reducing the bath using a mixture of steam and natural gas to remove oxides, and casting the remaining copper by pouring it into molds on the rotating casting wheel to produce copper anode. Anode slag is skimmed and returned to the converters for recovery of residual copper.

Process gas from the anode furnace is captured and treated for particulate matter and metals by the anode furnace baghouse before being routed to the caustic aisle scrubber for removal of  $\text{SO}_2$  and vented to the Aisle Scrubber Stack.





## 4.0 Methodology

The field measurements program was performed according to the following promulgated USEPA methods as contained in the 40 CFR Part 60, Appendix A, and USEPA's *Quality Assurance Handbook for Air Pollution Measurement Systems, Volume III, Stationary Source Specific Methods*. The general procedures that were followed for this emissions measurement evaluation include:

Method 1	Sample and Velocity Traverse for Stationary Sources
Method 2	Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube)
Method 3	Gas Analysis for the Determination of Dry Molecular Weight
Method 4	Determination of Moisture Content in Stack Gases
Method 18	Measurement of Gaseous Organic Compound Emissions by Gas Chromatography
Method 23	Measurement of Polychlorinated Dibenzo-p-Dioxins, Polychlorinated Dibenzofurans, Polychlorinated Biphenyls, and Polycyclic Aromatic Hydrocarbons from Stationary Sources
Method 26A	Determination of Hydrogen Halide and Halogen Emissions from Stationary Sources Isokinetic Method

All test methods and procedures selected for this measurements program are USEPA approved procedures for quantifying specific pollutant emission rates.

### 4.1 Support Measurements

Methods 1 through 4 were performed in support of the emissions measurements procedures selected for quantifying pollutant concentrations and emission rates. Method 1 has already been completed for the Vent Fume, Aisle Scrubber and APTG stacks. The determination of stack gas flow rate, molecular weight, and moisture content (Methods 2 through 4) were integrated into and performed concurrently with each Method 23 and Method 26A sample run.

#### 4.1.1 Selection of Traverse Points

Method 1 was completed for the Vent Fume, Aisle Scrubber and APTG stacks. The calculated measurement points were used for all Method 23 and Method 26A sample runs.

Cyclonic flow checks of the Vent Fume, Aisle Scrubber and APTG Stack test locations were performed during the March 2018 Continuous Monitoring Systems (CMS) Relative Accuracy Test Audit (RATA) test campaign. Results of the cyclonic flow checks are documented in the CMS RATA Test Report, April 2018. No further cyclonic flow checks of the Vent Fume, Aisle Scrubber and APTG Stack test locations are necessary unless a physical change to the configuration of the exhausts networks that would result in a variation of the flow characteristics is implemented.

The ideal measurement criteria are met at the Vent Fume Stack test location. The stack measures 159.5 inches inside diameter at the test location. According to Method 1, a total of 12 traverse points are required for sampling. This was accomplished by sampling three points through each of the four horizontal test ports located at 90° to each other. The three traverse



points and their respective distances from the duct wall are listed in **Table 4-1**. **Figure 4-1** illustrates the test and sample point locations at the Vent Fume exhaust.

**Table 4-1 Vent Fume Stack Traverse Point Locations**

Traverse Point	Distance from Wall (inches)
1	47.2
2	23.1
3	7.0

The ideal measurement criteria are not met at the Aisle Scrubber Stack test location. Further, the equipment lifting hoist, located at the north sample port, makes the north sample port inaccessible and was not used. During the three sample runs, for both Method 23 and Method 26A, one of the available sample ports was sampled twice. The sample port that was sampled twice was alternated so that after three sample runs each of the three available sample ports was sampled twice.

The Aisle Scrubber Stack measures 359.5 inches inside diameter at the test location. According to Method 1, a total of 24 traverse points is required for sampling. This was accomplished by sampling six points through each of the three available horizontal test ports located at 90° to each other (as noted above, one sample port was traversed twice during each run). The six traverse points and their respective distances from the duct wall are listed in **Table 4-2**. **Figure 4-2** illustrates the test and sample point locations at the Aisle Scrubber exhaust.

**Table 4-2 Aisle Scrubber Stack Traverse Point Locations**

Traverse Point	Distance from Wall (inches)
1	127.8
2	89.8
3	63.5
4	42.4
5	24.1
6	7.5

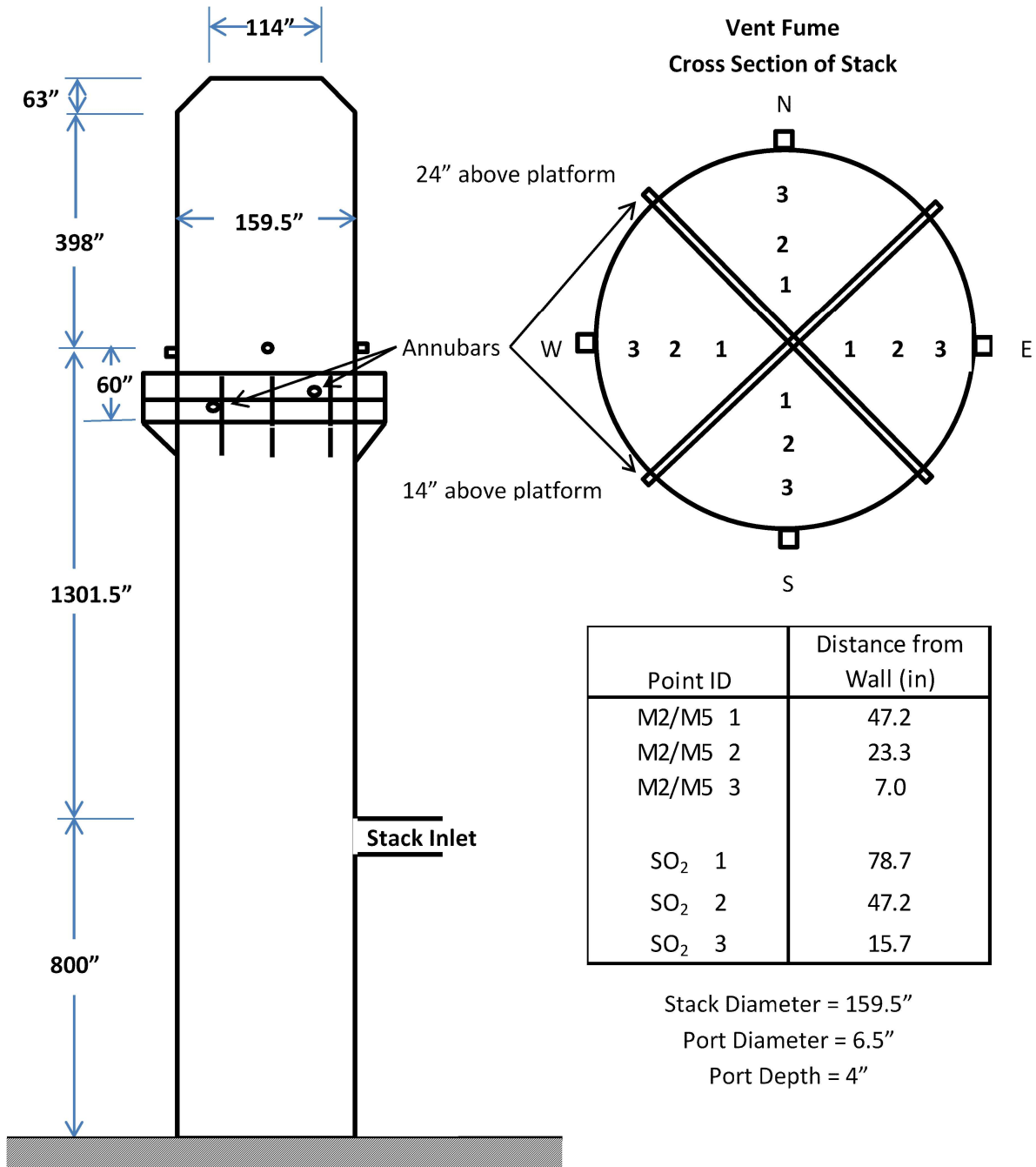
The APTG Stack test location meets the ideal criteria of Method 1. The APTG Stack measures 125.5 inches inside diameter at the test location. According to Method 1, a total of 12 traverse points were used for sampling. This was accomplished by sampling three points through each of the four horizontal test ports located at 90° to each other. The three measurement points for each port and their distance from the duct wall are listed in **Figure 4-3** illustrates the test and sample point configurations at the APTG test location.

**Table 4-3 Acid Plant Tail Gas Stack Traverse Point Locations**

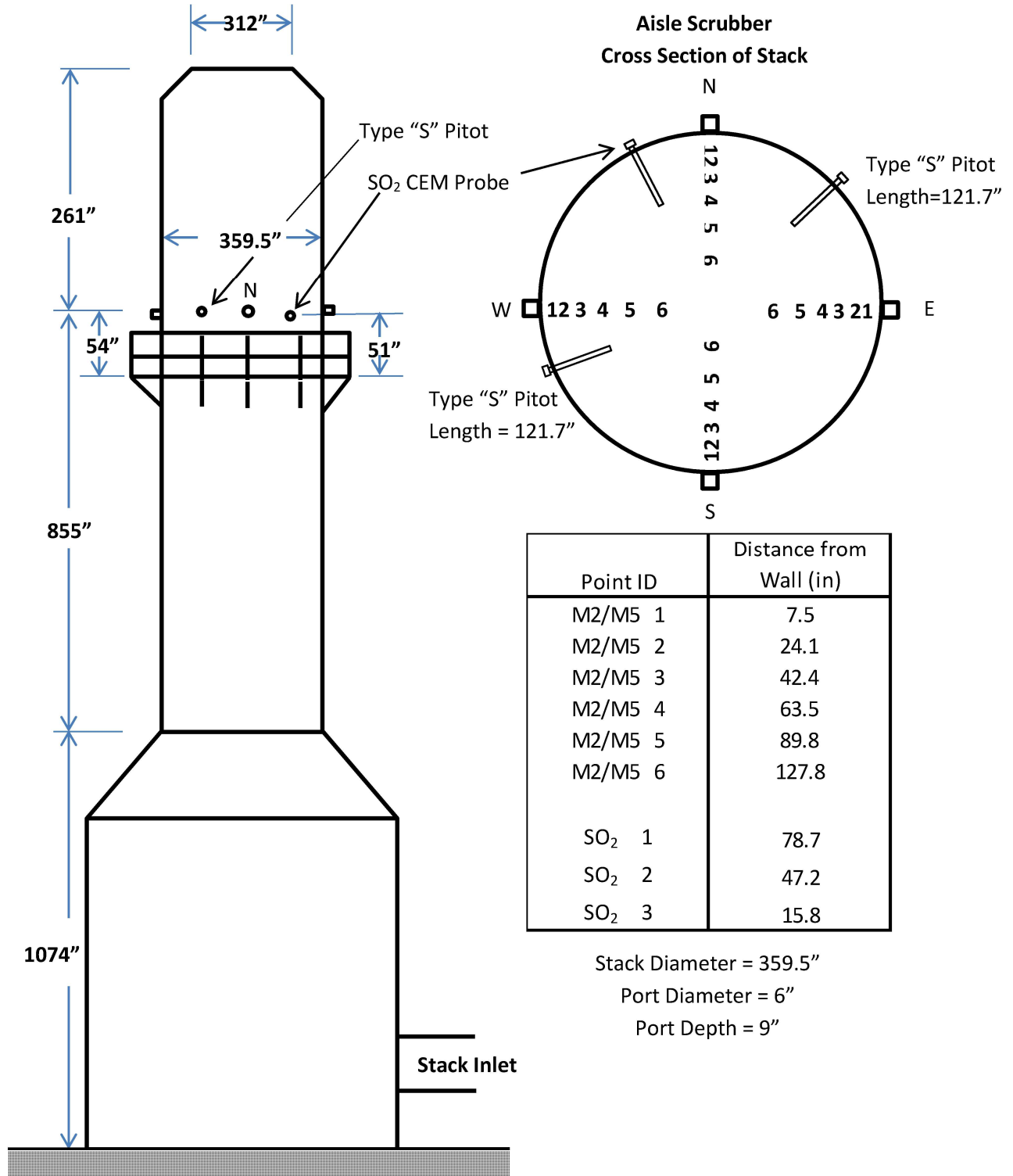
Traverse Point	Distance from Wall (inches)
1	37.1
2	18.3
3	5.5



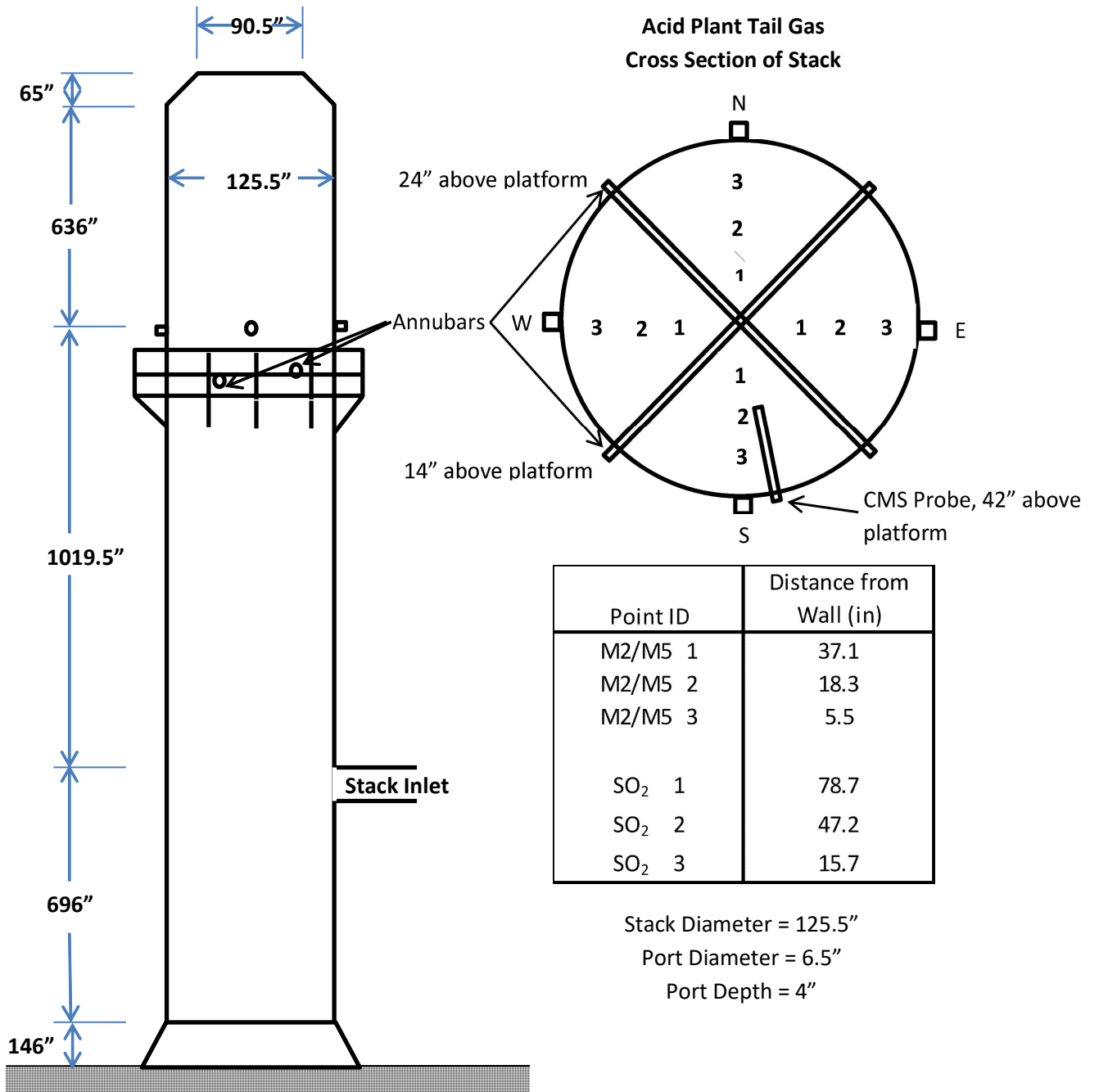
**Figure 4-1 Vent Fume Stack Schematic**



**Figure 4-2 Aisle Scrubber Stack Schematic**



**Figure 4-3 Acid Plant Tail Gas Stack Schematic**



#### 4.1.2 Volumetric Flow Rate Determination

Method 2 was followed to measure the velocity and calculate volumetric flow rate at each sample location. This method was incorporated into and conducted concurrently with each isokinetic sample run. This method allows for a stainless-steel Type-S or standard pitot tube to be connected to a differential pressure gauge (inclined manometer). The measured pressure differential, observed at each traverse point, was recorded on field data forms, and used for the determination of effluent velocity and subsequent volumetric flow rate for each sample run.

In addition to velocity pressures, gas temperatures were measured and recorded concurrently with all differential pressure data. The temperature was measured with a Type K thermocouple located at the measurement tip of the pitot tube (in the same measurement plane). The Type K thermocouple was connected directly to a calibrated digital temperature display for accurate measurements.

The stack gas velocity (Method 2), the stack gas dry molecular weight (Method 3), and the stack gas moisture (Method 4) data were used to calculate stack gas volumetric flow using equations set out in Section 12 of Method 2.

#### 4.1.3 Stack Gas Molecular Weight Determination

Method 3 was conducted to provide for the determination of effluent molecular weight at the APTG Stack. One integrated stack gas sample was collected for each Method 23/26A sample run and analyzed by Method 3. The results of the diluent O<sub>2</sub> and CO<sub>2</sub> analysis were used for the determination of effluent molecular weight for each APTG sample run.

As discussed in **Section 2.2** of this report, the effluent exhausted by the Vent Fume and Aisle Scrubber stacks are essentially ambient air with a dry molecular weight of approximately 29 pounds per pound-mole.

Methods 3 and 3A are applicable for the determination of diluent CO<sub>2</sub> and O<sub>2</sub> concentrations and dry molecular weight of samples from an effluent gas stream of a fossil-fuel combustion process or other processes. For processes emitting essentially air, Method 2 provides that Method 3/3A need not be conducted, but rather a dry molecular weight of 29 may be used. SLR assumed a dry molecular weight of 29 for the Vent Fume and Aisle Scrubber stacks in lieu of conducting Method 3.

#### 4.1.4 Stack Gas Moisture Content Determination

Method 4 was incorporated into each Method 23 and Method 26A sample run. The determination of moisture content will be accomplished by using a condenser and pump assembly, connected between a sample probe and metering system.

During each sample run, a known volume of gas (measured by a dry gas meter) will be passed through the condenser assembly. Upon completion of each sample run, the total amount of condensate collected in the condenser assembly will be gravimetrically measured. The total moisture gain, volume of gas extracted, and measured meter temperature data will be used to calculate the actual moisture content of the effluent. The moisture results determined from each sample run will be used to convert the stack gas volumetric flow rate data from a wet basis to a dry basis.



## 4.2 Benzene and Toluene Determination

Method 18 is designed to measure gaseous organics emitted from an industrial source using gas chromatography (GC). For this test program Method 18 was followed for the determination of benzene and toluene concentrations and emission rates at the test locations. This method will not determine compounds that (1) are polymeric (high molecular weight), (2) can polymerize before analysis, or (3) have very low vapor pressures at stack or instrument conditions.

The lower range of this method is determined by the sampling system; adsorbents may be used to concentrate the sample, thus lowering the limit of detection below 1 part per million (ppm) typically achievable with direct interface or bag sampling. The upper limit is governed by GC detector saturation or column overloading; the upper range can be extended by dilution of sample with an inert gas or by using smaller volume gas sampling loops. The upper limit can also be governed by condensation of higher boiling compounds.

The sensitivity limit for a compound is defined as the minimum detectable concentration of that compound, or the concentration that produces a signal-to-noise ratio of three to one. The minimum detectable concentration is determined during the presurvey calibration for each compound.

The major organic components of a gas mixture are separated by GC and individually quantified by flame ionization, photoionization, electron capture, or other appropriate detection principles. The retention times of each separated component are compared with those of known compounds under identical conditions. Therefore, the analyst confirms the identity and approximate concentrations of the organic emission components beforehand. With this information, the analyst then prepares or purchases commercially available standard mixtures to calibrate the GC under conditions identical to those of the samples. The analyst also determines the need for sample dilution to avoid detector saturation, gas stream filtration to eliminate particulate matter, and prevention of moisture condensation.

Eurofins' Knoxville, Tennessee laboratory selected the sorbent media for Method 18 sample collection based on their chemical knowledge of the requested analytes. Benzene and toluene were sampled using charcoal sorbent tubes followed by a CS<sub>2</sub> extraction and analyzed by GC/FID. The reporting limit (RL) is equal to the MDL for this project. The sample tube spike levels for spike trains are one half of the MDL for all selected Method 18 analytes.

For each Method 18 sample run paired charcoal sorbent tubes (one containing benzene and toluene spikes) were used to collect benzene and toluene samples. The sample rate was set at a rate of approximately 2 to 4 standard liters per minute (lpm) for a period of 120 minutes. Prior to and upon completion of each paired charcoal tube sample, the sample rate was verified using a BIOS primary standard.

## 4.3 Determination of Naphthalene, PAHs Excluding Naphthalene, and Dioxins and Furans

Method 23 was followed for the collection of samples to determine naphthalene, PAHs excluding naphthalene and D/F concentrations and emission rates from the Vent Fume, Aisle Scrubber and APTG stack exhausts. Eurofins (analytical laboratory) followed Method 23 (promulgated prior to March 20, 2023) and Method CARB429 to analyze the samples for naphthalene, PAHs excluding naphthalene and D/Fs. Eurofins explained their choice to use these methods instead of the March 20, 2023 method stating "The D/F analysis is very close to the new M23, but there are several standards listed in the method that are not available



commercially. Due to that, we are unable to fully implement that portion of the method.” And, “On the side of the PAHs, we would be following our in-house IDA PAH method derived from CARB 429. The DLs are not that different, but there are differences in the IDA solutions used.”

#### 4.3.1 Sample Train Component Preparation

All glass parts of the sample train, including the sorbent trap, were pre-cleaned prior to sampling according to the following procedures:

- Soak in hot soapy water (Alconox® or equivalent)
- Rinse three times with hot tap water
- Rinse three times with deionized water
- Rinse three times with pesticide grade methanol
- Rinse three times with pesticide grade toluene
- Bake glassware up to 400°C for a minimum of 2 hours
- Seal with clean Teflon tape
- Rinse immediately before use with acetone and toluene

The glassware remained sealed with Teflon tape until sample train assembly. Following sample recovery, the glassware was reused at the same sampling location as allowed by the method.

The XAD-2 resin traps were pre-cleaned and prepared by Eurofins. Each sorbent trap was charged with 20 to 40 grams of the pre-cleaned resin and the modules were spiked before the sampling event, not in the field. Care was taken to ensure that the resin was kept at temperatures below 122°F during shipment and before and after sample collection to prevent thermal decomposition. The time between charging the trap and use in the field was minimized and was not allowed to exceed 14 days. The sorbent traps were shipped from Eurofins to the FMMI facility under strict COC documentation.

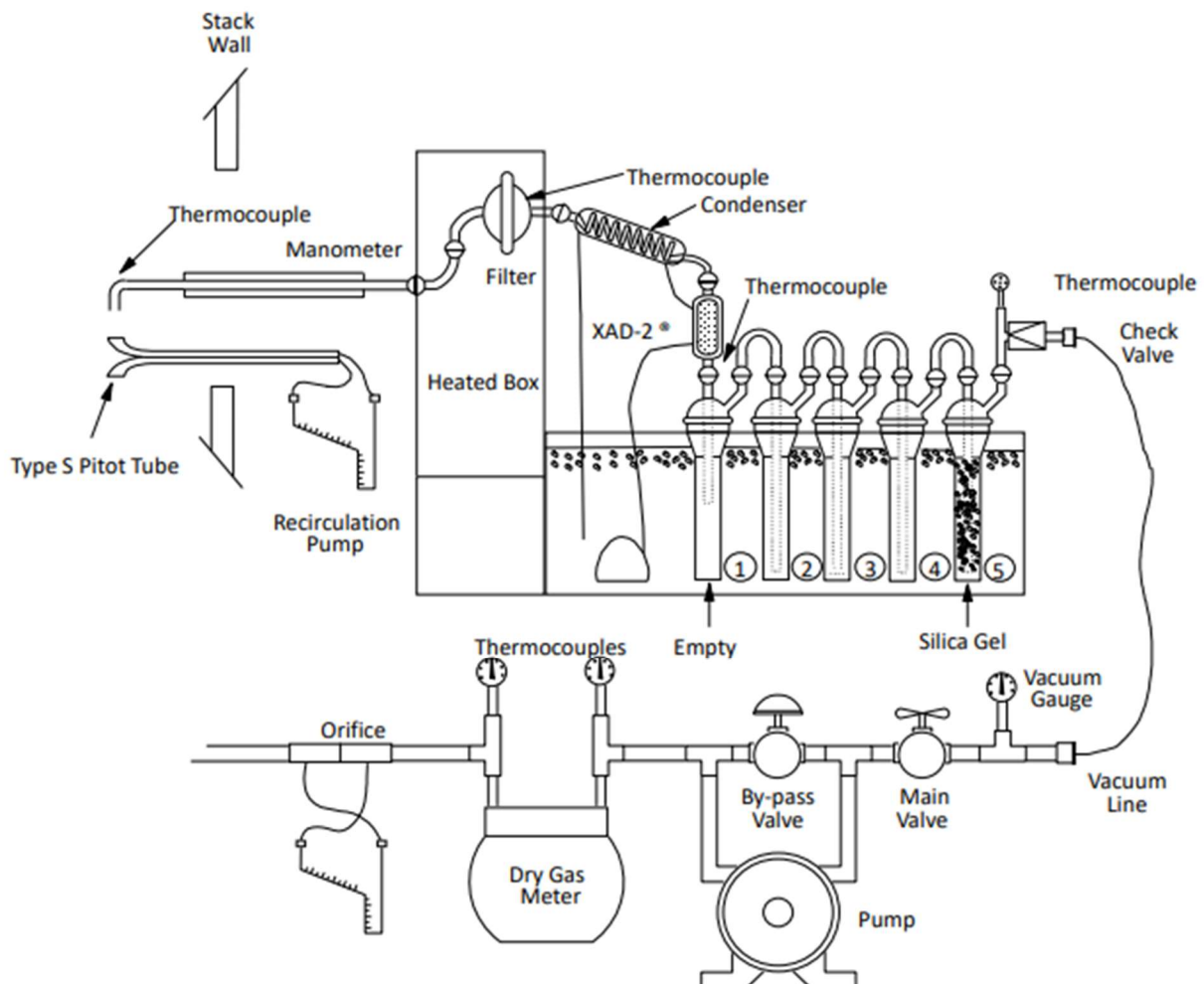
#### 4.3.2 Sample Collection

Samples were withdrawn isokinetically from each source using a Method 23 sampling train as depicted in **Figure 4-4**. The sampling train consisted of a high temperature probe with a quartz or high temperature alloy nozzle and Teflon probe liner, a pre-treated glass fiber filter maintained at a temperature of  $248 \pm 25^\circ\text{F}$ , a water-cooled condenser, a sorbent trap containing XAD-2 resin, five chilled impingers, and a metering console. The water-cooled condenser and sorbent trap were arranged in a manner that allows the condensate to drain vertically through the trap. Gas entering the trap was maintained at or below 68°F. The first impinger (optional knockout) was empty; the second and third impingers each contained 100 ml of HPLC water; the fourth was empty; and the fifth contained pre-weighed silica gel. Sealing greases were not used on any portion of the sample train.





**Figure 4-4 Method 23 Sample Train**



### 4.3.3 Sample Recovery

Recovery of the samples and assembly of the sample trains for reuse was conducted in a dust-free environment. Each impinger and the XAD-2 trap was weighed prior to and at the conclusion of each sample run. The volume of water vapor condensed in the impingers, XAD resin and silica gel were summed and entered into moisture content calculations.

All sample-exposed components of the sampling train were rinsed with acetone and toluene. The acetone and toluene rinses were kept separate for analysis at the request of Eurofins. Sample containers from a typical run include the following:

- Container 1 – Filter
- Container 2A – Acetone rinses of nozzle, probe, and front-half of filter holder and rinses of back-half of filter holder, condenser, and impingers
- Container 2B – Toluene rinses of nozzle, probe, and front-half of filter holder and rinses of back-half of filter holder, condenser, and impingers
- Container 3 – Impinger 1 through 3 water contents



- Container 4 – XAD cartridge and resin
- Container 5 – Silica gel.

The samples, comprised of containers 1 through 4, were shipped to Eurofins under strict COC documentation. Appropriate shipping containers were used to keep the samples cool during shipping.

A field train proof blank train was collected. The field train blank is a QC sample to evaluate equipment preparation and potential contamination during sample recovery and consists of a fully assembled train at the sampling site, without actual sampling. The field train proof blank train uses glassware from the same preparation batch as the field samples.

#### 4.3.4 Sample Analysis

The Method 23 samples were analyzed by Eurofins following Method 23 (promulgated prior to March 20, 2023) and Method CARB429 to quantify naphthalene, PAHs excluding naphthalene and D/Fs. The filter(s), acetone rinses, toluene rinses, XAD-2 resin, and impinger water were analyzed for the D/Fs and PAHs listed in Method 23 (promulgated March 20, 2023), Table 23-1 and Table 23-2 respectively using high-resolution gas chromatography/high resolution mass spectrometry.

#### 4.3.5 Data Reduction

The D/F results are expressed in terms of total mass basis and toxicity equivalents (TEQ). The individual D/F congeners were converted to TEQ using the 2005 World Health Organization (WHO) toxicity equivalence factors (TEFs), adopted by USEPA in 2009. The individual congener concentrations were multiplied by their respective TEFs to calculate TEQ and the TEQ values for individual congeners were summed for the total TEQ result.

When a target compound is measured at or below the estimated detection limit (EDL), the EDL was used as the concentration for purposes of calculating the total D/F TEQ concentration for that sample, as specified in Method 23 (§9.1.7.2).

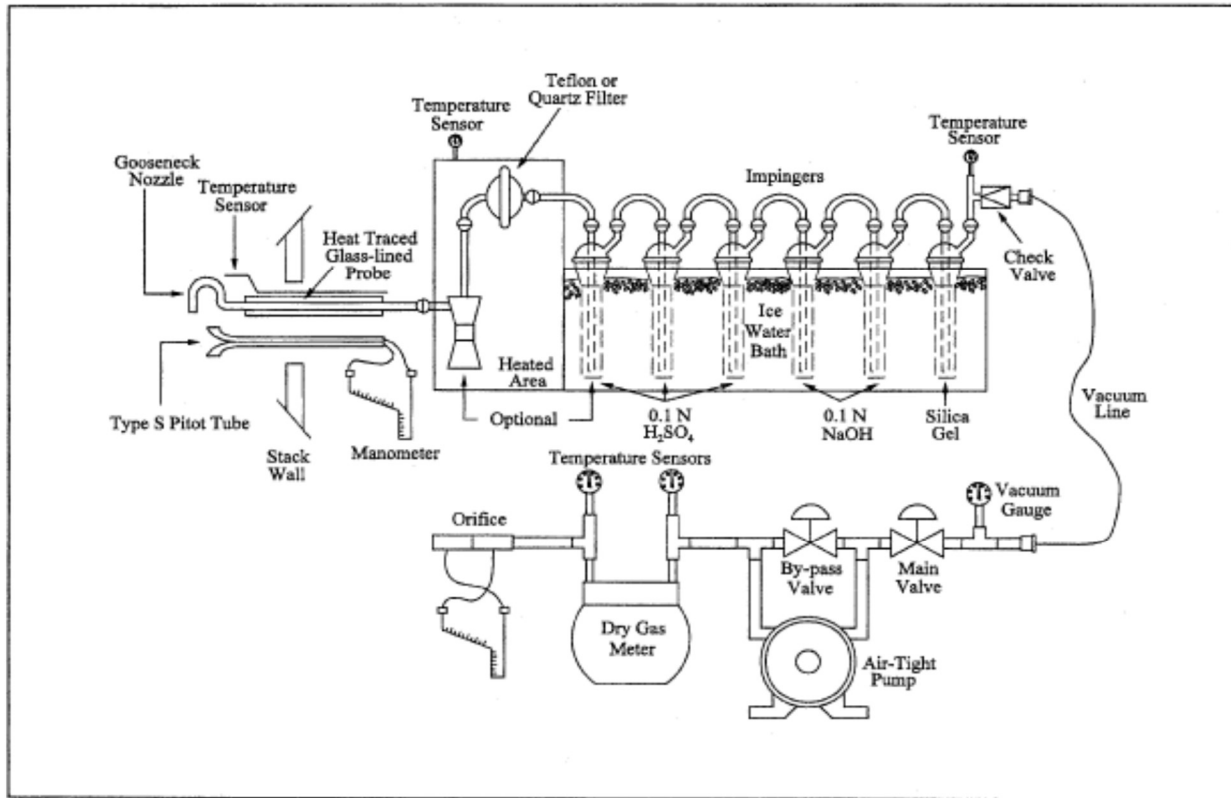
### 4.4 Hydrochloric Acid and Chlorine Determination

Method 26A was followed for the determination of HCl and Cl<sub>2</sub> emissions at the test locations. Included in the Method 26A sampling system was a calibrated Teflon coated stainless steel nozzle, stainless steel probe, Teflon probe liner, insulated filter oven, glass filter holder and Teflon filter, condenser assembly, and calibrated extraction system. The system vacuum was used to extract the effluent sample gas through the interconnected, leak-free components. The entire system was leak checked before and after each individual sample run to ensure sample integrity.

Samples were withdrawn isokinetically from each source using a Method 26A sampling train as illustrated in **Figure 4-5**. The condenser assembly consisted of a series of five glass impingers with glass inserts interconnected to each other by glass U tubes, providing a “leak tight” seal with ball and socket connections. The first and second impingers contained sulfuric acid (H<sub>2</sub>SO<sub>4</sub>). The third and fourth impingers contained sodium hydroxide (NaOH) as listed in the Method. The fifth impinger was filled with a pre-weighed amount of silica gel to capture any residual moisture from the sample stream. The impinger train was set in an ice bath to maintain the extracted gas outlet temperature at or below 70°F. By cooling the sample, all water vapor and gases were condensed and collected.



**Figure 4-5 Method 26A Sample Train**



Three valid sample runs were performed at the test locations. Upon completion of each sample run, the probe was removed from the effluent and allowed to cool. A leak check of the sampling system was then performed to verify the integrity of the system. The leak rate did not exceed 0.02 actual cubic feet per minute (acfm) for each sample run.

Each sample train was carefully recovered. The contents of the impingers and the silica gel from the fifth impinger were weighed to determine the moisture gain. The  $H_2SO_4$  solution in the first two impingers was quantitatively recovered in a glass sample container. The NaOH solution and the third and fourth impingers was recovered in a separate glass sample container. The impingers and connecting glassware were then rinsed with water and added to the respective sample jars.

Portions of the  $H_2SO_4$  and NaOH absorbing reagents were collected for blanks and diluted to the approximate volume of the corresponding sample jars with rinse water from the same wash bottle used. All liquid levels were marked. The  $H_2SO_4$  and NaOH sample jars and reagent blanks were sent to Eurofins located in Knoxville, Tennessee for HCl and  $Cl_2$  analysis by Ion Chromatography (IC).



## 4.5 Calculations and Nomenclature

The following section presents the calculations for determining flow rate, molecular weight, and moisture content. In addition, calculations for the determination of concentrations and emission rates are provided. The nomenclature for each calculation is also defined.

### Calculations

Stack Pressure (in. Hg):

$$P_s = P_b + \frac{P_g}{13.6}$$

Dry Standard Sample Gas Volume (dscf):

$$V_{m(std)} = V_m \times Y_d \times \left( \frac{T_{std}}{T_m} \right) \times \left( \frac{P_m}{P_{std}} \right)$$

Volume of Water Vapor (scf):

$$V_{wc(std)} = 0.04707 \times MG$$

Fractional Moisture:

$$B_{ws} = \frac{V_{wc(std)}}{V_{wc(std)} + V_{m(std)}}$$

Percent Moisture (%):

$$\% H_2O = B_{ws} \times 100$$

Molecular Weight (dry):

$$M_d = (0.44 \times \% CO_2) + (0.32 \times \% O_2) + (0.28 \times (100 - \% CO_2 - \% O_2))$$

Molecular Weight (wet):

$$M_w = M_d \times (1 - B_{ws}) + (18 \times B_{ws})$$

Velocity (fps):

$$v_s = 85.49 \times C_p \times \sqrt{\Delta p_{avg}} \times \sqrt{\frac{T_s}{P_s \times M_w}}$$

Flow Rate (acfm):

$$acfm = V_s \times A_s \times 60$$

Flow Rate (dscfm):

$$dscfm = acfm \times 17.64 \times \left( \frac{100 - \% H_2O}{100} \right) \times \left( \frac{P_s}{T_s} \right)$$



Flow Rate (wscfm):

$$wscfm = acfm \times 17.64 \times \left( \frac{P_s}{T_s} \right)$$

Percent Isokinetic (%):

$$\% I = \frac{0.09450 \times T_s \times V_{m(std)}}{P_s \times v_s \times A_n \times \Theta \times (1 - B_{ws})}$$

Arithmetic Mean:

$$\bar{d} = \frac{1}{n} \times \sum_{i=1}^n d_i$$

Pollutant Emission Rate (lb/hr):

$$E_p = C_{pollutant} \times dscfm \times 60$$

Production Based Pollutant Emission Rate, (lb/ton concentrated ore fed)

$$E_{lb/ton \text{ concentrated ore fed}} = \frac{E_p}{PR}$$

Emissions of D/F (ng TEQ/dscm):

$$C_{(D/F)T} = \frac{\sum_{i=1}^n C_{(D/F)i} TEF_i}{V_{m(std)}} \frac{ng}{1,000pg}$$

### Nomenclature

$A_n$	Nozzle Area (in <sup>2</sup> )
$A_s$	Cross-Sectional Area of the Stack (Square Feet)
acfm	Flow Rate (actual cubic feet per minute)
$B_{ws}$	Fractional Moisture (proportional by volume)
$C_p$	Pitot Tube Coefficient, Dimensionless (0.84 for Type-S)
$C_{pollutant}$	Pollutant Concentration (lb/dscf)
$C_{(D/F)i}$	Concentration of D/F congener i in sample (pg/liter)
$C_{(D/F)T}$	Total concentration of D/F congeners in sample (ng/liter)
D/F	Stack concentration of polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans (ng TEQ/dscm)
$\bar{d}$	Arithmetic Mean of the Difference, d, of a Set of Data Points
$d_i$	Individual Difference of the CEMS and RM Data Pairs
dscfm	Flow Rate (dry standard cubic feet per minute)
$E_a$	Gaseous Pollutant Emission Rate (lb/hr)



$E_p$	Pollutant Emission Rate (lb/hr)
$E_{part}$	Particulate Emission Rate (filter fraction) (lb/hr)
dscfm	Flow Rate (dry standard cubic feet per minute)
$M_d$	Molecular Weight of Stack Gas, dry basis (lb/lb-mole)
$M_w$	Molecular Weight of Stack Gas, wet basis (lb/lb-mole)
MG	Mass Gain (g)
$MG_{pollutant}$	Total Mass Gain (g)
MW	Molecular Weight of Gaseous Pollutant (g/mole)
n	Number of Data Points
$P_b$	Uncorrected Barometric Pressure (in. Hg)
$P_g$	Static Pressure of Stack Gas (in. WC)
PR	Production Rate (dry ton concentrated ore fed/hr)
$P_s$	Absolute Pressure of Stack Gas (in. Hg)
$P_{std}$	Standard Absolute Pressure (29.92 in. Hg)
$S_d$	Standard Deviation of the Set of Data Points $d_1$ - $d_n$
TEQ	Toxic Equivalency
$T_m$	Average DGM Absolute Temperature ( $^{\circ}$ R)
$T_s$	Stack Gas Temperature ( $^{\circ}$ R)
$T_{std}$	Standard Absolute Temperature (528 $^{\circ}$ R)
$V_m$	Dry Gas Volume as Measured by the DGM (dcf)
$V_{m(std)}$	Dry Gas Volume Corrected to Standard Conditions (dscf)
$V_s$	Average Gas Velocity (feet per second)
$V_w$	Volume of Moisture (ml)
$V_{wc(std)}$	Volume of Moisture Collected, Corrected to Standard Conditions (scf)
wscfm	Flow Rate (wet standard cubic feet per minute)
Y	DGM Calibration Factor
$\Delta P$	Velocity Head of Gas (in. WC)
$\Theta$	Sample Time (minutes)
%CO <sub>2</sub>	Percent Carbon Dioxide, Dry Basis (%)
%I	Isokinetics, dimensionless (%)
%H <sub>2</sub> O	Moisture Content of Gas (%)
%O <sub>2</sub>	Percent Oxygen, Dry Basis



## 5.0 Quality Assurance/Quality Control

### 5.1 Objectives

The objectives of SLR's Quality Assurance/Quality Control (QA/QC) program are as follows:

- To continually monitor the precision and accuracy of the data being generated for all source emission measurements.
- To implement measures designed to control the precision and accuracy of all data generated for individual sources.
- To maintain permanent records of analytical QC data and equipment calibrations that include traceability and certification; and
- To identify, document, and maintain a chain-of-custody log that accounts for each method sample collected during each measurement program.

### 5.2 Field Program

All primary, USEPA-approved testing procedures are referenced in the 40 CFR 60, Appendix A. No deviations from these procedures are anticipated other than what is outlined in Section 4.0 of this test report. All field personnel responsible for this emission test program strictly followed the procedures dictated by the applicable test methods.

All field test personnel involved with this test program are experienced and trained in field sampling methods and procedures. Field personnel were assigned key responsibilities in phases of sample collection, sample recovery, chain-of-custody, and transportation of samples. Basic responsibilities for field personnel include, but are not limited to the following:

**Recordkeeping.** Field personnel recorded all pertinent test parameters and relevant observations on the appropriate field data forms.

**Safety Requirements.** Field personnel were familiar with all company safety regulations and were provided with all the necessary safety equipment.

**Sample Handling.** Field personnel were trained in the proper procedures for handling samples including use of sample containers, sample preservation, identification, storage of collected samples, and chain-of-custody.

**Instrumentation.** Specific field personnel were trained in the proper operation, calibration, trouble shooting, and maintenance of the instrumentation intended for this program. This includes the use of pumps, control console(s), samplers, and instrumentation.

**Quality Control.** Field personnel were trained in all aspects of QC that relate directly to the specific USEPA method test procedures, sample handling, analyses, and reporting.

Mr. Bopray, of SLR, was the designated field manager and was responsible for coordinating testing activities with FMMI and USEPA if necessary. He provided answers to questions concerning test methodology, quality control, and all other project aspects. The field manager was also responsible for delegating work assignments to the members of the test crew, making sure all QA/QC procedures were carried out, and documenting all field activities in a bound logbook.



Method (reagent) blanks were collected for every parameter associated with each test series. This was done to determine if any interfering substance is present in any of the reagents. Storage containers deemed acceptable for the storage of reagents were used for the blanks as well as the samples.

All field instrumentation was maintained and calibrated according to all applicable USEPA guidelines. Records of instrument maintenance and calibration are kept in historical files and continually updated. Calibrations of all field instrumentation, at a minimum, meet or exceed the mandated procedures stipulated in the *Quality Assurance Handbook for Air Pollution Measurement Systems, Volume III*. Documentation of calibrations is maintained on file at all times. Calibration documentation for the equipment used in this test program was made available on the days of testing and is presented in the appendices of this test report.

### 5.3 Sample Documentation

All field data collected for each selected test procedure was documented on field data forms. Each form, specific to each sample run, includes information as to the source tested, date and time of sample collection, analyst(s) performing the test, and all data necessary for test validation. Each field data sheet was completed by the responsible technician at the time of the test and checked by the field manager for accuracy and completeness after each test series. Copies of all raw field data sheets are included in the appendices of this test report, with the originals maintained in project files at SLR's Fort Collins, Colorado office.

Sample containers utilized for the collection and storage of samples were specific to each test procedure. Sample bottles deemed acceptable by each test method were used for this measurement program. Filter substrates were maintained in individually labeled polyethylene Petri dishes sufficient in size to receive the samples unaltered and with the exposed surface protected from sample loss (if applicable).

Collection of all blanks were specific to each test performed. The field blanks were collected at the test locations and subjected to the same ambient conditions as the samples. This type of blank was collected for each reagent used in each test series and analyzed in the same manner as the sample itself.

Each recovered sample was labeled with standard sample tags. Each tag uniquely identified each sample. The tags provided information regarding the unit tested, sample location, date and time of collection, reagent(s) used, and sample identification. The sample containers were sealed, liquid level marked (if applicable) and properly stored until it was transported to the laboratory.

Standard chain-of-custody forms were completed before any samples were transported to the laboratory. This procedure is dictated by the USEPA and strictly adhered to by SLR. Each sample was tagged with a chain-of-custody tag, which requires the same information as the field sample label.

### 5.4 Analytical Quality Control

Eurofins, Knoxville, located at 5815 Middlebrook Pike, Knoxville, Tennessee 37921 was selected to perform all analyses. SLR has worked with Eurofins laboratories in the past, and their QA/QC programs are known to meet or exceed USEPA standards. Key components of Eurofins' QC program include:





**Recordkeeping.** Personnel are trained in the proper use of field and laboratory work sheets, recording of analytical and QC data, and recordkeeping.

**Safety Regulations.** Personnel are trained in all company safety policies and provided with all necessary safety equipment.

**Sample Handling.** Personnel are trained in the proper storage and handling of samples and sample containers.

**Use of Volumetric Glassware.** Personnel are trained in the proper use of graduated cylinders, burets, pipets, and volumetric flasks.

**Use of Balances.** Personnel are trained in the proper use of analytical balances. Balance checks with class "S" weights are routinely performed.

**Instrumentation.** Personnel are trained in the proper operation, calibration, and maintenance of all instrumentation utilized for emission testing programs.

**Data Handling and Reporting.** Personnel are trained in the proper procedures for recording raw laboratory data, calibrations, standards information and results, along with QC data. Analytical data will be reported in meaningful engineering units.

**Quality Control.** Personnel are trained on all of the QC procedures specific to the requirements established for this emission testing program.

All pertinent data, such as reagent preparation, filter weights, samples analyzed, blank analysis, and QA data will be available upon request.

#### 5.4.1 Laboratory Notes

Eurofins was contacted to provide clarification of the use of old M23 and CARB429. The following is Eurofins' discussion of their choice of analytical methods.

The laboratory performed EPA Method 23, the 1995 revision, and CARB429 with our in-house ID-0016 SIM-PAH analytical finish. The laboratory is NELAP certified for both methods. Both methods are performance based and are isotope dilution methods, meaning both are robust analytical methods. There are minimal differences in the detection limits for both methods. There were hits in most samples so more sensitive detection limits would not improve the data set. The laboratory has reviewed the Dioxin portion of the revised method and while there are additional standards, the data produced from the older method is of no lesser quality. The use of this method should have little to no impact on the data. Regarding the PAH portion of the data set, the laboratory has not performed a full technical review of this portion of the New Method 23 and cannot speak to the differences in the new method versus the CARB429 / ID-0016 method used.

In reference to the detections that were seen in the Proof Blank Container (sample 10), all are significantly lower than the reporting limits. For this method estimated detections (J levels) are allowed in the method blanks. These would have a minimal insignificant impact on the sample data.

The following Sections contain the Job Narratives from each of the laboratory reports.



#### 5.4.1.1 Method 18

The samples were received on 12/12/2023 10:00 AM. The samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 5.1° C. No laboratory results qualifiers were presented by Eurofins.

#### 5.4.1.2 Method 26A

The samples were received on 12/13/2023 9:30 AM. The samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 18.4° C and 18.4° C.

Analysis of Stationary Source Emission Samples by Ion Chromatography Samples were analyzed for chloride by ion chromatography using SOP number KNOX-WC-005 (based on USEPA methods 9056, 9057 and 26A). All sample results were reported as total µg hydrogen chloride and total µg chlorine. Results were calculated using the following equations:

$$\text{Hydrogen Chloride, } \mu\text{g} = (\text{Chloride, } \mu\text{g/mL}) \times (\text{Sample Volume, mL}) \times (\text{Molecular Weight HCl} / \text{Molecular Weight Cl}) \times \text{Bench DF}$$

$$\text{Chlorine, } \mu\text{g} = (\text{Chloride, } \mu\text{g/mL}) \times (\text{Sample Volume, mL}) \times \text{Bench DF}$$

Sodium hydroxide impinger samples were treated with sodium thiosulfate prior to the final analysis in order to convert residual hypochlorite to chloride ion. Note: A sample volume of 100 mL was used to convert the results to total µg for the method blanks, laboratory control samples, and client reagent blanks.

For demonstration of analytical method performance on these samples, Eurofins analyzed matrix spikes (MS) and matrix spike duplicates (MSD). Acceptable recoveries of these spikes demonstrate that quantitation from this particular stack gas matrix is accurate and acceptable. Impinger samples containing 0.1N sulfuric acid and 0.1N sodium hydroxide often display matrix interference effects causing poor method performance and possibly giving unreliable data unless the interference is dealt with. Therefore, the samples were diluted in the lab to reduce the interference for a more accurate anion response. The samples may be analyzed at increasing dilutions along with matrix spikes until matrix spikes display acceptable recoveries.

Method 0050/26A: The sample duplicate (DU) precision for samples VF26A-1 CONTAINER 3 H2SO4 (140-34757-1), VF26A-1 CONTAINER 3 H2SO4 (140-34757-1[DU]), AS26-2 CONTAINER 3 H2SO4 (140-34757-9), AS26-2 CONTAINER 3 H2SO4 (140-34757-9[DU]), AS26-3 CONTAINER 3 H2SO4 (140-34757-11) and AS26-3 CONTAINER 3 H2SO4 (140-34757-11[DU]) was outside control limits. One or more results are less than the RL and the results are considered estimates. Therefore, the requirement for the relative percent difference (RPD), a measure of the relative difference between two points, to be less than or equal to 10% does not apply.

Method 0050/26A: The sample duplicate (DU) precision for samples VF26A-1 CONTAINER 4 NAOH (140-34757-2), VF26A-1 CONTAINER 4 NAOH (140-34757-2[DU]), AP26-1 CONTAINER 4 NAOH (140-34757-14) and AP26-1 CONTAINER 4 NAOH (140-34757-14[DU]) was outside control limits. One or more results are less than the RL and the results are considered estimates. Therefore, the requirement for the RPD to be less than or equal to 10% does not apply.



### 5.4.1.3 Method 23

The samples were received on 12/12/2023 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 5.1° C and 18.4° C.

The following samples were received at the laboratory outside the required temperature criteria: AS23-1 CONTAINER 1,2A,2B,3, AS23-2 CONTAINER 1,2A,2B,3 AS23-3 CONTAINER 1,2A,2B,3, VF23-1 CONTAINER 1,2A,2B,3, VF23-2 CONTAINER 1,2A,2B,3, VF23-4 CONTAINER 1,2A,2B,3, AP23-1 CONTAINER 1,2A,2B,3, AP23-2 CONTAINER 1,2A,2B,3, AP23-3 CONTAINER 1,2A,2B,3 and PROOF BLANK CONTAINER 1,2A,2B,3. This does not meet regulatory requirements. The client was contacted regarding this issue, and the laboratory was instructed to proceed with analysis.

#### GC/MS Semi VOA

Method ID-0016: Dioxin and Furan Field Surrogate was added prior to extraction and does not represent field sampling efficiency. Field sampling efficiency can be quantified using the PAH field surrogate recovery.

The field surrogate, 13C6-Naphthalene, was not detected in sample AS23-2 CONTAINER 1,2A,2B,3,XAD (140-34737-2). It appears to have been omitted during the spiking process before shipment to the field. No additional analytical or quality issues were noted, other than those described above.

#### Dioxin

No analytical or quality issues were noted.

#### Organic Prep

Method Combined Prep: The following samples were spiked with field surrogate before extraction, not sampling. This does not represent field sampling efficiency, only extraction efficiency: AS23-1 CONTAINER 1,2A,2B,3,XAD (140-34737-1), AS23-2 CONTAINER 1,2A,2B,3,XAD (140-34737-2), AS23-3 CONTAINER 1,2A,2B,3,XAD (140-34737-3), VF23-1 CONTAINER 1,2A,2B,3,XAD (140-34737-4), VF23-2 CONTAINER 1,2A,2B,3,XAD (140-34737-5), VF23-4 CONTAINER 1,2A,2B,3,XAD (140-34737-6), AP23-1 CONTAINER 1,2A,2B,3,XAD (140-34737-7), AP23-2 CONTAINER 1,2A,2B,3,XAD (140-34737-8), AP23-3 CONTAINER 1,2A,2B,3,XAD (140-34737-9) and PROOF BLANK CONTAINER 1,2A,2B,3,XAD (140-34737-10) Methods 1668\_Sep\_2L, 1699, 8290, HRMS-Sepf, HRMS-Sox, Split: The following samples required a Gel-Permeation clean up, via EPA method 3640A, to reduce matrix interference: AS23-1 CONTAINER 1,2A,2B,3,XAD (140-34737-1), AS23-2 CONTAINER 1,2A,2B,3,XAD (140-34737-2), AS23-3 CONTAINER 1,2A,2B,3,XAD (140-34737-3), VF23-1 CONTAINER 1,2A,2B,3,XAD (140-34737-4), VF23-2 CONTAINER 1,2A,2B,3,XAD (140-34737-5), VF23-4 CONTAINER 1,2A,2B,3,XAD (140-34737-6), AP23-1 CONTAINER 1,2A,2B,3,XAD (140-34737-7), AP23-2 CONTAINER 1,2A,2B,3,XAD (140-34737-8), AP23-3 CONTAINER 1,2A,2B,3,XAD (140-34737-9), PROOF BLANK CONTAINER 1,2A,2B,3,XAD (140-34737-10) and A-1981,A-1982 M23/CARB429 MEDIA CHECK (140-34737-11).

No additional analytical or quality issues were noted, other than those described above.

### 5.4.1.4 Observations

For Method 26A, Eurofins reports data qualifiers for sample and quality control results. The data qualifiers presented in the Method 26A report included the following.



F5 - Duplicate relative percent difference (RPD), a measure of the relative difference between two points, exceeds limit, and one or both sample results are less than 5 times the reporting limit (RL), and the absolute difference between results is less than the upper reporting limits for both.

J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Most of the samples including the blanks were qualified as J.

Eurofins stated that Method 23 “samples were received at the laboratory outside the required temperature criteria”, however, Method 23 states “Ship samples cool ( $\leq 20$  °C, 68 °F), shielded from ultraviolet light” (§8.2.11). The samples were received at 18.4°C meeting the Method 23 requirement.

The data qualifiers presented in the Method 23 report included the following.

B - Compound was found in the blank and sample.

I - Value is EMPC (estimated maximum possible concentration).

J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q - The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Many of the PAH results that are above the MDL have J qualifiers meaning that the qualified result is an approximate value. Most of the D/F results have J with many also having q qualifiers meaning that the results are an approximate value and/or the estimated maximum possible concentration of the analyte, quantitated using the theoretical ion ratio. All D/F samples have a B qualifier for OCDD and OCDF.

## 5.5 Data Reduction, Validation and Reporting

SLR has implemented specific measures to ensure that reliable data is generated as a result of the sampling and analytical activities of every field program. The objective of this phase of SLR’s QA/QC program is to follow the proper collection of representative and QA field and analytical data with approved data reduction methods and equations.

All calculations are performed using QA spreadsheets incorporating standard accepted equations, as required by the applicable pollutant specific sampling methodology. Data reduction was performed by qualified engineers or data analysts familiar with standard engineering practices and approved methods. Calculation methods and equations, including conversion factors and units, are defined in this test report to allow the reviewer to easily reproduce the results from the raw field data and process information provided in the appendices of the report. This final report includes all raw data, QA/QC documentation, and process data collected during the test program. The initial draft of the test report, including both narrative and calculations, was subjected to review by the Project Manager and/or Principal-in-Charge prior to final publication.



## 6.0 Closure

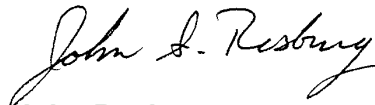
This document has been prepared by SLR International Corporation (SLR). The material and data in this report were prepared under the supervision and direction of the undersigned.

Sincerely,

**SLR International Corporation**



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# Appendix A    Field Data Forms and Analytical Results

## **USEPA Proposed Amendments to Primary Copper Smelting NESHAP: Non-Metal HAPs Performance Test Report**

Freeport-McMoRan Miami Inc.

SLR Project No.: 118.01290.00025

January 28, 2024



FMM1  
 Aisle Scrubber  
 11/30/23

Method 18 Sample Data

Run No.	Media ID	Media Type	Date	Run Time	Pre Flow Rate (Std L/min)	Post Flow Rate (Std L/min)	Sample Time (min)	Sample Vol. (Std L)
AS18-1	955320080	Charcoal	11/30/23	1430-1630	3.88	3.46	120	
AS18-1	9553200143	Spiked Charcoal	11/30/23	1430-1630	3.82	3.48	120	
		Charcoal						
		Spiked Charcoal						
		Charcoal						
		Spiked Charcoal						
		Charcoal						
		Spiked Charcoal						

GR  
 BU

Fmm1  
Aisle Scrubber  
12/01/23

Method 18 Sample Data

Run No.	Media ID	Media Type	Date	Run Time	Pre Flow Rate (Std L/min)	Post Flow Rate (Std L/min)	Sample Time (min)	Sample Vol. (Std L)
AS18-2	553200025	Charcoal	12/01/23	0935-1136	3.86	3.28	120	
AS18-2	553200092	Spiked Charcoal	12/01/23	0935-1136	3.82	3.42	120	
		Charcoal						
		Spiked Charcoal						
		Charcoal						
		Spiked Charcoal						
		Charcoal						
		Spiked Charcoal						

6R  
BL



Fmm1  
 Aisle Scrubber  
 12/01/23

Method 18 Sample Data

Run No.	Media ID	Media Type	Date	Run Time	Pre Flow Rate (Std L/min)	Post Flow Rate (Std L/min)	Sample Time (min)	Sample Vol. (Std L)
GA AS18-3	553200073	Charcoal	12/01/23	1338-1538	3.79 <del>3.79</del>	3.55	120	
BL AS18-3	553200085	Spiked Charcoal	12/01/23	1338-1538	3.72	3.34	120	
		Charcoal						
		Spiked Charcoal						
		Charcoal						
		Spiked Charcoal						
		Charcoal						
		Spiked Charcoal						

FMM1  
 Vent Furnace  
 Run = VF18-1  
 12/02/23

Method 18 Sample Data

Run No.	Media ID	Media Type	Date	Run Time	Pre Flow Rate (Std L/min)	Post Flow Rate (Std L/min)	Sample Time (min)	Sample Vol. (Std L)
VF18-1	553200036	Charcoal	12/02/23	1135-1335	3.79	3.67	120	
VF18-1	553200155	Spiked Charcoal	12/02/23	1135-1335	3.87	3.81	120	
		Charcoal						
		Spiked Charcoal						
		Charcoal						
		Spiked Charcoal						
		Charcoal						
		Spiked Charcoal						

ER  
 PL

Fmm1  
Vent Fume  
12/03/23

Method 18 Sample Data

Run No.	Media ID	Media Type	Date	Run Time	Pre Flow Rate (Std L/min)	Post Flow Rate (Std L/min)	Sample Time (min)	Sample Vol. (Std L)
VF18-2	553200045	Charcoal	12/03/23	1236-1436	3.88	3.72	120	
VF18-2	553200152	Spiked Charcoal	12/03/23	1236-1436	3.93	3.76	120	
		Charcoal						
		Spiked Charcoal						
		Charcoal						
		Spiked Charcoal						
		Charcoal						
		Spiked Charcoal						

# Method 18 Sample Data

Run No.	Media ID	Media Type	Date	Run Time	Pre Flow Rate (Std L/min)	Post Flow Rate (Std L/min)	Sample Time (min)	Sample Vol. (Std L)
VF18-4	53202844	Charcoal	12/05/23	0904-1104	3.80	3.68	120	
VF18-4	<del>9553200068</del> 9553200079	Spiked Charcoal	12/05/23	0904-1104	3.69	3.70	120	
		Charcoal						
		Spiked Charcoal						
		Charcoal						
		Spiked Charcoal						
		Charcoal						
		Spiked Charcoal						

FMM  
Acid Plant  
12/06/23

Method 18 Sample Data

Run No.	Media ID	Media Type	Date	Run Time	Pre Flow Rate (Std L/min)	Post Flow Rate (Std L/min)	Sample Time (min)	Sample Vol. (Std L)
AP18-1	553200144	Charcoal	12/06/23	08:10-10:10	3.86	3.92	120	
AP18-1	955320082	Spiked Charcoal	12/06/23	08:10-10:10	3.85	4.11	120	
		Charcoal						
		Spiked Charcoal						
		Charcoal						
		Spiked Charcoal						
		Charcoal						
		Spiked Charcoal						

From  
Acid Plant  
12/06/23  
Run = AP18-2

Method 18 Sample Data

Run No.	Media ID	Media Type	Date	Run Time	Pre Flow Rate (Std L/min)	Post Flow Rate (Std L/min)	Sample Time (min)	Sample Vol. (Std L)
AP18-2	9553200021	Charcoal	12/06/23	1430-1430	3.93	4.12	120	
AP18-2	9553200156	Spiked Charcoal	12/06/23	1430-1430	3.87	3.72	120	
		Charcoal						
		Spiked Charcoal						
		Charcoal						
		Spiked Charcoal						
		Charcoal						
		Spiked Charcoal						

Green  
Black

FMM1  
 Acid Plant  
 Run = AP18-3  
 12/07/23

### Method 18 Sample Data

Run No.	Media ID	Media Type	Date	Run Time	Pre Flow Rate (Std L/min)	Post Flow Rate (Std L/min)	Sample Time (min)	Sample Vol. (Std L)
AP18-3	955320040	Charcoal	12/07/23	0828-1028	3.81	3.42	120	
AP18-3	955320028	Spiked Charcoal	12/07/23	0828-1028	3.78	3.40	120	
		Charcoal						
		Spiked Charcoal						
		Charcoal						
		Spiked Charcoal						
		Charcoal						
		Spiked Charcoal						

FMM1  
 Blank  
 Run = Blank  
 12/06/23

Method 18 Sample Data

Run No.	Media ID	Media Type	Date	Run Time	Pre Flow Rate (Std L/min)	Post Flow Rate (Std L/min)	Sample Time (min)	Sample Vol. (Std L)
Blank	9553200047	Charcoal	12/06/23					
Blank	9553200041	Spiked Charcoal	12/06/23					
		Charcoal						
		Spiked Charcoal						
		Charcoal						
		Spiked Charcoal						
		Charcoal						
		Spiked Charcoal						



FMMI Method 18 Sample Data

Run No.	Media ID	Media Type	Date	Run Time	Pre Flow Rate (Std L/min)	Post Flow Rate (Std L/min)	Sample Time (min)	Sample Vol. (Std L)
AS18-1	9553200080	Charcoal	11/30/23	1430-1630	3.88	3.46	120	440.4
AS18-1	9553200143	Spiked Charcoal	11/30/23	1430-1630	3.82	3.48	120	438.0
AS18-2	9553200025	Charcoal	12/1/23	0935-1136	3.86	3.28	120	428.4
AS18-2	9553200092	Spiked Charcoal	12/1/23	0935-1136	3.82	3.42	120	434.4
AS18-3	9553200073	Charcoal	12/1/23	1338-1538	3.79	3.55	120	440.4
AS18-3	9553200085	Spiked Charcoal	12/1/23	1338-1538	3.72	3.34	120	423.6
VF18-1	9553200036	Charcoal	12/2/23	1135-1335	3.79	3.67	120	447.6
VF18-1	9553200155	Spiked Charcoal	12/2/23	1135-1335	3.87	3.81	120	460.8
VF18-2	9553200045	Charcoal	12/3/23	1236-1436	3.88	3.72	120	456.0
VF18-2	9553200152	Spiked Charcoal	12/3/23	1236-1436	3.93	3.76	120	461.4
VF18-4	9553202844	Charcoal	12/5/23	0904-1104	3.80	3.68	120	448.8
VF18-4	9553200079	Spiked Charcoal	12/5/23	0904-1104	3.69	3.70	120	443.4
APTG-1	9553200144	Charcoal	12/6/23	0840-1040	3.86	3.92	120	466.8
APTG-1	9553200082	Spiked Charcoal	12/6/23	0840-1040	3.85	4.11	120	477.6
APTG-2	9553200021	Charcoal	12/6/23	1230-1430	3.93	4.12	120	483.0
APTG-2	9553200156	Spiked Charcoal	12/6/23	1230-1430	3.87	3.72	120	455.4
APTG-3	9553200040	Charcoal	12/7/23	0828-1028	3.81	3.42	120	433.8
APTG-3	9553200128	Spiked Charcoal	12/7/23	0828-1028	3.78	3.40	120	430.8
Blank	9553200047	Charcoal	12/6/23	NA	NA	NA	NA	NA
Blank	9553200041	Spiked Charcoal	12/6/23	NA	NA	NA	NA	NA



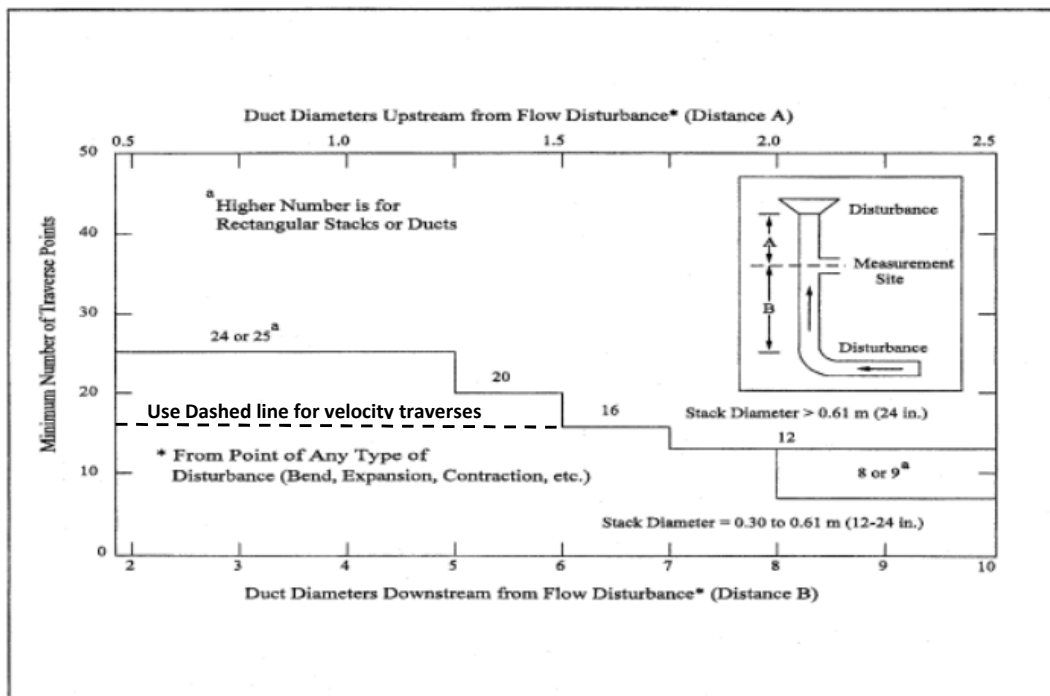
## RM 1 - Minimum Number of Traverse Points For Velocity & PM Traverses

Client Freeport-McMoRan Miami Inc  
 Location Claypool, AZ  
 Source Aisle Scrubber Stack  
 Operator DB, JR

Stack Diameter (in)	359		
Upstream Distance (in)	261	Diameters	0.7
Downstream Distance (in)	855	Diameters	2.4
Port Depth (in)	9		
Port Diameter (in)	6		

### Location of Traverse Points in Circular Stacks

Traverse Point Number	Number of traverse points (% of stack diameter from inside wall)							24 points, use first 6 in each port	
	6	8	10	12	16	20	24	Distance (ft)	Distance with port (ft)
	1	4.4	3.2	2.6	2.1	1.6	1.3	1.1	7.5
2	14.5	10.5	8.2	6.7	4.9	2.9	3.2	24.1	33.1
3	29.6	19.4	14.6	11.8	8.5	6.7	5.5	42.4	51.4
4	70.4	32.3	22.6	17.7	12.5	9.7	7.9	63.5	72.5
5	85.4	67.7	34.2	25.0	16.9	12.9	10.5	89.8	98.8
6	95.6	80.6	66.8	35.6	22.0	16.5	12.2	127.8	136.8
7		89.5	77.4	64.4	28.3	20.4	16.1	231.2	240.2
8		96.8	85.4	75.0	37.5	25.0	19.4	269.3	278.3
9			91.8	82.3	62.5	30.6	23.0	295.5	304.5
10			97.4	88.2	71.7	38.8	27.2	316.6	325.6
11				93.3	78.0	61.2	32.3	334.9	343.9
12				97.9	83.1	69.4	39.8	351.5	360.5
13					87.5	75.0	60.2		
14					91.5	79.6	67.7		
15					95.1	83.5	72.8		
16					98.4	87.1	77.0		
17						90.3	80.6		
18						93.3	83.9		
19						96.1	86.8		
20						98.7	88.6		
21							92.1		
22							94.5		
23							96.8		
24							99.9		





ISOKINETIC SAMPLE DATA FORM

Plant: Fmm1 Filter ID: F9  
 Location: Claypool AZ Ambient Temp. (°F): 56  
 Source I.D.: Airid Scrubber Stack Baro. Press. (in. Hg): 26.05  
 Date: 11/30/23 Static Press. (in H<sub>2</sub>O): 0.62  
 Flow Traverse Time: N/A O<sub>2</sub> (%): 20.9  
 Run No.: AS26A-1 CO<sub>2</sub> (%): 0.0  
 Operators: DR CS Duct Dia. (in): 359.5  
 Meter Box I.D.: Lightwires B<sub>ws</sub> (assumed): 0.03  
 Meter Y: 1.0347 Nozzle Dia. (in): 0.277, 0.276, 0.275 = 0.276  
 Meter Delta H<sub>2</sub>O: 1.6746 K Factor: 6.72  
 Probe I.D./ Impinger outlet I.D.: 17127224 Blue Leak Check: \_\_\_\_\_  
 Probe Length/Type: 13ft 2m Pre: 0.000 acf 10 in. Hg Vac.  
 Pitot Coeff. (Cp): 0.84 Post: 0.000 acf 7 in. Hg Vac.

Moisture Train: <u>1</u>	
Imp.	Final
1	<u>682.4</u>
2	<u>689.6</u>
3	<u>685.3</u>
4	<u>692.6</u>
5	<u>704.7</u>
6	<u>890.0</u>

Impact: 0.0 Static: 0.0  
0.0 in. H<sub>2</sub>O/15 sec.  
0.0 in. H<sub>2</sub>O/15 sec.

Pitot: 0.0 in. Hg Vac.  
0.0 in. Hg Vac.

DGM Clock Time	Port/Point I.D.	Sample Time (min.)	DGM Reading (DAGF)	DP (in. H <sub>2</sub> O)	DH (in. H <sub>2</sub> O)	Stack Temp. (°F)	Probe Temp. (°F)	Filter Temp. (°F)	Imp. Outlet Temp. (°F)	DGM Temp. (°F)	Vacuum (in. Hg)
1430	51	0	943.492	0.24	1.49	60	248	250	51	60	5
	2	5	946.99	0.24	1.49	65	252	252	44	60	5
	3	10	950.53	0.24	1.49	65	255	254	44	63	5
	4	15	954.09	0.24	1.49	65	254	254	46	60	5
	5	20	957.69	0.20	1.24	65	254	255	46	60	5
	6	25	960.99	0.18	1.12	64	256	255	46	61	5
	51	30	964.12	0.24	1.49	64	256	252	47	61	5
	2	35	967.68	0.24	1.49	64	253	254	46	61	5
	3	40	971.31	0.23	1.43	62	252	253	47	70	5
	4	45	974.58	0.24	1.45	64	251	251	47	71	5
	5	50	978.42	0.21	1.31	64	252	252	47	72	5
	6	55	981.84	0.19	1.18	64	252	253	47	72	5
	W1	60	985.107	0.24	1.49	64	251	250	46	72	5
	2	65	988.64	0.23	1.43	64	252	254	47	73	5
	3	70	992.18	0.23	1.43	64	252	254	47	73	5
	4	75	995.71	0.23	1.43	64	254	257	47	74	5
	5	80	999.23	0.19	1.18	64	265	253	48	74	5
	6	85	1002.48	0.19	1.18	63	256	249	47	74	5
	F1	90	1005.75	0.24	1.49	64	258	252	50	68	5
	2	95	1009.25	0.24	1.49	64	255	254	46	69	5
	3	100	1012.84	0.23	1.43	64	257	253	46	70	5
	4	105	1016.40	0.23	1.43	64	257	253	47	72	5
	5	110	1019.98	0.22	1.37	64	257	253	48	72	5
	6	115	1023.45	0.20	1.24	63	254	256	48	73	5
1640		120	1026.62								

Total Time	DGM Volume	Avg. DP	Avg. DH	Avg. t <sub>s</sub>
<u>100</u>	<u>83.290</u>	<u>0.223</u>	<u>1.580</u>	<u>64.1</u>
Average DGM Temp.				Max. Vac.
<u>66.5</u>				<u>5</u>

102.0

Plant = FMMI  
 Plant Location = Claypool, AZ  
 Source ID = Asile Scrubber  
 Run No = AS26A-1  
 Date = 11/30/2023  
 Run Time = 1430-1640  
 Sample Duration (min) = 120

Point Duration (min) = 5  
 Bar. Pres. (in Hg) = 26.05  
 Static Pres. (in WC) = 0.62  
 Nozzle Dia (in WC) = 0.276  
 Meter dH @ = 1.8246  
 Meter Yd = 1.0347  
 H2O Mass (ml/g) = 40.5

Moisture		
Initial	Final	Change
682.4	689.6	7.2
673.8	685.3	11.5
696.8	699.6	2.8
702.4	704.7	2.3
863.3	880.0	16.7
Sum	3618.7	3659.2

Point No.	DGM Reading (acf)	Sample Volume (acf)	dP (in WC)	dP1/2 (in WC)1/2	dH (in WC)	dH1/2 (in WC)1/2	Stack T (F)	DGM Inlet (F)	DGM Outlet (F)	DGM Ave (F)	velocity (ft/s)	Stack Pres (in Hg)	Meter Pres. (in Hg)
S1	943.492	3.498	0.24	0.490	1.49	1.221	66.0	60.0	60.0	60.0	29.4	26.10	26.16
	946.990	3.540	0.24	0.490	1.49	1.221	65.0	61.0	60.0	60.5	29.4	26.10	26.16
2	950.530	3.560	0.24	0.490	1.49	1.221	65.0	63.0	60.0	61.5	29.4	26.10	26.16
	954.090	3.600	0.24	0.490	1.49	1.221	65.0	65.0	60.0	62.5	29.4	26.10	26.16
3	957.690	3.300	0.20	0.447	1.24	1.114	65.0	67.0	60.0	63.5	26.8	26.10	26.14
	960.990	3.130	0.18	0.424	1.12	1.058	64.0	68.0	61.0	64.5	25.4	26.10	26.13
S1	964.120	3.560	0.24	0.490	1.49	1.221	64.0	69.0	61.0	65.0	29.4	26.10	26.16
	967.680	3.630	0.24	0.490	1.49	1.221	64.0	70.0	61.0	65.5	29.4	26.10	26.16
2	971.310	3.270	0.23	0.480	1.43	1.196	64.0	71.0	62.0	66.5	28.7	26.10	26.16
	974.580	3.840	0.24	0.490	1.49	1.221	64.0	71.0	63.0	67.0	29.4	26.10	26.16
3	978.420	3.420	0.21	0.458	1.31	1.145	64.0	72.0	63.0	67.5	27.5	26.10	26.15
	981.840	3.267	0.19	0.436	1.18	1.086	64.0	72.0	64.0	68.0	26.1	26.10	26.14
W1	985.107	3.533	0.24	0.490	1.49	1.221	64.0	72.0	64.0	68.0	29.4	26.10	26.16
	988.640	3.540	0.23	0.480	1.43	1.196	64.0	73.0	64.0	68.5	28.7	26.10	26.16
2	992.180	3.530	0.23	0.480	1.43	1.196	64.0	73.0	64.0	68.5	28.7	26.10	26.16
	995.710	3.520	0.23	0.480	1.43	1.196	63.0	74.0	65.0	69.5	28.7	26.10	26.16
3	999.230	3.250	0.19	0.436	1.18	1.086	64.0	74.0	65.0	69.5	26.1	26.10	26.14
	1002.480	3.270	0.19	0.436	1.18	1.086	63.0	74.0	65.0	69.5	26.1	26.10	26.14
E1	1005.750	3.500	0.24	0.490	1.49	1.221	64.0	68.0	65.0	66.5	29.4	26.10	26.16
	1009.250	3.590	0.24	0.490	1.49	1.221	64.0	69.0	65.0	67.0	29.4	26.10	26.16
2	1012.840	3.560	0.23	0.480	1.43	1.196	64.0	70.0	64.0	67.0	28.7	26.10	26.16
	1016.400	3.580	0.23	0.480	1.43	1.196	64.0	72.0	65.0	68.5	28.7	26.10	26.16
3	1019.980	3.470	0.22	0.469	1.37	1.170	64.0	72.0	64.0	68.0	28.1	26.10	26.15
	1023.450	3.312	0.20	0.447	1.24	1.114	63.0	73.0	64.0	68.5	26.8	26.10	26.14
	1026.762												
	83.270		0.223	0.472	1.388	1.177	64.1	69.7	62.9	66.3	28.3	26.10	26.15



ISOKINETIC SAMPLE DATA FORM

Plant: FMMI Filter ID: F8

Location: Claypool, AZ Ambient Temp. (°F): 54

Source I.D.: Asile Scrubber Baro. Press. (in. Hg): 26.15

Date: 12/1/23 Static Press. (in. H<sub>2</sub>O): 0.61

Flow Traverse Time: NA O<sub>2</sub> (%): 20.9

Run No.: AJZ6A-2 CO<sub>2</sub> (%): 0.0

Operators: DR, CS Duct Dia. (in.): 159.5

Meter Box I.D.: Ligatronics B<sub>ws</sub> (assumed): 0.03

Meter Y: 1.0347 Nozzle Dia. (in.): 0.226

Meter Delta H@: 1.8248 K Factor: 0.22

Probe I.D./Impinger outlet I.D.: 1712224/ green Leak Check: Pre: 0.000 acf Post: 0.000 acf

Probe Length/Type: 13ft Rms Pitot: Pre: 0.0 in. H<sub>2</sub>O/15 sec. Post: 0.0 in. H<sub>2</sub>O/15 sec.

Pitot Coeff. (Cp): 0.84

Moisture Train: 2

Imp.	Initial	Final
1	<u>680.0</u>	<u>689.1</u>
2	<u>683.2</u>	<u>696.3</u>
3	<u>701.7</u>	<u>709.2</u>
4	<u>702.6</u>	<u>704.7</u>
5	<u>850.6</u>	<u>865.4</u>
6		

Net Gain: 41.6

Static

Impact	0.0	in. H <sub>2</sub> O/15 sec.
Pitot	0.0	in. H <sub>2</sub> O/15 sec.

DGM Clock Time	Port/Point I.D.	Sample Time (min.)	DGM Reading (DACF)	DP (in. H <sub>2</sub> O)	DH (in. H <sub>2</sub> O)	Stack Temp. (°F)	Probe Temp. (°F)	Filter Temp. (°F)	Imp. Outlet Temp. (°F)	DGM Temp. (°F)	Vacuum (in. Hg)
936	S1	0	26.928	0.25	1.56	69	250	261	51	56	6
	S2	5	30.54	0.25	1.56	69	252	254	41	56	6
	S3	10	34.15	0.25	1.56	69	256	254	34	54	6
	S4	15	37.77	0.24	1.43	68	256	254	24	55	6
	S5	20	41.33	0.23	1.43	67	252	253	34	55	6
	S6	25	44.83	0.23	1.43	67	252	253	40	56	6
	W1	30	48.303	0.23	1.43	67	255	252	43	56	6
	S2	35	51.82	0.24	1.44	66	255	254	34	56	6
	S3	40	55.40	0.25	1.56	66	254	254	40	56	6
	S4	45	59.03	0.23	1.43	66	255	255	42	58	6
	S5	50	62.58	0.20	1.24	67	252	253	45	60	5
	S6	55	65.85	0.17	1.06	64	251	248	46	61	5
	W1	60	68.86	0.22	1.43	67	253	266	47	64	5
	S2	65	72.37	0.22	1.37	67	254	253	46	65	5
	S3	70	75.84	0.21	1.31	66	254	255	47	64	5
	S4	75	79.24	0.21	1.31	66	254	255	48	68	5
	S5	80	82.65	0.18	1.12	67	252	252	48	70	5
	S6	85	85.84	0.15	0.93	67	254	253	49	71	5
	W1	90	88.782	0.20	1.24	68	253	252	50	81	5
	S2	95	92.10	0.20	1.24	67	256	253	49	82	5
	S3	100	95.42	0.20	1.24	66	255	255	48	83	5
	S4	105	98.77	0.25	1.56	65	252	253	47	75	6
	S5	110	102.40	0.23	1.43	65	253	253	46	76	6
	S6	115	106.00	0.20	1.24	65	253	252	48	76	5
	W1	120	109.404								
Total Time			DGM Volume	Avg. DP	Avg. DH	Avg. Ts				Average DGM Temp.	Max. Vac.
		120	79.470	0.219	1.461	66.0				68.5	6

1.031

87-476

Plant = FMMI  
 Plant Location = Claypool, AZ  
 Source ID = Asile Scrubber  
 Run No = AS26A-2  
 Date = 12/1/2023  
 Run Time = 0936-1142  
 Sample Duration (min) = 120  
 Point Duration (min) = 5  
 Bar. Pres. (in Hg) = 26.15  
 Static Pres. (in WC) = 0.61  
 Nozzle Dia (in WC) = 0.276  
 Meter dH @ = 1.8246  
 Meter Yd = 1.0347  
 H2O Mass (ml/g) = 41.6

Moisture		
Initial	Final	Change
680.0	689.1	9.1
683.2	696.3	13.1
701.7	704.2	2.5
702.6	704.7	2.1
850.6	865.4	14.8
Sum	3618.1	3659.7

Point No.	DGM Reading (acf)	Sample Volume (acf)	dP (in WC)	dP1/2 (in WC)1/2	dH (in WC)	dH1/2 (in WC)1/2	Stack T (F)	DGM Inlet (F)	DGM Outlet (F)	DGM Ave (F)	velocity (ft/s)	Stack Pres (in Hg)	Meter Pres. (in Hg)
S1	26.928	3.612	0.25	0.500	1.56	1.249	69.0	66.0	64.0	65.0	30.0	26.19	26.26
	30.540	3.610	0.25	0.500	1.56	1.249	69.0	66.0	64.0	65.0	30.0	26.19	26.26
2	34.150	3.620	0.25	0.500	1.56	1.249	69.0	59.0	64.0	61.5	30.0	26.19	26.26
	37.770	3.560	0.24	0.490	1.49	1.221	68.0	60.0	55.0	57.5	29.4	26.19	26.26
3	41.330	3.500	0.23	0.480	1.43	1.196	67.0	61.0	55.0	58.0	28.8	26.19	26.26
	44.830	3.473	0.23	0.480	1.43	1.196	67.0	62.0	56.0	59.0	28.8	26.19	26.26
W1	48.303	3.517	0.23	0.480	1.43	1.196	67.0	62.0	56.0	59.0	28.8	26.19	26.26
	51.820	3.580	0.24	0.490	1.49	1.221	66.0	62.0	56.0	59.0	29.4	26.19	26.26
2	55.400	3.630	0.25	0.500	1.56	1.249	66.0	64.0	56.0	60.0	30.0	26.19	26.26
	59.030	3.550	0.23	0.480	1.43	1.196	66.0	67.0	58.0	62.5	28.7	26.19	26.26
3	62.580	3.270	0.20	0.447	1.24	1.114	67.0	70.0	60.0	65.0	26.8	26.19	26.24
	65.850	3.010	0.17	0.412	1.06	1.030	67.0	71.0	61.0	66.0	24.7	26.19	26.23
W1	68.860	3.510	0.23	0.480	1.43	1.196	67.0	72.0	64.0	68.0	28.8	26.19	26.26
	72.370	3.470	0.22	0.469	1.37	1.170	67.0	74.0	65.0	69.5	28.1	26.19	26.25
2	75.840	3.400	0.21	0.458	1.31	1.145	66.0	76.0	67.0	71.5	27.5	26.19	26.25
	79.240	3.410	0.21	0.458	1.31	1.145	66.0	77.0	68.0	72.5	27.5	26.19	26.25
3	82.650	3.240	0.18	0.424	1.12	1.058	67.0	79.0	70.0	74.5	25.4	26.19	26.23
	85.890	2.893	0.15	0.387	0.93	0.964	67.0	80.0	71.0	75.5	23.2	26.19	26.22
E1	88.783	3.317	0.20	0.447	1.24	1.114	68.0	81.0	73.0	77.0	26.9	26.19	26.24
	92.100	3.320	0.20	0.447	1.24	1.114	67.0	82.0	73.0	77.5	26.8	26.19	26.24
2	95.420	3.350	0.20	0.447	1.24	1.114	66.0	83.0	75.0	79.0	26.8	26.19	26.24
	98.770	3.630	0.25	0.500	1.56	1.249	65.0	83.0	75.0	79.0	29.9	26.19	26.26
3	102.400	3.600	0.23	0.480	1.43	1.196	65.0	83.0	76.0	79.5	28.7	26.19	26.26
	106.000	3.404	0.20	0.447	1.24	1.114	65.0	82.0	76.0	79.0	26.8	26.19	26.24
	109.404												
	82.476		0.22	0.467	1.36	1.164	66.8	71.8	64.9	68.3	28.0	26.19	26.25



ISOKINETIC SAMPLE DATA FORM

Plant: Fummi Filter ID: F10

Location: Claypool AZ Ambient Temp. (°F): 59

Source I.D.: Air Scrubber stack Baro. Press. (in. Hg): 26.15

Date: 12/1/23 Static Press. (in. H<sub>2</sub>O): 0.42

Flow Traverse Time: NA O<sub>2</sub> (%): 20.9

Run No.: AS26A-3 CO<sub>2</sub> (%): 0.0

Operators: DB, CS Duct Dia. (in): 35.5

Meter Box I.D.: Lightning B<sub>ws</sub> (assumed): 0.03

Meter Y: 10347 Nozzle Dia. (in): 0.276

Meter Delta H@: 1.8246 K Factor: 6.22

Probe I.D./Impinger outlet I.D.: 17123224 / 250 Leak Check:

Probe Length/Type: 13.5 / 2MS Pre: 0.000 acf

Pitot Coeff. (Cp): 0.84 Post: 0.002 acf

Moisture Train: ↑

Imp.	Initial	Final
1	680.7	690.0
2	680.0	690.2
3	705.4	701.5
4	880.0	708.4
5		897.8
6		

Net Gain: 40.9

Impact: 0.0 Static: 0.0

Pitot: 0.0 in. H<sub>2</sub>O/15 sec.

Pre: 0.0 in. Hg Vac.

Post: 0.0 in. Hg Vac.

DGM Clock Time	Port/Point I.D.	Sample Time (min.)	DGM Reading (DACF)	DP (in. H <sub>2</sub> O)	DH (in. H <sub>2</sub> O)	Stack Temp. (°F)	Probe Temp. (°F)	Filter Temp. (°F)	Imp. Outlet Temp. (°F)	DGM Temp. (°F)	Vacuum (in. Hg)	
1338	51	0	109.555	0.26	1.62	67	252	251	54	76	5	
	2	5	113.38	0.25	1.56	66	254	251	48	78	5	
	3	10	111.68	0.24	1.49	66	254	251	48	77	5	
	4	15	120.74	0.23	1.43	66	257	253	48	77	5	
	5	20	124.35	0.25	1.56	66	252	254	49	77	5	
	6	25	128.01	0.22	1.37	67	251	254	49	77	5	
1408/1409	01	30	131.494	0.26	1.62	68	256	251	48	77	5	
	2	35	135.28	0.26	1.62	69	256	251	48	77	5	
	3	40	139.08	0.27	1.68	69	256	252	48	76	5	
	4	45	142.95	0.27	1.68	69	256	255	49	76	5	
	5	50	146.82	0.24	1.49	70	253	251	49	75	5	
	6	55	150.48	0.22	1.37	69	257	253	49	76	5	
1439/1440	E1	60	153.912	0.28	1.74	70	256	248	50	76	6	
	2	65	157.91	0.29	1.80	70	251	253	50	76	6	
	3	70	161.93	0.29	1.80	70	252	253	50	76	6	
	4	75	165.96	0.29	1.80	70	251	253	51	76	6	
	5	80	169.99	0.25	1.56	69	253	252	50	75	5	
	6	85	173.82	0.23	1.37	69	255	255	51	75	5	
1510/1511	E1	90	177.250	0.27	1.69	70	253	253	50	73	5	
	2	95	181.06	0.28	1.74	71	251	253	52	74	5	
	3	100	184.93	0.29	1.80	70	251	252	52	72	6	
	4	105	188.91	0.28	1.74	70	256	254	52	72	6	
	5	110	192.86	0.25	1.56	71	254	253	54	72	6	
1541	6	115	196.62	0.22	1.37	72	254	253	54	72	5	
		120	200.156									
Total Time		170	DGM Volume	Avg. DP	Avg. DH	Avg. t <sub>s</sub>						
			90.601	0.258	1.602	68.9						
Average DGM Temp.							76.0					
Max. Vac.							6					

Plant = FMMI  
 Plant Location = Claypool, AZ  
 Source ID = Asile Scrubber  
 Run No = AS26A-3  
 Date = 12/1/2023  
 Run Time = 1338-1541  
 Sample Duration (min) = 120

Point Duration (min) = 5  
 Bar. Pres. (in Hg) = 26.15  
 Static Pres. (in WC) = 0.62  
 Nozzle Dia (in WC) = 0.276  
 Meter dH @ = 1.8246  
 Meter Yd = 1.0347  
 H2O Mass (ml/g) = 40.9

Moisture		
Initial	Final	Change
680.7	690.0	9.3
680.0	690.2	10.2
700.4	701.5	1.1
705.9	708.4	2.5
880	897.8	17.8
Sum	3647	3687.9

Point No.	DGM Reading (acf)	Sample Volume (acf)	dP (in WC)	dP1/2 (in WC)1/2	dH (in WC)	dH1/2 (in WC)1/2	Stack T (F)	DGM Inlet (F)	DGM Outlet (F)	DGM Ave (F)	velocity (ft/s)	Stack Pres (in Hg)	Meter Pres. (in Hg)
S1	109.555	3.825	0.26	0.510	1.62	1.273	67.0	76.0	78.0	77.0	30.6	26.20	26.27
	113.380	3.700	0.25	0.500	1.56	1.249	66.0	76.0	78.0	77.0	30.0	26.20	26.26
2	117.080	3.660	0.24	0.490	1.49	1.221	66.0	78.0	77.0	77.5	29.4	26.20	26.26
	120.740	3.610	0.23	0.480	1.43	1.196	66.0	80.0	77.0	78.5	28.7	26.20	26.26
3	124.350	3.660	0.25	0.500	1.56	1.249	66.0	81.0	77.0	79.0	30.0	26.20	26.26
	128.010	3.484	0.22	0.469	1.37	1.170	67.0	82.0	77.0	79.5	28.1	26.20	26.25
W1	131.494	3.786	0.26	0.510	1.62	1.273	68.0	82.0	77.0	79.5	30.6	26.20	26.27
	135.280	3.800	0.26	0.510	1.62	1.273	69.0	82.0	77.0	79.5	30.6	26.20	26.27
2	139.080	3.870	0.27	0.520	1.68	1.296	69.0	82.0	76.0	79.0	31.2	26.20	26.27
	142.950	3.870	0.27	0.520	1.68	1.296	69.0	82.0	76.0	79.0	31.2	26.20	26.27
3	146.820	3.660	0.24	0.490	1.49	1.221	70.0	81.0	75.0	78.0	29.5	26.20	26.26
	150.480	3.512	0.22	0.469	1.37	1.170	69.0	82.0	76.0	79.0	28.2	26.20	26.25
E1	153.992	3.918	0.28	0.529	1.74	1.319	70.0	83.0	76.0	79.5	31.8	26.20	26.28
	157.910	4.020	0.29	0.539	1.80	1.342	70.0	83.0	76.0	79.5	32.4	26.20	26.28
2	161.930	4.030	0.29	0.539	1.80	1.342	70.0	84.0	76.0	80.0	32.4	26.20	26.28
	165.960	4.030	0.29	0.539	1.80	1.342	70.0	82.0	76.0	79.0	32.4	26.20	26.28
3	169.990	2.830	0.25	0.500	1.56	1.249	69.0	81.0	75.0	78.0	30.0	26.20	26.26
	172.820	4.430	0.22	0.469	1.37	1.170	69.0	81.0	75.0	78.0	28.2	26.20	26.25
E1	177.250	3.810	0.27	0.520	1.68	1.296	70.0	80.0	73.0	76.5	31.3	26.20	26.27
	181.060	3.870	0.28	0.529	1.74	1.319	71.0	80.0	74.0	77.0	31.9	26.20	26.28
2	184.930	3.980	0.29	0.539	1.80	1.342	70.0	78.0	72.0	75.0	32.4	26.20	26.28
	188.910	3.950	0.28	0.529	1.74	1.319	70.0	79.0	72.0	75.5	31.8	26.20	26.28
3	192.860	3.760	0.25	0.500	1.56	1.249	71.0	79.0	72.0	75.5	30.1	26.20	26.26
	196.620	3.536	0.22	0.469	1.37	1.170	72.0	78.0	72.0	75.0	28.3	26.20	26.25
	200.156												
	90.601		0.258	0.507	1.60	1.264	68.9	80.5	75.4	78.0	30.5	26.20	26.27







Plant =	FMMI	Point Duration (min) =	15	Moisture		
Plant Location =	Claypool, AZ	Bar. Pres. (in Hg) =	26.35	Initial	Final	Change
Source ID =	APTG	Static Pres. (in WC) =	0.32	352.7	429.4	76.7
Run No =	AP23-1	Nozzle Dia (in WC) =	0.277	708.0	702.3	-5.7
Date =	12/6/2023	Meter dH @ =	1.7674	689.7	686.1	-3.6
Run Time =	0840-1147	Meter Yd =	0.9932	605.3	605.2	-0.1
Sample Duration (min) =	180	H2O Mass (ml/g) =	105.8	880.6	913.8	33.2
				245.1	250.4	5.3

Point No.	DGM Reading (acf)	Sample Volume (acf)	dP (in WC)	dP1/2 (in WC)1/2	dH (in WC)	dH1/2 (in WC)1/2	Stack T (F)	DGM Inlet (F)	DGM Outlet (F)	DGM Ave (F)	velocity (ft/s)	Stack Pres (in Hg)	Meter Pres. (in Hg)
S1	728.100	3.960	0.30	0.548	1.76	1.325	80.0	56.0	56.0	56.0	33.5	26.37	26.48
	732.060	4.140	0.32	0.566	1.88	1.371	80.0	57.0	56.0	56.5	34.6	26.37	26.49
	736.200	3.970	0.30	0.548	1.76	1.327	80.0	59.0	56.0	57.5	33.5	26.37	26.48
2	740.170	4.280	0.34	0.583	2.00	1.414	80.0	61.0	56.0	58.5	35.7	26.37	26.50
	744.450	4.170	0.33	0.574	1.94	1.393	80.0	63.0	57.0	60.0	35.2	26.37	26.49
	748.620	4.330	0.33	0.574	1.94	1.393	80.0	65.0	58.0	61.5	35.2	26.37	26.49
3	752.950	3.970	0.31	0.557	1.82	1.349	80.0	66.0	58.0	62.0	34.1	26.37	26.48
	756.920	3.880	0.28	0.529	1.65	1.285	80.0	68.0	59.0	63.5	32.4	26.37	26.47
	760.800	4.147	0.33	0.574	1.94	1.393	80.0	69.0	60.0	64.5	35.2	26.37	26.49
W1	764.947	4.083	0.32	0.566	1.88	1.371	80.0	69.0	61.0	65.0	34.6	26.37	26.49
	769.030	4.250	0.33	0.574	1.94	1.393	80.0	71.0	62.0	66.5	35.2	26.37	26.49
	773.280	4.300	0.34	0.583	2.00	1.414	80.0	72.0	62.0	67.0	35.7	26.37	26.50
2	777.580	4.300	0.34	0.583	2.00	1.414	80.0	73.0	63.0	68.0	35.7	26.37	26.50
	781.880	4.240	0.33	0.574	1.94	1.393	80.0	73.0	64.0	68.5	35.2	26.37	26.49
	786.120	4.080	0.32	0.566	1.88	1.371	80.0	74.0	64.0	69.0	34.6	26.37	26.49
3	790.200	4.230	0.33	0.574	1.94	1.393	80.0	74.0	65.0	69.5	35.2	26.37	26.49
	794.430	4.240	0.31	0.557	1.82	1.349	80.0	75.0	66.0	70.5	34.1	26.37	26.48
	798.670	4.162	0.32	0.566	1.88	1.371	80.0	75.0	66.0	70.5	34.6	26.37	26.49
N1	802.832	3.968	0.31	0.557	1.82	1.270	80.0	74.0	67.0	70.5	34.1	26.37	26.48
	806.800	4.130	0.31	0.557	1.82	1.349	80.0	76.0	67.0	71.5	34.1	26.37	26.48
	810.930	4.050	0.33	0.574	1.94	1.393	80.0	76.0	67.0	71.5	35.2	26.37	26.49
2	814.980	4.030	0.31	0.557	1.82	1.349	80.0	77.0	68.0	72.5	34.1	26.37	26.48
	819.010	4.320	0.34	0.583	2.00	1.414	80.0	77.0	68.0	72.5	35.7	26.37	26.50
	823.330	4.220	0.32	0.566	1.88	1.371	80.0	77.0	68.0	72.5	34.6	26.37	26.49
3	827.550	3.850	0.27	0.520	1.59	1.261	80.0	77.0	68.0	72.5	31.8	26.37	26.47
	831.400	3.750	0.28	0.529	1.65	1.285	80.0	77.0	68.0	72.5	32.4	26.37	26.47
	835.150	3.659	0.25	0.500	1.47	1.212	80.0	77.0	68.0	72.5	30.6	26.37	26.46
E1	838.809	3.771	0.27	0.520	1.59	1.261	80.0	76.0	69.0	72.5	31.8	26.37	26.47
	842.580	3.730	0.25	0.500	1.47	1.212	80.0	77.0	70.0	73.5	30.6	26.37	26.46
	846.310	3.890	0.28	0.529	1.65	1.285	80.0	78.0	69.0	73.5	32.4	26.37	26.47
2	850.200	4.100	0.30	0.548	1.76	1.327	80.0	79.0	70.0	74.5	33.5	26.37	26.48
	854.300	4.000	0.29	0.539	1.71	1.308	79.0	79.0	70.0	74.5	32.9	26.37	26.48
	858.300	4.270	0.33	0.574	1.94	1.393	80.0	79.0	70.0	74.5	35.2	26.37	26.49
3	862.570	3.970	0.28	0.529	1.65	1.285	80.0	79.0	70.0	74.5	32.4	26.37	26.47
	866.540	4.110	0.29	0.539	1.71	1.308	80.0	79.0	70.0	74.5	33.0	26.37	26.48
	870.650	3.951	0.29	0.539	1.71	1.308	80.0	80.0	71.0	75.5	33.0	26.37	26.48
874.601													
146.501			0.31	0.554	1.81	1.342	80.0	72.6	64.6	68.6	33.9	26.37	26.48



Method 23 ISOKINETIC SAMPLE DATA FORM

Moisture Train:	Initial	Final
1	352.4	383.9
2	795.3	791.0
3	607.7	603.4
4	605.1	604.9
5	844.0	843.9
6	247.9	255.6
Net Gain		60.4

Moisture Train: 3  
 Imp: 1 of 2  
 page

Filter ID: DF 2  
 Ambient Temp. (°F): 54  
 Baro. Press. (in. Hg): 26.15  
 Static Press. (in. H<sub>2</sub>O): 0.61  
 O<sub>2</sub> (%): 20.9  
 CO<sub>2</sub> (%): 0.0  
 Duct Dia. (in): 3.9, 1.5  
 B<sub>ws</sub> (assumed):  
 Nozzle Dia. (in): 0.277, 0.276, 0.278 = 0.277  
 K Factor: 6.11

Leak Check:  
 Pre: 0.001 acf  
 Post: 0.001 acf  
 in. Hg Vac. 10  
 in. Hg Vac. 10

Pitot: Impact Static  
 Pre: 0.0 0.0  
 Post: 0.0 0.0  
 in. H<sub>2</sub>O/15 sec.  
 in. H<sub>2</sub>O/15 sec.

Plant: FMMI  
 Location: City Pool, AZ  
 Source I.D.: AS 16 scrubber stack  
 Date: 12/1/23  
 Flow Traverse Time: NA  
 Run No.: AS 23-2  
 Operators: RB/CJT  
 Meter Box I.D.: Hawkseye  
 Meter Y: 0.9932  
 Meter Delta H@: 1.3674  
 Probe I.D./Impinger outlet: 1.712, 1.25 / yellow  
 Probe Length/Type: 13' R1W5  
 Pitot Coeff. (Cp): 0.84

DGM Clock Time: 09:30  
 Port/Point I.D.: 1  
 Sample Time (min.): 0  
 DGM Reading (DAGF): 853.153  
 DP (in. H<sub>2</sub>O): 0.24  
 DH (in. H<sub>2</sub>O): 1.44  
 Stack Temp. (°F): 67  
 Probe Temp. (°F): 258  
 Filter Temp. (°F): 256  
 Imp. Outlet Temp. (°F): 54  
 DGM Temp. (°F): 52  
 Condenser Outlet Temp. (°F): 43  
 Vacuum (in. Hg): 7

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Total Time  
 Vol. (DAGF)  
 Avg. DP  
 Avg. DH  
 Avg. t<sub>s</sub>  
 Average DGM Temp.  
 Max. Vac.



Method 23 ISOKINETIC SAMPLE DATA FORM

Plant: \_\_\_\_\_ Filter ID: \_\_\_\_\_

Location: \_\_\_\_\_ Ambient Temp. (°F): \_\_\_\_\_

Source I.D.: \_\_\_\_\_ Baro. Press. (in. Hg): \_\_\_\_\_

Date: \_\_\_\_\_ Static Press. (in H<sub>2</sub>O): \_\_\_\_\_

Flow Traverse Time: \_\_\_\_\_ O<sub>2</sub> (%): \_\_\_\_\_

Run No.: A5 23-2 CO<sub>2</sub> (%): \_\_\_\_\_

Operators: \_\_\_\_\_ Duct Dia. (in): \_\_\_\_\_

Meter Box I.D.: \_\_\_\_\_ B<sub>w</sub>s (assumed): \_\_\_\_\_

Meter Y: \_\_\_\_\_ Nozzle Dia. (in): \_\_\_\_\_

Meter Delta H@: \_\_\_\_\_ K Factor: \_\_\_\_\_

Probe I.D./ Impinger outlet \_\_\_\_\_ Leak Check: \_\_\_\_\_

Probe Length/Type: \_\_\_\_\_ Pre: \_\_\_\_\_ acf

Pitot Coeff. (Cp): \_\_\_\_\_ Post: \_\_\_\_\_ acf

Moisture Train:

Imp.	Initial	Final
1		
2		
3		
4		
5		
6		
		Net Gain

Page 2 of 2

Impact \_\_\_\_\_ Static \_\_\_\_\_

in. H<sub>2</sub>O/15 sec. \_\_\_\_\_

in. H<sub>2</sub>O/45 sec. \_\_\_\_\_

Pitot: \_\_\_\_\_

Pre: \_\_\_\_\_ in. Hg Vac.

Post: \_\_\_\_\_ in. Hg Vac.

DGM Clock Time	Port/Point I.D.	Sample Time (min.)	DGM Reading (DACF)	DP (in. H <sub>2</sub> O)	DH (in. H <sub>2</sub> O)	Stack Temp. (°F)	Probe Temp. (°F)	Filter Temp. (°F)	Imp. Outlet Temp. (°F)	DGM Temp. (°F)	Condenser Outlet Temp. (°F)	Vacuum (in. Hg)
11:16	1	96	921.567	0.26	1.54	66	245	250	54	63	47	7.5
		100	924.54	0.25	1.53	66	245	250	55	62	45	7.5
	2	104	927.65	0.25	1.53	66	249	249	51	63	44	8
		108	930.55	0.25	1.53	66	247	249	50	63	44	8
	3	112	933.50	0.25	1.53	65	251	251	50	63	45	8
		116	936.57	0.25	1.53	65	252	252	50	63	45	8
	4	124	939.58	0.24	1.47	65	252	250	51	64	45	7.5
		128	942.58	0.24	1.47	65	250	251	51	64	45	7.5
	5	132	945.58	0.24	1.47	65	250	249	52	64	46	7.5
		136	948.45	0.20	1.22	65	249	251	54	64	47	7.5
	6	140	951.15	0.19	1.16	64	246	250	53	65	48	7.5
		144	953.35	0.17	1.04	64	253	250	55	65	48	7.5
	1	148	956.238	0.24	1.47	65	245	250	56	66	54	7.5
		152	959.08	0.24	1.47	65	255	252	57	67	54	7.5
	2	156	962.03	0.24	1.47	65	248	249	55	67	47	7.5
		160	964.91	0.24	1.47	65	249	251	54	68	47	7.5
	3	164	967.01	0.24	1.65	64	254	252	55	68	47	7.5
		168	971.06	0.24	1.65	64	250	249	55	68	47	7.5
	4	172	974.30	0.24	1.47	66	253	249	55	68	47	7.5
		176	977.40	0.24	1.47	66	250	250	53	68	47	7.5
	5	180	980.00	0.23	1.47	66	249	250	53	68	47	7.5
		184	982.91	0.23	1.47	66	249	249	53	68	47	7.5
	6	188	985.80	0.23	1.47	66	248	249	52	68	47	7.5
		192	988.71	0.23	1.47	66	248	249	52	68	47	7.5
		196	991.415	0.20	1.22	67	247	253	52	68	49	7.5
		200							57		50	

Total Time	Vol. (DACF)	Avg. DP	Avg. DH	Avg. t <sub>s</sub>	Average DGM Temp.	Max. Vac.
191	150.72	0.24	1.15	66.8	68.1	8.0

Plant =	FMMI	Point Duration (min) =	15	Moisture		
Plant Location =	Claypool, AZ	Bar. Pres. (in Hg) =	26.35	Initial	Final	Change
Source ID =	APTG	Static Pres. (in WC) =	0.32	700.4	697.4	-3
Run No =	AP23-2	Nozzle Dia (in WC) =	0.277	682.8	681.0	-1.8
Date =	12/6/2023	Meter dH @ =	1.7674	602.8	603.1	0.3
Run Time =	1230-1538	Meter Yd =	0.9932	882.4	906.1	23.7
Sample Duration (min) =	180	H2O Mass (ml/g) =	101.9	248.6	256	7.4

Point No.	DGM Reading (acf)	Sample Volume (acf)	dP (in WC)	dP1/2 (in WC)1/2	dH (in WC)	dH1/2 (in WC)1/2	Stack T (F)	DGM Inlet (F)	DGM Outlet (F)	DGM Ave (F)	velocity (ft/s)	Stack Pres (in Hg)	Meter Pres. (in Hg)
E1	876.429	3.971	0.30	0.548	1.76	1.327	80.0	70.0	68.0	69.0	33.5	26.37	26.48
	880.400	4.100	0.35	0.592	2.06	1.435	80.0	71.0	68.0	69.5	36.2	26.37	26.50
	884.500	4.380	0.35	0.592	2.06	1.435	80.0	71.0	68.0	69.5	36.2	26.37	26.50
2	888.880	3.620	0.32	0.566	1.88	1.371	80.0	73.0	68.0	70.5	34.6	26.37	26.49
	892.500	4.880	0.34	0.583	2.00	1.414	80.0	72.0	68.0	70.0	35.7	26.37	26.50
	897.380	4.040	0.32	0.566	1.88	1.371	80.0	72.0	68.0	70.0	34.6	26.37	26.49
3	901.420	4.270	0.34	0.583	2.00	1.414	80.0	72.0	68.0	70.0	35.7	26.37	26.50
	905.690	4.330	0.34	0.583	2.00	1.414	80.0	73.0	67.0	70.0	35.7	26.37	26.50
	910.020	4.365	0.35	0.592	2.06	1.435	80.0	73.0	67.0	70.0	36.2	26.37	26.50
S1	914.385	4.315	0.34	0.583	2.00	1.414	80.0	71.0	67.0	69.0	35.7	26.37	26.50
	918.700	3.920	0.30	0.548	1.76	1.327	80.0	72.0	67.0	69.5	33.5	26.37	26.48
	922.620	4.290	0.35	0.592	2.06	1.435	80.0	72.0	67.0	69.5	36.2	26.37	26.50
2	926.910	4.350	0.37	0.608	2.18	1.476	80.0	73.0	68.0	70.5	37.2	26.37	26.51
	931.260	4.340	0.30	0.548	1.76	1.327	81.0	73.0	68.0	70.5	33.6	26.37	26.48
	935.600	4.180	0.34	0.583	2.00	1.414	80.0	72.0	68.0	70.0	35.7	26.37	26.50
3	939.780	4.320	0.32	0.566	1.88	1.371	81.0	72.0	68.0	70.0	34.7	26.37	26.49
	944.100	4.140	0.33	0.574	1.94	1.393	81.0	73.0	68.0	70.5	35.2	26.37	26.49
	948.240	4.181	0.31	0.557	1.82	1.349	81.0	74.0	69.0	71.5	34.1	26.37	26.48
N1	952.421	4.129	0.32	0.566	1.86	1.364	81.0	72.0	70.0	71.0	34.6	26.37	26.49
	956.550	4.120	0.32	0.566	1.86	1.364	80.0	74.0	69.0	71.5	34.7	26.37	26.49
	960.670	4.130	0.32	0.566	1.86	1.364	81.0	74.0	69.0	71.5	34.6	26.37	26.49
2	964.800	4.270	0.33	0.574	1.94	1.393	80.0	74.0	69.0	71.5	35.2	26.37	26.49
	969.070	4.060	0.30	0.548	1.76	1.327	80.0	74.0	68.0	71.0	33.6	26.37	26.48
	973.130	4.080	0.31	0.557	1.82	1.349	80.0	74.0	69.0	71.5	31.5	26.37	26.48
3	977.210	3.990	0.29	0.539	1.71	1.308	81.0	75.0	69.0	72.0	30.4	26.37	26.48
	981.200	4.050	0.29	0.539	1.71	1.308	80.0	75.0	69.0	72.0	33.0	26.37	26.48
	985.250	3.931	0.28	0.529	1.65	1.285	80.0	75.0	70.0	72.5	29.9	26.37	26.47
W1	989.181	3.889	0.28	0.529	1.65	1.285	81.0	74.0	70.0	72.0	29.9	26.37	26.47
	993.070	3.910	0.29	0.539	1.65	1.285	81.0	74.0	69.0	71.5	30.4	26.37	26.47
	996.980	4.120	0.32	0.566	1.88	1.371	82.0	75.0	70.0	72.5	32.0	26.37	26.49
2	1001.100	3.970	0.29	0.539	1.65	1.285	82.0	75.0	70.0	72.5	30.4	26.37	26.47
	1005.070	3.950	0.34	0.583	2.00	1.414	81.0	75.0	70.0	72.5	33.0	26.37	26.50
	1009.020	4.060	0.30	0.548	1.76	1.327	81.0	76.0	70.0	73.0	31.0	26.37	26.48
3	1013.080	4.200	0.32	0.566	1.86	1.364	82.0	77.0	70.0	73.5	32.0	26.37	26.49
	1017.280	3.950	0.29	0.539	1.65	1.285	82.0	76.0	70.0	73.0	30.4	26.37	26.47
	1021.230	3.968	0.29	0.539	1.65	1.285	82.0	76.0	71.0	73.5	30.4	26.37	26.47
1025.198													
148.769			0.32	0.564	1.86	1.363	80.6	73.4	68.7	71.1	33.7	26.37	26.49



Method 23 ISOKINETIC SAMPLE DATA FORM

Moisture Train:	4	
Initial	Final	
1	349.6	380.7
2	700.8	696.3
3	683.0	680.2
4	601.8	601.2
5	262.2	887.6
6	244.3	252.4
Net Gain		59.2

Filter ID: DF3  
 Ambient Temp. (°F): 59  
 Baro. Press. (in. Hg): 26.15  
 Static Press. (in. H<sub>2</sub>O): 0.61  
 O<sub>2</sub> (%): 20.9  
 CO<sub>2</sub> (%): 0.0  
 Duct Dia. (in): 3.595  
 B<sub>vis</sub> (assumed): 0.03  
 Nozzle Dia. (in): 0.277, 0.276, 0.278 = 0.277  
 K Factor: 6.11  
 Leak Check: acf  
 Pre: 0.001 acf  
 Post: 0.001 acf

Filter Temp. (°F):  
 in. Hg Vac. 10  
 in. Hg Vac. 10  
 Pitot: Pre: Static  
 Post: 0.0 0.0  
 0.0 0.0

Plant: FMMI  
 Location: Clay Pool, AZ  
 Source I.D.: A1510 scrubber stack  
 Date: 12/1/23  
 Flow Traverse Time: NA  
 Run No.: AS 23-3  
 Operators: RB/cj  
 Meter Box I.D.: How Keyo  
 Meter Y: 0.9932 V  
 Meter Delta H@: 1.7674  
 Probe I.D./Impinger outlet: 13 / 71275 / Red  
 Probe Length/Type: 13 / RM 5  
 Pitot Coeff. (Cp): 0.84

DGM Clock Time	Port/Point I.D.	Sample Time (min.)	DGM Reading (DACF)	DP (in. H <sub>2</sub> O)	DH (in. H <sub>2</sub> O)	Stack Temp. (°F)	Probe Temp. (°F)	Filter Temp. (°F)	Imp. Outlet Temp. (°F)	DGM Temp. (°F)	Condenser Outlet Temp. (°F)	Vacuum (in. Hg)
1336	2	0	992.050	0.24	1.71	67	246	239	53	60	47	
		4	995.18	0.24	1.47	67	750	253	52	61	43	
	2	8	998.05	0.24	1.41	66	253	253	52	63	43	
		12	0.92	0.24	1.47	66	251	251	52	63	43	
	3	16	3.44	0.26	1.50	66	246	250	52	61	43	
		20	6.35	0.27	1.50	68	250	250	52	61	43	
	4	24	9.91	0.27	1.65	69	251	251	51	61	43	
		28	13.03	0.27	1.62	69	249	251	50	63	43	
	5	32	16.14	0.25	1.53	69	249	251	50	63	43	
		36	19.19	0.25	1.53	69	249	251	50	63	43	
	6	40	22.16	0.27	1.65	71	249	249	54	63	43	
		44	25.35	0.27	1.65	71	249	251	50	63	43	
1420/1430	S1	48	28.242	0.27	1.65	71	251	251	50	63	43	
		52	31.42	0.27	1.65	70	251	251	50	63	43	
	2	56	34.57	0.27	1.65	69	252	252	50	66	43	
		60	37.72	0.27	1.65	69	250	249	51	66	43	
	3	64	40.88	0.29	1.77	70	249	249	52	66	43	
		68	44.03	0.29	1.77	71	249	249	50	66	43	
	4	72	47.29	0.28	1.71	71	247	248	49	67	43	
		76	50.48	0.29	1.71	70	251	252	50	67	43	
	5	80	53.66	0.29	1.71	71	249	250	49	67	43	
		84	56.61	0.29	1.71	71	249	249	50	67	43	
	6	88	59.53	0.23	1.41	71	243	249	50	67	43	
		92	62.44	0.23	1.41	71	249	249	50	69	43	
1516		96	65.197	0.21	1.28	72	251	251	50	69	43	

Total Time	Vol. (DACF)	Avg. DP	Avg. DH	Avg. t <sub>s</sub>	Average DGM Temp.	Max. Vac.
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Method 23 ISOKINETIC SAMPLE DATA FORM

Plant: \_\_\_\_\_ Filter ID: \_\_\_\_\_

Location: \_\_\_\_\_ Ambient Temp. (°F): \_\_\_\_\_

Source I.D.: \_\_\_\_\_ Baro. Press. (in. Hg): \_\_\_\_\_

Date: \_\_\_\_\_ Static Press. (in H<sub>2</sub>O): \_\_\_\_\_

Flow Traverse Time: \_\_\_\_\_ O<sub>2</sub> (%): \_\_\_\_\_

Run No.: AS 23-3 CO<sub>2</sub> (%): \_\_\_\_\_

Operators: \_\_\_\_\_ Duct Dia. (in): \_\_\_\_\_

Meter Box I.D.: \_\_\_\_\_ B<sub>ws</sub> (assumed): \_\_\_\_\_

Meter Y: \_\_\_\_\_ Nozzle Dia. (in): \_\_\_\_\_

Meter Delta H@: \_\_\_\_\_ K Factor: \_\_\_\_\_

Probe I.D./ Impinger outlet \_\_\_\_\_ Leak Check: \_\_\_\_\_

Probe Length/Type: \_\_\_\_\_ Pre: \_\_\_\_\_ acf

Pitot Coeff. (Cp): \_\_\_\_\_ Post: \_\_\_\_\_ acf

Moisture Train:

Imp.	Initial	Final
1		
2		
3		
4		
5		
6		

Net Gain \_\_\_\_\_

Page 2 of 2

Pitot: \_\_\_\_\_ Static \_\_\_\_\_

in. H<sub>2</sub>O/15 sec. \_\_\_\_\_

in. H<sub>2</sub>O/15 sec. \_\_\_\_\_

DGM Clock Time	Port/Point I.D.	Sample Time (min.)	DGM Reading (DADF)	DP (in. H <sub>2</sub> O)	DH (in. H <sub>2</sub> O)	Stack Temp. (°F)	Probe Temp. (°F)	Filter Temp. (°F)	Imp. Outlet Temp. (°F)	DGM Temp. (°F)	Condenser Outlet Temp. (°F)	Vacuum (in. Hg)
15:18	W1	96	65.197	0.28	1.41	73	250	250	51	75	77	7
		100	63.34	0.28	1.41	73	252	252	50	77	77	7
		104	91.54	0.28	1.41	73	247	250	52	70	78	7
		108	74.70	0.28	1.41	73	247	251	53	69	79	7
		112	77.91	0.28	1.41	73	251	251	53	70	79	7
		116	81.13	0.28	1.41	73	252	250	54	70	79	7
		120	84.35	0.26	1.59	73	251	250	54	71	79	7
		124	87.47	0.27	1.65	73	254	250	55	70	79	7
		128	90.61	0.25	1.53	72	249	249	56	71	79	7
		132	93.71	0.23	1.41	72	247	249	56	71	79	7
		136	96.67	0.20	1.22	72	252	251	57	71	79	7
		140	99.29	0.20	1.22	72	249	249	58	71	79	7
		144	101.970	0.29	1.77	72	248	250	58	70	79	7
		148	105.39	0.29	1.77	72	249	249	58	70	79	7
		152	108.71	0.29	1.77	72	249	247	58	70	79	7
		156	111.20	0.29	1.74	72	244	248	59	70	79	7
		160	114.81	0.25	1.53	72	257	252	60	70	79	7
		164	117.83	0.25	1.53	71	254	250	60	70	79	7
		168	120.65	0.23	1.41	70	251	250	60	69	79	7
		172	123.75	0.24	1.44	71	248	250	61	69	79	7
		176	126.66	0.20	1.27	69	248	248	62	69	79	7
		180	129.80	0.10	1.22	67	250	248	60	69	79	7
		184	131.88	0.19	1.16	67	246	250	60	69	79	7
		188	134.47	0.19	1.16	67	248	250	60	69	79	7
1656		192	137.012			67	248	251	60	68	79	7

Total Time	Vol. (DADF)	Avg. DP	Avg. DH	Avg. t <sub>s</sub>
197	144.966	0.245	1.50	70.7

Average DGM Temp.	Max. Vac.
70.7	8



			Moisture			
			Initial	Final	Change	
Plant =	FMMI	Point Duration (min) =	15			
Plant Location =	Claypool, AZ	Bar. Pres. (in Hg) =	26.25	352.1	424.5	72.4
Source ID =	APTG	Static Pres. (in WC) =	0.32	705.1	704.0	-1.1
Run No =	AP23-3	Nozzle Dia (in WC) =	0.277	687.9	685.3	-2.6
Date =	12/7/2023	Meter dH @ =	1.7674	604.5	604.9	0.4
Run Time =	0828-1137	Meter Yd =	0.9932	882.1	913.6	31.5
Sample Duration (min) =	180	H2O Mass (ml/g) =	109.3	252.3	261.0	8.7

Point No.	DGM Reading (acf)	Sample Volume (acf)	dP (in WC)	dP1/2 (in WC)1/2	dH (in WC)	dH1/2 (in WC)1/2	Stack T (F)	DGM Inlet (F)	DGM Outlet (F)	DGM Ave (F)	velocity (ft/s)	Stack Pres (in Hg)	Meter Pres. (in Hg)
E1	25.801	4.179	0.35	0.592	2.06	1.435	81.0	58.0	58.0	58.0	36.3	26.27	26.40
	29.980	4.110	0.32	0.566	1.88	1.371	81.0	61.0	59.0	60.0	34.7	26.27	26.39
	34.090	4.090	0.33	0.574	1.94	1.393	81.0	65.0	60.0	62.5	35.3	26.27	26.39
2	38.180	4.530	0.39	0.624	2.29	1.513	80.0	68.0	61.0	64.5	38.3	26.27	26.42
	42.710	4.500	0.38	0.616	2.23	1.493	81.0	70.0	62.0	66.0	37.8	26.27	26.41
	47.210	4.380	0.36	0.600	2.12	1.456	81.0	71.0	63.0	67.0	36.8	26.27	26.41
3	51.590	4.000	0.30	0.548	1.76	1.327	81.0	73.0	65.0	69.0	33.6	26.27	26.38
	55.590	3.960	0.29	0.539	1.71	1.308	81.0	75.0	66.0	70.5	33.1	26.27	26.38
	59.550	3.992	0.30	0.548	1.76	1.327	81.0	76.0	67.0	71.5	33.6	26.27	26.38
S1	63.542	4.018	0.31	0.557	1.82	1.349	81.0	77.0	69.0	73.0	34.2	26.27	26.38
	67.560	3.990	0.30	0.548	1.76	1.327	81.0	78.0	70.0	74.0	33.6	26.27	26.38
	71.550	4.030	0.30	0.548	1.76	1.327	81.0	79.0	71.0	75.0	33.6	26.27	26.38
2	75.580	4.030	0.33	0.574	1.94	1.393	81.0	81.0	71.0	76.0	35.3	26.27	26.39
	79.610	4.380	0.35	0.592	2.06	1.435	81.0	80.0	74.0	77.0	36.3	26.27	26.40
	83.990	4.410	0.35	0.592	2.06	1.435	81.0	81.0	73.0	77.0	36.3	26.27	26.40
3	88.400	4.390	0.35	0.592	2.06	1.435	81.0	81.0	73.0	77.0	36.3	26.27	26.40
	92.790	4.300	0.33	0.574	1.94	1.393	81.0	81.0	73.0	77.0	35.3	26.27	26.39
	97.090	4.321	0.33	0.574	1.94	1.393	81.0	81.0	73.0	77.0	35.3	26.27	26.39
W1	101.411	4.099	0.32	0.566	1.88	1.371	81.0	79.0	73.0	76.0	34.7	26.27	26.39
	105.510	4.210	0.32	0.566	1.88	1.371	81.0	79.0	74.0	76.5	34.7	26.27	26.39
	109.720	4.230	0.32	0.566	1.88	1.371	81.0	80.0	73.0	76.5	34.7	26.27	26.39
2	113.950	4.200	0.32	0.566	1.88	1.371	81.0	80.0	73.0	76.5	34.7	26.27	26.39
	118.150	4.200	0.31	0.557	1.82	1.349	81.0	82.0	75.0	78.5	34.2	26.27	26.38
	122.350	4.400	0.34	0.583	2.00	1.414	81.0	82.0	74.0	78.0	35.8	26.27	26.40
3	126.750	4.130	0.32	0.566	1.88	1.371	81.0	82.0	73.0	77.5	34.7	26.27	26.39
	130.880	4.370	0.35	0.592	2.06	1.435	81.0	82.0	73.0	77.5	36.3	26.27	26.40
	135.250	4.251	0.32	0.566	1.88	1.371	82.0	82.0	73.0	77.5	34.8	26.27	26.39
N1	139.501	4.079	0.32	0.566	1.88	1.371	81.0	81.0	74.0	77.5	34.7	26.27	26.39
	143.580	4.210	0.32	0.566	1.88	1.371	81.0	81.0	74.0	77.5	34.7	26.27	26.39
	147.790	4.120	0.30	0.548	1.76	1.327	82.0	82.0	74.0	78.0	33.7	26.27	26.38
2	151.910	4.090	0.30	0.548	1.76	1.327	82.0	82.0	74.0	78.0	33.7	26.27	26.38
	156.000	4.080	0.30	0.548	1.76	1.327	82.0	82.0	74.0	78.0	33.7	26.27	26.38
	160.080	4.020	0.31	0.557	1.82	1.349	82.0	83.0	75.0	79.0	34.2	26.27	26.38
3	164.100	4.310	0.32	0.566	1.88	1.371	82.0	83.0	75.0	79.0	34.8	26.27	26.39
	168.410	4.200	0.31	0.557	1.82	1.349	82.0	83.0	75.0	79.0	34.2	26.27	26.38
	172.610	3.952	0.28	0.529	1.65	1.285	82.0	83.0	75.0	79.0	32.5	26.27	26.37
	176.562												
150.761			0.32	0.568	1.90	1.378	81.2	77.9	70.5	74.2	34.9	26.27	26.39



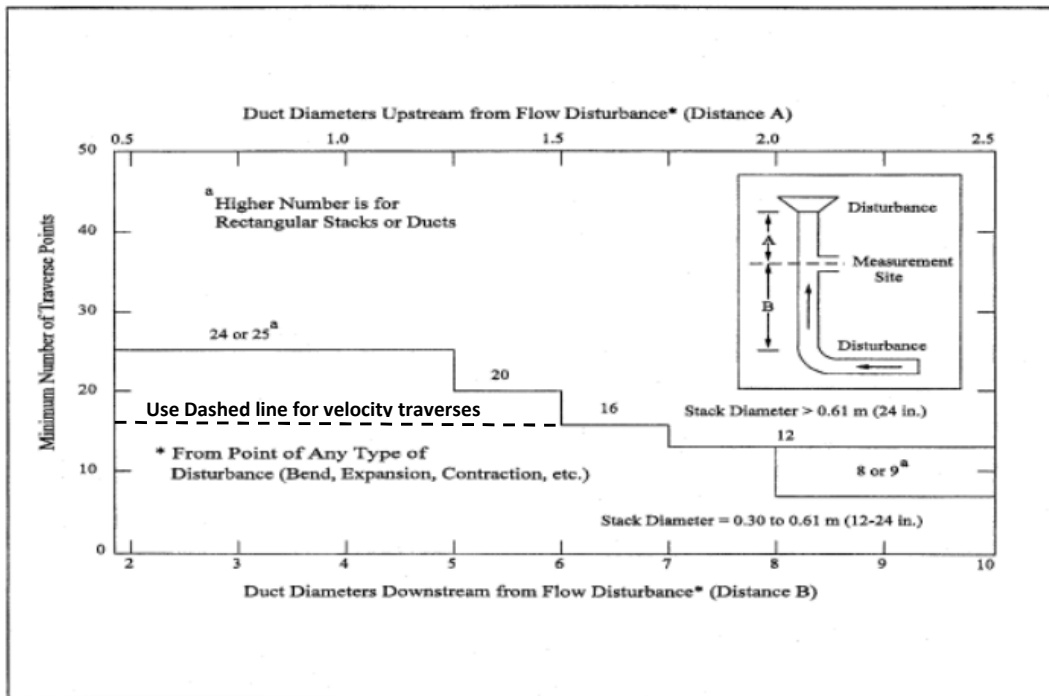
## RM 1 - Minimum Number of Traverse Points For Velocity & PM Traverses

Client Freeport-McMoRan Miami Inc  
 Location Claypool, AZ  
 Source Vent Fume  
 Operator JR

Stack Diameter (in)	159.5	
Upstream Distance (in)	398	Diameters 2.5
Downstream Distance (in)	1301.5	Diameters 8.2
Port Depth (in)	4	
Port Diameter (in)	6.5	

### Location of Traverse Points in Circular Stacks

Traverse Point Number	Number of traverse points (% of stack diameter from inside wall)							12 points, use first 3 in each port	
	6	8	10	12	16	20	24	Distance (ft)	Distance with port (ft)
	1	4.4	3.2	2.6	2.1	1.6	1.3	1.1	7.0
2	14.5	10.5	8.2	6.7	4.9	2.9	3.2	23.1	27.1
3	29.6	19.4	14.6	11.8	8.5	6.7	5.5	47.2	51.2
4	70.4	32.3	22.6	17.7	12.5	9.7	7.9		
5	85.4	67.7	34.2	25.0	16.9	12.9	10.5		
6	95.6	80.6	66.8	35.6	22.0	16.5	12.2		
7		89.5	77.4	64.4	28.3	20.4	16.1		
8		96.8	85.4	75.0	37.5	25.0	19.4		
9			91.8	82.3	62.5	30.6	23.0		
10			97.4	88.2	71.7	38.8	27.2		
11				93.3	78.0	61.2	32.3		
12				97.9	83.1	69.4	39.8		
13					87.5	75.0	60.2		
14					91.5	79.6	67.7		
15					95.1	83.5	72.8		
16					98.4	87.1	77.0		
17						90.3	80.6		
18						93.3	83.9		
19						96.1	86.8		
20						98.7	88.6		
21							92.1		
22							94.5		
23							96.8		
24							99.9		





ISOKINETIC SAMPLE DATA FORM

Plant: Fmml Filter ID: N/A  
 Location: Claypool AZ Ambient Temp. (°F): 55  
 Source I.D.: Vent Furne Baro. Press. (in. Hg): 24.30  
 Date: 12/12/23 Static Press. (in H<sub>2</sub>O): 0.82  
 Flow Traverse Time: NA O<sub>2</sub> (%): 20.9  
 Run No.: VEZBA-1 CO<sub>2</sub> (%): 0.0  
 Operators: DB CS Duct Dia. (in): 109.0  
 Meter Box I.D.: Lick bins B<sub>ws</sub> (assumed): 0.03  
 Meter Y: 1.0347 Nozzle Dia. (in): 0.276  
 Meter Delta H@: 1.8246 K Factor: 6.10  
 Probe I.D./Impinger outlet I.D.: 4/4 Blue Leak Check:  
 Probe Length/Type: 44x EMS Pre: 0.000 acf  
 Pitot Coeff. (Cp): 0.81 Post: 0.000 acf

Moisture Train: 1

Imp.	Initial	Final
1	684.0	695.3
2	678.2	688.9
3	696.2	697.4
4	705.2	706.3
5	697.8	715.4
6		

Net Gain: 419

Pitot: Static  
 Impact: 0.0 in. H<sub>2</sub>O/15 sec.  
 0.0 in. H<sub>2</sub>O/15 sec.  
 0.0

DGM Clock Time	Port/Point I.D.	Sample Time (min.)	DGM Reading (DACF)	DP (in. H <sub>2</sub> O)	DH (in. H <sub>2</sub> O)	Stack Temp. (°F)	Probe Temp. (°F)	Filter Temp. (°F)	Imp. Outlet Temp. (°F)	DGM Temp. (°F)	Vacuum (in. Hg)
1135	1	0	200.563	0.30	1.83	67	251	251	54	65	5
		5	204.49	0.33	2.01	67	251	252	48	65	6
	2	10	208.58	0.36	1.81	65	253	252	48	63	6
	3	15	212.83	0.36	2.20	65	253	254	49	64	6
		20	217.08	0.34	2.07	67	255	254	50	65	6
		25	221.25	0.34	2.07	68	256	254	50	66	6
1205/1208	N	30	225.415	0.36	2.20	69	253	254	51	69	6
		35	229.69	0.36	2.20	70	251	252	50	70	6
	2	40	234.00	0.33	2.01	71	253	252	50	71	6
	3	45	238.20	0.33	2.01	71	256	252	49	72	6
		50	242.38	0.33	2.01	71	255	252	49	71	6
		55	246.58	0.28	1.71	69	253	252	49	71	6
1238/1240	W	60	250.452	0.38	2.32	70	251	252	49	75	7
		65	254.79	0.37	2.26	71	252	253	48	75	7
		70	259.17	0.37	2.26	70	254	253	48	75	7
	2	75	263.53	0.37	2.26	69	257	252	48	72	7
	3	80	267.91	0.32	1.95	67	257	253	48	72	7
		85	272.03	0.31	1.89	68	250	253	48	67	7
1310/1312	S	90	276.041	0.36	2.20	68	255	256	51	69	7
		95	280.37	0.34	2.07	68	256	252	49	65	7
	2	100	284.52	0.34	2.07	68	253	252	49	64	7
	3	105	288.69	0.31	1.89	67	254	254	50	63	7
		110	292.70	0.29	1.77	67	251	253	51	63	7
		115	296.58	0.29	1.77	66	254	254	52	64	6
1342		120	300.392								
Total Time			DGM Volume	Avg. DP	Avg. DH	Avg. t <sub>s</sub>					
			99.825	1.326	2.061	68.3				Average DGM Temp.	Max Vac.
										69.8	7

Plant = FMMI  
 Plant Location = Claypool, AZ  
 Source ID = Vent Fume  
 Run No = VF26A-1  
 Date = 12/2/2023  
 Run Time = 1135-1342  
 Sample Duration (min) = 120

Point Duration (min) = 10  
 Bar. Pres. (in Hg) = 26.30  
 Static Pres. (in WC) = 0.82  
 Nozzle Dia (in WC) = 0.276  
 Meter dH @ = 1.8246  
 Meter Yd = 1.0347  
 H2O Mass (ml/g) = 41.9

Moisture		
Initial	Final	Change
684.0	695.3	11.3
678.2	688.9	10.7
696.2	697.4	1.2
705.2	706.3	1.1
897.8	915.4	17.6
Sum	3661.4	3703.3

Point No.	DGM Reading (acf)	Sample Volume (acf)	dP (in WC)	dP1/2 (in WC)1/2	dH (in WC)	dH1/2 (in WC)1/2	Stack T (F)	DGM Inlet (F)	DGM Outlet (F)	DGM Ave (F)	velocity (ft/s)	Stack Pres (in Hg)	Meter Pres. (in Hg)
E1	200.563	3.927	0.30	0.548	1.83	1.353	67.0	65.0	63.0	64.0	32.8	26.36	26.43
	204.490	4.090	0.33	0.574	2.01	1.418	67.0	65.0	63.0	64.0	34.3	26.36	26.45
2	208.580	4.250	0.36	0.600	2.20	1.483	65.0	68.0	63.0	65.5	35.8	26.36	26.46
	212.830	4.250	0.36	0.600	2.20	1.483	65.0	70.0	64.0	67.0	35.8	26.36	26.46
3	217.080	4.170	0.34	0.583	2.07	1.439	67.0	73.0	65.0	69.0	34.9	26.36	26.45
	221.250	4.165	0.34	0.583	2.07	1.439	68.0	74.0	66.0	70.0	34.9	26.36	26.45
N1	225.415	4.275	0.36	0.600	2.20	1.483	69.0	76.0	69.0	72.5	35.9	26.36	26.46
	229.690	4.310	0.36	0.600	2.20	1.483	70.0	78.0	70.0	74.0	36.0	26.36	26.46
2	234.000	4.200	0.33	0.574	2.01	1.418	71.0	80.0	71.0	75.5	34.5	26.36	26.45
	238.200	4.180	0.33	0.574	2.01	1.418	70.0	80.0	72.0	76.0	34.4	26.36	26.45
3	242.380	4.200	0.33	0.574	2.01	1.418	71.0	78.0	71.0	74.5	34.5	26.36	26.45
	246.580	3.872	0.28	0.529	1.71	1.308	71.0	77.0	71.0	74.0	31.8	26.36	26.43
W1	250.452	4.338	0.38	0.616	2.32	1.523	69.0	75.0	71.0	73.0	36.9	26.36	26.47
	254.790	4.380	0.37	0.608	2.26	1.503	71.0	75.0	71.0	73.0	36.5	26.36	26.47
2	259.170	4.360	0.37	0.608	2.26	1.503	70.0	75.0	70.0	72.5	36.5	26.36	26.47
	263.530	4.380	0.37	0.608	2.26	1.503	69.0	72.0	69.0	70.5	36.4	26.36	26.47
3	267.910	4.120	0.32	0.566	1.95	1.396	67.0	72.0	67.0	69.5	33.8	26.36	26.44
	272.030	4.011	0.31	0.557	1.89	1.375	68.0	71.0	67.0	69.0	33.3	26.36	26.44
S1	276.041	4.329	0.36	0.600	2.20	1.483	68.0	69.0	65.0	67.0	35.9	26.36	26.46
	280.370	4.150	0.34	0.583	2.07	1.439	68.0	69.0	65.0	67.0	34.9	26.36	26.45
2	284.520	4.170	0.34	0.583	2.07	1.439	68.0	68.0	64.0	66.0	34.9	26.36	26.45
	288.690	4.010	0.31	0.557	1.89	1.375	67.0	70.0	63.0	66.5	33.3	26.36	26.44
3	292.700	3.880	0.29	0.539	1.77	1.330	67.0	70.0	63.0	66.5	32.2	26.36	26.43
	296.580	3.812	0.29	0.539	1.77	1.330	66.0	71.0	64.0	67.5	32.2	26.36	26.43
	300.392												
	99.829		0.336	0.579	2.051	1.431	68.3	72.5	67.0	69.8	34.7	26.36	26.45



ISOKINETIC SAMPLE DATA FORM

Plant: FMM Filter ID: Z6A  
 Location: Caypool AZ Ambient Temp. (°F): 64  
 Source I.D.: Vent Furn Baro. Press. (in. Hg): 26.30  
 Date: 12/5/23 Static Press. (in H<sub>2</sub>O): 0.81  
 Flow Traverse Time: NA O<sub>2</sub>(%): 20.9  
 Run No.: VF Z6A-2 CO<sub>2</sub>(%): 0.0  
 Operators: DBCS Duct Dia. (in): 159.5  
 Meter Box I.D.: Lighting B<sub>vs</sub> (assumed): 0.3  
 Meter Y: (0347) Nozzle Dia. (in): 0.276  
 Meter Delta H@: 1.8246 K Factor: 6.10  
 Probe I.D./ Impinger outlet I.D.: 414 131ve Leak Check: \_\_\_\_\_  
 Probe Length/Type: 4ft RMS Pre: 0.000 acf Post: 8 acf  
 Pitot Coeff. (Cp): 0.84 acf Post: 8 acf

Moisture Train:

Imp.	Initial	Final
1	698.3	703.5
2	678.0	686.4
3	700.7	702.4
4	707.5	708.1
5	833.8	857.1
6		
Net Gain		47.2

Pitot: Static  
 Pre: 0.0 in. H<sub>2</sub>O/15 sec.  
 Post: 0.0 in. H<sub>2</sub>O/15 sec.

DGM Clock Time	Port/Point I.D.	Sample Time (min.)	DGM Reading (DACF)	DP (in. H <sub>2</sub> O)	DH (in. H <sub>2</sub> O)	Stack Temp. (°F)	Probe Temp. (°F)	Filter Temp. (°F)	Imp. Outlet Temp. (°F)	DGM Temp. (°F)	Vacuum (in. Hg)	
1236	E 1	0	302.13	0.32	1.95	70	256	251	57	69	7	
		5	306.18	0.33	2.01	69	261	260	53	69	7	
		10	310.33	0.34	2.07	68	255	257	53	68	7	
		15	314.48	0.33	2.01	69	255	255	51	69	7	
		20	318.72	0.25	1.53	69	254	254	50	69	6	
		25	322.41	0.29	1.77	68	252	254	50	69	6	
1306/1308	N 1	30	326.321	0.35	2.14	68	254	252	50	68	7	
		35	330.55	0.34	2.07	69	246	251	48	68	7	
		40	334.75	0.32	1.95	68	250	251	44	68	7	
		45	338.88	0.34	2.07	68	253	253	49	68	7	
		50	343.09	0.30	1.83	69	256	254	49	69	7	
		55	347.10	0.27	1.65	69	256	254	49	68	6	
1338/1339	W 1	60	350.883	0.34	2.07	70	254	253	50	68	7	
		65	355.03	0.34	2.07	71	252	255	51	69	7	
		70	359.24	0.33	2.01	72	259	255	52	70	7	
		75	363.42	0.32	1.95	70	256	255	53	70	7	
		80	367.49	0.27	1.65	70	255	254	56	70	6	
		85	371.31	0.30	1.83	71	254	254	56	70	6	
1409/1411	S 1	90	375.274	0.31	1.88	69	251	252	53	69	7	
		95	379.30	0.34	2.07	70	252	251	53	69	7	
		100	383.47	0.31	1.89	70	255	253	52	70	7	
		105	387.53	0.31	1.85	71	251	253	53	70	7	
		110	391.60	0.29	1.77	71	257	254	53	69	7	
		115	395.53	0.28	1.71	72	252	252	54	69	7	
1441		120	399.387									
Total Time			DGM Volume	Avg. DP	Avg. DH	Avg. t <sub>s</sub>						Max. Vac.
			972294	0.013	1.910	69.6						7
												Average DGM Temp.
												71.3

Plant = FMMI  
 Plant Location = Claypool, AZ  
 Source ID = Vent Fume  
 Run No = VF26A-2  
 Date = 12/3/2023  
 Run Time = 1236-1441  
 Sample Duration (min) = 120

Point Duration (min) = 10  
 Bar. Pres. (in Hg) = 26.30  
 Static Pres. (in WC) = 0.81  
 Nozzle Dia (in WC) = 0.276  
 Meter dH @ = 1.8246  
 Meter Yd = 1.0347  
 H2O Mass (ml/g) = 47.2

Moisture		
Initial	Final	Change
688.3	703.5	15.2
678.0	686.4	8.4
700.7	702.4	1.7
707.5	708.1	0.6
835.8	857.1	21.3
Sum	3610.3	3657.5

Point No.	DGM Reading (acf)	Sample Volume (acf)	dP (in WC)	dP1/2 (in WC)1/2	dH (in WC)	dH1/2 (in WC)1/2	Stack T (F)	DGM Inlet (F)	DGM Outlet (F)	DGM Ave (F)	velocity (ft/s)	Stack Pres (in Hg)	Meter Pres. (in Hg)
E1	302.113	4.067	0.32	0.566	1.95	1.396	70.0	69.0	69.0	69.0	33.9	26.36	26.44
	306.180	4.150	0.33	0.574	2.01	1.418	69.0	70.0	69.0	69.5	34.4	26.36	26.45
2	310.330	4.150	0.34	0.583	2.07	1.439	68.0	72.0	68.0	70.0	34.9	26.36	26.45
	314.480	4.240	0.33	0.574	2.01	1.418	69.0	74.0	69.0	71.5	34.4	26.36	26.45
3	318.720	3.690	0.25	0.500	1.53	1.237	69.0	74.0	69.0	71.5	30.0	26.36	26.41
	322.410	3.911	0.29	0.539	1.77	1.330	68.0	73.0	69.0	71.0	32.2	26.36	26.43
N1	326.321	4.229	0.35	0.592	2.14	1.463	68.0	72.0	68.0	70.0	35.4	26.36	26.46
	330.550	4.200	0.34	0.583	2.07	1.439	69.0	73.0	68.0	70.5	34.9	26.36	26.45
2	334.750	4.130	0.32	0.566	1.95	1.396	68.0	73.0	68.0	70.5	33.9	26.36	26.44
	338.880	4.210	0.34	0.583	2.07	1.439	68.0	73.0	68.0	70.5	34.9	26.36	26.45
3	343.090	4.010	0.30	0.548	1.83	1.353	69.0	73.0	69.0	71.0	32.8	26.36	26.43
	347.100	3.783	0.27	0.520	1.65	1.285	69.0	73.0	68.0	70.5	31.1	26.36	26.42
W1	350.883	4.147	0.34	0.583	2.07	1.439	70.0	72.0	68.0	70.0	35.0	26.36	26.45
	355.030	4.210	0.34	0.583	2.07	1.439	71.0	75.0	69.0	72.0	35.0	26.36	26.45
2	359.240	4.180	0.33	0.574	2.01	1.418	72.0	76.0	70.0	73.0	34.5	26.36	26.45
	363.420	4.070	0.32	0.566	1.95	1.396	70.0	76.0	70.0	73.0	33.9	26.36	26.44
3	367.490	3.820	0.27	0.520	1.65	1.285	70.0	76.0	70.0	73.0	31.2	26.36	26.42
	371.310	3.964	0.30	0.548	1.83	1.353	71.0	75.0	70.0	72.5	32.9	26.36	26.43
S1	375.274	4.026	0.31	0.557	1.89	1.375	69.0	73.0	69.0	71.0	33.4	26.36	26.44
	379.300	4.170	0.34	0.583	2.07	1.439	70.0	75.0	69.0	72.0	35.0	26.36	26.45
2	383.470	4.060	0.31	0.557	1.89	1.375	70.0	76.0	70.0	73.0	33.4	26.36	26.44
	387.530	4.070	0.31	0.557	1.89	1.375	71.0	76.0	70.0	73.0	33.4	26.36	26.44
3	391.600	3.930	0.29	0.539	1.77	1.330	71.0	75.0	69.0	72.0	32.3	26.36	26.43
	395.530	3.857	0.28	0.529	1.71	1.308	72.0	75.0	69.0	72.0	31.8	26.36	26.43
	399.387												
	97.274		0.313	0.559	1.910	1.381	69.6	73.7	69.0	71.3	33.5	26.36	26.44



ISOKINETIC SAMPLE DATA FORM

Plant: Fmm1 Filter ID: 264

Location: Clayport AZ Ambient Temp. (°F): 61

Source I.D.: West Farm Baro. Press. (in. Hg): 26.55

Date: 12/15/23 Static Press. (in. H<sub>2</sub>O): 0.51

Flow Traverse Time: NA O<sub>2</sub> (%): 20.9

Run No.: VE26A-4 CO<sub>2</sub> (%): 0.0

Operators: DA, CS Duct Dia. (in): 15.5

Meter Box I.D.: Lightwings B<sub>vis</sub> (assumed): 0.03

Meter Y: 1.0347 Nozzle Dia. (in): 0.276

Meter Delta H@: 1.8246 K Factor: 6.10

Probe I.D./Impinger outlet I.D.: 4/4 / 9/32 Leak Check: \_\_\_\_\_

Probe Length/Type: 4ft / 2m5 Pre: 0.000 acf 10

Pitot Coeff. (Cp): 0.84 Post: 0.000 acf 10

Pitot: \_\_\_\_\_ in. Hg Vac. \_\_\_\_\_

Impact: \_\_\_\_\_ in. Hg Vac. \_\_\_\_\_

Static: \_\_\_\_\_ in. H<sub>2</sub>O/15 sec. \_\_\_\_\_

Moisture Train: 2

Imp.	Initial	Final
1	680.8	695.2
2	689.6	696.3
3	704.6	705.8
4	707.2	708.5
5	886.4	900.8
6		
Net Gain		40.9

DGM Clock Time	Port/Point I.D.	Sample Time (min.)	DGM Reading (DACF)	DP (in. H <sub>2</sub> O)	DH (in. H <sub>2</sub> O)	Stack Temp. (°F)	Probe Temp. (°F)	Filter Temp. (°F)	Imp. Outlet Temp. (°F)	DGM Temp. (°F)	Vacuum (in. Hg)
0904	2	0	501.452	0.31	1.89	66	252	253	54	62	7
		5	505.44	0.31	1.89	65	247	251	45	62	7
		10	509.70	0.29	1.77	66	252	253	46	65	7
		15	513.29	0.31	1.89	67	253	253	47	62	7
		20	517.24	0.27	1.65	67	253	254	47	62	7
		25	521.02	0.27	1.65	66	255	254	47	62	7
		30	524.798	0.32	1.95	66	254	252	48	63	7
		35	528.82	0.31	1.89	68	253	252	47	64	7
		40	532.81	0.32	1.95	68	251	252	47	65	7
		45	536.89	0.31	1.89	68	250	250	48	65	7
		50	540.89	0.29	1.77	70	254	252	48	65	7
		55	544.77	0.26	1.59	70	256	255	48	66	6
		60	548.487	0.31	1.89	68	263	257	49	66	7
		65	552.45	0.34	2.07	71	268	258	49	67	8
		70	556.61	0.37	2.26	72	255	255	49	68	8
		75	560.95	0.37	2.26	72	257	254	46	69	8
		80	565.11	0.30	1.83	71	253	254	50	69	8
		85	569.09	0.27	1.65	71	255	253	50	69	8
		90	572.857	0.33	2.01	70	254	252	51	69	8
		95	576.94	0.30	1.83	70	253	251	50	69	8
		100	580.88	0.36	2.20	72	252	252	51	69	8
		105	585.15	0.36	2.20	72	252	252	51	70	8
		110	589.49	0.33	2.01	72	255	254	51	70	8
		115	593.65	0.32	1.95	73	255	253	52	70	8
		120	597.729								

Total Time	DGM Volume	Avg. DP	Avg. DH	Avg. t <sub>s</sub>	Average DGM Temp.	Max. Vac.
	60.27	0.31	1.904	69.7	69.7	8

Plant = FMMI  
 Plant Location = Claypool, AZ  
 Source ID = Vent Fume  
 Run No = VF26A-4  
 Date = 12/5/2023  
 Run Time = 0904-1108  
 Sample Duration (min) = 120

Point Duration (min) = 10  
 Bar. Pres. (in Hg) = 26.35  
 Static Pres. (in WC) = 0.81  
 Nozzle Dia (in WC) = 0.276  
 Meter dH @ = 1.8246  
 Meter Yd = 1.0347  
 H2O Mass (ml/g) = 40.7

Moisture		
Initial	Final	Change
680.8	695.2	14.4
687.6	696.3	8.7
704.6	705.5	0.9
707.2	708.5	1.3
885.4	900.8	15.4
Sum	3665.6	3706.3

Point No.	DGM Reading (acf)	Sample Volume (acf)	dP (in WC)	dP1/2 (in WC)1/2	dH (in WC)	dH1/2 (in WC)1/2	Stack T (F)	DGM Inlet (F)	DGM Outlet (F)	DGM Ave (F)	velocity (ft/s)	Stack Pres (in Hg)	Meter Pres. (in Hg)
E1	501.452	3.988	0.31	0.557	1.89	1.375	66.0	62.0	61.0	61.5	33.2	26.41	26.49
	505.440	3.960	0.31	0.557	1.89	1.375	65.0	62.0	60.0	61.0	33.2	26.41	26.49
2	509.400	3.890	0.29	0.539	1.77	1.330	66.0	65.0	61.0	63.0	32.1	26.41	26.48
	513.290	3.950	0.31	0.557	1.89	1.375	67.0	67.0	62.0	64.5	33.3	26.41	26.49
3	517.240	3.780	0.27	0.520	1.65	1.285	67.0	69.0	62.0	65.5	31.0	26.41	26.47
	521.020	3.778	0.27	0.520	1.65	1.285	66.0	70.0	62.0	66.0	31.0	26.41	26.47
N1	524.798	4.022	0.32	0.566	1.95	1.396	66.0	70.0	63.0	66.5	33.8	26.41	26.49
	528.820	3.990	0.31	0.557	1.89	1.375	68.0	72.0	64.0	68.0	33.3	26.41	26.49
2	532.810	4.080	0.32	0.566	1.95	1.396	68.0	73.0	65.0	69.0	33.8	26.41	26.49
	536.890	4.000	0.31	0.557	1.89	1.375	68.0	73.0	65.0	69.0	33.3	26.41	26.49
3	540.890	3.880	0.29	0.539	1.77	1.330	70.0	74.0	65.0	69.5	32.3	26.41	26.48
	544.770	3.717	0.26	0.510	1.59	1.261	70.0	74.0	66.0	70.0	30.5	26.41	26.47
W1	548.487	3.963	0.31	0.557	1.89	1.375	68.0	74.0	66.0	70.0	33.3	26.41	26.49
	552.450	4.160	0.34	0.583	2.07	1.439	71.0	75.0	67.0	71.0	35.0	26.41	26.50
2	556.610	4.340	0.37	0.608	2.26	1.503	72.0	76.0	68.0	72.0	36.5	26.41	26.52
	560.950	4.160	0.33	0.574	2.01	1.418	72.0	76.0	69.0	72.5	34.5	26.41	26.50
3	565.110	3.980	0.30	0.548	1.83	1.353	71.0	76.0	69.0	72.5	32.8	26.41	26.48
	569.090	3.767	0.27	0.520	1.65	1.285	71.0	76.0	69.0	72.5	31.2	26.41	26.47
S1	572.857	4.083	0.33	0.574	2.01	1.418	70.0	75.0	69.0	72.0	34.4	26.41	26.50
	576.940	3.940	0.30	0.548	1.83	1.353	70.0	76.0	69.0	72.5	32.8	26.41	26.48
2	580.880	4.270	0.36	0.600	2.20	1.483	72.0	76.0	69.0	72.5	36.0	26.41	26.51
	585.150	4.340	0.36	0.600	2.20	1.483	72.0	77.0	70.0	73.5	36.0	26.41	26.51
3	589.490	4.160	0.33	0.574	2.01	1.418	72.0	77.0	70.0	73.5	34.5	26.41	26.50
	593.650	4.079	0.32	0.566	1.95	1.396	73.0	77.0	70.0	73.5	34.0	26.41	26.49
	597.729												
	96.277		0.312	0.558	1.904	1.378	69.2	72.6	65.9	69.2	33.4	26.41	26.49







Method 23 ISOKINETIC SAMPLE DATA FORM

Plant: \_\_\_\_\_ Filter ID: \_\_\_\_\_

Location: \_\_\_\_\_ Ambient Temp. (°F): \_\_\_\_\_

Source I.D.: \_\_\_\_\_ Baro. Press. (in. Hg): \_\_\_\_\_

Date: \_\_\_\_\_ Static Press. (in H<sub>2</sub>O): \_\_\_\_\_

Flow Traverse Time: \_\_\_\_\_ O<sub>2</sub> (%): \_\_\_\_\_

Run No.: 1F23-1 CO<sub>2</sub> (%): \_\_\_\_\_

Operators: \_\_\_\_\_ Duct Dia. (in): \_\_\_\_\_

Meter Box I.D.: \_\_\_\_\_ B<sub>ws</sub> (assumed): \_\_\_\_\_

Meter Y: \_\_\_\_\_ Nozzle Dia. (in): \_\_\_\_\_

Meter Delta H@: \_\_\_\_\_ K Factor: \_\_\_\_\_

Probe I.D./Impinger outlet \_\_\_\_\_ Leak Check: \_\_\_\_\_

Probe Length/Type: \_\_\_\_\_ Pre: \_\_\_\_\_ acf \_\_\_\_\_

Pitot Coeff. (Cp): \_\_\_\_\_ Post: \_\_\_\_\_ acf \_\_\_\_\_

in. H<sub>2</sub>O/15 sec. \_\_\_\_\_

in. H<sub>2</sub>O/15 sec. \_\_\_\_\_

Moisture Train: \_\_\_\_\_

Imp.	Initial	Final
1		
2		
3		
4		
5		
6		

Net Gain \_\_\_\_\_

Page 2 of 2

DGM Clock Time	Port/Point I.D.	Sample Time (min.)	DGM Reading (DACF)	DP (in. H <sub>2</sub> O)	DH (in. H <sub>2</sub> O)	Stack Temp. (°F)	Probe Temp. (°F)	Filter Temp. (°F)	Imp. Outlet Temp. (°F)	DGM Temp. (°F)	Condenser Outlet Temp. (°F)	Vacuum (in. Hg)	Moisture Train						
													Initial	Final					
1309	N1	90	212.612	0.372	1.925	70	247	245	49	65	46	10							
		95	216.31	0.333	1.98	70	241	242	47	65	42	10							
		100	220.99	0.333	1.98	69	253	252	46	65	43	11							
	2	105	225.30	0.34	2.04	69	255	250	47	66	44	11							
		110	229.61	0.34	2.04	69	253	251	47	66	43	11							
		115	233.92	0.34	2.04	70	250	248	47	66	43	11							
	3	120	238.23	0.34	2.04	70	246	250	47	66	43	11							
		125	242.54	0.30	1.80	70	249	249	47	65	43	10							
		130	246.86	0.34	2.04	71	248	252	49	64	44	10							
135/1350	1	140	250.118	0.34	2.04	71	246	246	49	64	45	11							
		145	255.17	0.333	1.98	71	249	252	49	65	44	11							
		150	259.41	0.34	2.04	70	253	252	49	66	45	11							
	2	155	263.65	0.34	2.04	70	246	254	50	65	45	11							
		160	268.09	0.333	1.98	71	251	251	50	65	45	11							
		165	272.32	0.333	1.98	71	244	250	50	65	45	11							
	3	170	276.59	0.30	1.80	71	249	251	50	66	46	11							
		175	280.89	0.30	1.80	71	252	250	51	66	47	10							
		180	284.75	0.30	1.80	71	251	249	52	70	47	10							
1443		180	288.840																
Total Time													190	151.69	0.322	Avg. DP	Avg. DH	Avg. t	Max. Vac.
Average DGM Temp.													62.0						

Plant =	FMMI	Point Duration (min) =	15	Moisture		
Plant Location =	Claypool, AZ	Bar. Pres. (in Hg) =	26.30	Initial	Final	Change
Source ID =	Vent Fume	Static Pres. (in WC) =	0.82	352.7	388.3	35.6
Run No =	VF23-1	Nozzle Dia (in WC) =	0.277	705.9	700.7	-5.2
Date =	12/2/2023	Meter dH @ =	1.7674	690.7	687.2	-3.5
Run Time =	1135-1443	Meter Yd =	0.9932	605.7	605.5	-0.2
Sample Duration (min) =	180	H2O Mass (ml/g) =	57.9	873.9	897.4	23.5
				250.7	258.4	7.7

Point No.	DGM Reading (acf)	Sample Volume (acf)	dP (in WC)	dP1/2 (in WC)1/2	dH (in WC)	dH1/2 (in WC)1/2	Stack T (F)	DGM Inlet (F)	DGM Outlet (F)	DGM Ave (F)	velocity (ft/s)	Stack Pres (in Hg)	Meter Pres. (in Hg)
S1	137.671	4.249	0.35	0.592	2.10	1.449	68.0	55.0	53.0	54.0	35.5	26.36	26.45
	141.920	4.160	0.31	0.557	1.86	1.364	68.0	56.0	54.0	55.0	33.4	26.36	26.44
	146.080	4.080	0.30	0.548	1.80	1.342	67.0	59.0	54.0	56.5	32.9	26.36	26.43
2	150.160	4.140	0.31	0.557	1.86	1.364	67.0	61.0	56.0	58.5	33.4	26.36	26.44
	154.300	4.230	0.32	0.566	1.92	1.386	68.0	63.0	55.0	59.0	34.0	26.36	26.44
	158.530	4.140	0.30	0.548	1.80	1.342	70.0	65.0	57.0	61.0	33.0	26.36	26.43
3	162.670	4.340	0.35	0.592	2.10	1.449	71.0	68.0	58.0	63.0	35.6	26.36	26.45
	167.010	4.290	0.33	0.574	1.98	1.407	71.0	69.0	59.0	64.0	34.6	26.36	26.45
	171.300	4.149	0.31	0.557	1.86	1.364	72.0	70.0	60.0	65.0	33.6	26.36	26.44
E1	175.449	4.191	0.32	0.566	1.92	1.386	71.0	68.0	61.0	64.5	34.1	26.36	26.44
	179.640	4.140	0.31	0.557	1.86	1.364	72.0	68.0	61.0	64.5	33.6	26.36	26.44
	183.780	4.200	0.32	0.566	1.92	1.386	73.0	67.0	61.0	64.0	34.1	26.36	26.44
2	187.980	4.190	0.32	0.566	1.92	1.386	73.0	67.0	60.0	63.5	34.1	26.36	26.44
	192.170	4.130	0.31	0.557	1.86	1.364	73.0	67.0	61.0	64.0	33.6	26.36	26.44
	196.300	4.240	0.32	0.566	1.92	1.386	72.0	67.0	60.0	63.5	34.1	26.36	26.44
3	200.540	4.110	0.30	0.548	1.80	1.342	71.0	67.0	60.0	63.5	33.0	26.36	26.43
	204.650	3.980	0.28	0.529	1.68	1.296	70.0	65.0	60.0	62.5	31.8	26.36	26.42
	208.630	3.982	0.28	0.529	1.68	1.296	68.0	67.0	60.0	63.5	31.8	26.36	26.42
N1	212.612	4.098	0.32	0.566	1.92	1.270	70.0	65.0	59.0	62.0	34.0	26.36	26.44
	216.710	4.280	0.33	0.574	1.98	1.407	70.0	65.0	60.0	62.5	34.6	26.36	26.45
	220.990	4.310	0.33	0.574	1.98	1.407	69.0	65.0	60.0	62.5	34.5	26.36	26.45
2	225.300	4.310	0.34	0.583	2.04	1.428	69.0	66.0	59.0	62.5	35.1	26.36	26.45
	229.610	4.310	0.34	0.583	2.04	1.428	68.0	66.0	59.0	62.5	35.0	26.36	26.45
	233.920	4.350	0.34	0.583	2.04	1.428	69.0	66.0	59.0	62.5	35.1	26.36	26.45
3	238.270	4.320	0.34	0.583	2.04	1.428	70.0	66.0	59.0	62.5	35.1	26.36	26.45
	242.590	4.170	0.30	0.548	1.80	1.342	70.0	65.0	59.0	62.0	33.0	26.36	26.43
	246.760	4.158	0.34	0.583	2.04	1.428	71.0	64.0	60.0	62.0	35.1	26.36	26.45
W1	250.918	4.252	0.34	0.583	2.04	1.428	71.0	64.0	58.0	61.0	35.1	26.36	26.45
	255.170	4.240	0.33	0.574	1.98	1.407	71.0	65.0	59.0	62.0	34.6	26.36	26.45
	259.410	4.240	0.34	0.583	2.04	1.428	70.0	66.0	59.0	62.5	35.1	26.36	26.45
2	263.650	4.440	0.34	0.583	2.04	1.428	70.0	65.0	59.0	62.0	35.1	26.36	26.45
	268.090	4.230	0.33	0.574	1.98	1.407	71.0	65.0	59.0	62.0	34.6	26.36	26.45
	272.320	4.270	0.33	0.574	1.98	1.407	73.0	65.0	59.0	62.0	34.7	26.36	26.45
3	276.590	4.100	0.30	0.548	1.80	1.342	73.0	66.0	59.0	62.5	33.1	26.36	26.43
	280.690	4.060	0.30	0.548	1.80	1.342	72.0	68.0	60.0	64.0	33.0	26.36	26.43
	284.750	4.090	0.30	0.548	1.80	1.342	71.0	70.0	60.0	65.0	33.0	26.36	26.43
288.840													
151.169			0.32	0.566	1.92	1.382	70.4	65.3	58.8	62.0	34.1	26.36	26.44





Method 23 ISOKINETIC SAMPLE DATA FORM

Plant: \_\_\_\_\_ Filter ID: \_\_\_\_\_

Location: \_\_\_\_\_ Ambient Temp. (°F): \_\_\_\_\_

Source I.D.: \_\_\_\_\_ Baro. Press. (in. Hg): \_\_\_\_\_

Date: \_\_\_\_\_ Static Press. (in H<sub>2</sub>O): \_\_\_\_\_

Flow Traverse Time: \_\_\_\_\_ O<sub>2</sub> (%): \_\_\_\_\_

Run No.: \_\_\_\_\_ CO<sub>2</sub> (%): \_\_\_\_\_

Operators: \_\_\_\_\_ Duct Dia. (in): \_\_\_\_\_

Meter Box I.D.: \_\_\_\_\_ B<sub>wg</sub> (assumed): \_\_\_\_\_

Meter Y: \_\_\_\_\_ Nozzle Dia. (in): \_\_\_\_\_

Meter Delta H(@): \_\_\_\_\_ K Factor: \_\_\_\_\_

Probe I.D./Impinger outlet \_\_\_\_\_ Leak Check: \_\_\_\_\_

Probe Length/Type: \_\_\_\_\_ Pre: \_\_\_\_\_ acf

Pitot Coeff. (Cp): \_\_\_\_\_ Post: \_\_\_\_\_ acf

Moisture Train:

Imp.	Initial	Final
1		
2		
3		
4		
5		
6		
Net Gain		

page 2 of 2

Pitot: \_\_\_\_\_ Static \_\_\_\_\_

Pre: \_\_\_\_\_ in. H<sub>2</sub>O/15 sec.

Post: \_\_\_\_\_ in. H<sub>2</sub>O/15 sec.

Impact \_\_\_\_\_

DGM Clock Time	Port/Point I.D.	Sample Time (min.)	DGM Reading (DACF)	DP (in. H <sub>2</sub> O)	DH (in. H <sub>2</sub> O)	Stack Temp. (°F)	Probe Temp. (°F)	Filter Temp. (°F)	Imp. Outlet Temp. (°F)	DGM Temp. (°F)	Condenser Outlet Temp. (°F)	Vacuum (in. Hg)
1412	1	90	364.788	0.32	1.92	71	249	243	55	68	51	10
		95	369.800	0.32	1.92	72	243	244	51	68	48	10
		100	373.16	0.34	2.04	72	252	244	53	68	47	11
	2	105	377.47	0.34	2.04	74	251	252	50	70	55	11
		110	381.84	0.32	1.92	74	252	254	50	71	57	11
		115	386.89	0.32	1.92	74	251	249	50	71	57	11
	3	120	390.34	0.30	1.80	74	250	252	50	72	57	10
		125	394.76	0.32	1.92	75	256	251	50	72	57	11
		130	398.69	0.30	1.80	75	254	249	50	72	58	11
1458	1	135	402.822	0.30	1.80	75	249	241	53	76	51	10
		140	406.85	0.32	1.92	75	250	252	51	72	48	10
		145	410.99	0.32	1.92	73	251	250	51	73	48	10
	2	150	415.27	0.32	1.92	73	251	250	53	72	48	11
		155	419.45	0.33	1.98	74	251	251	53	73	50	11
		160	423.66	0.32	1.92	73	245	249	55	73	52	10
	3	165	427.64	0.32	1.92	73	249	250	56	72	52	10
		170	432.12	0.34	2.04	73	251	251	54	74	55	10
1514		175	436.41	0.34	2.04	72	250	250	60	75	55	10
		180	440.767	0.34	2.04	72	250	250	60	75	54	10
Total Time												190
Vol. (DACF)												151.486
Avg. DP												0.32
Avg. DH												1.93
Avg. t <sub>s</sub>												75.0
Average DGM Temp.												68.1
Max. Vac.												11

Plant =	FMMI	Point Duration (min) =	15	Moisture		
Plant Location =	Claypool, AZ	Bar. Pres. (in Hg) =	26.3	Initial	Final	Change
Source ID =	Vent Fume	Static Pres. (in WC) =	0.82	351.9	392.1	40.2
Run No =	VF23-2	Nozzle Dia (in WC) =	0.277	704.2	700.5	-3.7
Date =	12/3/2023	Meter dH @ =	1.7674	687.3	684.9	-2.4
Run Time =	1236-1544	Meter Yd =	0.9932	604.0	605.3	1.3
Sample Duration (min) =	180	H2O Mass (ml/g) =	72.0	861.8	894.5	32.7
				259.5	263.4	3.9

Point No.	DGM Reading (acf)	Sample Volume (acf)	dP (in WC)	dP1/2 (in WC)1/2	dH (in WC)	dH1/2 (in WC)1/2	Stack T (F)	DGM Inlet (F)	DGM Outlet (F)	DGM Ave (F)	velocity (ft/s)	Stack Pres (in Hg)	Meter Pres. (in Hg)
S1	289.281	4.199	0.34	0.583	2.04	1.428	72.0	55.0	54.0	54.5	35.2	26.36	26.45
	293.480	4.170	0.32	0.566	1.92	1.386	71.0	55.0	54.0	54.5	34.1	26.36	26.44
	297.650	4.220	0.32	0.566	1.92	1.386	71.0	57.0	55.0	56.0	34.1	26.36	26.44
2	301.870	4.080	0.31	0.557	1.86	1.364	71.0	59.0	55.0	57.0	33.5	26.36	26.44
	305.950	4.320	0.34	0.583	2.04	1.428	71.0	61.0	55.0	58.0	35.1	26.36	26.45
	310.270	4.250	0.32	0.566	1.92	1.386	71.0	62.0	56.0	59.0	34.1	26.36	26.44
3	314.520	4.250	0.32	0.566	1.92	1.386	70.0	63.0	57.0	60.0	34.0	26.36	26.44
	318.770	4.050	0.30	0.548	1.80	1.342	70.0	63.0	57.0	60.0	33.0	26.36	26.43
	322.820	4.206	0.32	0.566	1.92	1.386	70.0	64.0	57.0	60.5	34.0	26.36	26.44
E1	327.026	4.104	0.33	0.574	1.98	1.407	69.0	65.0	58.0	61.5	34.5	26.36	26.45
	331.130	4.160	0.31	0.557	1.86	1.364	70.0	65.0	59.0	62.0	33.5	26.36	26.44
	335.290	4.220	0.33	0.574	1.98	1.407	70.0	67.0	59.0	63.0	34.6	26.36	26.45
2	339.510	4.210	0.32	0.566	1.92	1.386	71.0	67.0	59.0	63.0	34.1	26.36	26.44
	343.720	4.270	0.34	0.583	2.04	1.428	72.0	68.0	60.0	64.0	35.2	26.36	26.45
	347.990	4.410	0.32	0.566	1.92	1.386	72.0	68.0	61.0	64.5	34.1	26.36	26.44
3	352.400	3.950	0.30	0.548	1.80	1.342	71.0	69.0	61.0	65.0	33.0	26.36	26.43
	356.350	4.200	0.32	0.566	1.92	1.386	70.0	69.0	61.0	65.0	34.1	26.36	26.44
	360.550	4.238	0.32	0.566	1.92	1.386	71.0	70.0	61.0	65.5	34.1	26.36	26.44
N1	364.788	4.212	0.32	0.566	1.92	1.386	71.0	68.0	62.0	65.0	34.1	26.36	26.44
	369.000	4.160	0.32	0.566	1.92	1.386	72.0	68.0	62.0	65.0	34.1	26.36	26.44
	373.160	4.310	0.34	0.583	2.04	1.428	72.0	68.0	62.0	65.0	35.2	26.36	26.45
2	377.470	4.370	0.34	0.583	2.04	1.428	74.0	70.0	62.0	66.0	35.2	26.36	26.45
	381.840	4.250	0.32	0.566	1.92	1.386	72.0	71.0	63.0	67.0	34.1	26.36	26.44
	386.090	4.250	0.32	0.566	1.92	1.386	74.0	71.0	63.0	67.0	31.7	26.36	26.44
3	390.340	4.120	0.30	0.548	1.80	1.342	74.0	72.0	64.0	68.0	30.7	26.36	26.43
	394.460	4.230	0.32	0.566	1.92	1.386	75.0	72.0	64.0	68.0	34.1	26.36	26.44
	398.690	4.132	0.30	0.548	1.80	1.342	75.0	72.0	64.0	68.0	30.7	26.36	26.43
W1	402.822	4.028	0.30	0.548	1.80	1.342	75.0	70.0	64.0	67.0	30.7	26.36	26.43
	406.850	4.140	0.32	0.566	1.92	1.386	75.0	72.0	65.0	68.5	31.7	26.36	26.44
	410.990	4.230	0.32	0.566	1.92	1.386	73.0	73.0	65.0	69.0	31.7	26.36	26.44
2	415.220	4.230	0.32	0.566	1.92	1.386	73.0	72.0	65.0	68.5	31.7	26.36	26.44
	419.450	4.210	0.33	0.574	1.98	1.407	74.0	73.0	65.0	69.0	32.2	26.36	26.45
	423.660	3.980	0.32	0.566	1.92	1.386	73.0	73.0	65.0	69.0	31.7	26.36	26.44
3	427.640	4.480	0.32	0.566	1.92	1.386	73.0	72.0	66.0	69.0	31.7	26.36	26.44
	432.120	4.290	0.34	0.583	2.04	1.428	73.0	74.0	66.0	70.0	32.7	26.36	26.45
	436.410	4.357	0.34	0.583	2.04	1.428	72.0	75.0	66.0	70.5	32.7	26.36	26.45
440.767													
151.486			0.32	0.567	1.93	1.388	72.0	67.6	60.9	64.2	33.4	26.36	26.44







Plant =	FMMI	Point Duration (min) =	15	Moisture		
Plant Location =	Claypool, AZ	Bar. Pres. (in Hg) =	26.35	Initial	Final	Change
Source ID =	Vent Fume	Static Pres. (in WC) =	0.81	352.1	391.3	39.2
Run No =	VF23-4	Nozzle Dia (in WC) =	0.277	705.1	700.8	-4.3
Date =	12/5/2023	Meter dH @ =	1.7674	687.7	685.1	-2.6
Run Time =	0904-1210	Meter Yd =	0.9932	604.5	605.7	1.2
Sample Duration (min) =	180	H2O Mass (ml/g) =	61.1	894.5	916.1	21.6
				245.8	251.8	6

Point No.	DGM Reading (acf)	Sample Volume (acf)	dP (in WC)	dP1/2 (in WC)1/2	dH (in WC)	dH1/2 (in WC)1/2	Stack T (F)	DGM Inlet (F)	DGM Outlet (F)	DGM Ave (F)	velocity (ft/s)	Stack Pres (in Hg)	Meter Pres. (in Hg)
S1	572.913	4.087	0.33	0.574	1.98	1.407	66.0	54.0	54.0	54.0	34.4	26.41	26.50
	577.000	4.280	0.34	0.583	2.04	1.428	66.0	54.0	54.0	54.0	34.9	26.41	26.50
	581.280	4.330	0.35	0.592	2.10	1.449	67.0	56.0	54.0	55.0	35.5	26.41	26.50
2	585.610	4.450	0.37	0.608	2.22	1.490	68.0	58.0	54.0	56.0	36.5	26.41	26.51
	590.060	4.530	0.38	0.616	2.26	1.503	68.0	60.0	55.0	57.5	37.0	26.41	26.52
	594.590	4.330	0.35	0.592	2.10	1.449	67.0	61.0	56.0	58.5	35.5	26.41	26.50
3	598.920	4.340	0.35	0.592	2.10	1.449	68.0	61.0	56.0	58.5	35.5	26.41	26.50
	603.260	4.040	0.30	0.548	1.80	1.342	68.0	63.0	57.0	60.0	32.9	26.41	26.48
	607.300	4.258	0.34	0.583	2.04	1.428	69.0	65.0	58.0	61.5	35.0	26.41	26.50
E1	611.558	4.232	0.35	0.592	2.10	1.449	69.0	65.0	59.0	62.0	35.5	26.41	26.50
	615.790	4.230	0.33	0.574	1.98	1.407	70.0	66.0	60.0	63.0	34.5	26.41	26.50
	620.020	4.190	0.32	0.566	1.92	1.386	71.0	66.0	60.0	63.0	34.0	26.41	26.49
2	624.210	4.340	0.35	0.592	2.10	1.449	69.0	66.0	60.0	63.0	35.5	26.41	26.50
	628.550	3.490	0.35	0.592	2.10	1.449	71.0	67.0	61.0	64.0	35.6	26.41	26.50
	632.040	5.310	0.37	0.608	2.22	1.490	71.0	67.0	61.0	64.0	36.6	26.41	26.51
3	637.350	4.340	0.35	0.592	2.10	1.449	73.0	68.0	62.0	65.0	35.7	26.41	26.50
	641.690	4.320	0.34	0.583	2.04	1.428	72.0	69.0	62.0	65.5	35.1	26.41	26.50
	646.010	4.365	0.35	0.592	2.10	1.449	72.0	69.0	63.0	66.0	35.6	26.41	26.50
N1	650.375	4.175	0.32	0.566	2.92	1.709	71.0	67.0	63.0	65.0	34.0	26.41	26.56
	654.550	4.170	0.34	0.583	2.04	1.428	71.0	68.0	62.0	65.0	35.1	26.41	26.50
	658.720	4.450	0.36	0.600	2.16	1.470	72.0	68.0	63.0	65.5	36.1	26.41	26.51
2	663.170	4.340	0.35	0.592	2.10	1.449	73.0	68.0	63.0	65.5	35.7	26.41	26.50
	667.510	4.340	0.35	0.592	2.10	1.449	74.0	68.0	63.0	65.5	35.7	26.41	26.50
	671.850	4.350	0.34	0.583	2.10	1.449	73.0	68.0	63.0	65.5	35.2	26.41	26.50
3	676.200	4.350	0.31	0.557	1.86	1.364	73.0	68.0	63.0	65.5	33.6	26.41	26.49
	680.550	4.080	0.34	0.583	2.04	1.428	73.0	68.0	63.0	65.5	35.2	26.41	26.50
	684.630	4.430	0.34	0.583	2.04	1.428	73.0	68.0	64.0	66.0	35.2	26.41	26.50
W1	689.060	4.190	0.34	0.583	2.04	1.428	71.0	67.0	62.0	64.5	35.1	26.41	26.50
	693.250	4.370	0.35	0.592	2.10	1.449	71.0	68.0	62.0	65.0	35.6	26.41	26.50
	697.620	4.320	0.34	0.583	2.04	1.428	71.0	68.0	62.0	65.0	35.1	26.41	26.50
2	701.940	4.250	0.33	0.574	1.98	1.407	71.0	68.0	63.0	65.5	34.6	26.41	26.50
	706.190	4.340	0.34	0.583	2.04	1.428	71.0	68.0	63.0	65.5	35.1	26.41	26.50
	710.530	4.370	0.35	0.592	2.10	1.449	72.0	68.0	64.0	66.0	35.6	26.41	26.50
3	714.900	4.350	0.33	0.574	1.98	1.407	70.0	68.0	63.0	65.5	34.5	26.41	26.50
	719.250	4.230	0.33	0.574	1.98	1.407	71.0	68.0	63.0	65.5	34.6	26.41	26.50
	723.480	4.359	0.35	0.592	2.10	1.449	71.0	67.0	63.0	65.0	35.6	26.41	26.50
727.839													
154.926			0.343	0.585	2.08	1.443	70.5	65.4	60.5	63.0	35.2	26.41	26.50



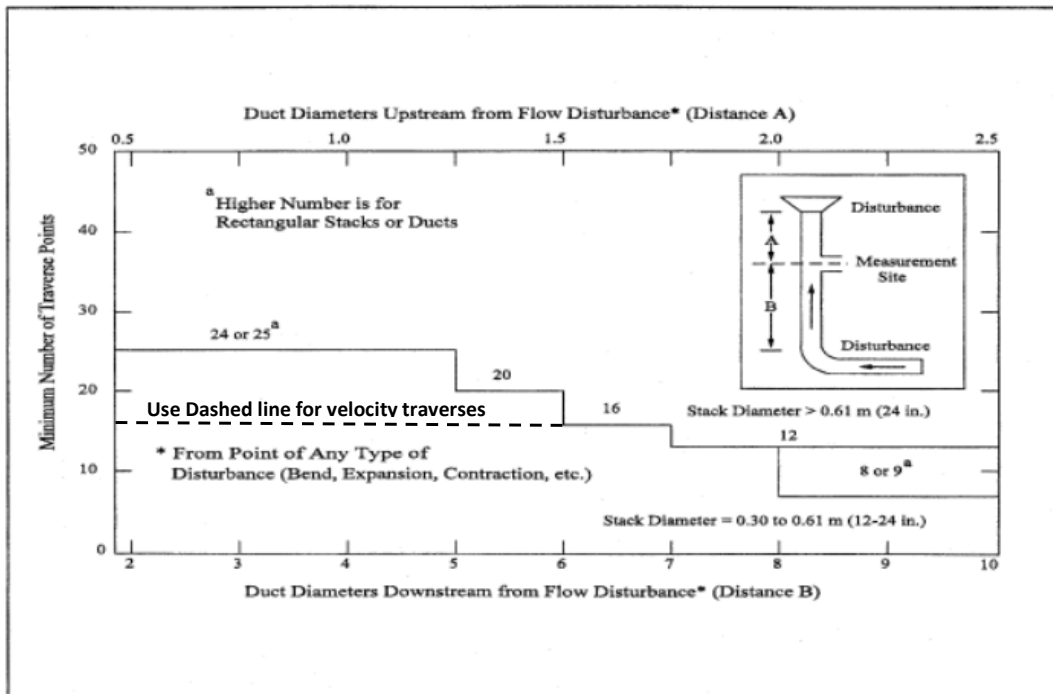
## RM 1 - Minimum Number of Traverse Points For Velocity & PM Traverses

Client Freeport-McMoRan Miami Inc  
 Location Claypool, AZ  
 Source APTG  
 Operator DB, JR

Stack Diameter (in)	125.5		
Upstream Distance (in)	636	Diameters	5.1
Downstream Distance (in)	1019.5	Diameters	8.1
Port Depth (in)	4		
Port Diameter (in)	6.5		

### Location of Traverse Points in Circular Stacks

Traverse Point Number	Number of traverse points (% of stack diameter from inside wall)							12 points, use first 3 in each port	
	6	8	10	12	16	20	24	Distance (ft)	Distance with port (ft)
	1	4.4	3.2	2.6	2.1	1.6	1.3	1.1	5.5
2	14.5	10.5	8.2	6.7	4.9	2.9	3.2	18.2	22.2
3	29.6	19.4	14.6	11.8	8.5	6.7	5.5	37.1	41.1
4	70.4	32.3	22.6	17.7	12.5	9.7	7.9	88.4	92.4
5	85.4	67.7	34.2	25.0	16.9	12.9	10.5	107.2	111.2
6	95.6	80.6	66.8	35.6	22.0	16.5	12.2	120.0	124.0
7		89.5	77.4	64.4	28.3	20.4	16.1		
8		96.8	85.4	75.0	37.5	25.0	19.4		
9			91.8	82.3	62.5	30.6	23.0		
10			97.4	88.2	71.7	38.8	27.2		
11				93.3	78.0	61.2	32.3		
12				97.9	83.1	69.4	39.8		
13					87.5	75.0	60.2		
14					91.5	79.6	67.7		
15					95.1	83.5	72.8		
16					98.4	87.1	77.0		
17						90.3	80.6		
18						93.3	83.9		
19						96.1	86.8		
20						98.7	88.6		
21							92.1		
22							94.5		
23							96.8		
24							99.9		





**ISOKINETIC SAMPLE DATA FORM**

Plant: Fummi Filter ID: 26A

Location: Clayport AZ Ambient Temp. (°F): 56

Source I.D.: APT6 Baro. Press. (in. Hg): 26.35

Date: 12/6/23 Static Press. (in H₂O): 0.32

Flow Traverse Time: NA O₂ (%): 20.9

Run No.: AP26A-1 CO₂ (%): 0.0

Operators: DJ, CJ Duct Dia. (in): 12.55

Meter Box I.D.: Lightings B<sub>vs</sub> (assumed): 0.03

Meter Y: 1.0347 Nozzle Dia. (in): 0.776

Meter Delta H@: 1.8246 K Factor: 5.58

Probe I.D./ Impinger outlet I.D.: 414 / Green Leak Check: \_\_\_\_\_

Probe Length/Type: 4ft RMS Pre: 0.000 acf 11

Pitot Coeff. (Cp): 0.84 Post: 0.000 acf 7

Moisture Train: Z

Imp.	Initial	Final
1	<u>681.6</u>	<u>718.4</u>
2	<u>686.4</u>	<u>699.7</u>
3	<u>402.4</u>	<u>403.7</u>
4	<u>406.6</u>	<u>408.4</u>
5	<u>851.8</u>	<u>873.5</u>
6		
Net Gain		

DGM Clock Time	Port/Point I.D.	Sample Time (min.)	DGM Reading (DAGF)	DP (in. H₂O)	DH (in. H₂O)	Stack Temp. (°F)	Probe Temp. (°F)	Filter Temp. (°F)	Imp. Inlet Temp. (°F)	DGM Temp. (°F)	Vacuum (in. Hg)
0640	5	0	598.333	0.32	1.91	79	265	261	57	61	6
	2	5	602.33	0.33	1.97	79	257	258	50	62	6
	3	10	606.40	0.33	1.97	80	254	255	49	62	6
0910   0911	3	15	610.48	0.34	2.03	80	287	255	50	63	6
	2	20	614.62	0.31	1.85	80	254	254	51	64	6
	1	25	618.64	0.32	1.91	79	258	253	52	65	6
	2	30	622.720	0.28	1.67	79	257	252	52	66	6
	3	35	626.58	0.30	1.79	79	259	254	50	67	6
0941   0942	2	40	630.53	0.33	1.97	79	254	253	49	67	6
	1	45	634.64	0.33	1.97	79	254	252	49	68	6
	2	50	638.76	0.30	1.79	79	253	255	50	70	6
	3	55	642.70	0.29	1.73	79	252	253	50	67	6
	1	60	646.608	0.30	1.79	79	253	254	50	69	6
1012   1014	2	65	650.59	0.31	1.85	79	253	251	51	69	6
	3	70	654.62	0.29	1.73	79	251	251	51	70	6
	1	75	658.51	0.27	1.61	79	251	254	52	71	5
	2	80	662.31	0.25	1.50	79	256	252	52	71	5
	3	85	665.98	0.29	1.73	79	254	254	52	72	6
1044	6	90	669.882	0.31	1.85	79	260	257	52	73	6
	2	95	673.90	0.32	1.91	79	259	257	53	73	6
	3	100	677.94	0.30	1.79	79	256	255	54	75	6
1044	3	105	681.97	0.32	1.91	79	252	255	54	76	6
	2	110	686.11	0.32	1.91	79	251	254	54	77	6
		115	690.27	0.31	1.85	79	253	252	56	77	6
		120	694.276								
Total Time		DGM Volume		Avg. DP	Avg. DH	Avg. tₛ					
							Average DGM Temp.				
							Max. Vac.				

Plant = FMMI  
 Plant Location = Claypool, AZ  
 Source ID = Acid Plant Tail Gas  
 Run No = AP26A-1  
 Date = 12/6/2023  
 Run Time = 0840-1044  
 Sample Duration (min) = 120

Point Duration (min) = 10  
 Bar. Pres. (in Hg) = 26.35  
 Static Pres. (in WC) = 0.32  
 Nozzle Dia (in WC) = 0.276  
 Meter dH @ = 1.8246  
 Meter Yd = 1.0347  
 H2O Mass (ml/g) = 68.3

Moisture		
Initial	Final	Change
681.6	718.4	36.8
686.4	699.1	12.7
702.4	703.7	1.3
706.6	708.4	1.8
857.8	873.5	15.7
Sum	3634.8	3703.1

Point No.	DGM Reading (acf)	Sample Volume (acf)	dP (in WC)	dP1/2 (in WC)1/2	dH (in WC)	dH1/2 (in WC)1/2	Stack T (F)	DGM Inlet (F)	DGM Outlet (F)	DGM Ave (F)	velocity (ft/s)	Stack Pres (in Hg)	Meter Pres. (in Hg)
S1	598.333	3.997	0.32	0.566	1.91	1.382	79.0	64.0	61.0	62.5	34.4	26.37	26.49
	602.330	4.070	0.33	0.574	1.97	1.404	79.0	67.0	62.0	64.5	34.9	26.37	26.49
2	606.400	4.080	0.33	0.574	1.97	1.404	80.0	70.0	62.0	66.0	34.9	26.37	26.49
	610.480	4.140	0.34	0.583	2.03	1.425	80.0	72.0	63.0	67.5	35.5	26.37	26.50
3	614.620	4.020	0.31	0.557	1.85	1.360	80.0	74.0	64.0	69.0	33.9	26.37	26.49
	618.640	4.080	0.32	0.566	1.91	1.382	79.0	75.0	65.0	70.0	34.4	26.37	26.49
W1	622.720	3.860	0.28	0.529	1.67	1.292	79.0	75.0	66.0	70.5	32.1	26.37	26.47
	626.580	3.950	0.30	0.548	1.79	1.338	79.0	77.0	67.0	72.0	33.3	26.37	26.48
2	630.530	4.110	0.33	0.574	1.97	1.404	79.0	77.0	68.0	72.5	34.9	26.37	26.49
	634.640	4.120	0.33	0.574	1.97	1.404	79.0	78.0	68.0	73.0	34.9	26.37	26.49
3	638.760	3.940	0.30	0.548	1.79	1.338	79.0	79.0	70.0	74.5	33.3	26.37	26.48
	642.700	3.908	0.29	0.539	1.73	1.315	79.0	78.0	69.0	73.5	32.7	26.37	26.48
N1	646.608	3.982	0.30	0.548	1.79	1.338	79.0	74.0	69.0	71.5	33.3	26.37	26.48
	650.590	4.030	0.31	0.557	1.85	1.360	79.0	76.0	69.0	72.5	33.8	26.37	26.49
2	654.620	3.890	0.29	0.539	1.73	1.315	79.0	79.0	70.0	74.5	32.7	26.37	26.48
	658.510	3.800	0.27	0.520	1.61	1.269	79.0	79.0	70.0	74.5	31.6	26.37	26.47
3	662.310	3.670	0.25	0.500	1.50	1.225	79.0	81.0	71.0	76.0	30.4	26.37	26.46
	665.980	3.902	0.29	0.539	1.73	1.315	79.0	81.0	72.0	76.5	32.7	26.37	26.48
E1	669.882	4.018	0.31	0.557	1.85	1.360	79.0	80.0	73.0	76.5	33.8	26.37	26.49
	673.900	4.090	0.32	0.566	1.91	1.382	79.0	83.0	73.0	78.0	34.4	26.37	26.49
2	677.990	3.980	0.30	0.548	1.79	1.338	79.0	85.0	75.0	80.0	33.3	26.37	26.48
	681.970	4.140	0.32	0.566	1.91	1.382	79.0	86.0	76.0	81.0	34.4	26.37	26.49
3	686.110	4.110	0.32	0.566	1.91	1.382	79.0	87.0	77.0	82.0	34.4	26.37	26.49
	690.220	4.056	0.31	0.557	1.85	1.360	79.0	86.0	77.0	81.5	33.8	26.37	26.49
	694.276												
	95.943		0.307	0.554	1.833	1.353	79.1	77.6	69.0	73.3	33.6	26.4	26.5



ISOKINETIC SAMPLE DATA FORM

Moisture Train:	Initial	Final
Imp. 1	685.1	728.6
2	677.6	689.2
3	696.3	698.0
4	702.7	704.1
5	857.1	877.7
6		
	Net Gain	

Plant: EMMI  
 Location: Clagwell AZ  
 Source I.D.: AP76  
 Date: 12/6/23  
 Flow Traverse Time: NA  
 Run No.: AP26A-2  
 Operators: D.C.C.S  
 Meter Box I.D.: Light rings  
 Meter Y: 1.0347  
 Meter Delta H@: 1.8246  
 Probe I.D./ Impinger outlet I.D.: 414 / 13.02  
 Probe Length/Type: 461 EM5  
 Pitot Coeff. (Cp): 0.84

Filter ID: 26A  
 Ambient Temp. (°F): 58  
 Baro. Press. (in. Hg): 26.35  
 Static Press. (in H<sub>2</sub>O): 0.32  
 O<sub>2</sub> (%): 1.10  
 CO<sub>2</sub> (%): ~1  
 Duct Dia. (in): 125.5  
 B<sub>ws</sub> (assumed): 0.03  
 Nozzle Dia. (in): 0.276  
 K Factor: 5.98 6.10

Leak Check: Pre: 0.000 acf Post: 0 acf  
 Pitot: Pre: 10 in. Hg Vac. Post: 9 in. Hg Vac.  
 Impact: 0.0 in. H<sub>2</sub>O/15 sec. Post: 0.0 in. H<sub>2</sub>O/15 sec.

DGM Clock Time	Port/Point I.D.	Sample Time (min.)	DGM Reading (DACF)	DP (in. H <sub>2</sub> O)	DH (in. H <sub>2</sub> O)	Stack Temp. (°F)	Probe Temp. (°F)	Filter Temp. (°F)	Imp. Outlet Temp. (°F)	DGM Temp. (°F)	Vacuum (in. Hg)
1230	5 1	0	694.439	0.37	1.97	79	253	255	52	79	6.5
	2	5	698.50	0.31	1.85	80	251	251	45	78	6.5
	3	10	702.52	0.33	1.97	80	251	251	45	78	6.5
	3	15	706.63	0.32	1.91	80	256	254	46	82	7
	3	20	710.73	0.30	1.83	80	256	251	47	78	7
	3	25	714.76	0.32	1.95	80	251	255	48	79	7
1300/1301	00 1	30	718.80	0.33	2.01	80	265	253	49	86	7
	2	35	723.10	0.33	2.01	80	263	254	51	87	7
	3	40	727.28	0.33	2.01	80	255	257	51	89	7
	3	45	731.49	0.30	1.83	80	253	253	52	87	7
	3	50	735.50	0.31	1.89	80	253	254	53	89	7
	3	55	739.60	0.29	1.77	80	254	253	52	84	7
1331/1334	00 1	60	743.676	0.29	1.77	80	256	254	52	87	7
	2	65	747.68	0.29	1.77	81	255	255	53	90	7
	2	70	751.54	0.30	1.83	81	251	257	53	90	7
	3	75	755.57	0.32	1.95	81	253	251	53	86	7
	3	80	759.71	0.30	1.83	81	255	253	53	86	7
	3	85	763.76	0.27	1.65	81	251	255	54	87	7
1404/1406	00 1	90	767.624	0.35	2.14	81	263	257	55	87	7
	2	95	771.89	0.31	1.89	81	260	257	54	87	7
	3	100	776.04	0.34	2.07	80	256	255	52	87	7
	3	105	780.28	0.34	2.07	80	253	253	52	87	7
	3	110	784.55	0.29	1.77	80	254	253	52	88	7
	3	115	788.54	0.33	2.01	80	254	253	52	88	7
1436		120	792.742								

Total Time	DGM Volume	Avg. DP	Avg. DH	Avg. t <sub>s</sub>	Average DGM Temp.	Max. Vac.

Plant = FMMI  
 Plant Location = Claypool, AZ  
 Source ID = Acid Plant Tail Gas  
 Run No = AP26A-2  
 Date = 12/6/2023  
 Run Time = 1230-1436  
 Sample Duration (min) = 120

Point Duration (min) = 10  
 Bar. Pres. (in Hg) = 26.35  
 Static Pres. (in WC) = 0.32  
 Nozzle Dia (in WC) = 0.2760  
 Meter dH @ = 1.8246  
 Meter Yd = 1.0347  
 H2O Mass (ml/g) = 73.8

Moisture		Change
Initial	Final	
685.1	728.6	43.5
677.6	689.2	11.6
696.3	698.0	1.7
702.7	704.1	1.4
857.1	872.7	15.6
Sum	3618.8	3692.6

Point No.	DGM Reading (acf)	Sample Volume (acf)	dP (in WC)	dP1/2 (in WC)1/2	dH (in WC)	dH1/2 (in WC)1/2	Stack T (F)	DGM Inlet (F)	DGM Outlet (F)	DGM Ave (F)	velocity (ft/s)	Stack Pres (in Hg)	Meter Pres. (in Hg)
S1	694.439	4.061	0.33	0.574	1.97	1.404	79.0	79.0	79.0	79.0	34.9	26.37	26.49
	698.500	4.020	0.31	0.557	1.85	1.360	80.0	78.0	78.0	78.0	33.9	26.37	26.49
2	702.520	4.110	0.33	0.574	1.97	1.404	80.0	80.0	78.0	79.0	35.0	26.37	26.49
	706.630	4.100	0.32	0.566	1.91	1.382	80.0	82.0	78.0	80.0	34.4	26.37	26.49
3	710.730	4.030	0.30	0.548	1.83	1.353	80.0	83.0	78.0	80.5	33.3	26.37	26.48
	714.760	4.120	0.32	0.566	1.95	1.396	80.0	85.0	79.0	82.0	34.4	26.37	26.49
W1	718.880	4.220	0.33	0.574	2.01	1.418	80.0	86.0	80.0	83.0	35.0	26.37	26.50
	723.100	4.180	0.33	0.574	2.01	1.418	80.0	87.0	81.0	84.0	35.0	26.37	26.50
2	727.280	4.210	0.33	0.574	2.01	1.418	80.0	89.0	82.0	85.5	35.0	26.37	26.50
	731.490	4.010	0.30	0.548	1.83	1.353	80.0	90.0	83.0	86.5	33.3	26.37	26.48
3	735.500	4.160	0.31	0.557	1.89	1.375	80.0	90.0	84.0	87.0	33.9	26.37	26.49
	739.660	4.016	0.29	0.539	1.77	1.330	80.0	91.0	84.0	87.5	32.8	26.37	26.48
N1	743.676	4.004	0.29	0.539	1.77	1.330	80.0	87.0	85.0	86.0	32.8	26.37	26.48
	747.680	3.860	0.29	0.539	1.77	1.330	81.0	90.0	85.0	87.5	32.8	26.37	26.48
2	751.540	4.030	0.30	0.548	1.83	1.353	81.0	90.0	85.0	87.5	33.4	26.37	26.48
	755.570	4.140	0.32	0.566	1.95	1.396	81.0	91.0	86.0	88.5	34.5	26.37	26.49
3	759.710	4.050	0.30	0.548	1.83	1.353	81.0	92.0	86.0	89.0	33.4	26.37	26.48
	763.760	3.864	0.27	0.520	1.65	1.285	81.0	93.0	87.0	90.0	31.6	26.37	26.47
E1	767.624	4.266	0.35	0.592	2.14	1.463	81.0	91.0	87.0	89.0	36.0	26.37	26.51
	771.890	4.150	0.31	0.557	1.89	1.375	81.0	92.0	87.0	89.5	33.9	26.37	26.49
2	776.040	4.240	0.34	0.583	2.07	1.439	80.0	93.0	87.0	90.0	35.5	26.37	26.50
	780.280	4.270	0.34	0.583	2.07	1.439	80.0	93.0	87.0	90.0	35.5	26.37	26.50
3	784.550	3.990	0.29	0.539	1.77	1.330	80.0	93.0	88.0	90.5	32.8	26.37	26.48
	788.540	4.202	0.33	0.574	2.01	1.418	80.0	94.0	88.0	91.0	35.0	26.37	26.50
	792.742												
	98.303		0.314	0.560	1.906	1.380	80.3	88.3	83.4	85.9	34.1	26.4	26.5



ISOKINETIC SAMPLE DATA FORM I

Plant: Fmmf Filter ID: 26A  
 Location: Clayton AZ Ambient Temp. (°F): 58  
 Source I.D.: APT Baro. Press. (in. Hg): 26.75  
 Date: 12/7/23 Static Press. (in H<sub>2</sub>O): 0.32  
 Flow Traverse Time: NA O<sub>2</sub> (%): ~10  
 Run No.: AP26A-3 CO<sub>2</sub> (%): ~1  
 Operators: DS, CS Duct Dia. (in): 125.5  
 Meter Box I.D.: Lightsnings B<sub>ws</sub> (assumed): 0.03  
 Meter Y: 1.0347 Nozzle Dia. (in): 0.274  
 Meter Delta H@: 1.8246 K Factor: 598  
 Probe I.D./Impinger outlet I.D.: 414 Leak Check: green  
 Probe Length/Type: 447 rms Pre: 0.000 acf  
 Pitot Coeff. (Cp): 0.84 Post: 0.000 acf

Moisture Train: Z

Imp.	Initial	Final
1	682.4	725.8
2	686.3	698.7
3	701.6	702.7
4	706.4	707.8
5	873.5	889.0
6		

Net Gain

Pitot: 0.0 in. H<sub>2</sub>O/15 sec.  
 Impact: 0.0 in. H<sub>2</sub>O/15 sec.  
 Static: 0.0

DGM Clock Time	Port/Point I.D.	Sample Time (min.)	DGM Reading (DADF)	DP (in. H <sub>2</sub> O)	DH (in. H <sub>2</sub> O)	Stack Temp. (°F)	Probe Temp. (°F)	Filter Temp. (°F)	Imp. Outlet Temp. (°F)	DGM Temp. (°F)	Vacuum (in. Hg)
0828	51	0	792.904	0.32	1.91	80	266	263	54	63	5
		5	796.94	0.33	1.97	80	254	257	44	66	6
	2	10	801.06	0.33	1.97	80	252	253	44	67	6
	3	15	805.18	0.35	2.09	80	254	257	45	71	6
		20	809.45	0.30	1.79	80	254	254	47	74	6
		25	813.43	0.28	1.67	80	252	257	48	76	6
	1	30	817.205	0.22	1.32	79	253	251	49	75	5
		35	820.74	0.25	1.50	80	251	253	46	78	5
	2	40	824.35	0.27	1.61	80	253	252	45	80	5
		45	828.13	0.27	1.73	80	255	252	45	82	5
	3	50	832.02	0.27	1.61	80	255	252	45	83	5
		55	835.78	0.25	1.50	80	251	252	45	83	5
	1	60	839.448	0.30	1.79	80	253	253	46	82	5
		65	843.39	0.33	1.97	80	257	254	47	81	6
	2	70	847.57	0.32	1.91	80	252	254	47	80	6
		75	851.67	0.25	1.73	79	251	252	47	81	6
	3	80	855.58	0.26	1.55	79	253	253	48	82	6
		85	859.34	0.27	1.61	80	253	253	48	82	5
	1	90	863.145	0.34	2.03	80	255	254	49	80	6
		95	867.26	0.32	1.91	80	255	253	48	82	6
	2	100	871.37	0.33	1.97	80	252	253	49	85	6
		105	875.57	0.32	1.91	80	255	254	49	86	6
	3	110	879.65	0.364	2.07	80	254	253	50	88	6
		115	883.86	0.34	2.03	80	254	253	50	87	6
		120	888.078							89	6
Total Time		DGM Volume		Avg. DP	Avg. DH	Avg. t <sub>s</sub>	Average DGM Temp.		Max. Vac.		

Plant =	FMMI	Point Duration (min) =	10	Moisture		
Plant Location =	Claypool, AZ	Bar. Pres. (in Hg) =	26.25	Initial	Final	Change
Source ID =	Acid Plant Tail Gas	Static Pres. (in WC) =	0.32	682.4	725.8	43.4
Run No =	AP26A-3	Nozzle Dia (in WC) =	0.2760	686.3	698.7	12.4
Date =	12/7/2023	Meter dH @ =	1.8246	701.6	702.9	1.3
Run Time =	1832-2035	Meter Yd =	1.0347	706.4	707.8	1.3
Sample Duration (min) =	120	H2O Mass (ml/g) =	74.0	873.5	889.0	1.4
				Sum	3650.2	3724.2

Point No.	DGM Reading (acf)	Sample Volume (acf)	dP (in WC)	dP1/2 (in WC)1/2	dH (in WC)	dH1/2 (in WC)1/2	Stack T (F)	DGM Inlet (F)	DGM Outlet (F)	DGM Ave (F)	velocity (ft/s)	Stack Pres (in Hg)	Meter Pres. (in Hg)
S1	792.907	4.033	0.32	0.566	1.91	1.382	80.0	63.0	61.0	62.0	34.5	26.27	26.39
	796.940	4.120	0.33	0.574	1.97	1.404	80.0	66.0	61.0	63.5	35.0	26.27	26.39
2	801.060	4.120	0.33	0.574	1.97	1.404	80.0	69.0	62.0	65.5	35.0	26.27	26.39
	805.180	4.270	0.35	0.592	2.09	1.446	80.0	71.0	62.0	66.5	36.1	26.27	26.40
3	809.450	3.980	0.30	0.548	1.79	1.338	80.0	74.0	64.0	69.0	33.4	26.27	26.38
	813.430	3.775	0.28	0.529	1.67	1.292	80.0	76.0	65.0	70.5	32.3	26.27	26.37
W1	817.205	3.535	0.22	0.469	1.32	1.149	80.0	75.0	66.0	70.5	28.6	26.27	26.35
	820.740	3.610	0.25	0.500	1.50	1.225	79.0	78.0	67.0	72.5	30.5	26.27	26.36
2	824.350	3.780	0.27	0.520	1.61	1.269	80.0	80.0	68.0	74.0	31.7	26.27	26.37
	828.130	3.890	0.29	0.539	1.73	1.315	80.0	82.0	70.0	76.0	32.8	26.27	26.38
3	832.020	3.760	0.27	0.520	1.61	1.269	80.0	83.0	70.0	76.5	31.7	26.27	26.37
	835.780	3.668	0.25	0.500	1.50	1.225	80.0	83.0	72.0	77.5	30.5	26.27	26.36
N1	839.448	3.942	0.30	0.548	1.79	1.338	80.0	82.0	72.0	77.0	33.4	26.27	26.38
	843.390	4.180	0.33	0.574	1.97	1.404	80.0	81.0	72.0	76.5	35.0	26.27	26.39
2	847.570	4.100	0.32	0.566	1.91	1.382	80.0	80.0	71.0	75.5	34.5	26.27	26.39
	851.670	3.910	0.29	0.539	1.73	1.315	79.0	81.0	72.0	76.5	32.8	26.27	26.38
3	855.580	3.760	0.26	0.510	1.55	1.245	79.0	82.0	72.0	77.0	31.1	26.27	26.36
	859.340	3.805	0.27	0.520	1.61	1.269	80.0	82.0	73.0	77.5	31.7	26.27	26.37
E1	863.145	4.115	0.34	0.583	2.03	1.425	80.0	80.0	74.0	77.0	35.5	26.27	26.40
	867.260	4.110	0.32	0.566	1.91	1.382	80.0	82.0	74.0	78.0	34.5	26.27	26.39
2	871.370	4.200	0.33	0.574	1.97	1.404	80.0	85.0	75.0	80.0	35.0	26.27	26.39
	875.570	4.080	0.32	0.566	1.91	1.382	80.0	86.0	76.0	81.0	34.5	26.27	26.39
3	879.650	4.210	0.34	0.583	2.03	1.425	80.0	88.0	77.0	82.5	35.5	26.27	26.40
	883.860	4.218	0.34	0.583	2.03	1.425	80.0	89.0	78.0	83.5	35.5	26.27	26.40
	888.078												
	95.171		0.301	0.548	1.796	1.338	79.9	79.1	69.8	74.4	33.4	26.3	26.4





Method 23 ISOKINETIC SAMPLE DATA FORM

FWMIJ

Filter ID:

DF

58

Location: Claydon A2

Source I.D.: 41/1/2016 plant

Date: 12/16/23

Flow Traverse Time: NA

Run No.: AP 23-1

Operators: RBGJ Hawk eye

Meter Box I.D.: 0.9932

Meter Y: 1.7674

Meter Delta H@: 1901025/ yellow

Probe I.D./ Impinger outlet: 419

Probe Length/Type: 0.94

Pitot Coeff. (Cp): 0.94

Moisture Train:

Imp.	Initial	Final
1	352.7	429.4
2	728.0	702.3
3	689.7	686.1
4	605.3	605.75
5	280.6	913.8
6	245.1	250.4

Net Gain

Pitot: Impact Static

Pre: 0.0 0.0 0.0

Post: 0.0 0.0 0.0

in. Hg Vac.

12

in. Hg Vac.

10

DGM Clock Time	Port/Point I.D.	Sample Time (min.)	DGM Reading (DACF)	DP (in. H <sub>2</sub> O)	DH (in. H <sub>2</sub> O)	Stack Temp. (°F)	Probe Temp. (°F)	Filter Temp. (°F)	Imp. Outlet Temp. (°F)	DGM Temp. (°F)	Condenser Outlet Temp. (°F)	Vacuum (in. Hg)
09:40	1	0	728.100	0.30	1.76	80	234	252	54	56	45	88
		5	737.06	0.32	1.89	80	250	250	46	56	44	88
		10	736.20	0.30	1.76	80	249	251	45	56	44	88
	2	15	740.17	0.34	2.00	80	242	241	48	54	45	88
		20	744.45	0.33	1.94	80	244	249	48	53	45	88
		25	748.62	0.33	1.82	80	251	251	48	59	45	88
		30	752.95	0.36	1.85	80	251	251	48	60	45	88
		35	756.92	0.33	1.97	80	250	251	49	61	45	88
		40	760.80	0.33	1.88	80	246	246	50	61	48	88
	1	45	764.947	0.32	1.94	80	239	247	49	62	48	88
		50	769.031	0.33	2.00	80	245	250	49	62	48	88
		55	773.78	0.34	2.00	80	249	249	50	63	48	88
		60	777.58	0.33	1.94	80	251	251	50	64	48	88
		65	781.88	0.32	1.88	80	250	251	50	64	48	88
		70	786.12	0.33	1.94	80	250	251	50	65	48	88
	3	75	790.20	0.33	1.88	80	250	251	51	65	48	88
		80	794.43	0.31	1.88	80	250	249	51	66	48	88
		85	798.67	0.32	1.88	80	252	250	51	66	48	88
10:12		90	802.832									

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3

Total Time	Vol. (DACF)	Avg. DP	Avg. DH	Avg. t <sub>s</sub>

Average DGM Temp.	Max. Vac.



Plant =	FMMI	Point Duration (min) =	15	Moisture		
Plant Location =	Claypool, AZ	Bar. Pres. (in Hg) =	26.35	Initial	Final	Change
Source ID =	APTG	Static Pres. (in WC) =	0.32	352.7	429.4	76.7
Run No =	AP23-1	Nozzle Dia (in WC) =	0.277	708.0	702.3	-5.7
Date =	12/6/2023	Meter dH @ =	1.7674	689.7	686.1	-3.6
Run Time =	0840-1147	Meter Yd =	0.9932	605.3	605.2	-0.1
Sample Duration (min) =	180	H2O Mass (ml/g) =	105.8	880.6	913.8	33.2
				245.1	250.4	5.3

Point No.	DGM Reading (acf)	Sample Volume (acf)	dP (in WC)	dP1/2 (in WC)1/2	dH (in WC)	dH1/2 (in WC)1/2	Stack T (F)	DGM Inlet (F)	DGM Outlet (F)	DGM Ave (F)	velocity (ft/s)	Stack Pres (in Hg)	Meter Pres. (in Hg)
S1	728.100	3.960	0.30	0.548	1.76	1.325	80.0	56.0	56.0	56.0	33.5	26.37	26.48
	732.060	4.140	0.32	0.566	1.88	1.371	80.0	57.0	56.0	56.5	34.6	26.37	26.49
	736.200	3.970	0.30	0.548	1.76	1.327	80.0	59.0	56.0	57.5	33.5	26.37	26.48
2	740.170	4.280	0.34	0.583	2.00	1.414	80.0	61.0	56.0	58.5	35.7	26.37	26.50
	744.450	4.170	0.33	0.574	1.94	1.393	80.0	63.0	57.0	60.0	35.2	26.37	26.49
	748.620	4.330	0.33	0.574	1.94	1.393	80.0	65.0	58.0	61.5	35.2	26.37	26.49
3	752.950	3.970	0.31	0.557	1.82	1.349	80.0	66.0	58.0	62.0	34.1	26.37	26.48
	756.920	3.880	0.28	0.529	1.65	1.285	80.0	68.0	59.0	63.5	32.4	26.37	26.47
	760.800	4.147	0.33	0.574	1.94	1.393	80.0	69.0	60.0	64.5	35.2	26.37	26.49
W1	764.947	4.083	0.32	0.566	1.88	1.371	80.0	69.0	61.0	65.0	34.6	26.37	26.49
	769.030	4.250	0.33	0.574	1.94	1.393	80.0	71.0	62.0	66.5	35.2	26.37	26.49
	773.280	4.300	0.34	0.583	2.00	1.414	80.0	72.0	62.0	67.0	35.7	26.37	26.50
2	777.580	4.300	0.34	0.583	2.00	1.414	80.0	73.0	63.0	68.0	35.7	26.37	26.50
	781.880	4.240	0.33	0.574	1.94	1.393	80.0	73.0	64.0	68.5	35.2	26.37	26.49
	786.120	4.080	0.32	0.566	1.88	1.371	80.0	74.0	64.0	69.0	34.6	26.37	26.49
3	790.200	4.230	0.33	0.574	1.94	1.393	80.0	74.0	65.0	69.5	35.2	26.37	26.49
	794.430	4.240	0.31	0.557	1.82	1.349	80.0	75.0	66.0	70.5	34.1	26.37	26.48
	798.670	4.162	0.32	0.566	1.88	1.371	80.0	75.0	66.0	70.5	34.6	26.37	26.49
N1	802.832	3.968	0.31	0.557	1.82	1.270	80.0	74.0	67.0	70.5	34.1	26.37	26.48
	806.800	4.130	0.31	0.557	1.82	1.349	80.0	76.0	67.0	71.5	34.1	26.37	26.48
	810.930	4.050	0.33	0.574	1.94	1.393	80.0	76.0	67.0	71.5	35.2	26.37	26.49
2	814.980	4.030	0.31	0.557	1.82	1.349	80.0	77.0	68.0	72.5	34.1	26.37	26.48
	819.010	4.320	0.34	0.583	2.00	1.414	80.0	77.0	68.0	72.5	35.7	26.37	26.50
	823.330	4.220	0.32	0.566	1.88	1.371	80.0	77.0	68.0	72.5	34.6	26.37	26.49
3	827.550	3.850	0.27	0.520	1.59	1.261	80.0	77.0	68.0	72.5	31.8	26.37	26.47
	831.400	3.750	0.28	0.529	1.65	1.285	80.0	77.0	68.0	72.5	32.4	26.37	26.47
	835.150	3.659	0.25	0.500	1.47	1.212	80.0	77.0	68.0	72.5	30.6	26.37	26.46
E1	838.809	3.771	0.27	0.520	1.59	1.261	80.0	76.0	69.0	72.5	31.8	26.37	26.47
	842.580	3.730	0.25	0.500	1.47	1.212	80.0	77.0	70.0	73.5	30.6	26.37	26.46
	846.310	3.890	0.28	0.529	1.65	1.285	80.0	78.0	69.0	73.5	32.4	26.37	26.47
2	850.200	4.100	0.30	0.548	1.76	1.327	80.0	79.0	70.0	74.5	33.5	26.37	26.48
	854.300	4.000	0.29	0.539	1.71	1.308	79.0	79.0	70.0	74.5	32.9	26.37	26.48
	858.300	4.270	0.33	0.574	1.94	1.393	80.0	79.0	70.0	74.5	35.2	26.37	26.49
3	862.570	3.970	0.28	0.529	1.65	1.285	80.0	79.0	70.0	74.5	32.4	26.37	26.47
	866.540	4.110	0.29	0.539	1.71	1.308	80.0	79.0	70.0	74.5	33.0	26.37	26.48
	870.650	3.951	0.29	0.539	1.71	1.308	80.0	80.0	71.0	75.5	33.0	26.37	26.48
874.601													
146.501			0.31	0.554	1.81	1.342	80.0	72.6	64.6	68.6	33.9	26.37	26.48



Method 23 ISOKINETIC SAMPLE DATA FORM

Moisture Train:	Initial	Final
Imp. 1	343.4	418.7
2	708.4	677.4
3	682.8	681.0
4	607.8	603.1
5	882.4	906.1
6	248.6	256.0
Net Gain		

in. H<sub>2</sub>O/15 sec. 0.0 0.0  
 in. H<sub>2</sub>O/15 sec. 0.0 0.0

Pitot: Impact Static  
 Pre: 0.0 0.0  
 Post: 0.0 0.0

in. Hg Vac. 9  
 in. Hg Vac. 11

Filter ID: DF  
 Ambient Temp. (°F): 60  
 Baro. Press. (in. Hg): 26.35  
 Static Press. (in H<sub>2</sub>O): 0.32  
 O<sub>2</sub> (%): 20.9  
 CO<sub>2</sub> (%): 0.0  
 Duct Dia. (in): 125.5"  
 B<sub>ws</sub> (assumed): 0.03  
 Nozzle Dia. (in): 0.276, 0.277, 0.278 = 0.277  
 K Factor: 5.88

Leak Check: acf acf  
 Pre: 0.002  
 Post: 0.005

Plant: FWWI  
 Location: Clay Pool A2  
 Source I.D.: Actel Plant  
 Date: 12/16/25  
 Flow Traverse Time: NA  
 Run No.: AD 23-1  
 Operators: RB/SJ  
 Meter Box I.D.: flow keye  
 Meter Y: 0.9932  
 Meter Delta H@: 1.7674  
 Probe I.D./Impinger outlet: 10901025 / Red  
 Probe Length/Type: 119  
 Pitot Coeff. (Cp): 0.94

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DGM Clock Time	Port/Point I.D.	Sample Time (min.)	DGM Reading (DADF)	DP (in. H <sub>2</sub> O)	DH (in. H <sub>2</sub> O)	Stack Temp. (°F)	Probe Temp. (°F)	Filter Temp. (°F)	Imp. Outlet Temp. (°F)	DGM Temp. (°F)	Static Temp. (°F)	Condenser Outlet Temp. (°F)	Vacuum (in. Hg)
12:00	0-1	0	876.429	0.30	1.76	80	242	249	56	70	68	72	7
		5	980.410	0.35	2.06	80	251	252	54	71	68	41	8
		10	887.970	0.32	1.88	80	252	252	54	73	68	41	9
	2	15	886.88	0.34	2.08	80	251	251	54	72	68	43	9
		20	842.50	0.32	1.88	80	250	250	54	73	68	43	9
		25	841.38	0.34	2.00	80	250	250	54	73	68	43	10
		30	901.42	0.34	2.00	80	252	250	54	73	68	43	10
		35	905.69	0.34	2.00	80	252	250	54	73	68	43	10
		40	910.02	0.35	2.06	80	250	246	54	73	68	43	10
	S1	45	914.385	0.34	2.00	80	250	250	56	71	68	44	9
		50	916.70	0.30	1.76	80	246	245	54	72	68	45	9
		55	922.62	0.35	2.06	80	249	249	54	73	68	45	10
	2	60	926.91	0.31	2.18	80	252	249	54	73	68	46	10
		65	931.26	0.30	2.00	81	245	249	54	73	68	46	10
		70	935.60	0.34	2.00	80	246	247	54	73	68	46	10
	3	75	939.78	0.32	1.88	81	241	242	54	73	68	46	10
		80	944.10	0.33	1.94	81	253	247	56	73	68	46	10
	.	85	948.24	0.29081	1.82	81	253	251	56	74	68	49	10
		90	952.421										
1:07													
Total Time		Vol. (DADF)		Avg. DP	Avg. DH	Avg. t <sub>s</sub>	Average DGM Temp.		Max. Vac.				



Method 23 ISOKINETIC SAMPLE DATA FORM

Plant: \_\_\_\_\_ Filter ID: \_\_\_\_\_

Location: \_\_\_\_\_ Ambient Temp. (°F): \_\_\_\_\_

Source I.D.: \_\_\_\_\_ Baro. Press. (in. Hg): \_\_\_\_\_

Date: \_\_\_\_\_ Static Press. (in. H<sub>2</sub>O): \_\_\_\_\_

Flow Traverse Time: \_\_\_\_\_ O<sub>2</sub> (%): \_\_\_\_\_

Run No.: AP 23-2 CO<sub>2</sub> (%): \_\_\_\_\_

Operators: \_\_\_\_\_ Duct Dia. (in): \_\_\_\_\_

Meter Box I.D.: \_\_\_\_\_ B<sub>ws</sub> (assumed): \_\_\_\_\_

Meter Y: \_\_\_\_\_ Nozzle Dia. (in): \_\_\_\_\_

Meter Delta H@: \_\_\_\_\_ K Factor: \_\_\_\_\_

Probe I.D./ Impinger outlet \_\_\_\_\_ Leak Check: \_\_\_\_\_

Probe Length/Type: \_\_\_\_\_ Pre: \_\_\_\_\_ acf

Pitot Coeff. (Cp): \_\_\_\_\_ Post: \_\_\_\_\_ acf

Moisture Train:      Imp.      Initial      Final

1			
2			
3			
4			
5			
6			
Net Gain			

in. H<sub>2</sub>O/15 sec.      Static  
in. H<sub>2</sub>O/15 sec.      Impact

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DGM Clock Time	Port/Point I.D.	Sample Time (min.)	DGM Reading (DACF)	DP (in. H <sub>2</sub> O)	DH (in. H <sub>2</sub> O)	Stack Temp. (°F)	Probe Temp. (°F)	Filter Temp. (°F)	Imp. Outlet Temp. (°F)	DGM Temp. (°F)	Condenser Outlet Temp. (°F)	Vacuum (in. Hg)
1406	NT	90	952.421	0.32	1.86	81	256	252	61	70	54	10
		95	956.551	0.32	1.86	80	257	251	61	70	56	10
		100	960.67	0.32	1.86	81	250	251	55	70	48	10
		105	964.80	0.32	1.86	80	251	250	54	70	48	10
		110	969.07	0.32	1.86	80	251	251	54	70	48	10
		115	973.13	0.32	1.86	80	251	251	54	70	48	10
		120	977.21	0.32	1.86	80	249	251	55	70	48	10
		125	981.20	0.32	1.86	80	250	250	55	70	48	10
		130	985.25	0.32	1.86	80	251	250	55	70	48	10
		135	989.181	0.32	1.86	80	251	250	55	70	48	10
		140	993.07	0.32	1.86	81	254	246	56	70	48	10
		145	996.88	0.32	1.86	81	251	246	56	70	48	10
		150	1000.10	0.32	1.86	82	249	249	56	70	48	10
		155	1005.04	0.34	2.0	81	254	246	56	70	48	10
		160	1009.02	0.30	1.78	81	251	252	56	70	48	10
		165	1013.06	0.32	1.86	82	251	252	56	70	48	10
		170	1017.28	0.29	1.65	82	248	250	60	70	48	10
		175	1021.23	0.29	1.65	82	258	250	60	70	48	10
		180	1025.198	0.29	1.65	82	258	250	60	70	48	10

Total Time	Vol. (DACF)	Avg. DP	Avg. DH	Avg. t <sub>s</sub>	Average DGM Temp.	Max. Vac.

Plant =	FMMI	Point Duration (min) =	15	Moisture		
Plant Location =	Claypool, AZ	Bar. Pres. (in Hg) =	26.35	Initial	Final	Change
Source ID =	APTG	Static Pres. (in WC) =	0.32	700.4	697.4	-3
Run No =	AP23-2	Nozzle Dia (in WC) =	0.277	682.8	681.0	-1.8
Date =	12/6/2023	Meter dH @ =	1.7674	602.8	603.1	0.3
Run Time =	1230-1538	Meter Yd =	0.9932	882.4	906.1	23.7
Sample Duration (min) =	180	H2O Mass (ml/g) =	101.9	248.6	256	7.4

Point No.	DGM Reading (acf)	Sample Volume (acf)	dP (in WC)	dP1/2 (in WC)1/2	dH (in WC)	dH1/2 (in WC)1/2	Stack T (F)	DGM Inlet (F)	DGM Outlet (F)	DGM Ave (F)	velocity (ft/s)	Stack Pres (in Hg)	Meter Pres. (in Hg)
E1	876.429	3.971	0.30	0.548	1.76	1.327	80.0	70.0	68.0	69.0	33.5	26.37	26.48
	880.400	4.100	0.35	0.592	2.06	1.435	80.0	71.0	68.0	69.5	36.2	26.37	26.50
	884.500	4.380	0.35	0.592	2.06	1.435	80.0	71.0	68.0	69.5	36.2	26.37	26.50
2	888.880	3.620	0.32	0.566	1.88	1.371	80.0	73.0	68.0	70.5	34.6	26.37	26.49
	892.500	4.880	0.34	0.583	2.00	1.414	80.0	72.0	68.0	70.0	35.7	26.37	26.50
	897.380	4.040	0.32	0.566	1.88	1.371	80.0	72.0	68.0	70.0	34.6	26.37	26.49
3	901.420	4.270	0.34	0.583	2.00	1.414	80.0	72.0	68.0	70.0	35.7	26.37	26.50
	905.690	4.330	0.34	0.583	2.00	1.414	80.0	73.0	67.0	70.0	35.7	26.37	26.50
	910.020	4.365	0.35	0.592	2.06	1.435	80.0	73.0	67.0	70.0	36.2	26.37	26.50
S1	914.385	4.315	0.34	0.583	2.00	1.414	80.0	71.0	67.0	69.0	35.7	26.37	26.50
	918.700	3.920	0.30	0.548	1.76	1.327	80.0	72.0	67.0	69.5	33.5	26.37	26.48
	922.620	4.290	0.35	0.592	2.06	1.435	80.0	72.0	67.0	69.5	36.2	26.37	26.50
2	926.910	4.350	0.37	0.608	2.18	1.476	80.0	73.0	68.0	70.5	37.2	26.37	26.51
	931.260	4.340	0.30	0.548	1.76	1.327	81.0	73.0	68.0	70.5	33.6	26.37	26.48
	935.600	4.180	0.34	0.583	2.00	1.414	80.0	72.0	68.0	70.0	35.7	26.37	26.50
3	939.780	4.320	0.32	0.566	1.88	1.371	81.0	72.0	68.0	70.0	34.7	26.37	26.49
	944.100	4.140	0.33	0.574	1.94	1.393	81.0	73.0	68.0	70.5	35.2	26.37	26.49
	948.240	4.181	0.31	0.557	1.82	1.349	81.0	74.0	69.0	71.5	34.1	26.37	26.48
N1	952.421	4.129	0.32	0.566	1.86	1.364	81.0	72.0	70.0	71.0	34.6	26.37	26.49
	956.550	4.120	0.32	0.566	1.86	1.364	80.0	74.0	69.0	71.5	34.7	26.37	26.49
	960.670	4.130	0.32	0.566	1.86	1.364	81.0	74.0	69.0	71.5	34.6	26.37	26.49
2	964.800	4.270	0.33	0.574	1.94	1.393	80.0	74.0	69.0	71.5	35.2	26.37	26.49
	969.070	4.060	0.30	0.548	1.76	1.327	80.0	74.0	68.0	71.0	33.6	26.37	26.48
	973.130	4.080	0.31	0.557	1.82	1.349	80.0	74.0	69.0	71.5	31.5	26.37	26.48
3	977.210	3.990	0.29	0.539	1.71	1.308	81.0	75.0	69.0	72.0	30.4	26.37	26.48
	981.200	4.050	0.29	0.539	1.71	1.308	80.0	75.0	69.0	72.0	33.0	26.37	26.48
	985.250	3.931	0.28	0.529	1.65	1.285	80.0	75.0	70.0	72.5	29.9	26.37	26.47
W1	989.181	3.889	0.28	0.529	1.65	1.285	81.0	74.0	70.0	72.0	29.9	26.37	26.47
	993.070	3.910	0.29	0.539	1.65	1.285	81.0	74.0	69.0	71.5	30.4	26.37	26.47
	996.980	4.120	0.32	0.566	1.88	1.371	82.0	75.0	70.0	72.5	32.0	26.37	26.49
2	1001.100	3.970	0.29	0.539	1.65	1.285	82.0	75.0	70.0	72.5	30.4	26.37	26.47
	1005.070	3.950	0.34	0.583	2.00	1.414	81.0	75.0	70.0	72.5	33.0	26.37	26.50
	1009.020	4.060	0.30	0.548	1.76	1.327	81.0	76.0	70.0	73.0	31.0	26.37	26.48
3	1013.080	4.200	0.32	0.566	1.86	1.364	82.0	77.0	70.0	73.5	32.0	26.37	26.49
	1017.280	3.950	0.29	0.539	1.65	1.285	82.0	76.0	70.0	73.0	30.4	26.37	26.47
	1021.230	3.968	0.29	0.539	1.65	1.285	82.0	76.0	71.0	73.5	30.4	26.37	26.47
1025.198													
148.769			0.32	0.564	1.86	1.363	80.6	73.4	68.7	71.1	33.7	26.37	26.49



Method 23 ISOKINETIC SAMPLE DATA FORM

Location: slump pit, AB  
 Source I.D.: Accel Plant  
 Date: 12/7/23  
 Flow Traverse Time: NA  
 Run No.: AP 23-3  
 Operators: RAICJ  
 Meter Box I.D.: Hand kept  
 Meter Y: 0.9932  
 Meter Delta H@: 1.7634  
 Probe I.D./ Impinger outlet: 109101025  
 Probe Length/Type: 419 yellow  
 Pitot Coeff. (Cp): 0.84

Filter ID: DF  
 Ambient Temp. (°F): 65  
 Baro. Press. (in. Hg): 26.25  
 Static Press. (in H<sub>2</sub>O): 0.31  
 O<sub>2</sub> (%): 20.9  
 CO<sub>2</sub> (%): 0.0  
 Duct Dia. (in): 1.055  
 B<sub>ws</sub> (assumed): 0.05  
 Nozzle Dia. (in): 0.176, 0.177, 0.278 = 0.277  
 K Factor: 5.888  
 Leak Check: Pre: 0.004 acf Post: 0.204 acf

Moisture Train: 3

Imp.	Initial	Final
1	352.1	424.5
2	705.1	1040
3	847.9	685.3
4	604.5	604.9
5	882.1	913.6
6	252.3	261.0
Net Gain		

case 1052

Pitot: Pre: 0.0 Post: 0.0  
 Impact: 0.0  
 Static: 0.0  
 in. H<sub>2</sub>O/15 sec. 0.0  
 in. H<sub>2</sub>O/15 sec. 0.0

DGM Clock Time	Port/Point I.D.	Sample Time (min.)	DGM Reading (DACF)	DP (in. H <sub>2</sub> O)	DH (in. H <sub>2</sub> O)	Stack Temp. (°F)	Probe Temp. (°F)	Filter Temp. (°F)	Imp. Outlet Temp. (°F)	DGM Temp. (°F)	Condenser Outlet Temp. (°F)	Vacuum (in. Hg)
08:120	2	0	25.801	0.35	2.00	81	257	247	61	58	47	9
		5	29.98	0.32	1.89	81	250	251	46	61	48	9
		10	34.09	0.33	1.94	81	248	251	46	65	47	10
	2	15	38.18	0.39	2.29	80	251	250	45	70	47	11
		20	42.71	0.30	2.23	81	247	249	45	73	47	11
	3	25	47.21	0.30	2.12	81	252	250	46	73	47	11
		30	51.59	0.30	1.76	81	247	249	47	73	49	11
		35	55.59	0.29	1.71	81	252	251	47	73	49	11
		40	59.55	0.30	1.76	81	257	251	47	73	49	11
9:13/10/16	5	45	63.542	0.31	1.82	81	251	250	49	73	49	10
		50	67.56	0.30	1.76	81	251	249	47	73	48	10
		55	71.55	0.30	1.76	81	252	251	47	73	48	10
4:33/10/15	2	60	75.58	0.33	2.06	81	248	250	48	73	48	10
		65	79.61	0.35	2.06	81	250	249	51	73	49	11
		70	83.99	0.35	2.06	81	250	250	51	73	49	11
	3	75	88.40	0.35	2.06	81	247	248	49	73	49	11
		80	92.79	0.33	1.94	81	252	251	49	73	49	11
		85	97.09	0.33	1.94	81	252	251	49	73	49	11
1002		90	101.411	0.33	1.94	81	249	250	49	73	49	11
Total Time			Vol. (DACF)	Avg. DP	Avg. DH	Avg. t <sub>s</sub>				Average DGM Temp.		Max. Vac.



Method 23 ISOKINETIC SAMPLE DATA FORM

Plant: \_\_\_\_\_ Filter ID: \_\_\_\_\_

Location: \_\_\_\_\_ Ambient Temp. (°F): \_\_\_\_\_

Source I.D.: \_\_\_\_\_ Baro. Press. (in. Hg): \_\_\_\_\_

Date: \_\_\_\_\_ Static Press. (in. H<sub>2</sub>O): \_\_\_\_\_

Flow Traverse Time: \_\_\_\_\_ O<sub>2</sub> (%): \_\_\_\_\_

Run No.: 1823-3 CO<sub>2</sub> (%): \_\_\_\_\_

Operators: \_\_\_\_\_ Duct Dia. (in): \_\_\_\_\_

Meter Box I.D.: \_\_\_\_\_ B<sub>ws</sub> (assumed): \_\_\_\_\_

Meter Y: \_\_\_\_\_ Nozzle Dia. (in): \_\_\_\_\_

Meter Delta H@: \_\_\_\_\_ K Factor: \_\_\_\_\_

Probe I.D./ Impinger outlet Leak Check: \_\_\_\_\_

Probe Length/Type: \_\_\_\_\_ Pre: \_\_\_\_\_ acf \_\_\_\_\_

Pitot Coeff. (Cp): \_\_\_\_\_ Post: \_\_\_\_\_ acf \_\_\_\_\_

Moisture Train: \_\_\_\_\_

Imp.	Initial	Final
1		
2		
3		
4		
5		
6		
		Net Gain

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Page

DGM Clock Time	Port/Point I.D.	Sample Time (min.)	DGM Reading (DACF)	DP (in. H <sub>2</sub> O)	DH (in. H <sub>2</sub> O)	Stack Temp. (°F)	Probe Temp. (°F)	Filter Temp. (°F)	Imp. Outlet Temp. (°F)	DGM Temp. (°F)	Condenser Outlet Temp. (°F)	Vacuum (in. Hg)
10:05	W 1	90	101.41	0.32	1.88	81	251	250	50	79	49	10
		95	105.91	0.32	1.84	81	250	251	50	79	48	10
		100	109.72	0.32	1.88	81	244	242	48	80	48	10
	2	108	113.95	0.32	1.88	81	250	246	50	82	49	10
		110	118.15	0.31	1.82	81	251	250	50	82	49	10
		115	122.35	0.32	2.00	81	252	252	51	82	50	10
	3	120	126.75	0.32	1.88	81	252	251	51	82	49	10
		125	130.89	0.35	2.06	81	252	251	52	82	49	10
		130	135.25	0.32	2.06	82	252	251	52	82	52	10
10:10	N 1	135	139.50	0.32	1.88	81	244	249	53	81	53	10
		140	143.88	0.32	1.88	81	244	247	51	81	48	10
		145	147.79	0.30	1.76	82	246	246	51	82	48	10
	2	150	151.91	0.30	1.76	82	252	249	51	82	48	10
		155	156.00	0.30	1.76	82	252	251	50	82	48	10
		160	160.08	0.31	1.82	82	250	250	50	82	48	10
	3	165	164.10	0.32	1.80	82	248	250	50	83	47	10
		170	168.41	0.28	1.65	82	249	250	49	83	47	10
		175	172.61	0.28	1.65	82	271	250	50	83	47	10
11:37		180	176.562	0.31	0.31	1.82						
Total Time			Vol. (DACF)	Avg. DP	Avg. DH	Avg. t <sub>s</sub>				Average DGM Temp.		Max. Vac.

\* 139.501



				Moisture		
				Initial	Final	Change
Plant =	FMMI	Point Duration (min) =	15			
Plant Location =	Claypool, AZ	Bar. Pres. (in Hg) =	26.25	352.1	424.5	72.4
Source ID =	APTG	Static Pres. (in WC) =	0.32	705.1	704.0	-1.1
Run No =	AP23-3	Nozzle Dia (in WC) =	0.277	687.9	685.3	-2.6
Date =	12/7/2023	Meter dH @ =	1.7674	604.5	604.9	0.4
Run Time =	0828-1137	Meter Yd =	0.9932	882.1	913.6	31.5
Sample Duration (min) =	180	H2O Mass (ml/g) =	109.3	252.3	261.0	8.7

Point No.	DGM Reading (acf)	Sample Volume (acf)	dP (in WC)	dP1/2 (in WC)1/2	dH (in WC)	dH1/2 (in WC)1/2	Stack T (F)	DGM Inlet (F)	DGM Outlet (F)	DGM Ave (F)	velocity (ft/s)	Stack Pres (in Hg)	Meter Pres. (in Hg)
E1	25.801	4.179	0.35	0.592	2.06	1.435	81.0	58.0	58.0	58.0	36.3	26.27	26.40
	29.980	4.110	0.32	0.566	1.88	1.371	81.0	61.0	59.0	60.0	34.7	26.27	26.39
	34.090	4.090	0.33	0.574	1.94	1.393	81.0	65.0	60.0	62.5	35.3	26.27	26.39
2	38.180	4.530	0.39	0.624	2.29	1.513	80.0	68.0	61.0	64.5	38.3	26.27	26.42
	42.710	4.500	0.38	0.616	2.23	1.493	81.0	70.0	62.0	66.0	37.8	26.27	26.41
	47.210	4.380	0.36	0.600	2.12	1.456	81.0	71.0	63.0	67.0	36.8	26.27	26.41
3	51.590	4.000	0.30	0.548	1.76	1.327	81.0	73.0	65.0	69.0	33.6	26.27	26.38
	55.590	3.960	0.29	0.539	1.71	1.308	81.0	75.0	66.0	70.5	33.1	26.27	26.38
	59.550	3.992	0.30	0.548	1.76	1.327	81.0	76.0	67.0	71.5	33.6	26.27	26.38
S1	63.542	4.018	0.31	0.557	1.82	1.349	81.0	77.0	69.0	73.0	34.2	26.27	26.38
	67.560	3.990	0.30	0.548	1.76	1.327	81.0	78.0	70.0	74.0	33.6	26.27	26.38
	71.550	4.030	0.30	0.548	1.76	1.327	81.0	79.0	71.0	75.0	33.6	26.27	26.38
2	75.580	4.030	0.33	0.574	1.94	1.393	81.0	81.0	71.0	76.0	35.3	26.27	26.39
	79.610	4.380	0.35	0.592	2.06	1.435	81.0	80.0	74.0	77.0	36.3	26.27	26.40
	83.990	4.410	0.35	0.592	2.06	1.435	81.0	81.0	73.0	77.0	36.3	26.27	26.40
3	88.400	4.390	0.35	0.592	2.06	1.435	81.0	81.0	73.0	77.0	36.3	26.27	26.40
	92.790	4.300	0.33	0.574	1.94	1.393	81.0	81.0	73.0	77.0	35.3	26.27	26.39
	97.090	4.321	0.33	0.574	1.94	1.393	81.0	81.0	73.0	77.0	35.3	26.27	26.39
W1	101.411	4.099	0.32	0.566	1.88	1.371	81.0	79.0	73.0	76.0	34.7	26.27	26.39
	105.510	4.210	0.32	0.566	1.88	1.371	81.0	79.0	74.0	76.5	34.7	26.27	26.39
	109.720	4.230	0.32	0.566	1.88	1.371	81.0	80.0	73.0	76.5	34.7	26.27	26.39
2	113.950	4.200	0.32	0.566	1.88	1.371	81.0	80.0	73.0	76.5	34.7	26.27	26.39
	118.150	4.200	0.31	0.557	1.82	1.349	81.0	82.0	75.0	78.5	34.2	26.27	26.38
	122.350	4.400	0.34	0.583	2.00	1.414	81.0	82.0	74.0	78.0	35.8	26.27	26.40
3	126.750	4.130	0.32	0.566	1.88	1.371	81.0	82.0	73.0	77.5	34.7	26.27	26.39
	130.880	4.370	0.35	0.592	2.06	1.435	81.0	82.0	73.0	77.5	36.3	26.27	26.40
	135.250	4.251	0.32	0.566	1.88	1.371	82.0	82.0	73.0	77.5	34.8	26.27	26.39
N1	139.501	4.079	0.32	0.566	1.88	1.371	81.0	81.0	74.0	77.5	34.7	26.27	26.39
	143.580	4.210	0.32	0.566	1.88	1.371	81.0	81.0	74.0	77.5	34.7	26.27	26.39
	147.790	4.120	0.30	0.548	1.76	1.327	82.0	82.0	74.0	78.0	33.7	26.27	26.38
2	151.910	4.090	0.30	0.548	1.76	1.327	82.0	82.0	74.0	78.0	33.7	26.27	26.38
	156.000	4.080	0.30	0.548	1.76	1.327	82.0	82.0	74.0	78.0	33.7	26.27	26.38
	160.080	4.020	0.31	0.557	1.82	1.349	82.0	83.0	75.0	79.0	34.2	26.27	26.38
3	164.100	4.310	0.32	0.566	1.88	1.371	82.0	83.0	75.0	79.0	34.8	26.27	26.39
	168.410	4.200	0.31	0.557	1.82	1.349	82.0	83.0	75.0	79.0	34.2	26.27	26.38
	172.610	3.952	0.28	0.529	1.65	1.285	82.0	83.0	75.0	79.0	32.5	26.27	26.37
	176.562												
150.761			0.32	0.568	1.90	1.378	81.2	77.9	70.5	74.2	34.9	26.27	26.39

Method 4 Moisture Gravimetric Form



Cold Box # 1 Run # VF26A-2 Cold Box # 1 Run # AP26A-2 Cold Box # \_\_\_\_\_ Run # \_\_\_\_\_

700.7

Imp.	Initial	Final
1	688.3	706.5
2	678.0	686.4
3	827	702.4
4	707.5	708.1
5	835.8	857.1
6		
Net Gain		

Imp.	Initial	Final
1	685.1	728.6
2	677.6	689.2
3	696.3	698.0
4	702.7	709.1
5	857.1	872.7
6		
Net Gain		

Imp.	Initial	Final
1		
2		
3		
4		
5		
6		
Net Gain		

Cold Box # 2 Run # VF26A-4 Cold Box # 2 Run # AP26A-1 Cold Box # 2 Run # AP26A-3

Imp.	Initial	Final
1	680.8	695.2
2	687.6	696.3
3	704.6	705.5
4	707.2	708.5
5	885.4	900.8
6		
Net Gain		

Imp.	Initial	Final
1	681.6	718.9
2	686.4	699.1
3	702.4	703.2
4	706.6	708.4
5	891.8	873.5
6		
Net Gain		

Imp.	Initial	Final
1	682.4	725.8
2	686.3	698.7
3	701.6	702.9
4	706.4	707.8
5	873.5	889.0
6		
Net Gain		

AP23-1

Cold Box # 3 Run # VF23-2 Cold Box # 3 Run # VF23-4 Cold Box # 3 Run # AP23-1

3-4 XAD

Imp.	Initial	Final
1	351.9	392.1
2	704.2	700.5
3	687.3	684.9
4	604.0	605.2
5	861.8	894.5
6	259.5	263.4
Net Gain		

3-5 XAD 256.8

Imp.	Initial	Final
1	352.1	391.3
2	705.1	700.8
3	687.7	685.1
4	604.5	609.7
5	894.5	916.1
6	245.8	252
Net Gain		

3-6 XAD

Imp.	Initial	Final
1	352.7	429.4
2	708.0	702.3
3	689.7	686.1
4	605.3	606.2
5	880.6	913.8
6	245.1	250.4
Net Gain		

AP26A-3

Cold Box # 4 Run # AP23-2 Cold Box # \_\_\_\_\_ Run # \_\_\_\_\_ Cold Box # 3 Run # AP23-3

4-4 XAD

Imp.	Initial	Final
1	393.4	418.4
2	700.4	697.4
3	682.8	681.0
4	602.8	603.1
5	882.4	906.1
6	248.6	256.0
Net Gain		

Imp.	Initial	Final
1		
2		
3		
4		
5		
6		
Net Gain		

3-7 XAD

Imp.	Initial	Final
1	392.1	424.5
2	709.1	704.0
3	687.9	685.3
4	604.4	604.9
5	882.1	913.6
6	252.3	261.0
Net Gain		

Daily Balance Calibration  
Standard Weight = 500 grams

Weight (g)  
Date: \_\_\_\_\_  
Date: \_\_\_\_\_  
Date: \_\_\_\_\_  
Date: \_\_\_\_\_  
Date: \_\_\_\_\_

Weight (g)  
Date: \_\_\_\_\_  
Date: \_\_\_\_\_  
Date: \_\_\_\_\_  
Date: \_\_\_\_\_  
Date: \_\_\_\_\_

Method 4 Moisture Gravimetric Form



Cold Box # 1 Run # AS26A-1 Cold Box # 1 Run # AS26A-3 Cold Box # 1 Run # VF26A-1

Imp.	Initial	Final
1	682.4	689.6
2	673.8	685.9
3	696.8	699.6
4	702.4	704.7
5	863.3	880.0
6		
Net Gain		

Imp.	Initial	Final
1	680.7	690.0
2	680.0	690.2
3	700.4	701.5
4	705.9	708.4
5	880.0	897.8
6		
Net Gain		

Imp.	Initial	Final
1	684.0	695.3
2	678.2	688.9
3	696.2	697.4
4	705.2	706.3
5	897.8	915.4
6		
Net Gain		

Cold Box # 2 Run # AS26A-2 Cold Box # 2 Run # AS23-2 Cold Box # \_\_\_\_\_ Run # \_\_\_\_\_

Imp.	Initial	Final
1	680.0	689.1
2	683.2	696.3
3	701.7	704.2
4	702.6	707.7
5	850.6	865.4
6		
Net Gain		

Imp.	Initial	Final
1	681.4	
2	686.2	
3	701.6	
4	708.1	
5	865.4	
6		
Net Gain		

Imp.	Initial	Final
1		
2		
3		
4		
5		
6		
Net Gain		

Cold Box # 3 Run # proof train Blank Cold Box # 3 Run # AS23-2 Cold Box # 3 Run # VF23-1

Imp.	Initial	Final
1	352.1	
2	704.2	
3	701.3	
4	602.8	
5	844.0	
6	258.2	
Net Gain		

Imp.	Initial	Final
1	352.4	383.9
2	705.3	701.0
3	687.7	683.4
4	605.1	604.9
5	844.0	873.9
6	247.8	255.6
Net Gain		

Imp.	Initial	Final
1	352.7	388.3
2	705.9	700.7
3	690.7	687.2
4	605.7	605.5
5	873.9	897.4
6	250.7	258.4
Net Gain		

Cold Box # 4 Run # AS23-1 Cold Box # 4 Run # AS23-3 Cold Box # 4 Run # VF23-2

Imp.	Initial	Final
1	343.0	367.1
2	701.1	695.3
3	682.0	680.8
4	609.9	601.7
5	836.1	862.1
6	251.6	258.8
Net Gain		

Imp.	Initial	Final
1	349.1	380.7
2	700.8	698.3
3	680.0	680.2
4	601.8	601.2
5	862.2	887.6
6	244.3	252.4
Net Gain		

Imp.	Initial	Final
1	343.3	
2	700.3	
3	680.4	
4	601.0	
5	851.5	882.4
6	252.9	
Net Gain		

Daily Balance Calibration  
Standard Weight = 500 grams

Weight (g)  
Date: 11/27/23 500.0  
Date: 11/30/23 499.9  
Date: \_\_\_\_\_  
Date: \_\_\_\_\_  
Date: \_\_\_\_\_

Weight (g)  
Date: \_\_\_\_\_  
Date: \_\_\_\_\_  
Date: \_\_\_\_\_  
Date: \_\_\_\_\_  
Date: \_\_\_\_\_



 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Doug Bopray  
SLR International Corp  
1612 Specht Point Road, Suite 119  
Fort Collins CO 80525

Generated 1/11/2024 4:15 PM

**JOB DESCRIPTION**

FMMI HAPs Testing - M18

**JOB NUMBER**

140-34735-1

# Eurofins Knoxville

## Job Notes

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## Authorization



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# Definitions/Glossary

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing - M18

Job ID: 140-34735-1

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

**Job Narrative  
140-34735-1**

**Receipt**

The samples were received on 12/12/2023 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 5.1° C.

**Air - GC VOA**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Method Summary

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing - M18

Job ID: 140-34735-1

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<b>Method</b>	<b>Method Description</b>	<b>Protocol</b>	<b>Laboratory</b>
EPA 18	Volatile Organic Compounds	EPA	EET KNX
Air Train	Collection via Air Train Sampling	None	EET KNX
EPA 18	Preparation, Air Sampling Tube	EPA	EET KNX

**Protocol References:**

EPA = US Environmental Protection Agency  
None = None

**Laboratory References:**

EET KNX = Eurofins Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

# Sample Summary

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing - M18

Job ID: 140-34735-1

---

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-34735-1	AS18-1 9553200080,9533200143	Air	11/30/23 00:00	12/12/23 10:00
140-34735-2	AS18-2 9553200025,9533200092	Air	12/01/23 00:00	12/12/23 10:00
140-34735-3	AS18-3 9553200073,9533200085	Air	12/01/23 00:00	12/12/23 10:00
140-34735-4	VF18-1 9553200036,9533200155	Air	12/02/23 00:00	12/12/23 10:00
140-34735-5	VF18-2 9553200045,9533200152	Air	12/03/23 00:00	12/12/23 10:00
140-34735-6	VF18-4 9553202844,9533200079	Air	12/05/23 00:00	12/12/23 10:00
140-34735-7	AP18-1 9553200144,9533200082	Air	12/06/23 00:00	12/12/23 10:00
140-34735-8	AP18-2 9553200021,9533200156	Air	12/06/23 00:00	12/12/23 10:00
140-34735-9	AP18-3 9553200040,9533200128	Air	12/07/23 00:00	12/12/23 10:00
140-34735-10	BLANK 9553200047,9553200041	Air	12/06/23 00:00	12/12/23 10:00
140-34735-11	A-1978 METHOD 18	Air	11/30/23 00:00	12/12/23 10:00
140-34735-12	A-1979 METHOD 18 (SPIKE @200UG)	Air	11/30/23 00:00	12/12/23 10:00

# QC Association Summary

Client: SLR International Corp  
 Project/Site: FMMI HAPs Testing - M18

Job ID: 140-34735-1

## Air - GC VOA

### Prep Batch: 82267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-34735-1	AS18-1 9553200080,9533200143	Total/NA	Air	EPA 18	
140-34735-2	AS18-2 9553200025,9533200092	Total/NA	Air	EPA 18	
140-34735-3	AS18-3 9553200073,9533200085	Total/NA	Air	EPA 18	
140-34735-4	VF18-1 9553200036,9533200155	Total/NA	Air	EPA 18	
140-34735-5	VF18-2 9553200045,9533200152	Total/NA	Air	EPA 18	
140-34735-6	VF18-4 9553202844,9533200079	Total/NA	Air	EPA 18	
140-34735-7	AP18-1 9553200144,9533200082	Total/NA	Air	EPA 18	
140-34735-8	AP18-2 9553200021,9533200156	Total/NA	Air	EPA 18	
140-34735-9	AP18-3 9553200040,9533200128	Total/NA	Air	EPA 18	
140-34735-10	BLANK 9553200047,9553200041	Total/NA	Air	EPA 18	
140-34735-11	A-1978 METHOD 18	Total/NA	Air	EPA 18	
140-34735-12	A-1979 METHOD 18 (SPIKE @200UG)	Total/NA	Air	EPA 18	
MB 140-82267/1-A	Method Blank	Total/NA	Air	EPA 18	
LCS 140-82267/2-A	Lab Control Sample	Total/NA	Air	EPA 18	
140-34735-1 MS	AS18-1 9553200080,9533200143	Total/NA	Air	EPA 18	
140-34735-2 MS	AS18-2 9553200025,9533200092	Total/NA	Air	EPA 18	
140-34735-3 MS	AS18-3 9553200073,9533200085	Total/NA	Air	EPA 18	
140-34735-4 MS	VF18-1 9553200036,9533200155	Total/NA	Air	EPA 18	
140-34735-5 MS	VF18-2 9553200045,9533200152	Total/NA	Air	EPA 18	
140-34735-6 MS	VF18-4 9553202844,9533200079	Total/NA	Air	EPA 18	
140-34735-7 MS	AP18-1 9553200144,9533200082	Total/NA	Air	EPA 18	
140-34735-8 MS	AP18-2 9553200021,9533200156	Total/NA	Air	EPA 18	
140-34735-9 MS	AP18-3 9553200040,9533200128	Total/NA	Air	EPA 18	
140-34735-10 MS	BLANK 9553200047,9553200041	Total/NA	Air	EPA 18	

### Analysis Batch: 82282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-34735-1	AS18-1 9553200080,9533200143	Total/NA	Air	EPA 18	82267
140-34735-2	AS18-2 9553200025,9533200092	Total/NA	Air	EPA 18	82267
140-34735-3	AS18-3 9553200073,9533200085	Total/NA	Air	EPA 18	82267
140-34735-4	VF18-1 9553200036,9533200155	Total/NA	Air	EPA 18	82267
140-34735-5	VF18-2 9553200045,9533200152	Total/NA	Air	EPA 18	82267
140-34735-6	VF18-4 9553202844,9533200079	Total/NA	Air	EPA 18	82267
140-34735-7	AP18-1 9553200144,9533200082	Total/NA	Air	EPA 18	82267
140-34735-8	AP18-2 9553200021,9533200156	Total/NA	Air	EPA 18	82267
140-34735-9	AP18-3 9553200040,9533200128	Total/NA	Air	EPA 18	82267
140-34735-10	BLANK 9553200047,9553200041	Total/NA	Air	EPA 18	82267
140-34735-11	A-1978 METHOD 18	Total/NA	Air	EPA 18	82267
140-34735-12	A-1979 METHOD 18 (SPIKE @200UG)	Total/NA	Air	EPA 18	82267
MB 140-82267/1-A	Method Blank	Total/NA	Air	EPA 18	82267
LCS 140-82267/2-A	Lab Control Sample	Total/NA	Air	EPA 18	82267
140-34735-1 MS	AS18-1 9553200080,9533200143	Total/NA	Air	EPA 18	82267
140-34735-2 MS	AS18-2 9553200025,9533200092	Total/NA	Air	EPA 18	82267
140-34735-3 MS	AS18-3 9553200073,9533200085	Total/NA	Air	EPA 18	82267
140-34735-4 MS	VF18-1 9553200036,9533200155	Total/NA	Air	EPA 18	82267
140-34735-5 MS	VF18-2 9553200045,9533200152	Total/NA	Air	EPA 18	82267
140-34735-6 MS	VF18-4 9553202844,9533200079	Total/NA	Air	EPA 18	82267
140-34735-7 MS	AP18-1 9553200144,9533200082	Total/NA	Air	EPA 18	82267
140-34735-8 MS	AP18-2 9553200021,9533200156	Total/NA	Air	EPA 18	82267
140-34735-9 MS	AP18-3 9553200040,9533200128	Total/NA	Air	EPA 18	82267
140-34735-10 MS	BLANK 9553200047,9553200041	Total/NA	Air	EPA 18	82267

# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing - M18

Job ID: 140-34735-1

**Client Sample ID: AS18-1 9553200080,9533200143**

**Lab Sample ID: 140-34735-1**

**Date Collected: 11/30/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

**Sample Container: Tube**

**Method: EPA 18 - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		10.0	5.50	ug/Sample		01/10/24 10:38	01/10/24 18:09	1
Toluene	ND		10.0	3.00	ug/Sample		01/10/24 10:38	01/10/24 18:09	1

# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing - M18

Job ID: 140-34735-1

**Client Sample ID: AS18-2 9553200025,9533200092**

**Lab Sample ID: 140-34735-2**

**Date Collected: 12/01/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

**Sample Container: Tube**

**Method: EPA 18 - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		10.0	5.50	ug/Sample		01/10/24 10:38	01/10/24 18:27	1
Toluene	ND		10.0	3.00	ug/Sample		01/10/24 10:38	01/10/24 18:27	1

# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing - M18

Job ID: 140-34735-1

**Client Sample ID: AS18-3 9553200073,9533200085**

**Lab Sample ID: 140-34735-3**

**Date Collected: 12/01/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

**Sample Container: Tube**

**Method: EPA 18 - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		10.0	5.50	ug/Sample		01/10/24 10:38	01/10/24 18:44	1
Toluene	ND		10.0	3.00	ug/Sample		01/10/24 10:38	01/10/24 18:44	1



# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing - M18

Job ID: 140-34735-1

**Client Sample ID: VF18-1 9553200036,9533200155**

**Lab Sample ID: 140-34735-4**

**Date Collected: 12/02/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

**Sample Container: Tube**

**Method: EPA 18 - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		10.0	5.50	ug/Sample		01/10/24 10:38	01/10/24 19:02	1
Toluene	ND		10.0	3.00	ug/Sample		01/10/24 10:38	01/10/24 19:02	1

# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing - M18

Job ID: 140-34735-1

**Client Sample ID: VF18-2 9553200045,9533200152**

**Lab Sample ID: 140-34735-5**

**Date Collected: 12/03/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

**Sample Container: Tube**

**Method: EPA 18 - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		10.0	5.50	ug/Sample		01/10/24 10:38	01/10/24 19:20	1
Toluene	ND		10.0	3.00	ug/Sample		01/10/24 10:38	01/10/24 19:20	1

# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing - M18

Job ID: 140-34735-1

**Client Sample ID: VF18-4 9553202844,9533200079**

**Lab Sample ID: 140-34735-6**

**Date Collected: 12/05/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

**Sample Container: Tube**

**Method: EPA 18 - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		10.0	5.50	ug/Sample		01/10/24 10:38	01/10/24 19:37	1
Toluene	ND		10.0	3.00	ug/Sample		01/10/24 10:38	01/10/24 19:37	1

# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing - M18

Job ID: 140-34735-1

**Client Sample ID: AP18-1 9553200144,9533200082**

**Lab Sample ID: 140-34735-7**

**Date Collected: 12/06/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

**Sample Container: Tube**

**Method: EPA 18 - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		10.0	5.50	ug/Sample		01/10/24 10:38	01/10/24 19:55	1
Toluene	ND		10.0	3.00	ug/Sample		01/10/24 10:38	01/10/24 19:55	1

# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing - M18

Job ID: 140-34735-1

**Client Sample ID: AP18-2 9553200021,9533200156**

**Lab Sample ID: 140-34735-8**

**Date Collected: 12/06/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

**Sample Container: Tube**

**Method: EPA 18 - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		10.0	5.50	ug/Sample		01/10/24 10:38	01/10/24 20:12	1
Toluene	ND		10.0	3.00	ug/Sample		01/10/24 10:38	01/10/24 20:12	1

# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing - M18

Job ID: 140-34735-1

**Client Sample ID: AP18-3 9553200040,9533200128**

**Lab Sample ID: 140-34735-9**

**Date Collected: 12/07/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

**Sample Container: Tube**

**Method: EPA 18 - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		10.0	5.50	ug/Sample		01/10/24 10:38	01/10/24 20:30	1
Toluene	ND		10.0	3.00	ug/Sample		01/10/24 10:38	01/10/24 20:30	1

# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing - M18

Job ID: 140-34735-1

**Client Sample ID: BLANK 9553200047,9553200041**

**Lab Sample ID: 140-34735-10**

**Date Collected: 12/06/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

**Sample Container: Tube**

**Method: EPA 18 - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		10.0	5.50	ug/Sample		01/10/24 10:38	01/10/24 20:47	1
Toluene	ND		10.0	3.00	ug/Sample		01/10/24 10:38	01/10/24 20:47	1

# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing - M18

Job ID: 140-34735-1

**Client Sample ID: A-1978 METHOD 18**

**Lab Sample ID: 140-34735-11**

**Date Collected: 11/30/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

**Sample Container: Tube**

**Method: EPA 18 - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		10.0	5.50	ug/Sample		01/10/24 10:38	01/10/24 17:52	1
Toluene	ND		10.0	3.00	ug/Sample		01/10/24 10:38	01/10/24 17:52	1



# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing - M18

Job ID: 140-34735-1

**Client Sample ID: A-1979 METHOD 18 (SPIKE @200UG)**

**Lab Sample ID: 140-34735-12**

Date Collected: 11/30/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Sample Container: Tube

**Method: EPA 18 - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	191		10.0	5.50	ug/Sample		01/10/24 10:38	01/10/24 18:00	1
Toluene	188		10.0	3.00	ug/Sample		01/10/24 10:38	01/10/24 18:00	1

# Default Detection Limits

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing - M18

Job ID: 140-34735-1

---

## Method: EPA 18 - Volatile Organic Compounds

### Prep: EPA 18

---

Analyte	RL	MDL	Units
Benzene	10.0	5.50	ug/Sample
Toluene	10.0	3.00	ug/Sample

# QC Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing - M18

Job ID: 140-34735-1

## Method: EPA 18 - Volatile Organic Compounds

**Lab Sample ID: MB 140-82267/1-A**  
**Matrix: Air**  
**Analysis Batch: 82282**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 82267**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		10.0	5.50	ug/Sample		01/10/24 10:38	01/10/24 17:25	1
Toluene	ND		10.0	3.00	ug/Sample		01/10/24 10:38	01/10/24 17:25	1

**Lab Sample ID: LCS 140-82267/2-A**  
**Matrix: Air**  
**Analysis Batch: 82282**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 82267**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Toluene	250	220.9		ug/Sample		88	70 - 130

**Lab Sample ID: 140-34735-1 MS**  
**Matrix: Air**  
**Analysis Batch: 82282**

**Client Sample ID: AS18-1 9553200080,9533200143**  
**Prep Type: Total/NA**  
**Prep Batch: 82267**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Toluene	ND		200	190.8		ug/Sample		95	70 - 130

**Lab Sample ID: 140-34735-2 MS**  
**Matrix: Air**  
**Analysis Batch: 82282**

**Client Sample ID: AS18-2 9553200025,9533200092**  
**Prep Type: Total/NA**  
**Prep Batch: 82267**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Toluene	ND		200	188.7		ug/Sample		94	70 - 130

**Lab Sample ID: 140-34735-3 MS**  
**Matrix: Air**  
**Analysis Batch: 82282**

**Client Sample ID: AS18-3 9553200073,9533200085**  
**Prep Type: Total/NA**  
**Prep Batch: 82267**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Toluene	ND		200	186.3		ug/Sample		93	70 - 130

**Lab Sample ID: 140-34735-4 MS**  
**Matrix: Air**  
**Analysis Batch: 82282**

**Client Sample ID: VF18-1 9553200036,9533200155**  
**Prep Type: Total/NA**  
**Prep Batch: 82267**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Toluene	ND		200	188.8		ug/Sample		94	70 - 130

**Lab Sample ID: 140-34735-5 MS**  
**Matrix: Air**  
**Analysis Batch: 82282**

**Client Sample ID: VF18-2 9553200045,9533200152**  
**Prep Type: Total/NA**  
**Prep Batch: 82267**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Toluene	ND		200	189.0		ug/Sample		95	70 - 130

# QC Sample Results

Client: SLR International Corp  
 Project/Site: FMMI HAPs Testing - M18

Job ID: 140-34735-1

## Method: EPA 18 - Volatile Organic Compounds

**Lab Sample ID: 140-34735-6 MS**  
**Matrix: Air**  
**Analysis Batch: 82282**

**Client Sample ID: VF18-4 9553202844,9533200079**  
**Prep Type: Total/NA**  
**Prep Batch: 82267**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier		Result	Qualifier				Limits
Benzene	ND		199	191.8		ug/Sample		97	70 - 130
Toluene	ND		200	191.9		ug/Sample		96	70 - 130

**Lab Sample ID: 140-34735-7 MS**  
**Matrix: Air**  
**Analysis Batch: 82282**

**Client Sample ID: AP18-1 9553200144,9533200082**  
**Prep Type: Total/NA**  
**Prep Batch: 82267**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier		Result	Qualifier				Limits
Benzene	ND		199	185.2		ug/Sample		93	70 - 130
Toluene	ND		200	184.7		ug/Sample		92	70 - 130

**Lab Sample ID: 140-34735-8 MS**  
**Matrix: Air**  
**Analysis Batch: 82282**

**Client Sample ID: AP18-2 9553200021,9533200156**  
**Prep Type: Total/NA**  
**Prep Batch: 82267**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier		Result	Qualifier				Limits
Benzene	ND		199	185.9		ug/Sample		94	70 - 130
Toluene	ND		200	185.0		ug/Sample		93	70 - 130

**Lab Sample ID: 140-34735-9 MS**  
**Matrix: Air**  
**Analysis Batch: 82282**

**Client Sample ID: AP18-3 9553200040,9533200128**  
**Prep Type: Total/NA**  
**Prep Batch: 82267**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier		Result	Qualifier				Limits
Benzene	ND		199	188.7		ug/Sample		95	70 - 130
Toluene	ND		200	188.0		ug/Sample		94	70 - 130

**Lab Sample ID: 140-34735-10 MS**  
**Matrix: Air**  
**Analysis Batch: 82282**

**Client Sample ID: BLANK 9553200047,9553200041**  
**Prep Type: Total/NA**  
**Prep Batch: 82267**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier		Result	Qualifier				Limits
Benzene	ND		199	185.0		ug/Sample		93	70 - 130
Toluene	ND		200	182.6		ug/Sample		91	70 - 130

# Lab Chronicle

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing - M18

Job ID: 140-34735-1

**Client Sample ID: AS18-1 9553200080,9533200143**

**Lab Sample ID: 140-34735-1**

**Date Collected: 11/30/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	EPA 18			1 Sample	5 mL	82267	01/10/24 10:38	BKK	EET KNX
Total/NA	Analysis	EPA 18		1			82282	01/10/24 18:09	BKK	EET KNX
Instrument ID: ALGC2										

**Client Sample ID: AS18-2 9553200025,9533200092**

**Lab Sample ID: 140-34735-2**

**Date Collected: 12/01/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	EPA 18			1 Sample	5 mL	82267	01/10/24 10:38	BKK	EET KNX
Total/NA	Analysis	EPA 18		1			82282	01/10/24 18:27	BKK	EET KNX
Instrument ID: ALGC2										

**Client Sample ID: AS18-3 9553200073,9533200085**

**Lab Sample ID: 140-34735-3**

**Date Collected: 12/01/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	EPA 18			1 Sample	5 mL	82267	01/10/24 10:38	BKK	EET KNX
Total/NA	Analysis	EPA 18		1			82282	01/10/24 18:44	BKK	EET KNX
Instrument ID: ALGC2										

**Client Sample ID: VF18-1 9553200036,9533200155**

**Lab Sample ID: 140-34735-4**

**Date Collected: 12/02/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	EPA 18			1 Sample	5 mL	82267	01/10/24 10:38	BKK	EET KNX
Total/NA	Analysis	EPA 18		1			82282	01/10/24 19:02	BKK	EET KNX
Instrument ID: ALGC2										

**Client Sample ID: VF18-2 9553200045,9533200152**

**Lab Sample ID: 140-34735-5**

**Date Collected: 12/03/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	EPA 18			1 Sample	5 mL	82267	01/10/24 10:38	BKK	EET KNX
Total/NA	Analysis	EPA 18		1			82282	01/10/24 19:20	BKK	EET KNX
Instrument ID: ALGC2										

# Lab Chronicle

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing - M18

Job ID: 140-34735-1

**Client Sample ID: VF18-4 9553202844,9533200079**

**Lab Sample ID: 140-34735-6**

**Date Collected: 12/05/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	EPA 18			1 Sample	5 mL	82267	01/10/24 10:38	BKK	EET KNX
Total/NA	Analysis	EPA 18		1			82282	01/10/24 19:37	BKK	EET KNX
Instrument ID: ALGC2										

**Client Sample ID: AP18-1 9553200144,9533200082**

**Lab Sample ID: 140-34735-7**

**Date Collected: 12/06/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	EPA 18			1 Sample	5 mL	82267	01/10/24 10:38	BKK	EET KNX
Total/NA	Analysis	EPA 18		1			82282	01/10/24 19:55	BKK	EET KNX
Instrument ID: ALGC2										

**Client Sample ID: AP18-2 9553200021,9533200156**

**Lab Sample ID: 140-34735-8**

**Date Collected: 12/06/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	EPA 18			1 Sample	5 mL	82267	01/10/24 10:38	BKK	EET KNX
Total/NA	Analysis	EPA 18		1			82282	01/10/24 20:12	BKK	EET KNX
Instrument ID: ALGC2										

**Client Sample ID: AP18-3 9553200040,9533200128**

**Lab Sample ID: 140-34735-9**

**Date Collected: 12/07/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	EPA 18			1 Sample	5 mL	82267	01/10/24 10:38	BKK	EET KNX
Total/NA	Analysis	EPA 18		1			82282	01/10/24 20:30	BKK	EET KNX
Instrument ID: ALGC2										

**Client Sample ID: BLANK 9553200047,9533200041**

**Lab Sample ID: 140-34735-10**

**Date Collected: 12/06/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	EPA 18			1 Sample	5 mL	82267	01/10/24 10:38	BKK	EET KNX
Total/NA	Analysis	EPA 18		1			82282	01/10/24 20:47	BKK	EET KNX
Instrument ID: ALGC2										

# Lab Chronicle

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing - M18

Job ID: 140-34735-1

## Client Sample ID: A-1978 METHOD 18

Lab Sample ID: 140-34735-11

Date Collected: 11/30/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	EPA 18			1 Sample	5 mL	82267	01/10/24 10:38	BKK	EET KNX
Total/NA	Analysis	EPA 18		1			82282	01/10/24 17:52	BKK	EET KNX
Instrument ID: ALGC2										

## Client Sample ID: A-1979 METHOD 18 (SPIKE @200UG)

Lab Sample ID: 140-34735-12

Date Collected: 11/30/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	EPA 18			1 Sample	5 mL	82267	01/10/24 10:38	BKK	EET KNX
Total/NA	Analysis	EPA 18		1			82282	01/10/24 18:00	BKK	EET KNX
Instrument ID: ALGC2										

## Client Sample ID: Method Blank

Lab Sample ID: MB 140-82267/1-A

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	EPA 18			1 Sample	5 mL	82267	01/10/24 10:38	BKK	EET KNX
Total/NA	Analysis	EPA 18		1			82282	01/10/24 17:25	BKK	EET KNX
Instrument ID: ALGC2										

## Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-82267/2-A

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	EPA 18			1 Sample	5 mL	82267	01/10/24 10:38	BKK	EET KNX
Total/NA	Analysis	EPA 18		1			82282	01/10/24 17:34	BKK	EET KNX
Instrument ID: ALGC2										

## Client Sample ID: AS18-1 9553200080,9533200143

Lab Sample ID: 140-34735-1 MS

Date Collected: 11/30/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	EPA 18			1 Sample	5 mL	82267	01/10/24 10:38	BKK	EET KNX
Total/NA	Analysis	EPA 18		1			82282	01/10/24 18:18	BKK	EET KNX
Instrument ID: ALGC2										

# Lab Chronicle

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing - M18

Job ID: 140-34735-1

**Client Sample ID: AS18-2 9553200025,9533200092**

**Lab Sample ID: 140-34735-2 MS**

**Date Collected: 12/01/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	EPA 18			1 Sample	5 mL	82267	01/10/24 10:38	BKK	EET KNX
Total/NA	Analysis	EPA 18		1			82282	01/10/24 18:36	BKK	EET KNX
Instrument ID: ALGC2										

**Client Sample ID: AS18-3 9553200073,9533200085**

**Lab Sample ID: 140-34735-3 MS**

**Date Collected: 12/01/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	EPA 18			1 Sample	5 mL	82267	01/10/24 10:38	BKK	EET KNX
Total/NA	Analysis	EPA 18		1			82282	01/10/24 18:53	BKK	EET KNX
Instrument ID: ALGC2										

**Client Sample ID: VF18-1 9553200036,9533200155**

**Lab Sample ID: 140-34735-4 MS**

**Date Collected: 12/02/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	EPA 18			1 Sample	5 mL	82267	01/10/24 10:38	BKK	EET KNX
Total/NA	Analysis	EPA 18		1			82282	01/10/24 19:11	BKK	EET KNX
Instrument ID: ALGC2										

**Client Sample ID: VF18-2 9553200045,9533200152**

**Lab Sample ID: 140-34735-5 MS**

**Date Collected: 12/03/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	EPA 18			1 Sample	5 mL	82267	01/10/24 10:38	BKK	EET KNX
Total/NA	Analysis	EPA 18		1			82282	01/10/24 19:28	BKK	EET KNX
Instrument ID: ALGC2										

**Client Sample ID: VF18-4 9553202844,9533200079**

**Lab Sample ID: 140-34735-6 MS**

**Date Collected: 12/05/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	EPA 18			1 Sample	5 mL	82267	01/10/24 10:38	BKK	EET KNX
Total/NA	Analysis	EPA 18		1			82282	01/10/24 19:46	BKK	EET KNX
Instrument ID: ALGC2										



# Lab Chronicle

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing - M18

Job ID: 140-34735-1

**Client Sample ID: AP18-1 9553200144,9533200082**

**Lab Sample ID: 140-34735-7 MS**

**Date Collected: 12/06/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	EPA 18			1 Sample	5 mL	82267	01/10/24 10:38	BKK	EET KNX
Total/NA	Analysis	EPA 18		1			82282	01/10/24 20:03	BKK	EET KNX
Instrument ID: ALGC2										

**Client Sample ID: AP18-2 9553200021,9533200156**

**Lab Sample ID: 140-34735-8 MS**

**Date Collected: 12/06/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	EPA 18			1 Sample	5 mL	82267	01/10/24 10:38	BKK	EET KNX
Total/NA	Analysis	EPA 18		1			82282	01/10/24 20:21	BKK	EET KNX
Instrument ID: ALGC2										

**Client Sample ID: AP18-3 9553200040,9533200128**

**Lab Sample ID: 140-34735-9 MS**

**Date Collected: 12/07/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	EPA 18			1 Sample	5 mL	82267	01/10/24 10:38	BKK	EET KNX
Total/NA	Analysis	EPA 18		1			82282	01/10/24 20:39	BKK	EET KNX
Instrument ID: ALGC2										

**Client Sample ID: BLANK 9553200047,9553200041**

**Lab Sample ID: 140-34735-10 MS**

**Date Collected: 12/06/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	EPA 18			1 Sample	5 mL	82267	01/10/24 10:38	BKK	EET KNX
Total/NA	Analysis	EPA 18		1			82282	01/10/24 20:56	BKK	EET KNX
Instrument ID: ALGC2										

**Laboratory References:**

EET KNX = Eurofins Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

# Accreditation/Certification Summary

Client: SLR International Corp  
 Project/Site: FMMI HAPs Testing - M18

Job ID: 140-34735-1

## Laboratory: Eurofins Knoxville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-25
ANAB	Dept. of Energy	L2311.01	02-13-25
ANAB	ISO/IEC 17025	L2311	02-13-25
Arkansas DEQ	State	88-0688	06-16-24
Colorado	State	TN00009	02-29-24
Connecticut	State	PH-0223	09-30-25
Florida	NELAP	E87177	06-30-24
Georgia (DW)	State	906	07-27-25
Hawaii	State	NA	07-27-24
Kansas	NELAP	E-10349	10-31-24
Kentucky (DW)	State	90101	12-31-23 *
Louisiana (All)	NELAP	83979	06-30-24
Louisiana (DW)	State	LA019	12-31-24
Maryland	State	277	03-31-24
Michigan	State	9933	07-27-25
Nevada	State	TN00009	07-31-24
New Hampshire	NELAP	2999	01-17-24
New Jersey	NELAP	TN001	07-01-24
New York	NELAP	10781	03-31-24
North Carolina (DW)	State	21705	07-31-24
North Carolina (WW/SW)	State	64	12-31-24
Oklahoma	State	9415	08-31-24
Oregon	NELAP	TNI0189	01-01-25
Pennsylvania	NELAP	68-00576	12-31-24
Tennessee	State	02014	07-27-25
Texas	NELAP	T104704380-23-18	08-31-24
US Fish & Wildlife	US Federal Programs	058448	07-31-24
USDA	US Federal Programs	525-22-279-18762	10-06-25
Utah	NELAP	TN00009	07-31-24
Virginia	NELAP	460176	09-14-24
Washington	State	C593	01-19-24
West Virginia (DW)	State	9955C	12-31-24
West Virginia DEP	State	345	04-30-24
Wisconsin	State	998044300	08-31-24

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

AIR - GC VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
 SDG No.: \_\_\_\_\_  
 Instrument ID: ALGC2 Analysis Batch Number: 70548  
 Lab Sample ID: IC 140-70548/4 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 02/21/23 18:09 Lab File ID: F-IC L1-2023-02-21-18-06 GC Column: DB HeavyWax ID: 0.1 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzene	0.87	Baseline Smoothing	P0IK	02/22/23 10:43
Ethylbenzene	1.60	Baseline Smoothing	P0IK	02/22/23 10:45
p-Xylene	1.64	Baseline Smoothing	P0IK	02/22/23 10:45
m-Xylene	1.67	Baseline Smoothing	P0IK	02/22/23 10:45

Lab Sample ID: IC 140-70548/5 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 02/21/23 18:18 Lab File ID: F-IC L1-2023-02-21-18-15 GC Column: DB HeavyWax ID: 0.1 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toluene	1.21	Baseline Smoothing	P0IK	02/22/23 10:43
Ethylbenzene	1.60	Baseline Smoothing	P0IK	02/22/23 10:45
p-Xylene	1.64	Baseline Smoothing	P0IK	02/22/23 10:45
m-Xylene	1.67	Baseline Smoothing	P0IK	02/22/23 10:45
o-Xylene	1.89	Baseline Smoothing	P0IK	02/22/23 10:46

Lab Sample ID: IC 140-70548/6 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 02/21/23 18:27 Lab File ID: F-IC L1-2023-02-21-18-24 GC Column: DB HeavyWax ID: 0.1 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzene	0.87	Baseline Smoothing	P0IK	02/22/23 10:43
Toluene	1.21	Baseline Smoothing	P0IK	02/22/23 10:44
Ethylbenzene	1.60	Baseline Smoothing	P0IK	02/22/23 10:45
p-Xylene	1.64	Baseline Smoothing	P0IK	02/22/23 10:45
m-Xylene	1.67	Baseline Smoothing	P0IK	02/22/23 10:45
Styrene	2.28	Baseline Smoothing	P0IK	02/22/23 10:46

AIR - GC VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34735-1

SDG No.: \_\_\_\_\_

Instrument ID: ALGC2 Analysis Batch Number: 82282

Lab Sample ID: MB 140-82267/1-A Client Sample ID: \_\_\_\_\_

Date Analyzed: 01/10/24 17:25 Lab File ID: F-MB 140-82267\_1-A-2024- GC Column: DB HeavyWax ID: 0.1(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzene		Invalid Compound ID	P0IK	01/10/24 17:56

Lab Sample ID: 140-34735-11 Client Sample ID: A-1978 METHOD 18

Date Analyzed: 01/10/24 17:52 Lab File ID: F-140-34735-A-11-A-2024- GC Column: DB HeavyWax ID: 0.1(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzene		Incomplete Integration	P0IK	01/11/24 10:33

Lab Sample ID: 140-34735-1 Client Sample ID: AS18-1 9553200080,9533200143

Date Analyzed: 01/10/24 18:09 Lab File ID: F-140-34735-A-1-A-2024-0 GC Column: DB HeavyWax ID: 0.1(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzene	0.88	Incomplete Integration	P0IK	01/11/24 10:33
Toluene	1.21	Incomplete Integration	P0IK	01/11/24 10:33

Lab Sample ID: 140-34735-2 Client Sample ID: AS18-2 9553200025,9533200092

Date Analyzed: 01/10/24 18:27 Lab File ID: F-140-34735-A-2-A-2024-0 GC Column: DB HeavyWax ID: 0.1(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzene	0.88	Incomplete Integration	P0IK	01/11/24 10:34
Toluene	1.21	Incomplete Integration	P0IK	01/11/24 10:34

AIR - GC VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
 SDG No.: \_\_\_\_\_  
 Instrument ID: ALGC2 Analysis Batch Number: 82282  
 Lab Sample ID: 140-34735-6 Client Sample ID: VF18-4 9553202844,9533200079  
 Date Analyzed: 01/10/24 19:37 Lab File ID: F-140-34735-A-6-A-2024-0 GC Column: DB HeavyWax ID: 0.1 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzene	0.88	Incomplete Integration	P0IK	01/11/24 10:35
Toluene	1.21	Incomplete Integration	P0IK	01/11/24 10:35

# Method 18 - Air Train

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Volatile Organic Compounds by Method  
18 (Air Train)

FORM III  
AIR - GC VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: F-LCS 140-82267\_2-A-2024-01-1  
 Lab ID: LCS 140-82267/2-A Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Sample)	LCS CONCENTRATION (ug/Sample)	LCS % REC	QC LIMITS REC	#
Benzene	248	222.1	89	70-130	
Toluene	250	220.9	88	70-130	

# Column to be used to flag recovery and RPD values  
 FORM III EPA 18

FORM III  
AIR - GC VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: F-140-34735-A-1-B MS-2024-01-  
 Lab ID: 140-34735-1 MS Client ID: AS18-1 9553200080,9533200143 MS

COMPOUND	SPIKE ADDED (ug/Sample)	SAMPLE CONCENTRATION (ug/Sample)	MS CONCENTRATION (ug/Sample)	MS % REC	QC LIMITS REC	#
Benzene	199	ND	193.4	97	70-130	
Toluene	200	ND	190.8	95	70-130	

# Column to be used to flag recovery and RPD values  
 FORM III EPA 18



FORM III  
AIR - GC VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: F-140-34735-A-2-B MS-2024-01-  
 Lab ID: 140-34735-2 MS Client ID: AS18-2 9553200025,9533200092 MS

COMPOUND	SPIKE ADDED (ug/Sample)	SAMPLE CONCENTRATION (ug/Sample)	MS CONCENTRATION (ug/Sample)	MS % REC	QC LIMITS REC	#
Benzene	199	ND	195.1	98	70-130	
Toluene	200	ND	188.7	94	70-130	

# Column to be used to flag recovery and RPD values  
 FORM III EPA 18

FORM III  
AIR - GC VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: F-140-34735-A-3-B MS-2024-01-  
 Lab ID: 140-34735-3 MS Client ID: AS18-3 9553200073,9533200085 MS

COMPOUND	SPIKE ADDED (ug/Sample)	SAMPLE CONCENTRATION (ug/Sample)	MS CONCENTRATION (ug/Sample)	MS % REC	QC LIMITS REC	#
Benzene	199	ND	191.6	96	70-130	
Toluene	200	ND	186.3	93	70-130	

# Column to be used to flag recovery and RPD values  
 FORM III EPA 18

FORM III  
AIR - GC VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: F-140-34735-A-4-B MS-2024-01-  
 Lab ID: 140-34735-4 MS Client ID: VF18-1 9553200036,9533200155 MS

COMPOUND	SPIKE ADDED (ug/Sample)	SAMPLE CONCENTRATION (ug/Sample)	MS CONCENTRATION (ug/Sample)	MS % REC	QC LIMITS REC	#
Benzene	199	ND	190.4	96	70-130	
Toluene	200	ND	188.8	94	70-130	

# Column to be used to flag recovery and RPD values  
 FORM III EPA 18

FORM III  
AIR - GC VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: F-140-34735-A-5-B MS-2024-01-  
 Lab ID: 140-34735-5 MS Client ID: VF18-2 9553200045,9533200152 MS

COMPOUND	SPIKE ADDED (ug/Sample)	SAMPLE CONCENTRATION (ug/Sample)	MS CONCENTRATION (ug/Sample)	MS % REC	QC LIMITS REC	#
Benzene	199	ND	191.0	96	70-130	
Toluene	200	ND	189.0	95	70-130	

# Column to be used to flag recovery and RPD values  
 FORM III EPA 18

FORM III  
AIR - GC VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: F-140-34735-A-6-B MS-2024-01-  
 Lab ID: 140-34735-6 MS Client ID: VF18-4 9553202844,9533200079 MS

COMPOUND	SPIKE ADDED (ug/Sample)	SAMPLE CONCENTRATION (ug/Sample)	MS CONCENTRATION (ug/Sample)	MS % REC	QC LIMITS REC	#
Benzene	199	ND	191.8	97	70-130	
Toluene	200	ND	191.9	96	70-130	

# Column to be used to flag recovery and RPD values  
 FORM III EPA 18

FORM III  
AIR - GC VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: F-140-34735-A-7-B MS-2024-01-  
 Lab ID: 140-34735-7 MS Client ID: AP18-1 9553200144,9533200082 MS

COMPOUND	SPIKE ADDED (ug/Sample)	SAMPLE CONCENTRATION (ug/Sample)	MS CONCENTRATION (ug/Sample)	MS % REC	QC LIMITS REC	#
Benzene	199	ND	185.2	93	70-130	
Toluene	200	ND	184.7	92	70-130	

# Column to be used to flag recovery and RPD values  
 FORM III EPA 18

FORM III  
AIR - GC VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins Knoxville Job No.: 140-34735-1

SDG No.: \_\_\_\_\_

Matrix: Air Level: Low Lab File ID: F-140-34735-A-8-B MS-2024-01-

Lab ID: 140-34735-8 MS Client ID: AP18-2 9553200021,9533200156 MS

COMPOUND	SPIKE ADDED (ug/Sample)	SAMPLE CONCENTRATION (ug/Sample)	MS CONCENTRATION (ug/Sample)	MS % REC	QC LIMITS REC	#
Benzene	199	ND	185.9	94	70-130	
Toluene	200	ND	185.0	93	70-130	

# Column to be used to flag recovery and RPD values

FORM III  
AIR - GC VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins Knoxville Job No.: 140-34735-1

SDG No.: \_\_\_\_\_

Matrix: Air Level: Low Lab File ID: F-140-34735-A-9-B MS-2024-01-

Lab ID: 140-34735-9 MS Client ID: AP18-3 9553200040,9533200128 MS

COMPOUND	SPIKE ADDED (ug/Sample)	SAMPLE CONCENTRATION (ug/Sample)	MS CONCENTRATION (ug/Sample)	MS % REC	QC LIMITS REC	#
Benzene	199	ND	188.7	95	70-130	
Toluene	200	ND	188.0	94	70-130	

# Column to be used to flag recovery and RPD values



FORM III  
AIR - GC VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: F-140-34735-A-10-B MS-2024-01  
 Lab ID: 140-34735-10 MS Client ID: BLANK 9553200047,9553200041 MS

COMPOUND	SPIKE ADDED (ug/Sample)	SAMPLE CONCENTRATION (ug/Sample)	MS CONCENTRATION (ug/Sample)	MS % REC	QC LIMITS REC	#
Benzene	199	ND	185.0	93	70-130	
Toluene	200	ND	182.6	91	70-130	

# Column to be used to flag recovery and RPD values  
 FORM III EPA 18

FORM IV  
AIR - GC VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: F-MB 140-82267\_1-A-2024-01-10 Lab Sample ID: MB 140-82267/1-A  
 Matrix: Air Heated Purge: (Y/N) N  
 Instrument ID: ALGC2 Date Analyzed: 01/10/2024 17:25  
 GC Column: DB HeavyWax ID: 0.1 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-82267/2-A	F-LCS 140-82267_2 -A-2024-01- 10-17-31-43 .D	01/10/2024 17:34
A-1978 METHOD 18	140-34735-11	F-140-34735 -A-11-A-202 4-01-10-17- 49-16.D	01/10/2024 17:52
A-1979 METHOD 18 (SPIKE @200UG)	140-34735-12	F-140-34735 -A-12-A-202 4-01-10-17- 58-04.D	01/10/2024 18:00
AS18-1 9553200080,9533200143	140-34735-1	F-140-34735 -A-1-A-2024 -01-10-18-0 7-01.D	01/10/2024 18:09
AS18-1 9553200080,9533200143 MS	140-34735-1 MS	F-140-34735 -A-1-B MS-2024-01- 10-18-15-45 .D	01/10/2024 18:18
AS18-2 9553200025,9533200092	140-34735-2	F-140-34735 -A-2-A-2024 -01-10-18-2 4-30.D	01/10/2024 18:27
AS18-2 9553200025,9533200092 MS	140-34735-2 MS	F-140-34735 -A-2-B MS-2024-01- 10-18-33-16 .D	01/10/2024 18:36
AS18-3 9553200073,9533200085	140-34735-3	F-140-34735 -A-3-A-2024 -01-10-18-4 2-02.D	01/10/2024 18:44
AS18-3 9553200073,9533200085 MS	140-34735-3 MS	F-140-34735 -A-3-B MS-2024-01- 10-18-50-46 .D	01/10/2024 18:53
VF18-1 9553200036,9533200155	140-34735-4	F-140-34735 -A-4-A-2024 -01-10-18-5 9-35.D	01/10/2024 19:02

FORM IV  
AIR - GC VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: F-MB 140-82267\_1-A-2024-01-10 Lab Sample ID: MB 140-82267/1-A  
 Matrix: Air Heated Purge: (Y/N) N  
 Instrument ID: ALGC2 Date Analyzed: 01/10/2024 17:25  
 GC Column: DB HeavyWax ID: 0.1 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
VF18-1 9553200036, 9533200155 MS	140-34735-4 MS	F-140-34735 -A-4-B MS-2024-01- 10-19-08-29 .D	01/10/2024 19:11
VF18-2 9553200045, 9533200152	140-34735-5	F-140-34735 -A-5-A-2024 -01-10-19-1 7-16.D	01/10/2024 19:20
VF18-2 9553200045, 9533200152 MS	140-34735-5 MS	F-140-34735 -A-5-B MS-2024-01- 10-19-26-00 .D	01/10/2024 19:28
VF18-4 9553202844, 9533200079	140-34735-6	F-140-34735 -A-6-A-2024 -01-10-19-3 4-46.D	01/10/2024 19:37
VF18-4 9553202844, 9533200079 MS	140-34735-6 MS	F-140-34735 -A-6-B MS-2024-01- 10-19-43-31 .D	01/10/2024 19:46
AP18-1 9553200144, 9533200082	140-34735-7	F-140-34735 -A-7-A-2024 -01-10-19-5 2-17.D	01/10/2024 19:55
AP18-1 9553200144, 9533200082 MS	140-34735-7 MS	F-140-34735 -A-7-B MS-2024-01- 10-20-01-03 .D	01/10/2024 20:03
AP18-2 9553200021, 9533200156	140-34735-8	F-140-34735 -A-8-A-2024 -01-10-20-0 9-58.D	01/10/2024 20:12
AP18-2 9553200021, 9533200156 MS	140-34735-8 MS	F-140-34735 -A-8-B MS-2024-01- 10-20-18-47 .D	01/10/2024 20:21
AP18-3 9553200040, 9533200128	140-34735-9	F-140-34735 -A-9-A-2024 -01-10-20-2 7-30.D	01/10/2024 20:30

FORM IV  
AIR - GC VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: F-MB 140-82267\_1-A-2024-01-10 Lab Sample ID: MB 140-82267/1-A  
 Matrix: Air Heated Purge: (Y/N) N  
 Instrument ID: ALGC2 Date Analyzed: 01/10/2024 17:25  
 GC Column: DB HeavyWax ID: 0.1 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
AP18-3 9553200040,9533200128 MS	140-34735-9 MS	F-140-34735 -A-9-B MS-2024-01- 10-20-36-17 .D	01/10/2024 20:39
BLANK 9553200047,9553200041	140-34735-10	F-140-34735 -A-10-A-202 4-01-10-20- 45-02.D	01/10/2024 20:47
BLANK 9553200047,9553200041 MS	140-34735-10 MS	F-140-34735 -A-10-B MS-2024-01- 10-20-53-4. D	01/10/2024 20:56

FORM I  
AIR - GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
SDG No.: \_\_\_\_\_  
Client Sample ID: AS18-1 Lab Sample ID: 140-34735-1  
9553200080,9533200143  
Matrix: Air Lab File ID: F-140-34735-A-1-A-2024-01-10-1  
Analysis Method: EPA 18 Date Collected: 11/30/2023 00:00  
Sample wt/vol: 1(Sample) Date Analyzed: 01/10/2024 18:09  
Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
Soil Extract Vol.: \_\_\_\_\_ GC Column: DB HeavyWax ID: 0.1(mm)  
Purge Volume: \_\_\_\_\_ Heated Purge: (Y/N) \_\_\_\_\_ pH: \_\_\_\_\_  
% Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ Level: (low/med) Low  
Analysis Batch No.: 82282 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		10.0	5.50
108-88-3	Toluene	ND		10.0	3.00

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-1-A-2024-01-10-18-07-01.D  
 Lims ID: 140-34735-A-1-A  
 Client ID: AS18-1 9553200080,9533200143  
 Sample Type: Client  
 Inject. Date: 10-Jan-2024 18:09:44      ALS Bottle#: 7      Worklist Smp#: 9  
 Injection Vol: 1.0 ul      Dil. Factor: 1.0000  
 Sample Info: 140-0031160-009  
 Operator ID: SYSTEM      Instrument ID: ALGC2  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 11-Jan-2024 10:36:22      Calib Date: 23-Sep-2023 17:07:49  
 Integrator: Falcon  
 Quant Method: External Standard      Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230923-29777.b\F-HEXANE-2023-09-23-17-05-05.D  
 Column 1 : DB HeavyWax ( 0.10 mm)      Det: GC FID1A  
 Process Host: CTX1681

First Level Reviewer: P0IK      Date: 11-Jan-2024 10:33:55

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
3 Benzene	0.877	0.874	0.003	947	0.2833	M
4 Toluene	1.213	1.212	0.001	366	0.0394	7M

**QC Flag Legend**

Processing Flags

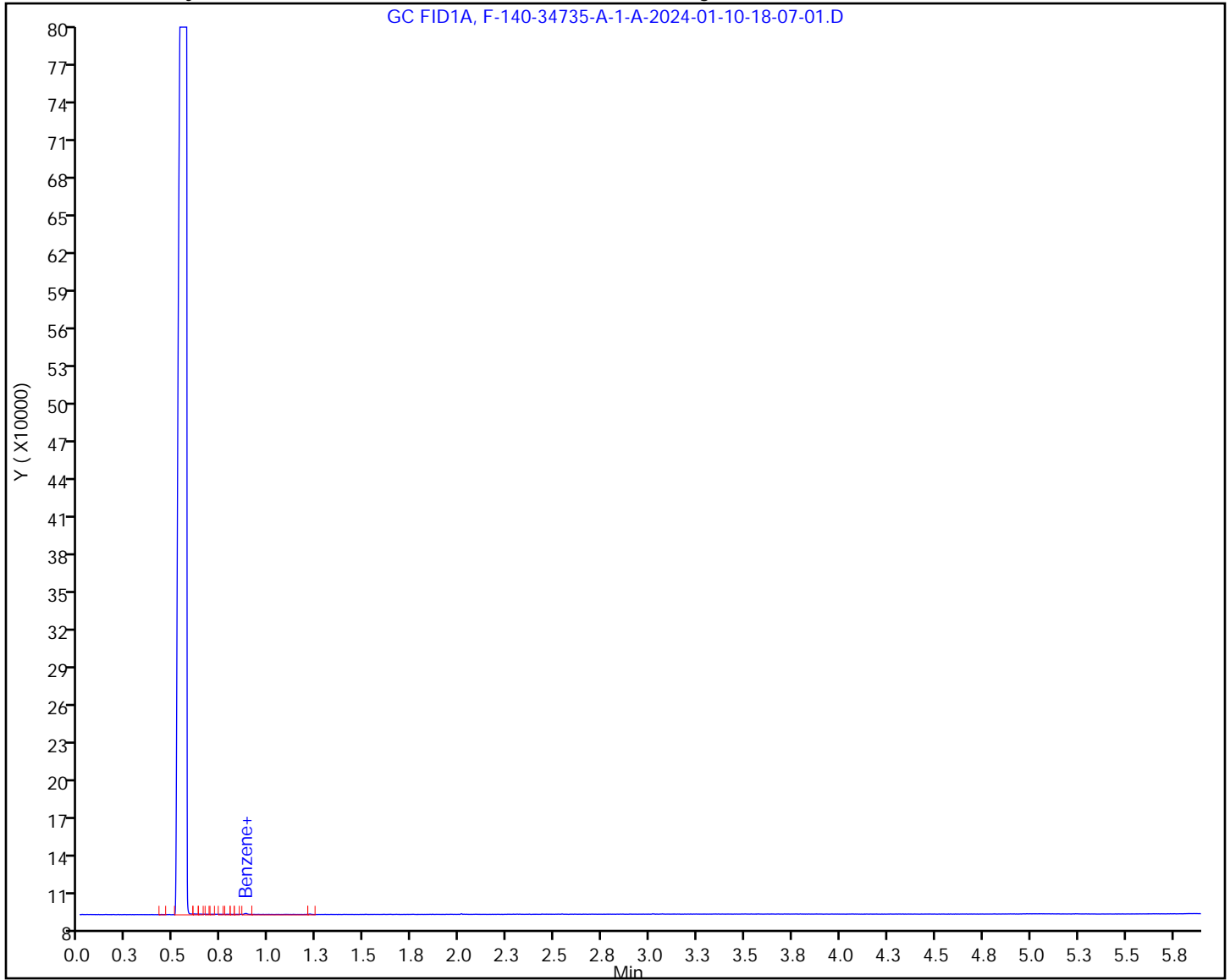
7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-1-A-2024-01-10-18-07-01.D  
Injection Date: 10-Jan-2024 18:09:44 Instrument ID: ALGC2  
Lims ID: 140-34735-A-1-A Lab Sample ID: 140-34735-1  
Client ID: AS18-1 9553200080,9533200143  
Operator ID: SYSTEM ALS Bottle#: 7 Worklist Smp#: 9  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax (0.10 mm) Y Scaling: Method Defined: Set to Absolute Y Value



Eurofins Knoxville

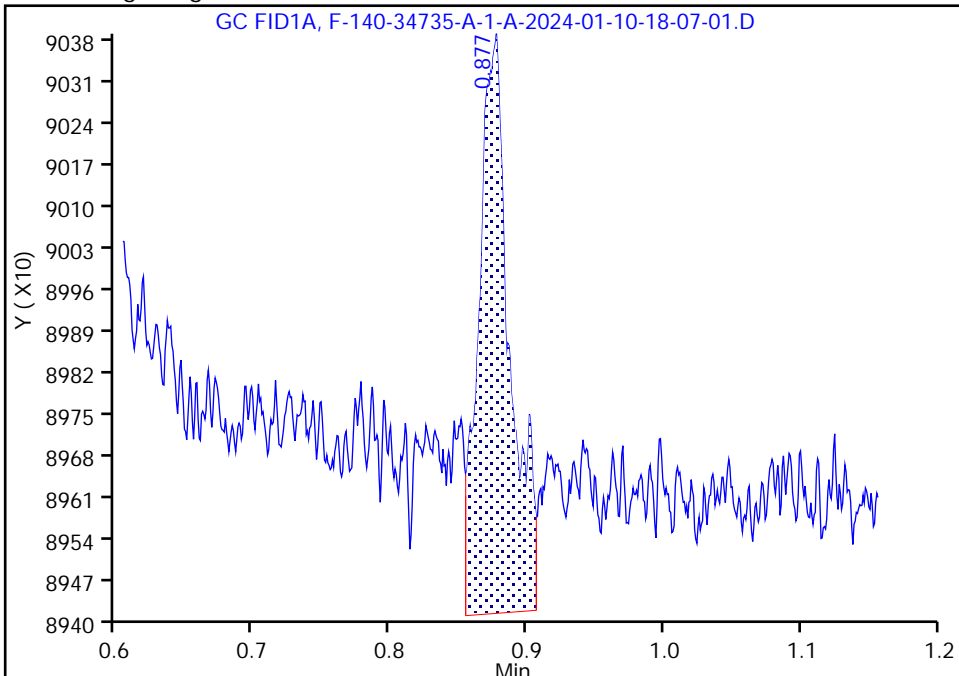
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Injection Date: 10-Jan-2024 18:09:44 Instrument ID: ALGC2  
Lims ID: 140-34735-A-1-A Lab Sample ID: 140-34735-1  
Client ID: AS18-1 953200080,9533200143  
Operator ID: SYSTEM ALS Bottle#: 7 Worklist Smp#: 9  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Detector: GC FID1A

3 Benzene, CAS: 71-43-2

Signal: 1

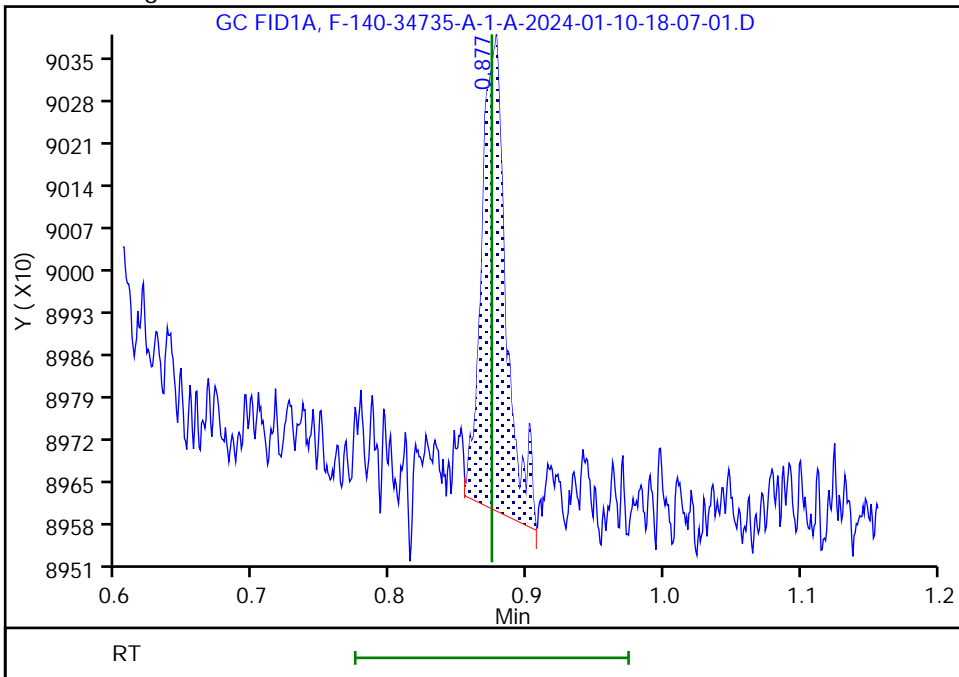
RT: 0.88  
Area: 1529  
Amount: 0.596715  
Amount Units: ug/ml

Processing Integration Results



RT: 0.88  
Area: 947  
Amount: 0.283349  
Amount Units: ug/ml

Manual Integration Results



Reviewer: POIK, 11-Jan-2024 10:33:39 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Eurofins Knoxville

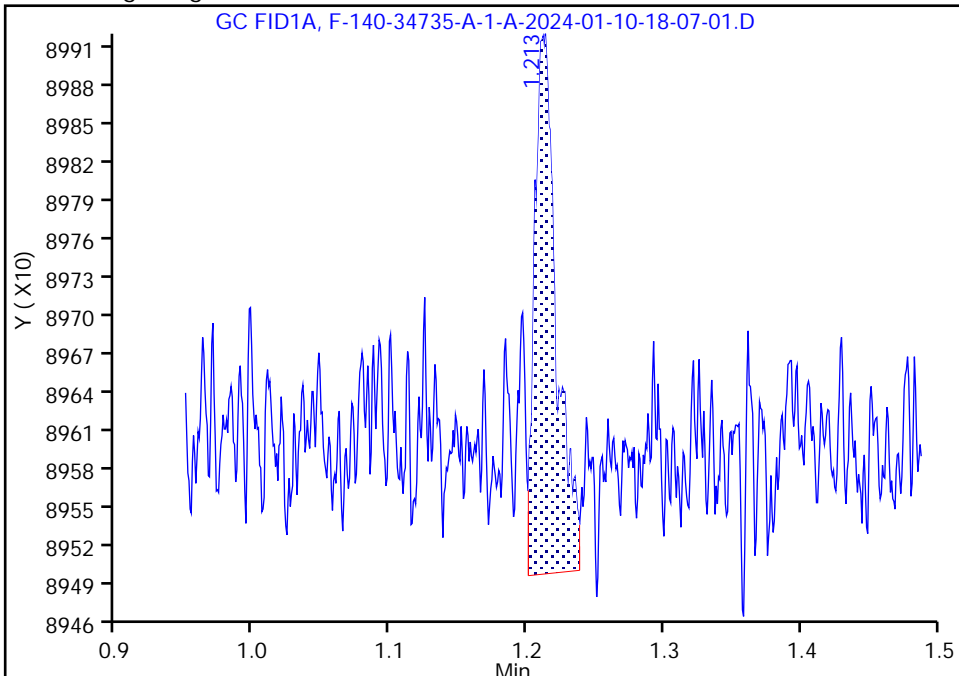
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Injection Date: 10-Jan-2024 18:09:44 Instrument ID: ALGC2  
Lims ID: 140-34735-A-1-A Lab Sample ID: 140-34735-1  
Client ID: AS18-1 9553200080,9533200143  
Operator ID: SYSTEM ALS Bottle#: 7 Worklist Smp#: 9  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Detector: GC FID1A

4 Toluene, CAS: 108-88-3

Signal: 1

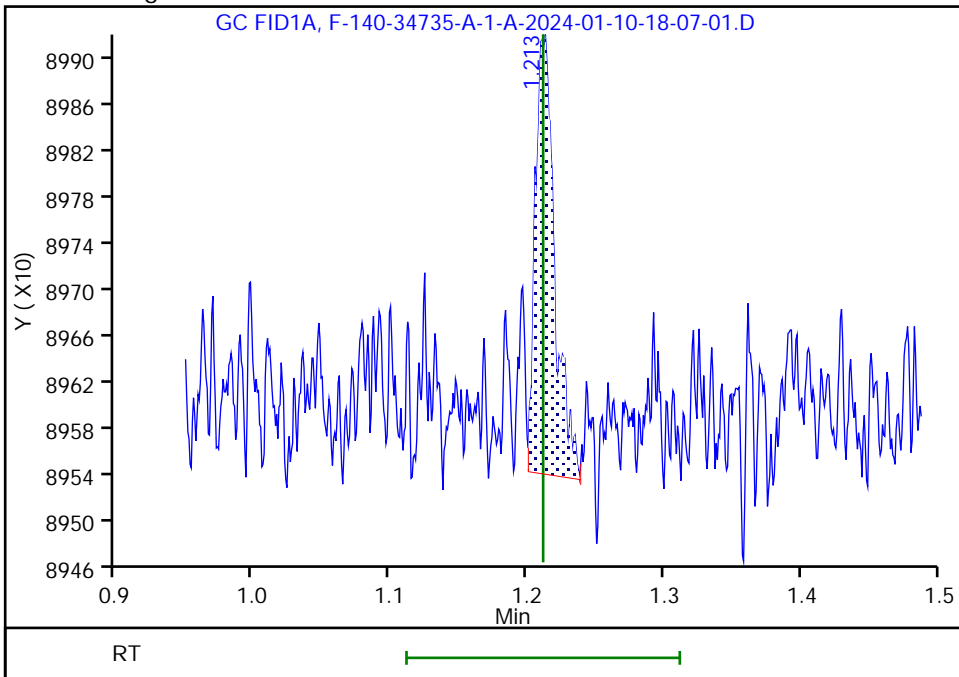
RT: 1.21  
Area: 456  
Amount: 0.087908  
Amount Units: ug/ml

Processing Integration Results



RT: 1.21  
Area: 366  
Amount: 0.039383  
Amount Units: ug/ml

Manual Integration Results



Reviewer: POIK, 11-Jan-2024 10:33:52 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM I  
AIR - GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Eurofins Knoxville</u>	Job No.: <u>140-34735-1</u>
SDG No.: _____	
Client Sample ID: <u>AS18-2</u> <u>9553200025,9533200092</u>	Lab Sample ID: <u>140-34735-2</u>
Matrix: <u>Air</u>	Lab File ID: <u>F-140-34735-A-2-A-2024-01-10-1</u>
Analysis Method: <u>EPA 18</u>	Date Collected: <u>12/01/2023 00:00</u>
Sample wt/vol: <u>1(Sample)</u>	Date Analyzed: <u>01/10/2024 18:27</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB HeavyWax</u> ID: <u>0.1(mm)</u>
Purge Volume: _____	Heated Purge: (Y/N) _____ pH: _____
% Moisture: _____ % Solids: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>82282</u>	Units: <u>ug/Sample</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		10.0	5.50
108-88-3	Toluene	ND		10.0	3.00

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-2-A-2024-01-10-18-24-30.D  
 Lims ID: 140-34735-A-2-A  
 Client ID: AS18-2 9553200025,9533200092  
 Sample Type: Client  
 Inject. Date: 10-Jan-2024 18:27:16 ALS Bottle#: 9 Worklist Smp#: 11  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0031160-011  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 11-Jan-2024 10:36:22 Calib Date: 23-Sep-2023 17:07:49  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230923-29777.b\F-HEXANE-2023-09-23-17-05-05.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1681

First Level Reviewer: P0IK Date: 11-Jan-2024 10:34:30

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
3 Benzene	0.875	0.874	0.001	945	0.2823	M
4 Toluene	1.212	1.212	0.000	325	0.0173	7M

**QC Flag Legend**

Processing Flags

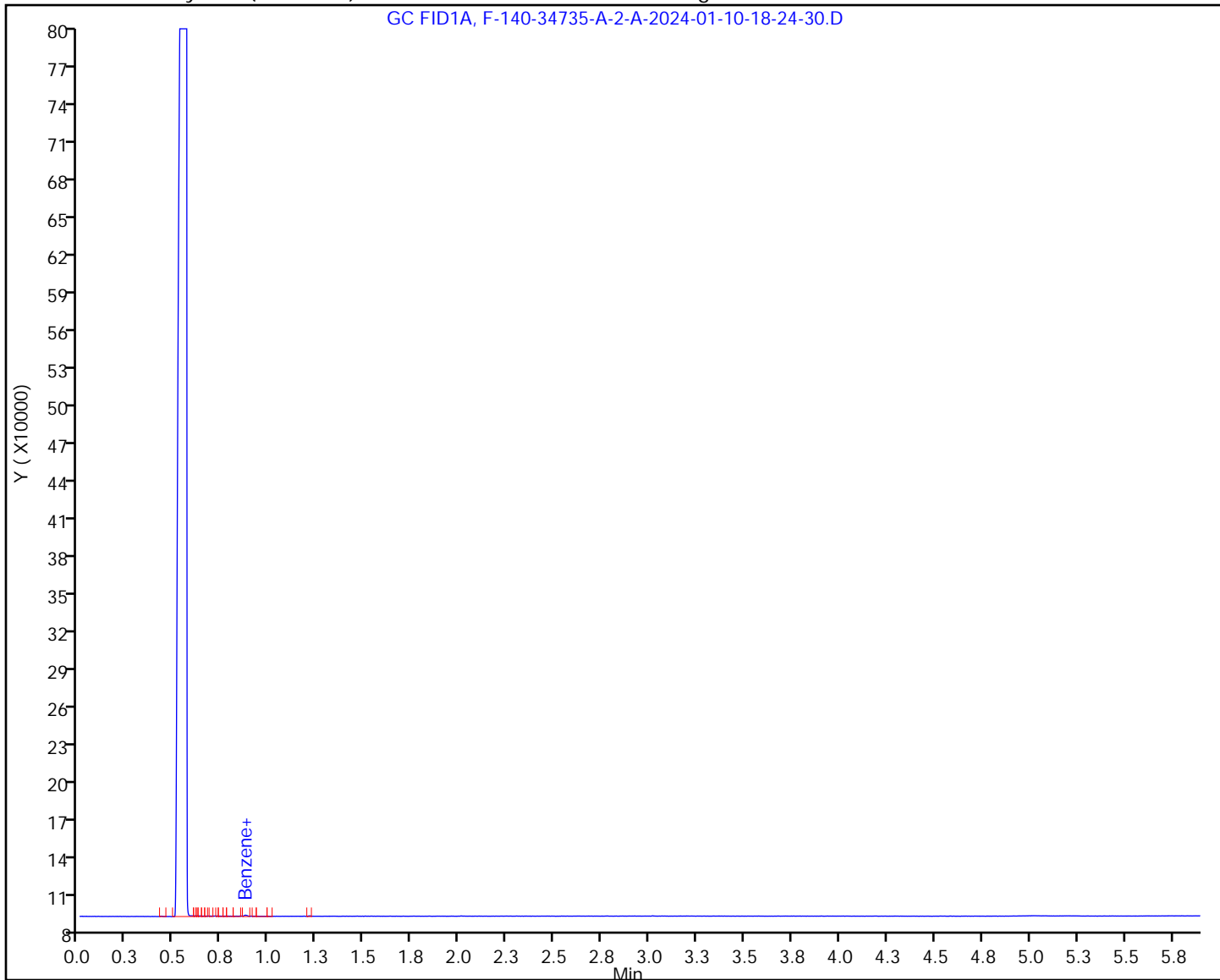
7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-2-A-2024-01-10-18-24-30.D  
Injection Date: 10-Jan-2024 18:27:16 Instrument ID: ALGC2  
Lims ID: 140-34735-A-2-A Lab Sample ID: 140-34735-2  
Client ID: AS18-2 9553200025,9533200092  
Operator ID: SYSTEM ALS Bottle#: 9 Worklist Smp#: 11  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax (0.10 mm) Y Scaling: Method Defined: Set to Absolute Y Value



Eurofins Knoxville

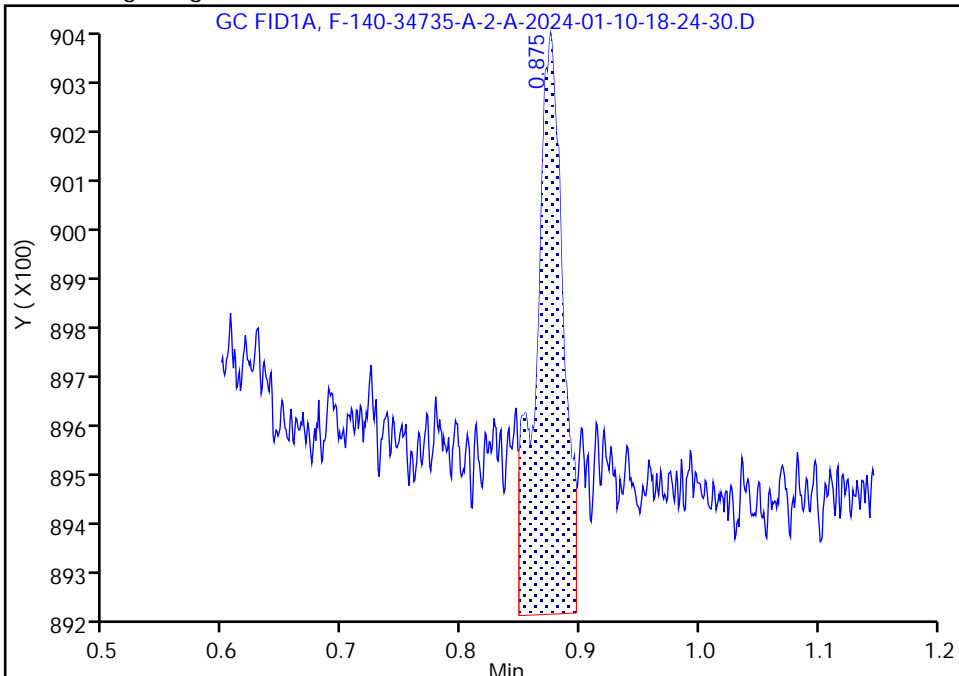
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Injection Date: 10-Jan-2024 18:27:16 Instrument ID: ALGC2  
Lims ID: 140-34735-A-2-A Lab Sample ID: 140-34735-2  
Client ID: AS18-2 9553200025,9533200092  
Operator ID: SYSTEM ALS Bottle#: 9 Worklist Smp#: 11  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Detector: GC FID1A

3 Benzene, CAS: 71-43-2

Signal: 1

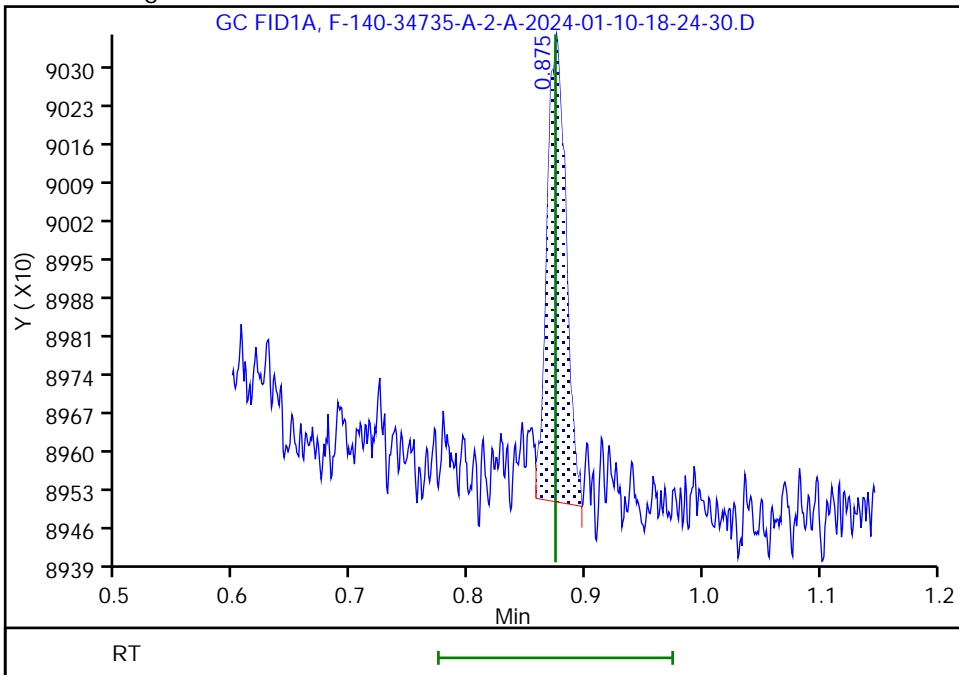
RT: 0.87  
Area: 1719  
Amount: 0.699017  
Amount Units: ug/ml

Processing Integration Results



RT: 0.87  
Area: 945  
Amount: 0.282272  
Amount Units: ug/ml

Manual Integration Results



Reviewer: POIK, 11-Jan-2024 10:34:06 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins Knoxville

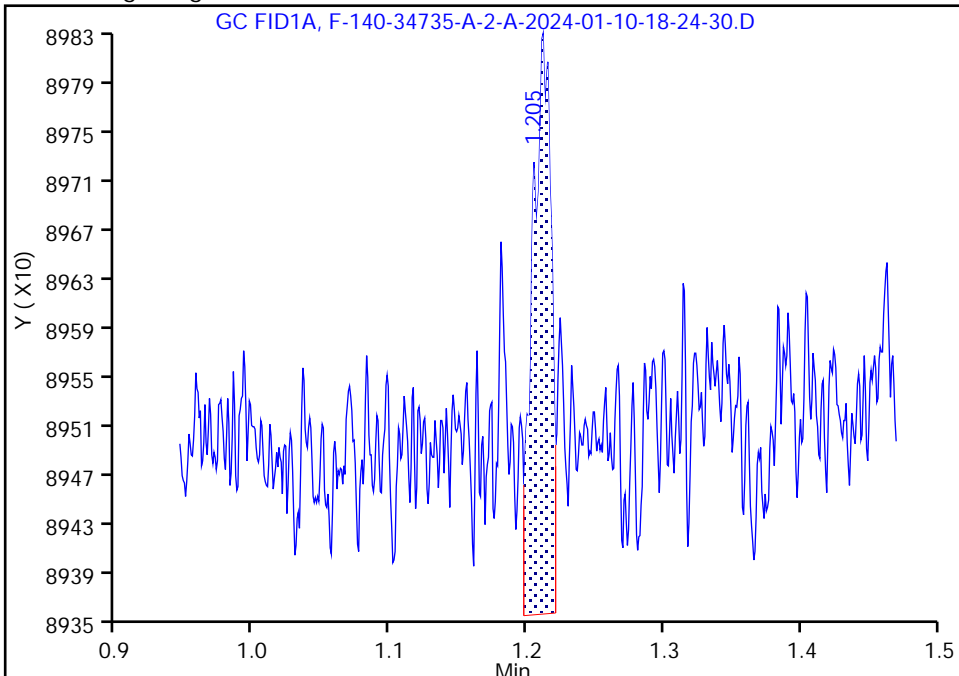
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Injection Date: 10-Jan-2024 18:27:16 Instrument ID: ALGC2  
Lims ID: 140-34735-A-2-A Lab Sample ID: 140-34735-2  
Client ID: AS18-2 9553200025,9533200092  
Operator ID: SYSTEM ALS Bottle#: 9 Worklist Smp#: 11  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Detector: GC FID1A

4 Toluene, CAS: 108-88-3

Signal: 1

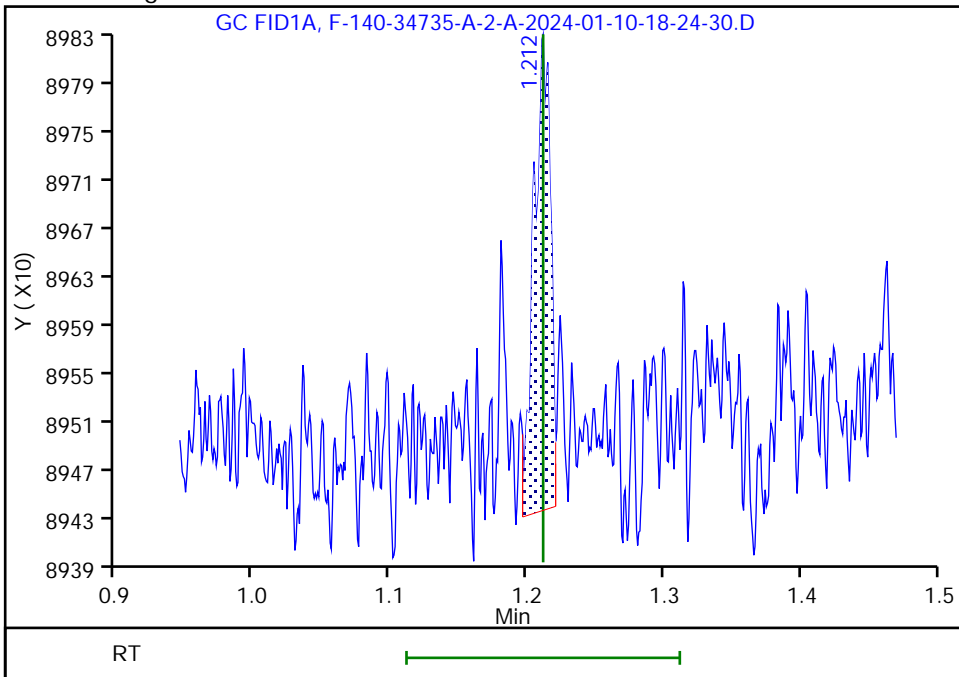
RT: 1.20  
Area: 434  
Amount: 0.076046  
Amount Units: ug/ml

Processing Integration Results



RT: 1.21  
Area: 325  
Amount: 0.017277  
Amount Units: ug/ml

Manual Integration Results



Reviewer: POIK, 11-Jan-2024 10:34:26 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM I  
AIR - GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Eurofins Knoxville</u>	Job No.: <u>140-34735-1</u>
SDG No.: _____	
Client Sample ID: <u>AS18-3</u> <u>9553200073,9533200085</u>	Lab Sample ID: <u>140-34735-3</u>
Matrix: <u>Air</u>	Lab File ID: <u>F-140-34735-A-3-A-2024-01-10-1</u>
Analysis Method: <u>EPA 18</u>	Date Collected: <u>12/01/2023 00:00</u>
Sample wt/vol: <u>1(Sample)</u>	Date Analyzed: <u>01/10/2024 18:44</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB HeavyWax</u> ID: <u>0.1(mm)</u>
Purge Volume: _____	Heated Purge: (Y/N) _____ pH: _____
% Moisture: _____ % Solids: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>82282</u>	Units: <u>ug/Sample</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		10.0	5.50
108-88-3	Toluene	ND		10.0	3.00

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-3-A-2024-01-10-18-42-02.D  
 Lims ID: 140-34735-A-3-A  
 Client ID: AS18-3 9553200073,9533200085  
 Sample Type: Client  
 Inject. Date: 10-Jan-2024 18:44:49      ALS Bottle#: 11      Worklist Smp#: 13  
 Injection Vol: 1.0 ul      Dil. Factor: 1.0000  
 Sample Info: 140-0031160-013  
 Operator ID: SYSTEM      Instrument ID: ALGC2  
  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 11-Jan-2024 10:36:22      Calib Date: 23-Sep-2023 17:07:49  
 Integrator: Falcon  
 Quant Method: External Standard      Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230923-29777.b\F-HEXANE-2023-09-23-17-05-05.D  
  
 Column 1 : DB HeavyWax ( 0.10 mm)      Det: GC FID1A  
 Process Host: CTX1681

First Level Reviewer: P0IK      Date: 11-Jan-2024 10:34:43

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
3 Benzene	0.874	0.874	0.000	345	-0.0408	7
4 Toluene	1.211	1.212	-0.001	1036	0.4006	

**QC Flag Legend**

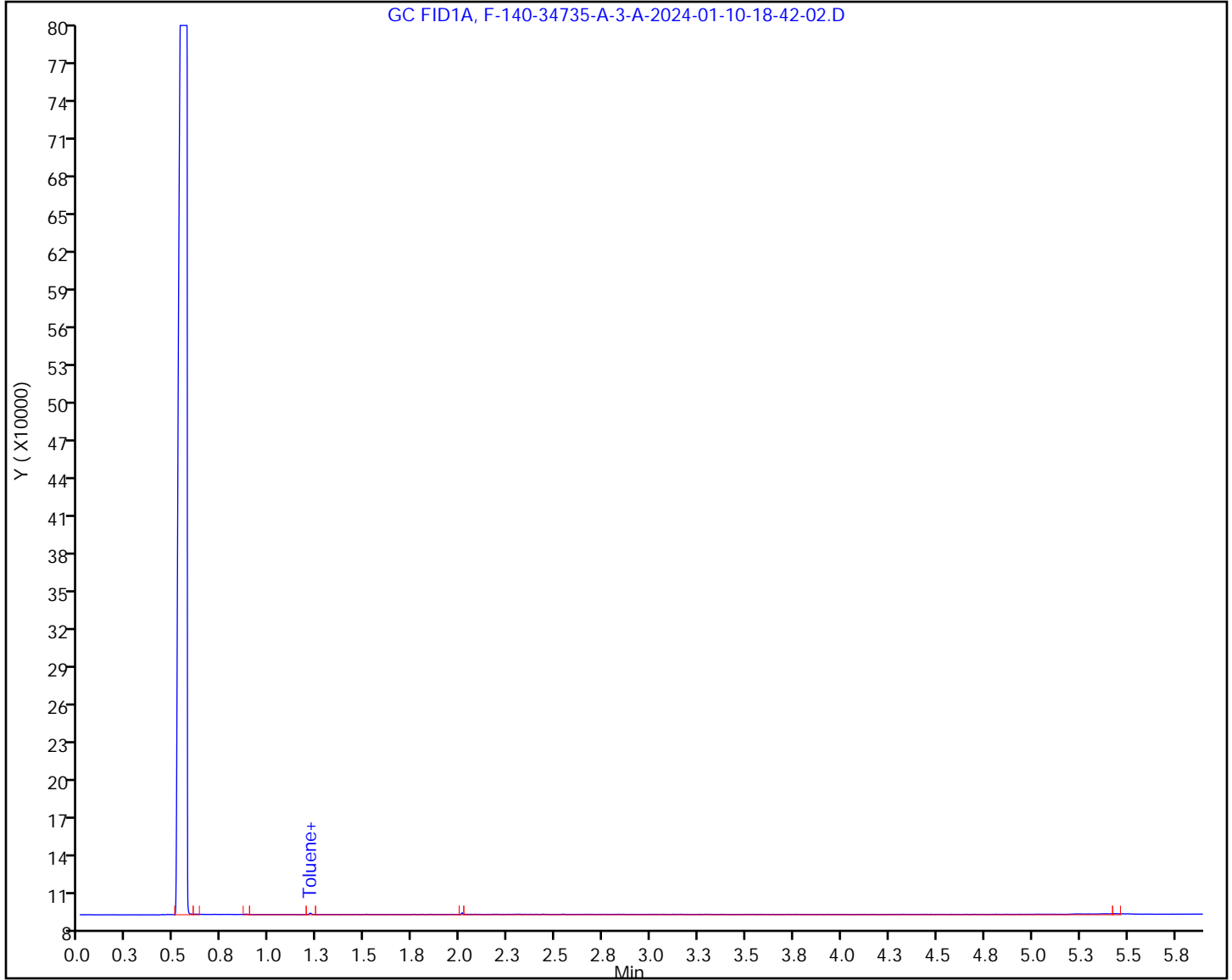
Processing Flags

7 - Failed Limit of Detection



Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-3-A-2024-01-10-18-42-02.D  
Injection Date: 10-Jan-2024 18:44:49 Instrument ID: ALGC2  
Lims ID: 140-34735-A-3-A Lab Sample ID: 140-34735-3  
Client ID: AS18-3 9553200073,9533200085  
Operator ID: SYSTEM ALS Bottle#: 11 Worklist Smp#: 13  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Y Scaling: Method Defined: Set to Absolute Y Value



FORM I  
AIR - GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
SDG No.: \_\_\_\_\_  
Client Sample ID: VF18-1 Lab Sample ID: 140-34735-4  
9553200036,9533200155  
Matrix: Air Lab File ID: F-140-34735-A-4-A-2024-01-10-1  
Analysis Method: EPA 18 Date Collected: 12/02/2023 00:00  
Sample wt/vol: 1(Sample) Date Analyzed: 01/10/2024 19:02  
Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
Soil Extract Vol.: \_\_\_\_\_ GC Column: DB HeavyWax ID: 0.1(mm)  
Purge Volume: \_\_\_\_\_ Heated Purge: (Y/N) \_\_\_\_\_ pH: \_\_\_\_\_  
% Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ Level: (low/med) Low  
Analysis Batch No.: 82282 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		10.0	5.50
108-88-3	Toluene	ND		10.0	3.00

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-4-A-2024-01-10-18-59-35.D  
 Lims ID: 140-34735-A-4-A  
 Client ID: VF18-1 9553200036,9533200155  
 Sample Type: Client  
 Inject. Date: 10-Jan-2024 19:02:29      ALS Bottle#: 13      Worklist Smp#: 15  
 Injection Vol: 1.0 ul      Dil. Factor: 1.0000  
 Sample Info: 140-0031160-015  
 Operator ID: SYSTEM      Instrument ID: ALGC2  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 11-Jan-2024 10:36:22      Calib Date: 23-Sep-2023 17:07:49  
 Integrator: Falcon  
 Quant Method: External Standard      Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230923-29777.b\F-HEXANE-2023-09-23-17-05-05.D  
 Column 1 : DB HeavyWax ( 0.10 mm)      Det: GC FID1A  
 Process Host: CTX1681

First Level Reviewer: P0IK      Date: 11-Jan-2024 10:34:51

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
3 Benzene	0.876	0.874	0.002	680	0.1396	7
4 Toluene	1.212	1.212	0.000	465	0.0928	7

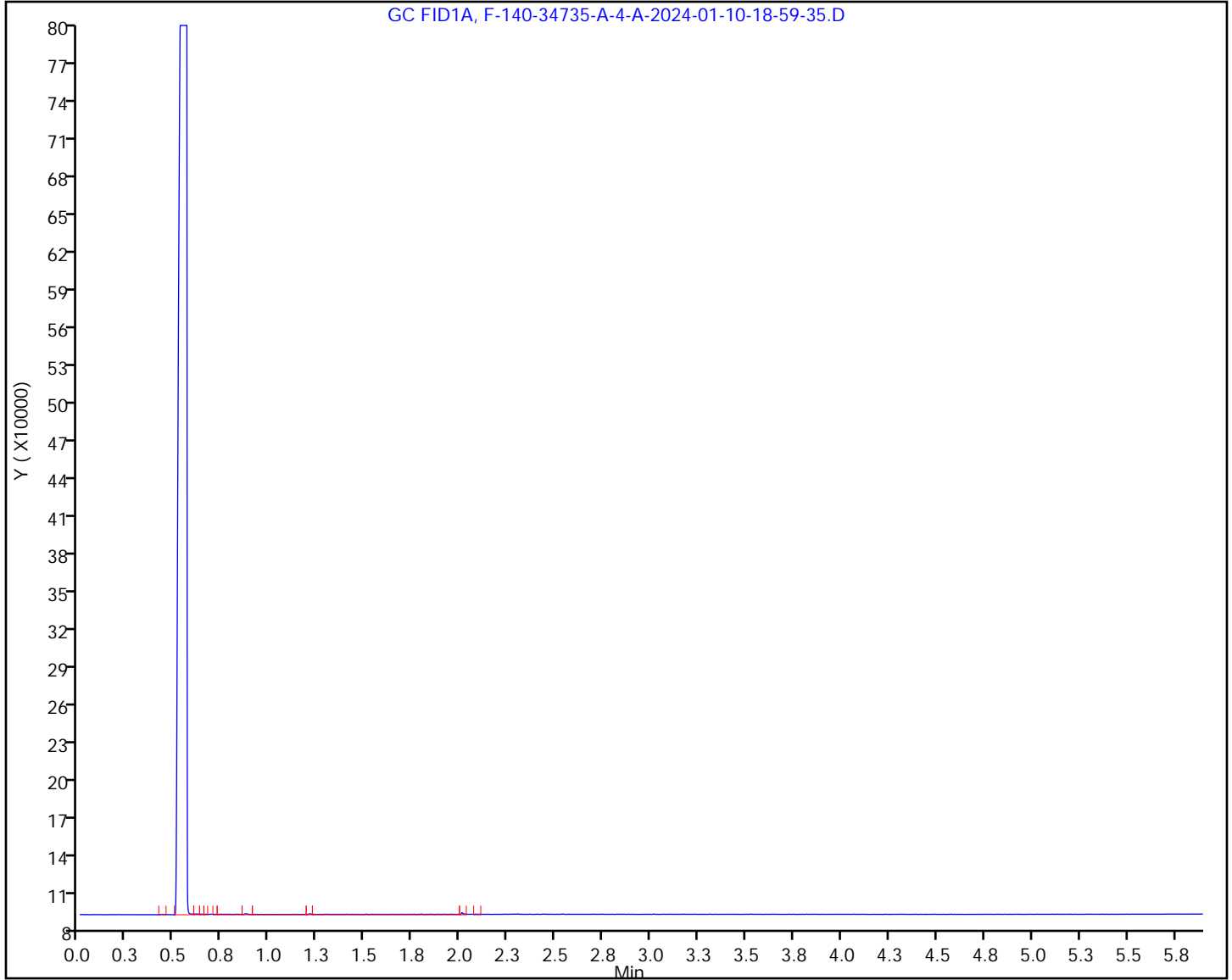
**QC Flag Legend**

Processing Flags

7 - Failed Limit of Detection

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-4-A-2024-01-10-18-59-35.D  
Injection Date: 10-Jan-2024 19:02:29 Instrument ID: ALGC2  
Lims ID: 140-34735-A-4-A Lab Sample ID: 140-34735-4  
Client ID: VF18-1 9553200036,9533200155  
Operator ID: SYSTEM ALS Bottle#: 13 Worklist Smp#: 15  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Y Scaling: Method Defined: Set to Absolute Y Value



FORM I  
AIR - GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
SDG No.: \_\_\_\_\_  
Client Sample ID: VF18-2 Lab Sample ID: 140-34735-5  
9553200045,9533200152  
Matrix: Air Lab File ID: F-140-34735-A-5-A-2024-01-10-1  
Analysis Method: EPA 18 Date Collected: 12/03/2023 00:00  
Sample wt/vol: 1(Sample) Date Analyzed: 01/10/2024 19:20  
Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
Soil Extract Vol.: \_\_\_\_\_ GC Column: DB HeavyWax ID: 0.1(mm)  
Purge Volume: \_\_\_\_\_ Heated Purge: (Y/N) \_\_\_\_\_ pH: \_\_\_\_\_  
% Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ Level: (low/med) Low  
Analysis Batch No.: 82282 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		10.0	5.50
108-88-3	Toluene	ND		10.0	3.00

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-5-A-2024-01-10-19-17-16.D  
 Lims ID: 140-34735-A-5-A  
 Client ID: VF18-2 9553200045,9533200152  
 Sample Type: Client  
 Inject. Date: 10-Jan-2024 19:20:02      ALS Bottle#: 15      Worklist Smp#: 17  
 Injection Vol: 1.0 ul      Dil. Factor: 1.0000  
 Sample Info: 140-0031160-017  
 Operator ID: SYSTEM      Instrument ID: ALGC2  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 11-Jan-2024 10:36:22      Calib Date: 23-Sep-2023 17:07:49  
 Integrator: Falcon  
 Quant Method: External Standard      Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230923-29777.b\F-HEXANE-2023-09-23-17-05-05.D  
 Column 1 : DB HeavyWax ( 0.10 mm)      Det: GC FID1A  
 Process Host: CTX1681

First Level Reviewer: P0IK      Date: 11-Jan-2024 10:34:58

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
3 Benzene	0.874	0.874	0.000	546	0.0674	7
4 Toluene		1.212			ND	

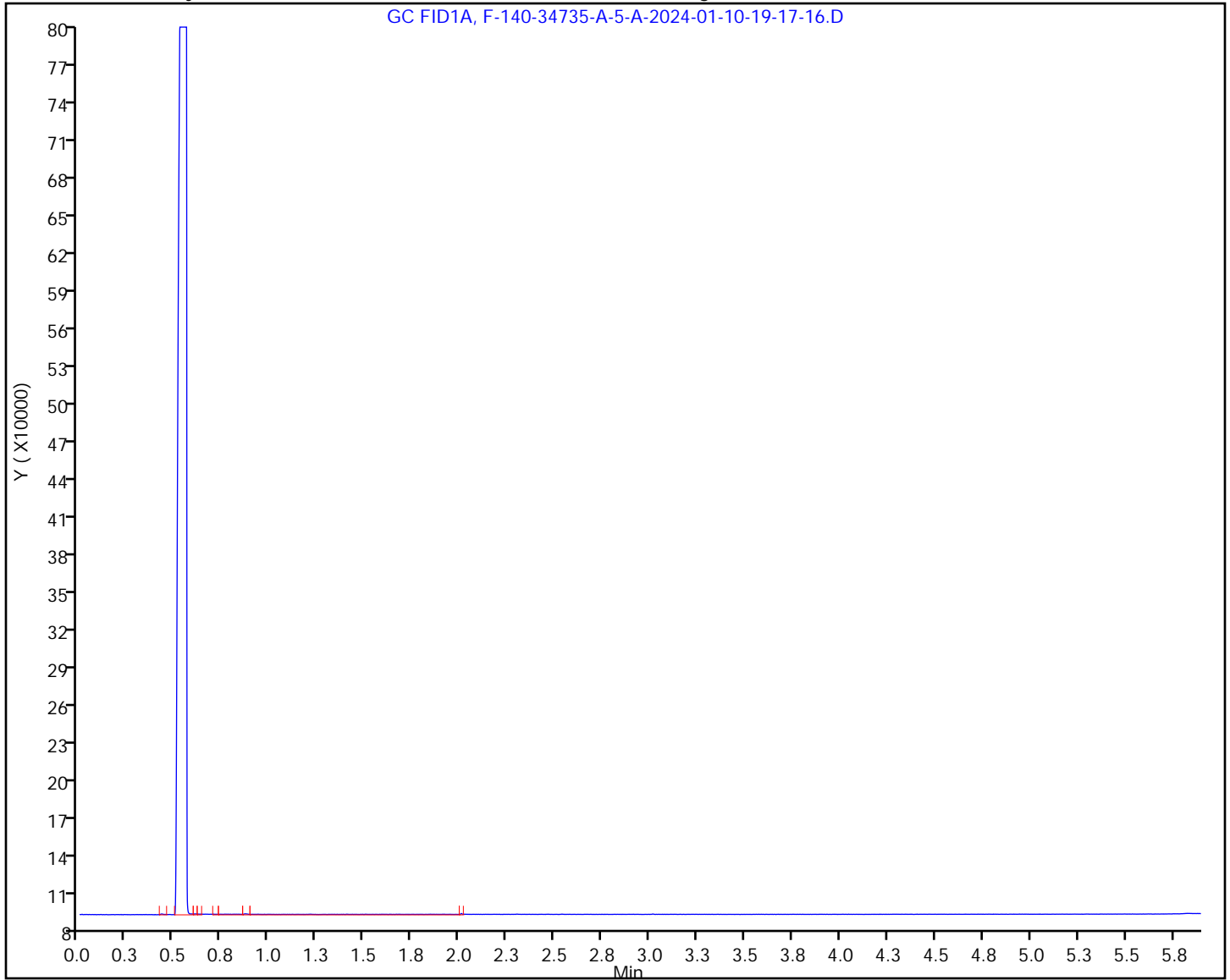
**QC Flag Legend**

Processing Flags

7 - Failed Limit of Detection

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-5-A-2024-01-10-19-17-16.D  
Injection Date: 10-Jan-2024 19:20:02 Instrument ID: ALGC2  
Lims ID: 140-34735-A-5-A Lab Sample ID: 140-34735-5  
Client ID: VF18-2 9553200045,9533200152  
Operator ID: SYSTEM ALS Bottle#: 15 Worklist Smp#: 17  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Y Scaling: Method Defined: Set to Absolute Y Value



FORM I  
AIR - GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
SDG No.: \_\_\_\_\_  
Client Sample ID: VF18-4 Lab Sample ID: 140-34735-6  
9553202844,9533200079  
Matrix: Air Lab File ID: F-140-34735-A-6-A-2024-01-10-1  
Analysis Method: EPA 18 Date Collected: 12/05/2023 00:00  
Sample wt/vol: 1(Sample) Date Analyzed: 01/10/2024 19:37  
Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
Soil Extract Vol.: \_\_\_\_\_ GC Column: DB HeavyWax ID: 0.1(mm)  
Purge Volume: \_\_\_\_\_ Heated Purge: (Y/N) \_\_\_\_\_ pH: \_\_\_\_\_  
% Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ Level: (low/med) Low  
Analysis Batch No.: 82282 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		10.0	5.50
108-88-3	Toluene	ND		10.0	3.00



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-6-A-2024-01-10-19-34-46.D  
 Lims ID: 140-34735-A-6-A  
 Client ID: VF18-4 9553202844,9533200079  
 Sample Type: Client  
 Inject. Date: 10-Jan-2024 19:37:32 ALS Bottle#: 17 Worklist Smp#: 19  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0031160-019  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 11-Jan-2024 10:36:22 Calib Date: 23-Sep-2023 17:07:49  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230923-29777.b\F-HEXANE-2023-09-23-17-05-05.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1681

First Level Reviewer: P0IK Date: 11-Jan-2024 10:35:24

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
3 Benzene	0.875	0.874	0.001	721	0.1617	7M
4 Toluene	1.209	1.212	-0.003	454	0.0868	7M

**QC Flag Legend**

Processing Flags

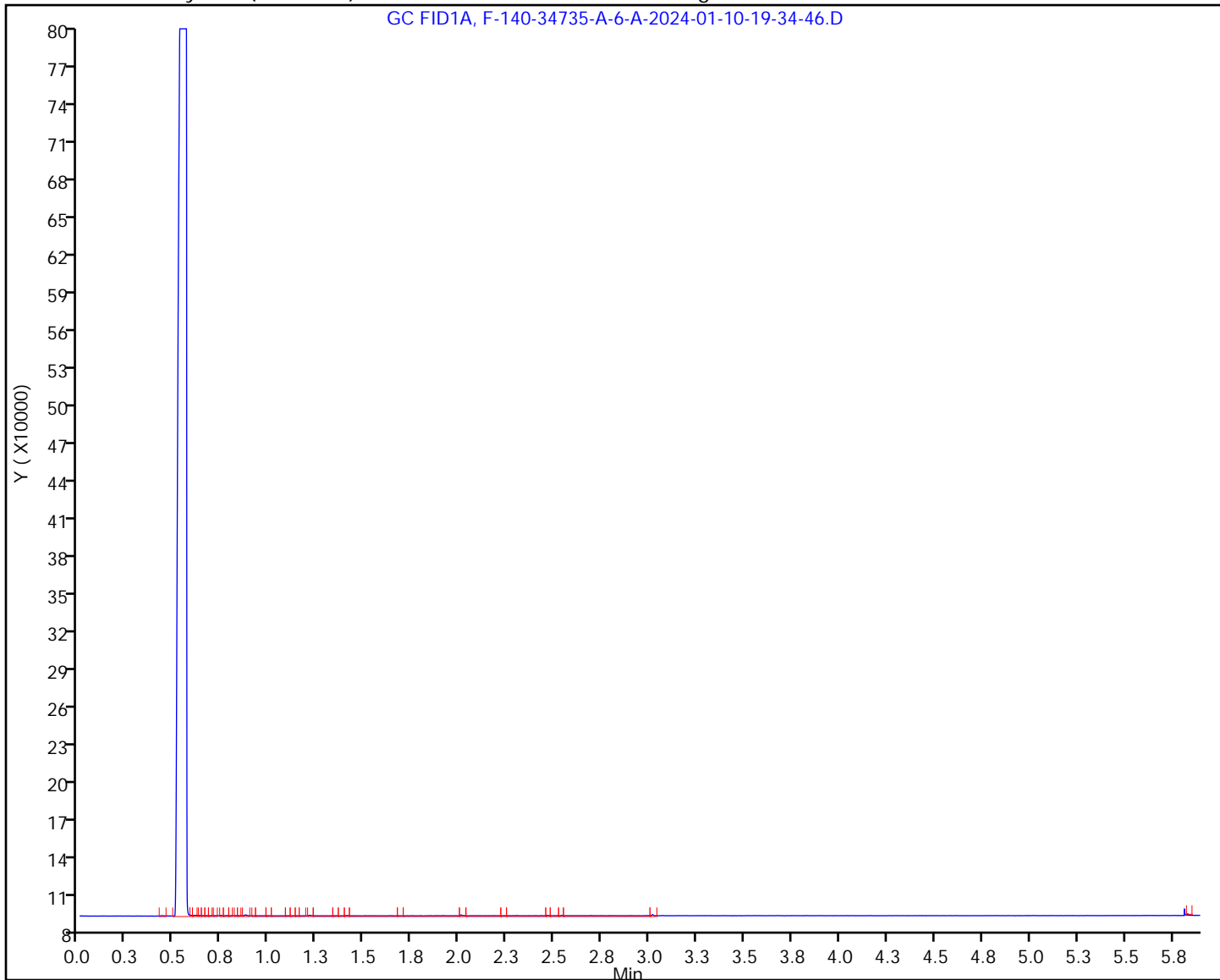
7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-6-A-2024-01-10-19-34-46.D  
Injection Date: 10-Jan-2024 19:37:32 Instrument ID: ALGC2  
Lims ID: 140-34735-A-6-A Lab Sample ID: 140-34735-6  
Client ID: VF18-4 9553202844,9533200079  
Operator ID: SYSTEM ALS Bottle#: 17 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Y Scaling: Method Defined: Set to Absolute Y Value



Eurofins Knoxville

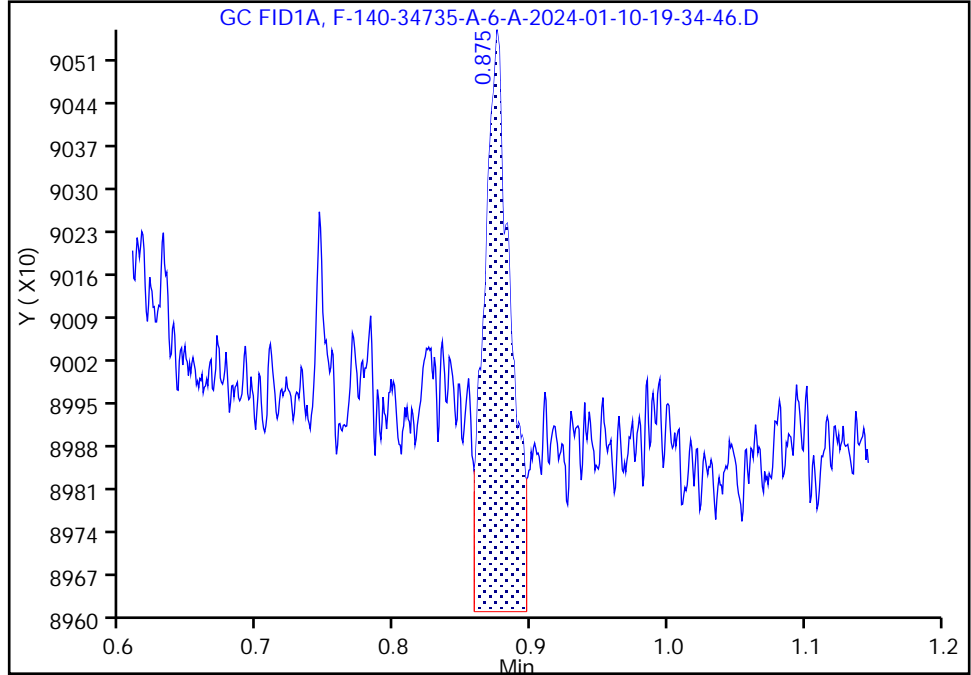
Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-6-A-2024-01-10-19-34-46.D  
Injection Date: 10-Jan-2024 19:37:32 Instrument ID: ALGC2  
Lims ID: 140-34735-A-6-A Lab Sample ID: 140-34735-6  
Client ID: VF18-4 9553202844,9533200079  
Operator ID: SYSTEM ALS Bottle#: 17 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Detector: GC FID1A

3 Benzene, CAS: 71-43-2

Signal: 1

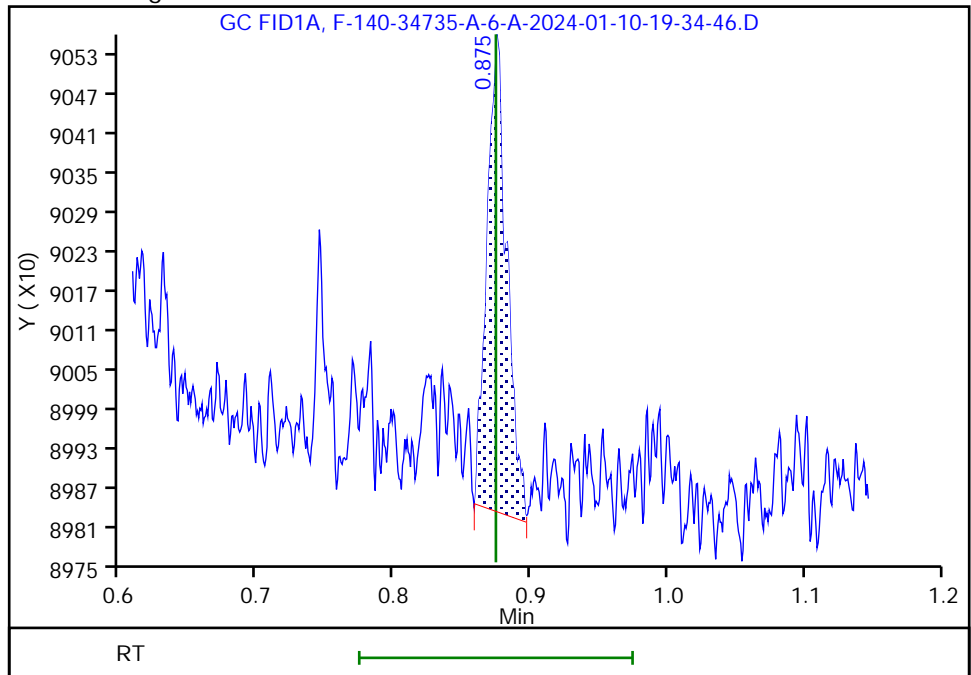
RT: 0.87  
Area: 1227  
Amount: 0.434110  
Amount Units: ug/ml

Processing Integration Results



RT: 0.87  
Area: 721  
Amount: 0.161664  
Amount Units: ug/ml

Manual Integration Results



Reviewer: POIK, 11-Jan-2024 10:35:11 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins Knoxville

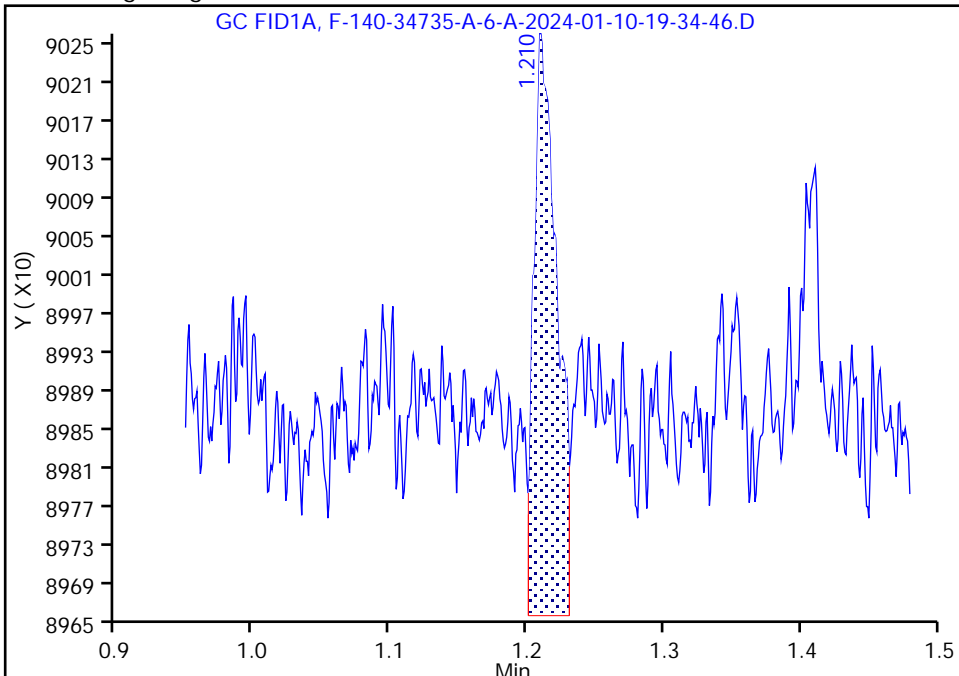
Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-6-A-2024-01-10-19-34-46.D  
Injection Date: 10-Jan-2024 19:37:32 Instrument ID: ALGC2  
Lims ID: 140-34735-A-6-A Lab Sample ID: 140-34735-6  
Client ID: VF18-4 9553202844,9533200079  
Operator ID: SYSTEM ALS Bottle#: 17 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Detector: GC FID1A

4 Toluene, CAS: 108-88-3

Signal: 1

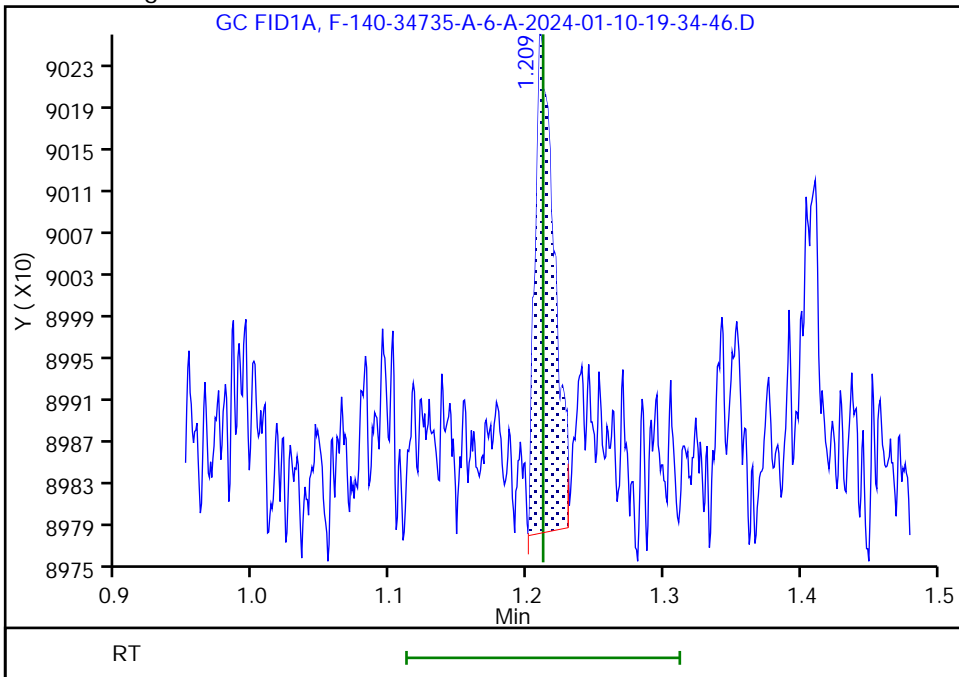
RT: 1.21  
Area: 690  
Amount: 0.214073  
Amount Units: ug/ml

Processing Integration Results



RT: 1.21  
Area: 454  
Amount: 0.086830  
Amount Units: ug/ml

Manual Integration Results



Reviewer: POIK, 11-Jan-2024 10:35:21 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM I  
AIR - GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
SDG No.: \_\_\_\_\_  
Client Sample ID: AP18-1 Lab Sample ID: 140-34735-7  
9553200144,9533200082  
Matrix: Air Lab File ID: F-140-34735-A-7-A-2024-01-10-1  
Analysis Method: EPA 18 Date Collected: 12/06/2023 00:00  
Sample wt/vol: 1(Sample) Date Analyzed: 01/10/2024 19:55  
Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
Soil Extract Vol.: \_\_\_\_\_ GC Column: DB HeavyWax ID: 0.1(mm)  
Purge Volume: \_\_\_\_\_ Heated Purge: (Y/N) \_\_\_\_\_ pH: \_\_\_\_\_  
% Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ Level: (low/med) Low  
Analysis Batch No.: 82282 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		10.0	5.50
108-88-3	Toluene	ND		10.0	3.00

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-7-A-2024-01-10-19-52-17.D  
 Lims ID: 140-34735-A-7-A  
 Client ID: AP18-1 9553200144,9533200082  
 Sample Type: Client  
 Inject. Date: 10-Jan-2024 19:55:03      ALS Bottle#: 19      Worklist Smp#: 21  
 Injection Vol: 1.0 ul      Dil. Factor: 1.0000  
 Sample Info: 140-0031160-021  
 Operator ID: SYSTEM      Instrument ID: ALGC2  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 11-Jan-2024 10:36:22      Calib Date: 23-Sep-2023 17:07:49  
 Integrator: Falcon  
 Quant Method: External Standard      Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230923-29777.b\F-HEXANE-2023-09-23-17-05-05.D  
 Column 1 : DB HeavyWax ( 0.10 mm)      Det: GC FID1A  
 Process Host: CTX1681

First Level Reviewer: P0IK      Date: 11-Jan-2024 10:35:33

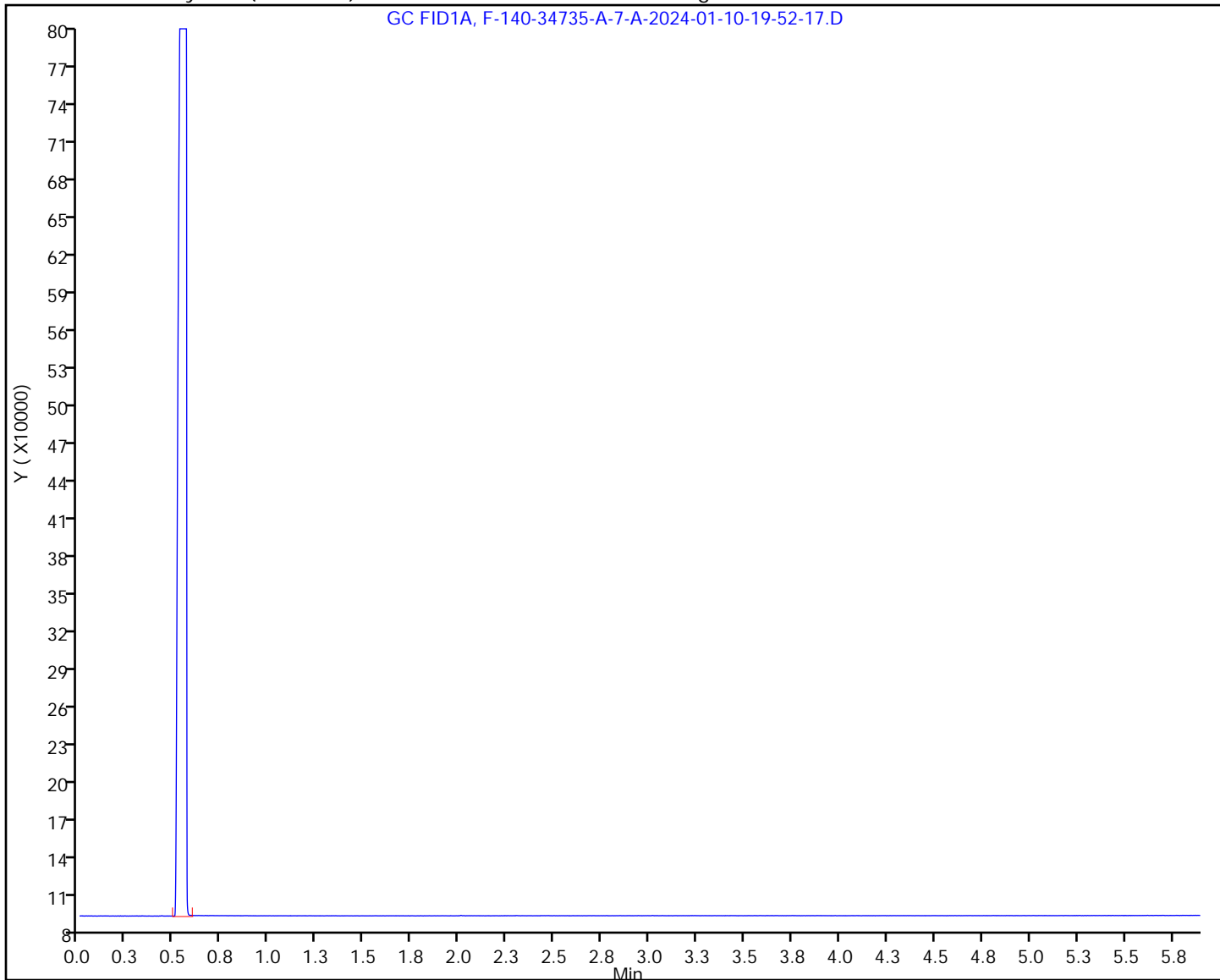
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
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3 Benzene		0.874			ND	
4 Toluene		1.212			ND	

**QC Flag Legend**  
Processing Flags

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-7-A-2024-01-10-19-52-17.D  
Injection Date: 10-Jan-2024 19:55:03 Instrument ID: ALGC2  
Lims ID: 140-34735-A-7-A Lab Sample ID: 140-34735-7  
Client ID: AP18-1 9553200144,9533200082  
Operator ID: SYSTEM ALS Bottle#: 19 Worklist Smp#: 21  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Y Scaling: Method Defined: Set to Absolute Y Value



FORM I  
AIR - GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
SDG No.: \_\_\_\_\_  
Client Sample ID: AP18-2 Lab Sample ID: 140-34735-8  
9553200021,9533200156  
Matrix: Air Lab File ID: F-140-34735-A-8-A-2024-01-10-2  
Analysis Method: EPA 18 Date Collected: 12/06/2023 00:00  
Sample wt/vol: 1(Sample) Date Analyzed: 01/10/2024 20:12  
Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
Soil Extract Vol.: \_\_\_\_\_ GC Column: DB HeavyWax ID: 0.1(mm)  
Purge Volume: \_\_\_\_\_ Heated Purge: (Y/N) \_\_\_\_\_ pH: \_\_\_\_\_  
% Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ Level: (low/med) Low  
Analysis Batch No.: 82282 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		10.0	5.50
108-88-3	Toluene	ND		10.0	3.00



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-8-A-2024-01-10-20-09-58.D  
 Lims ID: 140-34735-A-8-A  
 Client ID: AP18-2 9553200021,9533200156  
 Sample Type: Client  
 Inject. Date: 10-Jan-2024 20:12:46      ALS Bottle#: 21      Worklist Smp#: 23  
 Injection Vol: 1.0 ul      Dil. Factor: 1.0000  
 Sample Info: 140-0031160-023  
 Operator ID: SYSTEM      Instrument ID: ALGC2  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 11-Jan-2024 10:36:22      Calib Date: 23-Sep-2023 17:07:49  
 Integrator: Falcon  
 Quant Method: External Standard      Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230923-29777.b\F-HEXANE-2023-09-23-17-05-05.D  
 Column 1 : DB HeavyWax ( 0.10 mm)      Det: GC FID1A  
 Process Host: CTX1681

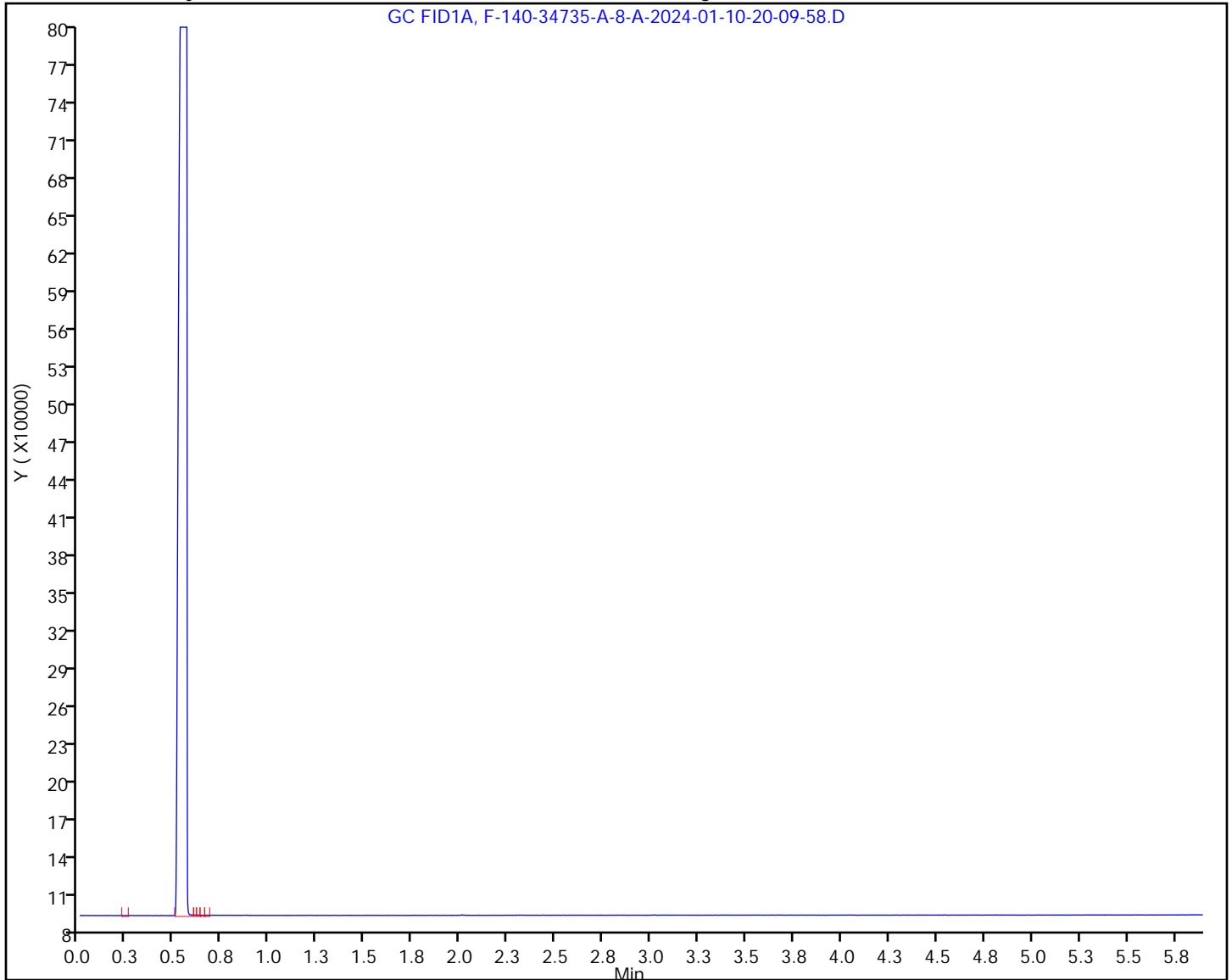
First Level Reviewer: P0IK      Date: 11-Jan-2024 10:35:39

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
3 Benzene		0.874			ND	
4 Toluene		1.212			ND	

**QC Flag Legend**  
Processing Flags

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-8-A-2024-01-10-20-09-58.D  
Injection Date: 10-Jan-2024 20:12:46 Instrument ID: ALGC2  
Lims ID: 140-34735-A-8-A Lab Sample ID: 140-34735-8  
Client ID: AP18-2 9553200021,9533200156  
Operator ID: SYSTEM ALS Bottle#: 21 Worklist Smp#: 23  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Y Scaling: Method Defined: Set to Absolute Y Value



FORM I  
AIR - GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
SDG No.: \_\_\_\_\_  
Client Sample ID: AP18-3 Lab Sample ID: 140-34735-9  
9553200040,9533200128  
Matrix: Air Lab File ID: F-140-34735-A-9-A-2024-01-10-2  
Analysis Method: EPA 18 Date Collected: 12/07/2023 00:00  
Sample wt/vol: 1(Sample) Date Analyzed: 01/10/2024 20:30  
Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
Soil Extract Vol.: \_\_\_\_\_ GC Column: DB HeavyWax ID: 0.1(mm)  
Purge Volume: \_\_\_\_\_ Heated Purge: (Y/N) \_\_\_\_\_ pH: \_\_\_\_\_  
% Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ Level: (low/med) Low  
Analysis Batch No.: 82282 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		10.0	5.50
108-88-3	Toluene	ND		10.0	3.00

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-9-A-2024-01-10-20-27-30.D  
 Lims ID: 140-34735-A-9-A  
 Client ID: AP18-3 9553200040,9533200128  
 Sample Type: Client  
 Inject. Date: 10-Jan-2024 20:30:17      ALS Bottle#: 23      Worklist Smp#: 25  
 Injection Vol: 1.0 ul      Dil. Factor: 1.0000  
 Sample Info: 140-0031160-025  
 Operator ID: SYSTEM      Instrument ID: ALGC2  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 11-Jan-2024 10:36:22      Calib Date: 23-Sep-2023 17:07:49  
 Integrator: Falcon  
 Quant Method: External Standard      Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230923-29777.b\F-HEXANE-2023-09-23-17-05-05.D  
 Column 1 : DB HeavyWax ( 0.10 mm)      Det: GC FID1A  
 Process Host: CTX1681

First Level Reviewer: P0IK      Date: 11-Jan-2024 10:35:47

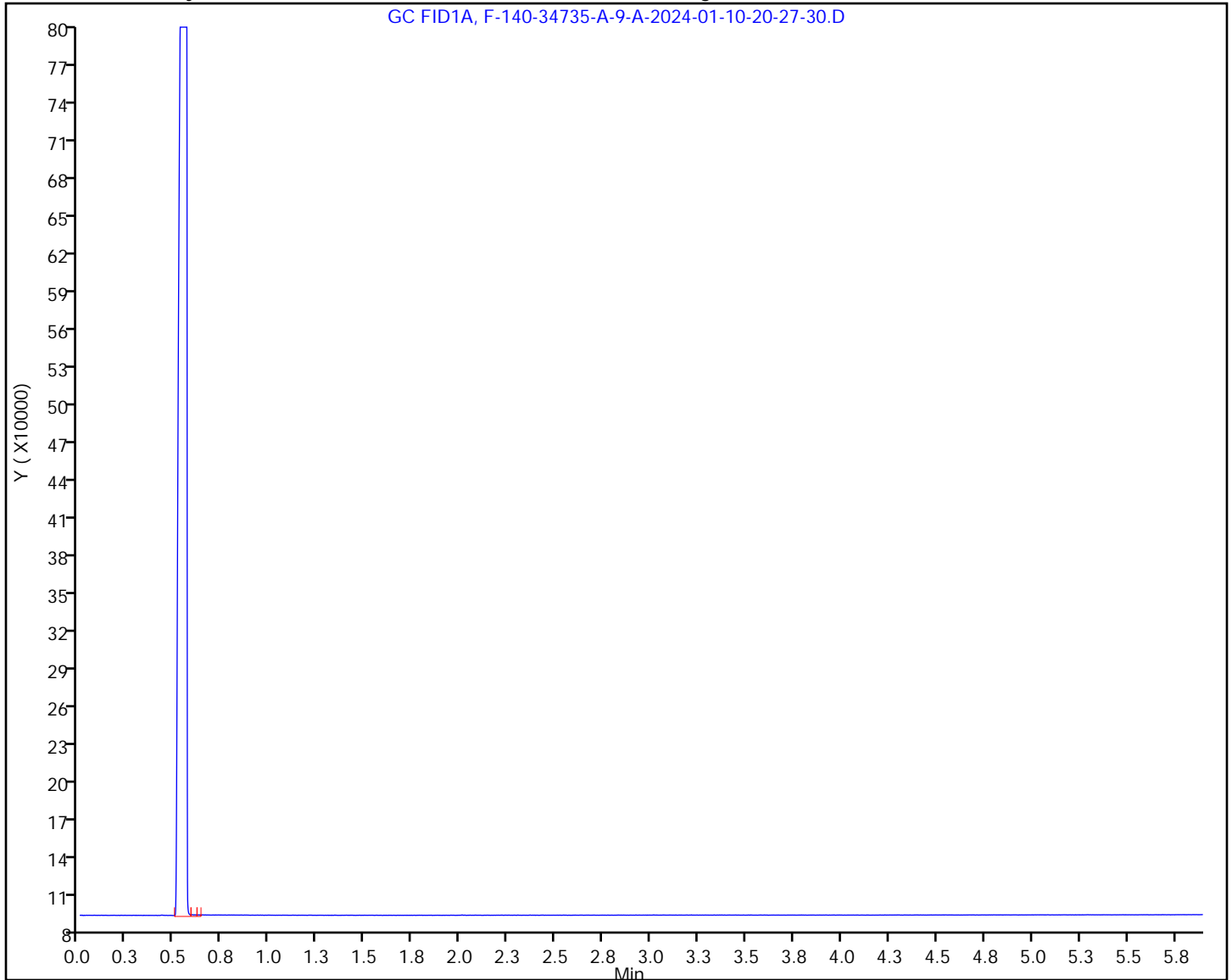
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
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3 Benzene		0.874			ND	
4 Toluene		1.212			ND	

**QC Flag Legend**  
Processing Flags

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-9-A-2024-01-10-20-27-30.D  
Injection Date: 10-Jan-2024 20:30:17 Instrument ID: ALGC2  
Lims ID: 140-34735-A-9-A Lab Sample ID: 140-34735-9  
Client ID: AP18-3 9553200040,9533200128  
Operator ID: SYSTEM ALS Bottle#: 23 Worklist Smp#: 25  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Y Scaling: Method Defined: Set to Absolute Y Value



FORM I  
AIR - GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
SDG No.: \_\_\_\_\_  
Client Sample ID: BLANK Lab Sample ID: 140-34735-10  
9553200047,9553200041  
Matrix: Air Lab File ID: F-140-34735-A-10-A-2024-01-10-  
Analysis Method: EPA 18 Date Collected: 12/06/2023 00:00  
Sample wt/vol: 1(Sample) Date Analyzed: 01/10/2024 20:47  
Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
Soil Extract Vol.: \_\_\_\_\_ GC Column: DB HeavyWax ID: 0.1(mm)  
Purge Volume: \_\_\_\_\_ Heated Purge: (Y/N) \_\_\_\_\_ pH: \_\_\_\_\_  
% Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ Level: (low/med) Low  
Analysis Batch No.: 82282 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		10.0	5.50
108-88-3	Toluene	ND		10.0	3.00

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-10-A-2024-01-10-20-45-02.D  
 Lims ID: 140-34735-A-10-A  
 Client ID: BLANK 9553200047,9553200041  
 Sample Type: Client  
 Inject. Date: 10-Jan-2024 20:47:48 ALS Bottle#: 25 Worklist Smp#: 27  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0031160-027  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 11-Jan-2024 10:36:22 Calib Date: 23-Sep-2023 17:07:49  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230923-29777.b\F-HEXANE-2023-09-23-17-05-05.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1681

First Level Reviewer: P0IK Date: 11-Jan-2024 10:35:53

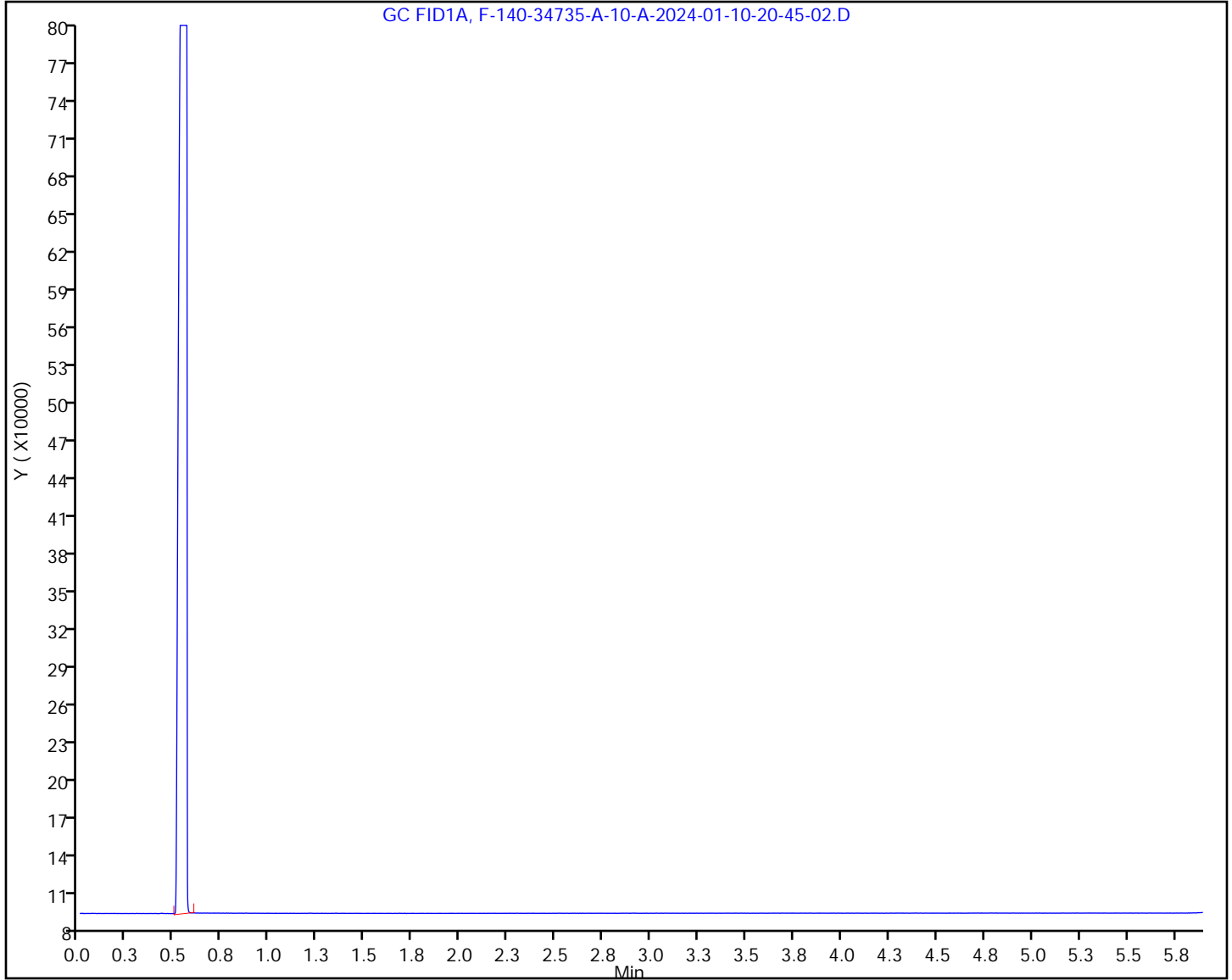
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
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3 Benzene		0.874			ND	
4 Toluene		1.212			ND	

**QC Flag Legend**  
Processing Flags

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-10-A-2024-01-10-20-45-02.D  
Injection Date: 10-Jan-2024 20:47:48 Instrument ID: ALGC2  
Lims ID: 140-34735-A-10-A Lab Sample ID: 140-34735-10  
Client ID: BLANK 9553200047,9553200041  
Operator ID: SYSTEM ALS Bottle#: 25 Worklist Smp#: 27  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Y Scaling: Method Defined: Set to Absolute Y Value





FORM I  
AIR - GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: A-1978 METHOD 18 Lab Sample ID: 140-34735-11  
 Matrix: Air Lab File ID: F-140-34735-A-11-A-2024-01-10-  
 Analysis Method: EPA 18 Date Collected: 11/30/2023 00:00  
 Sample wt/vol: 1(Sample) Date Analyzed: 01/10/2024 17:52  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB HeavyWax ID: 0.1(mm)  
 Purge Volume: \_\_\_\_\_ Heated Purge: (Y/N) \_\_\_\_\_ pH: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 82282 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		10.0	5.50
108-88-3	Toluene	ND		10.0	3.00

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-11-A-2024-01-10-17-49-16.D  
 Lims ID: 140-34735-A-11-A  
 Client ID: A-1978 METHOD 18  
 Sample Type: Client  
 Inject. Date: 10-Jan-2024 17:52:02 ALS Bottle#: 5 Worklist Smp#: 7  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0031160-007  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 11-Jan-2024 10:36:22 Calib Date: 23-Sep-2023 17:07:49  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230923-29777.b\F-HEXANE-2023-09-23-17-05-05.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1681

First Level Reviewer: P0IK Date: 11-Jan-2024 10:27:11

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
3 Benzene		0.874			ND	MU
4 Toluene		1.212			ND	

**QC Flag Legend**

Processing Flags

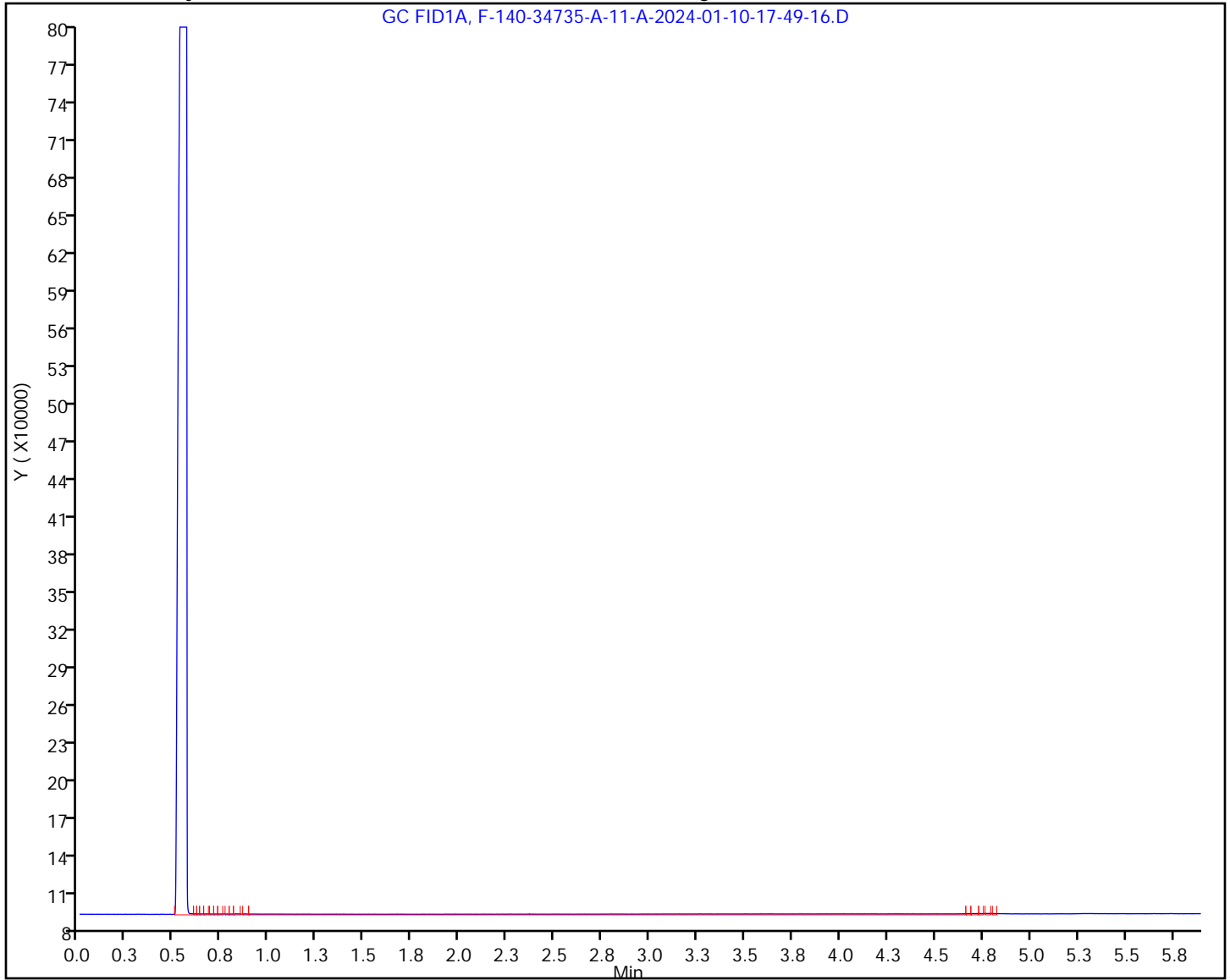
Review Flags

M - Manually Integrated

U - Marked Undetected

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-11-A-2024-01-10-17-49-16.D  
Injection Date: 10-Jan-2024 17:52:02 Instrument ID: ALGC2  
Lims ID: 140-34735-A-11-A Lab Sample ID: 140-34735-11  
Client ID: A-1978 METHOD 18  
Operator ID: SYSTEM ALS Bottle#: 5 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Y Scaling: Method Defined: Set to Absolute Y Value

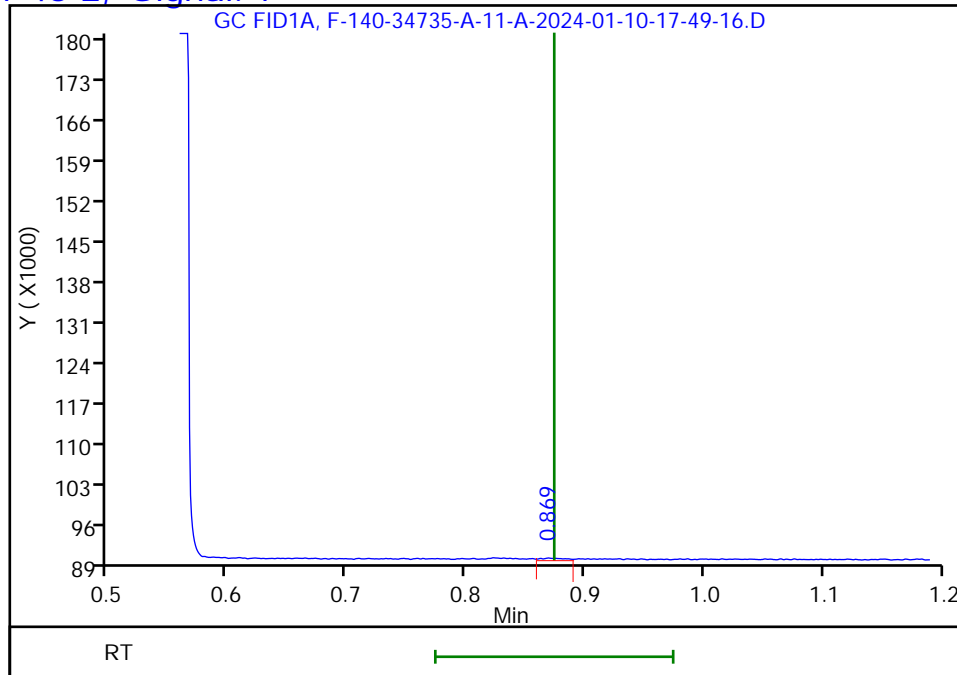


Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-11-A-2024-01-10-17-49-16.D  
Injection Date: 10-Jan-2024 17:52:02 Instrument ID: ALGC2  
Lims ID: 140-34735-A-11-A Lab Sample ID: 140-34735-11  
Client ID: A-1978 METHOD 18  
Operator ID: SYSTEM ALS Bottle#: 5 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax (0.10 mm) Detector GC FID1A

3 Benzene, CAS: 71-43-2, Signal: 1

RT: 0.87  
Response: 470  
Amount: 0.026518



Reviewer: P0IK, 11-Jan-2024 10:36:13

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I  
AIR - GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: A-1979 METHOD 18 (SPIKE @200UG) Lab Sample ID: 140-34735-12  
 Matrix: Air Lab File ID: F-140-34735-A-12-A-2024-01-10-  
 Analysis Method: EPA 18 Date Collected: 11/30/2023 00:00  
 Sample wt/vol: 1(Sample) Date Analyzed: 01/10/2024 18:00  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB HeavyWax ID: 0.1(mm)  
 Purge Volume: \_\_\_\_\_ Heated Purge: (Y/N) \_\_\_\_\_ pH: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 82282 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	191		10.0	5.50
108-88-3	Toluene	188		10.0	3.00

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-12-A-2024-01-10-17-58-04.D  
 Lims ID: 140-34735-A-12-A  
 Client ID: A-1979 METHOD 18 (SPIKE @200UG)  
 Sample Type: Client  
 Inject. Date: 10-Jan-2024 18:00:59      ALS Bottle#: 6      Worklist Smp#: 8  
 Injection Vol: 1.0 ul      Dil. Factor: 1.0000  
 Sample Info: 140-0031160-008  
 Operator ID: SYSTEM      Instrument ID: ALGC2  
  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 11-Jan-2024 10:36:22      Calib Date: 23-Sep-2023 17:07:49  
 Integrator: Falcon  
 Quant Method: External Standard      Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230923-29777.b\F-HEXANE-2023-09-23-17-05-05.D  
  
 Column 1 : DB HeavyWax ( 0.10 mm)      Det: GC FID1A  
 Process Host: CTX1681

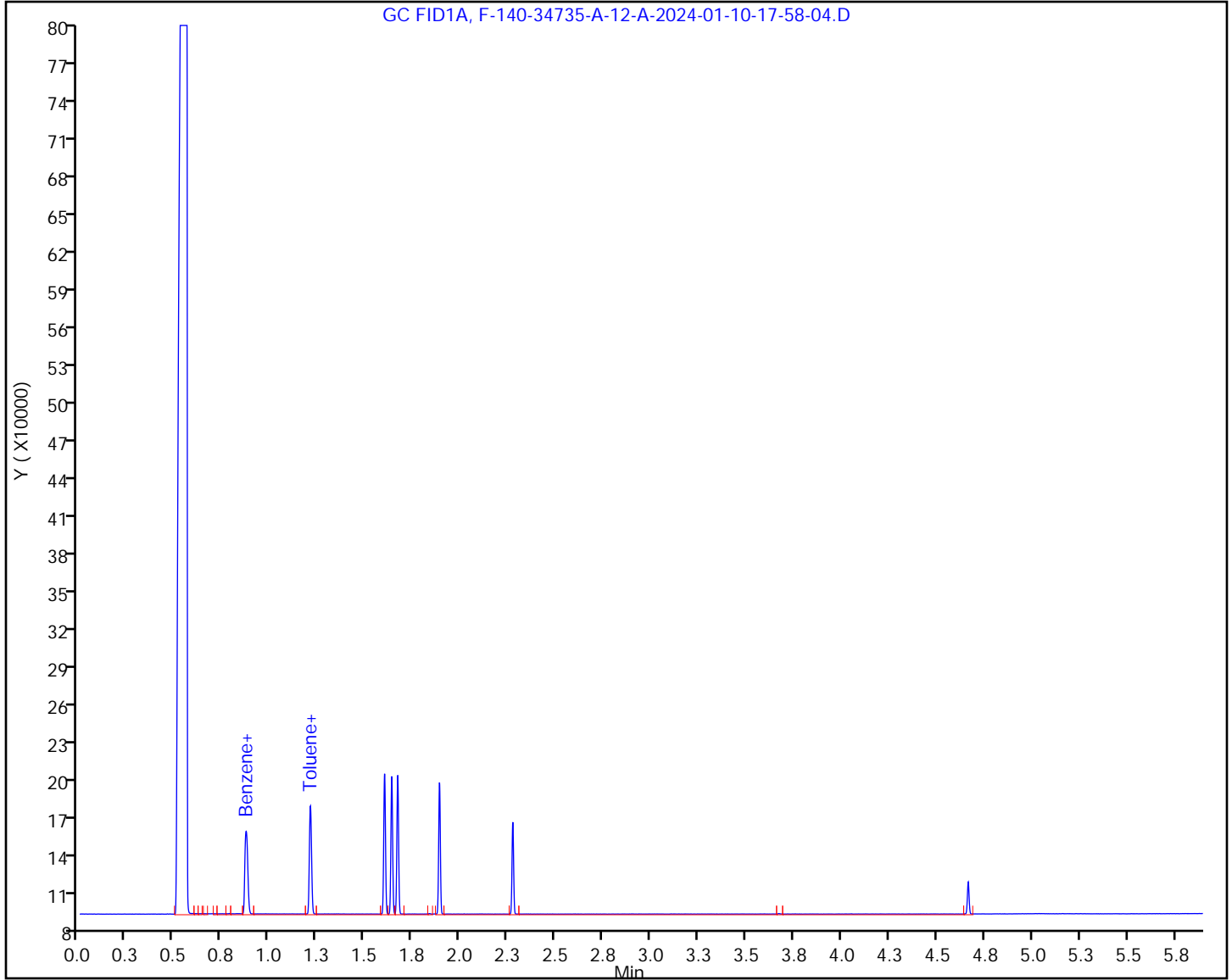
First Level Reviewer: P0IK      Date: 11-Jan-2024 10:33:32

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
3 Benzene	0.875	0.874	0.001	71482	38.3	
4 Toluene	1.212	1.212	0.000	70053	37.6	

**QC Flag Legend**  
Processing Flags

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-12-A-2024-01-10-17-58-04.D  
Injection Date: 10-Jan-2024 18:00:59 Instrument ID: ALGC2  
Lims ID: 140-34735-A-12-A Lab Sample ID: 140-34735-12  
Client ID: A-1979 METHOD 18 (SPIKE @200UG)  
Operator ID: SYSTEM ALS Bottle#: 6 Worklist Smp#: 8  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Y Scaling: Method Defined: Set to Absolute Y Value



FORM VI  
 AIR - GC VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA  
 RETENTION TIME SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34735-1 Analy Batch No.: 70548  
 SDG No.: \_\_\_\_\_  
 Instrument ID: ALGC2 GC Column: DB HeavyWax ID: 0.1(mm) Heated Purge: (Y/N) N  
 Calibration Start Date: 02/21/2023 18:09 Calibration End Date: 02/21/2023 21:08 Calibration ID: 4247

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-70548/4	F-IC L1-2023-02-21-18-06-27.D
Level 2	IC 140-70548/5	F-IC L1-2023-02-21-18-15-26.D
Level 3	IC 140-70548/6	F-IC L1-2023-02-21-18-24-23.D
Level 4	IC 140-70548/7	F-IC L2-2023-02-21-18-33-17.D
Level 5	IC 140-70548/8	F-IC L2-2023-02-21-18-42-17.D
Level 6	IC 140-70548/9	F-IC L2-2023-02-21-18-51-20.D
Level 7	IC 140-70548/10	F-IC L3-2023-02-21-19-00-12.D
Level 8	IC 140-70548/11	F-IC L3-2023-02-21-19-09-09.D
Level 9	IC 140-70548/12	F-IC L3-2023-02-21-19-18-06.D
Level 10	IC 140-70548/13	F-IC L4-2023-02-21-19-26-58.D
Level 11	IC 140-70548/14	F-IC L4-2023-02-21-19-35-55.D
Level 12	IC 140-70548/15	F-IC L4-2023-02-21-19-44-50.D
Level 13	IC 140-70548/16	F-IC L5-2023-02-21-19-53-57.D
Level 14	IC 140-70548/17	F-IC L5-2023-02-21-20-02-53.D
Level 15	IC 140-70548/18	F-IC L5-2023-02-21-20-11-47.D
Level 16	IC 140-70548/19	F-IC L6-2023-02-21-20-20-44.D
Level 17	IC 140-70548/20	F-IC L6-2023-02-21-20-29-41.D
Level 18	IC 140-70548/21	F-IC L6-2023-02-21-20-38-37.D
Level 19	IC 140-70548/22	F-IC L7-2023-02-21-20-47-33.D
Level 20	IC 140-70548/23	F-IC L7-2023-02-21-20-56-40.D
Level 21	IC 140-70548/24	F-IC L7-2023-02-21-21-05-36.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	RT WINDOW	AVG RT
	LVL 11 LVL 21	LVL 12	LVL 13	LVL 14	LVL 15	LVL 16	LVL 17	LVL 18	LVL 19	LVL 20		
Benzene	0.871 0.872 0.872	0.872 0.872	0.872 0.872	0.872 0.872	0.872 0.872	0.872 0.872	0.872 0.872	0.872 0.872	0.872 0.872	0.872 0.872	0.772 - 0.972	0.872
Toluene	1.212 1.212 1.215	1.211 1.212	1.211 1.212	1.212 1.212	1.212 1.212	1.211 1.213	1.212 1.212	1.211 1.213	1.211 1.216	1.212 1.215	1.112 - 1.312	1.212
Ethylbenzene	1.602 1.603 1.612	1.602 1.603	1.602 1.603	1.602 1.603	1.603 1.603	1.602 1.607	1.602 1.607	1.602 1.607	1.602 1.612	1.602 1.612	1.502 - 1.702	1.604
p-Xylene	1.640 1.641 1.651	1.640 1.641	1.640 1.641	1.640 1.641	1.641 1.642	1.640 1.646	1.640 1.646	1.640 1.646	1.640 1.651	1.641 1.651	1.541 - 1.741	1.643
m-Xylene	1.672 1.672 1.682	1.672 1.672	1.672 1.672	1.672 1.672	1.672 1.672	1.672 1.677	1.672 1.677	1.672 1.677	1.672 1.684	1.672 1.683	1.572 - 1.772	1.674



FORM VI  
 AIR - GC VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA  
 RETENTION TIME SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34735-1 Analy Batch No.: 70548

SDG No.: \_\_\_\_\_

Instrument ID: ALGC2 GC Column: DB HeavyWax ID: 0.1(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/21/2023 18:09 Calibration End Date: 02/21/2023 21:08 Calibration ID: 4247

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	RT WINDOW	AVG RT
	LVL 11 LVL 21	LVL 12	LVL 13	LVL 14	LVL 15	LVL 16	LVL 17	LVL 18	LVL 19	LVL 20		
o-Xylene	1.892 1.892 1.901	1.892 1.892	1.892 1.892	1.892 1.892	1.892 1.892	1.892 1.897	1.892 1.897	1.892 1.897	1.892 1.902	1.892 1.902	1.792 - 1.992	1.894
Styrene	2.277 2.277 2.285	2.277 2.277	2.277 2.278	2.277 2.277	2.277 2.278	2.277 2.282	2.277 2.281	2.277 2.281	2.277 2.286	2.277 2.285	2.177 - 2.377	2.279
Naphthalene	4.668 4.667 4.677	4.667 4.668	4.668 4.669	4.668 4.668	4.669 4.669	4.667 4.673	4.667 4.672	4.667 4.673	4.667 4.677	4.668 4.678	4.568 - 4.768	4.670

FORM VI  
AIR - GC VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA  
CURVE EVALUATION

Lab Name: Eurofins Knoxville Job No.: 140-34735-1 Analy Batch No.: 70548

SDG No.: \_\_\_\_\_

Instrument ID: ALGC2 GC Column: DB HeavyWax ID: 0.1(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/21/2023 18:09 Calibration End Date: 02/21/2023 21:08 Calibration ID: 4247

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-70548/4	F-IC L1-2023-02-21-18-06-27.D
Level 2	IC 140-70548/5	F-IC L1-2023-02-21-18-15-26.D
Level 3	IC 140-70548/6	F-IC L1-2023-02-21-18-24-23.D
Level 4	IC 140-70548/7	F-IC L2-2023-02-21-18-33-17.D
Level 5	IC 140-70548/8	F-IC L2-2023-02-21-18-42-17.D
Level 6	IC 140-70548/9	F-IC L2-2023-02-21-18-51-20.D
Level 7	IC 140-70548/10	F-IC L3-2023-02-21-19-00-12.D
Level 8	IC 140-70548/11	F-IC L3-2023-02-21-19-09-09.D
Level 9	IC 140-70548/12	F-IC L3-2023-02-21-19-18-06.D
Level 10	IC 140-70548/13	F-IC L4-2023-02-21-19-26-58.D
Level 11	IC 140-70548/14	F-IC L4-2023-02-21-19-35-55.D
Level 12	IC 140-70548/15	F-IC L4-2023-02-21-19-44-50.D
Level 13	IC 140-70548/16	F-IC L5-2023-02-21-19-53-57.D
Level 14	IC 140-70548/17	F-IC L5-2023-02-21-20-02-53.D
Level 15	IC 140-70548/18	F-IC L5-2023-02-21-20-11-47.D
Level 16	IC 140-70548/19	F-IC L6-2023-02-21-20-20-44.D
Level 17	IC 140-70548/20	F-IC L6-2023-02-21-20-29-41.D
Level 18	IC 140-70548/21	F-IC L6-2023-02-21-20-38-37.D
Level 19	IC 140-70548/22	F-IC L7-2023-02-21-20-47-33.D
Level 20	IC 140-70548/23	F-IC L7-2023-02-21-20-56-40.D
Level 21	IC 140-70548/24	F-IC L7-2023-02-21-21-05-36.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4		B	M1	M2								
Benzene	2137.3	2222.9	2293.4	1968.0	Lin1	420.74912	1857.2522						1.0000		0.9900	
	1933.2	1981.5	1957.1	1943.7												
	1972.2	1865.6	1867.1	1865.9		3	1									
	1843.8	1851.0	1851.0	1852.2												
	1831.6	1878.5	1867.4	1871.2												
	1842.3															

Note: The M1 coefficient is the same as Ave CF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI  
AIR - GC VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA  
CURVE EVALUATION

Lab Name: Eurofins Knoxville Job No.: 140-34735-1 Analy Batch No.: 70548

SDG No.: \_\_\_\_\_

Instrument ID: ALGC2 GC Column: DB HeavyWax ID: 0.1(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/21/2023 18:09 Calibration End Date: 02/21/2023 21:08 Calibration ID: 4247

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4		B	M1	M2								
Toluene	2159.7	2129.7	2132.7	1919.3	Lin2	292.95588 4	1854.7138 5						1.0000		0.9900	
	1926.1	1926.7	1949.3	1957.1												
	1930.3	1848.5	1854.4	1854.9												
	1826.3	1827.0	1831.6	1836.1												
	1813.8	1863.4	1853.2	1856.2												
	1827.4															
Ethylbenzene	2008.7	1991.7	1980.7	1918.1	Lin2	135.98361 3	1869.1705 0						0.9990		0.9900	
	1911.3	1891.3	1995.1	1984.4												
	1972.3	1855.7	1864.0	1860.7												
	1828.4	1830.5	1834.0	1841.7												
	1816.3	1867.3	1856.3	1858.7												
	1829.5															
p-Xylene	2012.8	1995.8	1987.8	1888.5	Lin2	150.90851 3	1857.9361 4						0.9990		0.9900	
	1905.7	1876.9	1995.4	1974.0												
	1960.5	1845.9	1854.3	1852.2												
	1816.6	1820.0	1823.9	1831.8												
	1806.5	1857.0	1846.4	1848.5												
	1819.9															
m-Xylene	2159.1	2016.1	2024.1	1917.5	Lin2	221.96578 9	1854.1652 2						0.9990		0.9900	
	1908.3	1872.1	1983.3	1984.1												
	1966.6	1842.9	1853.7	1852.0												
	1814.8	1816.6	1821.5	1828.9												
	1803.6	1854.0	1843.3	1845.6												
	1816.8															
o-Xylene	2065.2	1998.2	2050.2	1941.7	Lin2	187.64421 4	1864.2108 6						0.9990		0.9900	
	1906.9	1921.3	1999.9	1980.7												
	1984.3	1853.7	1860.5	1861.1												
	1817.5	1822.4	1826.6	1831.8												
	1806.6	1857.0	1846.1	1848.3												
	1819.4															

Note: The M1 coefficient is the same as Ave CF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI  
 AIR - GC VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA  
 CURVE EVALUATION

Lab Name: Eurofins Knoxville Job No.: 140-34735-1 Analy Batch No.: 70548

SDG No.: \_\_\_\_\_

Instrument ID: ALGC2 GC Column: DB HeavyWax ID: 0.1(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/21/2023 18:09 Calibration End Date: 02/21/2023 21:08 Calibration ID: 4247

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4		B	M1	M2								
Styrene	2117.4	2114.4	2076.4	1996.6	Lin2	225.28920	1896.1592						0.9990		0.9900	
	1985.2	1981.4	2013.6	2029.4												
	2018.1	1898.4	1904.9	1904.8												
	1839.5	1845.0	1848.9	1855.2												
	1829.2	1880.3	1869.0	1871.2												
	1842.1															
Naphthalene	2094.8	2178.9	2193.9	1999.0	Lin2	223.53755	1947.9028						0.9980		0.9900	
	2004.4	1996.6	2127.6	2134.1												
	2107.9	1939.4	1952.4	1946.2												
	1894.6	1895.7	1899.4	1903.1												
	1879.7	1931.1	1914.9	1920.2												
	1887.6															

Note: The M1 coefficient is the same as Ave CF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI  
AIR - GC VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA  
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Knoxville Job No.: 140-34735-1 Analy Batch No.: 70548

SDG No.: \_\_\_\_\_

Instrument ID: ALGC2 GC Column: DB HeavyWa ID: 0.1(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/21/2023 18:09 Calibration End Date: 02/21/2023 21:08 Calibration ID: 4247

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-70548/4	F-IC L1-2023-02-21-18-06-27.D
Level 2	IC 140-70548/5	F-IC L1-2023-02-21-18-15-26.D
Level 3	IC 140-70548/6	F-IC L1-2023-02-21-18-24-23.D
Level 4	IC 140-70548/7	F-IC L2-2023-02-21-18-33-17.D
Level 5	IC 140-70548/8	F-IC L2-2023-02-21-18-42-17.D
Level 6	IC 140-70548/9	F-IC L2-2023-02-21-18-51-20.D
Level 7	IC 140-70548/10	F-IC L3-2023-02-21-19-00-12.D
Level 8	IC 140-70548/11	F-IC L3-2023-02-21-19-09-09.D
Level 9	IC 140-70548/12	F-IC L3-2023-02-21-19-18-06.D
Level 10	IC 140-70548/13	F-IC L4-2023-02-21-19-26-58.D
Level 11	IC 140-70548/14	F-IC L4-2023-02-21-19-35-55.D
Level 12	IC 140-70548/15	F-IC L4-2023-02-21-19-44-50.D
Level 13	IC 140-70548/16	F-IC L5-2023-02-21-19-53-57.D
Level 14	IC 140-70548/17	F-IC L5-2023-02-21-20-02-53.D
Level 15	IC 140-70548/18	F-IC L5-2023-02-21-20-11-47.D
Level 16	IC 140-70548/19	F-IC L6-2023-02-21-20-20-44.D
Level 17	IC 140-70548/20	F-IC L6-2023-02-21-20-29-41.D
Level 18	IC 140-70548/21	F-IC L6-2023-02-21-20-38-37.D
Level 19	IC 140-70548/22	F-IC L7-2023-02-21-20-47-33.D
Level 20	IC 140-70548/23	F-IC L7-2023-02-21-20-56-40.D
Level 21	IC 140-70548/24	F-IC L7-2023-02-21-21-05-36.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6 LVL 11 LVL 16 LVL 21	LVL 2 LVL 7 LVL 12 LVL 17	LVL 3 LVL 8 LVL 13 LVL 18	LVL 4 LVL 9 LVL 14 LVL 19	LVL 5 LVL 10 LVL 15 LVL 20	LVL 1 LVL 6 LVL 11 LVL 16 LVL 21	LVL 2 LVL 7 LVL 12 LVL 17	LVL 3 LVL 8 LVL 13 LVL 18	LVL 4 LVL 9 LVL 14 LVL 19	LVL 5 LVL 10 LVL 15 LVL 20
Benzene	Lin1	2122	2207	2277	9770	9597	0.993	0.993	0.993	4.96	4.96
		9837	19431	19298	19581	92616	4.96	9.93	9.93	9.93	49.6
		92691	92630	183069	183784	183782	49.6	49.6	99.3	99.3	99.3
		919512	909247	932531	1872617	1876404	496	496	496	1003	1003
		1847459					1003				
Toluene	Lin2	2154	2124	2127	9571	9605	0.997	0.997	0.997	4.99	4.99
		9608	19441	19519	19252	92181	4.99	9.97	9.97	9.97	49.9
		92473	92497	182144	182215	182674	49.9	49.9	99.7	99.7	99.7
		915598	904512	929223	1866721	1869799	499	499	499	1007	1007
		1840788					1007				
Ethylbenzene	Lin2	2008	1991	1980	9587	9553	1.000	1.000	1.000	5.00	5.00
		9453	19944	19837	19716	92751	5.00	10.00	10.00	10.00	50.0
		93168	93003	182772	182987	183339	50.0	50.0	100.0	100.0	100.0
		920526	907838	933306	1874234	1876614	500	500	500	1010	1010

FORM VI  
AIR - GC VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA  
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Knoxville Job No.: 140-34735-1 Analy Batch No.: 70548

SDG No.: \_\_\_\_\_

Instrument ID: ALGC2 GC Column: DB HeavyWa ID: 0.1(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/21/2023 18:09 Calibration End Date: 02/21/2023 21:08 Calibration ID: 4247

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)					
		LVL 1 LVL 6 LVL 11 LVL 16 LVL 21	LVL 2 LVL 7 LVL 12 LVL 17	LVL 3 LVL 8 LVL 13 LVL 18	LVL 4 LVL 9 LVL 14 LVL 19	LVL 5 LVL 10 LVL 15 LVL 20	LVL 1 LVL 6 LVL 11 LVL 16 LVL 21	LVL 2 LVL 7 LVL 12 LVL 17	LVL 3 LVL 8 LVL 13 LVL 18	LVL 4 LVL 9 LVL 14 LVL 19	LVL 5 LVL 10 LVL 15 LVL 20	
		1847194					1010					
p-Xylene	Lin2	2012 9381 92681 915560 1837372	1995 19946 92577 902911	1987 19733 181588 928125	9439 19598 181932 1864176	9525 92260 182323 1866247	1.000 5.00 50.0 500 1010	1.000 10.00 50.0 500	1.000 10.00 100.0 500	5.00 10.00 100.0 1010	5.00 50.0 100.0 1010	
m-Xylene	Lin2	2159 9360 92681 914375 1834815	2016 19832 92596 901746	2024 19840 181471 926937	9587 19665 181647 1861620	9541 92140 182140 1863894	1.000 5.00 50.0 500 1010	1.000 10.00 50.0 500	1.000 10.00 100.0 500	5.00 10.00 100.0 1010	5.00 50.0 100.0 1010	
o-Xylene	Lin2	2064 9601 92973 915348 1836496	1997 19987 92999 902795	2049 19796 181649 927953	9703 19832 182131 1863441	9529 92634 182552 1865659	0.999 5.00 50.0 500 1009	0.999 9.99 50.0 500	0.999 9.99 99.9 500	5.00 9.99 99.9 1009	5.00 50.0 99.9 1009	
Styrene	Lin2	2116 9900 95182 926992 1859253	2113 20122 95174 913972	2075 20280 183825 939512	9976 20167 184370 1886391	9919 94855 184762 1888610	0.999 5.00 50.0 500 1009	0.999 9.99 50.0 500	0.999 9.99 99.9 500	5.00 9.99 99.9 1009	5.00 50.0 99.9 1009	
Naphthalene	Lin2	2091 9965 97442 949828 1903064	2175 21238 97134 938160	2190 21303 189119 963796	9977 21041 189233 1930520	10004 96795 189598 1935901	0.998 4.99 49.9 499 1008	0.998 9.98 49.9 499	0.998 9.98 99.8 499	4.99 9.98 99.8 1008	4.99 49.9 99.8 1008	

Curve Type Legend:

Lin1 = Linear 1/conc  
Lin2 = Linear 1/conc^2

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L1-2023-02-21-18-06-27.D  
 Lims ID: IC L1  
 Client ID:  
 Sample Type: IC Calib Level: 1  
 Inject. Date: 21-Feb-2023 18:09:25 ALS Bottle#: 1 Worklist Smp#: 4  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0027105-004  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Sublist: chrom-GC2M18wax\*sub5  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 23-Feb-2023 16:18:17 Calib Date: 21-Feb-2023 21:08:31  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L7-2023-02-21-21-05-36.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1625

First Level Reviewer: P0IK Date: 22-Feb-2023 10:43:01

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.871	0.872	-0.001	2122	0.99	0.9160	M
4 Toluene	1.212	1.212	0.000	2154	1.00	1.00	
5 Ethylbenzene	1.602	1.602	0.000	2008	1.00	1.00	M
7 p-Xylene	1.640	1.641	-0.001	2012	1.00	1.00	M
6 m-Xylene	1.672	1.672	0.000	2159	1.00	1.04	M
8 o-Xylene	1.892	1.892	0.000	2064	1.00	1.01	
9 Styrene	2.277	2.277	0.000	2116	1.00	1.00	
11 Naphthalene	4.668	4.668	0.000	2091	1.00	0.9587	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

95CVBTEX\_00024 Amount Added: 20.00 Units: uL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L1-2023-02-21-18-06-27.D

Injection Date: 21-Feb-2023 18:09:25

Instrument ID: ALGC2

Lims ID: IC L1

Client ID:

Operator ID: SYSTEM

ALS Bottle#: 1

Worklist Smp#: 4

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

Method: GC2M18wax

Limit Group: GCM - EPA18\_Extract - CS2 -ICAL

Column: DB HeavyWax (0.10 mm)

Y Scaling: Method Defined: Set to Absolute Y Value





Eurofins Knoxville

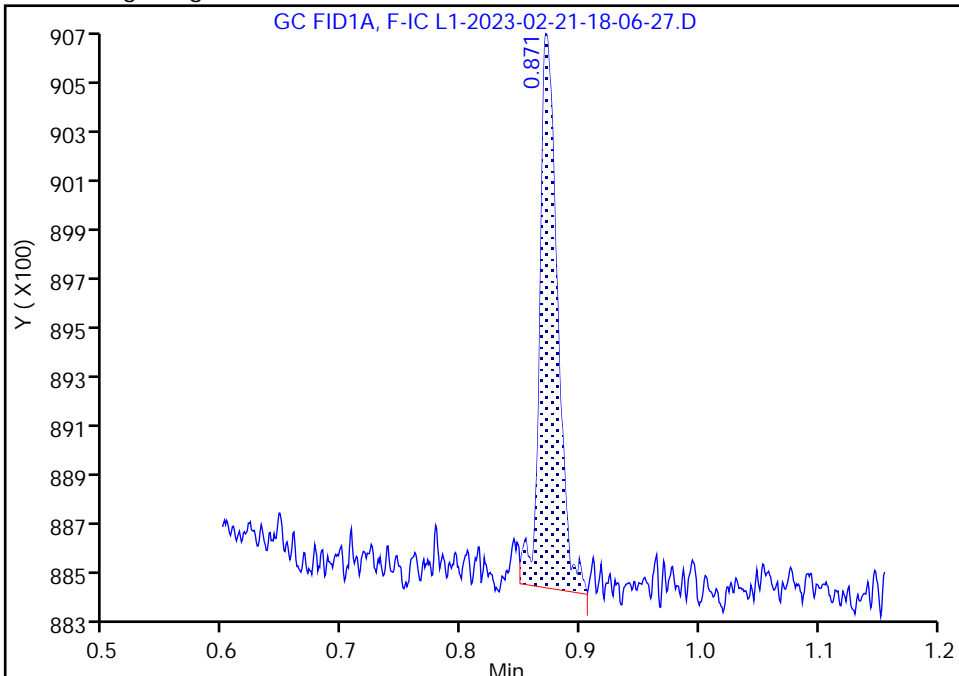
Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L1-2023-02-21-18-06-27.D  
Injection Date: 21-Feb-2023 18:09:25 Instrument ID: ALGC2  
Lims ID: IC L1  
Client ID:  
Operator ID: SYSTEM ALS Bottle#: 1 Worklist Smp#: 4  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Detector: GC FID1A

3 Benzene, CAS: 71-43-2

Signal: 1

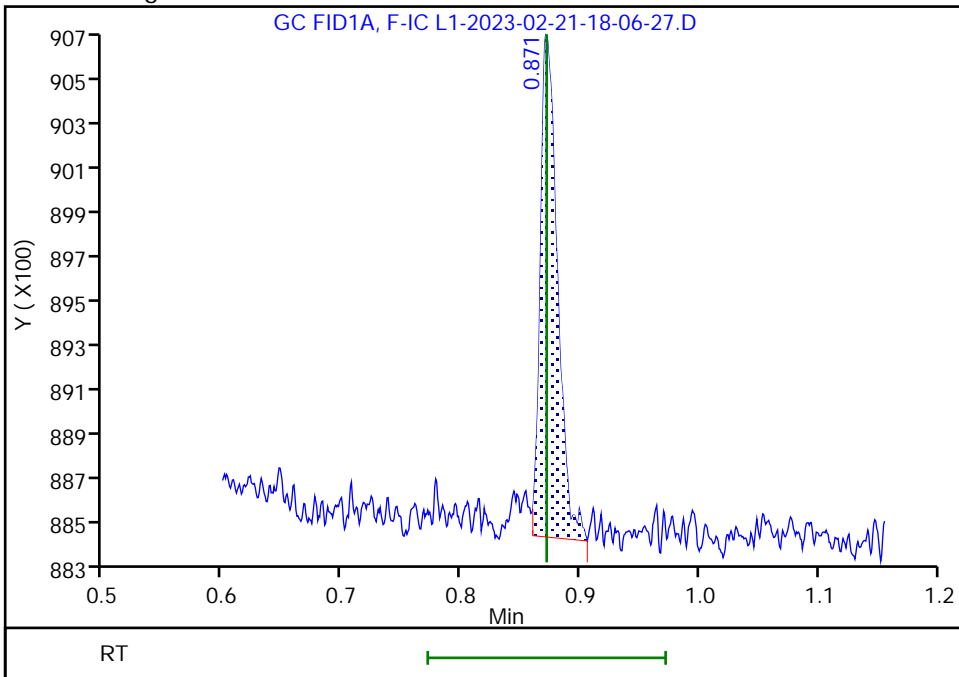
RT: 0.87  
Area: 2200  
Amount: 0.947344  
Amount Units: ug/ml

Processing Integration Results



RT: 0.87  
Area: 2122  
Amount: 0.916004  
Amount Units: ug/ml

Manual Integration Results



Reviewer: POIK, 22-Feb-2023 10:43:31  
Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Knoxville

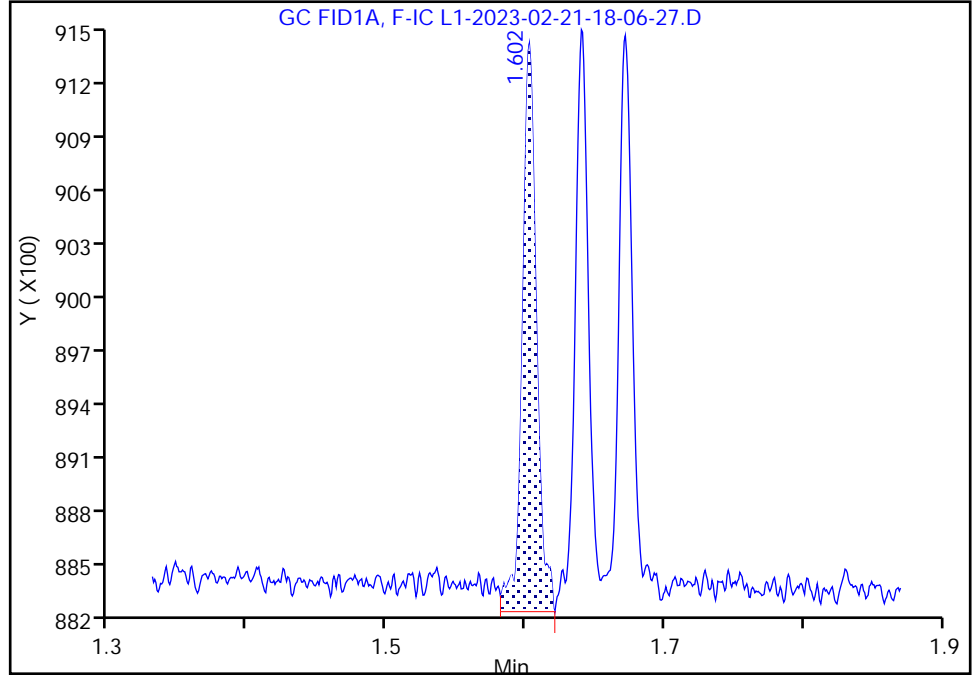
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Injection Date: 21-Feb-2023 18:09:25 Instrument ID: ALGC2  
Lims ID: IC L1  
Client ID:  
Operator ID: SYSTEM ALS Bottle#: 1 Worklist Smp#: 4  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Detector: GC FID1A

5 Ethylbenzene, CAS: 100-41-4

Signal: 1

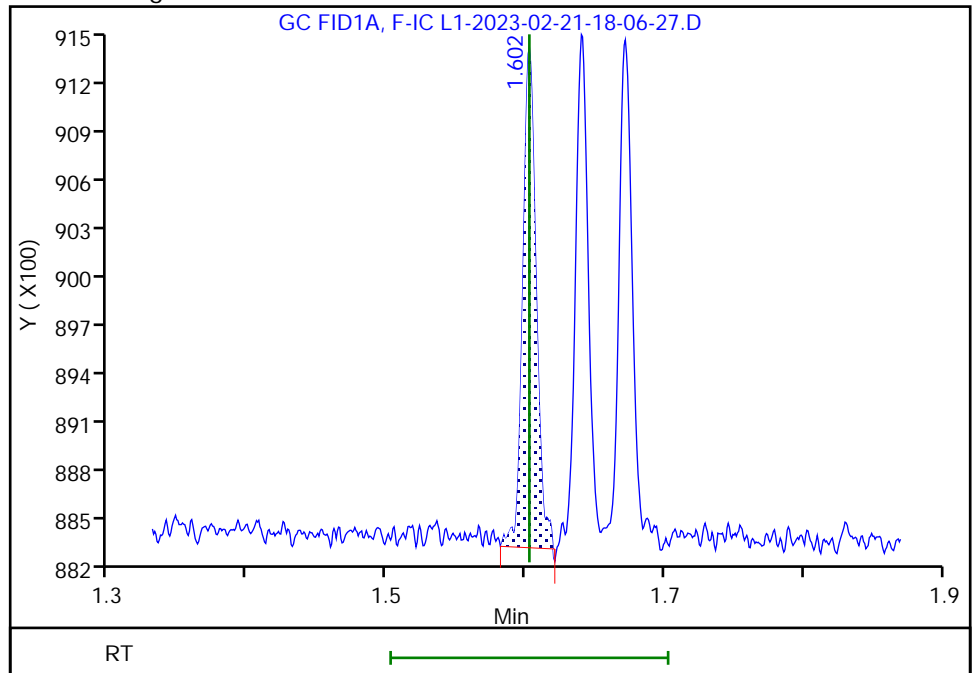
RT: 1.60  
Area: 2189  
Amount: 1.032350  
Amount Units: ug/ml

Processing Integration Results



RT: 1.60  
Area: 2008  
Amount: 1.001523  
Amount Units: ug/ml

Manual Integration Results



Reviewer: P0IK, 22-Feb-2023 10:45:23  
Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Knoxville

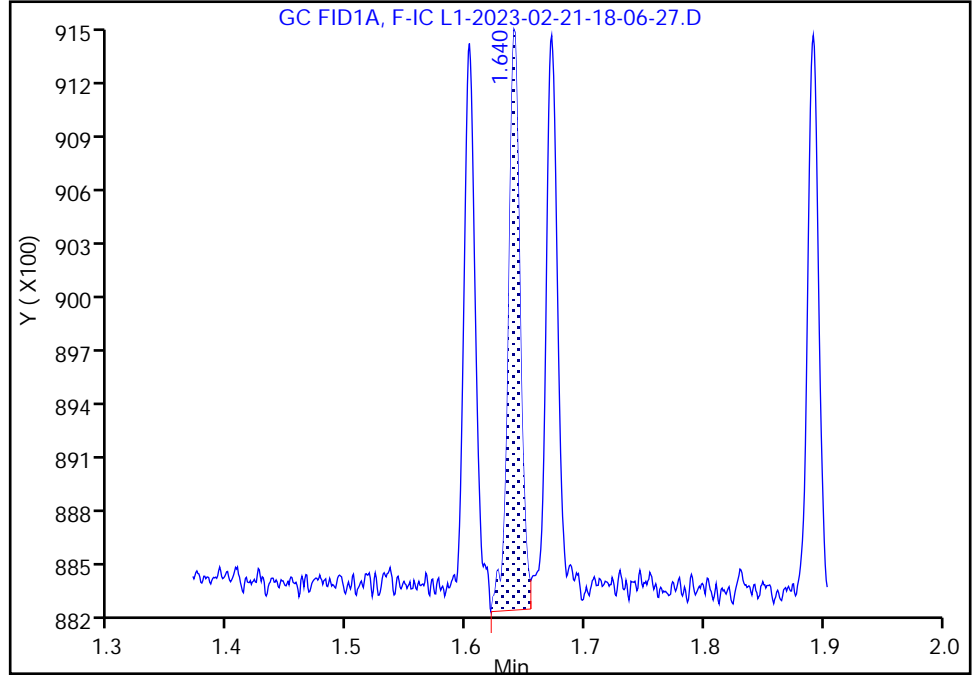
Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L1-2023-02-21-18-06-27.D  
Injection Date: 21-Feb-2023 18:09:25 Instrument ID: ALGC2  
Lims ID: IC L1  
Client ID:  
Operator ID: SYSTEM ALS Bottle#: 1 Worklist Smp#: 4  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Detector: GC FID1A

7 p-Xylene, CAS: 106-42-3

Signal: 1

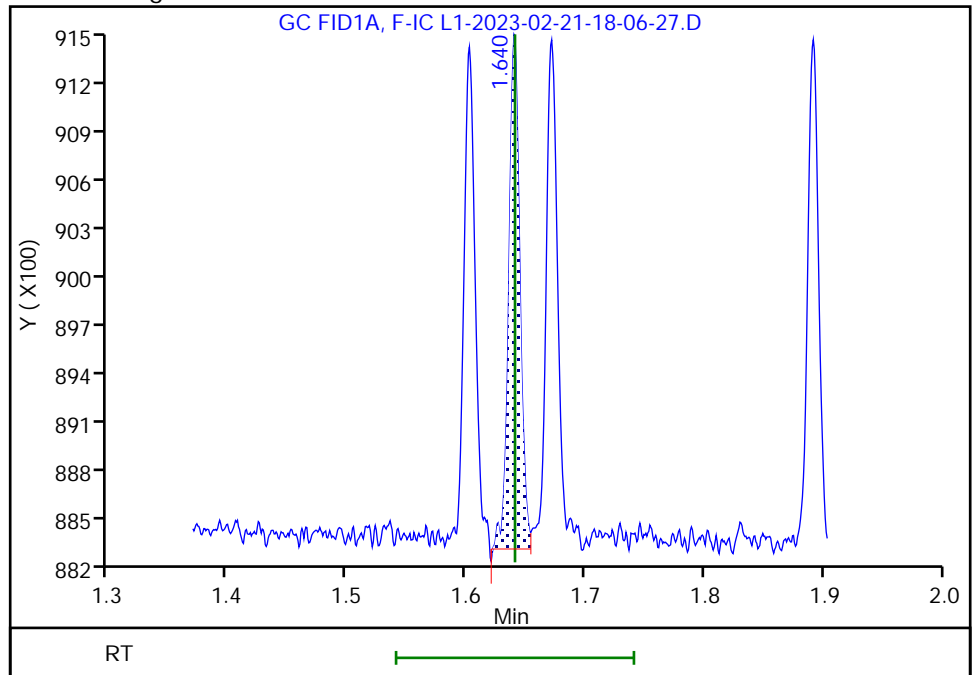
RT: 1.64  
Area: 2137  
Amount: 1.027290  
Amount Units: ug/ml

Processing Integration Results



RT: 1.64  
Area: 2012  
Amount: 1.001698  
Amount Units: ug/ml

Manual Integration Results



Reviewer: P0IK, 22-Feb-2023 10:45:23  
Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Knoxville

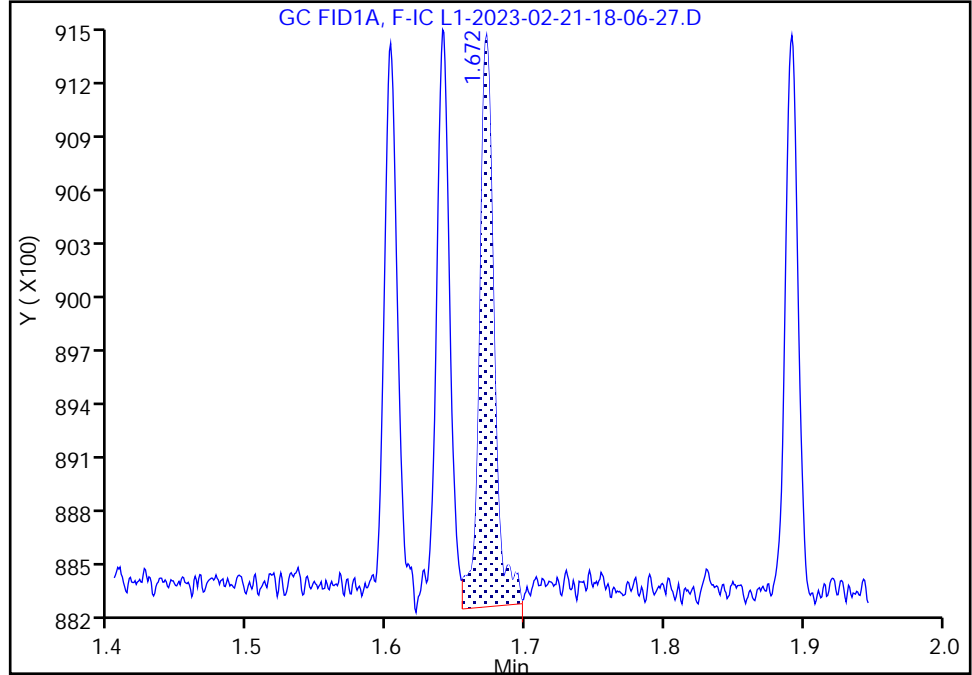
Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L1-2023-02-21-18-06-27.D  
Injection Date: 21-Feb-2023 18:09:25 Instrument ID: ALGC2  
Lims ID: IC L1  
Client ID:  
Operator ID: SYSTEM ALS Bottle#: 1 Worklist Smp#: 4  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Detector: GC FID1A

6 m-Xylene, CAS: 108-38-3

Signal: 1

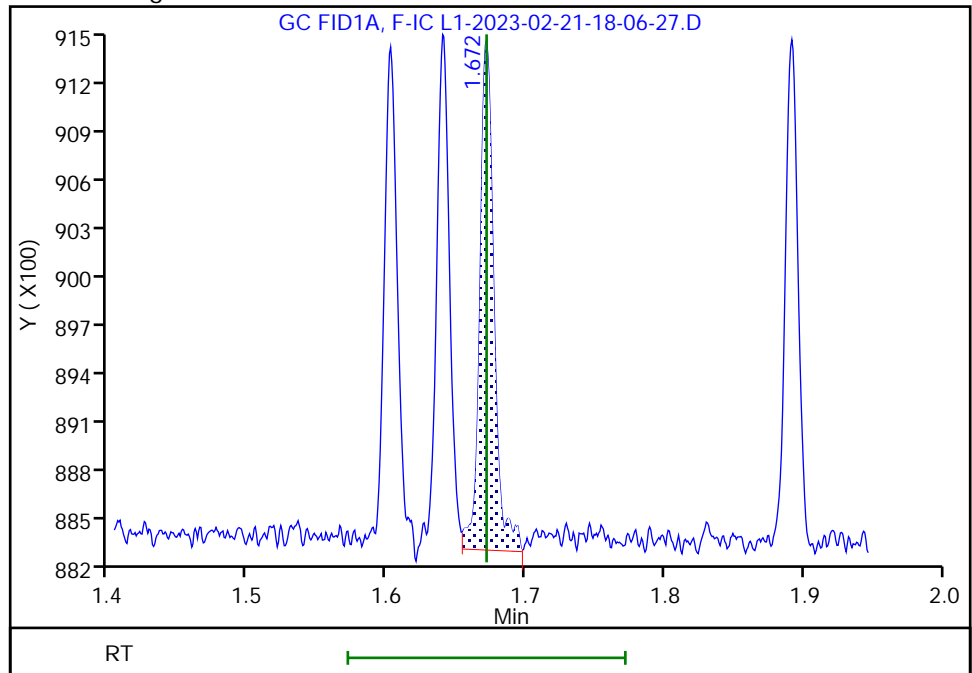
RT: 1.67  
Area: 2236  
Amount: 1.049518  
Amount Units: ug/ml

Processing Integration Results



RT: 1.67  
Area: 2159  
Amount: 1.044693  
Amount Units: ug/ml

Manual Integration Results



Reviewer: P0IK, 22-Feb-2023 10:45:23  
Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L1-2023-02-21-18-15-26.D  
 Lims ID: IC L1  
 Client ID:  
 Sample Type: IC Calib Level: 1  
 Inject. Date: 21-Feb-2023 18:18:20 ALS Bottle#: 1 Worklist Smp#: 5  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0027105-005  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Sublist: chrom-GC2M18wax\*sub5  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 23-Feb-2023 16:18:18 Calib Date: 21-Feb-2023 21:08:31  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L7-2023-02-21-21-05-36.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1625

First Level Reviewer: P0IK Date: 22-Feb-2023 10:43:59

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.872	0.872	0.000	2207	0.99	0.9618	
4 Toluene	1.211	1.212	-0.001	2124	1.00	0.9872	M
5 Ethylbenzene	1.602	1.602	0.000	1991	1.00	0.99	M
7 p-Xylene	1.640	1.641	-0.001	1995	1.00	0.99	M
6 m-Xylene	1.672	1.672	0.000	2016	1.00	0.9676	M
8 o-Xylene	1.892	1.892	0.000	1997	1.00	0.9706	M
9 Styrene	2.277	2.277	0.000	2113	1.00	1.00	
11 Naphthalene	4.667	4.668	-0.001	2175	1.00	1.00	

QC Flag Legend

Processing Flags

Review Flags

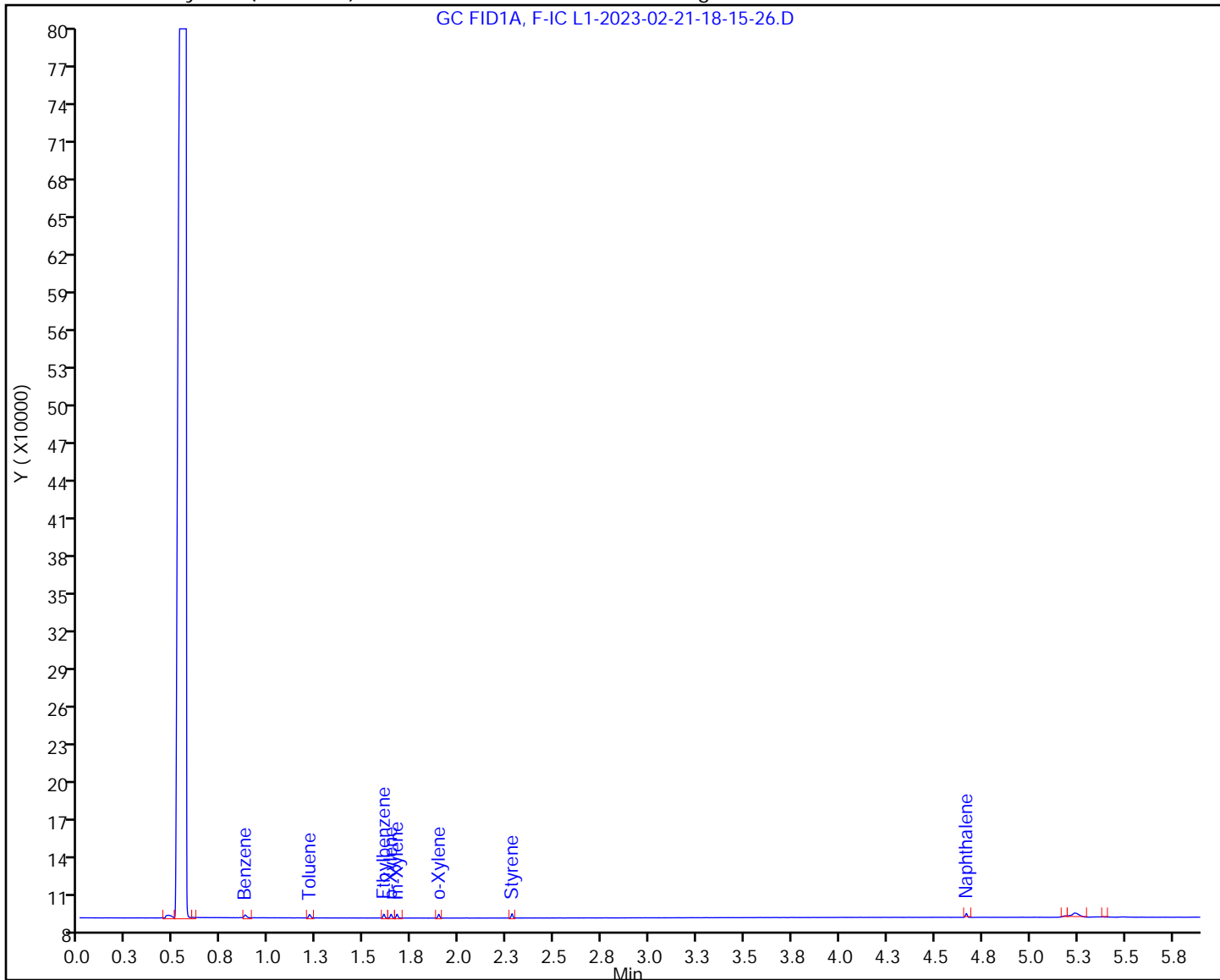
M - Manually Integrated

Reagents:

95CVBTEX\_00024 Amount Added: 20.00 Units: uL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L1-2023-02-21-18-15-26.D  
Injection Date: 21-Feb-2023 18:18:20 Instrument ID: ALGC2  
Lims ID: IC L1  
Client ID:  
Operator ID: SYSTEM ALS Bottle#: 1 Worklist Smp#: 5  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax (0.10 mm) Y Scaling: Method Defined: Set to Absolute Y Value



Eurofins Knoxville

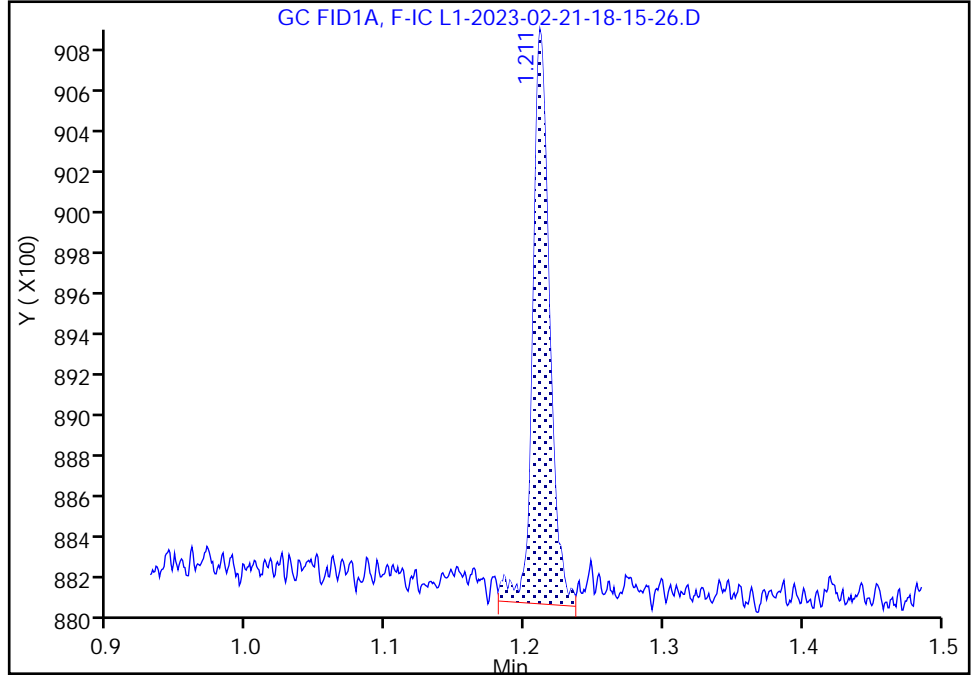
Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L1-2023-02-21-18-15-26.D  
Injection Date: 21-Feb-2023 18:18:20 Instrument ID: ALGC2  
Lims ID: IC L1  
Client ID:  
Operator ID: SYSTEM ALS Bottle#: 1 Worklist Smp#: 5  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Detector: GC FID1A

4 Toluene, CAS: 108-88-3

Signal: 1

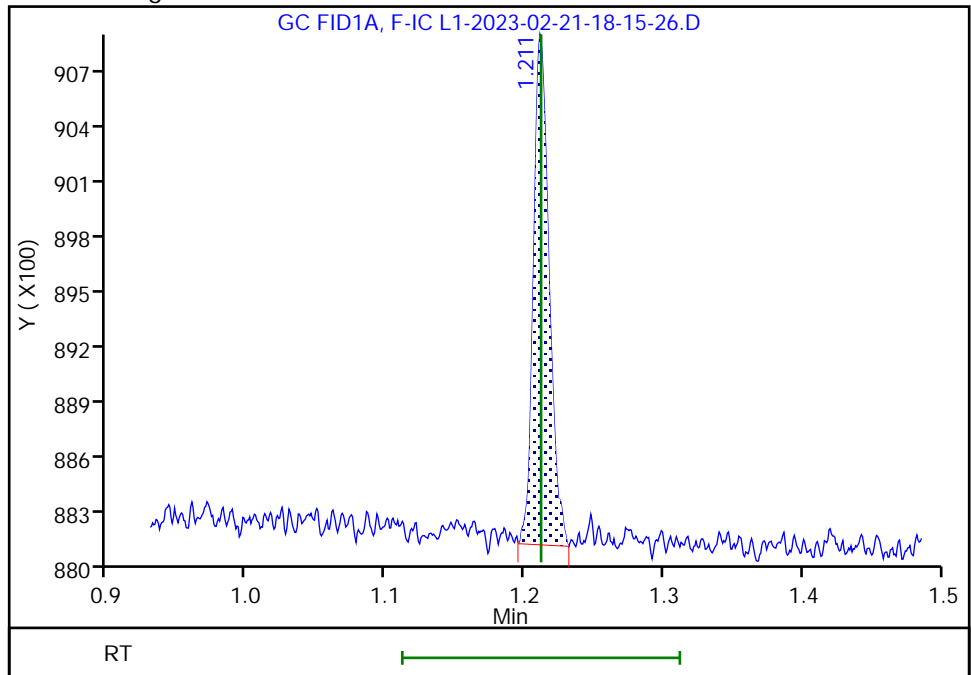
RT: 1.21  
Area: 2295  
Amount: 1.033364  
Amount Units: ug/ml

Processing Integration Results



RT: 1.21  
Area: 2124  
Amount: 0.987238  
Amount Units: ug/ml

Manual Integration Results



Reviewer: P0IK, 22-Feb-2023 10:43:54  
Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing  
Page 107 of 223

Eurofins Knoxville

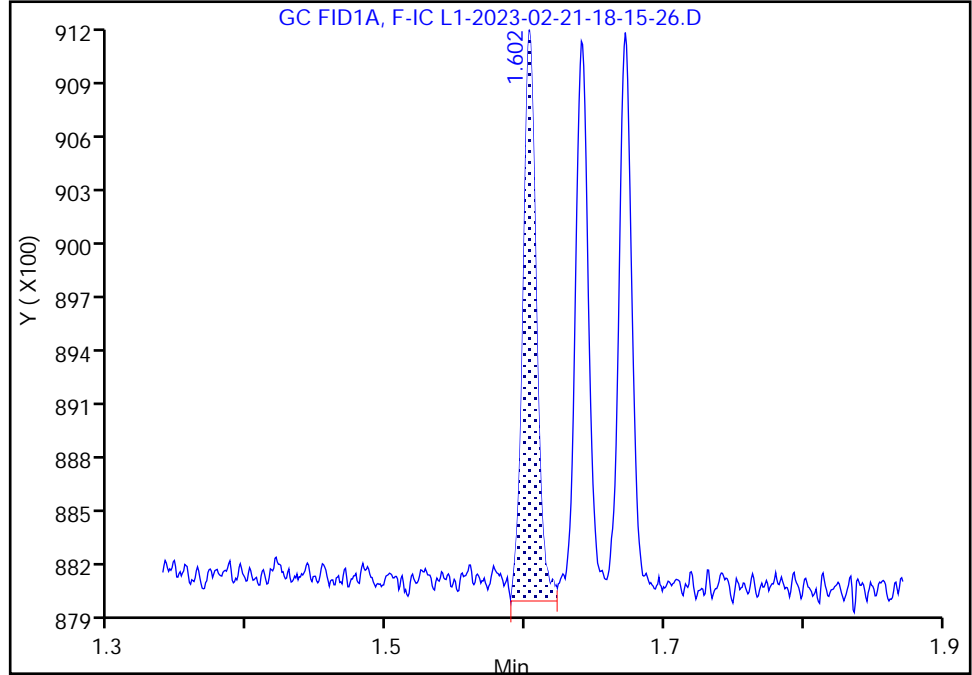
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Injection Date: 21-Feb-2023 18:18:20 Instrument ID: ALGC2  
Lims ID: IC L1  
Client ID:  
Operator ID: SYSTEM ALS Bottle#: 1 Worklist Smp#: 5  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Detector: GC FID1A

5 Ethylbenzene, CAS: 100-41-4

Signal: 1

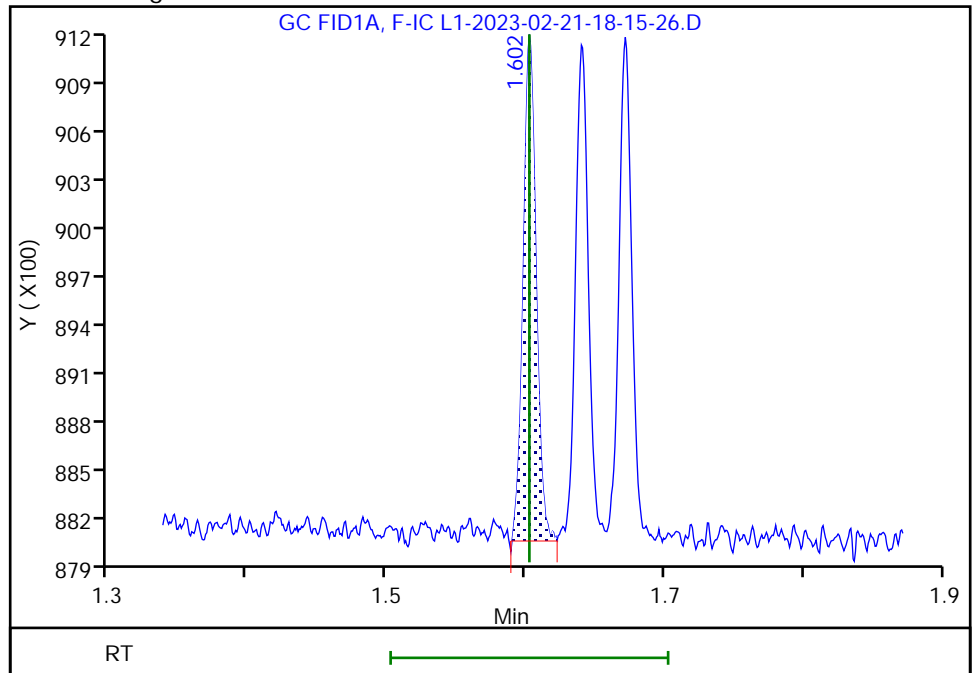
RT: 1.60  
Area: 2117  
Amount: 1.024929  
Amount Units: ug/ml

Processing Integration Results



RT: 1.60  
Area: 1991  
Amount: 0.992428  
Amount Units: ug/ml

Manual Integration Results



Reviewer: P0IK, 22-Feb-2023 10:45:36  
Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing



Eurofins Knoxville

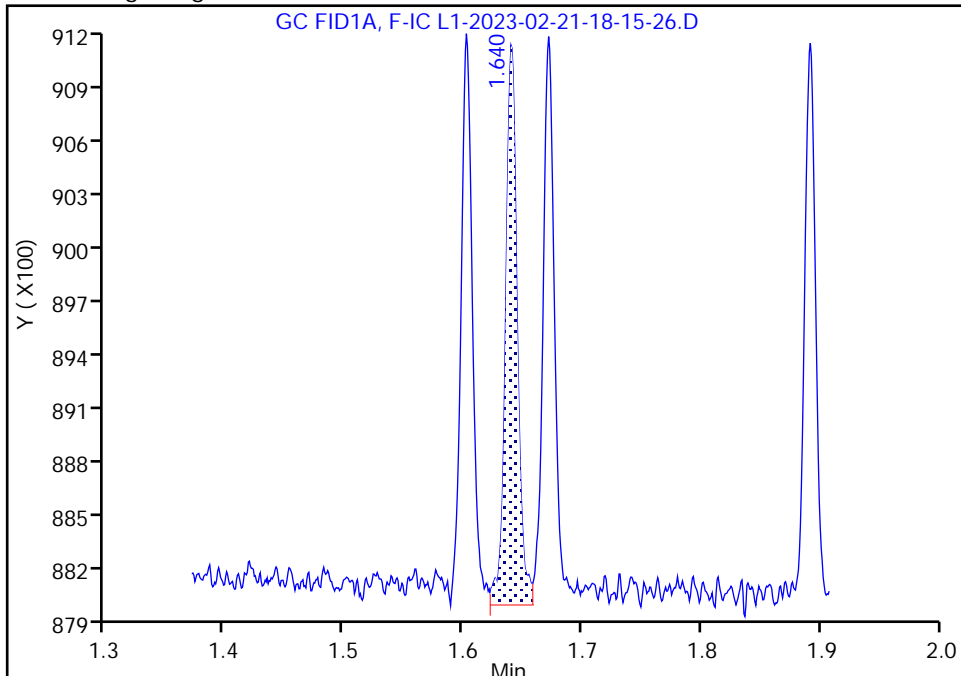
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Injection Date: 21-Feb-2023 18:18:20 Instrument ID: ALGC2  
Lims ID: IC L1  
Client ID:  
Operator ID: SYSTEM ALS Bottle#: 1 Worklist Smp#: 5  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Detector: GC FID1A

7 p-Xylene, CAS: 106-42-3

Signal: 1

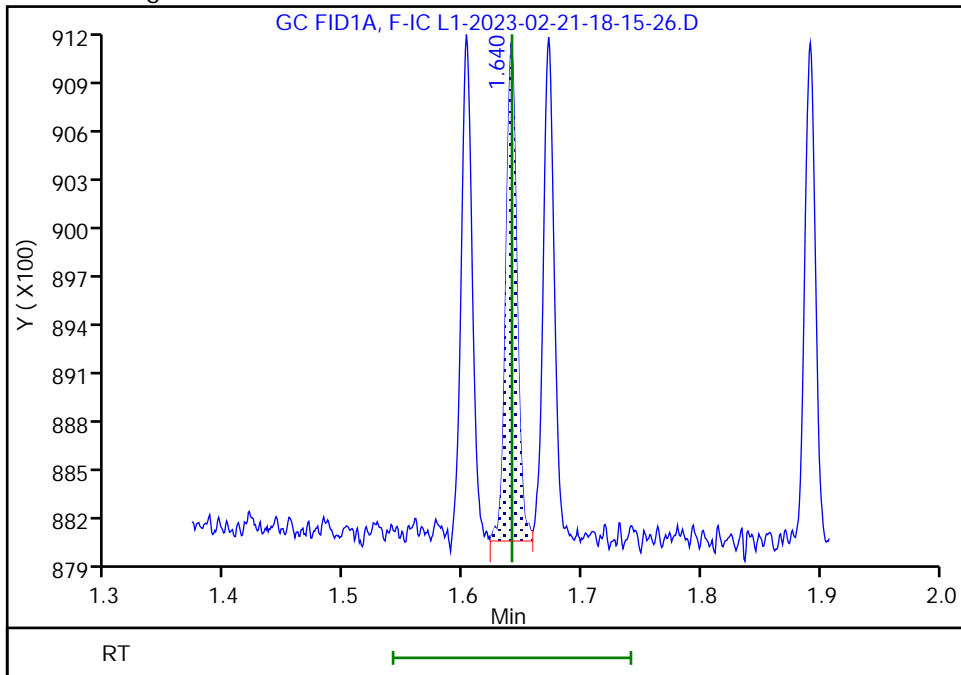
RT: 1.64  
Area: 2130  
Amount: 1.045163  
Amount Units: ug/ml

Processing Integration Results



RT: 1.64  
Area: 1995  
Amount: 0.992548  
Amount Units: ug/ml

Manual Integration Results



Reviewer: P0IK, 22-Feb-2023 10:45:36  
Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Knoxville

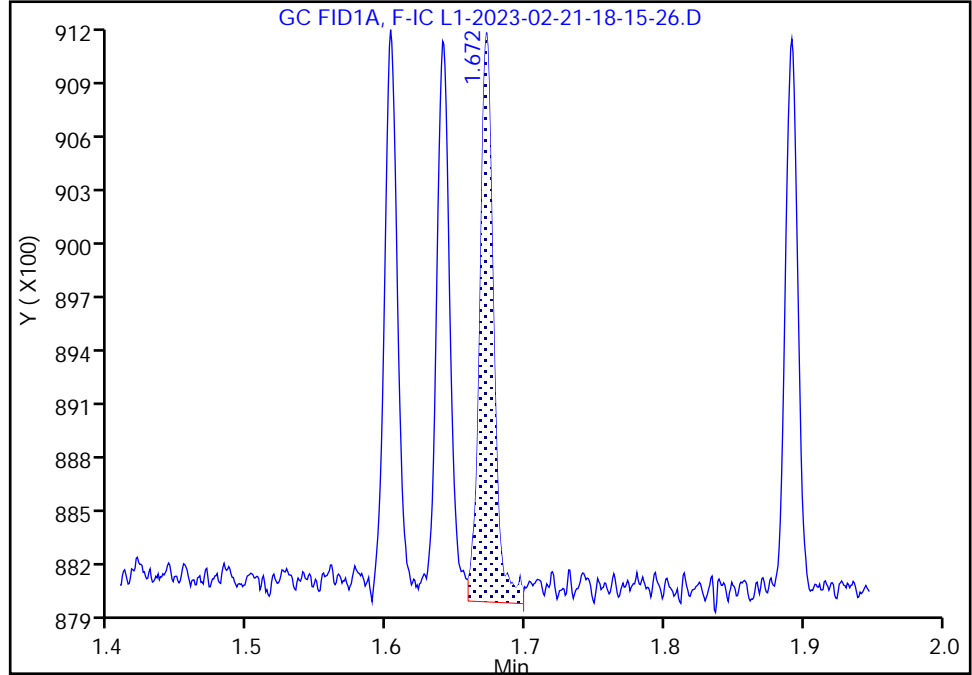
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Injection Date: 21-Feb-2023 18:18:20 Instrument ID: ALGC2  
Lims ID: IC L1  
Client ID:  
Operator ID: SYSTEM ALS Bottle#: 1 Worklist Smp#: 5  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Detector: GC FID1A

6 m-Xylene, CAS: 108-38-3

Signal: 1

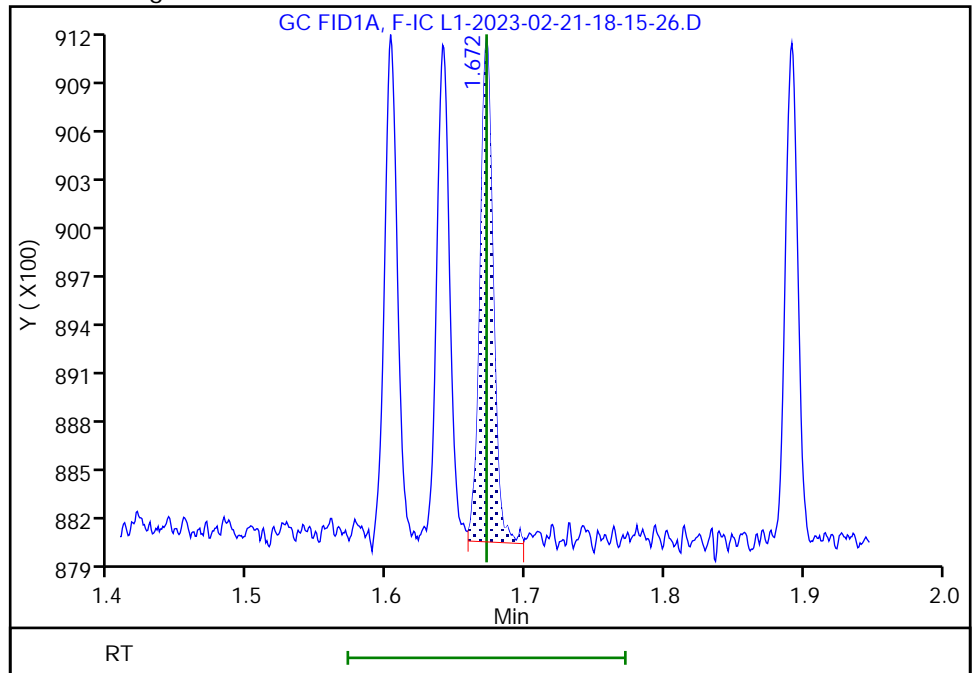
RT: 1.67  
Area: 2164  
Amount: 1.023986  
Amount Units: ug/ml

Processing Integration Results



RT: 1.67  
Area: 2016  
Amount: 0.967570  
Amount Units: ug/ml

Manual Integration Results



Reviewer: P0IK, 22-Feb-2023 10:45:36  
Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Knoxville

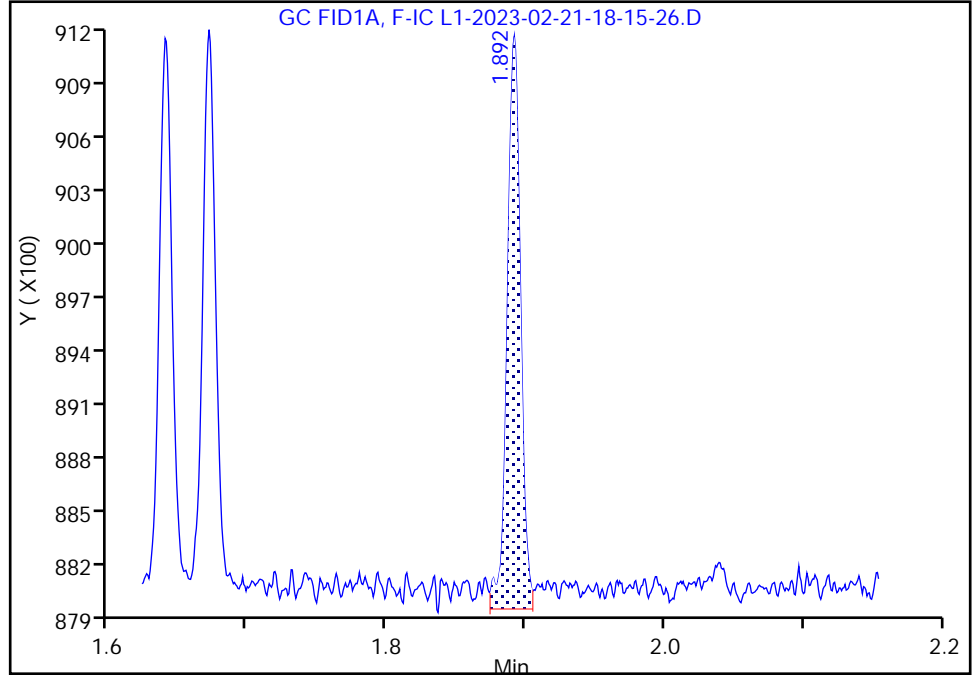
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Injection Date: 21-Feb-2023 18:18:20 Instrument ID: ALGC2  
Lims ID: IC L1  
Client ID:  
Operator ID: SYSTEM ALS Bottle#: 1 Worklist Smp#: 5  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Detector: GC FID1A

8 o-Xylene, CAS: 95-47-6

Signal: 1

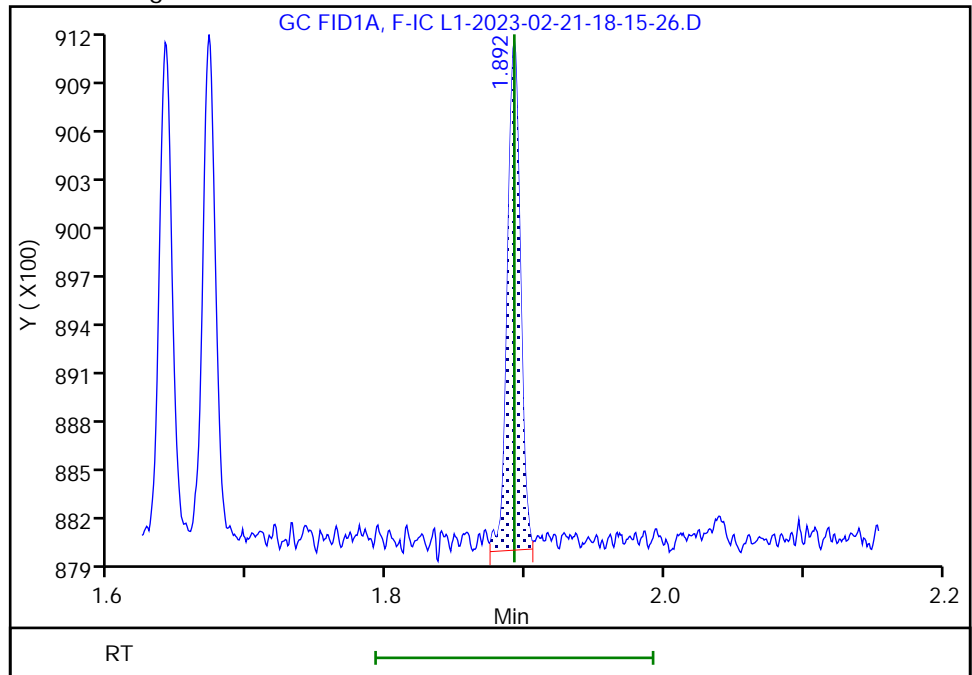
RT: 1.89  
Area: 2088  
Amount: 1.003682  
Amount Units: ug/ml

Processing Integration Results



RT: 1.89  
Area: 1997  
Amount: 0.970575  
Amount Units: ug/ml

Manual Integration Results



Reviewer: P0IK, 22-Feb-2023 10:46:29  
Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L1-2023-02-21-18-24-23.D  
 Lims ID: IC L1  
 Client ID:  
 Sample Type: IC Calib Level: 1  
 Inject. Date: 21-Feb-2023 18:27:17 ALS Bottle#: 1 Worklist Smp#: 6  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0027105-006  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Sublist: chrom-GC2M18wax\*sub5  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 23-Feb-2023 16:18:19 Calib Date: 21-Feb-2023 21:08:31  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L7-2023-02-21-21-05-36.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1625

First Level Reviewer: P0IK Date: 22-Feb-2023 10:43:17

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.872	0.872	0.000	2277	0.99	1.00	M
4 Toluene	1.211	1.212	-0.001	2127	1.00	0.9889	M
5 Ethylbenzene	1.602	1.602	0.000	1980	1.00	0.9865	M
7 p-Xylene	1.640	1.641	-0.001	1987	1.00	0.9882	M
6 m-Xylene	1.672	1.672	0.000	2024	1.00	0.9719	M
8 o-Xylene	1.892	1.892	0.000	2049	1.00	1.00	
9 Styrene	2.277	2.277	0.000	2075	1.00	0.9755	M
11 Naphthalene	4.668	4.668	0.000	2190	1.00	1.01	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

95CVBTEX\_00024 Amount Added: 20.00 Units: uL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L1-2023-02-21-18-24-23.D

Injection Date: 21-Feb-2023 18:27:17

Instrument ID: ALGC2

Lims ID: IC L1

Client ID:

Operator ID: SYSTEM

ALS Bottle#: 1

Worklist Smp#: 6

Injection Vol: 1.0 ul

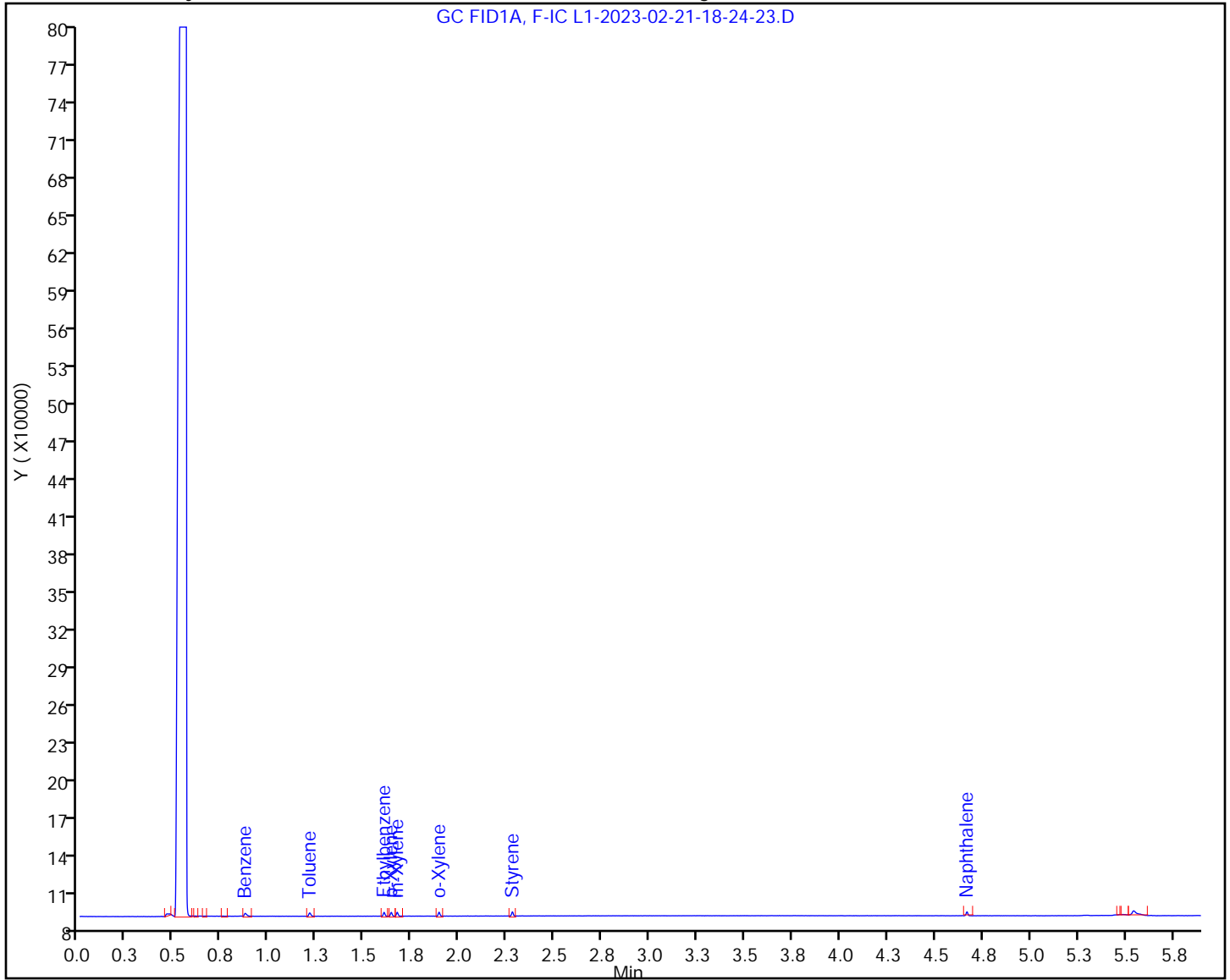
Dil. Factor: 1.0000

Method: GC2M18wax

Limit Group: GCM - EPA18\_Extract - CS2 -ICAL

Column: DB HeavyWax (0.10 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



Eurofins Knoxville

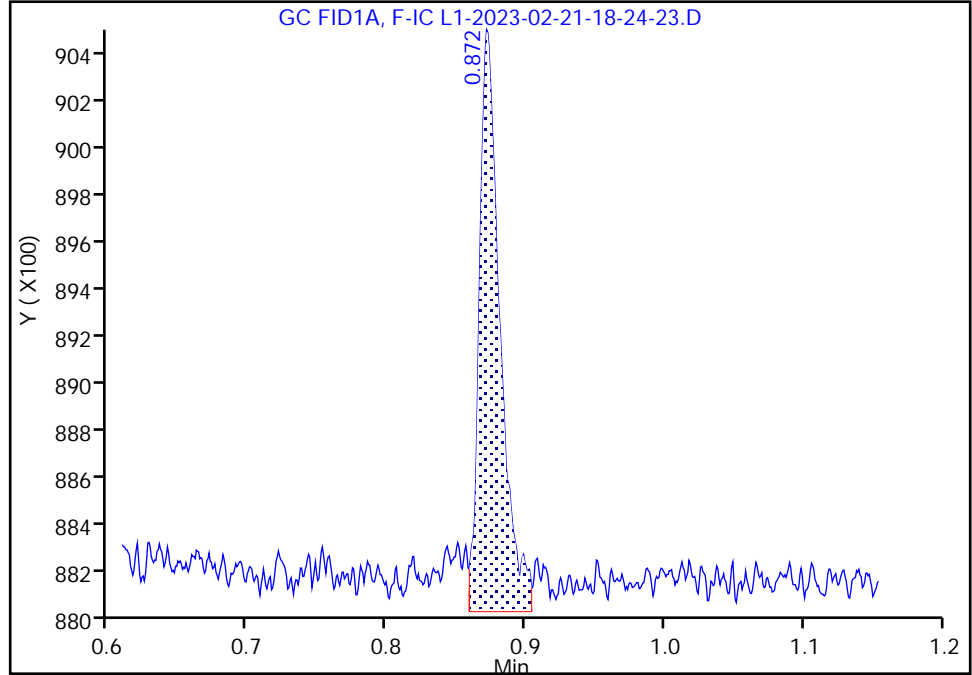
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Injection Date: 21-Feb-2023 18:27:17 Instrument ID: ALGC2  
Lims ID: IC L1  
Client ID:  
Operator ID: SYSTEM ALS Bottle#: 1 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Detector: GC FID1A

3 Benzene, CAS: 71-43-2

Signal: 1

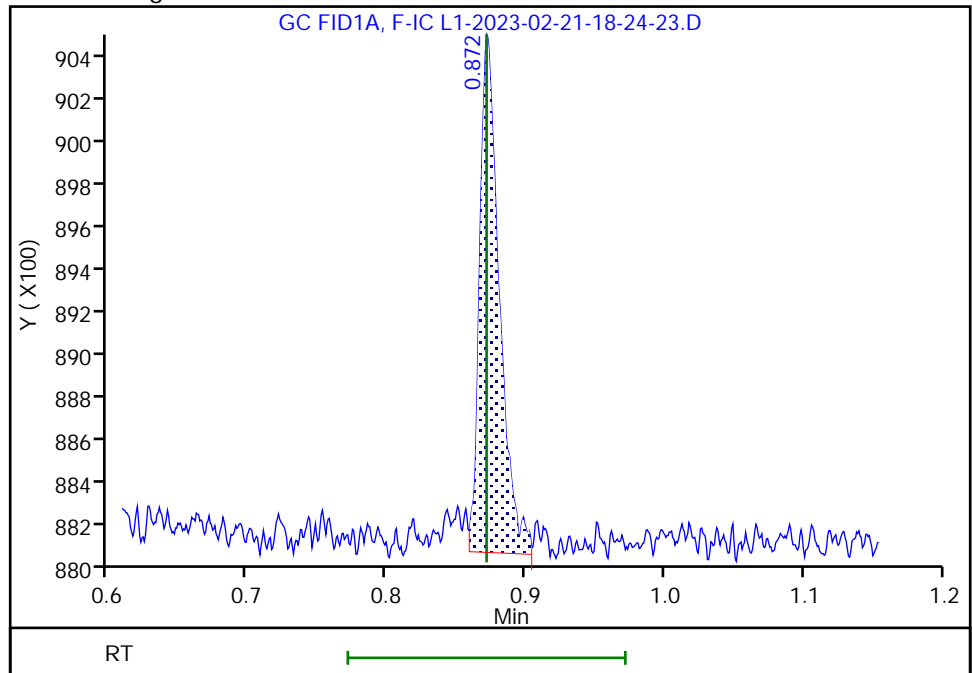
RT: 0.87  
Area: 2488  
Amount: 1.073597  
Amount Units: ug/ml

Processing Integration Results



RT: 0.87  
Area: 2277  
Amount: 0.999461  
Amount Units: ug/ml

Manual Integration Results



Eurofins Knoxville

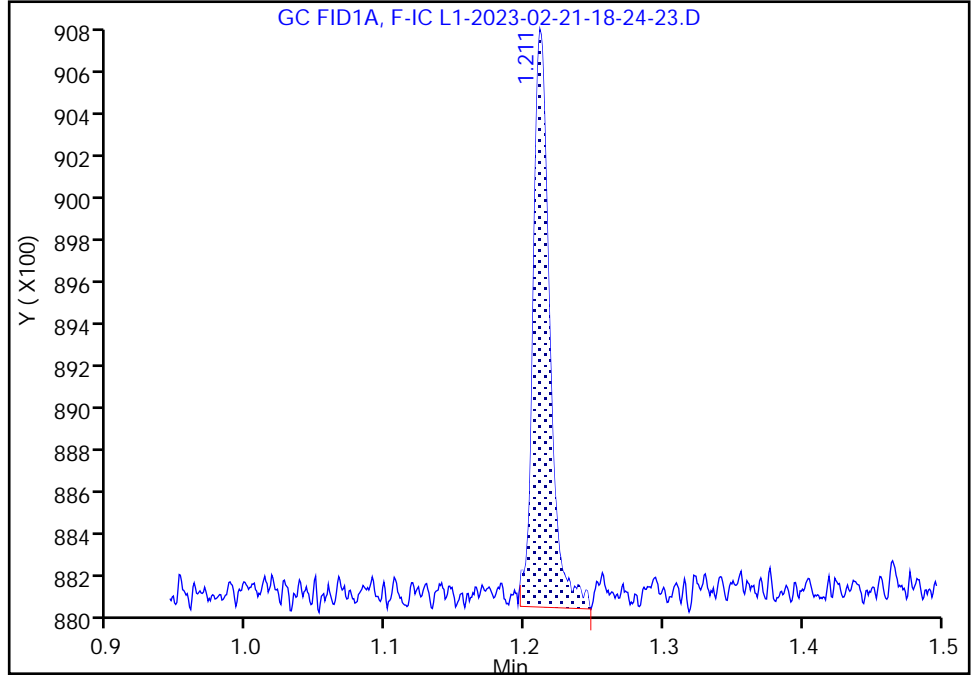
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Injection Date: 21-Feb-2023 18:27:17 Instrument ID: ALGC2  
Lims ID: IC L1  
Client ID:  
Operator ID: SYSTEM ALS Bottle#: 1 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Detector: GC FID1A

4 Toluene, CAS: 108-88-3

Signal: 1

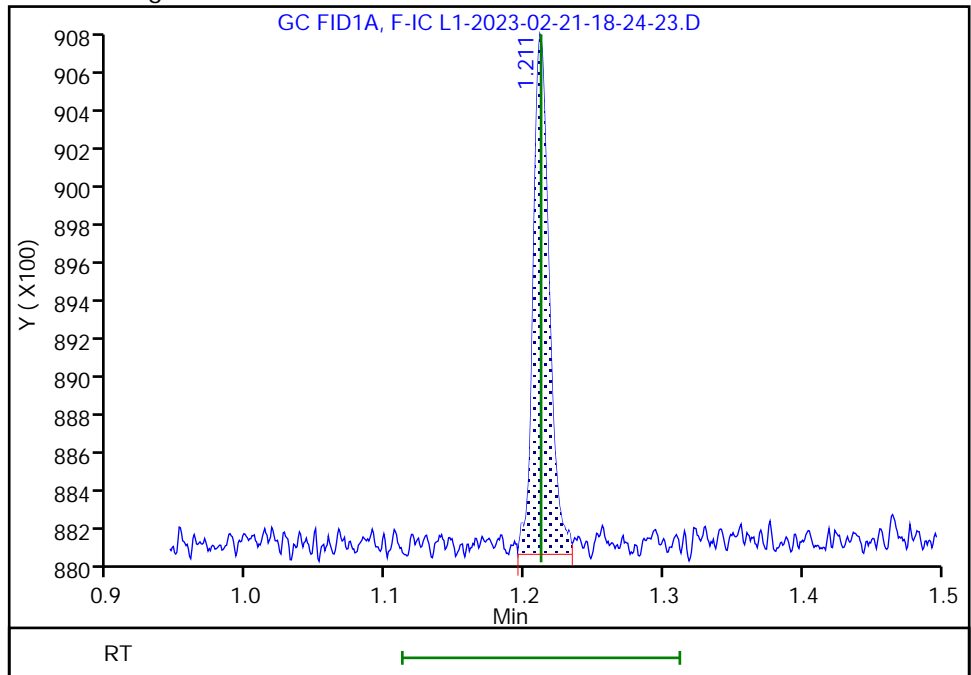
RT: 1.21  
Area: 2222  
Amount: 1.023614  
Amount Units: ug/ml

Processing Integration Results



RT: 1.21  
Area: 2127  
Amount: 0.988856  
Amount Units: ug/ml

Manual Integration Results



Reviewer: POIK, 22-Feb-2023 10:44:29  
Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Knoxville

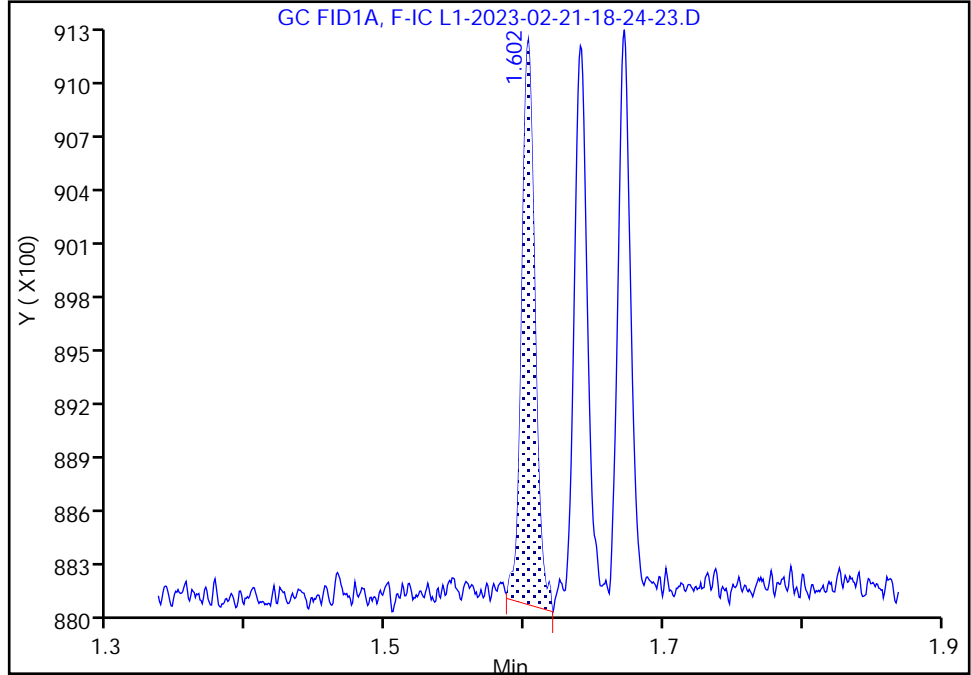
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Injection Date: 21-Feb-2023 18:27:17 Instrument ID: ALGC2  
Lims ID: IC L1  
Client ID:  
Operator ID: SYSTEM ALS Bottle#: 1 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Detector: GC FID1A

5 Ethylbenzene, CAS: 100-41-4

Signal: 1

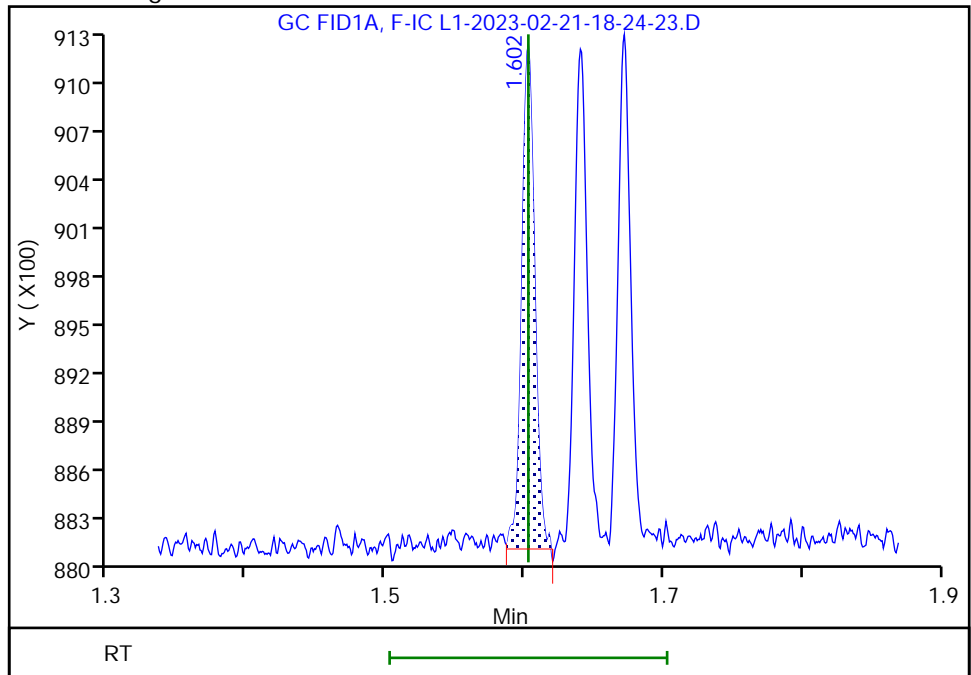
RT: 1.60  
Area: 2057  
Amount: 1.014489  
Amount Units: ug/ml

Processing Integration Results



RT: 1.60  
Area: 1980  
Amount: 0.986543  
Amount Units: ug/ml

Manual Integration Results



Reviewer: P0IK, 22-Feb-2023 10:45:49  
Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing



Eurofins Knoxville

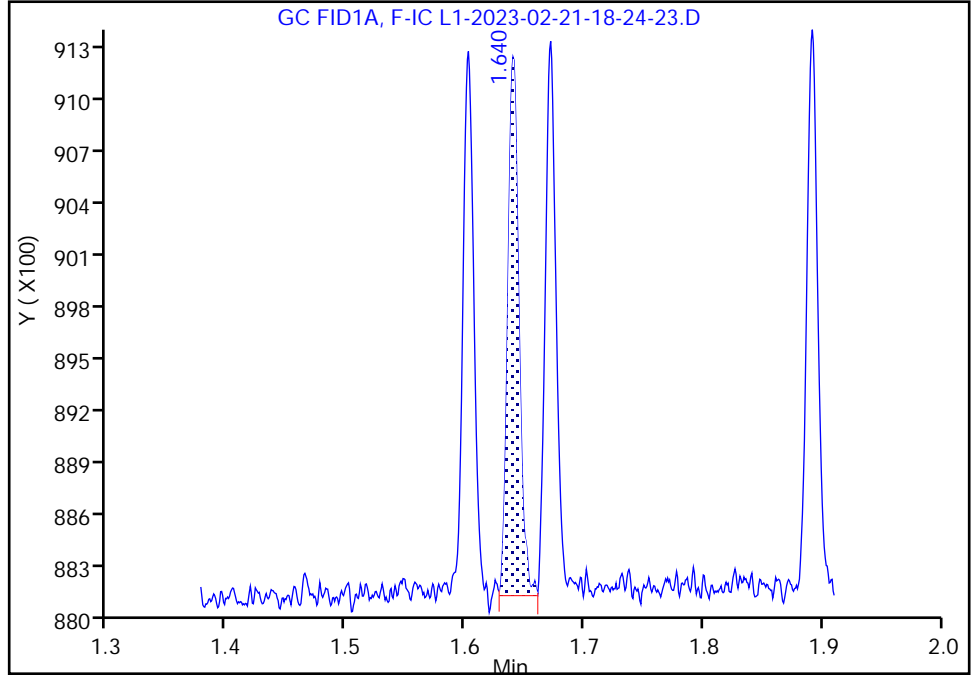
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Injection Date: 21-Feb-2023 18:27:17 Instrument ID: ALGC2  
Lims ID: IC L1  
Client ID:  
Operator ID: SYSTEM ALS Bottle#: 1 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Detector: GC FID1A

7 p-Xylene, CAS: 106-42-3

Signal: 1

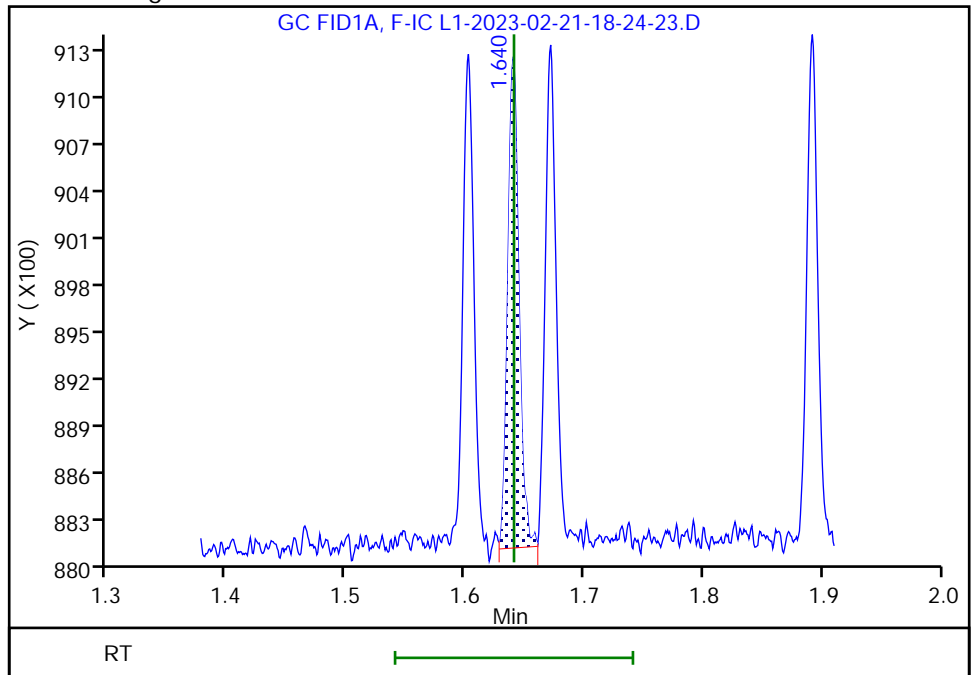
RT: 1.64  
Area: 1968  
Amount: 0.981311  
Amount Units: ug/ml

Processing Integration Results



RT: 1.64  
Area: 1987  
Amount: 0.988243  
Amount Units: ug/ml

Manual Integration Results



Reviewer: P0IK, 22-Feb-2023 10:45:49  
Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Knoxville

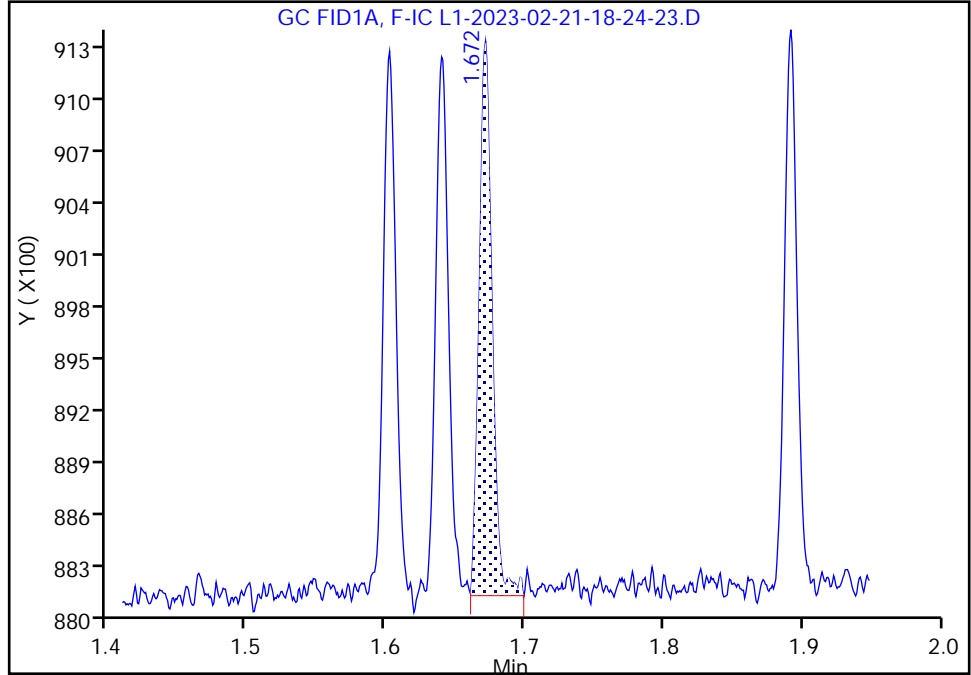
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Injection Date: 21-Feb-2023 18:27:17 Instrument ID: ALGC2  
Lims ID: IC L1  
Client ID:  
Operator ID: SYSTEM ALS Bottle#: 1 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Detector: GC FID1A

6 m-Xylene, CAS: 108-38-3

Signal: 1

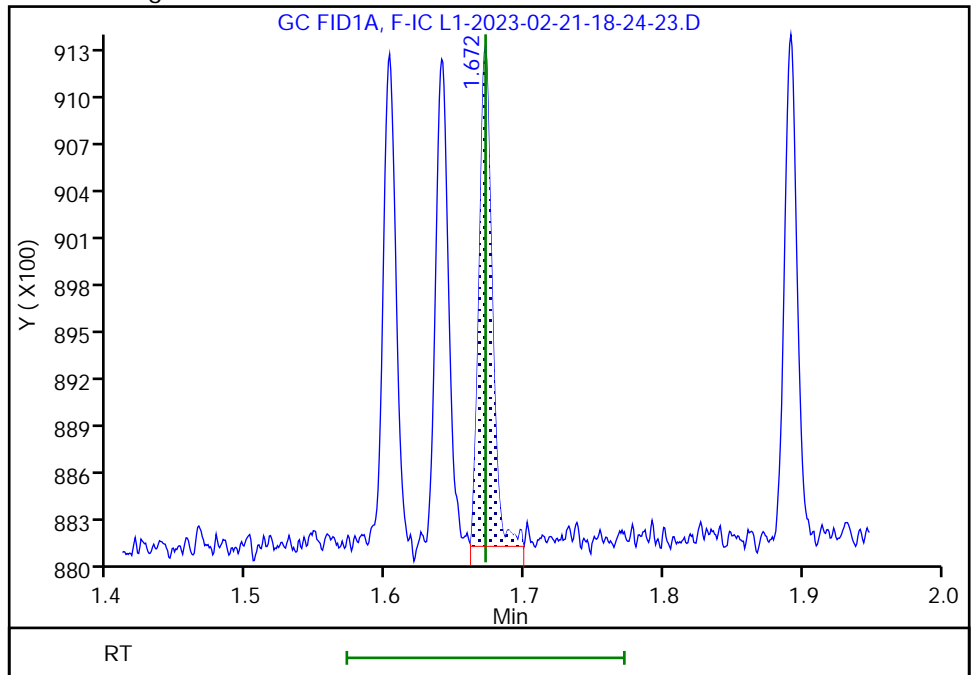
RT: 1.67  
Area: 2011  
Amount: 0.967134  
Amount Units: ug/ml

Processing Integration Results



RT: 1.67  
Area: 2024  
Amount: 0.971884  
Amount Units: ug/ml

Manual Integration Results



Reviewer: P0IK, 22-Feb-2023 10:45:49  
Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Knoxville

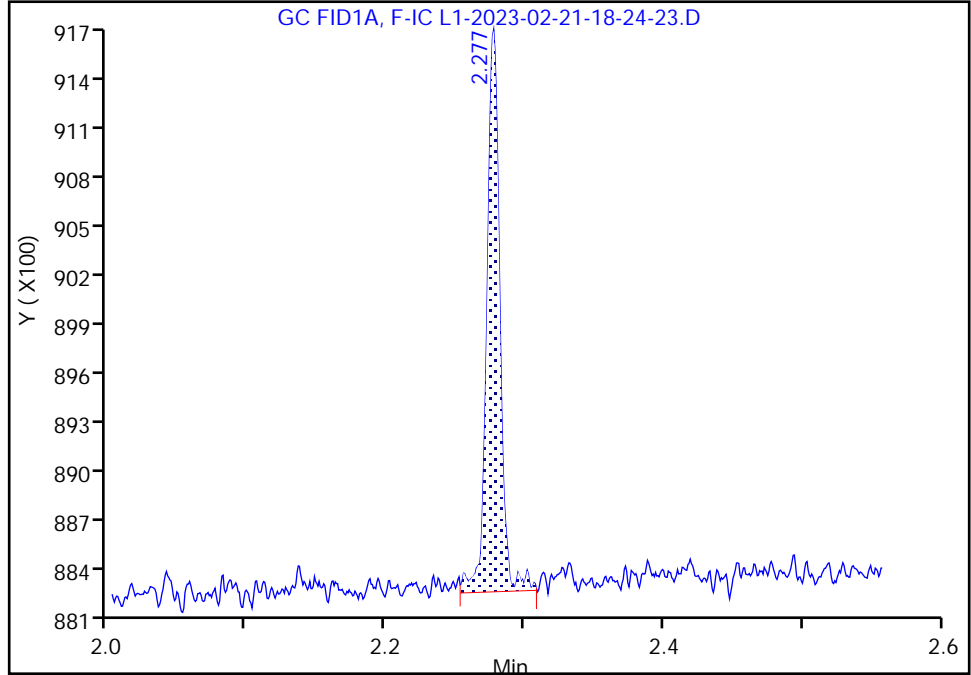
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Injection Date: 21-Feb-2023 18:27:17 Instrument ID: ALGC2  
Lims ID: IC L1  
Client ID:  
Operator ID: SYSTEM ALS Bottle#: 1 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Detector: GC FID1A

9 Styrene, CAS: 100-42-5

Signal: 1

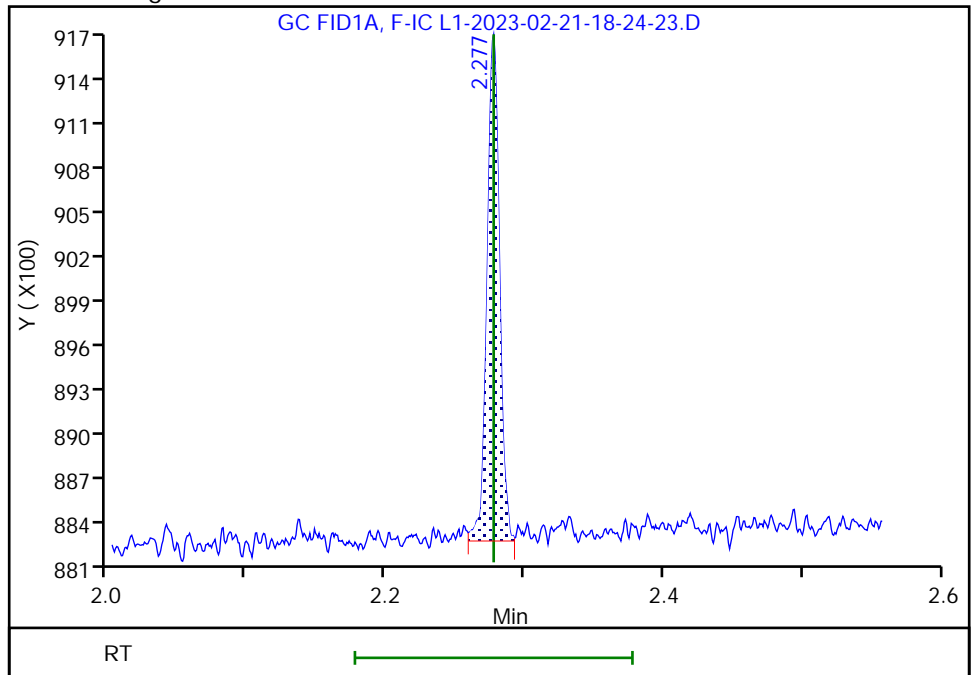
RT: 2.28  
Area: 2181  
Amount: 1.013428  
Amount Units: ug/ml

Processing Integration Results



RT: 2.28  
Area: 2075  
Amount: 0.975504  
Amount Units: ug/ml

Manual Integration Results



Reviewer: POIK, 22-Feb-2023 10:46:55  
Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L2-2023-02-21-18-33-17.D  
 Lims ID: IC L2  
 Client ID:  
 Sample Type: IC Calib Level: 2  
 Inject. Date: 21-Feb-2023 18:36:14 ALS Bottle#: 2 Worklist Smp#: 7  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0027105-007  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Sublist: chrom-GC2M18wax\*sub5  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 23-Feb-2023 16:18:19 Calib Date: 21-Feb-2023 21:08:31  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L7-2023-02-21-21-05-36.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1625

First Level Reviewer: P0IK

Date: 22-Feb-2023 10:44:40

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.872	0.872	0.000	9770	4.96	5.03	
4 Toluene	1.212	1.212	0.000	9571	4.99	5.00	
5 Ethylbenzene	1.602	1.602	0.000	9587	5.00	5.06	
7 p-Xylene	1.640	1.640	0.000	9439	5.00	5.00	
6 m-Xylene	1.672	1.672	0.000	9587	5.00	5.05	
8 o-Xylene	1.892	1.892	0.000	9703	5.00	5.10	
9 Styrene	2.277	2.277	0.000	9976	5.00	5.14	
11 Naphthalene	4.668	4.668	0.000	9977	4.99	5.01	

**QC Flag Legend**

Processing Flags

**Reagents:**

95CVBTEX\_00024

Amount Added: 100.00

Units: uL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L2-2023-02-21-18-33-17.D

Injection Date: 21-Feb-2023 18:36:14

Instrument ID: ALGC2

Lims ID: IC L2

Client ID:

Operator ID: SYSTEM

ALS Bottle#: 2

Worklist Smp#: 7

Injection Vol: 1.0 ul

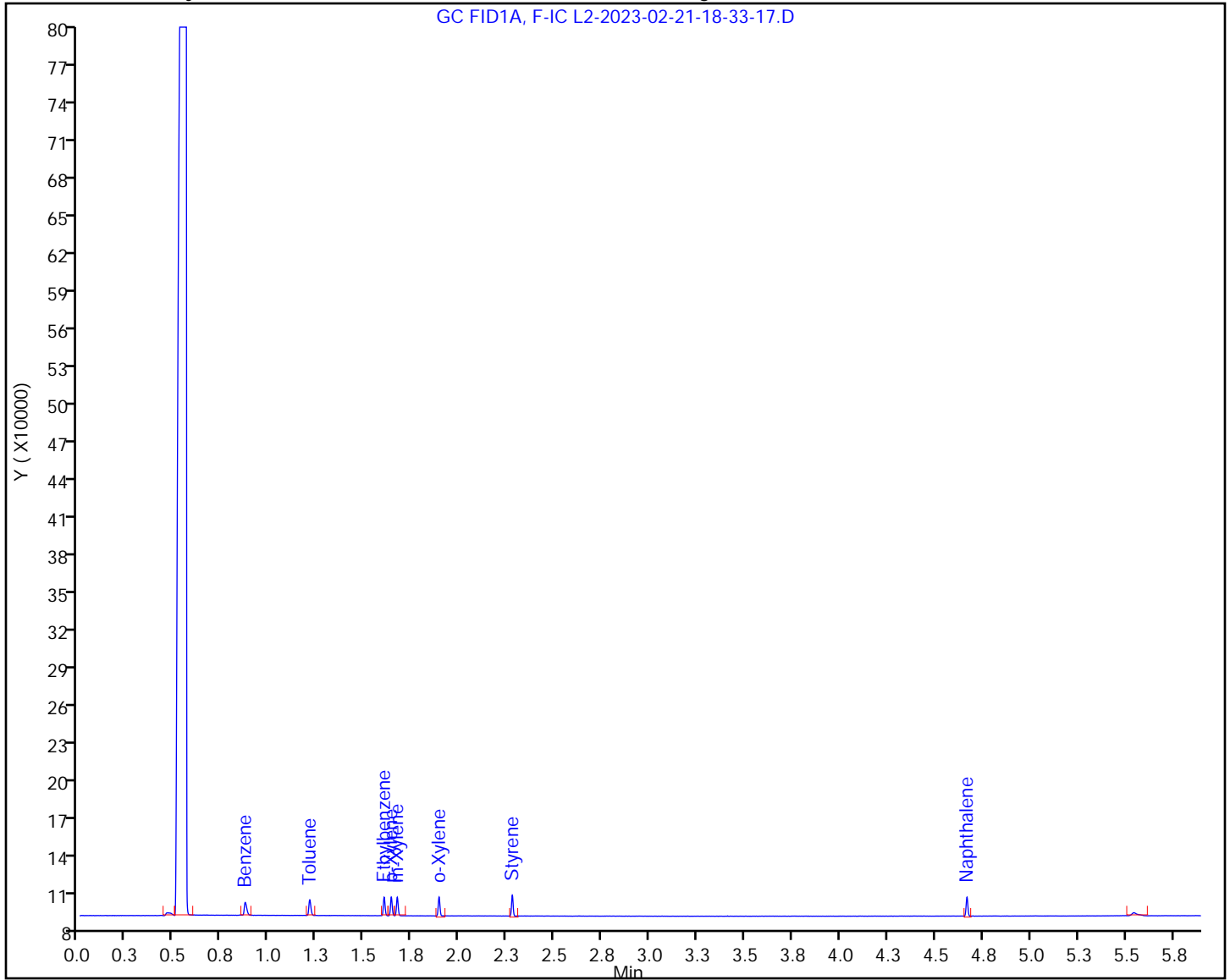
Dil. Factor: 1.0000

Method: GC2M18wax

Limit Group: GCM - EPA18\_Extract - CS2 -ICAL

Column: DB HeavyWax (0.10 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L2-2023-02-21-18-42-17.D  
 Lims ID: IC L2  
 Client ID:  
 Sample Type: IC Calib Level: 2  
 Inject. Date: 21-Feb-2023 18:45:19 ALS Bottle#: 2 Worklist Smp#: 8  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0027105-008  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Sublist: chrom-GC2M18wax\*sub5  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 23-Feb-2023 16:18:20 Calib Date: 21-Feb-2023 21:08:31  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L7-2023-02-21-21-05-36.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1625

First Level Reviewer: P0IK Date: 23-Feb-2023 16:00:33

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.872	0.872	0.000	9597	4.96	4.94	
4 Toluene	1.212	1.212	0.000	9605	4.99	5.02	
5 Ethylbenzene	1.603	1.603	0.000	9553	5.00	5.04	
7 p-Xylene	1.641	1.641	0.000	9525	5.00	5.05	
6 m-Xylene	1.672	1.672	0.000	9541	5.00	5.03	
8 o-Xylene	1.892	1.892	0.000	9529	5.00	5.01	
9 Styrene	2.277	2.277	0.000	9919	5.00	5.11	
11 Naphthalene	4.669	4.669	0.000	10004	4.99	5.02	

QC Flag Legend

Processing Flags

Reagents:

95CVBTEX\_00024 Amount Added: 100.00 Units: uL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L2-2023-02-21-18-42-17.D

Injection Date: 21-Feb-2023 18:45:19

Instrument ID: ALGC2

Lims ID: IC L2

Client ID:

Operator ID: SYSTEM

ALS Bottle#: 2

Worklist Smp#: 8

Injection Vol: 1.0 ul

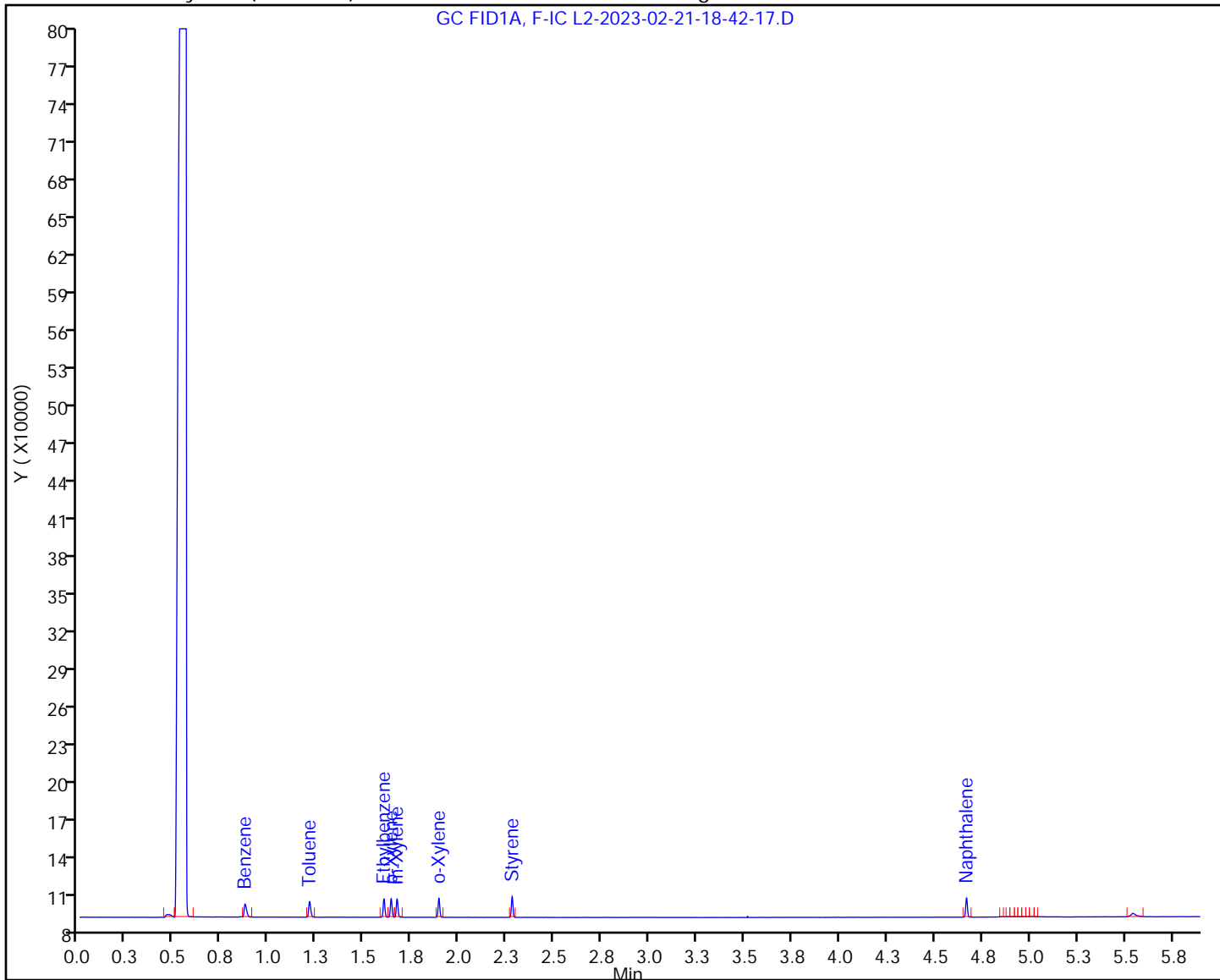
Dil. Factor: 1.0000

Method: GC2M18wax

Limit Group: GCM - EPA18\_Extract - CS2 -ICAL

Column: DB HeavyWax (0.10 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L2-2023-02-21-18-51-20.D  
 Lims ID: IC L2  
 Client ID:  
 Sample Type: IC Calib Level: 2  
 Inject. Date: 21-Feb-2023 18:54:12 ALS Bottle#: 2 Worklist Smp#: 9  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0027105-009  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Sublist: chrom-GC2M18wax\*sub5  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 23-Feb-2023 16:18:20 Calib Date: 21-Feb-2023 21:08:31  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L7-2023-02-21-21-05-36.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1625

First Level Reviewer: P0IK Date: 23-Feb-2023 16:00:43

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.872	0.872	0.000	9837	4.96	5.07	
4 Toluene	1.211	1.211	0.000	9608	4.99	5.02	
5 Ethylbenzene	1.602	1.602	0.000	9453	5.00	4.98	
7 p-Xylene	1.640	1.640	0.000	9381	5.00	4.97	
6 m-Xylene	1.672	1.672	0.000	9360	5.00	4.93	
8 o-Xylene	1.892	1.892	0.000	9601	5.00	5.05	
9 Styrene	2.277	2.277	0.000	9900	5.00	5.10	
11 Naphthalene	4.667	4.667	0.000	9965	4.99	5.00	

QC Flag Legend

Processing Flags

Reagents:

95CVBTEX\_00024 Amount Added: 100.00 Units: uL



Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L2-2023-02-21-18-51-20.D

Injection Date: 21-Feb-2023 18:54:12

Instrument ID: ALGC2

Lims ID: IC L2

Client ID:

Operator ID: SYSTEM

ALS Bottle#: 2

Worklist Smp#: 9

Injection Vol: 1.0 ul

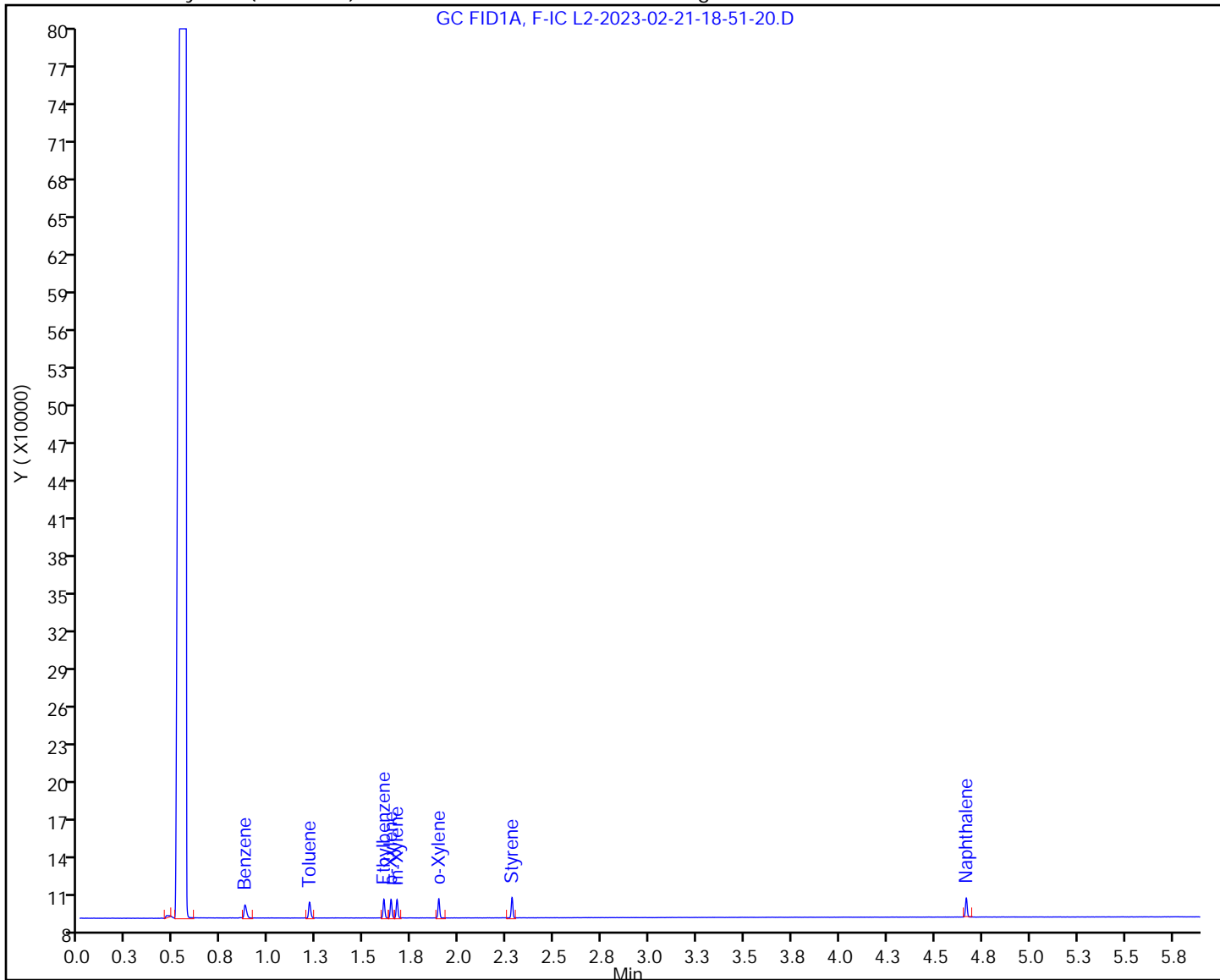
Dil. Factor: 1.0000

Method: GC2M18wax

Limit Group: GCM - EPA18\_Extract - CS2 -ICAL

Column: DB HeavyWax (0.10 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L3-2023-02-21-19-00-12.D  
 Lims ID: IC L3  
 Client ID:  
 Sample Type: IC Calib Level: 3  
 Inject. Date: 21-Feb-2023 19:03:08 ALS Bottle#: 3 Worklist Smp#: 10  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0027105-010  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Sublist: chrom-GC2M18wax\*sub5  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 23-Feb-2023 16:18:21 Calib Date: 21-Feb-2023 21:08:31  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L7-2023-02-21-21-05-36.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1625

First Level Reviewer: P0IK

Date: 23-Feb-2023 16:00:48

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.872	0.872	0.000	19431	9.93	10.2	
4 Toluene	1.212	1.211	0.001	19441	9.97	10.3	
5 Ethylbenzene	1.602	1.602	0.000	19944	10.0	10.6	
7 p-Xylene	1.640	1.640	0.000	19946	10.0	10.7	
6 m-Xylene	1.672	1.672	0.000	19832	10.0	10.6	
8 o-Xylene	1.892	1.892	0.000	19987	10.0	10.6	
9 Styrene	2.277	2.277	0.000	20122	10.0	10.5	
11 Naphthalene	4.667	4.667	0.000	21238	9.98	10.8	

## QC Flag Legend

Processing Flags

## Reagents:

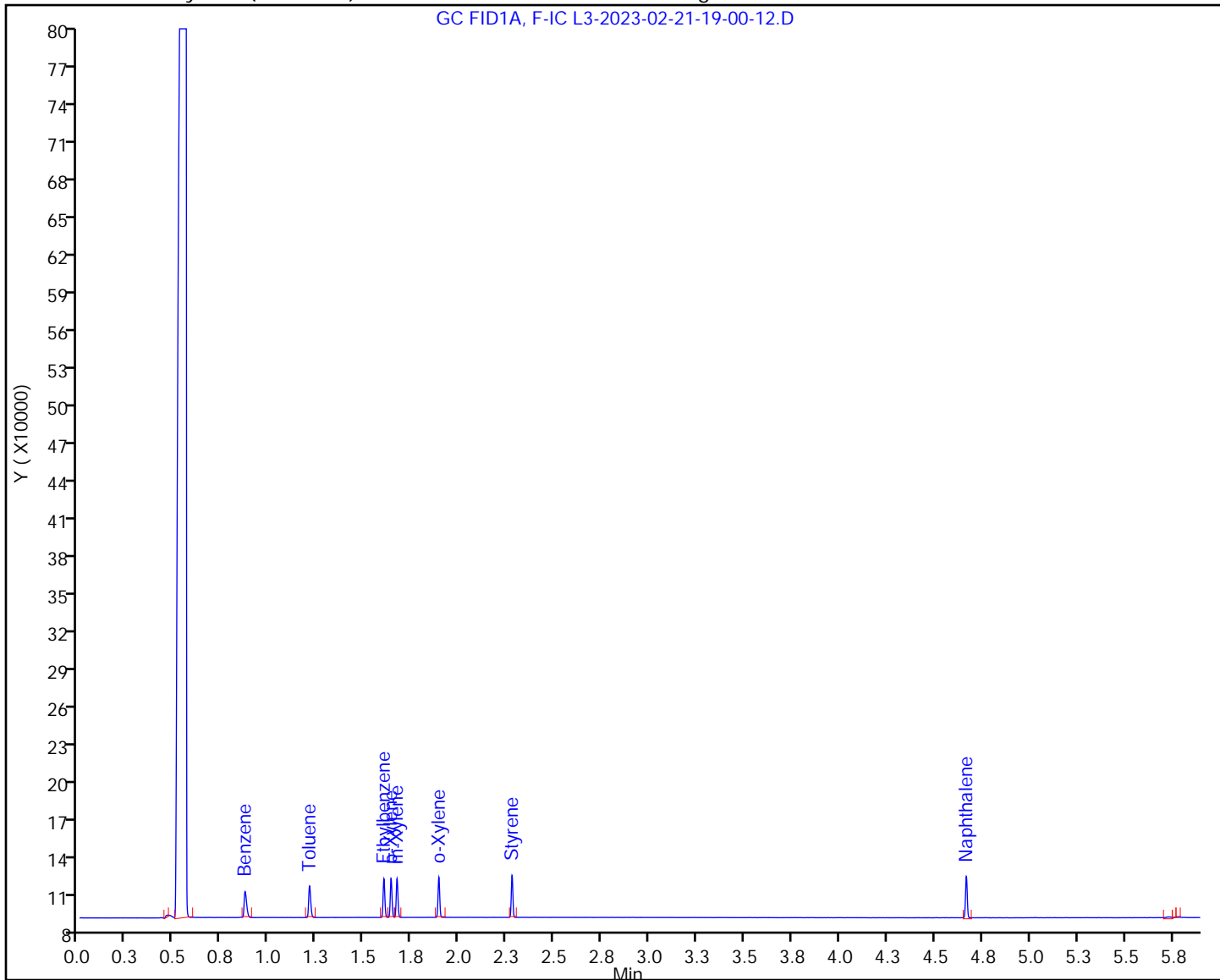
95xxBTEXSTN\_00005

Amount Added: 1.00

Units: uL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L3-2023-02-21-19-00-12.D  
Injection Date: 21-Feb-2023 19:03:08 Instrument ID: ALGC2  
Lims ID: IC L3  
Client ID:  
Operator ID: SYSTEM ALS Bottle#: 3 Worklist Smp#: 10  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax (0.10 mm) Y Scaling: Method Defined: Set to Absolute Y Value



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L3-2023-02-21-19-09-09.D  
 Lims ID: IC L3  
 Client ID:  
 Sample Type: IC Calib Level: 3  
 Inject. Date: 21-Feb-2023 19:12:03 ALS Bottle#: 3 Worklist Smp#: 11  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0027105-011  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Sublist: chrom-GC2M18wax\*sub5  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 23-Feb-2023 16:18:22 Calib Date: 21-Feb-2023 21:08:31  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L7-2023-02-21-21-05-36.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1625

First Level Reviewer: P0IK Date: 23-Feb-2023 16:00:56

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.872	0.872	0.000	19298	9.93	10.2	
4 Toluene	1.211	1.211	0.000	19519	9.97	10.4	
5 Ethylbenzene	1.602	1.602	0.000	19837	10.0	10.5	
7 p-Xylene	1.640	1.640	0.000	19733	10.0	10.5	
6 m-Xylene	1.672	1.672	0.000	19840	10.0	10.6	
8 o-Xylene	1.892	1.892	0.000	19796	10.0	10.5	
9 Styrene	2.277	2.277	0.000	20280	10.0	10.6	
11 Naphthalene	4.667	4.667	0.000	21303	9.98	10.8	

QC Flag Legend

Processing Flags

Reagents:

95xBTEXSTN\_00005 Amount Added: 1.00 Units: uL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L3-2023-02-21-19-09-09.D

Injection Date: 21-Feb-2023 19:12:03

Instrument ID: ALGC2

Lims ID: IC L3

Client ID:

Operator ID: SYSTEM

ALS Bottle#: 3

Worklist Smp#: 11

Injection Vol: 1.0 ul

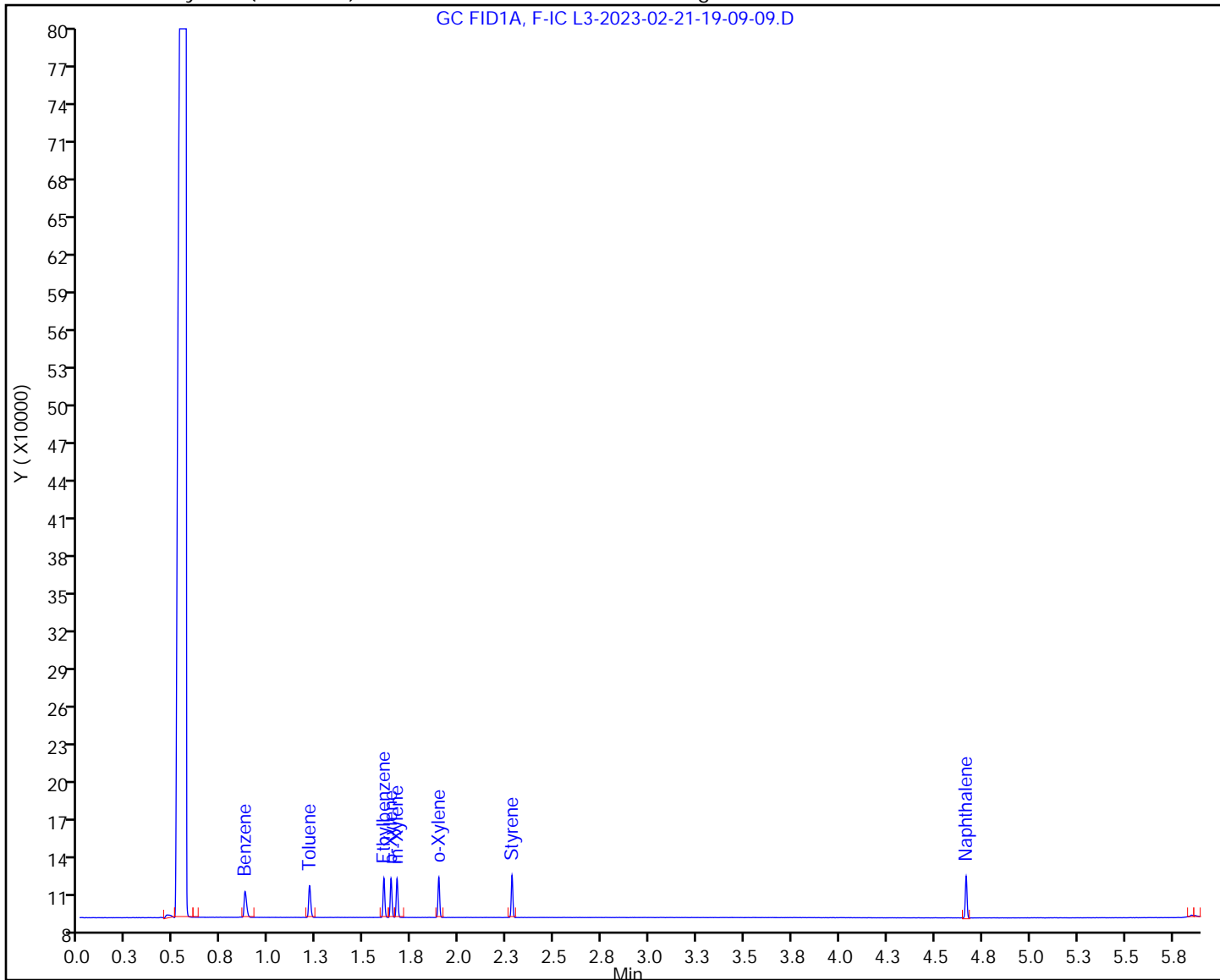
Dil. Factor: 1.0000

Method: GC2M18wax

Limit Group: GCM - EPA18\_Extract - CS2 -ICAL

Column: DB HeavyWax (0.10 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L3-2023-02-21-19-18-06.D  
 Lims ID: IC L3  
 Client ID:  
 Sample Type: IC Calib Level: 3  
 Inject. Date: 21-Feb-2023 19:20:59 ALS Bottle#: 3 Worklist Smp#: 12  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0027105-012  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Sublist: chrom-GC2M18wax\*sub5  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 23-Feb-2023 16:18:22 Calib Date: 21-Feb-2023 21:08:31  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L7-2023-02-21-21-05-36.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1625

First Level Reviewer: P0IK Date: 23-Feb-2023 16:01:13

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.872	0.872	0.000	19581	9.93	10.3	
4 Toluene	1.211	1.211	0.000	19252	9.97	10.2	
5 Ethylbenzene	1.602	1.602	0.000	19716	10.0	10.5	
7 p-Xylene	1.640	1.640	0.000	19598	10.0	10.5	
6 m-Xylene	1.672	1.672	0.000	19665	10.0	10.5	
8 o-Xylene	1.892	1.892	0.000	19832	10.0	10.5	
9 Styrene	2.277	2.277	0.000	20167	10.0	10.5	
11 Naphthalene	4.667	4.667	0.000	21041	9.98	10.7	

**QC Flag Legend**

Processing Flags

**Reagents:**

95xxBTEXSTN\_00005 Amount Added: 1.00 Units: uL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L3-2023-02-21-19-18-06.D

Injection Date: 21-Feb-2023 19:20:59

Instrument ID: ALGC2

Lims ID: IC L3

Client ID:

Operator ID: SYSTEM

ALS Bottle#: 3

Worklist Smp#: 12

Injection Vol: 1.0 ul

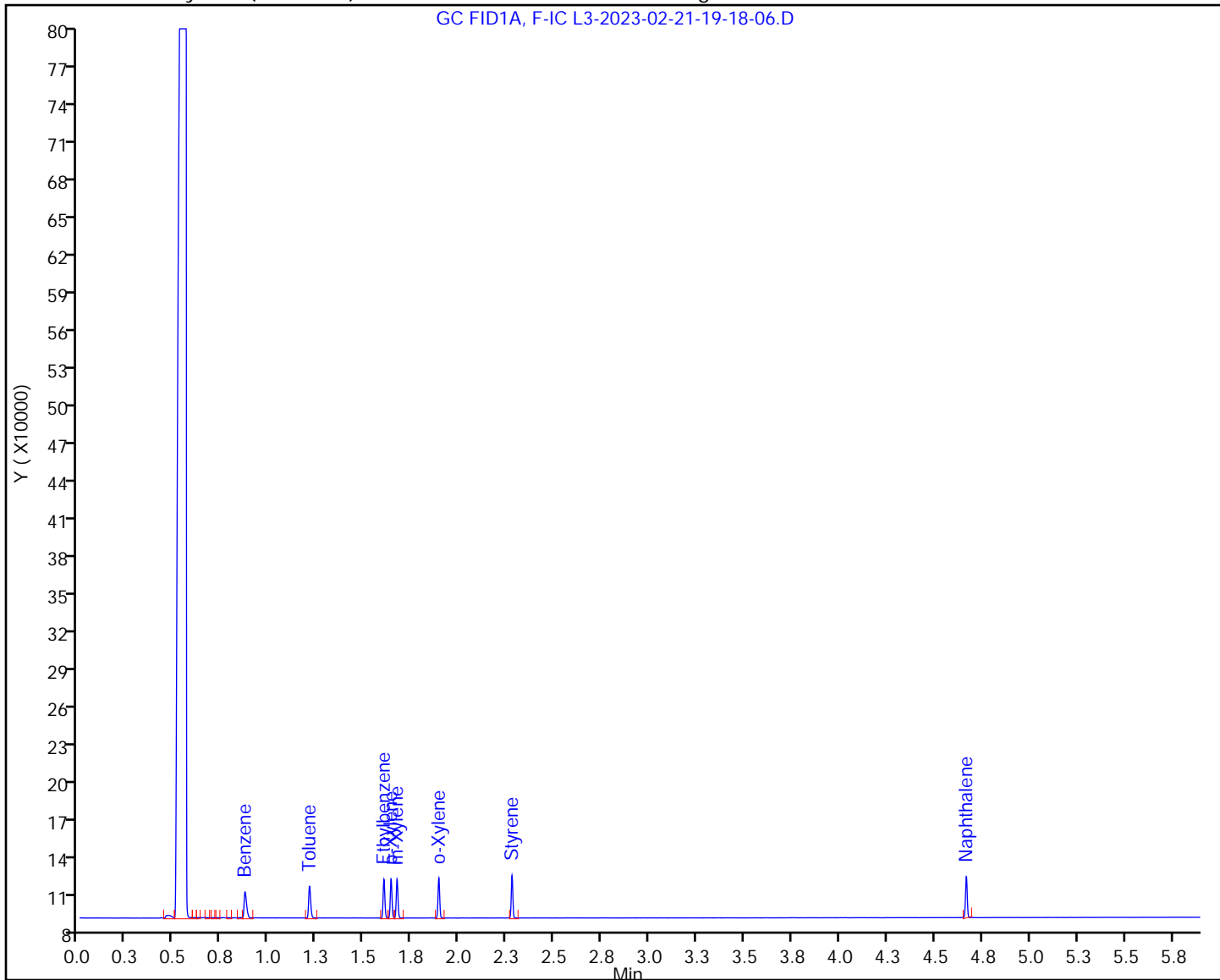
Dil. Factor: 1.0000

Method: GC2M18wax

Limit Group: GCM - EPA18\_Extract - CS2 -ICAL

Column: DB HeavyWax (0.10 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L4-2023-02-21-19-26-58.D  
 Lims ID: IC L4  
 Client ID:  
 Sample Type: IC Calib Level: 4  
 Inject. Date: 21-Feb-2023 19:29:54 ALS Bottle#: 4 Worklist Smp#: 13  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0027105-013  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Sublist: chrom-GC2M18wax\*sub5  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 23-Feb-2023 16:18:23 Calib Date: 21-Feb-2023 21:08:31  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L7-2023-02-21-21-05-36.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1625

First Level Reviewer: P0IK Date: 22-Feb-2023 12:20:14

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.872	0.872	0.000	92616	49.6	49.6	
4 Toluene	1.212	1.212	0.000	92181	49.9	49.5	
5 Ethylbenzene	1.602	1.602	0.000	92751	50.0	49.5	
7 p-Xylene	1.641	1.641	0.000	92260	50.0	49.6	
6 m-Xylene	1.672	1.672	0.000	92140	50.0	49.6	
8 o-Xylene	1.892	1.892	0.000	92634	50.0	49.6	
9 Styrene	2.277	2.277	0.000	94855	50.0	49.9	
11 Naphthalene	4.668	4.668	0.000	96795	49.9	49.6	

QC Flag Legend

Processing Flags

Reagents:

95xBTEXSTN\_00005 Amount Added: 5.00 Units: uL



Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L4-2023-02-21-19-26-58.D

Injection Date: 21-Feb-2023 19:29:54

Instrument ID: ALGC2

Lims ID: IC L4

Client ID:

Operator ID: SYSTEM

ALS Bottle#: 4

Worklist Smp#: 13

Injection Vol: 1.0 ul

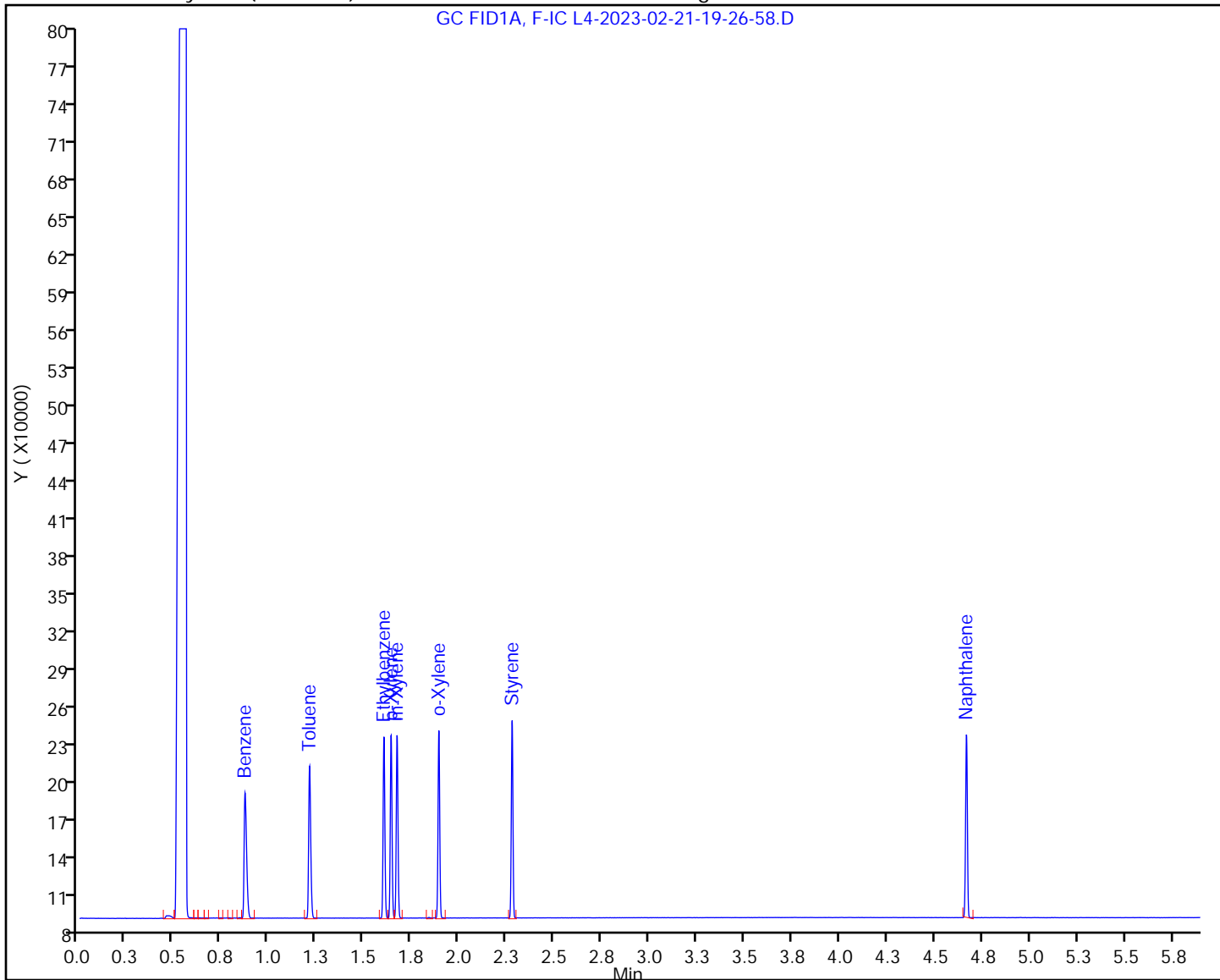
Dil. Factor: 1.0000

Method: GC2M18wax

Limit Group: GCM - EPA18\_Extract - CS2 -ICAL

Column: DB HeavyWax (0.10 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L4-2023-02-21-19-35-55.D  
 Lims ID: IC L4  
 Client ID:  
 Sample Type: IC Calib Level: 4  
 Inject. Date: 21-Feb-2023 19:38:50 ALS Bottle#: 4 Worklist Smp#: 14  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0027105-014  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Sublist: chrom-GC2M18wax\*sub5  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 23-Feb-2023 16:18:23 Calib Date: 21-Feb-2023 21:08:31  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L7-2023-02-21-21-05-36.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1625

First Level Reviewer: P0IK Date: 22-Feb-2023 10:42:11

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.872	0.872	0.000	92691	49.6	49.7	
4 Toluene	1.212	1.212	0.000	92473	49.9	49.7	
5 Ethylbenzene	1.603	1.602	0.001	93168	50.0	49.8	
7 p-Xylene	1.641	1.641	0.000	92681	50.0	49.8	
6 m-Xylene	1.672	1.672	0.000	92681	50.0	49.9	
8 o-Xylene	1.892	1.892	0.000	92973	50.0	49.8	
9 Styrene	2.277	2.277	0.000	95182	50.0	50.1	
11 Naphthalene	4.667	4.668	-0.001	97442	49.9	49.9	

**QC Flag Legend**

Processing Flags

**Reagents:**

95xBTEXSTN\_00005 Amount Added: 5.00 Units: uL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L4-2023-02-21-19-35-55.D

Injection Date: 21-Feb-2023 19:38:50

Instrument ID: ALGC2

Lims ID: IC L4

Client ID:

Operator ID: SYSTEM

ALS Bottle#: 4

Worklist Smp#: 14

Injection Vol: 1.0 ul

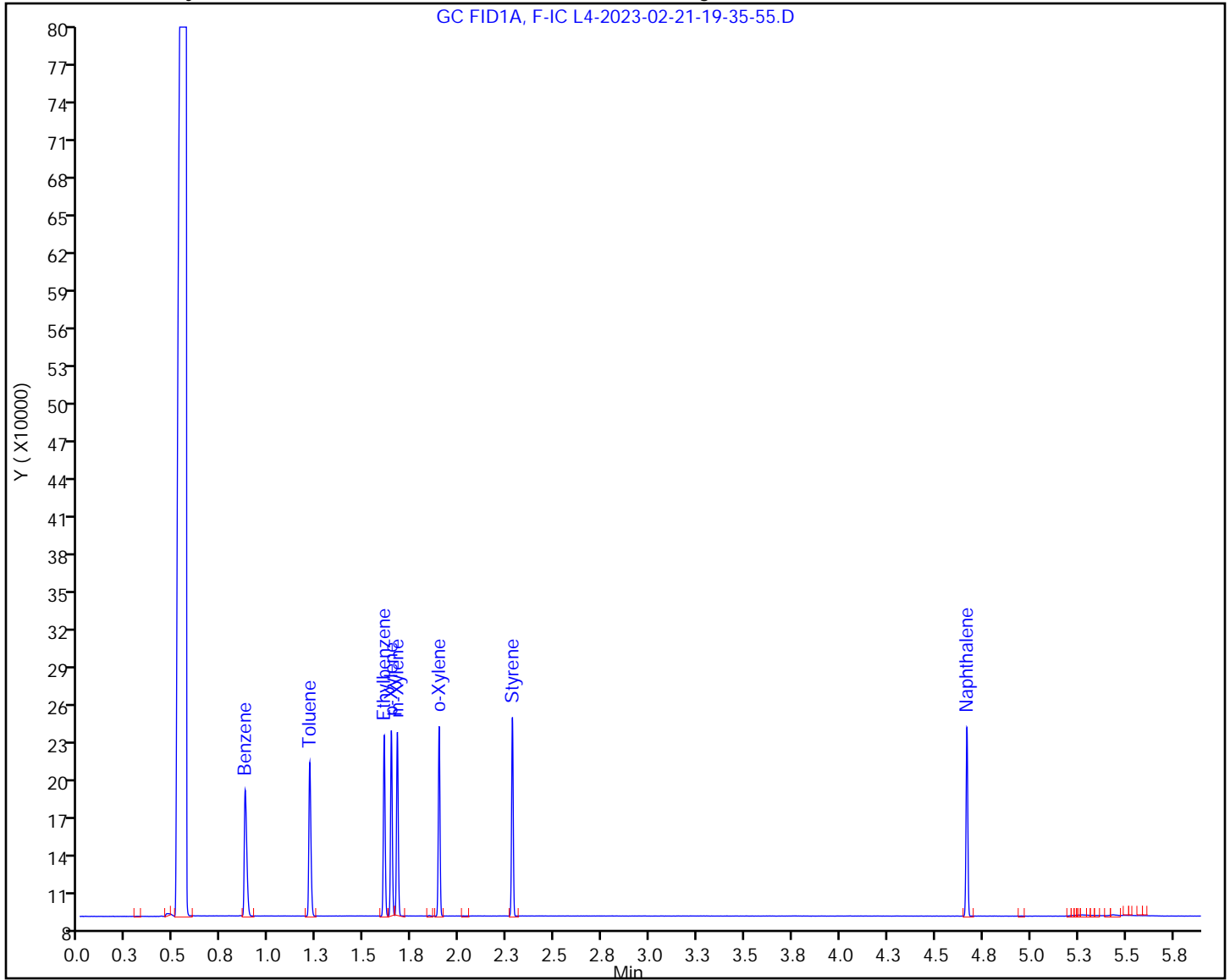
Dil. Factor: 1.0000

Method: GC2M18wax

Limit Group: GCM - EPA18\_Extract - CS2 -ICAL

Column: DB HeavyWax (0.10 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L4-2023-02-21-19-44-50.D  
 Lims ID: IC L4  
 Client ID:  
 Sample Type: IC Calib Level: 4  
 Inject. Date: 21-Feb-2023 19:47:56 ALS Bottle#: 4 Worklist Smp#: 15  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0027105-015  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Sublist: chrom-GC2M18wax\*sub5  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 23-Feb-2023 16:18:24 Calib Date: 21-Feb-2023 21:08:31  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L7-2023-02-21-21-05-36.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1625

First Level Reviewer: P0IK Date: 23-Feb-2023 16:01:26

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.872	0.872	0.000	92630	49.6	49.6	
4 Toluene	1.212	1.212	0.000	92497	49.9	49.7	
5 Ethylbenzene	1.603	1.602	0.001	93003	50.0	49.7	
7 p-Xylene	1.641	1.641	0.000	92577	50.0	49.7	
6 m-Xylene	1.672	1.672	0.000	92596	50.0	49.8	
8 o-Xylene	1.892	1.892	0.000	92999	50.0	49.8	
9 Styrene	2.277	2.277	0.000	95174	50.0	50.1	
11 Naphthalene	4.668	4.668	0.000	97134	49.9	49.8	

QC Flag Legend

Processing Flags

Reagents:

95xBTEXSTN\_00005 Amount Added: 5.00 Units: uL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L4-2023-02-21-19-44-50.D

Injection Date: 21-Feb-2023 19:47:56

Instrument ID: ALGC2

Lims ID: IC L4

Client ID:

Operator ID: SYSTEM

ALS Bottle#: 4

Worklist Smp#: 15

Injection Vol: 1.0 ul

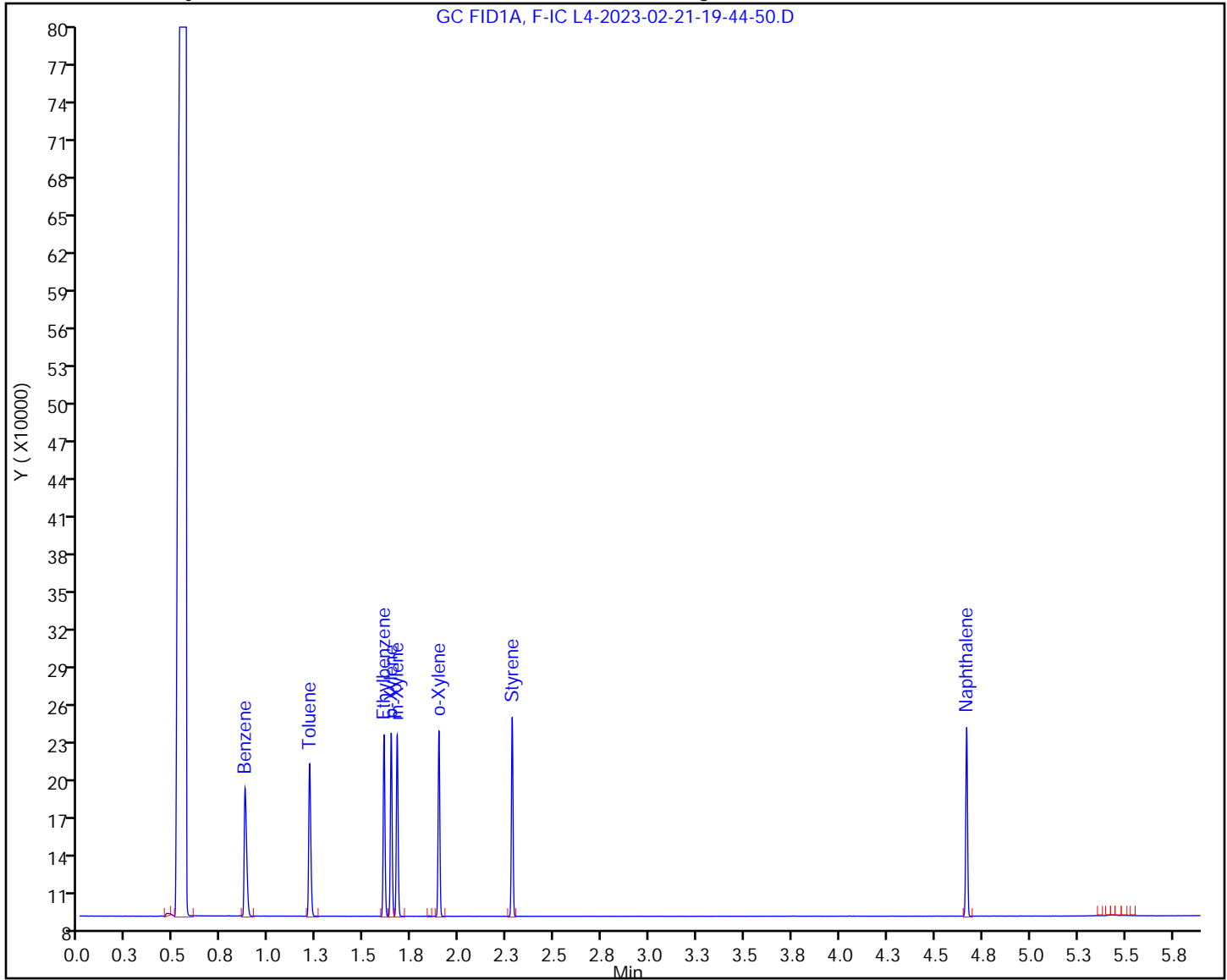
Dil. Factor: 1.0000

Method: GC2M18wax

Limit Group: GCM - EPA18\_Extract - CS2 -ICAL

Column: DB HeavyWax (0.10 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L5-2023-02-21-19-53-57.D  
 Lims ID: IC L5  
 Client ID:  
 Sample Type: IC Calib Level: 5  
 Inject. Date: 21-Feb-2023 19:56:52 ALS Bottle#: 5 Worklist Smp#: 16  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0027105-016  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Sublist: chrom-GC2M18wax\*sub5  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 23-Feb-2023 16:18:24 Calib Date: 21-Feb-2023 21:08:31  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L7-2023-02-21-21-05-36.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1625

First Level Reviewer: P0IK Date: 23-Feb-2023 16:01:30

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.872	0.872	0.000	183069	99.3	98.3	
4 Toluene	1.212	1.212	0.000	182144	99.7	98.0	
5 Ethylbenzene	1.603	1.602	0.001	182772	100.0	97.7	
7 p-Xylene	1.641	1.641	0.000	181588	100.0	97.7	
6 m-Xylene	1.672	1.672	0.000	181471	100.0	97.8	
8 o-Xylene	1.892	1.892	0.000	181649	99.9	97.3	
9 Styrene	2.278	2.277	0.001	183825	99.9	96.8	
11 Naphthalene	4.669	4.668	0.001	189119	99.8	97.0	

QC Flag Legend

Processing Flags

Reagents:

95xBTEXSTN\_00005 Amount Added: 10.00 Units: uL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L5-2023-02-21-19-53-57.D

Injection Date: 21-Feb-2023 19:56:52

Instrument ID: ALGC2

Lims ID: IC L5

Client ID:

Operator ID: SYSTEM

ALS Bottle#: 5

Worklist Smp#: 16

Injection Vol: 1.0 ul

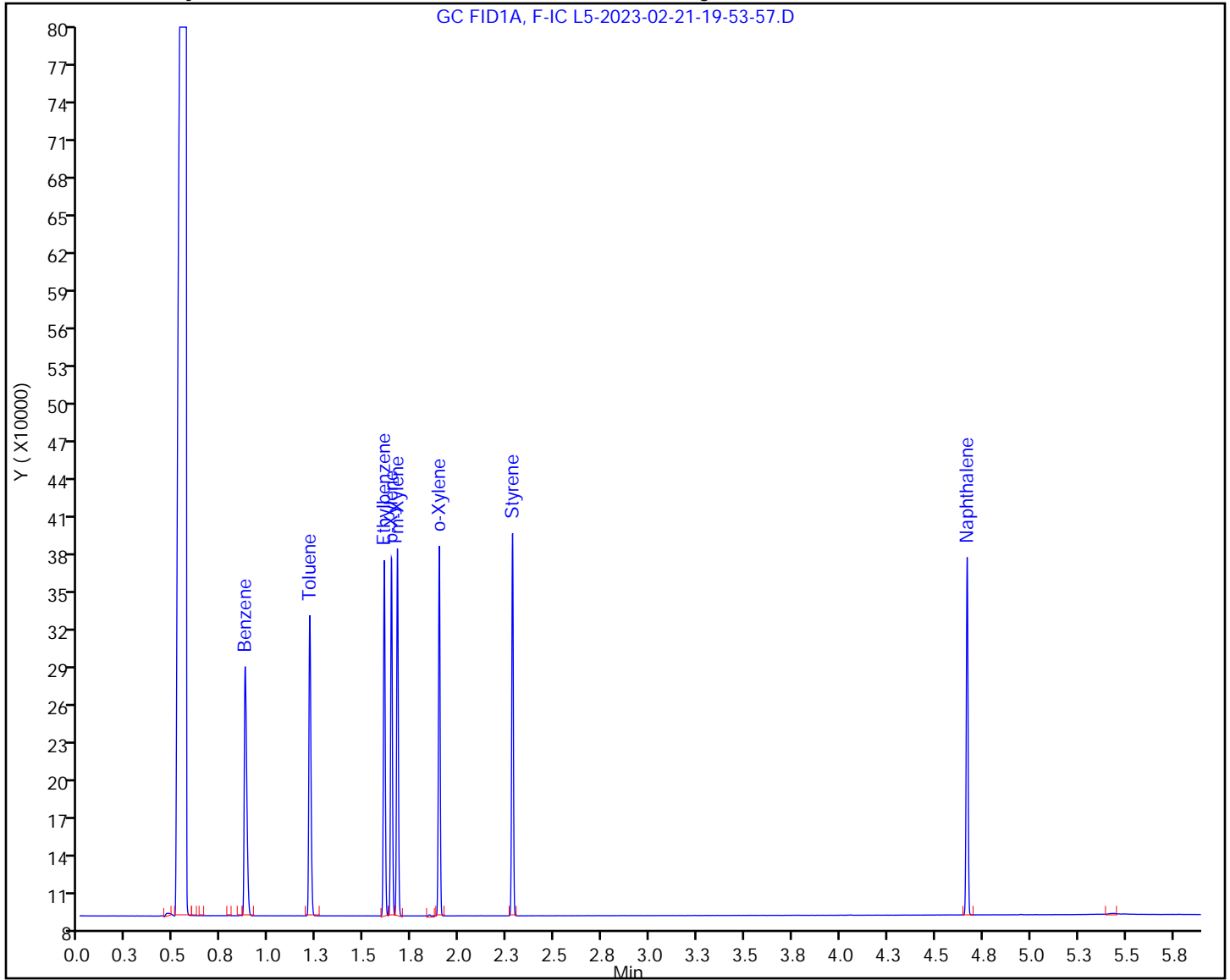
Dil. Factor: 1.0000

Method: GC2M18wax

Limit Group: GCM - EPA18\_Extract - CS2 -ICAL

Column: DB HeavyWax (0.10 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L5-2023-02-21-20-02-53.D  
 Lims ID: IC L5  
 Client ID:  
 Sample Type: IC Calib Level: 5  
 Inject. Date: 21-Feb-2023 20:05:46 ALS Bottle#: 5 Worklist Smp#: 17  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0027105-017  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Sublist: chrom-GC2M18wax\*sub5  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 23-Feb-2023 16:18:25 Calib Date: 21-Feb-2023 21:08:31  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L7-2023-02-21-21-05-36.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1625

First Level Reviewer: P0IK

Date: 23-Feb-2023 16:01:34

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.872	0.872	0.000	183784	99.3	98.7	
4 Toluene	1.212	1.212	0.000	182215	99.7	98.1	
5 Ethylbenzene	1.603	1.602	0.001	182987	100.0	97.8	
7 p-Xylene	1.641	1.641	0.000	181932	100.0	97.8	
6 m-Xylene	1.672	1.672	0.000	181647	100.0	97.8	
8 o-Xylene	1.892	1.892	0.000	182131	99.9	97.6	
9 Styrene	2.277	2.277	0.000	184370	99.9	97.1	
11 Naphthalene	4.668	4.668	0.000	189233	99.8	97.0	

## QC Flag Legend

Processing Flags

## Reagents:

95xBTEXSTN\_00005

Amount Added: 10.00

Units: uL



Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L5-2023-02-21-20-02-53.D

Injection Date: 21-Feb-2023 20:05:46

Instrument ID: ALGC2

Lims ID: IC L5

Client ID:

Operator ID: SYSTEM

ALS Bottle#: 5

Worklist Smp#: 17

Injection Vol: 1.0 ul

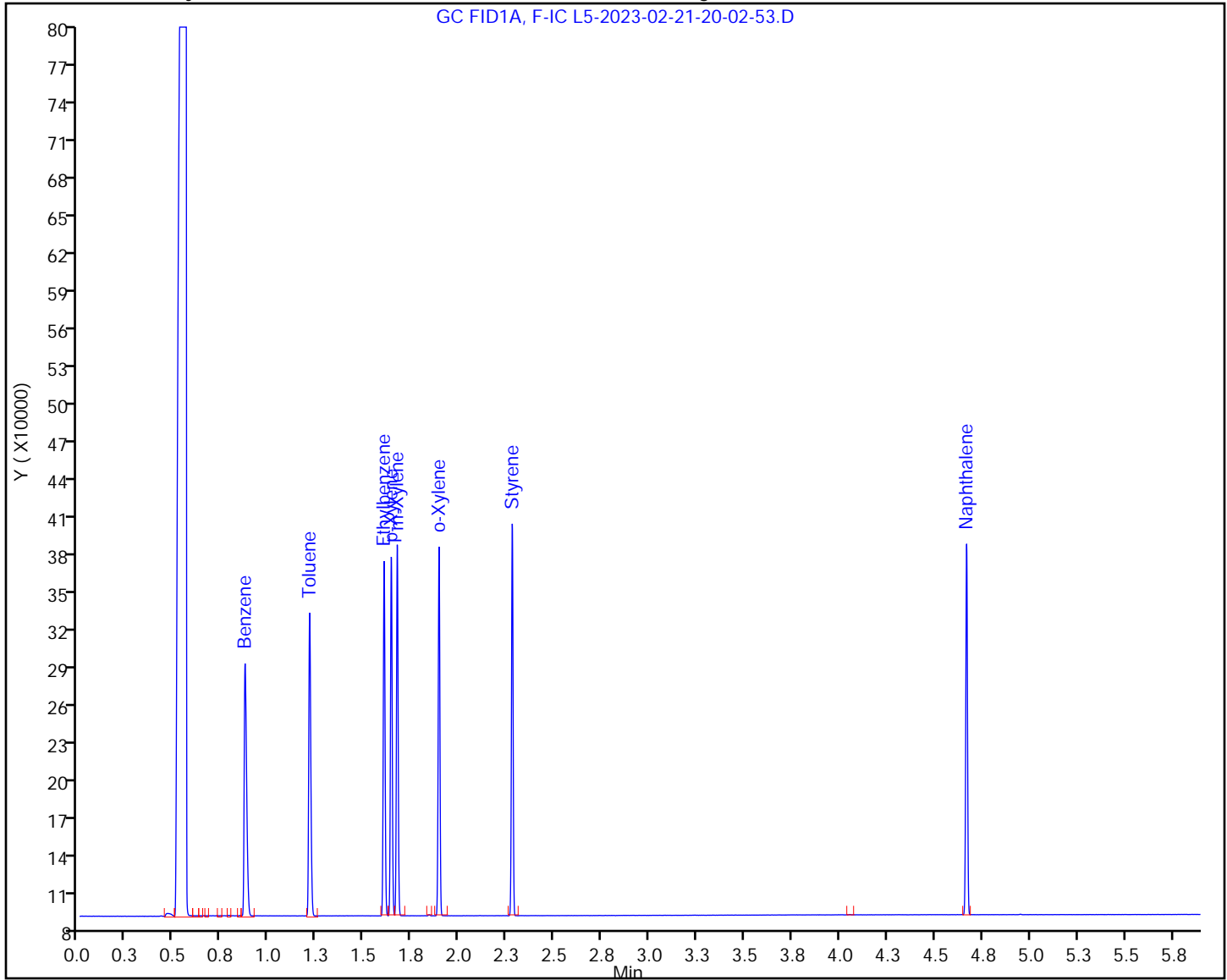
Dil. Factor: 1.0000

Method: GC2M18wax

Limit Group: GCM - EPA18\_Extract - CS2 -ICAL

Column: DB HeavyWax (0.10 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L5-2023-02-21-20-11-47.D  
 Lims ID: IC L5  
 Client ID:  
 Sample Type: IC Calib Level: 5  
 Inject. Date: 21-Feb-2023 20:14:43 ALS Bottle#: 5 Worklist Smp#: 18  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0027105-018  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Sublist: chrom-GC2M18wax\*sub5  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 23-Feb-2023 16:18:25 Calib Date: 21-Feb-2023 21:08:31  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L7-2023-02-21-21-05-36.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1625

First Level Reviewer: P0IK

Date: 23-Feb-2023 16:01:38

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.872	0.872	0.000	183782	99.3	98.7	
4 Toluene	1.212	1.212	0.000	182674	99.7	98.3	
5 Ethylbenzene	1.603	1.602	0.001	183339	100.0	98.0	
7 p-Xylene	1.642	1.641	0.001	182323	100.0	98.1	
6 m-Xylene	1.672	1.672	0.000	182140	100.0	98.1	
8 o-Xylene	1.892	1.892	0.000	182552	99.9	97.8	
9 Styrene	2.278	2.277	0.001	184762	99.9	97.3	
11 Naphthalene	4.669	4.668	0.001	189598	99.8	97.2	

## QC Flag Legend

Processing Flags

## Reagents:

95xBTEXSTN\_00005

Amount Added: 10.00

Units: uL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L5-2023-02-21-20-11-47.D

Injection Date: 21-Feb-2023 20:14:43

Instrument ID: ALGC2

Lims ID: IC L5

Client ID:

Operator ID: SYSTEM

ALS Bottle#: 5

Worklist Smp#: 18

Injection Vol: 1.0 ul

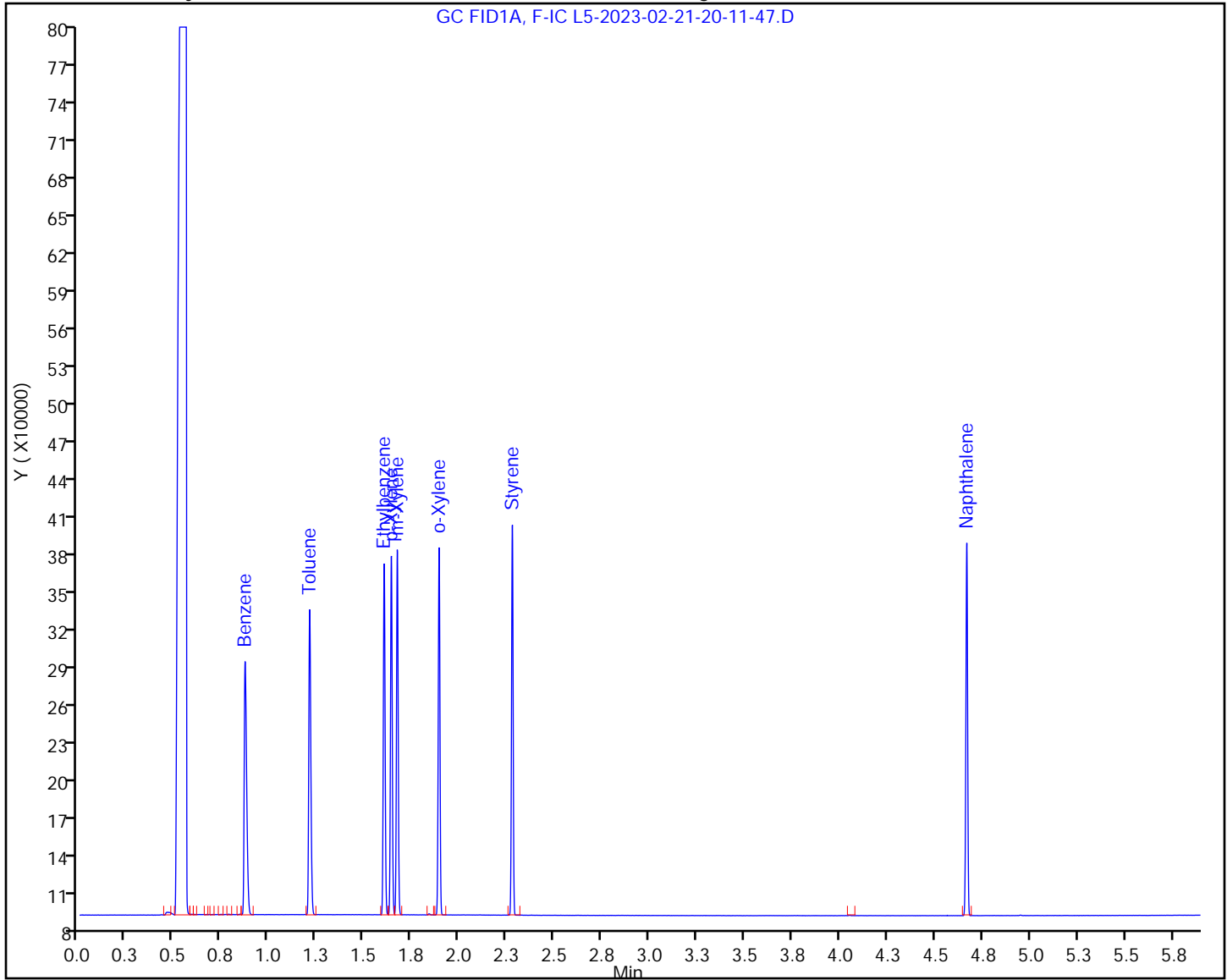
Dil. Factor: 1.0000

Method: GC2M18wax

Limit Group: GCM - EPA18\_Extract - CS2 -ICAL

Column: DB HeavyWax (0.10 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L6-2023-02-21-20-20-44.D  
 Lims ID: IC L6  
 Client ID:  
 Sample Type: IC Calib Level: 6  
 Inject. Date: 21-Feb-2023 20:23:40 ALS Bottle#: 6 Worklist Smp#: 19  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0027105-019  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Sublist: chrom-GC2M18wax\*sub5  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 23-Feb-2023 16:18:26 Calib Date: 21-Feb-2023 21:08:31  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L7-2023-02-21-21-05-36.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1625

First Level Reviewer: P0IK Date: 23-Feb-2023 16:01:43

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.872	0.872	0.000	919512	496.4	494.9	
4 Toluene	1.213	1.212	0.001	915598	498.7	493.5	
5 Ethylbenzene	1.607	1.602	0.005	920526	499.8	492.4	
7 p-Xylene	1.646	1.641	0.005	915560	499.8	492.7	
6 m-Xylene	1.677	1.672	0.005	914375	500.0	493.0	
8 o-Xylene	1.897	1.892	0.005	915348	499.7	490.9	
9 Styrene	2.282	2.277	0.005	926992	499.7	488.8	
11 Naphthalene	4.673	4.668	0.005	949828	499.1	487.5	

QC Flag Legend

Processing Flags

Reagents:

95xBTEXSTN\_00005 Amount Added: 50.00 Units: uL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L6-2023-02-21-20-20-44.D

Injection Date: 21-Feb-2023 20:23:40

Instrument ID: ALGC2

Lims ID: IC L6

Client ID:

Operator ID: SYSTEM

ALS Bottle#: 6

Worklist Smp#: 19

Injection Vol: 1.0 ul

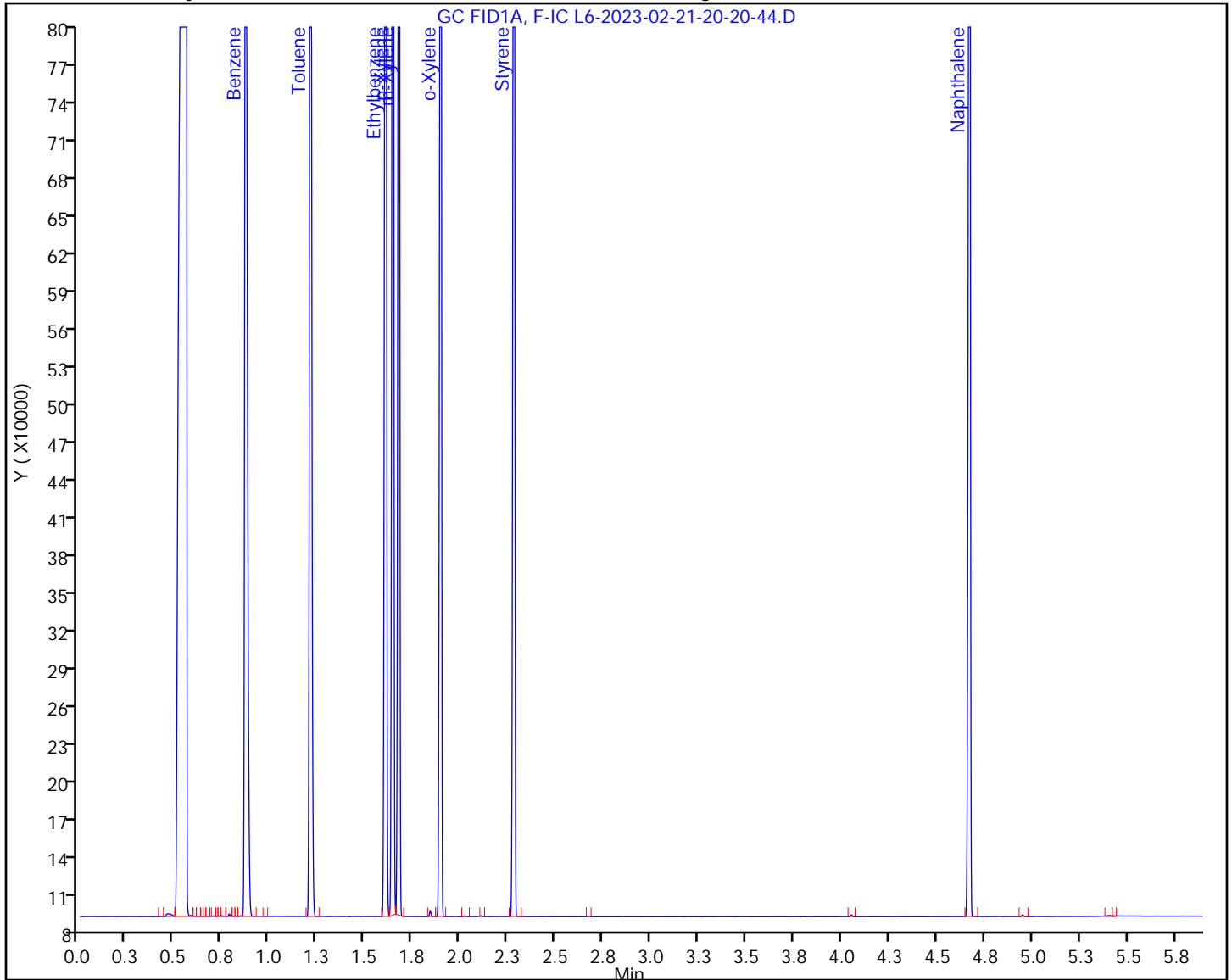
Dil. Factor: 1.0000

Method: GC2M18wax

Limit Group: GCM - EPA18\_Extract - CS2 -ICAL

Column: DB HeavyWax (0.10 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L6-2023-02-21-20-29-41.D  
 Lims ID: IC L6  
 Client ID:  
 Sample Type: IC Calib Level: 6  
 Inject. Date: 21-Feb-2023 20:32:37 ALS Bottle#: 6 Worklist Smp#: 20  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0027105-020  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Sublist: chrom-GC2M18wax\*sub5  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 23-Feb-2023 16:18:26 Calib Date: 21-Feb-2023 21:08:31  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L7-2023-02-21-21-05-36.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1625

First Level Reviewer: P0IK

Date: 23-Feb-2023 16:01:48

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.872	0.872	0.000	909247	496.4	489.3	
4 Toluene	1.212	1.212	0.000	904512	498.7	487.5	
5 Ethylbenzene	1.607	1.602	0.005	907838	499.8	485.6	
7 p-Xylene	1.646	1.641	0.005	902911	499.8	485.9	
6 m-Xylene	1.677	1.672	0.005	901746	500.0	486.2	
8 o-Xylene	1.897	1.892	0.005	902795	499.7	484.2	
9 Styrene	2.281	2.277	0.004	913972	499.7	481.9	
11 Naphthalene	4.672	4.668	0.004	938160	499.1	481.5	

**QC Flag Legend**

Processing Flags

**Reagents:**

95xBTEXSTN\_00005

Amount Added: 50.00

Units: uL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L6-2023-02-21-20-29-41.D

Injection Date: 21-Feb-2023 20:32:37

Instrument ID: ALGC2

Lims ID: IC L6

Client ID:

Operator ID: SYSTEM

ALS Bottle#: 6

Worklist Smp#: 20

Injection Vol: 1.0 ul

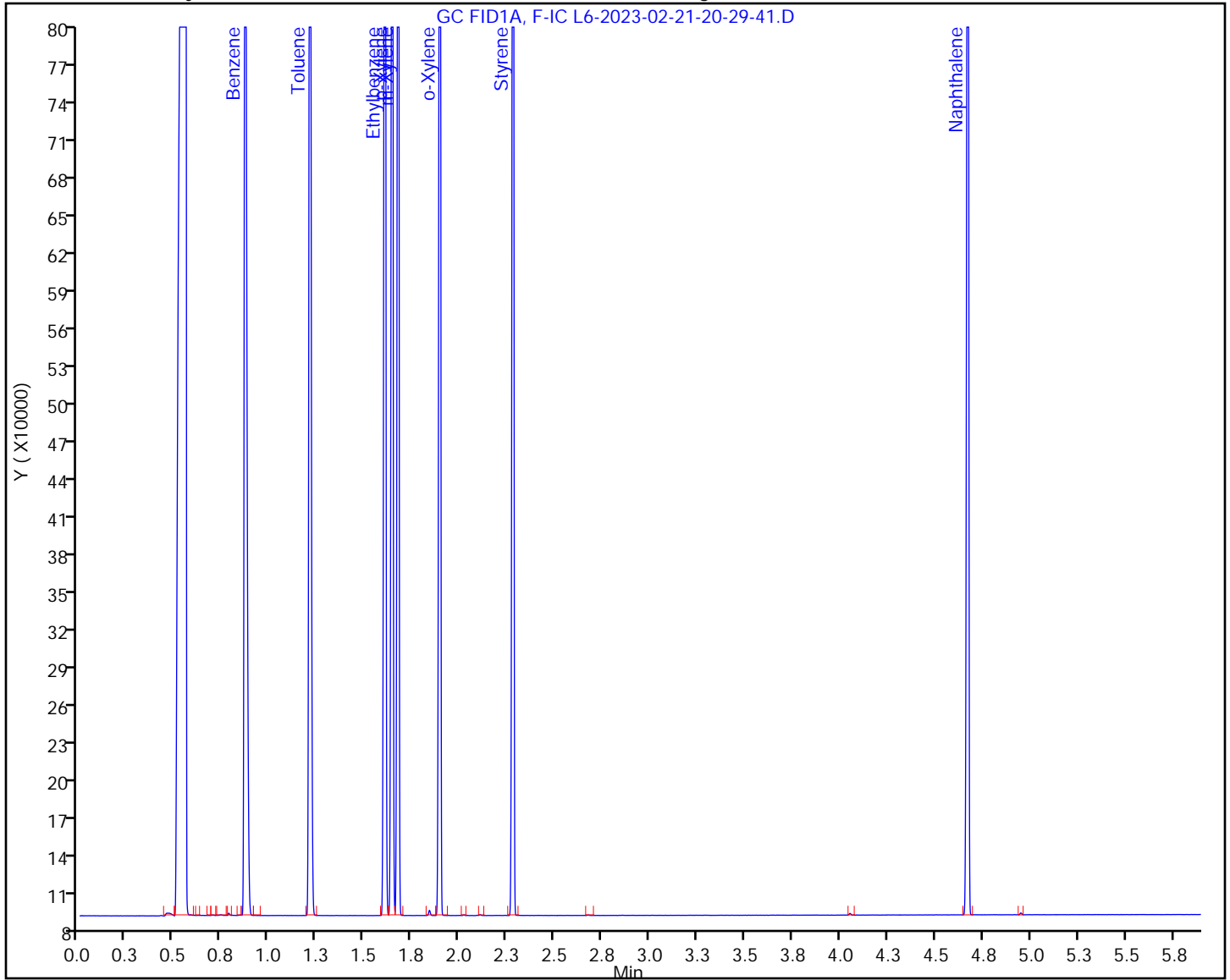
Dil. Factor: 1.0000

Method: GC2M18wax

Limit Group: GCM - EPA18\_Extract - CS2 -ICAL

Column: DB HeavyWax (0.10 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L6-2023-02-21-20-38-37.D  
 Lims ID: IC L6  
 Client ID:  
 Sample Type: IC Calib Level: 6  
 Inject. Date: 21-Feb-2023 20:41:32 ALS Bottle#: 6 Worklist Smp#: 21  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0027105-021  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Sublist: chrom-GC2M18wax\*sub5  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 23-Feb-2023 16:18:27 Calib Date: 21-Feb-2023 21:08:31  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L7-2023-02-21-21-05-36.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1625

First Level Reviewer: P0IK Date: 23-Feb-2023 16:01:54

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.872	0.872	0.000	932531	496.4	501.9	
4 Toluene	1.213	1.212	0.001	929223	498.7	500.8	
5 Ethylbenzene	1.607	1.602	0.005	933306	499.8	499.2	
7 p-Xylene	1.646	1.641	0.005	928125	499.8	499.5	
6 m-Xylene	1.677	1.672	0.005	926937	500.0	499.8	
8 o-Xylene	1.897	1.892	0.005	927953	499.7	497.7	
9 Styrene	2.281	2.277	0.004	939512	499.7	495.4	
11 Naphthalene	4.673	4.668	0.005	963796	499.1	494.7	

QC Flag Legend

Processing Flags

Reagents:

95xBTEXSTN\_00005 Amount Added: 50.00 Units: uL



Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L6-2023-02-21-20-38-37.D

Injection Date: 21-Feb-2023 20:41:32

Instrument ID: ALGC2

Lims ID: IC L6

Client ID:

Operator ID: SYSTEM

ALS Bottle#: 6

Worklist Smp#: 21

Injection Vol: 1.0 ul

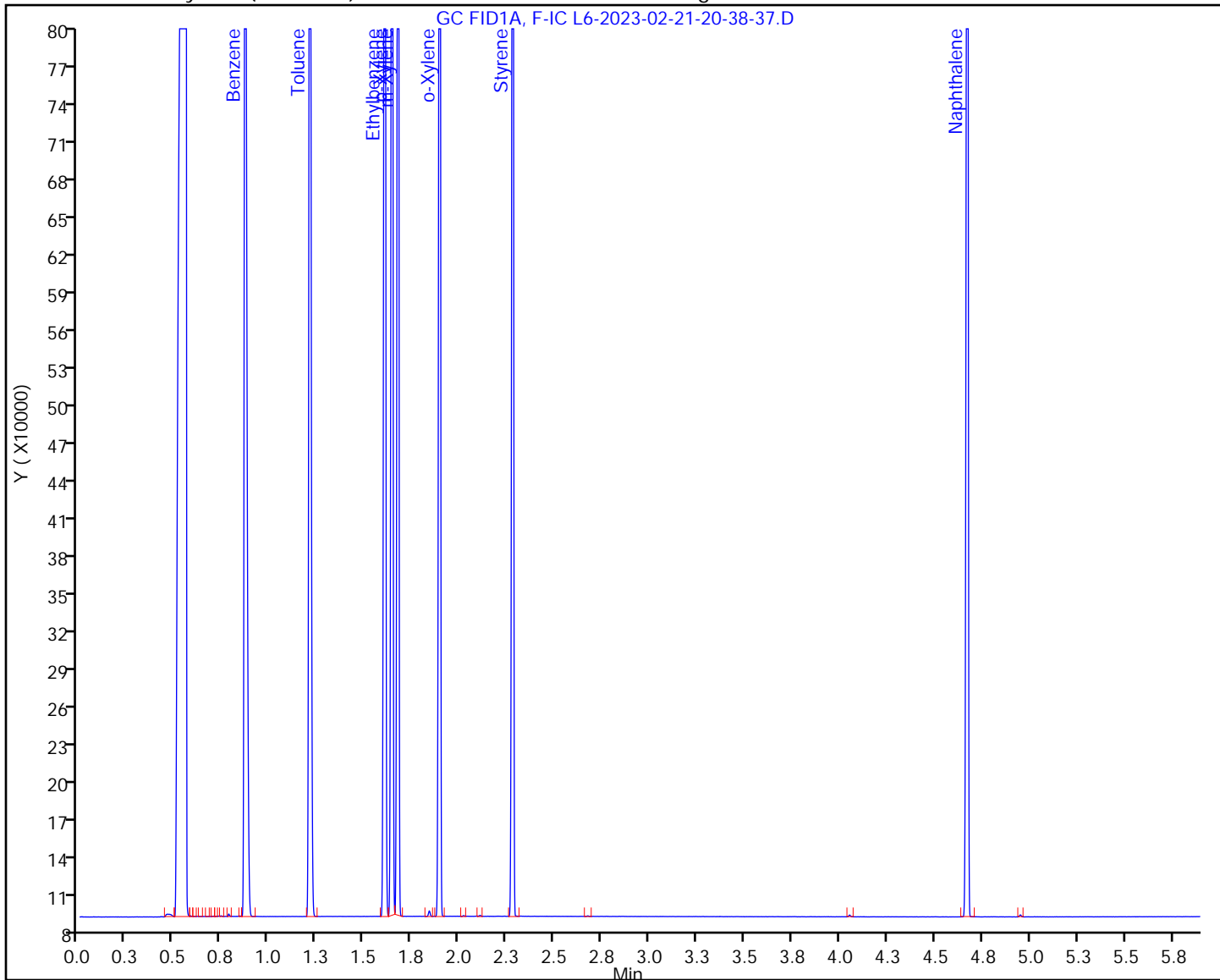
Dil. Factor: 1.0000

Method: GC2M18wax

Limit Group: GCM - EPA18\_Extract - CS2 -ICAL

Column: DB HeavyWax (0.10 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L7-2023-02-21-20-47-33.D  
 Lims ID: IC L7  
 Client ID:  
 Sample Type: IC Calib Level: 7  
 Inject. Date: 21-Feb-2023 20:50:38 ALS Bottle#: 7 Worklist Smp#: 22  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0027105-022  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Sublist: chrom-GC2M18wax\*sub5  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 23-Feb-2023 16:18:28 Calib Date: 21-Feb-2023 21:08:31  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L7-2023-02-21-21-05-36.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1625

First Level Reviewer: P0IK Date: 23-Feb-2023 16:01:58

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.872	0.872	0.000	1872617	1002.8	1008.0	
4 Toluene	1.216	1.212	0.004	1866721	1007.3	1006.3	
5 Ethylbenzene	1.612	1.602	0.010	1874234	1009.6	1002.6	
7 p-Xylene	1.651	1.641	0.010	1864176	1009.6	1003.3	
6 m-Xylene	1.684	1.672	0.012	1861620	1009.9	1003.9	
8 o-Xylene	1.902	1.892	0.010	1863441	1009.4	999.5	
9 Styrene	2.286	2.277	0.009	1886391	1009.3	994.7	
11 Naphthalene	4.677	4.668	0.009	1930520	1008.2	991.0	

QC Flag Legend

Processing Flags

Reagents:

95xBTEXSTN\_00005 Amount Added: 101.00 Units: uL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L7-2023-02-21-20-47-33.D

Injection Date: 21-Feb-2023 20:50:38

Instrument ID: ALGC2

Lims ID: IC L7

Client ID:

Operator ID: SYSTEM

ALS Bottle#: 7

Worklist Smp#: 22

Injection Vol: 1.0 ul

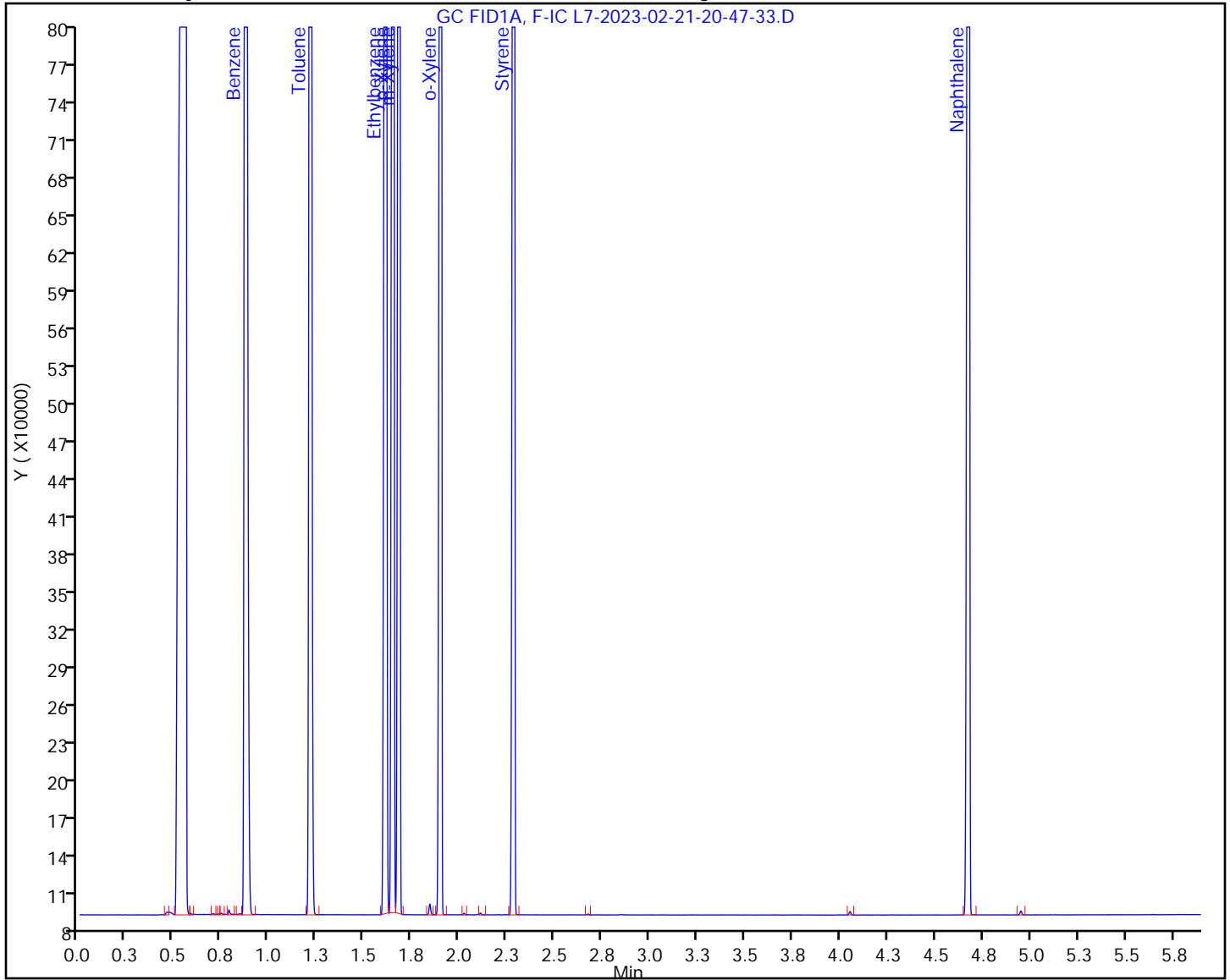
Dil. Factor: 1.0000

Method: GC2M18wax

Limit Group: GCM - EPA18\_Extract - CS2 -ICAL

Column: DB HeavyWax (0.10 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L7-2023-02-21-20-56-40.D  
 Lims ID: IC L7  
 Client ID:  
 Sample Type: IC Calib Level: 7  
 Inject. Date: 21-Feb-2023 20:59:35 ALS Bottle#: 7 Worklist Smp#: 23  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0027105-023  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Sublist: chrom-GC2M18wax\*sub5  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 23-Feb-2023 16:18:28 Calib Date: 21-Feb-2023 21:08:31  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L7-2023-02-21-21-05-36.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1625

First Level Reviewer: P0IK Date: 23-Feb-2023 16:02:02

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.872	0.872	0.000	1876404	1002.8	1010.1	
4 Toluene	1.215	1.212	0.003	1869799	1007.3	1008.0	
5 Ethylbenzene	1.612	1.602	0.010	1876614	1009.6	1003.9	
7 p-Xylene	1.651	1.641	0.010	1866247	1009.6	1004.4	
6 m-Xylene	1.683	1.672	0.011	1863894	1009.9	1005.1	
8 o-Xylene	1.902	1.892	0.010	1865659	1009.4	1000.7	
9 Styrene	2.285	2.277	0.008	1888610	1009.3	995.9	
11 Naphthalene	4.678	4.668	0.010	1935901	1008.2	993.7	

QC Flag Legend

Processing Flags

Reagents:

95xBTEXSTN\_00005 Amount Added: 101.00 Units: uL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L7-2023-02-21-20-56-40.D

Injection Date: 21-Feb-2023 20:59:35

Instrument ID: ALGC2

Lims ID: IC L7

Client ID:

Operator ID: SYSTEM

ALS Bottle#: 7

Worklist Smp#: 23

Injection Vol: 1.0 ul

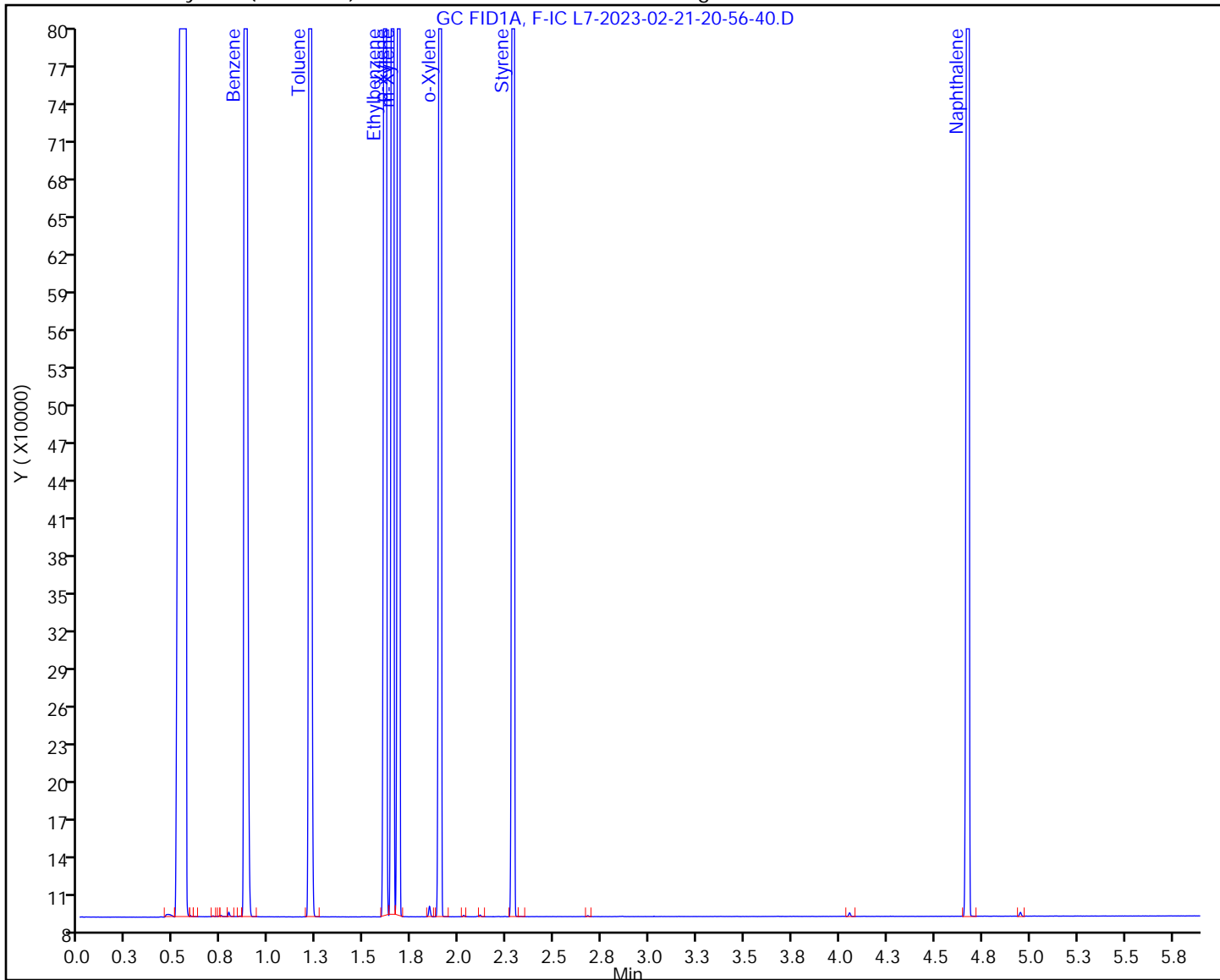
Dil. Factor: 1.0000

Method: GC2M18wax

Limit Group: GCM - EPA18\_Extract - CS2 -ICAL

Column: DB HeavyWax (0.10 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L7-2023-02-21-21-05-36.D  
 Lims ID: IC L7  
 Client ID:  
 Sample Type: IC Calib Level: 7  
 Inject. Date: 21-Feb-2023 21:08:31 ALS Bottle#: 7 Worklist Smp#: 24  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0027105-024  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Sublist: chrom-GC2M18wax\*sub5  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 23-Feb-2023 16:18:29 Calib Date: 21-Feb-2023 21:08:31  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L7-2023-02-21-21-05-36.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1625

First Level Reviewer: P0IK Date: 23-Feb-2023 16:02:06

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.872	0.872	0.000	1847459	1002.8	994.5	
4 Toluene	1.215	1.212	0.003	1840788	1007.3	992.3	
5 Ethylbenzene	1.612	1.602	0.010	1847194	1009.6	988.2	
7 p-Xylene	1.651	1.641	0.010	1837372	1009.6	988.9	
6 m-Xylene	1.682	1.672	0.010	1834815	1009.9	989.4	
8 o-Xylene	1.901	1.892	0.009	1836496	1009.4	985.0	
9 Styrene	2.285	2.277	0.008	1859253	1009.3	980.4	
11 Naphthalene	4.677	4.668	0.009	1903064	1008.2	976.9	

QC Flag Legend

Processing Flags

Reagents:

95xBTEXSTN\_00005 Amount Added: 101.00 Units: uL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L7-2023-02-21-21-05-36.D

Injection Date: 21-Feb-2023 21:08:31

Instrument ID: ALGC2

Lims ID: IC L7

Client ID:

Operator ID: SYSTEM

ALS Bottle#: 7

Worklist Smp#: 24

Injection Vol: 1.0 ul

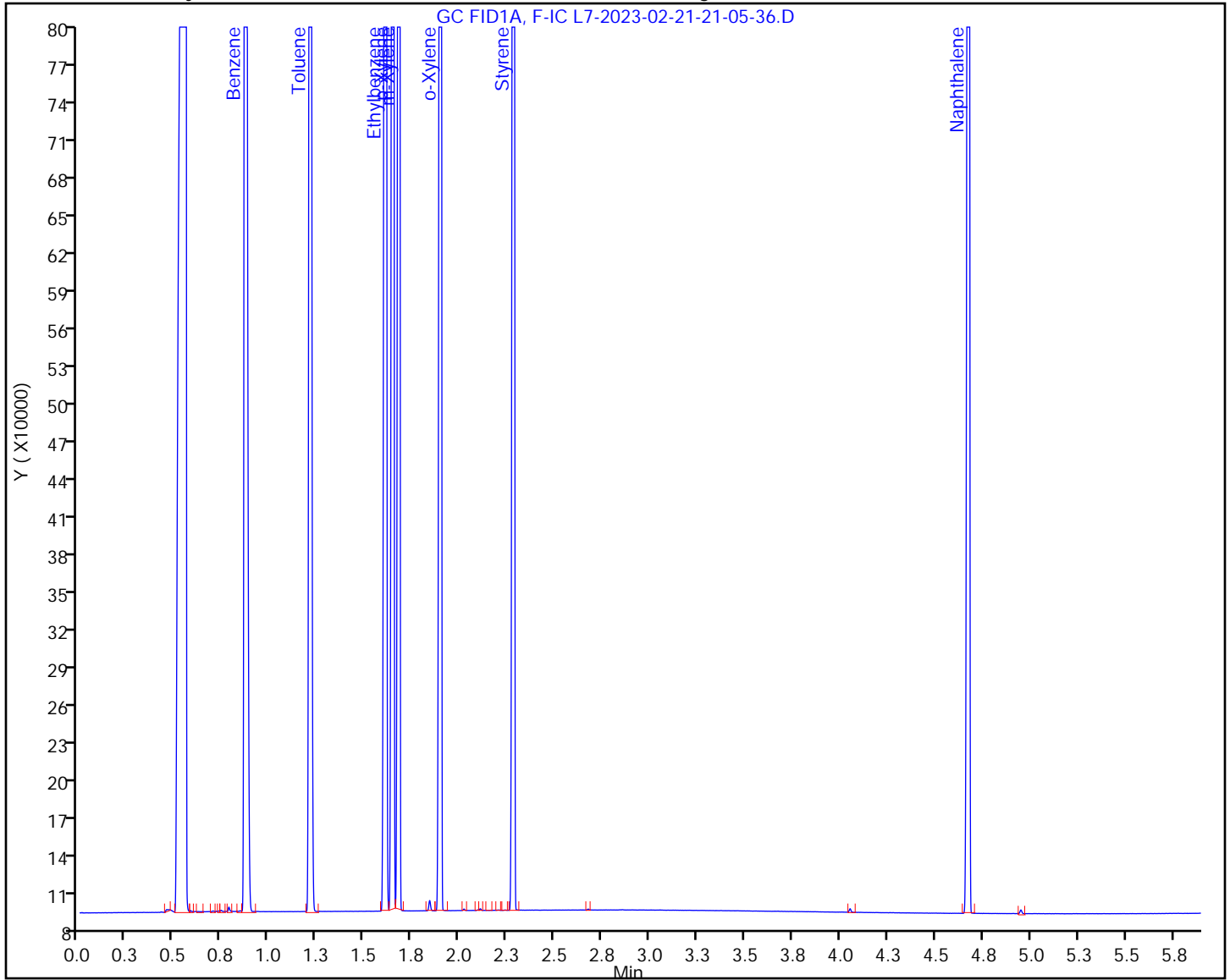
Dil. Factor: 1.0000

Method: GC2M18wax

Limit Group: GCM - EPA18\_Extract - CS2 -ICAL

Column: DB HeavyWax (0.10 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



Calibration

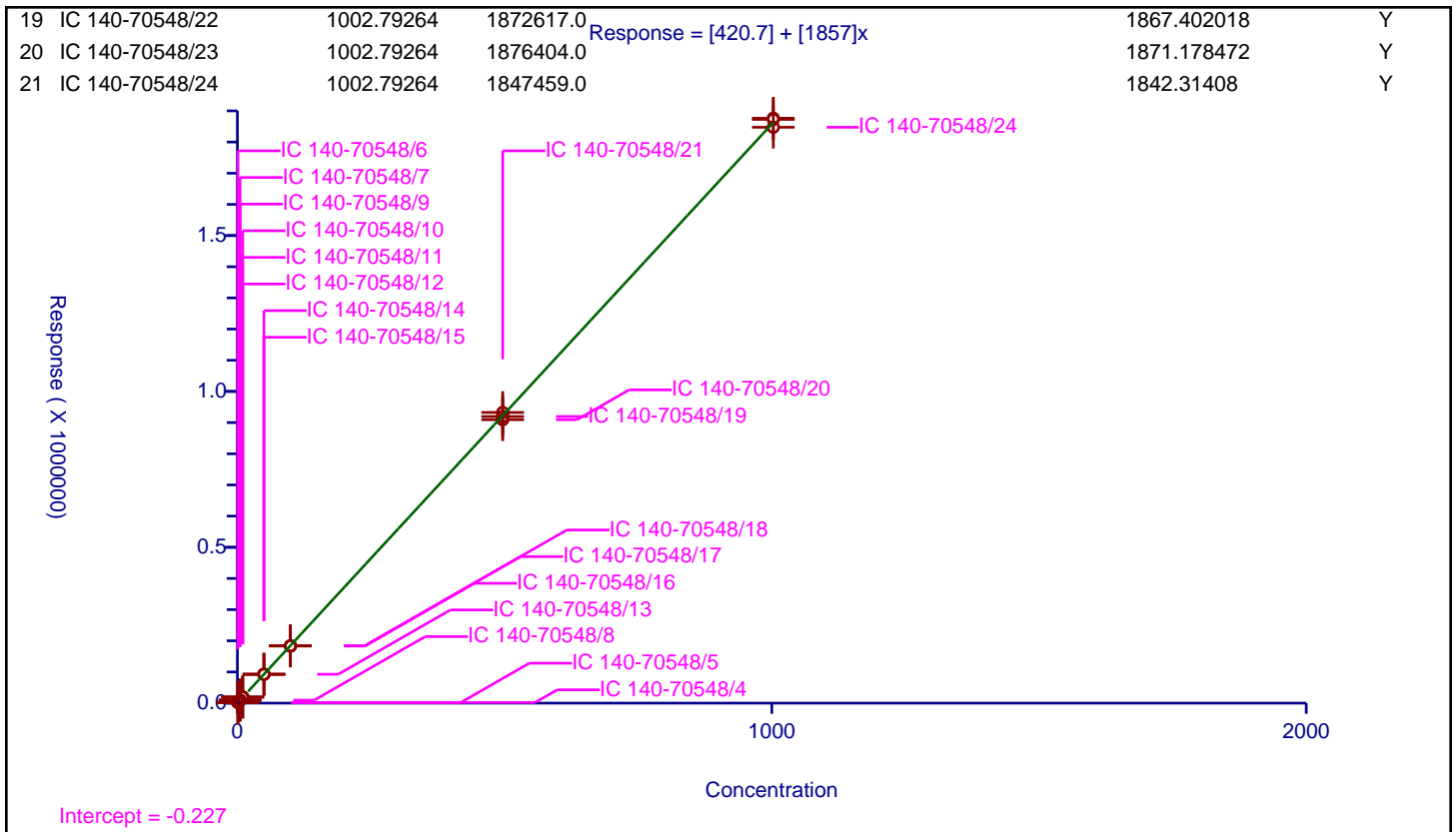
/ Benzene

Curve Type: Linear  
 Weighting: Conc  
 Origin: None  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	420.7
Slope:	1857

Error Coefficients	
Standard Error:	6510
Relative Standard Error:	2.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 140-70548/4	0.992864	2122.0			2137.251426	Y
2	IC 140-70548/5	0.992864	2207.0			2222.862346	Y
3	IC 140-70548/6	0.992864	2277.0			2293.365456	Y
4	IC 140-70548/7	4.96432	9770.0			1968.043962	Y
5	IC 140-70548/8	4.96432	9597.0			1933.195282	Y
6	IC 140-70548/9	4.96432	9837.0			1981.540271	Y
7	IC 140-70548/10	9.92864	19431.0			1957.06562	Y
8	IC 140-70548/11	9.92864	19298.0			1943.670029	Y
9	IC 140-70548/12	9.92864	19581.0			1972.17343	Y
10	IC 140-70548/13	49.6432	92616.0			1865.633158	Y
11	IC 140-70548/14	49.6432	92691.0			1867.143939	Y
12	IC 140-70548/15	49.6432	92630.0			1865.915171	Y
13	IC 140-70548/16	99.2864	183069.0			1843.847697	Y
14	IC 140-70548/17	99.2864	183784.0			1851.049086	Y
15	IC 140-70548/18	99.2864	183782.0			1851.028943	Y
16	IC 140-70548/19	496.432	919512.0			1852.241596	Y
17	IC 140-70548/20	496.432	909247.0			1831.564041	Y
18	IC 140-70548/21	496.432	932531.0			1878.466739	Y
19	IC 140-70548/22	1002.79264	1872617.0			1867.402018	Y
20	IC 140-70548/23	1002.79264	1876404.0			1871.178472	Y
21	IC 140-70548/24	1002.79264	1847459.0			1842.31408	Y





Calibration

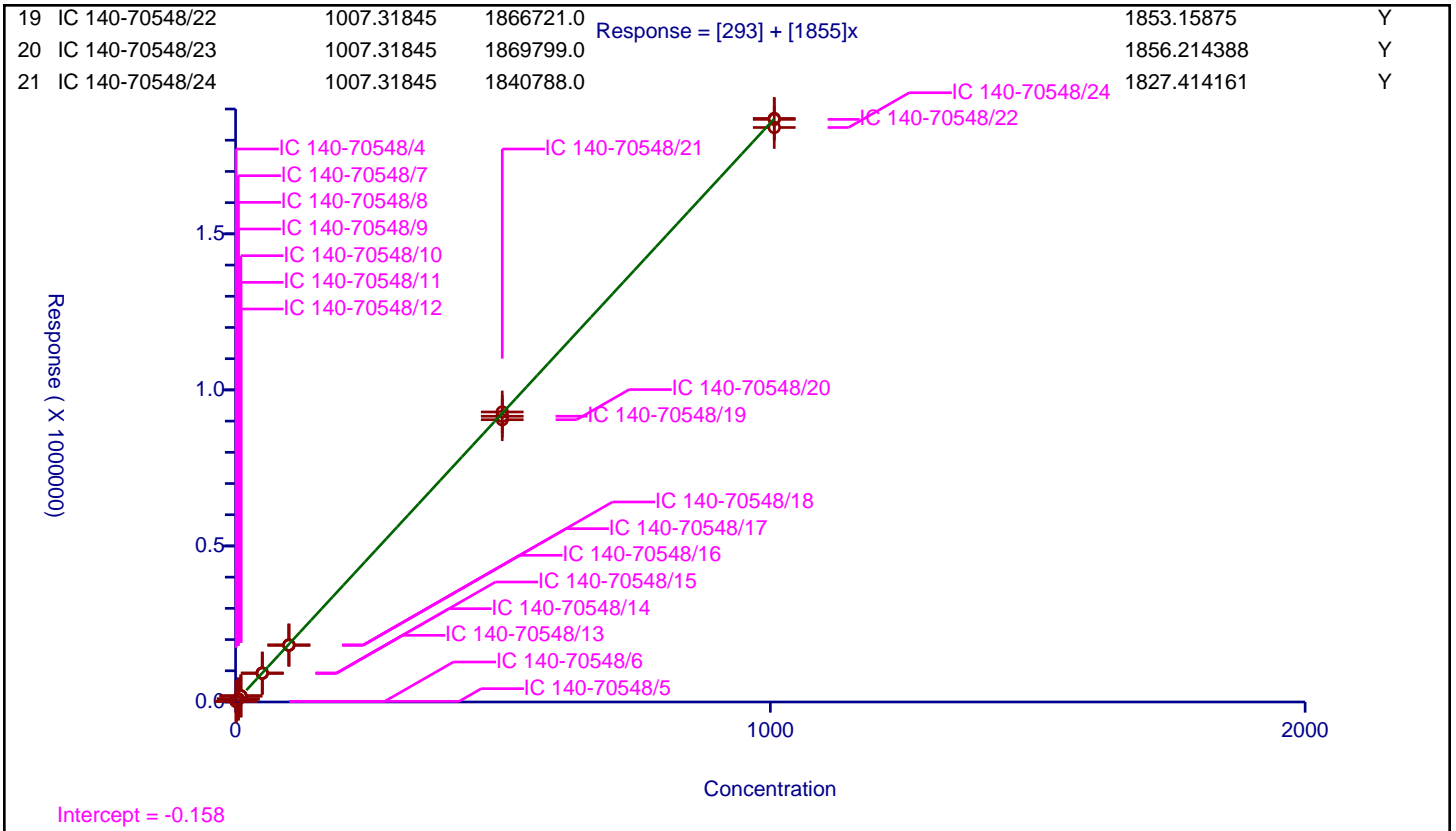
/ Toluene

Curve Type: Linear  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	293
Slope:	1855

Error Coefficients	
Standard Error:	8400
Relative Standard Error:	1.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 140-70548/4	0.997345	2154.0			2159.734094	Y
2	IC 140-70548/5	0.997345	2124.0			2129.654232	Y
3	IC 140-70548/6	0.997345	2127.0			2132.662218	Y
4	IC 140-70548/7	4.986725	9571.0			1919.29573	Y
5	IC 140-70548/8	4.986725	9605.0			1926.113832	Y
6	IC 140-70548/9	4.986725	9608.0			1926.715429	Y
7	IC 140-70548/10	9.97345	19441.0			1949.275326	Y
8	IC 140-70548/11	9.97345	19519.0			1957.09609	Y
9	IC 140-70548/12	9.97345	19252.0			1930.325013	Y
10	IC 140-70548/13	49.86725	92181.0			1848.527841	Y
11	IC 140-70548/14	49.86725	92473.0			1854.383388	Y
12	IC 140-70548/15	49.86725	92497.0			1854.864666	Y
13	IC 140-70548/16	99.7345	182144.0			1826.288797	Y
14	IC 140-70548/17	99.7345	182215.0			1827.000687	Y
15	IC 140-70548/18	99.7345	182674.0			1831.602906	Y
16	IC 140-70548/19	498.6725	915598.0			1836.070768	Y
17	IC 140-70548/20	498.6725	904512.0			1813.839745	Y
18	IC 140-70548/21	498.6725	929223.0			1863.393309	Y
19	IC 140-70548/22	1007.31845	1866721.0			1853.15875	Y
20	IC 140-70548/23	1007.31845	1869799.0			1856.214388	Y
21	IC 140-70548/24	1007.31845	1840788.0			1827.414161	Y



Calibration

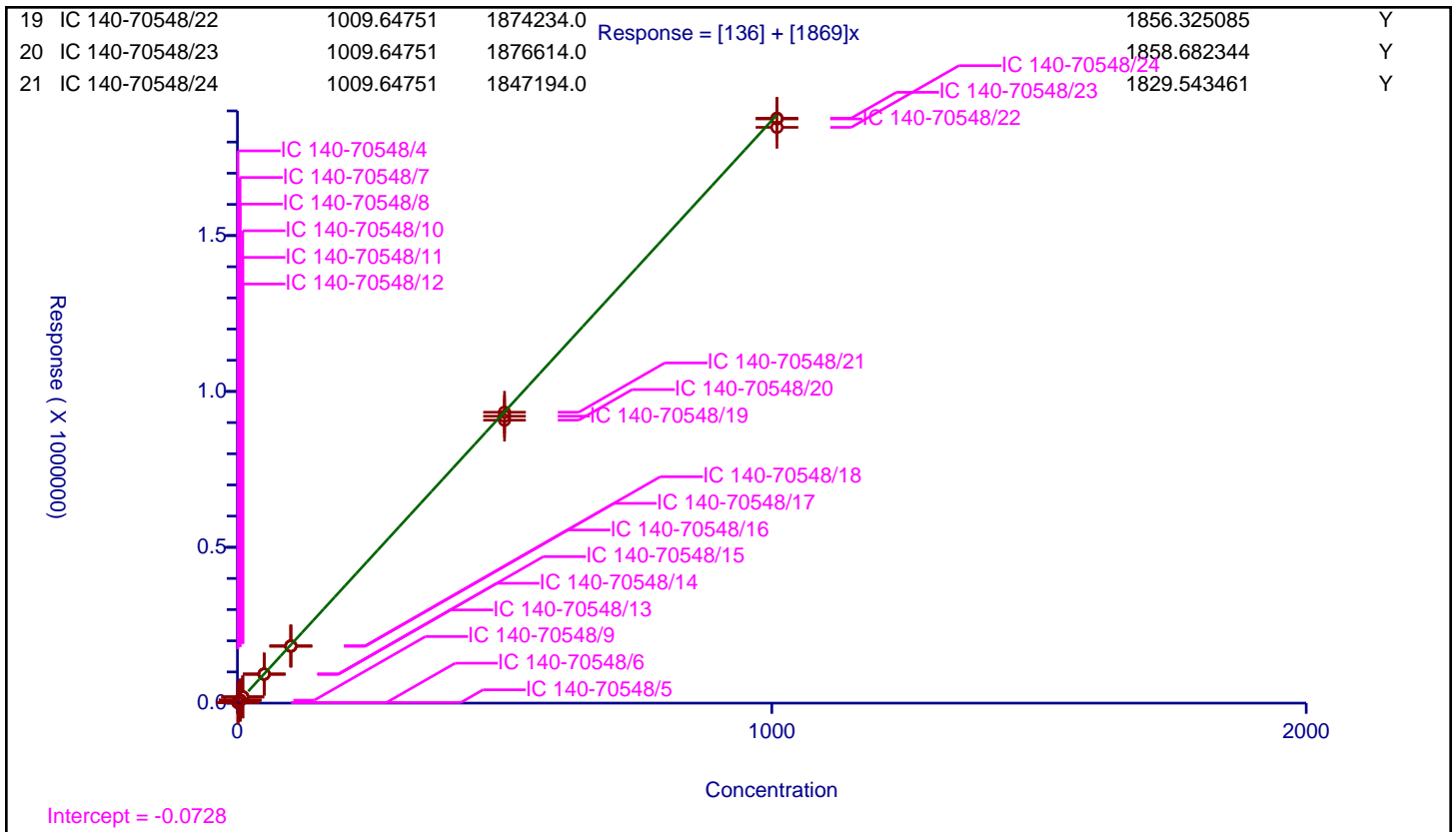
/ Ethylbenzene

Curve Type: Linear  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	136
Slope:	1869

Error Coefficients	
Standard Error:	12200
Relative Standard Error:	2.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 140-70548/4	0.999651	2008.0			2008.701037	Y
2	IC 140-70548/5	0.999651	1991.0			1991.695102	Y
3	IC 140-70548/6	0.999651	1980.0			1980.691261	Y
4	IC 140-70548/7	4.998255	9587.0			1918.069406	Y
5	IC 140-70548/8	4.998255	9553.0			1911.267032	Y
6	IC 140-70548/9	4.998255	9453.0			1891.26005	Y
7	IC 140-70548/10	9.99651	19944.0			1995.096289	Y
8	IC 140-70548/11	9.99651	19837.0			1984.392553	Y
9	IC 140-70548/12	9.99651	19716.0			1972.288329	Y
10	IC 140-70548/13	49.98255	92751.0			1855.667628	Y
11	IC 140-70548/14	49.98255	93168.0			1864.01054	Y
12	IC 140-70548/15	49.98255	93003.0			1860.709388	Y
13	IC 140-70548/16	99.9651	182772.0			1828.358097	Y
14	IC 140-70548/17	99.9651	182987.0			1830.508848	Y
15	IC 140-70548/18	99.9651	183339.0			1834.030076	Y
16	IC 140-70548/19	499.8255	920526.0			1841.694751	Y
17	IC 140-70548/20	499.8255	907838.0			1816.309892	Y
18	IC 140-70548/21	499.8255	933306.0			1867.263675	Y
19	IC 140-70548/22	1009.64751	1874234.0			1856.325085	Y
20	IC 140-70548/23	1009.64751	1876614.0			1858.682344	Y
21	IC 140-70548/24	1009.64751	1847194.0			1829.543461	Y



Calibration

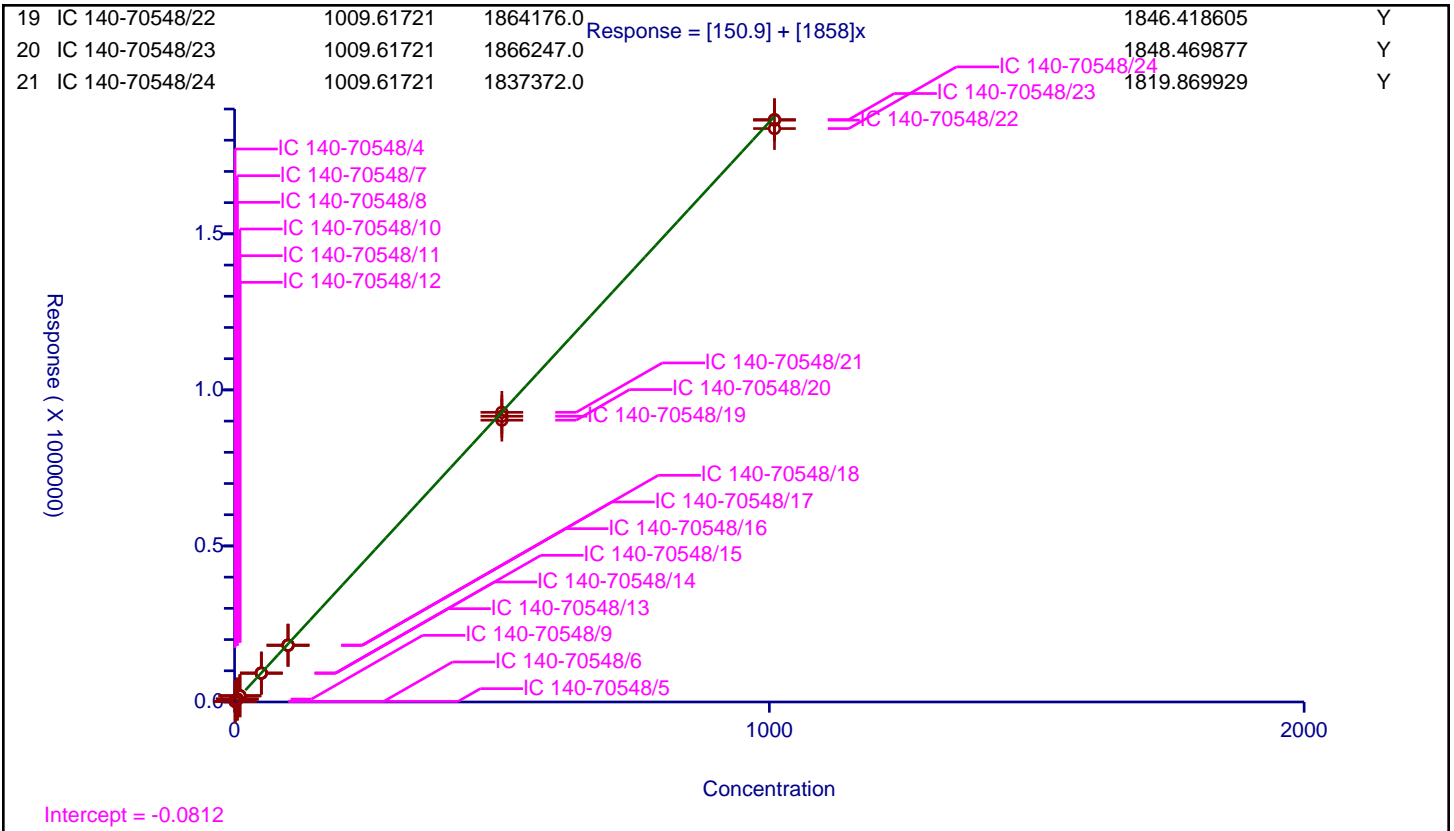
/ p-Xylene

Curve Type: Linear  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	150.9
Slope:	1858

Error Coefficients	
Standard Error:	11700
Relative Standard Error:	2.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 140-70548/4	0.999621	2012.0			2012.762837	Y
2	IC 140-70548/5	0.999621	1995.0			1995.756392	Y
3	IC 140-70548/6	0.999621	1987.0			1987.753359	Y
4	IC 140-70548/7	4.998105	9439.0			1888.515747	Y
5	IC 140-70548/8	4.998105	9525.0			1905.722269	Y
6	IC 140-70548/9	4.998105	9381.0			1876.911349	Y
7	IC 140-70548/10	9.99621	19946.0			1995.35624	Y
8	IC 140-70548/11	9.99621	19733.0			1974.048164	Y
9	IC 140-70548/12	9.99621	19598.0			1960.543046	Y
10	IC 140-70548/13	49.98105	92260.0			1845.899596	Y
11	IC 140-70548/14	49.98105	92681.0			1854.322788	Y
12	IC 140-70548/15	49.98105	92577.0			1852.242	Y
13	IC 140-70548/16	99.9621	181588.0			1816.568479	Y
14	IC 140-70548/17	99.9621	181932.0			1820.009784	Y
15	IC 140-70548/18	99.9621	182323.0			1823.921266	Y
16	IC 140-70548/19	499.8105	915560.0			1831.814258	Y
17	IC 140-70548/20	499.8105	902911.0			1806.506666	Y
18	IC 140-70548/21	499.8105	928125.0			1856.953785	Y
19	IC 140-70548/22	1009.61721	1864176.0			1846.418605	Y
20	IC 140-70548/23	1009.61721	1866247.0			1848.469877	Y
21	IC 140-70548/24	1009.61721	1837372.0			1819.869929	Y



Calibration

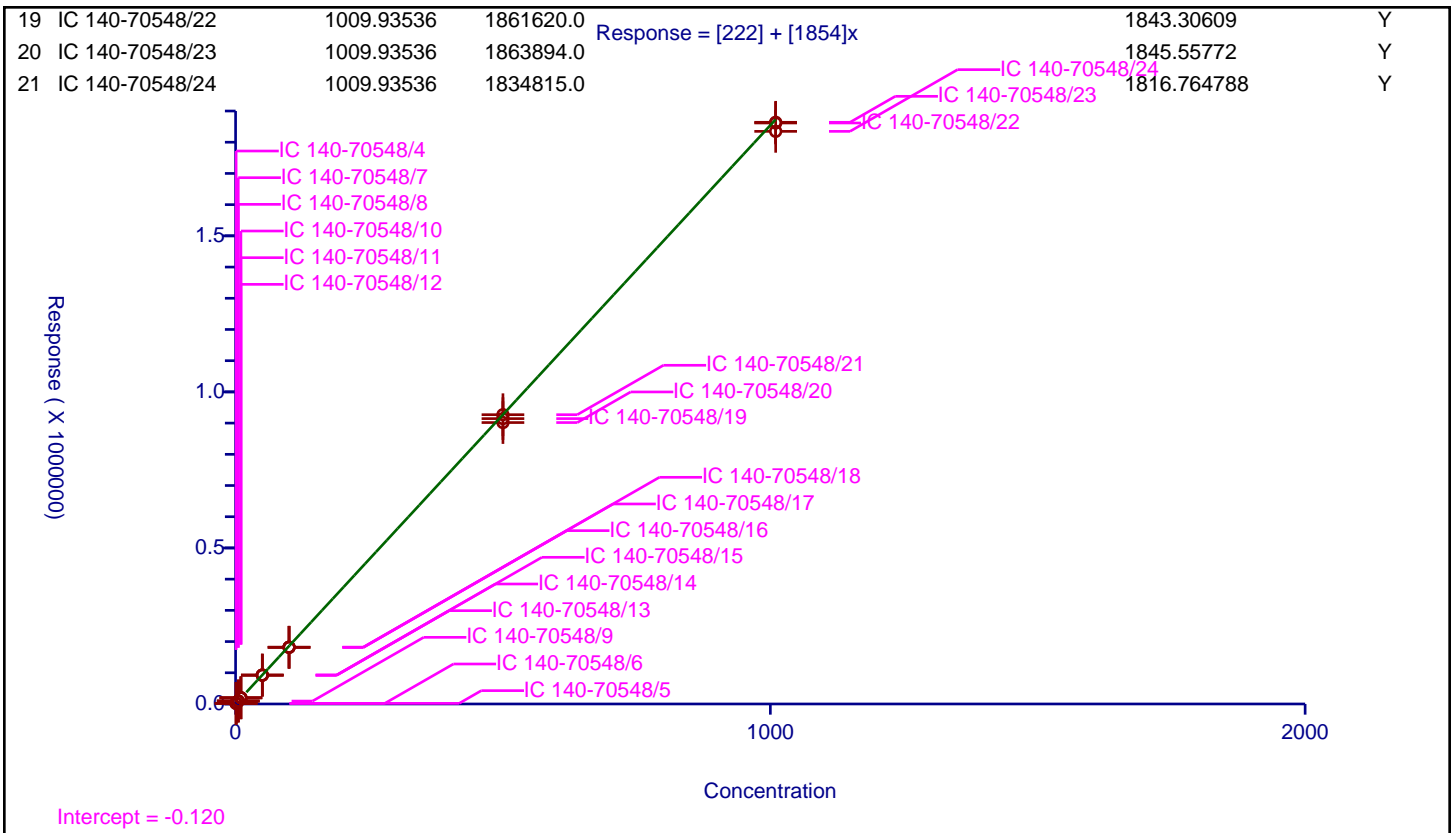
/ m-Xylene

Curve Type: Linear  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	222
Slope:	1854

Error Coefficients	
Standard Error:	11500
Relative Standard Error:	2.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 140-70548/4	0.999936	2159.0			2159.138185	Y
2	IC 140-70548/5	0.999936	2016.0			2016.129032	Y
3	IC 140-70548/6	0.999936	2024.0			2024.129544	Y
4	IC 140-70548/7	4.99968	9587.0			1917.522721	Y
5	IC 140-70548/8	4.99968	9541.0			1908.322133	Y
6	IC 140-70548/9	4.99968	9360.0			1872.119816	Y
7	IC 140-70548/10	9.99936	19832.0			1983.326933	Y
8	IC 140-70548/11	9.99936	19840.0			1984.126984	Y
9	IC 140-70548/12	9.99936	19665.0			1966.625864	Y
10	IC 140-70548/13	49.9968	92140.0			1842.917947	Y
11	IC 140-70548/14	49.9968	92681.0			1853.738639	Y
12	IC 140-70548/15	49.9968	92596.0			1852.03853	Y
13	IC 140-70548/16	99.9936	181471.0			1814.826149	Y
14	IC 140-70548/17	99.9936	181647.0			1816.586262	Y
15	IC 140-70548/18	99.9936	182140.0			1821.516577	Y
16	IC 140-70548/19	499.968	914375.0			1828.867047	Y
17	IC 140-70548/20	499.968	901746.0			1803.607431	Y
18	IC 140-70548/21	499.968	926937.0			1853.992656	Y
19	IC 140-70548/22	1009.93536	1861620.0			1843.30609	Y
20	IC 140-70548/23	1009.93536	1863894.0			1845.55772	Y
21	IC 140-70548/24	1009.93536	1834815.0			1816.764788	Y



Calibration

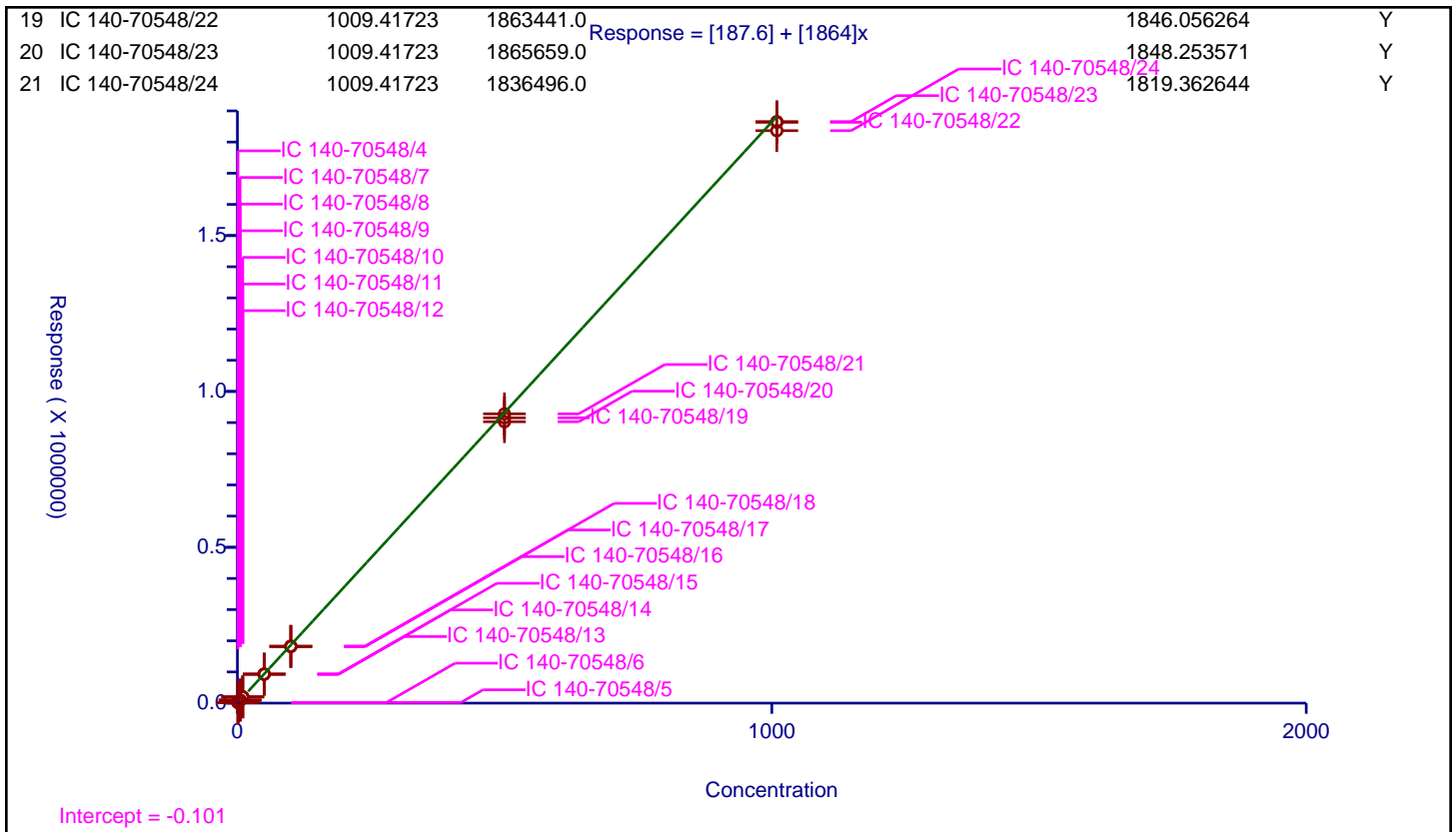
/ o-Xylene

Curve Type: Linear  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	187.6
Slope:	1864

Error Coefficients	
Standard Error:	14300
Relative Standard Error:	2.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 140-70548/4	0.999423	2064.0			2065.191616	Y
2	IC 140-70548/5	0.999423	1997.0			1998.152934	Y
3	IC 140-70548/6	0.999423	2049.0			2050.182956	Y
4	IC 140-70548/7	4.997115	9703.0			1941.720373	Y
5	IC 140-70548/8	4.997115	9529.0			1906.900281	Y
6	IC 140-70548/9	4.997115	9601.0			1921.308595	Y
7	IC 140-70548/10	9.99423	19987.0			1999.853916	Y
8	IC 140-70548/11	9.99423	19796.0			1980.742889	Y
9	IC 140-70548/12	9.99423	19832.0			1984.344967	Y
10	IC 140-70548/13	49.97115	92634.0			1853.749614	Y
11	IC 140-70548/14	49.97115	92973.0			1860.533528	Y
12	IC 140-70548/15	49.97115	92999.0			1861.053828	Y
13	IC 140-70548/16	99.9423	181649.0			1817.53872	Y
14	IC 140-70548/17	99.9423	182131.0			1822.361503	Y
15	IC 140-70548/18	99.9423	182552.0			1826.573933	Y
16	IC 140-70548/19	499.7115	915348.0			1831.752921	Y
17	IC 140-70548/20	499.7115	902795.0			1806.632427	Y
18	IC 140-70548/21	499.7115	927953.0			1856.977476	Y
19	IC 140-70548/22	1009.41723	1863441.0			1846.056264	Y
20	IC 140-70548/23	1009.41723	1865659.0			1848.253571	Y
21	IC 140-70548/24	1009.41723	1836496.0			1819.362644	Y



Calibration

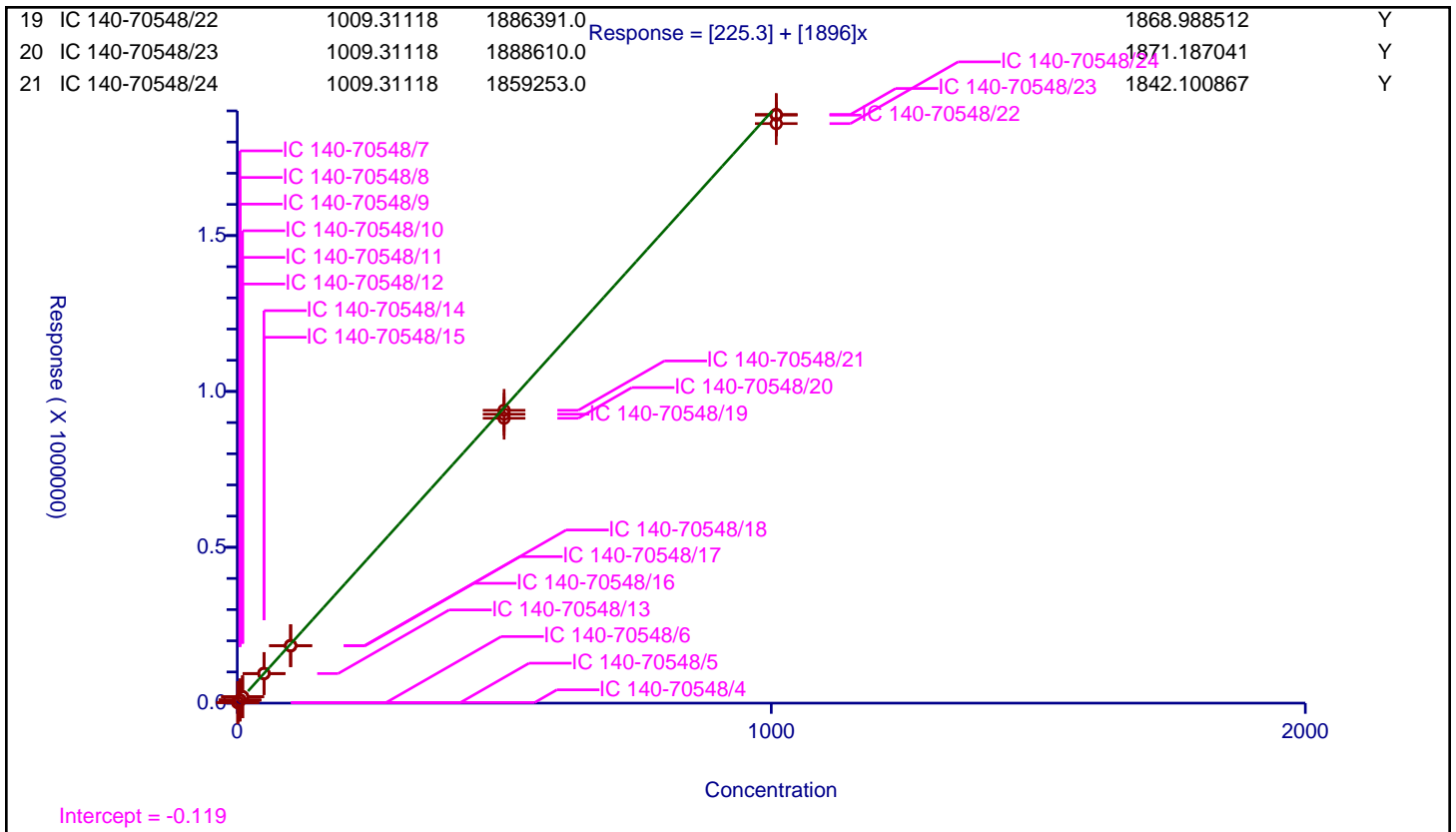
/ Styrene

Curve Type: Linear  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	225.3
Slope:	1896

Error Coefficients	
Standard Error:	18000
Relative Standard Error:	3.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 140-70548/4	0.999318	2116.0			2117.444097	Y
2	IC 140-70548/5	0.999318	2113.0			2114.442049	Y
3	IC 140-70548/6	0.999318	2075.0			2076.416116	Y
4	IC 140-70548/7	4.99659	9976.0			1996.561655	Y
5	IC 140-70548/8	4.99659	9919.0			1985.153875	Y
6	IC 140-70548/9	4.99659	9900.0			1981.351282	Y
7	IC 140-70548/10	9.99318	20122.0			2013.573257	Y
8	IC 140-70548/11	9.99318	20280.0			2029.38404	Y
9	IC 140-70548/12	9.99318	20167.0			2018.076328	Y
10	IC 140-70548/13	49.9659	94855.0			1898.394705	Y
11	IC 140-70548/14	49.9659	95182.0			1904.939169	Y
12	IC 140-70548/15	49.9659	95174.0			1904.779059	Y
13	IC 140-70548/16	99.9318	183825.0			1839.504542	Y
14	IC 140-70548/17	99.9318	184370.0			1844.958262	Y
15	IC 140-70548/18	99.9318	184762.0			1848.880937	Y
16	IC 140-70548/19	499.659	926992.0			1855.24928	Y
17	IC 140-70548/20	499.659	913972.0			1829.191509	Y
18	IC 140-70548/21	499.659	939512.0			1880.306369	Y
19	IC 140-70548/22	1009.31118	1886391.0			1868.988512	Y
20	IC 140-70548/23	1009.31118	1888610.0			1871.187041	Y
21	IC 140-70548/24	1009.31118	1859253.0			1842.100867	Y



Calibration

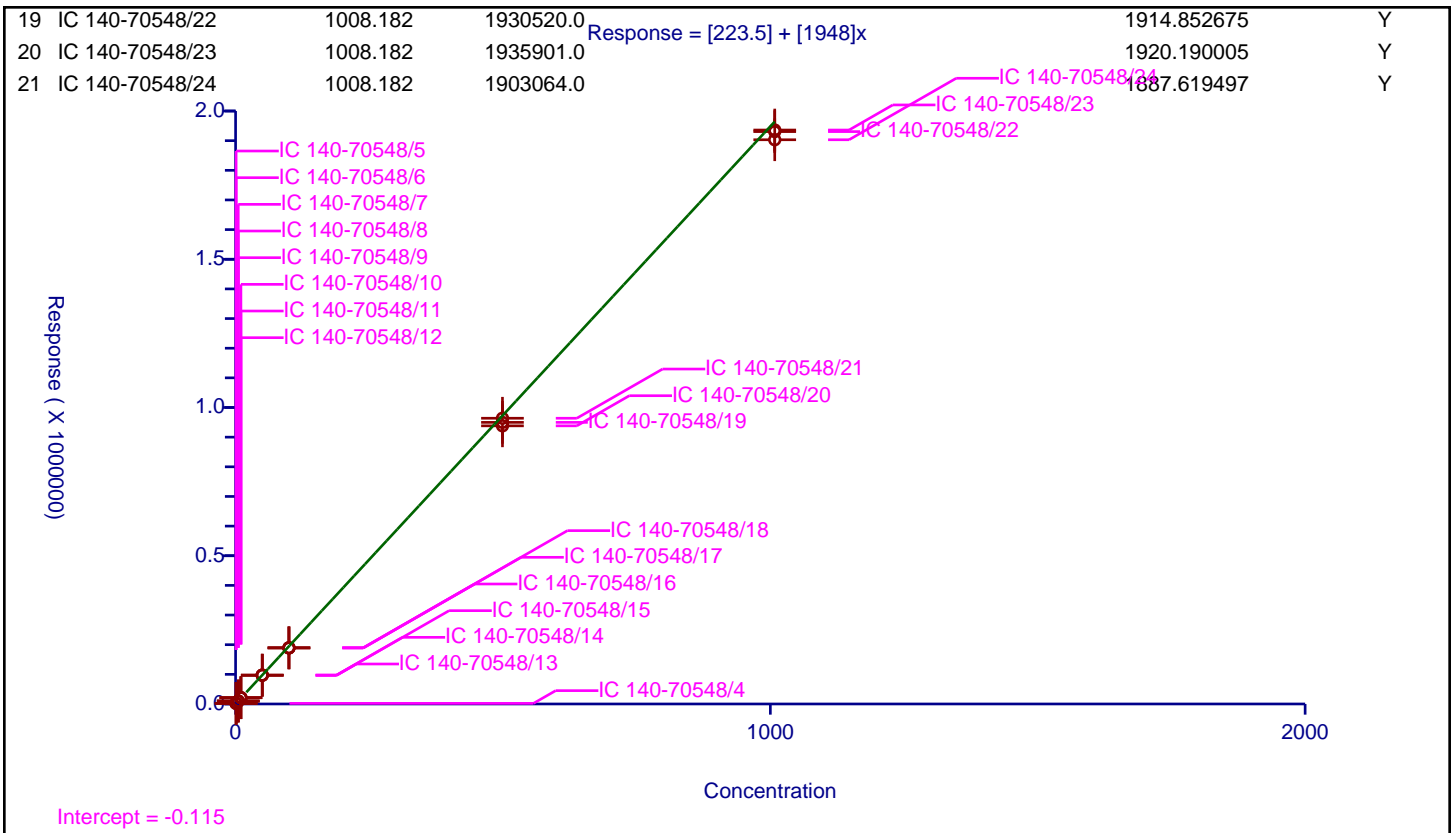
/ Naphthalene

Curve Type: Linear  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	223.5
Slope:	1948

Error Coefficients	
Standard Error:	19900
Relative Standard Error:	3.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 140-70548/4	0.9982	2091.0			2094.770587	Y
2	IC 140-70548/5	0.9982	2175.0			2178.92206	Y
3	IC 140-70548/6	0.9982	2190.0			2193.949108	Y
4	IC 140-70548/7	4.991	9977.0			1998.998197	Y
5	IC 140-70548/8	4.991	10004.0			2004.407934	Y
6	IC 140-70548/9	4.991	9965.0			1996.593869	Y
7	IC 140-70548/10	9.982	21238.0			2127.629734	Y
8	IC 140-70548/11	9.982	21303.0			2134.141455	Y
9	IC 140-70548/12	9.982	21041.0			2107.89421	Y
10	IC 140-70548/13	49.91	96795.0			1939.390904	Y
11	IC 140-70548/14	49.91	97442.0			1952.354238	Y
12	IC 140-70548/15	49.91	97134.0			1946.18313	Y
13	IC 140-70548/16	99.82	189119.0			1894.600281	Y
14	IC 140-70548/17	99.82	189233.0			1895.742336	Y
15	IC 140-70548/18	99.82	189598.0			1899.398918	Y
16	IC 140-70548/19	499.1	949828.0			1903.081547	Y
17	IC 140-70548/20	499.1	938160.0			1879.703466	Y
18	IC 140-70548/21	499.1	963796.0			1931.067922	Y
19	IC 140-70548/22	1008.182	1930520.0			1914.852675	Y
20	IC 140-70548/23	1008.182	1935901.0			1920.190005	Y
21	IC 140-70548/24	1008.182	1903064.0			1887.619497	Y



FORM VII  
AIR - GC VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 140-70548/26 Calibration Date: 02/21/2023 21:26  
 Instrument ID: ALGC2 Calib Start Date: 02/21/2023 18:09  
 GC Column: DB HeavyWax ID: 0.10 (mm) Calib End Date: 02/21/2023 21:08  
 Lab File ID: F-ICV-2023-02-21-21-23-28.D Conc. Units: ug/mL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzene	Lin1		1921		51.1	49.6	3.0	30.0
Toluene	Lin2		1927		51.8	50.0	3.6	30.0
Ethylbenzene	Lin2		1948		52.0	50.0	4.0	30.0
p-Xylene	Lin2		1935		52.0	50.0	4.0	30.0
m-Xylene	Lin2		1935		52.1	50.0	4.1	30.0
o-Xylene	Lin2		1943		52.0	50.0	4.0	30.0
Styrene	Lin2		1952		51.3	50.0	2.7	30.0
Naphthalene	Lin2		2049		52.5	50.0	5.0	30.0



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-ICV-2023-02-21-21-23-28.D  
 Lims ID: ICV  
 Client ID:  
 Sample Type: ICV  
 Inject. Date: 21-Feb-2023 21:26:24 ALS Bottle#: 8 Worklist Smp#: 26  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0027105-026  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Sublist:

Method: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 23-Feb-2023 16:18:29 Calib Date: 21-Feb-2023 21:08:31  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-IC L7-2023-02-21-21-05-36.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1625

First Level Reviewer: P0IK Date: 23-Feb-2023 16:02:15

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.872	0.872	0.000	95345	49.6	51.1	
4 Toluene	1.211	1.212	-0.001	96301	50.0	51.8	
5 Ethylbenzene	1.603	1.602	0.001	97344	50.0	52.0	
7 p-Xylene	1.641	1.641	0.000	96732	50.0	52.0	
6 m-Xylene	1.672	1.672	0.000	96751	50.0	52.1	
8 o-Xylene	1.892	1.892	0.000	97102	50.0	52.0	
9 Styrene	2.277	2.277	0.000	97558	50.0	51.3	
11 Naphthalene	4.669	4.668	0.001	102403	50.0	52.5	

QC Flag Legend

Processing Flags

Reagents:

95xBTEXSTN\_00004 Amount Added: 5.00 Units: uL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20230221-27105.b\F-ICV-2023-02-21-21-23-28.D

Injection Date: 21-Feb-2023 21:26:24

Instrument ID: ALGC2

Lims ID: ICV

Client ID:

Operator ID: SYSTEM

ALS Bottle#: 8

Worklist Smp#: 26

Injection Vol: 1.0 ul

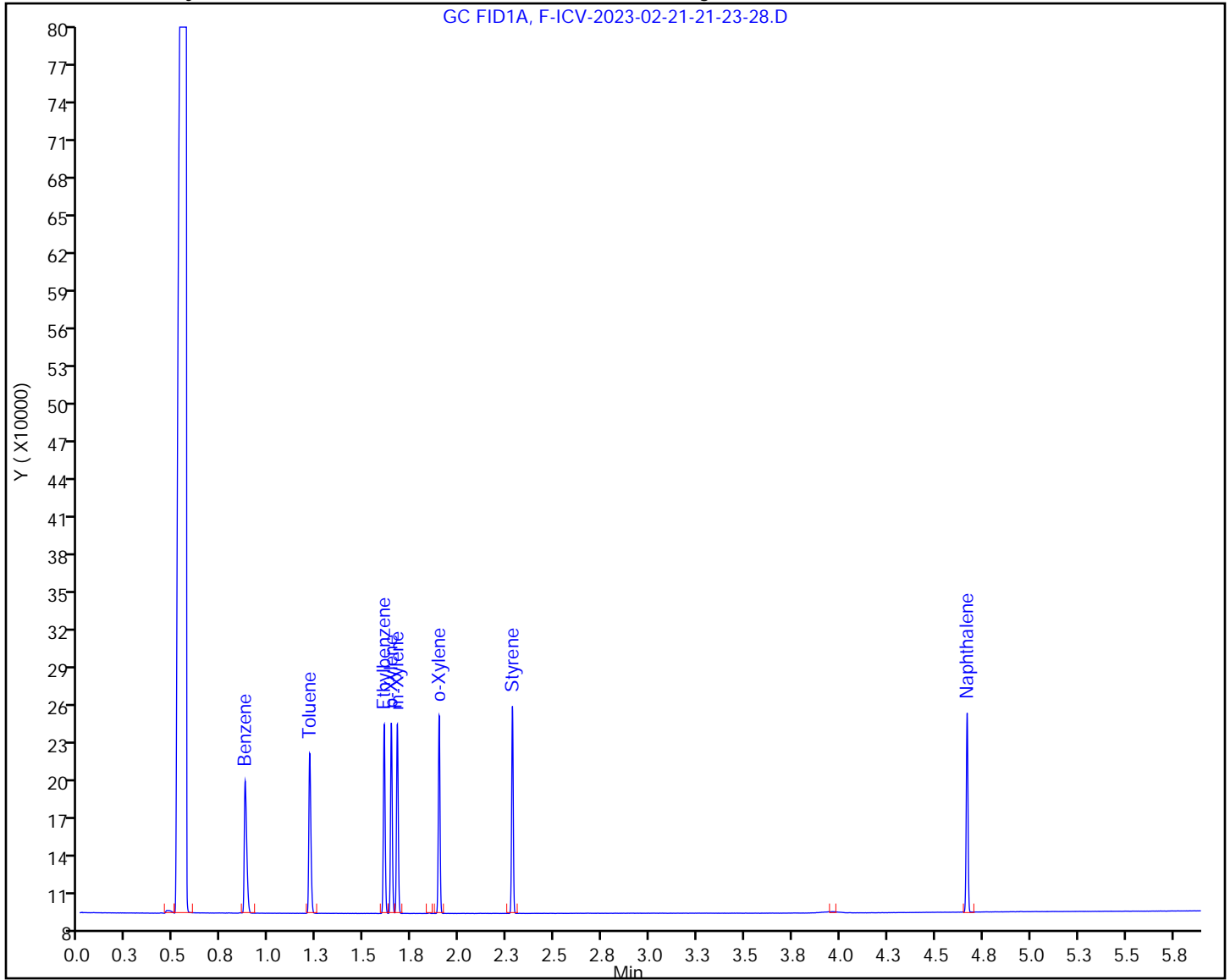
Dil. Factor: 1.0000

Method: GC2M18wax

Limit Group: GCM - EPA18\_Extract - CS2 -ICAL

Column: DB HeavyWax (0.10 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII  
AIR - GC VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-82282/3 Calibration Date: 01/10/2024 17:17  
 Instrument ID: ALGC2 Calib Start Date: 02/21/2023 18:09  
 GC Column: DB HeavyWax ID: 0.10 (mm) Calib End Date: 02/21/2023 21:08  
 Lab File ID: F-CCV-2024-01-10-17-14-15.D Conc. Units: ug/mL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzene	Lin1		1846		49.1	49.6	-1.1	20.0
Toluene	Lin2		1837		49.3	50.0	-1.3	20.0
Ethylbenzene	Lin2		1838		49.1	50.0	-1.8	20.0
p-Xylene	Lin2		1824		49.0	50.0	-2.0	20.0
m-Xylene	Lin2		1828		49.2	50.0	-1.7	20.0
o-Xylene	Lin2		1835		49.1	50.0	-1.8	20.0
Styrene	Lin2		1875		49.3	50.0	-1.4	20.0
Naphthalene	Lin2		1935		49.5	49.9	-0.9	20.0

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-CCV-2024-01-10-17-14-15.D  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 10-Jan-2024 17:17:01 ALS Bottle#: 1 Worklist Smp#: 3  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0031160-003  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Sublist: chrom-GC2M18wax\*sub5

Method: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 10-Jan-2024 17:55:02 Calib Date: 23-Sep-2023 17:07:49  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230923-29777.b\F-HEXANE-2023-09-23-17-05-05.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1637

First Level Reviewer: P0IK Date: 10-Jan-2024 17:55:02

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.874	0.874	0.000	91641	49.6	49.1	
4 Toluene	1.212	1.212	0.000	91809	50.0	49.3	
5 Ethylbenzene	1.602	1.602	0.000	91853	50.0	49.1	
7 p-Xylene	1.639	1.639	0.000	91157	50.0	49.0	
6 m-Xylene	1.670	1.670	0.000	91380	50.0	49.2	
8 o-Xylene	1.890	1.890	0.000	91698	50.0	49.1	
9 Styrene	2.275	2.275	0.000	93672	50.0	49.3	
11 Naphthalene	4.667	4.667	0.000	96635	49.9	49.5	

QC Flag Legend

Processing Flags

Reagents:

95CVBTEX\_00029 Amount Added: 1.00 Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-CCV-2024-01-10-17-14-15.D

Injection Date: 10-Jan-2024 17:17:01

Instrument ID: ALGC2

Lims ID: CCV

Client ID:

Operator ID: SYSTEM

ALS Bottle#: 1

Worklist Smp#: 3

Injection Vol: 1.0 ul

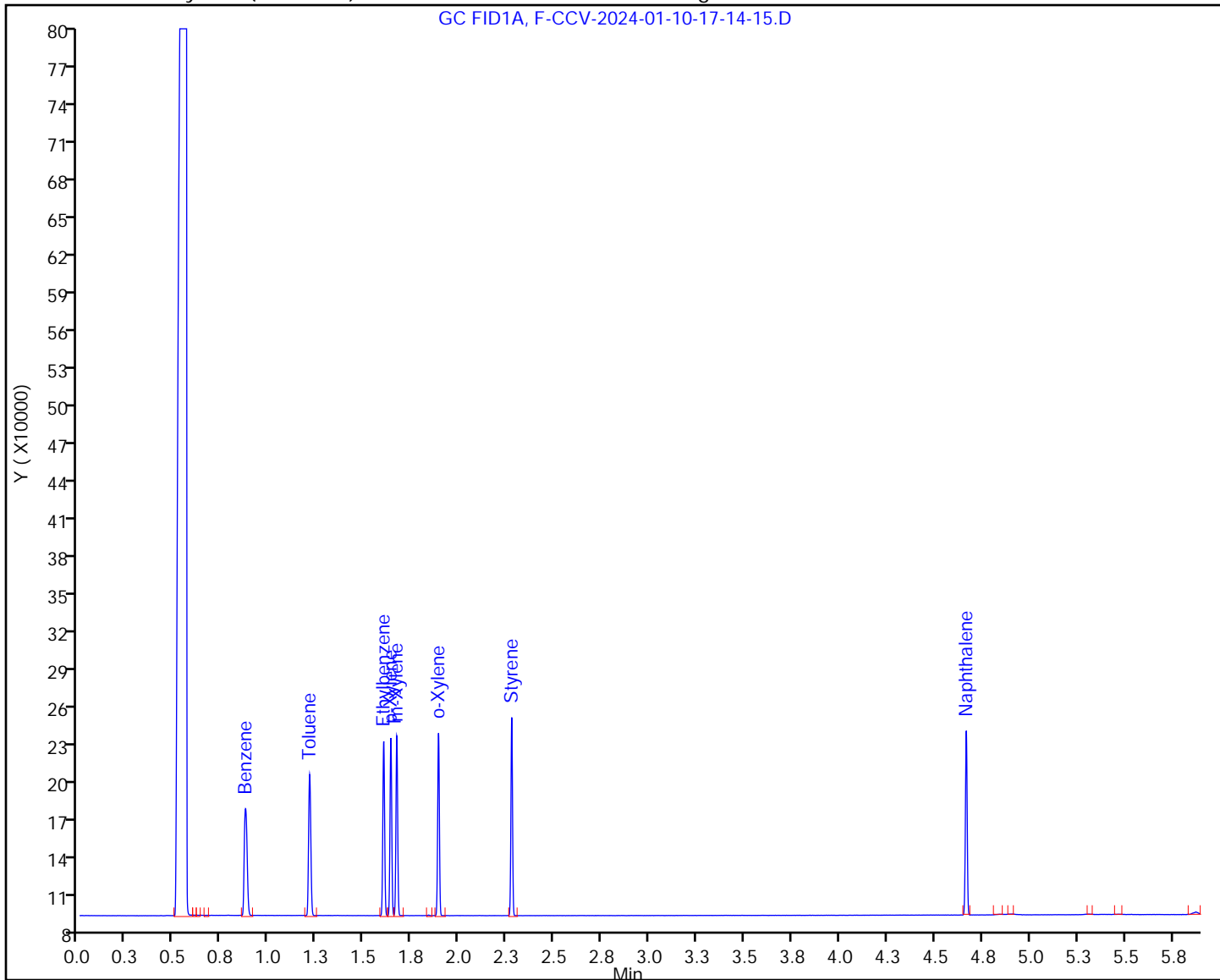
Dil. Factor: 1.0000

Method: GC2M18wax

Limit Group: GCM - EPA18\_Extract - CS2 -ICAL

Column: DB HeavyWax (0.10 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII  
AIR - GC VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-82282/31 Calibration Date: 01/10/2024 21:23  
 Instrument ID: ALGC2 Calib Start Date: 02/21/2023 18:09  
 GC Column: DB HeavyWax ID: 0.10 (mm) Calib End Date: 02/21/2023 21:08  
 Lab File ID: F-CCV-2024-01-10-21-20-16.D Conc. Units: ug/mL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzene	Lin1		1826		48.6	49.6	-2.1	20.0
Toluene	Lin2		1827		49.1	50.0	-1.8	20.0
Ethylbenzene	Lin2		1829		48.9	50.0	-2.3	20.0
p-Xylene	Lin2		1817		48.8	50.0	-2.4	20.0
m-Xylene	Lin2		1821		49.0	50.0	-2.0	20.0
o-Xylene	Lin2		1826		48.9	50.0	-2.2	20.0
Styrene	Lin2		1871		49.2	50.0	-1.6	20.0
Naphthalene	Lin2		1932		49.4	49.9	-1.0	20.0

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-CCV-2024-01-10-21-20-16.D  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 10-Jan-2024 21:23:01 ALS Bottle#: 1 Worklist Smp#: 31  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0031160-031  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Sublist: chrom-GC2M18wax\*sub5  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 11-Jan-2024 10:36:41 Calib Date: 23-Sep-2023 17:07:49  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230923-29777.b\F-HEXANE-2023-09-23-17-05-05.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1681

First Level Reviewer: P0IK Date: 11-Jan-2024 10:36:22

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.874	0.874	0.000	90648	49.6	48.6	
4 Toluene	1.212	1.212	0.000	91321	50.0	49.1	
5 Ethylbenzene	1.601	1.602	-0.001	91441	50.0	48.8	
7 p-Xylene	1.638	1.639	-0.001	90801	50.0	48.8	
6 m-Xylene	1.670	1.670	0.000	91031	50.0	49.0	
8 o-Xylene	1.890	1.890	0.000	91257	50.0	48.9	
9 Styrene	2.275	2.275	0.000	93474	50.0	49.2	
11 Naphthalene	4.667	4.667	0.000	96481	49.9	49.4	

QC Flag Legend

Processing Flags

Reagents:

95CVBTEX\_00029 Amount Added: 1.00 Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-CCV-2024-01-10-21-20-16.D

Injection Date: 10-Jan-2024 21:23:01

Instrument ID: ALGC2

Lims ID: CCV

Client ID:

Operator ID: SYSTEM

ALS Bottle#: 1

Worklist Smp#: 31

Injection Vol: 1.0 ul

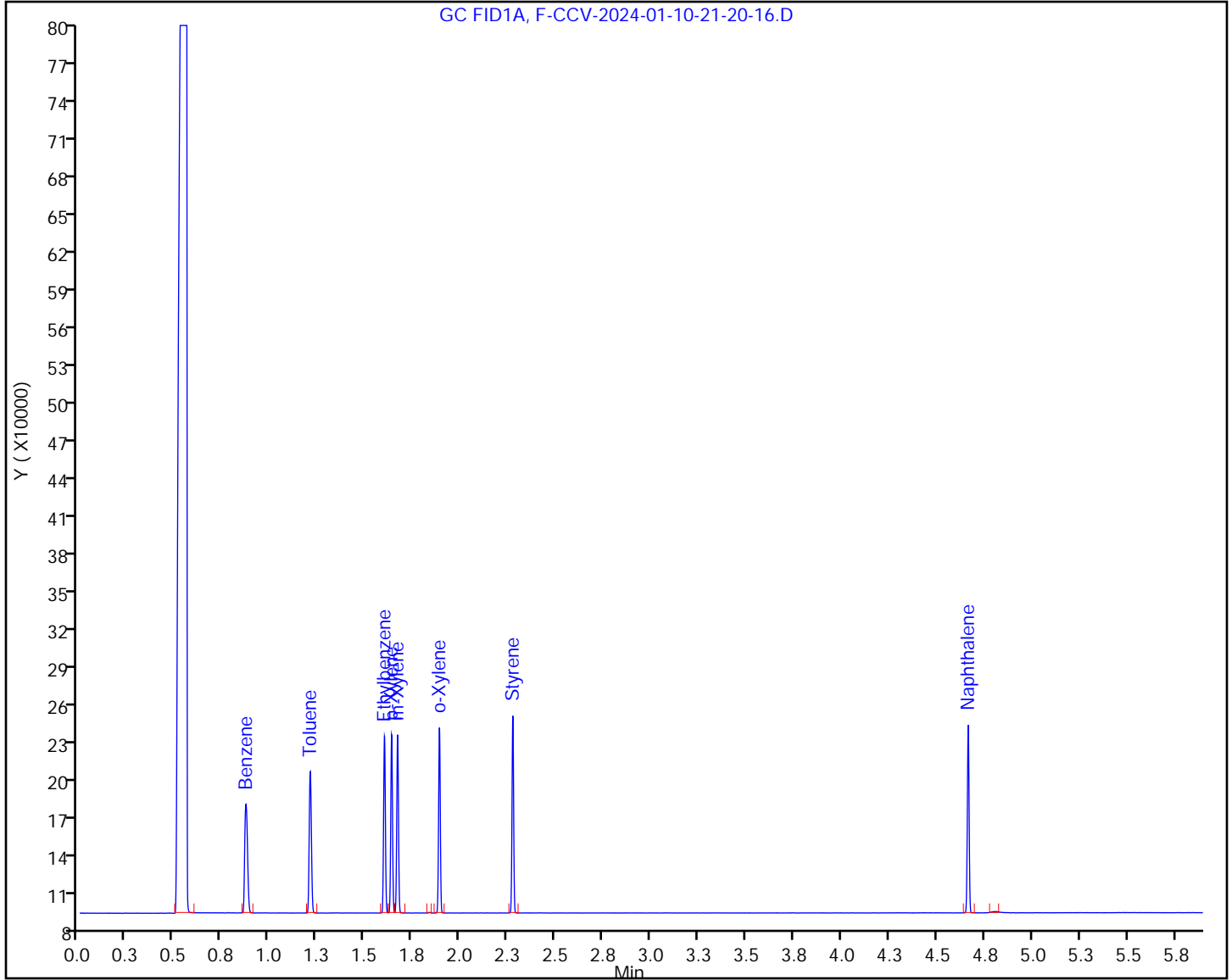
Dil. Factor: 1.0000

Method: GC2M18wax

Limit Group: GCM - EPA18\_Extract - CS2 -ICAL

Column: DB HeavyWax (0.10 mm)

Y Scaling: Method Defined: Set to Absolute Y Value





FORM I  
AIR - GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 140-82267/1-A  
 Matrix: Air Lab File ID: F-MB 140-82267\_1-A-2024-01-10-  
 Analysis Method: EPA 18 Date Collected: \_\_\_\_\_  
 Sample wt/vol: 1(Sample) Date Analyzed: 01/10/2024 17:25  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB HeavyWax ID: 0.1(mm)  
 Purge Volume: \_\_\_\_\_ Heated Purge: (Y/N)     pH: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 82282 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		10.0	5.50
108-88-3	Toluene	ND		10.0	3.00

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-MB 140-82267\_1-A-2024-01-10-17-23-01.D  
 Lims ID: MB 140-82267/1-A  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 10-Jan-2024 17:25:45 ALS Bottle#: 2 Worklist Smp#: 4  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0031160-004  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 10-Jan-2024 17:56:29 Calib Date: 23-Sep-2023 17:07:49  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230923-29777.b\F-HEXANE-2023-09-23-17-05-05.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1637

First Level Reviewer: P0IK Date: 10-Jan-2024 17:56:29

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Hexane		0.473				ND	
1 Acetaldehyde	0.562	0.509	0.053	2734317		NC	
3 Benzene		0.874				ND	U
84 alpha-Pinene		1.114				ND	
4 Toluene		1.212				ND	
87 beta-Pinene		1.506				ND	
5 Ethylbenzene		1.602				ND	
7 p-Xylene		1.639				ND	
6 m-Xylene		1.670				ND	
8 o-Xylene		1.890				ND	
90 d-Limonene		1.964				ND	
9 Styrene		2.275				ND	
30 Methanol		2.392				ND	
A 10 Total VOC as Hexane		(0.720-5.800)				ND	U
91 1,4-Dichlorobenzene		3.270				ND	
41 Ethanol		3.474				ND	
11 Naphthalene		4.667				ND	
12 Ethylene glycol		6.715				ND	
24 n-Butanol		7.014				ND	
13 1-Hexanol		0.000				ND	
46 Dimethylformamide		0.000				ND	
47 4-Isopropyltoluene		0.000				ND	
44 4-Methyl-2-pentanone (MIBK)		0.000				ND	
27 Acetone		0.000				ND	
28 Acrylonitrile		0.000				ND	
89 Hexadecane		0.000				ND	
54 2-Methoxyethanol		0.000				ND	
79 Heptadecane		0.000				ND	
53 Diethylene glycol methyl ether		0.000				ND	
45 2-(2-Butoxyethoxy)ethanol		0.000				ND	
23 2-Butanone (MEK)		0.000				ND	
34 Dimethyl ether		0.000				ND	

Compound	RT (min.)	Exp RT (min.)	Dit RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
33 Propionaldehyde		0.000				ND	
32 Triethylene glycol monomethyl et		0.000				ND	
39 Hexafluoroethane		0.000				ND	
15 Butyraldehyde		0.000				ND	
18 Ethoxytriglycol		0.000				ND	
19 Carbitol		0.000				ND	
21 2-Butoxyethanol		0.000				ND	
16 sec-Butyl Alcohol		0.000				ND	
17 2-Butoxyethyl acetate		0.000				ND	
29 Isopropylbenzene		0.000				ND	
20 2-Ethoxyethanol		0.000				ND	
36 Methyl acetate		0.000				ND	
50 Vinyl chloride		0.000				ND	
51 Propanol		0.000				ND	
52 Acetonitrile		0.000				ND	
35 Isoamyl alcohol		0.000				ND	
31 Methylene Chloride		0.000				ND	
37 1,2,4-Trimethylbenzene		0.000				ND	
38 Acrolein		0.000				ND	
80 C13		0.000				ND	
22 Tetrafluoromethane		0.000				ND	
49 Ethyl acetate		0.000				ND	
88 Dodecane		0.000				ND	
82 C15		0.000				ND	
83 icosane		0.000				ND	
85 n-Octadecane		0.000				ND	
86 n-Tetradecane		0.000				ND	
43 Trifluoromethane		0.000				ND	
25 2-Methyl-2-propanol		0.000				ND	
26 Isopropyl alcohol		0.000				ND	
14 2,3-Butanedione		0.000				ND	
48 1-Pentanol		0.000				ND	
81 C19		0.000				ND	
42 Propylene glycol		0.000				ND	

### QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

U - Marked Undetected

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-MB 140-82267\_1-A-2024-01-10-17-23-01.D

Injection Date: 10-Jan-2024 17:25:45

Instrument ID: ALGC2

Lims ID: MB 140-82267/1-A

Client ID:

Operator ID: SYSTEM

ALS Bottle#: 2

Worklist Smp#: 4

Injection Vol: 1.0 ul

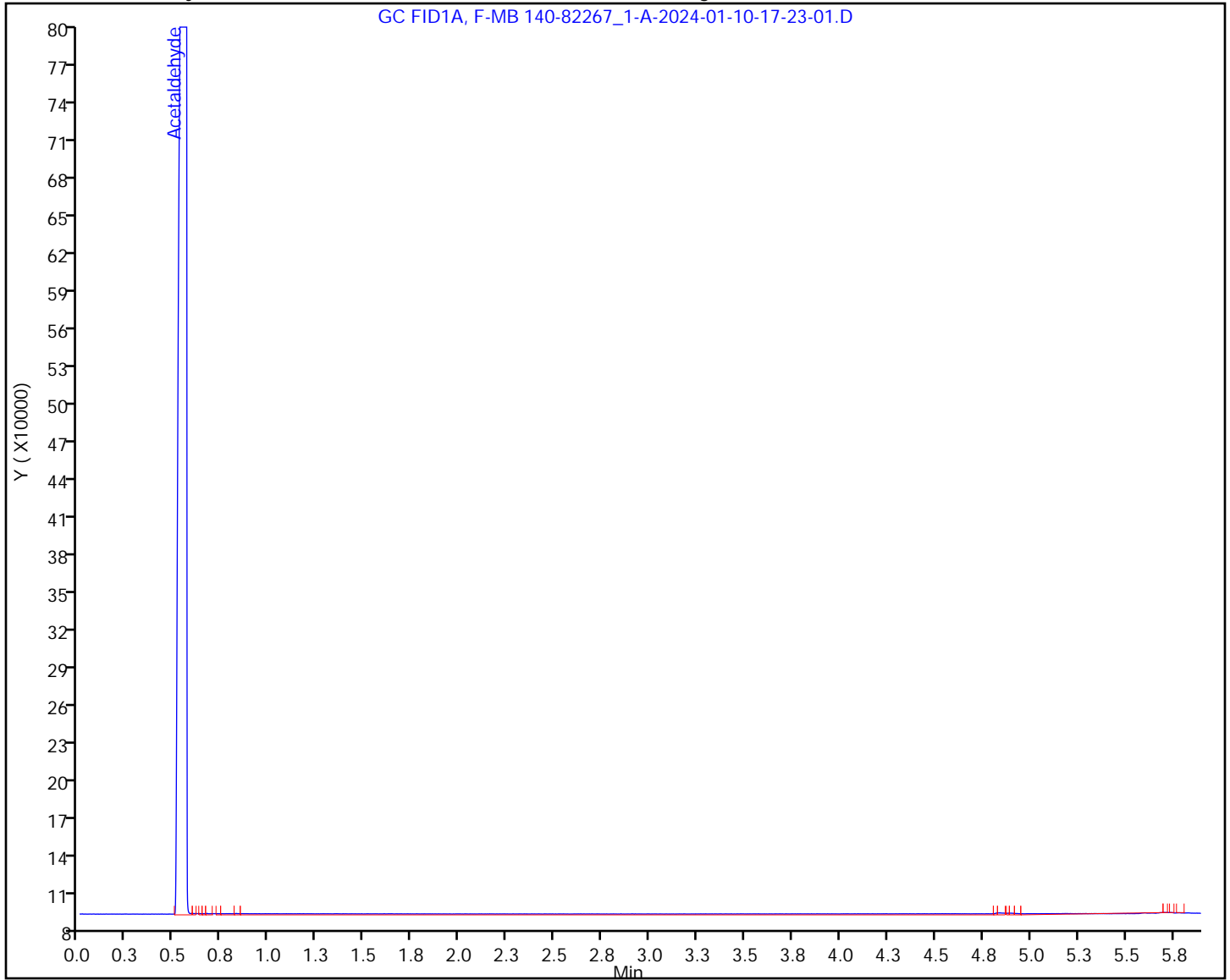
Dil. Factor: 1.0000

Method: GC2M18wax

Limit Group: GCM - EPA18\_Extract - CS2 -ICAL

Column: DB HeavyWax (0.10 mm)

Y Scaling: Method Defined: Set to Absolute Y Value

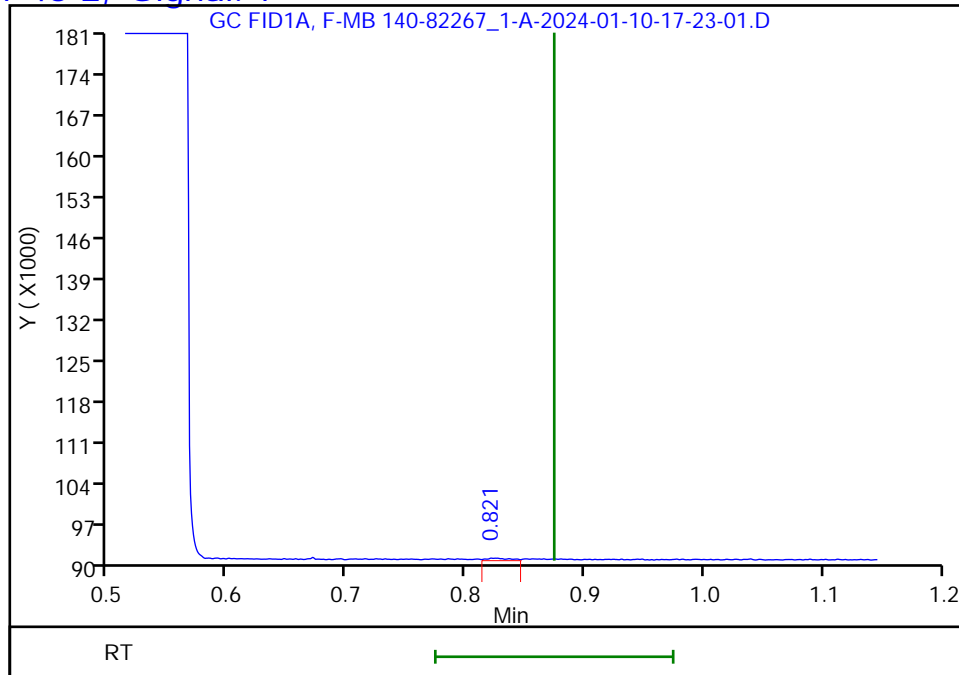


Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-MB 140-82267\_1-A-2024-01-10-17-23-01.D  
Injection Date: 10-Jan-2024 17:25:45 Instrument ID: ALGC2  
Lims ID: MB 140-82267/1-A  
Client ID:  
Operator ID: SYSTEM ALS Bottle#: 2 Worklist Smp#: 4  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Detector GC FID1A

3 Benzene, CAS: 71-43-2, Signal: 1

RT: 0.82  
Response: 427  
Amount: 0.003366



Reviewer: P0IK, 10-Jan-2024 17:56:29

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I  
AIR - GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 140-82267/2-A  
 Matrix: Air Lab File ID: F-LCS 140-82267\_2-A-2024-01-10  
 Analysis Method: EPA 18 Date Collected: \_\_\_\_\_  
 Sample wt/vol: 1(Sample) Date Analyzed: 01/10/2024 17:34  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB HeavyWax ID: 0.1(mm)  
 Purge Volume: \_\_\_\_\_ Heated Purge: (Y/N)     pH: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 82282 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	222.1		10.0	5.50
108-88-3	Toluene	220.9		10.0	3.00

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-LCS 140-82267\_2-A-2024-01-10-17-31-43.D  
 Lims ID: LCS 140-82267/2-A  
 Client ID:  
 Sample Type: LCS  
 Inject. Date: 10-Jan-2024 17:34:31 ALS Bottle#: 3 Worklist Smp#: 5  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0031160-005  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 10-Jan-2024 17:56:29 Calib Date: 23-Sep-2023 17:07:49  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230923-29777.b\F-HEXANE-2023-09-23-17-05-05.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1637

First Level Reviewer: P0IK Date: 10-Jan-2024 17:57:08

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.873	0.874	-0.001	82921	49643	44.4	
4 Toluene	1.211	1.212	-0.001	82247	49982	44.2	
5 Ethylbenzene	1.602	1.602	0.000	85151	49983	45.5	
7 p-Xylene	1.639	1.639	0.000	81111	49981	43.6	
6 m-Xylene	1.670	1.670	0.000	81772	49997	44.0	
8 o-Xylene	1.890	1.890	0.000	75531	49971	40.4	
9 Styrene	2.275	2.275	0.000	58628	49966	30.8	
11 Naphthalene	4.667	4.667	0.000	21691	49930	11.0	

**QC Flag Legend**  
Processing Flags

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-LCS 140-82267\_2-A-2024-01-10-17-31-43.D

Injection Date: 10-Jan-2024 17:34:31

Instrument ID: ALGC2

Lims ID: LCS 140-82267/2-A

Client ID:

Operator ID: SYSTEM

ALS Bottle#: 3

Worklist Smp#: 5

Injection Vol: 1.0 ul

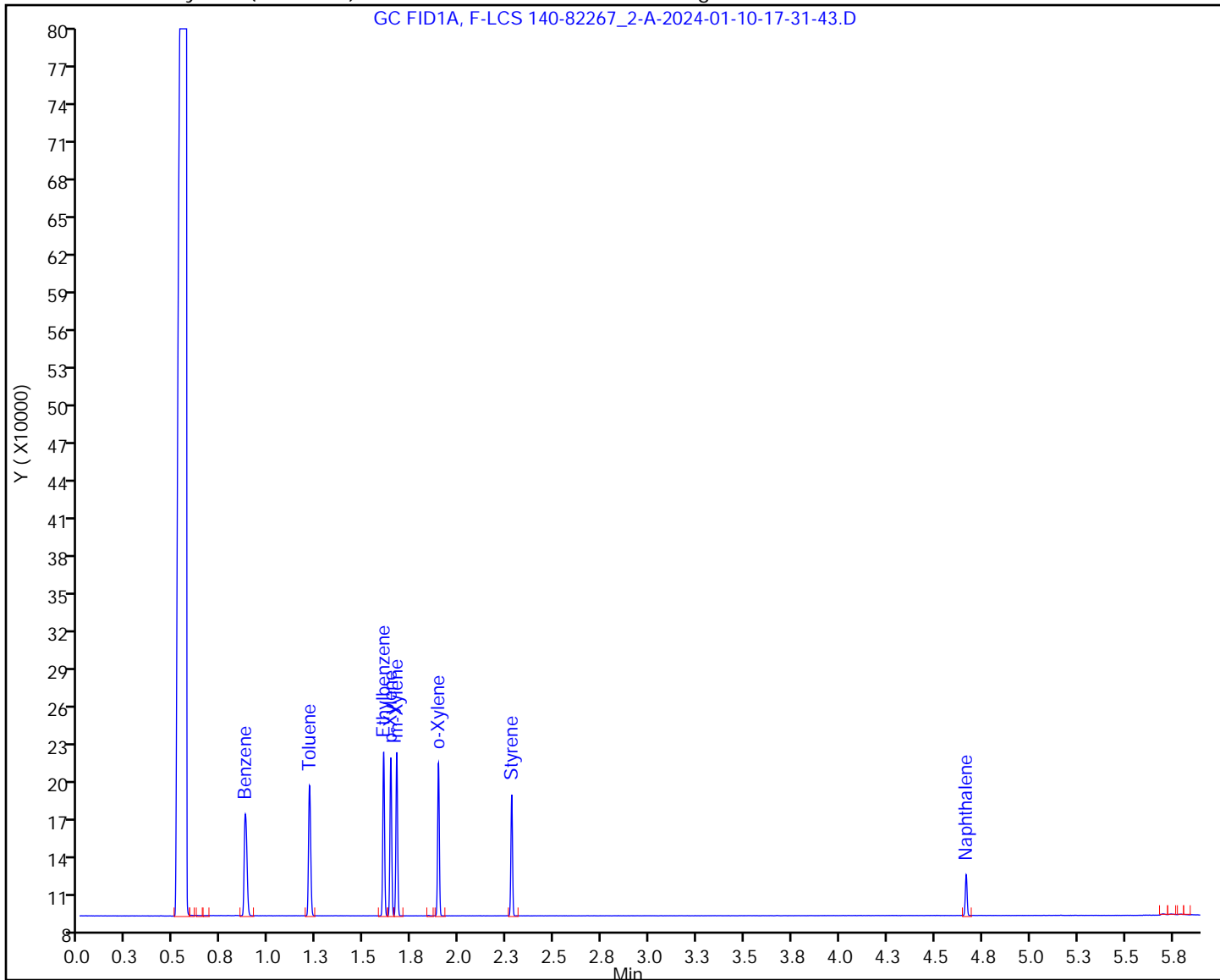
Dil. Factor: 1.0000

Method: GC2M18wax

Limit Group: GCM - EPA18\_Extract - CS2 -ICAL

Column: DB HeavyWax (0.10 mm)

Y Scaling: Method Defined: Set to Absolute Y Value





FORM I  
AIR - GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
SDG No.: \_\_\_\_\_  
Client Sample ID: AS18-1 Lab Sample ID: 140-34735-1 MS  
9553200080,9533200143 MS  
Matrix: Air Lab File ID: F-140-34735-A-1-B MS-2024-01-1  
Analysis Method: EPA 18 Date Collected: 11/30/2023 00:00  
Sample wt/vol: 1(Sample) Date Analyzed: 01/10/2024 18:18  
Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
Soil Extract Vol.: \_\_\_\_\_ GC Column: DB HeavyWax ID: 0.1(mm)  
Purge Volume: \_\_\_\_\_ Heated Purge: (Y/N) \_\_\_\_\_ pH: \_\_\_\_\_  
% Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ Level: (low/med) Low  
Analysis Batch No.: 82282 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	193.4		10.0	5.50
108-88-3	Toluene	190.8		10.0	3.00

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-1-B MS-2024-01-10-18-15-45.D  
 Lims ID: 140-34735-A-1-B MS  
 Client ID: AS18-1 9553200080,9533200143  
 Sample Type: MS  
 Inject. Date: 10-Jan-2024 18:18:30      ALS Bottle#: 8      Worklist Smp#: 10  
 Injection Vol: 1.0 ul      Dil. Factor: 1.0000  
 Sample Info: 140-0031160-010  
 Operator ID: SYSTEM      Instrument ID: ALGC2  
  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 11-Jan-2024 10:36:22      Calib Date: 23-Sep-2023 17:07:49  
 Integrator: Falcon  
 Quant Method: External Standard      Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230923-29777.b\F-HEXANE-2023-09-23-17-05-05.D  
  
 Column 1 : DB HeavyWax ( 0.10 mm)      Det: GC FID1A  
 Process Host: CTX1681

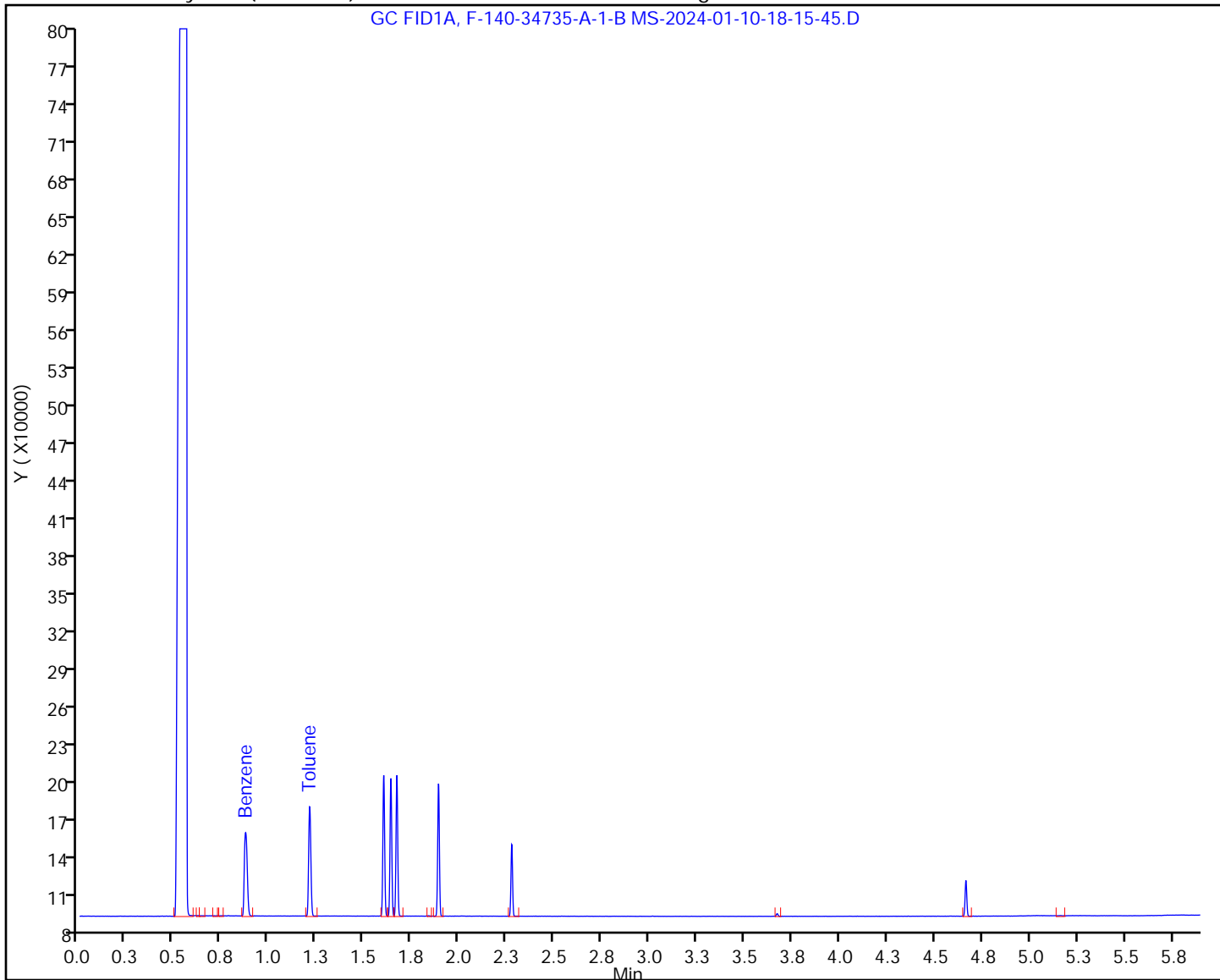
First Level Reviewer: P0IK      Date: 11-Jan-2024 10:33:58

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.875	0.874	0.001	72245	39.7	38.7	
4 Toluene	1.212	1.212	0.000	71077	40.0	38.2	

**QC Flag Legend**  
Processing Flags

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-1-B MS-2024-01-10-18-15-45.D  
Injection Date: 10-Jan-2024 18:18:30 Instrument ID: ALGC2  
Lims ID: 140-34735-A-1-B MS  
Client ID: AS18-1 9553200080,9533200143  
Operator ID: SYSTEM ALS Bottle#: 8 Worklist Smp#: 10  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Y Scaling: Method Defined: Set to Absolute Y Value



FORM I  
AIR - GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Eurofins Knoxville</u>	Job No.: <u>140-34735-1</u>
SDG No.: _____	
Client Sample ID: <u>AS18-2</u> <u>9553200025,9533200092 MS</u>	Lab Sample ID: <u>140-34735-2 MS</u>
Matrix: <u>Air</u>	Lab File ID: <u>F-140-34735-A-2-B MS-2024-01-1</u>
Analysis Method: <u>EPA 18</u>	Date Collected: <u>12/01/2023 00:00</u>
Sample wt/vol: <u>1(Sample)</u>	Date Analyzed: <u>01/10/2024 18:36</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB HeavyWax</u> ID: <u>0.1(mm)</u>
Purge Volume: _____	Heated Purge: (Y/N) _____ pH: _____
% Moisture: _____ % Solids: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>82282</u>	Units: <u>ug/Sample</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	195.1		10.0	5.50
108-88-3	Toluene	188.7		10.0	3.00

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-2-B MS-2024-01-10-18-33-16.D  
 Lims ID: 140-34735-A-2-B MS  
 Client ID: AS18-2 9553200025,9533200092  
 Sample Type: MS  
 Inject. Date: 10-Jan-2024 18:36:02      ALS Bottle#: 10      Worklist Smp#: 12  
 Injection Vol: 1.0 ul      Dil. Factor: 1.0000  
 Sample Info: 140-0031160-012  
 Operator ID: SYSTEM      Instrument ID: ALGC2  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 11-Jan-2024 10:36:22      Calib Date: 23-Sep-2023 17:07:49  
 Integrator: Falcon  
 Quant Method: External Standard      Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230923-29777.b\F-HEXANE-2023-09-23-17-05-05.D  
 Column 1 : DB HeavyWax ( 0.10 mm)      Det: GC FID1A  
 Process Host: CTX1681

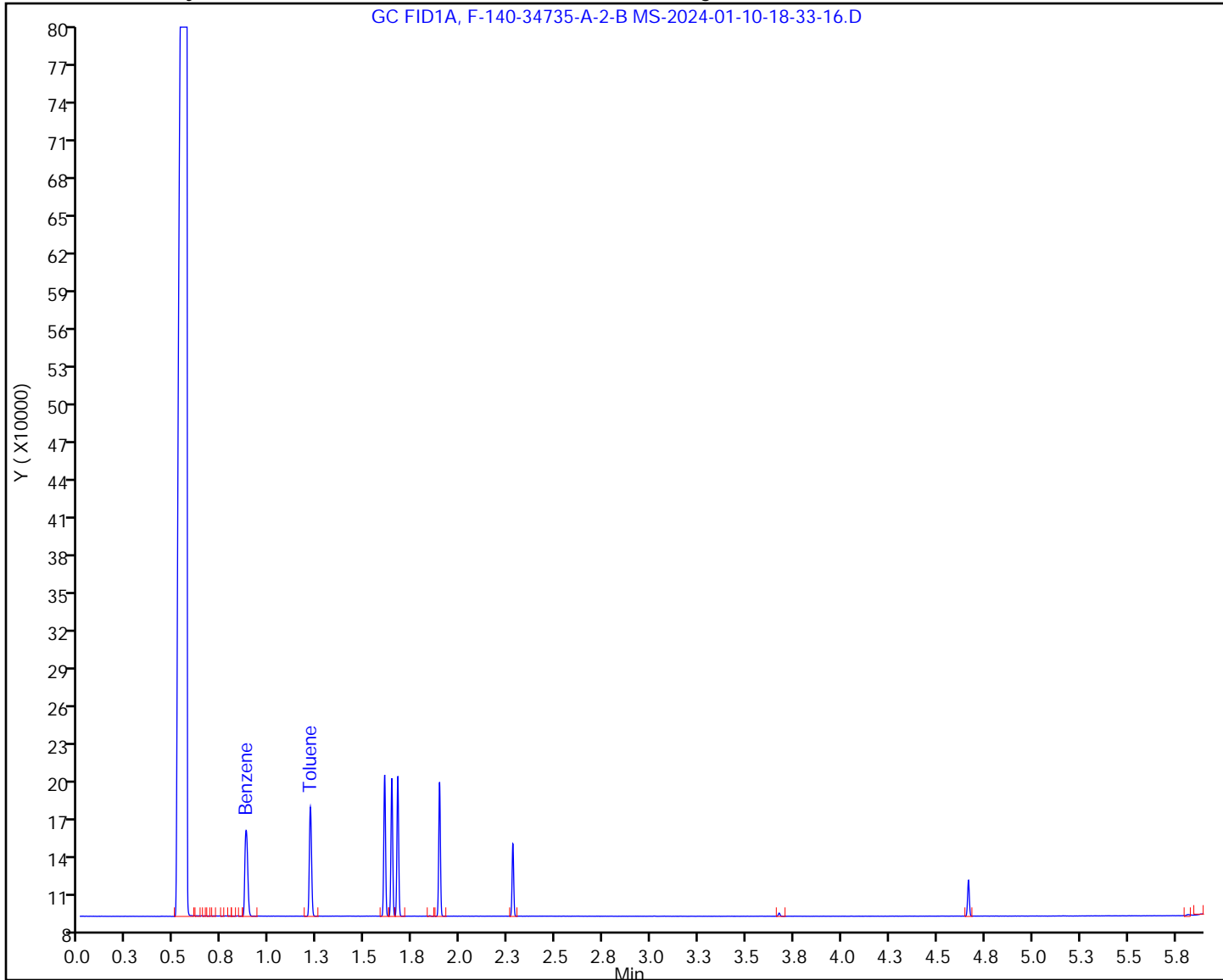
First Level Reviewer: P0IK      Date: 11-Jan-2024 10:34:33

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.874	0.874	0.000	72883	39.7	39.0	
4 Toluene	1.212	1.212	0.000	70289	40.0	37.7	

**QC Flag Legend**  
Processing Flags

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-2-B MS-2024-01-10-18-33-16.D  
Injection Date: 10-Jan-2024 18:36:02 Instrument ID: ALGC2  
Lims ID: 140-34735-A-2-B MS  
Client ID: AS18-2 9553200025,9533200092  
Operator ID: SYSTEM ALS Bottle#: 10 Worklist Smp#: 12  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Y Scaling: Method Defined: Set to Absolute Y Value



FORM I  
AIR - GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
SDG No.: \_\_\_\_\_  
Client Sample ID: AS18-3 Lab Sample ID: 140-34735-3 MS  
9553200073,9533200085 MS  
Matrix: Air Lab File ID: F-140-34735-A-3-B MS-2024-01-1  
Analysis Method: EPA 18 Date Collected: 12/01/2023 00:00  
Sample wt/vol: 1(Sample) Date Analyzed: 01/10/2024 18:53  
Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
Soil Extract Vol.: \_\_\_\_\_ GC Column: DB HeavyWax ID: 0.1(mm)  
Purge Volume: \_\_\_\_\_ Heated Purge: (Y/N) \_\_\_\_\_ pH: \_\_\_\_\_  
% Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ Level: (low/med) Low  
Analysis Batch No.: 82282 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	191.6		10.0	5.50
108-88-3	Toluene	186.3		10.0	3.00

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-3-B MS-2024-01-10-18-50-46.D  
 Lims ID: 140-34735-A-3-B MS  
 Client ID: AS18-3 9553200073,9533200085  
 Sample Type: MS  
 Inject. Date: 10-Jan-2024 18:53:35      ALS Bottle#: 12      Worklist Smp#: 14  
 Injection Vol: 1.0 ul      Dil. Factor: 1.0000  
 Sample Info: 140-0031160-014  
 Operator ID: SYSTEM      Instrument ID: ALGC2  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 11-Jan-2024 10:36:22      Calib Date: 23-Sep-2023 17:07:49  
 Integrator: Falcon  
 Quant Method: External Standard      Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230923-29777.b\F-HEXANE-2023-09-23-17-05-05.D  
 Column 1 : DB HeavyWax ( 0.10 mm)      Det: GC FID1A  
 Process Host: CTX1681

First Level Reviewer: P0IK      Date: 11-Jan-2024 10:34:46

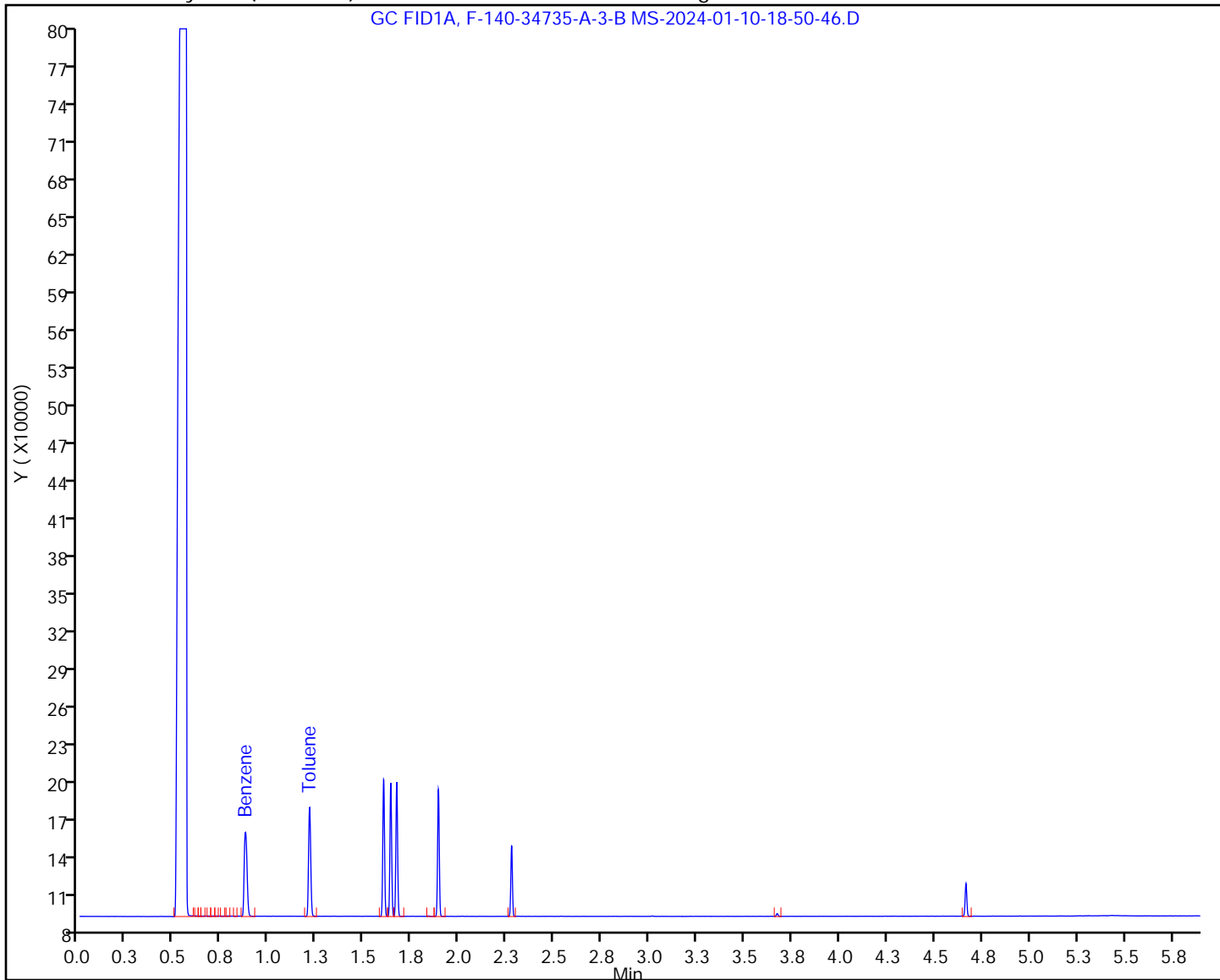
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.874	0.874	0.000	71581	39.7	38.3	
4 Toluene	1.212	1.212	0.000	69388	40.0	37.3	

**QC Flag Legend**  
Processing Flags



Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-3-B MS-2024-01-10-18-50-46.D  
Injection Date: 10-Jan-2024 18:53:35 Instrument ID: ALGC2  
Lims ID: 140-34735-A-3-B MS  
Client ID: AS18-3 9553200073,9533200085  
Operator ID: SYSTEM ALS Bottle#: 12 Worklist Smp#: 14  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Y Scaling: Method Defined: Set to Absolute Y Value



FORM I  
AIR - GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
SDG No.: \_\_\_\_\_  
Client Sample ID: VF18-1 Lab Sample ID: 140-34735-4 MS  
9553200036,9533200155 MS  
Matrix: Air Lab File ID: F-140-34735-A-4-B MS-2024-01-1  
Analysis Method: EPA 18 Date Collected: 12/02/2023 00:00  
Sample wt/vol: 1(Sample) Date Analyzed: 01/10/2024 19:11  
Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
Soil Extract Vol.: \_\_\_\_\_ GC Column: DB HeavyWax ID: 0.1(mm)  
Purge Volume: \_\_\_\_\_ Heated Purge: (Y/N) \_\_\_\_\_ pH: \_\_\_\_\_  
% Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ Level: (low/med) Low  
Analysis Batch No.: 82282 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	190.4		10.0	5.50
108-88-3	Toluene	188.8		10.0	3.00

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-4-B MS-2024-01-10-19-08-29.D  
 Lims ID: 140-34735-A-4-B MS  
 Client ID: VF18-1 9553200036,9533200155  
 Sample Type: MS  
 Inject. Date: 10-Jan-2024 19:11:16      ALS Bottle#: 14      Worklist Smp#: 16  
 Injection Vol: 1.0 ul      Dil. Factor: 1.0000  
 Sample Info: 140-0031160-016  
 Operator ID: SYSTEM      Instrument ID: ALGC2  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 11-Jan-2024 10:36:22      Calib Date: 23-Sep-2023 17:07:49  
 Integrator: Falcon  
 Quant Method: External Standard      Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230923-29777.b\F-HEXANE-2023-09-23-17-05-05.D  
 Column 1 : DB HeavyWax ( 0.10 mm)      Det: GC FID1A  
 Process Host: CTX1681

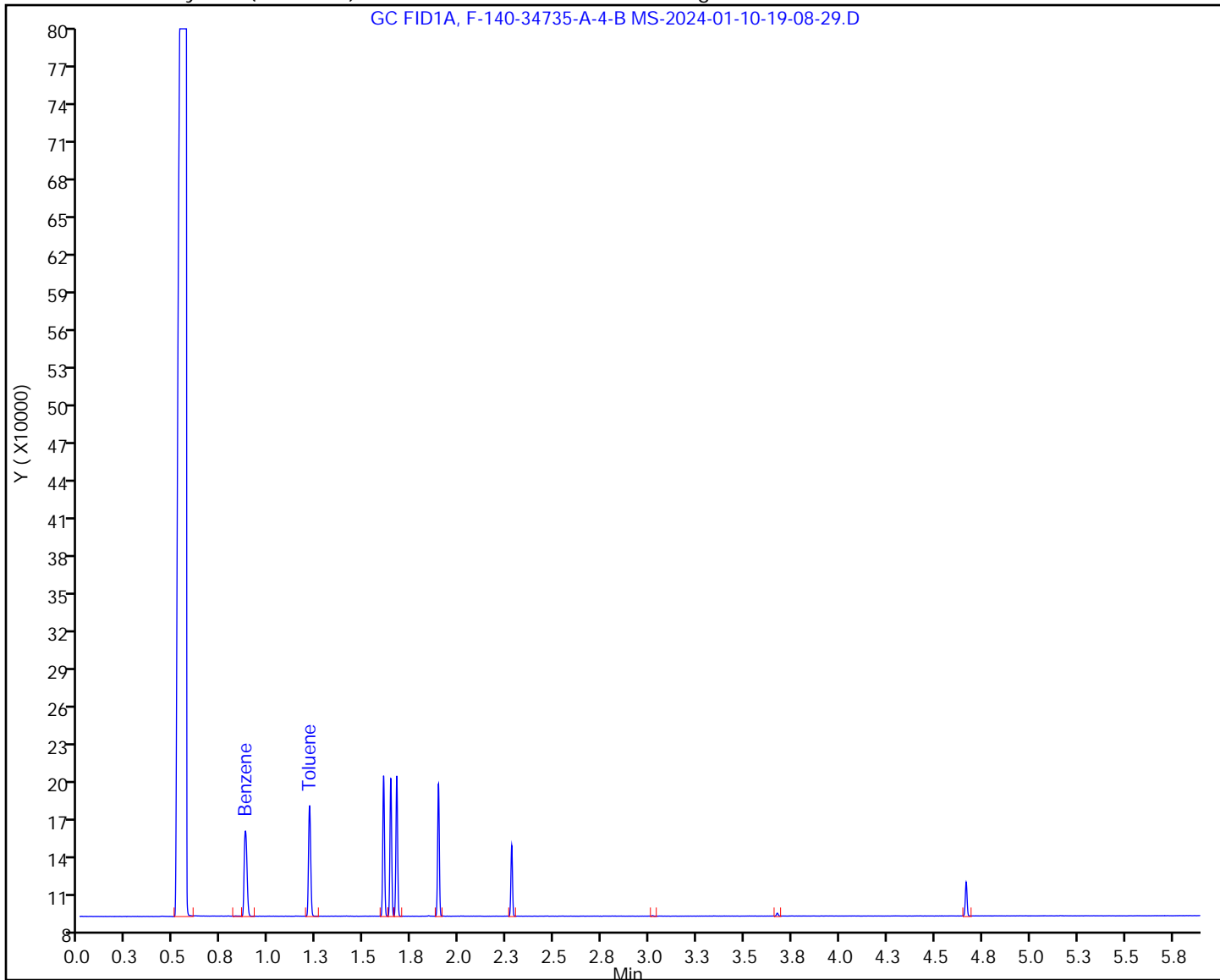
First Level Reviewer: P0IK      Date: 11-Jan-2024 10:34:54

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.874	0.874	0.000	71149	39.7	38.1	
4 Toluene	1.212	1.212	0.000	70331	40.0	37.8	

**QC Flag Legend**  
Processing Flags

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-4-B MS-2024-01-10-19-08-29.D  
Injection Date: 10-Jan-2024 19:11:16 Instrument ID: ALGC2  
Lims ID: 140-34735-A-4-B MS  
Client ID: VF18-1 9553200036,9533200155  
Operator ID: SYSTEM ALS Bottle#: 14 Worklist Smp#: 16  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Y Scaling: Method Defined: Set to Absolute Y Value



FORM I  
AIR - GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: VF18-2 Lab Sample ID: 140-34735-5 MS  
                                   9553200045,9533200152 MS  
 Matrix: Air Lab File ID: F-140-34735-A-5-B MS-2024-01-1  
 Analysis Method: EPA 18 Date Collected: 12/03/2023 00:00  
 Sample wt/vol: 1(Sample) Date Analyzed: 01/10/2024 19:28  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB HeavyWax ID: 0.1(mm)  
 Purge Volume: \_\_\_\_\_ Heated Purge: (Y/N) \_\_\_\_\_ pH: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 82282 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	191.0		10.0	5.50
108-88-3	Toluene	189.0		10.0	3.00

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-5-B MS-2024-01-10-19-26-00.D  
 Lims ID: 140-34735-A-5-B MS  
 Client ID: VF18-2 9553200045,9533200152  
 Sample Type: MS  
 Inject. Date: 10-Jan-2024 19:28:46      ALS Bottle#: 16      Worklist Smp#: 18  
 Injection Vol: 1.0 ul      Dil. Factor: 1.0000  
 Sample Info: 140-0031160-018  
 Operator ID: SYSTEM      Instrument ID: ALGC2  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 11-Jan-2024 10:36:22      Calib Date: 23-Sep-2023 17:07:49  
 Integrator: Falcon  
 Quant Method: External Standard      Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230923-29777.b\F-HEXANE-2023-09-23-17-05-05.D  
 Column 1 : DB HeavyWax ( 0.10 mm)      Det: GC FID1A  
 Process Host: CTX1681

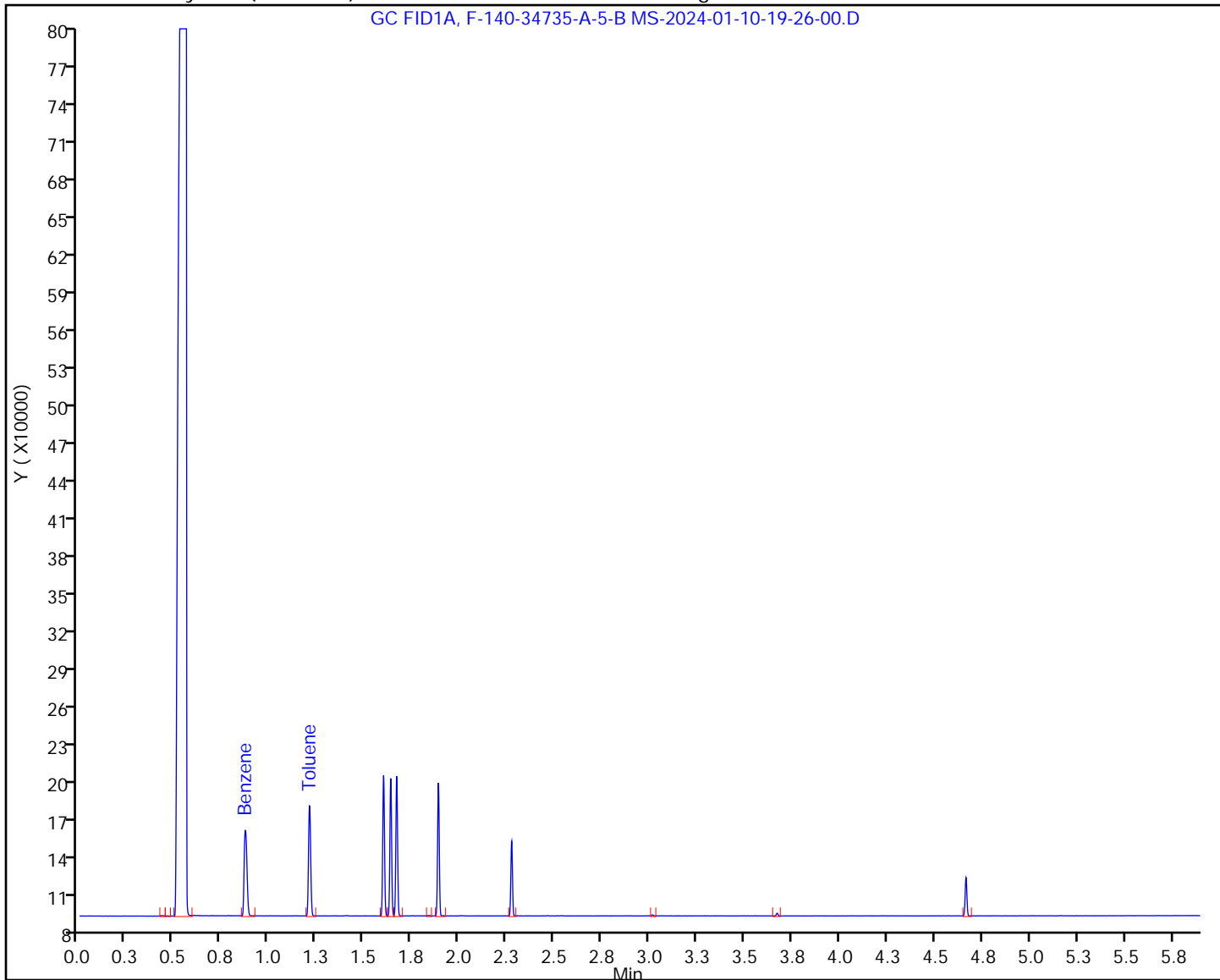
First Level Reviewer: P0IK      Date: 11-Jan-2024 10:35:02

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.873	0.874	-0.001	71374	39.7	38.2	
4 Toluene	1.211	1.212	-0.001	70417	40.0	37.8	

**QC Flag Legend**  
Processing Flags

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-5-B MS-2024-01-10-19-26-00.D  
Injection Date: 10-Jan-2024 19:28:46 Instrument ID: ALGC2  
Lims ID: 140-34735-A-5-B MS  
Client ID: VF18-2 9553200045,9533200152  
Operator ID: SYSTEM ALS Bottle#: 16 Worklist Smp#: 18  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax (0.10 mm) Y Scaling: Method Defined: Set to Absolute Y Value



FORM I  
AIR - GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
SDG No.: \_\_\_\_\_  
Client Sample ID: VF18-4 Lab Sample ID: 140-34735-6 MS  
9553202844,9533200079 MS  
Matrix: Air Lab File ID: F-140-34735-A-6-B MS-2024-01-1  
Analysis Method: EPA 18 Date Collected: 12/05/2023 00:00  
Sample wt/vol: 1(Sample) Date Analyzed: 01/10/2024 19:46  
Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
Soil Extract Vol.: \_\_\_\_\_ GC Column: DB HeavyWax ID: 0.1(mm)  
Purge Volume: \_\_\_\_\_ Heated Purge: (Y/N) \_\_\_\_\_ pH: \_\_\_\_\_  
% Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ Level: (low/med) Low  
Analysis Batch No.: 82282 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	191.8		10.0	5.50
108-88-3	Toluene	191.9		10.0	3.00



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-6-B MS-2024-01-10-19-43-31.D  
 Lims ID: 140-34735-A-6-B MS  
 Client ID: VF18-4 9553202844,9533200079  
 Sample Type: MS  
 Inject. Date: 10-Jan-2024 19:46:17      ALS Bottle#: 18      Worklist Smp#: 20  
 Injection Vol: 1.0 ul      Dil. Factor: 1.0000  
 Sample Info: 140-0031160-020  
 Operator ID: SYSTEM      Instrument ID: ALGC2  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 11-Jan-2024 10:36:22      Calib Date: 23-Sep-2023 17:07:49  
 Integrator: Falcon  
 Quant Method: External Standard      Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230923-29777.b\F-HEXANE-2023-09-23-17-05-05.D  
 Column 1 : DB HeavyWax ( 0.10 mm)      Det: GC FID1A  
 Process Host: CTX1681

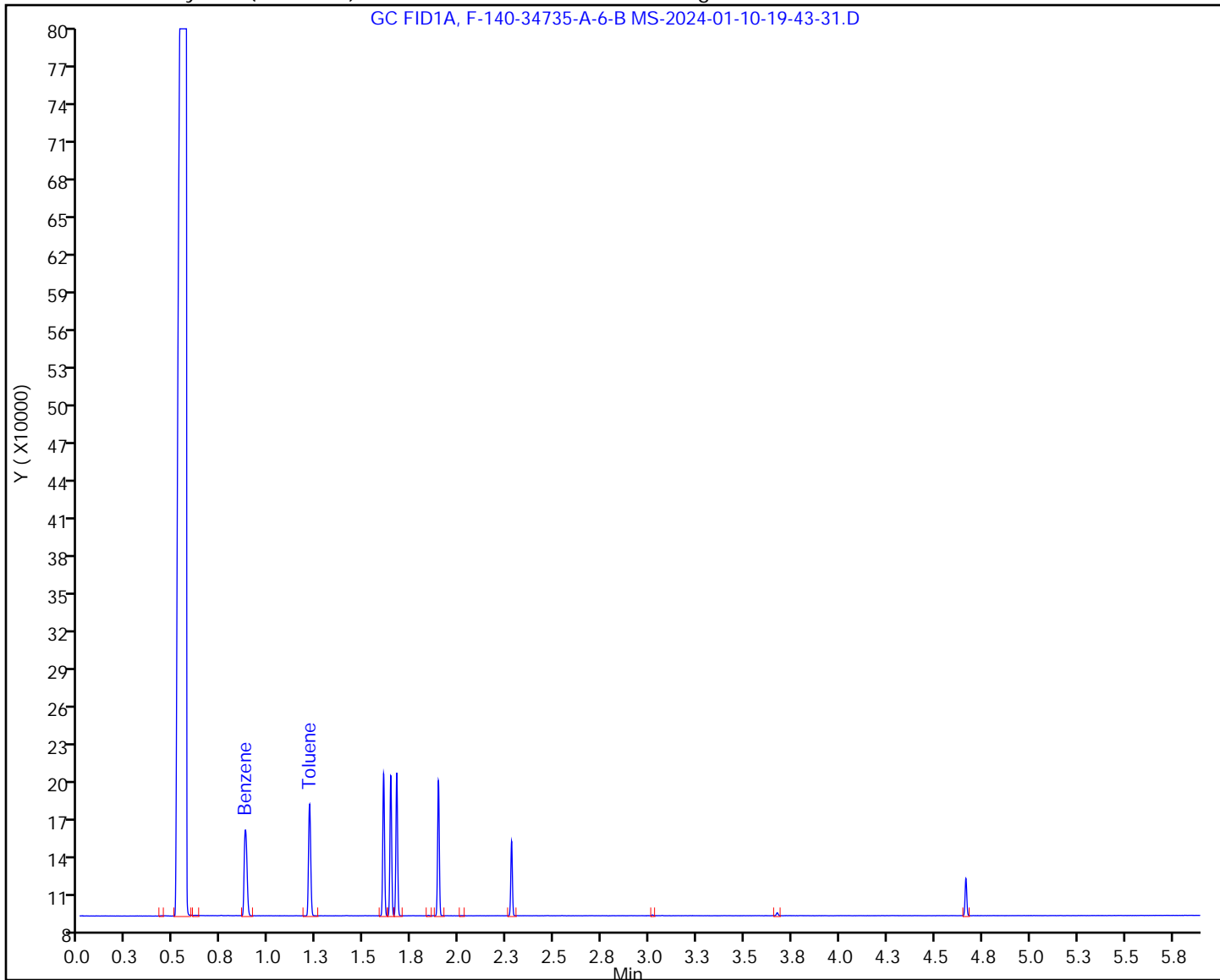
First Level Reviewer: P0IK      Date: 11-Jan-2024 10:35:27

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.873	0.874	-0.001	71683	39.7	38.4	
4 Toluene	1.212	1.212	0.000	71487	40.0	38.4	

**QC Flag Legend**  
Processing Flags

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-6-B MS-2024-01-10-19-43-31.D  
Injection Date: 10-Jan-2024 19:46:17 Instrument ID: ALGC2  
Lims ID: 140-34735-A-6-B MS  
Client ID: VF18-4 9553202844,9533200079  
Operator ID: SYSTEM ALS Bottle#: 18 Worklist Smp#: 20  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Y Scaling: Method Defined: Set to Absolute Y Value



FORM I  
AIR - GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
SDG No.: \_\_\_\_\_  
Client Sample ID: AP18-1 Lab Sample ID: 140-34735-7 MS  
9553200144,9533200082 MS  
Matrix: Air Lab File ID: F-140-34735-A-7-B MS-2024-01-1  
Analysis Method: EPA 18 Date Collected: 12/06/2023 00:00  
Sample wt/vol: 1(Sample) Date Analyzed: 01/10/2024 20:03  
Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
Soil Extract Vol.: \_\_\_\_\_ GC Column: DB HeavyWax ID: 0.1(mm)  
Purge Volume: \_\_\_\_\_ Heated Purge: (Y/N) \_\_\_\_\_ pH: \_\_\_\_\_  
% Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ Level: (low/med) Low  
Analysis Batch No.: 82282 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	185.2		10.0	5.50
108-88-3	Toluene	184.7		10.0	3.00

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-7-B MS-2024-01-10-20-01-03.D  
 Lims ID: 140-34735-A-7-B MS  
 Client ID: AP18-1 9553200144,9533200082  
 Sample Type: MS  
 Inject. Date: 10-Jan-2024 20:03:57      ALS Bottle#: 20      Worklist Smp#: 22  
 Injection Vol: 1.0 ul      Dil. Factor: 1.0000  
 Sample Info: 140-0031160-022  
 Operator ID: SYSTEM      Instrument ID: ALGC2  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 11-Jan-2024 10:36:22      Calib Date: 23-Sep-2023 17:07:49  
 Integrator: Falcon  
 Quant Method: External Standard      Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230923-29777.b\F-HEXANE-2023-09-23-17-05-05.D  
 Column 1 : DB HeavyWax ( 0.10 mm)      Det: GC FID1A  
 Process Host: CTX1681

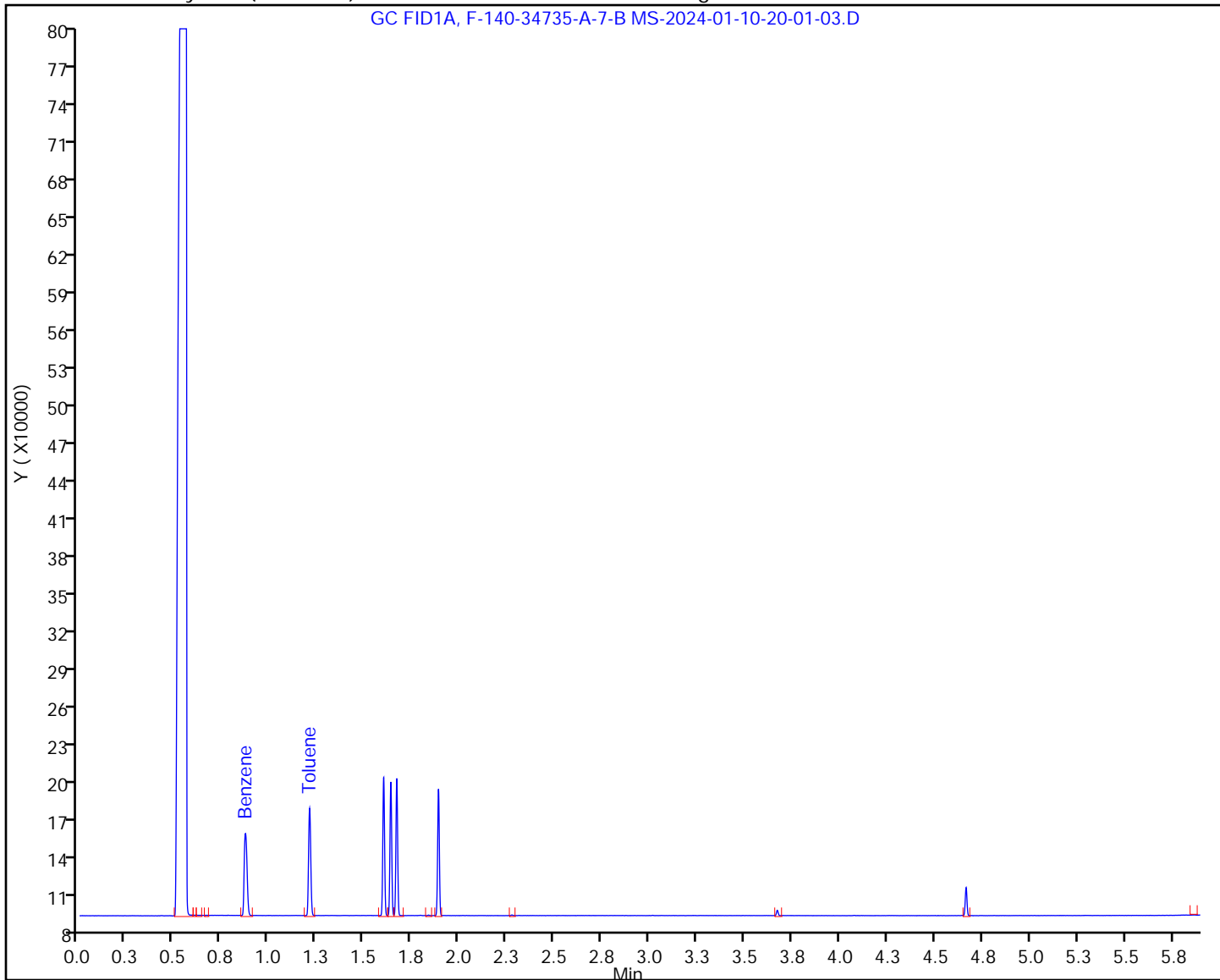
First Level Reviewer: P0IK      Date: 11-Jan-2024 10:35:36

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.874	0.874	0.000	69203	39.7	37.0	
4 Toluene	1.212	1.212	0.000	68789	40.0	36.9	

**QC Flag Legend**  
Processing Flags

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-7-B MS-2024-01-10-20-01-03.D  
Injection Date: 10-Jan-2024 20:03:57 Instrument ID: ALGC2  
Lims ID: 140-34735-A-7-B MS  
Client ID: AP18-1 9553200144,9533200082  
Operator ID: SYSTEM ALS Bottle#: 20 Worklist Smp#: 22  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Y Scaling: Method Defined: Set to Absolute Y Value



FORM I  
AIR - GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
SDG No.: \_\_\_\_\_  
Client Sample ID: AP18-2 Lab Sample ID: 140-34735-8 MS  
9553200021,9533200156 MS  
Matrix: Air Lab File ID: F-140-34735-A-8-B MS-2024-01-1  
Analysis Method: EPA 18 Date Collected: 12/06/2023 00:00  
Sample wt/vol: 1(Sample) Date Analyzed: 01/10/2024 20:21  
Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
Soil Extract Vol.: \_\_\_\_\_ GC Column: DB HeavyWax ID: 0.1(mm)  
Purge Volume: \_\_\_\_\_ Heated Purge: (Y/N) \_\_\_\_\_ pH: \_\_\_\_\_  
% Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ Level: (low/med) Low  
Analysis Batch No.: 82282 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	185.9		10.0	5.50
108-88-3	Toluene	185.0		10.0	3.00

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-8-B MS-2024-01-10-20-18-47.D  
 Lims ID: 140-34735-A-8-B MS  
 Client ID: AP18-2 9553200021,9533200156  
 Sample Type: MS  
 Inject. Date: 10-Jan-2024 20:21:30      ALS Bottle#: 22      Worklist Smp#: 24  
 Injection Vol: 1.0 ul      Dil. Factor: 1.0000  
 Sample Info: 140-0031160-024  
 Operator ID: SYSTEM      Instrument ID: ALGC2  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 11-Jan-2024 10:36:22      Calib Date: 23-Sep-2023 17:07:49  
 Integrator: Falcon  
 Quant Method: External Standard      Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230923-29777.b\F-HEXANE-2023-09-23-17-05-05.D  
 Column 1 : DB HeavyWax ( 0.10 mm)      Det: GC FID1A  
 Process Host: CTX1681

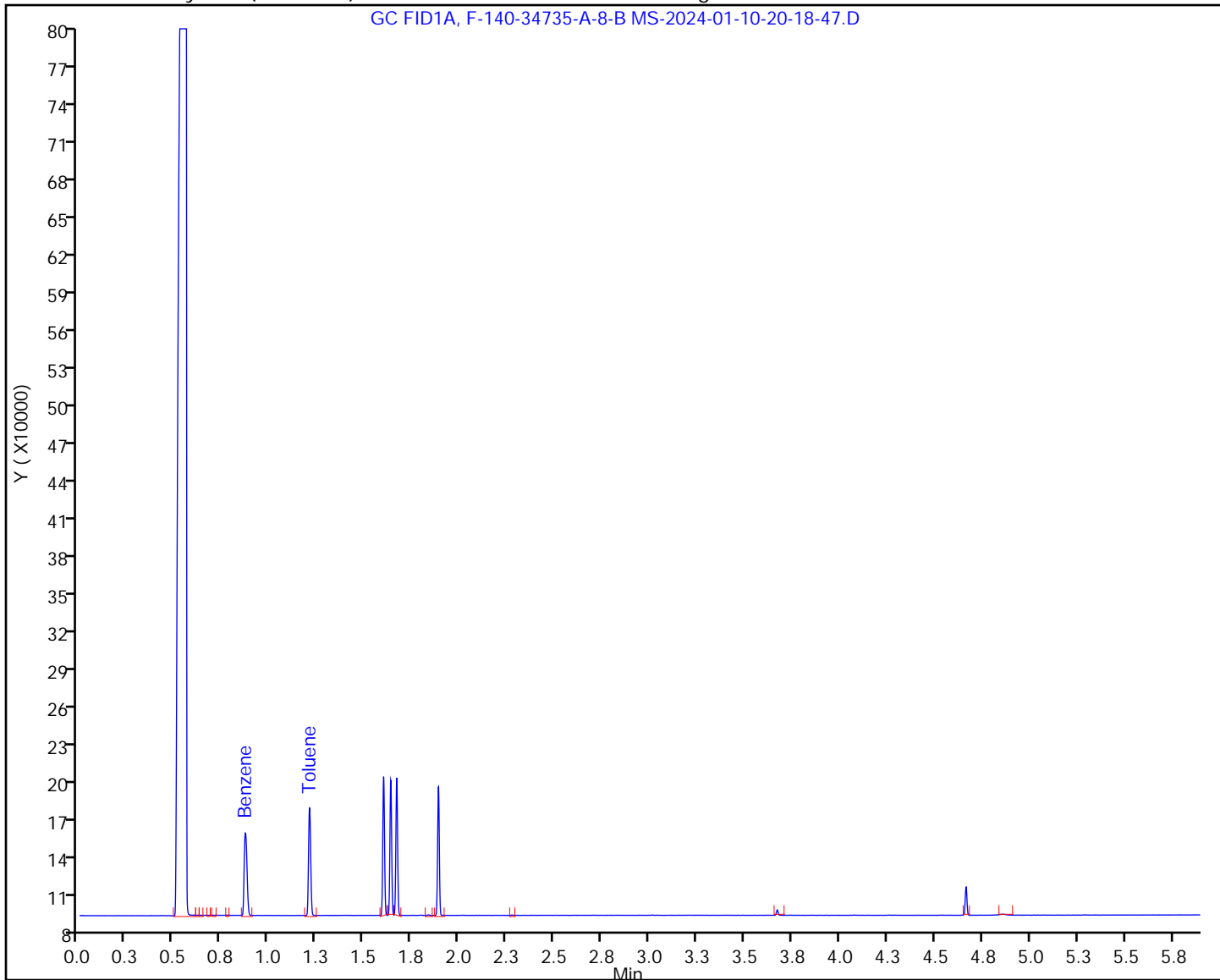
First Level Reviewer: P0IK      Date: 11-Jan-2024 10:35:44

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.873	0.874	-0.001	69487	39.7	37.2	
4 Toluene	1.212	1.212	0.000	68915	40.0	37.0	

**QC Flag Legend**  
Processing Flags

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-8-B MS-2024-01-10-20-18-47.D  
Injection Date: 10-Jan-2024 20:21:30 Instrument ID: ALGC2  
Lims ID: 140-34735-A-8-B MS  
Client ID: AP18-2 9553200021,9533200156  
Operator ID: SYSTEM ALS Bottle#: 22 Worklist Smp#: 24  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax (0.10 mm) Y Scaling: Method Defined: Set to Absolute Y Value





FORM I  
AIR - GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34735-1  
SDG No.: \_\_\_\_\_  
Client Sample ID: AP18-3 Lab Sample ID: 140-34735-9 MS  
9553200040,9533200128 MS  
Matrix: Air Lab File ID: F-140-34735-A-9-B MS-2024-01-1  
Analysis Method: EPA 18 Date Collected: 12/07/2023 00:00  
Sample wt/vol: 1(Sample) Date Analyzed: 01/10/2024 20:39  
Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
Soil Extract Vol.: \_\_\_\_\_ GC Column: DB HeavyWax ID: 0.1(mm)  
Purge Volume: \_\_\_\_\_ Heated Purge: (Y/N) \_\_\_\_\_ pH: \_\_\_\_\_  
% Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ Level: (low/med) Low  
Analysis Batch No.: 82282 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	188.7		10.0	5.50
108-88-3	Toluene	188.0		10.0	3.00

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-9-B MS-2024-01-10-20-36-17.D  
 Lims ID: 140-34735-A-9-B MS  
 Client ID: AP18-3 9553200040,9533200128  
 Sample Type: MS  
 Inject. Date: 10-Jan-2024 20:39:03      ALS Bottle#: 24      Worklist Smp#: 26  
 Injection Vol: 1.0 ul      Dil. Factor: 1.0000  
 Sample Info: 140-0031160-026  
 Operator ID: SYSTEM      Instrument ID: ALGC2  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 11-Jan-2024 10:36:22      Calib Date: 23-Sep-2023 17:07:49  
 Integrator: Falcon  
 Quant Method: External Standard      Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230923-29777.b\F-HEXANE-2023-09-23-17-05-05.D  
 Column 1 : DB HeavyWax ( 0.10 mm)      Det: GC FID1A  
 Process Host: CTX1681

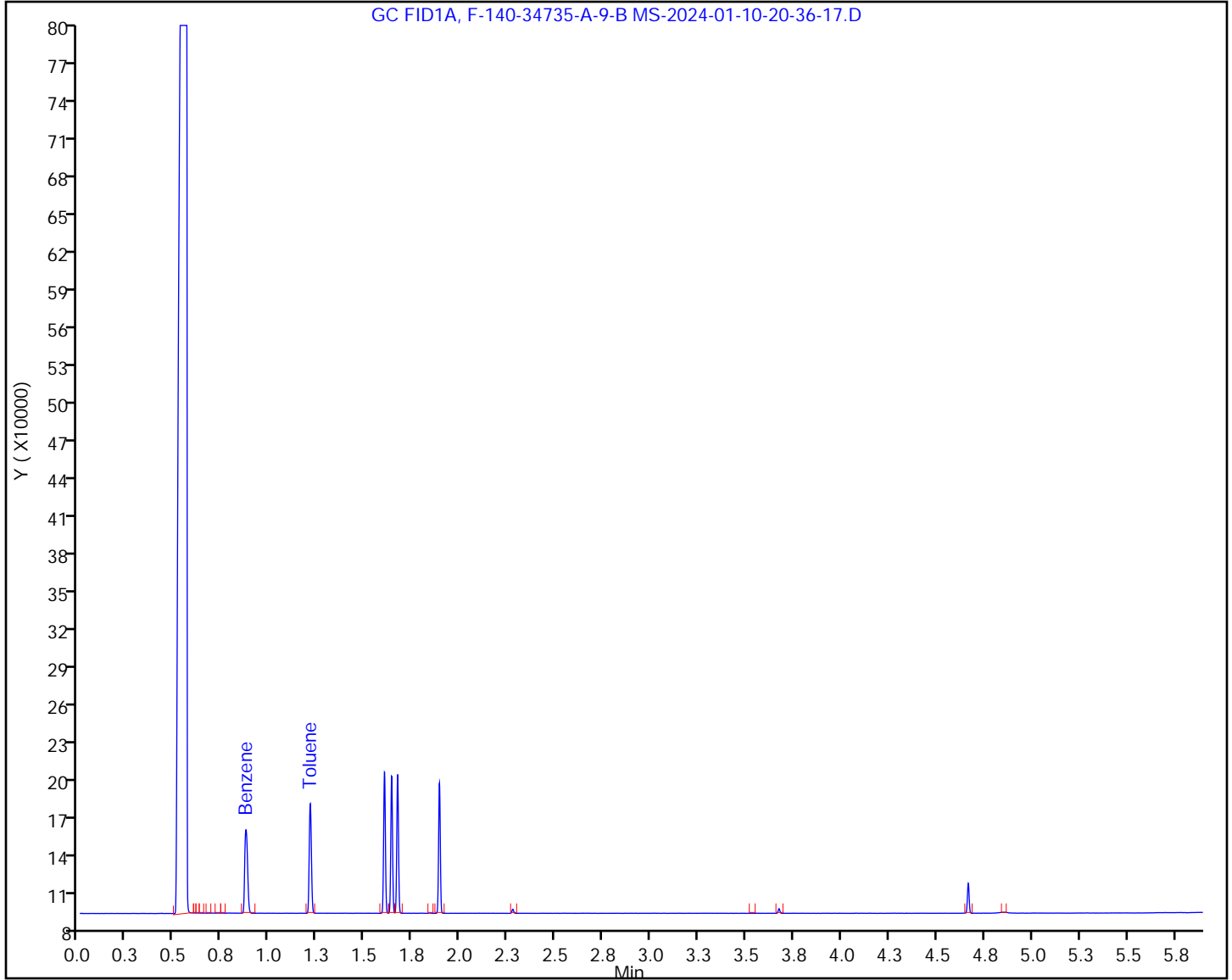
First Level Reviewer: P0IK      Date: 11-Jan-2024 10:35:50

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.874	0.874	0.000	70504	39.7	37.7	
4 Toluene	1.212	1.212	0.000	70041	40.0	37.6	

**QC Flag Legend**  
Processing Flags

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-9-B MS-2024-01-10-20-36-17.D  
Injection Date: 10-Jan-2024 20:39:03 Instrument ID: ALGC2  
Lims ID: 140-34735-A-9-B MS  
Client ID: AP18-3 9553200040,9533200128  
Operator ID: SYSTEM ALS Bottle#: 24 Worklist Smp#: 26  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Y Scaling: Method Defined: Set to Absolute Y Value



FORM I  
AIR - GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Eurofins Knoxville</u>	Job No.: <u>140-34735-1</u>
SDG No.: _____	
Client Sample ID: <u>BLANK</u> <u>9553200047,9553200041 MS</u>	Lab Sample ID: <u>140-34735-10 MS</u>
Matrix: <u>Air</u>	Lab File ID: <u>F-140-34735-A-10-B MS-2024-01-</u>
Analysis Method: <u>EPA 18</u>	Date Collected: <u>12/06/2023 00:00</u>
Sample wt/vol: <u>1(Sample)</u>	Date Analyzed: <u>01/10/2024 20:56</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB HeavyWax</u> ID: <u>0.1(mm)</u>
Purge Volume: _____	Heated Purge: (Y/N) _____ pH: _____
% Moisture: _____ % Solids: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>82282</u>	Units: <u>ug/Sample</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	185.0		10.0	5.50
108-88-3	Toluene	182.6		10.0	3.00

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-10-B MS-2024-01-10-20-53-4.D  
 Lims ID: 140-34735-A-10-B MS  
 Client ID: BLANK 9553200047,9553200041  
 Sample Type: MS  
 Inject. Date: 10-Jan-2024 20:56:33 ALS Bottle#: 26 Worklist Smp#: 28  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0031160-028  
 Operator ID: SYSTEM Instrument ID: ALGC2  
 Method: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\GC2M18wax.m  
 Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
 Last Update: 11-Jan-2024 10:36:22 Calib Date: 23-Sep-2023 17:07:49  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\ALGC2\20230923-29777.b\F-HEXANE-2023-09-23-17-05-05.D  
 Column 1 : DB HeavyWax ( 0.10 mm) Det: GC FID1A  
 Process Host: CTX1681

First Level Reviewer: P0IK

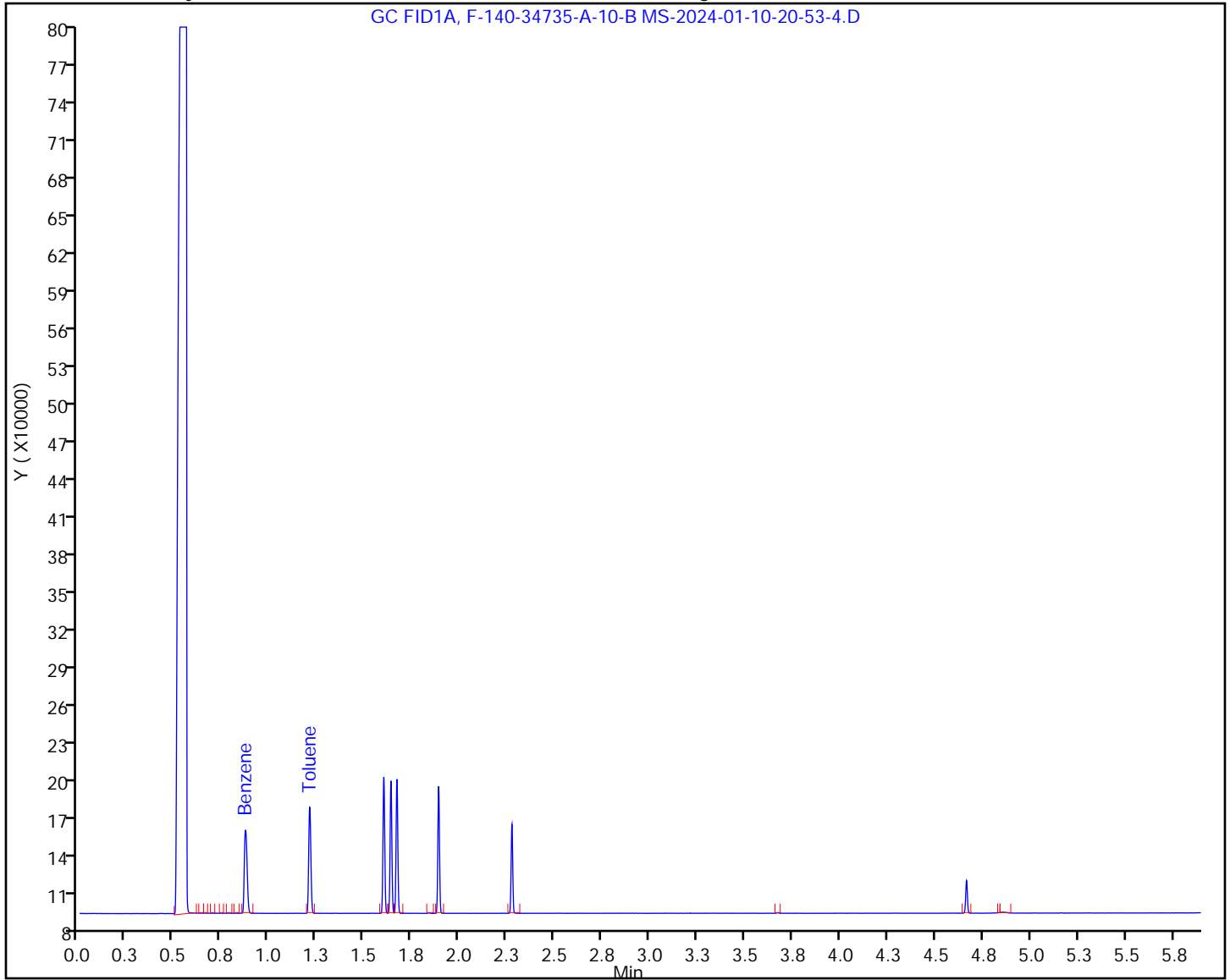
Date: 11-Jan-2024 10:35:57

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Benzene	0.873	0.874	-0.001	69146	39.7	37.0	
4 Toluene	1.211	1.212	-0.001	68025	40.0	36.5	

QC Flag Legend  
Processing Flags

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\ALGC2\20240110-31160.b\F-140-34735-A-10-B MS-2024-01-10-20-53-4.D  
Injection Date: 10-Jan-2024 20:56:33 Instrument ID: ALGC2  
Lims ID: 140-34735-A-10-B MS  
Client ID: BLANK 9553200047,9553200041  
Operator ID: SYSTEM ALS Bottle#: 26 Worklist Smp#: 28  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: GC2M18wax Limit Group: GCM - EPA18\_Extract - CS2 -ICAL  
Column: DB HeavyWax ( 0.10 mm) Y Scaling: Method Defined: Set to Absolute Y Value



AIR - GC VOA ANALYSIS RUN LOG

Lab Name: Eurofins Knoxville

Job No.: 140-34735-1

SDG No.:

Instrument ID: ALGC2

Start Date: 02/21/2023 18:09

Analysis Batch Number: 70548

End Date: 02/21/2023 21:26

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 140-70548/4		02/21/2023 18:09	1	F-IC L1-2023-02-21-1 8-06-27.D	DB HeavyWax 0.1 (mm)
IC 140-70548/5		02/21/2023 18:18	1	F-IC L1-2023-02-21-1 8-15-26.D	DB HeavyWax 0.1 (mm)
IC 140-70548/6		02/21/2023 18:27	1	F-IC L1-2023-02-21-1 8-24-23.D	DB HeavyWax 0.1 (mm)
IC 140-70548/7		02/21/2023 18:36	1	F-IC L2-2023-02-21-1 8-33-17.D	DB HeavyWax 0.1 (mm)
IC 140-70548/8		02/21/2023 18:45	1	F-IC L2-2023-02-21-1 8-42-17.D	DB HeavyWax 0.1 (mm)
IC 140-70548/9		02/21/2023 18:54	1	F-IC L2-2023-02-21-1 8-51-20.D	DB HeavyWax 0.1 (mm)
IC 140-70548/10		02/21/2023 19:03	1	F-IC L3-2023-02-21-1 9-00-12.D	DB HeavyWax 0.1 (mm)
IC 140-70548/11		02/21/2023 19:12	1	F-IC L3-2023-02-21-1 9-09-09.D	DB HeavyWax 0.1 (mm)
IC 140-70548/12		02/21/2023 19:20	1	F-IC L3-2023-02-21-1 9-18-06.D	DB HeavyWax 0.1 (mm)
IC 140-70548/13		02/21/2023 19:29	1	F-IC L4-2023-02-21-1 9-26-58.D	DB HeavyWax 0.1 (mm)
IC 140-70548/14		02/21/2023 19:38	1	F-IC L4-2023-02-21-1 9-35-55.D	DB HeavyWax 0.1 (mm)
IC 140-70548/15		02/21/2023 19:47	1	F-IC L4-2023-02-21-1 9-44-50.D	DB HeavyWax 0.1 (mm)
IC 140-70548/16		02/21/2023 19:56	1	F-IC L5-2023-02-21-1 9-53-57.D	DB HeavyWax 0.1 (mm)
IC 140-70548/17		02/21/2023 20:05	1	F-IC L5-2023-02-21-2 0-02-53.D	DB HeavyWax 0.1 (mm)
IC 140-70548/18		02/21/2023 20:14	1	F-IC L5-2023-02-21-2 0-11-47.D	DB HeavyWax 0.1 (mm)
IC 140-70548/19		02/21/2023 20:23	1	F-IC L6-2023-02-21-2 0-20-44.D	DB HeavyWax 0.1 (mm)
IC 140-70548/20		02/21/2023 20:32	1	F-IC L6-2023-02-21-2 0-29-41.D	DB HeavyWax 0.1 (mm)
IC 140-70548/21		02/21/2023 20:41	1	F-IC L6-2023-02-21-2 0-38-37.D	DB HeavyWax 0.1 (mm)
IC 140-70548/22		02/21/2023 20:50	1	F-IC L7-2023-02-21-2 0-47-33.D	DB HeavyWax 0.1 (mm)
IC 140-70548/23		02/21/2023 20:59	1	F-IC L7-2023-02-21-2 0-56-40.D	DB HeavyWax 0.1 (mm)
IC 140-70548/24		02/21/2023 21:08	1	F-IC L7-2023-02-21-2 1-05-36.D	DB HeavyWax 0.1 (mm)

AIR - GC VOA ANALYSIS RUN LOG

Lab Name: Eurofins Knoxville Job No.: 140-34735-1

SDG No.: \_\_\_\_\_

Instrument ID: ALGC2 Start Date: 02/21/2023 18:09

Analysis Batch Number: 70548 End Date: 02/21/2023 21:26

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ICV 140-70548/26		02/21/2023 21:26	1	F-ICV-2023-02-21-21-23-28.D	DB HeavyWax 0.1 (mm)



**Eurofins TestAmerica Knoxville GC Method 18 Initial Calibration Data Review Checklist**  
**SOP: KNOX-GC-0023, Rev 1**

<b>Instrument:</b>	<b>ALGC2</b>	<b>Chrom WL #:</b>	<b>27105</b>
<b>Date:</b>	<b>2/21/2023</b>	<b>TALS ICAL Batch / Event #:</b>	<b>70548 / 4247</b>

<i>Review Items</i>				2nd ✓	
<b>A. Initial Calibration (ICAL)</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>		<b>If No, why is data reportable?</b>
1. Re-read each limit group	Y			n/a	
2. All required reagents included and init/final volumes correct?	Y			n/a	
3. First levels “unlock/clear” or “unlock clear by sublist” as appropriate?	Y			Y	
4. Are the calibration levels & groups correct in WL?	Y			Y	
5. Is the correct Limit Group selected?	Y			Y	
6. Were all peaks identified automatically	Y			Y	<i>Modify method for detection must be attempted and all points reprocessed. Any non-detected peaks must be verified in each affected sample</i>
7. Is integration acceptable for each spiked analyte?	Y			Y	
8. Elution order verified?	Y			Y	
9. Each calibration level injected in triplicate?	Y			Y	
10. Minimum of 3 levels used for linear? Minimum of 6 levels used for quadratic?	Y			Y	
11. Is the lowest active point at or below the RL?	Y			Y	
12. Is the intercept below the RL (ICVZERO flag)?	Y			Y	
13. Has the best calibration fit been applied (generally lowest readback)?	Y			Y	
14. After re-quantitating ICAL, is each triplicate level ≤ 5% RSD? (does not apply to points < RL).	Y			Y	
15. Is the r <sup>2</sup> ≥ 0.990 for each?	Y			Y	
16. Quadratic curve slopes entirely positive or negative and continuous?			NA	NA	
17. ICV Within 30% D?	Y			Y	
18. Is the correct column identified in Chemstation and Chrom?	Y			Y	
19. After 2 <sup>nd</sup> level review, Lock the method in Chrom, upload to TALS and set as most recent method.				Y	
20. TALS: are all points in the most recent active calibration event and calibration correct?				Y	
21. Approve the calibration in TALS.				Y	
22. NCM's generated properly?				NA	
23. Scan checklist & Chemstation method, attach as document to TALS batch.				Y	

<b>Analyst: BKK</b>	<b>Date: 2/23/2023</b>	<b>2<sup>nd</sup> Level Reviewer: DLW</b>	<b>Date: 2/23/2023</b>
<b>Comments:</b>	<b>Comments:</b>		

AIR - GC VOA ANALYSIS RUN LOG

Lab Name: Eurofins Knoxville

Job No.: 140-34735-1

SDG No.:

Instrument ID: ALGC2

Start Date: 01/10/2024 17:17

Analysis Batch Number: 82282

End Date: 01/10/2024 21:23

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 140-82282/3		01/10/2024 17:17	1	F-CCV-2024-01-10-17-14-15.D	DB HeavyWax 0.1 (mm)
MB 140-82267/1-A		01/10/2024 17:25	1	F-MB 140-82267 1-A-2024-01-10-17-23-01.D	DB HeavyWax 0.1 (mm)
LCS 140-82267/2-A		01/10/2024 17:34	1	F-LCS 140-82267 2-A-2024-01-10-17-31-43.D	DB HeavyWax 0.1 (mm)
ZZZZZ		01/10/2024 17:43	1		DB HeavyWax 0.1 (mm)
140-34735-11	A-1978 METHOD 18	01/10/2024 17:52	1	F-140-34735-A-11-A-2024-01-10-17-49-16.D	DB HeavyWax 0.1 (mm)
140-34735-12	A-1979 METHOD 18 (SPIKE @200UG)	01/10/2024 18:00	1	F-140-34735-A-12-A-2024-01-10-17-58-04.D	DB HeavyWax 0.1 (mm)
140-34735-1	AS18-1 9553200080,9533200143	01/10/2024 18:09	1	F-140-34735-A-1-A-2024-01-10-18-07-01.D	DB HeavyWax 0.1 (mm)
140-34735-1 MS	AS18-1 9553200080,9533200143 MS	01/10/2024 18:18	1	F-140-34735-A-1-B MS-2024-01-10-18-15-45.D	DB HeavyWax 0.1 (mm)
140-34735-2	AS18-2 9553200025,9533200092	01/10/2024 18:27	1	F-140-34735-A-2-A-2024-01-10-18-24-30.D	DB HeavyWax 0.1 (mm)
140-34735-2 MS	AS18-2 9553200025,9533200092 MS	01/10/2024 18:36	1	F-140-34735-A-2-B MS-2024-01-10-18-33-16.D	DB HeavyWax 0.1 (mm)
140-34735-3	AS18-3 9553200073,9533200085	01/10/2024 18:44	1	F-140-34735-A-3-A-2024-01-10-18-42-02.D	DB HeavyWax 0.1 (mm)
140-34735-3 MS	AS18-3 9553200073,9533200085 MS	01/10/2024 18:53	1	F-140-34735-A-3-B MS-2024-01-10-18-50-46.D	DB HeavyWax 0.1 (mm)
140-34735-4	VF18-1 9553200036,9533200155	01/10/2024 19:02	1	F-140-34735-A-4-A-2024-01-10-18-59-35.D	DB HeavyWax 0.1 (mm)
140-34735-4 MS	VF18-1 9553200036,9533200155 MS	01/10/2024 19:11	1	F-140-34735-A-4-B MS-2024-01-10-19-08-29.D	DB HeavyWax 0.1 (mm)
140-34735-5	VF18-2 9553200045,9533200152	01/10/2024 19:20	1	F-140-34735-A-5-A-2024-01-10-19-17-16.D	DB HeavyWax 0.1 (mm)
140-34735-5 MS	VF18-2 9553200045,9533200152 MS	01/10/2024 19:28	1	F-140-34735-A-5-B MS-2024-01-10-19-26-00.D	DB HeavyWax 0.1 (mm)
140-34735-6	VF18-4 9553202844,9533200079	01/10/2024 19:37	1	F-140-34735-A-6-A-2024-01-10-19-34-46.D	DB HeavyWax 0.1 (mm)
140-34735-6 MS	VF18-4 9553202844,9533200079 MS	01/10/2024 19:46	1	F-140-34735-A-6-B MS-2024-01-10-19-43-31.D	DB HeavyWax 0.1 (mm)
140-34735-7	AP18-1 9553200144,9533200082	01/10/2024 19:55	1	F-140-34735-A-7-A-2024-01-10-19-52-17.D	DB HeavyWax 0.1 (mm)

AIR - GC VOA ANALYSIS RUN LOG

Lab Name: Eurofins Knoxville Job No.: 140-34735-1

SDG No.: \_\_\_\_\_

Instrument ID: ALGC2 Start Date: 01/10/2024 17:17

Analysis Batch Number: 82282 End Date: 01/10/2024 21:23

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
140-34735-7 MS	AP18-1 9553200144,9533200082 MS	01/10/2024 20:03	1	F-140-34735-A-7 -B MS-2024-01-10-2 0-01-03.D	DB HeavyWax 0.1 (mm)
140-34735-8	AP18-2 9553200021,9533200156	01/10/2024 20:12	1	F-140-34735-A-8 -A-2024-01-10-2 0-09-58.D	DB HeavyWax 0.1 (mm)
140-34735-8 MS	AP18-2 9553200021,9533200156 MS	01/10/2024 20:21	1	F-140-34735-A-8 -B MS-2024-01-10-2 0-18-47.D	DB HeavyWax 0.1 (mm)
140-34735-9	AP18-3 9553200040,9533200128	01/10/2024 20:30	1	F-140-34735-A-9 -A-2024-01-10-2 0-27-30.D	DB HeavyWax 0.1 (mm)
140-34735-9 MS	AP18-3 9553200040,9533200128 MS	01/10/2024 20:39	1	F-140-34735-A-9 -B MS-2024-01-10-2 0-36-17.D	DB HeavyWax 0.1 (mm)
140-34735-10	BLANK 9553200047,9553200041	01/10/2024 20:47	1	F-140-34735-A-1 0-A-2024-01-10- 20-45-02.D	DB HeavyWax 0.1 (mm)
140-34735-10 MS	BLANK 9553200047,9553200041 MS	01/10/2024 20:56	1	F-140-34735-A-1 0-B MS-2024-01-10-2 0-53-4.D	DB HeavyWax 0.1 (mm)
CCV 140-82282/31		01/10/2024 21:23	1	F-CCV-2024-01-1 0-21-20-16.D	DB HeavyWax 0.1 (mm)

**Eurofins Knoxville GC Method 18 Continuing Calibration Data Review / Narrative Checklist**  
**SOP: KNOX-GC-0023, Rev 2**

<b>Instrument:</b>	ALGC2	<b>Chrom WL #:</b>	31160
<b>Date:</b>	1/10/2024	<b>TALS Batch #</b>	82282
<b>TALS Prep Batch:</b>	82267	<b>TALS ICAL Batch / Event #:</b>	27105 / 70548 / 4247

<b>Review Items</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>2nd ✓</b>	<b>If No, why is data reportable?</b>
1. All the required reagents included and init/final volumes correct in the WL?	Y			Y	
2. All the sample initial/final volumes and dilution factors correct in the WL?	Y			Y	
3. Prep batch reviewed for accuracy and completeness?	Y			Y	
4. Was a CCV analyzed <del>(in triplicate)</del> at the beginning and end of the sequence?	Y			Y	Only run once at the beginning and end.
5. Was the CCAL compared to the most recent and correct ICAL? (verify ICAL batch/event #, start/end date/time)	Y			Y	
6. Has the RT been updated by the first CCV?	Y			Y	
7. Is integration acceptable for each CCV?	Y			Y	
8. Is the RSD of the CCV triplicate injections $\leq 5\%$			NA	NA	Triplicate injection not required, per client.
9. Average of the three CCAL %D $\leq 20\%$ ?	Y			Y	<input type="checkbox"/> CCV high, sample ND <input type="checkbox"/> Not enough sample for re-extraction
10. Method blank done per prep batch, method blank or instrument blank <del>run in triplicate</del> with each sequence, and average results $< RL$ ?	Y			Y	<input type="checkbox"/> No analyte $> RL$ in associated samples. <input type="checkbox"/> Sample results $> 10x$ higher than blank. <input type="checkbox"/> Insufficient sample for reanalysis.
11. Is the RSD of the LCS triplicate injections $\leq 5\%$			NA	NA	Triplicate injection not required, per client.
12. LCS done per prep batch <del>in triplicate and all average</del> recoveries within 70 – 130% R	Y			Y	<input type="checkbox"/> Insufficient sample for reanalysis. <input type="checkbox"/> LCS %R high and all analyte(s) were $< RL$ in associated samples.
13. Prep and analytical batches have all LSM assigned to each sample?	Y			Y	
14. Is the RSD of the samples' triplicate injections $\leq 5\%$ (only applies to results $> 5x RL$ ).			NA	NA	Triplicate injection not required, per client.
15. Are results within calibration range?	Y			Y	
16. Suffixes assigned properly to DL/RE?			NA	NA	
17. Were runs checked for carryover?	Y			Y	
18. Are chromatographic interferences that result in bias flagged?			NA	NA	
19. Matrix spike recoveries within limits for the average triplicate analysis? [for train spikes, see final report summary recoveries]	Y			Y	
20. For Tedlar bags, was the elapsed time between the spike and analysis at least as long as between sampling and analysis?			NA	NA	
21. Were all special project requirements met?	Y			Y	
22. Holding time flags removed?			NA	NA	
23. Each job have QC created (CCV/LCS/MB)?	Y			Y	
24. Each sample's <del>triplicate injection</del> linked to correct & all triplicate injections of MB/LCS/MS/CCV?	Y			Y	Triplicate injection not required, per client.
25. Is the correct ICV linked to all runs?	Y			Y	
26. Are all nonconformances documented appropriately?			NA	NA	

<b>Analyst: BKK</b>	<b>Date: 1/11/2024</b>	<b>2<sup>nd</sup> Level Reviewer: DLW</b>	<b>Date: 1/11/2024</b>
<b>Comments:</b>		<b>Comments:</b>	

AIR - GC VOA BATCH WORKSHEET

Lab Name: Eurofins Knoxville Job No.: 140-34735-1

SDG No.: \_\_\_\_\_

Batch Number: 70548 Batch Start Date: 02/21/23 18:09 Batch Analyst: Wiles, David L

Batch Method: EPA 18 Batch End Date: \_\_\_\_\_

Lab Sample ID	Client Sample ID	Method Chain	Basis	95CVBTEX 00024	95xxBTEXSTN 00004	95xxBTEXSTN 00005			
IC 140-70548/4		EPA 18		20 uL					
IC 140-70548/5		EPA 18		20 uL					
IC 140-70548/6		EPA 18		20 uL					
IC 140-70548/7		EPA 18		100 uL					
IC 140-70548/8		EPA 18		100 uL					
IC 140-70548/9		EPA 18		100 uL					
IC 140-70548/10		EPA 18				1 uL			
IC 140-70548/11		EPA 18				1 uL			
IC 140-70548/12		EPA 18				1 uL			
IC 140-70548/13		EPA 18				5 uL			
IC 140-70548/14		EPA 18				5 uL			
IC 140-70548/15		EPA 18				5 uL			
IC 140-70548/16		EPA 18				10 uL			
IC 140-70548/17		EPA 18				10 uL			
IC 140-70548/18		EPA 18				10 uL			
IC 140-70548/19		EPA 18				50 uL			
IC 140-70548/20		EPA 18				50 uL			
IC 140-70548/21		EPA 18				50 uL			
IC 140-70548/22		EPA 18				101 uL			
IC 140-70548/23		EPA 18				101 uL			
IC 140-70548/24		EPA 18				101 uL			
ICV 140-70548/26		EPA 18			5 uL				

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC VOA BATCH WORKSHEET

Lab Name: Eurofins Knoxville Job No.: 140-34735-1

SDG No.: \_\_\_\_\_

Batch Number: 82267 Batch Start Date: 01/10/24 10:38 Batch Analyst: Knight, Benjamin K

Batch Method: EPA 18 Batch End Date: \_\_\_\_\_

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	95xxBTEXSTN 00007	95xxBTEXSTN 00009		
MB 140-82267/1		EPA 18, EPA 18		1 Sample	5 mL				
LCS 140-82267/2		EPA 18, EPA 18		1 Sample	5 mL		25 uL		
140-34735-A-1	AS18-1 9553200080,95332 00143	EPA 18, EPA 18	T	1 Sample	5 mL				
140-34735-A-1 MS	AS18-1 9553200080,95332 00143	EPA 18, EPA 18	T	1 Sample	5 mL	20 uL			
140-34735-A-2	AS18-2 9553200025,95332 00092	EPA 18, EPA 18	T	1 Sample	5 mL				
140-34735-A-2 MS	AS18-2 9553200025,95332 00092	EPA 18, EPA 18	T	1 Sample	5 mL	20 uL			
140-34735-A-3	AS18-3 9553200073,95332 00085	EPA 18, EPA 18	T	1 Sample	5 mL				
140-34735-A-3 MS	AS18-3 9553200073,95332 00085	EPA 18, EPA 18	T	1 Sample	5 mL	20 uL			
140-34735-A-4	VF18-1 9553200036,95332 00155	EPA 18, EPA 18	T	1 Sample	5 mL				
140-34735-A-4 MS	VF18-1 9553200036,95332 00155	EPA 18, EPA 18	T	1 Sample	5 mL	20 uL			
140-34735-A-5	VF18-2 9553200045,95332 00152	EPA 18, EPA 18	T	1 Sample	5 mL				
140-34735-A-5 MS	VF18-2 9553200045,95332 00152	EPA 18, EPA 18	T	1 Sample	5 mL	20 uL			
140-34735-A-6	VF18-4 9553202844,95332 00079	EPA 18, EPA 18	T	1 Sample	5 mL				
140-34735-A-6 MS	VF18-4 9553202844,95332 00079	EPA 18, EPA 18	T	1 Sample	5 mL	20 uL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC VOA BATCH WORKSHEET

Lab Name: Eurofins Knoxville Job No.: 140-34735-1

SDG No.: \_\_\_\_\_

Batch Number: 82267 Batch Start Date: 01/10/24 10:38 Batch Analyst: Knight, Benjamin K

Batch Method: EPA 18 Batch End Date: \_\_\_\_\_

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	95xxBTEXSTN 00007	95xxBTEXSTN 00009		
140-34735-A-7	AP18-1 9553200144, 95332 00082	EPA 18, EPA 18	T	1 Sample	5 mL				
140-34735-A-7 MS	AP18-1 9553200144, 95332 00082	EPA 18, EPA 18	T	1 Sample	5 mL	20 uL			
140-34735-A-8	AP18-2 9553200021, 95332 00156	EPA 18, EPA 18	T	1 Sample	5 mL				
140-34735-A-8 MS	AP18-2 9553200021, 95332 00156	EPA 18, EPA 18	T	1 Sample	5 mL	20 uL			
140-34735-A-9	AP18-3 9553200040, 95332 00128	EPA 18, EPA 18	T	1 Sample	5 mL				
140-34735-A-9 MS	AP18-3 9553200040, 95332 00128	EPA 18, EPA 18	T	1 Sample	5 mL	20 uL			
140-34735-A-10	BLANK 9553200047, 95532 00041	EPA 18, EPA 18	T	1 Sample	5 mL				
140-34735-A-10 MS	BLANK 9553200047, 95532 00041	EPA 18, EPA 18	T	1 Sample	5 mL	20 uL			
140-34735-A-11	A-1978 METHOD 18	EPA 18, EPA 18	T	1 Sample	5 mL				
140-34735-A-12	A-1979 METHOD 18 (SPIKE @200UG)	EPA 18, EPA 18	T	1 Sample	5 mL	20 uL			

Batch Notes	
Batch Comment	SKC Charcoal tube lot# 2000 / CS2 lot# 233362

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# Shipping and Receiving Documents



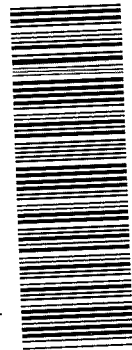
# Chain of Custody Record

No. 118.01290.00025 M18

SLR International Corporation  
 1612 Specht Point Road, Suite 119, Fort Collins, CO 80525  
 (970) 494-0805 Phone \* (970) 999-3998 Fax  
<http://www.slrconsulting.com/us>



Project Name: FMMI HAPs Testing		Project Number: 118.01290.00025 M18		Analysis Required		Page 1 of 2	
Send Report To: Doug Bopray, John Rosburg		Sampler (Print Name): Doug Bopray		Comments, Special Instructions, etc.		Purchase Order No. 3036	
Address: 1612 Specht Point Road, Suite 119		Shipment Method: FedEx		Comments, Special Instructions, etc.		Lab Sample ID (to be completed by lab)	
Fort Collins, CO 80525		Airbill Number		Comments, Special Instructions, etc.		Lab Sample ID (to be completed by lab)	
Phone: (970) 219-1431		Laboratory Receiving: Eurofins - Knoxville		Comments, Special Instructions, etc.		Lab Sample ID (to be completed by lab)	
Email: <a href="mailto:dbopray@slrconsulting.com">dbopray@slrconsulting.com</a> , <a href="mailto:jrosburg@gmail.com">jrosburg@gmail.com</a>				Comments, Special Instructions, etc.		Lab Sample ID (to be completed by lab)	
Field Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Time	Time	Time
AS18-1 9553200080	11/30/2023		Charcoal	1			
AS18-1 9553200143	11/30/2023		Charcoal	1			
AS18-2 9553200025	12/1/2023		Charcoal	1			
AS18-2 9553200092	12/1/2023		Charcoal	1			
AS18-3 9553200073	12/1/2023		Charcoal	1			
AS18-3 9553200085	12/1/2023		Charcoal	1			
VF18-1 9553200036	12/2/2023		Charcoal	1			
VF18-1 9553200155	12/2/2023		Charcoal	1			
VF18-2 9553200045	12/3/2023		Charcoal	1			
VF18-2 9553200152	12/3/2023		Charcoal	1			
VF18-4 9553202844	12/5/2023		Charcoal	1			
VF18-4 9553200079	12/5/2023		Charcoal	1			
Relinquished by: (Signature)		Received by: (Signature)		Date:		Date:	
Date: 12/11/23		Time: 16:00		Date: 12-12-23		Time: 10:00	
Relinquished by: (Signature)		Received by: (Signature)		Date:		Date:	
Date:		Time:		Date:		Time:	
Relinquished by: (Signature)		Received by: (Signature)		Date:		Date:	
Date:		Time:		Date:		Time:	
Sample Custodian Remarks (Completed)		QA/QC Level		Turnaround		Total # Containers Received?	
140-34735 Chain of Custody		Level I <input checked="" type="checkbox"/>		Routine <input type="checkbox"/>		COC Seals Present?	
		Level II <input type="checkbox"/>		24 Hour <input type="checkbox"/>		COC Seals Intact?	
		Level III <input type="checkbox"/>		1 Week <input type="checkbox"/>		Received Containers Intact?	
		Other <input type="checkbox"/>		Other <input type="checkbox"/>		Temperature?	
				14 days			



White: Lab Copy      Yellow: PM Copy      Pink: Field Copy      Gold: PM/QA/QC Copy



EUROFINS KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/				
2. Were ambient air containers received intact?	/				
3. The coolers/containers custody seal if present, is it intact?	/				CUSTODY SEALS INTACT RECEIVED AT 8:54:47 / 6/3/23 DSD 12-12-23
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID : <u>5274</u> Correction factor: <u>10.4°C</u>	/				
5. Were all of the sample containers received intact?	/				
6. Were samples received in appropriate containers?	/				
7. Do sample container labels match COC? (IDs, Dates, Times)	/				
8. Were all of the samples listed on the COC received?	/				
9. Is the date/time of sample collection noted?	/				
10. Was the sampler identified on the COC?	/				
11. Is the client and project name/# identified?	/				
12. Are tests/parameters listed for each sample?	/				
13. Is the matrix of the samples noted?	/				
14. Was COC relinquished? (Signed/Dated/Timed)	/				
15. Were samples received within holding time?	/				
16. Were samples received with correct chemical preservative (excluding Encore)?	/				
17. Were VOA samples received without headspace?	/				
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:	/				
19. For 1613B water samples is pH<9?	/				
20. For rad samples was sample activity info. Provided?	/				
Project #:					
				<input type="checkbox"/> Containers, Broken <input type="checkbox"/> Checked in lab <input type="checkbox"/> Yes <input type="checkbox"/> NA <input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt <input type="checkbox"/> Containers, Broken <input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel <input type="checkbox"/> COC & Samples Do Not Match <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received <input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received <input type="checkbox"/> COC; No Date/Time; Client Contacted <input type="checkbox"/> Sampler Not Listed on COC <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC No tests on COC <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Incorrect/Incomplete	Box 16A: pH Preservation Box 18A: Residual Chlorine Preservative: Lot Number: Exp Date: Analyst: Date: Time:
				<input type="checkbox"/> Holding Time - Receipt <input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative <input type="checkbox"/> Headspace (VOA only) <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> If no, notify lab to adjust <input type="checkbox"/> Project missing info	Labeling Verified by: _____ Date: _____ pH test strip lot number: _____

Sample Receiving Associate: [Signature] Date: 12-12-23



# ANALYTICAL REPORT

## PREPARED FOR

Attn: Mr. Doug Bopray  
SLR International Corp  
1612 Specht Point Road, Suite 119  
Fort Collins, Colorado 80525

Generated 1/19/2024 12:44:53 PM

## JOB DESCRIPTION

FMMI D/F+PAH Testing - M23/CARB429

## JOB NUMBER

140-34737-1

# Eurofins Knoxville

## Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

## Authorization



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1/19/2024 12:44:53 PM

Authorized for release by  
Courtney Adkins, Project Manager II  
[Courtney.Adkins@et.eurofinsus.com](mailto:Courtney.Adkins@et.eurofinsus.com)  
(865)291-3019



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# Definitions/Glossary

Client: SLR International Corp  
Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

## Qualifiers

### GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.

### Dioxin

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

# Case Narrative

Client: SLR International Corp  
Project: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

**Job ID: 140-34737-1**

**Eurofins Knoxville**

## Job Narrative 140-34737-1

### Receipt

The samples were received on 12/12/2023 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 5.1° C and 18.4° C.

### Receipt Exceptions

The following samples were received at the laboratory outside the required temperature criteria: AS23-1 CONTAINER 1,2A,2B,3,XAD (140-34737-1), AS23-2 CONTAINER 1,2A,2B,3,XAD (140-34737-2), AS23-3 CONTAINER 1,2A,2B,3,XAD (140-34737-3), VF23-1 CONTAINER 1,2A,2B,3,XAD (140-34737-4), VF23-2 CONTAINER 1,2A,2B,3,XAD (140-34737-5), VF23-4 CONTAINER 1,2A,2B,3,XAD (140-34737-6), AP23-1 CONTAINER 1,2A,2B,3,XAD (140-34737-7), AP23-2 CONTAINER 1,2A,2B,3,XAD (140-34737-8), AP23-3 CONTAINER 1,2A,2B,3,XAD (140-34737-9) and PROOF BLANK CONTAINER 1,2A,2B,3,XAD (140-34737-10). This does not meet regulatory requirements. The client was contacted regarding this issue, and the laboratory was instructed to proceed with analysis. Only the xad traps were received cold.

Dioxin and Furan Field Surrogate was added prior to extraction and does not represent field sampling efficiency. Field sampling efficiency can be quantified using the PAH field surrogate recovery.

### GC/MS Semi VOA

Method ID-0016: The field surrogate, 13C6-Naphthalene, was not detected in sample AS23-2 CONTAINER 1,2A,2B,3,XAD (140-34737-2). It appears to have been omitted during the spiking process before shipment to the field.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### Dioxin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### Organic Prep

Method Combined Prep: The following samples were spiked with field surrogate before extraction, not sampling. This does not represent field sampling efficiency, only extraction efficiency: AS23-1 CONTAINER 1,2A,2B,3,XAD (140-34737-1), AS23-2 CONTAINER 1,2A,2B,3,XAD (140-34737-2), AS23-3 CONTAINER 1,2A,2B,3,XAD (140-34737-3), VF23-1 CONTAINER 1,2A,2B,3,XAD (140-34737-4), VF23-2 CONTAINER 1,2A,2B,3,XAD (140-34737-5), VF23-4 CONTAINER 1,2A,2B,3,XAD (140-34737-6), AP23-1 CONTAINER 1,2A,2B,3,XAD (140-34737-7), AP23-2 CONTAINER 1,2A,2B,3,XAD (140-34737-8), AP23-3 CONTAINER 1,2A,2B,3,XAD (140-34737-9) and PROOF BLANK CONTAINER 1,2A,2B,3,XAD (140-34737-10)

Methods 1668\_Sep\_2L, 1699, 8290, HRMS-Sepf, HRMS-Sox, Split: The following samples required a Gel-Permeation clean up, via EPA method 3640A, to reduce matrix interference: AS23-1 CONTAINER 1,2A,2B,3,XAD (140-34737-1), AS23-2 CONTAINER 1,2A,2B,3,XAD (140-34737-2), AS23-3 CONTAINER 1,2A,2B,3,XAD (140-34737-3), VF23-1 CONTAINER 1,2A,2B,3,XAD (140-34737-4), VF23-2 CONTAINER 1,2A,2B,3,XAD (140-34737-5), VF23-4 CONTAINER 1,2A,2B,3,XAD (140-34737-6), AP23-1 CONTAINER 1,2A,2B,3,XAD (140-34737-7), AP23-2 CONTAINER 1,2A,2B,3,XAD (140-34737-8), AP23-3 CONTAINER 1,2A,2B,3,XAD (140-34737-9), PROOF BLANK CONTAINER 1,2A,2B,3,XAD (140-34737-10) and A-1981,A-1982 M23/CARB429 MEDIA CHECK (140-34737-11).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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# Client Sample Results

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

**Client Sample ID: AS23-1 CONTAINER 1,2A,2B,3,XAD**

**Lab Sample ID: 140-34737-1**

Date Collected: 11/30/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Sample Container: Air Train

**Method: ID-0016 - PAH Emissions (Stationary Source)(GC/MS Isotope Dilution)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	1230		800	162	ng/Sample		12/13/23 11:58	12/29/23 15:51	1
2-Methylnaphthalene	136		100	54.0	ng/Sample		12/13/23 11:58	12/29/23 15:51	1
Acenaphthene	19.0	J	40.0	12.8	ng/Sample		12/13/23 11:58	12/29/23 15:51	1
Acenaphthylene	154		40.0	3.80	ng/Sample		12/13/23 11:58	12/29/23 15:51	1
Fluorene	66.2		20.0	11.6	ng/Sample		12/13/23 11:58	12/29/23 15:51	1
Phenanthrene	249		60.0	40.0	ng/Sample		12/13/23 11:58	12/29/23 15:51	1
Anthracene	19.6	J	20.0	5.60	ng/Sample		12/13/23 11:58	12/29/23 15:51	1
Fluoranthene	83.6		20.0	13.8	ng/Sample		12/13/23 11:58	12/29/23 15:51	1
Pyrene	91.2	J	120	10.6	ng/Sample		12/13/23 11:58	12/29/23 15:51	1
Benzo[a]anthracene	ND		20.0	5.80	ng/Sample		12/13/23 11:58	12/29/23 15:51	1
Chrysene	12.3	J	20.0	7.60	ng/Sample		12/13/23 11:58	12/29/23 15:51	1
Benzo[b]fluoranthene	ND		200	19.6	ng/Sample		12/13/23 11:58	12/29/23 15:51	1
Benzo[k]fluoranthene	ND		200	4.80	ng/Sample		12/13/23 11:58	12/29/23 15:51	1
Benzo[e]pyrene	20.9		20.0	3.40	ng/Sample		12/13/23 11:58	12/29/23 15:51	1
Benzo[a]pyrene	4.06	J	20.0	3.40	ng/Sample		12/13/23 11:58	12/29/23 15:51	1
Perylene	9.77	J	20.0	2.20	ng/Sample		12/13/23 11:58	12/29/23 15:51	1
Indeno[1,2,3-cd]pyrene	11.6	J	20.0	3.80	ng/Sample		12/13/23 11:58	12/29/23 15:51	1
Dibenz(a,h)anthracene	ND		20.0	5.40	ng/Sample		12/13/23 11:58	12/29/23 15:51	1
Benzo[g,h,i]perylene	60.9		20.0	12.0	ng/Sample		12/13/23 11:58	12/29/23 15:51	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Naphthalene-d8	65		30 - 120	12/13/23 11:58	12/29/23 15:51	1
2-methylnaphthalene-d10	69		30 - 120	12/13/23 11:58	12/29/23 15:51	1
Acenaphthylene-d8	69		30 - 120	12/13/23 11:58	12/29/23 15:51	1
Fluorene -d10	65		30 - 120	12/13/23 11:58	12/29/23 15:51	1
Phenanthrene-d10	61		30 - 120	12/13/23 11:58	12/29/23 15:51	1
Anthracene-d10	63		30 - 120	12/13/23 11:58	12/29/23 15:51	1
Fluoranthene-d10	71		30 - 120	12/13/23 11:58	12/29/23 15:51	1
Chrysene-d12	69		30 - 120	12/13/23 11:58	12/29/23 15:51	1
Benzo(b)fluoranthene-d12	78		30 - 120	12/13/23 11:58	12/29/23 15:51	1
Benzo(k)fluoranthene-d12	81		30 - 120	12/13/23 11:58	12/29/23 15:51	1
Benzo(a)pyrene-d12	77		30 - 120	12/13/23 11:58	12/29/23 15:51	1
Perylene-d12	75		30 - 120	12/13/23 11:58	12/29/23 15:51	1
Indeno[1,2,3-cd]pyrene-d12	84		30 - 120	12/13/23 11:58	12/29/23 15:51	1
Dibenz(a,h)anthracene-d14	82		30 - 120	12/13/23 11:58	12/29/23 15:51	1
Benzo(ghi)perylene-d12	83		30 - 120	12/13/23 11:58	12/29/23 15:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	65		50 - 150	12/13/23 11:58	12/29/23 15:51	1
13C6-Naphthalene	94		50 - 150	12/13/23 11:58	12/29/23 15:51	1

**Method: EPA 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS)**

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	1.04	J q	20.0	0.794	pg/Sample		12/18/23 11:23	01/17/24 14:04	1
Total TCDD	113	q	20.0	0.794	pg/Sample		12/18/23 11:23	01/17/24 14:04	1
1,2,3,7,8-PeCDD	3.51	J q	100	0.502	pg/Sample		12/18/23 11:23	01/17/24 14:04	1
Total PeCDD	97.6	J q	100	0.502	pg/Sample		12/18/23 11:23	01/17/24 14:04	1
1,2,3,4,7,8-HxCDD	5.03	J	100	1.01	pg/Sample		12/18/23 11:23	01/17/24 14:04	1
1,2,3,6,7,8-HxCDD	3.96	J	100	0.960	pg/Sample		12/18/23 11:23	01/17/24 14:04	1
1,2,3,7,8,9-HxCDD	6.00	J	100	0.941	pg/Sample		12/18/23 11:23	01/17/24 14:04	1

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# Client Sample Results

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

**Client Sample ID: AS23-1 CONTAINER 1,2A,2B,3,XAD**

**Lab Sample ID: 140-34737-1**

Date Collected: 11/30/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Sample Container: Air Train

**Method: EPA 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS) (Continued)**

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HxCDD	69.2	J B q	100	0.972	pg/Sample		12/18/23 11:23	01/17/24 14:04	1
1,2,3,4,6,7,8-HpCDD	21.4	J	100	0.931	pg/Sample		12/18/23 11:23	01/17/24 14:04	1
Total HpCDD	41.3	J	100	0.931	pg/Sample		12/18/23 11:23	01/17/24 14:04	1
OCDD	44.9	J B q	200	0.894	pg/Sample		12/18/23 11:23	01/17/24 14:04	1
2,3,7,8-TCDF	11.3	J	20.0	0.883	pg/Sample		12/18/23 11:23	01/18/24 12:34	1
Total TCDF	179	q	20.0	0.578	pg/Sample		12/18/23 11:23	01/17/24 14:04	1
1,2,3,7,8-PeCDF	3.63	J	100	0.761	pg/Sample		12/18/23 11:23	01/17/24 14:04	1
2,3,4,7,8-PeCDF	10.0	J	100	0.749	pg/Sample		12/18/23 11:23	01/17/24 14:04	1
Total PeCDF	106	I q	100	0.755	pg/Sample		12/18/23 11:23	01/17/24 14:04	1
1,2,3,4,7,8-HxCDF	13.7	J q	100	0.837	pg/Sample		12/18/23 11:23	01/17/24 14:04	1
1,2,3,6,7,8-HxCDF	5.18	J q	100	0.769	pg/Sample		12/18/23 11:23	01/17/24 14:04	1
2,3,4,6,7,8-HxCDF	6.66	J q	100	0.829	pg/Sample		12/18/23 11:23	01/17/24 14:04	1
1,2,3,7,8,9-HxCDF	ND		100	0.903	pg/Sample		12/18/23 11:23	01/17/24 14:04	1
Total HxCDF	47.1	J I q	100	0.835	pg/Sample		12/18/23 11:23	01/17/24 14:04	1
1,2,3,4,6,7,8-HpCDF	13.2	J	100	0.361	pg/Sample		12/18/23 11:23	01/17/24 14:04	1
1,2,3,4,7,8,9-HpCDF	2.21	J	100	0.434	pg/Sample		12/18/23 11:23	01/17/24 14:04	1
Total HpCDF	20.0	J q	100	0.398	pg/Sample		12/18/23 11:23	01/17/24 14:04	1
OCDF	8.05	J B	200	0.290	pg/Sample		12/18/23 11:23	01/17/24 14:04	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	56		40 - 130	12/18/23 11:23	01/17/24 14:04	1
13C-1,2,3,7,8-PeCDD	43		40 - 130	12/18/23 11:23	01/17/24 14:04	1
13C-1,2,3,6,7,8-HxCDD	44		40 - 130	12/18/23 11:23	01/17/24 14:04	1
13C-1,2,3,4,6,7,8-HpCDD	42		25 - 130	12/18/23 11:23	01/17/24 14:04	1
13C-OCDD	37		25 - 130	12/18/23 11:23	01/17/24 14:04	1
13C-2,3,7,8-TCDF	47		40 - 130	12/18/23 11:23	01/17/24 14:04	1
13C-2,3,7,8-TCDF	44		40 - 130	12/18/23 11:23	01/18/24 12:34	1
13C-1,2,3,7,8-PeCDF	42		40 - 130	12/18/23 11:23	01/17/24 14:04	1
13C-1,2,3,6,7,8-HxCDF	47		40 - 130	12/18/23 11:23	01/17/24 14:04	1
13C-1,2,3,4,6,7,8-HpCDF	42		25 - 130	12/18/23 11:23	01/17/24 14:04	1
13C-OCDF	31		25 - 130	12/18/23 11:23	01/17/24 14:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	91		70 - 130	12/18/23 11:23	01/17/24 14:04	1
13C-2,3,4,7,8-PeCDF	99		70 - 130	12/18/23 11:23	01/17/24 14:04	1
13C-1,2,3,4,7,8-HxCDD	95		70 - 130	12/18/23 11:23	01/17/24 14:04	1
13C-1,2,3,4,7,8-HxCDF	96		70 - 130	12/18/23 11:23	01/17/24 14:04	1
13C-1,2,3,4,7,8,9-HpCDF	99		70 - 130	12/18/23 11:23	01/17/24 14:04	1

# Client Sample Results

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

**Client Sample ID: AS23-2 CONTAINER 1,2A,2B,3,XAD**

**Lab Sample ID: 140-34737-2**

Date Collected: 12/01/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Sample Container: Air Train

**Method: ID-0016 - PAH Emissions (Stationary Source)(GC/MS Isotope Dilution)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	1820		800	162	ng/Sample		12/13/23 11:58	12/29/23 16:14	1
2-Methylnaphthalene	76.3	J	100	54.0	ng/Sample		12/13/23 11:58	12/29/23 16:14	1
Acenaphthene	ND		40.0	12.8	ng/Sample		12/13/23 11:58	12/29/23 16:14	1
Acenaphthylene	270		40.0	3.80	ng/Sample		12/13/23 11:58	12/29/23 16:14	1
Fluorene	26.5		20.0	11.6	ng/Sample		12/13/23 11:58	12/29/23 16:14	1
Phenanthrene	237		60.0	40.0	ng/Sample		12/13/23 11:58	12/29/23 16:14	1
Anthracene	16.1	J	20.0	5.60	ng/Sample		12/13/23 11:58	12/29/23 16:14	1
Fluoranthene	78.1		20.0	13.8	ng/Sample		12/13/23 11:58	12/29/23 16:14	1
Pyrene	161		120	10.6	ng/Sample		12/13/23 11:58	12/29/23 16:14	1
Benzo[a]anthracene	ND		20.0	5.80	ng/Sample		12/13/23 11:58	12/29/23 16:14	1
Chrysene	ND		20.0	7.60	ng/Sample		12/13/23 11:58	12/29/23 16:14	1
Benzo[b]fluoranthene	ND		200	19.6	ng/Sample		12/13/23 11:58	12/29/23 16:14	1
Benzo[k]fluoranthene	ND		200	4.80	ng/Sample		12/13/23 11:58	12/29/23 16:14	1
Benzo[e]pyrene	15.3	J	20.0	3.40	ng/Sample		12/13/23 11:58	12/29/23 16:14	1
Benzo[a]pyrene	5.30	J	20.0	3.40	ng/Sample		12/13/23 11:58	12/29/23 16:14	1
Perylene	6.30	J	20.0	2.20	ng/Sample		12/13/23 11:58	12/29/23 16:14	1
Indeno[1,2,3-cd]pyrene	6.35	J	20.0	3.80	ng/Sample		12/13/23 11:58	12/29/23 16:14	1
Dibenz(a,h)anthracene	ND		20.0	5.40	ng/Sample		12/13/23 11:58	12/29/23 16:14	1
Benzo[g,h,i]perylene	35.7		20.0	12.0	ng/Sample		12/13/23 11:58	12/29/23 16:14	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Naphthalene-d8	61		30 - 120	12/13/23 11:58	12/29/23 16:14	1
2-methylnaphthalene-d10	64		30 - 120	12/13/23 11:58	12/29/23 16:14	1
Acenaphthylene-d8	67		30 - 120	12/13/23 11:58	12/29/23 16:14	1
Fluorene -d10	63		30 - 120	12/13/23 11:58	12/29/23 16:14	1
Phenanthrene-d10	59		30 - 120	12/13/23 11:58	12/29/23 16:14	1
Anthracene-d10	69		30 - 120	12/13/23 11:58	12/29/23 16:14	1
Fluoranthene-d10	65		30 - 120	12/13/23 11:58	12/29/23 16:14	1
Chrysene-d12	77		30 - 120	12/13/23 11:58	12/29/23 16:14	1
Benzo(b)fluoranthene-d12	68		30 - 120	12/13/23 11:58	12/29/23 16:14	1
Benzo(k)fluoranthene-d12	84		30 - 120	12/13/23 11:58	12/29/23 16:14	1
Benzo(a)pyrene-d12	77		30 - 120	12/13/23 11:58	12/29/23 16:14	1
Perylene-d12	77		30 - 120	12/13/23 11:58	12/29/23 16:14	1
Indeno[1,2,3-cd]pyrene-d12	79		30 - 120	12/13/23 11:58	12/29/23 16:14	1
Dibenz(a,h)anthracene-d14	81		30 - 120	12/13/23 11:58	12/29/23 16:14	1
Benzo(ghi)perylene-d12	81		30 - 120	12/13/23 11:58	12/29/23 16:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	59		50 - 150	12/13/23 11:58	12/29/23 16:14	1
13C6-Naphthalene	0	S1-	50 - 150	12/13/23 11:58	12/29/23 16:14	1

**Method: EPA 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS)**

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		20.0	0.242	pg/Sample		12/18/23 11:23	01/17/24 15:04	1
<b>Total TCDD</b>	<b>21.1</b>	<b>q</b>	20.0	0.242	pg/Sample		12/18/23 11:23	01/17/24 15:04	1
1,2,3,7,8-PeCDD	ND		100	0.397	pg/Sample		12/18/23 11:23	01/17/24 15:04	1
<b>Total PeCDD</b>	<b>15.5</b>	<b>J q</b>	100	0.397	pg/Sample		12/18/23 11:23	01/17/24 15:04	1
<b>1,2,3,4,7,8-HxCDD</b>	<b>3.56</b>	<b>J</b>	100	0.675	pg/Sample		12/18/23 11:23	01/17/24 15:04	1
<b>1,2,3,6,7,8-HxCDD</b>	<b>1.30</b>	<b>J</b>	100	0.639	pg/Sample		12/18/23 11:23	01/17/24 15:04	1
<b>1,2,3,7,8,9-HxCDD</b>	<b>1.41</b>	<b>J q</b>	100	0.626	pg/Sample		12/18/23 11:23	01/17/24 15:04	1

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# Client Sample Results

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

**Client Sample ID: AS23-2 CONTAINER 1,2A,2B,3,XAD**

**Lab Sample ID: 140-34737-2**

Date Collected: 12/01/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Sample Container: Air Train

**Method: EPA 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS) (Continued)**

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HxCDD	17.6	J B q	100	0.646	pg/Sample		12/18/23 11:23	01/17/24 15:04	1
1,2,3,4,6,7,8-HpCDD	3.85	J q	100	1.46	pg/Sample		12/18/23 11:23	01/17/24 15:04	1
Total HpCDD	3.85	J q	100	1.46	pg/Sample		12/18/23 11:23	01/17/24 15:04	1
OCDD	6.46	J B q	200	0.699	pg/Sample		12/18/23 11:23	01/17/24 15:04	1
2,3,7,8-TCDF	14.3	J	20.0	0.412	pg/Sample		12/18/23 11:23	01/17/24 15:04	1
Total TCDF	78.8	q	20.0	0.412	pg/Sample		12/18/23 11:23	01/17/24 15:04	1
1,2,3,7,8-PeCDF	1.71	J q	100	0.833	pg/Sample		12/18/23 11:23	01/17/24 15:04	1
2,3,4,7,8-PeCDF	3.76	J q	100	0.819	pg/Sample		12/18/23 11:23	01/17/24 15:04	1
Total PeCDF	37.9	J q	100	0.826	pg/Sample		12/18/23 11:23	01/17/24 15:04	1
1,2,3,4,7,8-HxCDF	7.25	J q	100	0.691	pg/Sample		12/18/23 11:23	01/17/24 15:04	1
1,2,3,6,7,8-HxCDF	2.52	J I q	100	0.634	pg/Sample		12/18/23 11:23	01/17/24 15:04	1
2,3,4,6,7,8-HxCDF	2.84	J	100	0.684	pg/Sample		12/18/23 11:23	01/17/24 15:04	1
1,2,3,7,8,9-HxCDF	ND		100	0.745	pg/Sample		12/18/23 11:23	01/17/24 15:04	1
Total HxCDF	22.5	J I q	100	0.689	pg/Sample		12/18/23 11:23	01/17/24 15:04	1
1,2,3,4,6,7,8-HpCDF	8.13	J	100	0.521	pg/Sample		12/18/23 11:23	01/17/24 15:04	1
1,2,3,4,7,8,9-HpCDF	ND		100	0.626	pg/Sample		12/18/23 11:23	01/17/24 15:04	1
Total HpCDF	9.17	J q	100	0.573	pg/Sample		12/18/23 11:23	01/17/24 15:04	1
OCDF	4.62	J B q	200	0.320	pg/Sample		12/18/23 11:23	01/17/24 15:04	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	61		40 - 130	12/18/23 11:23	01/17/24 15:04	1
13C-1,2,3,7,8-PeCDD	51		40 - 130	12/18/23 11:23	01/17/24 15:04	1
13C-1,2,3,6,7,8-HxCDD	51		40 - 130	12/18/23 11:23	01/17/24 15:04	1
13C-1,2,3,4,6,7,8-HpCDD	50		25 - 130	12/18/23 11:23	01/17/24 15:04	1
13C-OCDD	44		25 - 130	12/18/23 11:23	01/17/24 15:04	1
13C-2,3,7,8-TCDF	53		40 - 130	12/18/23 11:23	01/17/24 15:04	1
13C-1,2,3,7,8-PeCDF	48		40 - 130	12/18/23 11:23	01/17/24 15:04	1
13C-1,2,3,6,7,8-HxCDF	53		40 - 130	12/18/23 11:23	01/17/24 15:04	1
13C-1,2,3,4,6,7,8-HpCDF	48		25 - 130	12/18/23 11:23	01/17/24 15:04	1
13C-OCDF	37		25 - 130	12/18/23 11:23	01/17/24 15:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	86		70 - 130	12/18/23 11:23	01/17/24 15:04	1
13C-2,3,4,7,8-PeCDF	92		70 - 130	12/18/23 11:23	01/17/24 15:04	1
13C-1,2,3,4,7,8-HxCDD	91		70 - 130	12/18/23 11:23	01/17/24 15:04	1
13C-1,2,3,4,7,8-HxCDF	89		70 - 130	12/18/23 11:23	01/17/24 15:04	1
13C-1,2,3,4,7,8,9-HpCDF	93		70 - 130	12/18/23 11:23	01/17/24 15:04	1

# Client Sample Results

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

**Client Sample ID: AS23-3 CONTAINER 1,2A,2B,3,XAD**

**Lab Sample ID: 140-34737-3**

Date Collected: 12/01/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Sample Container: Air Train

**Method: ID-0016 - PAH Emissions (Stationary Source)(GC/MS Isotope Dilution)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	559	J	800	162	ng/Sample		12/13/23 11:58	12/29/23 16:36	1
2-Methylnaphthalene	96.5	J	100	54.0	ng/Sample		12/13/23 11:58	12/29/23 16:36	1
Acenaphthene	ND		40.0	12.8	ng/Sample		12/13/23 11:58	12/29/23 16:36	1
Acenaphthylene	38.9	J	40.0	3.80	ng/Sample		12/13/23 11:58	12/29/23 16:36	1
Fluorene	27.8		20.0	11.6	ng/Sample		12/13/23 11:58	12/29/23 16:36	1
Phenanthrene	146		60.0	40.0	ng/Sample		12/13/23 11:58	12/29/23 16:36	1
Anthracene	ND		20.0	5.60	ng/Sample		12/13/23 11:58	12/29/23 16:36	1
Fluoranthene	67.6		20.0	13.8	ng/Sample		12/13/23 11:58	12/29/23 16:36	1
Pyrene	87.4	J	120	10.6	ng/Sample		12/13/23 11:58	12/29/23 16:36	1
Benzo[a]anthracene	ND		20.0	5.80	ng/Sample		12/13/23 11:58	12/29/23 16:36	1
Chrysene	ND		20.0	7.60	ng/Sample		12/13/23 11:58	12/29/23 16:36	1
Benzo[b]fluoranthene	ND		200	19.6	ng/Sample		12/13/23 11:58	12/29/23 16:36	1
Benzo[k]fluoranthene	ND		200	4.80	ng/Sample		12/13/23 11:58	12/29/23 16:36	1
Benzo[e]pyrene	18.5	J	20.0	3.40	ng/Sample		12/13/23 11:58	12/29/23 16:36	1
Benzo[a]pyrene	4.72	J	20.0	3.40	ng/Sample		12/13/23 11:58	12/29/23 16:36	1
Perylene	7.46	J	20.0	2.20	ng/Sample		12/13/23 11:58	12/29/23 16:36	1
Indeno[1,2,3-cd]pyrene	10.4	J	20.0	3.80	ng/Sample		12/13/23 11:58	12/29/23 16:36	1
Dibenz(a,h)anthracene	ND		20.0	5.40	ng/Sample		12/13/23 11:58	12/29/23 16:36	1
Benzo[g,h,i]perylene	57.0		20.0	12.0	ng/Sample		12/13/23 11:58	12/29/23 16:36	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Naphthalene-d8	66		30 - 120	12/13/23 11:58	12/29/23 16:36	1
2-methylnaphthalene-d10	69		30 - 120	12/13/23 11:58	12/29/23 16:36	1
Acenaphthylene-d8	71		30 - 120	12/13/23 11:58	12/29/23 16:36	1
Fluorene -d10	69		30 - 120	12/13/23 11:58	12/29/23 16:36	1
Phenanthrene-d10	63		30 - 120	12/13/23 11:58	12/29/23 16:36	1
Anthracene-d10	72		30 - 120	12/13/23 11:58	12/29/23 16:36	1
Fluoranthene-d10	71		30 - 120	12/13/23 11:58	12/29/23 16:36	1
Chrysene-d12	74		30 - 120	12/13/23 11:58	12/29/23 16:36	1
Benzo(b)fluoranthene-d12	79		30 - 120	12/13/23 11:58	12/29/23 16:36	1
Benzo(k)fluoranthene-d12	78		30 - 120	12/13/23 11:58	12/29/23 16:36	1
Benzo(a)pyrene-d12	74		30 - 120	12/13/23 11:58	12/29/23 16:36	1
Perylene-d12	73		30 - 120	12/13/23 11:58	12/29/23 16:36	1
Indeno[1,2,3-cd]pyrene-d12	81		30 - 120	12/13/23 11:58	12/29/23 16:36	1
Dibenz(a,h)anthracene-d14	82		30 - 120	12/13/23 11:58	12/29/23 16:36	1
Benzo(ghi)perylene-d12	83		30 - 120	12/13/23 11:58	12/29/23 16:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	64		50 - 150	12/13/23 11:58	12/29/23 16:36	1
13C6-Naphthalene	93		50 - 150	12/13/23 11:58	12/29/23 16:36	1

**Method: EPA 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS)**

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.699	J q	20.0	0.399	pg/Sample		12/18/23 11:23	01/17/24 16:03	1
Total TCDD	35.0	q	20.0	0.399	pg/Sample		12/18/23 11:23	01/17/24 16:03	1
1,2,3,7,8-PeCDD	0.800	J q	100	0.310	pg/Sample		12/18/23 11:23	01/17/24 16:03	1
Total PeCDD	27.5	J q	100	0.310	pg/Sample		12/18/23 11:23	01/17/24 16:03	1
1,2,3,4,7,8-HxCDD	3.67	J	100	0.451	pg/Sample		12/18/23 11:23	01/17/24 16:03	1
1,2,3,6,7,8-HxCDD	1.13	J	100	0.427	pg/Sample		12/18/23 11:23	01/17/24 16:03	1
1,2,3,7,8,9-HxCDD	2.38	J q	100	0.418	pg/Sample		12/18/23 11:23	01/17/24 16:03	1

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# Client Sample Results

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

**Client Sample ID: AS23-3 CONTAINER 1,2A,2B,3,XAD**

**Lab Sample ID: 140-34737-3**

Date Collected: 12/01/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Sample Container: Air Train

**Method: EPA 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS) (Continued)**

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HxCDD	23.1	J B q	100	0.432	pg/Sample		12/18/23 11:23	01/17/24 16:03	1
1,2,3,4,6,7,8-HpCDD	4.22	J q	100	0.974	pg/Sample		12/18/23 11:23	01/17/24 16:03	1
Total HpCDD	9.01	J q	100	0.974	pg/Sample		12/18/23 11:23	01/17/24 16:03	1
OCDD	10.7	J B	200	0.346	pg/Sample		12/18/23 11:23	01/17/24 16:03	1
2,3,7,8-TCDF	17.7	J	20.0	0.366	pg/Sample		12/18/23 11:23	01/17/24 16:03	1
Total TCDF	94.8	q	20.0	0.366	pg/Sample		12/18/23 11:23	01/17/24 16:03	1
1,2,3,7,8-PeCDF	2.56	J I	100	0.425	pg/Sample		12/18/23 11:23	01/17/24 16:03	1
2,3,4,7,8-PeCDF	4.75	J q	100	0.418	pg/Sample		12/18/23 11:23	01/17/24 16:03	1
Total PeCDF	49.5	J I q	100	0.422	pg/Sample		12/18/23 11:23	01/17/24 16:03	1
1,2,3,4,7,8-HxCDF	7.67	J	100	0.472	pg/Sample		12/18/23 11:23	01/17/24 16:03	1
1,2,3,6,7,8-HxCDF	3.02	J	100	0.433	pg/Sample		12/18/23 11:23	01/17/24 16:03	1
2,3,4,6,7,8-HxCDF	3.51	J	100	0.467	pg/Sample		12/18/23 11:23	01/17/24 16:03	1
1,2,3,7,8,9-HxCDF	ND		100	0.508	pg/Sample		12/18/23 11:23	01/17/24 16:03	1
Total HxCDF	23.4	J q	100	0.470	pg/Sample		12/18/23 11:23	01/17/24 16:03	1
1,2,3,4,6,7,8-HpCDF	10.3	J q	100	0.205	pg/Sample		12/18/23 11:23	01/17/24 16:03	1
1,2,3,4,7,8,9-HpCDF	1.66	J q	100	0.246	pg/Sample		12/18/23 11:23	01/17/24 16:03	1
Total HpCDF	15.7	J q	100	0.226	pg/Sample		12/18/23 11:23	01/17/24 16:03	1
OCDF	49.6	J B	200	0.207	pg/Sample		12/18/23 11:23	01/17/24 16:03	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	72		40 - 130	12/18/23 11:23	01/17/24 16:03	1
13C-1,2,3,7,8-PeCDD	60		40 - 130	12/18/23 11:23	01/17/24 16:03	1
13C-1,2,3,6,7,8-HxCDD	55		40 - 130	12/18/23 11:23	01/17/24 16:03	1
13C-1,2,3,4,6,7,8-HpCDD	57		25 - 130	12/18/23 11:23	01/17/24 16:03	1
13C-OCDD	50		25 - 130	12/18/23 11:23	01/17/24 16:03	1
13C-2,3,7,8-TCDF	60		40 - 130	12/18/23 11:23	01/17/24 16:03	1
13C-1,2,3,7,8-PeCDF	55		40 - 130	12/18/23 11:23	01/17/24 16:03	1
13C-1,2,3,6,7,8-HxCDF	58		40 - 130	12/18/23 11:23	01/17/24 16:03	1
13C-1,2,3,4,6,7,8-HpCDF	54		25 - 130	12/18/23 11:23	01/17/24 16:03	1
13C-OCDF	41		25 - 130	12/18/23 11:23	01/17/24 16:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	84		70 - 130	12/18/23 11:23	01/17/24 16:03	1
13C-2,3,4,7,8-PeCDF	90		70 - 130	12/18/23 11:23	01/17/24 16:03	1
13C-1,2,3,4,7,8-HxCDD	92		70 - 130	12/18/23 11:23	01/17/24 16:03	1
13C-1,2,3,4,7,8-HxCDF	90		70 - 130	12/18/23 11:23	01/17/24 16:03	1
13C-1,2,3,4,7,8,9-HpCDF	91		70 - 130	12/18/23 11:23	01/17/24 16:03	1

# Client Sample Results

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

**Client Sample ID: VF23-1 CONTAINER 1,2A,2B,3,XAD**

**Lab Sample ID: 140-34737-4**

Date Collected: 12/02/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Sample Container: Air Train

**Method: ID-0016 - PAH Emissions (Stationary Source)(GC/MS Isotope Dilution)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	1680		800	162	ng/Sample		12/13/23 11:58	12/29/23 16:59	1
2-Methylnaphthalene	253		100	54.0	ng/Sample		12/13/23 11:58	12/29/23 16:59	1
Acenaphthene	23.5	J	40.0	12.8	ng/Sample		12/13/23 11:58	12/29/23 16:59	1
Acenaphthylene	77.2		40.0	3.80	ng/Sample		12/13/23 11:58	12/29/23 16:59	1
Fluorene	97.6		20.0	11.6	ng/Sample		12/13/23 11:58	12/29/23 16:59	1
Phenanthrene	327		60.0	40.0	ng/Sample		12/13/23 11:58	12/29/23 16:59	1
Anthracene	ND		20.0	5.60	ng/Sample		12/13/23 11:58	12/29/23 16:59	1
Fluoranthene	82.8		20.0	13.8	ng/Sample		12/13/23 11:58	12/29/23 16:59	1
Pyrene	26.1	J	120	10.6	ng/Sample		12/13/23 11:58	12/29/23 16:59	1
Benzo[a]anthracene	ND		20.0	5.80	ng/Sample		12/13/23 11:58	12/29/23 16:59	1
Chrysene	ND		20.0	7.60	ng/Sample		12/13/23 11:58	12/29/23 16:59	1
Benzo[b]fluoranthene	ND		200	19.6	ng/Sample		12/13/23 11:58	12/29/23 16:59	1
Benzo[k]fluoranthene	ND		200	4.80	ng/Sample		12/13/23 11:58	12/29/23 16:59	1
Benzo[e]pyrene	5.78	J	20.0	3.40	ng/Sample		12/13/23 11:58	12/29/23 16:59	1
Benzo[a]pyrene	4.18	J	20.0	3.40	ng/Sample		12/13/23 11:58	12/29/23 16:59	1
Perylene	8.60	J	20.0	2.20	ng/Sample		12/13/23 11:58	12/29/23 16:59	1
Indeno[1,2,3-cd]pyrene	ND		20.0	3.80	ng/Sample		12/13/23 11:58	12/29/23 16:59	1
Dibenz(a,h)anthracene	ND		20.0	5.40	ng/Sample		12/13/23 11:58	12/29/23 16:59	1
Benzo[g,h,i]perylene	ND		20.0	12.0	ng/Sample		12/13/23 11:58	12/29/23 16:59	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Naphthalene-d8	64		30 - 120	12/13/23 11:58	12/29/23 16:59	1
2-methylnaphthalene-d10	70		30 - 120	12/13/23 11:58	12/29/23 16:59	1
Acenaphthylene-d8	75		30 - 120	12/13/23 11:58	12/29/23 16:59	1
Fluorene -d10	71		30 - 120	12/13/23 11:58	12/29/23 16:59	1
Phenanthrene-d10	78		30 - 120	12/13/23 11:58	12/29/23 16:59	1
Anthracene-d10	83		30 - 120	12/13/23 11:58	12/29/23 16:59	1
Fluoranthene-d10	82		30 - 120	12/13/23 11:58	12/29/23 16:59	1
Chrysene-d12	90		30 - 120	12/13/23 11:58	12/29/23 16:59	1
Benzo(b)fluoranthene-d12	94		30 - 120	12/13/23 11:58	12/29/23 16:59	1
Benzo(k)fluoranthene-d12	101		30 - 120	12/13/23 11:58	12/29/23 16:59	1
Benzo(a)pyrene-d12	88		30 - 120	12/13/23 11:58	12/29/23 16:59	1
Perylene-d12	86		30 - 120	12/13/23 11:58	12/29/23 16:59	1
Indeno[1,2,3-cd]pyrene-d12	98		30 - 120	12/13/23 11:58	12/29/23 16:59	1
Dibenz(a,h)anthracene-d14	93		30 - 120	12/13/23 11:58	12/29/23 16:59	1
Benzo(ghi)perylene-d12	96		30 - 120	12/13/23 11:58	12/29/23 16:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	77		50 - 150	12/13/23 11:58	12/29/23 16:59	1
13C6-Naphthalene	102		50 - 150	12/13/23 11:58	12/29/23 16:59	1

**Method: EPA 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS)**

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.910	J q	20.0	0.241	pg/Sample		12/18/23 11:23	01/17/24 17:03	1
Total TCDD	16.4	J q	20.0	0.241	pg/Sample		12/18/23 11:23	01/17/24 17:03	1
1,2,3,7,8-PeCDD	ND		100	0.368	pg/Sample		12/18/23 11:23	01/17/24 17:03	1
Total PeCDD	7.24	J q	100	0.368	pg/Sample		12/18/23 11:23	01/17/24 17:03	1
1,2,3,4,7,8-HxCDD	3.65	J	100	0.495	pg/Sample		12/18/23 11:23	01/17/24 17:03	1
1,2,3,6,7,8-HxCDD	0.868	J q	100	0.468	pg/Sample		12/18/23 11:23	01/17/24 17:03	1
1,2,3,7,8,9-HxCDD	0.851	J q	100	0.459	pg/Sample		12/18/23 11:23	01/17/24 17:03	1

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# Client Sample Results

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

**Client Sample ID: VF23-1 CONTAINER 1,2A,2B,3,XAD**

**Lab Sample ID: 140-34737-4**

Date Collected: 12/02/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Sample Container: Air Train

**Method: EPA 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS) (Continued)**

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total HxCDD</b>	<b>12.7</b>	<b>J q B</b>	100	0.474	pg/Sample		12/18/23 11:23	01/17/24 17:03	1
1,2,3,4,6,7,8-HpCDD	ND		100	0.861	pg/Sample		12/18/23 11:23	01/17/24 17:03	1
Total HpCDD	ND		100	0.861	pg/Sample		12/18/23 11:23	01/17/24 17:03	1
<b>OCDD</b>	<b>29.4</b>	<b>J B</b>	200	0.466	pg/Sample		12/18/23 11:23	01/17/24 17:03	1
<b>2,3,7,8-TCDF</b>	<b>8.59</b>	<b>J</b>	20.0	0.861	pg/Sample		12/18/23 11:23	01/18/24 13:03	1
<b>Total TCDF</b>	<b>453</b>	<b>I q</b>	20.0	0.844	pg/Sample		12/18/23 11:23	01/17/24 17:03	1
<b>1,2,3,7,8-PeCDF</b>	<b>4.92</b>	<b>J I</b>	100	0.575	pg/Sample		12/18/23 11:23	01/17/24 17:03	1
<b>2,3,4,7,8-PeCDF</b>	<b>10.6</b>	<b>J I</b>	100	0.566	pg/Sample		12/18/23 11:23	01/17/24 17:03	1
<b>Total PeCDF</b>	<b>155</b>	<b>I q</b>	100	0.571	pg/Sample		12/18/23 11:23	01/17/24 17:03	1
<b>1,2,3,4,7,8-HxCDF</b>	<b>13.0</b>	<b>J</b>	100	0.597	pg/Sample		12/18/23 11:23	01/17/24 17:03	1
<b>1,2,3,6,7,8-HxCDF</b>	<b>4.85</b>	<b>J I</b>	100	0.548	pg/Sample		12/18/23 11:23	01/17/24 17:03	1
<b>2,3,4,6,7,8-HxCDF</b>	<b>2.71</b>	<b>J q</b>	100	0.591	pg/Sample		12/18/23 11:23	01/17/24 17:03	1
1,2,3,7,8,9-HxCDF	ND		100	0.644	pg/Sample		12/18/23 11:23	01/17/24 17:03	1
<b>Total HxCDF</b>	<b>48.3</b>	<b>J I q</b>	100	0.595	pg/Sample		12/18/23 11:23	01/17/24 17:03	1
<b>1,2,3,4,6,7,8-HpCDF</b>	<b>5.85</b>	<b>J q</b>	100	0.252	pg/Sample		12/18/23 11:23	01/17/24 17:03	1
1,2,3,4,7,8,9-HpCDF	ND		100	0.302	pg/Sample		12/18/23 11:23	01/17/24 17:03	1
<b>Total HpCDF</b>	<b>8.00</b>	<b>J q</b>	100	0.277	pg/Sample		12/18/23 11:23	01/17/24 17:03	1
<b>OCDF</b>	<b>3.96</b>	<b>J q B</b>	200	0.327	pg/Sample		12/18/23 11:23	01/17/24 17:03	1
<b>Isotope Dilution</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
13C-2,3,7,8-TCDD	81		40 - 130				12/18/23 11:23	01/17/24 17:03	1
13C-1,2,3,7,8-PeCDD	70		40 - 130				12/18/23 11:23	01/17/24 17:03	1
13C-1,2,3,6,7,8-HxCDD	66		40 - 130				12/18/23 11:23	01/17/24 17:03	1
13C-1,2,3,4,6,7,8-HpCDD	65		25 - 130				12/18/23 11:23	01/17/24 17:03	1
13C-OCDD	60		25 - 130				12/18/23 11:23	01/17/24 17:03	1
13C-2,3,7,8-TCDF	67		40 - 130				12/18/23 11:23	01/17/24 17:03	1
13C-2,3,7,8-TCDF	64		40 - 130				12/18/23 11:23	01/18/24 13:03	1
13C-1,2,3,7,8-PeCDF	66		40 - 130				12/18/23 11:23	01/17/24 17:03	1
13C-1,2,3,6,7,8-HxCDF	68		40 - 130				12/18/23 11:23	01/17/24 17:03	1
13C-1,2,3,4,6,7,8-HpCDF	62		25 - 130				12/18/23 11:23	01/17/24 17:03	1
13C-OCDF	48		25 - 130				12/18/23 11:23	01/17/24 17:03	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
37Cl4-2,3,7,8-TCDD	84		70 - 130				12/18/23 11:23	01/17/24 17:03	1
13C-2,3,4,7,8-PeCDF	89		70 - 130				12/18/23 11:23	01/17/24 17:03	1
13C-1,2,3,4,7,8-HxCDD	88		70 - 130				12/18/23 11:23	01/17/24 17:03	1
13C-1,2,3,4,7,8-HxCDF	88		70 - 130				12/18/23 11:23	01/17/24 17:03	1
13C-1,2,3,4,7,8,9-HpCDF	89		70 - 130				12/18/23 11:23	01/17/24 17:03	1



# Client Sample Results

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

**Client Sample ID: VF23-2 CONTAINER 1,2A,2B,3,XAD**

**Lab Sample ID: 140-34737-5**

Date Collected: 12/03/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Sample Container: Air Train

**Method: ID-0016 - PAH Emissions (Stationary Source)(GC/MS Isotope Dilution)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	944		800	162	ng/Sample		12/13/23 11:58	12/29/23 17:22	1
2-Methylnaphthalene	302		100	54.0	ng/Sample		12/13/23 11:58	12/29/23 17:22	1
Acenaphthene	30.1	J	40.0	12.8	ng/Sample		12/13/23 11:58	12/29/23 17:22	1
Acenaphthylene	36.8	J	40.0	3.80	ng/Sample		12/13/23 11:58	12/29/23 17:22	1
Fluorene	97.0		20.0	11.6	ng/Sample		12/13/23 11:58	12/29/23 17:22	1
Phenanthrene	390		60.0	40.0	ng/Sample		12/13/23 11:58	12/29/23 17:22	1
Anthracene	ND		20.0	5.60	ng/Sample		12/13/23 11:58	12/29/23 17:22	1
Fluoranthene	90.9		20.0	13.8	ng/Sample		12/13/23 11:58	12/29/23 17:22	1
Pyrene	25.4	J	120	10.6	ng/Sample		12/13/23 11:58	12/29/23 17:22	1
Benzo[a]anthracene	ND		20.0	5.80	ng/Sample		12/13/23 11:58	12/29/23 17:22	1
Chrysene	ND		20.0	7.60	ng/Sample		12/13/23 11:58	12/29/23 17:22	1
Benzo[b]fluoranthene	ND		200	19.6	ng/Sample		12/13/23 11:58	12/29/23 17:22	1
Benzo[k]fluoranthene	ND		200	4.80	ng/Sample		12/13/23 11:58	12/29/23 17:22	1
Benzo[e]pyrene	3.83	J	20.0	3.40	ng/Sample		12/13/23 11:58	12/29/23 17:22	1
Benzo[a]pyrene	ND		20.0	3.40	ng/Sample		12/13/23 11:58	12/29/23 17:22	1
Perylene	3.88	J	20.0	2.20	ng/Sample		12/13/23 11:58	12/29/23 17:22	1
Indeno[1,2,3-cd]pyrene	ND		20.0	3.80	ng/Sample		12/13/23 11:58	12/29/23 17:22	1
Dibenz(a,h)anthracene	ND		20.0	5.40	ng/Sample		12/13/23 11:58	12/29/23 17:22	1
Benzo[g,h,i]perylene	ND		20.0	12.0	ng/Sample		12/13/23 11:58	12/29/23 17:22	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Naphthalene-d8	75		30 - 120	12/13/23 11:58	12/29/23 17:22	1
2-methylnaphthalene-d10	77		30 - 120	12/13/23 11:58	12/29/23 17:22	1
Acenaphthylene-d8	82		30 - 120	12/13/23 11:58	12/29/23 17:22	1
Fluorene -d10	79		30 - 120	12/13/23 11:58	12/29/23 17:22	1
Phenanthrene-d10	70		30 - 120	12/13/23 11:58	12/29/23 17:22	1
Anthracene-d10	74		30 - 120	12/13/23 11:58	12/29/23 17:22	1
Fluoranthene-d10	82		30 - 120	12/13/23 11:58	12/29/23 17:22	1
Chrysene-d12	93		30 - 120	12/13/23 11:58	12/29/23 17:22	1
Benzo(b)fluoranthene-d12	88		30 - 120	12/13/23 11:58	12/29/23 17:22	1
Benzo(k)fluoranthene-d12	98		30 - 120	12/13/23 11:58	12/29/23 17:22	1
Benzo(a)pyrene-d12	92		30 - 120	12/13/23 11:58	12/29/23 17:22	1
Perylene-d12	92		30 - 120	12/13/23 11:58	12/29/23 17:22	1
Indeno[1,2,3-cd]pyrene-d12	96		30 - 120	12/13/23 11:58	12/29/23 17:22	1
Dibenz(a,h)anthracene-d14	94		30 - 120	12/13/23 11:58	12/29/23 17:22	1
Benzo(ghi)perylene-d12	100		30 - 120	12/13/23 11:58	12/29/23 17:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	74		50 - 150	12/13/23 11:58	12/29/23 17:22	1
13C6-Naphthalene	96		50 - 150	12/13/23 11:58	12/29/23 17:22	1

**Method: EPA 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS)**

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.425	J q	20.0	0.159	pg/Sample		12/18/23 11:23	01/17/24 18:03	1
Total TCDD	8.17	J q	20.0	0.159	pg/Sample		12/18/23 11:23	01/17/24 18:03	1
1,2,3,7,8-PeCDD	0.650	J q	100	0.218	pg/Sample		12/18/23 11:23	01/17/24 18:03	1
Total PeCDD	2.26	J q	100	0.218	pg/Sample		12/18/23 11:23	01/17/24 18:03	1
1,2,3,4,7,8-HxCDD	3.70	J	100	0.460	pg/Sample		12/18/23 11:23	01/17/24 18:03	1
1,2,3,6,7,8-HxCDD	ND		100	0.435	pg/Sample		12/18/23 11:23	01/17/24 18:03	1
1,2,3,7,8,9-HxCDD	ND		100	0.427	pg/Sample		12/18/23 11:23	01/17/24 18:03	1

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# Client Sample Results

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

**Client Sample ID: VF23-2 CONTAINER 1,2A,2B,3,XAD**

**Lab Sample ID: 140-34737-5**

Date Collected: 12/03/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Sample Container: Air Train

**Method: EPA 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS) (Continued)**

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HxCDD	6.26	J B q	100	0.441	pg/Sample		12/18/23 11:23	01/17/24 18:03	1
1,2,3,4,6,7,8-HpCDD	0.803	J q	100	0.326	pg/Sample		12/18/23 11:23	01/17/24 18:03	1
Total HpCDD	1.71	J q	100	0.326	pg/Sample		12/18/23 11:23	01/17/24 18:03	1
OCDD	2.19	J B	200	0.354	pg/Sample		12/18/23 11:23	01/17/24 18:03	1
2,3,7,8-TCDF	4.64	J	20.0	0.439	pg/Sample		12/18/23 11:23	01/18/24 13:32	1
Total TCDF	210	I q	20.0	0.488	pg/Sample		12/18/23 11:23	01/17/24 18:03	1
1,2,3,7,8-PeCDF	2.09	J	100	0.494	pg/Sample		12/18/23 11:23	01/17/24 18:03	1
2,3,4,7,8-PeCDF	3.74	J	100	0.486	pg/Sample		12/18/23 11:23	01/17/24 18:03	1
Total PeCDF	63.0	J I q	100	0.490	pg/Sample		12/18/23 11:23	01/17/24 18:03	1
1,2,3,4,7,8-HxCDF	4.68	J	100	0.367	pg/Sample		12/18/23 11:23	01/17/24 18:03	1
1,2,3,6,7,8-HxCDF	1.30	J q	100	0.337	pg/Sample		12/18/23 11:23	01/17/24 18:03	1
2,3,4,6,7,8-HxCDF	1.21	J q	100	0.363	pg/Sample		12/18/23 11:23	01/17/24 18:03	1
1,2,3,7,8,9-HxCDF	ND		100	0.395	pg/Sample		12/18/23 11:23	01/17/24 18:03	1
Total HxCDF	15.1	J I q	100	0.366	pg/Sample		12/18/23 11:23	01/17/24 18:03	1
1,2,3,4,6,7,8-HpCDF	1.59	J q	100	0.272	pg/Sample		12/18/23 11:23	01/17/24 18:03	1
1,2,3,4,7,8,9-HpCDF	ND		100	0.327	pg/Sample		12/18/23 11:23	01/17/24 18:03	1
Total HpCDF	1.59	J q	100	0.300	pg/Sample		12/18/23 11:23	01/17/24 18:03	1
OCDF	1.66	J B q	200	0.142	pg/Sample		12/18/23 11:23	01/17/24 18:03	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	87		40 - 130	12/18/23 11:23	01/17/24 18:03	1
13C-1,2,3,7,8-PeCDD	68		40 - 130	12/18/23 11:23	01/17/24 18:03	1
13C-1,2,3,6,7,8-HxCDD	68		40 - 130	12/18/23 11:23	01/17/24 18:03	1
13C-1,2,3,4,6,7,8-HpCDD	68		25 - 130	12/18/23 11:23	01/17/24 18:03	1
13C-OCDD	63		25 - 130	12/18/23 11:23	01/17/24 18:03	1
13C-2,3,7,8-TCDF	67		40 - 130	12/18/23 11:23	01/17/24 18:03	1
13C-2,3,7,8-TCDF	67		40 - 130	12/18/23 11:23	01/18/24 13:32	1
13C-1,2,3,7,8-PeCDF	64		40 - 130	12/18/23 11:23	01/17/24 18:03	1
13C-1,2,3,6,7,8-HxCDF	69		40 - 130	12/18/23 11:23	01/17/24 18:03	1
13C-1,2,3,4,6,7,8-HpCDF	66		25 - 130	12/18/23 11:23	01/17/24 18:03	1
13C-OCDF	52		25 - 130	12/18/23 11:23	01/17/24 18:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	83		70 - 130	12/18/23 11:23	01/17/24 18:03	1
13C-2,3,4,7,8-PeCDF	89		70 - 130	12/18/23 11:23	01/17/24 18:03	1
13C-1,2,3,4,7,8-HxCDD	90		70 - 130	12/18/23 11:23	01/17/24 18:03	1
13C-1,2,3,4,7,8-HxCDF	89		70 - 130	12/18/23 11:23	01/17/24 18:03	1
13C-1,2,3,4,7,8,9-HpCDF	91		70 - 130	12/18/23 11:23	01/17/24 18:03	1

# Client Sample Results

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

**Client Sample ID: VF23-4 CONTAINER 1,2A,2B,3,XAD**

**Lab Sample ID: 140-34737-6**

Date Collected: 12/04/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Sample Container: Air Train

**Method: ID-0016 - PAH Emissions (Stationary Source)(GC/MS Isotope Dilution)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	964		800	162	ng/Sample		12/13/23 11:58	12/29/23 17:45	1
2-Methylnaphthalene	242		100	54.0	ng/Sample		12/13/23 11:58	12/29/23 17:45	1
Acenaphthene	17.4	J	40.0	12.8	ng/Sample		12/13/23 11:58	12/29/23 17:45	1
Acenaphthylene	21.0	J	40.0	3.80	ng/Sample		12/13/23 11:58	12/29/23 17:45	1
Fluorene	58.3		20.0	11.6	ng/Sample		12/13/23 11:58	12/29/23 17:45	1
Phenanthrene	179		60.0	40.0	ng/Sample		12/13/23 11:58	12/29/23 17:45	1
Anthracene	ND		20.0	5.60	ng/Sample		12/13/23 11:58	12/29/23 17:45	1
Fluoranthene	44.7		20.0	13.8	ng/Sample		12/13/23 11:58	12/29/23 17:45	1
Pyrene	11.2	J	120	10.6	ng/Sample		12/13/23 11:58	12/29/23 17:45	1
Benzo[a]anthracene	ND		20.0	5.80	ng/Sample		12/13/23 11:58	12/29/23 17:45	1
Chrysene	ND		20.0	7.60	ng/Sample		12/13/23 11:58	12/29/23 17:45	1
Benzo[b]fluoranthene	ND		200	19.6	ng/Sample		12/13/23 11:58	12/29/23 17:45	1
Benzo[k]fluoranthene	ND		200	4.80	ng/Sample		12/13/23 11:58	12/29/23 17:45	1
Benzo[e]pyrene	ND		20.0	3.40	ng/Sample		12/13/23 11:58	12/29/23 17:45	1
Benzo[a]pyrene	ND		20.0	3.40	ng/Sample		12/13/23 11:58	12/29/23 17:45	1
Perylene	4.11	J	20.0	2.20	ng/Sample		12/13/23 11:58	12/29/23 17:45	1
Indeno[1,2,3-cd]pyrene	ND		20.0	3.80	ng/Sample		12/13/23 11:58	12/29/23 17:45	1
Dibenz(a,h)anthracene	ND		20.0	5.40	ng/Sample		12/13/23 11:58	12/29/23 17:45	1
Benzo[g,h,i]perylene	ND		20.0	12.0	ng/Sample		12/13/23 11:58	12/29/23 17:45	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Naphthalene-d8	60		30 - 120	12/13/23 11:58	12/29/23 17:45	1
2-methylnaphthalene-d10	64		30 - 120	12/13/23 11:58	12/29/23 17:45	1
Acenaphthylene-d8	67		30 - 120	12/13/23 11:58	12/29/23 17:45	1
Fluorene -d10	69		30 - 120	12/13/23 11:58	12/29/23 17:45	1
Phenanthrene-d10	62		30 - 120	12/13/23 11:58	12/29/23 17:45	1
Anthracene-d10	65		30 - 120	12/13/23 11:58	12/29/23 17:45	1
Fluoranthene-d10	74		30 - 120	12/13/23 11:58	12/29/23 17:45	1
Chrysene-d12	82		30 - 120	12/13/23 11:58	12/29/23 17:45	1
Benzo(b)fluoranthene-d12	75		30 - 120	12/13/23 11:58	12/29/23 17:45	1
Benzo(k)fluoranthene-d12	94		30 - 120	12/13/23 11:58	12/29/23 17:45	1
Benzo(a)pyrene-d12	83		30 - 120	12/13/23 11:58	12/29/23 17:45	1
Perylene-d12	82		30 - 120	12/13/23 11:58	12/29/23 17:45	1
Indeno[1,2,3-cd]pyrene-d12	89		30 - 120	12/13/23 11:58	12/29/23 17:45	1
Dibenz(a,h)anthracene-d14	89		30 - 120	12/13/23 11:58	12/29/23 17:45	1
Benzo(ghi)perylene-d12	90		30 - 120	12/13/23 11:58	12/29/23 17:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	69		50 - 150	12/13/23 11:58	12/29/23 17:45	1
13C6-Naphthalene	104		50 - 150	12/13/23 11:58	12/29/23 17:45	1

**Method: EPA 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS)**

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		20.0	0.600	pg/Sample		12/18/23 11:23	01/17/24 19:03	1
<b>Total TCDD</b>	<b>153</b>		20.0	0.600	pg/Sample		12/18/23 11:23	01/17/24 19:03	1
1,2,3,7,8-PeCDD	ND		100	0.396	pg/Sample		12/18/23 11:23	01/17/24 19:03	1
<b>Total PeCDD</b>	<b>16.6</b>	<b>J q</b>	100	0.396	pg/Sample		12/18/23 11:23	01/17/24 19:03	1
<b>1,2,3,4,7,8-HxCDD</b>	<b>2.98</b>	<b>J q</b>	100	0.474	pg/Sample		12/18/23 11:23	01/17/24 19:03	1
<b>1,2,3,6,7,8-HxCDD</b>	<b>0.617</b>	<b>J</b>	100	0.449	pg/Sample		12/18/23 11:23	01/17/24 19:03	1
<b>1,2,3,7,8,9-HxCDD</b>	<b>1.21</b>	<b>J q</b>	100	0.440	pg/Sample		12/18/23 11:23	01/17/24 19:03	1

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# Client Sample Results

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

**Client Sample ID: VF23-4 CONTAINER 1,2A,2B,3,XAD**

**Lab Sample ID: 140-34737-6**

Date Collected: 12/04/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Sample Container: Air Train

**Method: EPA 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS) (Continued)**

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total HxCDD</b>	<b>11.1</b>	<b>J q B</b>	100	0.454	pg/Sample		12/18/23 11:23	01/17/24 19:03	1
1,2,3,4,6,7,8-HpCDD	ND		100	2.10	pg/Sample		12/18/23 11:23	01/17/24 19:03	1
Total HpCDD	ND		100	2.10	pg/Sample		12/18/23 11:23	01/17/24 19:03	1
<b>OCDD</b>	<b>2.41</b>	<b>J B</b>	200	0.681	pg/Sample		12/18/23 11:23	01/17/24 19:03	1
<b>2,3,7,8-TCDF</b>	<b>3.62</b>	<b>J q</b>	20.0	1.47	pg/Sample		12/18/23 11:23	01/18/24 14:01	1
<b>Total TCDF</b>	<b>218</b>	<b>q</b>	20.0	0.593	pg/Sample		12/18/23 11:23	01/17/24 19:03	1
<b>1,2,3,7,8-PeCDF</b>	<b>2.43</b>	<b>J l q</b>	100	0.594	pg/Sample		12/18/23 11:23	01/17/24 19:03	1
<b>2,3,4,7,8-PeCDF</b>	<b>5.07</b>	<b>J l</b>	100	0.585	pg/Sample		12/18/23 11:23	01/17/24 19:03	1
<b>Total PeCDF</b>	<b>76.9</b>	<b>J l q</b>	100	0.589	pg/Sample		12/18/23 11:23	01/17/24 19:03	1
<b>1,2,3,4,7,8-HxCDF</b>	<b>8.02</b>	<b>J</b>	100	0.412	pg/Sample		12/18/23 11:23	01/17/24 19:03	1
<b>1,2,3,6,7,8-HxCDF</b>	<b>1.96</b>	<b>J q</b>	100	0.378	pg/Sample		12/18/23 11:23	01/17/24 19:03	1
<b>2,3,4,6,7,8-HxCDF</b>	<b>2.04</b>	<b>J</b>	100	0.408	pg/Sample		12/18/23 11:23	01/17/24 19:03	1
1,2,3,7,8,9-HxCDF	ND		100	0.444	pg/Sample		12/18/23 11:23	01/17/24 19:03	1
<b>Total HxCDF</b>	<b>22.5</b>	<b>J l q</b>	100	0.410	pg/Sample		12/18/23 11:23	01/17/24 19:03	1
<b>1,2,3,4,6,7,8-HpCDF</b>	<b>5.48</b>	<b>J</b>	100	0.353	pg/Sample		12/18/23 11:23	01/17/24 19:03	1
1,2,3,4,7,8,9-HpCDF	ND		100	0.425	pg/Sample		12/18/23 11:23	01/17/24 19:03	1
<b>Total HpCDF</b>	<b>6.00</b>	<b>J q</b>	100	0.389	pg/Sample		12/18/23 11:23	01/17/24 19:03	1
<b>OCDF</b>	<b>1.55</b>	<b>J B</b>	200	0.335	pg/Sample		12/18/23 11:23	01/17/24 19:03	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	77		40 - 130	12/18/23 11:23	01/17/24 19:03	1
13C-1,2,3,7,8-PeCDD	62		40 - 130	12/18/23 11:23	01/17/24 19:03	1
13C-1,2,3,6,7,8-HxCDD	60		40 - 130	12/18/23 11:23	01/17/24 19:03	1
13C-1,2,3,4,6,7,8-HpCDD	62		25 - 130	12/18/23 11:23	01/17/24 19:03	1
13C-OCDD	57		25 - 130	12/18/23 11:23	01/17/24 19:03	1
13C-2,3,7,8-TCDF	61		40 - 130	12/18/23 11:23	01/17/24 19:03	1
13C-2,3,7,8-TCDF	61		40 - 130	12/18/23 11:23	01/18/24 14:01	1
13C-1,2,3,7,8-PeCDF	57		40 - 130	12/18/23 11:23	01/17/24 19:03	1
13C-1,2,3,6,7,8-HxCDF	64		40 - 130	12/18/23 11:23	01/17/24 19:03	1
13C-1,2,3,4,6,7,8-HpCDF	60		25 - 130	12/18/23 11:23	01/17/24 19:03	1
13C-OCDF	47		25 - 130	12/18/23 11:23	01/17/24 19:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	84		70 - 130	12/18/23 11:23	01/17/24 19:03	1
13C-2,3,4,7,8-PeCDF	90		70 - 130	12/18/23 11:23	01/17/24 19:03	1
13C-1,2,3,4,7,8-HxCDD	93		70 - 130	12/18/23 11:23	01/17/24 19:03	1
13C-1,2,3,4,7,8-HxCDF	90		70 - 130	12/18/23 11:23	01/17/24 19:03	1
13C-1,2,3,4,7,8,9-HpCDF	91		70 - 130	12/18/23 11:23	01/17/24 19:03	1

# Client Sample Results

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

**Client Sample ID: AP23-1 CONTAINER 1,2A,2B,3,XAD**

**Lab Sample ID: 140-34737-7**

Date Collected: 11/30/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Sample Container: Air Train

**Method: ID-0016 - PAH Emissions (Stationary Source)(GC/MS Isotope Dilution)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		800	162	ng/Sample		12/13/23 11:58	12/29/23 18:08	1
2-Methylnaphthalene	ND		100	54.0	ng/Sample		12/13/23 11:58	12/29/23 18:08	1
Acenaphthene	ND		40.0	12.8	ng/Sample		12/13/23 11:58	12/29/23 18:08	1
Acenaphthylene	ND		40.0	3.80	ng/Sample		12/13/23 11:58	12/29/23 18:08	1
Fluorene	ND		20.0	11.6	ng/Sample		12/13/23 11:58	12/29/23 18:08	1
<b>Phenanthrene</b>	<b>42.2</b>	<b>J</b>	60.0	40.0	ng/Sample		12/13/23 11:58	12/29/23 18:08	1
<b>Anthracene</b>	<b>7.13</b>	<b>J</b>	20.0	5.60	ng/Sample		12/13/23 11:58	12/29/23 18:08	1
<b>Fluoranthene</b>	<b>16.3</b>	<b>J</b>	20.0	13.8	ng/Sample		12/13/23 11:58	12/29/23 18:08	1
<b>Pyrene</b>	<b>18.5</b>	<b>J</b>	120	10.6	ng/Sample		12/13/23 11:58	12/29/23 18:08	1
Benzo[a]anthracene	ND		20.0	5.80	ng/Sample		12/13/23 11:58	12/29/23 18:08	1
Chrysene	ND		20.0	7.60	ng/Sample		12/13/23 11:58	12/29/23 18:08	1
Benzo[b]fluoranthene	ND		200	19.6	ng/Sample		12/13/23 11:58	12/29/23 18:08	1
Benzo[k]fluoranthene	ND		200	4.80	ng/Sample		12/13/23 11:58	12/29/23 18:08	1
<b>Benzo[e]pyrene</b>	<b>5.81</b>	<b>J</b>	20.0	3.40	ng/Sample		12/13/23 11:58	12/29/23 18:08	1
Benzo[a]pyrene	ND		20.0	3.40	ng/Sample		12/13/23 11:58	12/29/23 18:08	1
<b>Perylene</b>	<b>3.37</b>	<b>J</b>	20.0	2.20	ng/Sample		12/13/23 11:58	12/29/23 18:08	1
Indeno[1,2,3-cd]pyrene	ND		20.0	3.80	ng/Sample		12/13/23 11:58	12/29/23 18:08	1
Dibenz(a,h)anthracene	ND		20.0	5.40	ng/Sample		12/13/23 11:58	12/29/23 18:08	1
Benzo[g,h,i]perylene	ND		20.0	12.0	ng/Sample		12/13/23 11:58	12/29/23 18:08	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Naphthalene-d8	69		30 - 120	12/13/23 11:58	12/29/23 18:08	1
2-methylnaphthalene-d10	72		30 - 120	12/13/23 11:58	12/29/23 18:08	1
Acenaphthylene-d8	68		30 - 120	12/13/23 11:58	12/29/23 18:08	1
Fluorene -d10	73		30 - 120	12/13/23 11:58	12/29/23 18:08	1
Phenanthrene-d10	67		30 - 120	12/13/23 11:58	12/29/23 18:08	1
Anthracene-d10	57		30 - 120	12/13/23 11:58	12/29/23 18:08	1
Fluoranthene-d10	71		30 - 120	12/13/23 11:58	12/29/23 18:08	1
Chrysene-d12	69		30 - 120	12/13/23 11:58	12/29/23 18:08	1
Benzo(b)fluoranthene-d12	72		30 - 120	12/13/23 11:58	12/29/23 18:08	1
Benzo(k)fluoranthene-d12	73		30 - 120	12/13/23 11:58	12/29/23 18:08	1
Benzo(a)pyrene-d12	57		30 - 120	12/13/23 11:58	12/29/23 18:08	1
Perylene-d12	53		30 - 120	12/13/23 11:58	12/29/23 18:08	1
Indeno[1,2,3-cd]pyrene-d12	68		30 - 120	12/13/23 11:58	12/29/23 18:08	1
Dibenz(a,h)anthracene-d14	70		30 - 120	12/13/23 11:58	12/29/23 18:08	1
Benzo(ghi)perylene-d12	66		30 - 120	12/13/23 11:58	12/29/23 18:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	67		50 - 150	12/13/23 11:58	12/29/23 18:08	1
13C6-Naphthalene	91		50 - 150	12/13/23 11:58	12/29/23 18:08	1

**Method: EPA 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS)**

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		20.0	0.161	pg/Sample		12/18/23 11:23	01/17/24 20:03	1
<b>Total TCDD</b>	<b>4.47</b>	<b>J q</b>	20.0	0.161	pg/Sample		12/18/23 11:23	01/17/24 20:03	1
1,2,3,7,8-PeCDD	ND		100	0.439	pg/Sample		12/18/23 11:23	01/17/24 20:03	1
<b>Total PeCDD</b>	<b>1.46</b>	<b>J</b>	100	0.439	pg/Sample		12/18/23 11:23	01/17/24 20:03	1
<b>1,2,3,4,7,8-HxCDD</b>	<b>3.06</b>	<b>J</b>	100	0.614	pg/Sample		12/18/23 11:23	01/17/24 20:03	1
1,2,3,6,7,8-HxCDD	ND		100	0.581	pg/Sample		12/18/23 11:23	01/17/24 20:03	1
1,2,3,7,8,9-HxCDD	ND		100	0.569	pg/Sample		12/18/23 11:23	01/17/24 20:03	1

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# Client Sample Results

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

**Client Sample ID: AP23-1 CONTAINER 1,2A,2B,3,XAD**

**Lab Sample ID: 140-34737-7**

Date Collected: 11/30/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Sample Container: Air Train

**Method: EPA 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS) (Continued)**

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total HxCDD</b>	<b>6.66</b>	<b>J q B</b>	100	0.588	pg/Sample		12/18/23 11:23	01/17/24 20:03	1
1,2,3,4,6,7,8-HpCDD	ND		100	0.458	pg/Sample		12/18/23 11:23	01/17/24 20:03	1
<b>Total HpCDD</b>	<b>1.14</b>	<b>J q</b>	100	0.458	pg/Sample		12/18/23 11:23	01/17/24 20:03	1
<b>OCDD</b>	<b>2.55</b>	<b>J B</b>	200	0.553	pg/Sample		12/18/23 11:23	01/17/24 20:03	1
<b>2,3,7,8-TCDF</b>	<b>1.76</b>	<b>J q</b>	20.0	0.301	pg/Sample		12/18/23 11:23	01/17/24 20:03	1
<b>Total TCDF</b>	<b>20.1</b>	<b>q</b>	20.0	0.301	pg/Sample		12/18/23 11:23	01/17/24 20:03	1
1,2,3,7,8-PeCDF	ND		100	0.546	pg/Sample		12/18/23 11:23	01/17/24 20:03	1
<b>2,3,4,7,8-PeCDF</b>	<b>0.729</b>	<b>J q</b>	100	0.537	pg/Sample		12/18/23 11:23	01/17/24 20:03	1
<b>Total PeCDF</b>	<b>2.55</b>	<b>J I q</b>	100	0.542	pg/Sample		12/18/23 11:23	01/17/24 20:03	1
<b>1,2,3,4,7,8-HxCDF</b>	<b>1.24</b>	<b>J</b>	100	0.418	pg/Sample		12/18/23 11:23	01/17/24 20:03	1
1,2,3,6,7,8-HxCDF	ND		100	0.384	pg/Sample		12/18/23 11:23	01/17/24 20:03	1
2,3,4,6,7,8-HxCDF	ND		100	0.414	pg/Sample		12/18/23 11:23	01/17/24 20:03	1
1,2,3,7,8,9-HxCDF	ND		100	0.451	pg/Sample		12/18/23 11:23	01/17/24 20:03	1
<b>Total HxCDF</b>	<b>1.24</b>	<b>J</b>	100	0.417	pg/Sample		12/18/23 11:23	01/17/24 20:03	1
<b>1,2,3,4,6,7,8-HpCDF</b>	<b>0.955</b>	<b>J q</b>	100	0.271	pg/Sample		12/18/23 11:23	01/17/24 20:03	1
1,2,3,4,7,8,9-HpCDF	ND		100	0.326	pg/Sample		12/18/23 11:23	01/17/24 20:03	1
<b>Total HpCDF</b>	<b>0.955</b>	<b>J q</b>	100	0.298	pg/Sample		12/18/23 11:23	01/17/24 20:03	1
<b>OCDF</b>	<b>1.25</b>	<b>J q B</b>	200	0.351	pg/Sample		12/18/23 11:23	01/17/24 20:03	1
<b>Isotope Dilution</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
13C-2,3,7,8-TCDD	70		40 - 130				12/18/23 11:23	01/17/24 20:03	1
13C-1,2,3,7,8-PeCDD	56		40 - 130				12/18/23 11:23	01/17/24 20:03	1
13C-1,2,3,6,7,8-HxCDD	55		40 - 130				12/18/23 11:23	01/17/24 20:03	1
13C-1,2,3,4,6,7,8-HpCDD	56		25 - 130				12/18/23 11:23	01/17/24 20:03	1
13C-OCDD	50		25 - 130				12/18/23 11:23	01/17/24 20:03	1
13C-2,3,7,8-TCDF	56		40 - 130				12/18/23 11:23	01/17/24 20:03	1
13C-1,2,3,7,8-PeCDF	52		40 - 130				12/18/23 11:23	01/17/24 20:03	1
13C-1,2,3,6,7,8-HxCDF	56		40 - 130				12/18/23 11:23	01/17/24 20:03	1
13C-1,2,3,4,6,7,8-HpCDF	53		25 - 130				12/18/23 11:23	01/17/24 20:03	1
13C-OCDF	41		25 - 130				12/18/23 11:23	01/17/24 20:03	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
37Cl4-2,3,7,8-TCDD	84		70 - 130				12/18/23 11:23	01/17/24 20:03	1
13C-2,3,4,7,8-PeCDF	91		70 - 130				12/18/23 11:23	01/17/24 20:03	1
13C-1,2,3,4,7,8-HxCDD	89		70 - 130				12/18/23 11:23	01/17/24 20:03	1
13C-1,2,3,4,7,8-HxCDF	90		70 - 130				12/18/23 11:23	01/17/24 20:03	1
13C-1,2,3,4,7,8,9-HpCDF	93		70 - 130				12/18/23 11:23	01/17/24 20:03	1

# Client Sample Results

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

**Client Sample ID: AP23-2 CONTAINER 1,2A,2B,3,XAD**

**Lab Sample ID: 140-34737-8**

Date Collected: 12/01/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Sample Container: Air Train

**Method: ID-0016 - PAH Emissions (Stationary Source)(GC/MS Isotope Dilution)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		800	162	ng/Sample		12/13/23 11:58	12/29/23 18:31	1
2-Methylnaphthalene	ND		100	54.0	ng/Sample		12/13/23 11:58	12/29/23 18:31	1
Acenaphthene	ND		40.0	12.8	ng/Sample		12/13/23 11:58	12/29/23 18:31	1
Acenaphthylene	ND		40.0	3.80	ng/Sample		12/13/23 11:58	12/29/23 18:31	1
<b>Fluorene</b>	<b>12.6</b>	<b>J</b>	20.0	11.6	ng/Sample		12/13/23 11:58	12/29/23 18:31	1
<b>Phenanthrene</b>	<b>45.2</b>	<b>J</b>	60.0	40.0	ng/Sample		12/13/23 11:58	12/29/23 18:31	1
Anthracene	ND		20.0	5.60	ng/Sample		12/13/23 11:58	12/29/23 18:31	1
<b>Fluoranthene</b>	<b>28.6</b>		20.0	13.8	ng/Sample		12/13/23 11:58	12/29/23 18:31	1
<b>Pyrene</b>	<b>41.1</b>	<b>J</b>	120	10.6	ng/Sample		12/13/23 11:58	12/29/23 18:31	1
Benzo[a]anthracene	ND		20.0	5.80	ng/Sample		12/13/23 11:58	12/29/23 18:31	1
Chrysene	ND		20.0	7.60	ng/Sample		12/13/23 11:58	12/29/23 18:31	1
Benzo[b]fluoranthene	ND		200	19.6	ng/Sample		12/13/23 11:58	12/29/23 18:31	1
Benzo[k]fluoranthene	ND		200	4.80	ng/Sample		12/13/23 11:58	12/29/23 18:31	1
<b>Benzo[e]pyrene</b>	<b>29.7</b>		20.0	3.40	ng/Sample		12/13/23 11:58	12/29/23 18:31	1
Benzo[a]pyrene	ND		20.0	3.40	ng/Sample		12/13/23 11:58	12/29/23 18:31	1
<b>Perylene</b>	<b>4.12</b>	<b>J</b>	20.0	2.20	ng/Sample		12/13/23 11:58	12/29/23 18:31	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>11.0</b>	<b>J</b>	20.0	3.80	ng/Sample		12/13/23 11:58	12/29/23 18:31	1
Dibenz(a,h)anthracene	ND		20.0	5.40	ng/Sample		12/13/23 11:58	12/29/23 18:31	1
<b>Benzo[g,h,i]perylene</b>	<b>61.4</b>		20.0	12.0	ng/Sample		12/13/23 11:58	12/29/23 18:31	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Naphthalene-d8	63		30 - 120	12/13/23 11:58	12/29/23 18:31	1
2-methylnaphthalene-d10	66		30 - 120	12/13/23 11:58	12/29/23 18:31	1
Acenaphthylene-d8	63		30 - 120	12/13/23 11:58	12/29/23 18:31	1
Fluorene -d10	67		30 - 120	12/13/23 11:58	12/29/23 18:31	1
Phenanthrene-d10	62		30 - 120	12/13/23 11:58	12/29/23 18:31	1
Anthracene-d10	64		30 - 120	12/13/23 11:58	12/29/23 18:31	1
Fluoranthene-d10	66		30 - 120	12/13/23 11:58	12/29/23 18:31	1
Chrysene-d12	70		30 - 120	12/13/23 11:58	12/29/23 18:31	1
Benzo(b)fluoranthene-d12	65		30 - 120	12/13/23 11:58	12/29/23 18:31	1
Benzo(k)fluoranthene-d12	67		30 - 120	12/13/23 11:58	12/29/23 18:31	1
Benzo(a)pyrene-d12	57		30 - 120	12/13/23 11:58	12/29/23 18:31	1
Perylene-d12	52		30 - 120	12/13/23 11:58	12/29/23 18:31	1
Indeno[1,2,3-cd]pyrene-d12	65		30 - 120	12/13/23 11:58	12/29/23 18:31	1
Dibenz(a,h)anthracene-d14	68		30 - 120	12/13/23 11:58	12/29/23 18:31	1
Benzo(ghi)perylene-d12	64		30 - 120	12/13/23 11:58	12/29/23 18:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	67		50 - 150	12/13/23 11:58	12/29/23 18:31	1
13C6-Naphthalene	94		50 - 150	12/13/23 11:58	12/29/23 18:31	1

**Method: EPA 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS)**

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>2,3,7,8-TCDD</b>	<b>0.307</b>	<b>J q</b>	20.0	0.143	pg/Sample		12/18/23 11:23	01/18/24 05:15	1
<b>Total TCDD</b>	<b>2.91</b>	<b>J q</b>	20.0	0.143	pg/Sample		12/18/23 11:23	01/18/24 05:15	1
1,2,3,7,8-PeCDD	ND		100	0.298	pg/Sample		12/18/23 11:23	01/18/24 05:15	1
<b>Total PeCDD</b>	<b>0.462</b>	<b>J I</b>	100	0.298	pg/Sample		12/18/23 11:23	01/18/24 05:15	1
<b>1,2,3,4,7,8-HxCDD</b>	<b>3.26</b>	<b>J</b>	100	0.473	pg/Sample		12/18/23 11:23	01/18/24 05:15	1
1,2,3,6,7,8-HxCDD	ND		100	0.448	pg/Sample		12/18/23 11:23	01/18/24 05:15	1
1,2,3,7,8,9-HxCDD	ND		100	0.439	pg/Sample		12/18/23 11:23	01/18/24 05:15	1

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# Client Sample Results

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

**Client Sample ID: AP23-2 CONTAINER 1,2A,2B,3,XAD**

**Lab Sample ID: 140-34737-8**

Date Collected: 12/01/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Sample Container: Air Train

**Method: EPA 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS) (Continued)**

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total HxCDD</b>	<b>7.10</b>	<b>J q B</b>	100	0.453	pg/Sample		12/18/23 11:23	01/18/24 05:15	1
1,2,3,4,6,7,8-HpCDD	ND		100	2.12	pg/Sample		12/18/23 11:23	01/18/24 05:15	1
Total HpCDD	ND		100	2.12	pg/Sample		12/18/23 11:23	01/18/24 05:15	1
<b>OCDD</b>	<b>4.40</b>	<b>J q B</b>	200	0.555	pg/Sample		12/18/23 11:23	01/18/24 05:15	1
<b>2,3,7,8-TCDF</b>	<b>1.60</b>	<b>J</b>	20.0	0.230	pg/Sample		12/18/23 11:23	01/18/24 05:15	1
<b>Total TCDF</b>	<b>10.7</b>	<b>J q</b>	20.0	0.230	pg/Sample		12/18/23 11:23	01/18/24 05:15	1
1,2,3,7,8-PeCDF	ND		100	0.449	pg/Sample		12/18/23 11:23	01/18/24 05:15	1
2,3,4,7,8-PeCDF	ND		100	0.442	pg/Sample		12/18/23 11:23	01/18/24 05:15	1
Total PeCDF	ND		100	0.449	pg/Sample		12/18/23 11:23	01/18/24 05:15	1
1,2,3,4,7,8-HxCDF	ND		100	0.587	pg/Sample		12/18/23 11:23	01/18/24 05:15	1
1,2,3,6,7,8-HxCDF	ND		100	0.538	pg/Sample		12/18/23 11:23	01/18/24 05:15	1
2,3,4,6,7,8-HxCDF	ND		100	0.581	pg/Sample		12/18/23 11:23	01/18/24 05:15	1
1,2,3,7,8,9-HxCDF	ND		100	0.632	pg/Sample		12/18/23 11:23	01/18/24 05:15	1
Total HxCDF	ND		100	0.632	pg/Sample		12/18/23 11:23	01/18/24 05:15	1
<b>1,2,3,4,6,7,8-HpCDF</b>	<b>0.878</b>	<b>J q</b>	100	0.379	pg/Sample		12/18/23 11:23	01/18/24 05:15	1
1,2,3,4,7,8,9-HpCDF	ND		100	0.455	pg/Sample		12/18/23 11:23	01/18/24 05:15	1
<b>Total HpCDF</b>	<b>0.878</b>	<b>J q</b>	100	0.417	pg/Sample		12/18/23 11:23	01/18/24 05:15	1
<b>OCDF</b>	<b>1.62</b>	<b>J B</b>	200	0.197	pg/Sample		12/18/23 11:23	01/18/24 05:15	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	77		40 - 130	12/18/23 11:23	01/18/24 05:15	1
13C-1,2,3,7,8-PeCDD	65		40 - 130	12/18/23 11:23	01/18/24 05:15	1
13C-1,2,3,6,7,8-HxCDD	58		40 - 130	12/18/23 11:23	01/18/24 05:15	1
13C-1,2,3,4,6,7,8-HpCDD	58		25 - 130	12/18/23 11:23	01/18/24 05:15	1
13C-OCDD	54		25 - 130	12/18/23 11:23	01/18/24 05:15	1
13C-2,3,7,8-TCDF	62		40 - 130	12/18/23 11:23	01/18/24 05:15	1
13C-1,2,3,7,8-PeCDF	59		40 - 130	12/18/23 11:23	01/18/24 05:15	1
13C-1,2,3,6,7,8-HxCDF	61		40 - 130	12/18/23 11:23	01/18/24 05:15	1
13C-1,2,3,4,6,7,8-HpCDF	56		25 - 130	12/18/23 11:23	01/18/24 05:15	1
13C-OCDF	44		25 - 130	12/18/23 11:23	01/18/24 05:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	87		70 - 130	12/18/23 11:23	01/18/24 05:15	1
13C-2,3,4,7,8-PeCDF	93		70 - 130	12/18/23 11:23	01/18/24 05:15	1
13C-1,2,3,4,7,8-HxCDD	93		70 - 130	12/18/23 11:23	01/18/24 05:15	1
13C-1,2,3,4,7,8-HxCDF	88		70 - 130	12/18/23 11:23	01/18/24 05:15	1
13C-1,2,3,4,7,8,9-HpCDF	94		70 - 130	12/18/23 11:23	01/18/24 05:15	1



# Client Sample Results

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

**Client Sample ID: AP23-3 CONTAINER 1,2A,2B,3,XAD**

**Lab Sample ID: 140-34737-9**

Date Collected: 12/01/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Sample Container: Air Train

**Method: ID-0016 - PAH Emissions (Stationary Source)(GC/MS Isotope Dilution)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		800	162	ng/Sample		12/13/23 11:58	12/29/23 18:54	1
2-Methylnaphthalene	ND		100	54.0	ng/Sample		12/13/23 11:58	12/29/23 18:54	1
Acenaphthene	ND		40.0	12.8	ng/Sample		12/13/23 11:58	12/29/23 18:54	1
Acenaphthylene	ND		40.0	3.80	ng/Sample		12/13/23 11:58	12/29/23 18:54	1
Fluorene	ND		20.0	11.6	ng/Sample		12/13/23 11:58	12/29/23 18:54	1
Phenanthrene	ND		60.0	40.0	ng/Sample		12/13/23 11:58	12/29/23 18:54	1
Anthracene	ND		20.0	5.60	ng/Sample		12/13/23 11:58	12/29/23 18:54	1
Fluoranthene	ND		20.0	13.8	ng/Sample		12/13/23 11:58	12/29/23 18:54	1
<b>Pyrene</b>	<b>11.4</b>	<b>J</b>	120	10.6	ng/Sample		12/13/23 11:58	12/29/23 18:54	1
Benzo[a]anthracene	ND		20.0	5.80	ng/Sample		12/13/23 11:58	12/29/23 18:54	1
Chrysene	ND		20.0	7.60	ng/Sample		12/13/23 11:58	12/29/23 18:54	1
Benzo[b]fluoranthene	ND		200	19.6	ng/Sample		12/13/23 11:58	12/29/23 18:54	1
Benzo[k]fluoranthene	ND		200	4.80	ng/Sample		12/13/23 11:58	12/29/23 18:54	1
Benzo[e]pyrene	ND		20.0	3.40	ng/Sample		12/13/23 11:58	12/29/23 18:54	1
<b>Benzo[a]pyrene</b>	<b>4.94</b>	<b>J</b>	20.0	3.40	ng/Sample		12/13/23 11:58	12/29/23 18:54	1
Perylene	ND		20.0	2.20	ng/Sample		12/13/23 11:58	12/29/23 18:54	1
Indeno[1,2,3-cd]pyrene	ND		20.0	3.80	ng/Sample		12/13/23 11:58	12/29/23 18:54	1
Dibenz(a,h)anthracene	ND		20.0	5.40	ng/Sample		12/13/23 11:58	12/29/23 18:54	1
Benzo[g,h,i]perylene	ND		20.0	12.0	ng/Sample		12/13/23 11:58	12/29/23 18:54	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Naphthalene-d8	60		30 - 120	12/13/23 11:58	12/29/23 18:54	1
2-methylnaphthalene-d10	63		30 - 120	12/13/23 11:58	12/29/23 18:54	1
Acenaphthylene-d8	61		30 - 120	12/13/23 11:58	12/29/23 18:54	1
Fluorene -d10	65		30 - 120	12/13/23 11:58	12/29/23 18:54	1
Phenanthrene-d10	64		30 - 120	12/13/23 11:58	12/29/23 18:54	1
Anthracene-d10	61		30 - 120	12/13/23 11:58	12/29/23 18:54	1
Fluoranthene-d10	68		30 - 120	12/13/23 11:58	12/29/23 18:54	1
Chrysene-d12	70		30 - 120	12/13/23 11:58	12/29/23 18:54	1
Benzo(b)fluoranthene-d12	65		30 - 120	12/13/23 11:58	12/29/23 18:54	1
Benzo(k)fluoranthene-d12	71		30 - 120	12/13/23 11:58	12/29/23 18:54	1
Benzo(a)pyrene-d12	60		30 - 120	12/13/23 11:58	12/29/23 18:54	1
Perylene-d12	54		30 - 120	12/13/23 11:58	12/29/23 18:54	1
Indeno[1,2,3-cd]pyrene-d12	63		30 - 120	12/13/23 11:58	12/29/23 18:54	1
Dibenz(a,h)anthracene-d14	69		30 - 120	12/13/23 11:58	12/29/23 18:54	1
Benzo(ghi)perylene-d12	66		30 - 120	12/13/23 11:58	12/29/23 18:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	69		50 - 150	12/13/23 11:58	12/29/23 18:54	1
13C6-Naphthalene	95		50 - 150	12/13/23 11:58	12/29/23 18:54	1

**Method: EPA 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS)**

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		20.0	0.732	pg/Sample		12/18/23 11:23	01/18/24 06:15	1
<b>Total TCDD</b>	<b>251</b>		20.0	0.732	pg/Sample		12/18/23 11:23	01/18/24 06:15	1
1,2,3,7,8-PeCDD	ND		100	0.440	pg/Sample		12/18/23 11:23	01/18/24 06:15	1
<b>Total PeCDD</b>	<b>18.8</b>	<b>J q</b>	100	0.440	pg/Sample		12/18/23 11:23	01/18/24 06:15	1
<b>1,2,3,4,7,8-HxCDD</b>	<b>3.21</b>	<b>J</b>	100	0.517	pg/Sample		12/18/23 11:23	01/18/24 06:15	1
1,2,3,6,7,8-HxCDD	ND		100	0.489	pg/Sample		12/18/23 11:23	01/18/24 06:15	1
1,2,3,7,8,9-HxCDD	ND		100	0.480	pg/Sample		12/18/23 11:23	01/18/24 06:15	1

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# Client Sample Results

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

**Client Sample ID: AP23-3 CONTAINER 1,2A,2B,3,XAD**

**Lab Sample ID: 140-34737-9**

Date Collected: 12/01/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Sample Container: Air Train

**Method: EPA 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS) (Continued)**

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total HxCDD</b>	<b>6.23</b>	<b>J q B</b>	100	0.495	pg/Sample		12/18/23 11:23	01/18/24 06:15	1
1,2,3,4,6,7,8-HpCDD	ND		100	1.83	pg/Sample		12/18/23 11:23	01/18/24 06:15	1
Total HpCDD	ND		100	1.83	pg/Sample		12/18/23 11:23	01/18/24 06:15	1
<b>OCDD</b>	<b>2.11</b>	<b>J B</b>	200	0.544	pg/Sample		12/18/23 11:23	01/18/24 06:15	1
<b>2,3,7,8-TCDF</b>	<b>2.14</b>	<b>J</b>	20.0	0.271	pg/Sample		12/18/23 11:23	01/18/24 06:15	1
<b>Total TCDF</b>	<b>8.06</b>	<b>J q</b>	20.0	0.271	pg/Sample		12/18/23 11:23	01/18/24 06:15	1
1,2,3,7,8-PeCDF	ND		100	0.536	pg/Sample		12/18/23 11:23	01/18/24 06:15	1
2,3,4,7,8-PeCDF	ND		100	0.527	pg/Sample		12/18/23 11:23	01/18/24 06:15	1
Total PeCDF	ND		100	0.536	pg/Sample		12/18/23 11:23	01/18/24 06:15	1
1,2,3,4,7,8-HxCDF	ND		100	0.350	pg/Sample		12/18/23 11:23	01/18/24 06:15	1
1,2,3,6,7,8-HxCDF	ND		100	0.322	pg/Sample		12/18/23 11:23	01/18/24 06:15	1
2,3,4,6,7,8-HxCDF	ND		100	0.347	pg/Sample		12/18/23 11:23	01/18/24 06:15	1
1,2,3,7,8,9-HxCDF	ND		100	0.378	pg/Sample		12/18/23 11:23	01/18/24 06:15	1
<b>Total HxCDF</b>	<b>0.843</b>	<b>J q</b>	100	0.349	pg/Sample		12/18/23 11:23	01/18/24 06:15	1
<b>1,2,3,4,6,7,8-HpCDF</b>	<b>0.747</b>	<b>J</b>	100	0.351	pg/Sample		12/18/23 11:23	01/18/24 06:15	1
1,2,3,4,7,8,9-HpCDF	ND		100	0.421	pg/Sample		12/18/23 11:23	01/18/24 06:15	1
<b>Total HpCDF</b>	<b>0.747</b>	<b>J</b>	100	0.386	pg/Sample		12/18/23 11:23	01/18/24 06:15	1
<b>OCDF</b>	<b>0.741</b>	<b>J q B</b>	200	0.355	pg/Sample		12/18/23 11:23	01/18/24 06:15	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	66		40 - 130	12/18/23 11:23	01/18/24 06:15	1
13C-1,2,3,7,8-PeCDD	55		40 - 130	12/18/23 11:23	01/18/24 06:15	1
13C-1,2,3,6,7,8-HxCDD	52		40 - 130	12/18/23 11:23	01/18/24 06:15	1
13C-1,2,3,4,6,7,8-HpCDD	53		25 - 130	12/18/23 11:23	01/18/24 06:15	1
13C-OCDD	48		25 - 130	12/18/23 11:23	01/18/24 06:15	1
13C-2,3,7,8-TCDF	53		40 - 130	12/18/23 11:23	01/18/24 06:15	1
13C-1,2,3,7,8-PeCDF	51		40 - 130	12/18/23 11:23	01/18/24 06:15	1
13C-1,2,3,6,7,8-HxCDF	53		40 - 130	12/18/23 11:23	01/18/24 06:15	1
13C-1,2,3,4,6,7,8-HpCDF	50		25 - 130	12/18/23 11:23	01/18/24 06:15	1
13C-OCDF	39		25 - 130	12/18/23 11:23	01/18/24 06:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	85		70 - 130	12/18/23 11:23	01/18/24 06:15	1
13C-2,3,4,7,8-PeCDF	90		70 - 130	12/18/23 11:23	01/18/24 06:15	1
13C-1,2,3,4,7,8-HxCDD	92		70 - 130	12/18/23 11:23	01/18/24 06:15	1
13C-1,2,3,4,7,8-HxCDF	91		70 - 130	12/18/23 11:23	01/18/24 06:15	1
13C-1,2,3,4,7,8,9-HpCDF	91		70 - 130	12/18/23 11:23	01/18/24 06:15	1

# Client Sample Results

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

**Client Sample ID: PROOF BLANK CONTAINER 1,2A,2B,3,XAD**

**Lab Sample ID: 140-34737-10**

Date Collected: 12/01/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Sample Container: Air Train

**Method: ID-0016 - PAH Emissions (Stationary Source)(GC/MS Isotope Dilution)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		800	162	ng/Sample		12/13/23 11:58	12/29/23 19:16	1
2-Methylnaphthalene	ND		100	54.0	ng/Sample		12/13/23 11:58	12/29/23 19:16	1
Acenaphthene	ND		40.0	12.8	ng/Sample		12/13/23 11:58	12/29/23 19:16	1
Acenaphthylene	ND		40.0	3.80	ng/Sample		12/13/23 11:58	12/29/23 19:16	1
<b>Fluorene</b>	<b>13.2</b>	<b>J</b>	20.0	11.6	ng/Sample		12/13/23 11:58	12/29/23 19:16	1
<b>Phenanthrene</b>	<b>52.4</b>	<b>J</b>	60.0	40.0	ng/Sample		12/13/23 11:58	12/29/23 19:16	1
Anthracene	ND		20.0	5.60	ng/Sample		12/13/23 11:58	12/29/23 19:16	1
<b>Fluoranthene</b>	<b>20.9</b>		20.0	13.8	ng/Sample		12/13/23 11:58	12/29/23 19:16	1
<b>Pyrene</b>	<b>29.3</b>	<b>J</b>	120	10.6	ng/Sample		12/13/23 11:58	12/29/23 19:16	1
Benzo[a]anthracene	ND		20.0	5.80	ng/Sample		12/13/23 11:58	12/29/23 19:16	1
Chrysene	ND		20.0	7.60	ng/Sample		12/13/23 11:58	12/29/23 19:16	1
Benzo[b]fluoranthene	ND		200	19.6	ng/Sample		12/13/23 11:58	12/29/23 19:16	1
Benzo[k]fluoranthene	ND		200	4.80	ng/Sample		12/13/23 11:58	12/29/23 19:16	1
<b>Benzo[e]pyrene</b>	<b>4.76</b>	<b>J</b>	20.0	3.40	ng/Sample		12/13/23 11:58	12/29/23 19:16	1
Benzo[a]pyrene	ND		20.0	3.40	ng/Sample		12/13/23 11:58	12/29/23 19:16	1
<b>Perylene</b>	<b>8.69</b>	<b>J</b>	20.0	2.20	ng/Sample		12/13/23 11:58	12/29/23 19:16	1
Indeno[1,2,3-cd]pyrene	ND		20.0	3.80	ng/Sample		12/13/23 11:58	12/29/23 19:16	1
Dibenz(a,h)anthracene	ND		20.0	5.40	ng/Sample		12/13/23 11:58	12/29/23 19:16	1
Benzo[g,h,i]perylene	ND		20.0	12.0	ng/Sample		12/13/23 11:58	12/29/23 19:16	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Naphthalene-d8	58		30 - 120	12/13/23 11:58	12/29/23 19:16	1
2-methylnaphthalene-d10	62		30 - 120	12/13/23 11:58	12/29/23 19:16	1
Acenaphthylene-d8	66		30 - 120	12/13/23 11:58	12/29/23 19:16	1
Fluorene -d10	63		30 - 120	12/13/23 11:58	12/29/23 19:16	1
Phenanthrene-d10	57		30 - 120	12/13/23 11:58	12/29/23 19:16	1
Anthracene-d10	67		30 - 120	12/13/23 11:58	12/29/23 19:16	1
Fluoranthene-d10	68		30 - 120	12/13/23 11:58	12/29/23 19:16	1
Chrysene-d12	78		30 - 120	12/13/23 11:58	12/29/23 19:16	1
Benzo(b)fluoranthene-d12	69		30 - 120	12/13/23 11:58	12/29/23 19:16	1
Benzo(k)fluoranthene-d12	85		30 - 120	12/13/23 11:58	12/29/23 19:16	1
Benzo(a)pyrene-d12	80		30 - 120	12/13/23 11:58	12/29/23 19:16	1
Perylene-d12	80		30 - 120	12/13/23 11:58	12/29/23 19:16	1
Indeno[1,2,3-cd]pyrene-d12	81		30 - 120	12/13/23 11:58	12/29/23 19:16	1
Dibenz(a,h)anthracene-d14	85		30 - 120	12/13/23 11:58	12/29/23 19:16	1
Benzo(ghi)perylene-d12	84		30 - 120	12/13/23 11:58	12/29/23 19:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	66		50 - 150	12/13/23 11:58	12/29/23 19:16	1
13C6-Naphthalene	102		50 - 150	12/13/23 11:58	12/29/23 19:16	1

**Method: EPA 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS)**

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>2,3,7,8-TCDD</b>	<b>0.614</b>	<b>J q</b>	20.0	0.226	pg/Sample		12/18/23 11:23	01/14/24 18:19	1
<b>Total TCDD</b>	<b>4.28</b>	<b>J q</b>	20.0	0.226	pg/Sample		12/18/23 11:23	01/14/24 18:19	1
1,2,3,7,8-PeCDD	ND		100	0.414	pg/Sample		12/18/23 11:23	01/14/24 18:19	1
<b>Total PeCDD</b>	<b>1.38</b>	<b>J</b>	100	0.414	pg/Sample		12/18/23 11:23	01/14/24 18:19	1
<b>1,2,3,4,7,8-HxCDD</b>	<b>2.70</b>	<b>J q</b>	100	0.545	pg/Sample		12/18/23 11:23	01/14/24 18:19	1
<b>1,2,3,6,7,8-HxCDD</b>	<b>0.927</b>	<b>J</b>	100	0.515	pg/Sample		12/18/23 11:23	01/14/24 18:19	1
1,2,3,7,8,9-HxCDD	ND		100	0.505	pg/Sample		12/18/23 11:23	01/14/24 18:19	1

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# Client Sample Results

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

**Client Sample ID: PROOF BLANK CONTAINER 1,2A,2B,3,XAD**

**Lab Sample ID: 140-34737-10**

Date Collected: 12/01/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Sample Container: Air Train

**Method: EPA 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS) (Continued)**

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HxCDD	5.98	J B q	100	0.522	pg/Sample		12/18/23 11:23	01/14/24 18:19	1
1,2,3,4,6,7,8-HpCDD	1.82	J	100	1.03	pg/Sample		12/18/23 11:23	01/14/24 18:19	1
Total HpCDD	1.82	J	100	1.03	pg/Sample		12/18/23 11:23	01/14/24 18:19	1
OCDD	2.76	J B q	200	0.646	pg/Sample		12/18/23 11:23	01/14/24 18:19	1
2,3,7,8-TCDF	1.36	J q	20.0	0.307	pg/Sample		12/18/23 11:23	01/14/24 18:19	1
Total TCDF	9.12	J q	20.0	0.307	pg/Sample		12/18/23 11:23	01/14/24 18:19	1
1,2,3,7,8-PeCDF	0.667	J q	100	0.565	pg/Sample		12/18/23 11:23	01/14/24 18:19	1
2,3,4,7,8-PeCDF	ND		100	0.556	pg/Sample		12/18/23 11:23	01/14/24 18:19	1
Total PeCDF	0.667	J q	100	0.561	pg/Sample		12/18/23 11:23	01/14/24 18:19	1
1,2,3,4,7,8-HxCDF	ND		100	0.662	pg/Sample		12/18/23 11:23	01/14/24 18:19	1
1,2,3,6,7,8-HxCDF	ND		100	0.607	pg/Sample		12/18/23 11:23	01/14/24 18:19	1
2,3,4,6,7,8-HxCDF	ND		100	0.656	pg/Sample		12/18/23 11:23	01/14/24 18:19	1
1,2,3,7,8,9-HxCDF	ND		100	0.714	pg/Sample		12/18/23 11:23	01/14/24 18:19	1
Total HxCDF	ND		100	0.714	pg/Sample		12/18/23 11:23	01/14/24 18:19	1
1,2,3,4,6,7,8-HpCDF	ND		100	0.596	pg/Sample		12/18/23 11:23	01/14/24 18:19	1
1,2,3,4,7,8,9-HpCDF	ND		100	0.716	pg/Sample		12/18/23 11:23	01/14/24 18:19	1
Total HpCDF	ND		100	0.716	pg/Sample		12/18/23 11:23	01/14/24 18:19	1
OCDF	0.651	J B q	200	0.260	pg/Sample		12/18/23 11:23	01/14/24 18:19	1
<b>Isotope Dilution</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
13C-2,3,7,8-TCDD	77		40 - 130				12/18/23 11:23	01/14/24 18:19	1
13C-1,2,3,7,8-PeCDD	64		40 - 130				12/18/23 11:23	01/14/24 18:19	1
13C-1,2,3,6,7,8-HxCDD	60		40 - 130				12/18/23 11:23	01/14/24 18:19	1
13C-1,2,3,4,6,7,8-HpCDD	64		25 - 130				12/18/23 11:23	01/14/24 18:19	1
13C-OCDD	58		25 - 130				12/18/23 11:23	01/14/24 18:19	1
13C-2,3,7,8-TCDF	65		40 - 130				12/18/23 11:23	01/14/24 18:19	1
13C-1,2,3,7,8-PeCDF	60		40 - 130				12/18/23 11:23	01/14/24 18:19	1
13C-1,2,3,6,7,8-HxCDF	63		40 - 130				12/18/23 11:23	01/14/24 18:19	1
13C-1,2,3,4,6,7,8-HpCDF	61		25 - 130				12/18/23 11:23	01/14/24 18:19	1
13C-OCDF	48		25 - 130				12/18/23 11:23	01/14/24 18:19	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
37Cl4-2,3,7,8-TCDD	86		70 - 130				12/18/23 11:23	01/14/24 18:19	1
13C-2,3,4,7,8-PeCDF	89		70 - 130				12/18/23 11:23	01/14/24 18:19	1
13C-1,2,3,4,7,8-HxCDD	92		70 - 130				12/18/23 11:23	01/14/24 18:19	1
13C-1,2,3,4,7,8-HxCDF	90		70 - 130				12/18/23 11:23	01/14/24 18:19	1
13C-1,2,3,4,7,8,9-HpCDF	94		70 - 130				12/18/23 11:23	01/14/24 18:19	1

# Client Sample Results

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

**Client Sample ID: A-1981,A-1982 M23/CARB429 MEDIA**

**Lab Sample ID: 140-34737-11**

**CHECK**

Date Collected: 11/30/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Sample Container: Air Train

**Method: ID-0016 - PAH Emissions (Stationary Source)(GC/MS Isotope Dilution)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		800	162	ng/Sample		12/13/23 11:58	12/29/23 19:39	1
2-Methylnaphthalene	ND		100	54.0	ng/Sample		12/13/23 11:58	12/29/23 19:39	1
Acenaphthene	ND		40.0	12.8	ng/Sample		12/13/23 11:58	12/29/23 19:39	1
Acenaphthylene	ND		40.0	3.80	ng/Sample		12/13/23 11:58	12/29/23 19:39	1
Fluorene	ND		20.0	11.6	ng/Sample		12/13/23 11:58	12/29/23 19:39	1
Phenanthrene	ND		60.0	40.0	ng/Sample		12/13/23 11:58	12/29/23 19:39	1
Anthracene	ND		20.0	5.60	ng/Sample		12/13/23 11:58	12/29/23 19:39	1
Fluoranthene	ND		20.0	13.8	ng/Sample		12/13/23 11:58	12/29/23 19:39	1
Pyrene	ND		120	10.6	ng/Sample		12/13/23 11:58	12/29/23 19:39	1
Benzo[a]anthracene	ND		20.0	5.80	ng/Sample		12/13/23 11:58	12/29/23 19:39	1
Chrysene	ND		20.0	7.60	ng/Sample		12/13/23 11:58	12/29/23 19:39	1
Benzo[b]fluoranthene	ND		200	19.6	ng/Sample		12/13/23 11:58	12/29/23 19:39	1
Benzo[k]fluoranthene	ND		200	4.80	ng/Sample		12/13/23 11:58	12/29/23 19:39	1
Benzo[e]pyrene	ND		20.0	3.40	ng/Sample		12/13/23 11:58	12/29/23 19:39	1
Benzo[a]pyrene	ND		20.0	3.40	ng/Sample		12/13/23 11:58	12/29/23 19:39	1
<b>Perylene</b>	<b>4.19</b>	<b>J</b>	20.0	2.20	ng/Sample		12/13/23 11:58	12/29/23 19:39	1
Indeno[1,2,3-cd]pyrene	ND		20.0	3.80	ng/Sample		12/13/23 11:58	12/29/23 19:39	1
Dibenz(a,h)anthracene	ND		20.0	5.40	ng/Sample		12/13/23 11:58	12/29/23 19:39	1
Benzo[g,h,i]perylene	ND		20.0	12.0	ng/Sample		12/13/23 11:58	12/29/23 19:39	1

Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Naphthalene-d8	78		30 - 120			12/13/23 11:58	12/29/23 19:39	1
2-methylnaphthalene-d10	79		30 - 120			12/13/23 11:58	12/29/23 19:39	1
Acenaphthylene-d8	84		30 - 120			12/13/23 11:58	12/29/23 19:39	1
Fluorene -d10	75		30 - 120			12/13/23 11:58	12/29/23 19:39	1
Phenanthrene-d10	66		30 - 120			12/13/23 11:58	12/29/23 19:39	1
Anthracene-d10	88		30 - 120			12/13/23 11:58	12/29/23 19:39	1
Fluoranthene-d10	82		30 - 120			12/13/23 11:58	12/29/23 19:39	1
Chrysene-d12	81		30 - 120			12/13/23 11:58	12/29/23 19:39	1
Benzo(b)fluoranthene-d12	78		30 - 120			12/13/23 11:58	12/29/23 19:39	1
Benzo(k)fluoranthene-d12	99		30 - 120			12/13/23 11:58	12/29/23 19:39	1
Benzo(a)pyrene-d12	90		30 - 120			12/13/23 11:58	12/29/23 19:39	1
Perylene-d12	95		30 - 120			12/13/23 11:58	12/29/23 19:39	1
Indeno[1,2,3-cd]pyrene-d12	94		30 - 120			12/13/23 11:58	12/29/23 19:39	1
Dibenz(a,h)anthracene-d14	90		30 - 120			12/13/23 11:58	12/29/23 19:39	1
Benzo(ghi)perylene-d12	93		30 - 120			12/13/23 11:58	12/29/23 19:39	1

**Method: EPA 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS)**

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		20.0	0.153	pg/Sample		12/18/23 11:23	01/14/24 17:19	1
<b>Total TCDD</b>	<b>3.61</b>	<b>J q</b>	20.0	0.153	pg/Sample		12/18/23 11:23	01/14/24 17:19	1
<b>1,2,3,7,8-PeCDD</b>	<b>0.386</b>	<b>J q</b>	100	0.284	pg/Sample		12/18/23 11:23	01/14/24 17:19	1
<b>Total PeCDD</b>	<b>3.52</b>	<b>J q</b>	100	0.284	pg/Sample		12/18/23 11:23	01/14/24 17:19	1
1,2,3,4,7,8-HxCDD	ND		100	0.523	pg/Sample		12/18/23 11:23	01/14/24 17:19	1
<b>1,2,3,6,7,8-HxCDD</b>	<b>0.553</b>	<b>J q</b>	100	0.495	pg/Sample		12/18/23 11:23	01/14/24 17:19	1
1,2,3,7,8,9-HxCDD	ND		100	0.486	pg/Sample		12/18/23 11:23	01/14/24 17:19	1
<b>Total HxCDD</b>	<b>3.44</b>	<b>J B q</b>	100	0.501	pg/Sample		12/18/23 11:23	01/14/24 17:19	1
1,2,3,4,6,7,8-HpCDD	ND		100	1.28	pg/Sample		12/18/23 11:23	01/14/24 17:19	1

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# Client Sample Results

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

**Client Sample ID: A-1981,A-1982 M23/CARB429 MEDIA**

**Lab Sample ID: 140-34737-11**

**CHECK**

Date Collected: 11/30/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Sample Container: Air Train

**Method: EPA 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS) (Continued)**

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HpCDD	ND		100	1.28	pg/Sample		12/18/23 11:23	01/14/24 17:19	1
<b>OCDD</b>	<b>1.83</b>	<b>J B</b>	200	0.503	pg/Sample		12/18/23 11:23	01/14/24 17:19	1
<b>2,3,7,8-TCDF</b>	<b>0.983</b>	<b>J</b>	20.0	0.191	pg/Sample		12/18/23 11:23	01/14/24 17:19	1
<b>Total TCDF</b>	<b>6.04</b>	<b>J q</b>	20.0	0.191	pg/Sample		12/18/23 11:23	01/14/24 17:19	1
1,2,3,7,8-PeCDF	ND		100	0.491	pg/Sample		12/18/23 11:23	01/14/24 17:19	1
2,3,4,7,8-PeCDF	ND		100	0.483	pg/Sample		12/18/23 11:23	01/14/24 17:19	1
Total PeCDF	ND		100	0.491	pg/Sample		12/18/23 11:23	01/14/24 17:19	1
1,2,3,4,7,8-HxCDF	ND		100	0.529	pg/Sample		12/18/23 11:23	01/14/24 17:19	1
1,2,3,6,7,8-HxCDF	ND		100	0.486	pg/Sample		12/18/23 11:23	01/14/24 17:19	1
2,3,4,6,7,8-HxCDF	ND		100	0.524	pg/Sample		12/18/23 11:23	01/14/24 17:19	1
1,2,3,7,8,9-HxCDF	ND		100	0.571	pg/Sample		12/18/23 11:23	01/14/24 17:19	1
Total HxCDF	ND		100	0.571	pg/Sample		12/18/23 11:23	01/14/24 17:19	1
1,2,3,4,6,7,8-HpCDF	ND		100	0.350	pg/Sample		12/18/23 11:23	01/14/24 17:19	1
1,2,3,4,7,8,9-HpCDF	ND		100	0.421	pg/Sample		12/18/23 11:23	01/14/24 17:19	1
Total HpCDF	ND		100	0.421	pg/Sample		12/18/23 11:23	01/14/24 17:19	1
<b>OCDF</b>	<b>0.604</b>	<b>J B q</b>	200	0.241	pg/Sample		12/18/23 11:23	01/14/24 17:19	1
<b>Isotope Dilution</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
13C-2,3,7,8-TCDD	85		40 - 130				12/18/23 11:23	01/14/24 17:19	1
13C-1,2,3,7,8-PeCDD	72		40 - 130				12/18/23 11:23	01/14/24 17:19	1
13C-1,2,3,6,7,8-HxCDD	66		40 - 130				12/18/23 11:23	01/14/24 17:19	1
13C-1,2,3,4,6,7,8-HpCDD	74		25 - 130				12/18/23 11:23	01/14/24 17:19	1
13C-OCDD	67		25 - 130				12/18/23 11:23	01/14/24 17:19	1
13C-2,3,7,8-TCDF	71		40 - 130				12/18/23 11:23	01/14/24 17:19	1
13C-1,2,3,7,8-PeCDF	66		40 - 130				12/18/23 11:23	01/14/24 17:19	1
13C-1,2,3,6,7,8-HxCDF	66		40 - 130				12/18/23 11:23	01/14/24 17:19	1
13C-1,2,3,4,6,7,8-HpCDF	70		25 - 130				12/18/23 11:23	01/14/24 17:19	1
13C-OCDF	54		25 - 130				12/18/23 11:23	01/14/24 17:19	1

## Default Detection Limits

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

### Method: ID-0016 - PAH Emissions (Stationary Source)(GC/MS Isotope Dilution)

Prep: CARB429 Comb

Analyte	RL	MDL	Units
2-Methylnaphthalene	50.0	27.0	ng/Sample
Acenaphthene	20.0	6.40	ng/Sample
Acenaphthylene	20.0	1.90	ng/Sample
Anthracene	10.0	2.80	ng/Sample
Benzo[a]anthracene	10.0	2.90	ng/Sample
Benzo[a]pyrene	10.0	1.70	ng/Sample
Benzo[b]fluoranthene	100	9.80	ng/Sample
Benzo[e]pyrene	10.0	1.70	ng/Sample
Benzo[g,h,i]perylene	10.0	6.00	ng/Sample
Benzo[k]fluoranthene	100	2.40	ng/Sample
Chrysene	10.0	3.80	ng/Sample
Dibenz(a,h)anthracene	10.0	2.70	ng/Sample
Fluoranthene	10.0	6.90	ng/Sample
Fluorene	10.0	5.80	ng/Sample
Indeno[1,2,3-cd]pyrene	10.0	1.90	ng/Sample
Naphthalene	400	81.0	ng/Sample
Perylene	10.0	1.10	ng/Sample
Phenanthrene	30.0	20.0	ng/Sample
Pyrene	60.0	5.30	ng/Sample

### Method: 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS)

Prep: Combined Prep

Analyte	RL	Units
1,2,3,4,6,7,8-HpCDD	50.0	pg/Sample
1,2,3,4,6,7,8-HpCDF	50.0	pg/Sample
1,2,3,4,7,8,9-HpCDF	50.0	pg/Sample
1,2,3,4,7,8-HxCDD	50.0	pg/Sample
1,2,3,4,7,8-HxCDF	50.0	pg/Sample
1,2,3,6,7,8-HxCDD	50.0	pg/Sample
1,2,3,6,7,8-HxCDF	50.0	pg/Sample
1,2,3,7,8,9-HxCDD	50.0	pg/Sample
1,2,3,7,8,9-HxCDF	50.0	pg/Sample
1,2,3,7,8-PeCDD	50.0	pg/Sample
1,2,3,7,8-PeCDF	50.0	pg/Sample
2,3,4,6,7,8-HxCDF	50.0	pg/Sample
2,3,4,7,8-PeCDF	50.0	pg/Sample
2,3,7,8-TCDD	10.0	pg/Sample
2,3,7,8-TCDF	10.0	pg/Sample
OCDD	100	pg/Sample
OCDF	100	pg/Sample
Total HpCDD	50.0	pg/Sample
Total HpCDF	50.0	pg/Sample
Total HxCDD	50.0	pg/Sample
Total HxCDF	50.0	pg/Sample
Total PeCDD	50.0	pg/Sample
Total PeCDF	50.0	pg/Sample
Total TCDD	10.0	pg/Sample
Total TCDF	10.0	pg/Sample

# Surrogate Summary

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

## Method: ID-0016 - PAH Emissions (Stationary Source)(GC/MS Isotope Dilution)

Matrix: Air

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		TPHL (50-150)	C6N (50-150)
140-34737-1	AS23-1 CONTAINER 1,2A,2B,3,	65	94
140-34737-2	AS23-2 CONTAINER 1,2A,2B,3,XAD	59	0 S1-
140-34737-3	AS23-3 CONTAINER 1,2A,2B,3,XAD	64	93
140-34737-4	VF23-1 CONTAINER 1,2A,2B,3,XAD	77	102
140-34737-5	VF23-2 CONTAINER 1,2A,2B,3,XAD	74	96
140-34737-6	VF23-4 CONTAINER 1,2A,2B,3,XAD	69	104
140-34737-7	AP23-1 CONTAINER 1,2A,2B,3,XAD	67	91
140-34737-8	AP23-2 CONTAINER 1,2A,2B,3,XAD	67	94
140-34737-9	AP23-3 CONTAINER 1,2A,2B,3,XAD	69	95
140-34737-10	PROOF BLANK CONTAINER 1,2A,2B,3,XAD	66	102
LCS 140-81338/13-B	Lab Control Sample	75	
LCSD 140-81338/14-B	Lab Control Sample Dup	71	
MB 140-81338/12-B	Method Blank	67	

### Surrogate Legend

TPHL = Terphenyl-d14

C6N = 13C6-Naphthalene

## Method: 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS)

Matrix: Air

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)				
		37TCDD (70-130)	PeCF (70-130)	HxCDD (70-130)	HxCDF (70-130)	HpCDF2 (70-130)
140-34737-1	AS23-1 CONTAINER 1,2A,2B,3,	91	99	95	96	99
140-34737-2	AS23-2 CONTAINER 1,2A,2B,3,XAD	86	92	91	89	93
140-34737-3	AS23-3 CONTAINER 1,2A,2B,3,XAD	84	90	92	90	91
140-34737-4	VF23-1 CONTAINER 1,2A,2B,3,XAD	84	89	88	88	89
140-34737-5	VF23-2 CONTAINER 1,2A,2B,3,XAD	83	89	90	89	91
140-34737-6	VF23-4 CONTAINER 1,2A,2B,3,XAD	84	90	93	90	91
140-34737-7	AP23-1 CONTAINER 1,2A,2B,3,XAD	84	91	89	90	93
140-34737-8	AP23-2 CONTAINER 1,2A,2B,3,XAD	87	93	93	88	94
140-34737-9	AP23-3 CONTAINER 1,2A,2B,3,XAD	85	90	92	91	91
140-34737-10	PROOF BLANK CONTAINER 1,2A,2B,3,XAD	86	89	92	90	94

### Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD



# Surrogate Summary

Client: SLR International Corp

Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

PeCF = 13C-2,3,4,7,8-PeCDF

HxCDD = 13C-1,2,3,4,7,8-HxCDD

HxCDF = 13C-1,2,3,4,7,8-HxCDF

HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF

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# Isotope Dilution Summary

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

## Method: ID-0016 - PAH Emissions (Stationary Source)(GC/MS Isotope Dilution)

Matrix: Air

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		NPT (30-120)	2MN (30-120)	ACY (30-120)	FLd10 (30-120)	PHN (30-120)	ANC (30-120)	FLN (30-120)	CRY (30-120)
140-34737-1	AS23-1 CONTAINER 1,2A,2B,3,	65	69	69	65	61	63	71	69
140-34737-2	AS23-2 CONTAINER 1,2A,2B,3,XAD	61	64	67	63	59	69	65	77
140-34737-3	AS23-3 CONTAINER 1,2A,2B,3,XAD	66	69	71	69	63	72	71	74
140-34737-4	VF23-1 CONTAINER 1,2A,2B,3,XAD	64	70	75	71	78	83	82	90
140-34737-5	VF23-2 CONTAINER 1,2A,2B,3,XAD	75	77	82	79	70	74	82	93
140-34737-6	VF23-4 CONTAINER 1,2A,2B,3,XAD	60	64	67	69	62	65	74	82
140-34737-7	AP23-1 CONTAINER 1,2A,2B,3,XAD	69	72	68	73	67	57	71	69
140-34737-8	AP23-2 CONTAINER 1,2A,2B,3,XAD	63	66	63	67	62	64	66	70
140-34737-9	AP23-3 CONTAINER 1,2A,2B,3,XAD	60	63	61	65	64	61	68	70
140-34737-10	PROOF BLANK CONTAINER 1,2A,2B,3,XAD	58	62	66	63	57	67	68	78
140-34737-11	A-1981,A-1982 M23/CARB429 MEDIA CHECK	78	79	84	75	66	88	82	81
LCS 140-81338/13-B	Lab Control Sample	78	79	80	78	76	81	84	81
LCSD 140-81338/14-B	Lab Control Sample Dup	80	82	83	80	77	78	83	91
MB 140-81338/12-B	Method Blank	76	77	77	75	68	81	81	82

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)						
		BBFd12 (30-120)	BKFd12 (30-120)	BNAPd12 (30-120)	PRY (30-120)	IDPd12 (30-120)	DBAd14 (30-120)	BNGHI12 (30-120)
140-34737-1	AS23-1 CONTAINER 1,2A,2B,3,	78	81	77	75	84	82	83
140-34737-2	AS23-2 CONTAINER 1,2A,2B,3,XAD	68	84	77	77	79	81	81
140-34737-3	AS23-3 CONTAINER 1,2A,2B,3,XAD	79	78	74	73	81	82	83
140-34737-4	VF23-1 CONTAINER 1,2A,2B,3,XAD	94	101	88	86	98	93	96
140-34737-5	VF23-2 CONTAINER 1,2A,2B,3,XAD	88	98	92	92	96	94	100
140-34737-6	VF23-4 CONTAINER 1,2A,2B,3,XAD	75	94	83	82	89	89	90
140-34737-7	AP23-1 CONTAINER 1,2A,2B,3,XAD	72	73	57	53	68	70	66
140-34737-8	AP23-2 CONTAINER 1,2A,2B,3,XAD	65	67	57	52	65	68	64
140-34737-9	AP23-3 CONTAINER 1,2A,2B,3,XAD	65	71	60	54	63	69	66
140-34737-10	PROOF BLANK CONTAINER 1,2A,2B,3,XAD	69	85	80	80	81	85	84
140-34737-11	A-1981,A-1982 M23/CARB429 MEDIA CHECK	78	99	90	95	94	90	93
LCS 140-81338/13-B	Lab Control Sample	88	90	89	85	99	100	100
LCSD 140-81338/14-B	Lab Control Sample Dup	90	91	90	86	100	103	101
MB 140-81338/12-B	Method Blank	80	97	86	86	93	90	94

### Surrogate Legend

NPT = Naphthalene-d8  
 2MN = 2-methylnaphthalene-d10

# Isotope Dilution Summary

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

ACY = Acenaphthylene-d8  
 FLd10 = Fluorene -d10  
 PHN = Phenanthrene-d10  
 ANC = Anthracene-d10  
 FLN = Fluoranthene-d10  
 CRY = Chrysene-d12  
 BBFd12 = Benzo(b)fluoranthene-d12  
 BKFd12 = Benzo(k)fluoranthene-d12  
 BNAPd12 = Benzo(a)pyrene-d12  
 PRY = Perylene-d12  
 IDPd12 = Indeno[1,2,3-cd]pyrene-d12  
 DBAd14 = Dibenz(a,h)anthracene-d14  
 BNGHI12 = Benzo(ghi)perylene-d12

## Method: 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS)

Matrix: Air

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		TCDD (40-130)	PeCDD (40-130)	HxCDD (40-130)	HpCDD (25-130)	OCDD (25-130)	TCDF (40-130)	PeCDF (40-130)	HxCDF (40-130)
140-34737-1	AS23-1 CONTAINER 1,2A,2B,3,	56	43	44	42	37	47	42	47
140-34737-1	AS23-1 CONTAINER 1,2A,2B,3,XAD						44		
140-34737-2	AS23-2 CONTAINER 1,2A,2B,3,XAD	61	51	51	50	44	53	48	53
140-34737-3	AS23-3 CONTAINER 1,2A,2B,3,XAD	72	60	55	57	50	60	55	58
140-34737-4	VF23-1 CONTAINER 1,2A,2B,3,XAD	81	70	66	65	60	67	66	68
140-34737-4	VF23-1 CONTAINER 1,2A,2B,3,XAD						64		
140-34737-5	VF23-2 CONTAINER 1,2A,2B,3,XAD	87	68	68	68	63	67	64	69
140-34737-5	VF23-2 CONTAINER 1,2A,2B,3,XAD						67		
140-34737-6	VF23-4 CONTAINER 1,2A,2B,3,XAD	77	62	60	62	57	61	57	64
140-34737-6	VF23-4 CONTAINER 1,2A,2B,3,XAD						61		
140-34737-7	AP23-1 CONTAINER 1,2A,2B,3,XAD	70	56	55	56	50	56	52	56
140-34737-8	AP23-2 CONTAINER 1,2A,2B,3,XAD	77	65	58	58	54	62	59	61
140-34737-9	AP23-3 CONTAINER 1,2A,2B,3,XAD	66	55	52	53	48	53	51	53
140-34737-10	PROOF BLANK CONTAINER 1,2A,2B,3,XAD	77	64	60	64	58	65	60	63
140-34737-11	A-1981,A-1982 M23/CARB429 MEDIA CHECK	85	72	66	74	67	71	66	66
LCS 140-81501/12-B	Lab Control Sample	76	54	59	62	54	66	57	64
LCSD 140-81501/13-B	Lab Control Sample Dup	68	55	52	57	51	59	53	55
MB 140-81501/14-B	Method Blank	64	56	46	52	48	53	51	48

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)	
		HpCDF (25-130)	OCDF (25-130)
140-34737-1	AS23-1 CONTAINER 1,2A,2B,3,	42	31
140-34737-1	AS23-1 CONTAINER 1,2A,2B,3,XAD		
140-34737-2	AS23-2 CONTAINER 1,2A,2B,3,XAD	48	37

# Isotope Dilution Summary

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

**Method: 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS) (Continued)**

**Matrix: Air**

**Prep Type: Total/NA**

**Percent Isotope Dilution Recovery (Acceptance Limits)**

Lab Sample ID	Client Sample ID	HpCDF (25-130)	OCDF (25-130)
140-34737-3	AS23-3 CONTAINER 1,2A,2B,3,	54	41
140-34737-4	VF23-1 CONTAINER 1,2A,2B,3,XAD	62	48
140-34737-4	VF23-1 CONTAINER 1,2A,2B,3,XAD		
140-34737-5	VF23-2 CONTAINER 1,2A,2B,3,XAD	66	52
140-34737-5	VF23-2 CONTAINER 1,2A,2B,3,XAD		
140-34737-6	VF23-4 CONTAINER 1,2A,2B,3,XAD	60	47
140-34737-6	VF23-4 CONTAINER 1,2A,2B,3,XAD		
140-34737-7	AP23-1 CONTAINER 1,2A,2B,3,XAD	53	41
140-34737-8	AP23-2 CONTAINER 1,2A,2B,3,XAD	56	44
140-34737-9	AP23-3 CONTAINER 1,2A,2B,3,XAD	50	39
140-34737-10	PROOF BLANK CONTAINER 1,2A,2B,3,XAD	61	48
140-34737-11	A-1981,A-1982 M23/CARB429 MEDIA CHECK	70	54
LCS 140-81501/12-B	Lab Control Sample	65	44
LCSD 140-81501/13-B	Lab Control Sample Dup	56	42
MB 140-81501/14-B	Method Blank	49	38

**Surrogate Legend**

- TCDD = 13C-2,3,7,8-TCDD
- PeCDD = 13C-1,2,3,7,8-PeCDD
- HxCDD = 13C-1,2,3,6,7,8-HxCDD
- HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
- OCDD = 13C-OCDD
- TCDF = 13C-2,3,7,8-TCDF
- PeCDF = 13C-1,2,3,7,8-PeCDF
- HxCDF = 13C-1,2,3,6,7,8-HxCDF
- HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
- OCDF = 13C-OCDF

# QC Sample Results

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

## Method: ID-0016 - PAH Emissions (Stationary Source)(GC/MS Isotope Dilution)

**Lab Sample ID: MB 140-81338/12-B**  
**Matrix: Air**  
**Analysis Batch: 81875**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 81338**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		800	162	ng/Sample		12/13/23 11:58	12/29/23 14:44	1
2-Methylnaphthalene	ND		100	54.0	ng/Sample		12/13/23 11:58	12/29/23 14:44	1
Acenaphthene	ND		40.0	12.8	ng/Sample		12/13/23 11:58	12/29/23 14:44	1
Acenaphthylene	ND		40.0	3.80	ng/Sample		12/13/23 11:58	12/29/23 14:44	1
Fluorene	ND		20.0	11.6	ng/Sample		12/13/23 11:58	12/29/23 14:44	1
Phenanthrene	ND		60.0	40.0	ng/Sample		12/13/23 11:58	12/29/23 14:44	1
Anthracene	ND		20.0	5.60	ng/Sample		12/13/23 11:58	12/29/23 14:44	1
Fluoranthene	ND		20.0	13.8	ng/Sample		12/13/23 11:58	12/29/23 14:44	1
Pyrene	ND		120	10.6	ng/Sample		12/13/23 11:58	12/29/23 14:44	1
Benzo[a]anthracene	ND		20.0	5.80	ng/Sample		12/13/23 11:58	12/29/23 14:44	1
Chrysene	ND		20.0	7.60	ng/Sample		12/13/23 11:58	12/29/23 14:44	1
Benzo[b]fluoranthene	ND		200	19.6	ng/Sample		12/13/23 11:58	12/29/23 14:44	1
Benzo[k]fluoranthene	ND		200	4.80	ng/Sample		12/13/23 11:58	12/29/23 14:44	1
Benzo[e]pyrene	ND		20.0	3.40	ng/Sample		12/13/23 11:58	12/29/23 14:44	1
Benzo[a]pyrene	ND		20.0	3.40	ng/Sample		12/13/23 11:58	12/29/23 14:44	1
Perylene	ND		20.0	2.20	ng/Sample		12/13/23 11:58	12/29/23 14:44	1
Indeno[1,2,3-cd]pyrene	ND		20.0	3.80	ng/Sample		12/13/23 11:58	12/29/23 14:44	1
Dibenz(a,h)anthracene	ND		20.0	5.40	ng/Sample		12/13/23 11:58	12/29/23 14:44	1
Benzo[g,h,i]perylene	ND		20.0	12.0	ng/Sample		12/13/23 11:58	12/29/23 14:44	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Naphthalene-d8	76		30 - 120	12/13/23 11:58	12/29/23 14:44	1
2-methylnaphthalene-d10	77		30 - 120	12/13/23 11:58	12/29/23 14:44	1
Acenaphthylene-d8	77		30 - 120	12/13/23 11:58	12/29/23 14:44	1
Fluorene -d10	75		30 - 120	12/13/23 11:58	12/29/23 14:44	1
Phenanthrene-d10	68		30 - 120	12/13/23 11:58	12/29/23 14:44	1
Anthracene-d10	81		30 - 120	12/13/23 11:58	12/29/23 14:44	1
Fluoranthene-d10	81		30 - 120	12/13/23 11:58	12/29/23 14:44	1
Chrysene-d12	82		30 - 120	12/13/23 11:58	12/29/23 14:44	1
Benzo(b)fluoranthene-d12	80		30 - 120	12/13/23 11:58	12/29/23 14:44	1
Benzo(k)fluoranthene-d12	97		30 - 120	12/13/23 11:58	12/29/23 14:44	1
Benzo(a)pyrene-d12	86		30 - 120	12/13/23 11:58	12/29/23 14:44	1
Perylene-d12	86		30 - 120	12/13/23 11:58	12/29/23 14:44	1
Indeno[1,2,3-cd]pyrene-d12	93		30 - 120	12/13/23 11:58	12/29/23 14:44	1
Dibenz(a,h)anthracene-d14	90		30 - 120	12/13/23 11:58	12/29/23 14:44	1
Benzo(ghi)perylene-d12	94		30 - 120	12/13/23 11:58	12/29/23 14:44	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	67		50 - 150	12/13/23 11:58	12/29/23 14:44	1

**Lab Sample ID: LCS 140-81338/13-B**  
**Matrix: Air**  
**Analysis Batch: 81875**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 81338**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Naphthalene	4250	3989		ng/Sample		94	60 - 140
2-Methylnaphthalene	500	471.0		ng/Sample		94	60 - 140
Acenaphthene	500	457.4		ng/Sample		91	60 - 140

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# QC Sample Results

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

## Method: ID-0016 - PAH Emissions (Stationary Source)(GC/MS Isotope Dilution) (Continued)

**Lab Sample ID: LCS 140-81338/13-B**  
**Matrix: Air**  
**Analysis Batch: 81875**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 81338**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthylene	500	444.3		ng/Sample		89	60 - 140
Fluorene	500	468.3		ng/Sample		94	60 - 140
Phenanthrene	500	481.3		ng/Sample		96	60 - 140
Anthracene	500	466.1		ng/Sample		93	60 - 140
Fluoranthene	500	462.0		ng/Sample		92	60 - 140
Pyrene	500	472.8		ng/Sample		95	60 - 140
Benzo[a]anthracene	500	477.7		ng/Sample		96	60 - 140
Chrysene	500	542.1		ng/Sample		108	60 - 140
Benzo[b]fluoranthene	500	436.1		ng/Sample		87	60 - 140
Benzo[k]fluoranthene	500	497.1		ng/Sample		99	60 - 140
Benzo[e]pyrene	500	459.6		ng/Sample		92	60 - 140
Benzo[a]pyrene	500	475.8		ng/Sample		95	60 - 140
Perylene	500	467.9		ng/Sample		94	60 - 140
Indeno[1,2,3-cd]pyrene	500	459.1		ng/Sample		92	60 - 140
Dibenz(a,h)anthracene	500	459.9		ng/Sample		92	60 - 140
Benzo[g,h,i]perylene	500	454.3		ng/Sample		91	60 - 140

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
Naphthalene-d8	78		30 - 120
2-methylnaphthalene-d10	79		30 - 120
Acenaphthylene-d8	80		30 - 120
Fluorene -d10	78		30 - 120
Phenanthrene-d10	76		30 - 120
Anthracene-d10	81		30 - 120
Fluoranthene-d10	84		30 - 120
Chrysene-d12	81		30 - 120
Benzo(b)fluoranthene-d12	88		30 - 120
Benzo(k)fluoranthene-d12	90		30 - 120
Benzo(a)pyrene-d12	89		30 - 120
Perylene-d12	85		30 - 120
Indeno[1,2,3-cd]pyrene-d12	99		30 - 120
Dibenz(a,h)anthracene-d14	100		30 - 120
Benzo(ghi)perylene-d12	100		30 - 120

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Terphenyl-d14	75		50 - 150

**Lab Sample ID: LCSD 140-81338/14-B**  
**Matrix: Air**  
**Analysis Batch: 81875**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 81338**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD Limit
							Limits	RPD	
Naphthalene	4250	4067		ng/Sample		96	60 - 140	2	25
2-Methylnaphthalene	500	461.8		ng/Sample		92	60 - 140	2	25
Acenaphthene	500	458.6		ng/Sample		92	60 - 140	0	25
Acenaphthylene	500	448.1		ng/Sample		90	60 - 140	1	25
Fluorene	500	467.5		ng/Sample		93	60 - 140	0	25
Phenanthrene	500	483.1		ng/Sample		97	60 - 140	0	25

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# QC Sample Results

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

## Method: ID-0016 - PAH Emissions (Stationary Source)(GC/MS Isotope Dilution) (Continued)

**Lab Sample ID: LCSD 140-81338/14-B**  
**Matrix: Air**  
**Analysis Batch: 81875**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 81338**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	RPD Limit
							Limits	RPD		
Anthracene	500	483.1		ng/Sample		97	60 - 140	4	25	
Fluoranthene	500	461.5		ng/Sample		92	60 - 140	0	25	
Pyrene	500	478.3		ng/Sample		96	60 - 140	1	25	
Benzo[a]anthracene	500	424.7		ng/Sample		85	60 - 140	12	25	
Chrysene	500	480.2		ng/Sample		96	60 - 140	12	25	
Benzo[b]fluoranthene	500	432.8		ng/Sample		87	60 - 140	1	25	
Benzo[k]fluoranthene	500	482.5		ng/Sample		97	60 - 140	3	25	
Benzo[e]pyrene	500	456.3		ng/Sample		91	60 - 140	1	25	
Benzo[a]pyrene	500	449.7		ng/Sample		90	60 - 140	6	25	
Perylene	500	437.1		ng/Sample		87	60 - 140	7	25	
Indeno[1,2,3-cd]pyrene	500	458.1		ng/Sample		92	60 - 140	0	25	
Dibenz(a,h)anthracene	500	455.2		ng/Sample		91	60 - 140	1	25	
Benzo[g,h,i]perylene	500	448.3		ng/Sample		90	60 - 140	1	25	

Isotope Dilution	LCSD		Limits
	%Recovery	Qualifier	
Naphthalene-d8	80		30 - 120
2-methylnaphthalene-d10	82		30 - 120
Acenaphthylene-d8	83		30 - 120
Fluorene -d10	80		30 - 120
Phenanthrene-d10	77		30 - 120
Anthracene-d10	78		30 - 120
Fluoranthene-d10	83		30 - 120
Chrysene-d12	91		30 - 120
Benzo(b)fluoranthene-d12	90		30 - 120
Benzo(k)fluoranthene-d12	91		30 - 120
Benzo(a)pyrene-d12	90		30 - 120
Perylene-d12	86		30 - 120
Indeno[1,2,3-cd]pyrene-d12	100		30 - 120
Dibenz(a,h)anthracene-d14	103		30 - 120
Benzo(ghi)perylene-d12	101		30 - 120

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
Terphenyl-d14	71		50 - 150

## Method: 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS)

**Lab Sample ID: MB 140-81501/14-B**  
**Matrix: Air**  
**Analysis Batch: 82372**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 81501**

Analyte	MB		RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2,3,7,8-TCDD	ND		20.0	0.487	pg/Sample		12/18/23 11:23	01/14/24 14:19	1
Total TCDD	ND		20.0	0.515	pg/Sample		12/18/23 11:23	01/14/24 14:19	1
1,2,3,7,8-PeCDD	ND		100	0.707	pg/Sample		12/18/23 11:23	01/14/24 14:19	1
Total PeCDD	ND		100	0.707	pg/Sample		12/18/23 11:23	01/14/24 14:19	1
1,2,3,4,7,8-HxCDD	ND		100	0.752	pg/Sample		12/18/23 11:23	01/14/24 14:19	1
1,2,3,6,7,8-HxCDD	ND		100	0.712	pg/Sample		12/18/23 11:23	01/14/24 14:19	1
1,2,3,7,8,9-HxCDD	ND		100	0.698	pg/Sample		12/18/23 11:23	01/14/24 14:19	1
Total HxCDD	1.018	J q	100	0.721	pg/Sample		12/18/23 11:23	01/14/24 14:19	1

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# QC Sample Results

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

## Method: 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS) (Continued)

**Lab Sample ID: MB 140-81501/14-B**  
**Matrix: Air**  
**Analysis Batch: 82372**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 81501**

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	ND		100	0.981	pg/Sample		12/18/23 11:23	01/14/24 14:19	1
Total HpCDD	ND		100	0.981	pg/Sample		12/18/23 11:23	01/14/24 14:19	1
OCDD	1.875	J	200	0.803	pg/Sample		12/18/23 11:23	01/14/24 14:19	1
2,3,7,8-TCDF	ND		20.0	0.387	pg/Sample		12/18/23 11:23	01/14/24 14:19	1
Total TCDF	ND		20.0	0.452	pg/Sample		12/18/23 11:23	01/14/24 14:19	1
1,2,3,7,8-PeCDF	ND		100	0.801	pg/Sample		12/18/23 11:23	01/14/24 14:19	1
2,3,4,7,8-PeCDF	ND		100	0.788	pg/Sample		12/18/23 11:23	01/14/24 14:19	1
Total PeCDF	ND		100	0.801	pg/Sample		12/18/23 11:23	01/14/24 14:19	1
1,2,3,4,7,8-HxCDF	ND		100	0.806	pg/Sample		12/18/23 11:23	01/14/24 14:19	1
1,2,3,6,7,8-HxCDF	ND		100	0.739	pg/Sample		12/18/23 11:23	01/14/24 14:19	1
2,3,4,6,7,8-HxCDF	ND		100	0.798	pg/Sample		12/18/23 11:23	01/14/24 14:19	1
1,2,3,7,8,9-HxCDF	ND		100	0.869	pg/Sample		12/18/23 11:23	01/14/24 14:19	1
Total HxCDF	ND		100	0.869	pg/Sample		12/18/23 11:23	01/14/24 14:19	1
1,2,3,4,6,7,8-HpCDF	ND		100	0.531	pg/Sample		12/18/23 11:23	01/14/24 14:19	1
1,2,3,4,7,8,9-HpCDF	ND		100	0.637	pg/Sample		12/18/23 11:23	01/14/24 14:19	1
Total HpCDF	ND		100	0.637	pg/Sample		12/18/23 11:23	01/14/24 14:19	1
OCDF	1.675	J q	200	0.431	pg/Sample		12/18/23 11:23	01/14/24 14:19	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	64		40 - 130	12/18/23 11:23	01/14/24 14:19	1
13C-1,2,3,7,8-PeCDD	56		40 - 130	12/18/23 11:23	01/14/24 14:19	1
13C-1,2,3,6,7,8-HxCDD	46		40 - 130	12/18/23 11:23	01/14/24 14:19	1
13C-1,2,3,4,6,7,8-HpCDD	52		25 - 130	12/18/23 11:23	01/14/24 14:19	1
13C-OCDD	48		25 - 130	12/18/23 11:23	01/14/24 14:19	1
13C-2,3,7,8-TCDF	53		40 - 130	12/18/23 11:23	01/14/24 14:19	1
13C-1,2,3,7,8-PeCDF	51		40 - 130	12/18/23 11:23	01/14/24 14:19	1
13C-1,2,3,6,7,8-HxCDF	48		40 - 130	12/18/23 11:23	01/14/24 14:19	1
13C-1,2,3,4,6,7,8-HpCDF	49		25 - 130	12/18/23 11:23	01/14/24 14:19	1
13C-OCDF	38		25 - 130	12/18/23 11:23	01/14/24 14:19	1

**Lab Sample ID: LCS 140-81501/12-B**  
**Matrix: Air**  
**Analysis Batch: 82372**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 81501**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,3,7,8-TCDD	400	355.2		pg/Sample		89	70 - 130
1,2,3,7,8-PeCDD	2000	2074		pg/Sample		104	70 - 130
1,2,3,4,7,8-HxCDD	2000	1988		pg/Sample		99	70 - 130
1,2,3,6,7,8-HxCDD	2000	1983		pg/Sample		99	70 - 130
1,2,3,7,8,9-HxCDD	2000	2391		pg/Sample		120	70 - 130
1,2,3,4,6,7,8-HpCDD	2000	1831		pg/Sample		92	70 - 130
OCDD	4000	3267		pg/Sample		82	70 - 130
2,3,7,8-TCDF	400	375.6		pg/Sample		94	70 - 130
1,2,3,7,8-PeCDF	2000	2000		pg/Sample		100	70 - 130
2,3,4,7,8-PeCDF	2000	1910		pg/Sample		96	70 - 130
1,2,3,4,7,8-HxCDF	2000	1993		pg/Sample		100	70 - 130
1,2,3,6,7,8-HxCDF	2000	1958		pg/Sample		98	70 - 130
2,3,4,6,7,8-HxCDF	2000	2025		pg/Sample		101	70 - 130
1,2,3,7,8,9-HxCDF	2000	2030		pg/Sample		102	70 - 130

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# QC Sample Results

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

## Method: 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS) (Continued)

**Lab Sample ID: LCS 140-81501/12-B**  
**Matrix: Air**  
**Analysis Batch: 82372**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 81501**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
1,2,3,4,6,7,8-HpCDF	2000	1753		pg/Sample		88	70 - 130	
1,2,3,4,7,8,9-HpCDF	2000	1868		pg/Sample		93	70 - 130	
OCDF	4000	3656		pg/Sample		91	70 - 130	
		LCS LCS						
Isotope Dilution	%Recovery	Qualifier	Limits					
13C-2,3,7,8-TCDD	76		40 - 130					
13C-1,2,3,7,8-PeCDD	54		40 - 130					
13C-1,2,3,6,7,8-HxCDD	59		40 - 130					
13C-1,2,3,4,6,7,8-HpCDD	62		25 - 130					
13C-OCDD	54		25 - 130					
13C-2,3,7,8-TCDF	66		40 - 130					
13C-1,2,3,7,8-PeCDF	57		40 - 130					
13C-1,2,3,6,7,8-HxCDF	64		40 - 130					
13C-1,2,3,4,6,7,8-HpCDF	65		25 - 130					
13C-OCDF	44		25 - 130					

**Lab Sample ID: LCSD 140-81501/13-B**  
**Matrix: Air**  
**Analysis Batch: 82372**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 81501**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits		RPD Limit	
									RPD	Limit
2,3,7,8-TCDD	400	335.5		pg/Sample		84	70 - 130	6	50	
1,2,3,7,8-PeCDD	2000	2007		pg/Sample		100	70 - 130	3	50	
1,2,3,4,7,8-HxCDD	2000	2092		pg/Sample		105	70 - 130	5	50	
1,2,3,6,7,8-HxCDD	2000	2000		pg/Sample		100	70 - 130	1	50	
1,2,3,7,8,9-HxCDD	2000	2584		pg/Sample		129	70 - 130	8	50	
1,2,3,4,6,7,8-HpCDD	2000	1848		pg/Sample		92	70 - 130	1	50	
OCDD	4000	3400		pg/Sample		85	70 - 130	4	50	
2,3,7,8-TCDF	400	389.7		pg/Sample		97	70 - 130	4	50	
1,2,3,7,8-PeCDF	2000	2112		pg/Sample		106	70 - 130	5	50	
2,3,4,7,8-PeCDF	2000	1945		pg/Sample		97	70 - 130	2	50	
1,2,3,4,7,8-HxCDF	2000	2036		pg/Sample		102	70 - 130	2	50	
1,2,3,6,7,8-HxCDF	2000	1942		pg/Sample		97	70 - 130	1	50	
2,3,4,6,7,8-HxCDF	2000	2137		pg/Sample		107	70 - 130	5	50	
1,2,3,7,8,9-HxCDF	2000	2164		pg/Sample		108	70 - 130	6	50	
1,2,3,4,6,7,8-HpCDF	2000	1856		pg/Sample		93	70 - 130	6	50	
1,2,3,4,7,8,9-HpCDF	2000	2012		pg/Sample		101	70 - 130	7	50	
OCDF	4000	3704		pg/Sample		93	70 - 130	1	50	
		LCSD LCSD								
Isotope Dilution	%Recovery	Qualifier	Limits							
13C-2,3,7,8-TCDD	68		40 - 130							
13C-1,2,3,7,8-PeCDD	55		40 - 130							
13C-1,2,3,6,7,8-HxCDD	52		40 - 130							
13C-1,2,3,4,6,7,8-HpCDD	57		25 - 130							
13C-OCDD	51		25 - 130							
13C-2,3,7,8-TCDF	59		40 - 130							
13C-1,2,3,7,8-PeCDF	53		40 - 130							
13C-1,2,3,6,7,8-HxCDF	55		40 - 130							
13C-1,2,3,4,6,7,8-HpCDF	56		25 - 130							

# QC Sample Results

Client: SLR International Corp  
Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

## Method: 23 - Dioxins and Furans (Stationary Source) (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 140-81501/13-B  
Matrix: Air  
Analysis Batch: 82372

Client Sample ID: Lab Control Sample Dup  
Prep Type: Total/NA  
Prep Batch: 81501

<i>Isotope Dilution</i>	<i>LCSD LCSD</i>		<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
13C-OCDF	42		25 - 130

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# QC Association Summary

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

## GC/MS Semi VOA

### Prep Batch: 81338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-34737-1	AS23-1 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	CARB429 Comb	
140-34737-2	AS23-2 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	CARB429 Comb	
140-34737-3	AS23-3 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	CARB429 Comb	
140-34737-4	VF23-1 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	CARB429 Comb	
140-34737-5	VF23-2 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	CARB429 Comb	
140-34737-6	VF23-4 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	CARB429 Comb	
140-34737-7	AP23-1 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	CARB429 Comb	
140-34737-8	AP23-2 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	CARB429 Comb	
140-34737-9	AP23-3 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	CARB429 Comb	
140-34737-10	PROOF BLANK CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	CARB429 Comb	
140-34737-11	A-1981,A-1982 M23/CARB429 MEDIA CHECK	Total/NA	Air	CARB429 Comb	
MB 140-81338/12-B	Method Blank	Total/NA	Air	CARB429 Comb	
LCS 140-81338/13-B	Lab Control Sample	Total/NA	Air	CARB429 Comb	
LCSD 140-81338/14-B	Lab Control Sample Dup	Total/NA	Air	CARB429 Comb	

### Cleanup Batch: 81695

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-34737-1	AS23-1 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Split	81338
140-34737-2	AS23-2 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Split	81338
140-34737-3	AS23-3 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Split	81338
140-34737-4	VF23-1 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Split	81338
140-34737-5	VF23-2 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Split	81338
140-34737-6	VF23-4 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Split	81338
140-34737-7	AP23-1 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Split	81338
140-34737-8	AP23-2 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Split	81338
140-34737-9	AP23-3 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Split	81338
140-34737-10	PROOF BLANK CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Split	81338
140-34737-11	A-1981,A-1982 M23/CARB429 MEDIA CHECK	Total/NA	Air	Split	81338
MB 140-81338/12-B	Method Blank	Total/NA	Air	Split	81338
LCS 140-81338/13-B	Lab Control Sample	Total/NA	Air	Split	81338
LCSD 140-81338/14-B	Lab Control Sample Dup	Total/NA	Air	Split	81338

### Analysis Batch: 81875

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-34737-1	AS23-1 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	ID-0016	81695
140-34737-2	AS23-2 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	ID-0016	81695
140-34737-3	AS23-3 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	ID-0016	81695
140-34737-4	VF23-1 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	ID-0016	81695
140-34737-5	VF23-2 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	ID-0016	81695
140-34737-6	VF23-4 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	ID-0016	81695
140-34737-7	AP23-1 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	ID-0016	81695
140-34737-8	AP23-2 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	ID-0016	81695
140-34737-9	AP23-3 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	ID-0016	81695
140-34737-10	PROOF BLANK CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	ID-0016	81695
140-34737-11	A-1981,A-1982 M23/CARB429 MEDIA CHECK	Total/NA	Air	ID-0016	81695
MB 140-81338/12-B	Method Blank	Total/NA	Air	ID-0016	81695
LCS 140-81338/13-B	Lab Control Sample	Total/NA	Air	ID-0016	81695
LCSD 140-81338/14-B	Lab Control Sample Dup	Total/NA	Air	ID-0016	81695

# QC Association Summary

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

## Specialty Organics

### Prep Batch: 81501

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-34737-1	AS23-1 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Combined Prep	
140-34737-2	AS23-2 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Combined Prep	
140-34737-3	AS23-3 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Combined Prep	
140-34737-4	VF23-1 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Combined Prep	
140-34737-5	VF23-2 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Combined Prep	
140-34737-6	VF23-4 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Combined Prep	
140-34737-7	AP23-1 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Combined Prep	
140-34737-8	AP23-2 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Combined Prep	
140-34737-9	AP23-3 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Combined Prep	
140-34737-10	PROOF BLANK CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Combined Prep	
140-34737-11	A-1981,A-1982 M23/CARB429 MEDIA CHECK	Total/NA	Air	Combined Prep	
MB 140-81501/14-B	Method Blank	Total/NA	Air	Combined Prep	
LCS 140-81501/12-B	Lab Control Sample	Total/NA	Air	Combined Prep	
LCSD 140-81501/13-B	Lab Control Sample Dup	Total/NA	Air	Combined Prep	

### Cleanup Batch: 81696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-34737-1	AS23-1 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Split	81501
140-34737-2	AS23-2 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Split	81501
140-34737-3	AS23-3 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Split	81501
140-34737-4	VF23-1 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Split	81501
140-34737-5	VF23-2 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Split	81501
140-34737-6	VF23-4 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Split	81501
140-34737-7	AP23-1 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Split	81501
140-34737-8	AP23-2 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Split	81501
140-34737-9	AP23-3 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Split	81501
140-34737-10	PROOF BLANK CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	Split	81501
140-34737-11	A-1981,A-1982 M23/CARB429 MEDIA CHECK	Total/NA	Air	Split	81501
MB 140-81501/14-B	Method Blank	Total/NA	Air	Split	81501
LCS 140-81501/12-B	Lab Control Sample	Total/NA	Air	Split	81501
LCSD 140-81501/13-B	Lab Control Sample Dup	Total/NA	Air	Split	81501

### Analysis Batch: 82372

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-34737-10	PROOF BLANK CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	23	81696
140-34737-11	A-1981,A-1982 M23/CARB429 MEDIA CHECK	Total/NA	Air	23	81696
MB 140-81501/14-B	Method Blank	Total/NA	Air	23	81696
LCS 140-81501/12-B	Lab Control Sample	Total/NA	Air	23	81696
LCSD 140-81501/13-B	Lab Control Sample Dup	Total/NA	Air	23	81696

### Analysis Batch: 82379

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-34737-1	AS23-1 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	23	81696
140-34737-2	AS23-2 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	23	81696
140-34737-3	AS23-3 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	23	81696
140-34737-4	VF23-1 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	23	81696
140-34737-5	VF23-2 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	23	81696
140-34737-6	VF23-4 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	23	81696
140-34737-7	AP23-1 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	23	81696

# QC Association Summary

Client: SLR International Corp  
Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

## Specialty Organics

### Analysis Batch: 82406

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-34737-8	AP23-2 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	23	81696
140-34737-9	AP23-3 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	23	81696

### Analysis Batch: 82416

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-34737-1	AS23-1 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	23	81696
140-34737-4	VF23-1 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	23	81696
140-34737-5	VF23-2 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	23	81696
140-34737-6	VF23-4 CONTAINER 1,2A,2B,3,XAD	Total/NA	Air	23	81696



# Lab Chronicle

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

**Client Sample ID: AS23-1 CONTAINER 1,2A,2B,3,XAD**

**Lab Sample ID: 140-34737-1**

**Date Collected: 11/30/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	CARB429 Comb			1 Sample	20 mL	81338	12/13/23 11:58	DWS	EET KNX
Total/NA	Cleanup	Split			10 mL	500 uL	81695	12/21/23 18:06	DRM	EET KNX
Total/NA	Analysis	ID-0016		1	1 mL	1 mL	81875	12/29/23 15:51	GEM	EET KNX
Instrument ID: GCMS1										
Total/NA	Prep	Combined Prep			1 Sample	20 mL	81501	12/18/23 11:23	SSS	EET KNX
Total/NA	Cleanup	Split			10 mL	20 uL	81696	12/21/23 18:08	DRM	EET KNX
Total/NA	Analysis	23		1			82379	01/17/24 14:04	MSD	EET KNX
Instrument ID: D11A										
Total/NA	Prep	Combined Prep			1 Sample	20 mL	81501	12/18/23 11:23	SSS	EET KNX
Total/NA	Cleanup	Split			10 mL	20 uL	81696	12/21/23 18:08	DRM	EET KNX
Total/NA	Analysis	23		1			82416	01/18/24 12:34	MSP	EET KNX
Instrument ID: D12C										

**Client Sample ID: AS23-2 CONTAINER 1,2A,2B,3,XAD**

**Lab Sample ID: 140-34737-2**

**Date Collected: 12/01/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	CARB429 Comb			1 Sample	20 mL	81338	12/13/23 11:58	DWS	EET KNX
Total/NA	Cleanup	Split			10 mL	500 uL	81695	12/21/23 18:06	DRM	EET KNX
Total/NA	Analysis	ID-0016		1	1 mL	1 mL	81875	12/29/23 16:14	GEM	EET KNX
Instrument ID: GCMS1										
Total/NA	Prep	Combined Prep			1 Sample	20 mL	81501	12/18/23 11:23	SSS	EET KNX
Total/NA	Cleanup	Split			10 mL	20 uL	81696	12/21/23 18:08	DRM	EET KNX
Total/NA	Analysis	23		1			82379	01/17/24 15:04	MSD	EET KNX
Instrument ID: D11A										

**Client Sample ID: AS23-3 CONTAINER 1,2A,2B,3,XAD**

**Lab Sample ID: 140-34737-3**

**Date Collected: 12/01/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	CARB429 Comb			1 Sample	20 mL	81338	12/13/23 11:58	DWS	EET KNX
Total/NA	Cleanup	Split			10 mL	500 uL	81695	12/21/23 18:06	DRM	EET KNX
Total/NA	Analysis	ID-0016		1	1 mL	1 mL	81875	12/29/23 16:36	GEM	EET KNX
Instrument ID: GCMS1										
Total/NA	Prep	Combined Prep			1 Sample	20 mL	81501	12/18/23 11:23	SSS	EET KNX
Total/NA	Cleanup	Split			10 mL	20 uL	81696	12/21/23 18:08	DRM	EET KNX
Total/NA	Analysis	23		1			82379	01/17/24 16:03	MSD	EET KNX
Instrument ID: D11A										

# Lab Chronicle

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

## Client Sample ID: VF23-1 CONTAINER 1,2A,2B,3,XAD

Lab Sample ID: 140-34737-4

Date Collected: 12/02/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	CARB429 Comb			1 Sample	20 mL	81338	12/13/23 11:58	DWS	EET KNX
Total/NA	Cleanup	Split			10 mL	500 uL	81695	12/21/23 18:06	DRM	EET KNX
Total/NA	Analysis	ID-0016		1	1 mL	1 mL	81875	12/29/23 16:59	GEM	EET KNX
Instrument ID: GCMS1										
Total/NA	Prep	Combined Prep			1 Sample	20 mL	81501	12/18/23 11:23	SSS	EET KNX
Total/NA	Cleanup	Split			10 mL	20 uL	81696	12/21/23 18:08	DRM	EET KNX
Total/NA	Analysis	23		1			82379	01/17/24 17:03	MSD	EET KNX
Instrument ID: D11A										
Total/NA	Prep	Combined Prep			1 Sample	20 mL	81501	12/18/23 11:23	SSS	EET KNX
Total/NA	Cleanup	Split			10 mL	20 uL	81696	12/21/23 18:08	DRM	EET KNX
Total/NA	Analysis	23		1			82416	01/18/24 13:03	MSP	EET KNX
Instrument ID: D12C										

## Client Sample ID: VF23-2 CONTAINER 1,2A,2B,3,XAD

Lab Sample ID: 140-34737-5

Date Collected: 12/03/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	CARB429 Comb			1 Sample	20 mL	81338	12/13/23 11:58	DWS	EET KNX
Total/NA	Cleanup	Split			10 mL	500 uL	81695	12/21/23 18:06	DRM	EET KNX
Total/NA	Analysis	ID-0016		1	1 mL	1 mL	81875	12/29/23 17:22	GEM	EET KNX
Instrument ID: GCMS1										
Total/NA	Prep	Combined Prep			1 Sample	20 mL	81501	12/18/23 11:23	SSS	EET KNX
Total/NA	Cleanup	Split			10 mL	20 uL	81696	12/21/23 18:08	DRM	EET KNX
Total/NA	Analysis	23		1			82379	01/17/24 18:03	MSD	EET KNX
Instrument ID: D11A										
Total/NA	Prep	Combined Prep			1 Sample	20 mL	81501	12/18/23 11:23	SSS	EET KNX
Total/NA	Cleanup	Split			10 mL	20 uL	81696	12/21/23 18:08	DRM	EET KNX
Total/NA	Analysis	23		1			82416	01/18/24 13:32	MSP	EET KNX
Instrument ID: D12C										

## Client Sample ID: VF23-4 CONTAINER 1,2A,2B,3,XAD

Lab Sample ID: 140-34737-6

Date Collected: 12/04/23 00:00

Matrix: Air

Date Received: 12/12/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	CARB429 Comb			1 Sample	20 mL	81338	12/13/23 11:58	DWS	EET KNX
Total/NA	Cleanup	Split			10 mL	500 uL	81695	12/21/23 18:06	DRM	EET KNX
Total/NA	Analysis	ID-0016		1	1 mL	1 mL	81875	12/29/23 17:45	GEM	EET KNX
Instrument ID: GCMS1										
Total/NA	Prep	Combined Prep			1 Sample	20 mL	81501	12/18/23 11:23	SSS	EET KNX
Total/NA	Cleanup	Split			10 mL	20 uL	81696	12/21/23 18:08	DRM	EET KNX
Total/NA	Analysis	23		1			82379	01/17/24 19:03	MSD	EET KNX
Instrument ID: D11A										

# Lab Chronicle

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

**Client Sample ID: VF23-4 CONTAINER 1,2A,2B,3,XAD**  
**Date Collected: 12/04/23 00:00**  
**Date Received: 12/12/23 10:00**

**Lab Sample ID: 140-34737-6**  
**Matrix: Air**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Combined Prep			1 Sample	20 mL	81501	12/18/23 11:23	SSS	EET KNX
Total/NA	Cleanup	Split			10 mL	20 uL	81696	12/21/23 18:08	DRM	EET KNX
Total/NA	Analysis	23		1			82416	01/18/24 14:01	MSP	EET KNX
Instrument ID: D12C										

**Client Sample ID: AP23-1 CONTAINER 1,2A,2B,3,XAD**  
**Date Collected: 11/30/23 00:00**  
**Date Received: 12/12/23 10:00**

**Lab Sample ID: 140-34737-7**  
**Matrix: Air**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	CARB429 Comb			1 Sample	20 mL	81338	12/13/23 11:58	DWS	EET KNX
Total/NA	Cleanup	Split			10 mL	500 uL	81695	12/21/23 18:06	DRM	EET KNX
Total/NA	Analysis	ID-0016		1	1 mL	1 mL	81875	12/29/23 18:08	GEM	EET KNX
Instrument ID: GCMS1										
Total/NA	Prep	Combined Prep			1 Sample	20 mL	81501	12/18/23 11:23	SSS	EET KNX
Total/NA	Cleanup	Split			10 mL	20 uL	81696	12/21/23 18:08	DRM	EET KNX
Total/NA	Analysis	23		1			82379	01/17/24 20:03	MSD	EET KNX
Instrument ID: D11A										

**Client Sample ID: AP23-2 CONTAINER 1,2A,2B,3,XAD**  
**Date Collected: 12/01/23 00:00**  
**Date Received: 12/12/23 10:00**

**Lab Sample ID: 140-34737-8**  
**Matrix: Air**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	CARB429 Comb			1 Sample	20 mL	81338	12/13/23 11:58	DWS	EET KNX
Total/NA	Cleanup	Split			10 mL	500 uL	81695	12/21/23 18:06	DRM	EET KNX
Total/NA	Analysis	ID-0016		1	1 mL	1 mL	81875	12/29/23 18:31	GEM	EET KNX
Instrument ID: GCMS1										
Total/NA	Prep	Combined Prep			1 Sample	20 mL	81501	12/18/23 11:23	SSS	EET KNX
Total/NA	Cleanup	Split			10 mL	20 uL	81696	12/21/23 18:08	DRM	EET KNX
Total/NA	Analysis	23		1			82406	01/18/24 05:15	MSP	EET KNX
Instrument ID: D11A										

**Client Sample ID: AP23-3 CONTAINER 1,2A,2B,3,XAD**  
**Date Collected: 12/01/23 00:00**  
**Date Received: 12/12/23 10:00**

**Lab Sample ID: 140-34737-9**  
**Matrix: Air**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	CARB429 Comb			1 Sample	20 mL	81338	12/13/23 11:58	DWS	EET KNX
Total/NA	Cleanup	Split			10 mL	500 uL	81695	12/21/23 18:06	DRM	EET KNX
Total/NA	Analysis	ID-0016		1	1 mL	1 mL	81875	12/29/23 18:54	GEM	EET KNX
Instrument ID: GCMS1										
Total/NA	Prep	Combined Prep			1 Sample	20 mL	81501	12/18/23 11:23	SSS	EET KNX
Total/NA	Cleanup	Split			10 mL	20 uL	81696	12/21/23 18:08	DRM	EET KNX
Total/NA	Analysis	23		1			82406	01/18/24 06:15	MSP	EET KNX
Instrument ID: D11A										



# Lab Chronicle

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

**Client Sample ID: PROOF BLANK CONTAINER 1,2A,2B,3,XAD**

**Lab Sample ID: 140-34737-10**

**Date Collected: 12/01/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	CARB429 Comb			1 Sample	20 mL	81338	12/13/23 11:58	DWS	EET KNX
Total/NA	Cleanup	Split			10 mL	500 uL	81695	12/21/23 18:06	DRM	EET KNX
Total/NA	Analysis	ID-0016		1	1 mL	1 mL	81875	12/29/23 19:16	GEM	EET KNX
Instrument ID: GCMS1										
Total/NA	Prep	Combined Prep			1 Sample	20 mL	81501	12/18/23 11:23	SSS	EET KNX
Total/NA	Cleanup	Split			10 mL	20 uL	81696	12/21/23 18:08	DRM	EET KNX
Total/NA	Analysis	23		1			82372	01/14/24 18:19	MSD	EET KNX
Instrument ID: D11A										

**Client Sample ID: A-1981,A-1982 M23/CARB429 MEDIA CHECK**

**Lab Sample ID: 140-34737-11**

**Date Collected: 11/30/23 00:00**

**Matrix: Air**

**Date Received: 12/12/23 10:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	CARB429 Comb			1 Sample	20 mL	81338	12/13/23 11:58	DWS	EET KNX
Total/NA	Cleanup	Split			10 mL	500 uL	81695	12/21/23 18:06	DRM	EET KNX
Total/NA	Analysis	ID-0016		1	1 mL	1 mL	81875	12/29/23 19:39	GEM	EET KNX
Instrument ID: GCMS1										
Total/NA	Prep	Combined Prep			1 Sample	20 mL	81501	12/18/23 11:23	SSS	EET KNX
Total/NA	Cleanup	Split			10 mL	20 uL	81696	12/21/23 18:08	DRM	EET KNX
Total/NA	Analysis	23		1			82372	01/14/24 17:19	MSD	EET KNX
Instrument ID: D11A										

**Client Sample ID: Method Blank**

**Lab Sample ID: MB 140-81338/12-B**

**Date Collected: N/A**

**Matrix: Air**

**Date Received: N/A**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	CARB429 Comb			1 Sample	20 mL	81338	12/13/23 11:58	DWS	EET KNX
Total/NA	Cleanup	Split			10 mL	500 uL	81695	12/21/23 18:06	DRM	EET KNX
Total/NA	Analysis	ID-0016		1	1 mL	1 mL	81875	12/29/23 14:44	GEM	EET KNX
Instrument ID: GCMS1										

**Client Sample ID: Method Blank**

**Lab Sample ID: MB 140-81501/14-B**

**Date Collected: N/A**

**Matrix: Air**

**Date Received: N/A**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Combined Prep			1 Sample	20 mL	81501	12/18/23 11:23	SSS	EET KNX
Total/NA	Cleanup	Split			10 mL	20 uL	81696	12/21/23 18:08	DRM	EET KNX
Total/NA	Analysis	23		1			82372	01/14/24 14:19	MSD	EET KNX
Instrument ID: D11A										

# Lab Chronicle

Client: SLR International Corp  
Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

## Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-81338/13-B

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	CARB429 Comb			1 Sample	20 mL	81338	12/13/23 11:58	DWS	EET KNX
Total/NA	Cleanup	Split			10 mL	500 uL	81695	12/21/23 18:06	DRM	EET KNX
Total/NA	Analysis	ID-0016		1	1 mL	1 mL	81875	12/29/23 15:06	GEM	EET KNX

Instrument ID: GCMS1

## Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-81501/12-B

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Combined Prep			1 Sample	20 mL	81501	12/18/23 11:23	SSS	EET KNX
Total/NA	Cleanup	Split			10 mL	20 uL	81696	12/21/23 18:08	DRM	EET KNX
Total/NA	Analysis	23		1			82372	01/14/24 10:34	MSD	EET KNX

Instrument ID: D11A

## Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-81338/14-B

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	CARB429 Comb			1 Sample	20 mL	81338	12/13/23 14:02	DWS	EET KNX
Total/NA	Cleanup	Split			10 mL	500 uL	81695	12/21/23 18:06	DRM	EET KNX
Total/NA	Analysis	ID-0016		1	1 mL	1 mL	81875	12/29/23 15:29	GEM	EET KNX

Instrument ID: GCMS1

## Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-81501/13-B

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Combined Prep			1 Sample	20 mL	81501	12/18/23 11:23	SSS	EET KNX
Total/NA	Cleanup	Split			10 mL	20 uL	81696	12/21/23 18:08	DRM	EET KNX
Total/NA	Analysis	23		1			82372	01/14/24 11:34	MSD	EET KNX

Instrument ID: D11A

### Laboratory References:

EET KNX = Eurofins Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

# Accreditation/Certification Summary

Client: SLR International Corp  
 Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

## Laboratory: Eurofins Knoxville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-25
ANAB	Dept. of Energy	L2311.01	02-13-25
ANAB	ISO/IEC 17025	L2311	02-13-25
Arkansas DEQ	State	88-0688	06-16-24
Colorado	State	TN00009	02-29-24
Connecticut	State	PH-0223	09-30-25
Florida	NELAP	E87177	06-30-24
Georgia (DW)	State	906	07-27-25
Hawaii	State	NA	07-27-24
Kansas	NELAP	E-10349	10-31-24
Kentucky (DW)	State	90101	12-31-24
Louisiana (All)	NELAP	83979	06-30-24
Louisiana (DW)	State	LA019	12-31-24
Maryland	State	277	03-31-24
Michigan	State	9933	07-27-25
Nevada	State	TN00009	07-31-24
New Jersey	NELAP	TN001	07-01-24
New York	NELAP	10781	03-31-24
North Carolina (DW)	State	21705	07-31-24
North Carolina (WW/SW)	State	64	12-31-24
Oklahoma	State	9415	08-31-24
Oregon	NELAP	TNI0189	01-01-25
Pennsylvania	NELAP	68-00576	12-31-24
Tennessee	State	02014	07-27-25
Texas	NELAP	T104704380-23-18	08-31-24
US Fish & Wildlife	US Federal Programs	058448	07-31-24
USDA	US Federal Programs	525-22-279-18762	10-06-25
Utah	NELAP	TN00009	07-31-24
Virginia	NELAP	460176	09-14-24
Washington	State	C593	01-19-24
West Virginia (DW)	State	9955C	12-31-24
West Virginia DEP	State	345	04-30-24
Wisconsin	State	998044300	08-31-24

# Method Summary

Client: SLR International Corp  
Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

Method	Method Description	Protocol	Laboratory
ID-0016	PAH Emissions (Stationary Source)(GC/MS Isotope Dilution)	None	EET KNX
23	Dioxins and Furans (Stationary Source) (HRGC/HRMS)	EPA	EET KNX
CARB429 Comb	Extraction, Source Air Samples (Combined)	CARB	EET KNX
Combined Prep	Extraction, Source Air Samples (Combined)	None	EET KNX
Split	Source Air Split	None	EET KNX

**Protocol References:**

- CARB = CA EPA Air Resource Board
- EPA = US Environmental Protection Agency
- None = None

**Laboratory References:**

- EET KNX = Eurofins Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000



# Sample Summary

Client: SLR International Corp  
Project/Site: FMMI D/F+PAH Testing - M23/CARB429

Job ID: 140-34737-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-34737-1	AS23-1 CONTAINER 1,2A,2B,3,XAD	Air	11/30/23 00:00	12/12/23 10:00
140-34737-2	AS23-2 CONTAINER 1,2A,2B,3,XAD	Air	12/01/23 00:00	12/12/23 10:00
140-34737-3	AS23-3 CONTAINER 1,2A,2B,3,XAD	Air	12/01/23 00:00	12/12/23 10:00
140-34737-4	VF23-1 CONTAINER 1,2A,2B,3,XAD	Air	12/02/23 00:00	12/12/23 10:00
140-34737-5	VF23-2 CONTAINER 1,2A,2B,3,XAD	Air	12/03/23 00:00	12/12/23 10:00
140-34737-6	VF23-4 CONTAINER 1,2A,2B,3,XAD	Air	12/04/23 00:00	12/12/23 10:00
140-34737-7	AP23-1 CONTAINER 1,2A,2B,3,XAD	Air	11/30/23 00:00	12/12/23 10:00
140-34737-8	AP23-2 CONTAINER 1,2A,2B,3,XAD	Air	12/01/23 00:00	12/12/23 10:00
140-34737-9	AP23-3 CONTAINER 1,2A,2B,3,XAD	Air	12/01/23 00:00	12/12/23 10:00
140-34737-10	PROOF BLANK CONTAINER 1,2A,2B,3,XAD	Air	12/01/23 00:00	12/12/23 10:00
140-34737-11	A-1981,A-1982 M23/CARB429 MEDIA CHECK	Air	11/30/23 00:00	12/12/23 10:00

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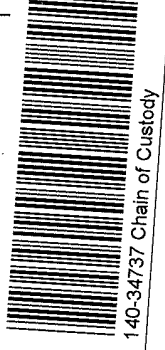


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<http://www.slrconsulting.com/us>

No. 118.01290.00025\_M23

# Chain of Custody Record

Project Name: FMMI D/F and PAH Testing		Project Number: 118.01290.00025_M23		Analysis Required		Page 1 of 4	
Send Report To: Doug Bopray, John Rosburg		Sampler (Print Name): Doug Bopray					
Address:		Sampler (Print Name): John Rosburg					
1612 Specht Point Road, Suite 119		Shipment Method: FedEx					
Fort Collins, CO 80525		Airbill Number					
Phone: (970) 219-1431		Laboratory Receiving: Eurofins - Knoxville				Purchase Order No. 3036	
Email: dbopray@slrconsulting.com, jrosburg@gmail.com						Comments, Special Instructions, etc.	
Field Sample ID		Sample Date		Sample Time		Sample Matrix	
AS23-1 container 1		11/30/2023				Filter	
AS23-1 container 2A		11/30/2023				Acetone	
AS23-1 container 2B		11/30/2023				Toluene	
AS23-1 container 3		11/30/2023				Water	
AS23-1		11/30/2023				XAD	
AS23-2 container 1		12/11/2023				Filter	
AS23-2 container 2A		12/11/2023				Acetone	
AS23-2 container 2B		12/11/2023				Toluene	
AS23-2 container 3		12/11/2023				Water	
AS23-2		12/11/2023				XAD	
AS23-3 container 1		12/11/2023				Filter	
AS23-3 container 2A		12/11/2023				Acetone	
AS23-3 container 2B		12/11/2023				Toluene	
AS23-3 container 3		12/11/2023				Water	
AS23-3		12/11/2023				XAD	
Relinquished by: (Signature)		Date: 12/11/23		Time: 16:26		Received By: (Signature)	
Relinquished by: (Signature)		Date:		Time:		Received By: (Signature)	
Relinquished by: (Signature)		Date:		Time:		Received by: (Signature)	
M23 D/Fs and PAHs		Number of Containers		Sample Custodian Remarks (Completed By Laboratory):		Turnaround	
X		1		QA/QC Level		Routine <input type="checkbox"/>	
X		1		Level I <input checked="" type="checkbox"/>		24 Hour <input type="checkbox"/>	
X		1		Level II <input type="checkbox"/>		1 Week <input type="checkbox"/>	
X		1		Level III <input type="checkbox"/>		Other <input type="checkbox"/>	
X		1		Other <input type="checkbox"/>		14 days	
X		1		Total # Containers Received?		Sample Receipt	
X		1		COC Seals Present?		COC Seals Intact?	
X		1		COC Seals Intact?		Received Containers Intact?	
X		1		Received Containers Intact?		Temperature?	



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No. 118.01290.00025\_M23

# Chain of Custody Record

Project Name: FMMI D/F and PAH Testing		Project Number: 118.01290.00025_M23		Analysis Required		Page 2 of 4	
Send Report To: Doug Bopray, John Rosburg		Sampler (Print Name): Doug Bopray				Purchase Order No. 3036	
Address: 1612 Specht Point Road, Suite 119		Shipment Method: FedEx				Comments, Special Instructions, etc.	
Fort Collins, CO 80525		Airbill Number				Lab Sample ID (to be completed by lab)	
Phone: (970) 219-1431		Laboratory Receiving: Eurofins - Knoxville					
Email: <a href="mailto:dbopray@slrconsulting.com">dbopray@slrconsulting.com</a> , <a href="mailto:jrosburg@gmail.com">jrosburg@gmail.com</a>							
Field Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	M23 D/Fs and PAHs		
VF23-1 container 1	12/2/2023		Filter	1	X	Please combine the fractions as necessary to analyze them for D/Fs and PAHs	
VF23-1 container 2A	12/2/2023		Acetone	1	X		
VF23-1 container 2B	12/2/2023		Toluene	1	X		
VF23-1 container 3	12/2/2023		Water	1	X		
VF23-1	12/2/2023		XAD	1	X		
VF23-2 container 1	12/3/2023		Filter	1	X		
VF23-2 container 2A	12/3/2023		Acetone	1	X		
VF23-2 container 2B	12/3/2023		Toluene	1	X		
VF23-2 container 3	12/3/2023		Water	1	X		
VF23-2	12/3/2023		XAD	1	X		
VF23-4 container 1	12/5/2023		Filter	1	X		
VF23-4 container 2A	12/5/2023		Acetone	1	X		
VF23-4 container 2B	12/5/2023		Toluene	1	X		
VF23-4 container 3	12/5/2023		Water	1	X		
VF23-4	12/5/2023		XAD	1	X		
Relinquished by: (Signature)		Time: 16:00	Date: 12/11/23	Received by: (Signature)		Time: 10:00	Date: 12-12-23
Relinquished by: (Signature)		Time:	Date:	Received by: (Signature)		Time:	Date:
Relinquished by: (Signature)		Time:	Date:	Received by: (Signature)		Time:	Date:
Sample Custodian Remarks (Completed By Laboratory):		QA/QC Level		Turnaround		Sample Receipt	
		Level I <input checked="" type="checkbox"/>		Routine <input type="checkbox"/>		Total # Containers Received?	
		Level II <input type="checkbox"/>		24 Hour <input type="checkbox"/>		COC Seals Present?	
		Level III <input type="checkbox"/>		1 Week <input type="checkbox"/>		COC Seals Intact?	
		Other <input type="checkbox"/>		Other 14 days <input type="checkbox"/>		Received Containers Intact?	
						Temperature?	

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# Chain of Custody Record

No. 118.01290.00025\_M23

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Project Name: FMMI D/F and PAH Testing		Project Number: 118.01290.00025_M23		Analysis Required		Page <u>3</u> of <u>4</u>	
Send Report To: Doug Bopray, John Rosburg		Sampler (Print Name): Doug Bopray		Comments, Special Instructions, etc.		Lab Sample ID (to be completed by lab)	
Address: 1612 Specht Point Road, Suite 119		Sampler (Print Name): John Rosburg		PleApe combine the fractions AP necessary to analyze them for D/Fs and PAHs			
Fort Collins, CO 80525		Shipment Method: FedEx					
Phone: (970) 219-1431		Airbill Number					
Email: dbopray@slrconsulting.com, jrosburg@gmail.com		Laboratory Receiving: Eurofins - Knoxville					
Field Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	M23 D/Fs and PAHs		
AP23-1 container 1	11/30/2023		Filter	1	X		
AP23-1 container 2A	11/30/2023		Acetone	1	X		
AP23-1 container 2B	11/30/2023		Toluene	1	X		
AP23-1 container 3	11/30/2023		Water	1	X		
AP23-1	11/30/2023		XAD	1	X		
AP23-2 container 1	12/1/2023		Filter	1	X		
AP23-2 container 2A	12/1/2023		Acetone	1	X		
AP23-2 container 2B	12/1/2023		Toluene	1	X		
AP23-2 container 3	12/1/2023		Water	1	X		
AP23-2	12/1/2023		XAD	1	X		
AP23-3 container 1	12/1/2023		Filter	1	X		
AP23-3 container 2A	12/1/2023		Acetone	1	X		
AP23-3 container 2B	12/1/2023		Toluene	1	X		
AP23-3 container 3	12/1/2023		Water	1	X		
AP23-3	12/1/2023		XAD	1	X		
Relinquished by: (Signature)	Date: 12/11/23	Time: 16:00	Received by: (Signature)	Date: 12-12-23	Time: 10:00	Sample Custodian Remarks (Completed By Laboratory):	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:	Turnaround	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:	Total # Containers Received? <input type="checkbox"/>	
						COC Seals Present? <input type="checkbox"/>	
						COC Seals Intact? <input type="checkbox"/>	
						Received Containers Intact? <input type="checkbox"/>	
						Temperature? <input type="checkbox"/>	

White: Lab Copy      Yellow: PM Copy      Pink: Field Copy      Gold: PM/GA/QC Copy





# Chain of Custody Record

No. 118.01290.00025\_M23

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Project Name: FMMI D/F and PAH Testing		Project Number: 118.01290.00025_M23		Analysis Required		Page 4 of 4	
Send Report To: Doug Bopray, John Rosburg		Sampler (Print Name): Doug Bopray		Comments, Special Instructions, etc.		Lab Sample ID (to be completed by lab)	
Address: 1612 Specht Point Road, Suite 119		Sampler (Print Name): John Rosburg		Please combine the fractions as necessary to analyze them for D/Fs and PAHs			
Fort Collins, CO 80525		Shipment Method: FedEx		1 used and labeled, 1 unused. Do Not Analyze			
Phone: (970) 219-1431		Airbill Number				Purchase Order No. 3036	
Email: dbopray@slrcounseling.com, jrosburg@gmail.com		Laboratory Receiving: Eurofins - Knoxville					
Field Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	M23 D/Fs and PAHs	QA/QC Level	Turnaround
Proof blank container 1	12/1/2023		Filter	1	X	Level I <input checked="" type="checkbox"/>	Routine <input type="checkbox"/>
Proof blank container 2A	12/1/2023		Acetone	1	X	Level II <input type="checkbox"/>	24 Hour <input type="checkbox"/>
Proof blank container 2B	12/1/2023		Toluene	1	X	Level III <input type="checkbox"/>	1 Week <input type="checkbox"/>
Proof blank container 3	12/1/2023		Water	1	X	Other <input type="checkbox"/>	Other 14 days <input type="checkbox"/>
Proof blank container XAD	12/1/2023		XAD	1	X		
XAD Traps				2			
Relinquished by: (Signature) <i>[Signature]</i>		Received by: (Signature) <i>[Signature]</i>		Date: 12/1/23		Time: 10:00	
Relinquished by: (Signature) <i>[Signature]</i>		Received by: (Signature) <i>[Signature]</i>		Date: 12/1/23		Time: 10:00	
Relinquished by: (Signature) <i>[Signature]</i>		Received by: (Signature) <i>[Signature]</i>		Date: 12/1/23		Time: 10:00	

White: Lab Copy      Yellow: PM Copy      Pink: Field Copy      Gold: PM/QA/QC Copy



EUROFINS KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			<input type="checkbox"/> Containers, Broken	
2. Were ambient air containers received intact?		/		<input type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	/			<input type="checkbox"/> Yes <input type="checkbox"/> NA	CUSTODY SEALS INTACT XAD TRAPS RECEIVED AT KT H.7 / CT 18.41C RINSES RECEIVED ANALYST KS 18.0 / CT 18.41C SKD 12.12.23
4. Is the cooler temperature within limits? (> freezing temp. of water to 6°C, VOST: 10°C) Thermometer ID: <u>91423</u> Correction factor: <u>+0.4</u>	/	/		<input checked="" type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	COOLERS/2. ANALYST FAX# 7744 3620 709 PD 7744 3615 3068 PD 7744 3611 3320 PD 7744 3618 7512 PD
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	H. ANALYST AND FILTERS RECEIVED ANALYST
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received <input type="checkbox"/> COC; No Date/Time; Client Contacted	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> Sampler Not Listed on COC <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC No tests on COC	Labeling Verified by: _____ Date: _____ pH test strip lot number: _____
10. Was the sampler identified on the COC?	/			<input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC No tests on COC	
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	Box 16A: pH Preservation Box 18A: Residual Chlorine
16. Were samples received with correct chemical preservative (excluding Encore)?		/		<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	Preservative: _____ Lot Number: _____ Exp Date: _____ Analyst: _____ Date: _____ Time: _____
17. Were VOA samples received without headspace? (e.g. 1613B, 1668)		/		<input type="checkbox"/> Headspace (VOA only) <input type="checkbox"/> Residual Chlorine	
18. Did you check for residual chlorine, if necessary? Chlorine test strip lot number:		/			
19. For 1613B water samples is pH<9?		/		<input type="checkbox"/> If no, notify lab to adjust <input type="checkbox"/> Project missing info	
20. For rad samples was sample activity info. Provided?		/			
Project #: _____ PM Instructions: _____					

Sample Receiving Associate: Randall Date: 12-12-23  
QA026R33.doc, 11/10/23



 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Doug Bopray  
SLR International Corp  
1612 Specht Point Road, Suite 119  
Fort Collins CO 80525  
Generated 12/19/2023 1:46 PM

**JOB DESCRIPTION**

FMMI HAPs Testing M26A

**JOB NUMBER**

140-34757-1

# Eurofins Knoxville

## Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

## Authorization



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12/19/2023 1:46 PM

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# Definitions/Glossary

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

## Qualifiers

### HPLC/IC

Qualifier	Qualifier Description
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL, and the absolute difference between results is < the upper reporting limits for both.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

# Method Summary

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

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<b>Method</b>	<b>Method Description</b>	<b>Protocol</b>	<b>Laboratory</b>
0050/26A	Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod)	SW846	EET KNX
0050/26A	Extraction of Hydrogen Halide and Halogen Emissions	SW846	EET KNX

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

EET KNX = Eurofins Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000



# Sample Summary

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-34757-1	VF26A-1 CONTAINER 3 H2SO4	Air	12/02/23 00:00	12/13/23 09:30
140-34757-2	VF26A-1 CONTAINER 4 NAOH	Air	12/02/23 00:00	12/13/23 09:30
140-34757-3	VF26A-2 CONTAINER 3 H2SO4	Air	12/03/23 00:00	12/13/23 09:30
140-34757-4	VF26A-2 CONTAINER 4 NAOH	Air	12/03/23 00:00	12/13/23 09:30
140-34757-5	VF26A-4 CONTAINER 3 H2SO4	Air	12/05/23 00:00	12/13/23 09:30
140-34757-6	VF26A-4 CONTAINER 4 NAOH	Air	12/05/23 00:00	12/13/23 09:30
140-34757-7	AS26-1 CONTAINER 3 H2SO4	Air	11/30/23 00:00	12/13/23 09:30
140-34757-8	AS26-1 CONTAINER 4 NAOH	Air	11/30/23 00:00	12/13/23 09:30
140-34757-9	AS26-2 CONTAINER 3 H2SO4	Air	12/01/23 00:00	12/13/23 09:30
140-34757-10	AS26-2 CONTAINER 4 NAOH	Air	12/01/23 00:00	12/13/23 09:30
140-34757-11	AS26-3 CONTAINER 3 H2SO4	Air	12/01/23 00:00	12/13/23 09:30
140-34757-12	AS26-3 CONTAINER 4 NAOH	Air	12/01/23 00:00	12/13/23 09:30
140-34757-13	AP26-1 CONTAINER 3 H2SO4	Air	12/06/23 00:00	12/13/23 09:30
140-34757-14	AP26-1 CONTAINER 4 NAOH	Air	12/06/23 00:00	12/13/23 09:30
140-34757-15	AP26-2 CONTAINER 3 H2SO4	Air	12/06/23 00:00	12/13/23 09:30
140-34757-16	AP26-2 CONTAINER 4 NAOH	Air	12/06/23 00:00	12/13/23 09:30
140-34757-17	AP26-3 CONTAINER 3 H2SO4	Air	12/07/23 00:00	12/13/23 09:30
140-34757-18	AP26-3 CONTAINER 4 NAOH	Air	12/07/23 00:00	12/13/23 09:30
140-34757-19	BLANK CONTAINER 6 H2SO4	Air	12/07/23 00:00	12/13/23 09:30
140-34757-20	BLANK CONTAINER 7 NAOH	Air	12/07/23 00:00	12/13/23 09:30
140-34757-21	BLANK CONTAINER 8 H2O	Air	12/07/23 00:00	12/13/23 09:30

**Job Narrative  
140-34757-1**

**Receipt**

The samples were received on 12/13/2023 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 18.4° C and 18.4° C.

**General Chemistry**

Analysis of Stationary Source Emission Samples by Ion Chromatography

Samples were analyzed for chloride by ion chromatography using SOP number KNOX-WC-005 (based on EPA methods 9056, 9057 and 26A). All sample results were reported as total µg hydrogen chloride and total µg chlorine. Results were calculated using the following equations:

Hydrogen Chloride, µg = (Chloride, µg/mL) × (Sample Volume, mL) × (Molecular Weight HCl / Molecular Weight Cl) × Bench DF

Chlorine, µg = (Chloride, µg/mL) × (Sample Volume, mL) × Bench DF

Sodium hydroxide impinger samples were treated with sodium thiosulfate prior to the final analysis in order to convert residual hypochlorite to chloride ion.

Note: A sample volume of 100 mL was used to convert the results to total µg for the method blanks, laboratory control samples, and client reagent blanks.

For demonstration of analytical method performance on these samples, Eurofins TestAmerica Knoxville analyzed matrix spikes (MS) and matrix spike duplicates (MSD). Acceptable recoveries of these spikes demonstrate that quantitation from this particular stack gas matrix is accurate and acceptable. Impinger samples containing 0.1N sulfuric acid and 0.1N sodium hydroxide often display matrix interference effects causing poor method performance and possibly giving unreliable data unless the interference is dealt with. Therefore, the samples were diluted in the lab to reduce the interference for a more accurate anion response. The samples may be analyzed at increasing dilutions along with matrix spikes until matrix spikes display acceptable recoveries.

Method 0050/26A: The sample duplicate (DU) precision for samples VF26A-1 CONTAINER 3 H2SO4 (140-34757-1), VF26A-1 CONTAINER 3 H2SO4 (140-34757-1[DU]), AS26-2 CONTAINER 3 H2SO4 (140-34757-9), AS26-2 CONTAINER 3 H2SO4 (140-34757-9[DU]), AS26-3 CONTAINER 3 H2SO4 (140-34757-11) and AS26-3 CONTAINER 3 H2SO4 (140-34757-11[DU]) was outside control limits. One or more results are less than the RL and the results are considered estimates. Therefore, the requirement for the RPD to be less than or equal to 10% does not apply.

Method 0050/26A: The sample duplicate (DU) precision for samples VF26A-1 CONTAINER 4 NAOH (140-34757-2), VF26A-1 CONTAINER 4 NAOH (140-34757-2[DU]), AP26-1 CONTAINER 4 NAOH (140-34757-14) and AP26-1 CONTAINER 4 NAOH (140-34757-14[DU]) was outside control limits. One or more results are less than the RL and the results are considered estimates. Therefore, the requirement for the RPD to be less than or equal to 10% does not apply.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# QC Association Summary

Client: SLR International Corp  
 Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

## HPLC/IC

### Prep Batch: 81372

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-34757-1	VF26A-1 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	
140-34757-3	VF26A-2 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	
140-34757-5	VF26A-4 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	
140-34757-7	AS26-1 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	
140-34757-9	AS26-2 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	
140-34757-11	AS26-3 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	
140-34757-13	AP26-1 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	
140-34757-15	AP26-2 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	
140-34757-17	AP26-3 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	
140-34757-19	BLANK CONTAINER 6 H2SO4	Total/NA	Air	0050/26A	
140-34757-21	BLANK CONTAINER 8 H2O	Total/NA	Air	0050/26A	
MB 140-81372/1-A	Method Blank	Total/NA	Air	0050/26A	
LCS 140-81372/2-A	Lab Control Sample	Total/NA	Air	0050/26A	
LCSD 140-81372/3-A	Lab Control Sample Dup	Total/NA	Air	0050/26A	
140-34757-3 MS	VF26A-2 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	
140-34757-3 MSD	VF26A-2 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	
140-34757-9 MS	AS26-2 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	
140-34757-9 MSD	AS26-2 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	
140-34757-15 MS	AP26-2 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	
140-34757-15 MSD	AP26-2 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	
140-34757-1 DU	VF26A-1 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	
140-34757-3 DU	VF26A-2 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	
140-34757-5 DU	VF26A-4 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	
140-34757-7 DU	AS26-1 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	
140-34757-9 DU	AS26-2 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	
140-34757-11 DU	AS26-3 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	
140-34757-13 DU	AP26-1 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	
140-34757-15 DU	AP26-2 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	
140-34757-17 DU	AP26-3 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	
140-34757-19 DU	BLANK CONTAINER 6 H2SO4	Total/NA	Air	0050/26A	
140-34757-21 DU	BLANK CONTAINER 8 H2O	Total/NA	Air	0050/26A	

### Prep Batch: 81373

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-34757-2	VF26A-1 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	
140-34757-4	VF26A-2 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	
140-34757-6	VF26A-4 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	
140-34757-8	AS26-1 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	
140-34757-10	AS26-2 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	
140-34757-12	AS26-3 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	
140-34757-14	AP26-1 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	
140-34757-16	AP26-2 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	
140-34757-18	AP26-3 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	
140-34757-20	BLANK CONTAINER 7 NAOH	Total/NA	Air	0050/26A	
MB 140-81373/1-A	Method Blank	Total/NA	Air	0050/26A	
LCS 140-81373/2-A	Lab Control Sample	Total/NA	Air	0050/26A	
LCSD 140-81373/3-A	Lab Control Sample Dup	Total/NA	Air	0050/26A	
140-34757-4 MS	VF26A-2 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	
140-34757-4 MSD	VF26A-2 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	
140-34757-10 MS	AS26-2 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	
140-34757-10 MSD	AS26-2 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	

# QC Association Summary

Client: SLR International Corp  
 Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

## HPLC/IC (Continued)

### Prep Batch: 81373 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-34757-16 MS	AP26-2 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	
140-34757-16 MSD	AP26-2 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	
140-34757-2 DU	VF26A-1 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	
140-34757-4 DU	VF26A-2 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	
140-34757-6 DU	VF26A-4 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	
140-34757-8 DU	AS26-1 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	
140-34757-10 DU	AS26-2 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	
140-34757-12 DU	AS26-3 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	
140-34757-14 DU	AP26-1 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	
140-34757-16 DU	AP26-2 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	
140-34757-18 DU	AP26-3 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	
140-34757-20 DU	BLANK CONTAINER 7 NAOH	Total/NA	Air	0050/26A	

### Analysis Batch: 81419

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-34757-1	VF26A-1 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	81372
140-34757-3	VF26A-2 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	81372
140-34757-5	VF26A-4 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	81372
140-34757-7	AS26-1 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	81372
140-34757-9	AS26-2 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	81372
140-34757-11	AS26-3 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	81372
140-34757-13	AP26-1 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	81372
140-34757-15	AP26-2 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	81372
140-34757-17	AP26-3 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	81372
140-34757-19	BLANK CONTAINER 6 H2SO4	Total/NA	Air	0050/26A	81372
140-34757-21	BLANK CONTAINER 8 H2O	Total/NA	Air	0050/26A	81372
MB 140-81372/1-A	Method Blank	Total/NA	Air	0050/26A	81372
LCS 140-81372/2-A	Lab Control Sample	Total/NA	Air	0050/26A	81372
LCSD 140-81372/3-A	Lab Control Sample Dup	Total/NA	Air	0050/26A	81372
140-34757-3 MS	VF26A-2 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	81372
140-34757-3 MSD	VF26A-2 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	81372
140-34757-9 MS	AS26-2 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	81372
140-34757-9 MSD	AS26-2 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	81372
140-34757-15 MS	AP26-2 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	81372
140-34757-15 MSD	AP26-2 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	81372
140-34757-1 DU	VF26A-1 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	81372
140-34757-3 DU	VF26A-2 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	81372
140-34757-5 DU	VF26A-4 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	81372
140-34757-7 DU	AS26-1 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	81372
140-34757-9 DU	AS26-2 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	81372
140-34757-11 DU	AS26-3 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	81372
140-34757-13 DU	AP26-1 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	81372
140-34757-15 DU	AP26-2 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	81372
140-34757-17 DU	AP26-3 CONTAINER 3 H2SO4	Total/NA	Air	0050/26A	81372
140-34757-19 DU	BLANK CONTAINER 6 H2SO4	Total/NA	Air	0050/26A	81372
140-34757-21 DU	BLANK CONTAINER 8 H2O	Total/NA	Air	0050/26A	81372

### Analysis Batch: 81494

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-34757-2	VF26A-1 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	81373
140-34757-4	VF26A-2 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	81373

# QC Association Summary

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

## HPLC/IC (Continued)

### Analysis Batch: 81494 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-34757-6	VF26A-4 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	81373
140-34757-8	AS26-1 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	81373
140-34757-10	AS26-2 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	81373
140-34757-12	AS26-3 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	81373
140-34757-14	AP26-1 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	81373
140-34757-16	AP26-2 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	81373
140-34757-18	AP26-3 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	81373
140-34757-20	BLANK CONTAINER 7 NAOH	Total/NA	Air	0050/26A	81373
MB 140-81373/1-A	Method Blank	Total/NA	Air	0050/26A	81373
LCS 140-81373/2-A	Lab Control Sample	Total/NA	Air	0050/26A	81373
LCSD 140-81373/3-A	Lab Control Sample Dup	Total/NA	Air	0050/26A	81373
140-34757-4 MS	VF26A-2 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	81373
140-34757-4 MSD	VF26A-2 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	81373
140-34757-10 MS	AS26-2 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	81373
140-34757-10 MSD	AS26-2 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	81373
140-34757-16 MS	AP26-2 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	81373
140-34757-16 MSD	AP26-2 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	81373
140-34757-2 DU	VF26A-1 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	81373
140-34757-4 DU	VF26A-2 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	81373
140-34757-6 DU	VF26A-4 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	81373
140-34757-8 DU	AS26-1 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	81373
140-34757-10 DU	AS26-2 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	81373
140-34757-12 DU	AS26-3 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	81373
140-34757-14 DU	AP26-1 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	81373
140-34757-16 DU	AP26-2 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	81373
140-34757-18 DU	AP26-3 CONTAINER 4 NAOH	Total/NA	Air	0050/26A	81373
140-34757-20 DU	BLANK CONTAINER 7 NAOH	Total/NA	Air	0050/26A	81373

# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

**Client Sample ID: VF26A-1 CONTAINER 3 H2SO4**

**Lab Sample ID: 140-34757-1**

Date Collected: 12/02/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Sample Container: Amber Glass 250ml - unpreserved

**Method: SW846 0050/26A - Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hydrogen Chloride	28.1	J	52.4	27.0	ug/Sample		12/14/23 09:50	12/14/23 12:44	2

# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

**Client Sample ID: VF26A-1 CONTAINER 4 NAOH**

**Lab Sample ID: 140-34757-2**

Date Collected: 12/02/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Sample Container: Amber Glass 250ml - unpreserved

**Method: SW846 0050/26A - Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorine	104	J	123	61.3	ug/Sample		12/14/23 09:56	12/15/23 21:30	5

# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

**Client Sample ID: VF26A-2 CONTAINER 3 H2SO4**

**Lab Sample ID: 140-34757-3**

Date Collected: 12/03/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Sample Container: Amber Glass 250ml - unpreserved

**Method: SW846 0050/26A - Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hydrogen Chloride	46.0	J	52.4	27.0	ug/Sample		12/14/23 09:50	12/14/23 13:29	2



# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

**Client Sample ID: VF26A-2 CONTAINER 4 NAOH**

**Lab Sample ID: 140-34757-4**

Date Collected: 12/03/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Sample Container: Amber Glass 250ml - unpreserved

**Method: SW846 0050/26A - Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorine	212		123	61.3	ug/Sample		12/14/23 09:56	12/15/23 22:54	5

# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

**Client Sample ID: VF26A-4 CONTAINER 3 H2SO4**

**Lab Sample ID: 140-34757-5**

Date Collected: 12/05/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Sample Container: Amber Glass 250ml - unpreserved

**Method: SW846 0050/26A - Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hydrogen Chloride	ND		51.4	26.5	ug/Sample		12/14/23 09:50	12/14/23 14:57	2

# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

**Client Sample ID: VF26A-4 CONTAINER 4 NAOH**

**Lab Sample ID: 140-34757-6**

Date Collected: 12/05/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Sample Container: Amber Glass 250ml - unpreserved

**Method: SW846 0050/26A - Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorine	92.8	J	120	60.0	ug/Sample		12/14/23 09:56	12/16/23 01:43	5

# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

**Client Sample ID: AS26-1 CONTAINER 3 H2SO4**

**Lab Sample ID: 140-34757-7**

Date Collected: 11/30/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Sample Container: Amber Glass 250ml - unpreserved

**Method: SW846 0050/26A - Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hydrogen Chloride	46.4	J	51.4	26.5	ug/Sample		12/14/23 09:50	12/14/23 16:26	2

# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

**Client Sample ID: AS26-1 CONTAINER 4 NAOH**

**Lab Sample ID: 140-34757-8**

Date Collected: 11/30/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Sample Container: Amber Glass 250ml - unpreserved

**Method: SW846 0050/26A - Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorine	92.2	J	118	58.8	ug/Sample		12/14/23 09:56	12/16/23 03:52	5

# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

**Client Sample ID: AS26-2 CONTAINER 3 H2SO4**

**Lab Sample ID: 140-34757-9**

Date Collected: 12/01/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Sample Container: Amber Glass 250ml - unpreserved

**Method: SW846 0050/26A - Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hydrogen Chloride	41.3	J	51.4	26.5	ug/Sample		12/14/23 09:50	12/14/23 17:11	2

# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

**Client Sample ID: AS26-2 CONTAINER 4 NAOH**

**Lab Sample ID: 140-34757-10**

Date Collected: 12/01/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Sample Container: Amber Glass 250ml - unpreserved

**Method: SW846 0050/26A - Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorine	91.2	J	118	58.8	ug/Sample		12/14/23 09:56	12/16/23 05:17	5

# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

**Client Sample ID: AS26-3 CONTAINER 3 H2SO4**

**Lab Sample ID: 140-34757-11**

Date Collected: 12/01/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Sample Container: Amber Glass 500mL - unpreserved

**Method: SW846 0050/26A - Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hydrogen Chloride	51.2	J	52.4	27.0	ug/Sample		12/14/23 09:50	12/14/23 18:39	2



# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

**Client Sample ID: AS26-3 CONTAINER 4 NAOH**

**Lab Sample ID: 140-34757-12**

Date Collected: 12/01/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Sample Container: Amber Glass 250ml - unpreserved

**Method: SW846 0050/26A - Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorine	80.4	J	123	61.3	ug/Sample		12/14/23 09:56	12/16/23 08:05	5

# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

**Client Sample ID: AP26-1 CONTAINER 3 H2SO4**

**Lab Sample ID: 140-34757-13**

Date Collected: 12/06/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Sample Container: Amber Glass 250ml - unpreserved

**Method: SW846 0050/26A - Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hydrogen Chloride	137		53.5	27.6	ug/Sample		12/14/23 09:50	12/14/23 19:24	2

# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

**Client Sample ID: AP26-1 CONTAINER 4 NAOH**

**Lab Sample ID: 140-34757-14**

Date Collected: 12/06/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Sample Container: Amber Glass 250ml - unpreserved

**Method: SW846 0050/26A - Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorine	85.9	J	120	60.0	ug/Sample		12/14/23 09:56	12/16/23 09:30	5

# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

**Client Sample ID: AP26-2 CONTAINER 3 H2SO4**

**Lab Sample ID: 140-34757-15**

Date Collected: 12/06/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Sample Container: Amber Glass 250ml - unpreserved

**Method: SW846 0050/26A - Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hydrogen Chloride	159		54.5	28.1	ug/Sample		12/14/23 09:50	12/14/23 20:53	2

# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

**Client Sample ID: AP26-2 CONTAINER 4 NAOH**

**Lab Sample ID: 140-34757-16**

Date Collected: 12/06/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Sample Container: Amber Glass 250ml - unpreserved

**Method: SW846 0050/26A - Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorine	96.6	J	120	60.0	ug/Sample		12/14/23 09:56	12/16/23 11:38	5

# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

**Client Sample ID: AP26-3 CONTAINER 3 H2SO4**

**Lab Sample ID: 140-34757-17**

Date Collected: 12/07/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Sample Container: Amber Glass 250ml - unpreserved

**Method: SW846 0050/26A - Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hydrogen Chloride	119		64.8	33.4	ug/Sample		12/14/23 09:50	12/14/23 22:21	2

# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

**Client Sample ID: AP26-3 CONTAINER 4 NAOH**

**Lab Sample ID: 140-34757-18**

Date Collected: 12/07/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Sample Container: Amber Glass 250ml - unpreserved

**Method: SW846 0050/26A - Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorine	88.3	J	125	62.5	ug/Sample		12/14/23 09:56	12/16/23 14:27	5

# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

**Client Sample ID: BLANK CONTAINER 6 H2SO4**

**Lab Sample ID: 140-34757-19**

Date Collected: 12/07/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Sample Container: Amber Glass 250ml - unpreserved

**Method: SW846 0050/26A - Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hydrogen Chloride	31.2	J	47.3	24.4	ug/Sample		12/14/23 09:50	12/14/23 23:06	2



# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

**Client Sample ID: BLANK CONTAINER 7 NAOH**

**Lab Sample ID: 140-34757-20**

Date Collected: 12/07/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Sample Container: Amber Glass 250ml - unpreserved

**Method: SW846 0050/26A - Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorine	73.3	J	115	57.5	ug/Sample		12/14/23 09:56	12/16/23 15:51	5

# Client Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

**Client Sample ID: BLANK CONTAINER 8 H2O**

**Lab Sample ID: 140-34757-21**

**Date Collected: 12/07/23 00:00**

**Matrix: Air**

**Date Received: 12/13/23 09:30**

**Sample Container: Amber Glass 250ml - unpreserved**

**Method: SW846 0050/26A - Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorine	ND		20.0	10.0	ug/Sample		12/14/23 09:50	12/14/23 23:50	2
Hydrogen Chloride	ND		20.6	10.6	ug/Sample		12/14/23 09:50	12/14/23 23:50	2

# Default Detection Limits

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

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## Method: 0050/26A - Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod)

### Prep: 0050/26A

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Analyte	RL	MDL	Units
Chlorine	10.0	5.00	ug/Sample
Hydrogen Chloride	10.3	5.30	ug/Sample

# QC Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

## Method: 0050/26A - Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod)

**Lab Sample ID: MB 140-81372/1-A**  
**Matrix: Air**  
**Analysis Batch: 81419**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 81372**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorine	ND		10.0	5.00	ug/Sample		12/14/23 09:50	12/14/23 11:37	1
Hydrogen Chloride	ND		10.3	5.30	ug/Sample		12/14/23 09:50	12/14/23 11:37	1

**Lab Sample ID: LCS 140-81372/2-A**  
**Matrix: Air**  
**Analysis Batch: 81419**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 81372**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorine	75.0	78.94		ug/Sample		105	90 - 110
Hydrogen Chloride	77.1	81.18		ug/Sample		105	90 - 110

**Lab Sample ID: LCSD 140-81372/3-A**  
**Matrix: Air**  
**Analysis Batch: 81419**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 81372**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chlorine	75.0	79.09		ug/Sample		105	90 - 110	0	20
Hydrogen Chloride	77.1	81.34		ug/Sample		105	90 - 110	0	20

**Lab Sample ID: 140-34757-3 MS**  
**Matrix: Air**  
**Analysis Batch: 81419**

**Client Sample ID: VF26A-2 CONTAINER 3 H2SO4**  
**Prep Type: Total/NA**  
**Prep Batch: 81372**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hydrogen Chloride	46.0	J	524	561.4		ug/Sample		98	75 - 125

**Lab Sample ID: 140-34757-3 MSD**  
**Matrix: Air**  
**Analysis Batch: 81419**

**Client Sample ID: VF26A-2 CONTAINER 3 H2SO4**  
**Prep Type: Total/NA**  
**Prep Batch: 81372**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hydrogen Chloride	46.0	J	524	560.9		ug/Sample		98	75 - 125	0	20

**Lab Sample ID: 140-34757-9 MS**  
**Matrix: Air**  
**Analysis Batch: 81419**

**Client Sample ID: AS26-2 CONTAINER 3 H2SO4**  
**Prep Type: Total/NA**  
**Prep Batch: 81372**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hydrogen Chloride	41.3	J	514	544.7		ug/Sample		98	75 - 125

**Lab Sample ID: 140-34757-9 MSD**  
**Matrix: Air**  
**Analysis Batch: 81419**

**Client Sample ID: AS26-2 CONTAINER 3 H2SO4**  
**Prep Type: Total/NA**  
**Prep Batch: 81372**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hydrogen Chloride	41.3	J	514	546.4		ug/Sample		98	75 - 125	0	20

# QC Sample Results

Client: SLR International Corp  
 Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

## Method: 0050/26A - Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod) (Continued)

**Lab Sample ID: 140-34757-15 MS**  
**Matrix: Air**  
**Analysis Batch: 81419**

**Client Sample ID: AP26-2 CONTAINER 3 H2SO4**  
**Prep Type: Total/NA**  
**Prep Batch: 81372**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hydrogen Chloride	159		545	686.0		ug/Sample		97	75 - 125

**Lab Sample ID: 140-34757-15 MSD**  
**Matrix: Air**  
**Analysis Batch: 81419**

**Client Sample ID: AP26-2 CONTAINER 3 H2SO4**  
**Prep Type: Total/NA**  
**Prep Batch: 81372**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hydrogen Chloride	159		545	685.2		ug/Sample		97	75 - 125	0	20

**Lab Sample ID: 140-34757-1 DU**  
**Matrix: Air**  
**Analysis Batch: 81419**

**Client Sample ID: VF26A-1 CONTAINER 3 H2SO4**  
**Prep Type: Total/NA**  
**Prep Batch: 81372**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Hydrogen Chloride	28.1	J	32.21	J F5	ug/Sample		14	10

**Lab Sample ID: 140-34757-3 DU**  
**Matrix: Air**  
**Analysis Batch: 81419**

**Client Sample ID: VF26A-2 CONTAINER 3 H2SO4**  
**Prep Type: Total/NA**  
**Prep Batch: 81372**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Hydrogen Chloride	46.0	J	47.44	J	ug/Sample		3	10

**Lab Sample ID: 140-34757-5 DU**  
**Matrix: Air**  
**Analysis Batch: 81419**

**Client Sample ID: VF26A-4 CONTAINER 3 H2SO4**  
**Prep Type: Total/NA**  
**Prep Batch: 81372**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Hydrogen Chloride	ND		ND		ug/Sample		NC	10

**Lab Sample ID: 140-34757-7 DU**  
**Matrix: Air**  
**Analysis Batch: 81419**

**Client Sample ID: AS26-1 CONTAINER 3 H2SO4**  
**Prep Type: Total/NA**  
**Prep Batch: 81372**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Hydrogen Chloride	46.4	J	45.43	J	ug/Sample		2	10

**Lab Sample ID: 140-34757-9 DU**  
**Matrix: Air**  
**Analysis Batch: 81419**

**Client Sample ID: AS26-2 CONTAINER 3 H2SO4**  
**Prep Type: Total/NA**  
**Prep Batch: 81372**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Hydrogen Chloride	41.3	J	34.56	J F5	ug/Sample		18	10

**Lab Sample ID: 140-34757-11 DU**  
**Matrix: Air**  
**Analysis Batch: 81419**

**Client Sample ID: AS26-3 CONTAINER 3 H2SO4**  
**Prep Type: Total/NA**  
**Prep Batch: 81372**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Hydrogen Chloride	51.2	J	39.19	J F5	ug/Sample		27	10

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# QC Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

## Method: 0050/26A - Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod)

**Lab Sample ID: 140-34757-13 DU**  
**Matrix: Air**  
**Analysis Batch: 81419**

**Client Sample ID: AP26-1 CONTAINER 3 H2SO4**  
**Prep Type: Total/NA**  
**Prep Batch: 81372**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Hydrogen Chloride	137		135.3		ug/Sample		1	10

**Lab Sample ID: 140-34757-15 DU**  
**Matrix: Air**  
**Analysis Batch: 81419**

**Client Sample ID: AP26-2 CONTAINER 3 H2SO4**  
**Prep Type: Total/NA**  
**Prep Batch: 81372**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Hydrogen Chloride	159		150.1		ug/Sample		6	10

**Lab Sample ID: 140-34757-17 DU**  
**Matrix: Air**  
**Analysis Batch: 81419**

**Client Sample ID: AP26-3 CONTAINER 3 H2SO4**  
**Prep Type: Total/NA**  
**Prep Batch: 81372**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Hydrogen Chloride	119		118.2		ug/Sample		1	10

**Lab Sample ID: 140-34757-19 DU**  
**Matrix: Air**  
**Analysis Batch: 81419**

**Client Sample ID: BLANK CONTAINER 6 H2SO4**  
**Prep Type: Total/NA**  
**Prep Batch: 81372**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Hydrogen Chloride	31.2	J	29.68	J	ug/Sample		5	10

**Lab Sample ID: 140-34757-21 DU**  
**Matrix: Air**  
**Analysis Batch: 81419**

**Client Sample ID: BLANK CONTAINER 8 H2O**  
**Prep Type: Total/NA**  
**Prep Batch: 81372**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chlorine	ND		ND		ug/Sample		NC	10
Hydrogen Chloride	ND		ND		ug/Sample		NC	10

**Lab Sample ID: MB 140-81373/1-A**  
**Matrix: Air**  
**Analysis Batch: 81494**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 81373**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorine	ND		10.0	5.00	ug/Sample		12/14/23 09:56	12/15/23 20:03	1

**Lab Sample ID: LCS 140-81373/2-A**  
**Matrix: Air**  
**Analysis Batch: 81494**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 81373**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorine	75.0	79.29		ug/Sample		106	90 - 110

# QC Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

## Method: 0050/26A - Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod) (Continued)

**Lab Sample ID: LCSD 140-81373/3-A**  
**Matrix: Air**  
**Analysis Batch: 81494**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 81373**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chlorine	75.0	78.67		ug/Sample		105	90 - 110	1	20

**Lab Sample ID: 140-34757-4 MS**  
**Matrix: Air**  
**Analysis Batch: 81494**

**Client Sample ID: VF26A-2 CONTAINER 4 NAOH**  
**Prep Type: Total/NA**  
**Prep Batch: 81373**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorine	212		1230	1448		ug/Sample		101	75 - 125

**Lab Sample ID: 140-34757-4 MSD**  
**Matrix: Air**  
**Analysis Batch: 81494**

**Client Sample ID: VF26A-2 CONTAINER 4 NAOH**  
**Prep Type: Total/NA**  
**Prep Batch: 81373**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chlorine	212		1230	1446		ug/Sample		101	75 - 125	0	20

**Lab Sample ID: 140-34757-10 MS**  
**Matrix: Air**  
**Analysis Batch: 81494**

**Client Sample ID: AS26-2 CONTAINER 4 NAOH**  
**Prep Type: Total/NA**  
**Prep Batch: 81373**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorine	91.2	J	1180	1247		ug/Sample		98	75 - 125

**Lab Sample ID: 140-34757-10 MSD**  
**Matrix: Air**  
**Analysis Batch: 81494**

**Client Sample ID: AS26-2 CONTAINER 4 NAOH**  
**Prep Type: Total/NA**  
**Prep Batch: 81373**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chlorine	91.2	J	1180	1246		ug/Sample		98	75 - 125	0	20

**Lab Sample ID: 140-34757-16 MS**  
**Matrix: Air**  
**Analysis Batch: 81494**

**Client Sample ID: AP26-2 CONTAINER 4 NAOH**  
**Prep Type: Total/NA**  
**Prep Batch: 81373**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorine	96.6	J	1200	1263		ug/Sample		97	75 - 125

**Lab Sample ID: 140-34757-16 MSD**  
**Matrix: Air**  
**Analysis Batch: 81494**

**Client Sample ID: AP26-2 CONTAINER 4 NAOH**  
**Prep Type: Total/NA**  
**Prep Batch: 81373**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chlorine	96.6	J	1200	1263		ug/Sample		97	75 - 125	0	20

**Lab Sample ID: 140-34757-2 DU**  
**Matrix: Air**  
**Analysis Batch: 81494**

**Client Sample ID: VF26A-1 CONTAINER 4 NAOH**  
**Prep Type: Total/NA**  
**Prep Batch: 81373**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chlorine	104	J	87.71	J F5	ug/Sample		17	10

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# QC Sample Results

Client: SLR International Corp  
 Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

## Method: 0050/26A - Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod)

**Lab Sample ID: 140-34757-4 DU**  
**Matrix: Air**  
**Analysis Batch: 81494**

**Client Sample ID: VF26A-2 CONTAINER 4 NAOH**  
**Prep Type: Total/NA**  
**Prep Batch: 81373**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chlorine	212		208.4		ug/Sample		2	10

**Lab Sample ID: 140-34757-6 DU**  
**Matrix: Air**  
**Analysis Batch: 81494**

**Client Sample ID: VF26A-4 CONTAINER 4 NAOH**  
**Prep Type: Total/NA**  
**Prep Batch: 81373**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chlorine	92.8	J	88.77	J	ug/Sample		4	10

**Lab Sample ID: 140-34757-8 DU**  
**Matrix: Air**  
**Analysis Batch: 81494**

**Client Sample ID: AS26-1 CONTAINER 4 NAOH**  
**Prep Type: Total/NA**  
**Prep Batch: 81373**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chlorine	92.2	J	89.22	J	ug/Sample		3	10

**Lab Sample ID: 140-34757-10 DU**  
**Matrix: Air**  
**Analysis Batch: 81494**

**Client Sample ID: AS26-2 CONTAINER 4 NAOH**  
**Prep Type: Total/NA**  
**Prep Batch: 81373**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chlorine	91.2	J	89.39	J	ug/Sample		2	10

**Lab Sample ID: 140-34757-12 DU**  
**Matrix: Air**  
**Analysis Batch: 81494**

**Client Sample ID: AS26-3 CONTAINER 4 NAOH**  
**Prep Type: Total/NA**  
**Prep Batch: 81373**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chlorine	80.4	J	81.41	J	ug/Sample		1	10

**Lab Sample ID: 140-34757-14 DU**  
**Matrix: Air**  
**Analysis Batch: 81494**

**Client Sample ID: AP26-1 CONTAINER 4 NAOH**  
**Prep Type: Total/NA**  
**Prep Batch: 81373**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chlorine	85.9	J	68.74	J F5	ug/Sample		22	10

**Lab Sample ID: 140-34757-16 DU**  
**Matrix: Air**  
**Analysis Batch: 81494**

**Client Sample ID: AP26-2 CONTAINER 4 NAOH**  
**Prep Type: Total/NA**  
**Prep Batch: 81373**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chlorine	96.6	J	96.56	J	ug/Sample		0.09	10

**Lab Sample ID: 140-34757-18 DU**  
**Matrix: Air**  
**Analysis Batch: 81494**

**Client Sample ID: AP26-3 CONTAINER 4 NAOH**  
**Prep Type: Total/NA**  
**Prep Batch: 81373**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chlorine	88.3	J	85.61	J	ug/Sample		3	10



# QC Sample Results

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

## Method: 0050/26A - Hydrogen Halide and Halogen Emissions/Stationary Sources (Mod)

Lab Sample ID: 140-34757-20 DU

Matrix: Air

Analysis Batch: 81494

Client Sample ID: BLANK CONTAINER 7 NAOH

Prep Type: Total/NA

Prep Batch: 81373

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chlorine	73.3	J	73.82	J	ug/Sample		0.7	10

# Lab Chronicle

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

## Client Sample ID: VF26A-1 CONTAINER 3 H2SO4

Lab Sample ID: 140-34757-1

Date Collected: 12/02/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	255 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		2	10 mL	10 mL	81419	12/14/23 12:44	JXP	EET KNX
Instrument ID: IC4										

## Client Sample ID: VF26A-1 CONTAINER 4 NAOH

Lab Sample ID: 140-34757-2

Date Collected: 12/02/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	245 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		5	10 mL	10 mL	81494	12/15/23 21:30	JXP	EET KNX
Instrument ID: IC4										

## Client Sample ID: VF26A-2 CONTAINER 3 H2SO4

Lab Sample ID: 140-34757-3

Date Collected: 12/03/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	255 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		2	10 mL	10 mL	81419	12/14/23 13:29	JXP	EET KNX
Instrument ID: IC4										

## Client Sample ID: VF26A-2 CONTAINER 4 NAOH

Lab Sample ID: 140-34757-4

Date Collected: 12/03/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	245 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		5	10 mL	10 mL	81494	12/15/23 22:54	JXP	EET KNX
Instrument ID: IC4										

## Client Sample ID: VF26A-4 CONTAINER 3 H2SO4

Lab Sample ID: 140-34757-5

Date Collected: 12/05/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	250 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		2	10 mL	10 mL	81419	12/14/23 14:57	JXP	EET KNX
Instrument ID: IC4										

# Lab Chronicle

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

## Client Sample ID: VF26A-4 CONTAINER 4 NAOH

Lab Sample ID: 140-34757-6

Date Collected: 12/05/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	240 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		5	10 mL	10 mL	81494	12/16/23 01:43	JXP	EET KNX
Instrument ID: IC4										

## Client Sample ID: AS26-1 CONTAINER 3 H2SO4

Lab Sample ID: 140-34757-7

Date Collected: 11/30/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	250 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		2	10 mL	10 mL	81419	12/14/23 16:26	JXP	EET KNX
Instrument ID: IC4										

## Client Sample ID: AS26-1 CONTAINER 4 NAOH

Lab Sample ID: 140-34757-8

Date Collected: 11/30/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	235 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		5	10 mL	10 mL	81494	12/16/23 03:52	JXP	EET KNX
Instrument ID: IC4										

## Client Sample ID: AS26-2 CONTAINER 3 H2SO4

Lab Sample ID: 140-34757-9

Date Collected: 12/01/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	250 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		2	10 mL	10 mL	81419	12/14/23 17:11	JXP	EET KNX
Instrument ID: IC4										

## Client Sample ID: AS26-2 CONTAINER 4 NAOH

Lab Sample ID: 140-34757-10

Date Collected: 12/01/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	235 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		5	10 mL	10 mL	81494	12/16/23 05:17	JXP	EET KNX
Instrument ID: IC4										

# Lab Chronicle

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

**Client Sample ID: AS26-3 CONTAINER 3 H2SO4**

**Lab Sample ID: 140-34757-11**

**Date Collected: 12/01/23 00:00**

**Matrix: Air**

**Date Received: 12/13/23 09:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	255 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		2	10 mL	10 mL	81419	12/14/23 18:39	JXP	EET KNX
Instrument ID: IC4										

**Client Sample ID: AS26-3 CONTAINER 4 NAOH**

**Lab Sample ID: 140-34757-12**

**Date Collected: 12/01/23 00:00**

**Matrix: Air**

**Date Received: 12/13/23 09:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	245 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		5	10 mL	10 mL	81494	12/16/23 08:05	JXP	EET KNX
Instrument ID: IC4										

**Client Sample ID: AP26-1 CONTAINER 3 H2SO4**

**Lab Sample ID: 140-34757-13**

**Date Collected: 12/06/23 00:00**

**Matrix: Air**

**Date Received: 12/13/23 09:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	260 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		2	10 mL	10 mL	81419	12/14/23 19:24	JXP	EET KNX
Instrument ID: IC4										

**Client Sample ID: AP26-1 CONTAINER 4 NAOH**

**Lab Sample ID: 140-34757-14**

**Date Collected: 12/06/23 00:00**

**Matrix: Air**

**Date Received: 12/13/23 09:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	240 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		5	10 mL	10 mL	81494	12/16/23 09:30	JXP	EET KNX
Instrument ID: IC4										

**Client Sample ID: AP26-2 CONTAINER 3 H2SO4**

**Lab Sample ID: 140-34757-15**

**Date Collected: 12/06/23 00:00**

**Matrix: Air**

**Date Received: 12/13/23 09:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	265 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		2	10 mL	10 mL	81419	12/14/23 20:53	JXP	EET KNX
Instrument ID: IC4										

# Lab Chronicle

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

## Client Sample ID: AP26-2 CONTAINER 4 NAOH

Lab Sample ID: 140-34757-16

Date Collected: 12/06/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	240 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		5	10 mL	10 mL	81494	12/16/23 11:38	JXP	EET KNX
Instrument ID: IC4										

## Client Sample ID: AP26-3 CONTAINER 3 H2SO4

Lab Sample ID: 140-34757-17

Date Collected: 12/07/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	315 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		2	10 mL	10 mL	81419	12/14/23 22:21	JXP	EET KNX
Instrument ID: IC4										

## Client Sample ID: AP26-3 CONTAINER 4 NAOH

Lab Sample ID: 140-34757-18

Date Collected: 12/07/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	250 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		5	10 mL	10 mL	81494	12/16/23 14:27	JXP	EET KNX
Instrument ID: IC4										

## Client Sample ID: BLANK CONTAINER 6 H2SO4

Lab Sample ID: 140-34757-19

Date Collected: 12/07/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	230 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		2	10 mL	10 mL	81419	12/14/23 23:06	JXP	EET KNX
Instrument ID: IC4										

## Client Sample ID: BLANK CONTAINER 7 NAOH

Lab Sample ID: 140-34757-20

Date Collected: 12/07/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	230 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		5	10 mL	10 mL	81494	12/16/23 15:51	JXP	EET KNX
Instrument ID: IC4										

# Lab Chronicle

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

**Client Sample ID: BLANK CONTAINER 8 H2O**

**Lab Sample ID: 140-34757-21**

**Date Collected: 12/07/23 00:00**

**Matrix: Air**

**Date Received: 12/13/23 09:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	100 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		2	10 mL	10 mL	81419	12/14/23 23:50	JXP	EET KNX
Instrument ID: IC4										

**Client Sample ID: Method Blank**

**Lab Sample ID: MB 140-81372/1-A**

**Date Collected: N/A**

**Matrix: Air**

**Date Received: N/A**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	100 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		1	10 mL	10 mL	81419	12/14/23 11:37	JXP	EET KNX
Instrument ID: IC4										

**Client Sample ID: Method Blank**

**Lab Sample ID: MB 140-81373/1-A**

**Date Collected: N/A**

**Matrix: Air**

**Date Received: N/A**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	100 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		1	10 mL	10 mL	81494	12/15/23 20:03	JXP	EET KNX
Instrument ID: IC4										

**Client Sample ID: Lab Control Sample**

**Lab Sample ID: LCS 140-81372/2-A**

**Date Collected: N/A**

**Matrix: Air**

**Date Received: N/A**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	100 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		1	10 mL	10 mL	81419	12/14/23 12:00	JXP	EET KNX
Instrument ID: IC4										

**Client Sample ID: Lab Control Sample**

**Lab Sample ID: LCS 140-81373/2-A**

**Date Collected: N/A**

**Matrix: Air**

**Date Received: N/A**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	100 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		1	10 mL	10 mL	81494	12/15/23 20:46	JXP	EET KNX
Instrument ID: IC4										

# Lab Chronicle

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

**Client Sample ID: Lab Control Sample Dup**

**Lab Sample ID: LCSD 140-81372/3-A**

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	100 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		1	10 mL	10 mL	81419	12/14/23 12:22	JXP	EET KNX
Instrument ID: IC4										

**Client Sample ID: Lab Control Sample Dup**

**Lab Sample ID: LCSD 140-81373/3-A**

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	100 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		1	10 mL	10 mL	81494	12/15/23 21:08	JXP	EET KNX
Instrument ID: IC4										

**Client Sample ID: VF26A-2 CONTAINER 3 H2SO4**

**Lab Sample ID: 140-34757-3 MS**

Date Collected: 12/03/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	255 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		2	10 mL	10 mL	81419	12/14/23 14:13	JXP	EET KNX
Instrument ID: IC4										

**Client Sample ID: VF26A-2 CONTAINER 3 H2SO4**

**Lab Sample ID: 140-34757-3 MSD**

Date Collected: 12/03/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	255 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		2	10 mL	10 mL	81419	12/14/23 14:35	JXP	EET KNX
Instrument ID: IC4										

**Client Sample ID: VF26A-2 CONTAINER 4 NAOH**

**Lab Sample ID: 140-34757-4 MS**

Date Collected: 12/03/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	245 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		5	10 mL	10 mL	81494	12/16/23 00:19	JXP	EET KNX
Instrument ID: IC4										

# Lab Chronicle

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

## Client Sample ID: VF26A-2 CONTAINER 4 NAOH

## Lab Sample ID: 140-34757-4 MSD

Date Collected: 12/03/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	245 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		5	10 mL	10 mL	81494	12/16/23 01:01	JXP	EET KNX
Instrument ID: IC4										

## Client Sample ID: AS26-2 CONTAINER 3 H2SO4

## Lab Sample ID: 140-34757-9 MS

Date Collected: 12/01/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	250 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		2	10 mL	10 mL	81419	12/14/23 17:55	JXP	EET KNX
Instrument ID: IC4										

## Client Sample ID: AS26-2 CONTAINER 3 H2SO4

## Lab Sample ID: 140-34757-9 MSD

Date Collected: 12/01/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	250 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		2	10 mL	10 mL	81419	12/14/23 18:17	JXP	EET KNX
Instrument ID: IC4										

## Client Sample ID: AS26-2 CONTAINER 4 NAOH

## Lab Sample ID: 140-34757-10 MS

Date Collected: 12/01/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	235 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		5	10 mL	10 mL	81494	12/16/23 06:41	JXP	EET KNX
Instrument ID: IC4										

## Client Sample ID: AS26-2 CONTAINER 4 NAOH

## Lab Sample ID: 140-34757-10 MSD

Date Collected: 12/01/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	235 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		5	10 mL	10 mL	81494	12/16/23 07:23	JXP	EET KNX
Instrument ID: IC4										



# Lab Chronicle

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

**Client Sample ID: AP26-2 CONTAINER 3 H2SO4**

**Lab Sample ID: 140-34757-15 MS**

Date Collected: 12/06/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	265 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		2	10 mL	10 mL	81419	12/14/23 21:37	JXP	EET KNX
Instrument ID: IC4										

**Client Sample ID: AP26-2 CONTAINER 3 H2SO4**

**Lab Sample ID: 140-34757-15 MSD**

Date Collected: 12/06/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	265 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		2	10 mL	10 mL	81419	12/14/23 21:59	JXP	EET KNX
Instrument ID: IC4										

**Client Sample ID: AP26-2 CONTAINER 4 NAOH**

**Lab Sample ID: 140-34757-16 MS**

Date Collected: 12/06/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	240 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		5	10 mL	10 mL	81494	12/16/23 13:03	JXP	EET KNX
Instrument ID: IC4										

**Client Sample ID: AP26-2 CONTAINER 4 NAOH**

**Lab Sample ID: 140-34757-16 MSD**

Date Collected: 12/06/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	240 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		5	10 mL	10 mL	81494	12/16/23 13:45	JXP	EET KNX
Instrument ID: IC4										

**Client Sample ID: VF26A-1 CONTAINER 3 H2SO4**

**Lab Sample ID: 140-34757-1 DU**

Date Collected: 12/02/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	255 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		2	10 mL	10 mL	81419	12/14/23 13:06	JXP	EET KNX
Instrument ID: IC4										

# Lab Chronicle

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

## Client Sample ID: VF26A-1 CONTAINER 4 NAOH

Lab Sample ID: 140-34757-2 DU

Date Collected: 12/02/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	245 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		5	10 mL	10 mL	81494	12/15/23 22:12	JXP	EET KNX
Instrument ID: IC4										

## Client Sample ID: VF26A-2 CONTAINER 3 H2SO4

Lab Sample ID: 140-34757-3 DU

Date Collected: 12/03/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	255 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		2	10 mL	10 mL	81419	12/14/23 13:51	JXP	EET KNX
Instrument ID: IC4										

## Client Sample ID: VF26A-2 CONTAINER 4 NAOH

Lab Sample ID: 140-34757-4 DU

Date Collected: 12/03/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	245 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		5	10 mL	10 mL	81494	12/15/23 23:37	JXP	EET KNX
Instrument ID: IC4										

## Client Sample ID: VF26A-4 CONTAINER 3 H2SO4

Lab Sample ID: 140-34757-5 DU

Date Collected: 12/05/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	250 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		2	10 mL	10 mL	81419	12/14/23 16:04	JXP	EET KNX
Instrument ID: IC4										

## Client Sample ID: VF26A-4 CONTAINER 4 NAOH

Lab Sample ID: 140-34757-6 DU

Date Collected: 12/05/23 00:00

Matrix: Air

Date Received: 12/13/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	240 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		5	10 mL	10 mL	81494	12/16/23 03:10	JXP	EET KNX
Instrument ID: IC4										

# Lab Chronicle

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

**Client Sample ID: AS26-1 CONTAINER 3 H2SO4**

**Lab Sample ID: 140-34757-7 DU**

**Date Collected: 11/30/23 00:00**

**Matrix: Air**

**Date Received: 12/13/23 09:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	250 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		2	10 mL	10 mL	81419	12/14/23 16:48	JXP	EET KNX
Instrument ID: IC4										

**Client Sample ID: AS26-1 CONTAINER 4 NAOH**

**Lab Sample ID: 140-34757-8 DU**

**Date Collected: 11/30/23 00:00**

**Matrix: Air**

**Date Received: 12/13/23 09:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	235 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		5	10 mL	10 mL	81494	12/16/23 04:34	JXP	EET KNX
Instrument ID: IC4										

**Client Sample ID: AS26-2 CONTAINER 3 H2SO4**

**Lab Sample ID: 140-34757-9 DU**

**Date Collected: 12/01/23 00:00**

**Matrix: Air**

**Date Received: 12/13/23 09:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	250 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		2	10 mL	10 mL	81419	12/14/23 17:33	JXP	EET KNX
Instrument ID: IC4										

**Client Sample ID: AS26-2 CONTAINER 4 NAOH**

**Lab Sample ID: 140-34757-10 DU**

**Date Collected: 12/01/23 00:00**

**Matrix: Air**

**Date Received: 12/13/23 09:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	235 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		5	10 mL	10 mL	81494	12/16/23 05:59	JXP	EET KNX
Instrument ID: IC4										

**Client Sample ID: AS26-3 CONTAINER 3 H2SO4**

**Lab Sample ID: 140-34757-11 DU**

**Date Collected: 12/01/23 00:00**

**Matrix: Air**

**Date Received: 12/13/23 09:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	255 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		2	10 mL	10 mL	81419	12/14/23 19:02	JXP	EET KNX
Instrument ID: IC4										

# Lab Chronicle

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

**Client Sample ID: AS26-3 CONTAINER 4 NAOH**

**Lab Sample ID: 140-34757-12 DU**

**Date Collected: 12/01/23 00:00**

**Matrix: Air**

**Date Received: 12/13/23 09:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	245 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		5	10 mL	10 mL	81494	12/16/23 08:47	JXP	EET KNX
Instrument ID: IC4										

**Client Sample ID: AP26-1 CONTAINER 3 H2SO4**

**Lab Sample ID: 140-34757-13 DU**

**Date Collected: 12/06/23 00:00**

**Matrix: Air**

**Date Received: 12/13/23 09:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	260 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		2	10 mL	10 mL	81419	12/14/23 20:30	JXP	EET KNX
Instrument ID: IC4										

**Client Sample ID: AP26-1 CONTAINER 4 NAOH**

**Lab Sample ID: 140-34757-14 DU**

**Date Collected: 12/06/23 00:00**

**Matrix: Air**

**Date Received: 12/13/23 09:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	240 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		5	10 mL	10 mL	81494	12/16/23 10:56	JXP	EET KNX
Instrument ID: IC4										

**Client Sample ID: AP26-2 CONTAINER 3 H2SO4**

**Lab Sample ID: 140-34757-15 DU**

**Date Collected: 12/06/23 00:00**

**Matrix: Air**

**Date Received: 12/13/23 09:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	265 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		2	10 mL	10 mL	81419	12/14/23 21:15	JXP	EET KNX
Instrument ID: IC4										

**Client Sample ID: AP26-2 CONTAINER 4 NAOH**

**Lab Sample ID: 140-34757-16 DU**

**Date Collected: 12/06/23 00:00**

**Matrix: Air**

**Date Received: 12/13/23 09:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	240 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		5	10 mL	10 mL	81494	12/16/23 12:21	JXP	EET KNX
Instrument ID: IC4										

# Lab Chronicle

Client: SLR International Corp  
Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

**Client Sample ID: AP26-3 CONTAINER 3 H2SO4**

**Lab Sample ID: 140-34757-17 DU**

**Date Collected: 12/07/23 00:00**

**Matrix: Air**

**Date Received: 12/13/23 09:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	315 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		2	10 mL	10 mL	81419	12/14/23 22:43	JXP	EET KNX
Instrument ID: IC4										

**Client Sample ID: AP26-3 CONTAINER 4 NAOH**

**Lab Sample ID: 140-34757-18 DU**

**Date Collected: 12/07/23 00:00**

**Matrix: Air**

**Date Received: 12/13/23 09:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	250 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		5	10 mL	10 mL	81494	12/16/23 15:09	JXP	EET KNX
Instrument ID: IC4										

**Client Sample ID: BLANK CONTAINER 6 H2SO4**

**Lab Sample ID: 140-34757-19 DU**

**Date Collected: 12/07/23 00:00**

**Matrix: Air**

**Date Received: 12/13/23 09:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	230 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		2	10 mL	10 mL	81419	12/14/23 23:28	JXP	EET KNX
Instrument ID: IC4										

**Client Sample ID: BLANK CONTAINER 7 NAOH**

**Lab Sample ID: 140-34757-20 DU**

**Date Collected: 12/07/23 00:00**

**Matrix: Air**

**Date Received: 12/13/23 09:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	230 mL	81373	12/14/23 09:56	JXP	EET KNX
Total/NA	Analysis	0050/26A		5	10 mL	10 mL	81494	12/16/23 16:34	JXP	EET KNX
Instrument ID: IC4										

**Client Sample ID: BLANK CONTAINER 8 H2O**

**Lab Sample ID: 140-34757-21 DU**

**Date Collected: 12/07/23 00:00**

**Matrix: Air**

**Date Received: 12/13/23 09:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	0050/26A			1 Sample	100 mL	81372	12/14/23 09:50	JXP	EET KNX
Total/NA	Analysis	0050/26A		2	10 mL	10 mL	81419	12/15/23 01:16	JXP	EET KNX
Instrument ID: IC4										

**Laboratory References:**

EET KNX = Eurofins Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

# Accreditation/Certification Summary

Client: SLR International Corp  
 Project/Site: FMMI HAPs Testing M26A

Job ID: 140-34757-1

## Laboratory: Eurofins Knoxville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-25
ANAB	Dept. of Energy	L2311.01	02-13-25
ANAB	ISO/IEC 17025	L2311	02-13-25
Arkansas DEQ	State	88-0688	06-16-24
Colorado	State	TN00009	02-29-24
Connecticut	State	PH-0223	09-30-25
Florida	NELAP	E87177	06-30-24
Georgia (DW)	State	906	07-27-25
Hawaii	State	NA	07-27-24
Kansas	NELAP	E-10349	10-31-24
Kentucky (DW)	State	90101	12-31-23
Louisiana (All)	NELAP	83979	06-30-24
Louisiana (DW)	State	LA019	12-31-23
Maryland	State	277	03-31-24
Michigan	State	9933	07-27-25
Nevada	State	TN00009	07-31-24
New Hampshire	NELAP	2999	01-17-24
New Jersey	NELAP	TN001	07-01-24
New York	NELAP	10781	03-31-24
North Carolina (DW)	State	21705	07-31-24
North Carolina (WW/SW)	State	64	12-31-23
Oklahoma	State	9415	12-31-23
Oregon	NELAP	TNI0189	01-01-24
Pennsylvania	NELAP	68-00576	12-31-24
Tennessee	State	02014	07-27-25
Texas	NELAP	T104704380-23-18	08-31-24
US Fish & Wildlife	US Federal Programs	058448	07-31-24
USDA	US Federal Programs	525-22-279-18762	10-06-25
Utah	NELAP	TN00009	07-31-24
Virginia	NELAP	460176	09-14-24
Washington	State	C593	01-19-24
West Virginia (DW)	State	9955C	12-31-23
West Virginia DEP	State	345	04-30-24
Wisconsin	State	998044300	08-31-24

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1

SDG No.: \_\_\_\_\_

Instrument ID: IC4 Analysis Batch Number: 76764

Lab Sample ID: IC 140-76764/1 Client Sample ID: \_\_\_\_\_

Date Analyzed: 08/21/23 18:48 Lab File ID: Air\_Anions-08212023 ICAL GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.33	Baseline Smoothing	EXJ2	08/22/23 09:46
Chloride	4.74	Baseline Smoothing	EXJ2	08/22/23 09:46
Nitrite as N	5.68	Baseline Smoothing	EXJ2	08/22/23 09:46
Nitrate as N	7.59	Baseline Smoothing	EXJ2	08/22/23 09:46
Orthophosphate as P	10.14	Baseline Smoothing	EXJ2	08/22/23 09:47
Iodide	14.84	Baseline Smoothing	EXJ2	08/22/23 09:47

Lab Sample ID: IC 140-76764/2 Client Sample ID: \_\_\_\_\_

Date Analyzed: 08/21/23 19:10 Lab File ID: Air\_Anions-08212023 ICAL GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.33	Baseline Smoothing	EXJ2	08/22/23 09:54
Chloride	4.74	Baseline Smoothing	EXJ2	08/22/23 09:54
Nitrate as N	7.59	Unspecified		
Orthophosphate as P	10.13	Baseline Smoothing	EXJ2	08/22/23 09:47
Iodide	14.84	Unspecified		

Lab Sample ID: IC 140-76764/3 Client Sample ID: \_\_\_\_\_

Date Analyzed: 08/21/23 19:32 Lab File ID: Air\_Anions-08212023 ICAL GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.33	Baseline Smoothing	EXJ2	08/22/23 09:54
Chloride	4.74	Baseline Smoothing	EXJ2	08/22/23 09:54
Nitrite as N	5.68	Unspecified		
Orthophosphate as P	10.13	Unspecified		
Iodide	14.83	Unspecified		

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1

SDG No.: \_\_\_\_\_

Instrument ID: IC4 Analysis Batch Number: 76764

Lab Sample ID: IC 140-76764/4 Client Sample ID: \_\_\_\_\_

Date Analyzed: 08/21/23 19:55 Lab File ID: Air\_Anions-08212023 ICAL GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.33	Baseline Smoothing	EXJ2	08/22/23 09:55
Chloride	4.74	Baseline Smoothing	EXJ2	08/22/23 09:54
Nitrite as N	5.68	Unspecified		
Orthophosphate as P	10.12	Unspecified		
Iodide	14.83	Unspecified		

Lab Sample ID: IC 140-76764/5 Client Sample ID: \_\_\_\_\_

Date Analyzed: 08/21/23 20:17 Lab File ID: Air\_Anions-08212023 ICAL GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.33	Baseline Smoothing	EXJ2	08/22/23 09:52
Chloride	4.74	Baseline Smoothing	EXJ2	08/22/23 09:55
Nitrite as N	5.69	Baseline Smoothing	EXJ2	08/22/23 09:52

Lab Sample ID: IC 140-76764/6 Client Sample ID: \_\_\_\_\_

Date Analyzed: 08/21/23 20:39 Lab File ID: Air\_Anions-08212023 ICAL GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.33	Baseline Smoothing	EXJ2	08/22/23 09:51
Chloride	4.74	Baseline Smoothing	EXJ2	08/22/23 09:51
Nitrite as N	5.69	Baseline Smoothing	EXJ2	08/22/23 09:52
Bromide	6.73	Baseline Smoothing	EXJ2	08/22/23 09:52
Nitrate as N	7.57	Baseline Smoothing	EXJ2	08/22/23 09:52



HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1

SDG No.: \_\_\_\_\_

Instrument ID: IC4 Analysis Batch Number: 76764

Lab Sample ID: IC 140-76764/7 Client Sample ID: \_\_\_\_\_

Date Analyzed: 08/21/23 21:01 Lab File ID: Air\_Anions-08212023 ICAL GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.34	Baseline Smoothing	EXJ2	08/22/23 09:51
Chloride	4.75	Baseline Smoothing	EXJ2	08/22/23 09:51

Lab Sample ID: ICV 140-76764/8 Client Sample ID: \_\_\_\_\_

Date Analyzed: 08/21/23 21:23 Lab File ID: Air\_Anions-08212023 ICAL GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.33	Baseline Smoothing	EXJ2	08/22/23 09:55
Chloride	4.74	Baseline Smoothing	EXJ2	08/22/23 09:55
Nitrite as N	5.69	Baseline Smoothing	EXJ2	08/22/23 09:56
Bromide	6.74	Baseline Smoothing	EXJ2	08/22/23 09:56
Nitrate as N	7.58	Baseline Smoothing	EXJ2	08/22/23 09:56

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1

SDG No.: \_\_\_\_\_

Instrument ID: IC4 Analysis Batch Number: 81419

Lab Sample ID: CCV 140-81419/1 Client Sample ID: \_\_\_\_\_

Date Analyzed: 12/14/23 10:53 Lab File ID: Air\_Anions-1214202310.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.32	Baseline Smoothing	EXJ2	12/15/23 09:29
Chloride	4.59	Baseline Smoothing	EXJ2	12/15/23 09:29

Lab Sample ID: CCB 140-81419/2 Client Sample ID: \_\_\_\_\_

Date Analyzed: 12/14/23 11:15 Lab File ID: Air\_Anions-1214202311.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride		Unspecified		

Lab Sample ID: MB 140-81372/1-A Client Sample ID: \_\_\_\_\_

Date Analyzed: 12/14/23 11:37 Lab File ID: Air\_Anions-1214202312.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride		Unspecified		

Lab Sample ID: LCS 140-81372/2-A Client Sample ID: \_\_\_\_\_

Date Analyzed: 12/14/23 12:00 Lab File ID: Air\_Anions-1214202313.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.59	Baseline Smoothing	EXJ2	12/15/23 09:30

Lab Sample ID: LCSD 140-81372/3-A Client Sample ID: \_\_\_\_\_

Date Analyzed: 12/14/23 12:22 Lab File ID: Air\_Anions-1214202314.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.59	Baseline Smoothing	EXJ2	12/15/23 09:30

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1

SDG No.: \_\_\_\_\_

Instrument ID: IC4 Analysis Batch Number: 81419

Lab Sample ID: CCV 140-81419/13 Client Sample ID: \_\_\_\_\_

Date Analyzed: 12/14/23 15:19 Lab File ID: Air\_Anions-1214202322.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.31	Baseline Smoothing	EXJ2	12/15/23 09:31
Chloride	4.58	Baseline Smoothing	EXJ2	12/15/23 09:31

Lab Sample ID: CCB 140-81419/14 Client Sample ID: \_\_\_\_\_

Date Analyzed: 12/14/23 15:42 Lab File ID: Air\_Anions-1214202323.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride		Unspecified		

Lab Sample ID: CCV 140-81419/25 Client Sample ID: \_\_\_\_\_

Date Analyzed: 12/14/23 19:46 Lab File ID: Air\_Anions-1214202334.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.32	Baseline Smoothing	EXJ2	12/15/23 09:32
Chloride	4.58	Baseline Smoothing	EXJ2	12/15/23 09:32

Lab Sample ID: CCB 140-81419/26 Client Sample ID: \_\_\_\_\_

Date Analyzed: 12/14/23 20:08 Lab File ID: Air\_Anions-1214202335.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride		Unspecified		

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1

SDG No.: \_\_\_\_\_

Instrument ID: IC4 Analysis Batch Number: 81419

Lab Sample ID: CCV 140-81419/37 Client Sample ID: \_\_\_\_\_

Date Analyzed: 12/15/23 00:32 Lab File ID: Air\_Anions-1214202346.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.32	Baseline Smoothing	EXJ2	12/15/23 09:34
Chloride	4.60	Baseline Smoothing	EXJ2	12/15/23 09:34

Lab Sample ID: CCB 140-81419/38 Client Sample ID: \_\_\_\_\_

Date Analyzed: 12/15/23 00:54 Lab File ID: Air\_Anions-1214202347.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride		Unspecified		

Lab Sample ID: 140-34757-21 DU Client Sample ID: BLANK CONTAINER 8 H2O DU

Date Analyzed: 12/15/23 01:16 Lab File ID: Air\_Anions-1214202348.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.58	Baseline Smoothing	EXJ2	12/15/23 09:34

Lab Sample ID: CCV 140-81419/40 Client Sample ID: \_\_\_\_\_

Date Analyzed: 12/15/23 01:59 Lab File ID: Air\_Anions-1214202349.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.32	Baseline Smoothing	EXJ2	12/15/23 09:34
Chloride	4.60	Baseline Smoothing	EXJ2	12/15/23 09:34

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Instrument ID: IC4 Analysis Batch Number: 81419  
 Lab Sample ID: CCB 140-81419/41 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 12/15/23 02:21 Lab File ID: Air\_Anions-1214202350.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride		Unspecified		

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1

SDG No.: \_\_\_\_\_

Instrument ID: IC4 Analysis Batch Number: 81494

Lab Sample ID: CCV 140-81494/1 Client Sample ID: \_\_\_\_\_

Date Analyzed: 12/15/23 19:19 Lab File ID: Air\_Anions-1215202310.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.32	Baseline Smoothing	EXJ2	12/18/23 12:00
Chloride	4.60	Baseline Smoothing	EXJ2	12/18/23 12:00

Lab Sample ID: CCB 140-81494/2 Client Sample ID: \_\_\_\_\_

Date Analyzed: 12/15/23 19:41 Lab File ID: Air\_Anions-1215202311.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride		Unspecified		

Lab Sample ID: MB 140-81373/1-A Client Sample ID: \_\_\_\_\_

Date Analyzed: 12/15/23 20:03 Lab File ID: Air\_Anions-1215202312.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.57	Baseline Smoothing	EXJ2	12/18/23 12:00

Lab Sample ID: LCS 140-81373/2-A Client Sample ID: \_\_\_\_\_

Date Analyzed: 12/15/23 20:46 Lab File ID: Air\_Anions-1215202313.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.60	Baseline Smoothing	EXJ2	12/18/23 12:00

Lab Sample ID: LCSD 140-81373/3-A Client Sample ID: \_\_\_\_\_

Date Analyzed: 12/15/23 21:08 Lab File ID: Air\_Anions-1215202314.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.60	Baseline Smoothing	EXJ2	12/18/23 12:00

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1

SDG No.: \_\_\_\_\_

Instrument ID: IC4 Analysis Batch Number: 81494

Lab Sample ID: 140-34757-2 Client Sample ID: VF26A-1 CONTAINER 4 NAOH

Date Analyzed: 12/15/23 21:30 Lab File ID: Air\_Anions-1215202315.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.51	Baseline Smoothing	EXJ2	12/18/23 12:01

Lab Sample ID: 140-34757-2 DU Client Sample ID: VF26A-1 CONTAINER 4 NAOH DU

Date Analyzed: 12/15/23 22:12 Lab File ID: Air\_Anions-1215202316.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.51	Baseline Smoothing	EXJ2	12/18/23 12:01

Lab Sample ID: 140-34757-4 Client Sample ID: VF26A-2 CONTAINER 4 NAOH

Date Analyzed: 12/15/23 22:54 Lab File ID: Air\_Anions-1215202317.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.51	Baseline Smoothing	EXJ2	12/18/23 12:01

Lab Sample ID: 140-34757-4 DU Client Sample ID: VF26A-2 CONTAINER 4 NAOH DU

Date Analyzed: 12/15/23 23:37 Lab File ID: Air\_Anions-1215202318.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.51	Baseline Smoothing	EXJ2	12/18/23 12:01

Lab Sample ID: CCV 140-81494/13 Client Sample ID: \_\_\_\_\_

Date Analyzed: 12/16/23 02:25 Lab File ID: Air\_Anions-1215202322.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.33	Baseline Smoothing	EXJ2	12/18/23 12:01
Chloride	4.60	Baseline Smoothing	EXJ2	12/18/23 12:01

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1

SDG No.: \_\_\_\_\_

Instrument ID: IC4 Analysis Batch Number: 81494

Lab Sample ID: 140-34757-10 Client Sample ID: AS26-2 CONTAINER 4 NAOH

Date Analyzed: 12/16/23 05:17 Lab File ID: Air\_Anions-1215202327.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.52	Baseline Smoothing	EXJ2	12/18/23 12:02

Lab Sample ID: 140-34757-10 DU Client Sample ID: AS26-2 CONTAINER 4 NAOH DU

Date Analyzed: 12/16/23 05:59 Lab File ID: Air\_Anions-1215202328.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.52	Baseline Smoothing	EXJ2	12/18/23 12:02

Lab Sample ID: 140-34757-14 Client Sample ID: AP26-1 CONTAINER 4 NAOH

Date Analyzed: 12/16/23 09:30 Lab File ID: Air\_Anions-1215202333.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.53	Baseline Smoothing	EXJ2	12/18/23 12:03

Lab Sample ID: CCV 140-81494/25 Client Sample ID: \_\_\_\_\_

Date Analyzed: 12/16/23 10:12 Lab File ID: Air\_Anions-1215202334.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.33	Baseline Smoothing	EXJ2	12/18/23 12:02
Chloride	4.60	Baseline Smoothing	EXJ2	12/18/23 12:02

Lab Sample ID: CCB 140-81494/26 Client Sample ID: \_\_\_\_\_

Date Analyzed: 12/16/23 10:34 Lab File ID: Air\_Anions-1215202335.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride		Unspecified		



HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1

SDG No.: \_\_\_\_\_

Instrument ID: IC4 Analysis Batch Number: 81494

Lab Sample ID: 140-34757-14 DU Client Sample ID: AP26-1 CONTAINER 4 NAOH DU

Date Analyzed: 12/16/23 10:56 Lab File ID: Air\_Anions-1215202336.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.54	Baseline Smoothing	EXJ2	12/18/23 12:03

Lab Sample ID: 140-34757-16 Client Sample ID: AP26-2 CONTAINER 4 NAOH

Date Analyzed: 12/16/23 11:38 Lab File ID: Air\_Anions-1215202337.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.54	Baseline Smoothing	EXJ2	12/18/23 12:03

Lab Sample ID: 140-34757-16 DU Client Sample ID: AP26-2 CONTAINER 4 NAOH DU

Date Analyzed: 12/16/23 12:21 Lab File ID: Air\_Anions-1215202338.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.54	Baseline Smoothing	EXJ2	12/18/23 12:03

Lab Sample ID: 140-34757-18 Client Sample ID: AP26-3 CONTAINER 4 NAOH

Date Analyzed: 12/16/23 14:27 Lab File ID: Air\_Anions-1215202341.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.54	Baseline Smoothing	EXJ2	12/18/23 12:04

Lab Sample ID: 140-34757-18 DU Client Sample ID: AP26-3 CONTAINER 4 NAOH DU

Date Analyzed: 12/16/23 15:09 Lab File ID: Air\_Anions-1215202342.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.54	Baseline Smoothing	EXJ2	12/18/23 12:04

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1

SDG No.: \_\_\_\_\_

Instrument ID: IC4 Analysis Batch Number: 81494

Lab Sample ID: 140-34757-20 Client Sample ID: BLANK CONTAINER 7 NAOH

Date Analyzed: 12/16/23 15:51 Lab File ID: Air\_Anions-1215202343.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.49	Baseline Smoothing	EXJ2	12/18/23 12:04

Lab Sample ID: 140-34757-20 DU Client Sample ID: BLANK CONTAINER 7 NAOH DU

Date Analyzed: 12/16/23 16:34 Lab File ID: Air\_Anions-1215202344.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	4.49	Baseline Smoothing	EXJ2	12/18/23 12:03

Lab Sample ID: CCV 140-81494/36 Client Sample ID: \_\_\_\_\_

Date Analyzed: 12/16/23 17:16 Lab File ID: Air\_Anions-1215202345.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.33	Baseline Smoothing	EXJ2	12/18/23 12:04
Chloride	4.60	Baseline Smoothing	EXJ2	12/18/23 12:04

Lab Sample ID: CCB 140-81494/37 Client Sample ID: \_\_\_\_\_

Date Analyzed: 12/16/23 17:38 Lab File ID: Air\_Anions-1215202346.d GC Column: AS22 ID: \_\_\_\_\_

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride		Unspecified		

# Method 0050\_26A

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Hydrogen Halide and Halogen  
Emissions/Stationary Sources (Mod)  
by Method 0050\_26A

FORM III  
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: Air\_Anions-1214202313.d  
 Lab ID: LCS 140-81372/2-A Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Sample)	LCS CONCENTRATION (ug/Sample)	LCS % REC	QC LIMITS REC	#
Chlorine	75.0	78.94	105	90-110	
Hydrogen Chloride	77.1	81.18	105	90-110	

# Column to be used to flag recovery and RPD values  
 FORM III 0050/26A

FORM III  
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: Air\_Anions-1215202313.d  
 Lab ID: LCS 140-81373/2-A Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Sample)	LCS CONCENTRATION (ug/Sample)	LCS % REC	QC LIMITS REC	#
Chlorine	75.0	79.29	106	90-110	

FORM III  
HPLC/IC LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: Air\_Anions-1214202314.d  
 Lab ID: LCSD 140-81372/3-A Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Sample)	LCSD CONCENTRATION (ug/Sample)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Chlorine	75.0	79.09	105	0	20	90-110	
Hydrogen Chloride	77.1	81.34	105	0	20	90-110	

# Column to be used to flag recovery and RPD values  
 FORM III 0050/26A

FORM III  
HPLC/IC LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: Air\_Anions-1215202314.d  
 Lab ID: LCSD 140-81373/3-A Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Sample)	LCSD CONCENTRATION (ug/Sample)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Chlorine	75.0	78.67	105	1	20	90-110	

# Column to be used to flag recovery and RPD values  
 FORM III 0050/26A

FORM III  
HPLC/IC MATRIX SPIKE RECOVERY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1

SDG No.: \_\_\_\_\_

Matrix: Air Level: Low Lab File ID: Air\_Anions-1214202319.d

Lab ID: 140-34757-3 MS Client ID: VF26A-2 CONTAINER 3 H2SO4 MS

COMPOUND	SPIKE ADDED (ug/Sample)	SAMPLE CONCENTRATION (ug/Sample)	MS CONCENTRATION (ug/Sample)	MS % REC	QC LIMITS REC	#
Hydrogen Chloride	524	46.0 J	561.4	98	75-125	

# Column to be used to flag recovery and RPD values

FORM III 0050/26A



FORM III  
HPLC/IC MATRIX SPIKE RECOVERY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: Air\_Anions-1215202319.d  
 Lab ID: 140-34757-4 MS Client ID: VF26A-2 CONTAINER 4 NAOH MS

COMPOUND	SPIKE ADDED (ug/Sample)	SAMPLE CONCENTRATION (ug/Sample)	MS CONCENTRATION (ug/Sample)	MS % REC	QC LIMITS REC	#
Chlorine	1230	212	1448	101	75-125	

FORM III  
HPLC/IC MATRIX SPIKE RECOVERY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1

SDG No.: \_\_\_\_\_

Matrix: Air Level: Low Lab File ID: Air\_Anions-1214202329.d

Lab ID: 140-34757-9 MS Client ID: AS26-2 CONTAINER 3 H2SO4 MS

COMPOUND	SPIKE ADDED (ug/Sample)	SAMPLE CONCENTRATION (ug/Sample)	MS CONCENTRATION (ug/Sample)	MS % REC	QC LIMITS REC	#
Hydrogen Chloride	514	41.3 J	544.7	98	75-125	

# Column to be used to flag recovery and RPD values

FORM III  
HPLC/IC MATRIX SPIKE RECOVERY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: Air\_Anions-1215202329.d  
 Lab ID: 140-34757-10 MS Client ID: AS26-2 CONTAINER 4 NAOH MS

COMPOUND	SPIKE ADDED (ug/Sample)	SAMPLE CONCENTRATION (ug/Sample)	MS CONCENTRATION (ug/Sample)	MS % REC	QC LIMITS REC	#
Chlorine	1180	91.2 J	1247	98	75-125	

# Column to be used to flag recovery and RPD values  
 FORM III 0050/26A

FORM III  
HPLC/IC MATRIX SPIKE RECOVERY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1

SDG No.: \_\_\_\_\_

Matrix: Air Level: Low Lab File ID: Air\_Anions-1214202339.d

Lab ID: 140-34757-15 MS Client ID: AP26-2 CONTAINER 3 H2SO4 MS

COMPOUND	SPIKE ADDED (ug/Sample)	SAMPLE CONCENTRATION (ug/Sample)	MS CONCENTRATION (ug/Sample)	MS % REC	QC LIMITS REC	#
Hydrogen Chloride	545	159	686.0	97	75-125	

# Column to be used to flag recovery and RPD values

FORM III  
HPLC/IC MATRIX SPIKE RECOVERY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1

SDG No.: \_\_\_\_\_

Matrix: Air Level: Low Lab File ID: Air\_Anions-1215202339.d

Lab ID: 140-34757-16 MS Client ID: AP26-2 CONTAINER 4 NAOH MS

COMPOUND	SPIKE ADDED (ug/Sample)	SAMPLE CONCENTRATION (ug/Sample)	MS CONCENTRATION (ug/Sample)	MS % REC	QC LIMITS REC	#
Chlorine	1200	96.6 J	1263	97	75-125	

# Column to be used to flag recovery and RPD values

FORM III  
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: Air\_Anions-1214202320.d  
 Lab ID: 140-34757-3 MSD Client ID: VF26A-2 CONTAINER 3 H2SO4 MSD

COMPOUND	SPIKE ADDED (ug/Sample)	MSD CONCENTRATION (ug/Sample)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Hydrogen Chloride	524	560.9	98	0	20	75-125	

# Column to be used to flag recovery and RPD values  
 FORM III 0050/26A

FORM III  
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: Air\_Anions-1215202320.d  
 Lab ID: 140-34757-4 MSD Client ID: VF26A-2 CONTAINER 4 NAOH MSD

COMPOUND	SPIKE ADDED (ug/Sample)	MSD CONCENTRATION (ug/Sample)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Chlorine	1230	1446	101	0	20	75-125	

# Column to be used to flag recovery and RPD values  
 FORM III 0050/26A

FORM III  
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1

SDG No.: \_\_\_\_\_

Matrix: Air Level: Low Lab File ID: Air\_Anions-1214202330.d

Lab ID: 140-34757-9 MSD Client ID: AS26-2 CONTAINER 3 H2SO4 MSD

COMPOUND	SPIKE ADDED (ug/Sample)	MSD CONCENTRATION (ug/Sample)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Hydrogen Chloride	514	546.4	98	0	20	75-125	

# Column to be used to flag recovery and RPD values



FORM III  
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: Air\_Anions-1215202330.d  
 Lab ID: 140-34757-10 MSD Client ID: AS26-2 CONTAINER 4 NAOH MSD

COMPOUND	SPIKE ADDED (ug/Sample)	MSD CONCENTRATION (ug/Sample)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Chlorine	1180	1246	98	0	20	75-125	

# Column to be used to flag recovery and RPD values  
 FORM III 0050/26A

FORM III  
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: Air\_Anions-1214202340.d  
 Lab ID: 140-34757-15 MSD Client ID: AP26-2 CONTAINER 3 H2SO4 MSD

COMPOUND	SPIKE ADDED (ug/Sample)	MSD CONCENTRATION (ug/Sample)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Hydrogen Chloride	545	685.2	97	0	20	75-125	

# Column to be used to flag recovery and RPD values  
 FORM III 0050/26A

FORM III  
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: Air\_Anions-1215202340.d  
 Lab ID: 140-34757-16 MSD Client ID: AP26-2 CONTAINER 4 NAOH MSD

COMPOUND	SPIKE ADDED (ug/Sample)	MSD CONCENTRATION (ug/Sample)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Chlorine	1200	1263	97	0	20	75-125	

# Column to be used to flag recovery and RPD values  
 FORM III 0050/26A

HPLC/IC DUPLICATE SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: Air\_Anions-1214202316.d  
 Lab ID: 140-34757-1 DU Client ID: VF26A-1 CONTAINER 3 H2SO4 DU

COMPOUND	SAMPLE CONCENTRATION (ug/Sample)	DUPLICATE CONCENTRATION (ug/Sample)	%RPD	%RPD LIMIT	#
Hydrogen Chloride	28.1 J	32.21 J	14	10	F5

# Column to be used to flag %RPD values

0050/26A

HPLC/IC DUPLICATE SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: Air\_Anions-1215202316.d  
 Lab ID: 140-34757-2 DU Client ID: VF26A-1 CONTAINER 4 NAOH DU

COMPOUND	SAMPLE CONCENTRATION (ug/Sample)	DUPLICATE CONCENTRATION (ug/Sample)	%RPD	%RPD LIMIT	#
Chlorine	104 J	87.71 J	17	10	F5

# Column to be used to flag %RPD values

0050/26A

HPLC/IC DUPLICATE SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: Air\_Anions-1214202318.d  
 Lab ID: 140-34757-3 DU Client ID: VF26A-2 CONTAINER 3 H2SO4 DU

COMPOUND	SAMPLE CONCENTRATION (ug/Sample)	DUPLICATE CONCENTRATION (ug/Sample)	%RPD	%RPD LIMIT	#
Hydrogen Chloride	46.0 J	47.44 J	3	10	

# Column to be used to flag %RPD values

0050/26A

HPLC/IC DUPLICATE SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1

SDG No.: \_\_\_\_\_

Matrix: Air Level: Low Lab File ID: Air\_Anions-1215202318.d

Lab ID: 140-34757-4 DU Client ID: VF26A-2 CONTAINER 4 NAOH DU

COMPOUND	SAMPLE CONCENTRATION (ug/Sample)	DUPLICATE CONCENTRATION (ug/Sample)	%RPD	%RPD LIMIT	#
Chlorine	212	208.4	2	10	

# Column to be used to flag %RPD values

0050/26A

HPLC/IC DUPLICATE SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: Air\_Anions-1214202324.d  
 Lab ID: 140-34757-5 DU Client ID: VF26A-4 CONTAINER 3 H2SO4 DU

COMPOUND	SAMPLE CONCENTRATION (ug/Sample)	DUPLICATE CONCENTRATION (ug/Sample)	%RPD	%RPD LIMIT	#
Hydrogen Chloride	ND	ND	NC	10	

# Column to be used to flag %RPD values

0050/26A



HPLC/IC DUPLICATE SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1

SDG No.: \_\_\_\_\_

Matrix: Air Level: Low Lab File ID: Air\_Anions-1215202324.d

Lab ID: 140-34757-6 DU Client ID: VF26A-4 CONTAINER 4 NAOH DU

COMPOUND	SAMPLE CONCENTRATION (ug/Sample)	DUPLICATE CONCENTRATION (ug/Sample)	%RPD	%RPD LIMIT	#
Chlorine	92.8 J	88.77 J	4	10	

# Column to be used to flag %RPD values

0050/26A

HPLC/IC DUPLICATE SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: Air\_Anions-1214202326.d  
 Lab ID: 140-34757-7 DU Client ID: AS26-1 CONTAINER 3 H2SO4 DU

COMPOUND	SAMPLE CONCENTRATION (ug/Sample)	DUPLICATE CONCENTRATION (ug/Sample)	%RPD	%RPD LIMIT	#
Hydrogen Chloride	46.4 J	45.43 J	2	10	

# Column to be used to flag %RPD values

0050/26A

HPLC/IC DUPLICATE SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1

SDG No.: \_\_\_\_\_

Matrix: Air Level: Low Lab File ID: Air\_Anions-1215202326.d

Lab ID: 140-34757-8 DU Client ID: AS26-1 CONTAINER 4 NAOH DU

COMPOUND	SAMPLE CONCENTRATION (ug/Sample)	DUPLICATE CONCENTRATION (ug/Sample)	%RPD	%RPD LIMIT	#
Chlorine	92.2 J	89.22 J	3	10	

# Column to be used to flag %RPD values

0050/26A

HPLC/IC DUPLICATE SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: Air\_Anions-1214202328.d  
 Lab ID: 140-34757-9 DU Client ID: AS26-2 CONTAINER 3 H2SO4 DU

COMPOUND	SAMPLE CONCENTRATION (ug/Sample)	DUPLICATE CONCENTRATION (ug/Sample)	%RPD	%RPD LIMIT	#
Hydrogen Chloride	41.3 J	34.56 J	18	10	F5

# Column to be used to flag %RPD values

0050/26A

HPLC/IC DUPLICATE SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: Air\_Anions-1215202328.d  
 Lab ID: 140-34757-10 DU Client ID: AS26-2 CONTAINER 4 NAOH DU

COMPOUND	SAMPLE CONCENTRATION (ug/Sample)	DUPLICATE CONCENTRATION (ug/Sample)	%RPD	%RPD LIMIT	#
Chlorine	91.2 J	89.39 J	2	10	

# Column to be used to flag %RPD values

0050/26A

HPLC/IC DUPLICATE SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: Air\_Anions-1214202332.d  
 Lab ID: 140-34757-11 DU Client ID: AS26-3 CONTAINER 3 H2SO4 DU

COMPOUND	SAMPLE CONCENTRATION (ug/Sample)	DUPLICATE CONCENTRATION (ug/Sample)	%RPD	%RPD LIMIT	#
Hydrogen Chloride	51.2 J	39.19 J	27	10	F5

# Column to be used to flag %RPD values

0050/26A

HPLC/IC DUPLICATE SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: Air\_Anions-1215202332.d  
 Lab ID: 140-34757-12 DU Client ID: AS26-3 CONTAINER 4 NAOH DU

COMPOUND	SAMPLE CONCENTRATION (ug/Sample)	DUPLICATE CONCENTRATION (ug/Sample)	%RPD	%RPD LIMIT	#
Chlorine	80.4 J	81.41 J	1	10	

# Column to be used to flag %RPD values

0050/26A

HPLC/IC DUPLICATE SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: Air\_Anions-1214202336.d  
 Lab ID: 140-34757-13 DU Client ID: AP26-1 CONTAINER 3 H2SO4 DU

COMPOUND	SAMPLE CONCENTRATION (ug/Sample)	DUPLICATE CONCENTRATION (ug/Sample)	%RPD	%RPD LIMIT	#
Hydrogen Chloride	137	135.3	1	10	

# Column to be used to flag %RPD values

0050/26A



HPLC/IC DUPLICATE SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: Air\_Anions-1215202336.d  
 Lab ID: 140-34757-14 DU Client ID: AP26-1 CONTAINER 4 NAOH DU

COMPOUND	SAMPLE CONCENTRATION (ug/Sample)	DUPLICATE CONCENTRATION (ug/Sample)	%RPD	%RPD LIMIT	#
Chlorine	85.9 J	68.74 J	22	10	F5

# Column to be used to flag %RPD values

0050/26A

HPLC/IC DUPLICATE SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: Air\_Anions-1214202338.d  
 Lab ID: 140-34757-15 DU Client ID: AP26-2 CONTAINER 3 H2SO4 DU

COMPOUND	SAMPLE CONCENTRATION (ug/Sample)	DUPLICATE CONCENTRATION (ug/Sample)	%RPD	%RPD LIMIT	#
Hydrogen Chloride	159	150.1	6	10	

# Column to be used to flag %RPD values

0050/26A

HPLC/IC DUPLICATE SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: Air\_Anions-1215202338.d  
 Lab ID: 140-34757-16 DU Client ID: AP26-2 CONTAINER 4 NAOH DU

COMPOUND	SAMPLE CONCENTRATION (ug/Sample)	DUPLICATE CONCENTRATION (ug/Sample)	%RPD	%RPD LIMIT	#
Chlorine	96.6 J	96.56 J	0.09	10	

# Column to be used to flag %RPD values

0050/26A

HPLC/IC DUPLICATE SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: Air\_Anions-1214202342.d  
 Lab ID: 140-34757-17 DU Client ID: AP26-3 CONTAINER 3 H2SO4 DU

COMPOUND	SAMPLE CONCENTRATION (ug/Sample)	DUPLICATE CONCENTRATION (ug/Sample)	%RPD	%RPD LIMIT	#
Hydrogen Chloride	119	118.2	1	10	

# Column to be used to flag %RPD values

0050/26A

HPLC/IC DUPLICATE SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: Air\_Anions-1215202342.d  
 Lab ID: 140-34757-18 DU Client ID: AP26-3 CONTAINER 4 NAOH DU

COMPOUND	SAMPLE CONCENTRATION (ug/Sample)	DUPLICATE CONCENTRATION (ug/Sample)	%RPD	%RPD LIMIT	#
Chlorine	88.3 J	85.61 J	3	10	

# Column to be used to flag %RPD values

0050/26A

HPLC/IC DUPLICATE SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: Air\_Anions-1214202344.d  
 Lab ID: 140-34757-19 DU Client ID: BLANK CONTAINER 6 H2SO4 DU

COMPOUND	SAMPLE CONCENTRATION (ug/Sample)	DUPLICATE CONCENTRATION (ug/Sample)	%RPD	%RPD LIMIT	#
Hydrogen Chloride	31.2 J	29.68 J	5	10	

# Column to be used to flag %RPD values

0050/26A

HPLC/IC DUPLICATE SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: Air\_Anions-1215202344.d  
 Lab ID: 140-34757-20 DU Client ID: BLANK CONTAINER 7 NAOH DU

COMPOUND	SAMPLE CONCENTRATION (ug/Sample)	DUPLICATE CONCENTRATION (ug/Sample)	%RPD	%RPD LIMIT	#
Chlorine	73.3 J	73.82 J	0.7	10	

# Column to be used to flag %RPD values

0050/26A

HPLC/IC DUPLICATE SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1

SDG No.: \_\_\_\_\_

Matrix: Air Level: Low Lab File ID: Air\_Anions-1214202348.d

Lab ID: 140-34757-21 DU Client ID: BLANK CONTAINER 8 H2O DU

COMPOUND	SAMPLE CONCENTRATION (ug/Sample)	DUPLICATE CONCENTRATION (ug/Sample)	%RPD	%RPD LIMIT	#
Chlorine	ND	ND	NC	10	
Hydrogen Chloride	ND	ND	NC	10	

# Column to be used to flag %RPD values

0050/26A



FORM IV  
HPLC/IC METHOD BLANK SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: Air\_Anions-1214202312.d Lab Sample ID: MB 140-81372/1-A  
 Matrix: Air Date Extracted: 12/14/2023 09:50  
 Instrument ID: IC4 Date Analyzed: 12/14/2023 11:37  
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-81372/2-A	Air_Anions-1214202313.d	12/14/2023 12:00
	LCSD 140-81372/3-A	Air_Anions-1214202314.d	12/14/2023 12:22
VF26A-1 CONTAINER 3 H2SO4	140-34757-1	Air_Anions-1214202315.d	12/14/2023 12:44
VF26A-1 CONTAINER 3 H2SO4 DU	140-34757-1 DU	Air_Anions-1214202316.d	12/14/2023 13:06
VF26A-2 CONTAINER 3 H2SO4	140-34757-3	Air_Anions-1214202317.d	12/14/2023 13:29
VF26A-2 CONTAINER 3 H2SO4 DU	140-34757-3 DU	Air_Anions-1214202318.d	12/14/2023 13:51
VF26A-2 CONTAINER 3 H2SO4 MS	140-34757-3 MS	Air_Anions-1214202319.d	12/14/2023 14:13
VF26A-2 CONTAINER 3 H2SO4 MSD	140-34757-3 MSD	Air_Anions-1214202320.d	12/14/2023 14:35
VF26A-4 CONTAINER 3 H2SO4	140-34757-5	Air_Anions-1214202321.d	12/14/2023 14:57
VF26A-4 CONTAINER 3 H2SO4 DU	140-34757-5 DU	Air_Anions-1214202324.d	12/14/2023 16:04
AS26-1 CONTAINER 3 H2SO4	140-34757-7	Air_Anions-1214202325.d	12/14/2023 16:26
AS26-1 CONTAINER 3 H2SO4 DU	140-34757-7 DU	Air_Anions-1214202326.d	12/14/2023 16:48
AS26-2 CONTAINER 3 H2SO4	140-34757-9	Air_Anions-1214202327.d	12/14/2023 17:11
AS26-2 CONTAINER 3 H2SO4 DU	140-34757-9 DU	Air_Anions-1214202328.d	12/14/2023 17:33
AS26-2 CONTAINER 3 H2SO4 MS	140-34757-9 MS	Air_Anions-1214202329.d	12/14/2023 17:55

FORM IV  
HPLC/IC METHOD BLANK SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: Air\_Anions-1214202312.d Lab Sample ID: MB 140-81372/1-A  
 Matrix: Air Date Extracted: 12/14/2023 09:50  
 Instrument ID: IC4 Date Analyzed: 12/14/2023 11:37  
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
AS26-2 CONTAINER 3 H2SO4 MSD	140-34757-9 MSD	Air_Anions-1214202330.d	12/14/2023 18:17
AS26-3 CONTAINER 3 H2SO4	140-34757-11	Air_Anions-1214202331.d	12/14/2023 18:39
AS26-3 CONTAINER 3 H2SO4 DU	140-34757-11 DU	Air_Anions-1214202332.d	12/14/2023 19:02
AP26-1 CONTAINER 3 H2SO4	140-34757-13	Air_Anions-1214202333.d	12/14/2023 19:24
AP26-1 CONTAINER 3 H2SO4 DU	140-34757-13 DU	Air_Anions-1214202336.d	12/14/2023 20:30
AP26-2 CONTAINER 3 H2SO4	140-34757-15	Air_Anions-1214202337.d	12/14/2023 20:53
AP26-2 CONTAINER 3 H2SO4 DU	140-34757-15 DU	Air_Anions-1214202338.d	12/14/2023 21:15
AP26-2 CONTAINER 3 H2SO4 MS	140-34757-15 MS	Air_Anions-1214202339.d	12/14/2023 21:37
AP26-2 CONTAINER 3 H2SO4 MSD	140-34757-15 MSD	Air_Anions-1214202340.d	12/14/2023 21:59
AP26-3 CONTAINER 3 H2SO4	140-34757-17	Air_Anions-1214202341.d	12/14/2023 22:21
AP26-3 CONTAINER 3 H2SO4 DU	140-34757-17 DU	Air_Anions-1214202342.d	12/14/2023 22:43
BLANK CONTAINER 6 H2SO4	140-34757-19	Air_Anions-1214202343.d	12/14/2023 23:06
BLANK CONTAINER 6 H2SO4 DU	140-34757-19 DU	Air_Anions-1214202344.d	12/14/2023 23:28
BLANK CONTAINER 8 H2O	140-34757-21	Air_Anions-1214202345.d	12/14/2023 23:50
BLANK CONTAINER 8 H2O DU	140-34757-21 DU	Air_Anions-1214202348.d	12/15/2023 01:16

FORM IV  
HPLC/IC METHOD BLANK SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: Air\_Anions-1215202312.d Lab Sample ID: MB 140-81373/1-A  
 Matrix: Air Date Extracted: 12/14/2023 09:56  
 Instrument ID: IC4 Date Analyzed: 12/15/2023 20:03  
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-81373/2-A	Air_Anions-1215202313.d	12/15/2023 20:46
	LCSD 140-81373/3-A	Air_Anions-1215202314.d	12/15/2023 21:08
VF26A-1 CONTAINER 4 NAOH	140-34757-2	Air_Anions-1215202315.d	12/15/2023 21:30
VF26A-1 CONTAINER 4 NAOH DU	140-34757-2 DU	Air_Anions-1215202316.d	12/15/2023 22:12
VF26A-2 CONTAINER 4 NAOH	140-34757-4	Air_Anions-1215202317.d	12/15/2023 22:54
VF26A-2 CONTAINER 4 NAOH DU	140-34757-4 DU	Air_Anions-1215202318.d	12/15/2023 23:37
VF26A-2 CONTAINER 4 NAOH MS	140-34757-4 MS	Air_Anions-1215202319.d	12/16/2023 00:19
VF26A-2 CONTAINER 4 NAOH MSD	140-34757-4 MSD	Air_Anions-1215202320.d	12/16/2023 01:01
VF26A-4 CONTAINER 4 NAOH	140-34757-6	Air_Anions-1215202321.d	12/16/2023 01:43
VF26A-4 CONTAINER 4 NAOH DU	140-34757-6 DU	Air_Anions-1215202324.d	12/16/2023 03:10
AS26-1 CONTAINER 4 NAOH	140-34757-8	Air_Anions-1215202325.d	12/16/2023 03:52
AS26-1 CONTAINER 4 NAOH DU	140-34757-8 DU	Air_Anions-1215202326.d	12/16/2023 04:34
AS26-2 CONTAINER 4 NAOH	140-34757-10	Air_Anions-1215202327.d	12/16/2023 05:17
AS26-2 CONTAINER 4 NAOH DU	140-34757-10 DU	Air_Anions-1215202328.d	12/16/2023 05:59
AS26-2 CONTAINER 4 NAOH MS	140-34757-10 MS	Air_Anions-1215202329.d	12/16/2023 06:41

FORM IV  
HPLC/IC METHOD BLANK SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: Air\_Anions-1215202312.d Lab Sample ID: MB 140-81373/1-A  
 Matrix: Air Date Extracted: 12/14/2023 09:56  
 Instrument ID: IC4 Date Analyzed: 12/15/2023 20:03  
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
AS26-2 CONTAINER 4 NAOH MSD	140-34757-10 MSD	Air_Anions-1215202330.d	12/16/2023 07:23
AS26-3 CONTAINER 4 NAOH	140-34757-12	Air_Anions-1215202331.d	12/16/2023 08:05
AS26-3 CONTAINER 4 NAOH DU	140-34757-12 DU	Air_Anions-1215202332.d	12/16/2023 08:47
AP26-1 CONTAINER 4 NAOH	140-34757-14	Air_Anions-1215202333.d	12/16/2023 09:30
AP26-1 CONTAINER 4 NAOH DU	140-34757-14 DU	Air_Anions-1215202336.d	12/16/2023 10:56
AP26-2 CONTAINER 4 NAOH	140-34757-16	Air_Anions-1215202337.d	12/16/2023 11:38
AP26-2 CONTAINER 4 NAOH DU	140-34757-16 DU	Air_Anions-1215202338.d	12/16/2023 12:21
AP26-2 CONTAINER 4 NAOH MS	140-34757-16 MS	Air_Anions-1215202339.d	12/16/2023 13:03
AP26-2 CONTAINER 4 NAOH MSD	140-34757-16 MSD	Air_Anions-1215202340.d	12/16/2023 13:45
AP26-3 CONTAINER 4 NAOH	140-34757-18	Air_Anions-1215202341.d	12/16/2023 14:27
AP26-3 CONTAINER 4 NAOH DU	140-34757-18 DU	Air_Anions-1215202342.d	12/16/2023 15:09
BLANK CONTAINER 7 NAOH	140-34757-20	Air_Anions-1215202343.d	12/16/2023 15:51
BLANK CONTAINER 7 NAOH DU	140-34757-20 DU	Air_Anions-1215202344.d	12/16/2023 16:34

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: VF26A-1 CONTAINER 3 H2SO4 Lab Sample ID: 140-34757-1  
 Matrix: Air Lab File ID: Air\_Anions-1214202315.d  
 Analysis Method: 0050/26A Date Collected: 12/02/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:50  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/14/2023 12:44  
 Con. Extract Vol.: 255(mL) Dilution Factor: 2  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81419 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7647-01-0	Hydrogen Chloride	28.1	J	52.4	27.0

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202315.d  
 Lims ID: 140-34757-A-1-A  
 Client ID: VF26A-1 CONTAINER 3 H2SO4  
 Sample Type: Client  
 Inject. Date: 14-Dec-2023 12:44:00 ALS Bottle#: 0 Worklist Smp#: 6  
 Injection Vol: 1.0 ul Dil. Factor: 2.0000  
 Sample Info: 140-0030874-006  
 Misc. Info.: 140-34757-A-1-A  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:35:59 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.600	4.593	0.007	1586435	0.0536	
S 7 Hydrogen Chloride					0.0552	

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202315.d

Injection Date: 14-Dec-2023 12:44:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-1-A

Lab Sample ID: 140-34757-1

Worklist Smp#: 6

Client ID: VF26A-1 CONTAINER 3 H2SO4

Injection Vol: 1.0 ul

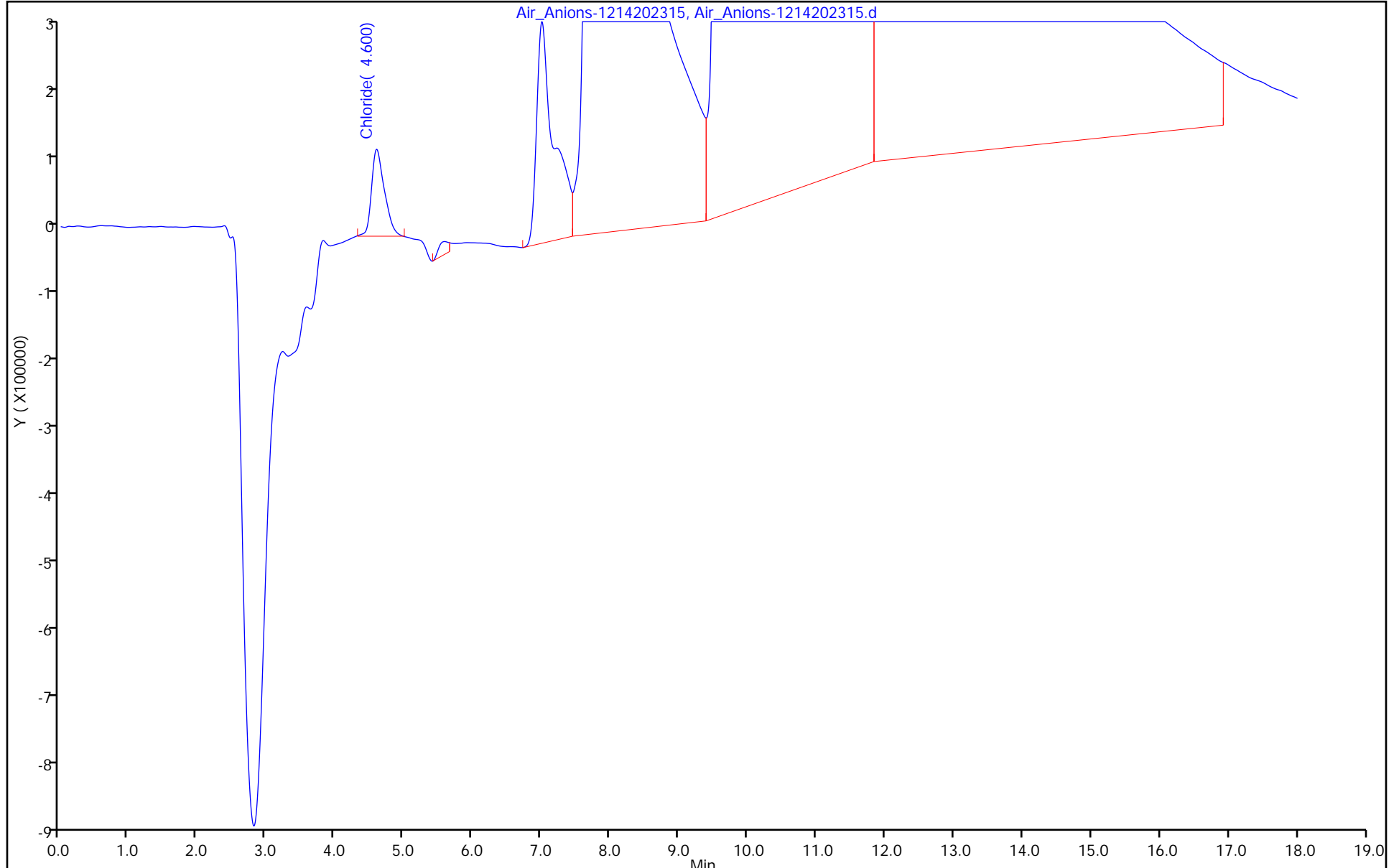
Dil. Factor: 2.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: VF26A-1 CONTAINER 4 NAOH Lab Sample ID: 140-34757-2  
 Matrix: Air Lab File ID: Air\_Anions-1215202315.d  
 Analysis Method: 0050/26A Date Collected: 12/02/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:56  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/15/2023 21:30  
 Con. Extract Vol.: 245(mL) Dilution Factor: 5  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81494 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	104	J	123	61.3



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202315.d  
 Lims ID: 140-34757-A-2-A  
 Client ID: VF26A-1 CONTAINER 4 NAOH  
 Sample Type: Client  
 Inject. Date: 15-Dec-2023 21:30:00 ALS Bottle#: 0 Worklist Smp#: 6  
 Injection Vol: 1.0 ul Dil. Factor: 5.0000  
 Sample Info: 140-0030907-006  
 Misc. Info.: 140-34757-A-2-A  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:04:55 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

First Level Reviewer: EXJ2 Date: 18-Dec-2023 12:01:12

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.513	4.597	-0.084	2515247	0.0849	M
S 13 Chlorine					0.0849	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202315.d

Injection Date: 15-Dec-2023 21:30:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-2-A

Lab Sample ID: 140-34757-2

Worklist Smp#: 6

Client ID: VF26A-1 CONTAINER 4 NAOH

Injection Vol: 1.0 ul

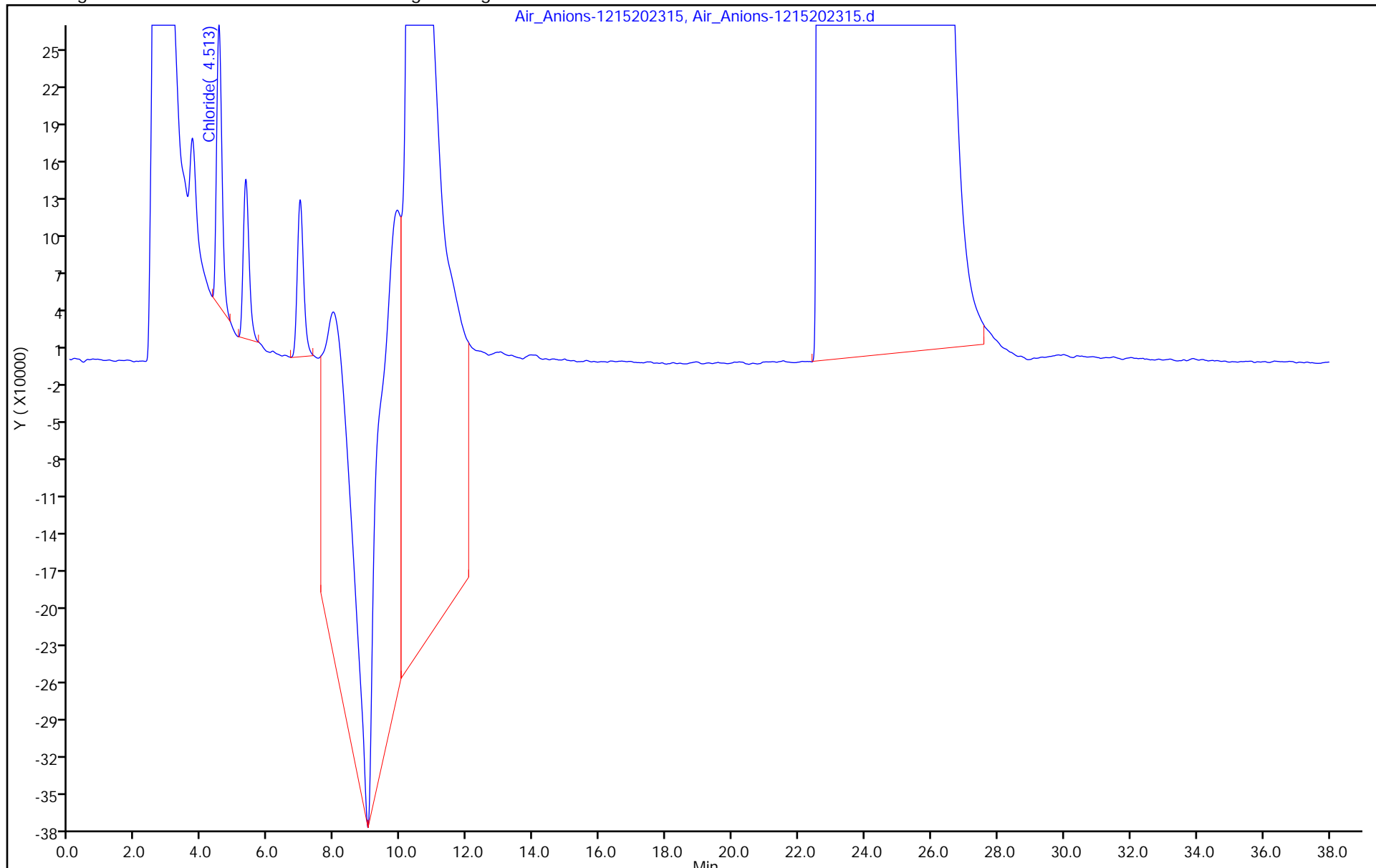
Dil. Factor: 5.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

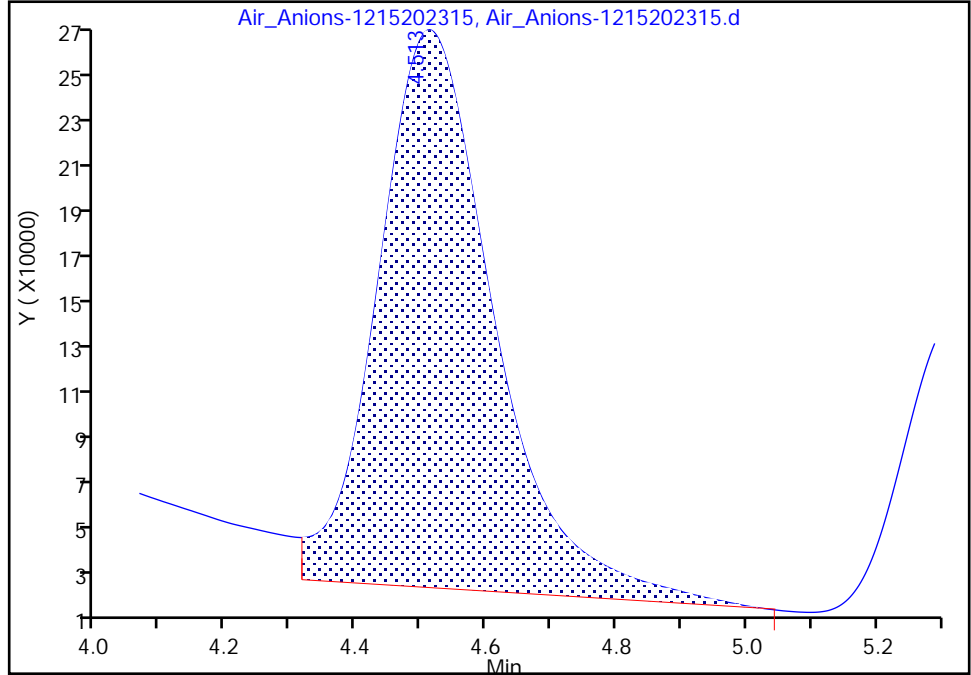
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Injection Date:	15-Dec-2023 21:30:00	Instrument ID:	IC4
Lims ID:	140-34757-A-2-A	Lab Sample ID:	140-34757-2
Client ID:	VF26A-1 CONTAINER 4 NAOH		
Operator ID:		ALS Bottle#:	0
		Worklist Smp#:	6
Injection Vol:	1.0 ul	Dil. Factor:	5.0000
Method:	0050_26A_IC4	Limit Group:	IC 0050_26A ICAL
Column:		Detector:	IC

2 Chloride, CAS: 16887-00-6

Signal: 1

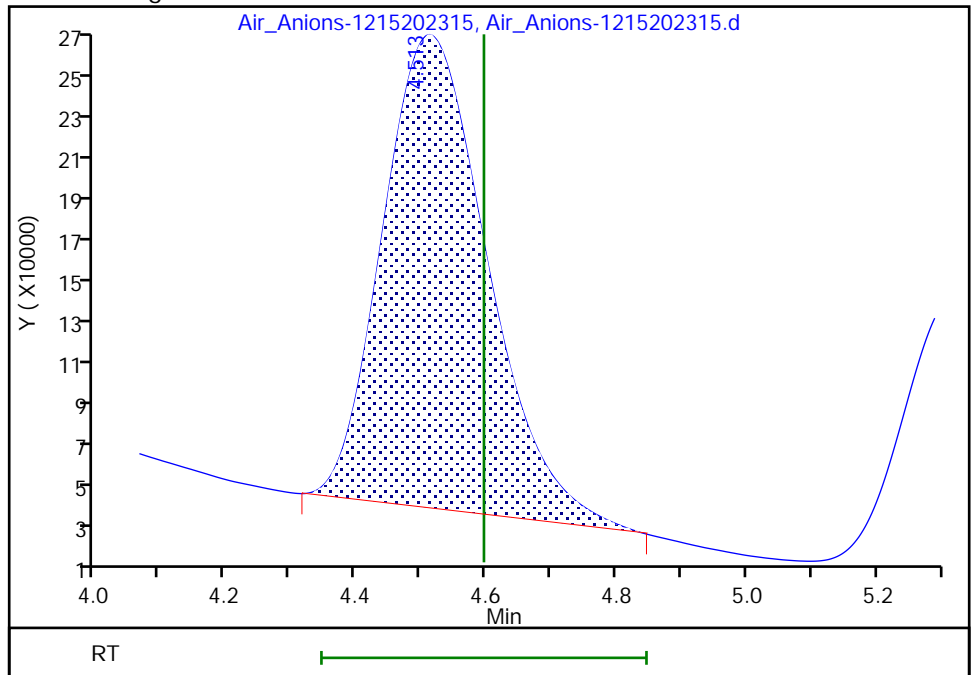
RT: 4.51  
 Area: 2980010  
 Amount: 0.100489  
 Amount Units: ug/ml

Processing Integration Results



RT: 4.51  
 Area: 2515247  
 Amount: 0.084889  
 Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 18-Dec-2023 12:01:09 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: VF26A-2 CONTAINER 3 H2SO4 Lab Sample ID: 140-34757-3  
 Matrix: Air Lab File ID: Air\_Anions-1214202317.d  
 Analysis Method: 0050/26A Date Collected: 12/03/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:50  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/14/2023 13:29  
 Con. Extract Vol.: 255(mL) Dilution Factor: 2  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81419 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7647-01-0	Hydrogen Chloride	46.0	J	52.4	27.0

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202317.d  
 Lims ID: 140-34757-A-3-A  
 Client ID: VF26A-2 CONTAINER 3 H2SO4  
 Sample Type: Client  
 Inject. Date: 14-Dec-2023 13:29:00 ALS Bottle#: 0 Worklist Smp#: 8  
 Injection Vol: 1.0 ul Dil. Factor: 2.0000  
 Sample Info: 140-0030874-008  
 Misc. Info.: 140-34757-A-3-A  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:35:59 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:30:49

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride		3.320			ND	
2 Chloride	4.590	4.593	-0.003	2600407	0.0877	M
3 Nitrite as N	5.577	5.400	0.177	132122	0.002108	
4 Bromide		6.343			ND	
5 Nitrate as N	6.993	7.013	-0.020	3836340	0.0539	
19 Orthophosphate as P		9.280			ND	
6 Iodide		13.163			ND	
S 11 Nitrous Acid					0.007074	
S 12 Br		0.000			ND	
S 13 Chlorine					0.0877	
S 10 Nitric acid					0.2423	
S 7 Hydrogen Chloride					0.0902	
S 20 Phosphorus as PO4		0.000			ND	
S 9 Hydrobromic Acid		0.000			ND	
S 22 Hydrogen Iodide		0.000			ND	
S 8 Hydro Fluoric Acid		0.000			ND	
S 21 Phosphate as H3PO4		0.000			ND	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202317.d

Injection Date: 14-Dec-2023 13:29:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-3-A

Lab Sample ID: 140-34757-3

Worklist Smp#: 8

Client ID: VF26A-2 CONTAINER 3 H2SO4

Injection Vol: 1.0 ul

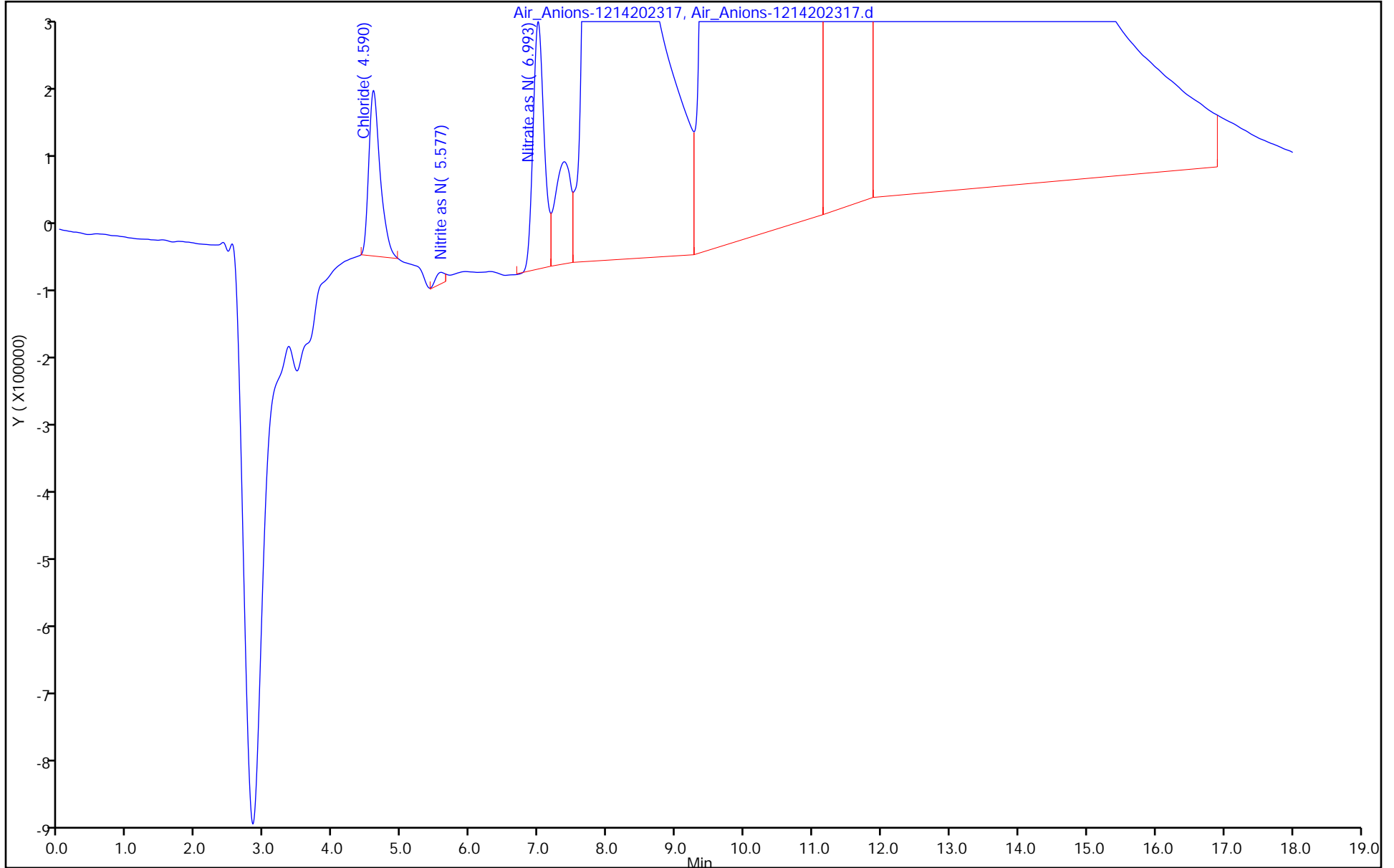
Dil. Factor: 2.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: VF26A-2 CONTAINER 4 NAOH Lab Sample ID: 140-34757-4  
 Matrix: Air Lab File ID: Air\_Anions-1215202317.d  
 Analysis Method: 0050/26A Date Collected: 12/03/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:56  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/15/2023 22:54  
 Con. Extract Vol.: 245(mL) Dilution Factor: 5  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81494 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	212		123	61.3

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202317.d  
 Lims ID: 140-34757-A-4-A  
 Client ID: VF26A-2 CONTAINER 4 NAOH  
 Sample Type: Client  
 Inject. Date: 15-Dec-2023 22:54:00 ALS Bottle#: 0 Worklist Smp#: 8  
 Injection Vol: 1.0 ul Dil. Factor: 5.0000  
 Sample Info: 140-0030907-008  
 Misc. Info.: 140-34757-A-4-A  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:04:55 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

First Level Reviewer: EXJ2 Date: 18-Dec-2023 12:01:27

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride		3.323			ND	
2 Chloride	4.513	4.597	-0.084	5144404	0.1728	M
3 Nitrite as N	5.320	5.407	-0.087	1792555	0.0285	
4 Bromide		6.350			ND	
5 Nitrate as N	6.957	7.023	-0.066	2208108	0.0311	
19 Orthophosphate as P		9.280			ND	
6 Iodide		13.173			ND	
S 11 Nitrous Acid					0.0958	
S 12 Br		0.000			ND	
S 13 Chlorine					0.1728	
S 10 Nitric acid					0.1397	
S 7 Hydrogen Chloride					0.1777	
S 20 Phosphorus as PO4		0.000			ND	
S 9 Hydrobromic Acid		0.000			ND	
S 22 Hydrogen Iodide		0.000			ND	
S 8 Hydro Fluoric Acid		0.000			ND	
S 21 Phosphate as H3PO4		0.000			ND	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated



Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202317.d

Injection Date: 15-Dec-2023 22:54:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-4-A

Lab Sample ID: 140-34757-4

Worklist Smp#: 8

Client ID: VF26A-2 CONTAINER 4 NAOH

Injection Vol: 1.0 ul

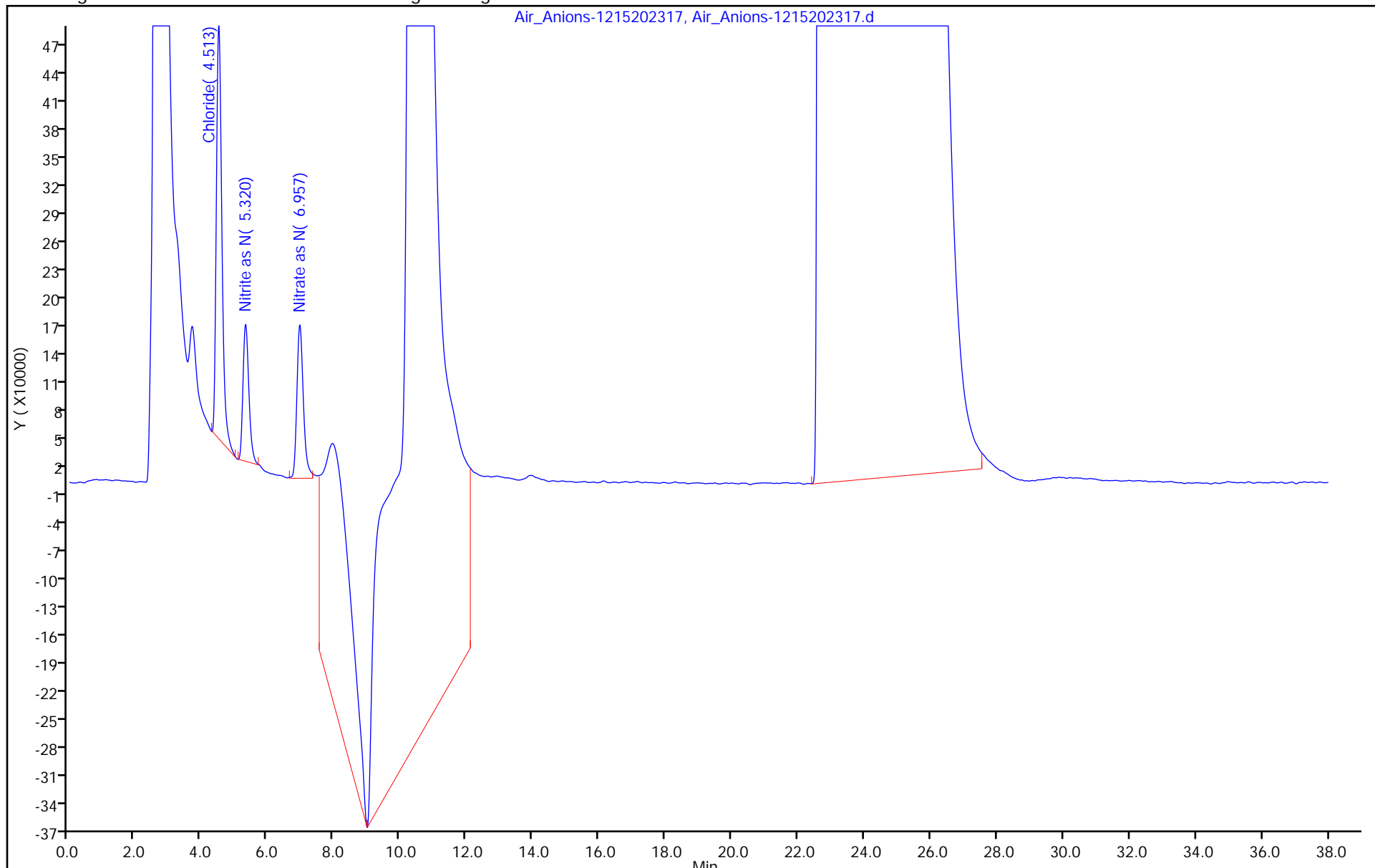
Dil. Factor: 5.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

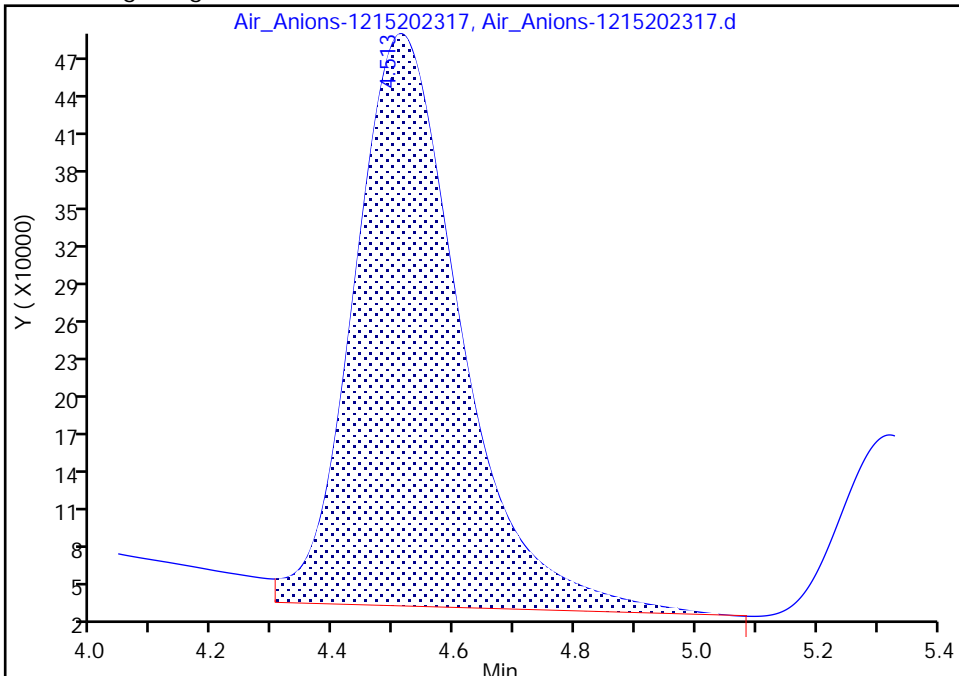
Data File:	\\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air_Anions-1215202317.d		
Injection Date:	15-Dec-2023 22:54:00	Instrument ID:	IC4
Lims ID:	140-34757-A-4-A	Lab Sample ID:	140-34757-4
Client ID:	VF26A-2 CONTAINER 4 NAOH		
Operator ID:		ALS Bottle#:	0
		Worklist Smp#:	8
Injection Vol:	1.0 ul	Dil. Factor:	5.0000
Method:	0050_26A_IC4	Limit Group:	IC 0050_26A ICAL
Column:		Detector:	IC

2 Chloride, CAS: 16887-00-6

Signal: 1

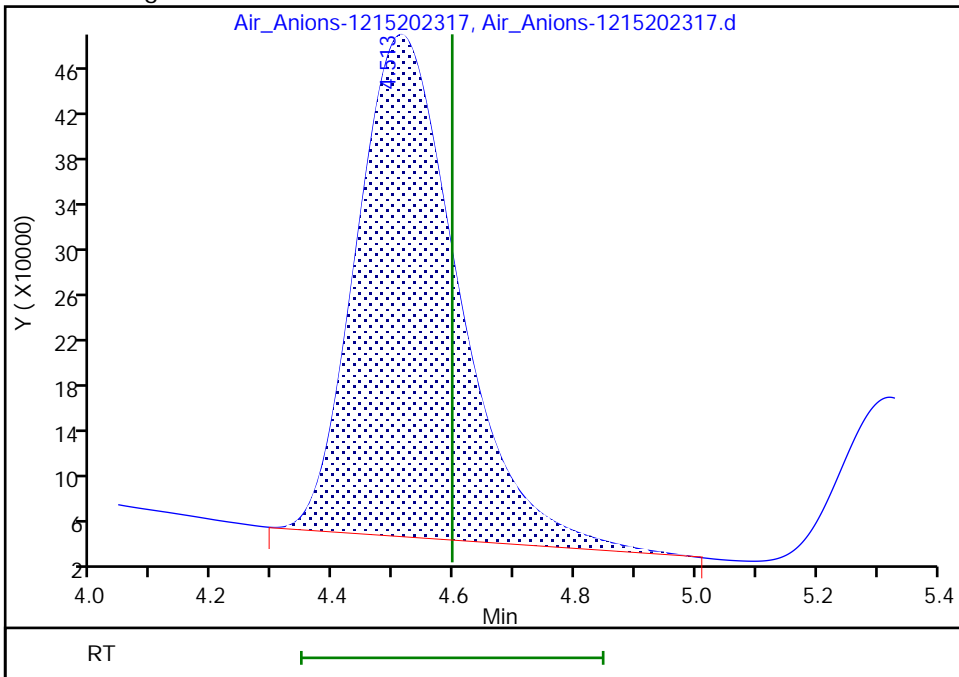
RT: 4.51  
 Area: 5554573  
 Amount: 0.186433  
 Amount Units: ug/ml

Processing Integration Results



RT: 4.51  
 Area: 5144404  
 Amount: 0.172794  
 Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 18-Dec-2023 12:01:25 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: VF26A-4 CONTAINER 3 H2SO4 Lab Sample ID: 140-34757-5  
 Matrix: Air Lab File ID: Air\_Anions-1214202321.d  
 Analysis Method: 0050/26A Date Collected: 12/05/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:50  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/14/2023 14:57  
 Con. Extract Vol.: 250(mL) Dilution Factor: 2  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81419 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7647-01-0	Hydrogen Chloride	ND		51.4	26.5

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202321.d  
 Lims ID: 140-34757-A-5-A  
 Client ID: VF26A-4 CONTAINER 3 H2SO4  
 Sample Type: Client  
 Inject. Date: 14-Dec-2023 14:57:00 ALS Bottle#: 0 Worklist Smp#: 12  
 Injection Vol: 1.0 ul Dil. Factor: 2.0000  
 Sample Info: 140-0030874-012  
 Misc. Info.: 140-34757-A-5-A  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:35:59 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:31:20

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.590	4.593	-0.003	1237424	0.0419	M
S 7 Hydrogen Chloride					0.0430	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202321.d

Injection Date: 14-Dec-2023 14:57:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-5-A

Lab Sample ID: 140-34757-5

Worklist Smp#: 12

Client ID: VF26A-4 CONTAINER 3 H2SO4

Injection Vol: 1.0 ul

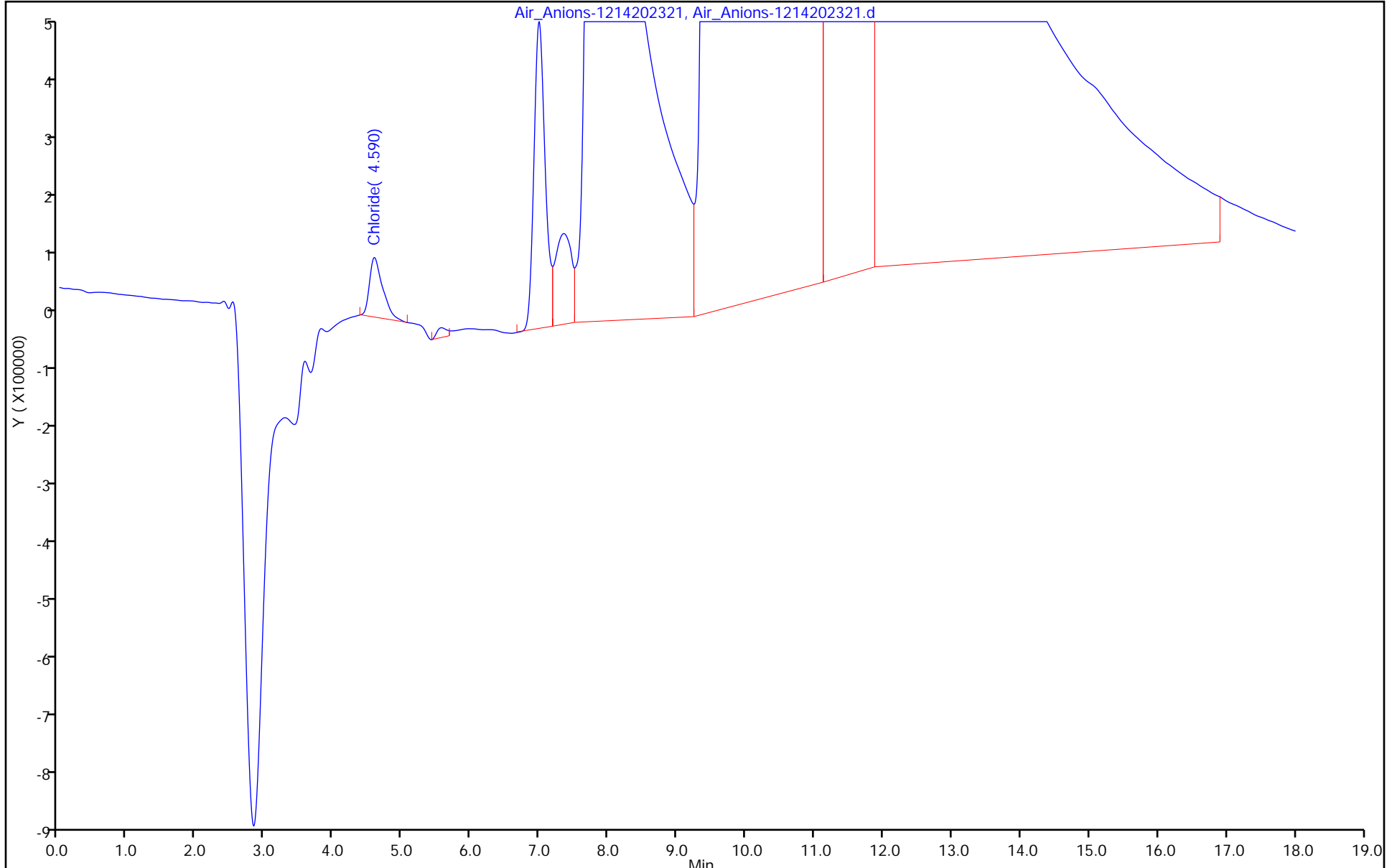
Dil. Factor: 2.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: VF26A-4 CONTAINER 4 NAOH Lab Sample ID: 140-34757-6  
 Matrix: Air Lab File ID: Air\_Anions-1215202321.d  
 Analysis Method: 0050/26A Date Collected: 12/05/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:56  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/16/2023 01:43  
 Con. Extract Vol.: 240(mL) Dilution Factor: 5  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81494 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	92.8	J	120	60.0

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202321.d  
 Lims ID: 140-34757-A-6-A  
 Client ID: VF26A-4 CONTAINER 4 NAOH  
 Sample Type: Client  
 Inject. Date: 16-Dec-2023 01:43:00 ALS Bottle#: 0 Worklist Smp#: 12  
 Injection Vol: 1.0 ul Dil. Factor: 5.0000  
 Sample Info: 140-0030907-012  
 Misc. Info.: 140-34757-A-6-A  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:04:55 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.513	4.597	-0.084	2289399	0.0773	
S 13 Chlorine					0.0773	

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202321.d

Injection Date: 16-Dec-2023 01:43:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-6-A

Lab Sample ID: 140-34757-6

Worklist Smp#: 12

Client ID: VF26A-4 CONTAINER 4 NAOH

Injection Vol: 1.0 ul

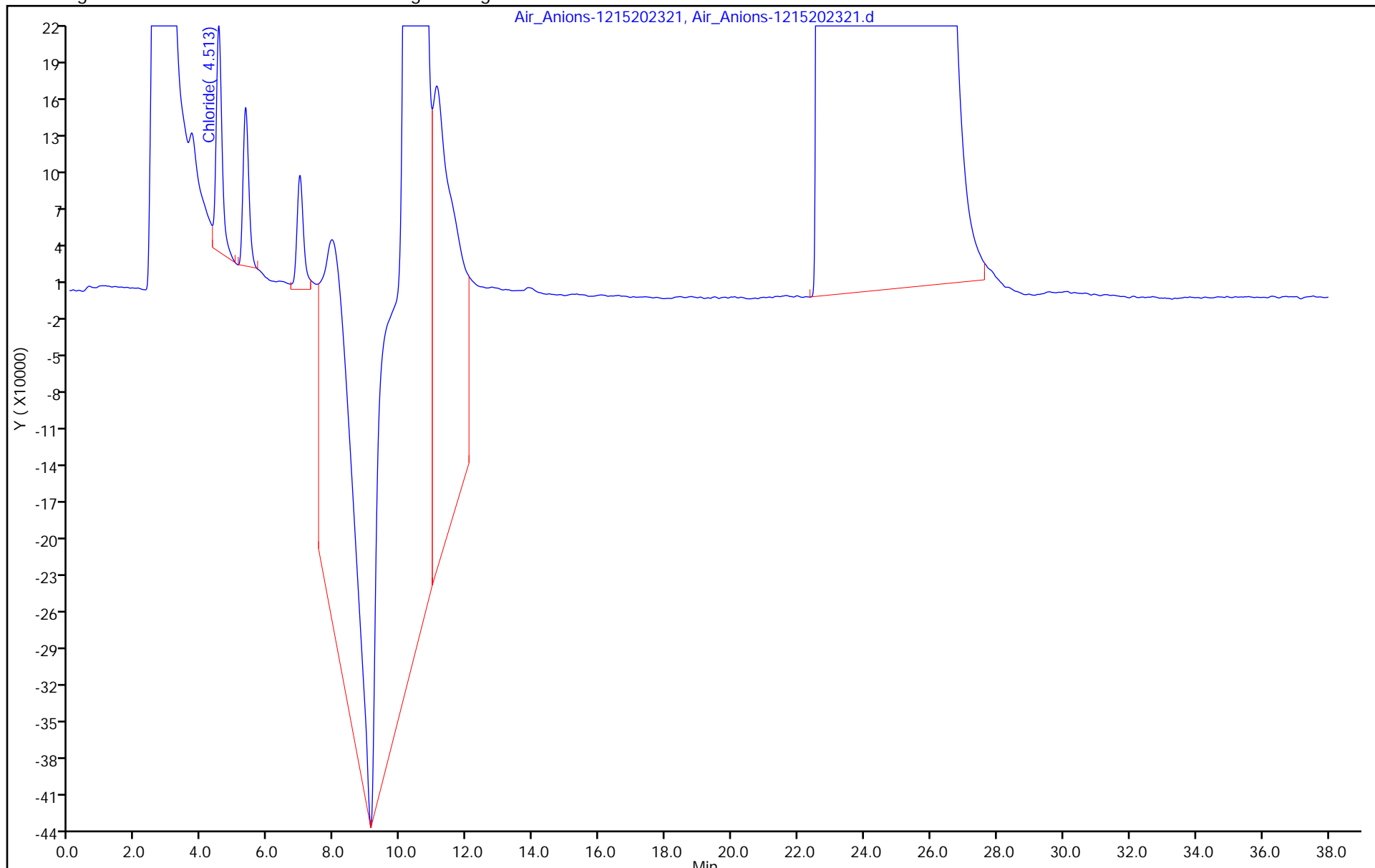
Dil. Factor: 5.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1





FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AS26-1 CONTAINER 3 H2SO4 Lab Sample ID: 140-34757-7  
 Matrix: Air Lab File ID: Air\_Anions-1214202325.d  
 Analysis Method: 0050/26A Date Collected: 11/30/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:50  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/14/2023 16:26  
 Con. Extract Vol.: 250(mL) Dilution Factor: 2  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81419 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7647-01-0	Hydrogen Chloride	46.4	J	51.4	26.5

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202325.d  
 Lims ID: 140-34757-A-7-A  
 Client ID: AS26-1 CONTAINER 3 H2SO4  
 Sample Type: Client  
 Inject. Date: 14-Dec-2023 16:26:00 ALS Bottle#: 0 Worklist Smp#: 16  
 Injection Vol: 1.0 ul Dil. Factor: 2.0000  
 Sample Info: 140-0030874-016  
 Misc. Info.: 140-34757-A-7-A  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:36:05 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:31:48

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.587	4.593	-0.006	2675384	0.0903	M
S 7 Hydrogen Chloride					0.0928	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202325.d

Injection Date: 14-Dec-2023 16:26:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-7-A

Lab Sample ID: 140-34757-7

Worklist Smp#: 16

Client ID: AS26-1 CONTAINER 3 H2SO4

Injection Vol: 1.0 ul

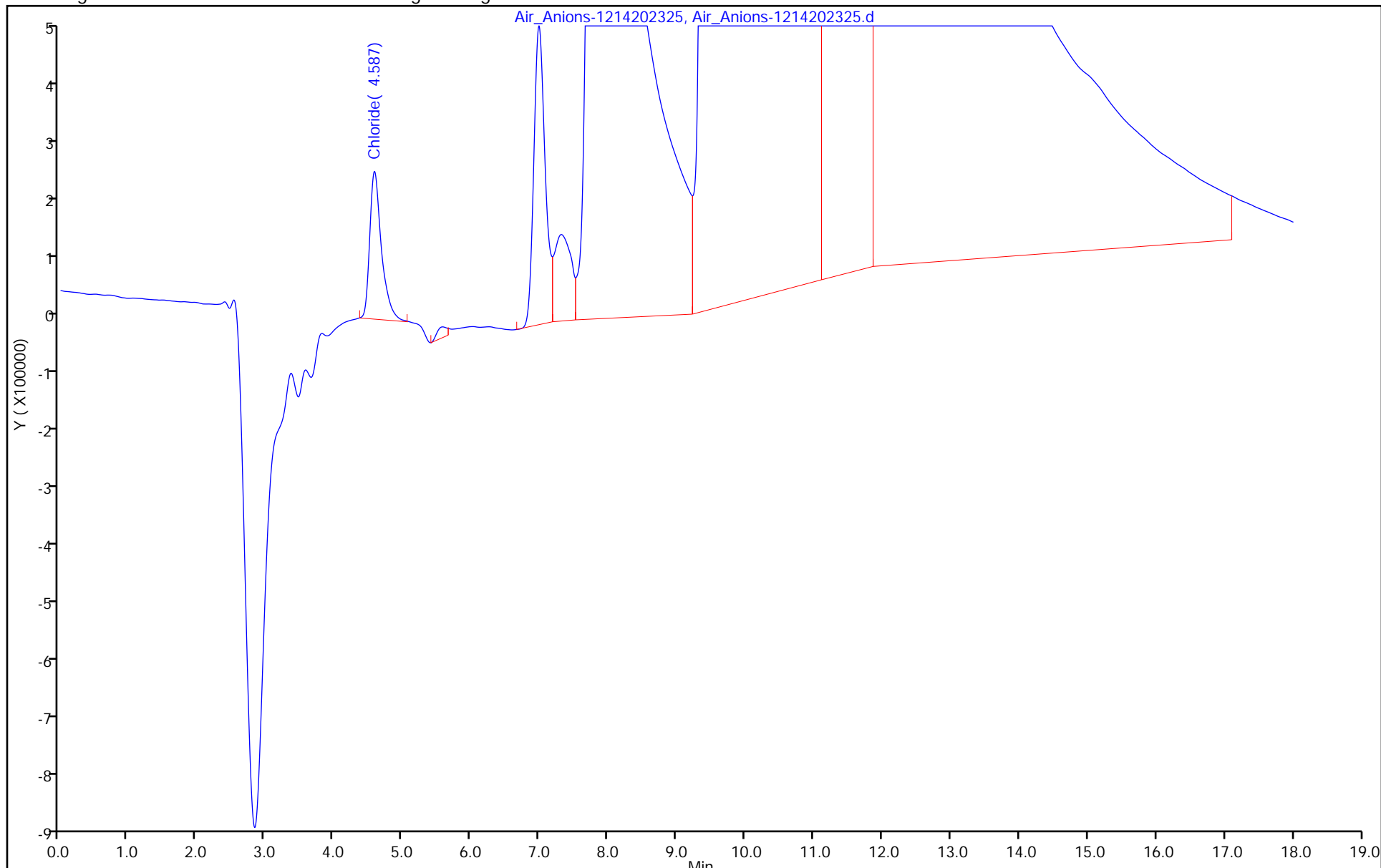
Dil. Factor: 2.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AS26-1 CONTAINER 4 NAOH Lab Sample ID: 140-34757-8  
 Matrix: Air Lab File ID: Air\_Anions-1215202325.d  
 Analysis Method: 0050/26A Date Collected: 11/30/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:56  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/16/2023 03:52  
 Con. Extract Vol.: 235(mL) Dilution Factor: 5  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81494 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	92.2	J	118	58.8

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202325.d  
 Lims ID: 140-34757-A-8-A  
 Client ID: AS26-1 CONTAINER 4 NAOH  
 Sample Type: Client  
 Inject. Date: 16-Dec-2023 03:52:00 ALS Bottle#: 0 Worklist Smp#: 16  
 Injection Vol: 1.0 ul Dil. Factor: 5.0000  
 Sample Info: 140-0030907-016  
 Misc. Info.: 140-34757-A-8-A  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:05:01 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

First Level Reviewer: EXJ2 Date: 18-Dec-2023 12:02:15

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.523	4.597	-0.074	2323420	0.0784	
S 13 Chlorine					0.0784	

**QC Flag Legend**  
Processing Flags

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202325.d

Injection Date: 16-Dec-2023 03:52:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-8-A

Lab Sample ID: 140-34757-8

Worklist Smp#: 16

Client ID: AS26-1 CONTAINER 4 NAOH

Injection Vol: 1.0 ul

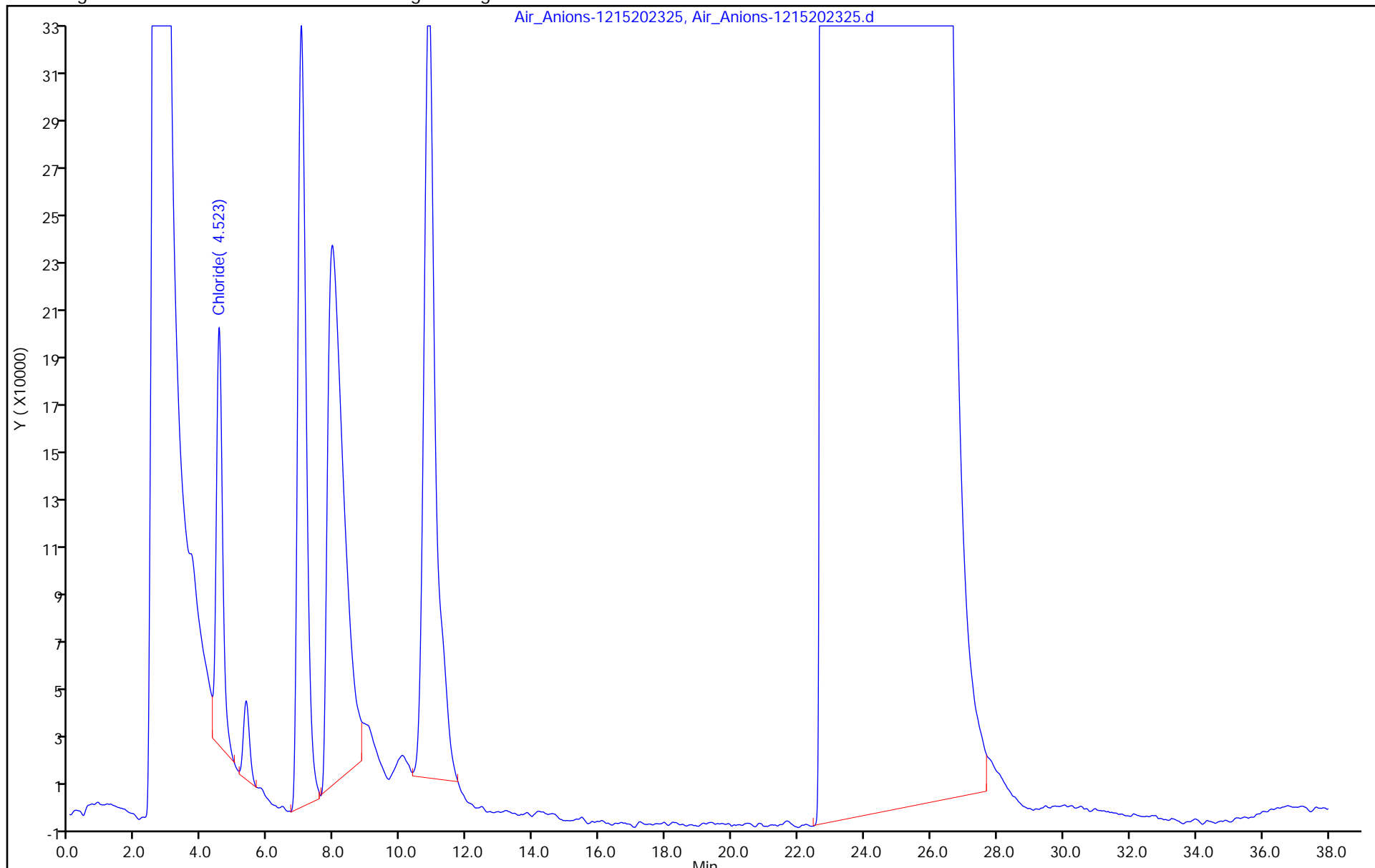
Dil. Factor: 5.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AS26-2 CONTAINER 3 H2SO4 Lab Sample ID: 140-34757-9  
 Matrix: Air Lab File ID: Air\_Anions-1214202327.d  
 Analysis Method: 0050/26A Date Collected: 12/01/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:50  
 Sample wt/vol: 1 (Sample) Date Analyzed: 12/14/2023 17:11  
 Con. Extract Vol.: 250 (mL) Dilution Factor: 2  
 Injection Volume: 1 (uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81419 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7647-01-0	Hydrogen Chloride	41.3	J	51.4	26.5

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202327.d  
 Lims ID: 140-34757-A-9-A  
 Client ID: AS26-2 CONTAINER 3 H2SO4  
 Sample Type: Client  
 Inject. Date: 14-Dec-2023 17:11:00 ALS Bottle#: 0 Worklist Smp#: 18  
 Injection Vol: 1.0 ul Dil. Factor: 2.0000  
 Sample Info: 140-0030874-018  
 Misc. Info.: 140-34757-A-9-A  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:36:05 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:32:01

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride		3.320			ND	
2 Chloride	4.587	4.593	-0.006	2376534	0.0802	M
3 Nitrite as N	5.567	5.400	0.167	208994	0.003334	
4 Bromide		6.343			ND	
5 Nitrate as N	6.983	7.013	-0.030	24579102	0.3364	
19 Orthophosphate as P		9.280			ND	
6 Iodide		13.163			ND	
S 11 Nitrous Acid					0.0112	
S 12 Br		0.000			ND	
S 13 Chlorine					0.0802	
S 10 Nitric acid					1.51	
S 7 Hydrogen Chloride					0.0825	
S 20 Phosphorus as PO4		0.000			ND	
S 9 Hydrobromic Acid		0.000			ND	
S 22 Hydrogen Iodide		0.000			ND	
S 8 Hydro Fluoric Acid		0.000			ND	
S 21 Phosphate as H3PO4		0.000			ND	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated



Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202327.d

Injection Date: 14-Dec-2023 17:11:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-9-A

Lab Sample ID: 140-34757-9

Worklist Smp#: 18

Client ID: AS26-2 CONTAINER 3 H2SO4

Injection Vol: 1.0 ul

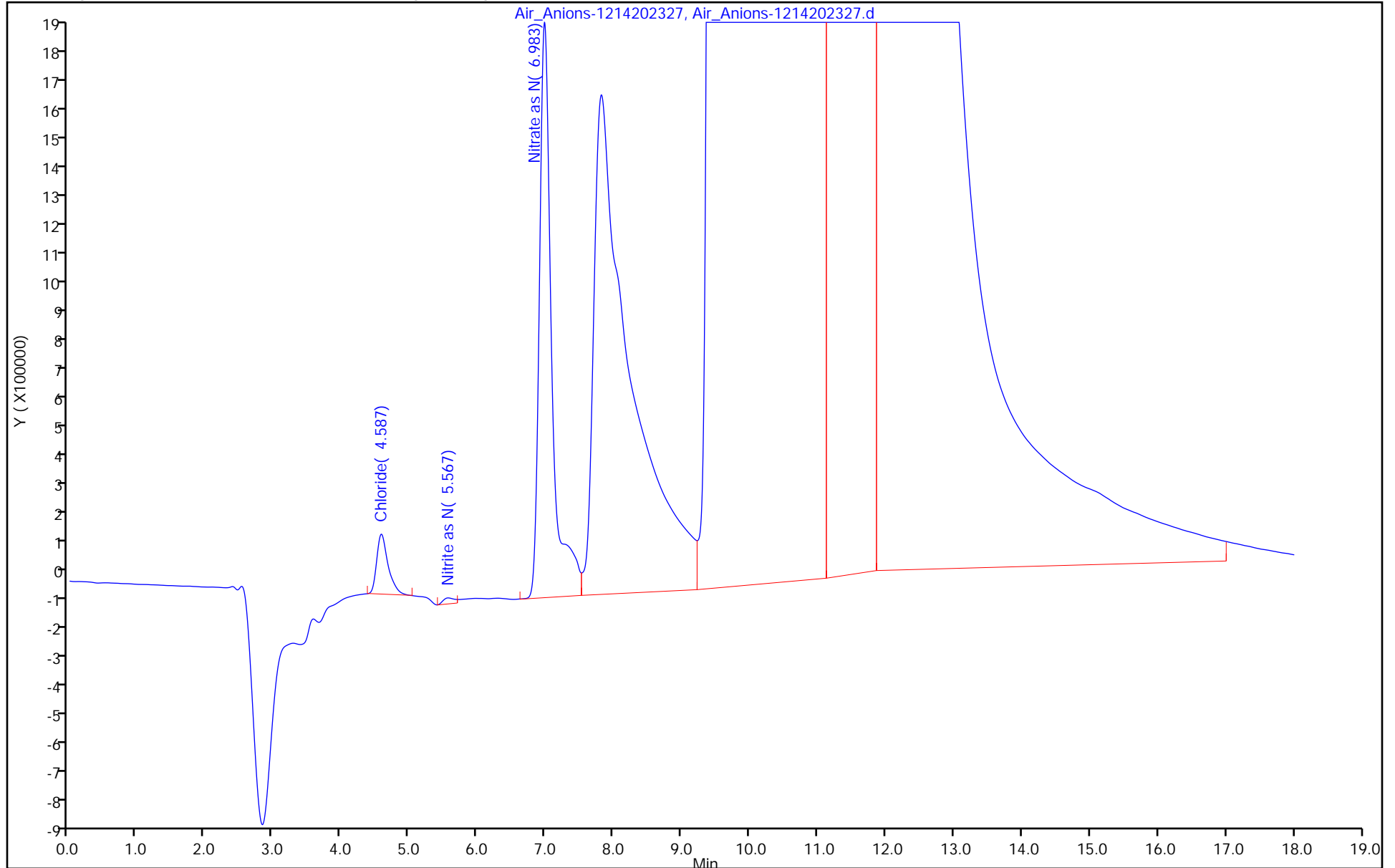
Dil. Factor: 2.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AS26-2 CONTAINER 4 NAOH Lab Sample ID: 140-34757-10  
 Matrix: Air Lab File ID: Air\_Anions-1215202327.d  
 Analysis Method: 0050/26A Date Collected: 12/01/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:56  
 Sample wt/vol: 1 (Sample) Date Analyzed: 12/16/2023 05:17  
 Con. Extract Vol.: 235 (mL) Dilution Factor: 5  
 Injection Volume: 1 (uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81494 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	91.2	J	118	58.8

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202327.d  
 Lims ID: 140-34757-A-10-A  
 Client ID: AS26-2 CONTAINER 4 NAOH  
 Sample Type: Client  
 Inject. Date: 16-Dec-2023 05:17:00 ALS Bottle#: 0 Worklist Smp#: 18  
 Injection Vol: 1.0 ul Dil. Factor: 5.0000  
 Sample Info: 140-0030907-018  
 Misc. Info.: 140-34757-A-10-A  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:05:01 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

First Level Reviewer: EXJ2 Date: 18-Dec-2023 12:02:33

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride		3.323			ND	
2 Chloride	4.523	4.597	-0.074	2298032	0.0776	M
3 Nitrite as N	5.333	5.407	-0.074	360313	0.005746	
4 Bromide		6.350			ND	
5 Nitrate as N	6.990	7.023	-0.033	8815074	0.1230	
19 Orthophosphate as P		9.280			ND	
6 Iodide		13.173			ND	
S 11 Nitrous Acid					0.0193	
S 12 Br		0.000			ND	
S 13 Chlorine					0.0776	
S 10 Nitric acid					0.5532	
S 7 Hydrogen Chloride					0.0798	
S 20 Phosphorus as PO4		0.000			ND	
S 9 Hydrobromic Acid		0.000			ND	
S 22 Hydrogen Iodide		0.000			ND	
S 8 Hydro Fluoric Acid		0.000			ND	
S 21 Phosphate as H3PO4		0.000			ND	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202327.d

Injection Date: 16-Dec-2023 05:17:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-10-A

Lab Sample ID: 140-34757-10

Worklist Smp#: 18

Client ID: AS26-2 CONTAINER 4 NAOH

Injection Vol: 1.0 ul

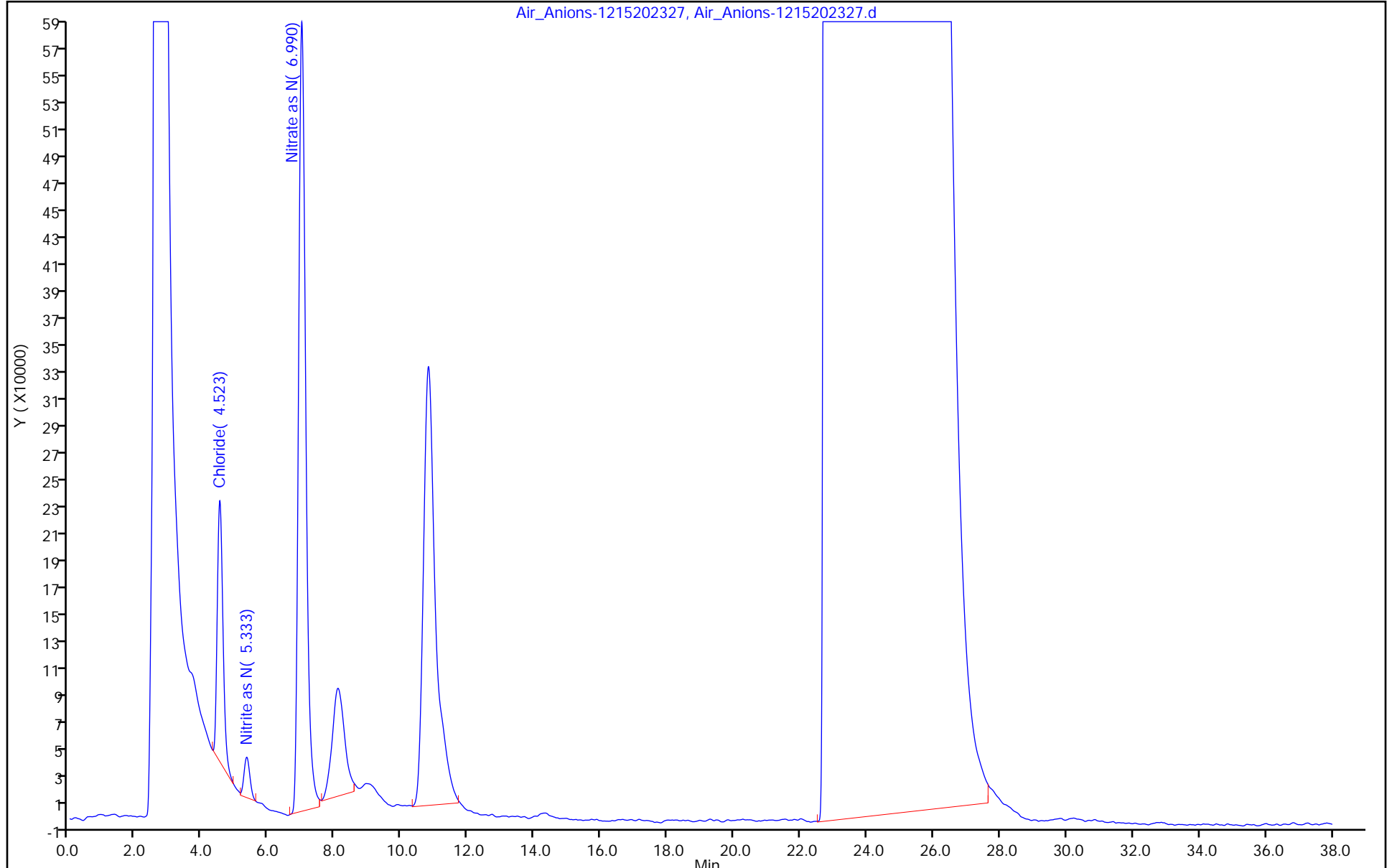
Dil. Factor: 5.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

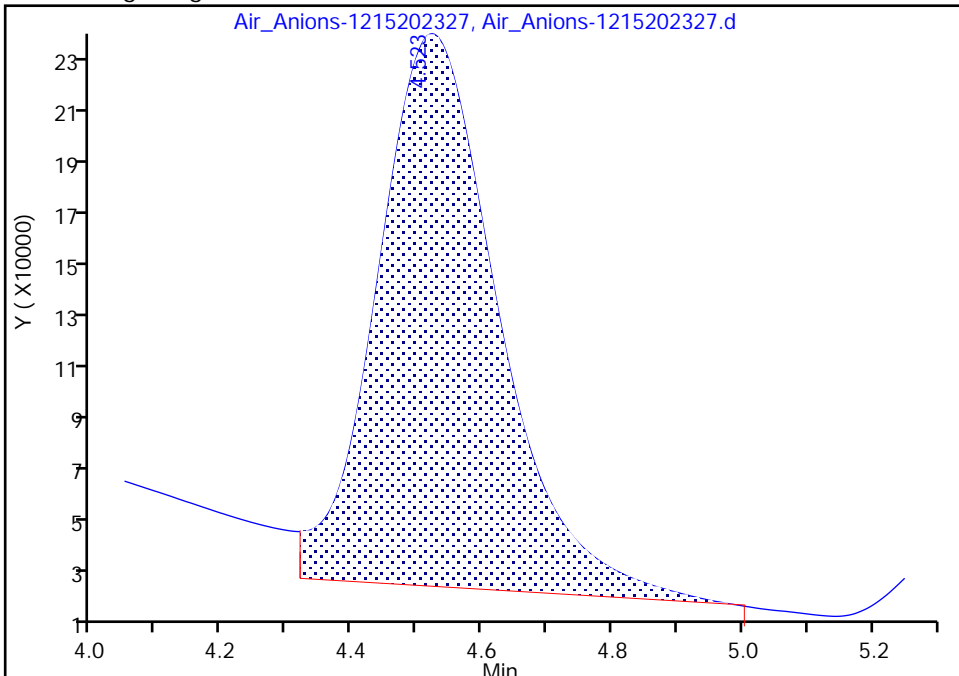
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Injection Date: 16-Dec-2023 05:17:00 Instrument ID: IC4  
Lims ID: 140-34757-A-10-A Lab Sample ID: 140-34757-10  
Client ID: AS26-2 CONTAINER 4 NAOH  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 18  
Injection Vol: 1.0 ul Dil. Factor: 5.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

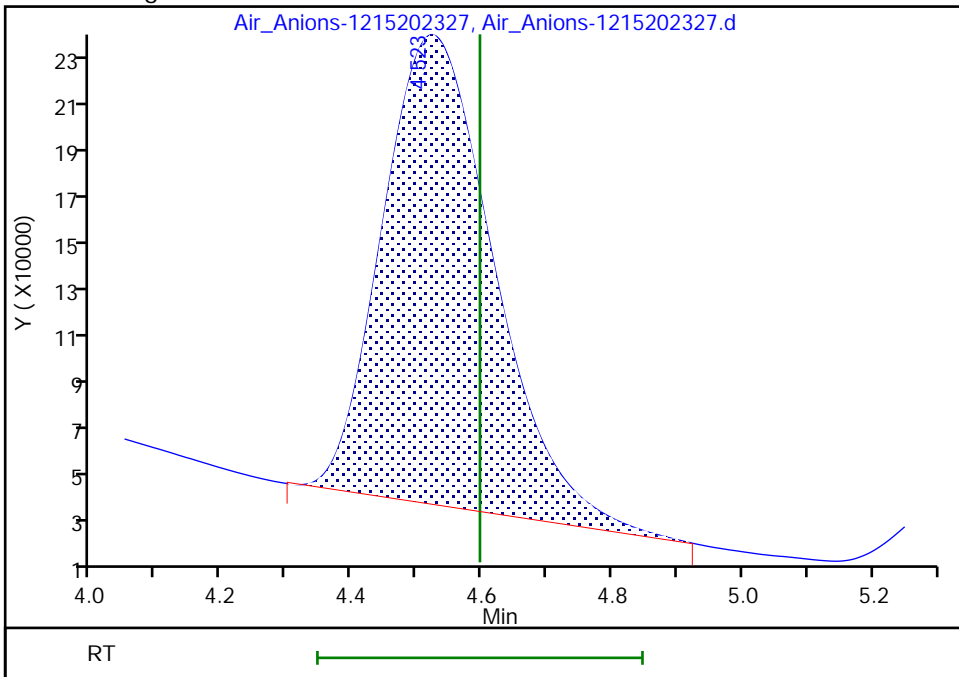
RT: 4.52  
Area: 2647871  
Amount: 0.089343  
Amount Units: ug/ml

Processing Integration Results



RT: 4.52  
Area: 2298032  
Amount: 0.077589  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 18-Dec-2023 12:02:31 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AS26-3 CONTAINER 3 H2SO4 Lab Sample ID: 140-34757-11  
 Matrix: Air Lab File ID: Air\_Anions-1214202331.d  
 Analysis Method: 0050/26A Date Collected: 12/01/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:50  
 Sample wt/vol: 1 (Sample) Date Analyzed: 12/14/2023 18:39  
 Con. Extract Vol.: 255 (mL) Dilution Factor: 2  
 Injection Volume: 1 (uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81419 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7647-01-0	Hydrogen Chloride	51.2	J	52.4	27.0

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202331.d  
 Lims ID: 140-34757-A-11-A  
 Client ID: AS26-3 CONTAINER 3 H2SO4  
 Sample Type: Client  
 Inject. Date: 14-Dec-2023 18:39:00 ALS Bottle#: 0 Worklist Smp#: 22  
 Injection Vol: 1.0 ul Dil. Factor: 2.0000  
 Sample Info: 140-0030874-022  
 Misc. Info.: 140-34757-A-11-A  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:44:12 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:44:12

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
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2 Chloride	4.583	4.593	-0.010	2895172	0.0976	M
S 7 Hydrogen Chloride					0.1004	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202331.d

Injection Date: 14-Dec-2023 18:39:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-11-A

Lab Sample ID: 140-34757-11

Worklist Smp#: 22

Client ID: AS26-3 CONTAINER 3 H2SO4

Injection Vol: 1.0 ul

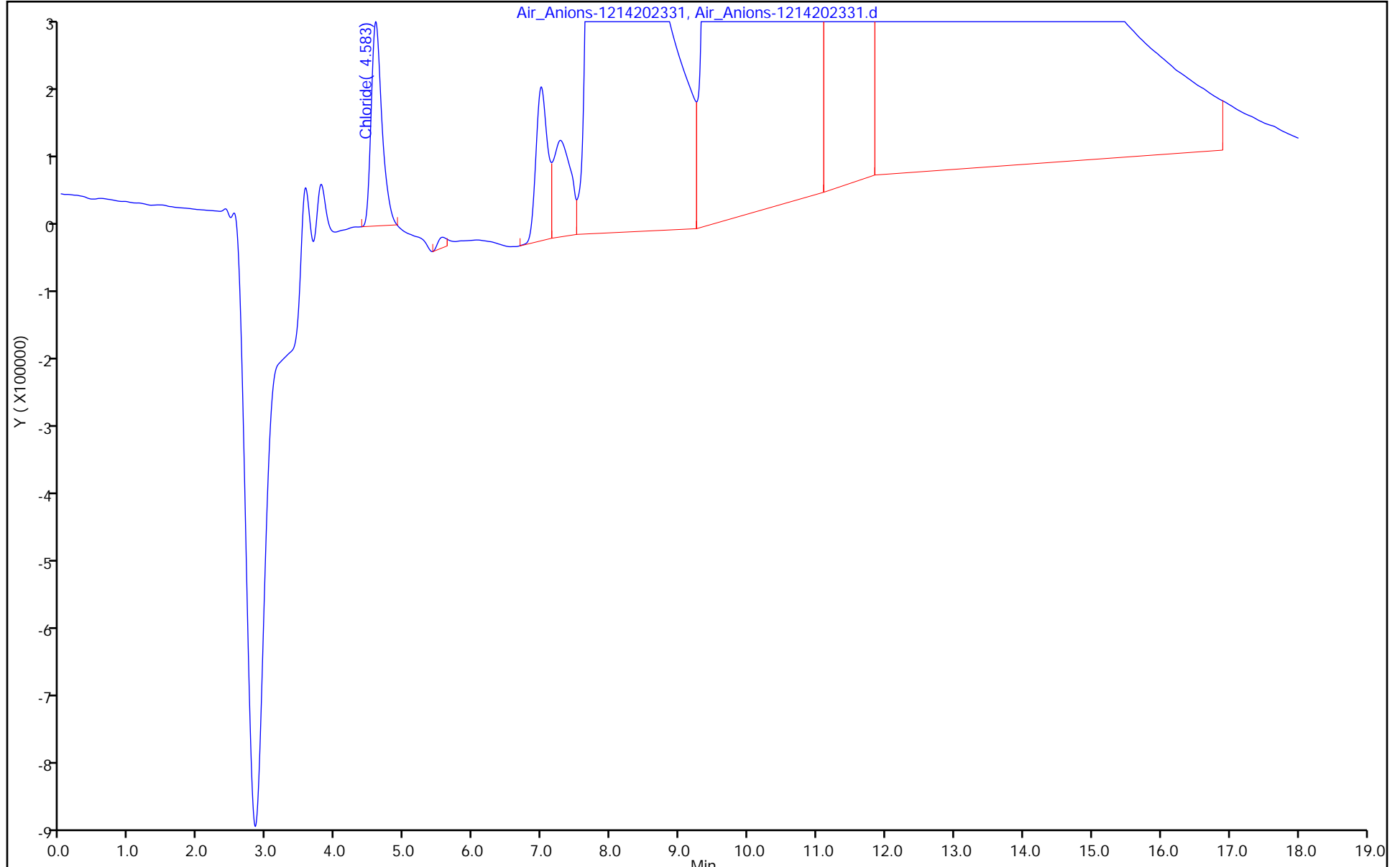
Dil. Factor: 2.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1





FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AS26-3 CONTAINER 4 NAOH Lab Sample ID: 140-34757-12  
 Matrix: Air Lab File ID: Air\_Anions-1215202331.d  
 Analysis Method: 0050/26A Date Collected: 12/01/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:56  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/16/2023 08:05  
 Con. Extract Vol.: 245(mL) Dilution Factor: 5  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81494 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	80.4	J	123	61.3

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202331.d  
 Lims ID: 140-34757-A-12-A  
 Client ID: AS26-3 CONTAINER 4 NAOH  
 Sample Type: Client  
 Inject. Date: 16-Dec-2023 08:05:00 ALS Bottle#: 0 Worklist Smp#: 22  
 Injection Vol: 1.0 ul Dil. Factor: 5.0000  
 Sample Info: 140-0030907-022  
 Misc. Info.: 140-34757-A-12-A  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:05:01 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.533	4.597	-0.064	1942581	0.0656	
S 13 Chlorine					0.0656	

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202331.d

Injection Date: 16-Dec-2023 08:05:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-12-A

Lab Sample ID: 140-34757-12

Worklist Smp#: 22

Client ID: AS26-3 CONTAINER 4 NAOH

Injection Vol: 1.0 ul

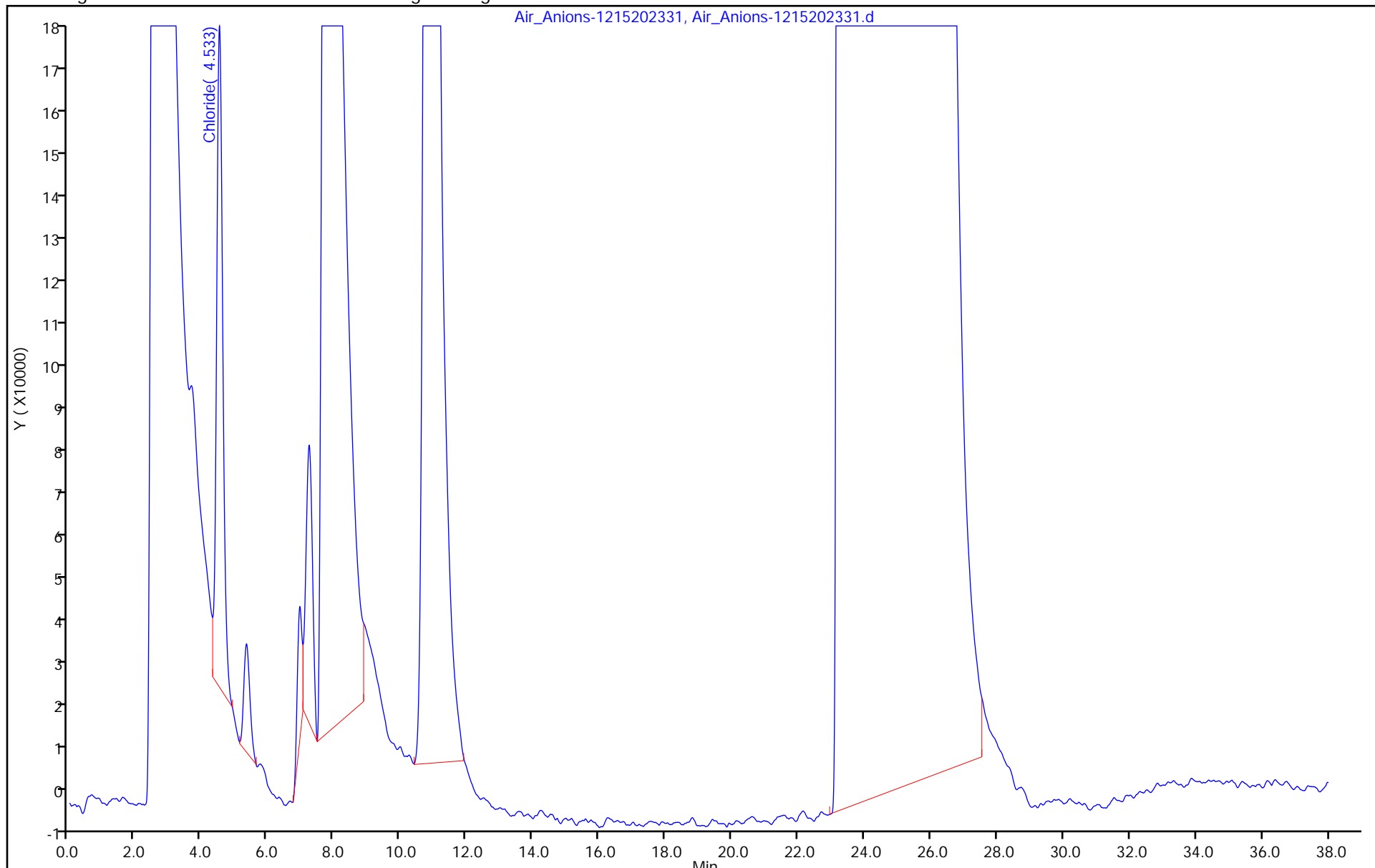
Dil. Factor: 5.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AP26-1 CONTAINER 3 H2SO4 Lab Sample ID: 140-34757-13  
 Matrix: Air Lab File ID: Air\_Anions-1214202333.d  
 Analysis Method: 0050/26A Date Collected: 12/06/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:50  
 Sample wt/vol: 1 (Sample) Date Analyzed: 12/14/2023 19:24  
 Con. Extract Vol.: 260 (mL) Dilution Factor: 2  
 Injection Volume: 1 (uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81419 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7647-01-0	Hydrogen Chloride	137		53.5	27.6

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202333.d  
 Lims ID: 140-34757-A-13-A  
 Client ID: AP26-1 CONTAINER 3 H2SO4  
 Sample Type: Client  
 Inject. Date: 14-Dec-2023 19:24:00 ALS Bottle#: 0 Worklist Smp#: 24  
 Injection Vol: 1.0 ul Dil. Factor: 2.0000  
 Sample Info: 140-0030874-024  
 Misc. Info.: 140-34757-A-13-A  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:36:05 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:32:32

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.583	4.593	-0.010	7641709	0.2555	M
S 7 Hydrogen Chloride					0.2628	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202333.d

Injection Date: 14-Dec-2023 19:24:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-13-A

Lab Sample ID: 140-34757-13

Worklist Smp#: 24

Client ID: AP26-1 CONTAINER 3 H2SO4

Injection Vol: 1.0 ul

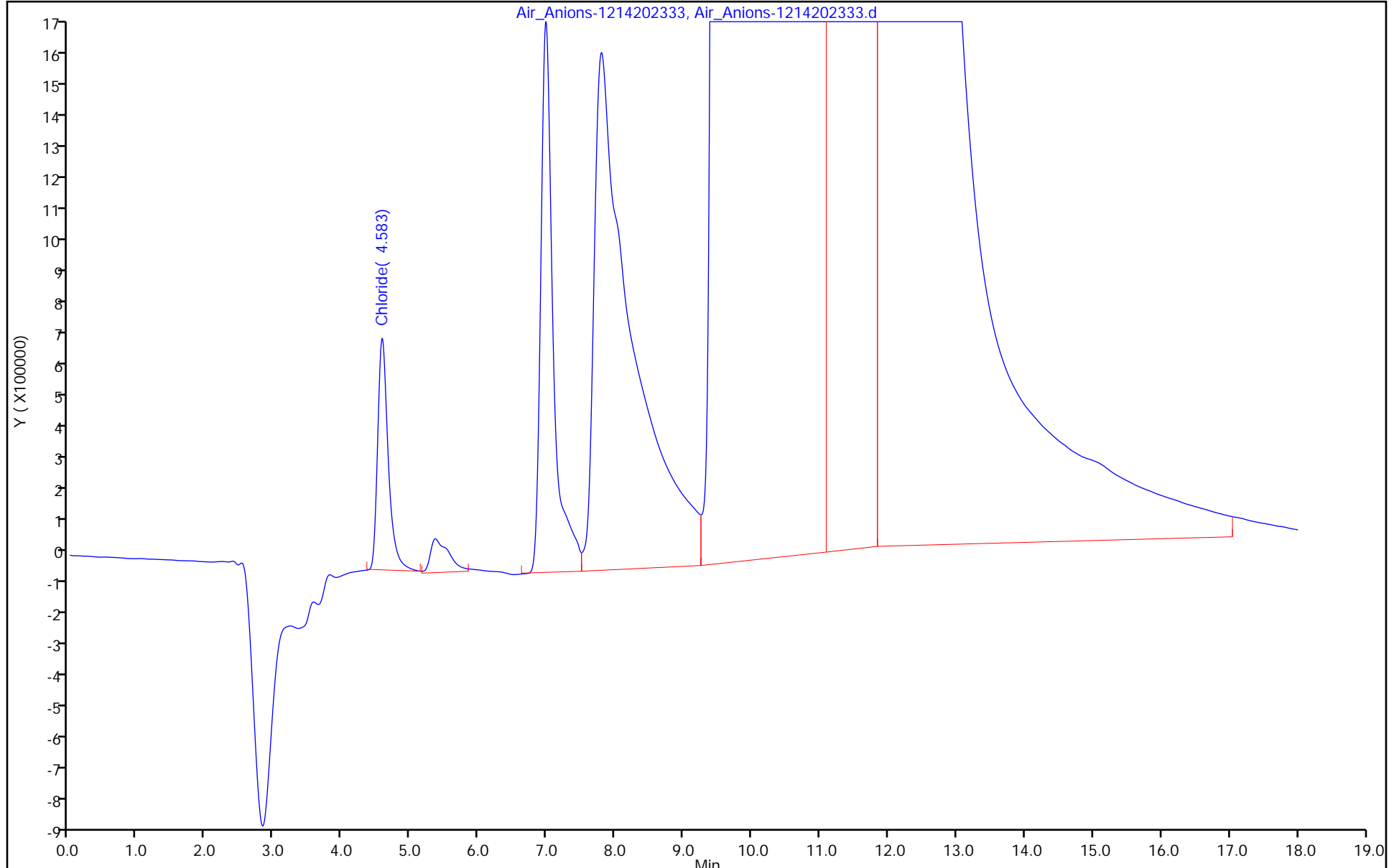
Dil. Factor: 2.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AP26-1 CONTAINER 4 NAOH Lab Sample ID: 140-34757-14  
 Matrix: Air Lab File ID: Air\_Anions-1215202333.d  
 Analysis Method: 0050/26A Date Collected: 12/06/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:56  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/16/2023 09:30  
 Con. Extract Vol.: 240(mL) Dilution Factor: 5  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81494 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	85.9	J	120	60.0

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202333.d  
 Lims ID: 140-34757-A-14-A  
 Client ID: AP26-1 CONTAINER 4 NAOH  
 Sample Type: Client  
 Inject. Date: 16-Dec-2023 09:30:00 ALS Bottle#: 0 Worklist Smp#: 24  
 Injection Vol: 1.0 ul Dil. Factor: 5.0000  
 Sample Info: 140-0030907-024  
 Misc. Info.: 140-34757-A-14-A  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:05:01 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

First Level Reviewer: EXJ2 Date: 18-Dec-2023 12:03:19

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.533	4.597	-0.064	2118309	0.0715	M
S 13 Chlorine					0.0715	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated



Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202333.d

Injection Date: 16-Dec-2023 09:30:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-14-A

Lab Sample ID: 140-34757-14

Worklist Smp#: 24

Client ID: AP26-1 CONTAINER 4 NAOH

Injection Vol: 1.0 ul

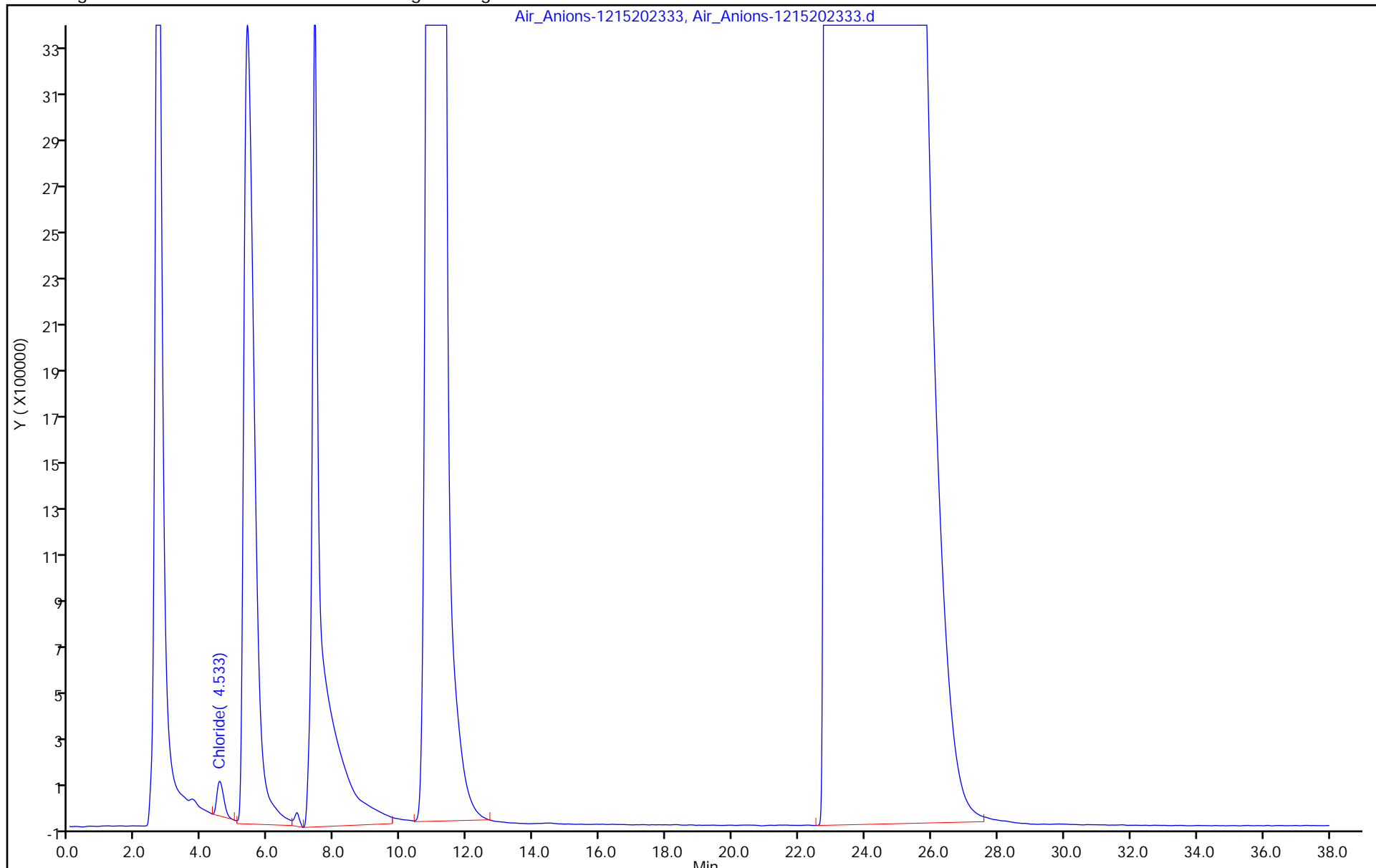
Dil. Factor: 5.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

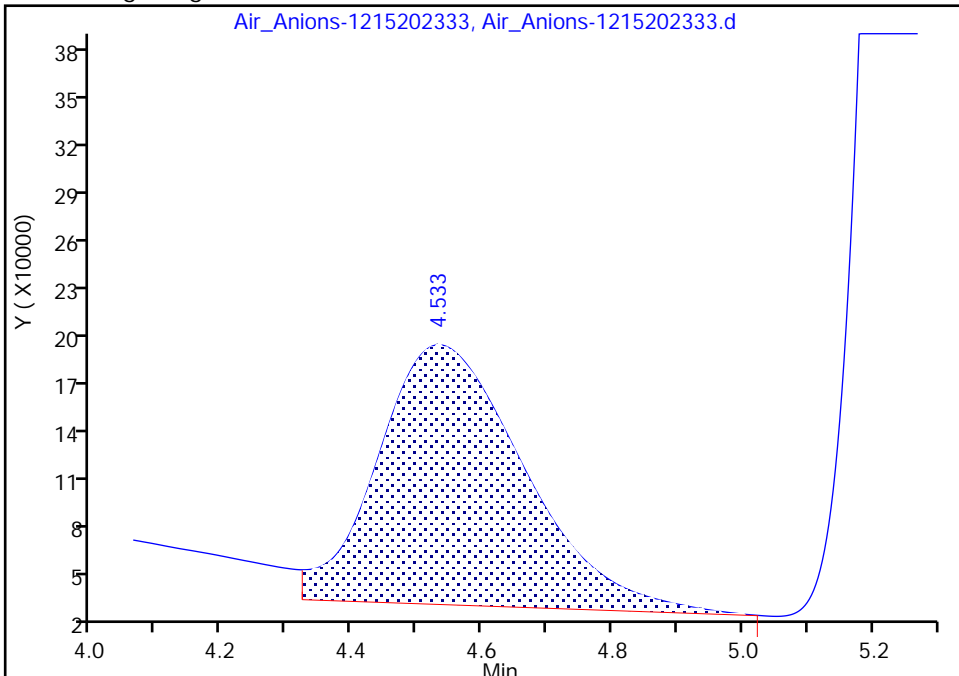
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Injection Date: 16-Dec-2023 09:30:00 Instrument ID: IC4  
Lims ID: 140-34757-A-14-A Lab Sample ID: 140-34757-14  
Client ID: AP26-1 CONTAINER 4 NAOH  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 24  
Injection Vol: 1.0 ul Dil. Factor: 5.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

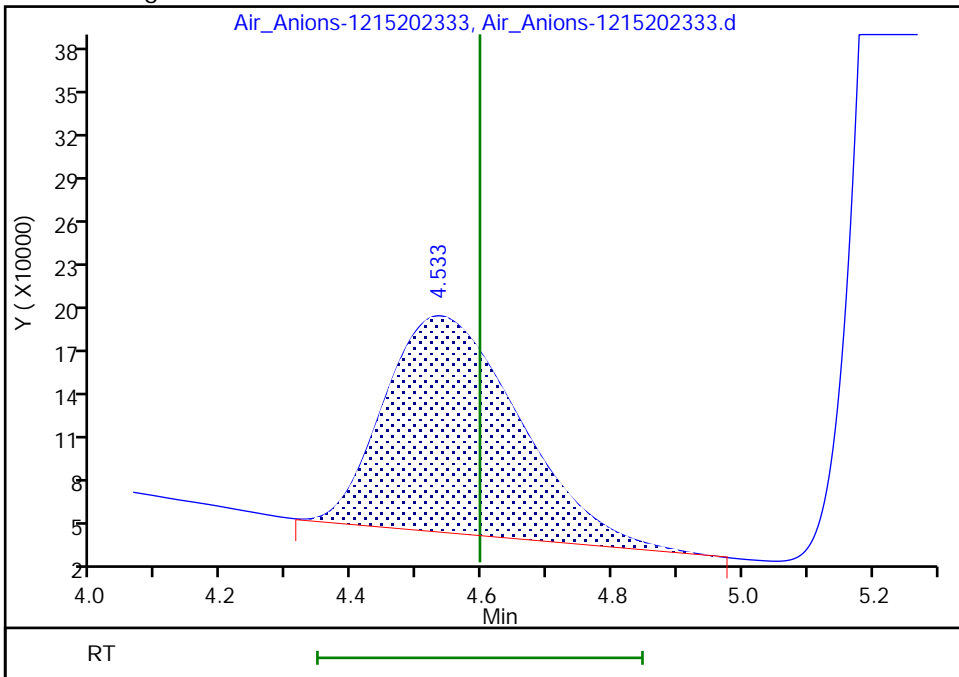
RT: 4.53  
Area: 2483291  
Amount: 0.083816  
Amount Units: ug/ml

Processing Integration Results



RT: 4.53  
Area: 2118309  
Amount: 0.071545  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 18-Dec-2023 12:03:16 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AP26-2 CONTAINER 3 H2SO4 Lab Sample ID: 140-34757-15  
 Matrix: Air Lab File ID: Air\_Anions-1214202337.d  
 Analysis Method: 0050/26A Date Collected: 12/06/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:50  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/14/2023 20:53  
 Con. Extract Vol.: 265(mL) Dilution Factor: 2  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81419 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7647-01-0	Hydrogen Chloride	159		54.5	28.1

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202337.d  
 Lims ID: 140-34757-A-15-A  
 Client ID: AP26-2 CONTAINER 3 H2SO4  
 Sample Type: Client  
 Inject. Date: 14-Dec-2023 20:53:00 ALS Bottle#: 0 Worklist Smp#: 28  
 Injection Vol: 1.0 ul Dil. Factor: 2.0000  
 Sample Info: 140-0030874-028  
 Misc. Info.: 140-34757-A-15-A  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:36:11 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:33:07

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride		3.320			ND	
2 Chloride	4.583	4.593	-0.010	8739639	0.2917	M
3 Nitrite as N	5.363	5.400	-0.037	514843	0.008209	
4 Bromide		6.343			ND	
5 Nitrate as N	6.983	7.013	-0.030	20692806	0.2845	
19 Orthophosphate as P		9.280			ND	
6 Iodide		13.163			ND	
S 11 Nitrous Acid					0.0276	
S 12 Br		0.000			ND	
S 13 Chlorine					0.2917	
S 10 Nitric acid					1.28	
S 7 Hydrogen Chloride					0.3000	
S 20 Phosphorus as PO4		0.000			ND	
S 9 Hydrobromic Acid		0.000			ND	
S 22 Hydrogen Iodide		0.000			ND	
S 8 Hydro Fluoric Acid		0.000			ND	
S 21 Phosphate as H3PO4		0.000			ND	

QC Flag Legend

Processing Flags  
 Review Flags  
 M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202337.d

Injection Date: 14-Dec-2023 20:53:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-15-A

Lab Sample ID: 140-34757-15

Worklist Smp#: 28

Client ID: AP26-2 CONTAINER 3 H2SO4

Injection Vol: 1.0 ul

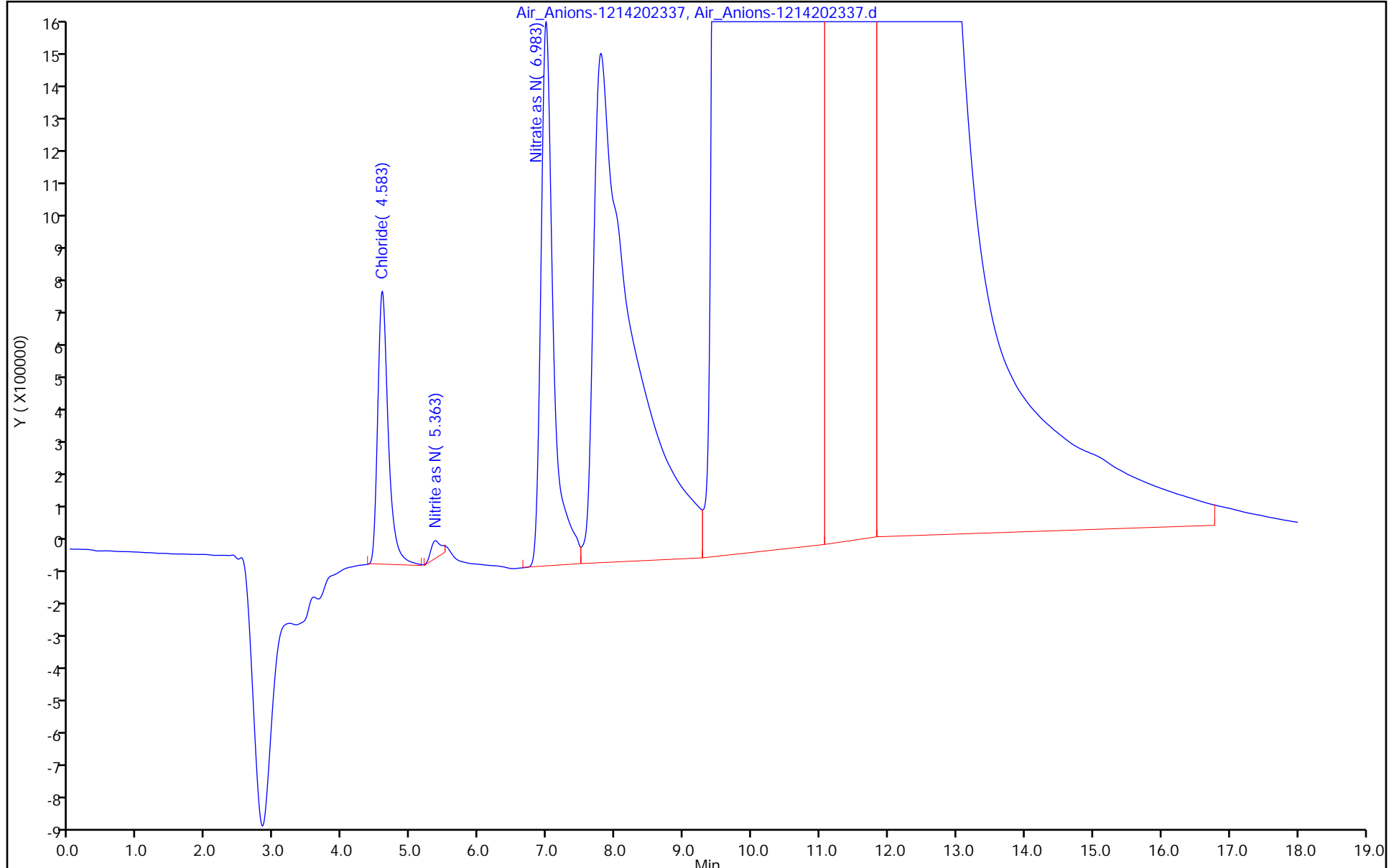
Dil. Factor: 2.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AP26-2 CONTAINER 4 NAOH Lab Sample ID: 140-34757-16  
 Matrix: Air Lab File ID: Air\_Anions-1215202337.d  
 Analysis Method: 0050/26A Date Collected: 12/06/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:56  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/16/2023 11:38  
 Con. Extract Vol.: 240(mL) Dilution Factor: 5  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81494 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	96.6	J	120	60.0

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202337.d  
 Lims ID: 140-34757-A-16-A  
 Client ID: AP26-2 CONTAINER 4 NAOH  
 Sample Type: Client  
 Inject. Date: 16-Dec-2023 11:38:00 ALS Bottle#: 0 Worklist Smp#: 28  
 Injection Vol: 1.0 ul Dil. Factor: 5.0000  
 Sample Info: 140-0030907-028  
 Misc. Info.: 140-34757-A-16-A  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:05:07 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

First Level Reviewer: EXJ2 Date: 18-Dec-2023 12:03:37

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride		3.323			ND	
2 Chloride	4.537	4.597	-0.060	2385788	0.0805	M
3 Nitrite as N	5.377	5.407	-0.030	76900647	1.14	
4 Bromide		6.350			ND	
5 Nitrate as N	6.873	7.023	-0.150	752340	0.0106	
19 Orthophosphate as P		9.280			ND	
6 Iodide		13.173			ND	
S 11 Nitrous Acid					3.82	
S 12 Br		0.000			ND	
S 13 Chlorine					0.0805	
S 10 Nitric acid					0.0477	
S 7 Hydrogen Chloride					0.0828	
S 20 Phosphorus as PO4		0.000			ND	
S 9 Hydrobromic Acid		0.000			ND	
S 22 Hydrogen Iodide		0.000			ND	
S 8 Hydro Fluoric Acid		0.000			ND	
S 21 Phosphate as H3PO4		0.000			ND	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202337.d

Injection Date: 16-Dec-2023 11:38:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-16-A

Lab Sample ID: 140-34757-16

Worklist Smp#: 28

Client ID: AP26-2 CONTAINER 4 NAOH

Injection Vol: 1.0 ul

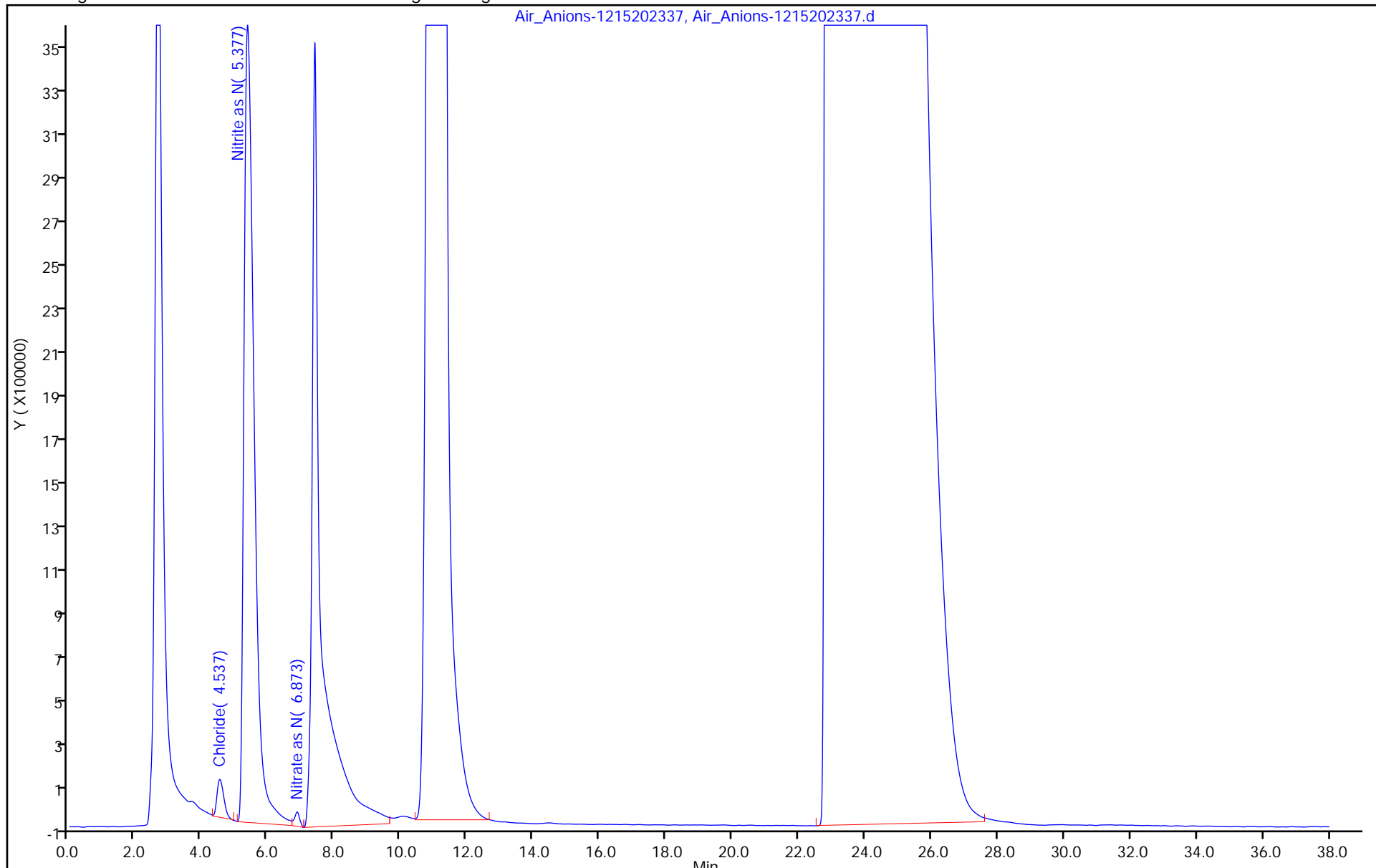
Dil. Factor: 5.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1





Eurofins Knoxville

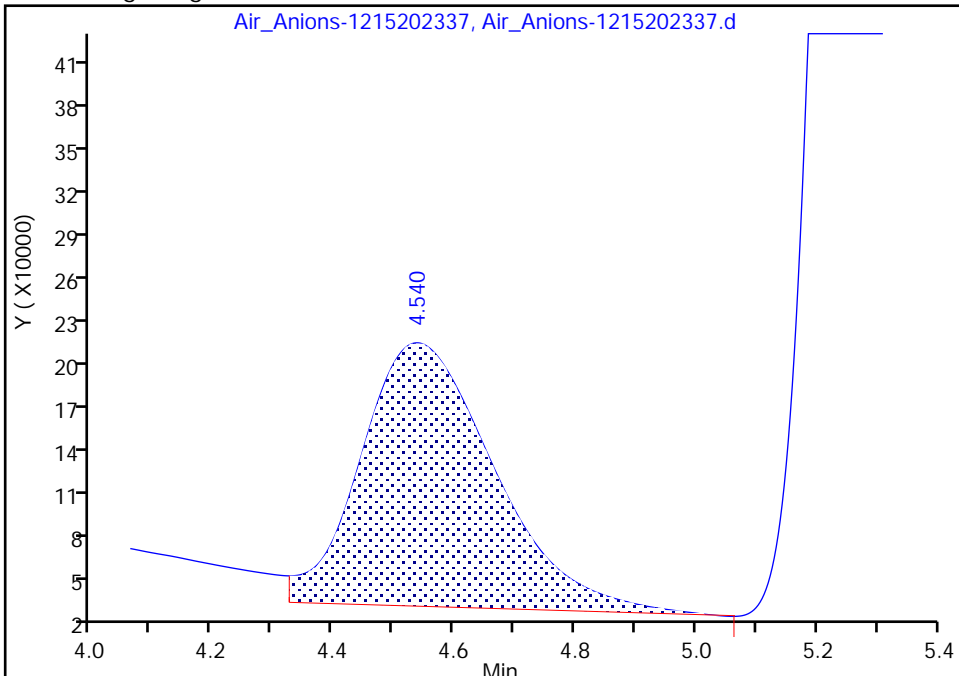
Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202337.d  
Injection Date: 16-Dec-2023 11:38:00 Instrument ID: IC4  
Lims ID: 140-34757-A-16-A Lab Sample ID: 140-34757-16  
Client ID: AP26-2 CONTAINER 4 NAOH  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 28  
Injection Vol: 1.0 ul Dil. Factor: 5.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

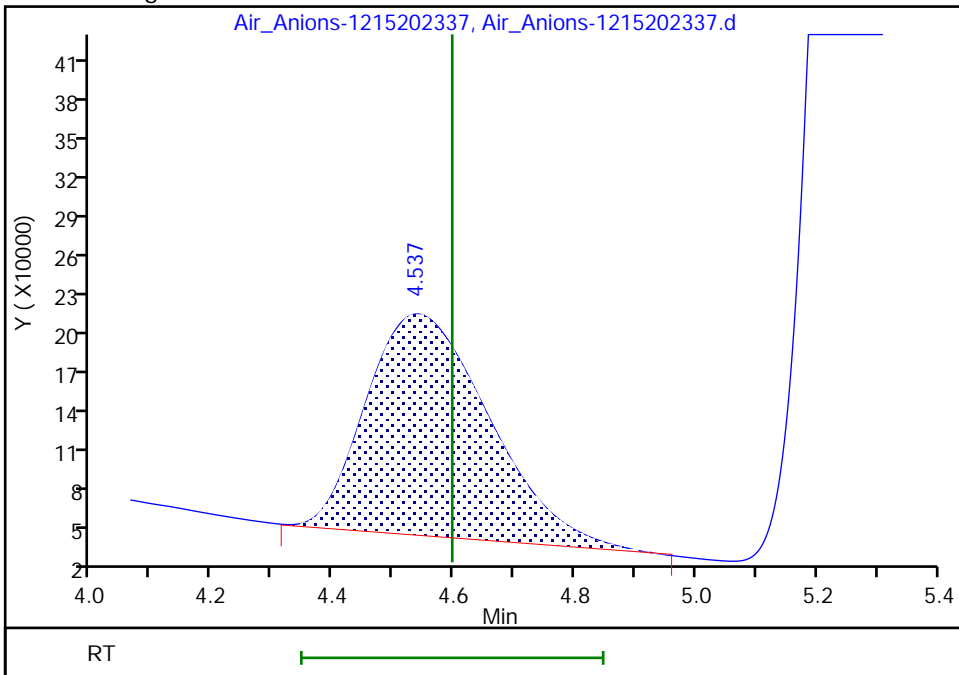
RT: 4.54  
Area: 2775815  
Amount: 0.093639  
Amount Units: ug/ml

Processing Integration Results



RT: 4.54  
Area: 2385788  
Amount: 0.080539  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 18-Dec-2023 12:03:34 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
SDG No.: \_\_\_\_\_  
Client Sample ID: AP26-3 CONTAINER 3 H2SO4 Lab Sample ID: 140-34757-17  
Matrix: Air Lab File ID: Air\_Anions-1214202341.d  
Analysis Method: 0050/26A Date Collected: 12/07/2023 00:00  
Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:50  
Sample wt/vol: 1(Sample) Date Analyzed: 12/14/2023 22:21  
Con. Extract Vol.: 315(mL) Dilution Factor: 2  
Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
% Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
Cleanup Factor: \_\_\_\_\_  
Analysis Batch No.: 81419 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7647-01-0	Hydrogen Chloride	119		64.8	33.4

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202341.d  
 Lims ID: 140-34757-A-17-A  
 Client ID: AP26-3 CONTAINER 3 H2SO4  
 Sample Type: Client  
 Inject. Date: 14-Dec-2023 22:21:00 ALS Bottle#: 0 Worklist Smp#: 32  
 Injection Vol: 1.0 ul Dil. Factor: 2.0000  
 Sample Info: 140-0030874-032  
 Misc. Info.: 140-34757-A-17-A  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:36:11 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.583	4.593	-0.010	5488044	0.1842	
S 7 Hydrogen Chloride					0.1895	

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202341.d

Injection Date: 14-Dec-2023 22:21:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-17-A

Lab Sample ID: 140-34757-17

Worklist Smp#: 32

Client ID: AP26-3 CONTAINER 3 H2SO4

Injection Vol: 1.0 ul

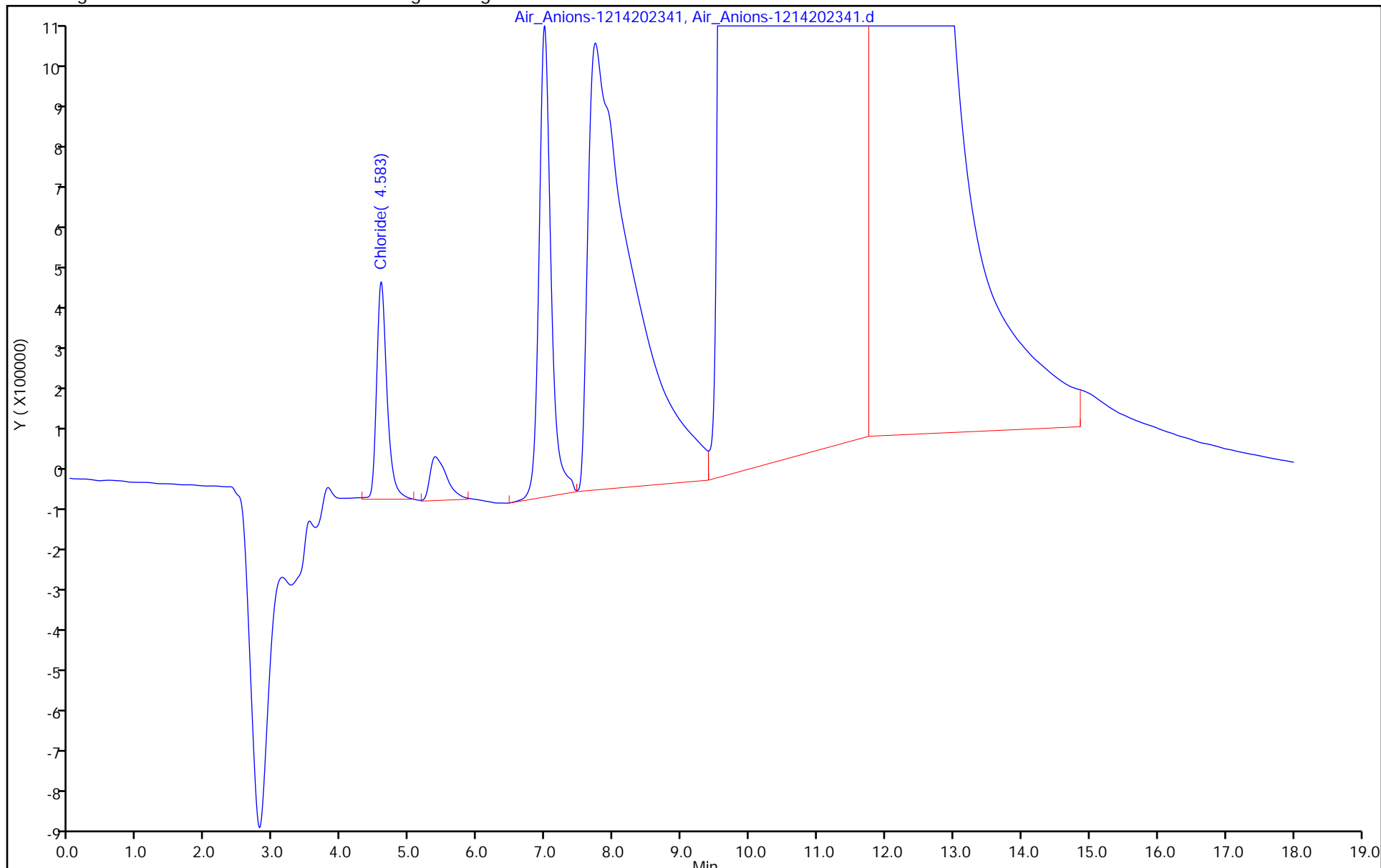
Dil. Factor: 2.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AP26-3 CONTAINER 4 NAOH Lab Sample ID: 140-34757-18  
 Matrix: Air Lab File ID: Air\_Anions-1215202341.d  
 Analysis Method: 0050/26A Date Collected: 12/07/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:56  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/16/2023 14:27  
 Con. Extract Vol.: 250(mL) Dilution Factor: 5  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81494 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	88.3	J	125	62.5

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202341.d  
 Lims ID: 140-34757-A-18-A  
 Client ID: AP26-3 CONTAINER 4 NAOH  
 Sample Type: Client  
 Inject. Date: 16-Dec-2023 14:27:00 ALS Bottle#: 0 Worklist Smp#: 32  
 Injection Vol: 1.0 ul Dil. Factor: 5.0000  
 Sample Info: 140-0030907-032  
 Misc. Info.: 140-34757-A-18-A  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:05:07 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

First Level Reviewer: EXJ2 Date: 18-Dec-2023 12:04:25

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.537	4.597	-0.060	2090623	0.0706	M
S 13 Chlorine					0.0706	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202341.d

Injection Date: 16-Dec-2023 14:27:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-18-A

Lab Sample ID: 140-34757-18

Worklist Smp#: 32

Client ID: AP26-3 CONTAINER 4 NAOH

Injection Vol: 1.0 ul

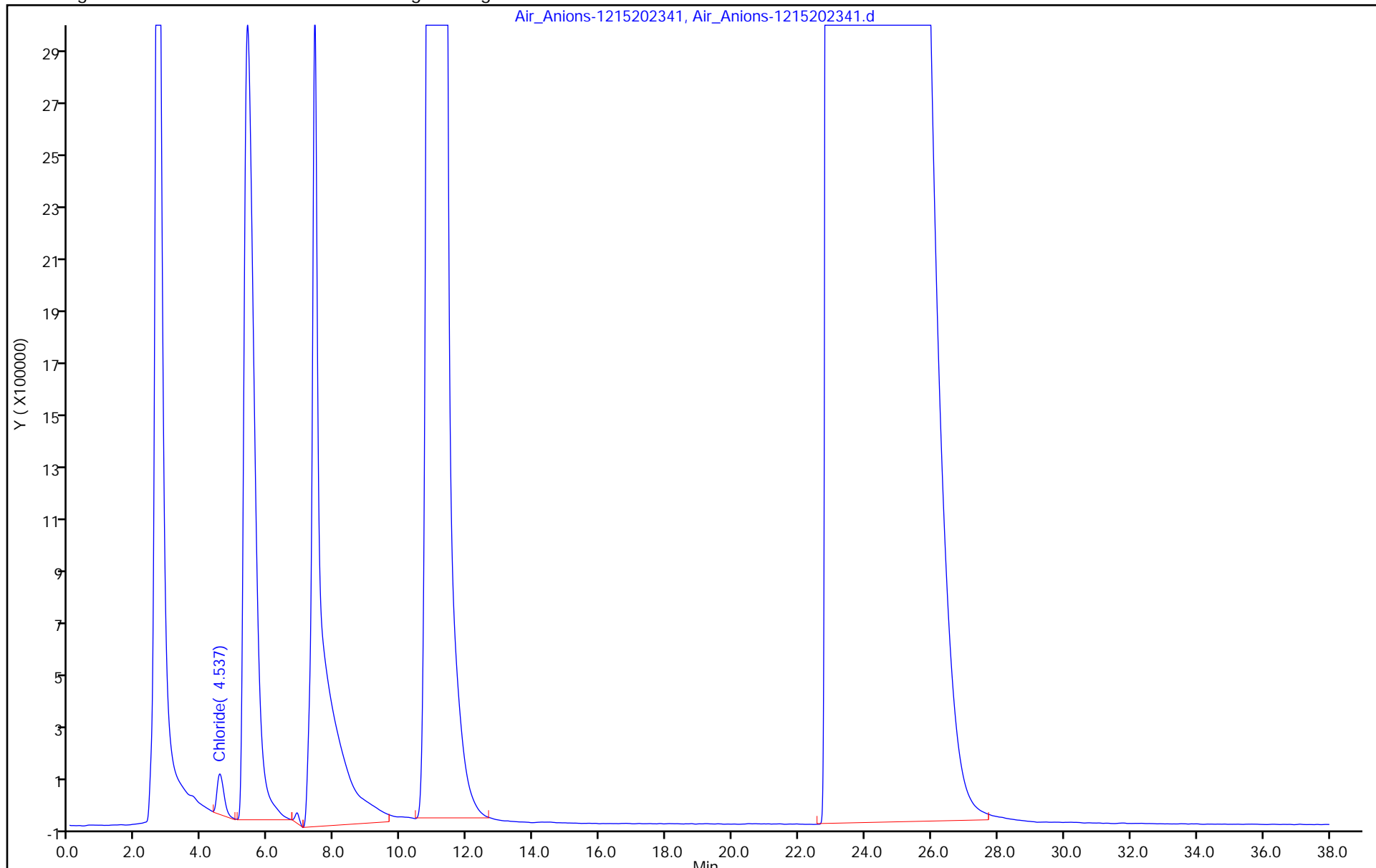
Dil. Factor: 5.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

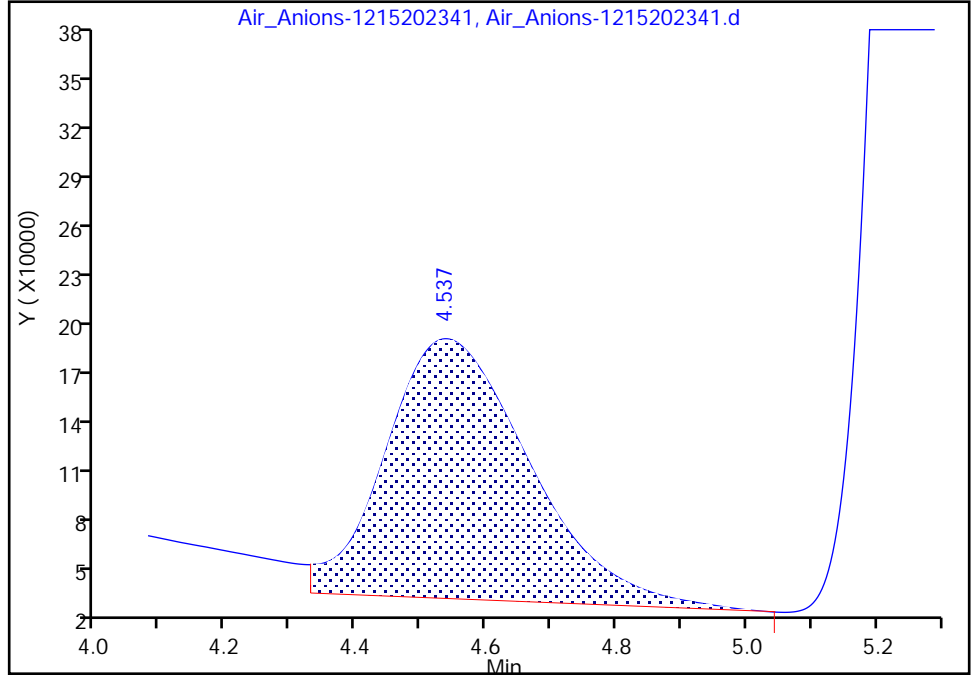
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Injection Date: 16-Dec-2023 14:27:00 Instrument ID: IC4  
Lims ID: 140-34757-A-18-A Lab Sample ID: 140-34757-18  
Client ID: AP26-3 CONTAINER 4 NAOH  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 32  
Injection Vol: 1.0 ul Dil. Factor: 5.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

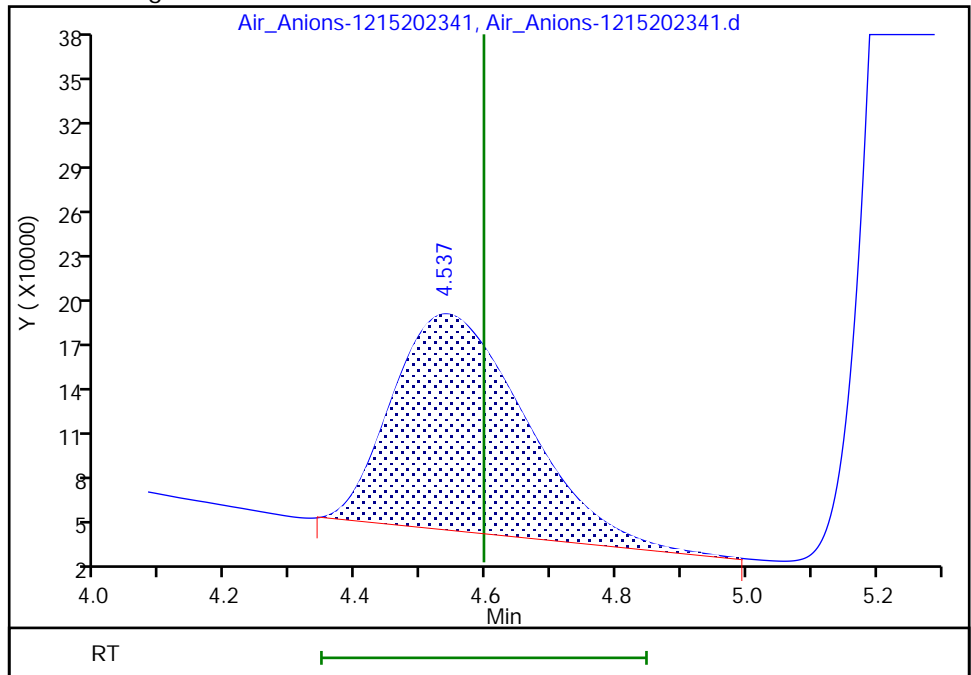
RT: 4.54  
Area: 2452656  
Amount: 0.082786  
Amount Units: ug/ml

Processing Integration Results



RT: 4.54  
Area: 2090623  
Amount: 0.070613  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 18-Dec-2023 12:04:21 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: BLANK CONTAINER 6 H2SO4 Lab Sample ID: 140-34757-19  
 Matrix: Air Lab File ID: Air\_Anions-1214202343.d  
 Analysis Method: 0050/26A Date Collected: 12/07/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:50  
 Sample wt/vol: 1 (Sample) Date Analyzed: 12/14/2023 23:06  
 Con. Extract Vol.: 230 (mL) Dilution Factor: 2  
 Injection Volume: 1 (uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81419 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7647-01-0	Hydrogen Chloride	31.2	J	47.3	24.4

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202343.d  
 Lims ID: 140-34757-A-19-A  
 Client ID: BLANK CONTAINER 6 H2SO4  
 Sample Type: Client  
 Inject. Date: 14-Dec-2023 23:06:00 ALS Bottle#: 0 Worklist Smp#: 34  
 Injection Vol: 1.0 ul Dil. Factor: 2.0000  
 Sample Info: 140-0030874-034  
 Misc. Info.: 140-34757-A-19-A  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:36:11 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:33:40

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.413	4.593	-0.180	1949624	0.0659	M
S 7 Hydrogen Chloride					0.0677	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202343.d

Injection Date: 14-Dec-2023 23:06:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-19-A

Lab Sample ID: 140-34757-19

Worklist Smp#: 34

Client ID: BLANK CONTAINER 6 H2SO4

Injection Vol: 1.0 ul

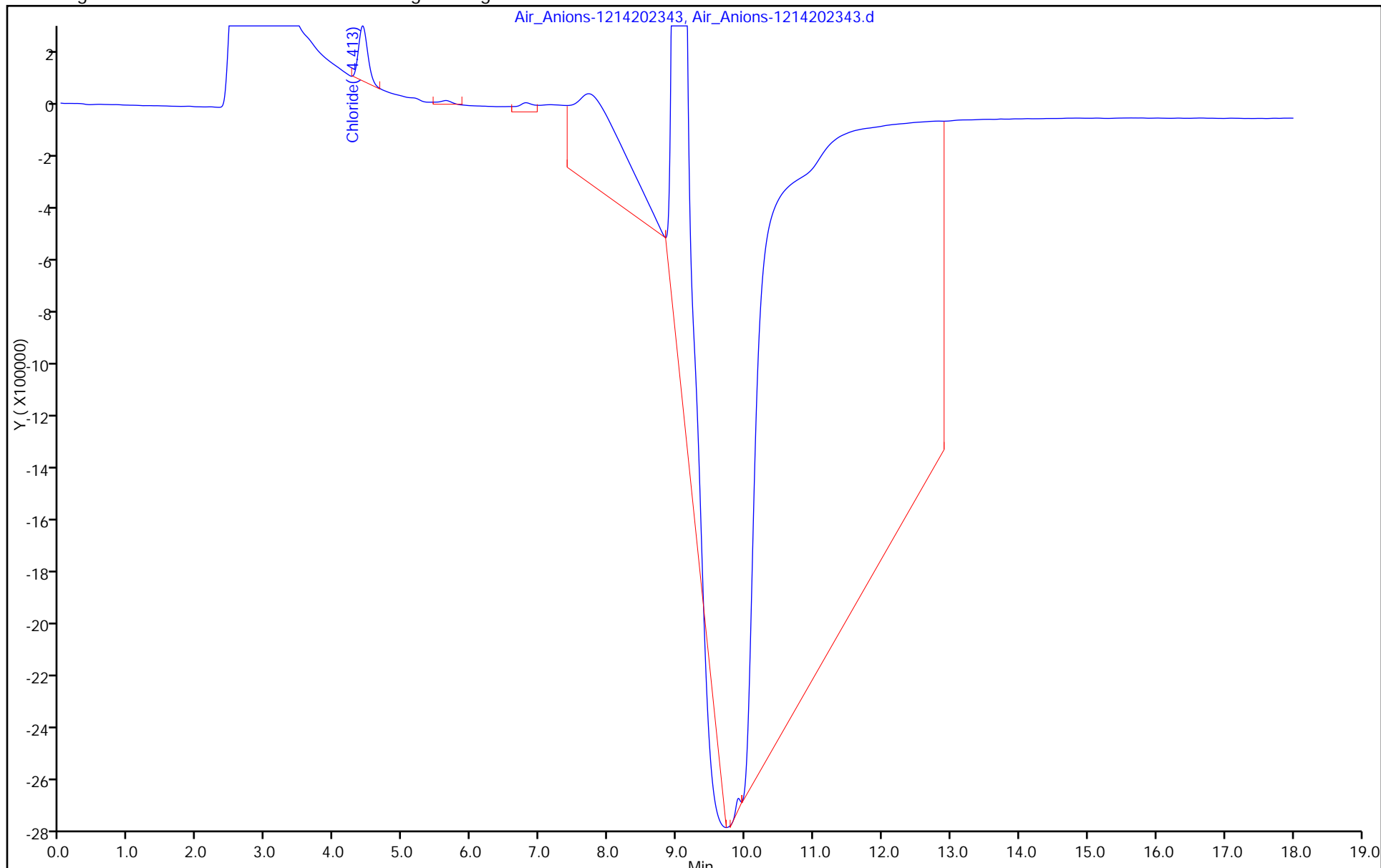
Dil. Factor: 2.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
SDG No.: \_\_\_\_\_  
Client Sample ID: BLANK CONTAINER 7 NAOH Lab Sample ID: 140-34757-20  
Matrix: Air Lab File ID: Air\_Anions-1215202343.d  
Analysis Method: 0050/26A Date Collected: 12/07/2023 00:00  
Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:56  
Sample wt/vol: 1(Sample) Date Analyzed: 12/16/2023 15:51  
Con. Extract Vol.: 230(mL) Dilution Factor: 5  
Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
% Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
Cleanup Factor: \_\_\_\_\_  
Analysis Batch No.: 81494 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	73.3	J	115	57.5

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202343.d  
 Lims ID: 140-34757-A-20-A  
 Client ID: BLANK CONTAINER 7 NAOH  
 Sample Type: Client  
 Inject. Date: 16-Dec-2023 15:51:00 ALS Bottle#: 0 Worklist Smp#: 34  
 Injection Vol: 1.0 ul Dil. Factor: 5.0000  
 Sample Info: 140-0030907-034  
 Misc. Info.: 140-34757-A-20-A  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:05:07 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

First Level Reviewer: EXJ2 Date: 18-Dec-2023 12:04:09

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.493	4.597	-0.104	1887291	0.0638	M
S 13 Chlorine					0.0638	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202343.d

Injection Date: 16-Dec-2023 15:51:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-20-A

Lab Sample ID: 140-34757-20

Worklist Smp#: 34

Client ID: BLANK CONTAINER 7 NAOH

Injection Vol: 1.0 ul

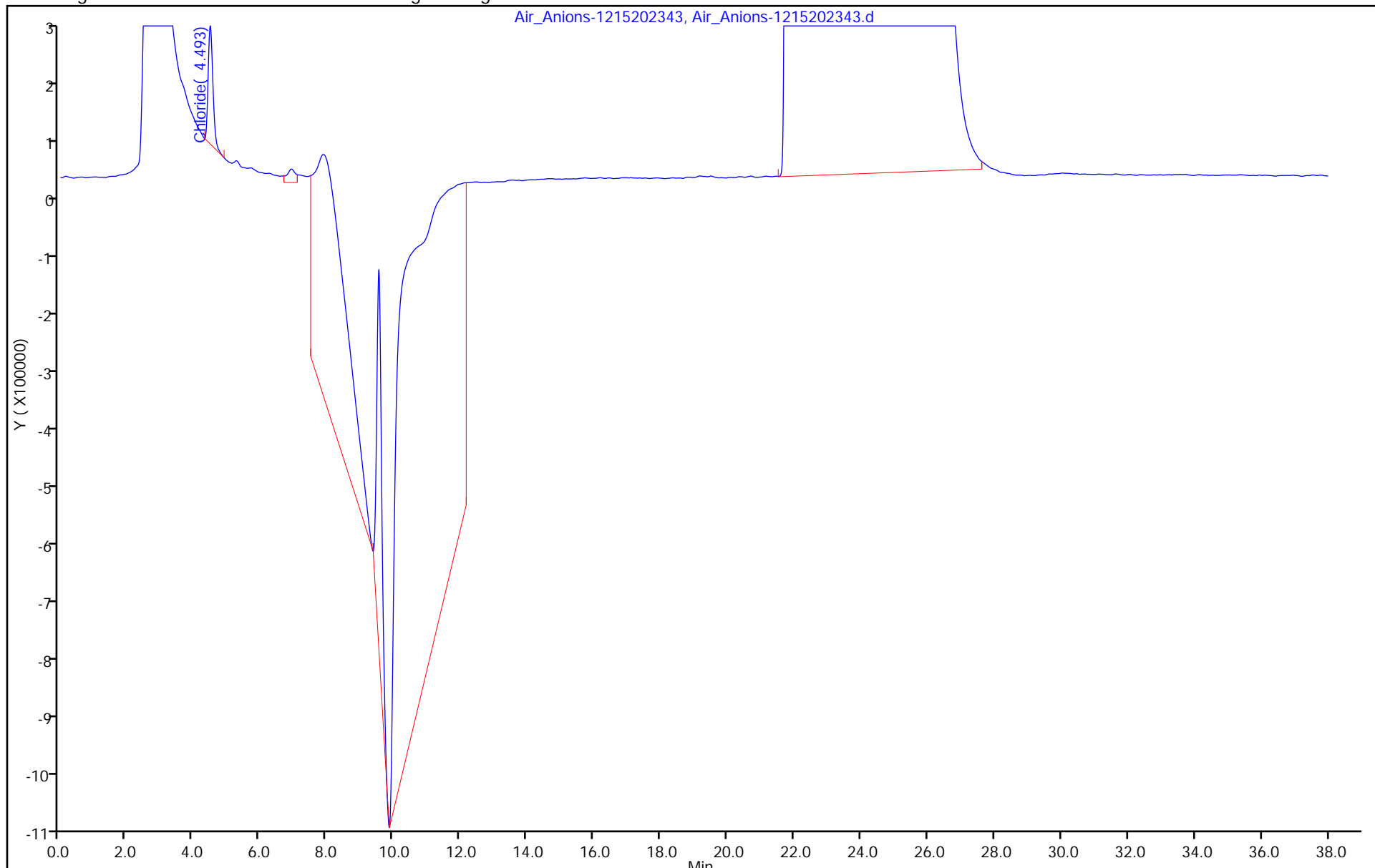
Dil. Factor: 5.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

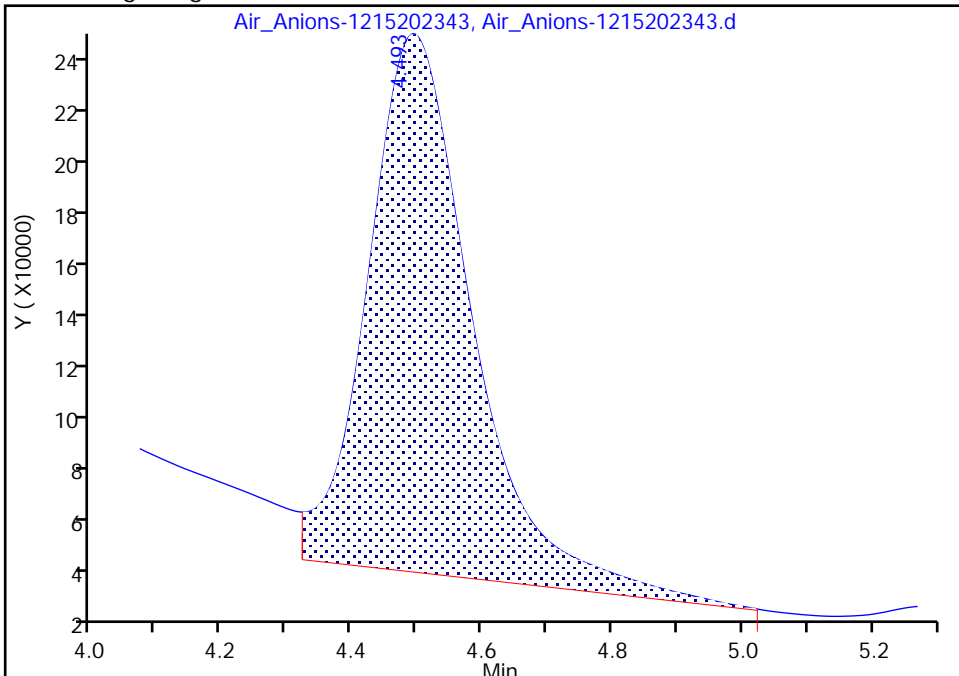
Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202343.d  
Injection Date: 16-Dec-2023 15:51:00 Instrument ID: IC4  
Lims ID: 140-34757-A-20-A Lab Sample ID: 140-34757-20  
Client ID: BLANK CONTAINER 7 NAOH  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 34  
Injection Vol: 1.0 ul Dil. Factor: 5.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

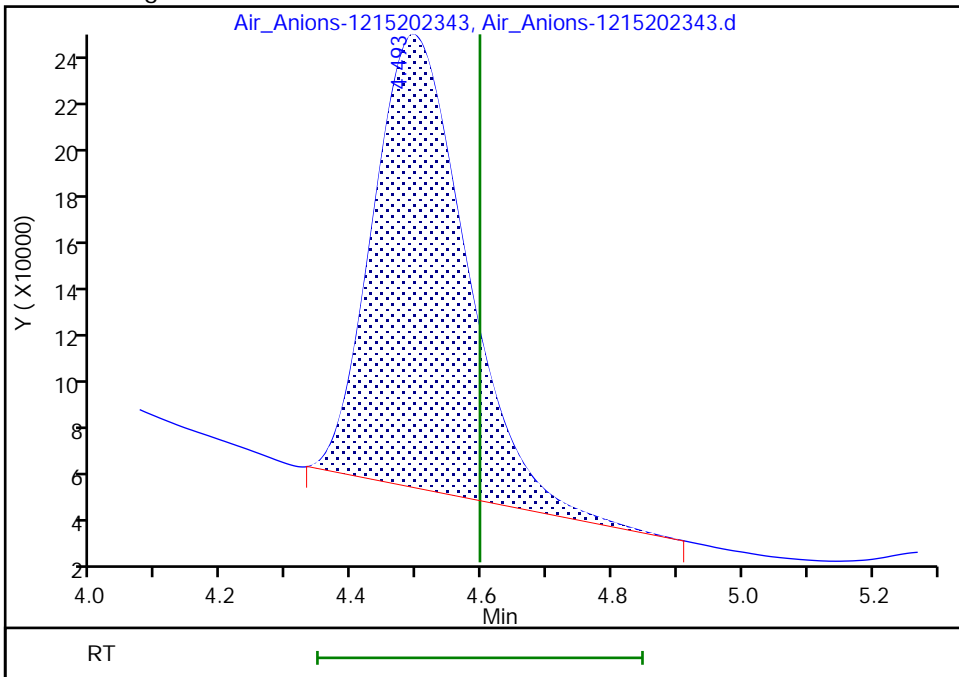
RT: 4.49  
Area: 2272860  
Amount: 0.076743  
Amount Units: ug/ml

Processing Integration Results



RT: 4.49  
Area: 1887291  
Amount: 0.063769  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 18-Dec-2023 12:04:05 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: BLANK CONTAINER 8 H2O Lab Sample ID: 140-34757-21  
 Matrix: Air Lab File ID: Air\_Anions-1214202345.d  
 Analysis Method: 0050/26A Date Collected: 12/07/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:50  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/14/2023 23:50  
 Con. Extract Vol.: 100(mL) Dilution Factor: 2  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81419 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	ND		20.0	10.0
7647-01-0	Hydrogen Chloride	ND		20.6	10.6



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202345.d  
 Lims ID: 140-34757-A-21-A  
 Client ID: BLANK CONTAINER 8 H2O  
 Sample Type: Client  
 Inject. Date: 14-Dec-2023 23:50:00 ALS Bottle#: 0 Worklist Smp#: 36  
 Injection Vol: 1.0 ul Dil. Factor: 2.0000  
 Sample Info: 140-0030874-036  
 Misc. Info.: 140-34757-A-21-A  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:36:11 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.570	4.593	-0.023	638273	0.0216	
S 13 Chlorine					0.0216	
S 7 Hydrogen Chloride					0.0222	

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202345.d

Injection Date: 14-Dec-2023 23:50:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-21-A

Lab Sample ID: 140-34757-21

Worklist Smp#: 36

Client ID: BLANK CONTAINER 8 H2O

Injection Vol: 1.0 ul

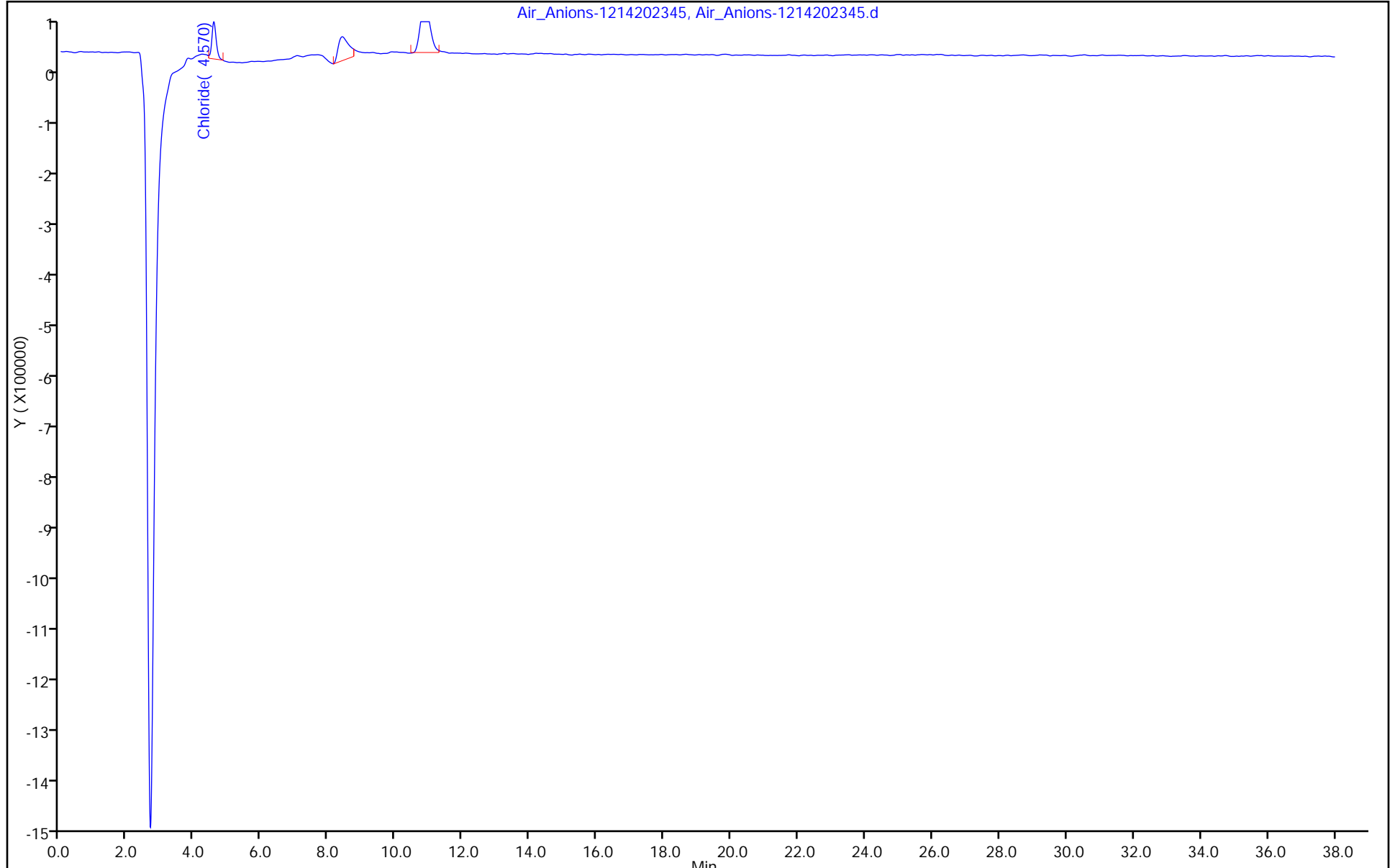
Dil. Factor: 2.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VI  
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA  
RETENTION TIME SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1 Analy Batch No.: 76764  
SDG No.: \_\_\_\_\_  
Instrument ID: IC4 GC Column: AS22 ID: \_\_\_\_\_ Heated Purge: (Y/N) N  
Calibration Start Date: 08/21/2023 18:48 Calibration End Date: 08/21/2023 21:01 Calibration ID: 4504

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-76764/1	Air_Anions-08212023 ICAL1.d
Level 2	IC 140-76764/2	Air_Anions-08212023 ICAL2.d
Level 3	IC 140-76764/3	Air_Anions-08212023 ICAL3.d
Level 4	IC 140-76764/4	Air_Anions-08212023 ICAL4.d
Level 5	IC 140-76764/5	Air_Anions-08212023 ICAL5.d
Level 6	IC 140-76764/6	Air_Anions-08212023 ICAL6.d
Level 7	IC 140-76764/7	Air_Anions-08212023 ICAL7.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7				RT WINDOW	AVG RT
Fluoride	3.330	3.327	3.330	3.330	3.333	3.333	3.343				3.080 - 3.580	3.332
Chloride	4.740	4.740	4.740	4.740	4.743	4.743	4.747				4.490 - 4.990	4.742
Nitrite as N	5.680	5.680	5.683	5.683	5.687	5.690	5.703				5.433 - 5.933	5.687
Bromide	6.737	6.737	6.737	6.737	6.737	6.733	6.737				6.487 - 6.987	6.736
Nitrate as N	7.587	7.587	7.587	7.583	7.580	7.573	7.563				7.333 - 7.833	7.580
Orthophosphate as P	10.137	10.133	10.133	10.123	10.120	10.113	10.110				10.023 - 10.223	10.124
Iodide	14.843	14.837	14.833	14.830	14.827	14.813	14.807				14.580 - 15.080	14.827

FORM VI  
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA  
CURVE EVALUATION

Lab Name: Eurofins Knoxville Job No.: 140-34757-1 Analy Batch No.: 76764

SDG No.: \_\_\_\_\_

Instrument ID: IC4 GC Column: AS22 ID: \_\_\_\_\_ Heated Purge: (Y/N) N

Calibration Start Date: 08/21/2023 18:48 Calibration End Date: 08/21/2023 21:01 Calibration ID: 4504

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-76764/1	Air_Anions-08212023 ICAL1.d
Level 2	IC 140-76764/2	Air_Anions-08212023 ICAL2.d
Level 3	IC 140-76764/3	Air_Anions-08212023 ICAL3.d
Level 4	IC 140-76764/4	Air_Anions-08212023 ICAL4.d
Level 5	IC 140-76764/5	Air_Anions-08212023 ICAL5.d
Level 6	IC 140-76764/6	Air_Anions-08212023 ICAL6.d
Level 7	IC 140-76764/7	Air_Anions-08212023 ICAL7.d

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4		B	M1	M2								
Fluoride	39597800 43474824	40830067 45907775	41084630 49320394	42179236	QuaF		41962804. 9	3691222.5 0						1.0000		0.9900
Chloride	31542460 30644052	30537387 30920910	30318250 32741871	30139620	QuaF		29492609. 8	1615907.0 0						1.0000		0.9900
Nitrite as N	63327160 65119902	62747533 66912281	62440700 71273148	63443140	QuaF		62680082. 2	4294571.3 6						1.0000		0.9900
Bromide	13194180 13045548	13118467 13513495	13031700 14131138	12973068	QuaF		12824315. 8	654737.86 4						1.0000		0.9900
Nitrate as N	76181560 75005744	73339040 76824524	73679250 83920500	73809420	QuaF		70890428. 1	6488670.0 7						1.0000		0.9900
Orthophosphate as P	36036540 31317594	30669507 31782449	32927890 33041954	31936140	QuaF		30810801. 0	1107694.1 4						1.0000		0.9900
Iodide	7563560 7916450	7940307 7837823	7955250 8046368	7961464	QuaF		7751425.6 2	144733.60 0						1.0000		0.9900

Note: The M1 coefficient is the same as Ave CF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI  
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA  
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Knoxville Job No.: 140-34757-1 Analy Batch No.: 76764

SDG No.: \_\_\_\_\_

Instrument ID: IC4 GC Column: AS22 ID: \_\_\_\_\_ Heated Purge: (Y/N) N

Calibration Start Date: 08/21/2023 18:48 Calibration End Date: 08/21/2023 21:01 Calibration ID: 4504

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-76764/1	Air_Anions-08212023 ICAL1.d
Level 2	IC 140-76764/2	Air_Anions-08212023 ICAL2.d
Level 3	IC 140-76764/3	Air_Anions-08212023 ICAL3.d
Level 4	IC 140-76764/4	Air_Anions-08212023 ICAL4.d
Level 5	IC 140-76764/5	Air_Anions-08212023 ICAL5.d
Level 6	IC 140-76764/6	Air_Anions-08212023 ICAL6.d
Level 7	IC 140-76764/7	Air_Anions-08212023 ICAL7.d

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Fluoride	QuaF	1979890	3062255	4108463	10544809	21737412	0.0500	0.0750	0.100	0.250	0.500
		45907775	98640787				1.00	2.00			
Chloride	QuaF	1577123	2290304	3031825	7534905	15322026	0.0500	0.0750	0.100	0.250	0.500
		30920910	65483741				1.00	2.00			
Nitrite as N	QuaF	3166358	4706065	6244070	15860785	32559951	0.0500	0.0750	0.100	0.250	0.500
		66912281	142546295				1.00	2.00			
Bromide	QuaF	659709	983885	1303170	3243267	6522774	0.0500	0.0750	0.100	0.250	0.500
		13513495	28262276				1.00	2.00			
Nitrate as N	QuaF	3809078	5500428	7367925	18452355	37502872	0.0500	0.0750	0.100	0.250	0.500
		76824524	167840999				1.00	2.00			
Orthophosphate as P	QuaF	1801827	2300213	3292789	7984035	15658797	0.0500	0.0750	0.100	0.250	0.500
		31782449	66083907				1.00	2.00			
Iodide	QuaF	378178	595523	795525	1990366	3958225	0.0500	0.0750	0.100	0.250	0.500
		7837823	16092735				1.00	2.00			

Curve Type Legend:

QuaF = Quadratic forced zero

FORM VI  
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA  
READBACK PERCENT ERROR

Lab Name: Eurofins Knoxville Job No.: 140-34757-1 Analy Batch No.: 76764

SDG No.: \_\_\_\_\_

Instrument ID: IC4 GC Column: AS22 ID: \_\_\_\_\_ Heated Purge: (Y/N) N

Calibration Start Date: 08/21/2023 18:48 Calibration End Date: 08/21/2023 21:01 Calibration ID: 4504

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-76764/1	Air_Anions-08212023 ICAL1.d
Level 2	IC 140-76764/2	Air_Anions-08212023 ICAL2.d
Level 3	IC 140-76764/3	Air_Anions-08212023 ICAL3.d
Level 4	IC 140-76764/4	Air_Anions-08212023 ICAL4.d
Level 5	IC 140-76764/5	Air_Anions-08212023 ICAL5.d
Level 6	IC 140-76764/6	Air_Anions-08212023 ICAL6.d
Level 7	IC 140-76764/7	Air_Anions-08212023 ICAL7.d

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Fluoride	-6.0 0.0	-3.3	-2.9	-1.6	-0.7	0.5	50 30	30	30	30	30	30
Chloride	6.6 0.0	3.1	2.2	0.8	1.1	-0.6	50 30	30	30	30	30	30
Nitrite as N	0.7 0.0	-0.4	-1.1	-0.5	0.4	-0.1	50 30	30	30	30	30	30
Bromide	2.6 0.0	1.9	1.1	-0.1	-0.8	0.2	50 30	30	30	30	30	30
Nitrate as N	6.9 0.1	2.7	3.0	1.7	1.1	-0.7	50 30	30	30	30	30	30
Orthophosphate as P	16.7 0.0	-0.7	6.5	2.7	-0.1	-0.4	50 30	30	30	30	30	30
Iodide	-2.5 0.1	2.3	2.4	2.2	1.2	-0.7	50 30	30	30	30	30	30

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL1.d  
 Lims ID: ICAL 1  
 Client ID:  
 Sample Type: IC Calib Level: 1  
 Inject. Date: 21-Aug-2023 18:48:00 ALS Bottle#: 0 Worklist Smp#: 1  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0029316-001  
 Misc. Info.: ICAL 1  
 Operator ID: Instrument ID: IC4  
 Sublist: chrom-0050\_26A\_IC4\*sub8  
 Method: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 22-Aug-2023 09:56:47 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICAL File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 22-Aug-2023 09:47:33

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.330	3.330	0.000	1979890	0.0500	0.0470	Ma
2 Chloride	4.740	4.740	0.000	1577123	0.0500	0.0533	Ma
3 Nitrite as N	5.680	5.683	-0.003	3166358	0.0500	0.0503	Ma
4 Bromide	6.737	6.737	0.000	659709	0.0500	0.0513	
5 Nitrate as N	7.587	7.583	0.004	3809078	0.0500	0.0535	a
19 Orthophosphate as P	10.137	10.123	0.014	1801827	0.0500	0.0584	Ma
6 Iodide	14.843	14.830	0.013	378178	0.0500	0.0487	Ma
S 11 Nitrous Acid					0.1678	0.1690	
S 12 Br					0.0500	0.0513	
S 13 Chlorine					0.0500	0.0533	
S 10 Nitric acid					0.2249	0.2406	
S 7 Hydrogen Chloride					0.0514	0.0548	
S 20 Phosphorus as PO4						0.1789	
S 9 Hydrobromic Acid					0.0506	0.0520	
S 22 Hydrogen Iodide						0.0491	
S 8 Hydro Fluoric Acid					0.0527	0.0495	
S 21 Phosphate as H3PO4						0.1846	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

85L1M26AP\_00050

Amount Added: 10.00

Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL1.d

Injection Date: 21-Aug-2023 18:48:00

Instrument ID: IC4

Operator ID:

Lims ID: ICAL 1

Worklist Smp#: 1

Client ID:

Injection Vol: 1.0 ul

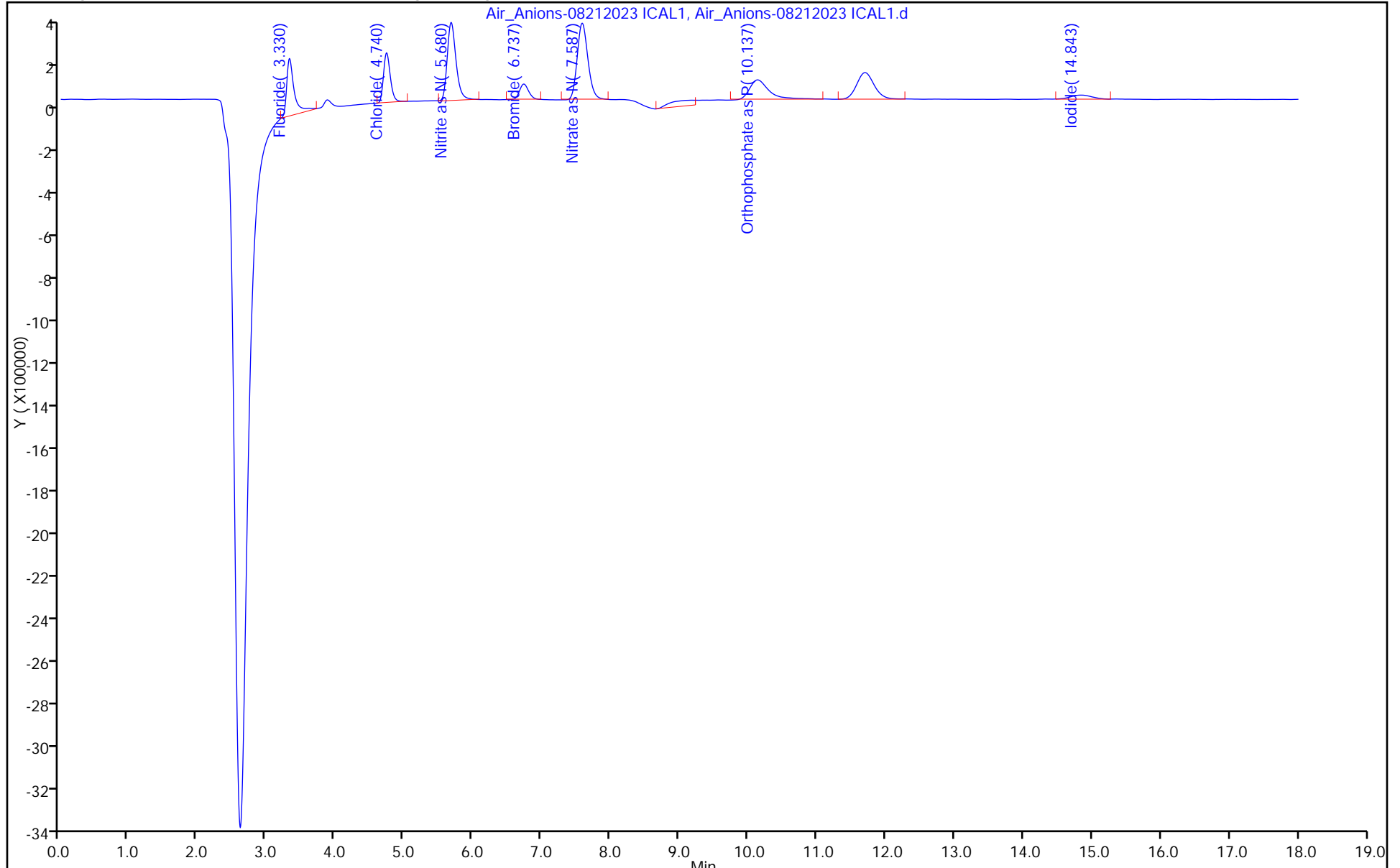
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1





Eurofins Knoxville

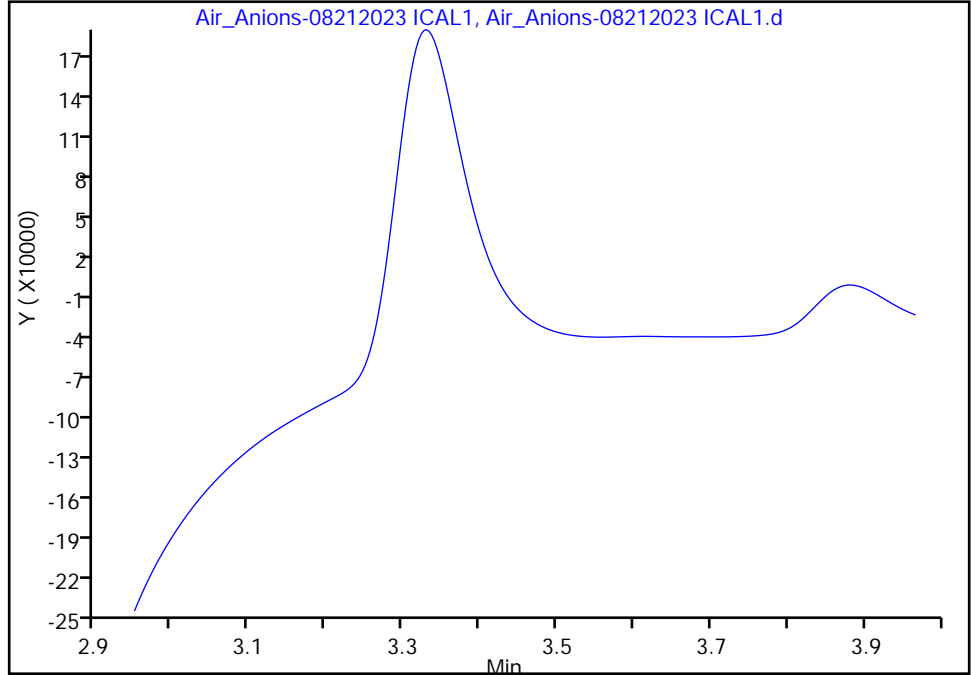
Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL1.d  
Injection Date: 21-Aug-2023 18:48:00 Instrument ID: IC4  
Lims ID: ICAL 1  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 1  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

1 Fluoride, CAS: 16984-48-8

Signal: 1

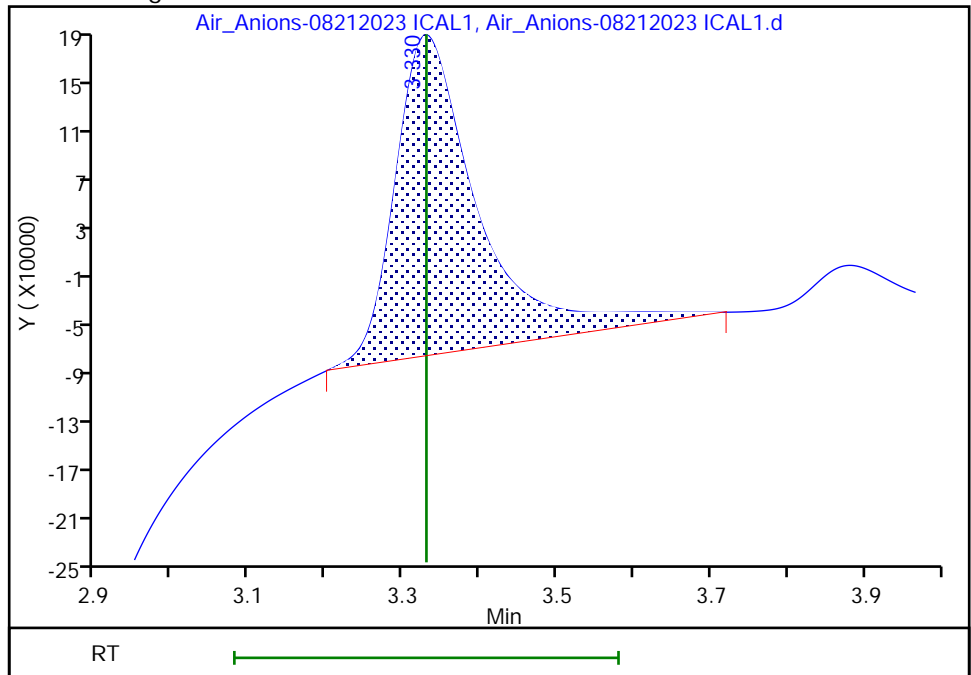
Not Detected  
Expected RT: 3.33

Processing Integration Results



RT: 3.33  
Area: 1979890  
Amount: 0.046988  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 22-Aug-2023 09:46:49 -04:00:00 (UTC)

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Eurofins Knoxville

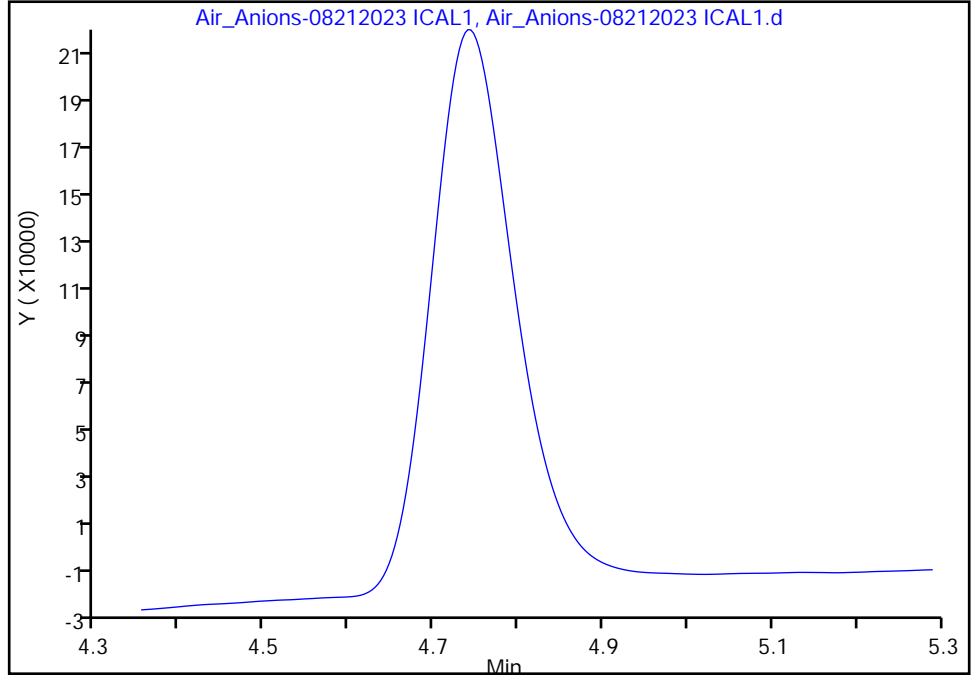
Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.bAir\_Anions-08212023 ICAL1.d  
Injection Date: 21-Aug-2023 18:48:00 Instrument ID: IC4  
Lims ID: ICAL 1  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 1  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

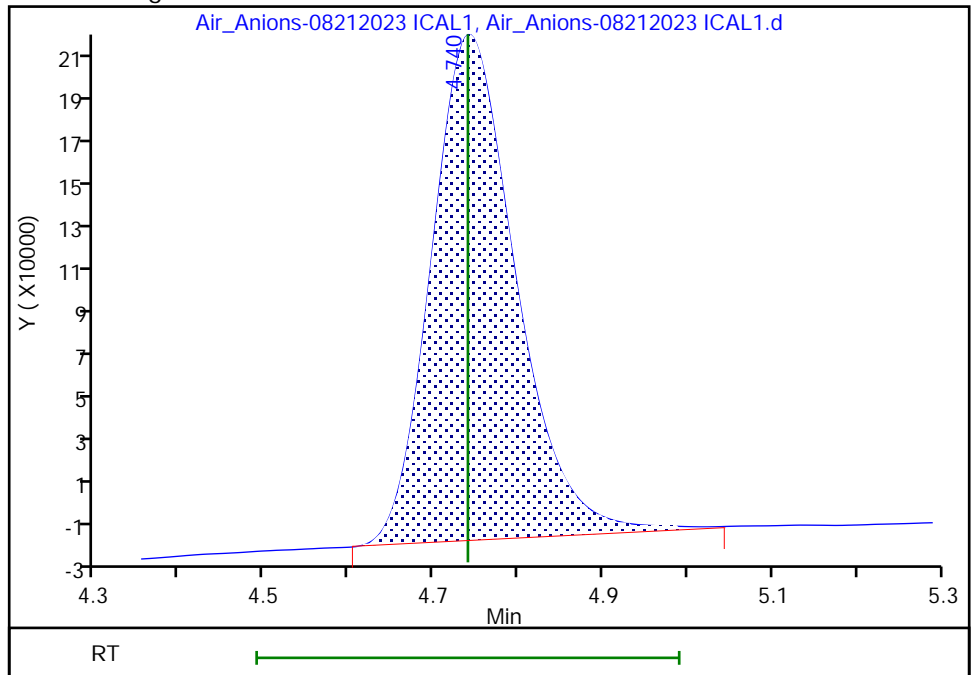
Not Detected  
Expected RT: 4.74

Processing Integration Results



RT: 4.74  
Area: 1577123  
Amount: 0.053319  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 22-Aug-2023 09:46:52 -04:00:00 (UTC)

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Eurofins Knoxville

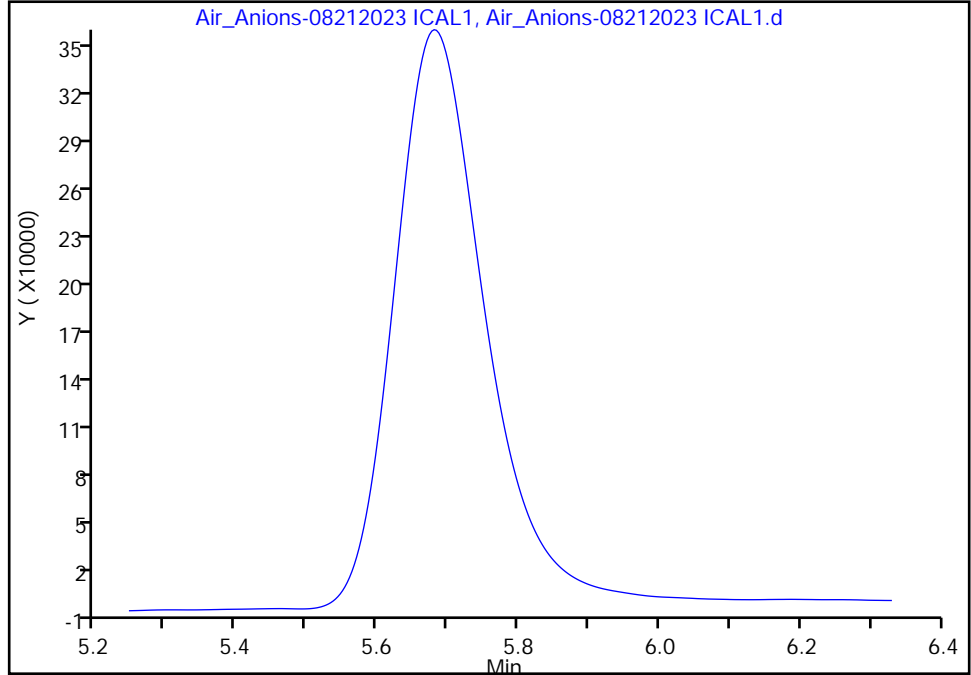
Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL1.d  
Injection Date: 21-Aug-2023 18:48:00 Instrument ID: IC4  
Lims ID: ICAL 1  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 1  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

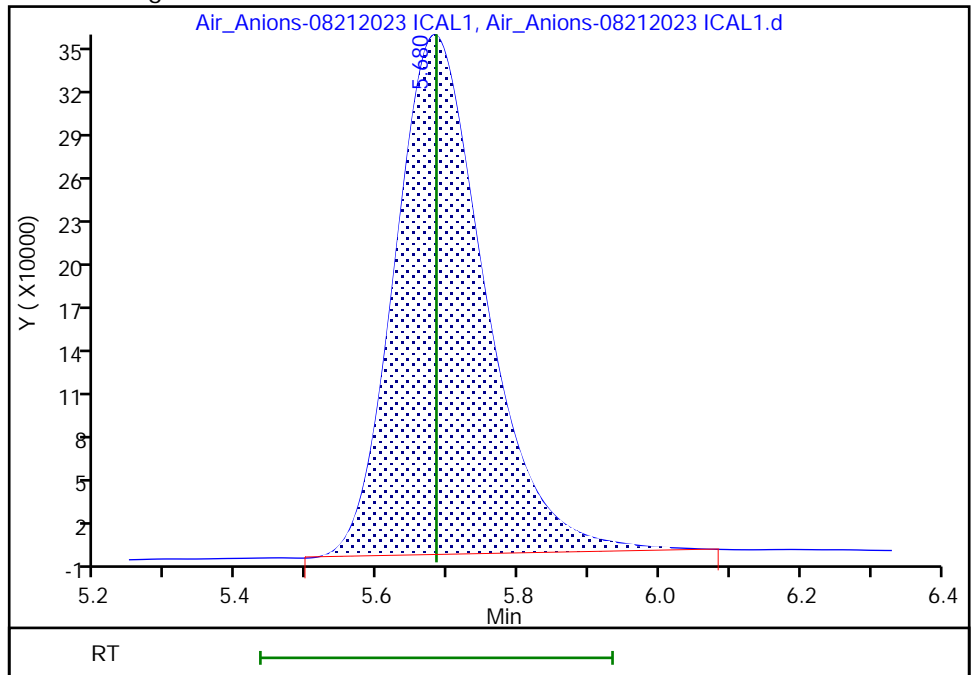
Not Detected  
Expected RT: 5.68

Processing Integration Results



Manual Integration Results

RT: 5.68  
Area: 3166358  
Amount: 0.050343  
Amount Units: ug/ml



Reviewer: EXJ2, 22-Aug-2023 09:46:54 -04:00:00 (UTC)

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Eurofins Knoxville

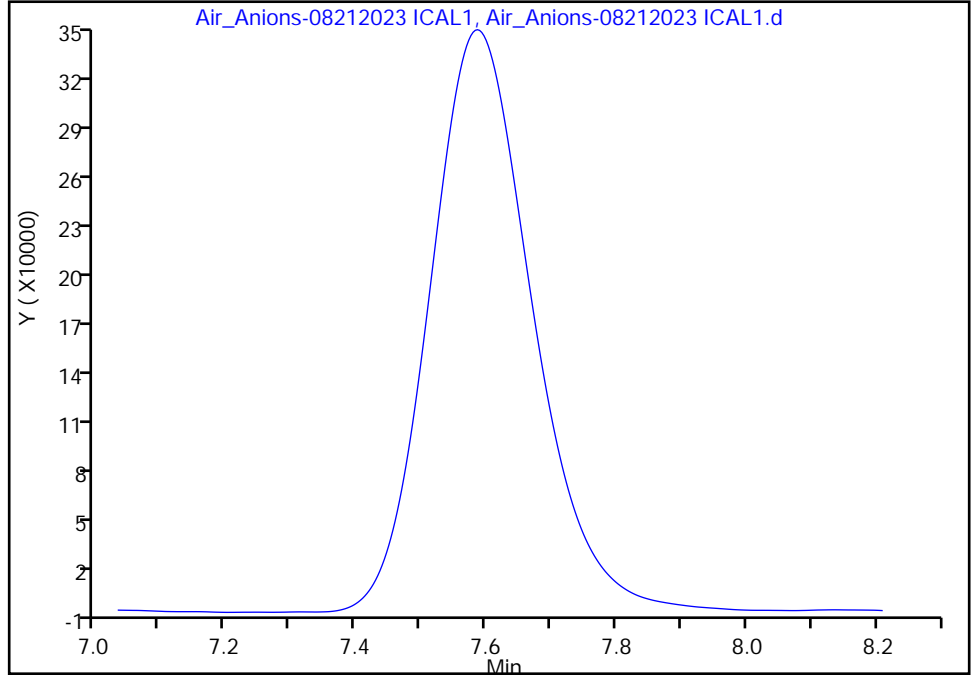
Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL1.d  
Injection Date: 21-Aug-2023 18:48:00 Instrument ID: IC4  
Lims ID: ICAL 1  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 1  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

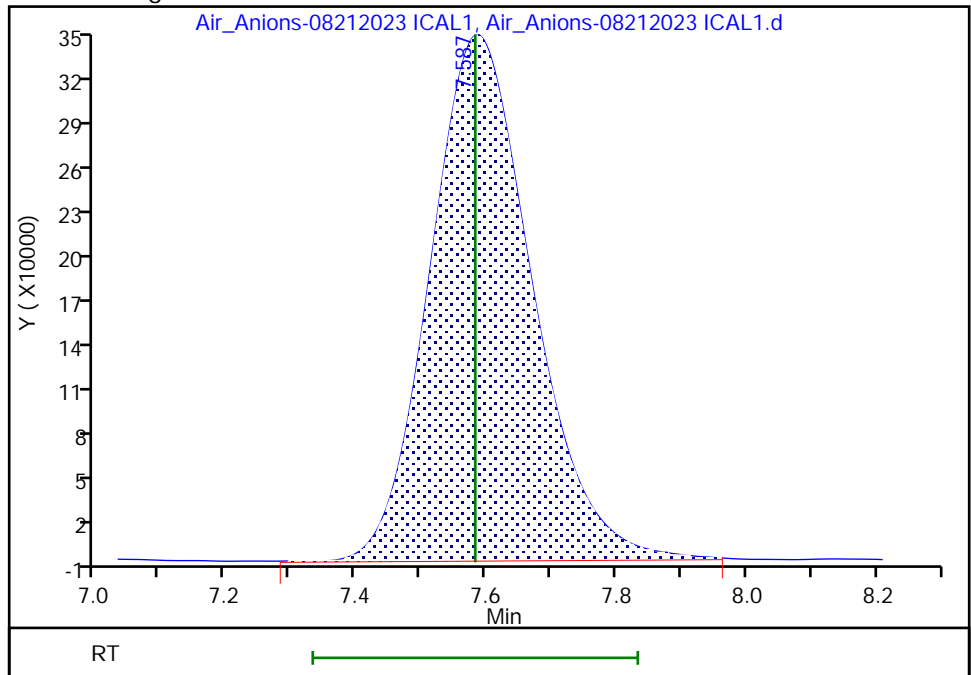
Not Detected  
Expected RT: 7.58

Processing Integration Results



Manual Integration Results

RT: 7.59  
Area: 3809078  
Amount: 0.053470  
Amount Units: ug/ml



Reviewer: EXJ2, 22-Aug-2023 09:46:56 -04:00:00 (UTC)

Audit Action: Assigned Compound ID

Audit Reason: Baseline Smoothing

Eurofins Knoxville

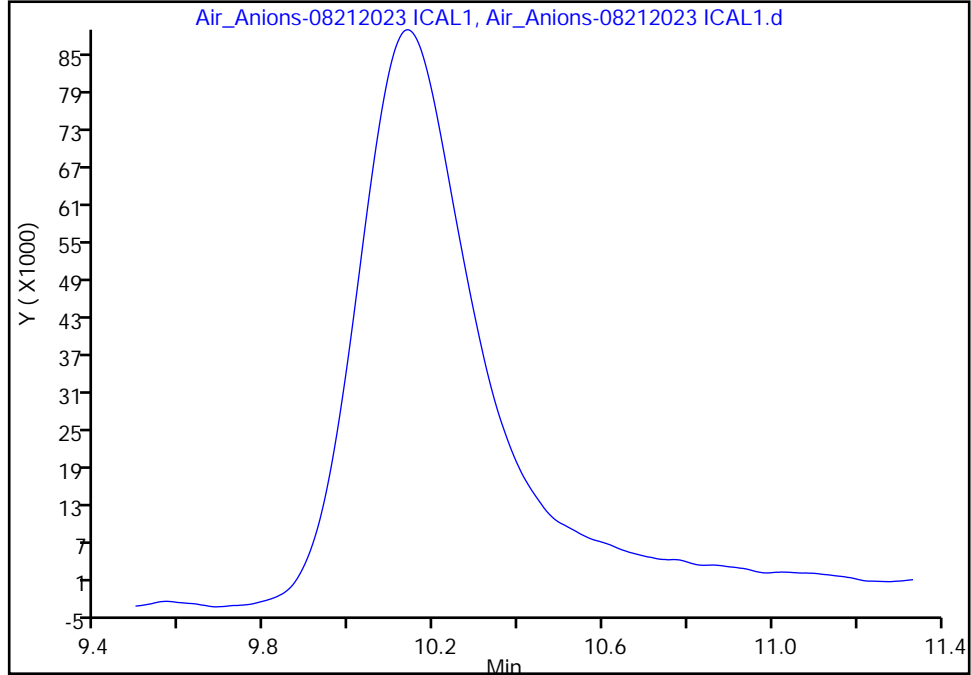
Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL1.d  
Injection Date: 21-Aug-2023 18:48:00 Instrument ID: IC4  
Lims ID: ICAL 1  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 1  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

19 Orthophosphate as P, CAS: STL00599

Signal: 1

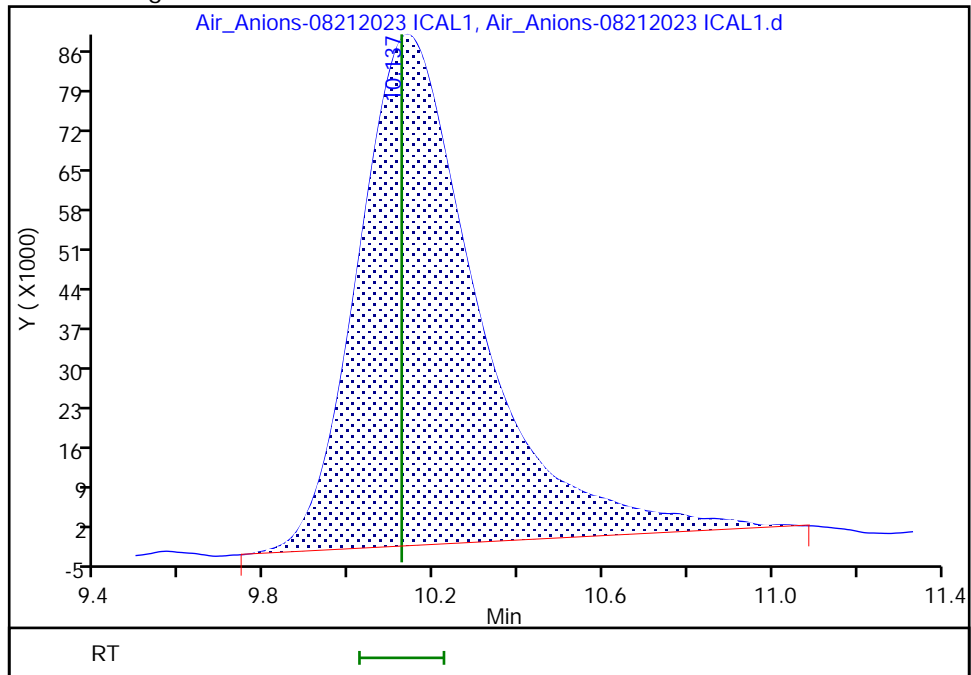
Not Detected  
Expected RT: 10.12

Processing Integration Results



Manual Integration Results

RT: 10.14  
Area: 1801827  
Amount: 0.058358  
Amount Units: ug/ml



Reviewer: EXJ2, 22-Aug-2023 09:47:21 -04:00:00 (UTC)

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Eurofins Knoxville

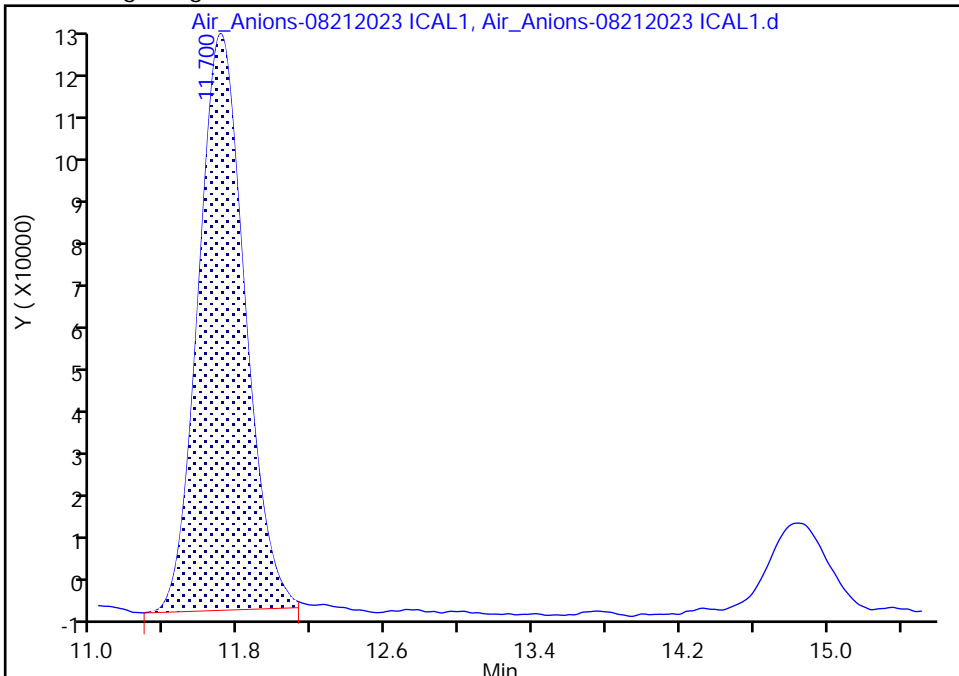
Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL1.d  
Injection Date: 21-Aug-2023 18:48:00 Instrument ID: IC4  
Lims ID: ICAL 1  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 1  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

6 Iodide, CAS: 20461-54-5

Signal: 1

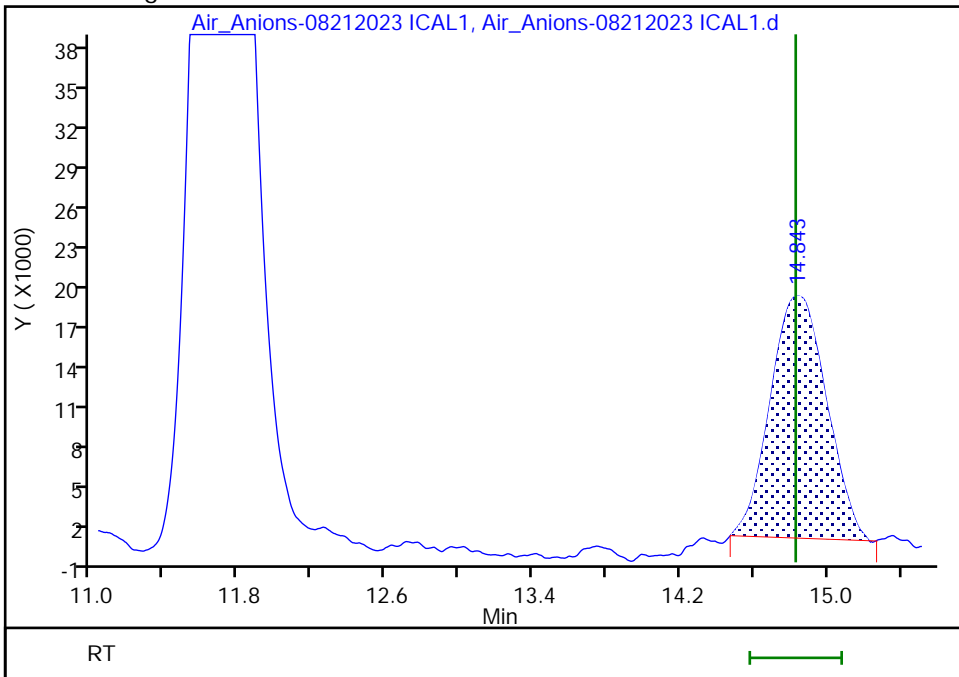
RT: 11.70  
Area: 2119356  
Amount: 0.034501  
Amount Units: ug/ml

Processing Integration Results



RT: 14.84  
Area: 378178  
Amount: 0.048744  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 22-Aug-2023 09:47:16 -04:00:00 (UTC)

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL2.d  
 Lims ID: ICAL 2  
 Client ID:  
 Sample Type: IC Calib Level: 2  
 Inject. Date: 21-Aug-2023 19:10:00 ALS Bottle#: 0 Worklist Smp#: 2  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0029316-002  
 Misc. Info.: ICAL 2  
 Operator ID: Instrument ID: IC4  
 Sublist: chrom-0050\_26A\_IC4\*sub8  
 Method: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 22-Aug-2023 09:56:48 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICAL File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 22-Aug-2023 09:48:13

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.327	3.330	-0.003	3062255	0.0750	0.0725	M
2 Chloride	4.740	4.740	0.000	2290304	0.0750	0.0773	M
3 Nitrite as N	5.680	5.683	-0.003	4706065	0.0750	0.0747	
4 Bromide	6.737	6.737	0.000	983885	0.0750	0.0764	
5 Nitrate as N	7.587	7.583	0.004	5500428	0.0750	0.0770	M
19 Orthophosphate as P	10.133	10.123	0.010	2300213	0.0750	0.0745	M
6 Iodide	14.837	14.830	0.007	595523	0.0750	0.0767	M
S 11 Nitrous Acid					0.2517	0.2507	
S 12 Br					0.0750	0.0764	
S 13 Chlorine					0.0750	0.0773	
S 10 Nitric acid					0.3374	0.3466	
S 7 Hydrogen Chloride					0.0771	0.0795	
S 20 Phosphorus as PO4						0.2283	
S 9 Hydrobromic Acid					0.0759	0.0774	
S 22 Hydrogen Iodide						0.0773	
S 8 Hydro Fluoric Acid					0.0790	0.0764	
S 21 Phosphate as H3PO4						0.2356	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

85L2M26AP\_00050

Amount Added: 10.00

Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL2.d

Injection Date: 21-Aug-2023 19:10:00

Instrument ID: IC4

Operator ID:

Lims ID: ICAL 2

Worklist Smp#: 2

Client ID:

Injection Vol: 1.0 ul

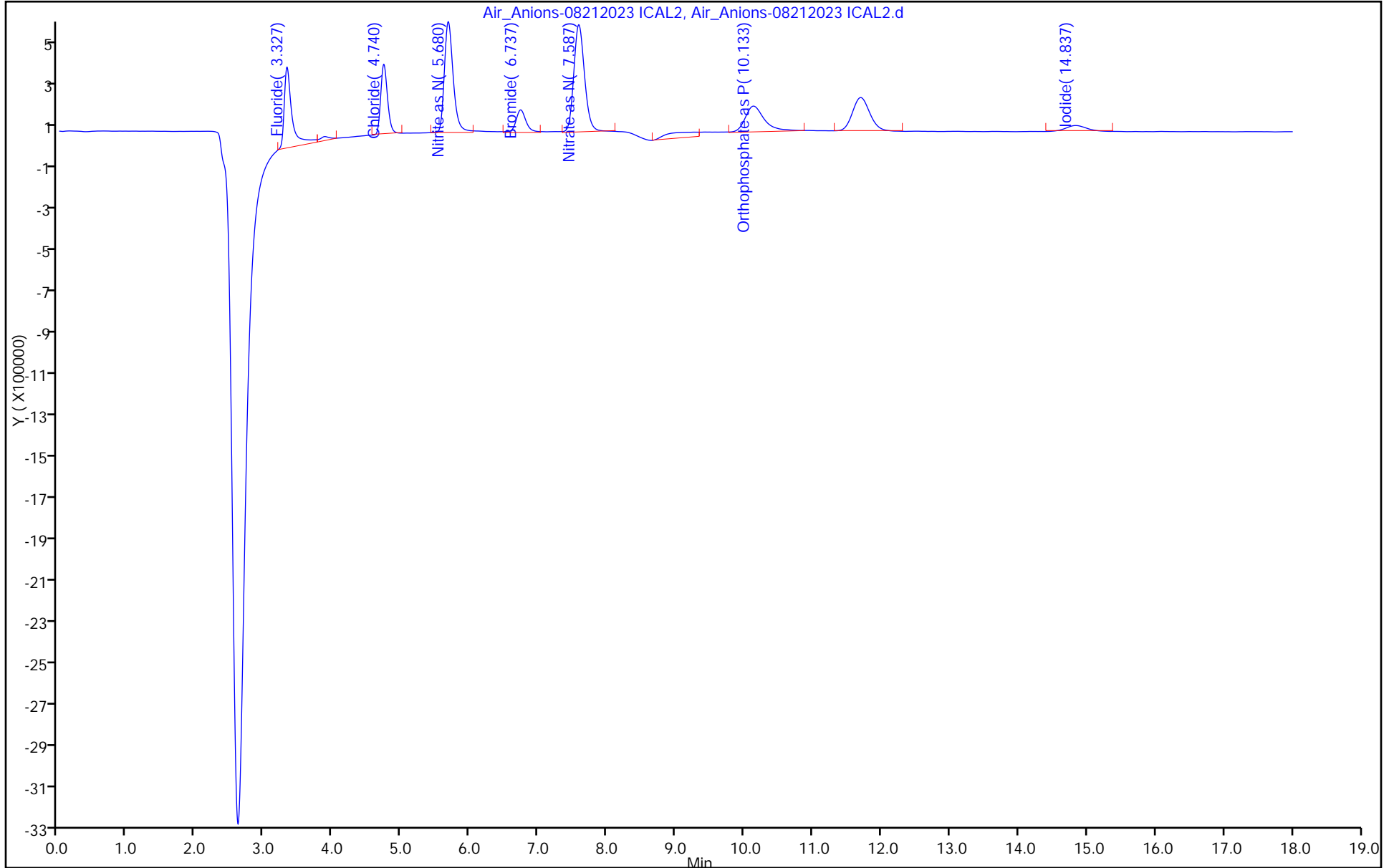
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1





Eurofins Knoxville

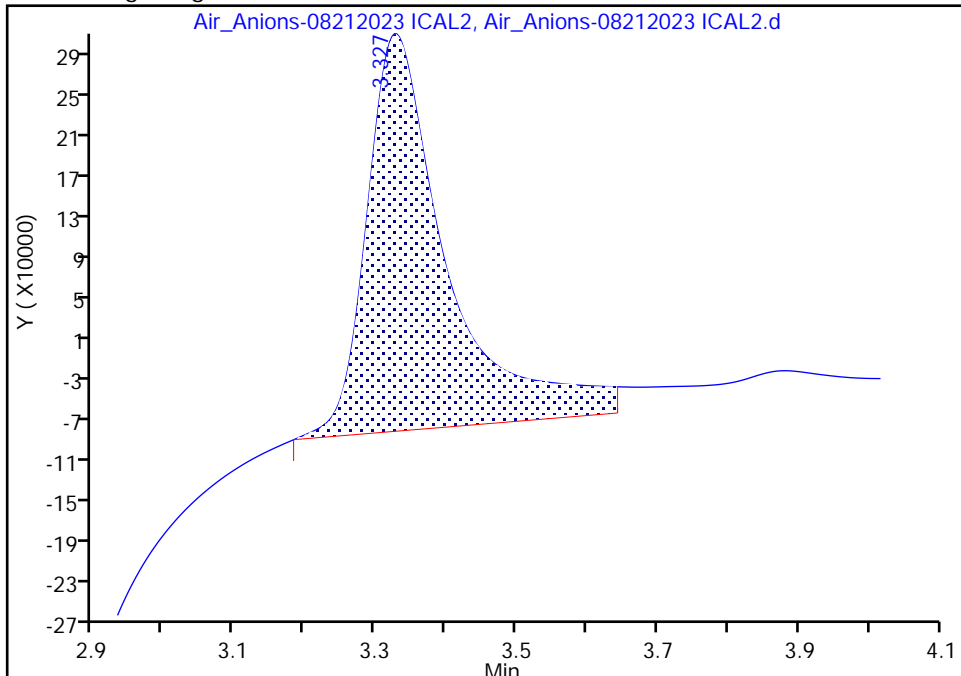
Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL2.d  
Injection Date: 21-Aug-2023 19:10:00 Instrument ID: IC4  
Lims ID: ICAL 2  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 2  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

1 Fluoride, CAS: 16984-48-8

Signal: 1

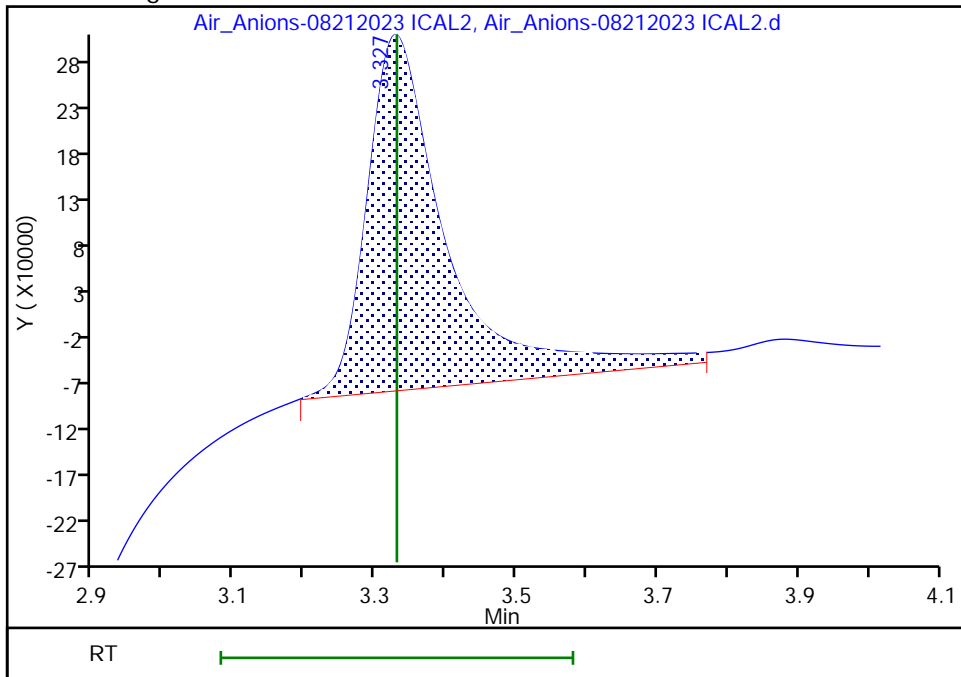
RT: 3.33  
Area: 3078808  
Amount: 0.070714  
Amount Units: ug/ml

Processing Integration Results



RT: 3.33  
Area: 3062255  
Amount: 0.072513  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 22-Aug-2023 09:54:31 -04:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline Smoothing

Eurofins Knoxville

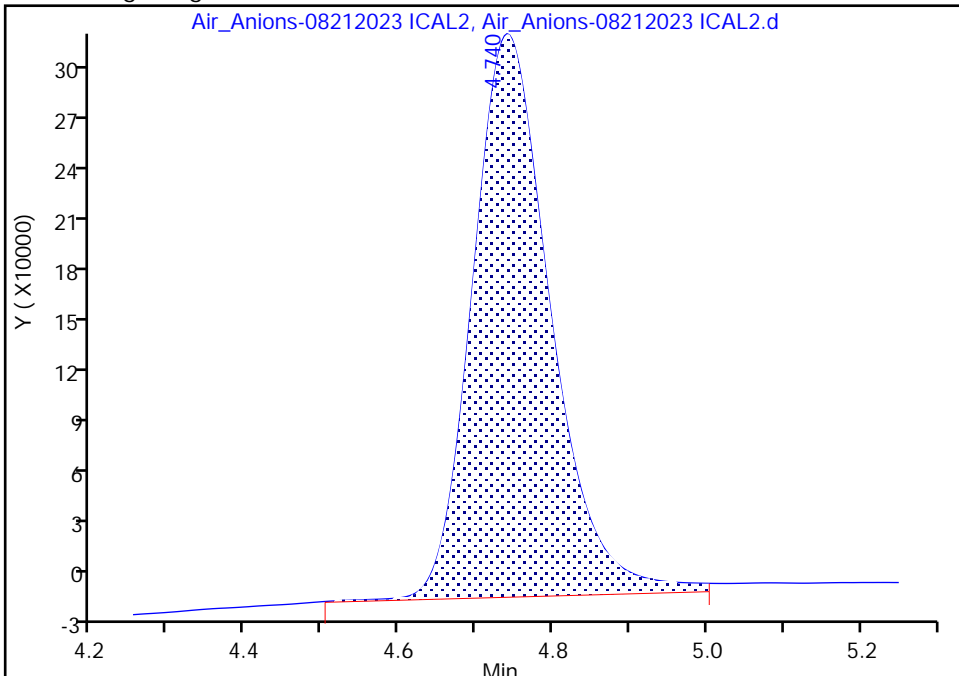
Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.bAir\_Anions-08212023 ICAL2.d  
Injection Date: 21-Aug-2023 19:10:00 Instrument ID: IC4  
Lims ID: ICAL 2  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 2  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

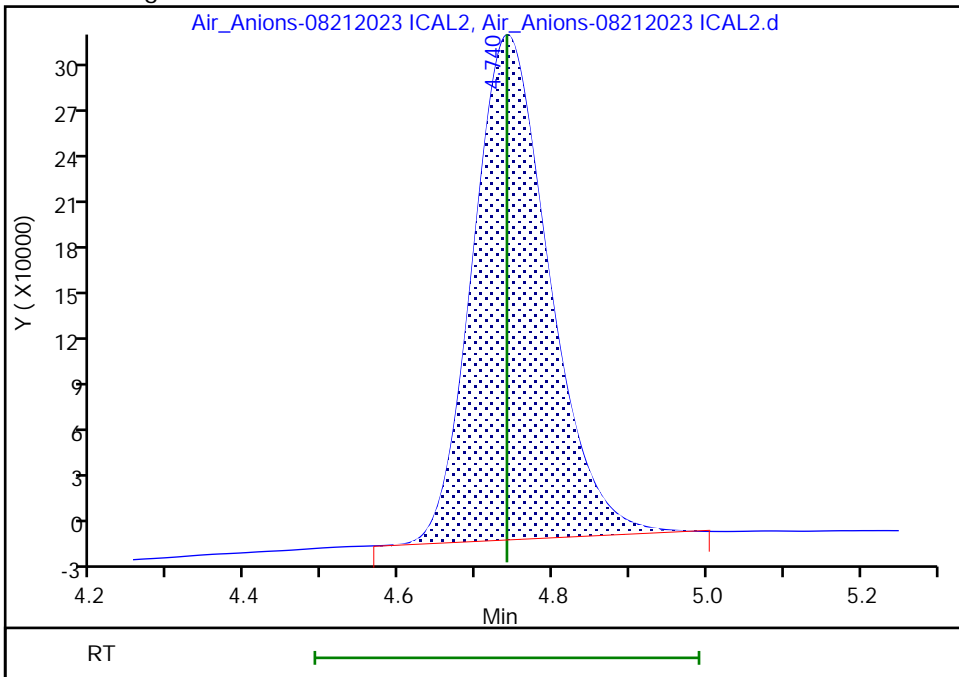
RT: 4.74  
Area: 2359547  
Amount: 0.079370  
Amount Units: ug/ml

Processing Integration Results



RT: 4.74  
Area: 2290304  
Amount: 0.077329  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 22-Aug-2023 09:54:23 -04:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Knoxville

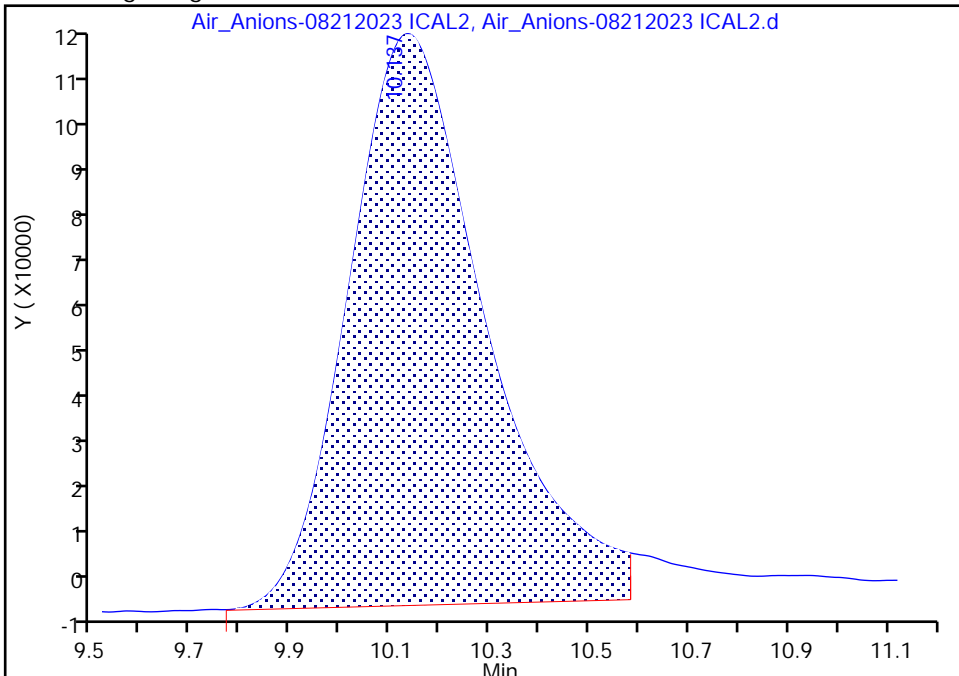
Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL2.d  
Injection Date: 21-Aug-2023 19:10:00 Instrument ID: IC4  
Lims ID: ICAL 2  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 2  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

19 Orthophosphate as P, CAS: STL00599

Signal: 1

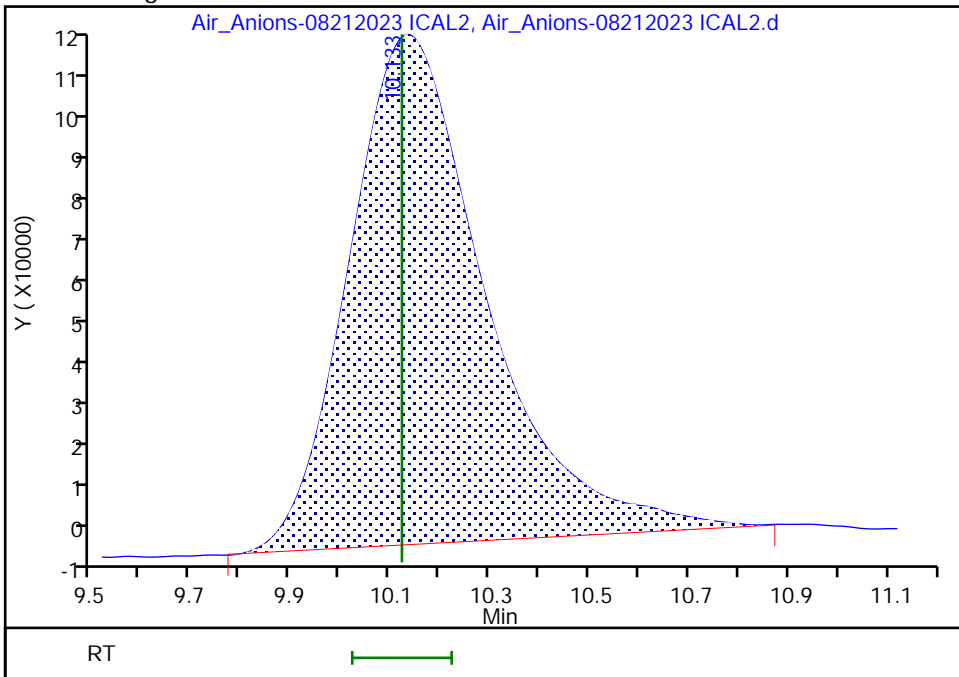
RT: 10.14  
Area: 2336284  
Amount: 0.075000  
Amount Units: ug/ml

Processing Integration Results



RT: 10.13  
Area: 2300213  
Amount: 0.074457  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 22-Aug-2023 09:47:51 -04:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL3.d  
 Lims ID: ICAL 3  
 Client ID:  
 Sample Type: IC Calib Level: 3  
 Inject. Date: 21-Aug-2023 19:32:00 ALS Bottle#: 0 Worklist Smp#: 3  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0029316-003  
 Misc. Info.: ICAL 3  
 Operator ID: Instrument ID: IC4  
 Sublist: chrom-0050\_26A\_IC4\*sub8  
 Method: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 22-Aug-2023 09:56:48 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICAL File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 22-Aug-2023 09:48:46

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.330	3.330	0.000	4108463	0.1000	0.0971	M
2 Chloride	4.740	4.740	0.000	3031825	0.1000	0.1022	M
3 Nitrite as N	5.683	5.683	0.000	6244070	0.1000	0.0989	M
4 Bromide	6.737	6.737	0.000	1303170	0.1000	0.1011	
5 Nitrate as N	7.587	7.583	0.004	7367925	0.1000	0.1030	
19 Orthophosphate as P	10.133	10.123	0.010	3292789	0.1000	0.1065	M
6 Iodide	14.833	14.830	0.003	795525	0.1000	0.1024	M
S 11 Nitrous Acid					0.3357	0.3321	
S 12 Br					0.1000	0.1011	
S 13 Chlorine					0.1000	0.1022	
S 10 Nitric acid					0.4499	0.4632	
S 7 Hydrogen Chloride					0.1028	0.1051	
S 20 Phosphorus as PO4						0.3264	
S 9 Hydrobromic Acid					0.1013	0.1024	
S 22 Hydrogen Iodide						0.1032	
S 8 Hydro Fluoric Acid					0.1053	0.1022	
S 21 Phosphate as H3PO4						0.3368	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

85L3M26AP\_00050

Amount Added: 10.00

Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL3.d

Injection Date: 21-Aug-2023 19:32:00

Instrument ID: IC4

Operator ID:

Lims ID: ICAL 3

Worklist Smp#: 3

Client ID:

Injection Vol: 1.0 ul

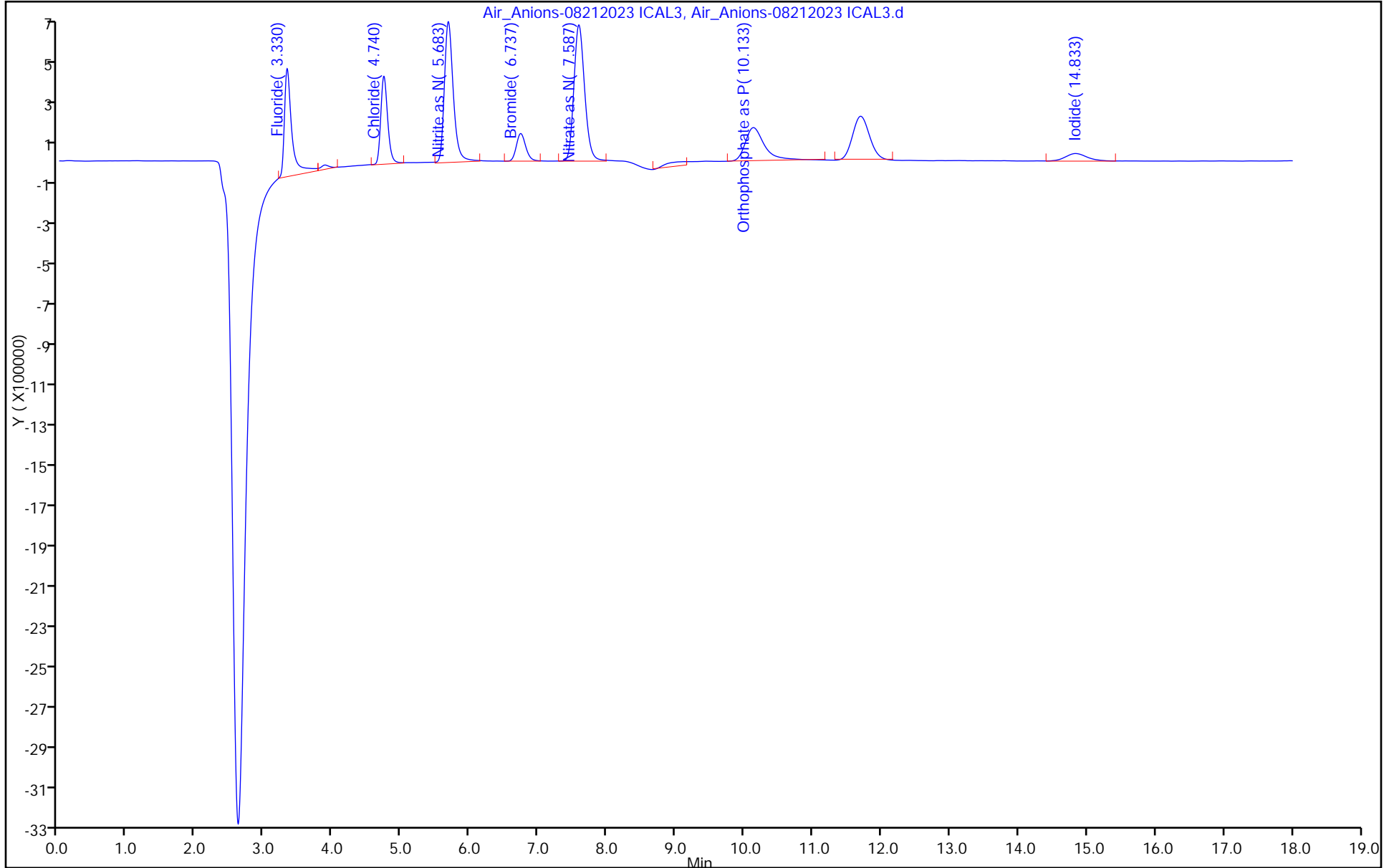
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

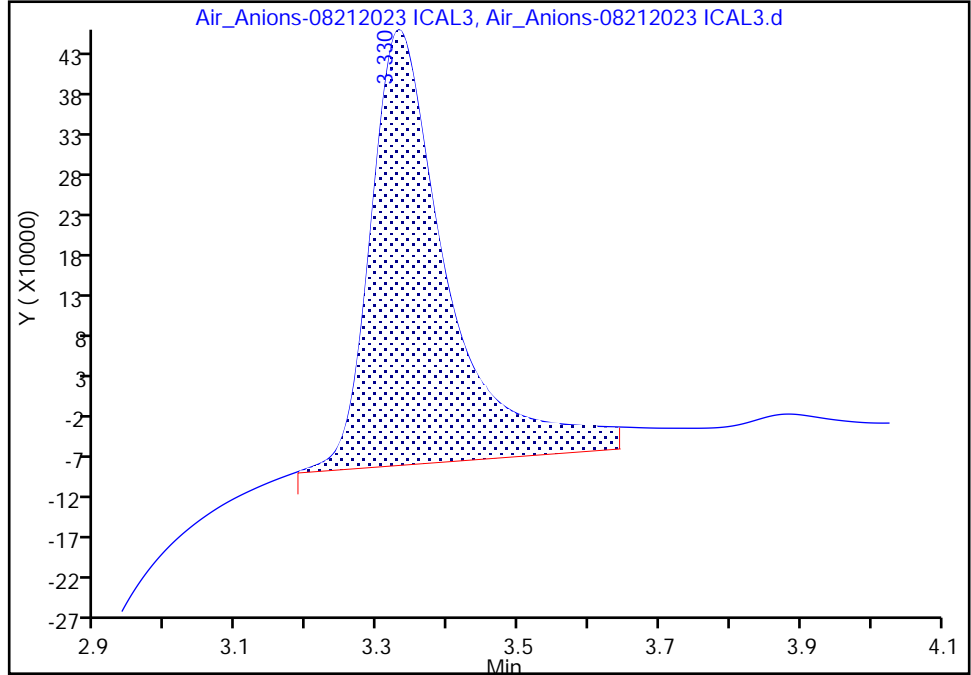
Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL3.d  
Injection Date: 21-Aug-2023 19:32:00 Instrument ID: IC4  
Lims ID: ICAL 3  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 3  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

1 Fluoride, CAS: 16984-48-8

Signal: 1

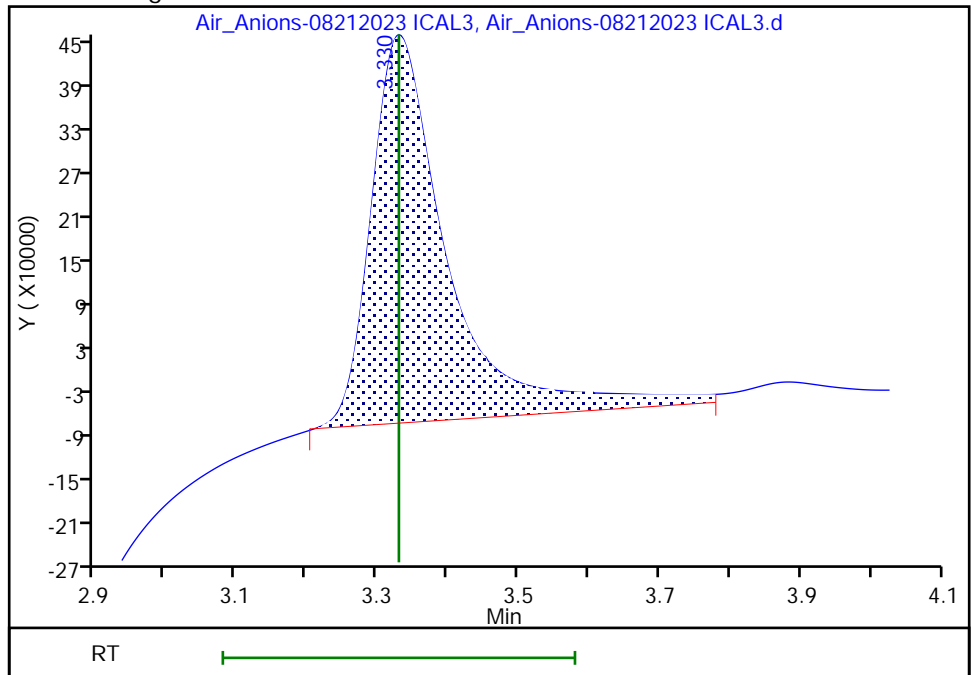
RT: 3.33  
Area: 4130461  
Amount: 0.094786  
Amount Units: ug/ml

Processing Integration Results



RT: 3.33  
Area: 4108463  
Amount: 0.097078  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 22-Aug-2023 09:54:48 -04:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline Smoothing

Eurofins Knoxville

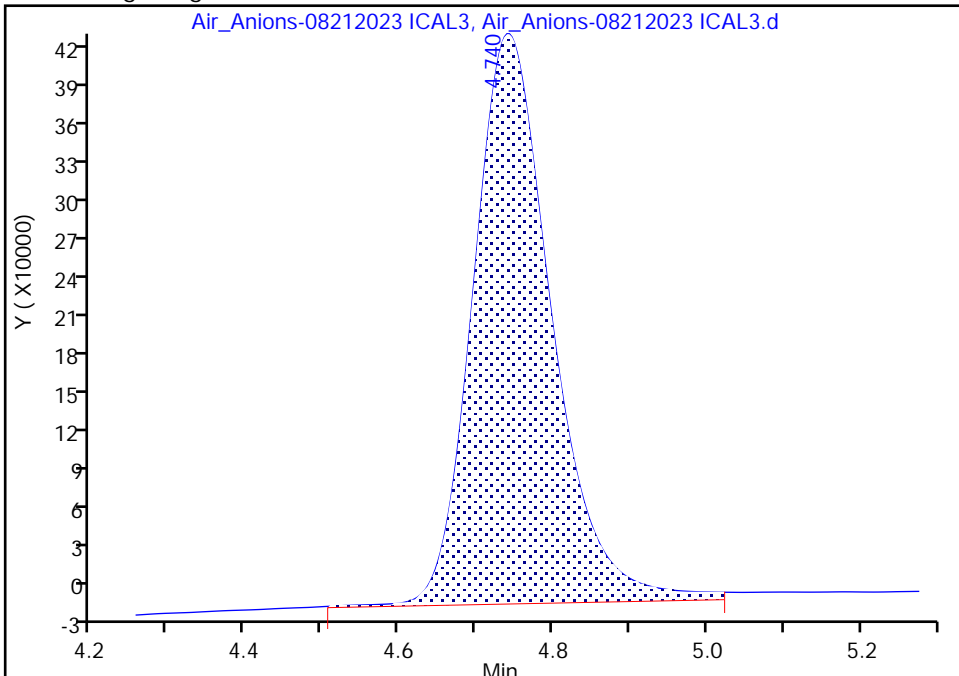
Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL3.d  
Injection Date: 21-Aug-2023 19:32:00 Instrument ID: IC4  
Lims ID: ICAL 3  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 3  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

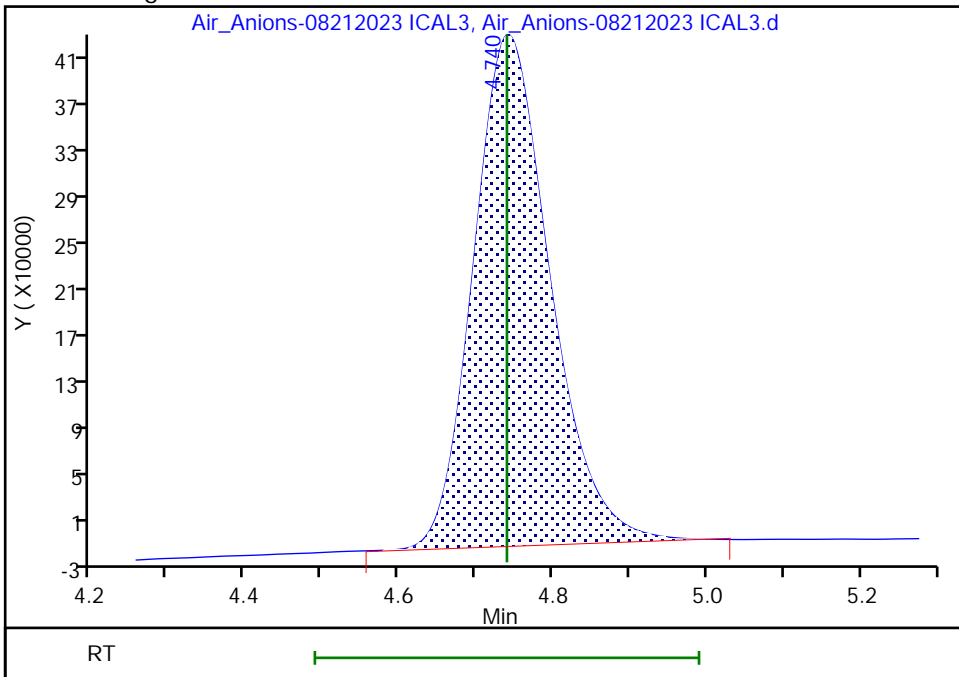
RT: 4.74  
Area: 3107513  
Amount: 0.104432  
Amount Units: ug/ml

Processing Integration Results



RT: 4.74  
Area: 3031825  
Amount: 0.102227  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 22-Aug-2023 09:54:43 -04:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL4.d  
 Lims ID: ICAL 4  
 Client ID:  
 Sample Type: IC Calib Level: 4  
 Inject. Date: 21-Aug-2023 19:55:00 ALS Bottle#: 0 Worklist Smp#: 4  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0029316-004  
 Misc. Info.: ICAL 4  
 Operator ID: Instrument ID: IC4  
 Sublist: chrom-0050\_26A\_IC4\*sub8  
 Method: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 22-Aug-2023 09:56:49 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICAL File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 22-Aug-2023 09:49:28

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.330	3.330	0.000	10544809	0.2500	0.2460	M
2 Chloride	4.740	4.740	0.000	7534905	0.2500	0.2520	M
3 Nitrite as N	5.683	5.683	0.000	15860785	0.2500	0.2488	M
4 Bromide	6.737	6.737	0.000	3243267	0.2500	0.2497	
5 Nitrate as N	7.583	7.583	0.000	18452355	0.2500	0.2544	
19 Orthophosphate as P	10.123	10.123	0.000	7984035	0.2500	0.2568	M
6 Iodide	14.830	14.830	0.000	1990366	0.2500	0.2556	M
S 11 Nitrous Acid					0.8391	0.8351	
S 12 Br					0.2500	0.2497	
S 13 Chlorine					0.2500	0.2520	
S 10 Nitric acid					1.12	1.14	
S 7 Hydrogen Chloride					0.2571	0.2592	
S 20 Phosphorus as PO4						0.7873	
S 9 Hydrobromic Acid					0.2532	0.2529	
S 22 Hydrogen Iodide						0.2576	
S 8 Hydro Fluoric Acid					0.2633	0.2591	
S 21 Phosphate as H3PO4						0.8123	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

85L4M26AP\_00051

Amount Added: 10.00

Units: mL



Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL4.d

Injection Date: 21-Aug-2023 19:55:00

Instrument ID: IC4

Operator ID:

Lims ID: ICAL 4

Worklist Smp#: 4

Client ID:

Injection Vol: 1.0 ul

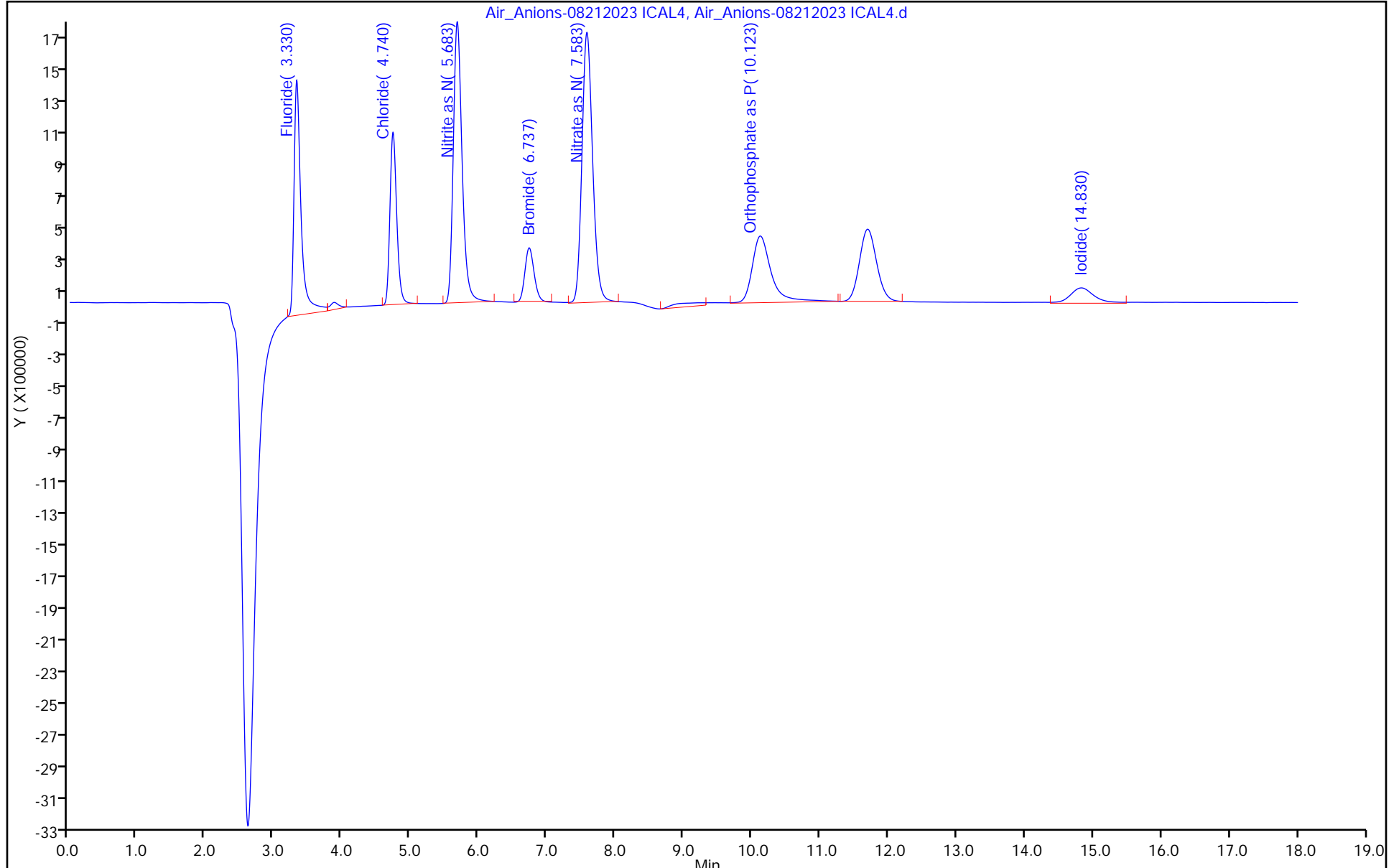
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

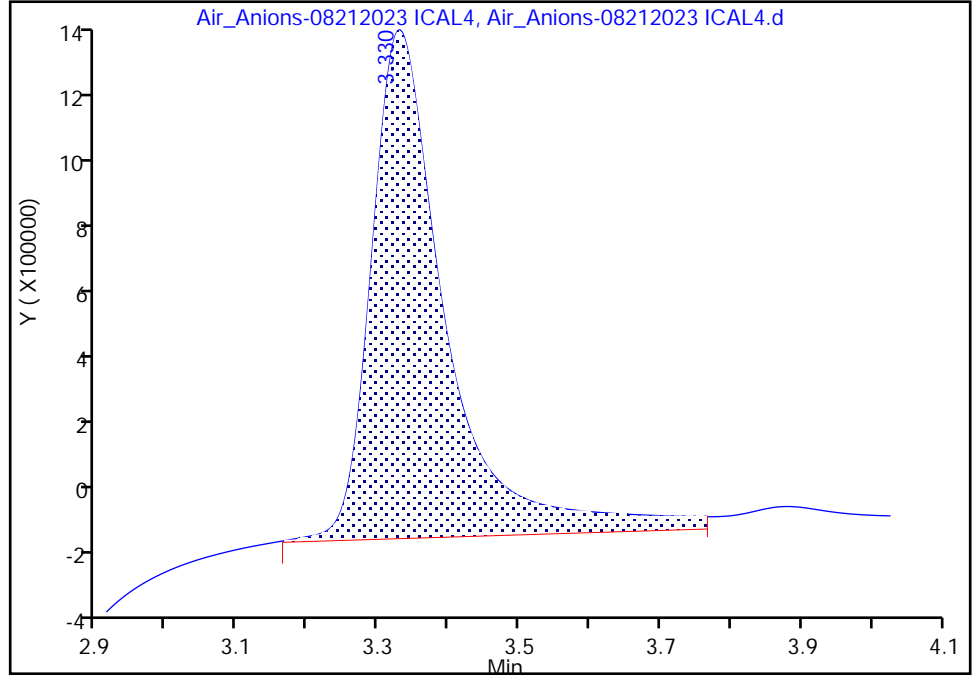
Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL4.d  
Injection Date: 21-Aug-2023 19:55:00 Instrument ID: IC4  
Lims ID: ICAL 4  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

1 Fluoride, CAS: 16984-48-8

Signal: 1

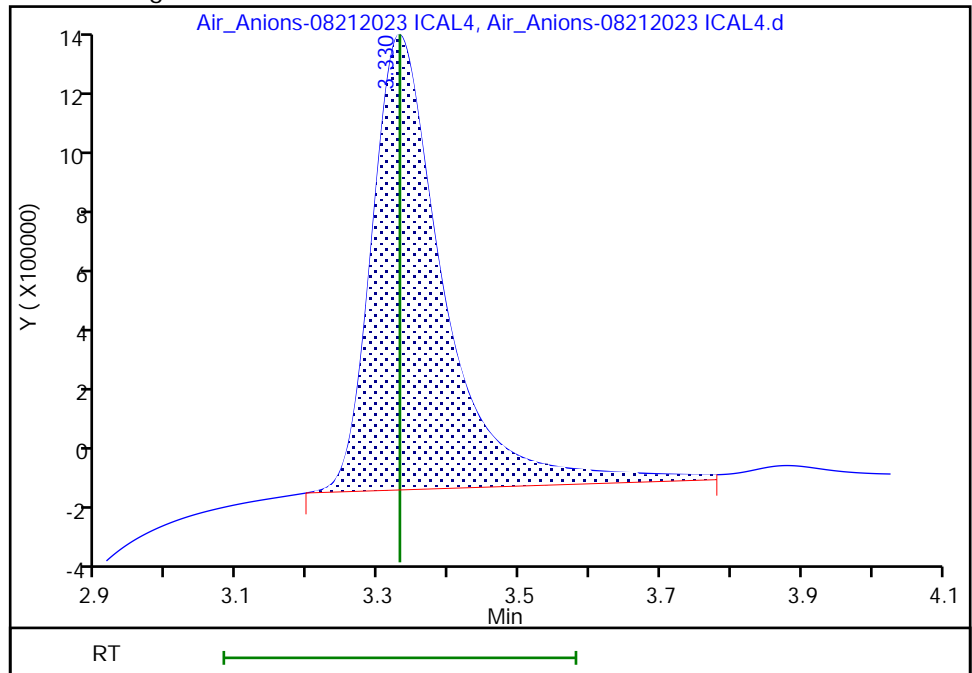
RT: 3.33  
Area: 10999237  
Amount: 0.249900  
Amount Units: ug/ml

Processing Integration Results



RT: 3.33  
Area: 10544809  
Amount: 0.245968  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 22-Aug-2023 09:55:04 -04:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline Smoothing

Eurofins Knoxville

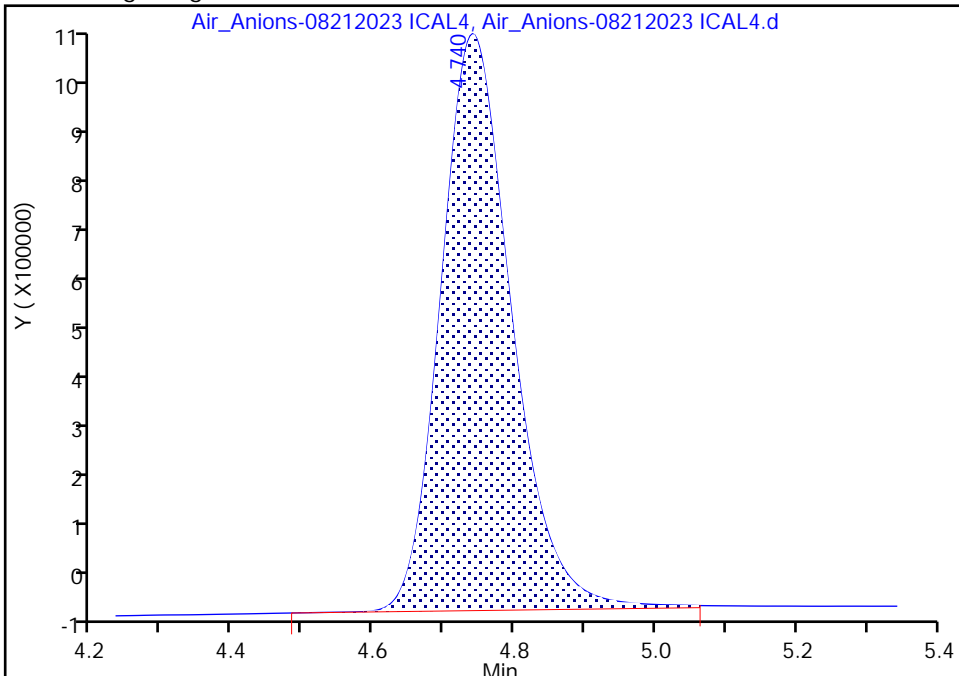
Data File:	\\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air_Anions-08212023 ICAL4.d			
Injection Date:	21-Aug-2023 19:55:00	Instrument ID:	IC4	
Lims ID:	ICAL 4			
Client ID:				
Operator ID:	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	
Method:	0050_26A_IC4	Limit Group:	IC 0050_26A ICAL	
Column:		Detector:	IC	

2 Chloride, CAS: 16887-00-6

Signal: 1

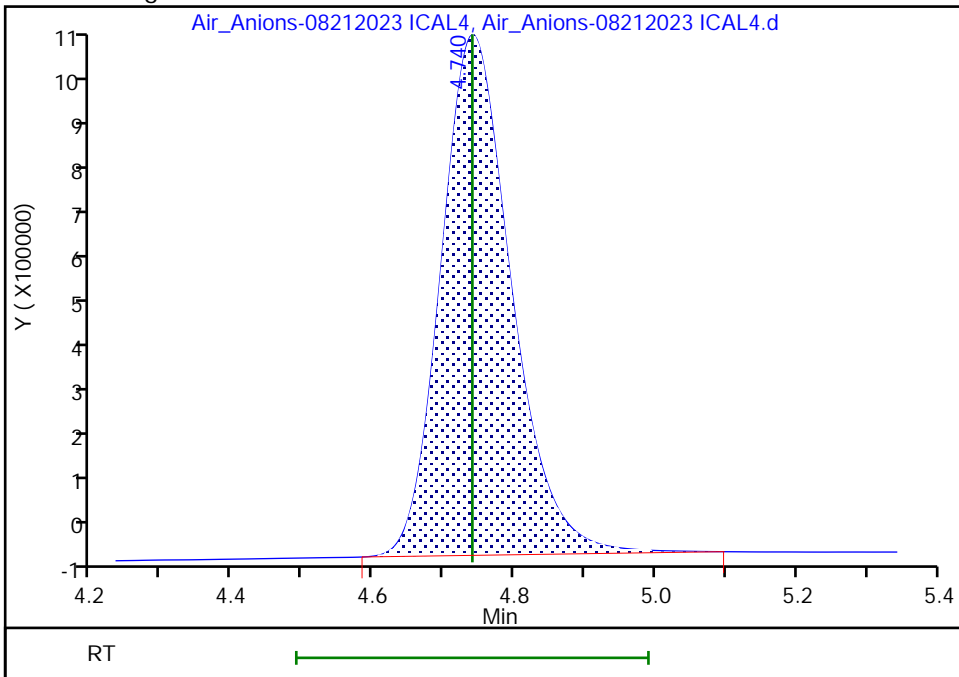
RT: 4.74  
 Area: 7625493  
 Amount: 0.254382  
 Amount Units: ug/ml

Processing Integration Results



RT: 4.74  
 Area: 7534905  
 Amount: 0.252005  
 Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 22-Aug-2023 09:54:59 -04:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL5.d  
 Lims ID: ICAL 5  
 Client ID:  
 Sample Type: IC Calib Level: 5  
 Inject. Date: 21-Aug-2023 20:17:00 ALS Bottle#: 0 Worklist Smp#: 5  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0029316-005  
 Misc. Info.: ICAL 5  
 Operator ID: Instrument ID: IC4  
 Sublist: chrom-0050\_26A\_IC4\*sub8  
 Method: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 22-Aug-2023 09:56:49 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICAL File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2

Date: 22-Aug-2023 09:49:43

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.333	3.330	0.003	21737412	0.5000	0.4963	M
2 Chloride	4.743	4.740	0.003	15322026	0.5000	0.5055	M
3 Nitrite as N	5.687	5.683	0.004	32559951	0.5000	0.5022	M
4 Bromide	6.737	6.737	0.000	6522774	0.5000	0.4961	
5 Nitrate as N	7.580	7.583	-0.003	37502872	0.5000	0.5056	
19 Orthophosphate as P	10.120	10.123	-0.003	15658797	0.5000	0.4993	
6 Iodide	14.827	14.830	-0.003	3958225	0.5000	0.5059	
S 11 Nitrous Acid					1.68	1.69	
S 12 Br					0.5000	0.4961	
S 13 Chlorine					0.5000	0.5055	
S 10 Nitric acid					2.25	2.27	
S 7 Hydrogen Chloride					0.5142	0.5199	
S 20 Phosphorus as PO4						1.53	
S 9 Hydrobromic Acid					0.5063	0.5023	
S 22 Hydrogen Iodide						0.5099	
S 8 Hydro Fluoric Acid					0.5266	0.5228	
S 21 Phosphate as H3PO4						1.58	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

85L5M26AP\_00050

Amount Added: 10.00

Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL5.d

Injection Date: 21-Aug-2023 20:17:00

Instrument ID: IC4

Operator ID:

Lims ID: ICAL 5

Worklist Smp#: 5

Client ID:

Injection Vol: 1.0 ul

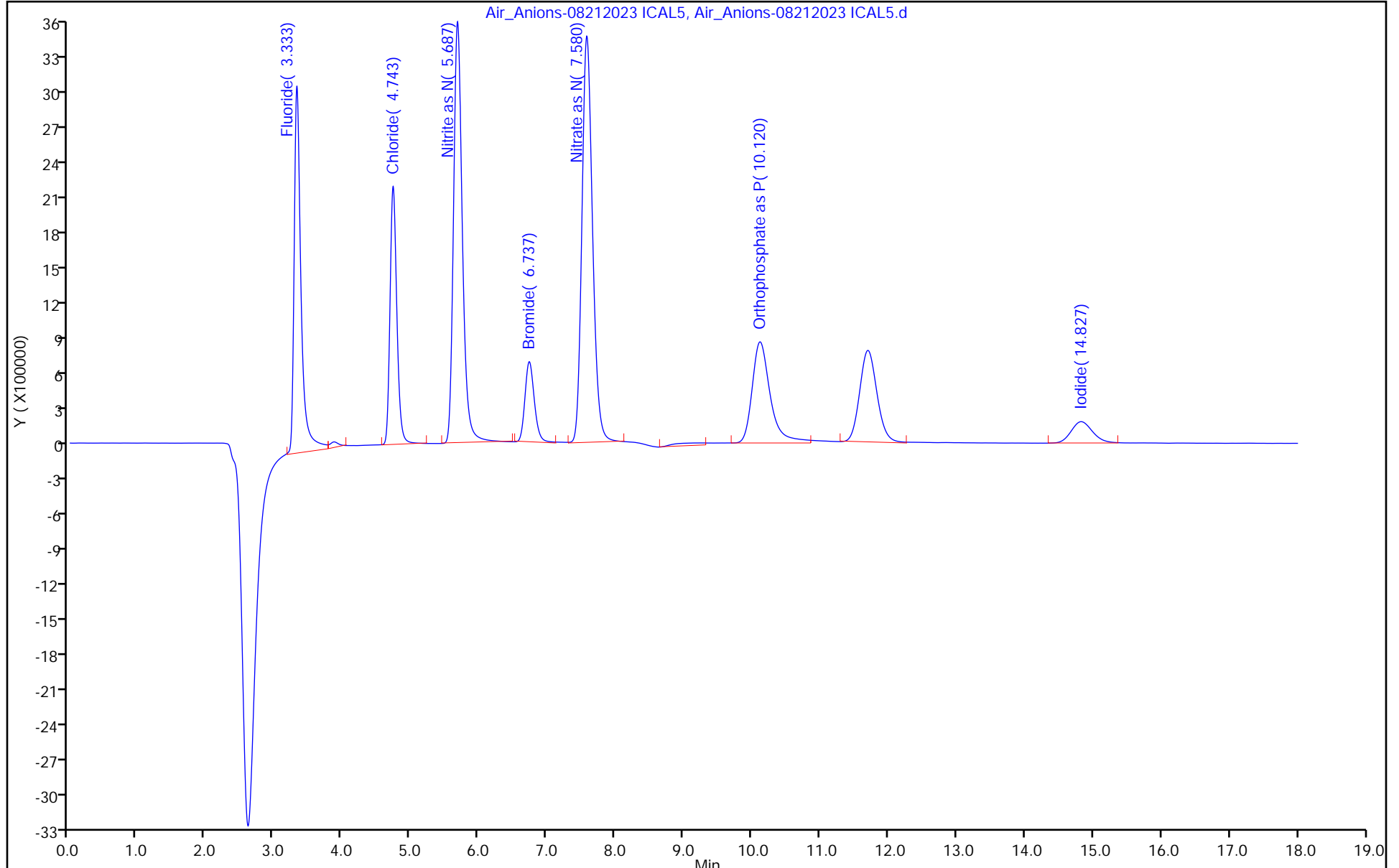
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

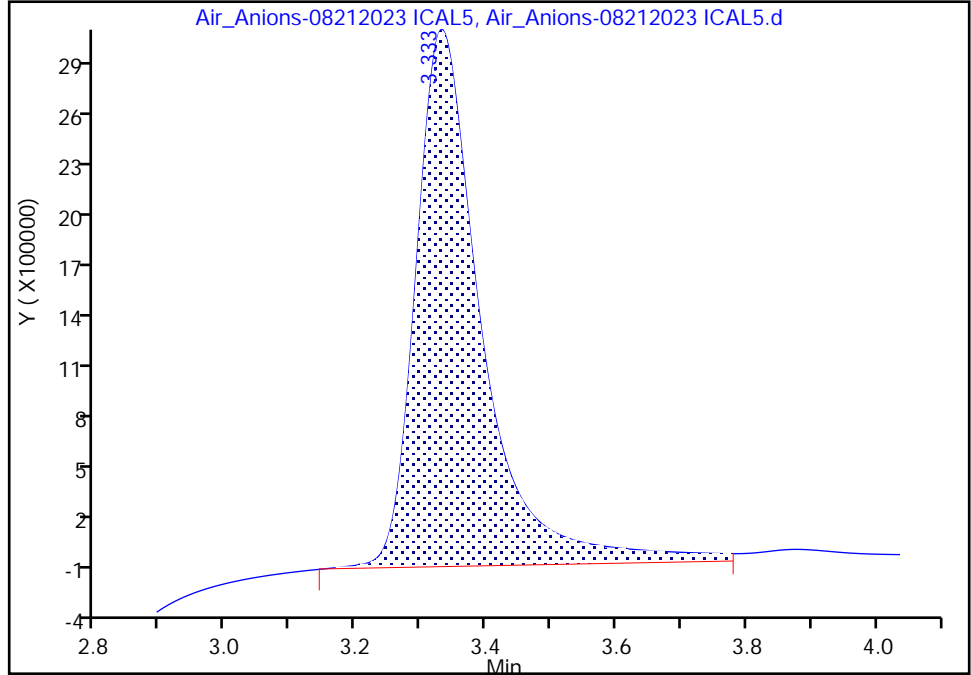
Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL5.d  
Injection Date: 21-Aug-2023 20:17:00 Instrument ID: IC4  
Lims ID: ICAL 5  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 5  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

1 Fluoride, CAS: 16984-48-8

Signal: 1

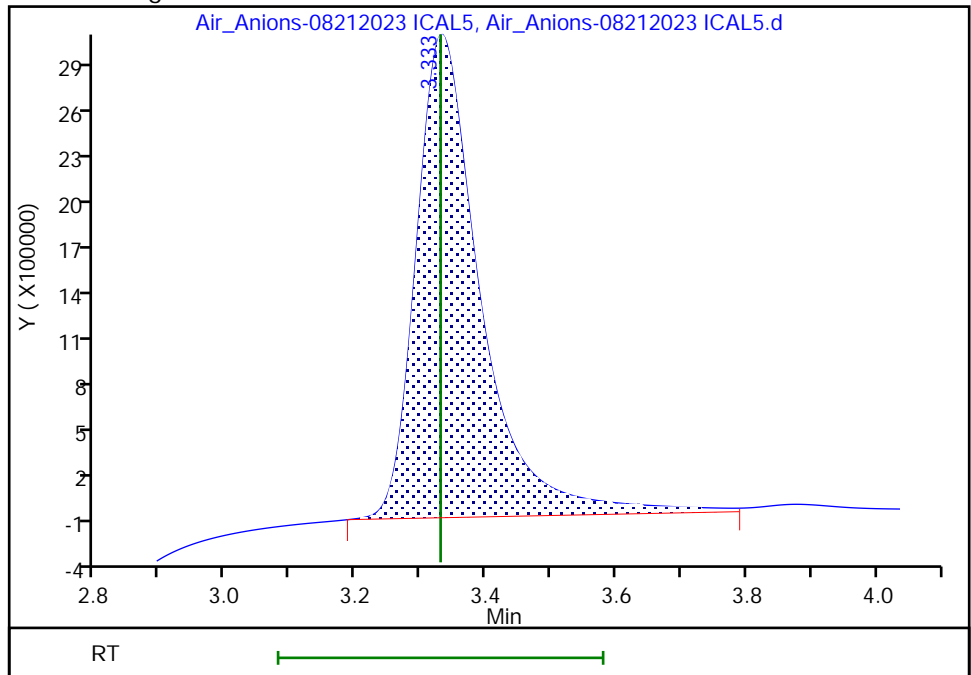
RT: 3.33  
Area: 22316499  
Amount: 0.506694  
Amount Units: ug/ml

Processing Integration Results



RT: 3.33  
Area: 21737412  
Amount: 0.496345  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 22-Aug-2023 09:52:28 -04:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline Smoothing

Eurofins Knoxville

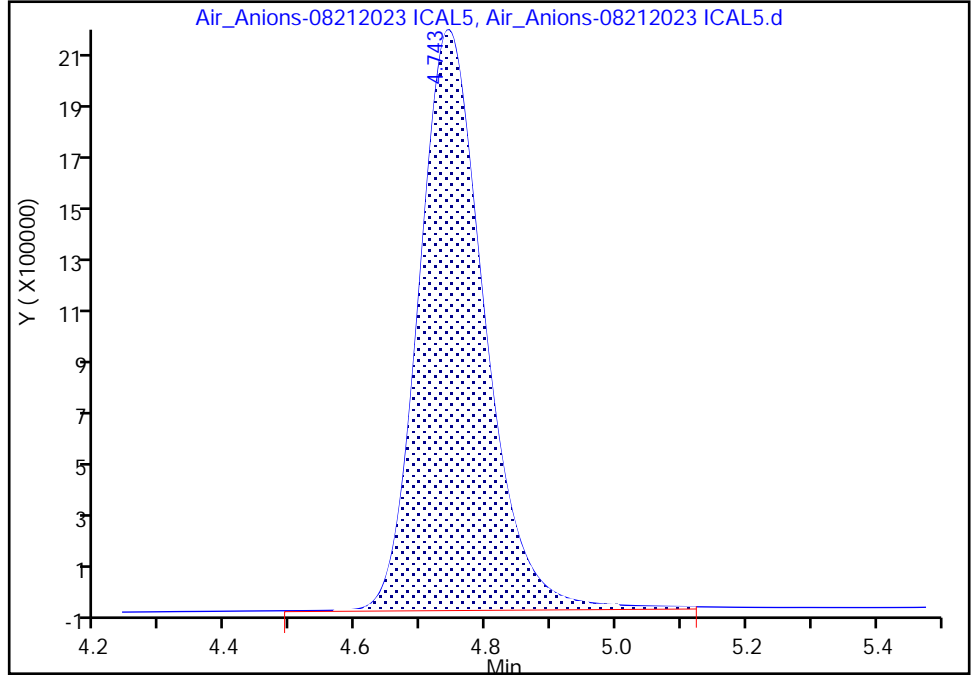
Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL5.d  
Injection Date: 21-Aug-2023 20:17:00 Instrument ID: IC4  
Lims ID: ICAL 5  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 5  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

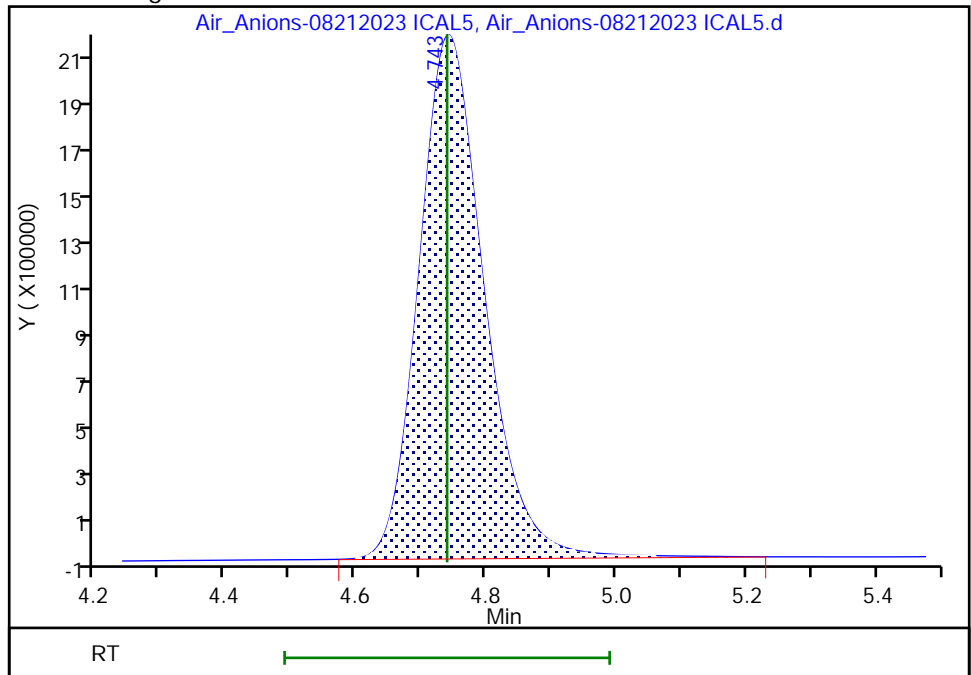
RT: 4.74  
Area: 15367974  
Amount: 0.506530  
Amount Units: ug/ml

Processing Integration Results



RT: 4.74  
Area: 15322026  
Amount: 0.505519  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 22-Aug-2023 09:55:15 -04:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Knoxville

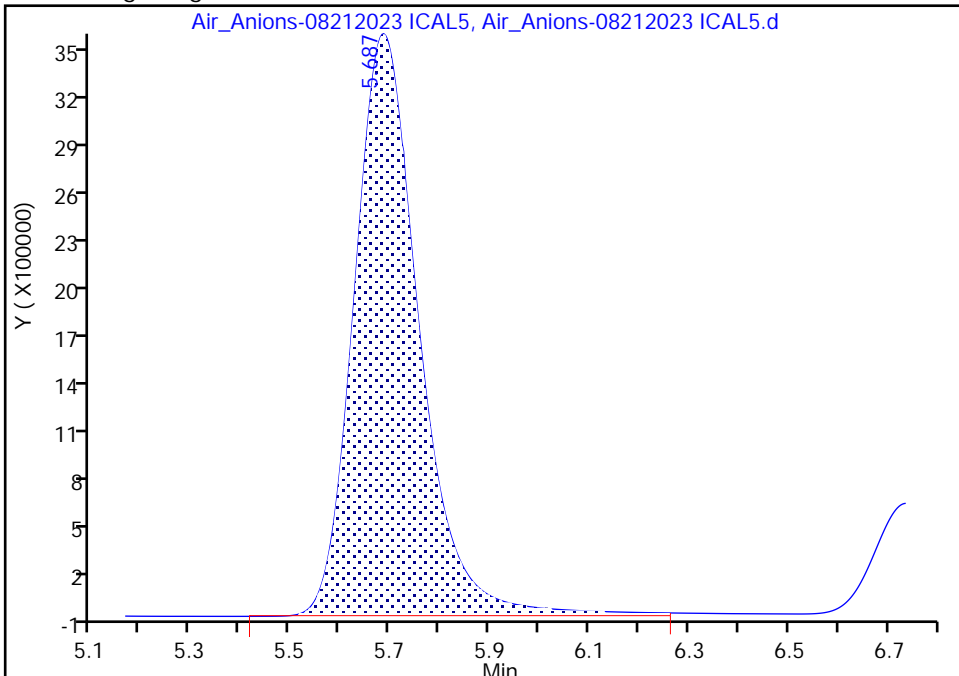
Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL5.d  
Injection Date: 21-Aug-2023 20:17:00 Instrument ID: IC4  
Lims ID: ICAL 5  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 5  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

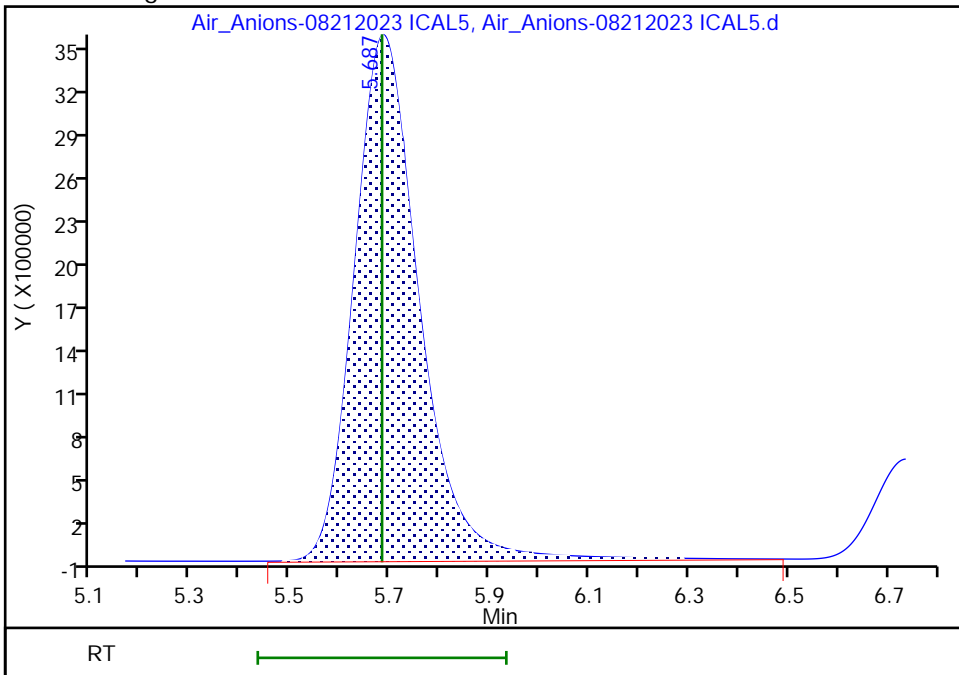
RT: 5.69  
Area: 32564460  
Amount: 0.502221  
Amount Units: ug/ml

Processing Integration Results



RT: 5.69  
Area: 32559951  
Amount: 0.502184  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 22-Aug-2023 09:52:23 -04:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL6.d  
 Lims ID: ICAL 6  
 Client ID:  
 Sample Type: IC Calib Level: 6  
 Inject. Date: 21-Aug-2023 20:39:00 ALS Bottle#: 0 Worklist Smp#: 6  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0029316-006  
 Misc. Info.: ICAL 6  
 Operator ID: Instrument ID: IC4  
 Sublist: chrom-0050\_26A\_IC4\*sub8  
 Method: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 22-Aug-2023 09:56:50 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICAL File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 22-Aug-2023 09:49:56

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.333	3.330	0.003	45907775	1.00	1.01	M
2 Chloride	4.743	4.740	0.003	30920910	1.00	0.99	M
3 Nitrite as N	5.690	5.683	0.007	66912281	1.00	1.00	Ma
4 Bromide	6.733	6.737	-0.004	13513495	1.00	1.00	Ma
5 Nitrate as N	7.573	7.583	-0.010	76824524	1.00	0.99	Ma
19 Orthophosphate as P	10.113	10.123	-0.010	31782449	1.00	1.00	
6 Iodide	14.813	14.830	-0.017	7837823	1.00	0.99	
S 11 Nitrous Acid					3.36	3.35	
S 12 Br					1.00	1.00	
S 13 Chlorine					1.00	0.99	
S 10 Nitric acid					4.50	4.47	
S 7 Hydrogen Chloride					1.03	1.02	
S 20 Phosphorus as PO4						3.05	
S 9 Hydrobromic Acid					1.01	1.02	
S 22 Hydrogen Iodide						1.00	
S 8 Hydro Fluoric Acid					1.05	1.06	
S 21 Phosphate as H3PO4						3.15	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

85L6M26AP\_00055

Amount Added: 10.00

Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL6.d

Injection Date: 21-Aug-2023 20:39:00

Instrument ID: IC4

Operator ID:

Lims ID: ICAL 6

Worklist Smp#: 6

Client ID:

Injection Vol: 1.0 ul

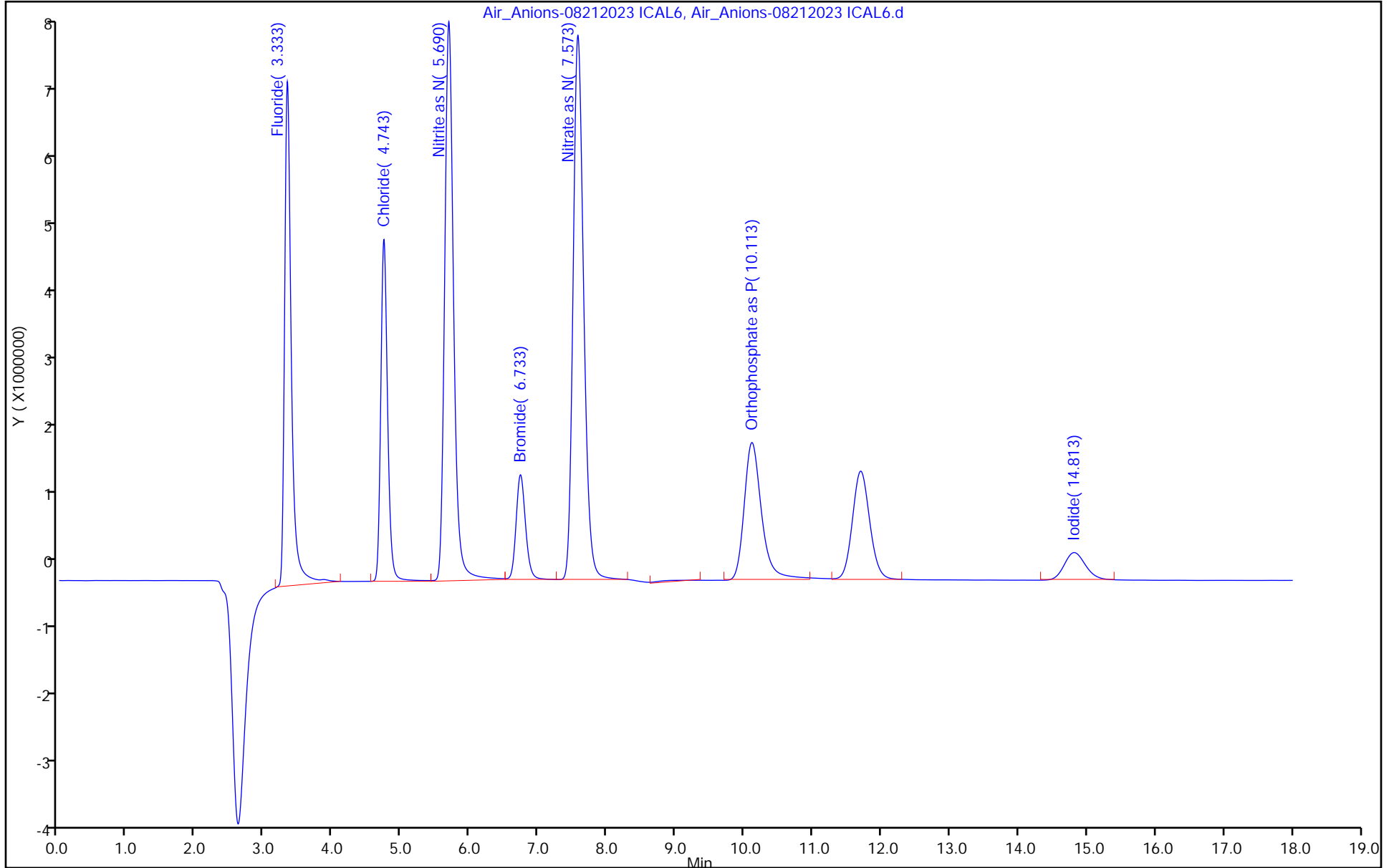
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

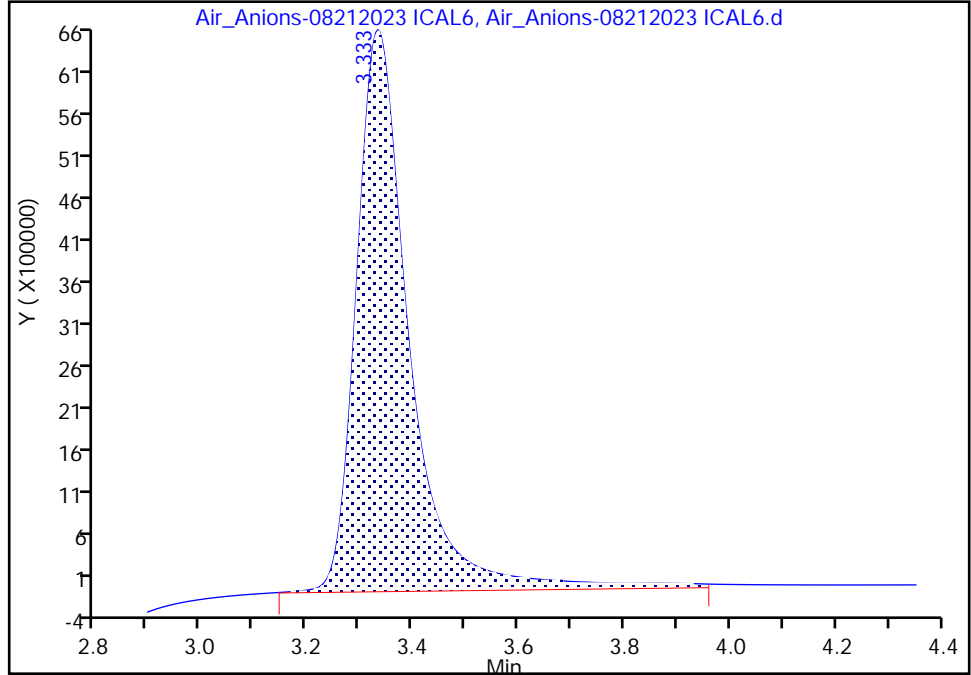
Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL6.d  
Injection Date: 21-Aug-2023 20:39:00 Instrument ID: IC4  
Lims ID: ICAL 6  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

1 Fluoride, CAS: 16984-48-8

Signal: 1

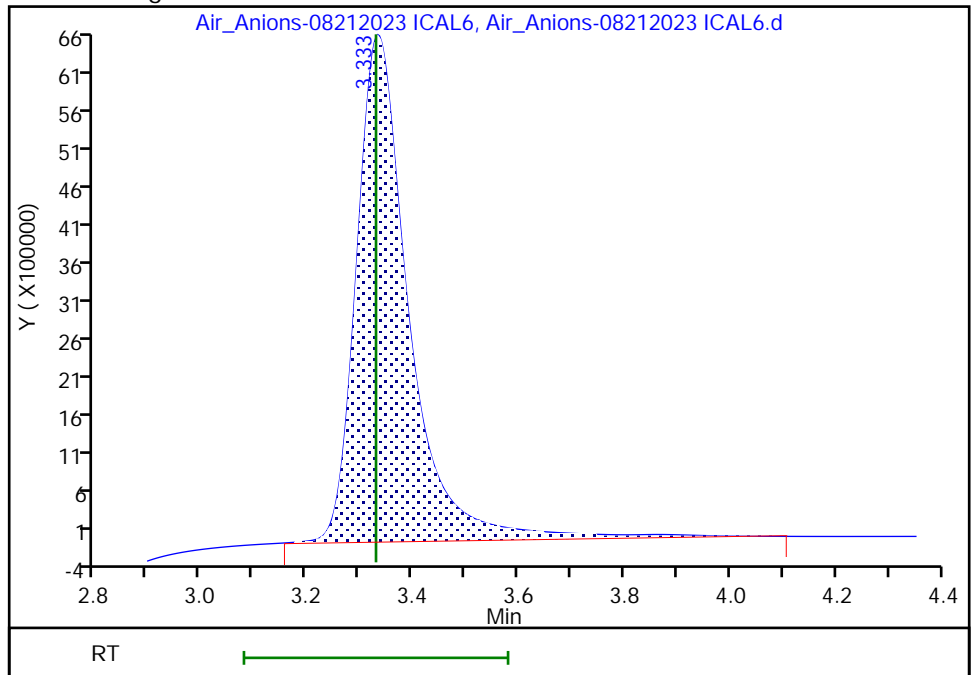
RT: 3.33  
Area: 46608925  
Amount: 1.008624  
Amount Units: ug/ml

Processing Integration Results



RT: 3.33  
Area: 45907775  
Amount: 1.005140  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 22-Aug-2023 09:51:53 -04:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Knoxville

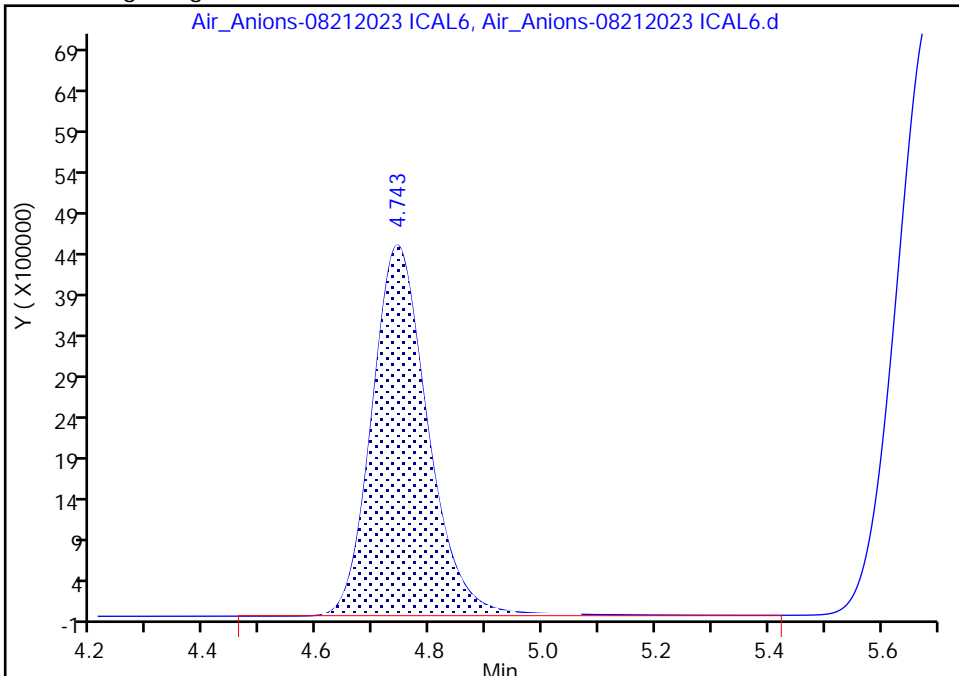
Data File:	\\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air_Anions-08212023 ICAL6.d		
Injection Date:	21-Aug-2023 20:39:00	Instrument ID:	IC4
Lims ID:	ICAL 6		
Client ID:			
Operator ID:	ALS Bottle#:	0	Worklist Smp#: 6
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	0050_26A_IC4	Limit Group:	IC 0050_26A ICAL
Column:		Detector:	IC

2 Chloride, CAS: 16887-00-6

Signal: 1

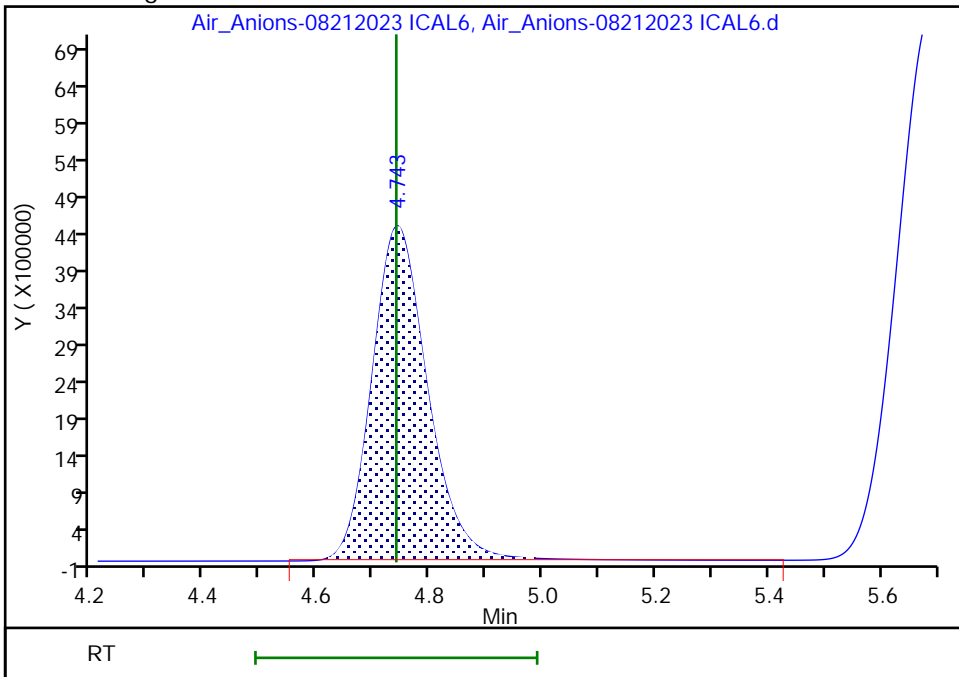
RT: 4.74  
 Area: 31179092  
 Amount: 0.996146  
 Amount Units: ug/ml

Processing Integration Results



RT: 4.74  
 Area: 30920910  
 Amount: 0.994265  
 Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 22-Aug-2023 09:51:55 -04:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Knoxville

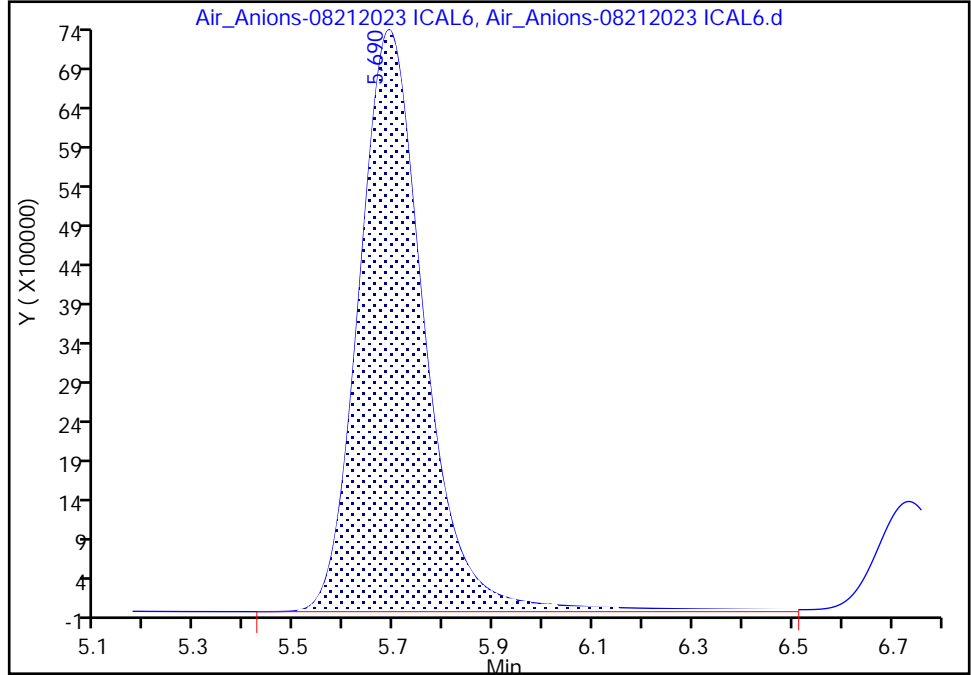
Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL6.d  
Injection Date: 21-Aug-2023 20:39:00 Instrument ID: IC4  
Lims ID: ICAL 6  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

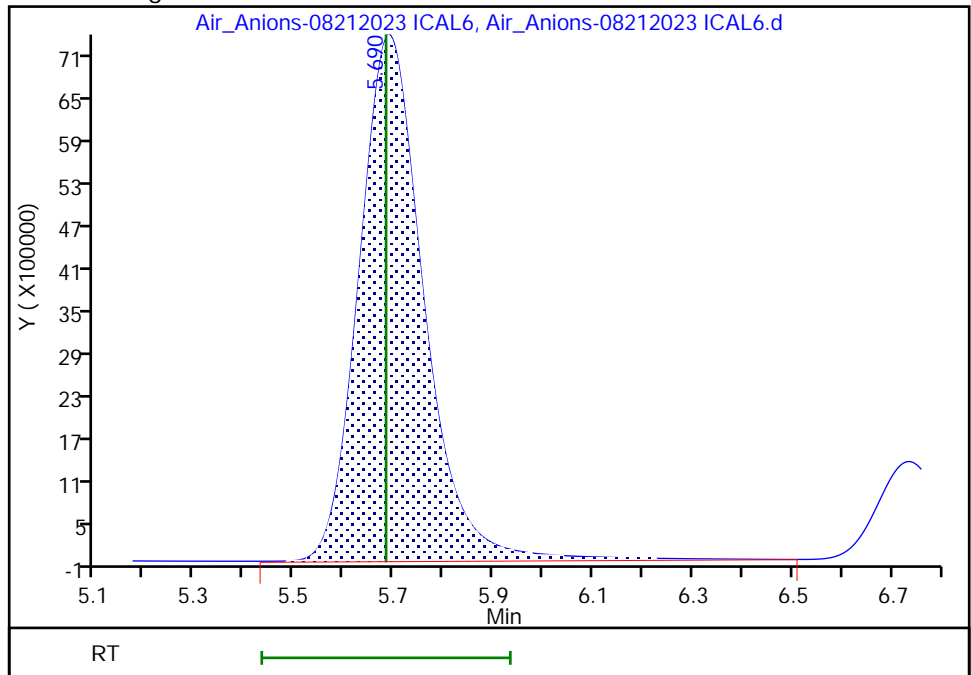
RT: 5.69  
Area: 67596812  
Amount: 1.002182  
Amount Units: ug/ml

Processing Integration Results



RT: 5.69  
Area: 66912281  
Amount: 0.999125  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 22-Aug-2023 09:52:09 -04:00:00 (UTC)

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Eurofins Knoxville

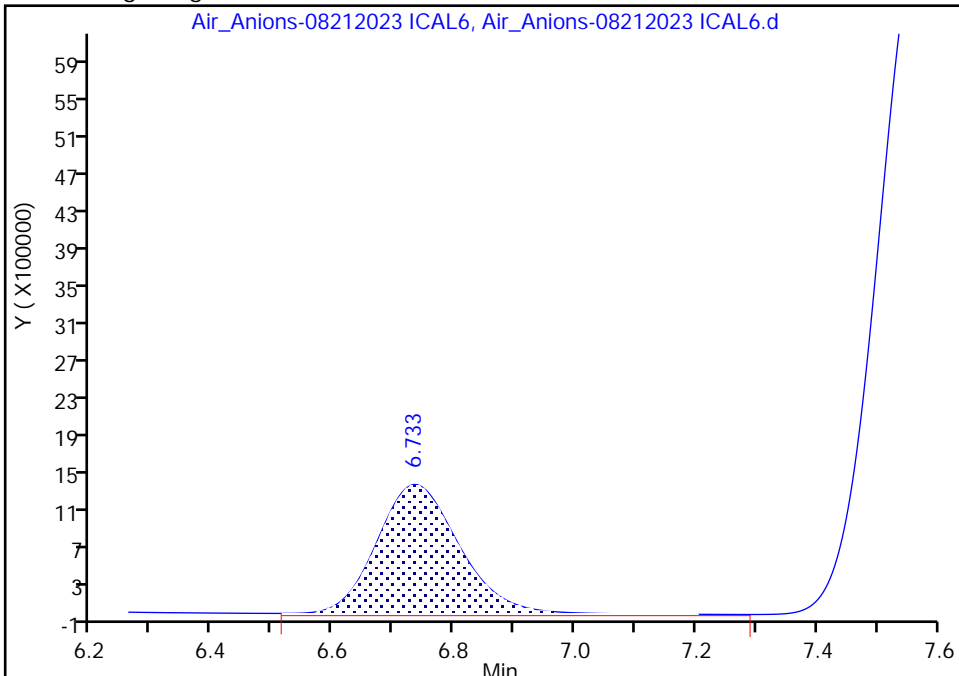
Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL6.d  
Injection Date: 21-Aug-2023 20:39:00 Instrument ID: IC4  
Lims ID: ICAL 6  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

4 Bromide, CAS: 24959-67-9

Signal: 1

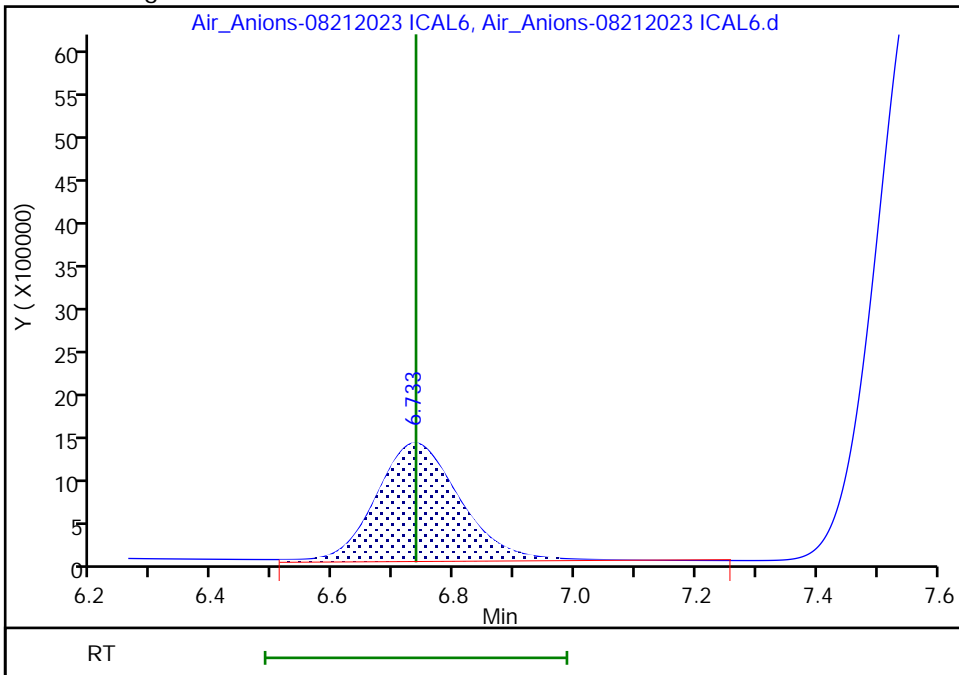
RT: 6.73  
Area: 14073109  
Amount: 1.019971  
Amount Units: ug/ml

Processing Integration Results



RT: 6.73  
Area: 13513495  
Amount: 1.002437  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 22-Aug-2023 09:52:11 -04:00:00 (UTC)

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Eurofins Knoxville

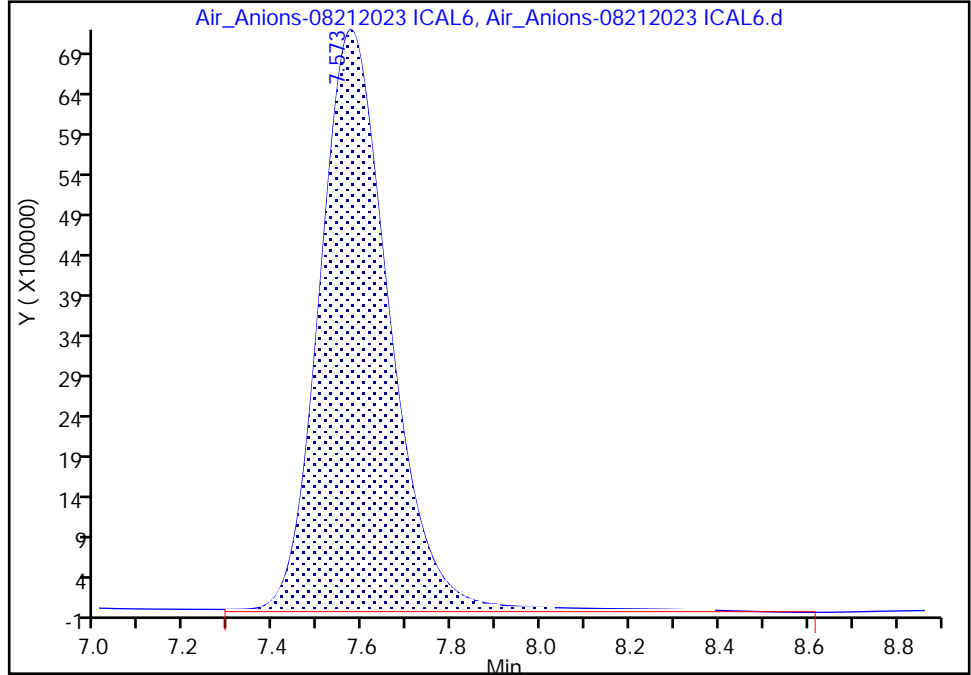
Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL6.d  
Injection Date: 21-Aug-2023 20:39:00 Instrument ID: IC4  
Lims ID: ICAL 6  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

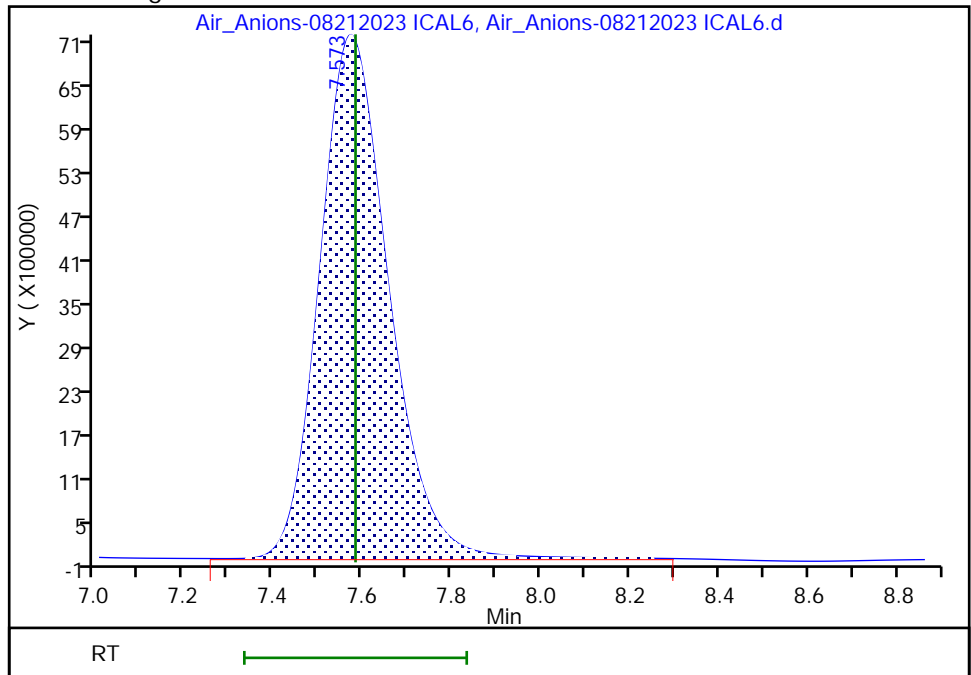
RT: 7.57  
Area: 78408311  
Amount: 1.001769  
Amount Units: ug/ml

Processing Integration Results



RT: 7.57  
Area: 76824524  
Amount: 0.993384  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 22-Aug-2023 09:52:13 -04:00:00 (UTC)

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Lims ID: ICAL 7  
 Client ID:  
 Sample Type: IC Calib Level: 7  
 Inject. Date: 21-Aug-2023 21:01:00 ALS Bottle#: 0 Worklist Smp#: 7  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0029316-007  
 Misc. Info.: ICAL 7  
 Operator ID: Instrument ID: IC4  
 Sublist: chrom-0050\_26A\_IC4\*sub8  
 Method: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 22-Aug-2023 09:56:46 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last Ical File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 22-Aug-2023 09:56:46

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.343	3.330	0.013	98640787	2.00	2.00	M
2 Chloride	4.747	4.740	0.007	65483741	2.00	2.00	M
3 Nitrite as N	5.703	5.683	0.020	142546295	2.00	2.00	
4 Bromide	6.737	6.737	0.000	28262276	2.00	2.00	
5 Nitrate as N	7.563	7.583	-0.020	167840999	2.00	2.00	
19 Orthophosphate as P	10.110	10.123	-0.013	66083907	2.00	2.00	
6 Iodide	14.807	14.830	-0.023	16092735	2.00	2.00	
S 11 Nitrous Acid					6.71	6.71	
S 12 Br					2.00	2.00	
S 13 Chlorine					2.00	2.00	
S 10 Nitric acid					9.00	9.00	
S 7 Hydrogen Chloride					2.06	2.06	
S 20 Phosphorus as PO4						6.14	
S 9 Hydrobromic Acid					2.03	2.02	
S 22 Hydrogen Iodide						2.02	
S 8 Hydro Fluoric Acid					2.11	2.11	
S 21 Phosphate as H3PO4						6.33	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

85L7M26AP\_00051

Amount Added: 10.00

Units: mL



Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d

Injection Date: 21-Aug-2023 21:01:00

Instrument ID: IC4

Operator ID:

Lims ID: ICAL 7

Worklist Smp#: 7

Client ID:

Injection Vol: 1.0 ul

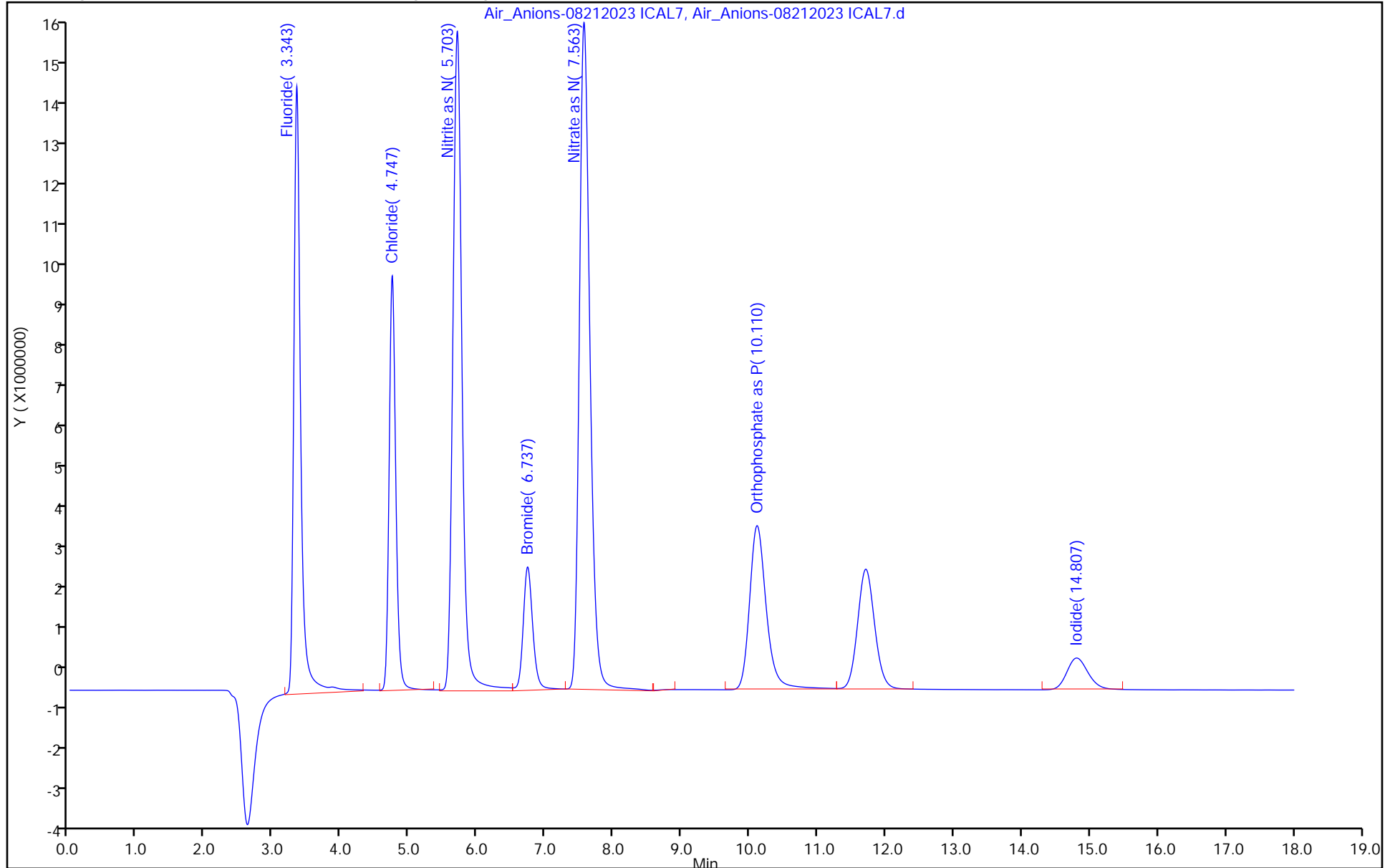
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

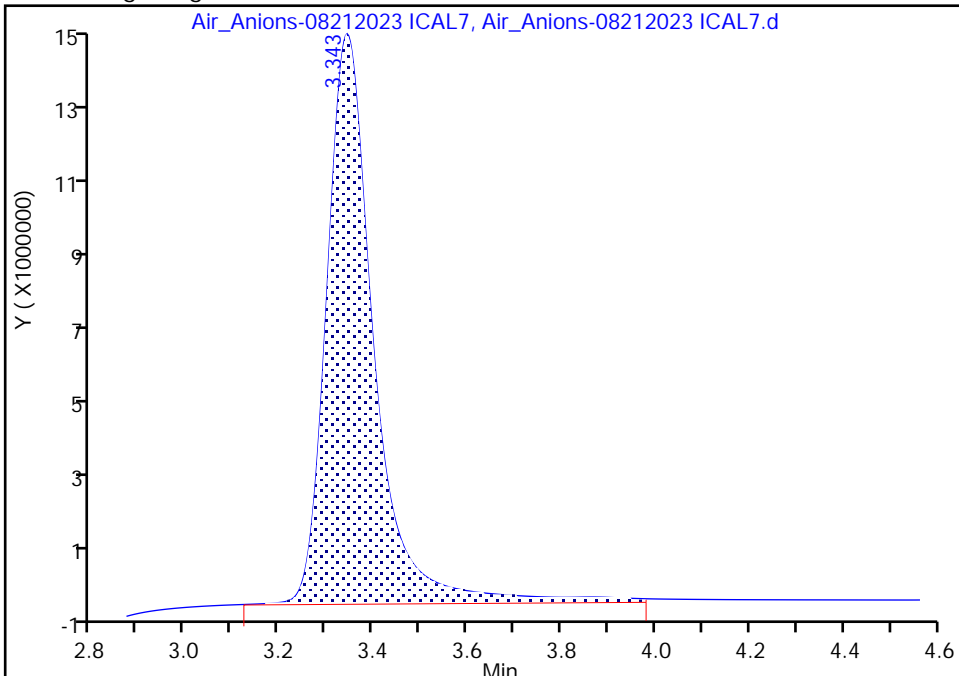
Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
Injection Date: 21-Aug-2023 21:01:00 Instrument ID: IC4  
Lims ID: ICAL 7  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

1 Fluoride, CAS: 16984-48-8

Signal: 1

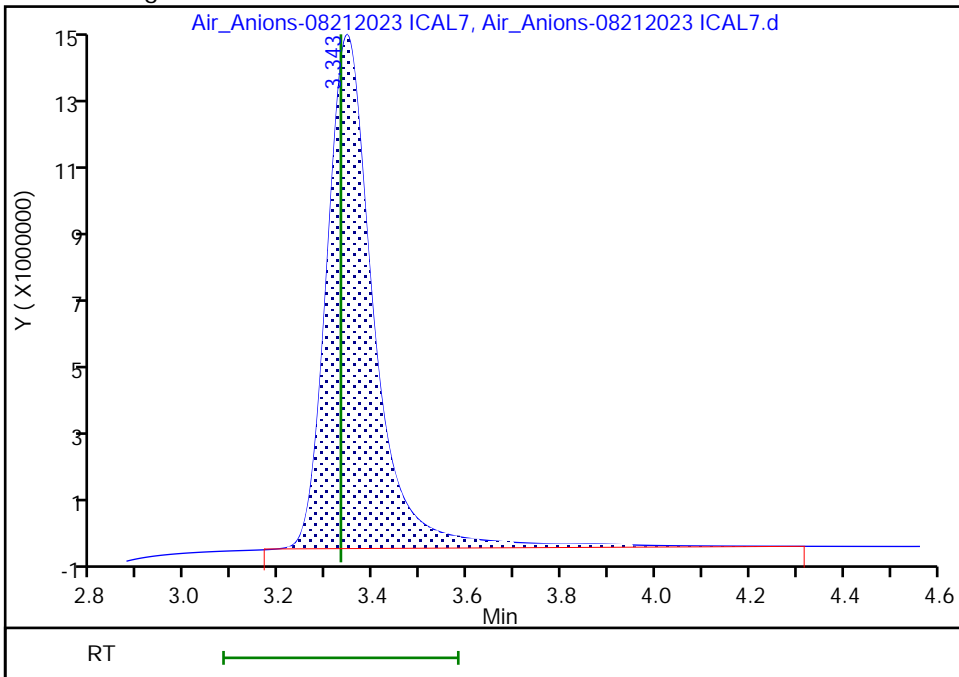
RT: 3.34  
Area: 98999684  
Amount: 1.998392  
Amount Units: ug/ml

Processing Integration Results



RT: 3.34  
Area: 98640787  
Amount: 1.999124  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 22-Aug-2023 09:51:39 -04:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Knoxville

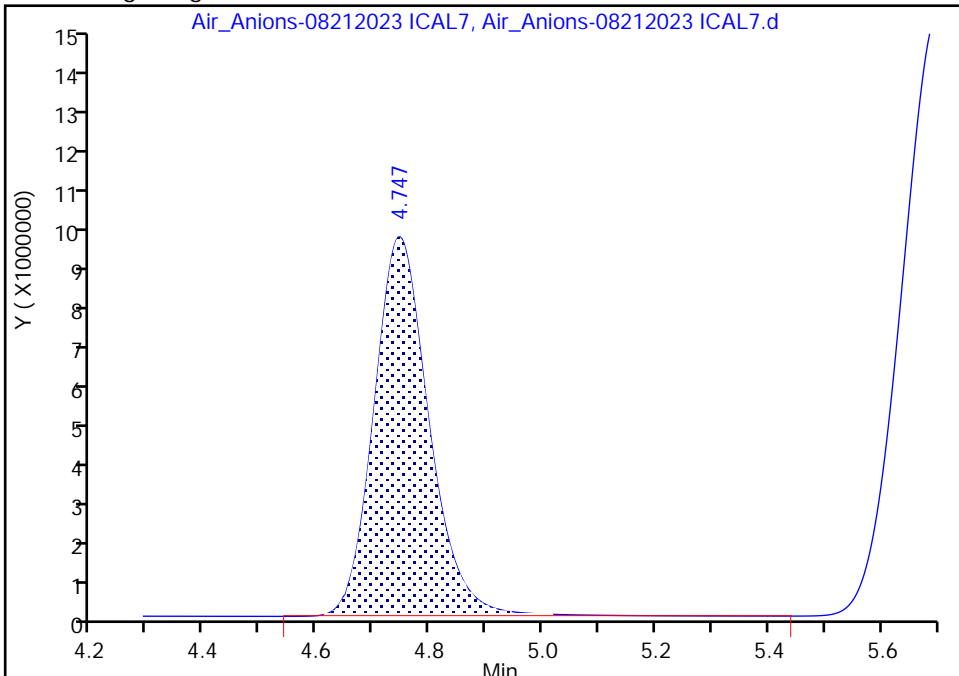
Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Injection Date: 21-Aug-2023 21:01:00 Instrument ID: IC4  
 Lims ID: ICAL 7  
 Client ID:  
 Operator ID: ALS Bottle#: 0 Worklist Smp#: 7  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
 Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

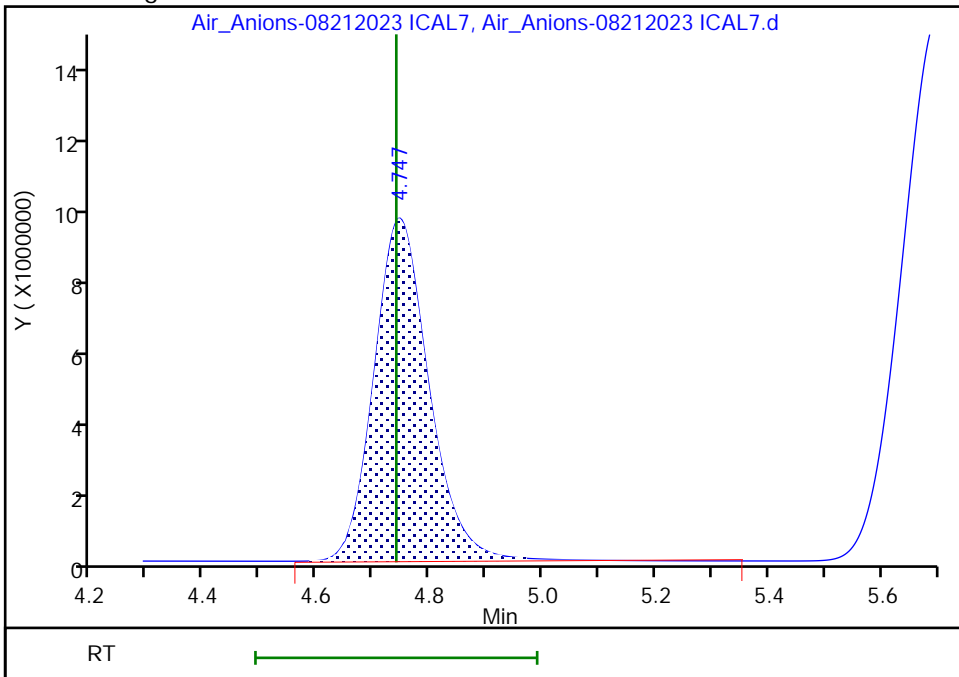
RT: 4.75  
 Area: 65703284  
 Amount: 2.000808  
 Amount Units: ug/ml

Processing Integration Results



RT: 4.75  
 Area: 65483741  
 Amount: 2.000970  
 Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 22-Aug-2023 09:51:41 -04:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

FORM VII  
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 140-76764/8 Calibration Date: 08/21/2023 21:23  
 Instrument ID: IC4 Calib Start Date: 08/21/2023 18:48  
 GC Column: AS22 ID: \_\_\_\_\_ Calib End Date: 08/21/2023 21:01  
 Lab File ID: Air\_Anions-08212023 ICAL8.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	QuaF		44749745		0.750	0.750	0.0	10.0
Chloride	QuaF		30511745		0.746	0.750	-0.6	10.0
Nitrite as N	QuaF		67078995		0.763	0.750	1.7	10.0
Bromide	QuaF		13427841		0.756	0.750	0.8	10.0
Nitrate as N	QuaF		77093780		0.762	0.750	1.7	10.0
Orthophosphate as P	QuaF		31726015		0.752	0.750	0.3	10.0
Iodide	QuaF		7927613		0.758	0.752	0.8	10.0

FORM VII  
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 140-76764/8 Calibration Date: 08/21/2023 21:23  
 Instrument ID: IC4 Calib Start Date: 08/21/2023 18:48  
 GC Column: AS22 ID: \_\_\_\_\_ Calib End Date: 08/21/2023 21:01  
 Lab File ID: Air\_Anions-08212023 ICAL8.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.33	3.08	3.58
Chloride	4.74	4.49	4.99
Nitrite as N	5.69	5.43	5.93
Bromide	6.74	6.49	6.99
Nitrate as N	7.58	7.33	7.83
Orthophosphate as P	10.12	10.02	10.22
Iodide	14.82	14.58	15.08

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL8.d  
 Lims ID: ICV  
 Client ID:  
 Sample Type: ICV  
 Inject. Date: 21-Aug-2023 21:23:00 ALS Bottle#: 0 Worklist Smp#: 8  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0029316-008  
 Misc. Info.: ICV  
 Operator ID: Instrument ID: IC4  
 Sublist:  
 Method: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 22-Aug-2023 09:56:50 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICAL File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 22-Aug-2023 09:50:24

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.333	3.330	0.003	33562309	0.7500	0.7503	M
2 Chloride	4.743	4.740	0.003	22883809	0.7500	0.7455	M
3 Nitrite as N	5.690	5.683	0.007	50309246	0.7500	0.7628	Ma
4 Bromide	6.737	6.737	0.000	10070881	0.7500	0.7561	Ma
5 Nitrate as N	7.577	7.583	-0.006	57820335	0.7500	0.7624	M
19 Orthophosphate as P	10.117	10.123	-0.006	23794511	0.7500	0.7520	
6 Iodide	14.823	14.830	-0.007	5957601	0.7515	0.7579	
S 11 Nitrous Acid					2.52	2.56	
S 12 Br					0.7500	0.7561	
S 13 Chlorine					0.7500	0.7455	
S 10 Nitric acid					3.37	3.43	
S 7 Hydrogen Chloride					0.7710	0.7666	
S 9 Hydrobromic Acid					0.7595	0.7656	
S 8 Hydro Fluoric Acid					0.7898	0.7902	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

85SPICVLCSS\_00118 Amount Added: 10.00 Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL8.d

Injection Date: 21-Aug-2023 21:23:00

Instrument ID: IC4

Operator ID:

Lims ID: ICV

Worklist Smp#: 8

Client ID:

Injection Vol: 1.0 ul

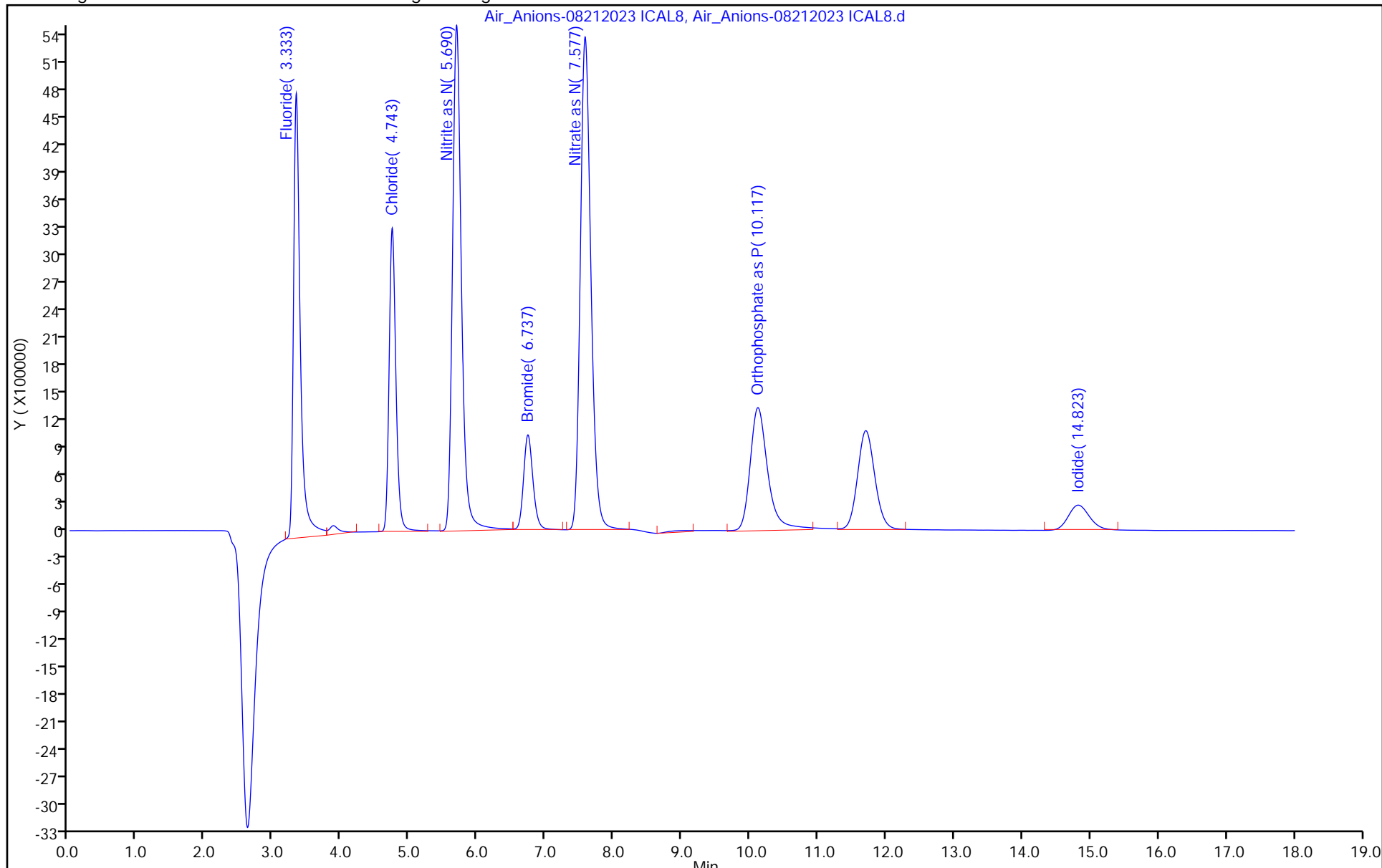
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

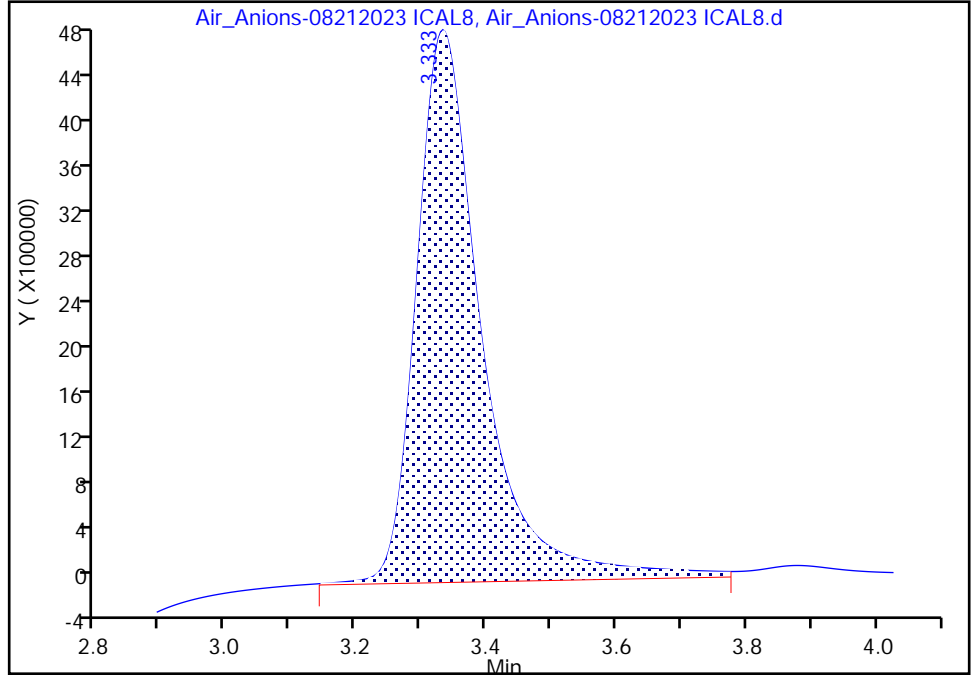
Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL8.d  
Injection Date: 21-Aug-2023 21:23:00 Instrument ID: IC4  
Lims ID: ICV  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 8  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

1 Fluoride, CAS: 16984-48-8

Signal: 1

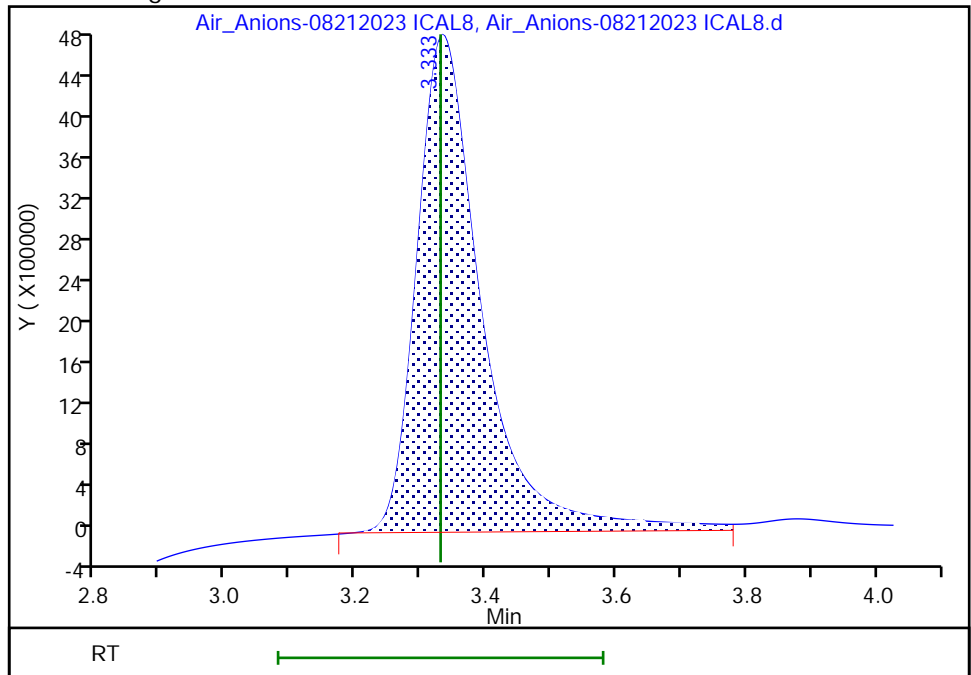
RT: 3.33  
Area: 33827712  
Amount: 0.755877  
Amount Units: ug/ml

Processing Integration Results



RT: 3.33  
Area: 33562309  
Amount: 0.750292  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 22-Aug-2023 09:55:59 -04:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline Smoothing



Eurofins Knoxville

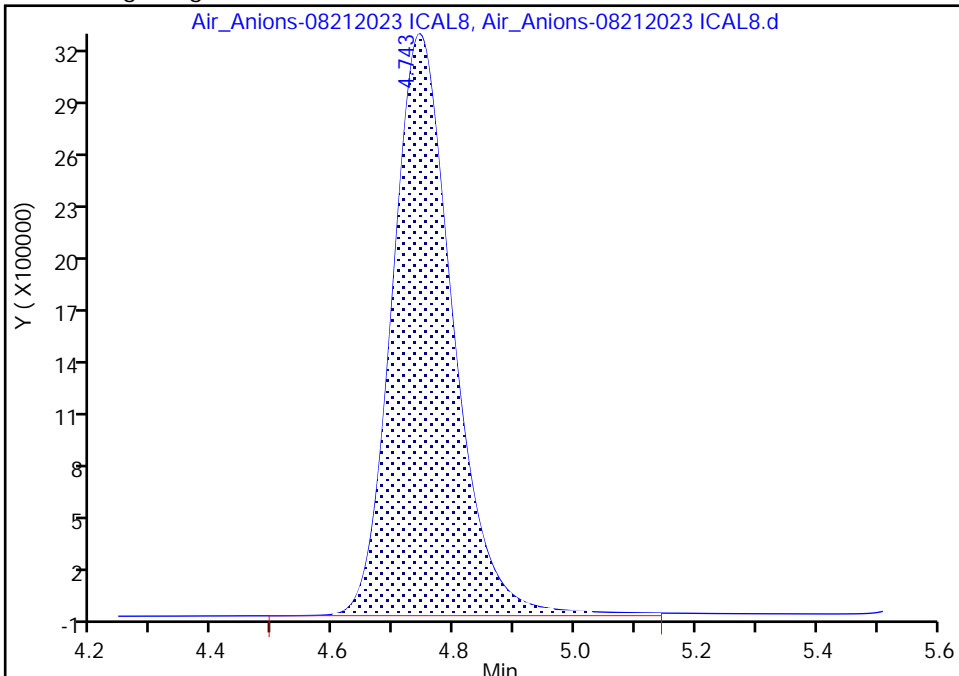
Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL8.d  
Injection Date: 21-Aug-2023 21:23:00 Instrument ID: IC4  
Lims ID: ICV  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 8  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

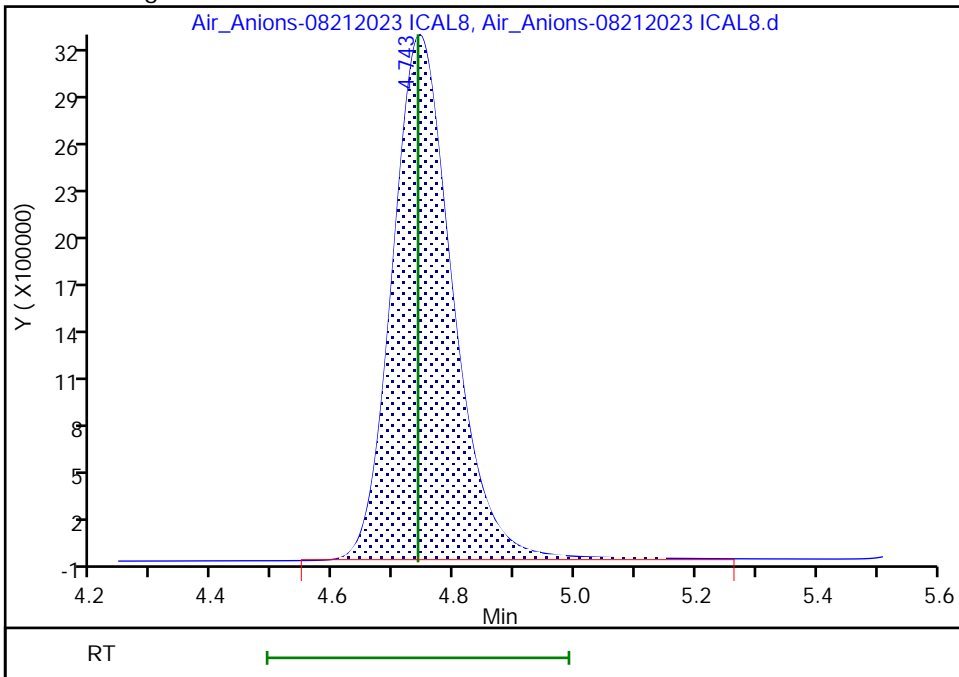
RT: 4.74  
Area: 22923164  
Amount: 0.746702  
Amount Units: ug/ml

Processing Integration Results



RT: 4.74  
Area: 22883809  
Amount: 0.745469  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 22-Aug-2023 09:55:54 -04:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Knoxville

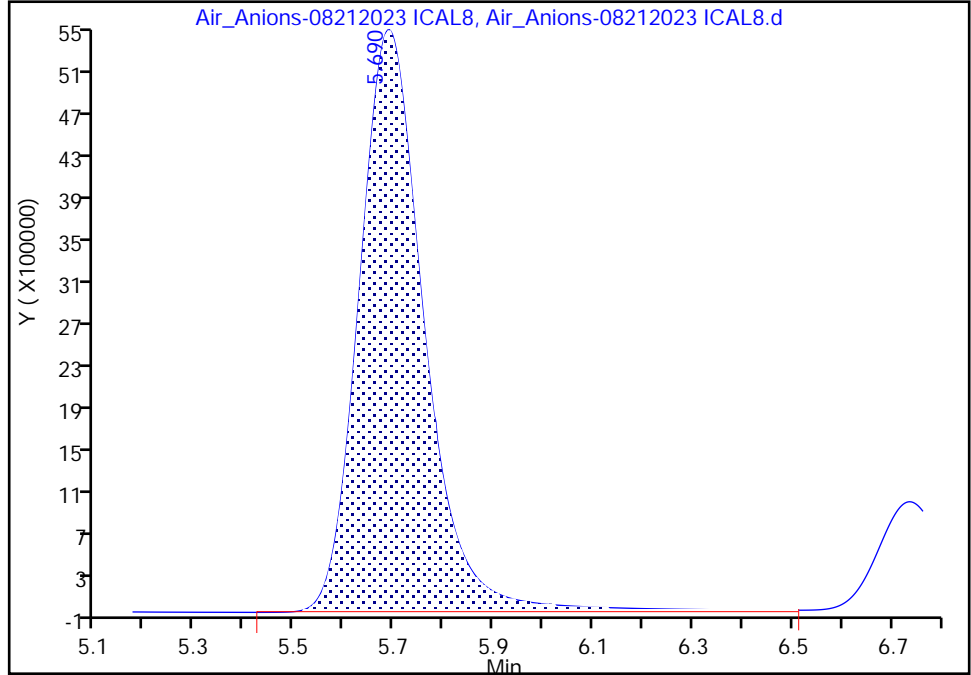
Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL8.d  
Injection Date: 21-Aug-2023 21:23:00 Instrument ID: IC4  
Lims ID: ICV  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 8  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

3 Nitrite as N, CAS: 14797-65-0

Signal: 1

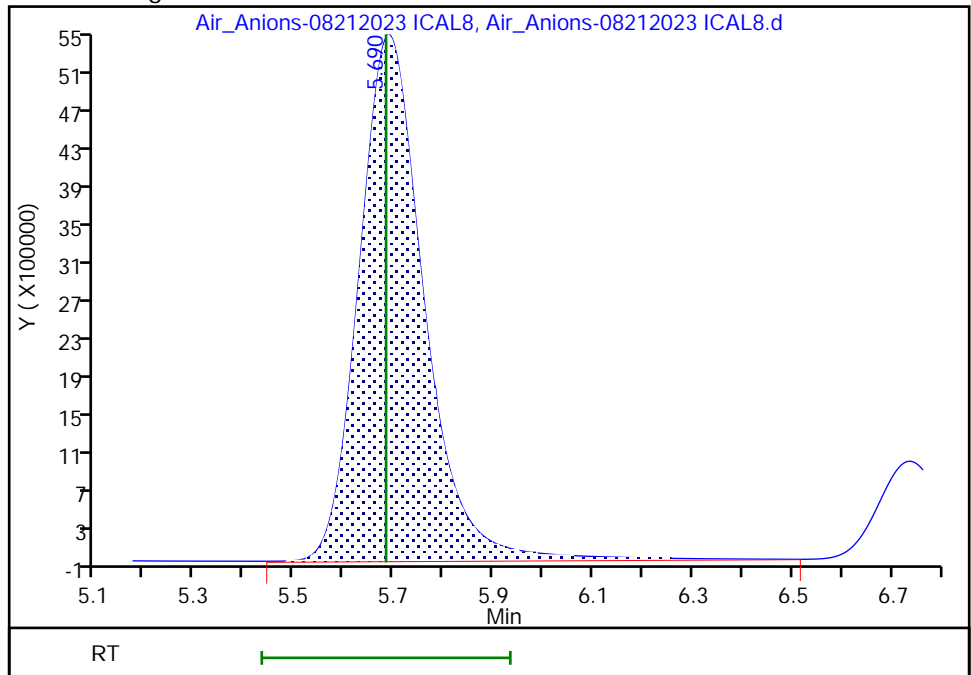
RT: 5.69  
Area: 50458369  
Amount: 0.764925  
Amount Units: ug/ml

Processing Integration Results



RT: 5.69  
Area: 50309246  
Amount: 0.762771  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 22-Aug-2023 09:56:24 -04:00:00 (UTC)

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Eurofins Knoxville

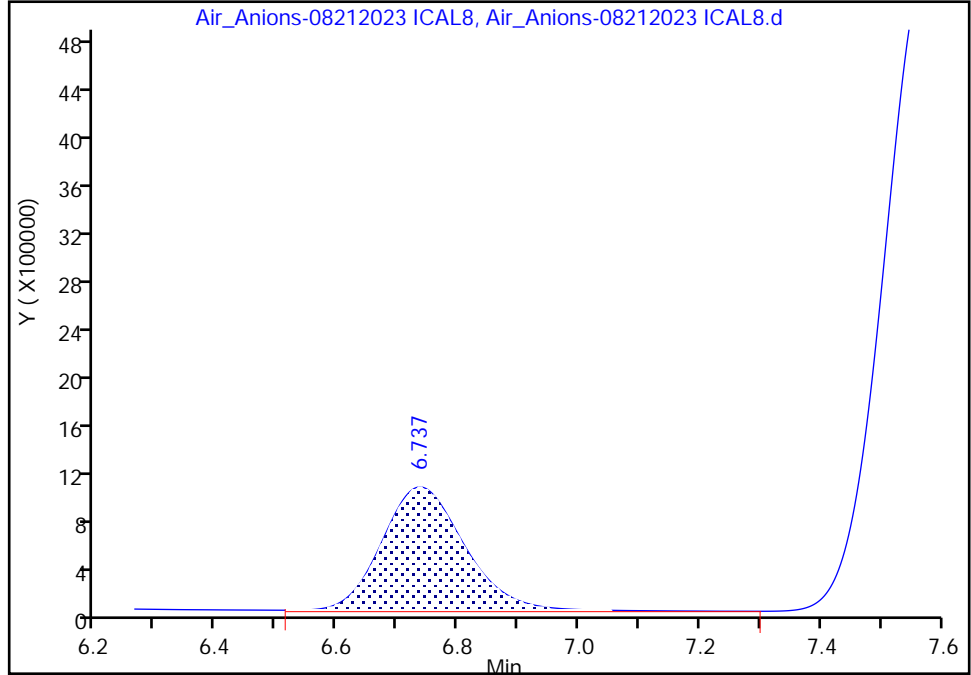
Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL8.d  
Injection Date: 21-Aug-2023 21:23:00 Instrument ID: IC4  
Lims ID: ICV  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 8  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

4 Bromide, CAS: 24959-67-9

Signal: 1

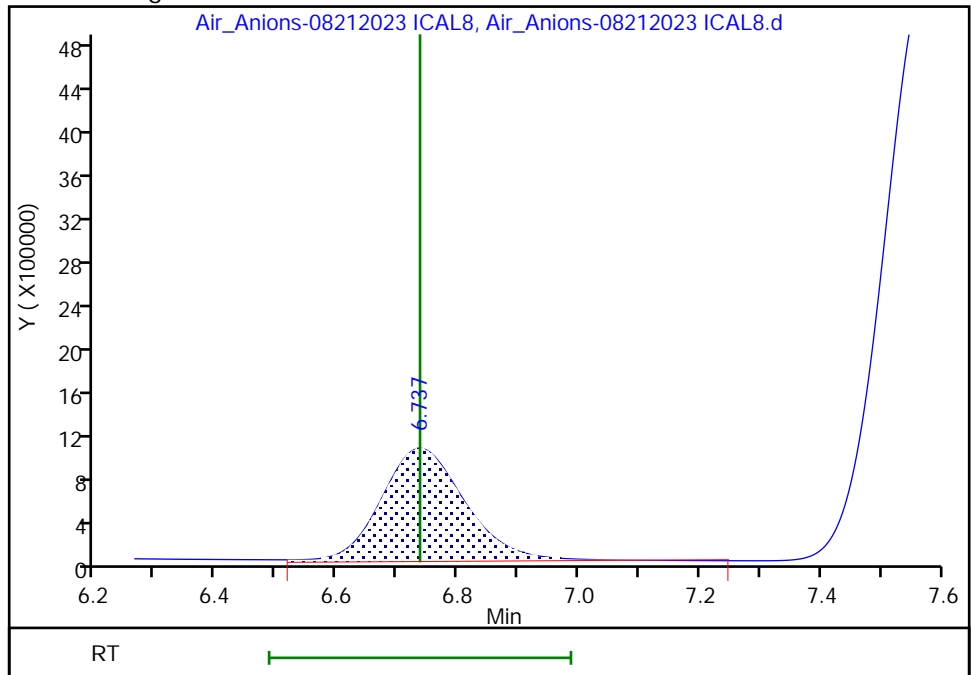
RT: 6.74  
Area: 10263195  
Amount: 0.770020  
Amount Units: ug/ml

Processing Integration Results



RT: 6.74  
Area: 10070881  
Amount: 0.756108  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 22-Aug-2023 09:56:26 -04:00:00 (UTC)

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Eurofins Knoxville

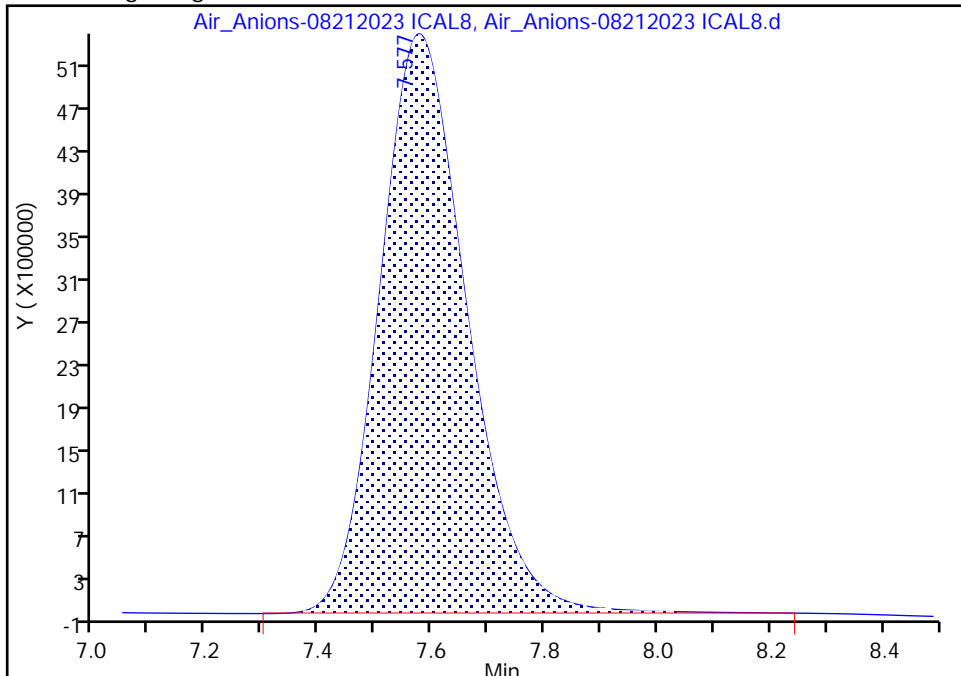
Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL8.d  
Injection Date: 21-Aug-2023 21:23:00 Instrument ID: IC4  
Lims ID: ICV  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 8  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

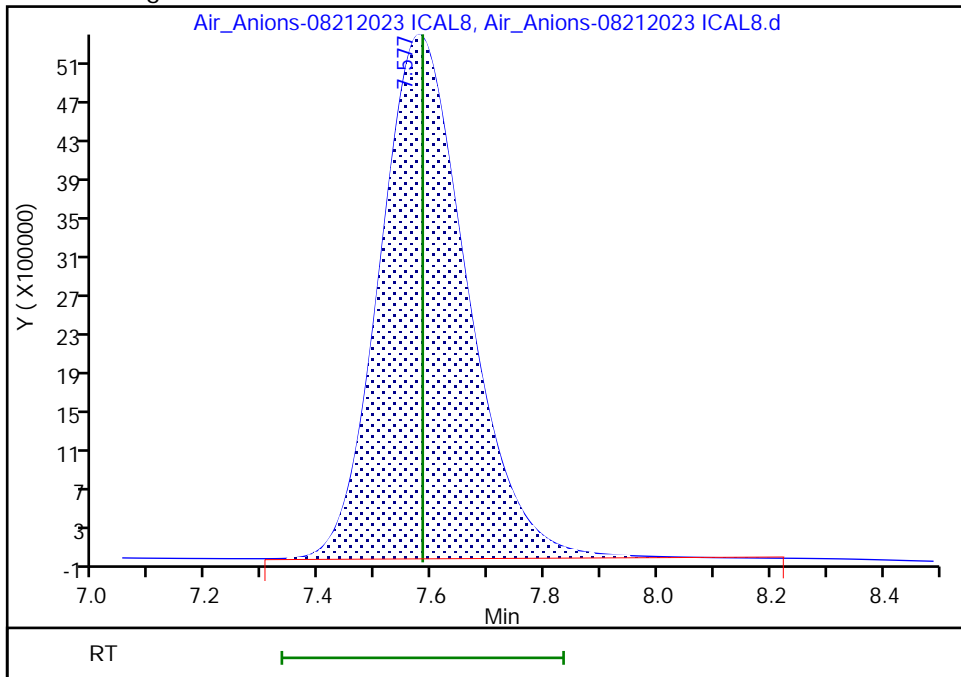
RT: 7.58  
Area: 58027440  
Amount: 0.764987  
Amount Units: ug/ml

Processing Integration Results



RT: 7.58  
Area: 57820335  
Amount: 0.762424  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 22-Aug-2023 09:56:11 -04:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

FORM VII  
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-81419/1 Calibration Date: 12/14/2023 10:53  
 Instrument ID: IC4 Calib Start Date: 08/21/2023 18:48  
 GC Column: AS22 ID: \_\_\_\_\_ Calib End Date: 08/21/2023 21:01  
 Lab File ID: Air\_Anions-1214202310.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	QuaF		46356166		1.01	1.00	1.4	10.0
Chloride	QuaF		32486357		1.04	1.00	4.2	10.0
Nitrite as N	QuaF		68262060		1.02	1.00	1.8	10.0
Bromide	QuaF		17496648		1.28	1.00	28.1*	10.0
Nitrate as N	QuaF		86633971		1.11	1.00	10.9*	10.0
Iodide	QuaF		8129380		1.03	1.00	2.9	10.0
Orthophosphate as P	QuaF					1.00	-100.0*	10.0

FORM VII  
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-81419/1 Calibration Date: 12/14/2023 10:53  
 Instrument ID: IC4 Calib Start Date: 08/21/2023 18:48  
 GC Column: AS22 ID: \_\_\_\_\_ Calib End Date: 08/21/2023 21:01  
 Lab File ID: Air\_Anions-1214202310.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.32	3.07	3.57
Chloride	4.59	4.34	4.84
Nitrite as N	5.40	5.15	5.65
Bromide	6.34	6.09	6.59
Nitrate as N	7.01	6.76	7.26
Iodide	13.16	12.91	13.41
Orthophosphate as P			

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202310.d  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 14-Dec-2023 10:53:00 ALS Bottle#: 0 Worklist Smp#: 1  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0030874-001  
 Misc. Info.: CCV  
 Operator ID: Instrument ID: IC4  
 Sublist: chrom-0050\_26A\_IC4\*sub8  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:35:59 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICAL File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:29:57

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.320	3.320	0.000	46356166	1.00	1.01	M
2 Chloride	4.593	4.593	0.000	32486357	1.00	1.04	M
3 Nitrite as N	5.400	5.400	0.000	68262060	1.00	1.02	
4 Bromide	6.343	6.343	0.000	17496648	1.00	1.28	
5 Nitrate as N	7.013	7.013	0.000	86633971	1.00	1.11	
19 Orthophosphate as P		9.280			ND	ND	
6 Iodide	13.163	13.163	0.000	8129380	1.00	1.03	
S 11 Nitrous Acid					3.36	3.42	
S 12 Br					1.00	1.28	
S 13 Chlorine					1.00	1.04	
S 10 Nitric acid					4.50	4.99	
S 7 Hydrogen Chloride					1.03	1.07	
S 9 Hydrobromic Acid					1.01	1.30	
S 8 Hydro Fluoric Acid					1.05	1.07	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

85L6M26AP\_00055 Amount Added: 10.00 Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202310.d

Injection Date: 14-Dec-2023 10:53:00

Instrument ID: IC4

Operator ID:

Lims ID: CCV

Worklist Smp#: 1

Client ID:

Injection Vol: 1.0 ul

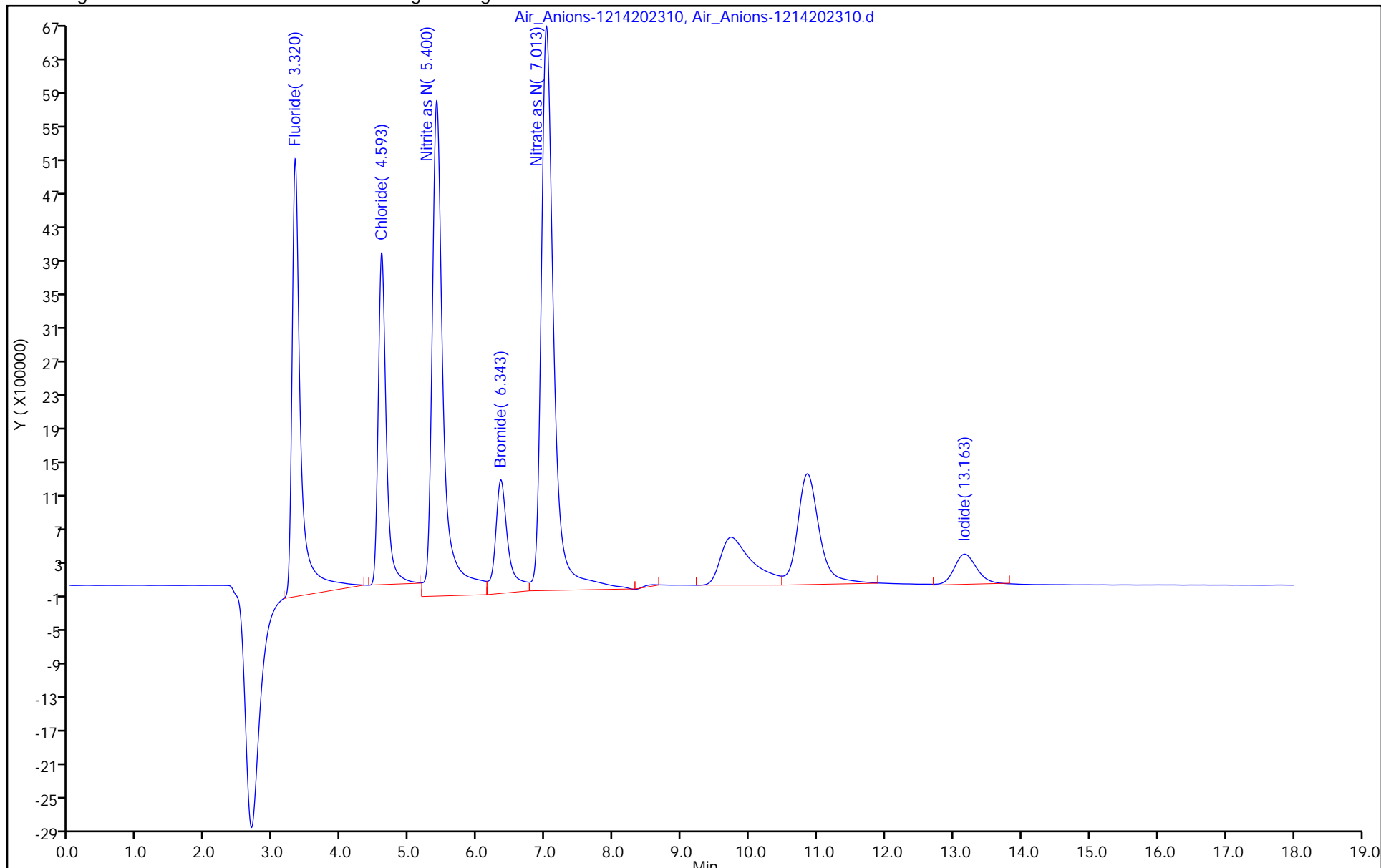
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1





Eurofins Knoxville

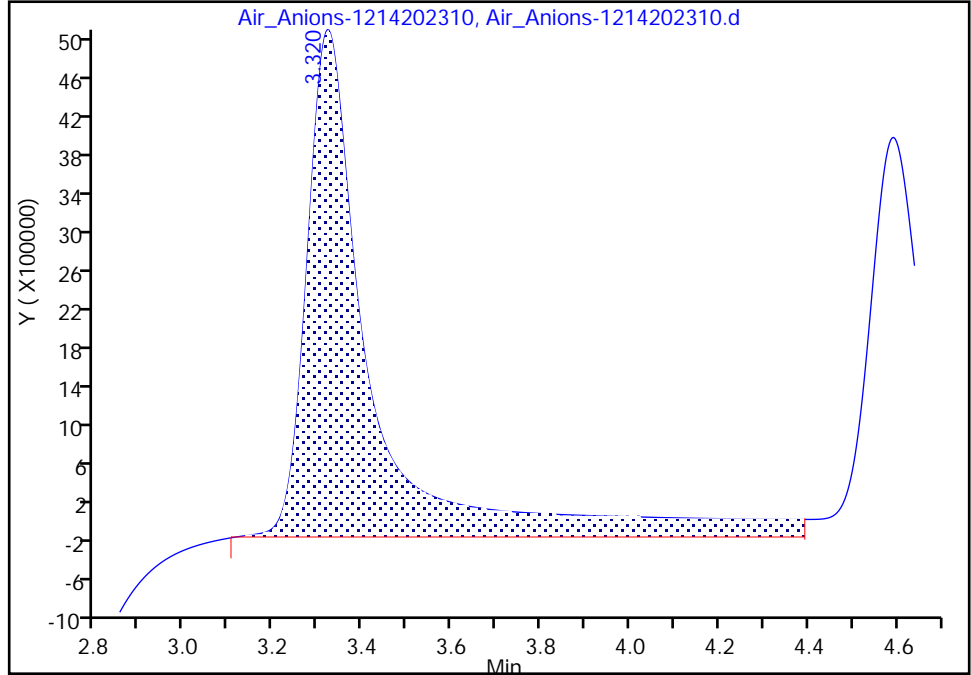
Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.bAir\_Anions-1214202310.d  
Injection Date: 14-Dec-2023 10:53:00 Instrument ID: IC4  
Lims ID: CCV  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 1  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

1 Fluoride, CAS: 16984-48-8

Signal: 1

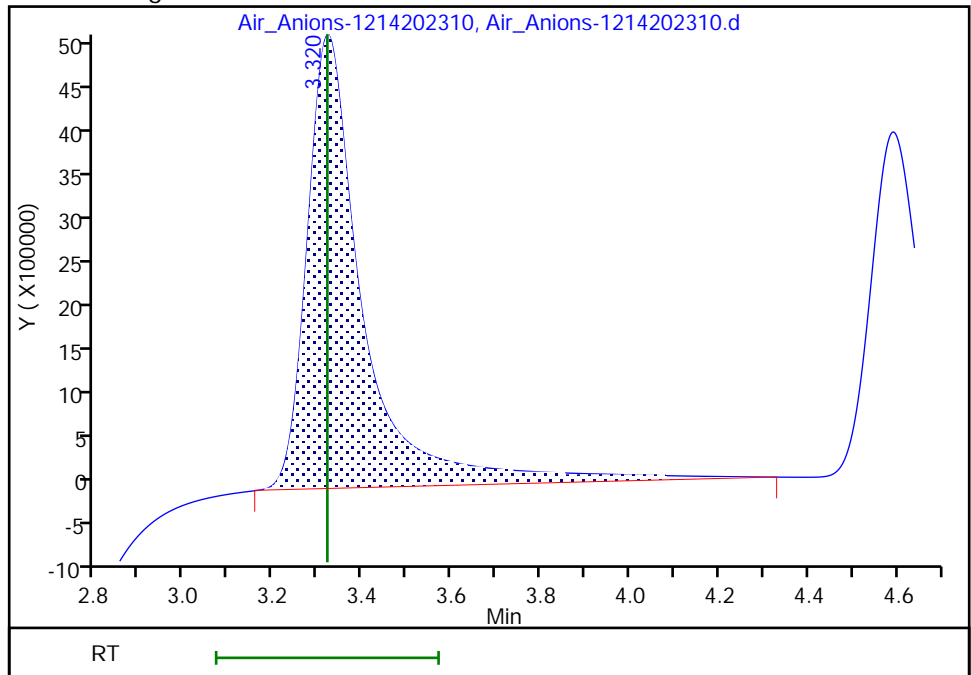
RT: 3.32  
Area: 54269640  
Amount: 1.172376  
Amount Units: ug/ml

Processing Integration Results



RT: 3.32  
Area: 46356166  
Amount: 1.014214  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 15-Dec-2023 09:29:43 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Knoxville

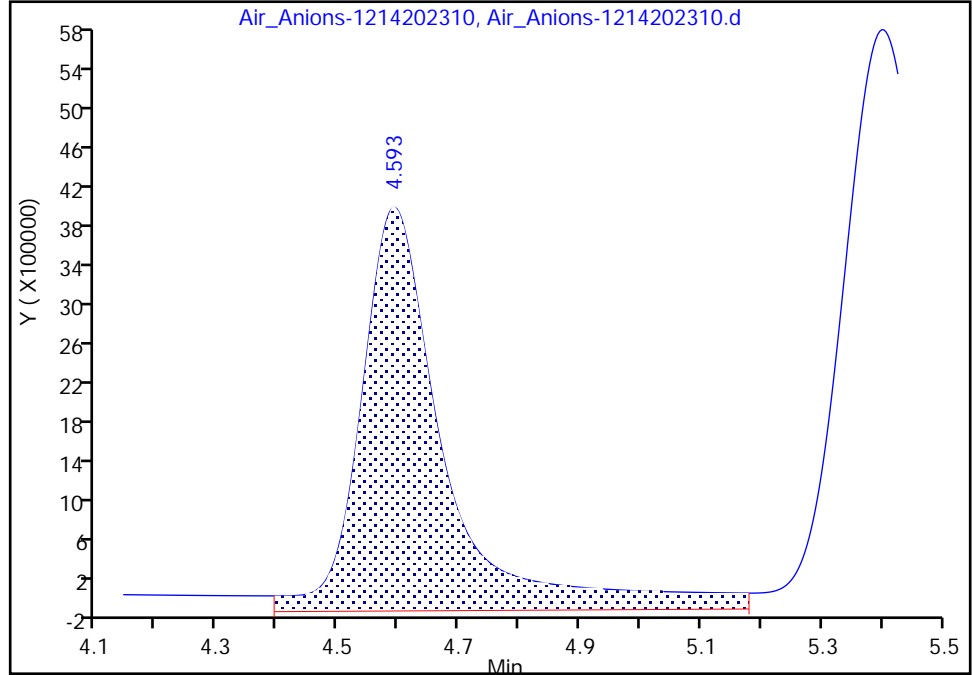
Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202310.d  
Injection Date: 14-Dec-2023 10:53:00 Instrument ID: IC4  
Lims ID: CCV  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 1  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

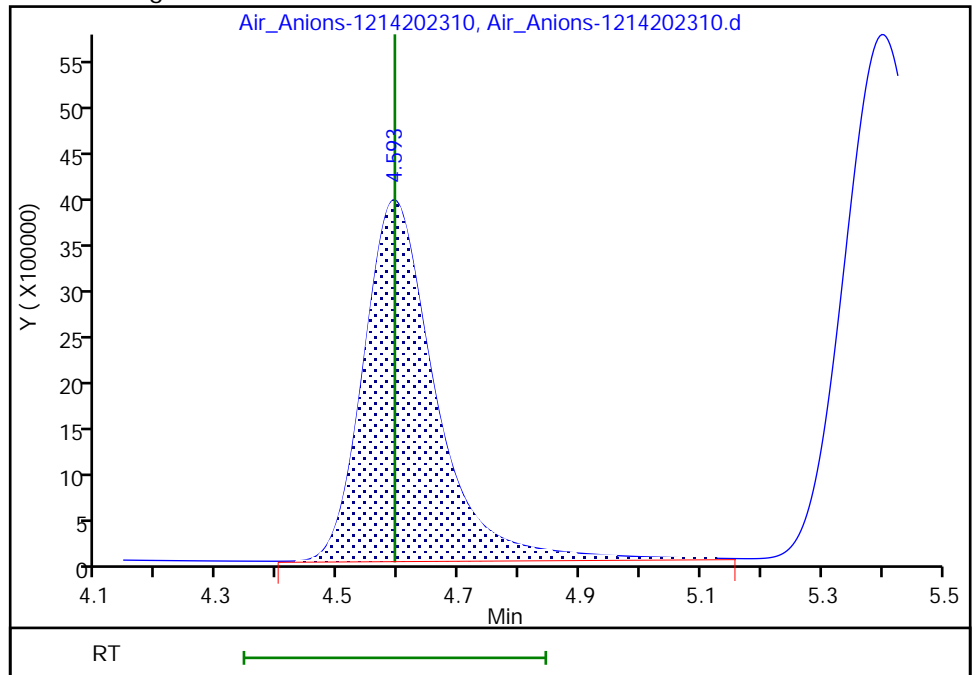
RT: 4.59  
Area: 40127050  
Amount: 1.271939  
Amount Units: ug/ml

Processing Integration Results



RT: 4.59  
Area: 32486357  
Amount: 1.042017  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 15-Dec-2023 09:29:45 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

FORM VII  
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-81419/13 Calibration Date: 12/14/2023 15:19  
 Instrument ID: IC4 Calib Start Date: 08/21/2023 18:48  
 GC Column: AS22 ID: \_\_\_\_\_ Calib End Date: 08/21/2023 21:01  
 Lab File ID: Air\_Anions-1214202322.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	QuaF		45895209		1.01	1.00	0.5	10.0
Chloride	QuaF		32613656		1.05	1.00	4.6	10.0
Nitrite as N	QuaF		69355776		1.03	1.00	3.3	10.0
Bromide	QuaF		17331963		1.27	1.00	26.9*	10.0
Nitrate as N	QuaF		87674337		1.12	1.00	12.2*	10.0
Iodide	QuaF		8087862		1.02	1.00	2.4	10.0
Orthophosphate as P	QuaF					1.00	-100.0*	10.0

FORM VII  
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-81419/13 Calibration Date: 12/14/2023 15:19  
 Instrument ID: IC4 Calib Start Date: 08/21/2023 18:48  
 GC Column: AS22 ID: \_\_\_\_\_ Calib End Date: 08/21/2023 21:01  
 Lab File ID: Air\_Anions-1214202322.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.31	3.07	3.57
Chloride	4.58	4.34	4.84
Nitrite as N	5.39	5.15	5.65
Bromide	6.33	6.09	6.59
Nitrate as N	7.00	6.76	7.26
Iodide	13.14	12.91	13.41
Orthophosphate as P			

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202322.d  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 14-Dec-2023 15:19:00 ALS Bottle#: 0 Worklist Smp#: 13  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0030874-013  
 Misc. Info.: CCV  
 Operator ID: Instrument ID: IC4  
 Sublist: chrom-0050\_26A\_IC4\*sub8  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:36:05 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICAL File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:31:31

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.310	3.320	-0.010	45895209	1.00	1.00	M
2 Chloride	4.580	4.593	-0.013	32613656	1.00	1.05	M
3 Nitrite as N	5.390	5.400	-0.010	69355776	1.00	1.03	
4 Bromide	6.330	6.343	-0.013	17331963	1.00	1.27	
5 Nitrate as N	7.000	7.013	-0.013	87674337	1.00	1.12	
19 Orthophosphate as P		9.280			ND	ND	
6 Iodide	13.140	13.163	-0.023	8087862	1.00	1.02	
S 11 Nitrous Acid					3.36	3.47	
S 12 Br					1.00	1.27	
S 13 Chlorine					1.00	1.05	
S 10 Nitric acid					4.50	5.05	
S 7 Hydrogen Chloride					1.03	1.08	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid					1.01	1.29	
S 22 Hydrogen Iodide						1.03	
S 8 Hydro Fluoric Acid					1.05	1.06	
S 21 Phosphate as H3PO4		0.000				ND	

**QC Flag Legend**

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

**Reagents:**

85L6M26AP\_00055

Amount Added: 10.00

Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202322.d

Injection Date: 14-Dec-2023 15:19:00

Instrument ID: IC4

Operator ID:

Lims ID: CCV

Worklist Smp#: 13

Client ID:

Injection Vol: 1.0 ul

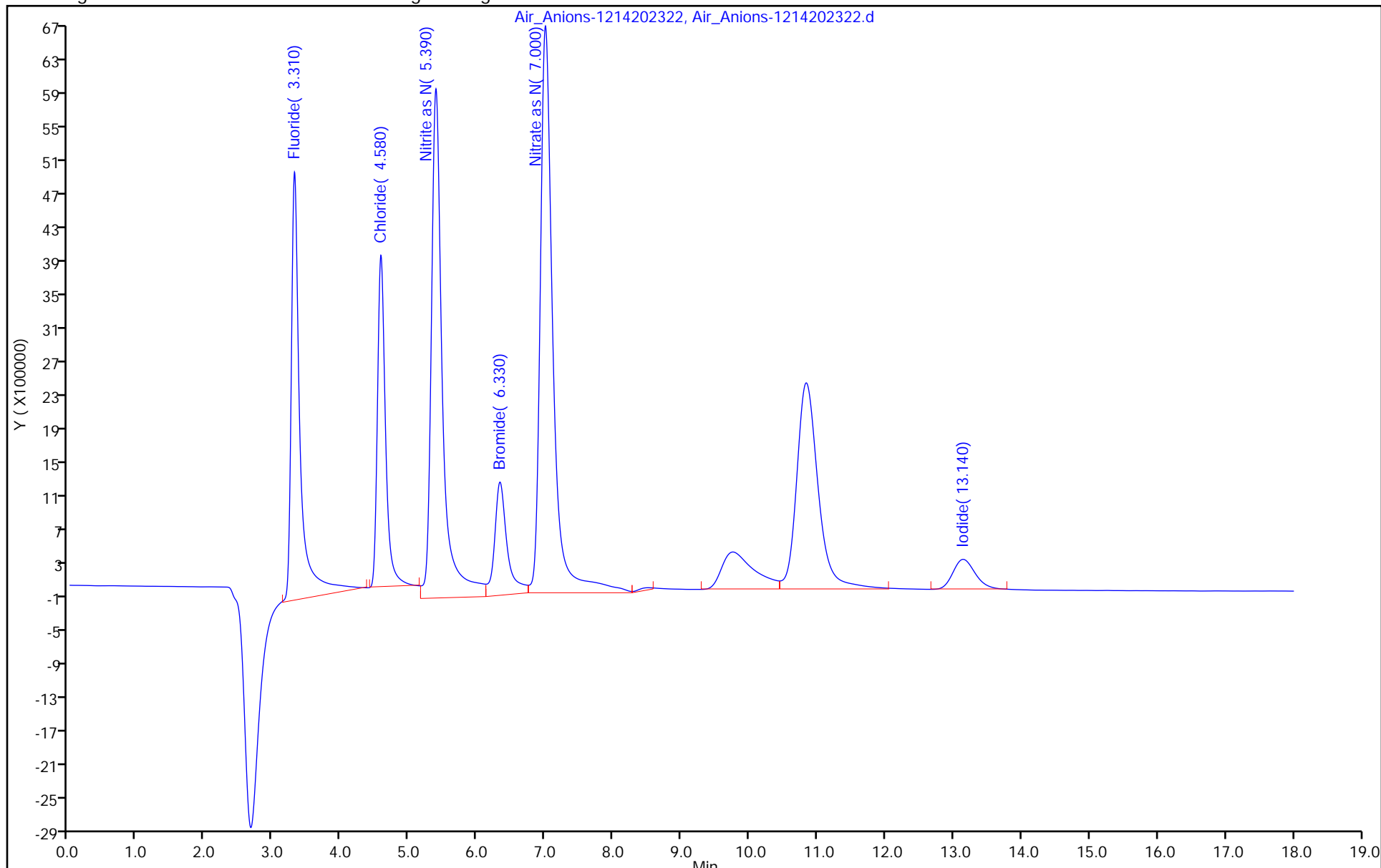
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

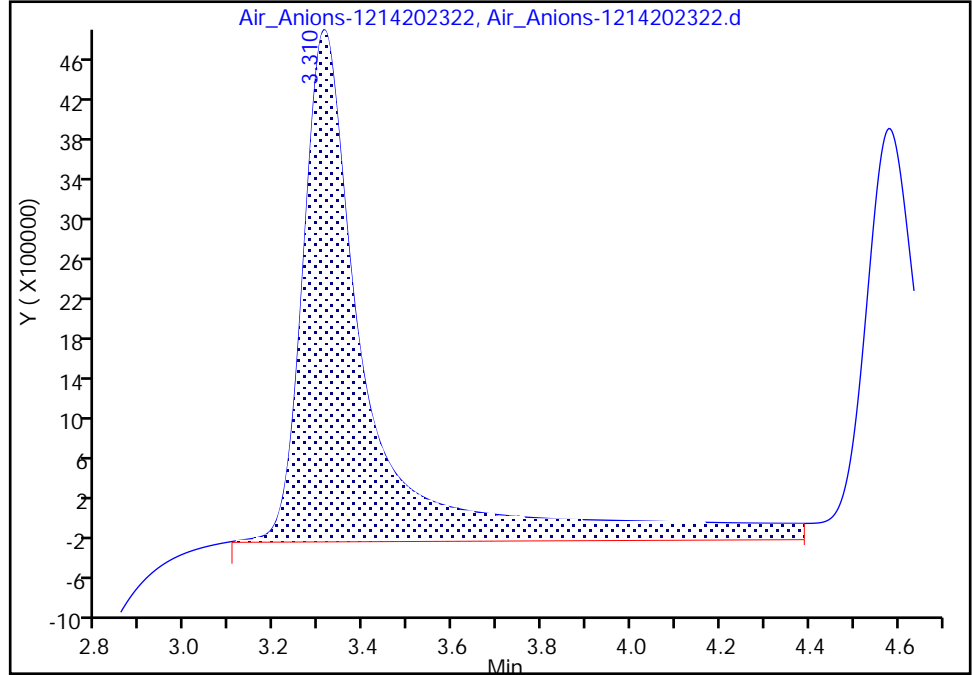
Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202322.d  
Injection Date: 14-Dec-2023 15:19:00 Instrument ID: IC4  
Lims ID: CCV  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 13  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

1 Fluoride, CAS: 16984-48-8

Signal: 1

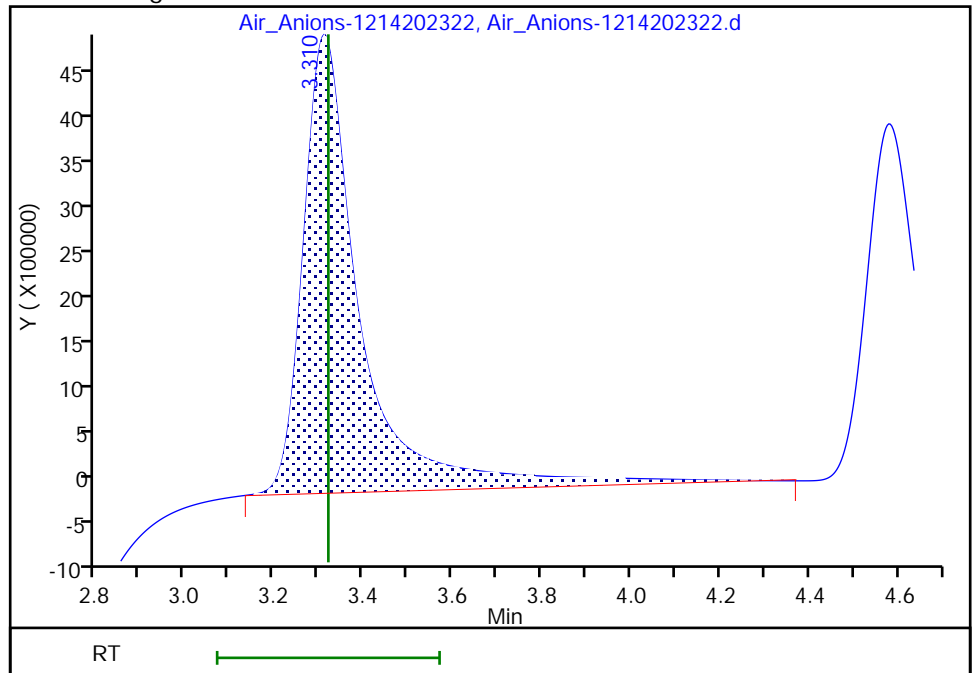
RT: 3.31  
Area: 52760263  
Amount: 1.142492  
Amount Units: ug/ml

Processing Integration Results



RT: 3.31  
Area: 45895209  
Amount: 1.004886  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 15-Dec-2023 09:31:28 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Knoxville

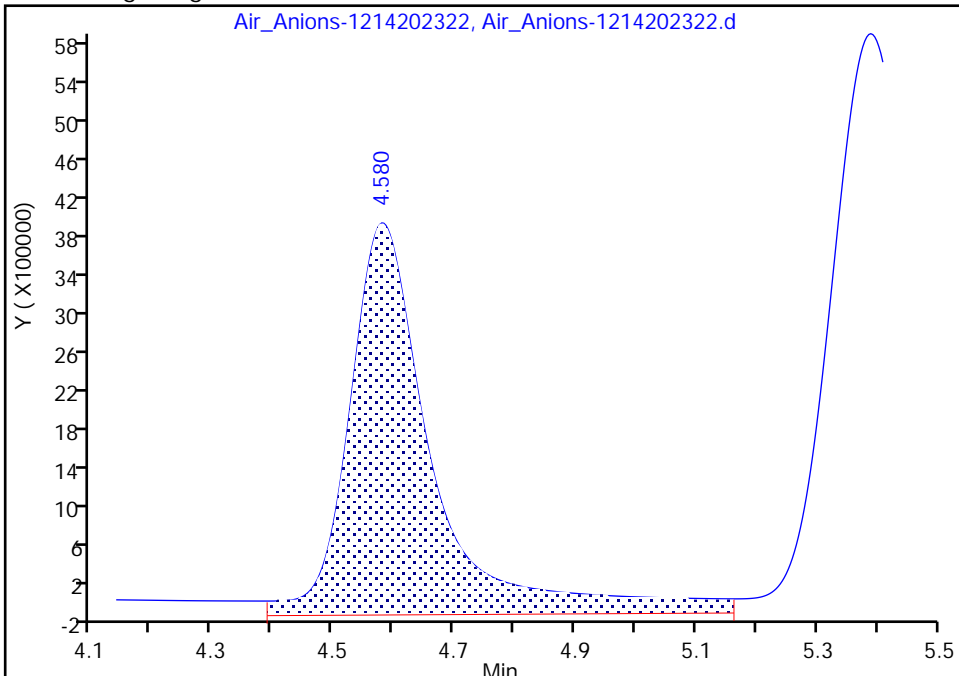
Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.bAir\_Anions-1214202322.d  
Injection Date: 14-Dec-2023 15:19:00 Instrument ID: IC4  
Lims ID: CCV  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 13  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

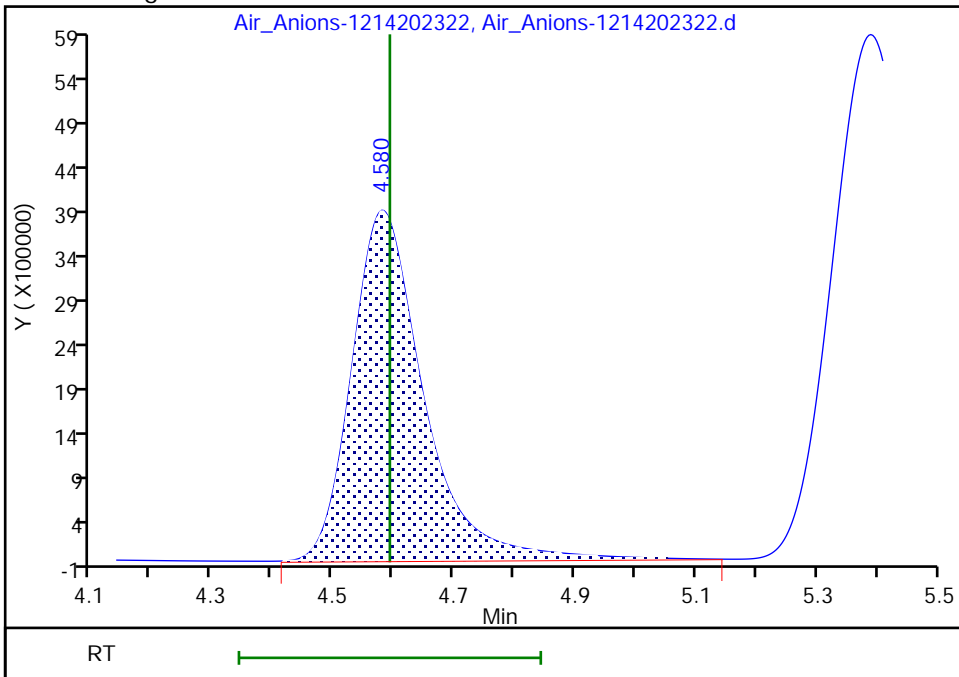
RT: 4.58  
Area: 39719599  
Amount: 1.259806  
Amount Units: ug/ml

Processing Integration Results



RT: 4.58  
Area: 32613656  
Amount: 1.045890  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 15-Dec-2023 09:31:25 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing



FORM VII  
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-81419/25 Calibration Date: 12/14/2023 19:46  
 Instrument ID: IC4 Calib Start Date: 08/21/2023 18:48  
 GC Column: AS22 ID: \_\_\_\_\_ Calib End Date: 08/21/2023 21:01  
 Lab File ID: Air\_Anions-1214202334.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	QuaF		45655963		1.00	1.00	0.0	10.0
Chloride	QuaF		32659159		1.05	1.00	4.7	10.0
Nitrite as N	QuaF		69899556		1.04	1.00	4.1	10.0
Bromide	QuaF		17754767		1.30	1.00	29.8*	10.0
Nitrate as N	QuaF		88634329		1.13	1.00	13.3*	10.0
Iodide	QuaF		8193922		1.04	1.00	3.7	10.0
Orthophosphate as P	QuaF					1.00	-100.0*	10.0

FORM VII  
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-81419/25 Calibration Date: 12/14/2023 19:46  
 Instrument ID: IC4 Calib Start Date: 08/21/2023 18:48  
 GC Column: AS22 ID: \_\_\_\_\_ Calib End Date: 08/21/2023 21:01  
 Lab File ID: Air\_Anions-1214202334.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.32	3.07	3.57
Chloride	4.58	4.34	4.84
Nitrite as N	5.39	5.15	5.65
Bromide	6.33	6.09	6.59
Nitrate as N	7.00	6.76	7.26
Iodide	13.14	12.91	13.41
Orthophosphate as P			

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202334.d  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 14-Dec-2023 19:46:00 ALS Bottle#: 0 Worklist Smp#: 25  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0030874-025  
 Misc. Info.: CCV  
 Operator ID: Instrument ID: IC4  
 Sublist: chrom-0050\_26A\_IC4\*sub8  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:36:11 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICAL File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:32:40

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.317	3.320	-0.003	45655963	1.00	1.00	M
2 Chloride	4.583	4.593	-0.010	32659159	1.00	1.05	M
3 Nitrite as N	5.393	5.400	-0.007	69899556	1.00	1.04	
4 Bromide	6.333	6.343	-0.010	17754767	1.00	1.30	
5 Nitrate as N	7.003	7.013	-0.010	88634329	1.00	1.13	
19 Orthophosphate as P		9.280			ND	ND	
6 Iodide	13.140	13.163	-0.023	8193922	1.00	1.04	
S 11 Nitrous Acid					3.36	3.49	
S 12 Br					1.00	1.30	
S 13 Chlorine					1.00	1.05	
S 10 Nitric acid					4.50	5.10	
S 7 Hydrogen Chloride					1.03	1.08	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid					1.01	1.31	
S 22 Hydrogen Iodide						1.05	
S 8 Hydro Fluoric Acid					1.05	1.05	
S 21 Phosphate as H3PO4		0.000				ND	

**QC Flag Legend**

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

**Reagents:**

85L6M26AP\_00055

Amount Added: 10.00

Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202334.d

Injection Date: 14-Dec-2023 19:46:00

Instrument ID: IC4

Operator ID:

Lims ID: CCV

Worklist Smp#: 25

Client ID:

Injection Vol: 1.0 ul

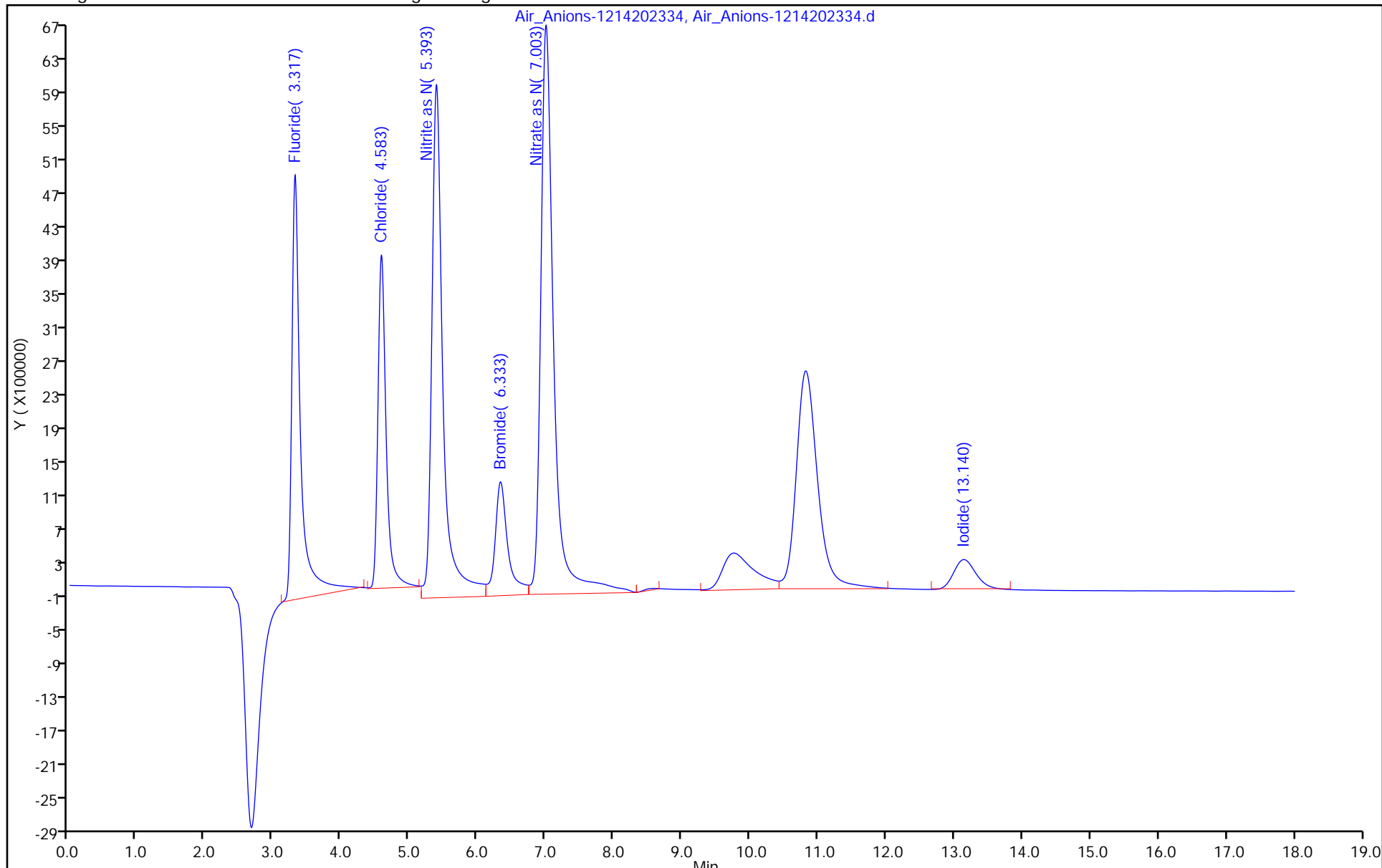
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

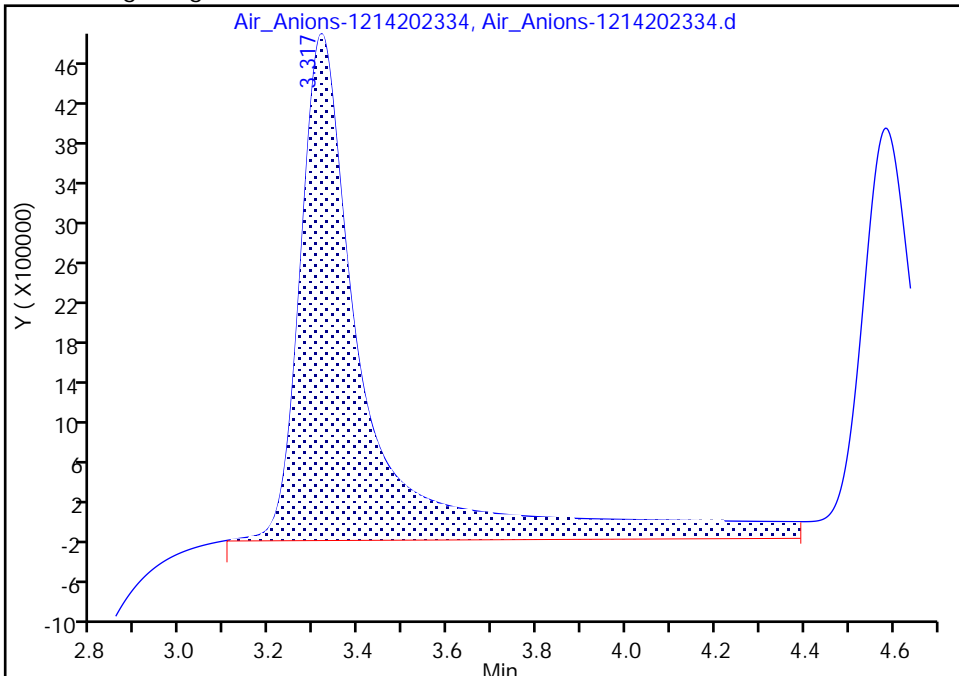
Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202334.d  
Injection Date: 14-Dec-2023 19:46:00 Instrument ID: IC4  
Lims ID: CCV  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 25  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

1 Fluoride, CAS: 16984-48-8

Signal: 1

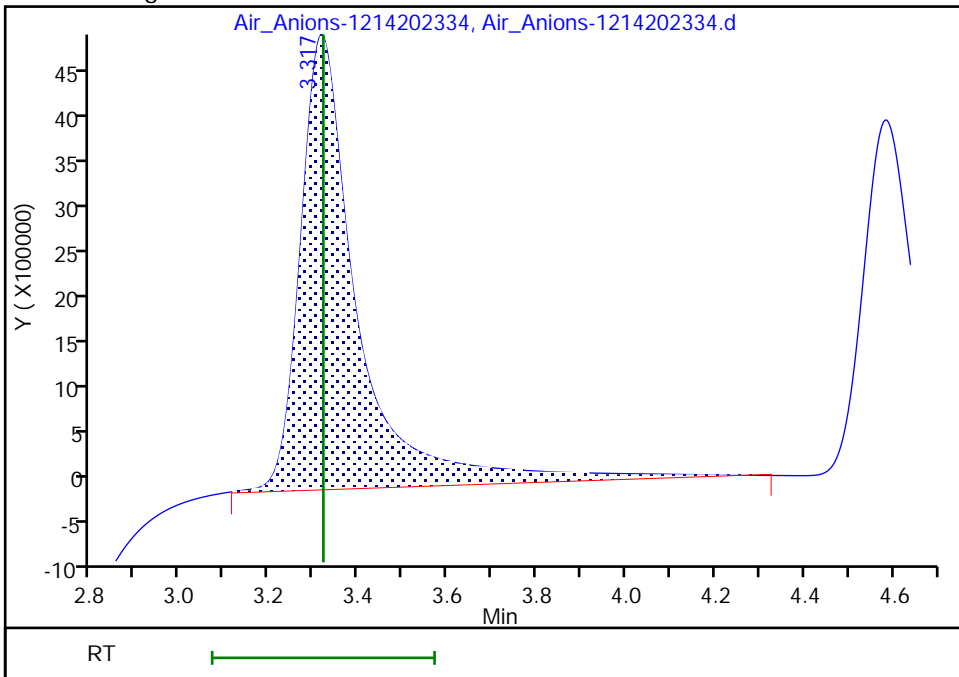
RT: 3.32  
Area: 52747256  
Amount: 1.142234  
Amount Units: ug/ml

Processing Integration Results



RT: 3.32  
Area: 45655963  
Amount: 1.000039  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 15-Dec-2023 09:32:36 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Knoxville

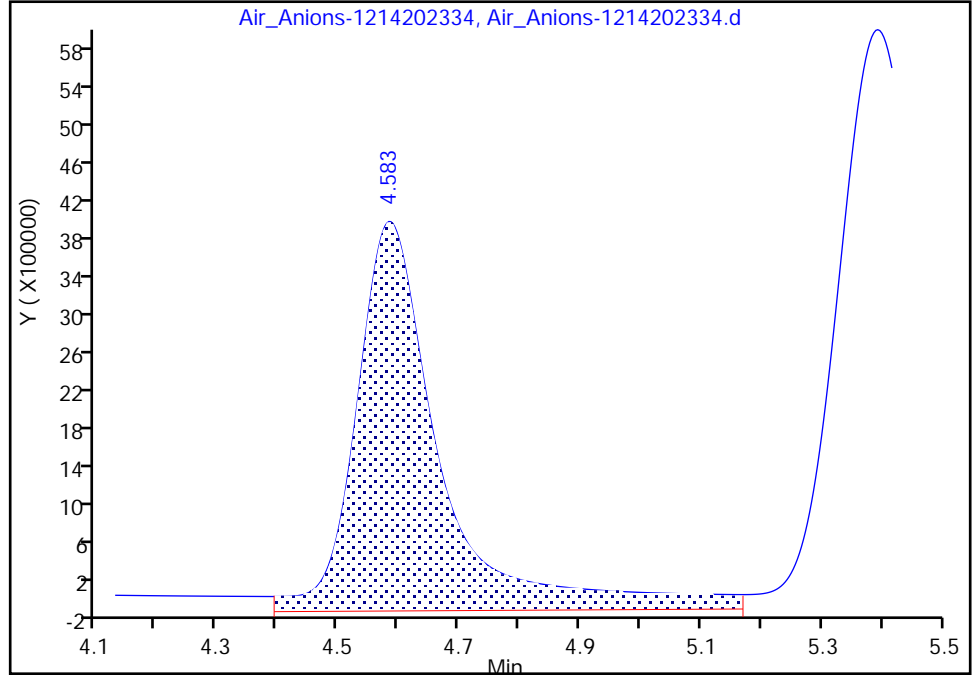
Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202334.d  
Injection Date: 14-Dec-2023 19:46:00 Instrument ID: IC4  
Lims ID: CCV  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 25  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

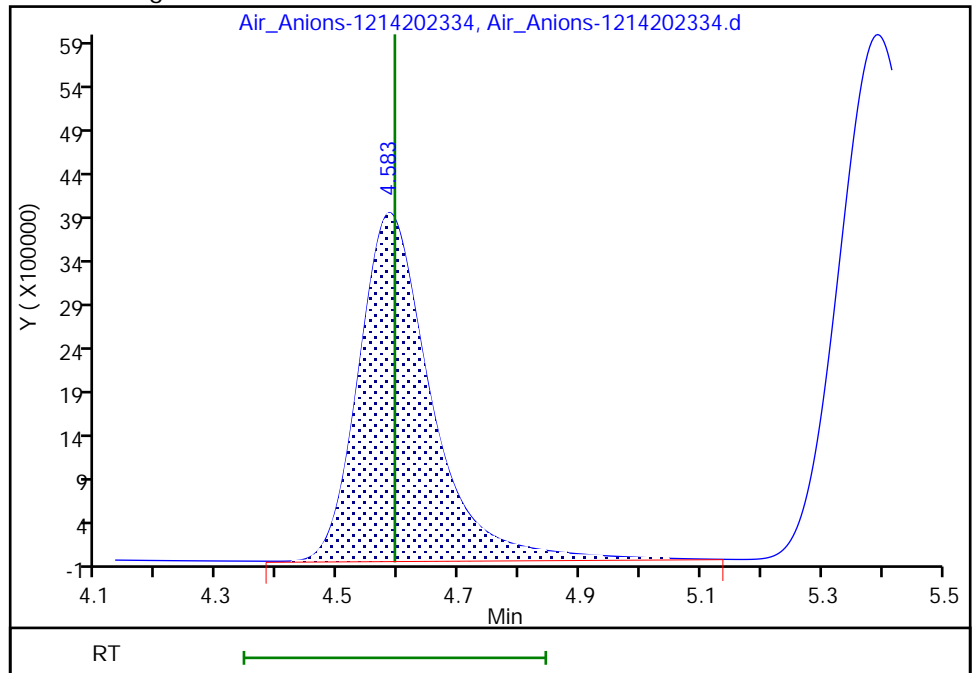
RT: 4.58  
Area: 40061944  
Amount: 1.270001  
Amount Units: ug/ml

Processing Integration Results



RT: 4.58  
Area: 32659159  
Amount: 1.047275  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 15-Dec-2023 09:32:38 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

FORM VII  
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-81419/37 Calibration Date: 12/15/2023 00:32  
 Instrument ID: IC4 Calib Start Date: 08/21/2023 18:48  
 GC Column: AS22 ID: \_\_\_\_\_ Calib End Date: 08/21/2023 21:01  
 Lab File ID: Air\_Anions-1214202346.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	QuaF		46600080		1.02	1.00	1.9	10.0
Chloride	QuaF		32549974		1.04	1.00	4.4	10.0
Nitrite as N	QuaF		70266986		1.05	1.00	4.6	10.0
Bromide	QuaF		17821432		1.30	1.00	30.3*	10.0
Nitrate as N	QuaF		87139118		1.12	1.00	11.5*	10.0
Iodide	QuaF		8123617		1.03	1.00	2.8	10.0
Orthophosphate as P	QuaF					1.00	-100.0*	10.0

FORM VII  
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-81419/37 Calibration Date: 12/15/2023 00:32  
 Instrument ID: IC4 Calib Start Date: 08/21/2023 18:48  
 GC Column: AS22 ID: \_\_\_\_\_ Calib End Date: 08/21/2023 21:01  
 Lab File ID: Air\_Anions-1214202346.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.32	3.07	3.57
Chloride	4.60	4.34	4.84
Nitrite as N	5.41	5.15	5.65
Bromide	6.35	6.09	6.59
Nitrate as N	7.02	6.76	7.26
Iodide	13.17	12.91	13.41
Orthophosphate as P			



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202346.d  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 15-Dec-2023 00:32:00 ALS Bottle#: 0 Worklist Smp#: 37  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0030874-037  
 Misc. Info.: CCV  
 Operator ID: Instrument ID: IC4  
 Sublist: chrom-0050\_26A\_IC4\*sub8  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:36:16 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICAL File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:34:05

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.323	3.320	0.003	46600080	1.00	1.02	M
2 Chloride	4.597	4.593	0.004	32549974	1.00	1.04	M
3 Nitrite as N	5.407	5.400	0.007	70266986	1.00	1.05	
4 Bromide	6.350	6.343	0.007	17821432	1.00	1.30	
5 Nitrate as N	7.020	7.013	0.007	87139118	1.00	1.12	
19 Orthophosphate as P		9.280			ND	ND	
6 Iodide	13.170	13.163	0.007	8123617	1.00	1.03	
S 11 Nitrous Acid					3.36	3.51	
S 12 Br					1.00	1.30	
S 13 Chlorine					1.00	1.04	
S 10 Nitric acid					4.50	5.02	
S 7 Hydrogen Chloride					1.03	1.07	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid					1.01	1.32	
S 22 Hydrogen Iodide						1.04	
S 8 Hydro Fluoric Acid					1.05	1.07	
S 21 Phosphate as H3PO4		0.000				ND	

**QC Flag Legend**

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

**Reagents:**

85L6M26AP\_00055

Amount Added: 10.00

Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202346.d

Injection Date: 15-Dec-2023 00:32:00

Instrument ID: IC4

Operator ID:

Lims ID: CCV

Worklist Smp#: 37

Client ID:

Injection Vol: 1.0 ul

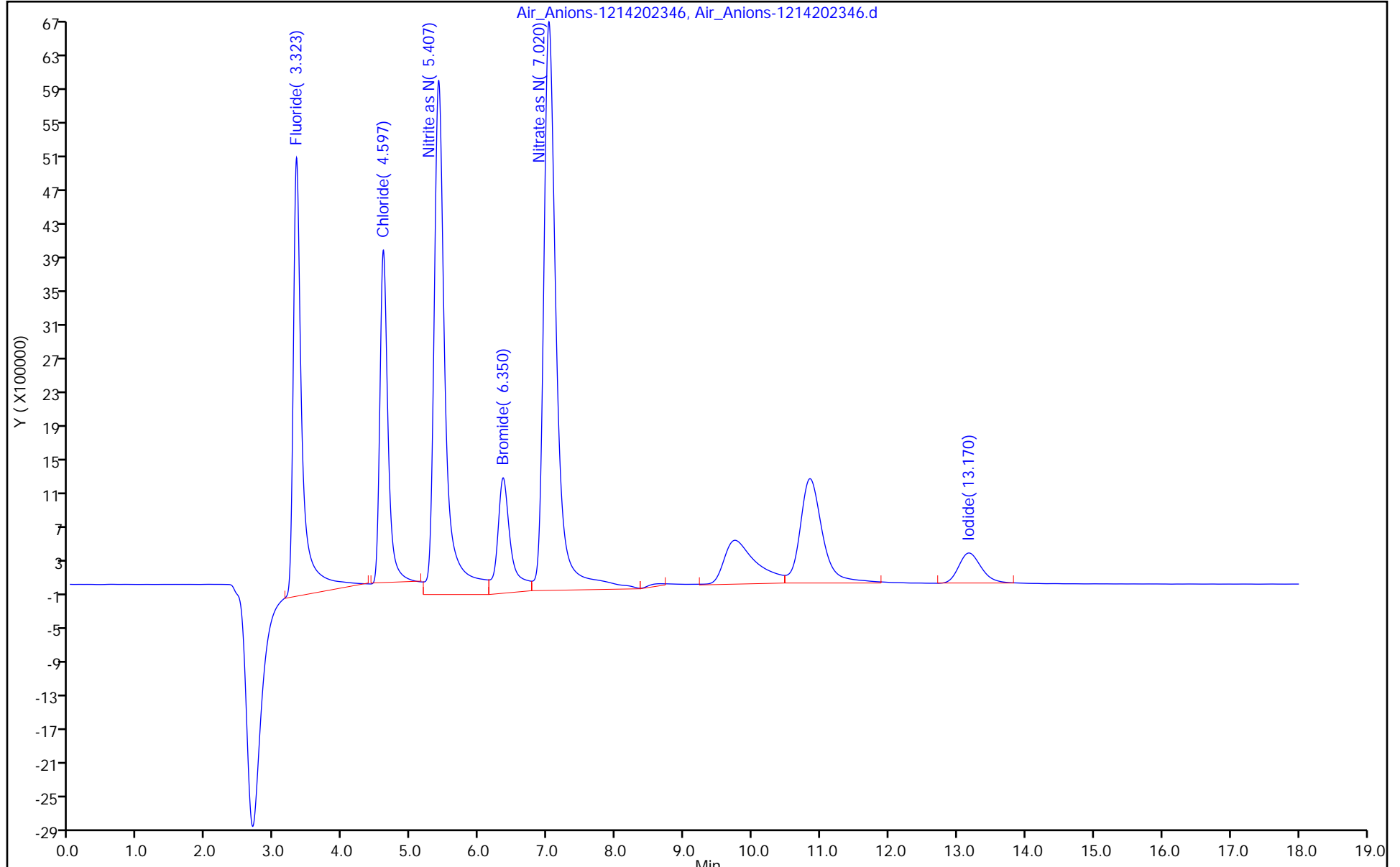
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

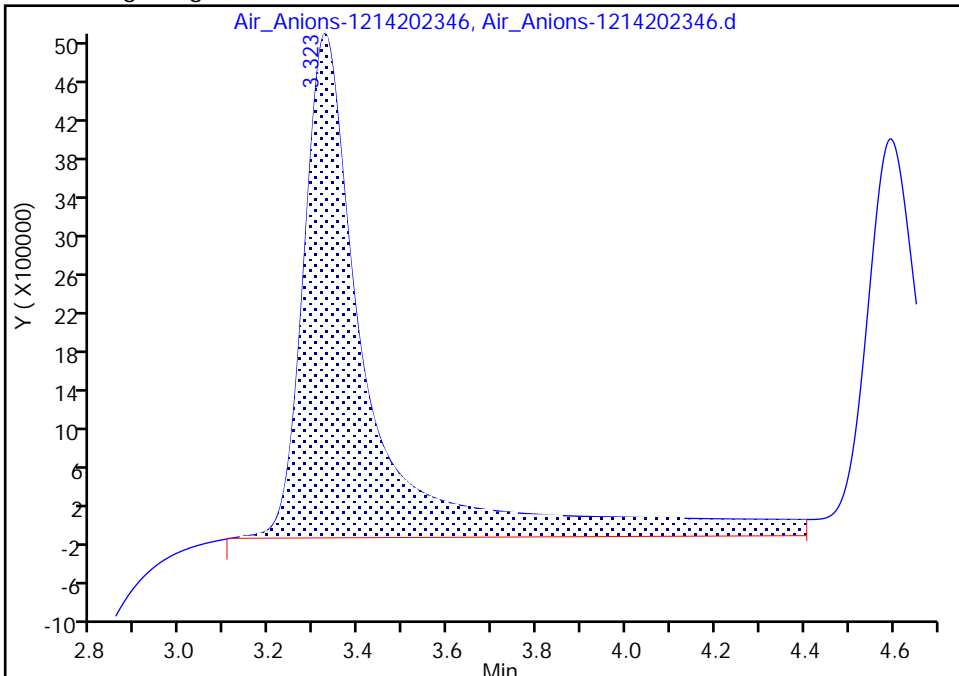
Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.bAir\_Anions-1214202346.d  
Injection Date: 15-Dec-2023 00:32:00 Instrument ID: IC4  
Lims ID: CCV  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 37  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

1 Fluoride, CAS: 16984-48-8

Signal: 1

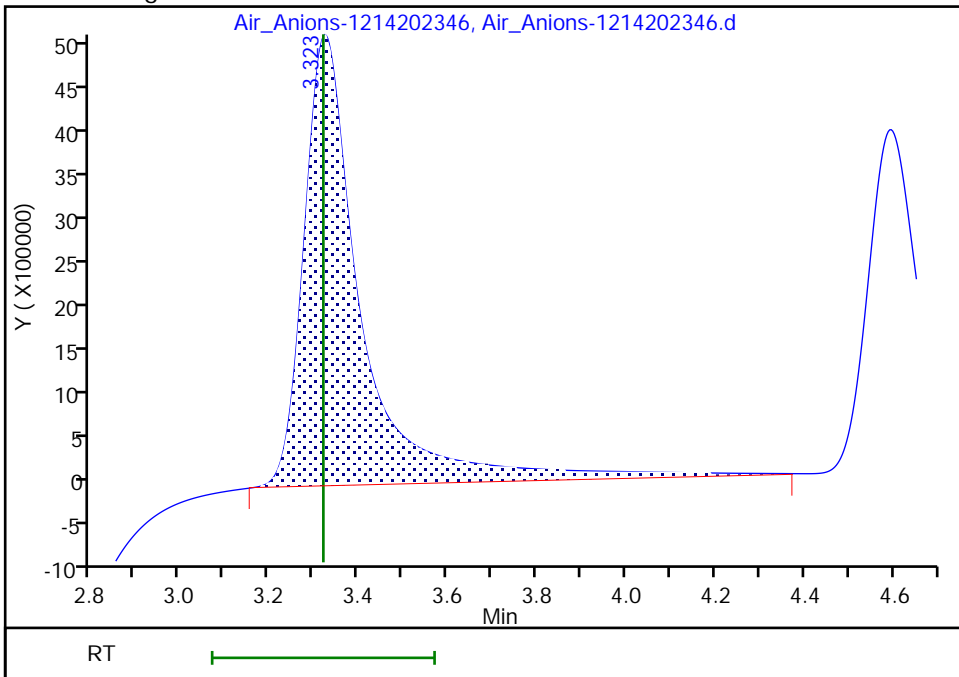
RT: 3.32  
Area: 54796144  
Amount: 1.182770  
Amount Units: ug/ml

Processing Integration Results



RT: 3.32  
Area: 46600080  
Amount: 1.019145  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 15-Dec-2023 09:34:00 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Knoxville

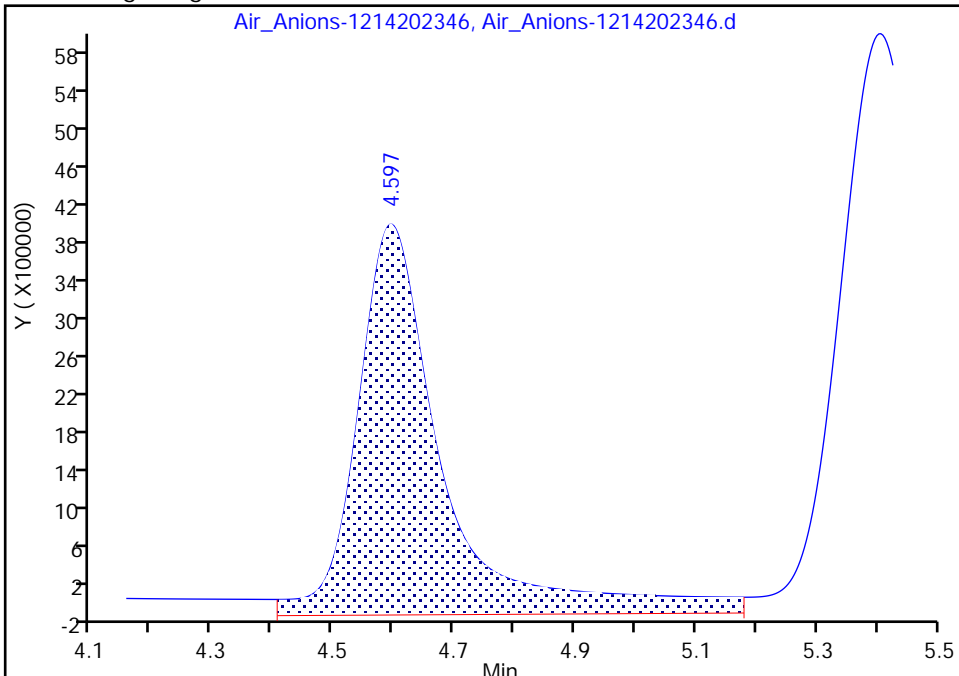
Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202346.d  
Injection Date: 15-Dec-2023 00:32:00 Instrument ID: IC4  
Lims ID: CCV  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 37  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

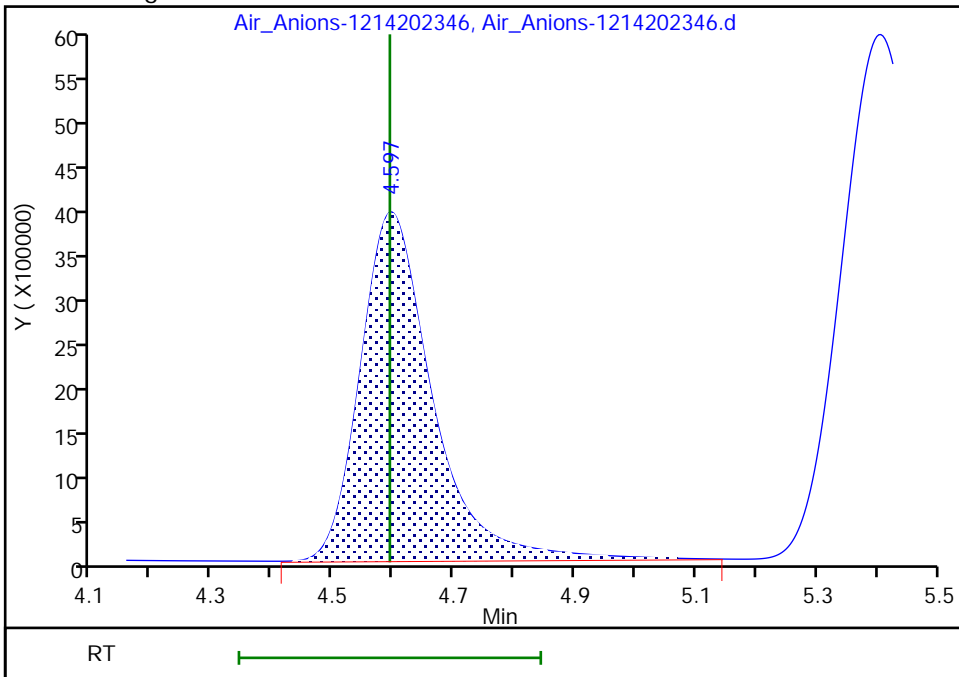
RT: 4.60  
Area: 40365184  
Amount: 1.279023  
Amount Units: ug/ml

Processing Integration Results



RT: 4.60  
Area: 32549974  
Amount: 1.043953  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 15-Dec-2023 09:34:01 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

FORM VII  
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-81419/40 Calibration Date: 12/15/2023 01:59  
 Instrument ID: IC4 Calib Start Date: 08/21/2023 18:48  
 GC Column: AS22 ID: \_\_\_\_\_ Calib End Date: 08/21/2023 21:01  
 Lab File ID: Air\_Anions-1214202349.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	QuaF		46538198		1.02	1.00	1.8	10.0
Chloride	QuaF		32401817		1.04	1.00	3.9	10.0
Nitrite as N	QuaF		70271761		1.05	1.00	4.6	10.0
Bromide	QuaF		17795243		1.30	1.00	30.1*	10.0
Nitrate as N	QuaF		86871825		1.11	1.00	11.2*	10.0
Iodide	QuaF		8113062		1.03	1.00	2.7	10.0
Orthophosphate as P	QuaF					1.00	-100.0*	10.0

FORM VII  
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-81419/40 Calibration Date: 12/15/2023 01:59  
 Instrument ID: IC4 Calib Start Date: 08/21/2023 18:48  
 GC Column: AS22 ID: \_\_\_\_\_ Calib End Date: 08/21/2023 21:01  
 Lab File ID: Air\_Anions-1214202349.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.32	3.07	3.57
Chloride	4.60	4.34	4.84
Nitrite as N	5.41	5.15	5.65
Bromide	6.35	6.09	6.59
Nitrate as N	7.02	6.76	7.26
Iodide	13.18	12.91	13.41
Orthophosphate as P			

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202349.d  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 15-Dec-2023 01:59:00 ALS Bottle#: 0 Worklist Smp#: 40  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0030874-040  
 Misc. Info.: CCV  
 Operator ID: Instrument ID: IC4  
 Sublist: chrom-0050\_26A\_IC4\*sub8  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:36:18 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICAL File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:34:30

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.323	3.320	0.003	46538198	1.00	1.02	M
2 Chloride	4.597	4.593	0.004	32401817	1.00	1.04	M
3 Nitrite as N	5.407	5.400	0.007	70271761	1.00	1.05	
4 Bromide	6.350	6.343	0.007	17795243	1.00	1.30	
5 Nitrate as N	7.023	7.013	0.010	86871825	1.00	1.11	
19 Orthophosphate as P		9.280			ND	ND	
6 Iodide	13.180	13.163	0.017	8113062	1.00	1.03	
S 11 Nitrous Acid					3.36	3.51	
S 12 Br					1.00	1.30	
S 13 Chlorine					1.00	1.04	
S 10 Nitric acid					4.50	5.00	
S 7 Hydrogen Chloride					1.03	1.07	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid					1.01	1.32	
S 22 Hydrogen Iodide						1.04	
S 8 Hydro Fluoric Acid					1.05	1.07	
S 21 Phosphate as H3PO4		0.000				ND	

**QC Flag Legend**

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

**Reagents:**

85L6M26AP\_00055

Amount Added: 10.00

Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202349.d

Injection Date: 15-Dec-2023 01:59:00

Instrument ID: IC4

Operator ID:

Lims ID: CCV

Worklist Smp#: 40

Client ID:

Injection Vol: 1.0 ul

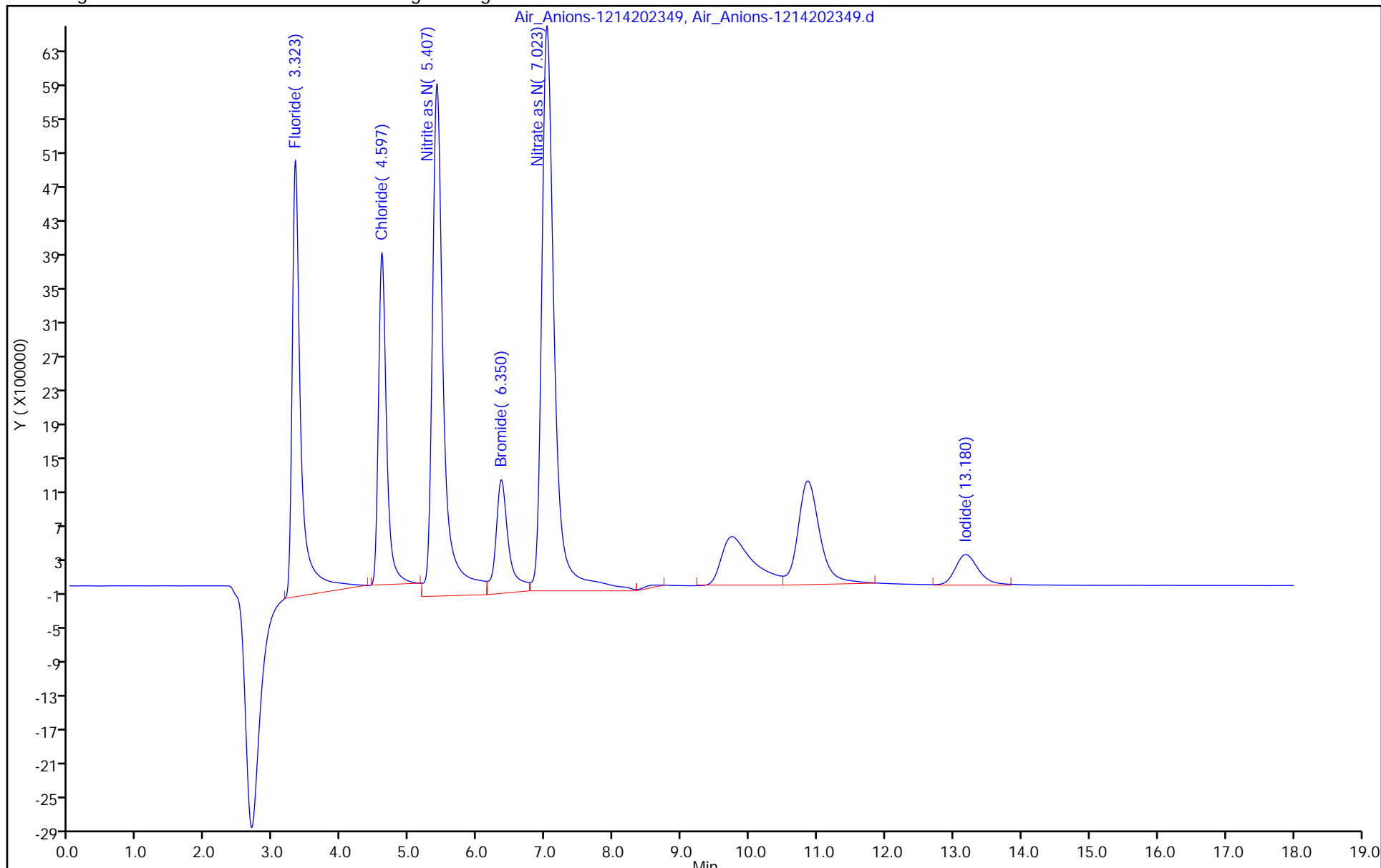
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1





Eurofins Knoxville

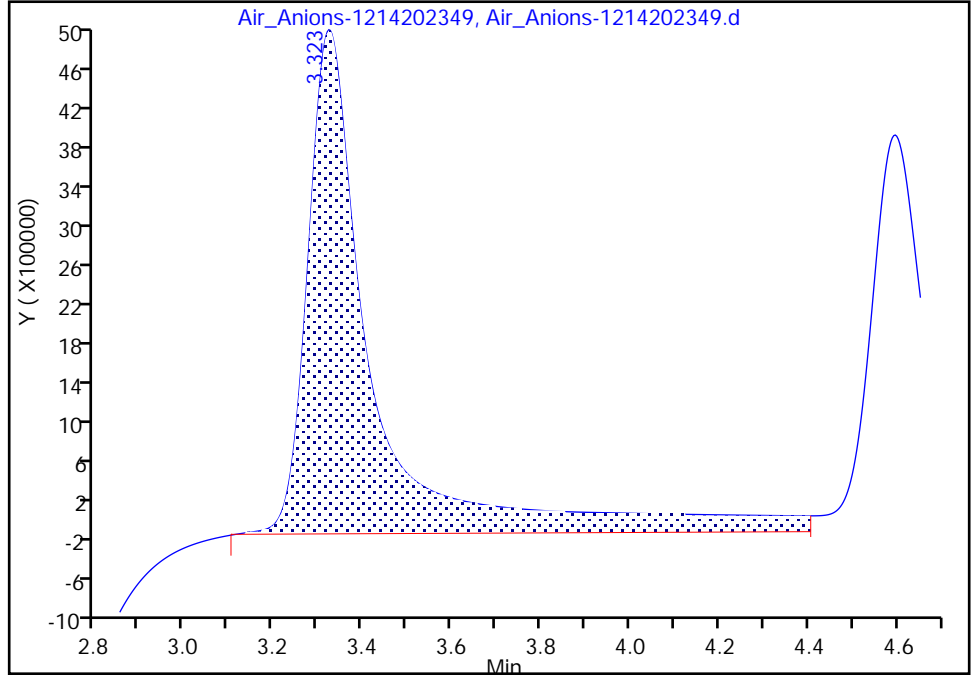
Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202349.d  
Injection Date: 15-Dec-2023 01:59:00 Instrument ID: IC4  
Lims ID: CCV  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 40  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

1 Fluoride, CAS: 16984-48-8

Signal: 1

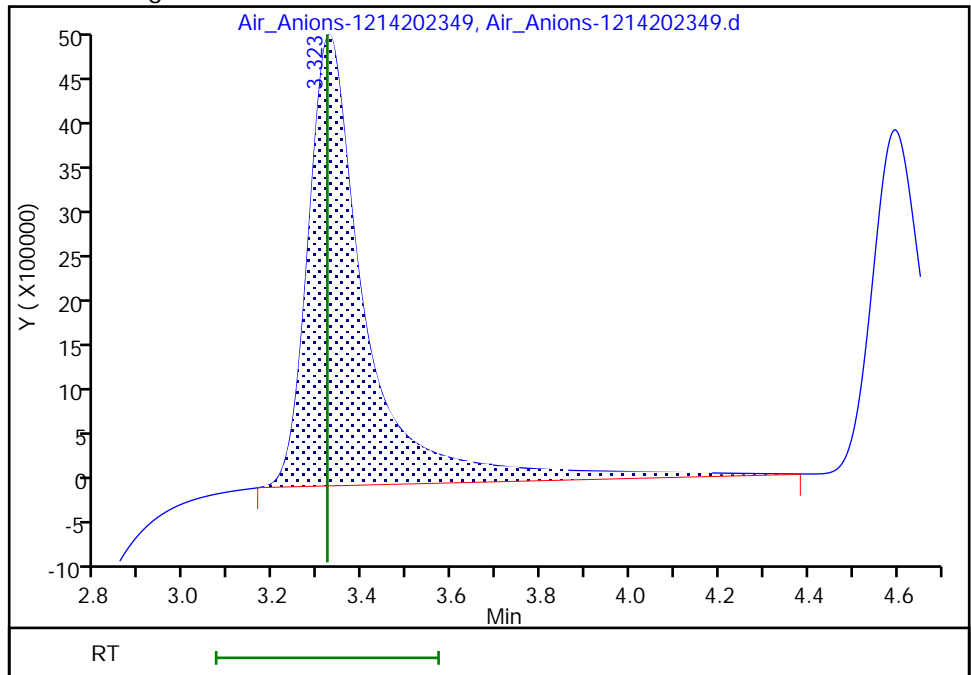
RT: 3.32  
Area: 54766067  
Amount: 1.182176  
Amount Units: ug/ml

Processing Integration Results



RT: 3.32  
Area: 46538198  
Amount: 1.017894  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 15-Dec-2023 09:34:25 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Knoxville

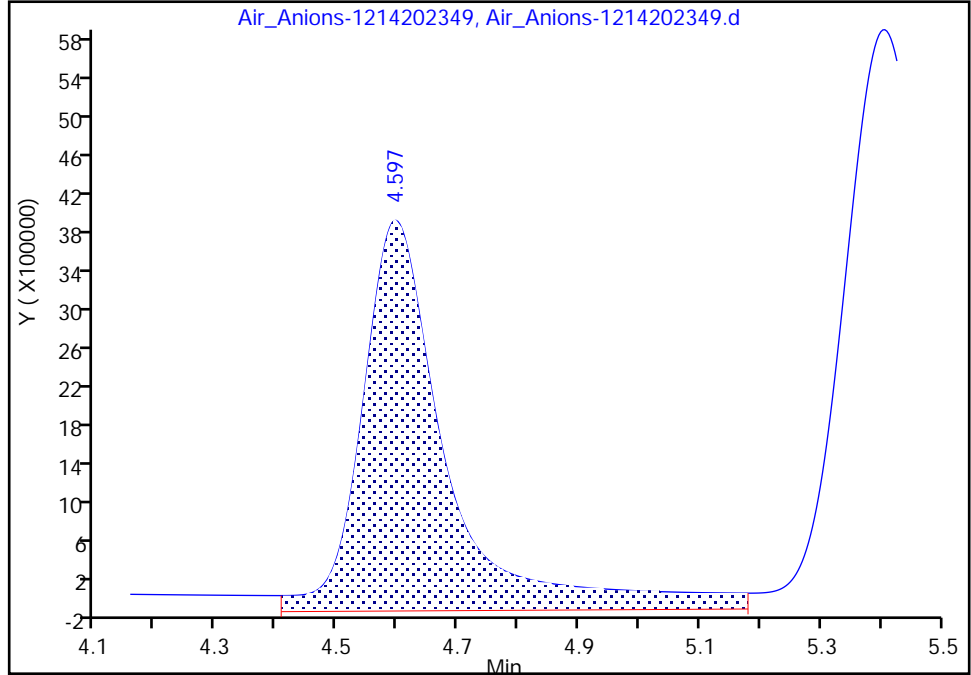
Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202349.d  
Injection Date: 15-Dec-2023 01:59:00 Instrument ID: IC4  
Lims ID: CCV  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 40  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

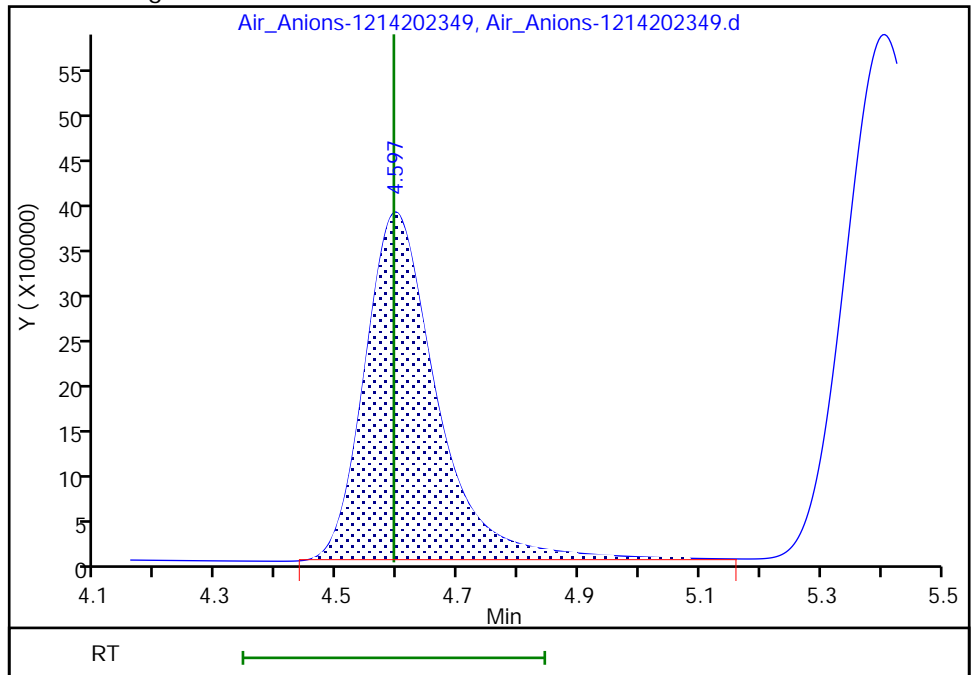
RT: 4.60  
Area: 40231331  
Amount: 1.275041  
Amount Units: ug/ml

Processing Integration Results



RT: 4.60  
Area: 32401817  
Amount: 1.039444  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 15-Dec-2023 09:34:27 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

FORM VII  
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-81494/1 Calibration Date: 12/15/2023 19:19  
 Instrument ID: IC4 Calib Start Date: 08/21/2023 18:48  
 GC Column: AS22 ID: \_\_\_\_\_ Calib End Date: 08/21/2023 21:01  
 Lab File ID: Air\_Anions-1215202310.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	QuaF		46846408		1.02	1.00	2.4	10.0
Chloride	QuaF		32345003		1.04	1.00	3.8	10.0
Nitrite as N	QuaF		70645531		1.05	1.00	5.1	10.0
Bromide	QuaF		17839986		1.30	1.00	30.4*	10.0
Nitrate as N	QuaF		86878643		1.11	1.00	11.2*	10.0
Iodide	QuaF		8102221		1.03	1.00	2.6	10.0
Orthophosphate as P	QuaF					1.00	-100.0*	10.0

FORM VII  
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-81494/1 Calibration Date: 12/15/2023 19:19  
 Instrument ID: IC4 Calib Start Date: 08/21/2023 18:48  
 GC Column: AS22 ID: \_\_\_\_\_ Calib End Date: 08/21/2023 21:01  
 Lab File ID: Air\_Anions-1215202310.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.32	3.07	3.57
Chloride	4.60	4.35	4.85
Nitrite as N	5.41	5.16	5.66
Bromide	6.35	6.10	6.60
Nitrate as N	7.02	6.77	7.27
Iodide	13.17	12.92	13.42
Orthophosphate as P			

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202310.d  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 15-Dec-2023 19:19:00 ALS Bottle#: 0 Worklist Smp#: 1  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0030907-001  
 Misc. Info.: CCV  
 Operator ID: Instrument ID: IC4  
 Sublist: chrom-0050\_26A\_IC4\*sub8  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:04:55 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICAL File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

First Level Reviewer: EXJ2 Date: 18-Dec-2023 12:00:19

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.323	3.323	0.000	46846408	1.00	1.02	M
2 Chloride	4.597	4.597	0.000	32345003	1.00	1.04	M
3 Nitrite as N	5.407	5.407	0.000	70645531	1.00	1.05	
4 Bromide	6.350	6.350	0.000	17839986	1.00	1.30	
5 Nitrate as N	7.023	7.023	0.000	86878643	1.00	1.11	
19 Orthophosphate as P		9.280			ND	ND	
6 Iodide	13.173	13.173	0.000	8102221	1.00	1.03	
S 11 Nitrous Acid					3.36	3.53	
S 12 Br					1.00	1.30	
S 13 Chlorine					1.00	1.04	
S 10 Nitric acid					4.50	5.00	
S 7 Hydrogen Chloride					1.03	1.07	
S 9 Hydrobromic Acid					1.01	1.32	
S 8 Hydro Fluoric Acid					1.05	1.08	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

85L6M26AP\_00055 Amount Added: 10.00 Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202310.d

Injection Date: 15-Dec-2023 19:19:00

Instrument ID: IC4

Operator ID:

Lims ID: CCV

Worklist Smp#: 1

Client ID:

Injection Vol: 1.0 ul

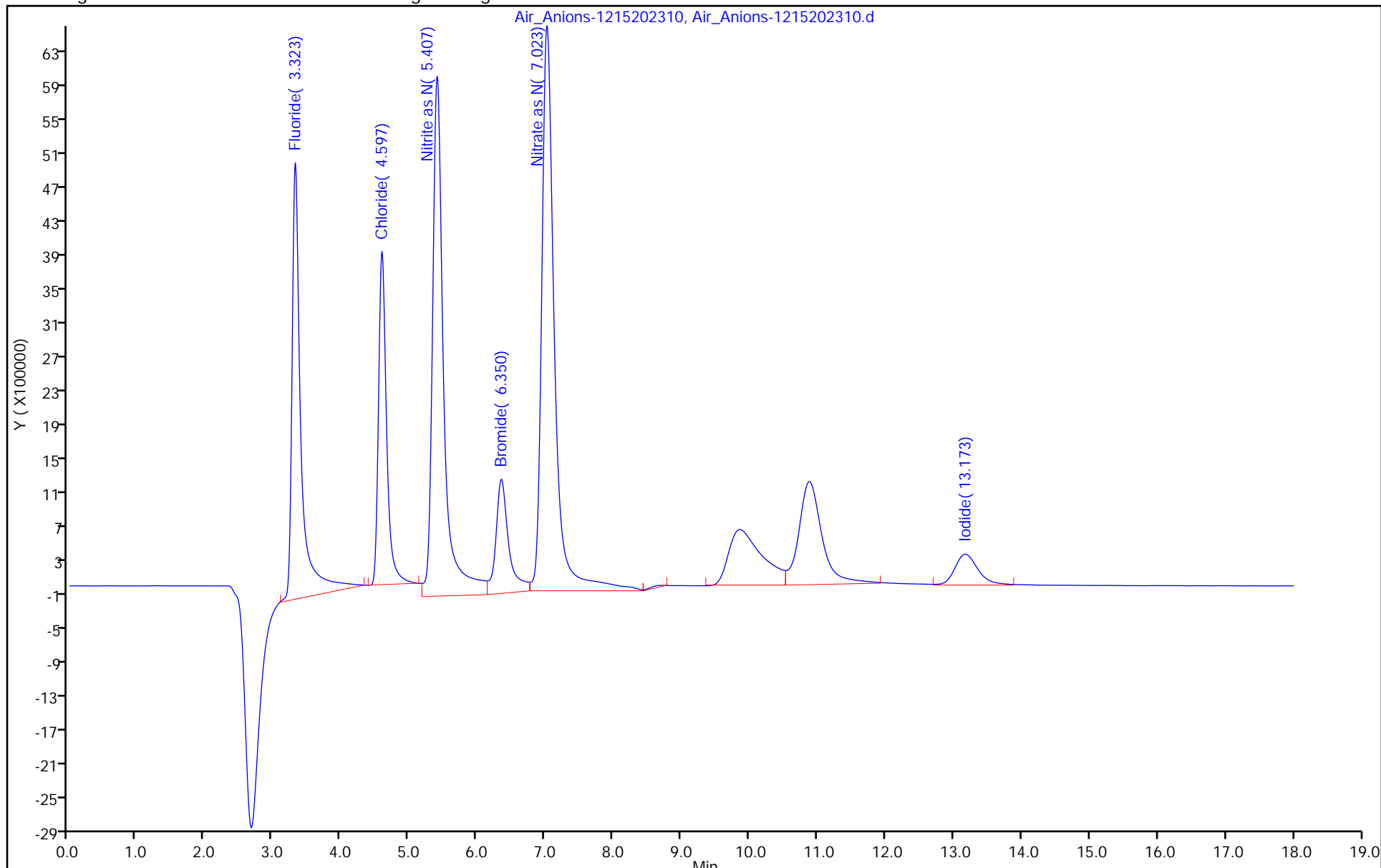
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

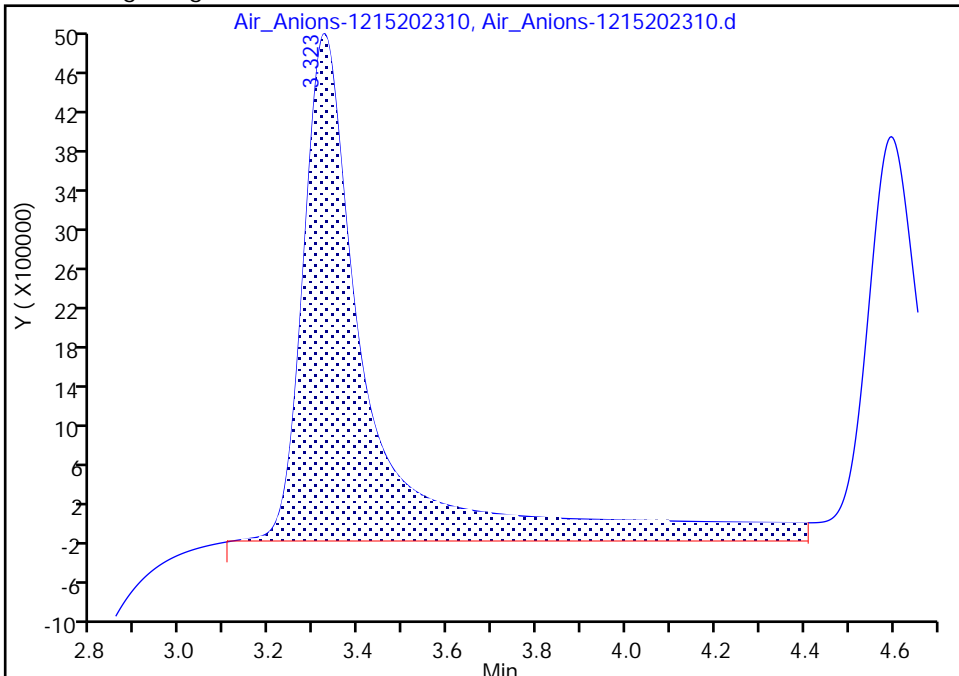
Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202310.d  
Injection Date: 15-Dec-2023 19:19:00 Instrument ID: IC4  
Lims ID: CCV  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 1  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

1 Fluoride, CAS: 16984-48-8

Signal: 1

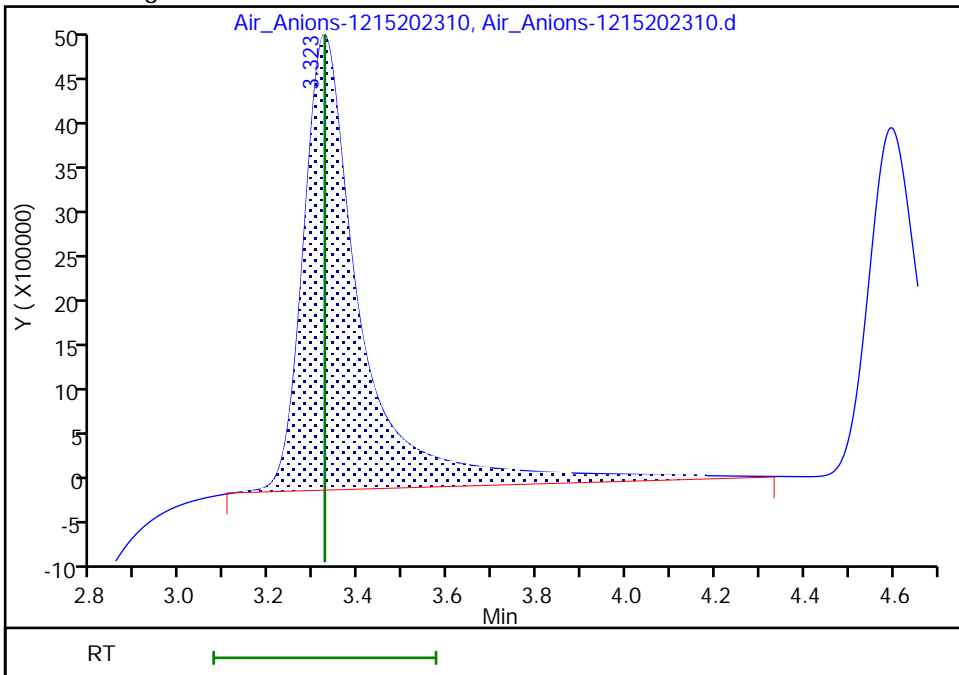
RT: 3.32  
Area: 54118483  
Amount: 1.169389  
Amount Units: ug/ml

Processing Integration Results



RT: 3.32  
Area: 46846408  
Amount: 1.024121  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 18-Dec-2023 12:00:15 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Knoxville

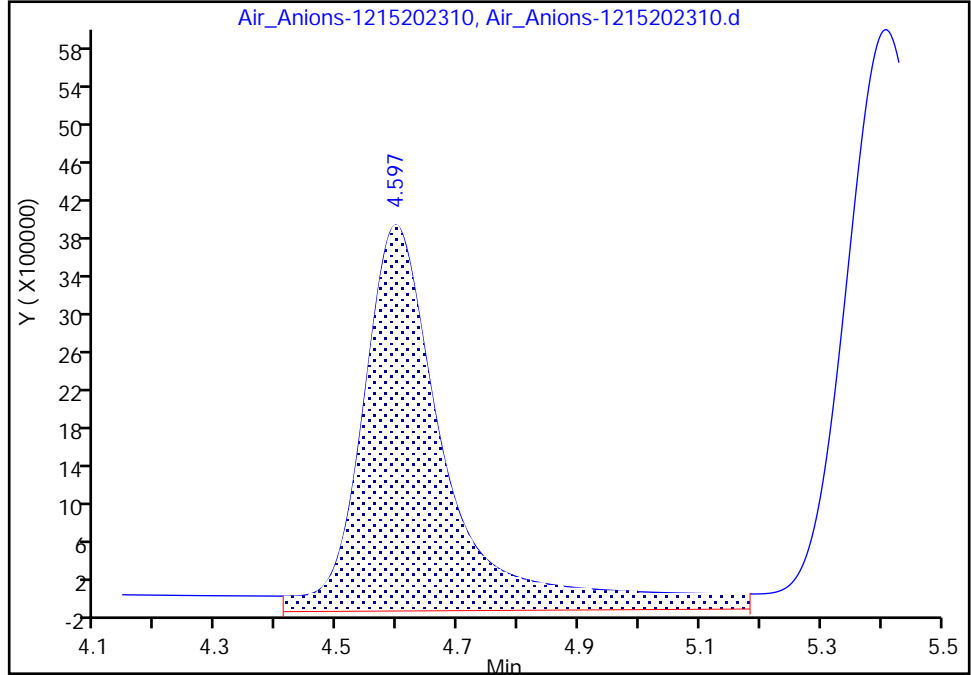
Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202310.d  
Injection Date: 15-Dec-2023 19:19:00 Instrument ID: IC4  
Lims ID: CCV  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 1  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

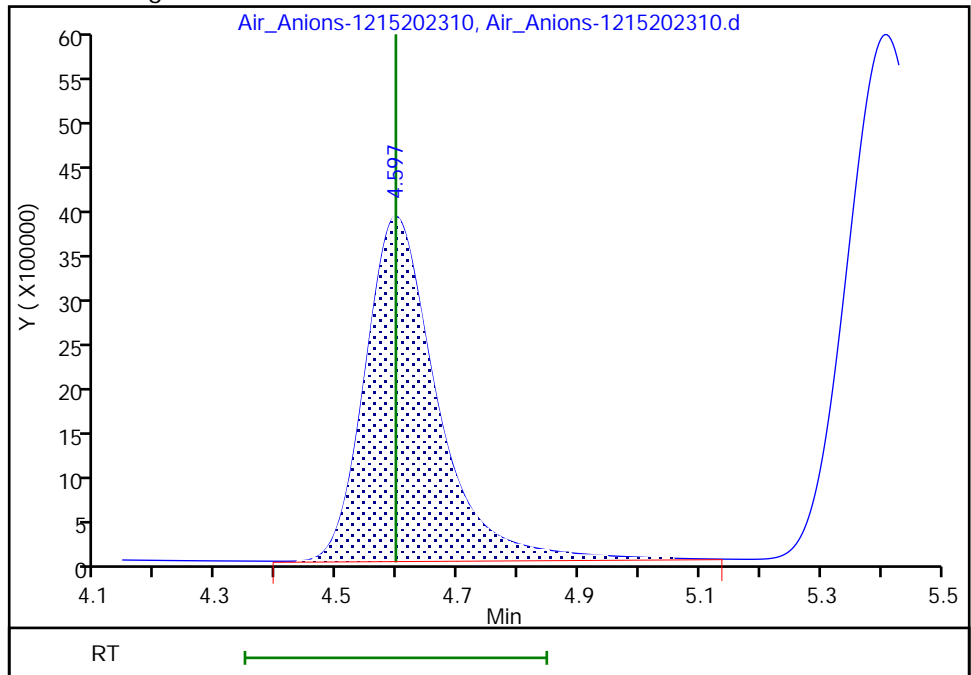
RT: 4.60  
Area: 39991149  
Amount: 1.267894  
Amount Units: ug/ml

Processing Integration Results



RT: 4.60  
Area: 32345003  
Amount: 1.037715  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 18-Dec-2023 12:00:17 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing



FORM VII  
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-81494/13 Calibration Date: 12/16/2023 02:25  
 Instrument ID: IC4 Calib Start Date: 08/21/2023 18:48  
 GC Column: AS22 ID: \_\_\_\_\_ Calib End Date: 08/21/2023 21:01  
 Lab File ID: Air\_Anions-1215202322.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	QuaF		46122904		1.01	1.00	0.9	10.0
Chloride	QuaF		32582949		1.05	1.00	4.5	10.0
Nitrite as N	QuaF		70220407		1.05	1.00	4.5	10.0
Bromide	QuaF		17637287		1.29	1.00	29.0*	10.0
Nitrate as N	QuaF		86747527		1.11	1.00	11.1*	10.0
Iodide	QuaF		8036357		1.02	1.00	1.7	10.0
Orthophosphate as P	QuaF					1.00	-100.0*	10.0

FORM VII  
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-81494/13 Calibration Date: 12/16/2023 02:25  
 Instrument ID: IC4 Calib Start Date: 08/21/2023 18:48  
 GC Column: AS22 ID: \_\_\_\_\_ Calib End Date: 08/21/2023 21:01  
 Lab File ID: Air\_Anions-1215202322.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.33	3.07	3.57
Chloride	4.60	4.35	4.85
Nitrite as N	5.41	5.16	5.66
Bromide	6.36	6.10	6.60
Nitrate as N	7.03	6.77	7.27
Iodide	13.19	12.92	13.42
Orthophosphate as P			

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202322.d  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 16-Dec-2023 02:25:00 ALS Bottle#: 0 Worklist Smp#: 13  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0030907-013  
 Misc. Info.: CCV  
 Operator ID: Instrument ID: IC4  
 Sublist: chrom-0050\_26A\_IC4\*sub8  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:05:01 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICAL File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

First Level Reviewer: EXJ2 Date: 18-Dec-2023 12:01:59

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.327	3.323	0.004	46122904	1.00	1.01	M
2 Chloride	4.603	4.597	0.006	32582949	1.00	1.04	M
3 Nitrite as N	5.413	5.407	0.006	70220407	1.00	1.05	
4 Bromide	6.360	6.350	0.010	17637287	1.00	1.29	
5 Nitrate as N	7.030	7.023	0.007	86747527	1.00	1.11	
19 Orthophosphate as P		9.280			ND	ND	
6 Iodide	13.190	13.173	0.017	8036357	1.00	1.02	
S 11 Nitrous Acid					3.36	3.51	
S 12 Br					1.00	1.29	
S 13 Chlorine					1.00	1.04	
S 10 Nitric acid					4.50	5.00	
S 7 Hydrogen Chloride					1.03	1.07	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid					1.01	1.31	
S 22 Hydrogen Iodide						1.03	
S 8 Hydro Fluoric Acid					1.05	1.06	
S 21 Phosphate as H3PO4		0.000				ND	

**QC Flag Legend**

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

**Reagents:**

85L6M26AP\_00055

Amount Added: 10.00

Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202322.d

Injection Date: 16-Dec-2023 02:25:00

Instrument ID: IC4

Operator ID:

Lims ID: CCV

Worklist Smp#: 13

Client ID:

Injection Vol: 1.0 ul

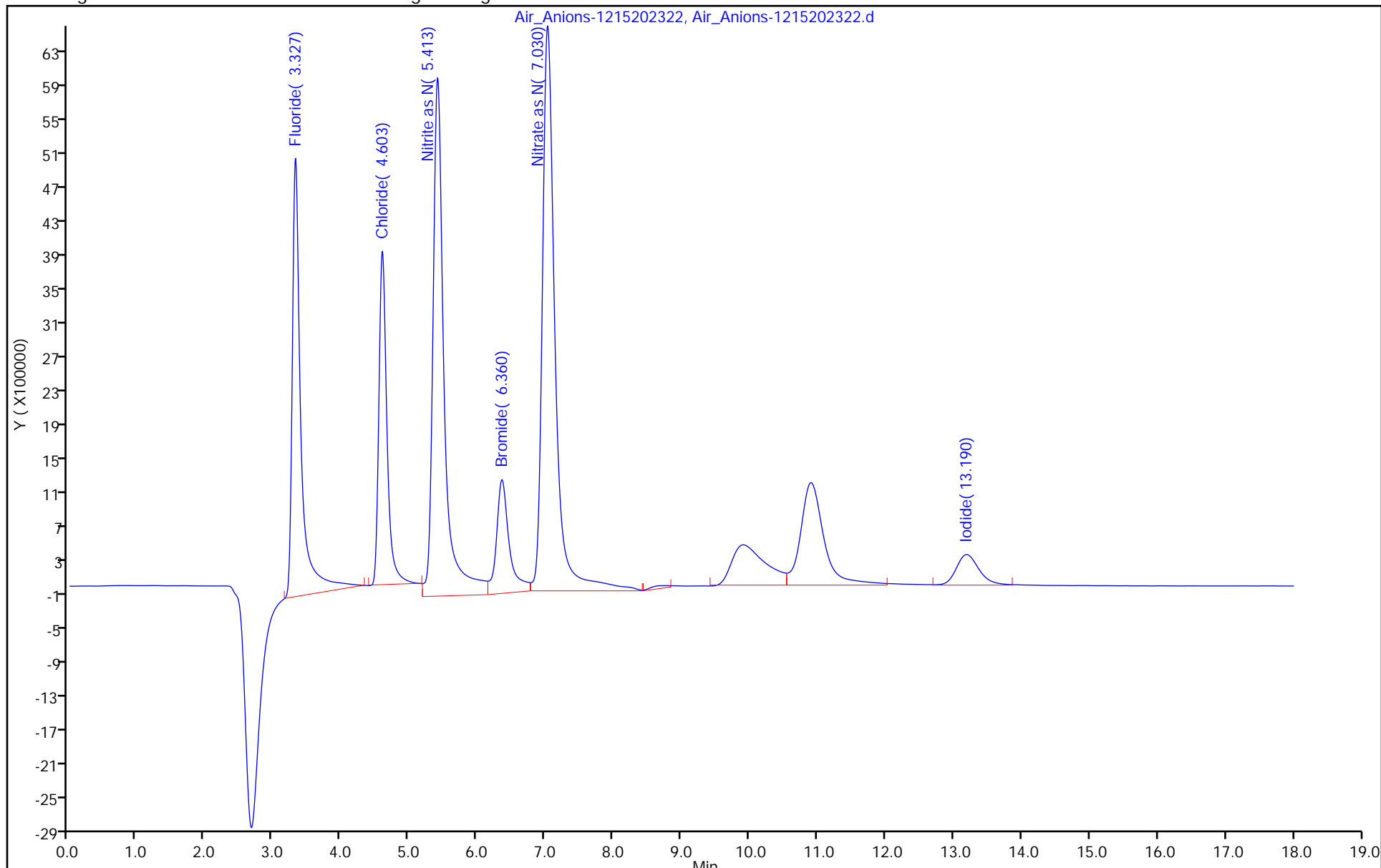
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

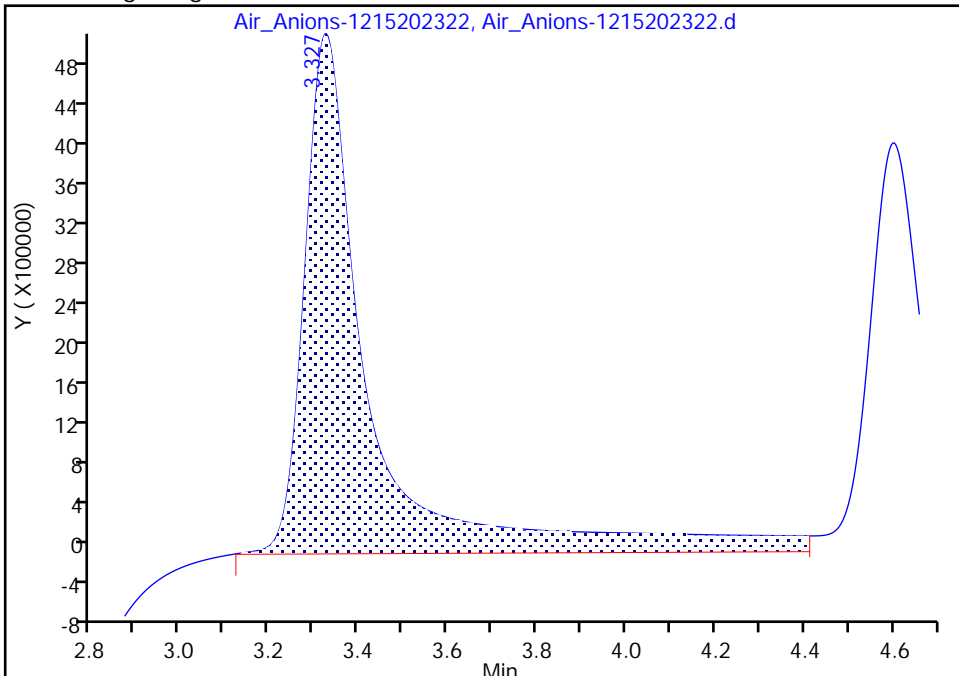
Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202322.d  
Injection Date: 16-Dec-2023 02:25:00 Instrument ID: IC4  
Lims ID: CCV  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 13  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

1 Fluoride, CAS: 16984-48-8

Signal: 1

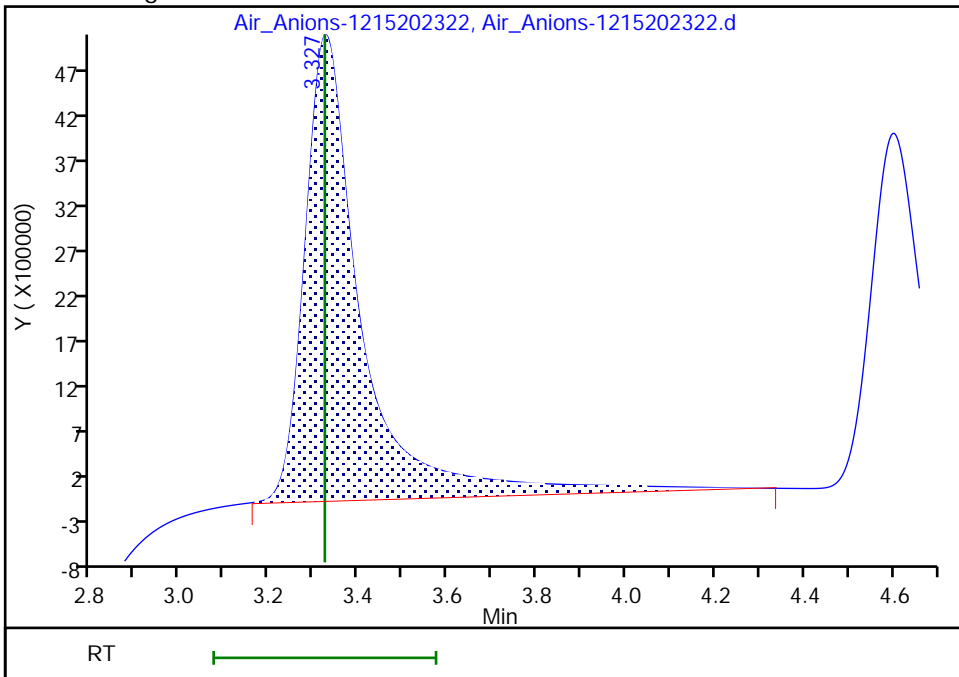
RT: 3.33  
Area: 53474238  
Amount: 1.156644  
Amount Units: ug/ml

Processing Integration Results



RT: 3.33  
Area: 46122904  
Amount: 1.009495  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 18-Dec-2023 12:01:55 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Knoxville

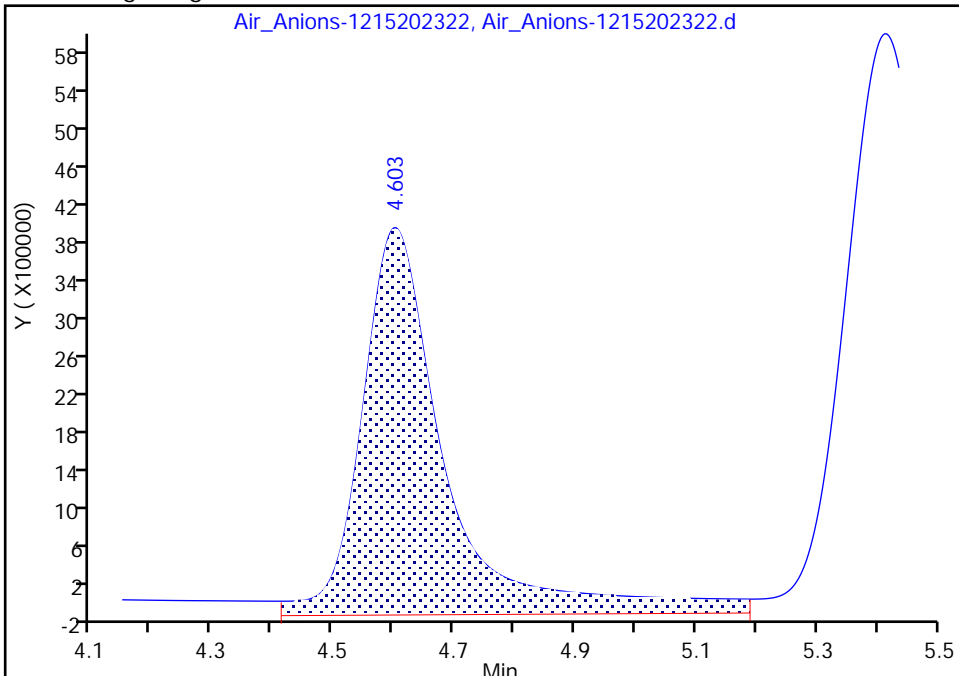
Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202322.d  
Injection Date: 16-Dec-2023 02:25:00 Instrument ID: IC4  
Lims ID: CCV  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 13  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

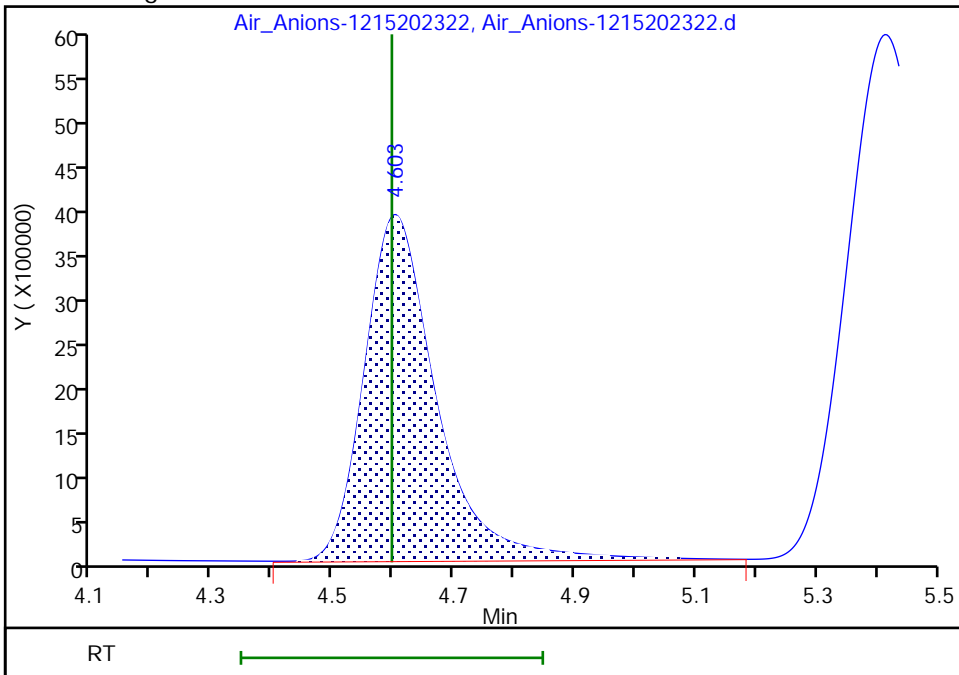
RT: 4.60  
Area: 39699250  
Amount: 1.259200  
Amount Units: ug/ml

Processing Integration Results



RT: 4.60  
Area: 32582949  
Amount: 1.044956  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 18-Dec-2023 12:01:57 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

FORM VII  
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-81494/25 Calibration Date: 12/16/2023 10:12  
 Instrument ID: IC4 Calib Start Date: 08/21/2023 18:48  
 GC Column: AS22 ID: \_\_\_\_\_ Calib End Date: 08/21/2023 21:01  
 Lab File ID: Air\_Anions-1215202334.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	QuaF		46539344		1.02	1.00	1.8	10.0
Chloride	QuaF		32749264		1.05	1.00	5.0	10.0
Nitrite as N	QuaF		70020064		1.04	1.00	4.3	10.0
Bromide	QuaF		17235684		1.26	1.00	26.3*	10.0
Nitrate as N	QuaF		86368997		1.11	1.00	10.6*	10.0
Iodide	QuaF		8053600		1.02	1.00	2.0	10.0
Orthophosphate as P	QuaF					1.00	-100.0*	10.0

FORM VII  
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-81494/25 Calibration Date: 12/16/2023 10:12  
 Instrument ID: IC4 Calib Start Date: 08/21/2023 18:48  
 GC Column: AS22 ID: \_\_\_\_\_ Calib End Date: 08/21/2023 21:01  
 Lab File ID: Air\_Anions-1215202334.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.33	3.07	3.57
Chloride	4.60	4.35	4.85
Nitrite as N	5.42	5.16	5.66
Bromide	6.36	6.10	6.60
Nitrate as N	7.03	6.77	7.27
Iodide	13.20	12.92	13.42
Orthophosphate as P			



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202334.d  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 16-Dec-2023 10:12:00 ALS Bottle#: 0 Worklist Smp#: 25  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0030907-025  
 Misc. Info.: CCV  
 Operator ID: Instrument ID: IC4  
 Sublist: chrom-0050\_26A\_IC4\*sub8  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:05:07 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICAL File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

First Level Reviewer: EXJ2 Date: 18-Dec-2023 12:03:01

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.327	3.323	0.004	46539344	1.00	1.02	M
2 Chloride	4.603	4.597	0.006	32749264	1.00	1.05	M
3 Nitrite as N	5.417	5.407	0.010	70020064	1.00	1.04	
4 Bromide	6.363	6.350	0.013	17235684	1.00	1.26	
5 Nitrate as N	7.033	7.023	0.010	86368997	1.00	1.11	
19 Orthophosphate as P		9.280			ND	ND	
6 Iodide	13.197	13.173	0.024	8053600	1.00	1.02	
S 11 Nitrous Acid					3.36	3.50	
S 12 Br					1.00	1.26	
S 13 Chlorine					1.00	1.05	
S 10 Nitric acid					4.50	4.98	
S 7 Hydrogen Chloride					1.03	1.08	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid					1.01	1.28	
S 22 Hydrogen Iodide						1.03	
S 8 Hydro Fluoric Acid					1.05	1.07	
S 21 Phosphate as H3PO4		0.000				ND	

**QC Flag Legend**

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

**Reagents:**

85L6M26AP\_00055

Amount Added: 10.00

Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202334.d

Injection Date: 16-Dec-2023 10:12:00

Instrument ID: IC4

Operator ID:

Lims ID: CCV

Worklist Smp#: 25

Client ID:

Injection Vol: 1.0 ul

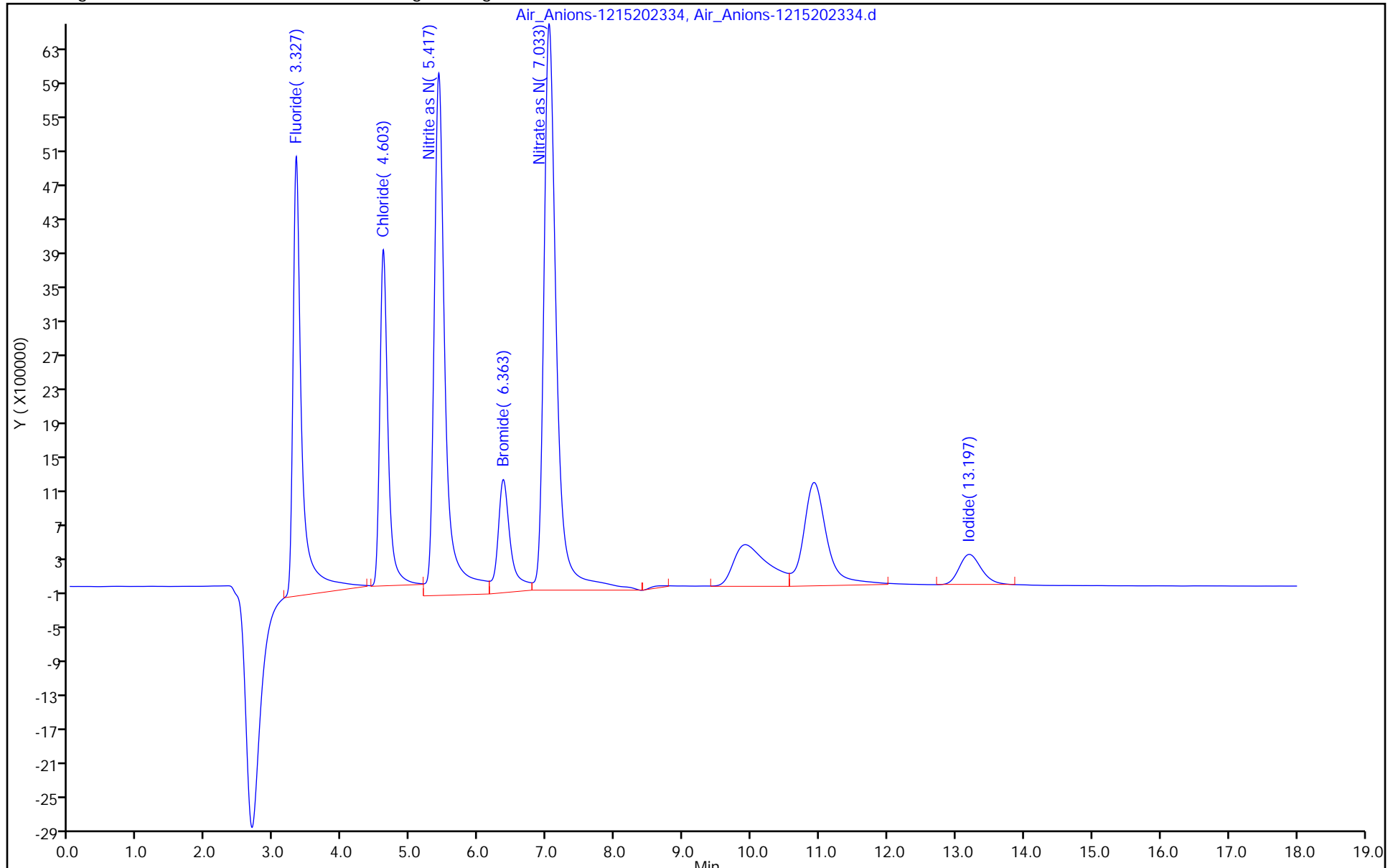
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

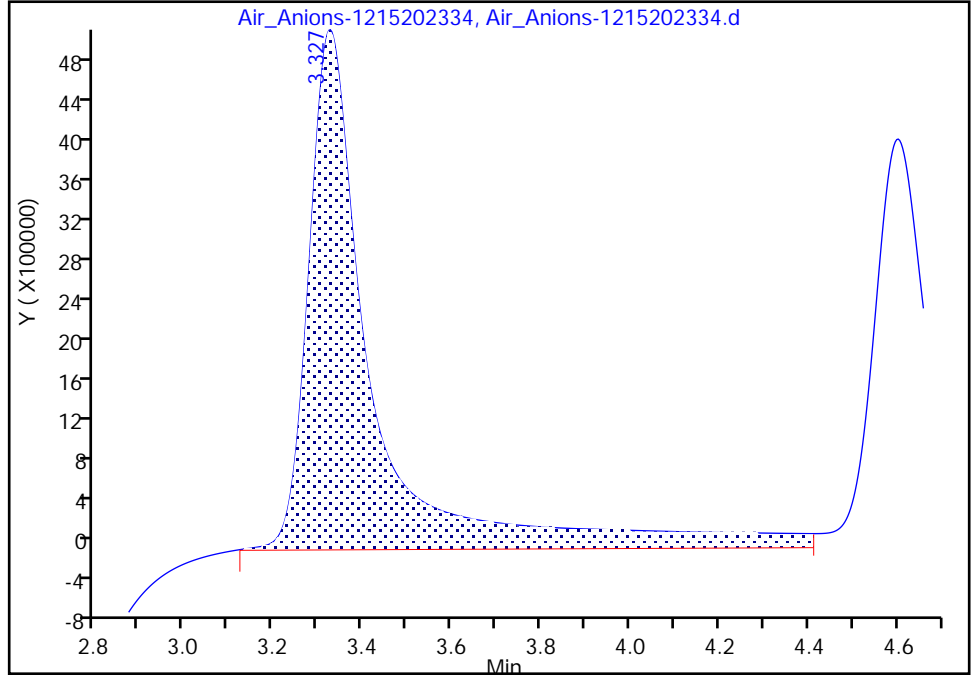
Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202334.d  
Injection Date: 16-Dec-2023 10:12:00 Instrument ID: IC4  
Lims ID: CCV  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 25  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

1 Fluoride, CAS: 16984-48-8

Signal: 1

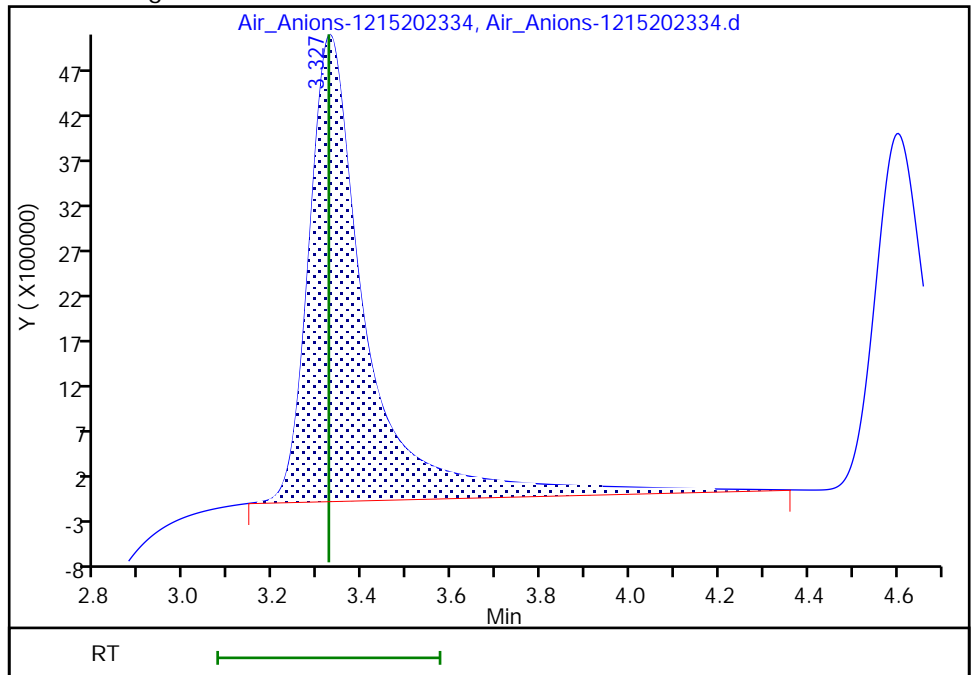
RT: 3.33  
Area: 52751583  
Amount: 1.142319  
Amount Units: ug/ml

Processing Integration Results



RT: 3.33  
Area: 46539344  
Amount: 1.017917  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 18-Dec-2023 12:02:57 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Knoxville

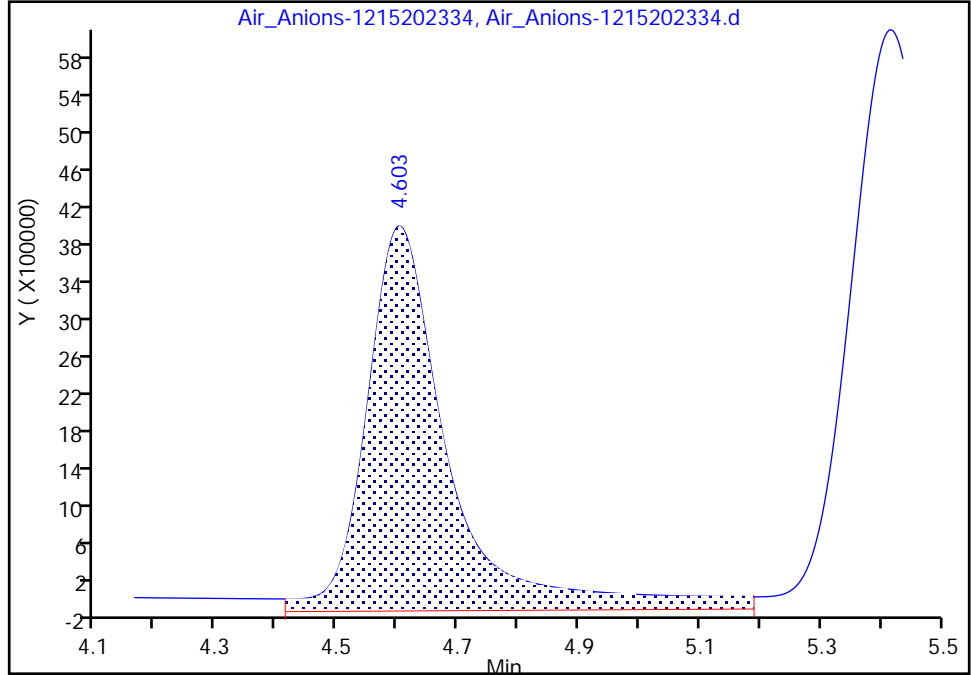
Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202334.d  
Injection Date: 16-Dec-2023 10:12:00 Instrument ID: IC4  
Lims ID: CCV  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 25  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

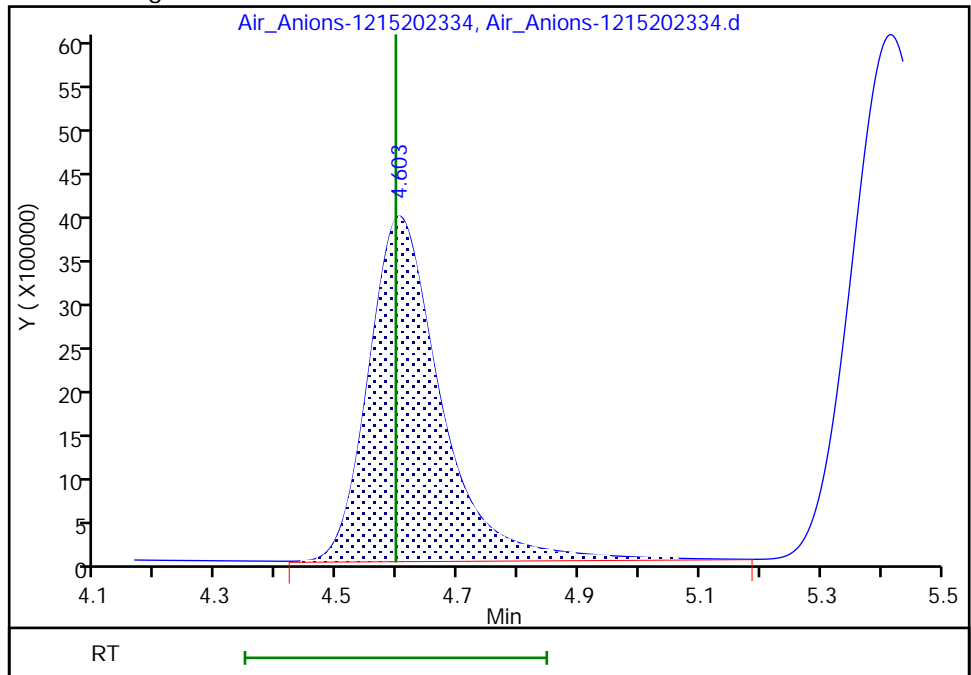
RT: 4.60  
Area: 39108237  
Amount: 1.241575  
Amount Units: ug/ml

Processing Integration Results



RT: 4.60  
Area: 32749264  
Amount: 1.050015  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 18-Dec-2023 12:02:58 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

FORM VII  
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-81494/36 Calibration Date: 12/16/2023 17:16  
 Instrument ID: IC4 Calib Start Date: 08/21/2023 18:48  
 GC Column: AS22 ID: \_\_\_\_\_ Calib End Date: 08/21/2023 21:01  
 Lab File ID: Air\_Anions-1215202345.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	QuaF		46288055		1.01	1.00	1.3	10.0
Chloride	QuaF		32808285		1.05	1.00	5.2	10.0
Nitrite as N	QuaF		71182364		1.06	1.00	5.9	10.0
Bromide	QuaF		17545313		1.28	1.00	28.4*	10.0
Nitrate as N	QuaF		86763725		1.11	1.00	11.1*	10.0
Iodide	QuaF		8075542		1.02	1.00	2.2	10.0
Orthophosphate as P	QuaF					1.00	-100.0*	10.0

FORM VII  
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-81494/36 Calibration Date: 12/16/2023 17:16  
 Instrument ID: IC4 Calib Start Date: 08/21/2023 18:48  
 GC Column: AS22 ID: \_\_\_\_\_ Calib End Date: 08/21/2023 21:01  
 Lab File ID: Air\_Anions-1215202345.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.33	3.07	3.57
Chloride	4.60	4.35	4.85
Nitrite as N	5.42	5.16	5.66
Bromide	6.36	6.10	6.60
Nitrate as N	7.04	6.77	7.27
Iodide	13.20	12.92	13.42
Orthophosphate as P			

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202345.d  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 16-Dec-2023 17:16:00 ALS Bottle#: 0 Worklist Smp#: 36  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0030907-036  
 Misc. Info.: CCV  
 Operator ID: Instrument ID: IC4  
 Sublist: chrom-0050\_26A\_IC4\*sub8  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:05:12 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICAL File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

First Level Reviewer: EXJ2 Date: 18-Dec-2023 12:04:34

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.327	3.323	0.004	46288055	1.00	1.01	M
2 Chloride	4.603	4.597	0.006	32808285	1.00	1.05	M
3 Nitrite as N	5.417	5.407	0.010	71182364	1.00	1.06	
4 Bromide	6.363	6.350	0.013	17545313	1.00	1.28	
5 Nitrate as N	7.037	7.023	0.014	86763725	1.00	1.11	
19 Orthophosphate as P		9.280			ND	ND	
6 Iodide	13.203	13.173	0.030	8075542	1.00	1.02	
S 11 Nitrous Acid					3.36	3.55	
S 12 Br					1.00	1.28	
S 13 Chlorine					1.00	1.05	
S 10 Nitric acid					4.50	5.00	
S 7 Hydrogen Chloride					1.03	1.08	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid					1.01	1.30	
S 22 Hydrogen Iodide						1.03	
S 8 Hydro Fluoric Acid					1.05	1.07	
S 21 Phosphate as H3PO4		0.000				ND	

**QC Flag Legend**

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

**Reagents:**

85L6M26AP\_00055

Amount Added: 10.00

Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202345.d

Injection Date: 16-Dec-2023 17:16:00

Instrument ID: IC4

Operator ID:

Lims ID: CCV

Worklist Smp#: 36

Client ID:

Injection Vol: 1.0 ul

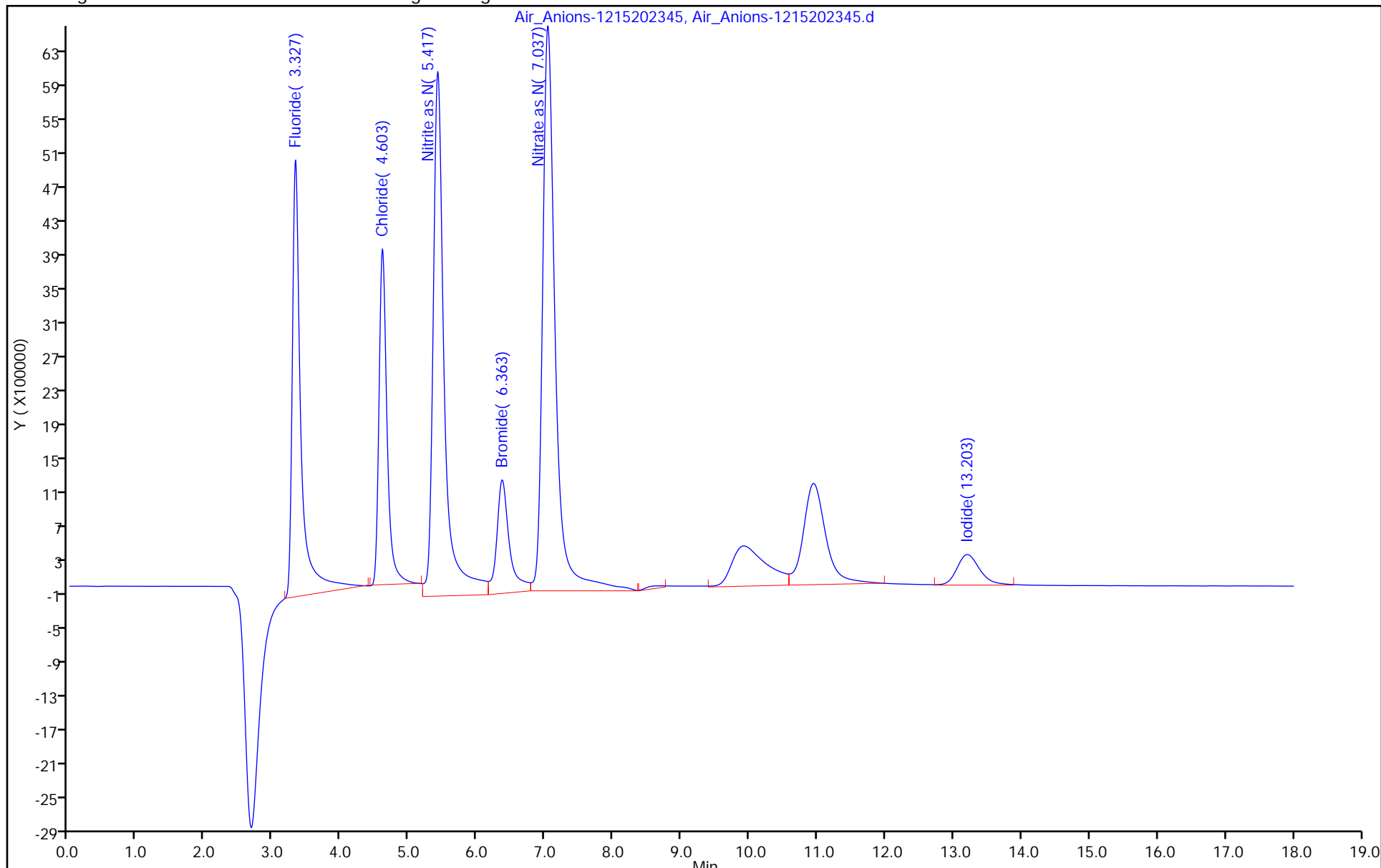
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1





Eurofins Knoxville

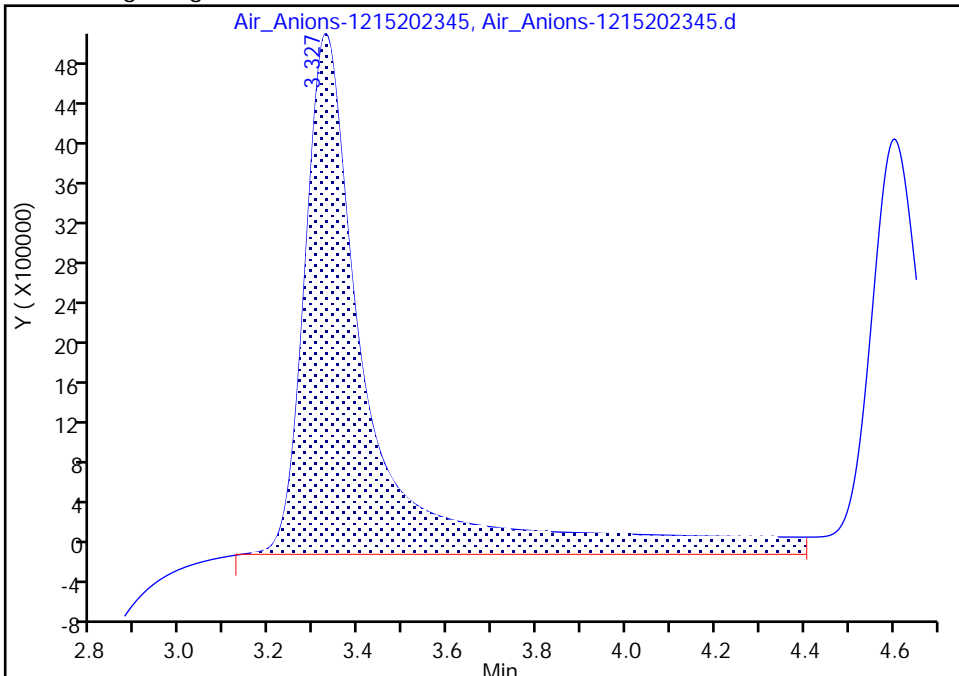
Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202345.d  
Injection Date: 16-Dec-2023 17:16:00 Instrument ID: IC4  
Lims ID: CCV  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 36  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

1 Fluoride, CAS: 16984-48-8

Signal: 1

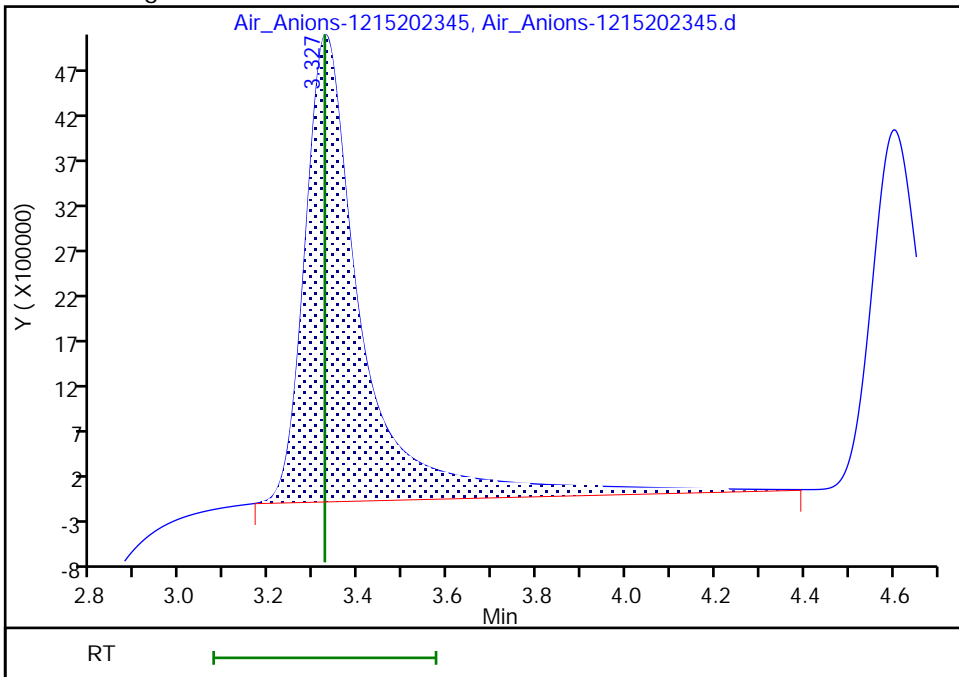
RT: 3.33  
Area: 53299114  
Amount: 1.153175  
Amount Units: ug/ml

Processing Integration Results



RT: 3.33  
Area: 46288055  
Amount: 1.012836  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 18-Dec-2023 12:04:29 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Knoxville

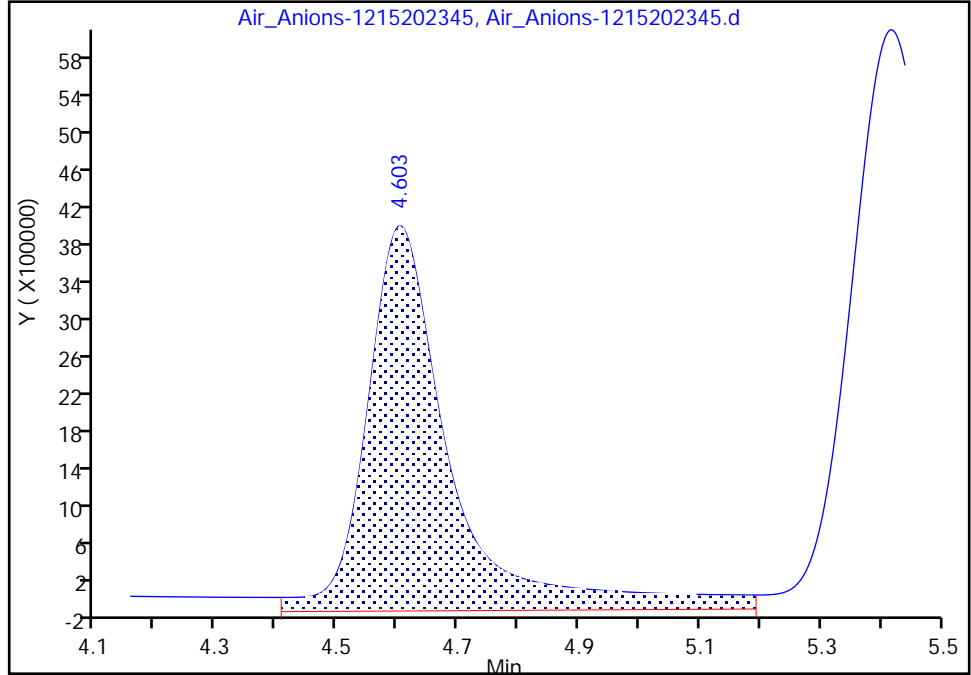
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Injection Date: 16-Dec-2023 17:16:00 Instrument ID: IC4  
Lims ID: CCV  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 36  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

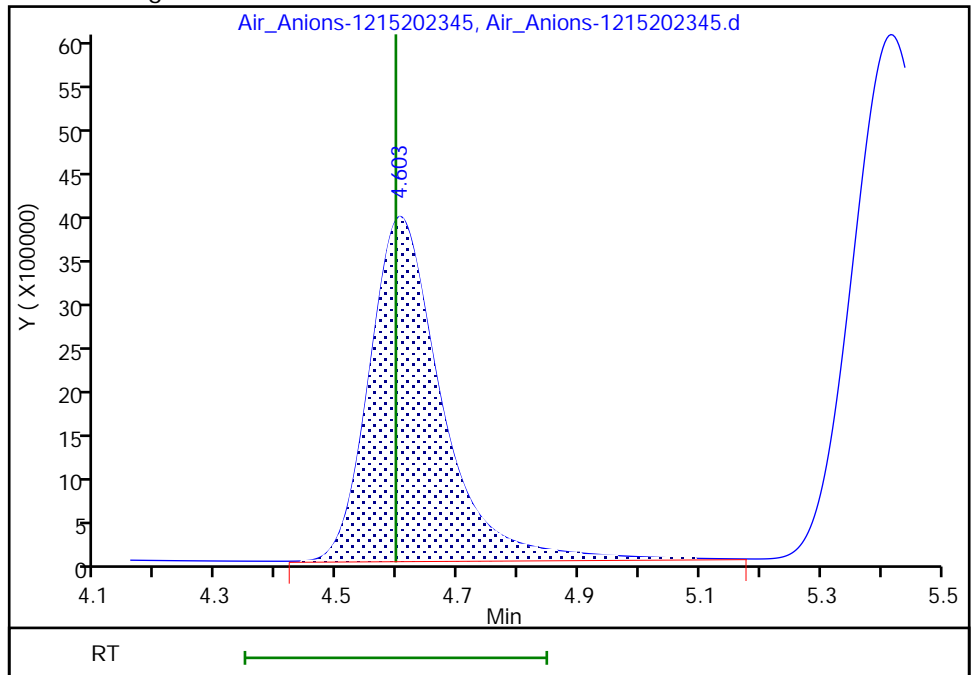
RT: 4.60  
Area: 40069638  
Amount: 1.270230  
Amount Units: ug/ml

Processing Integration Results



RT: 4.60  
Area: 32808285  
Amount: 1.051809  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 18-Dec-2023 12:04:31 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 140-81372/1-A  
 Matrix: Air Lab File ID: Air\_Anions-1214202312.d  
 Analysis Method: 0050/26A Date Collected: \_\_\_\_\_  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:50  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/14/2023 11:37  
 Con. Extract Vol.: 100(mL) Dilution Factor: 1  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81419 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	ND		10.0	5.00
7647-01-0	Hydrogen Chloride	ND		10.3	5.30

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202312.d  
 Lims ID: MB 140-81372/1-A  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 14-Dec-2023 11:37:00 ALS Bottle#: 0 Worklist Smp#: 3  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0030874-003  
 Misc. Info.: MB 140-81372/1-A  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:35:59 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:30:13

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.320				ND	
2 Chloride		4.593				ND	U
3 Nitrite as N		5.400				ND	U
4 Bromide		6.343				ND	
5 Nitrate as N		7.013				ND	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.163				ND	
S 11 Nitrous Acid		0.000				ND	
S 12 Br		0.000				ND	
S 13 Chlorine		0.000				ND	
S 10 Nitric acid		0.000				ND	
S 7 Hydrogen Chloride		0.000				ND	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

QC Flag Legend

Processing Flags

Review Flags

U - Marked Undetected

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202312.d

Injection Date: 14-Dec-2023 11:37:00

Instrument ID: IC4

Operator ID:

Lims ID: MB 140-81372/1-A

Worklist Smp#: 3

Client ID:

Injection Vol: 1.0 ul

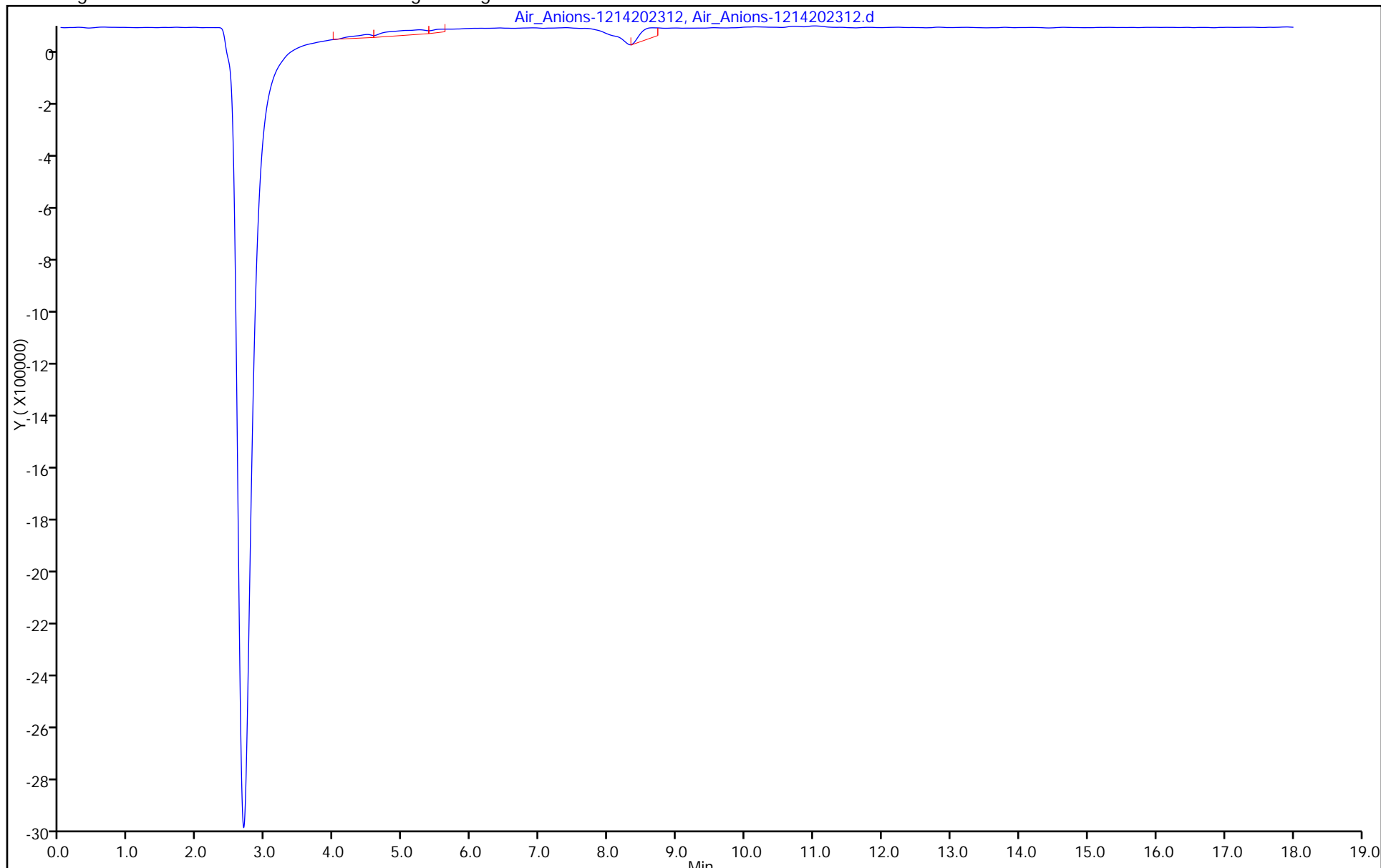
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1

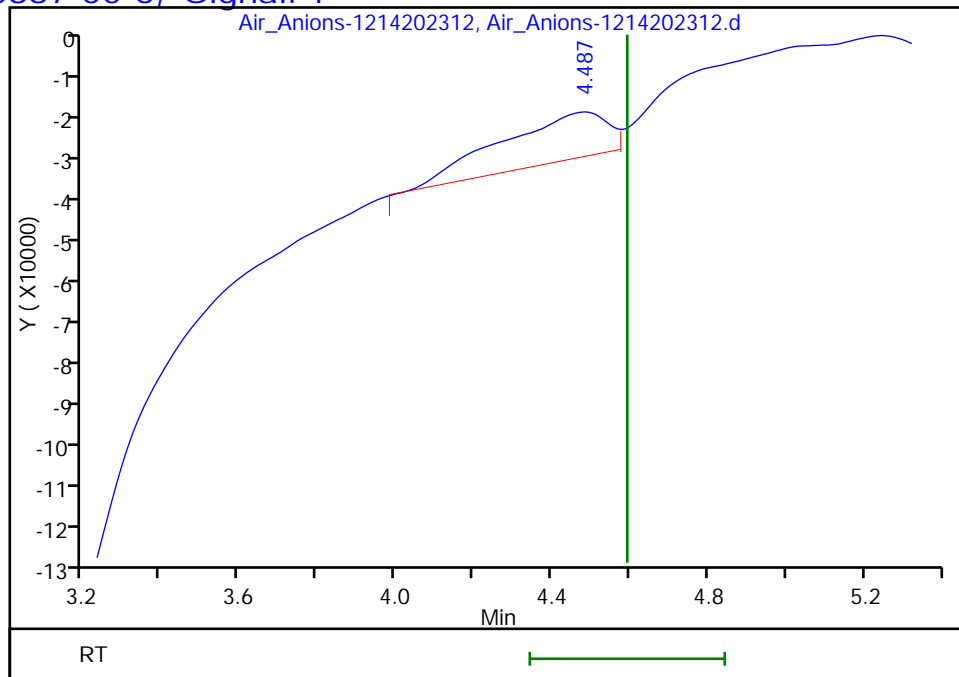


Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202312.d  
Injection Date: 14-Dec-2023 11:37:00 Instrument ID: IC4  
Lims ID: MB 140-81372/1-A  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 3  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6, Signal: 1

RT: 4.49  
Response: 217954  
Amount: 0.007387



Reviewer: EXJ2, 15-Dec-2023 09:30:13  
Audit Action: Manually Integrated

Audit Reason:

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 140-81373/1-A  
 Matrix: Air Lab File ID: Air\_Anions-1215202312.d  
 Analysis Method: 0050/26A Date Collected: \_\_\_\_\_  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:56  
 Sample wt/vol: 1 (Sample) Date Analyzed: 12/15/2023 20:03  
 Con. Extract Vol.: 100 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81494 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	ND		10.0	5.00

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202312.d  
 Lims ID: MB 140-81373/1-A  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 15-Dec-2023 20:03:00 ALS Bottle#: 0 Worklist Smp#: 3  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0030907-003  
 Misc. Info.: MB 140-81373/1-A  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:04:55 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

First Level Reviewer: EXJ2 Date: 18-Dec-2023 12:00:41

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.323				ND	
2 Chloride	4.573	4.597	-0.024	1377651		0.0466	M
3 Nitrite as N	5.367	5.407	-0.040	81935		0.001307	
4 Bromide		6.350				ND	
5 Nitrate as N	6.997	7.023	-0.026	160836		0.002268	
19 Orthophosphate as P	9.257	9.280	-0.023	3614435		0.1168	
6 Iodide		13.173				ND	
S 11 Nitrous Acid						0.004387	
S 12 Br		0.000				ND	
S 13 Chlorine						0.0466	
S 10 Nitric acid						0.0102	
S 7 Hydrogen Chloride						0.0479	
S 20 Phosphorus as PO4						0.3582	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4						0.3696	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated



Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202312.d

Injection Date: 15-Dec-2023 20:03:00

Instrument ID: IC4

Operator ID:

Lims ID: MB 140-81373/1-A

Worklist Smp#: 3

Client ID:

Injection Vol: 1.0 ul

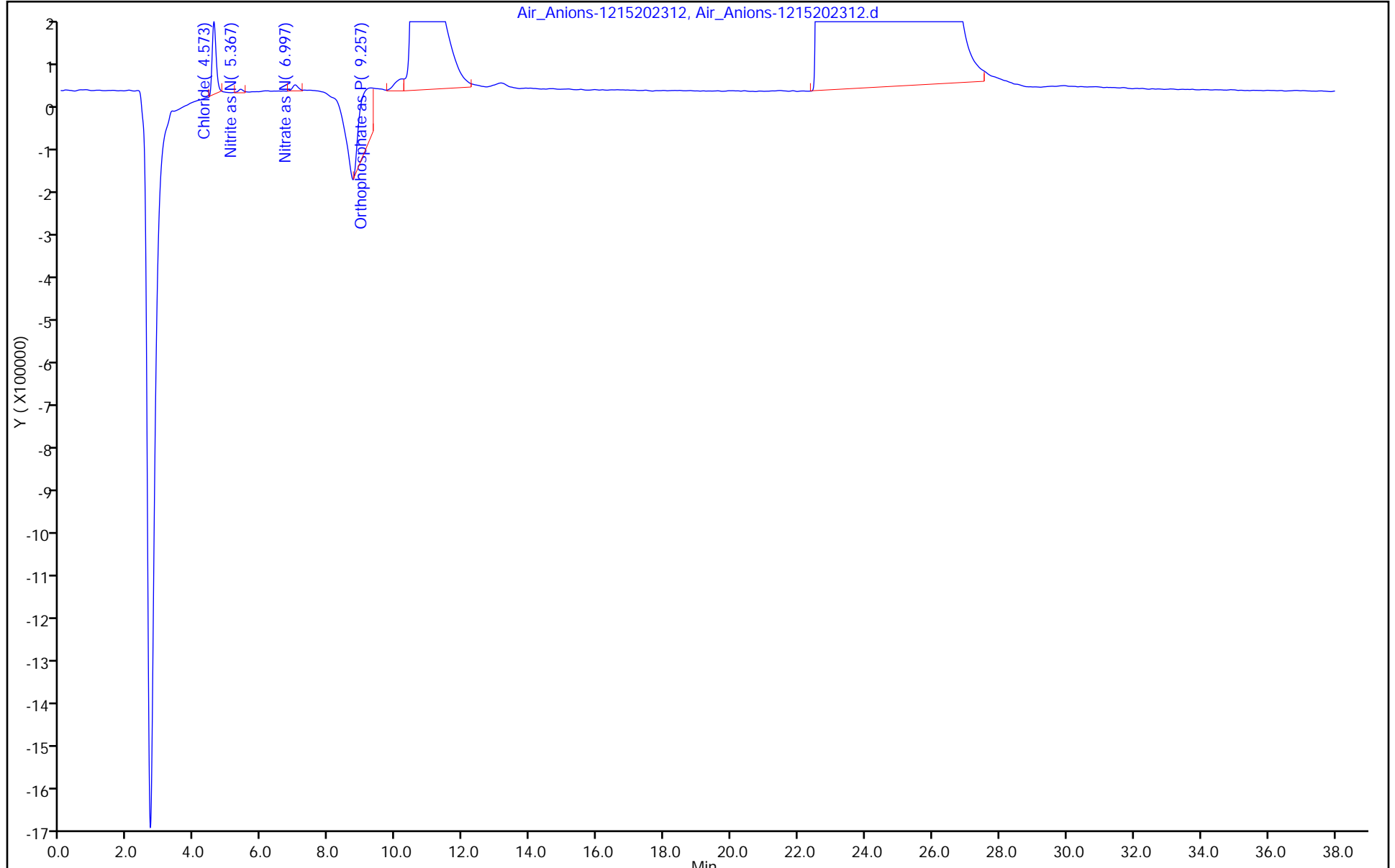
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

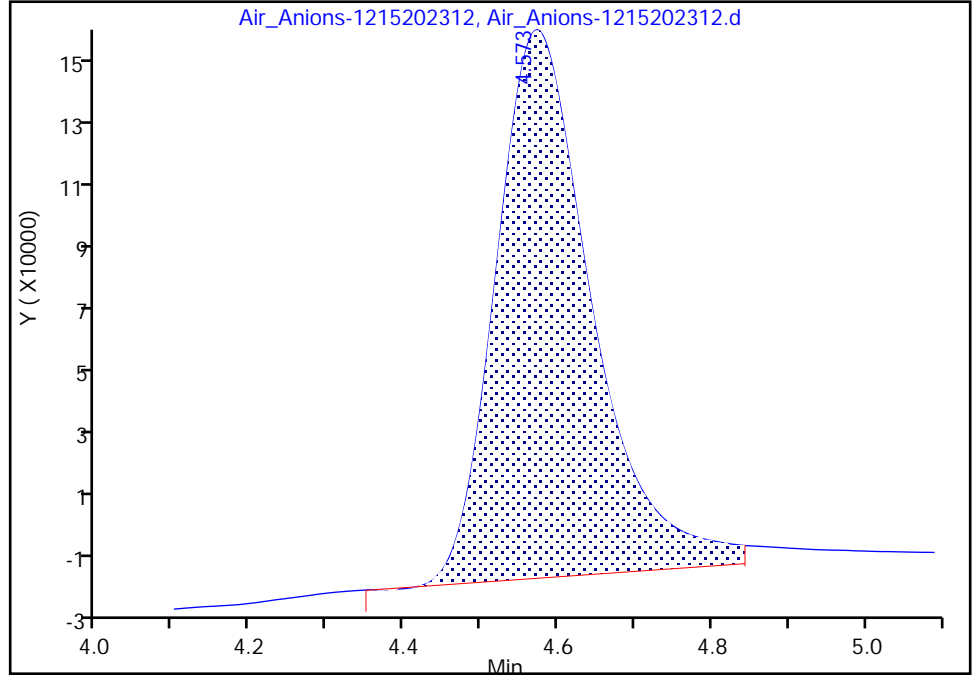
Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.bAir\_Anions-1215202312.d  
Injection Date: 15-Dec-2023 20:03:00 Instrument ID: IC4  
Lims ID: MB 140-81373/1-A  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 3  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

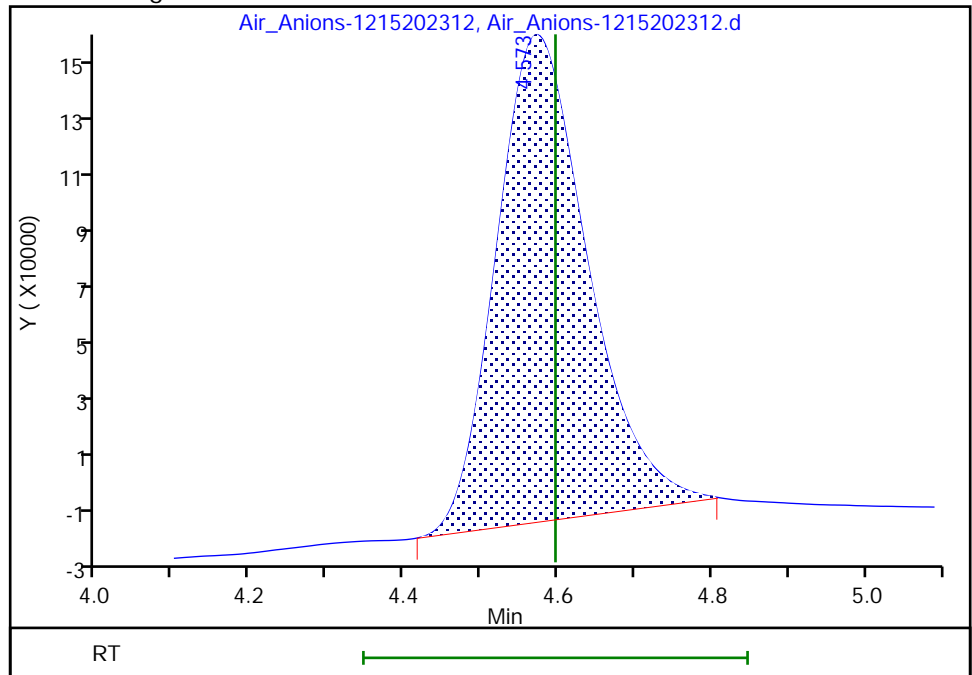
RT: 4.57  
Area: 1488819  
Amount: 0.050342  
Amount Units: ug/ml

Processing Integration Results



RT: 4.57  
Area: 1377651  
Amount: 0.046593  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 18-Dec-2023 12:00:38 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: CCB 140-81419/2  
 Matrix: Air Lab File ID: Air\_Anions-1214202311.d  
 Analysis Method: 0050/26A Date Collected: \_\_\_\_\_  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 10 (mL) Date Analyzed: 12/14/2023 11:15  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81419 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	ND		0.0500	0.0100
7647-01-0	Hydrogen Chloride	ND		0.0500	0.0100

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202311.d  
 Lims ID: CCB  
 Client ID:  
 Sample Type: CCB  
 Inject. Date: 14-Dec-2023 11:15:00 ALS Bottle#: 0 Worklist Smp#: 2  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0030874-002  
 Misc. Info.: CCB  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:35:59 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648  
 First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:30:05

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.320				ND	
2 Chloride		4.593				ND	U
3 Nitrite as N		5.400				ND	U
4 Bromide		6.343				ND	
5 Nitrate as N		7.013				ND	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.163				ND	
S 11 Nitrous Acid		0.000				ND	
S 12 Br		0.000				ND	
S 13 Chlorine		0.000				ND	
S 10 Nitric acid		0.000				ND	
S 7 Hydrogen Chloride		0.000				ND	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

**QC Flag Legend**

Processing Flags

Review Flags

U - Marked Undetected

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202311.d

Injection Date: 14-Dec-2023 11:15:00

Instrument ID: IC4

Operator ID:

Lims ID: CCB

Worklist Smp#: 2

Client ID:

Injection Vol: 1.0 ul

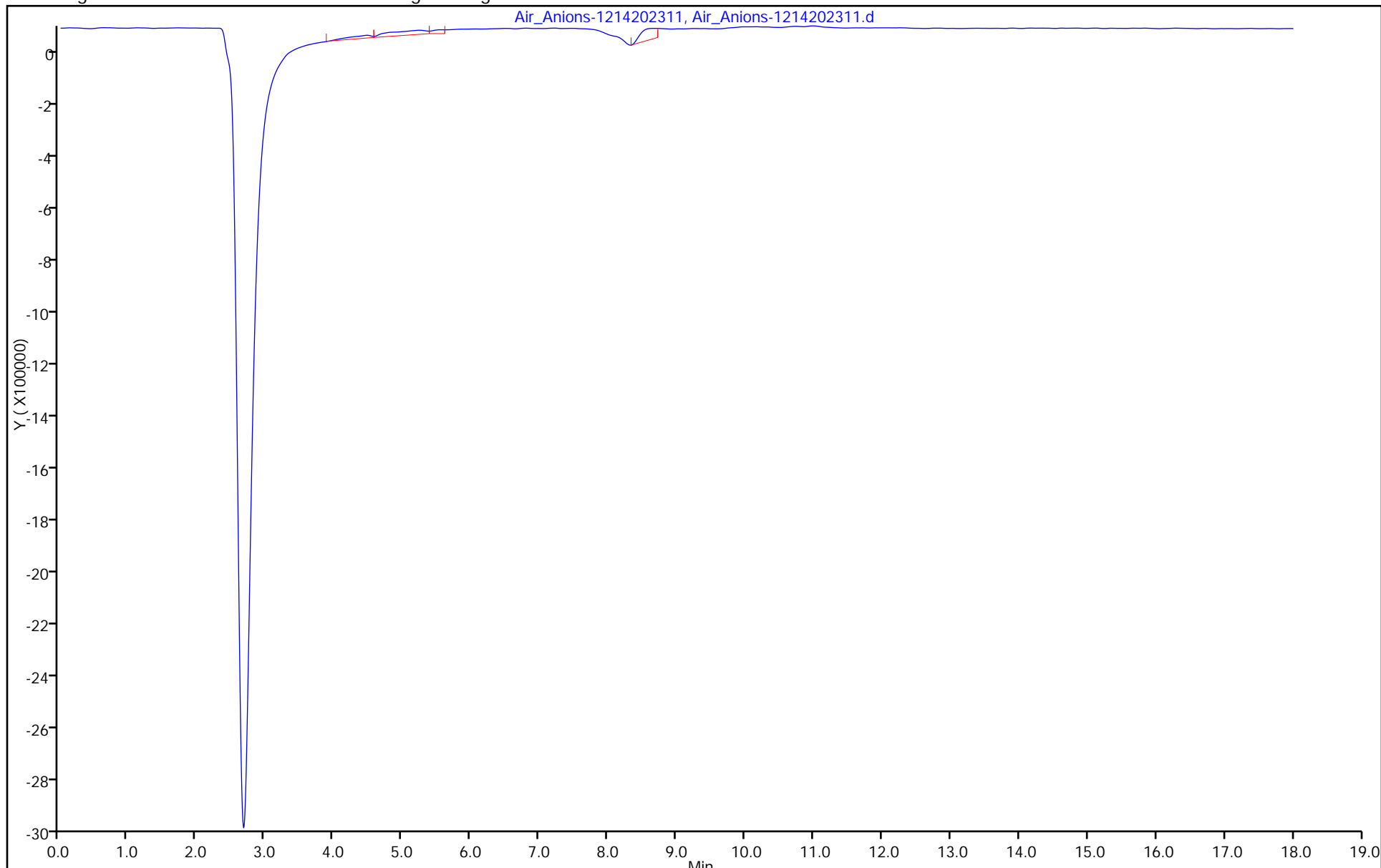
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1

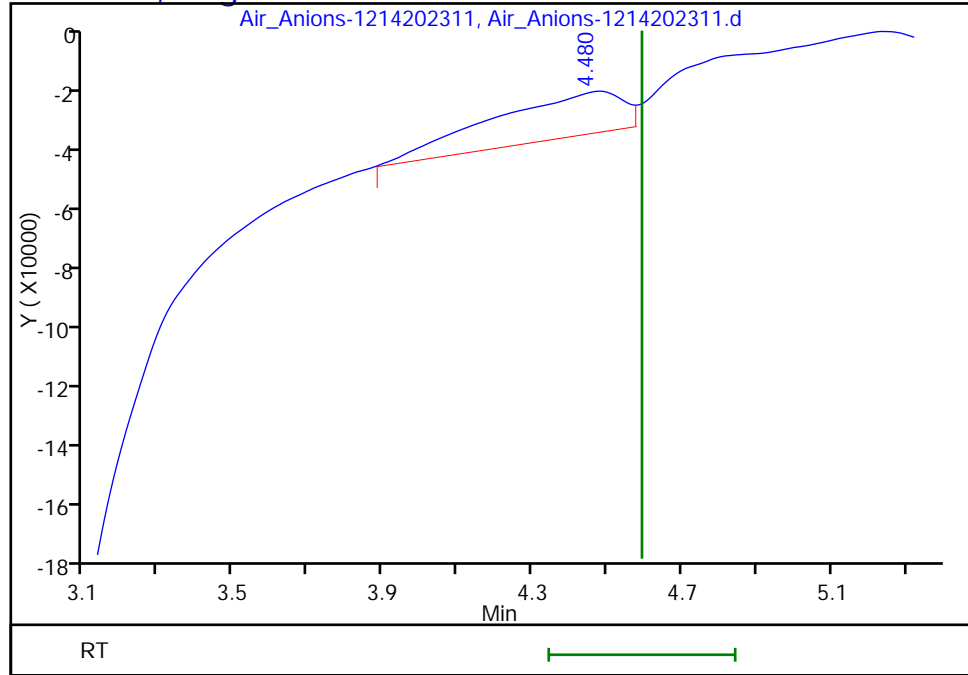


Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.bAir\_Anions-1214202311.d  
Injection Date: 14-Dec-2023 11:15:00 Instrument ID: IC4  
Lims ID: CCB  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 2  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6, Signal: 1

RT: 4.48  
Response: 340092  
Amount: 0.011524



Reviewer: EXJ2, 15-Dec-2023 09:30:05  
Audit Action: Manually Integrated

Audit Reason:

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: CCB 140-81419/14  
 Matrix: Air Lab File ID: Air\_Anions-1214202323.d  
 Analysis Method: 0050/26A Date Collected: \_\_\_\_\_  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 10 (mL) Date Analyzed: 12/14/2023 15:42  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81419 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	ND		0.0500	0.0100
7647-01-0	Hydrogen Chloride	ND		0.0500	0.0100

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202323.d  
 Lims ID: CCB  
 Client ID:  
 Sample Type: CCB  
 Inject. Date: 14-Dec-2023 15:42:00 ALS Bottle#: 0 Worklist Smp#: 14  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0030874-014  
 Misc. Info.: CCB  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:36:05 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:31:37

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.320				ND	
2 Chloride		4.593				ND	U
3 Nitrite as N	5.277	5.400	-0.123	776197		0.0124	
4 Bromide		6.343				ND	
5 Nitrate as N		7.013				ND	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.163				ND	
S 11 Nitrous Acid						0.0415	
S 12 Br		0.000				ND	
S 13 Chlorine		0.000				ND	
S 10 Nitric acid		0.000				ND	
S 7 Hydrogen Chloride		0.000				ND	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

**QC Flag Legend**

Processing Flags

Review Flags

U - Marked Undetected



Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202323.d

Injection Date: 14-Dec-2023 15:42:00

Instrument ID: IC4

Operator ID:

Lims ID: CCB

Worklist Smp#: 14

Client ID:

Injection Vol: 1.0 ul

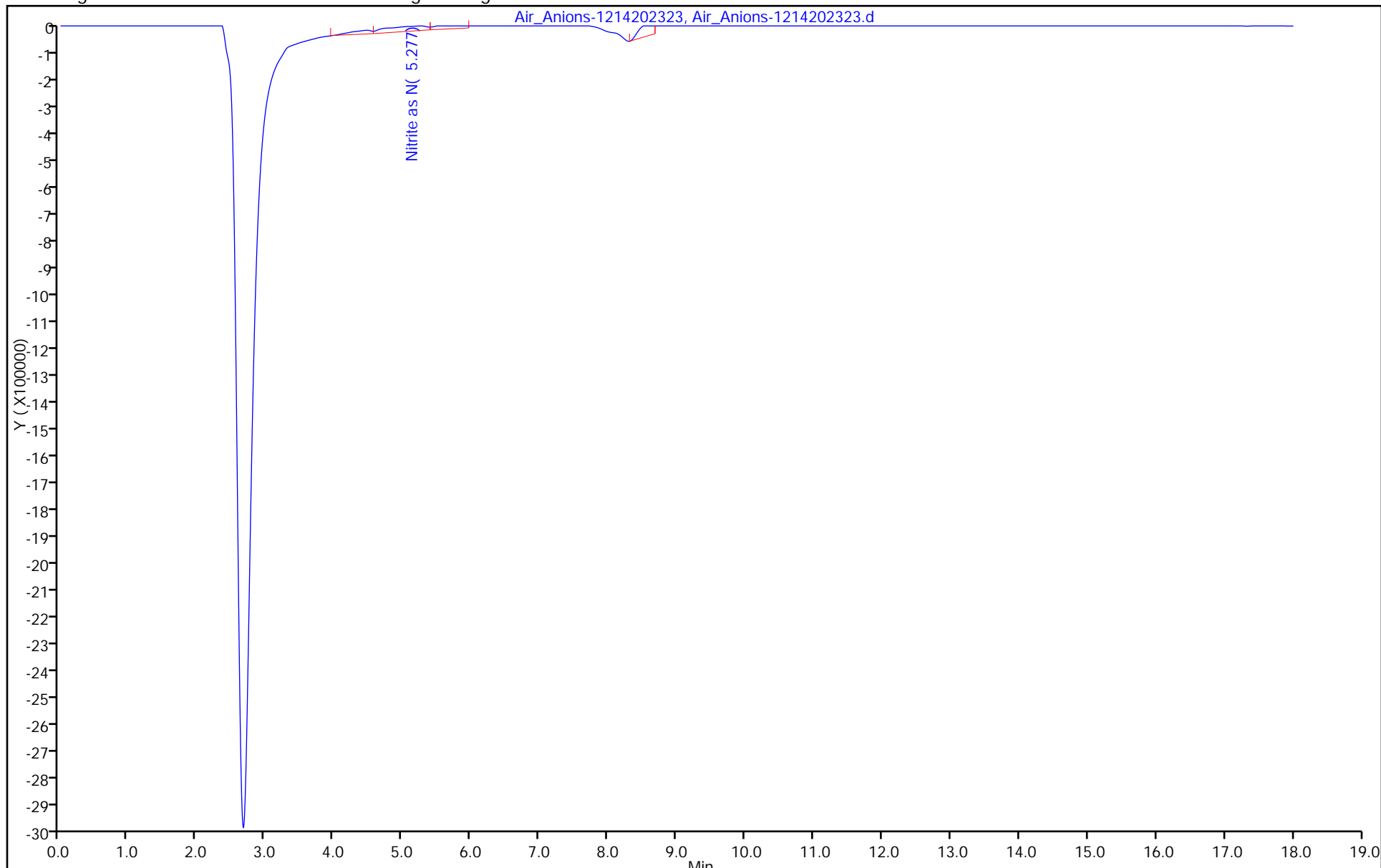
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1

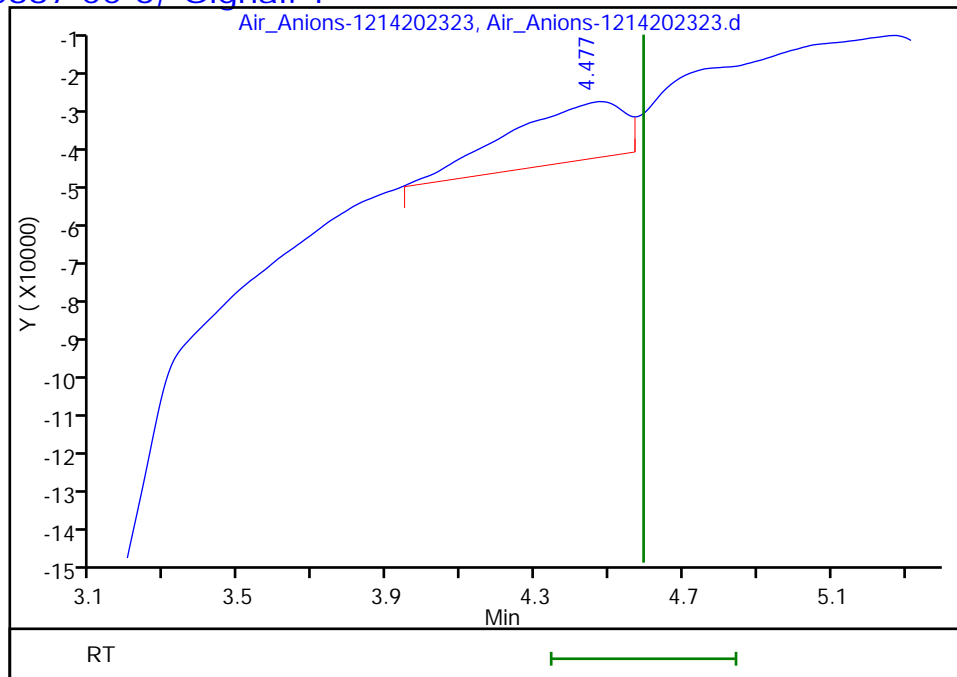


Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202323.d  
Injection Date: 14-Dec-2023 15:42:00 Instrument ID: IC4  
Lims ID: CCB  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 14  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6, Signal: 1

RT: 4.48  
Response: 303419  
Amount: 0.010282



Reviewer: EXJ2, 15-Dec-2023 09:31:37  
Audit Action: Manually Integrated

Audit Reason:

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: CCB 140-81419/26  
 Matrix: Air Lab File ID: Air\_Anions-1214202335.d  
 Analysis Method: 0050/26A Date Collected: \_\_\_\_\_  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 10 (mL) Date Analyzed: 12/14/2023 20:08  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81419 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	ND		0.0500	0.0100
7647-01-0	Hydrogen Chloride	ND		0.0500	0.0100

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202335.d  
 Lims ID: CCB  
 Client ID:  
 Sample Type: CCB  
 Inject. Date: 14-Dec-2023 20:08:00 ALS Bottle#: 0 Worklist Smp#: 26  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0030874-026  
 Misc. Info.: CCB  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:36:11 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:32:49

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.320				ND	
2 Chloride		4.593				ND	U
3 Nitrite as N		5.400				ND	U
4 Bromide		6.343				ND	
5 Nitrate as N		7.013				ND	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.163				ND	
S 11 Nitrous Acid		0.000				ND	
S 12 Br		0.000				ND	
S 13 Chlorine		0.000				ND	
S 10 Nitric acid		0.000				ND	
S 7 Hydrogen Chloride		0.000				ND	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

QC Flag Legend

Processing Flags

Review Flags

U - Marked Undetected

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202335.d

Injection Date: 14-Dec-2023 20:08:00

Instrument ID: IC4

Operator ID:

Lims ID: CCB

Worklist Smp#: 26

Client ID:

Injection Vol: 1.0 ul

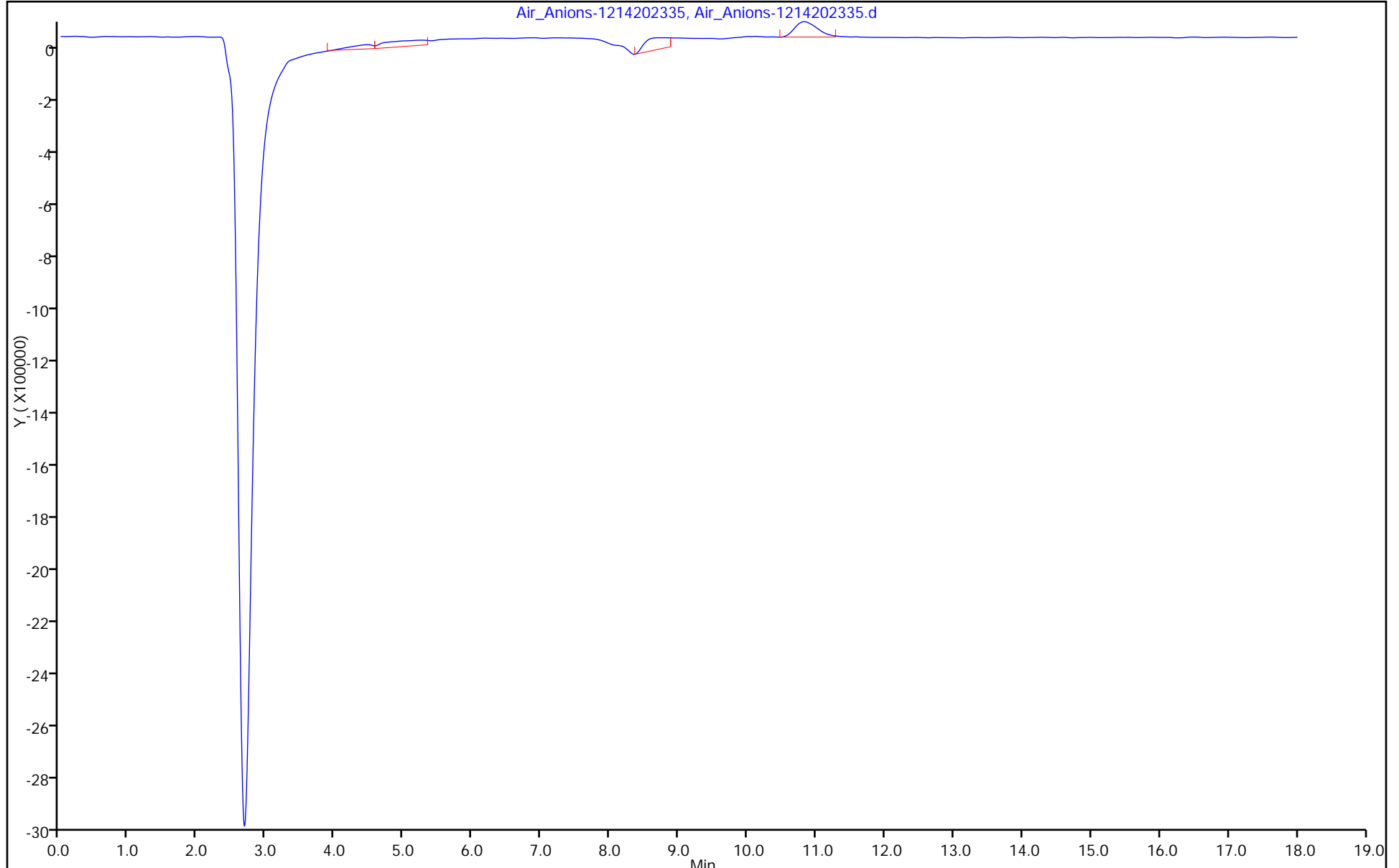
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1

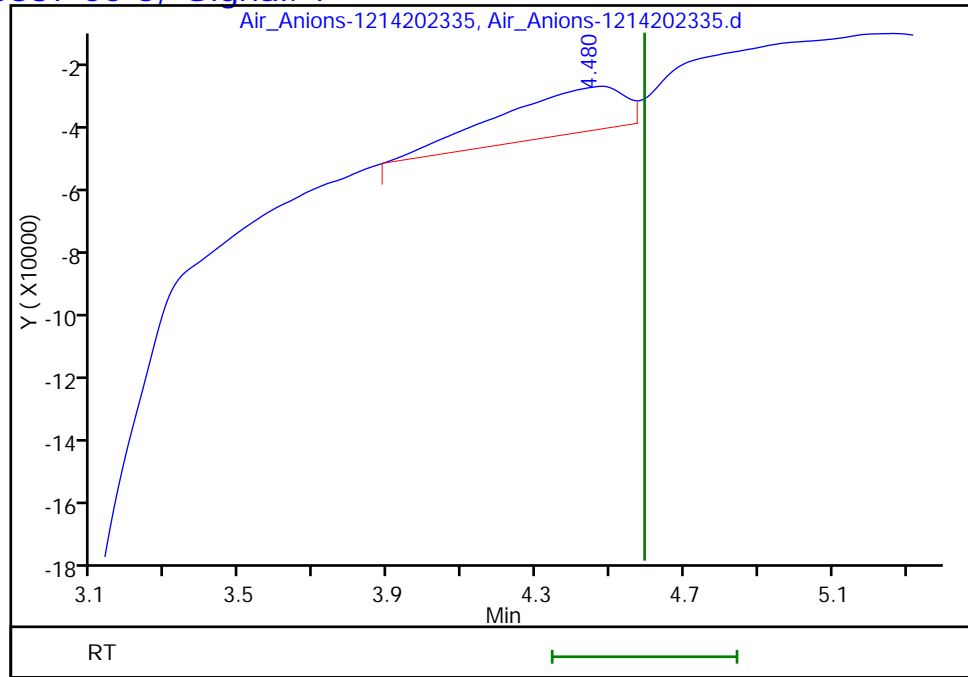


Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202335.d  
Injection Date: 14-Dec-2023 20:08:00 Instrument ID: IC4  
Lims ID: CCB  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 26  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6, Signal: 1

RT: 4.48  
Response: 339444  
Amount: 0.011502



Reviewer: EXJ2, 15-Dec-2023 09:32:49  
Audit Action: Manually Integrated

Audit Reason:

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: CCB 140-81419/38  
 Matrix: Air Lab File ID: Air\_Anions-1214202347.d  
 Analysis Method: 0050/26A Date Collected: \_\_\_\_\_  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 10 (mL) Date Analyzed: 12/15/2023 00:54  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81419 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	ND		0.0500	0.0100
7647-01-0	Hydrogen Chloride	ND		0.0500	0.0100

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202347.d  
 Lims ID: CCB  
 Client ID:  
 Sample Type: CCB  
 Inject. Date: 15-Dec-2023 00:54:00 ALS Bottle#: 0 Worklist Smp#: 38  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0030874-038  
 Misc. Info.: CCB  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:36:16 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:34:12

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.320				ND	
2 Chloride		4.593				ND	U
3 Nitrite as N		5.400				ND	U
4 Bromide		6.343				ND	
5 Nitrate as N		7.013				ND	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.163				ND	
S 11 Nitrous Acid		0.000				ND	
S 12 Br		0.000				ND	
S 13 Chlorine		0.000				ND	
S 10 Nitric acid		0.000				ND	
S 7 Hydrogen Chloride		0.000				ND	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

QC Flag Legend

Processing Flags

Review Flags

U - Marked Undetected



Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202347.d

Injection Date: 15-Dec-2023 00:54:00

Instrument ID: IC4

Operator ID:

Lims ID: CCB

Worklist Smp#: 38

Client ID:

Injection Vol: 1.0 ul

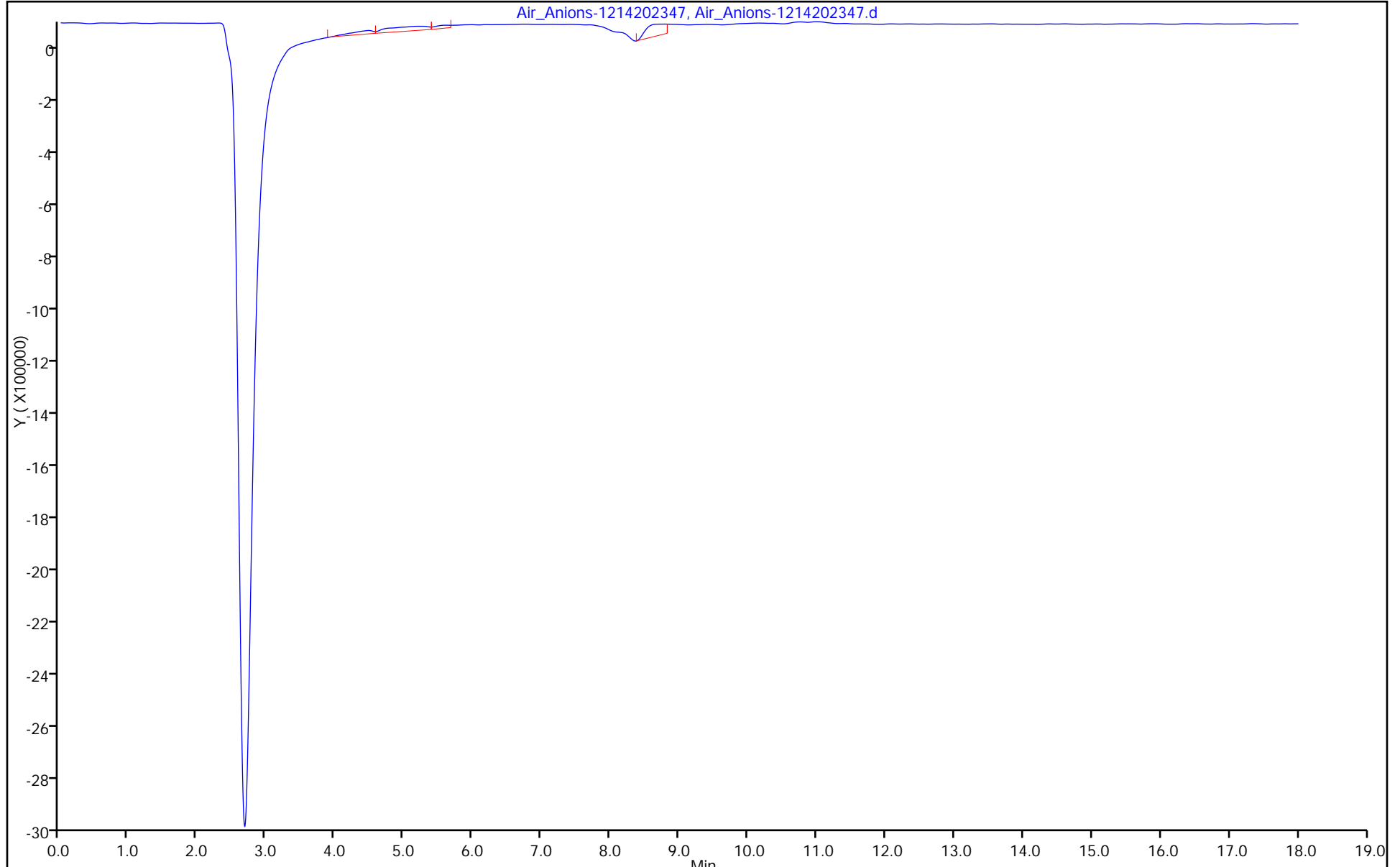
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1

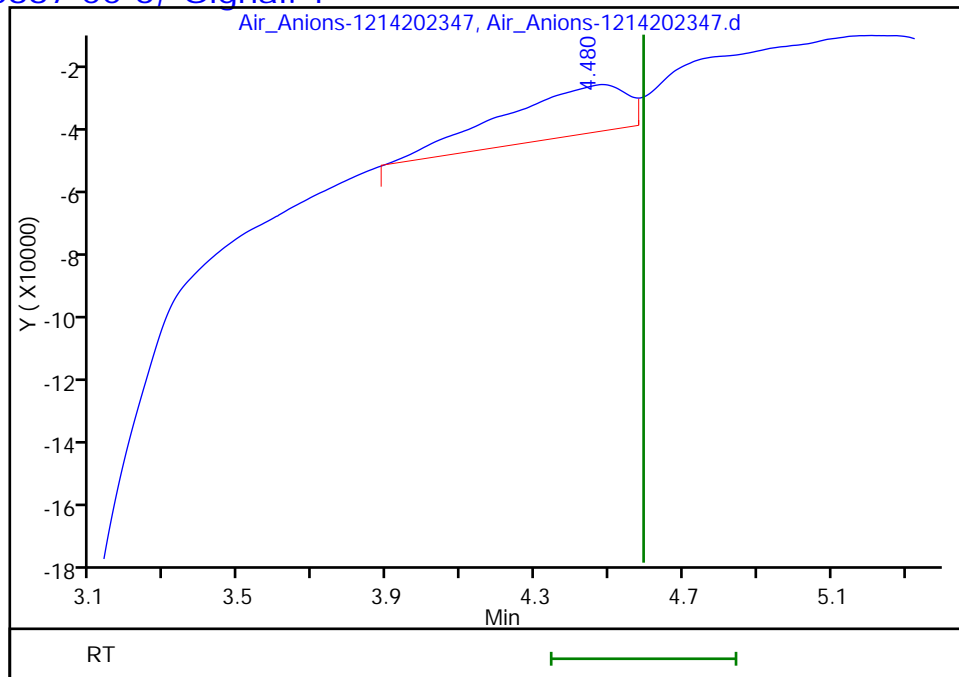


Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202347.d  
Injection Date: 15-Dec-2023 00:54:00 Instrument ID: IC4  
Lims ID: CCB  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 38  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6, Signal: 1

RT: 4.48  
Response: 378424  
Amount: 0.012822



Reviewer: EXJ2, 15-Dec-2023 09:34:12  
Audit Action: Manually Integrated

Audit Reason:

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: CCB 140-81419/41  
 Matrix: Air Lab File ID: Air\_Anions-1214202350.d  
 Analysis Method: 0050/26A Date Collected: \_\_\_\_\_  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 10 (mL) Date Analyzed: 12/15/2023 02:21  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81419 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	ND		0.0500	0.0100
7647-01-0	Hydrogen Chloride	ND		0.0500	0.0100

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202350.d  
 Lims ID: CCB  
 Client ID:  
 Sample Type: CCB  
 Inject. Date: 15-Dec-2023 02:21:00 ALS Bottle#: 0 Worklist Smp#: 41  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0030874-041  
 Misc. Info.: CCB  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:36:18 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:34:37

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.320				ND	
2 Chloride		4.593				ND	U
3 Nitrite as N		5.400				ND	U
4 Bromide		6.343				ND	
5 Nitrate as N		7.013				ND	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.163				ND	
S 11 Nitrous Acid		0.000				ND	
S 12 Br		0.000				ND	
S 13 Chlorine		0.000				ND	
S 10 Nitric acid		0.000				ND	
S 7 Hydrogen Chloride		0.000				ND	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

**QC Flag Legend**

Processing Flags

Review Flags

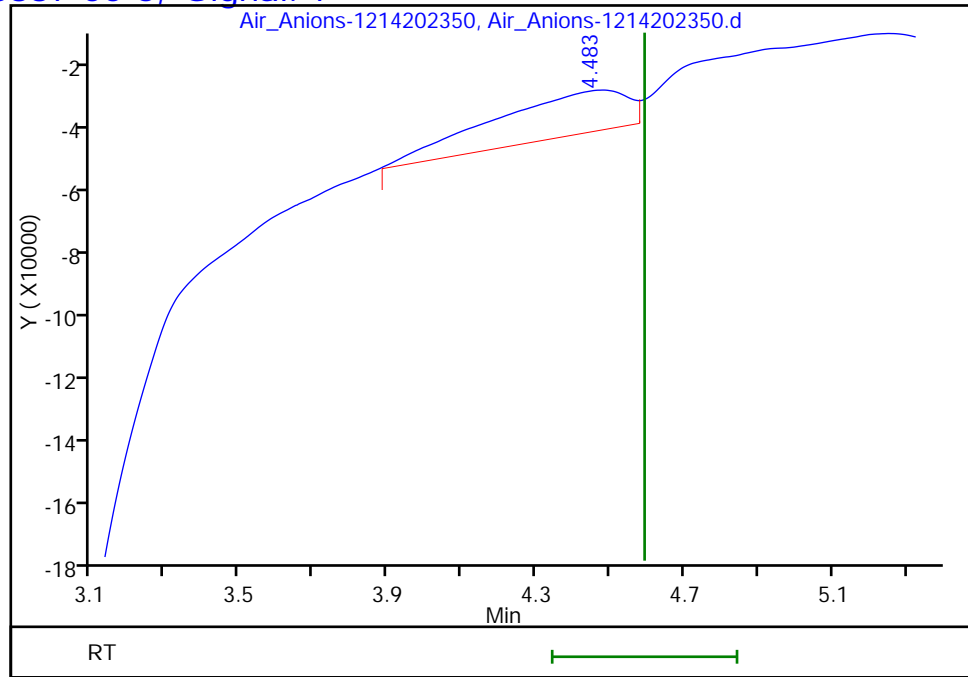
U - Marked Undetected

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202350.d  
Injection Date: 15-Dec-2023 02:21:00 Instrument ID: IC4  
Lims ID: CCB  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 41  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6, Signal: 1

RT: 4.48  
Response: 357634  
Amount: 0.012118



Reviewer: EXJ2, 15-Dec-2023 09:34:37

Audit Action: Manually Integrated

Audit Reason:

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: CCB 140-81494/2  
 Matrix: Air Lab File ID: Air\_Anions-1215202311.d  
 Analysis Method: 0050/26A Date Collected: \_\_\_\_\_  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 10 (mL) Date Analyzed: 12/15/2023 19:41  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81494 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	ND		0.0500	0.0100

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202311.d  
 Lims ID: CCB  
 Client ID:  
 Sample Type: CCB  
 Inject. Date: 15-Dec-2023 19:41:00 ALS Bottle#: 0 Worklist Smp#: 2  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0030907-002  
 Misc. Info.: CCB  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:04:55 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

First Level Reviewer: EXJ2 Date: 18-Dec-2023 12:00:28

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.323				ND	
2 Chloride		4.597				ND	U
3 Nitrite as N		5.407				ND	U
4 Bromide		6.350				ND	
5 Nitrate as N		7.023				ND	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.173				ND	
S 11 Nitrous Acid		0.000				ND	
S 12 Br		0.000				ND	
S 13 Chlorine		0.000				ND	
S 10 Nitric acid		0.000				ND	
S 7 Hydrogen Chloride		0.000				ND	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

QC Flag Legend

Processing Flags

Review Flags

U - Marked Undetected

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202311.d

Injection Date: 15-Dec-2023 19:41:00

Instrument ID: IC4

Operator ID:

Lims ID: CCB

Worklist Smp#: 2

Client ID:

Injection Vol: 1.0 ul

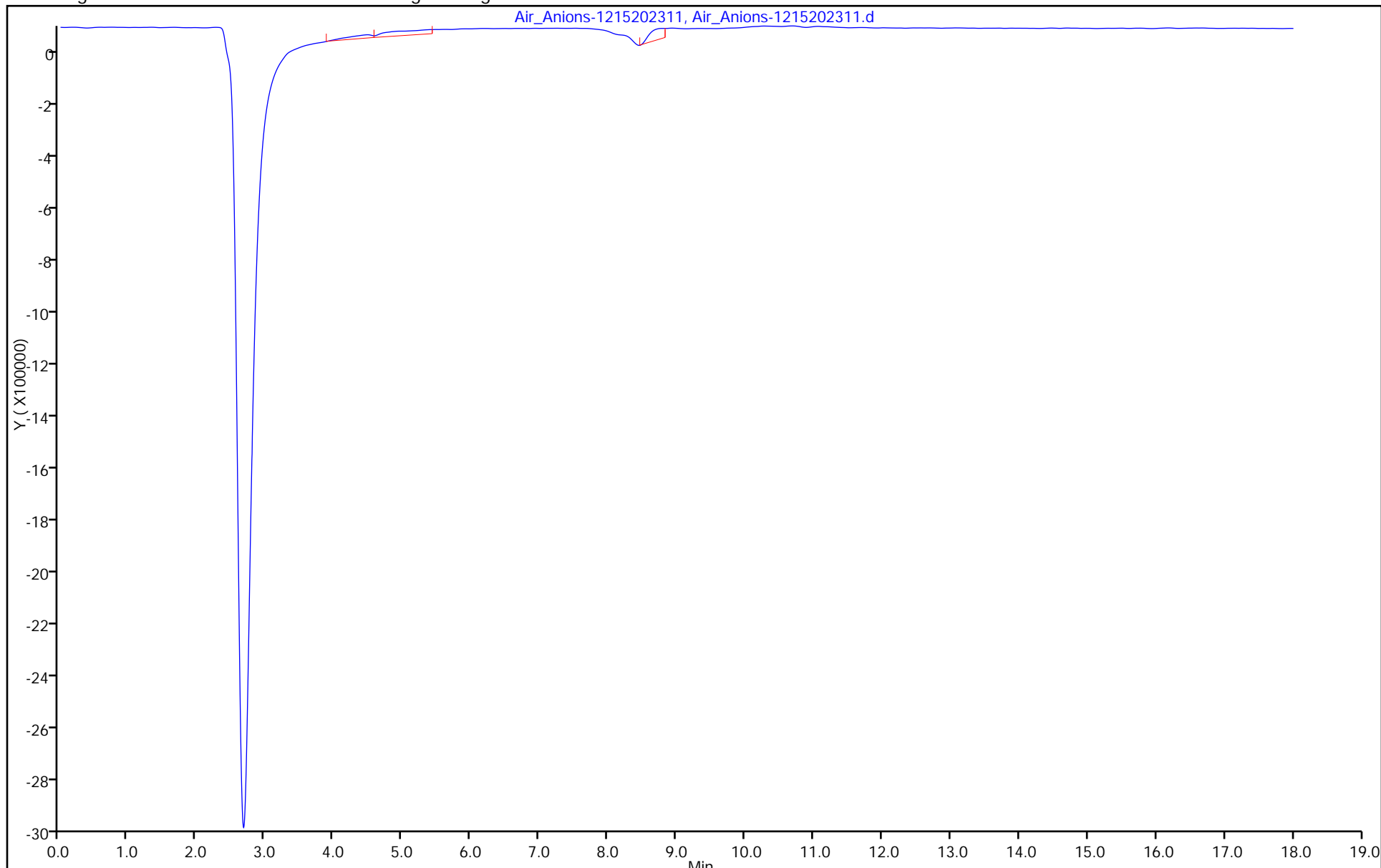
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



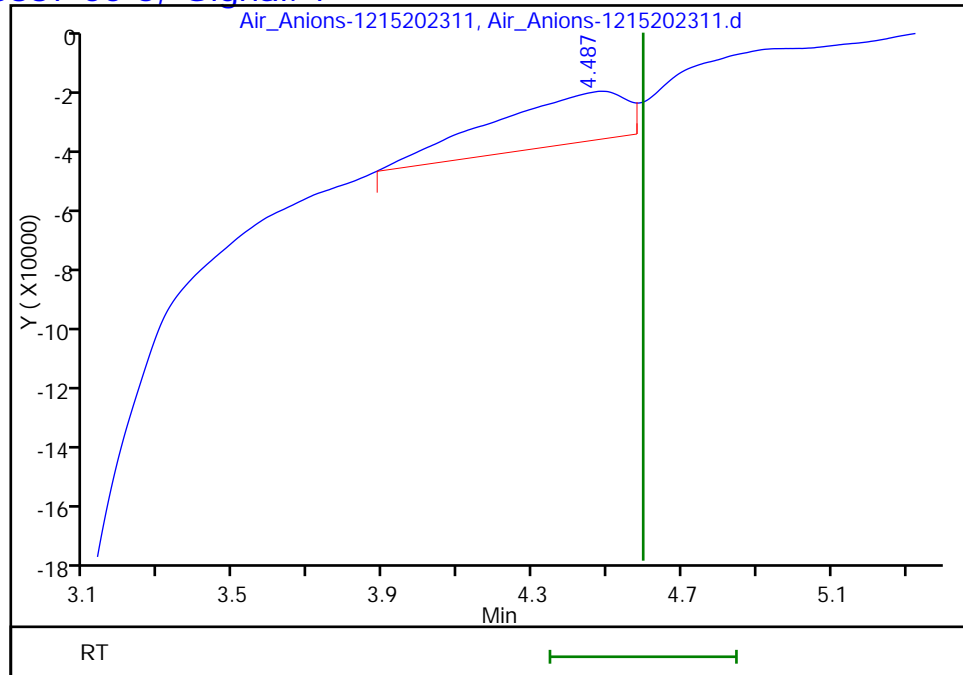


Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202311.d  
Injection Date: 15-Dec-2023 19:41:00 Instrument ID: IC4  
Lims ID: CCB  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 2  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6, Signal: 1

RT: 4.49  
Response: 399978  
Amount: 0.013552



Reviewer: EXJ2, 18-Dec-2023 12:00:28  
Audit Action: Manually Integrated

Audit Reason:

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: CCB 140-81494/14  
 Matrix: Air Lab File ID: Air\_Anions-1215202323.d  
 Analysis Method: 0050/26A Date Collected: \_\_\_\_\_  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 10 (mL) Date Analyzed: 12/16/2023 02:48  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81494 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	ND		0.0500	0.0100

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202323.d  
 Lims ID: CCB  
 Client ID:  
 Sample Type: CCB  
 Inject. Date: 16-Dec-2023 02:48:00 ALS Bottle#: 0 Worklist Smp#: 14  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0030907-014  
 Misc. Info.: CCB  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:05:01 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

First Level Reviewer: EXJ2 Date: 18-Dec-2023 12:02:07

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.323				ND	
2 Chloride		4.597				ND	
3 Nitrite as N		5.407				ND	U
4 Bromide		6.350				ND	
5 Nitrate as N		7.023				ND	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.173				ND	
S 11 Nitrous Acid		0.000				ND	
S 12 Br		0.000				ND	
S 13 Chlorine		0.000				ND	
S 10 Nitric acid		0.000				ND	
S 7 Hydrogen Chloride		0.000				ND	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

QC Flag Legend

Processing Flags

Review Flags

U - Marked Undetected

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202323.d

Injection Date: 16-Dec-2023 02:48:00

Instrument ID: IC4

Operator ID:

Lims ID: CCB

Worklist Smp#: 14

Client ID:

Injection Vol: 1.0 ul

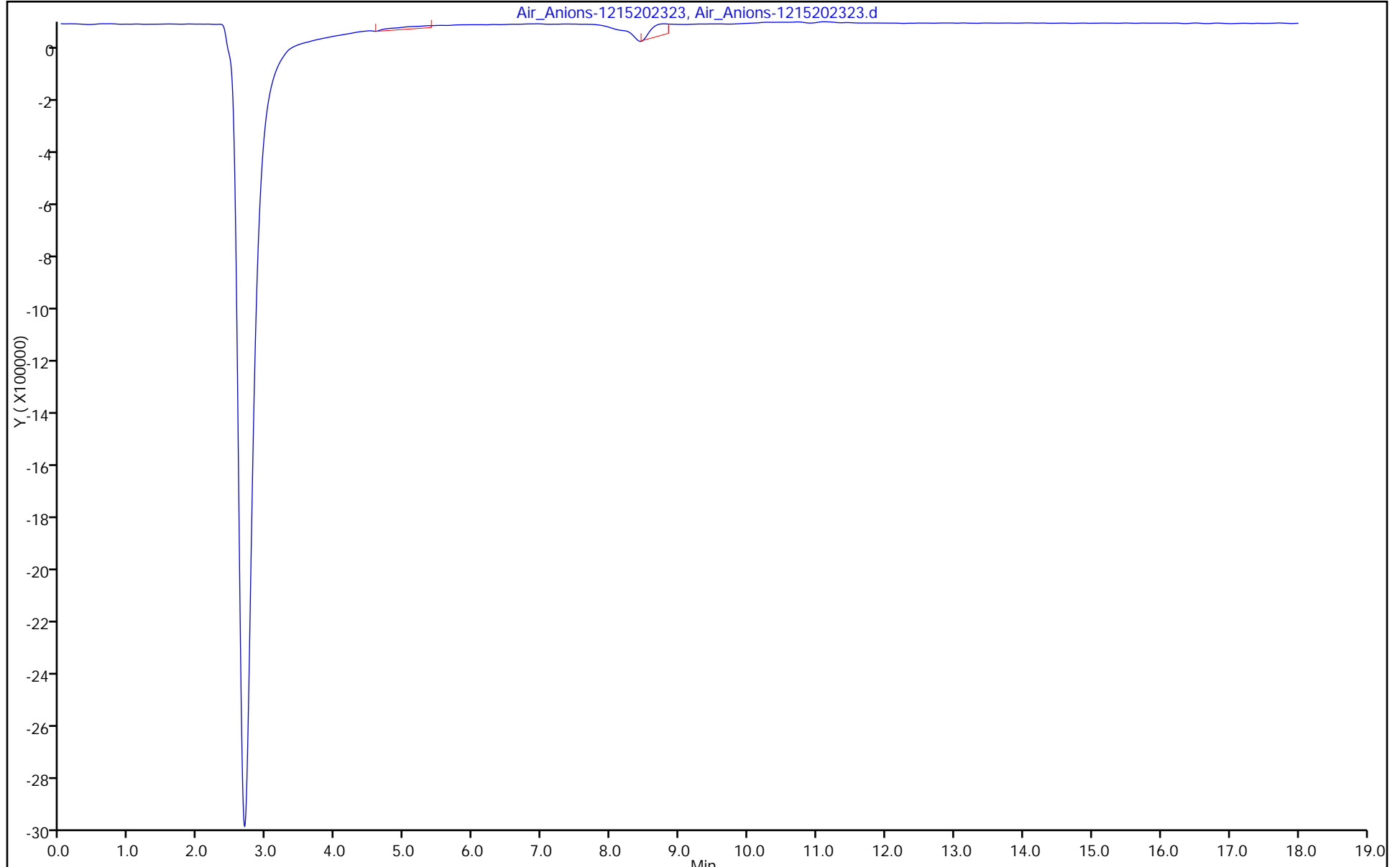
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: CCB 140-81494/26  
 Matrix: Air Lab File ID: Air\_Anions-1215202335.d  
 Analysis Method: 0050/26A Date Collected: \_\_\_\_\_  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 10 (mL) Date Analyzed: 12/16/2023 10:34  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81494 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	ND		0.0500	0.0100

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202335.d  
 Lims ID: CCB  
 Client ID:  
 Sample Type: CCB  
 Inject. Date: 16-Dec-2023 10:34:00 ALS Bottle#: 0 Worklist Smp#: 26  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0030907-026  
 Misc. Info.: CCB  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:05:07 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

First Level Reviewer: EXJ2 Date: 18-Dec-2023 12:03:07

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.323				ND	
2 Chloride		4.597				ND	U
3 Nitrite as N		5.407				ND	
4 Bromide		6.350				ND	
5 Nitrate as N		7.023				ND	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.173				ND	
S 11 Nitrous Acid		0.000				ND	
S 12 Br		0.000				ND	
S 13 Chlorine		0.000				ND	
S 10 Nitric acid		0.000				ND	
S 7 Hydrogen Chloride		0.000				ND	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

QC Flag Legend

Processing Flags

Review Flags

U - Marked Undetected

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202335.d

Injection Date: 16-Dec-2023 10:34:00

Instrument ID: IC4

Operator ID:

Lims ID: CCB

Worklist Smp#: 26

Client ID:

Injection Vol: 1.0 ul

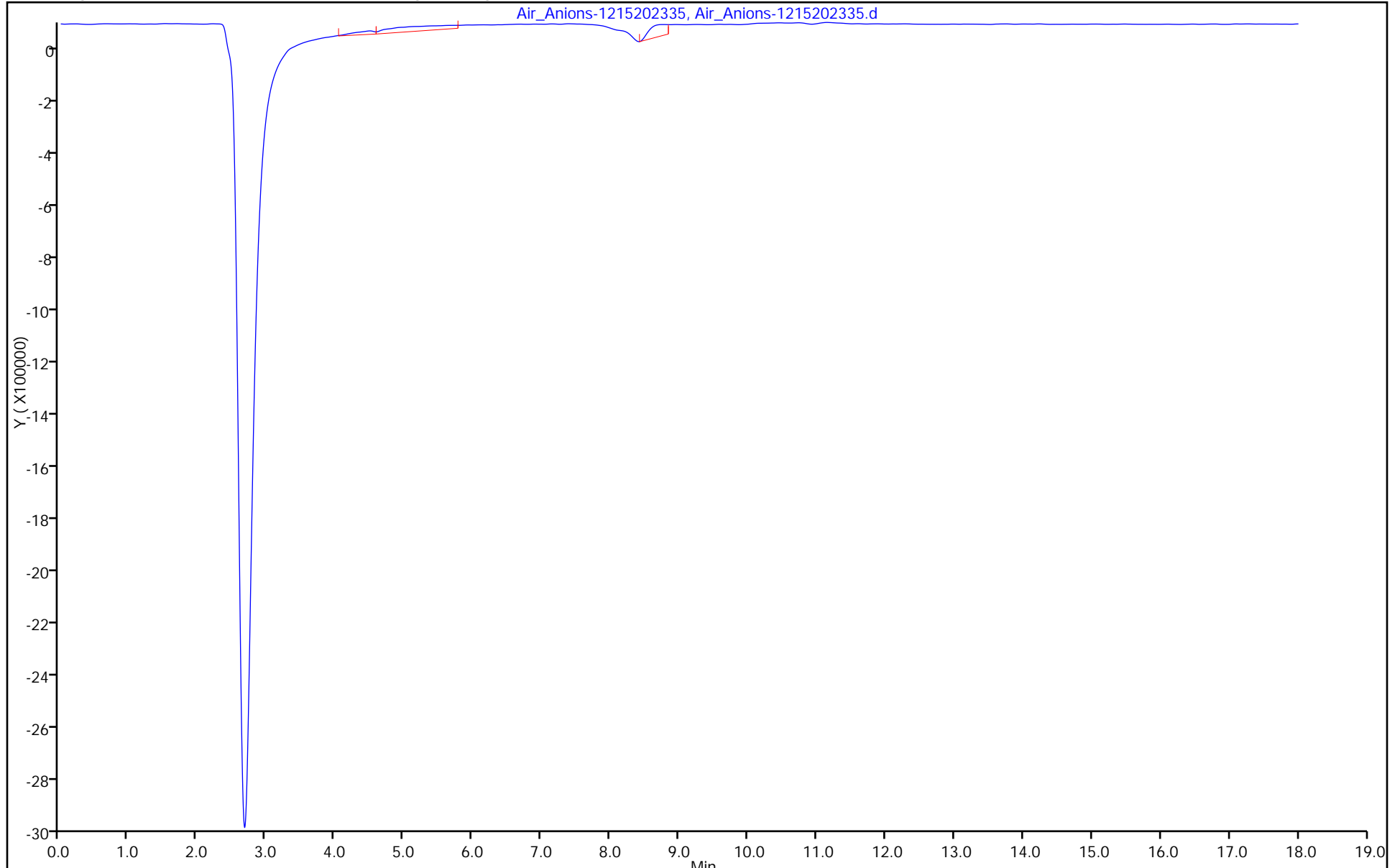
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1

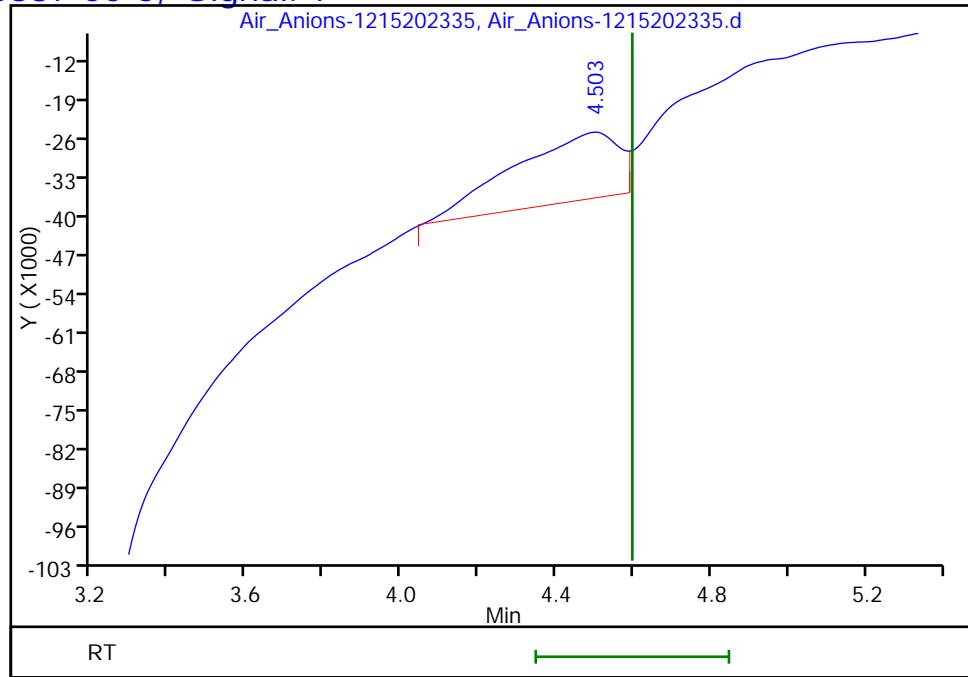


Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202335.d  
Injection Date: 16-Dec-2023 10:34:00 Instrument ID: IC4  
Lims ID: CCB  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 26  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6, Signal: 1

RT: 4.50  
Response: 239816  
Amount: 0.008128



Reviewer: EXJ2, 18-Dec-2023 12:03:07

Audit Action: Manually Integrated

Audit Reason:



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: CCB 140-81494/37  
 Matrix: Air Lab File ID: Air\_Anions-1215202346.d  
 Analysis Method: 0050/26A Date Collected: \_\_\_\_\_  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 10 (mL) Date Analyzed: 12/16/2023 17:38  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81494 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	ND		0.0500	0.0100

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202346.d  
 Lims ID: CCB  
 Client ID:  
 Sample Type: CCB  
 Inject. Date: 16-Dec-2023 17:38:00 ALS Bottle#: 0 Worklist Smp#: 37  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0030907-037  
 Misc. Info.: CCB  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:05:12 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

First Level Reviewer: EXJ2 Date: 18-Dec-2023 12:04:42

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.323				ND	
2 Chloride		4.597				ND	U
3 Nitrite as N		5.407				ND	U
4 Bromide		6.350				ND	
5 Nitrate as N		7.023				ND	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.173				ND	
S 11 Nitrous Acid		0.000				ND	
S 12 Br		0.000				ND	
S 13 Chlorine		0.000				ND	
S 10 Nitric acid		0.000				ND	
S 7 Hydrogen Chloride		0.000				ND	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

**QC Flag Legend**

Processing Flags

Review Flags

U - Marked Undetected

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202346.d

Injection Date: 16-Dec-2023 17:38:00

Instrument ID: IC4

Operator ID:

Lims ID: CCB

Worklist Smp#: 37

Client ID:

Injection Vol: 1.0 ul

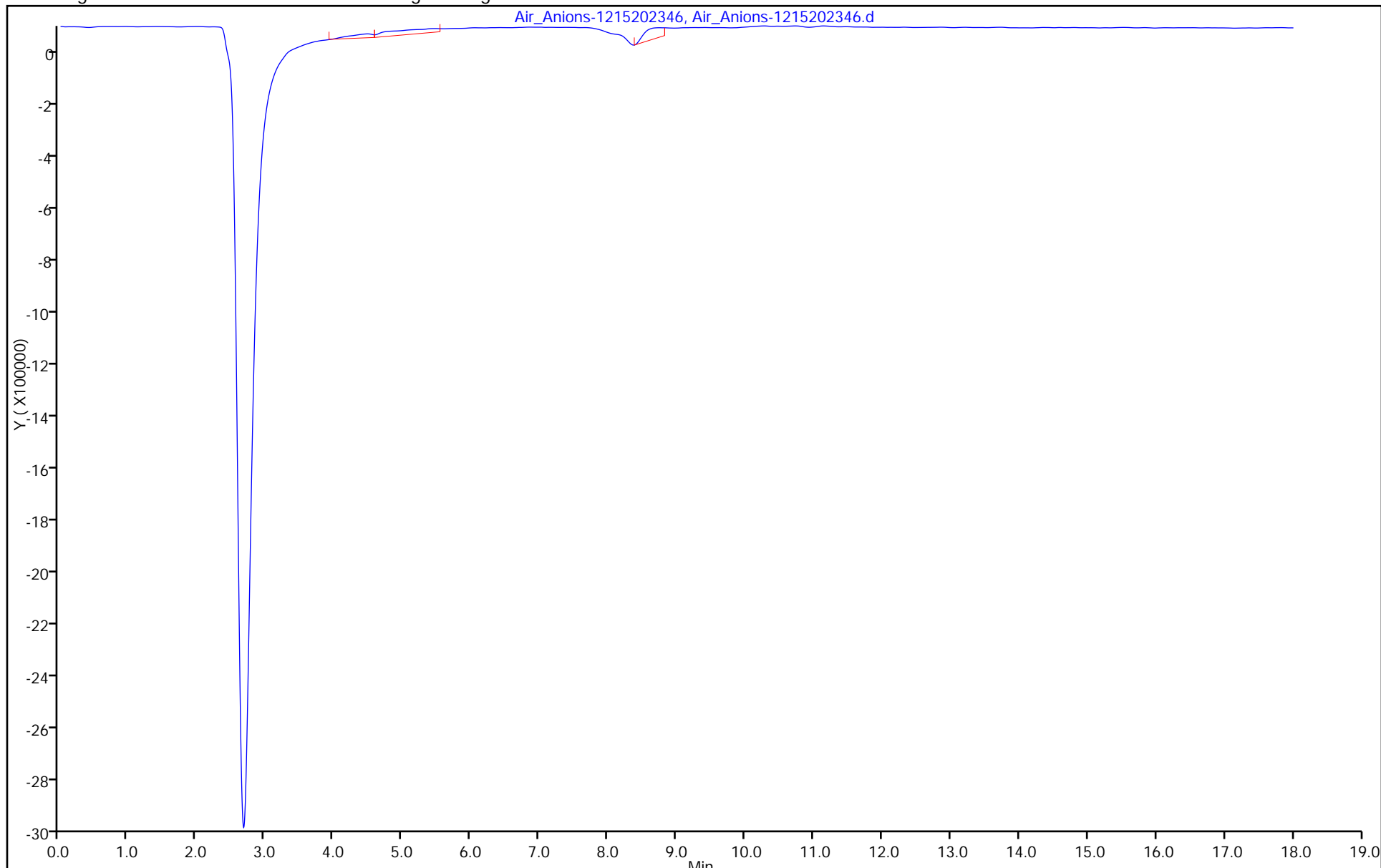
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1

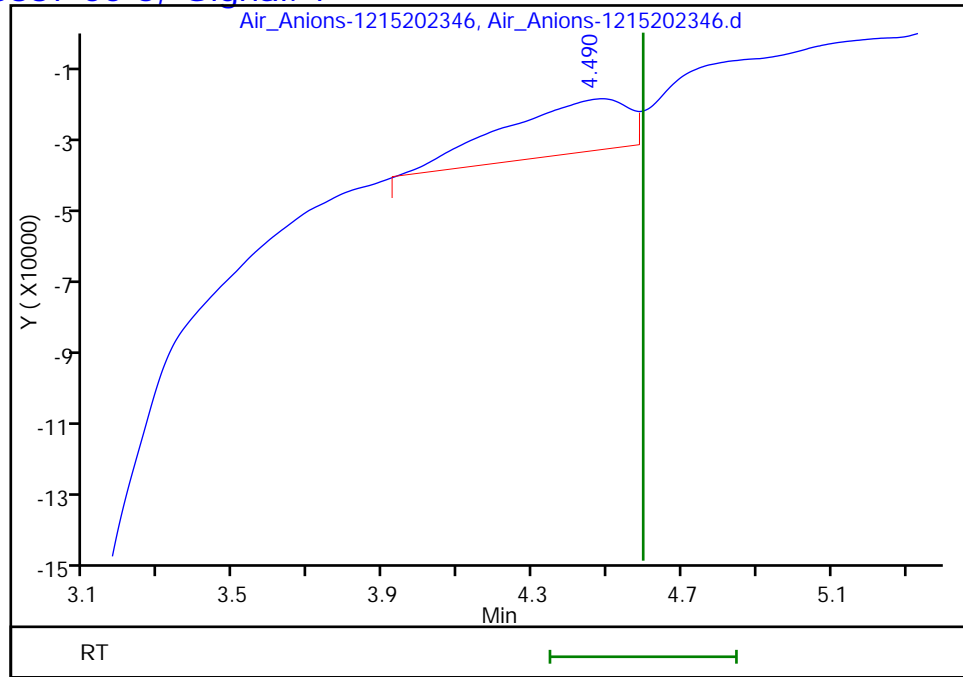


Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202346.d  
Injection Date: 16-Dec-2023 17:38:00 Instrument ID: IC4  
Lims ID: CCB  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 37  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6, Signal: 1

RT: 4.49  
Response: 343446  
Amount: 0.011638



Reviewer: EXJ2, 18-Dec-2023 12:04:42

Audit Action: Manually Integrated

Audit Reason:

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: ICB 140-76764/9  
 Matrix: Air Lab File ID: Air\_Anions-08212023 ICAL9.d  
 Analysis Method: 0050/26A Date Collected: \_\_\_\_\_  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 10 (mL) Date Analyzed: 08/21/2023 21:46  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 76764 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	ND		0.0500	0.0100
7647-01-0	Hydrogen Chloride	ND		0.0500	0.0100

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL9.d  
 Lims ID: ICB  
 Client ID:  
 Sample Type: ICB  
 Inject. Date: 21-Aug-2023 21:46:00 ALS Bottle#: 0 Worklist Smp#: 9  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0029316-009  
 Misc. Info.: ICB  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 22-Aug-2023 09:56:50 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 22-Aug-2023 09:50:52

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.330				ND	
2 Chloride		4.740				ND	
3 Nitrite as N		5.683				ND	
4 Bromide		6.737				ND	
5 Nitrate as N		7.583				ND	
19 Orthophosphate as P	10.153	10.123	0.030	758035		0.0246	M
6 Iodide		14.830				ND	U
S 11 Nitrous Acid		0.000				ND	
S 12 Br		0.000				ND	
S 13 Chlorine		0.000				ND	
S 10 Nitric acid		0.000				ND	
S 7 Hydrogen Chloride		0.000				ND	
S 20 Phosphorus as PO4						0.0754	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4						0.0778	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

U - Marked Undetected

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL9.d

Injection Date: 21-Aug-2023 21:46:00

Instrument ID: IC4

Operator ID:

Lims ID: ICB

Worklist Smp#: 9

Client ID:

Injection Vol: 1.0 ul

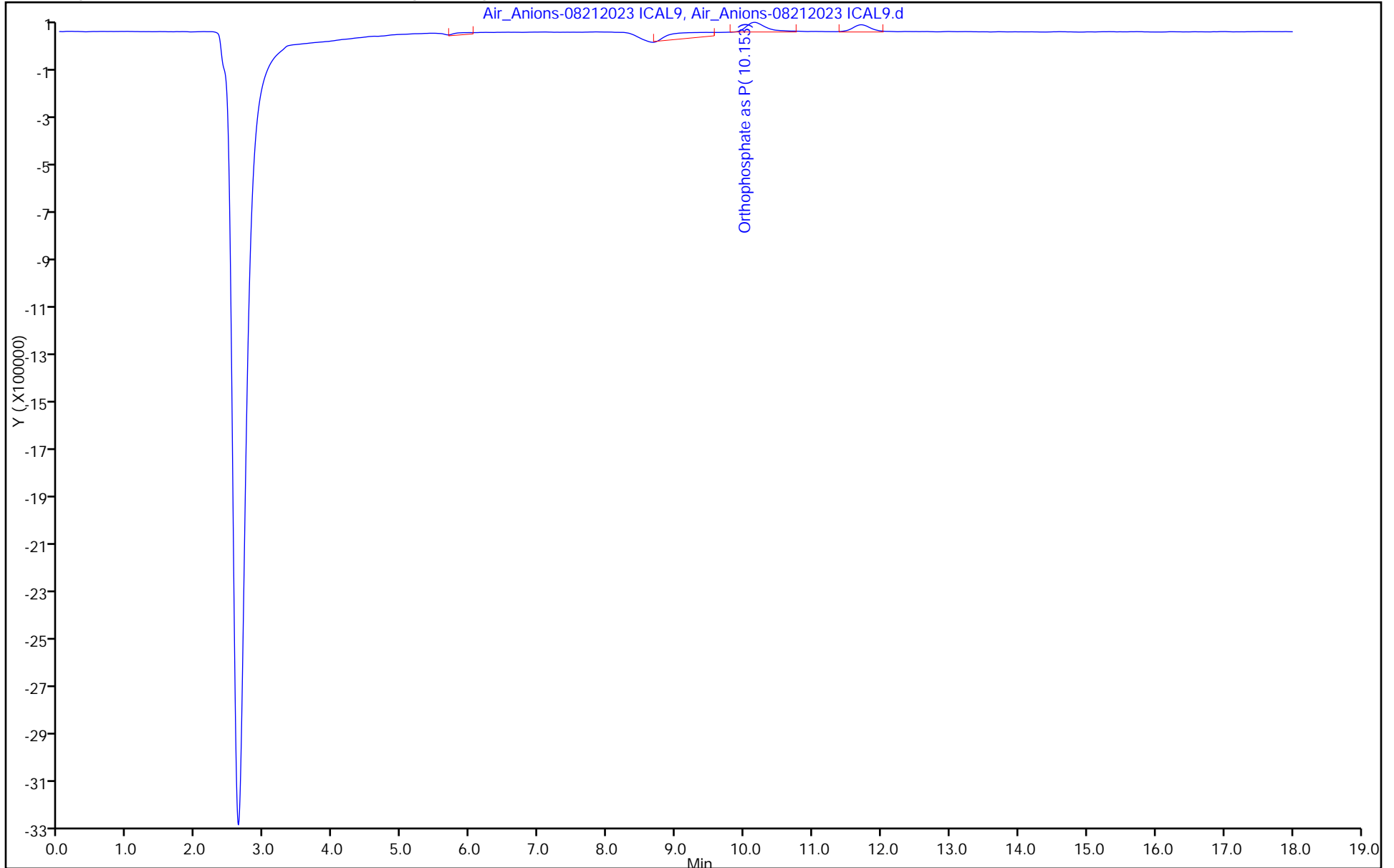
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 140-81372/2-A  
 Matrix: Air Lab File ID: Air\_Anions-1214202313.d  
 Analysis Method: 0050/26A Date Collected: \_\_\_\_\_  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:50  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/14/2023 12:00  
 Con. Extract Vol.: 100(mL) Dilution Factor: 1  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81419 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	78.94		10.0	5.00
7647-01-0	Hydrogen Chloride	81.18		10.3	5.30



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202313.d  
 Lims ID: LCS 140-81372/2-A  
 Client ID:  
 Sample Type: LCS  
 Inject. Date: 14-Dec-2023 12:00:00 ALS Bottle#: 0 Worklist Smp#: 4  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0030874-004  
 Misc. Info.: LCS 140-81372/2-A  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:35:59 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:30:21

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.320	3.320	0.000	35168878	0.7500	0.7840	M
2 Chloride	4.593	4.593	0.000	24288043	0.7500	0.7894	M
3 Nitrite as N	5.400	5.400	0.000	53774322	0.7500	0.8127	
4 Bromide	6.347	6.343	0.004	13919447	0.7500	1.03	
5 Nitrate as N	7.017	7.013	0.004	66708480	0.7500	0.8715	
19 Orthophosphate as P		9.280			ND	ND	
6 Iodide	13.170	13.163	0.007	6177316	0.7515	0.7854	
S 11 Nitrous Acid					2.52	2.73	
S 12 Br					0.7500	1.03	
S 13 Chlorine					0.7500	0.7894	
S 10 Nitric acid					3.37	3.92	
S 7 Hydrogen Chloride					0.7710	0.8118	
S 9 Hydrobromic Acid					0.7595	1.04	
S 8 Hydro Fluoric Acid					0.7898	0.8258	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

85SPICVLCSS\_00118 Amount Added: 10.00 Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202313.d

Injection Date: 14-Dec-2023 12:00:00

Instrument ID: IC4

Operator ID:

Lims ID: LCS 140-81372/2-A

Worklist Smp#: 4

Client ID:

Injection Vol: 1.0 ul

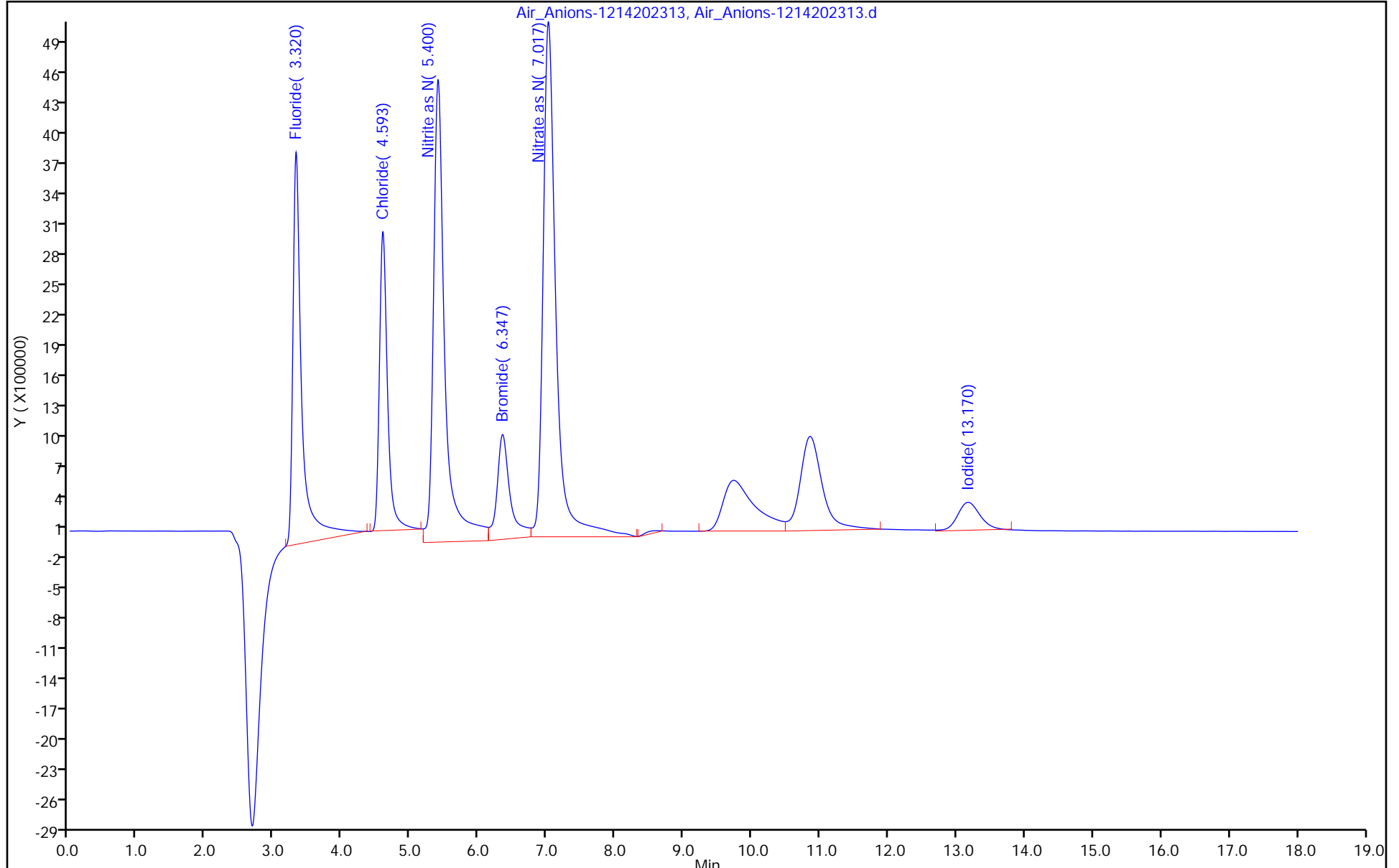
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

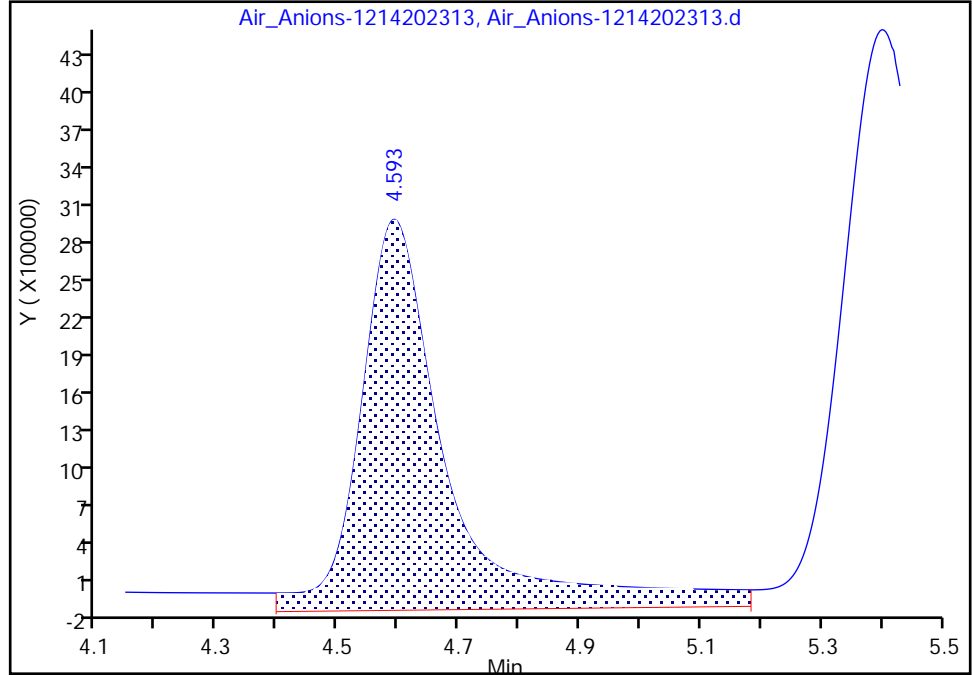
Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202313.d  
Injection Date: 14-Dec-2023 12:00:00 Instrument ID: IC4  
Lims ID: LCS 140-81372/2-A  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

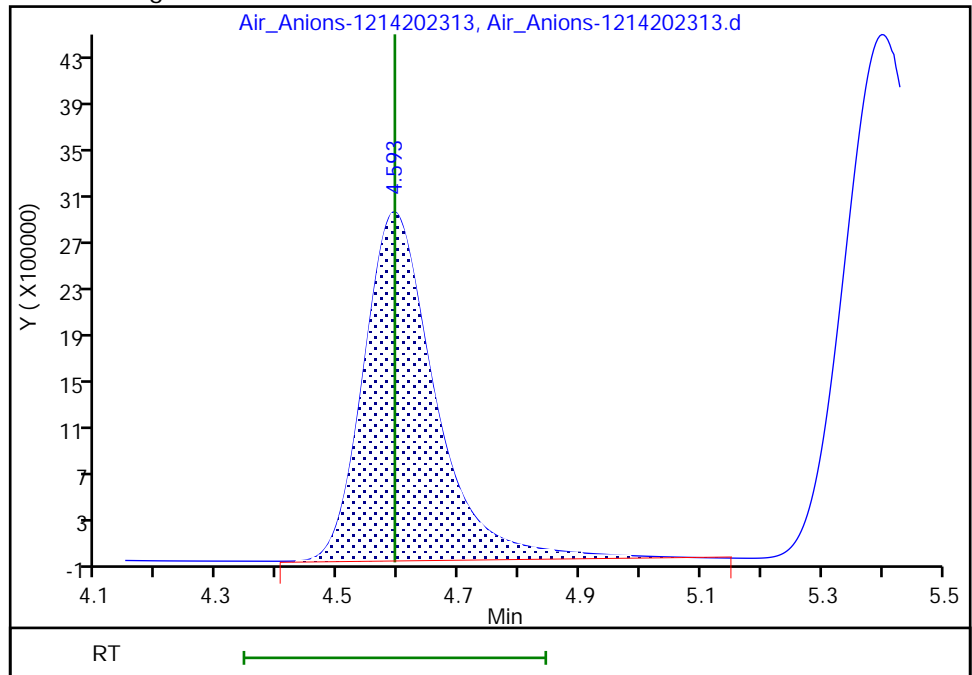
RT: 4.59  
Area: 31237565  
Amount: 1.003943  
Amount Units: ug/ml

Processing Integration Results



RT: 4.59  
Area: 24288043  
Amount: 0.789388  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 15-Dec-2023 09:30:18 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 140-81373/2-A  
 Matrix: Air Lab File ID: Air\_Anions-1215202313.d  
 Analysis Method: 0050/26A Date Collected: \_\_\_\_\_  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:56  
 Sample wt/vol: 1 (Sample) Date Analyzed: 12/15/2023 20:46  
 Con. Extract Vol.: 100 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81494 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	79.29		10.0	5.00

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202313.d  
 Lims ID: LCS 140-81373/2-A  
 Client ID:  
 Sample Type: LCS  
 Inject. Date: 15-Dec-2023 20:46:00 ALS Bottle#: 0 Worklist Smp#: 4  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0030907-004  
 Misc. Info.: LCS 140-81373/2-A  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:04:55 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

First Level Reviewer: EXJ2 Date: 18-Dec-2023 12:00:50

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.323	3.323	0.000	34668606	0.7500	0.7735	M
2 Chloride	4.597	4.597	0.000	24399410	0.7500	0.7929	M
3 Nitrite as N	5.410	5.407	0.003	54976729	0.7500	0.8299	
4 Bromide	6.357	6.350	0.007	14134672	0.7500	1.05	
5 Nitrate as N	7.027	7.023	0.004	67171608	0.7500	0.8771	
19 Orthophosphate as P		9.280			ND	ND	
6 Iodide	13.187	13.173	0.014	6132189	0.7515	0.7798	
S 11 Nitrous Acid					2.52	2.79	
S 12 Br					0.7500	1.05	
S 13 Chlorine					0.7500	0.7929	
S 10 Nitric acid					3.37	3.95	
S 7 Hydrogen Chloride					0.7710	0.8154	
S 9 Hydrobromic Acid					0.7595	1.06	
S 8 Hydro Fluoric Acid					0.7898	0.8147	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

85SPICVLCSS\_00118 Amount Added: 10.00 Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202313.d

Injection Date: 15-Dec-2023 20:46:00

Instrument ID: IC4

Operator ID:

Lims ID: LCS 140-81373/2-A

Worklist Smp#: 4

Client ID:

Injection Vol: 1.0 ul

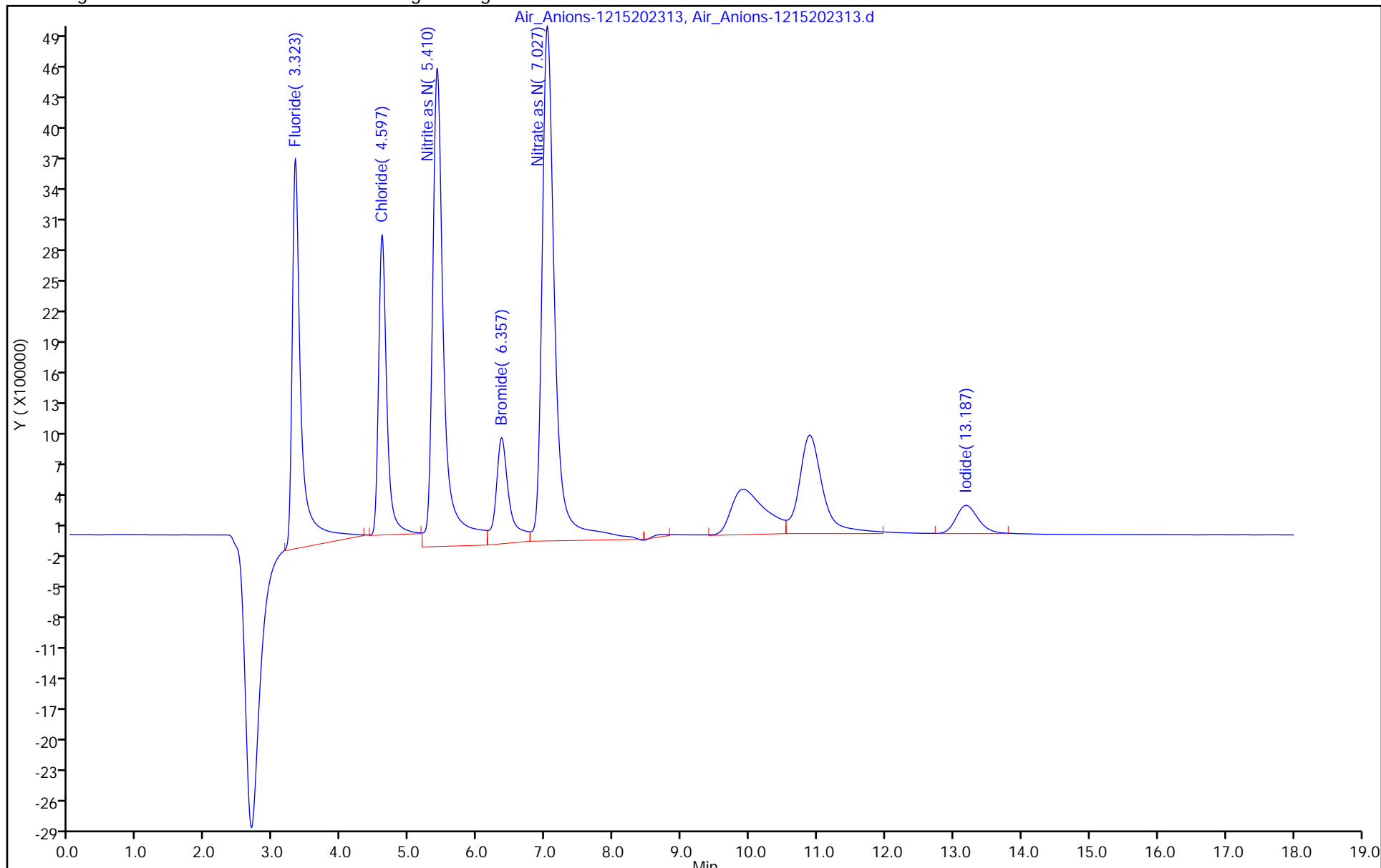
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

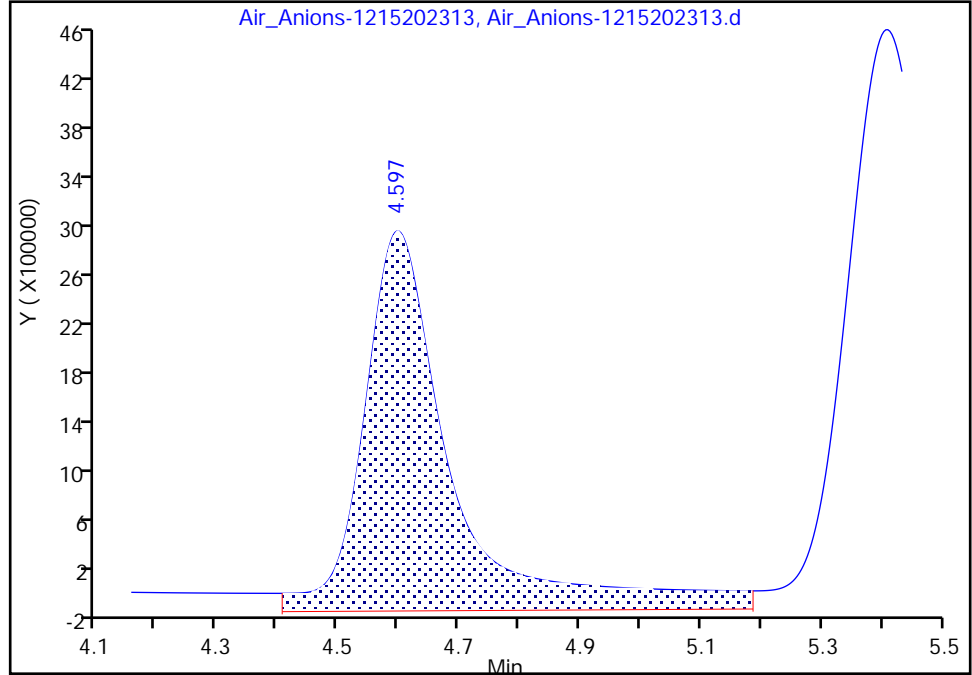
Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202313.d  
Injection Date: 15-Dec-2023 20:46:00 Instrument ID: IC4  
Lims ID: LCS 140-81373/2-A  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

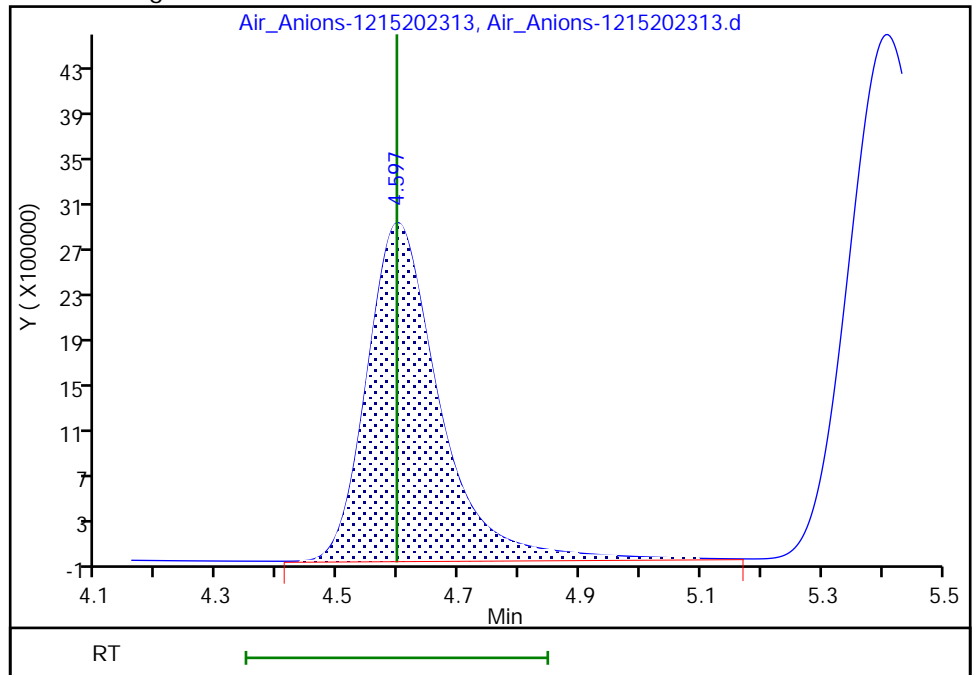
RT: 4.60  
Area: 31230332  
Amount: 1.003722  
Amount Units: ug/ml

Processing Integration Results



RT: 4.60  
Area: 24399410  
Amount: 0.792863  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 18-Dec-2023 12:00:47 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCSD 140-81372/3-A  
 Matrix: Air Lab File ID: Air\_Anions-1214202314.d  
 Analysis Method: 0050/26A Date Collected: \_\_\_\_\_  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:50  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/14/2023 12:22  
 Con. Extract Vol.: 100(mL) Dilution Factor: 1  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81419 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	79.09		10.0	5.00
7647-01-0	Hydrogen Chloride	81.34		10.3	5.30



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202314.d  
 Lims ID: LCSD 140-81372/3-A  
 Client ID:  
 Sample Type: LCSD  
 Inject. Date: 14-Dec-2023 12:22:00 ALS Bottle#: 0 Worklist Smp#: 5  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0030874-005  
 Misc. Info.: LCSD 140-81372/3-A  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:35:59 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:30:30

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.320	3.320	0.000	35065599	0.7500	0.7819	M
2 Chloride	4.593	4.593	0.000	24336519	0.7500	0.7909	M
3 Nitrite as N	5.403	5.400	0.003	53950231	0.7500	0.8152	
4 Bromide	6.347	6.343	0.004	13911770	0.7500	1.03	
5 Nitrate as N	7.020	7.013	0.007	66641662	0.7500	0.8707	
19 Orthophosphate as P		9.280			ND	ND	
6 Iodide	13.170	13.163	0.007	6191444	0.7515	0.7872	
S 11 Nitrous Acid					2.52	2.74	
S 12 Br					0.7500	1.03	
S 13 Chlorine					0.7500	0.7909	
S 10 Nitric acid					3.37	3.92	
S 7 Hydrogen Chloride					0.7710	0.8134	
S 9 Hydrobromic Acid					0.7595	1.04	
S 8 Hydro Fluoric Acid					0.7898	0.8235	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

85SPICVLCSS\_00118 Amount Added: 10.00 Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202314.d

Injection Date: 14-Dec-2023 12:22:00

Instrument ID: IC4

Operator ID:

Lims ID: LCSD 140-81372/3-A

Worklist Smp#: 5

Client ID:

Injection Vol: 1.0 ul

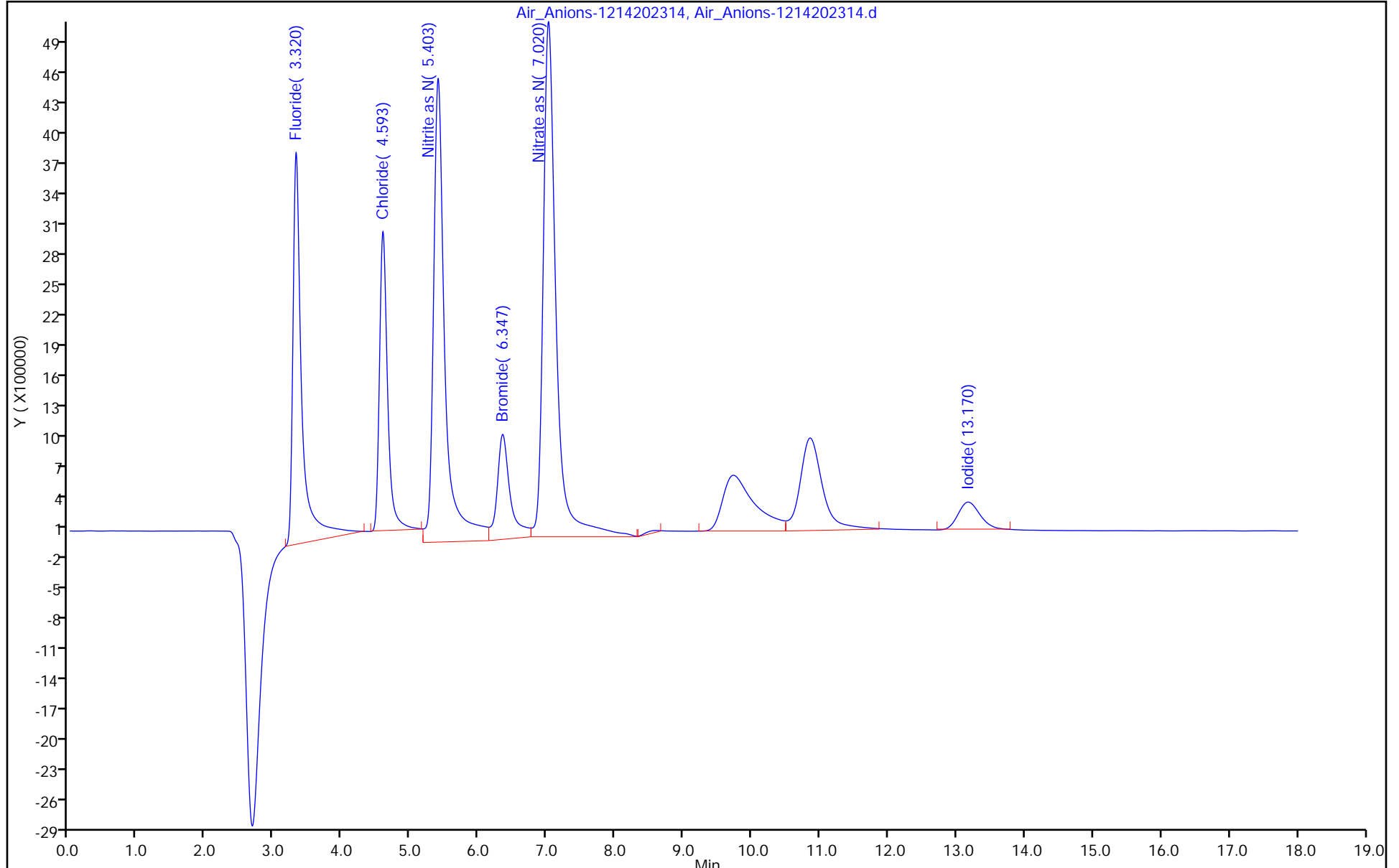
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

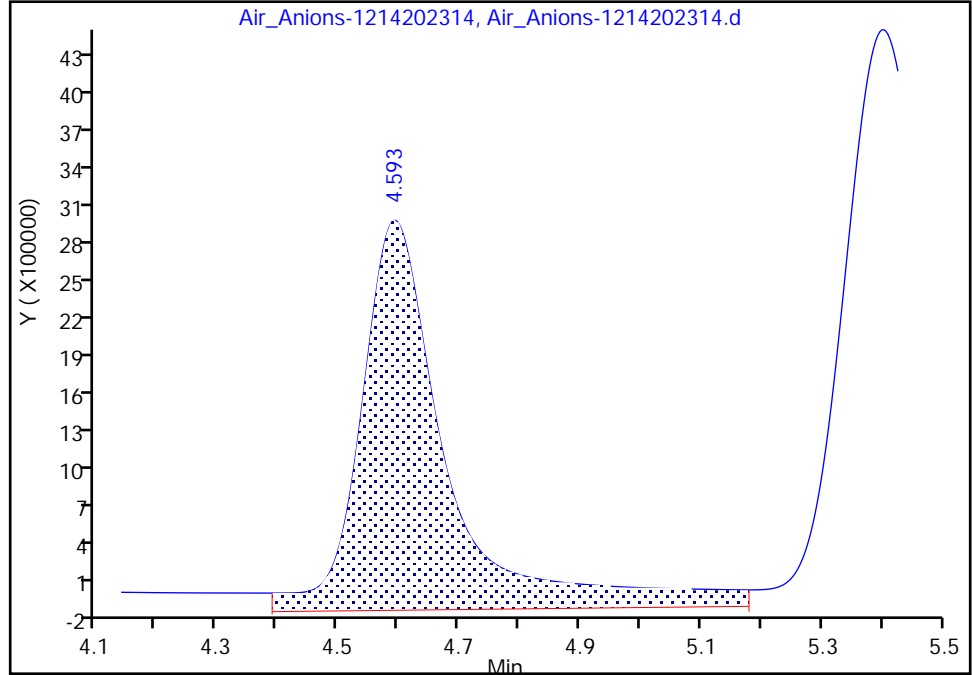
Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202314.d  
Injection Date: 14-Dec-2023 12:22:00 Instrument ID: IC4  
Lims ID: LCSD 140-81372/3-A  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 5  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

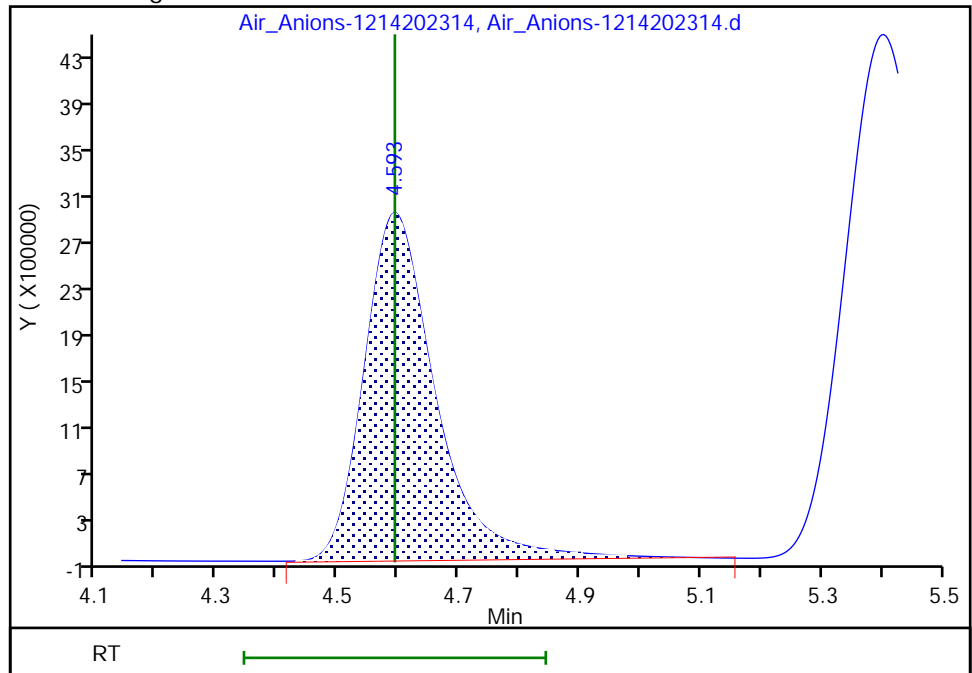
RT: 4.59  
Area: 31280448  
Amount: 1.005253  
Amount Units: ug/ml

Processing Integration Results



RT: 4.59  
Area: 24336519  
Amount: 0.790901  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 15-Dec-2023 09:30:27 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCSD 140-81373/3-A  
 Matrix: Air Lab File ID: Air\_Anions-1215202314.d  
 Analysis Method: 0050/26A Date Collected: \_\_\_\_\_  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:56  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/15/2023 21:08  
 Con. Extract Vol.: 100(mL) Dilution Factor: 1  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81494 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	78.67		10.0	5.00

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202314.d  
 Lims ID: LCSD 140-81373/3-A  
 Client ID:  
 Sample Type: LCSD  
 Inject. Date: 15-Dec-2023 21:08:00 ALS Bottle#: 0 Worklist Smp#: 5  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0030907-005  
 Misc. Info.: LCSD 140-81373/3-A  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:04:55 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

First Level Reviewer: EXJ2 Date: 18-Dec-2023 12:01:01

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.327	3.323	0.004	35037207	0.7500	0.7813	M
2 Chloride	4.603	4.597	0.006	24202223	0.7500	0.7867	M
3 Nitrite as N	5.413	5.407	0.006	55223286	0.7500	0.8334	
4 Bromide	6.360	6.350	0.010	14228842	0.7500	1.05	
5 Nitrate as N	7.033	7.023	0.010	67337213	0.7500	0.8791	
19 Orthophosphate as P		9.280			ND	ND	
6 Iodide	13.193	13.173	0.020	6138209	0.7515	0.7805	
S 11 Nitrous Acid					2.52	2.80	
S 12 Br					0.7500	1.05	
S 13 Chlorine					0.7500	0.7867	
S 10 Nitric acid					3.37	3.96	
S 7 Hydrogen Chloride					0.7710	0.8091	
S 9 Hydrobromic Acid					0.7595	1.07	
S 8 Hydro Fluoric Acid					0.7898	0.8229	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

85SPICVLCSS\_00118 Amount Added: 10.00 Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202314.d

Injection Date: 15-Dec-2023 21:08:00

Instrument ID: IC4

Operator ID:

Lims ID: LCSD 140-81373/3-A

Worklist Smp#: 5

Client ID:

Injection Vol: 1.0 ul

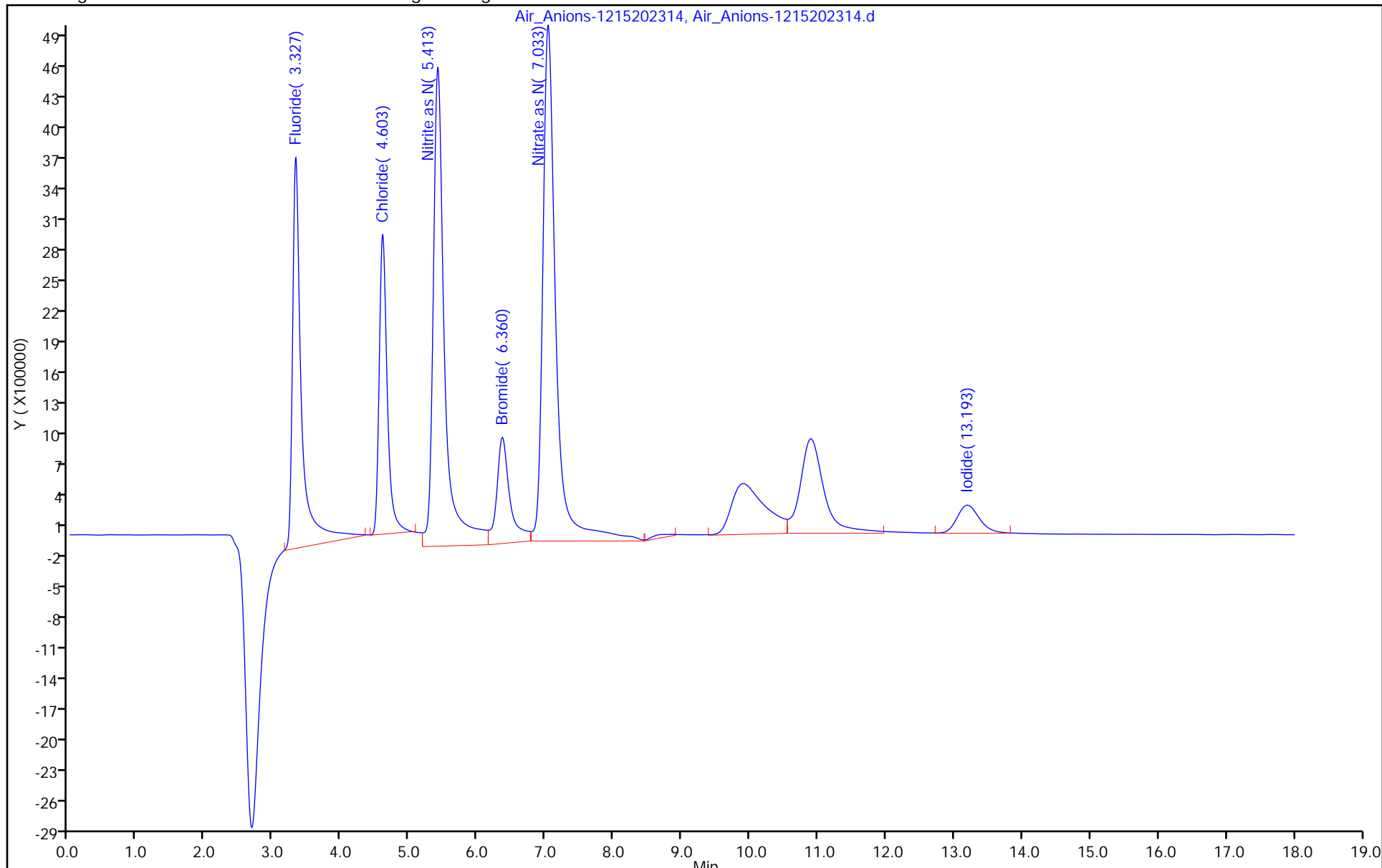
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

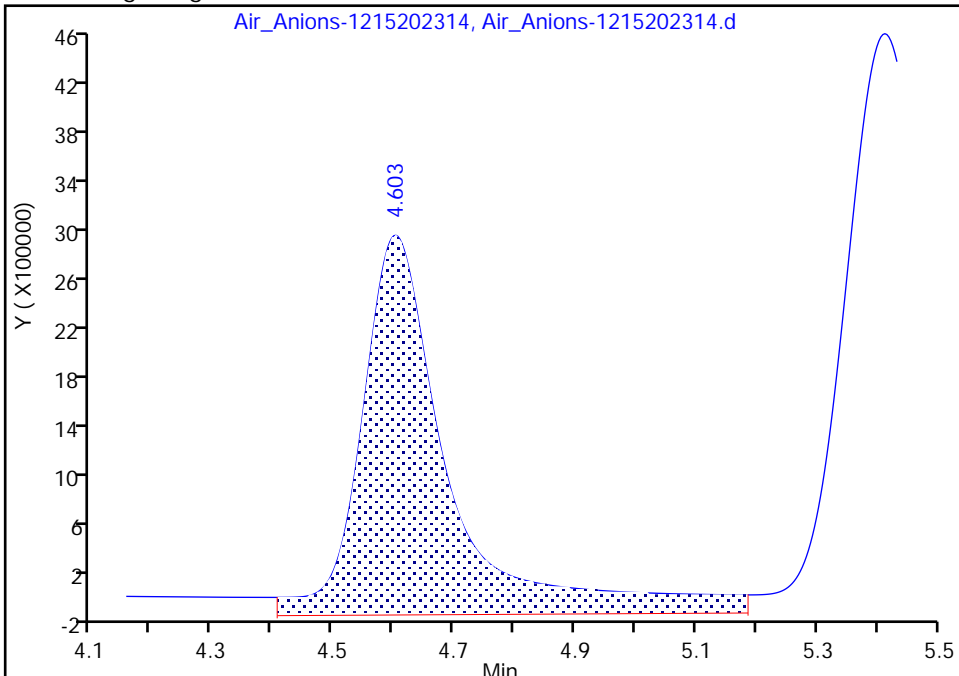
Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202314.d  
Injection Date: 15-Dec-2023 21:08:00 Instrument ID: IC4  
Lims ID: LCSD 140-81373/3-A  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 5  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

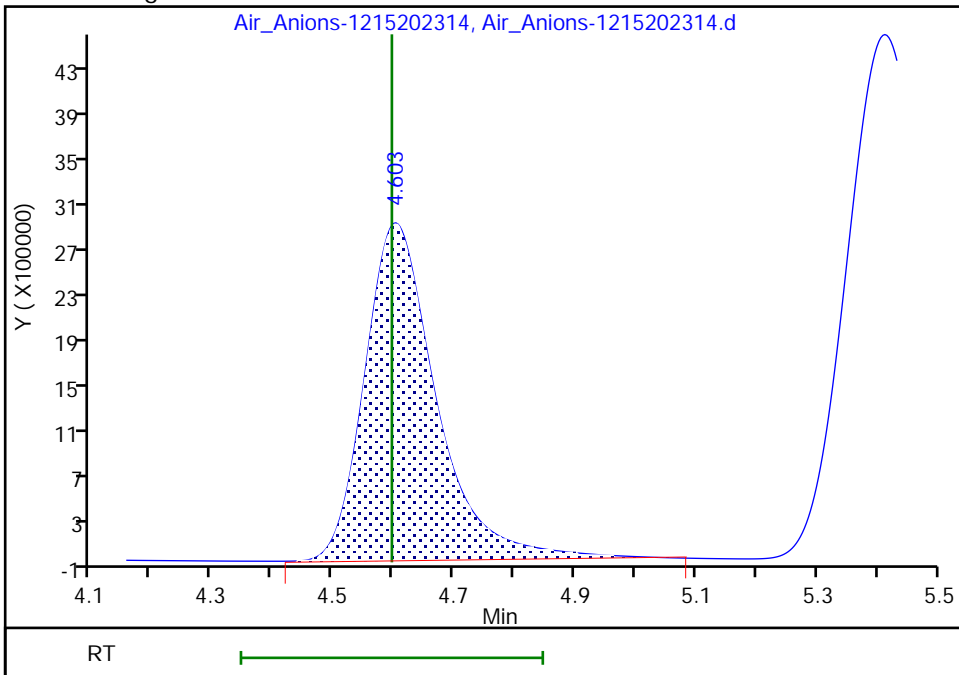
RT: 4.60  
Area: 31229831  
Amount: 1.003706  
Amount Units: ug/ml

Processing Integration Results



RT: 4.60  
Area: 24202223  
Amount: 0.786710  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 18-Dec-2023 12:00:58 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: VF26A-2 CONTAINER 3 H2SO4 MS Lab Sample ID: 140-34757-3 MS  
 Matrix: Air Lab File ID: Air\_Anions-1214202319.d  
 Analysis Method: 0050/26A Date Collected: 12/03/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:50  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/14/2023 14:13  
 Con. Extract Vol.: 255(mL) Dilution Factor: 2  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81419 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7647-01-0	Hydrogen Chloride	561.4		52.4	27.0



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202319.d  
 Lims ID: 140-34757-A-3-C MS  
 Client ID: VF26A-2 CONTAINER 3 H2SO4  
 Sample Type: MS  
 Inject. Date: 14-Dec-2023 14:13:00 ALS Bottle#: 0 Worklist Smp#: 10  
 Injection Vol: 1.0 ul Dil. Factor: 2.0000  
 Sample Info: 140-0030874-010  
 Misc. Info.: 140-34757-A-3-C MS  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:35:59 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.560	3.320	0.240	27159314	0.5000	0.6141	
2 Chloride	4.587	4.593	-0.006	33418380	0.5000	1.07	
3 Nitrite as N	5.370	5.400	-0.030	35030880	0.5000	0.5390	
4 Bromide	6.330	6.343	-0.013	15041146	0.5000	1.11	
5 Nitrate as N	6.980	7.013	-0.033	99520895	0.5000	1.26	
19 Orthophosphate as P		9.280			ND	ND	
6 Iodide		13.163			ND	ND	
S 11 Nitrous Acid					1.68	1.81	
S 12 Br					0.5000	1.11	
S 13 Chlorine					0.5000	1.07	
S 10 Nitric acid					2.25	5.66	
S 7 Hydrogen Chloride					0.5140	1.10	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid					0.5063	1.12	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid					0.5265	0.6468	
S 21 Phosphate as H3PO4		0.000				ND	

**QC Flag Legend**

Processing Flags

ND - Not Detected or Marked ND

**Reagents:**

85SPANion\_S\_00001 Amount Added: 0.10 Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202319.d

Injection Date: 14-Dec-2023 14:13:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-3-C MS

Worklist Smp#: 10

Client ID: VF26A-2 CONTAINER 3 H2SO4

Injection Vol: 1.0 ul

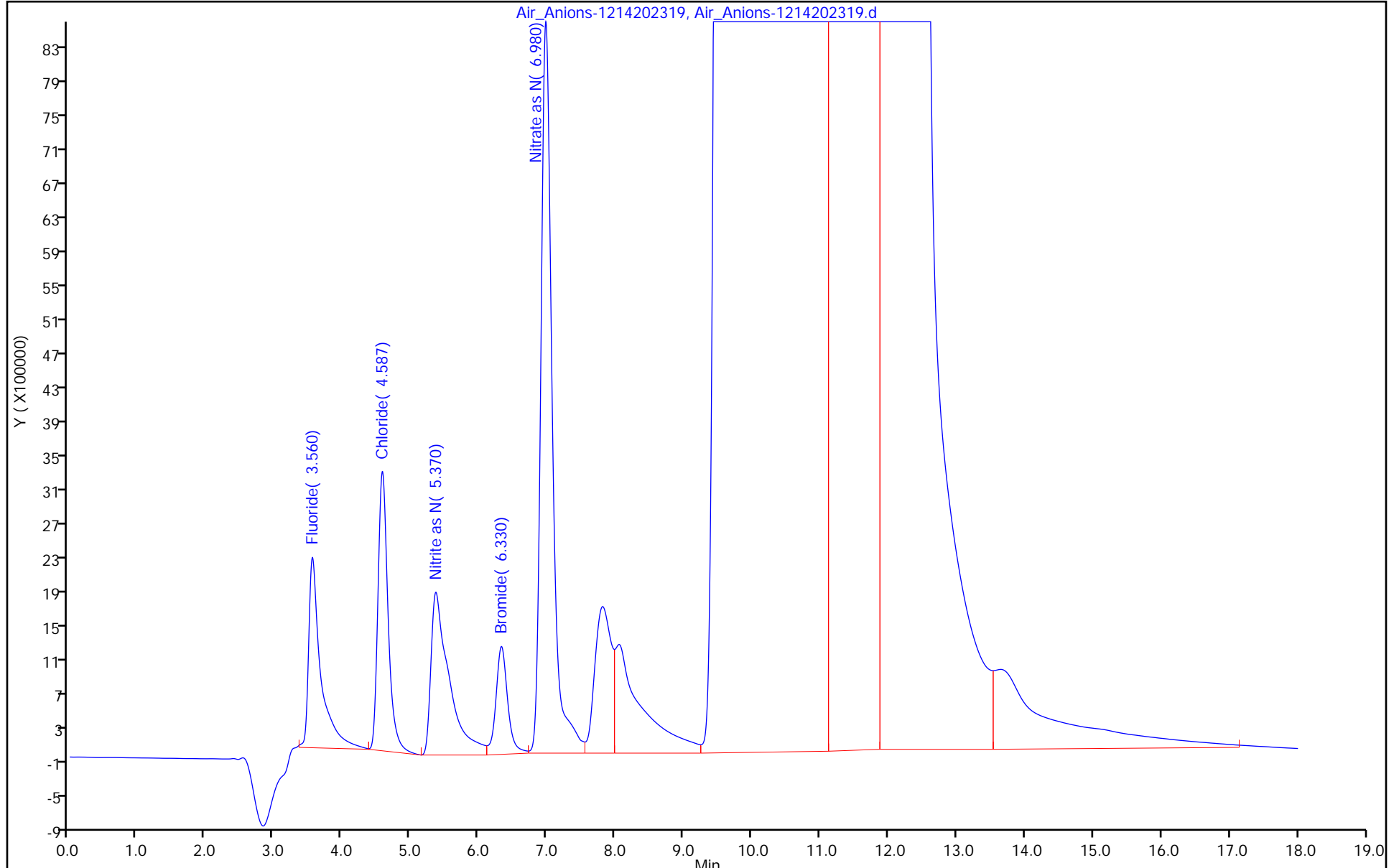
Dil. Factor: 2.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: VF26A-2 CONTAINER 4 NAOH MS Lab Sample ID: 140-34757-4 MS  
 Matrix: Air Lab File ID: Air\_Anions-1215202319.d  
 Analysis Method: 0050/26A Date Collected: 12/03/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:56  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/16/2023 00:19  
 Con. Extract Vol.: 245(mL) Dilution Factor: 5  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81494 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	1448		123	61.3

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202319.d  
 Lims ID: 140-34757-A-4-C MS  
 Client ID: VF26A-2 CONTAINER 4 NAOH  
 Sample Type: MS  
 Inject. Date: 16-Dec-2023 00:19:00 ALS Bottle#: 0 Worklist Smp#: 10  
 Injection Vol: 1.0 ul Dil. Factor: 5.0000  
 Sample Info: 140-0030907-010  
 Misc. Info.: 140-34757-A-4-C MS  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:04:55 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICAL File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.233	3.323	-0.090	45314400	0.2000	0.99	
2 Chloride	4.520	4.597	-0.077	37121917	0.2000	1.18	
3 Nitrite as N	5.333	5.407	-0.074	61223565	0.2000	0.9189	
4 Bromide	6.283	6.350	-0.067	13026262	0.2000	0.9679	
5 Nitrate as N	6.957	7.023	-0.066	91090499	0.2000	1.16	
19 Orthophosphate as P		9.280			ND	ND	
6 Iodide	13.020	13.173	-0.153	8201177	0.2004	1.04	
S 11 Nitrous Acid					0.6713	3.08	
S 12 Br					0.2000	0.9679	
S 13 Chlorine					0.2000	1.18	
S 10 Nitric acid					0.8998	5.23	
S 7 Hydrogen Chloride					0.2056	1.22	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid					0.2025	0.9801	
S 22 Hydrogen Iodide						1.05	
S 8 Hydro Fluoric Acid					0.2106	1.05	
S 21 Phosphate as H3PO4		0.000				ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

85SPANion\_S\_00001 Amount Added: 0.10 Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202319.d

Injection Date: 16-Dec-2023 00:19:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-4-C MS

Worklist Smp#: 10

Client ID: VF26A-2 CONTAINER 4 NAOH

Injection Vol: 1.0 ul

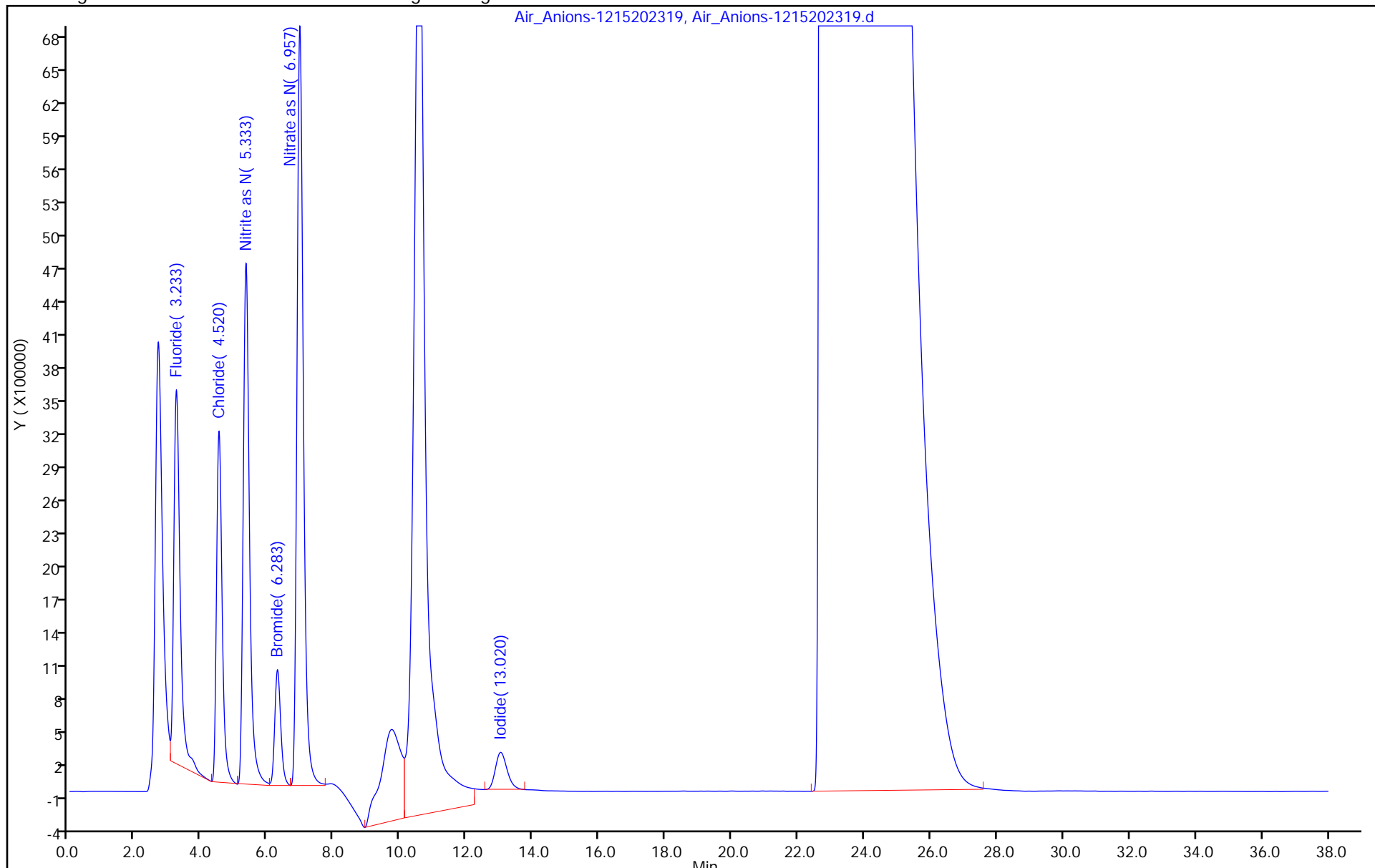
Dil. Factor: 5.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AS26-2 CONTAINER 3 H2SO4 MS Lab Sample ID: 140-34757-9 MS  
 Matrix: Air Lab File ID: Air\_Anions-1214202329.d  
 Analysis Method: 0050/26A Date Collected: 12/01/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:50  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/14/2023 17:55  
 Con. Extract Vol.: 250(mL) Dilution Factor: 2  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81419 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7647-01-0	Hydrogen Chloride	544.7		51.4	26.5

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202329.d  
 Lims ID: 140-34757-A-9-C MS  
 Client ID: AS26-2 CONTAINER 3 H2SO4  
 Sample Type: MS  
 Inject. Date: 14-Dec-2023 17:55:00 ALS Bottle#: 0 Worklist Smp#: 20  
 Injection Vol: 1.0 ul Dil. Factor: 2.0000  
 Sample Info: 140-0030874-020  
 Misc. Info.: 140-34757-A-9-C MS  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:36:05 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICAL File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.553	3.320	0.233	29214489	0.5000	0.6581	
2 Chloride	4.580	4.593	-0.013	33053323	0.5000	1.06	
3 Nitrite as N	5.367	5.400	-0.033	35928690	0.5000	0.5523	
4 Bromide	6.323	6.343	-0.020	14636052	0.5000	1.08	
5 Nitrate as N	6.973	7.013	-0.040	119489002	0.5000	1.48	
19 Orthophosphate as P		9.280			ND	ND	
6 Iodide		13.163			ND	ND	
S 11 Nitrous Acid					1.68	1.85	
S 12 Br					0.5000	1.08	
S 13 Chlorine					0.5000	1.06	
S 10 Nitric acid					2.25	6.68	
S 7 Hydrogen Chloride					0.5140	1.09	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid					0.5063	1.10	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid					0.5265	0.6931	
S 21 Phosphate as H3PO4		0.000				ND	

**QC Flag Legend**

Processing Flags

ND - Not Detected or Marked ND

**Reagents:**

85SPANion\_S\_00001 Amount Added: 0.10 Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202329.d

Injection Date: 14-Dec-2023 17:55:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-9-C MS

Worklist Smp#: 20

Client ID: AS26-2 CONTAINER 3 H2SO4

Injection Vol: 1.0 ul

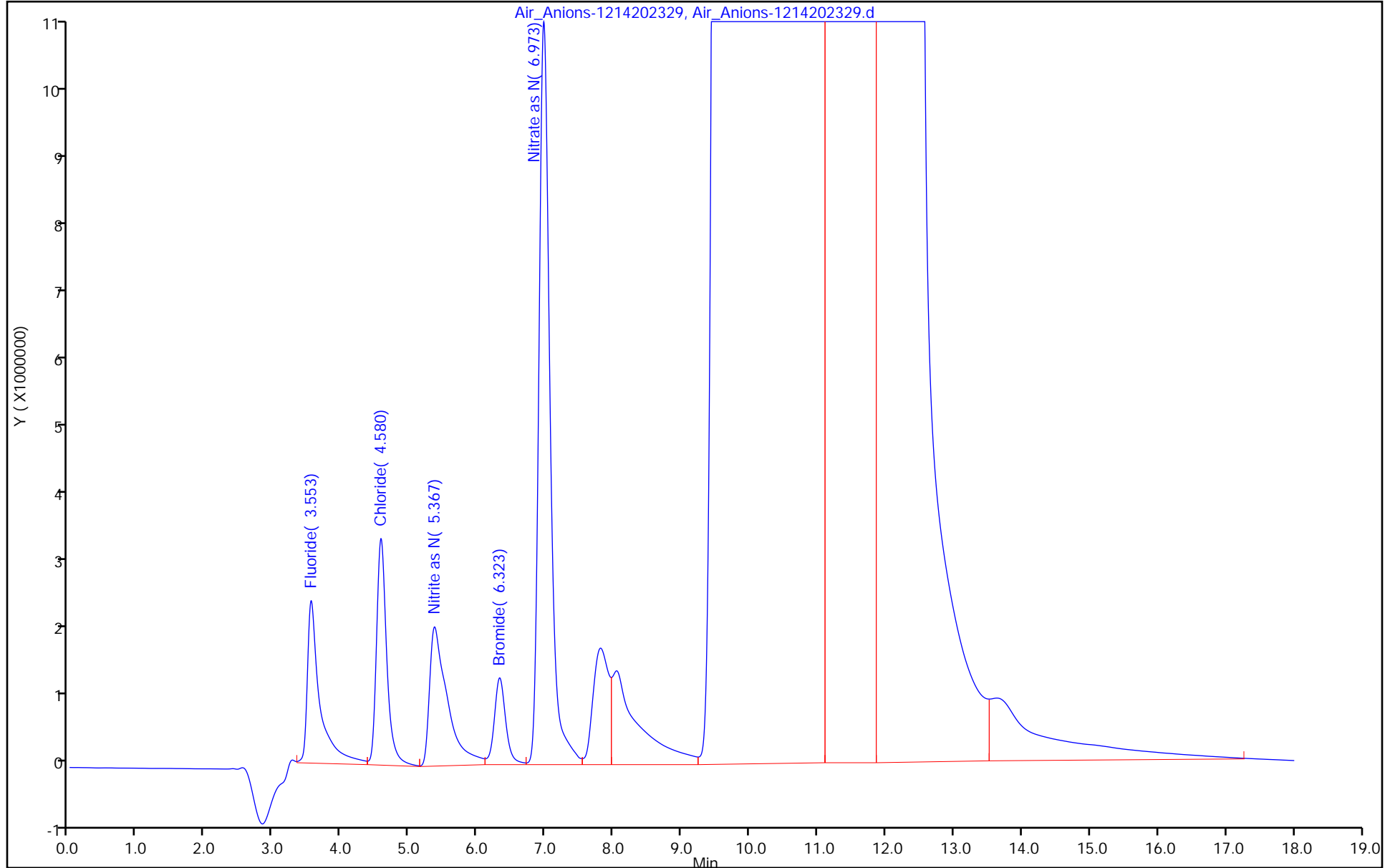
Dil. Factor: 2.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1





FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AS26-2 CONTAINER 4 NAOH MS Lab Sample ID: 140-34757-10 MS  
 Matrix: Air Lab File ID: Air\_Anions-1215202329.d  
 Analysis Method: 0050/26A Date Collected: 12/01/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:56  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/16/2023 06:41  
 Con. Extract Vol.: 235(mL) Dilution Factor: 5  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81494 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	1247		118	58.8

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202329.d  
 Lims ID: 140-34757-A-10-C MS  
 Client ID: AS26-2 CONTAINER 4 NAOH  
 Sample Type: MS  
 Inject. Date: 16-Dec-2023 06:41:00 ALS Bottle#: 0 Worklist Smp#: 20  
 Injection Vol: 1.0 ul Dil. Factor: 5.0000  
 Sample Info: 140-0030907-020  
 Misc. Info.: 140-34757-A-10-C MS  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:05:01 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.237	3.323	-0.086	43585599	0.2000	0.9580	
2 Chloride	4.527	4.597	-0.070	33126477	0.2000	1.06	
3 Nitrite as N	5.347	5.407	-0.060	59239766	0.2000	0.8908	
4 Bromide	6.303	6.350	-0.047	12756974	0.2000	0.9488	
5 Nitrate as N	6.983	7.023	-0.040	97925326	0.2000	1.24	
19 Orthophosphate as P		9.280			ND	ND	
6 Iodide	13.100	13.173	-0.073	8252758	0.2004	1.04	
S 11 Nitrous Acid					0.6713	2.99	
S 12 Br					0.2000	0.9488	
S 13 Chlorine					0.2000	1.06	
S 10 Nitric acid					0.8998	5.58	
S 7 Hydrogen Chloride					0.2056	1.09	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid					0.2025	0.9607	
S 22 Hydrogen Iodide						1.05	
S 8 Hydro Fluoric Acid					0.2106	1.01	
S 21 Phosphate as H3PO4		0.000				ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

85SPANion\_S\_00001

Amount Added: 0.10

Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202329.d

Injection Date: 16-Dec-2023 06:41:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-10-C MS

Worklist Smp#: 20

Client ID: AS26-2 CONTAINER 4 NAOH

Injection Vol: 1.0 ul

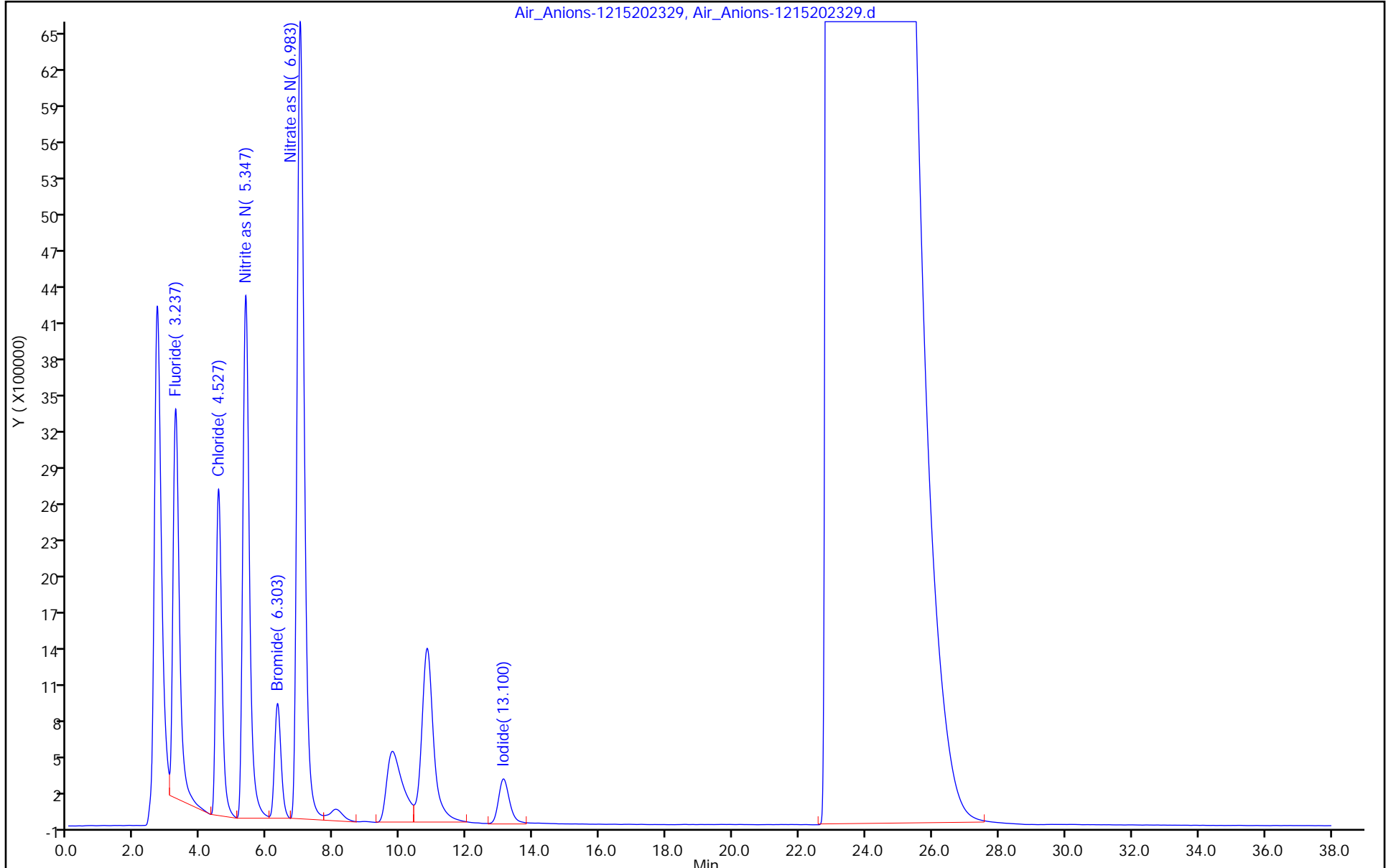
Dil. Factor: 5.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AP26-2 CONTAINER 3 H2SO4 MS Lab Sample ID: 140-34757-15 MS  
 Matrix: Air Lab File ID: Air\_Anions-1214202339.d  
 Analysis Method: 0050/26A Date Collected: 12/06/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:50  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/14/2023 21:37  
 Con. Extract Vol.: 265(mL) Dilution Factor: 2  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81419 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7647-01-0	Hydrogen Chloride	686.0		54.5	28.1

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202339.d  
 Lims ID: 140-34757-A-15-C MS  
 Client ID: AP26-2 CONTAINER 3 H2SO4  
 Sample Type: MS  
 Inject. Date: 14-Dec-2023 21:37:00 ALS Bottle#: 0 Worklist Smp#: 30  
 Injection Vol: 1.0 ul Dil. Factor: 2.0000  
 Sample Info: 140-0030874-030  
 Misc. Info.: 140-34757-A-15-C MS  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:36:11 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICAL File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.547	3.320	0.227	27360600	0.5000	0.6184	
2 Chloride	4.587	4.593	-0.006	39679536	0.5000	1.26	
3 Nitrite as N	5.377	5.400	-0.023	38607950	0.5000	0.5919	
4 Bromide	6.330	6.343	-0.013	14467356	0.5000	1.07	
5 Nitrate as N	6.980	7.013	-0.033	118192196	0.5000	1.47	
19 Orthophosphate as P		9.280			ND	ND	
6 Iodide		13.163			ND	ND	
S 11 Nitrous Acid					1.68	1.99	
S 12 Br					0.5000	1.07	
S 13 Chlorine					0.5000	1.26	
S 10 Nitric acid					2.25	6.61	
S 7 Hydrogen Chloride					0.5140	1.29	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid					0.5063	1.08	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid					0.5265	0.6513	
S 21 Phosphate as H3PO4		0.000				ND	

**QC Flag Legend**

Processing Flags

ND - Not Detected or Marked ND

**Reagents:**

85SPANion\_S\_00001 Amount Added: 0.10 Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202339.d

Injection Date: 14-Dec-2023 21:37:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-15-C MS

Worklist Smp#: 30

Client ID: AP26-2 CONTAINER 3 H2SO4

Injection Vol: 1.0 ul

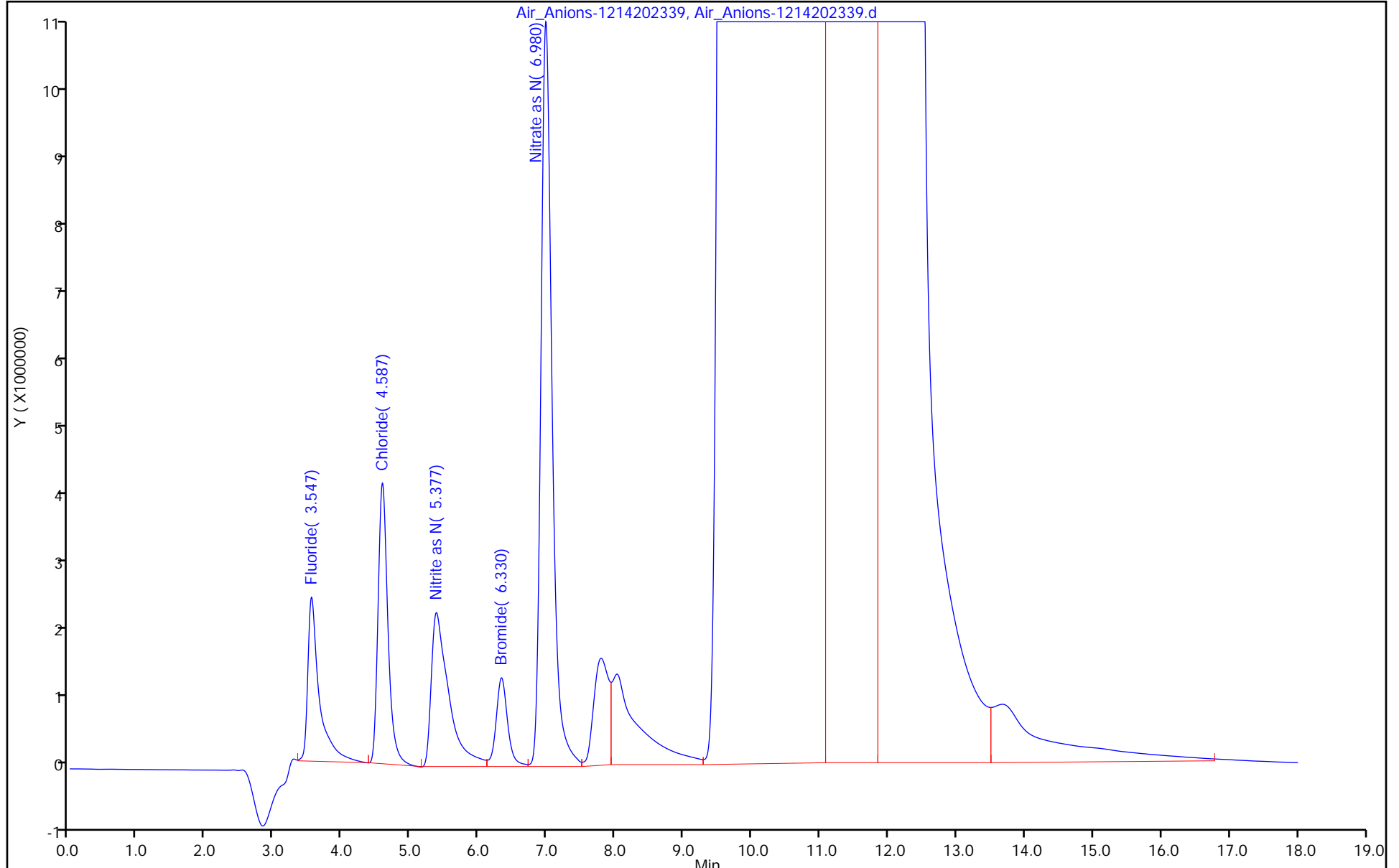
Dil. Factor: 2.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AP26-2 CONTAINER 4 NAOH MS Lab Sample ID: 140-34757-16 MS  
 Matrix: Air Lab File ID: Air\_Anions-1215202339.d  
 Analysis Method: 0050/26A Date Collected: 12/06/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:56  
 Sample wt/vol: 1 (Sample) Date Analyzed: 12/16/2023 13:03  
 Con. Extract Vol.: 240 (mL) Dilution Factor: 5  
 Injection Volume: 1 (uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81494 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	1263		120	60.0

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202339.d  
 Lims ID: 140-34757-A-16-C MS  
 Client ID: AP26-2 CONTAINER 4 NAOH  
 Sample Type: MS  
 Inject. Date: 16-Dec-2023 13:03:00 ALS Bottle#: 0 Worklist Smp#: 30  
 Injection Vol: 1.0 ul Dil. Factor: 5.0000  
 Sample Info: 140-0030907-030  
 Misc. Info.: 140-34757-A-16-C MS  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:05:07 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICAL File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.247	3.323	-0.076	44610451	0.2000	0.9788	
2 Chloride	4.543	4.597	-0.054	32837408	0.2000	1.05	
3 Nitrite as N	5.380	5.407	-0.027	137975053	0.2000	1.94	
4 Bromide	6.250	6.350	-0.100	3451376	0.2000	0.2655	
5 Nitrate as N	6.813	7.023	-0.210	12311568	0.2000	0.1710	
19 Orthophosphate as P		9.280			ND	ND	
6 Iodide	13.157	13.173	-0.016	8202138	0.2004	1.04	
S 11 Nitrous Acid					0.6713	6.52	
S 12 Br					0.2000	0.2655	
S 13 Chlorine					0.2000	1.05	
S 10 Nitric acid					0.8998	0.7693	
S 7 Hydrogen Chloride					0.2056	1.08	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid					0.2025	0.2689	
S 22 Hydrogen Iodide						1.05	
S 8 Hydro Fluoric Acid					0.2106	1.03	
S 21 Phosphate as H3PO4		0.000				ND	

**QC Flag Legend**

Processing Flags

ND - Not Detected or Marked ND

**Reagents:**

85SPANion\_S\_00001 Amount Added: 0.10 Units: mL



Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202339.d

Injection Date: 16-Dec-2023 13:03:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-16-C MS

Worklist Smp#: 30

Client ID: AP26-2 CONTAINER 4 NAOH

Injection Vol: 1.0 ul

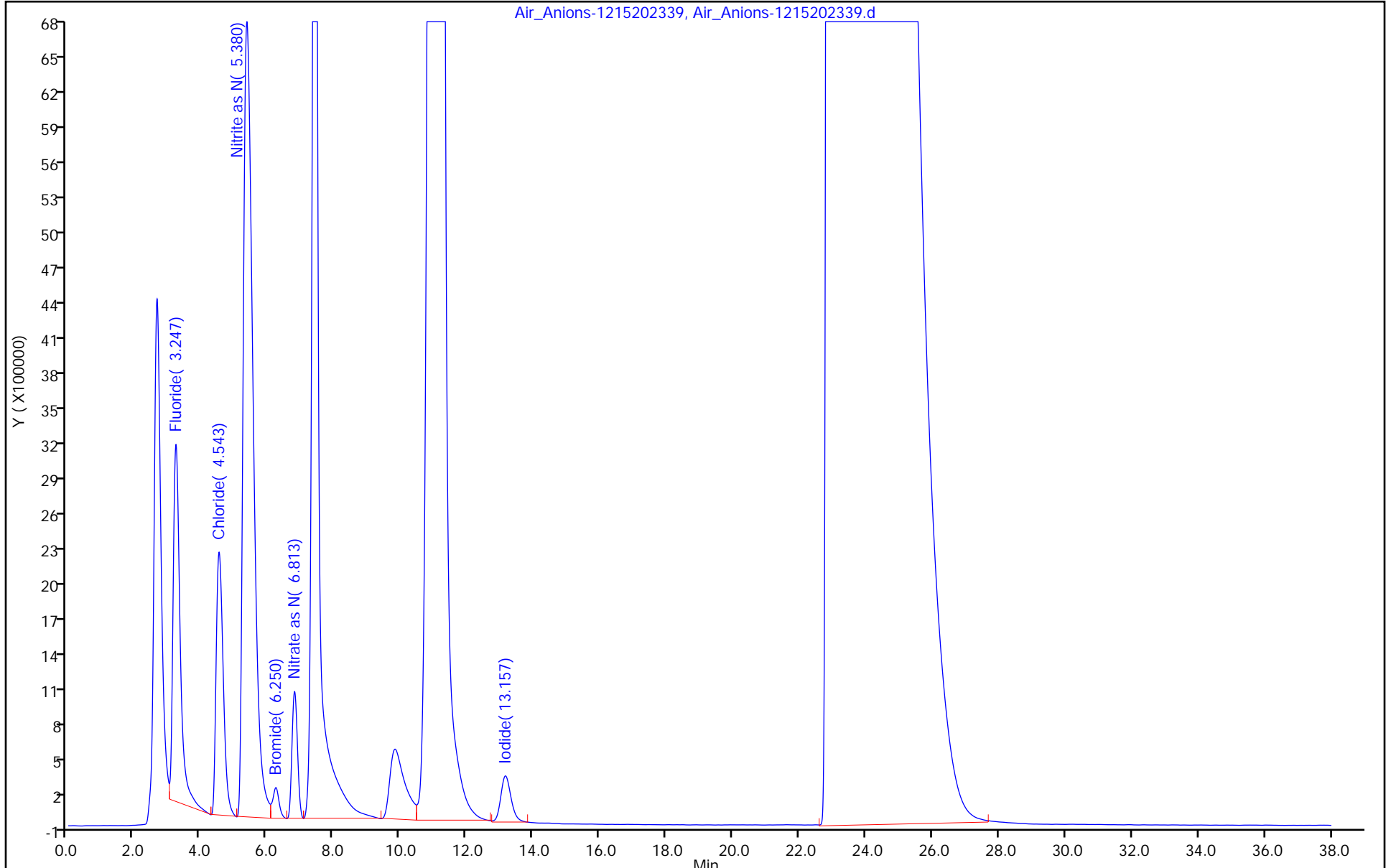
Dil. Factor: 5.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: VF26A-2 CONTAINER 3 H2SO4 MSD Lab Sample ID: 140-34757-3 MSD  
 Matrix: Air Lab File ID: Air\_Anions-1214202320.d  
 Analysis Method: 0050/26A Date Collected: 12/03/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:50  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/14/2023 14:35  
 Con. Extract Vol.: 255(mL) Dilution Factor: 2  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81419 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7647-01-0	Hydrogen Chloride	560.9		52.4	27.0

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202320.d  
 Lims ID: 140-34757-A-3-D MSD  
 Client ID: VF26A-2 CONTAINER 3 H2SO4  
 Sample Type: MSD  
 Inject. Date: 14-Dec-2023 14:35:00 ALS Bottle#: 0 Worklist Smp#: 11  
 Injection Vol: 1.0 ul Dil. Factor: 2.0000  
 Sample Info: 140-0030874-011  
 Misc. Info.: 140-34757-A-3-D MSD  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:35:59 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICAL File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.560	3.320	0.240	28529802	0.5000	0.6435	
2 Chloride	4.587	4.593	-0.006	33384371	0.5000	1.07	
3 Nitrite as N	5.370	5.400	-0.030	35520813	0.5000	0.5463	
4 Bromide	6.330	6.343	-0.013	14965981	0.5000	1.10	
5 Nitrate as N	6.980	7.013	-0.033	99409043	0.5000	1.26	
19 Orthophosphate as P		9.280			ND	ND	
6 Iodide		13.163			ND	ND	
S 11 Nitrous Acid					1.68	1.83	
S 12 Br					0.5000	1.10	
S 13 Chlorine					0.5000	1.07	
S 10 Nitric acid					2.25	5.66	
S 7 Hydrogen Chloride					0.5140	1.10	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid					0.5063	1.12	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid					0.5265	0.6777	
S 21 Phosphate as H3PO4		0.000				ND	

**QC Flag Legend**

Processing Flags

ND - Not Detected or Marked ND

**Reagents:**

85SPANion\_S\_00001

Amount Added: 0.10

Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202320.d

Injection Date: 14-Dec-2023 14:35:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-3-D MSD

Worklist Smp#: 11

Client ID: VF26A-2 CONTAINER 3 H2SO4

Injection Vol: 1.0 ul

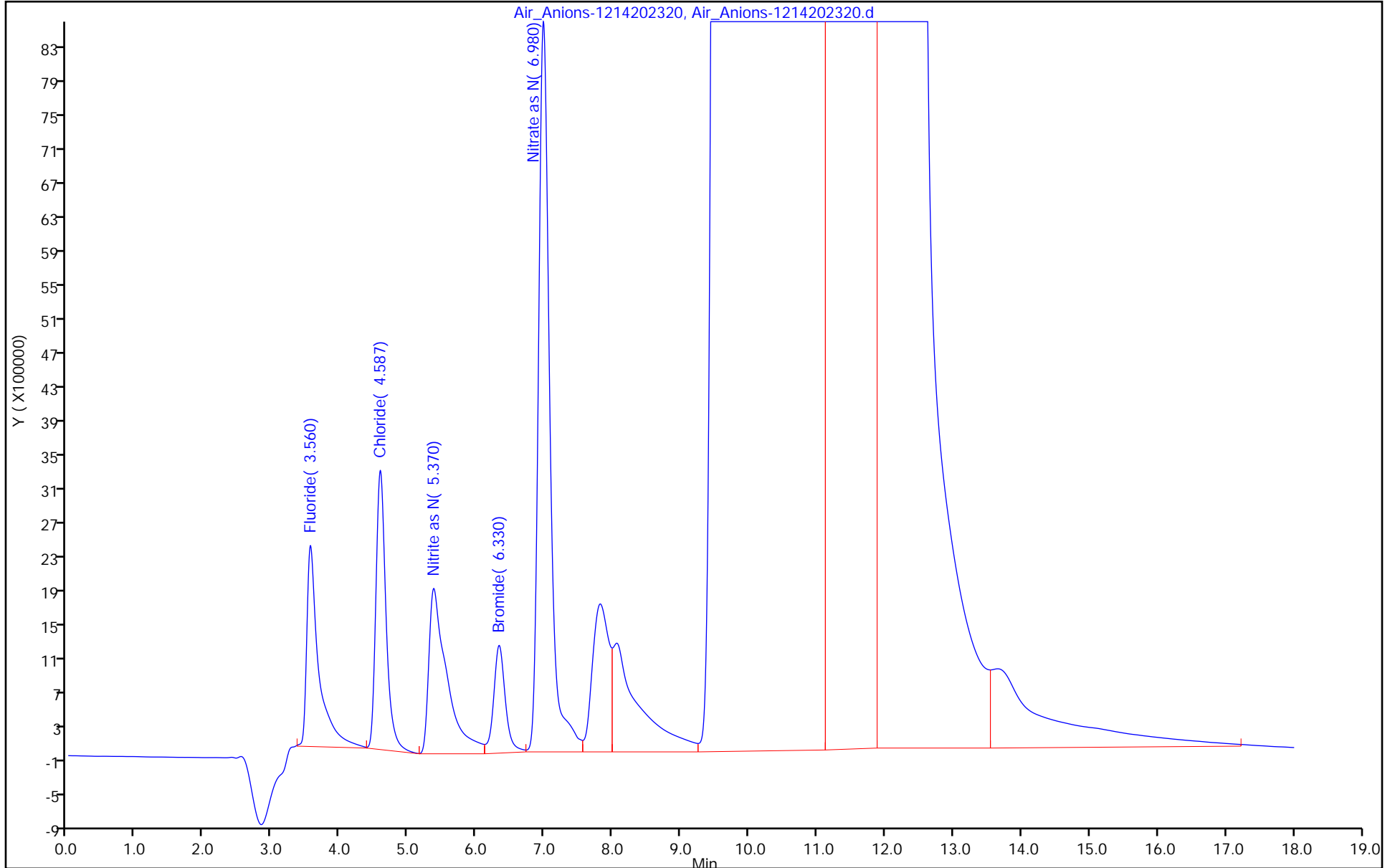
Dil. Factor: 2.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: VF26A-2 CONTAINER 4 NAOH MSD Lab Sample ID: 140-34757-4 MSD  
 Matrix: Air Lab File ID: Air\_Anions-1215202320.d  
 Analysis Method: 0050/26A Date Collected: 12/03/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:56  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/16/2023 01:01  
 Con. Extract Vol.: 245(mL) Dilution Factor: 5  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81494 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	1446		123	61.3

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202320.d  
 Lims ID: 140-34757-A-4-D MSD  
 Client ID: VF26A-2 CONTAINER 4 NAOH  
 Sample Type: MSD  
 Inject. Date: 16-Dec-2023 01:01:00 ALS Bottle#: 0 Worklist Smp#: 11  
 Injection Vol: 1.0 ul Dil. Factor: 5.0000  
 Sample Info: 140-0030907-011  
 Misc. Info.: 140-34757-A-4-D MSD  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:04:55 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICAL File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.233	3.323	-0.090	45308665	0.2000	0.99	
2 Chloride	4.520	4.597	-0.077	37068357	0.2000	1.18	
3 Nitrite as N	5.333	5.407	-0.074	61258876	0.2000	0.9194	
4 Bromide	6.283	6.350	-0.067	13002749	0.2000	0.9662	
5 Nitrate as N	6.957	7.023	-0.066	91052166	0.2000	1.16	
19 Orthophosphate as P		9.280			ND	ND	
6 Iodide	13.017	13.173	-0.156	8181829	0.2004	1.04	
S 11 Nitrous Acid					0.6713	3.09	
S 12 Br					0.2000	0.9662	
S 13 Chlorine					0.2000	1.18	
S 10 Nitric acid					0.8998	5.22	
S 7 Hydrogen Chloride					0.2056	1.21	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid					0.2025	0.9784	
S 22 Hydrogen Iodide						1.04	
S 8 Hydro Fluoric Acid					0.2106	1.05	
S 21 Phosphate as H3PO4		0.000				ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

85SPANion\_S\_00001

Amount Added: 0.10

Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202320.d

Injection Date: 16-Dec-2023 01:01:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-4-D MSD

Worklist Smp#: 11

Client ID: VF26A-2 CONTAINER 4 NAOH

Injection Vol: 1.0 ul

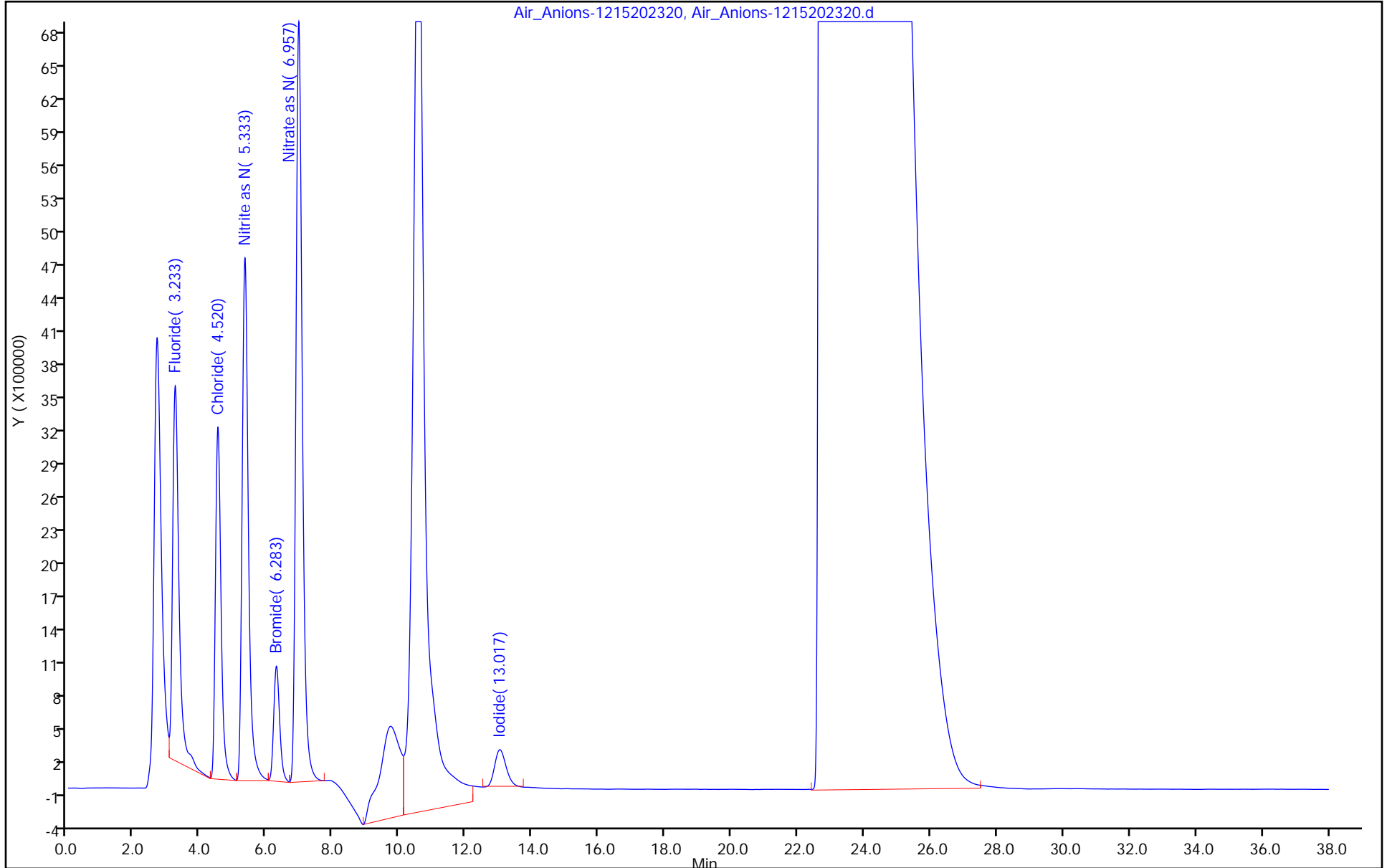
Dil. Factor: 5.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AS26-2 CONTAINER 3 H2SO4 MSD Lab Sample ID: 140-34757-9 MSD  
 Matrix: Air Lab File ID: Air\_Anions-1214202330.d  
 Analysis Method: 0050/26A Date Collected: 12/01/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:50  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/14/2023 18:17  
 Con. Extract Vol.: 250(mL) Dilution Factor: 2  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81419 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7647-01-0	Hydrogen Chloride	546.4		51.4	26.5



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202330.d  
 Lims ID: 140-34757-A-9-D MSD  
 Client ID: AS26-2 CONTAINER 3 H2SO4  
 Sample Type: MSD  
 Inject. Date: 14-Dec-2023 18:17:00 ALS Bottle#: 0 Worklist Smp#: 21  
 Injection Vol: 1.0 ul Dil. Factor: 2.0000  
 Sample Info: 140-0030874-021  
 Misc. Info.: 140-34757-A-9-D MSD  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:36:05 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.557	3.320	0.237	30260921	0.5000	0.6804	
2 Chloride	4.587	4.593	-0.006	33161245	0.5000	1.06	
3 Nitrite as N	5.373	5.400	-0.027	36121171	0.5000	0.5552	
4 Bromide	6.330	6.343	-0.013	14459892	0.5000	1.07	
5 Nitrate as N	6.977	7.013	-0.036	119248568	0.5000	1.48	
19 Orthophosphate as P		9.280			ND	ND	
6 Iodide		13.163			ND	ND	
S 11 Nitrous Acid					1.68	1.86	
S 12 Br					0.5000	1.07	
S 13 Chlorine					0.5000	1.06	
S 10 Nitric acid					2.25	6.66	
S 7 Hydrogen Chloride					0.5140	1.09	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid					0.5063	1.08	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid					0.5265	0.7166	
S 21 Phosphate as H3PO4		0.000				ND	

**QC Flag Legend**

Processing Flags

ND - Not Detected or Marked ND

**Reagents:**

85SPANion\_S\_00001

Amount Added: 0.10

Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202330.d

Injection Date: 14-Dec-2023 18:17:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-9-D MSD

Worklist Smp#: 21

Client ID: AS26-2 CONTAINER 3 H2SO4

Injection Vol: 1.0 ul

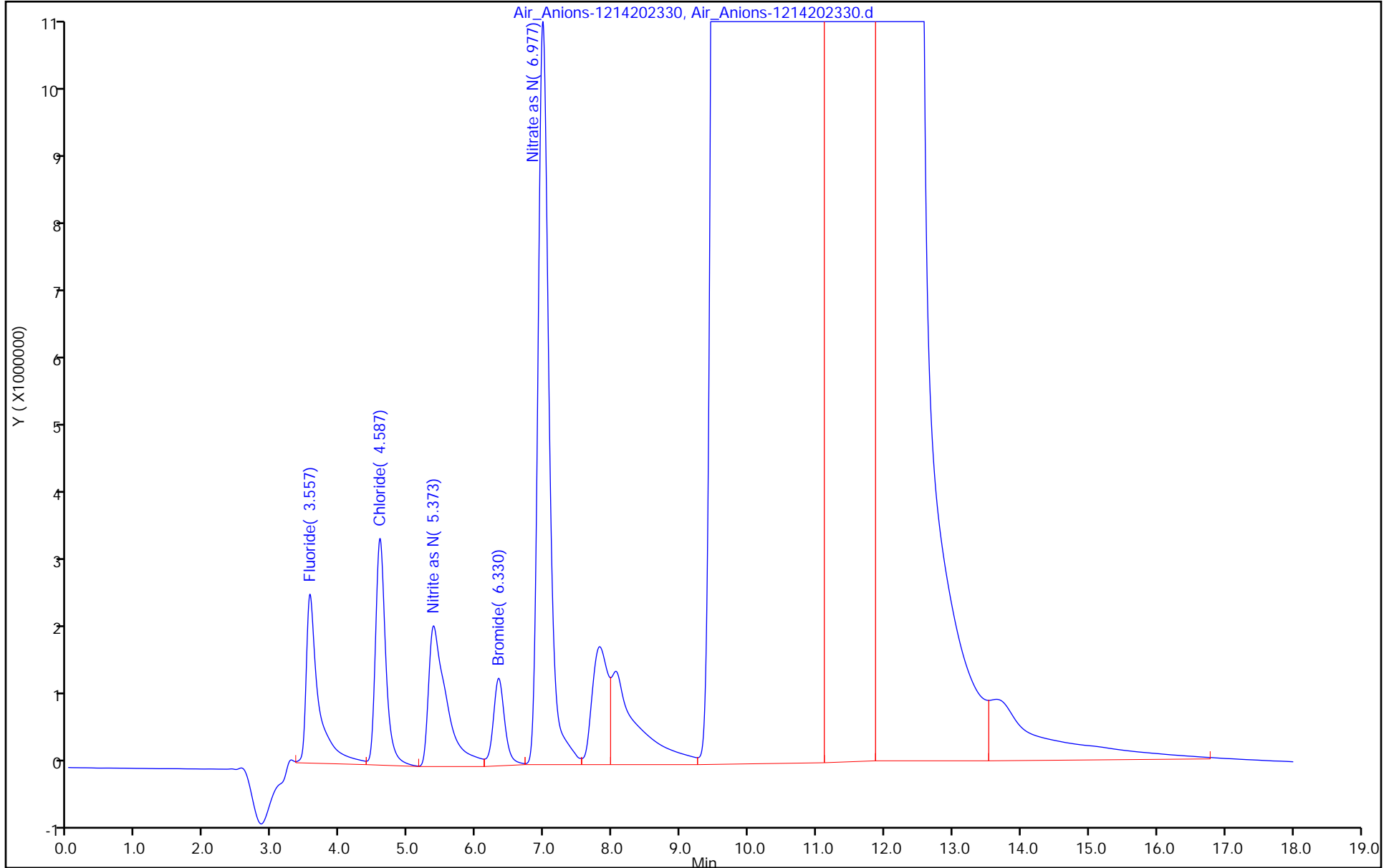
Dil. Factor: 2.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AS26-2 CONTAINER 4 NAOH MSD Lab Sample ID: 140-34757-10 MSD  
 Matrix: Air Lab File ID: Air\_Anions-1215202330.d  
 Analysis Method: 0050/26A Date Collected: 12/01/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:56  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/16/2023 07:23  
 Con. Extract Vol.: 235(mL) Dilution Factor: 5  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81494 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	1246		118	58.8

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202330.d  
 Lims ID: 140-34757-A-10-D MSD  
 Client ID: AS26-2 CONTAINER 4 NAOH  
 Sample Type: MSD  
 Inject. Date: 16-Dec-2023 07:23:00 ALS Bottle#: 0 Worklist Smp#: 21  
 Injection Vol: 1.0 ul Dil. Factor: 5.0000  
 Sample Info: 140-0030907-021  
 Misc. Info.: 140-34757-A-10-D MSD  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:05:01 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.237	3.323	-0.086	43622435	0.2000	0.9587	
2 Chloride	4.527	4.597	-0.070	33094167	0.2000	1.06	
3 Nitrite as N	5.343	5.407	-0.064	59311556	0.2000	0.8918	
4 Bromide	6.300	6.350	-0.050	12770054	0.2000	0.9497	
5 Nitrate as N	6.983	7.023	-0.040	97937475	0.2000	1.24	
19 Orthophosphate as P		9.280			ND	ND	
6 Iodide	13.097	13.173	-0.076	8220540	0.2004	1.04	
S 11 Nitrous Acid					0.6713	2.99	
S 12 Br					0.2000	0.9497	
S 13 Chlorine					0.2000	1.06	
S 10 Nitric acid					0.8998	5.58	
S 7 Hydrogen Chloride					0.2056	1.09	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid					0.2025	0.9617	
S 22 Hydrogen Iodide						1.05	
S 8 Hydro Fluoric Acid					0.2106	1.01	
S 21 Phosphate as H3PO4		0.000				ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

85SPANion\_S\_00001

Amount Added: 0.10

Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202330.d

Injection Date: 16-Dec-2023 07:23:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-10-D MSD

Worklist Smp#: 21

Client ID: AS26-2 CONTAINER 4 NAOH

Injection Vol: 1.0 ul

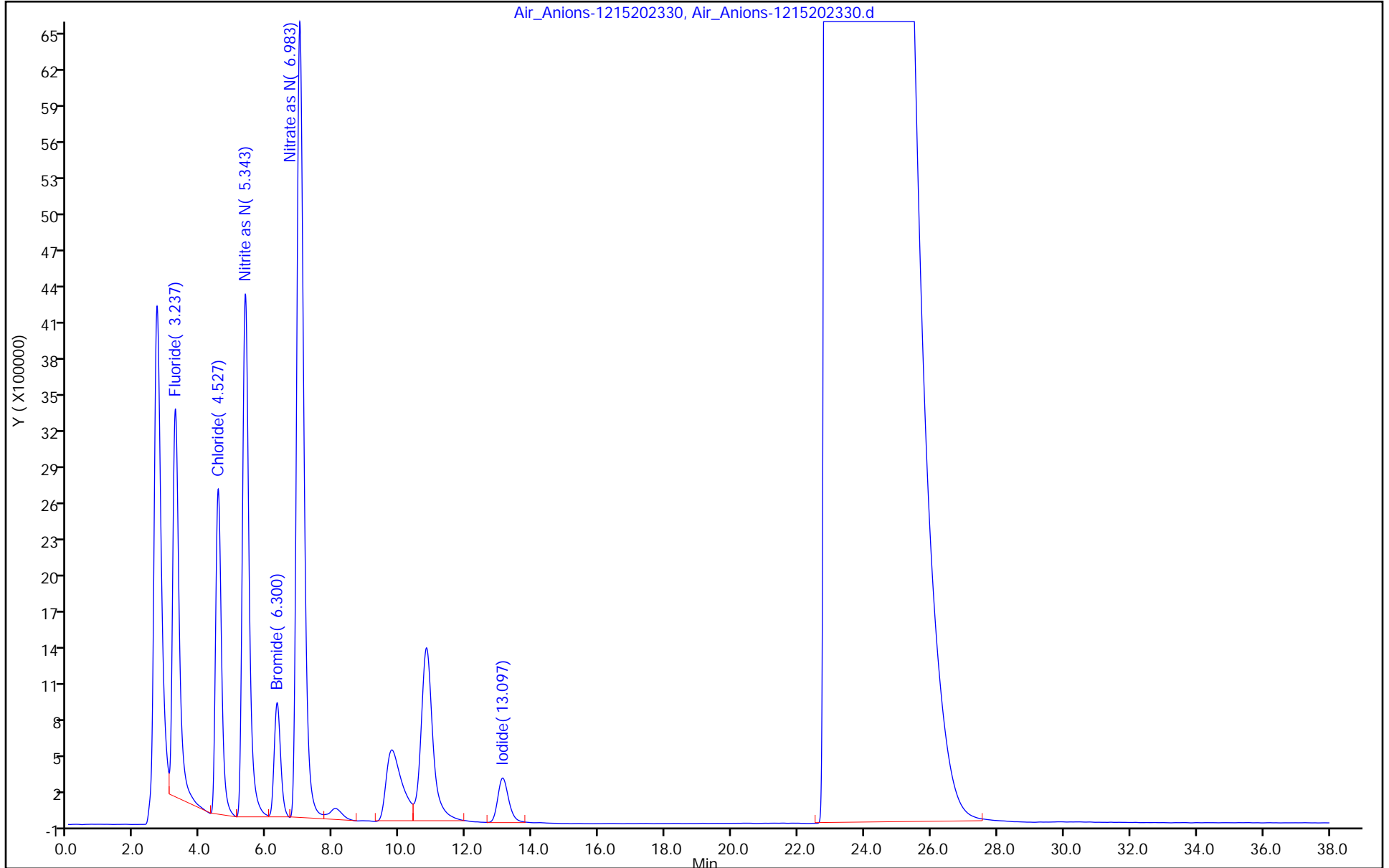
Dil. Factor: 5.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AP26-2 CONTAINER 3 H2SO4 MSD Lab Sample ID: 140-34757-15 MSD  
 Matrix: Air Lab File ID: Air\_Anions-1214202340.d  
 Analysis Method: 0050/26A Date Collected: 12/06/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:50  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/14/2023 21:59  
 Con. Extract Vol.: 265(mL) Dilution Factor: 2  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81419 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7647-01-0	Hydrogen Chloride	685.2		54.5	28.1

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202340.d  
 Lims ID: 140-34757-A-15-D MSD  
 Client ID: AP26-2 CONTAINER 3 H2SO4  
 Sample Type: MSD  
 Inject. Date: 14-Dec-2023 21:59:00 ALS Bottle#: 0 Worklist Smp#: 31  
 Injection Vol: 1.0 ul Dil. Factor: 2.0000  
 Sample Info: 140-0030874-031  
 Misc. Info.: 140-34757-A-15-D MSD  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:36:11 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.547	3.320	0.227	28401786	0.5000	0.6407	
2 Chloride	4.583	4.593	-0.010	39626301	0.5000	1.26	
3 Nitrite as N	5.377	5.400	-0.023	38784146	0.5000	0.5945	
4 Bromide	6.330	6.343	-0.013	14448116	0.5000	1.07	
5 Nitrate as N	6.980	7.013	-0.033	118173086	0.5000	1.47	
19 Orthophosphate as P		9.280			ND	ND	
6 Iodide		13.163			ND	ND	
S 11 Nitrous Acid					1.68	2.00	
S 12 Br					0.5000	1.07	
S 13 Chlorine					0.5000	1.26	
S 10 Nitric acid					2.25	6.61	
S 7 Hydrogen Chloride					0.5140	1.29	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid					0.5063	1.08	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid					0.5265	0.6748	
S 21 Phosphate as H3PO4		0.000				ND	

**QC Flag Legend**

Processing Flags

ND - Not Detected or Marked ND

**Reagents:**

85SPANion\_S\_00001

Amount Added: 0.10

Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202340.d

Injection Date: 14-Dec-2023 21:59:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-15-D MSD

Worklist Smp#: 31

Client ID: AP26-2 CONTAINER 3 H2SO4

Injection Vol: 1.0 ul

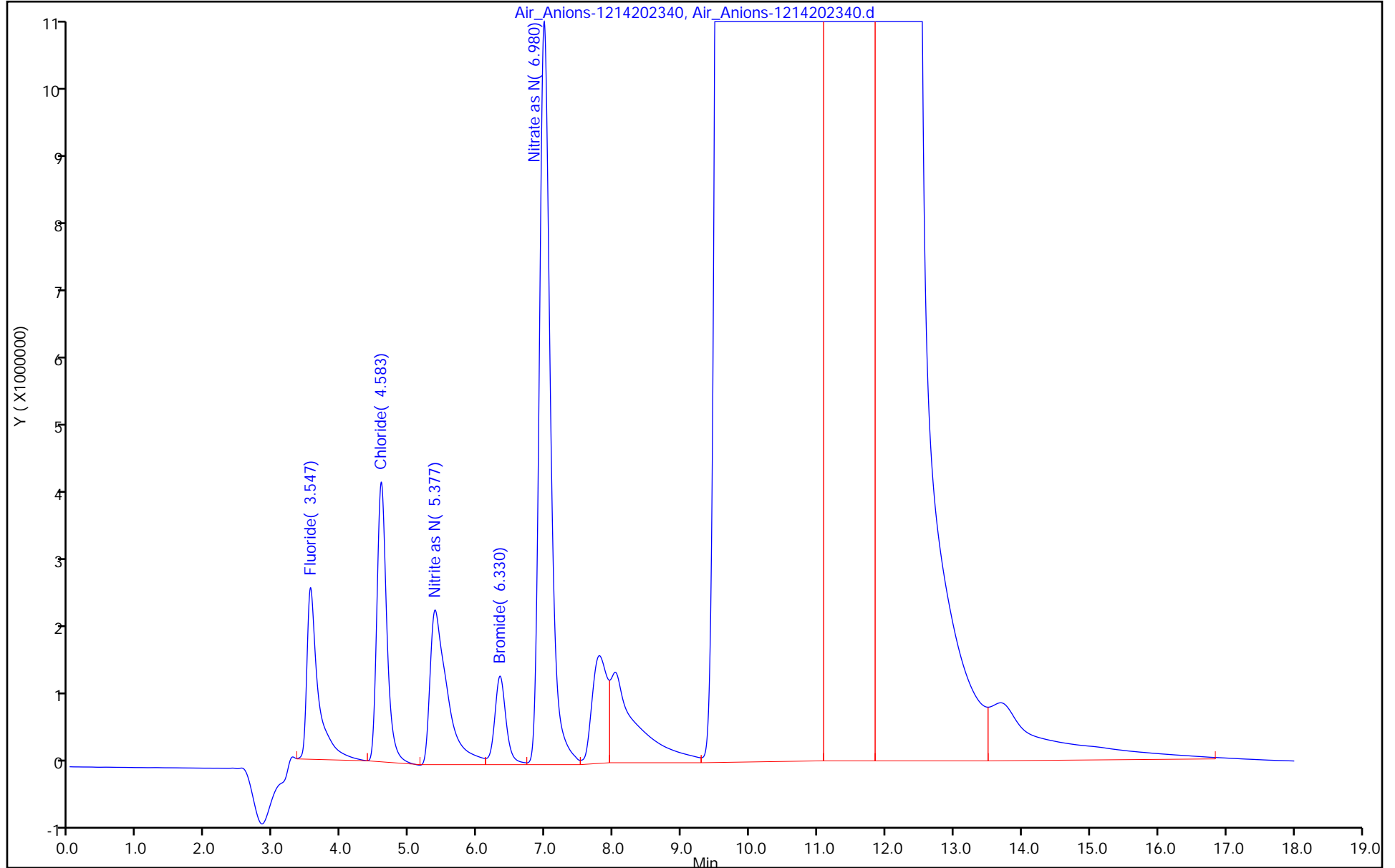
Dil. Factor: 2.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1





FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AP26-2 CONTAINER 4 NAOH MSD Lab Sample ID: 140-34757-16 MSD  
 Matrix: Air Lab File ID: Air\_Anions-1215202340.d  
 Analysis Method: 0050/26A Date Collected: 12/06/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:56  
 Sample wt/vol: 1 (Sample) Date Analyzed: 12/16/2023 13:45  
 Con. Extract Vol.: 240 (mL) Dilution Factor: 5  
 Injection Volume: 1 (uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81494 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	1263		120	60.0

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202340.d  
 Lims ID: 140-34757-A-16-D MSD  
 Client ID: AP26-2 CONTAINER 4 NAOH  
 Sample Type: MSD  
 Inject. Date: 16-Dec-2023 13:45:00 ALS Bottle#: 0 Worklist Smp#: 31  
 Injection Vol: 1.0 ul Dil. Factor: 5.0000  
 Sample Info: 140-0030907-031  
 Misc. Info.: 140-34757-A-16-D MSD  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:05:07 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICAL File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.247	3.323	-0.076	44610478	0.2000	0.9788	
2 Chloride	4.547	4.597	-0.050	32818156	0.2000	1.05	
3 Nitrite as N	5.383	5.407	-0.024	138479656	0.2000	1.95	
4 Bromide	6.257	6.350	-0.093	3461512	0.2000	0.2663	
5 Nitrate as N	6.820	7.023	-0.203	12335206	0.2000	0.1713	
19 Orthophosphate as P		9.280			ND	ND	
6 Iodide	13.163	13.173	-0.010	8066214	0.2004	1.02	
S 11 Nitrous Acid					0.6713	6.54	
S 12 Br					0.2000	0.2663	
S 13 Chlorine					0.2000	1.05	
S 10 Nitric acid					0.8998	0.7707	
S 7 Hydrogen Chloride					0.2056	1.08	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid					0.2025	0.2697	
S 22 Hydrogen Iodide						1.03	
S 8 Hydro Fluoric Acid					0.2106	1.03	
S 21 Phosphate as H3PO4		0.000				ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

85SPANion\_S\_00001 Amount Added: 0.10 Units: mL

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202340.d

Injection Date: 16-Dec-2023 13:45:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-16-D MSD

Worklist Smp#: 31

Client ID: AP26-2 CONTAINER 4 NAOH

Injection Vol: 1.0 ul

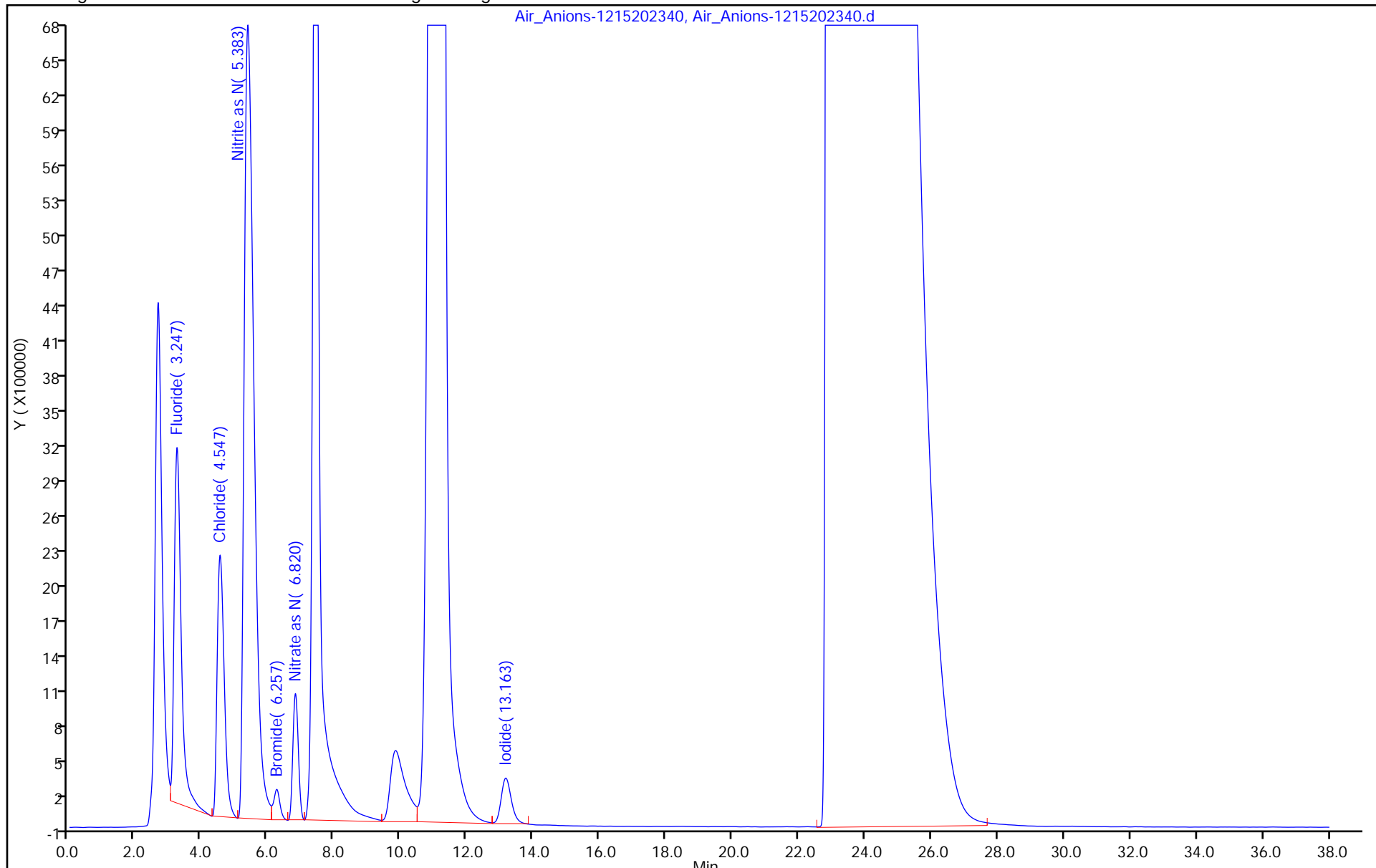
Dil. Factor: 5.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1





Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202316.d  
 Lims ID: 140-34757-A-1-B DU  
 Client ID: VF26A-1 CONTAINER 3 H2SO4  
 Sample Type: DU  
 Inject. Date: 14-Dec-2023 13:06:00 ALS Bottle#: 0 Worklist Smp#: 7  
 Injection Vol: 1.0 ul Dil. Factor: 2.0000  
 Sample Info: 140-0030874-007  
 Misc. Info.: 140-34757-A-1-B DU  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:35:59 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.320				ND	
2 Chloride	4.590	4.593	-0.003	1817389		0.0614	
3 Nitrite as N	5.583	5.400	0.183	180353		0.002877	
4 Bromide		6.343				ND	
5 Nitrate as N	6.993	7.013	-0.020	3495704		0.0491	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.163				ND	
S 11 Nitrous Acid						0.009656	
S 12 Br		0.000				ND	
S 13 Chlorine						0.0614	
S 10 Nitric acid						0.2208	
S 7 Hydrogen Chloride						0.0632	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202316.d

Injection Date: 14-Dec-2023 13:06:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-1-B DU

Worklist Smp#: 7

Client ID: VF26A-1 CONTAINER 3 H2SO4

Injection Vol: 1.0 ul

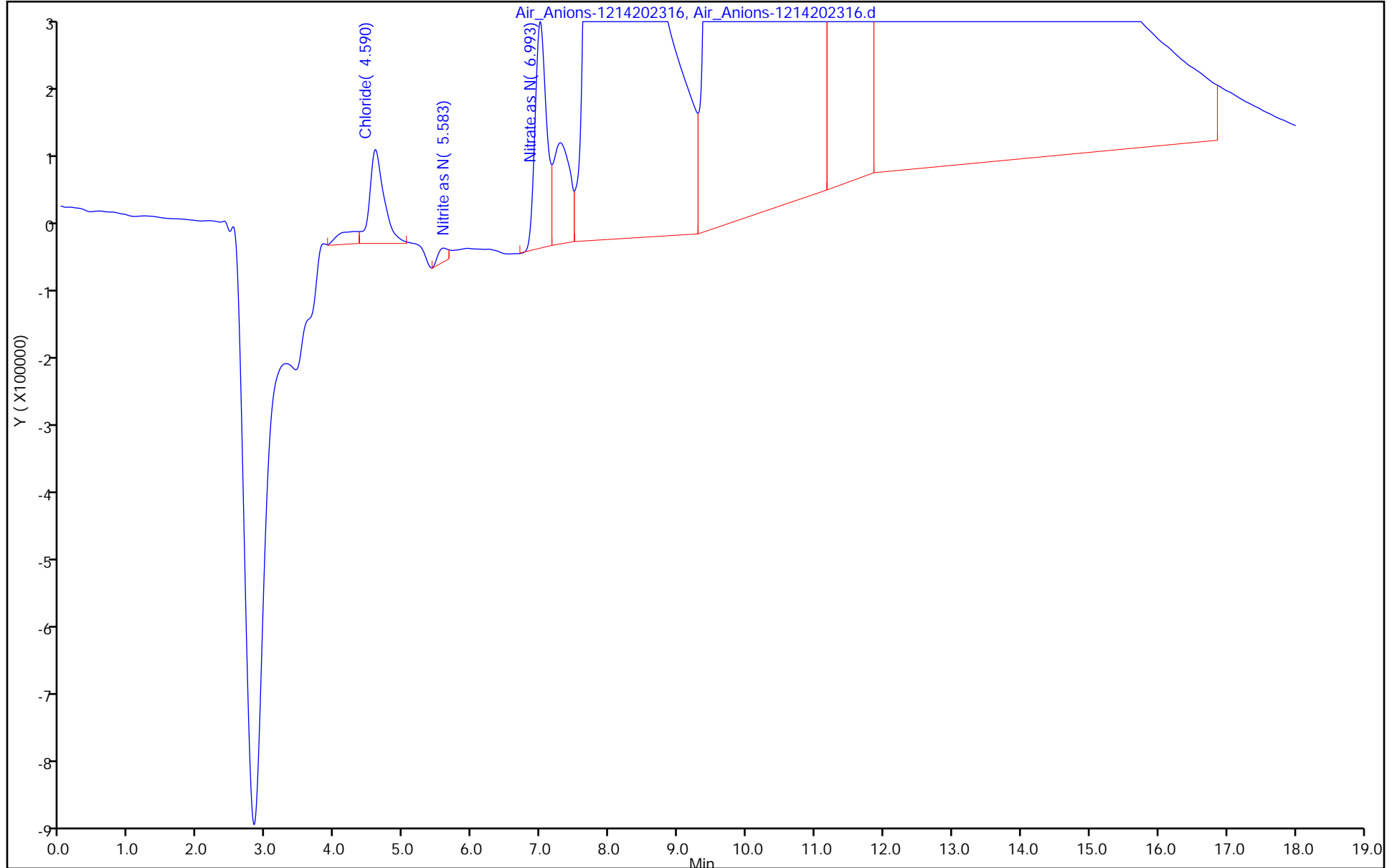
Dil. Factor: 2.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
SDG No.: \_\_\_\_\_  
Client Sample ID: VF26A-1 CONTAINER 4 NAOH Lab Sample ID: 140-34757-2 DU  
DU  
Matrix: Air Lab File ID: Air\_Anions-1215202316.d  
Analysis Method: 0050/26A Date Collected: 12/02/2023 00:00  
Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:56  
Sample wt/vol: 1(Sample) Date Analyzed: 12/15/2023 22:12  
Con. Extract Vol.: 245(mL) Dilution Factor: 5  
Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
% Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
Cleanup Factor: \_\_\_\_\_  
Analysis Batch No.: 81494 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	87.71	J	123	61.3

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202316.d  
 Lims ID: 140-34757-A-2-B DU  
 Client ID: VF26A-1 CONTAINER 4 NAOH  
 Sample Type: DU  
 Inject. Date: 15-Dec-2023 22:12:00 ALS Bottle#: 0 Worklist Smp#: 7  
 Injection Vol: 1.0 ul Dil. Factor: 5.0000  
 Sample Info: 140-0030907-007  
 Misc. Info.: 140-34757-A-2-B DU  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:04:55 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

First Level Reviewer: EXJ2 Date: 18-Dec-2023 12:01:20

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.323				ND	
2 Chloride	4.510	4.597	-0.087	2119947		0.0716	M
3 Nitrite as N	5.320	5.407	-0.087	1549060		0.0247	
4 Bromide		6.350				ND	
5 Nitrate as N	6.957	7.023	-0.066	1691472		0.0238	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.173				ND	
S 11 Nitrous Acid						0.0828	
S 12 Br		0.000				ND	
S 13 Chlorine						0.0716	
S 10 Nitric acid						0.1071	
S 7 Hydrogen Chloride						0.0736	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated



Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202316.d

Injection Date: 15-Dec-2023 22:12:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-2-B DU

Worklist Smp#: 7

Client ID: VF26A-1 CONTAINER 4 NAOH

Injection Vol: 1.0 ul

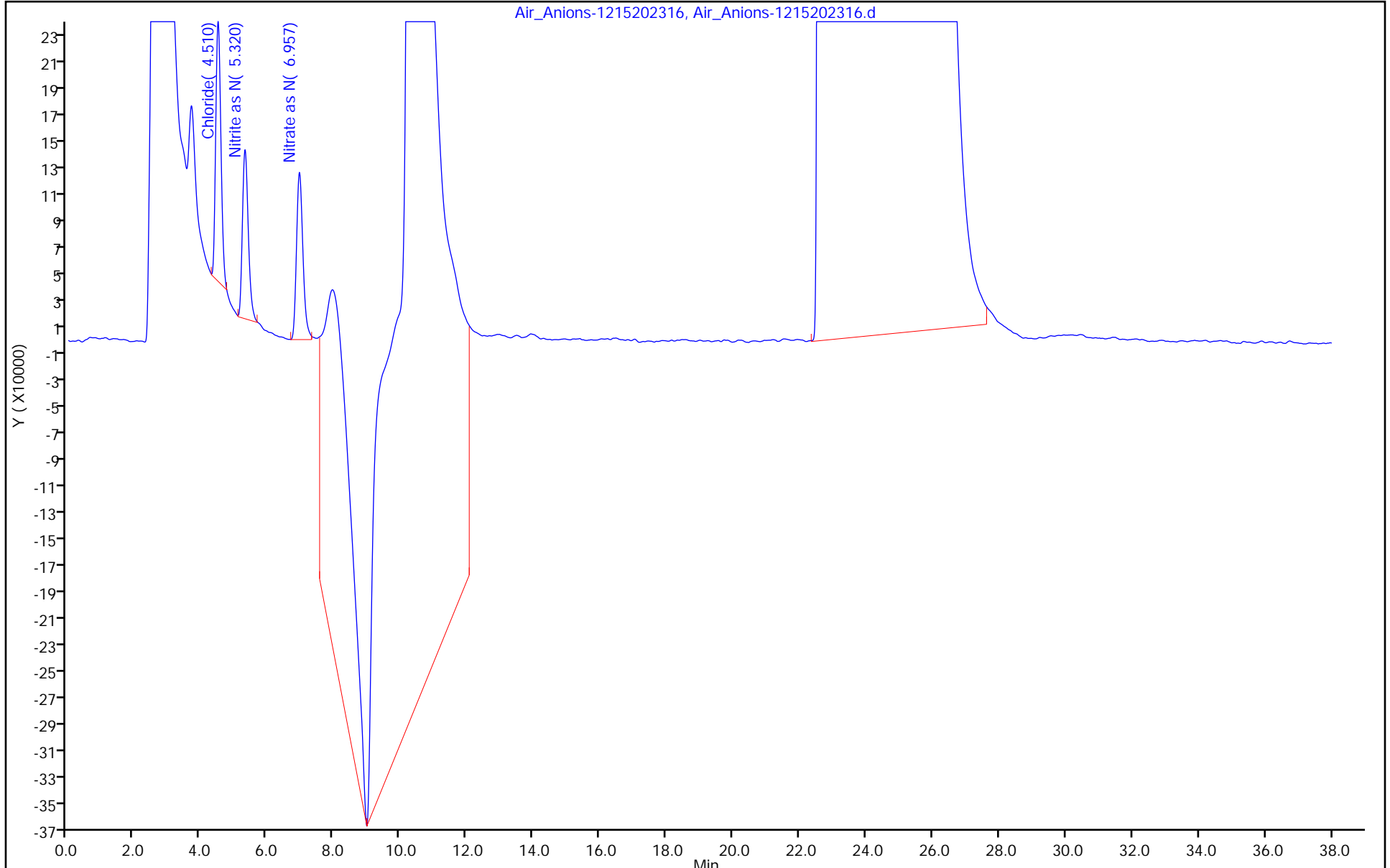
Dil. Factor: 5.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

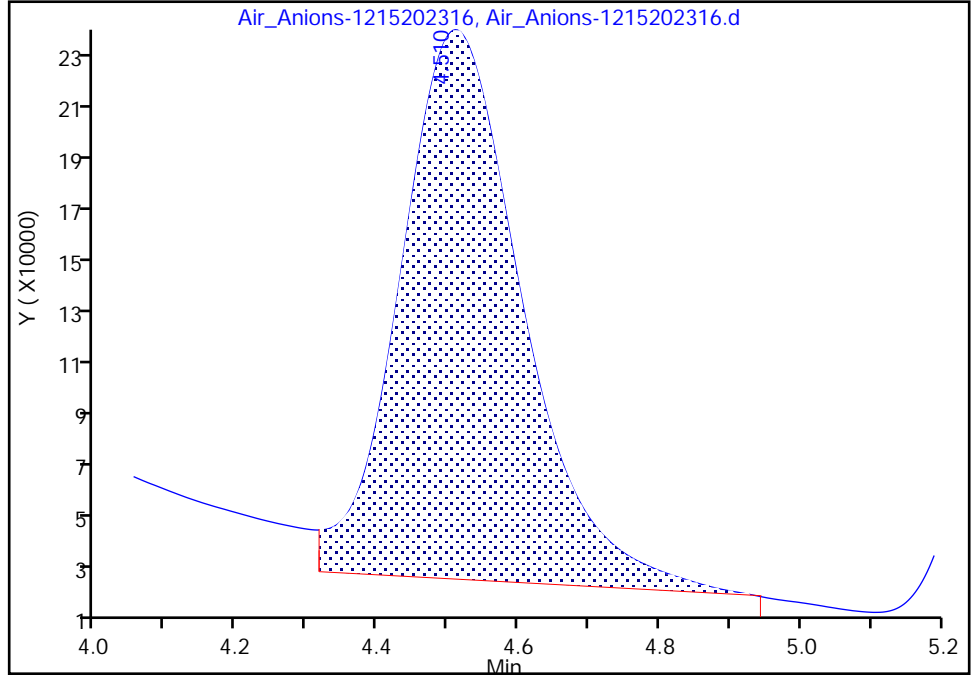
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Injection Date:	15-Dec-2023 22:12:00	Instrument ID:	IC4
Lims ID:	140-34757-A-2-B DU		
Client ID:	VF26A-1 CONTAINER 4 NAOH		
Operator ID:		ALS Bottle#:	0
		Worklist Smp#:	7
Injection Vol:	1.0 ul	Dil. Factor:	5.0000
Method:	0050_26A_IC4	Limit Group:	IC 0050_26A ICAL
Column:		Detector:	IC

2 Chloride, CAS: 16887-00-6

Signal: 1

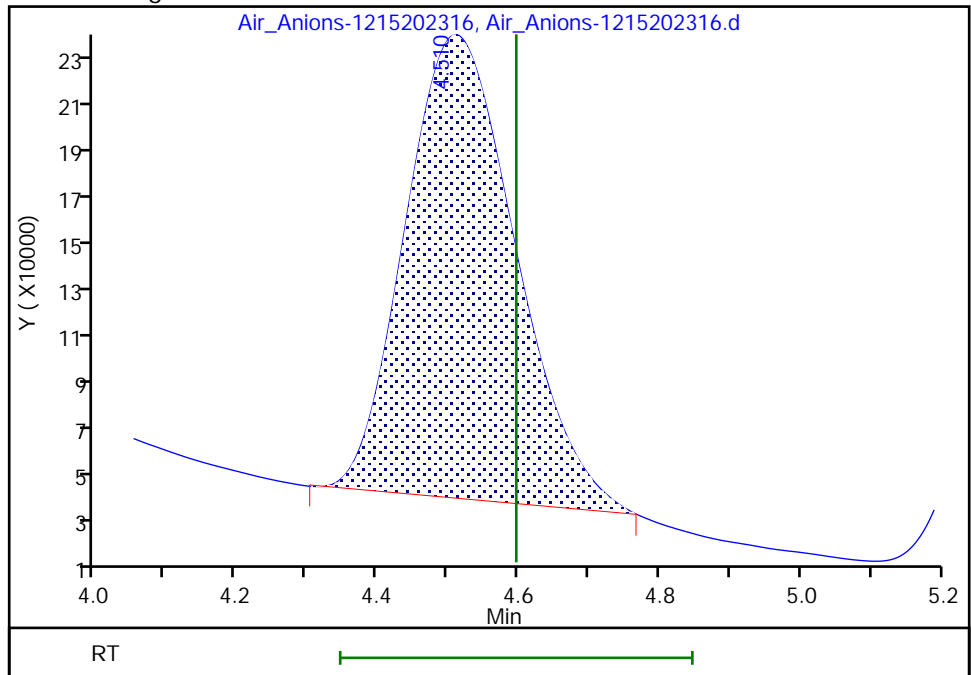
RT: 4.51  
 Area: 2529940  
 Amount: 0.085383  
 Amount Units: ug/ml

Processing Integration Results



RT: 4.51  
 Area: 2119947  
 Amount: 0.071600  
 Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 18-Dec-2023 12:01:17 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202318.d  
 Lims ID: 140-34757-A-3-B DU  
 Client ID: VF26A-2 CONTAINER 3 H2SO4  
 Sample Type: DU  
 Inject. Date: 14-Dec-2023 13:51:00 ALS Bottle#: 0 Worklist Smp#: 9  
 Injection Vol: 1.0 ul Dil. Factor: 2.0000  
 Sample Info: 140-0030874-009  
 Misc. Info.: 140-34757-A-3-B DU  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:35:59 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:31:04

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.320				ND	
2 Chloride	4.590	4.593	-0.003	2680792		0.0904	M
3 Nitrite as N	5.573	5.400	0.173	133259		0.002126	
4 Bromide		6.343				ND	
5 Nitrate as N	6.990	7.013	-0.023	3791801		0.0532	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.163				ND	
S 11 Nitrous Acid						0.007135	
S 12 Br		0.000				ND	
S 13 Chlorine						0.0904	
S 10 Nitric acid						0.2395	
S 7 Hydrogen Chloride						0.0930	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202318.d

Injection Date: 14-Dec-2023 13:51:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-3-B DU

Worklist Smp#: 9

Client ID: VF26A-2 CONTAINER 3 H2SO4

Injection Vol: 1.0 ul

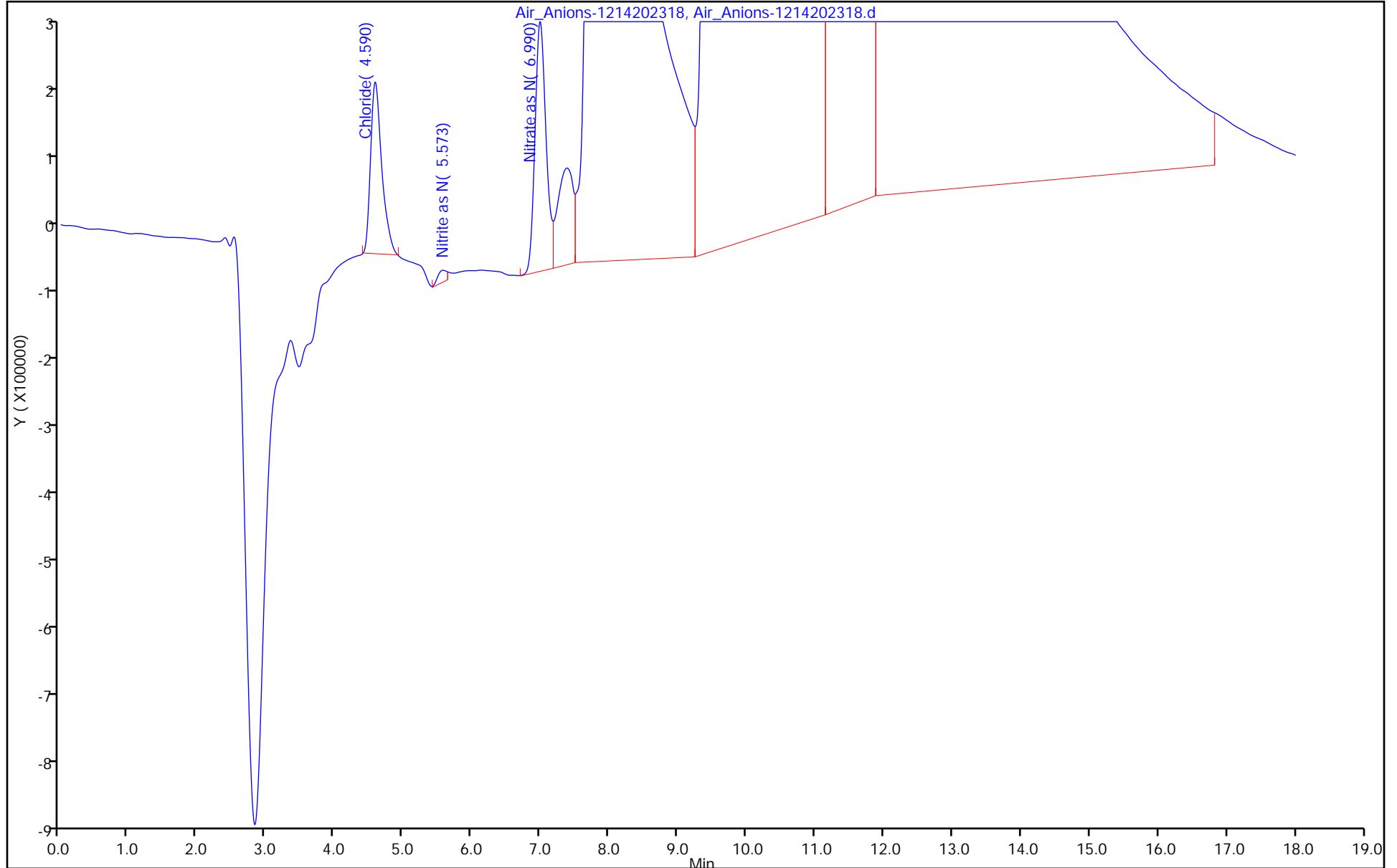
Dil. Factor: 2.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1





Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202318.d  
 Lims ID: 140-34757-A-4-B DU  
 Client ID: VF26A-2 CONTAINER 4 NAOH  
 Sample Type: DU  
 Inject. Date: 15-Dec-2023 23:37:00 ALS Bottle#: 0 Worklist Smp#: 9  
 Injection Vol: 1.0 ul Dil. Factor: 5.0000  
 Sample Info: 140-0030907-009  
 Misc. Info.: 140-34757-A-4-B DU  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:04:55 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

First Level Reviewer: EXJ2 Date: 18-Dec-2023 12:01:35

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.323				ND	
2 Chloride	4.513	4.597	-0.084	5064115		0.1701	M
3 Nitrite as N	5.323	5.407	-0.084	1726935		0.0275	
4 Bromide		6.350				ND	
5 Nitrate as N	6.960	7.023	-0.063	2189915		0.0308	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.173				ND	
S 11 Nitrous Acid						0.0923	
S 12 Br		0.000				ND	
S 13 Chlorine						0.1701	
S 10 Nitric acid						0.1386	
S 7 Hydrogen Chloride						0.1750	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202318.d

Injection Date: 15-Dec-2023 23:37:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-4-B DU

Worklist Smp#: 9

Client ID: VF26A-2 CONTAINER 4 NAOH

Injection Vol: 1.0 ul

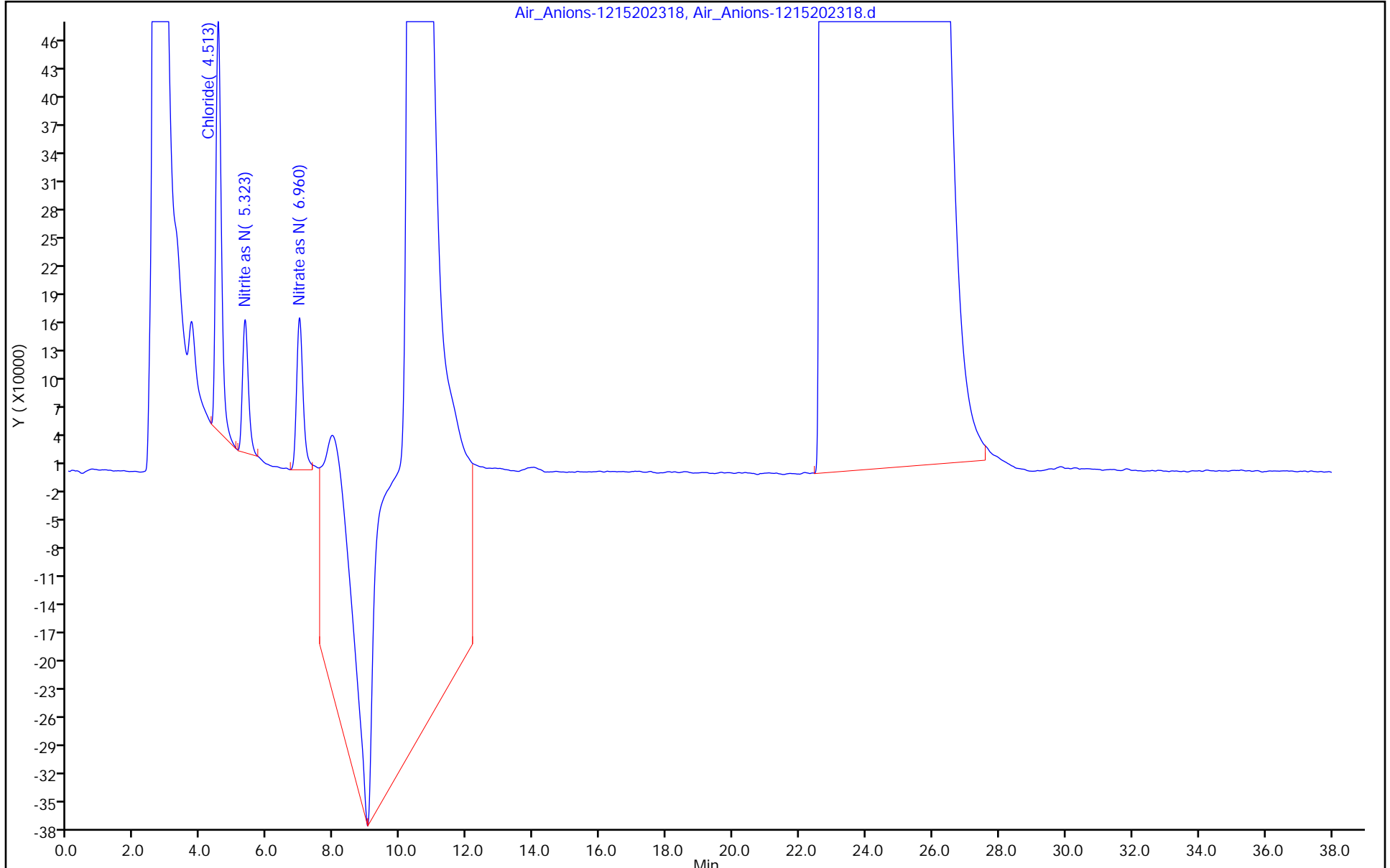
Dil. Factor: 5.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1





Eurofins Knoxville

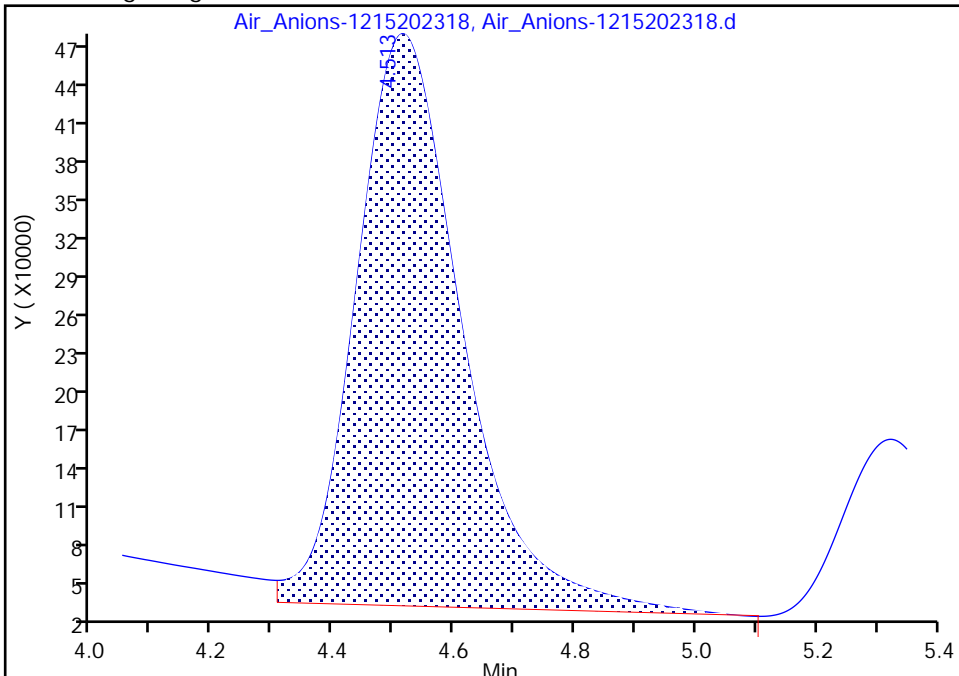
Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202318.d  
Injection Date: 15-Dec-2023 23:37:00 Instrument ID: IC4  
Lims ID: 140-34757-A-4-B DU  
Client ID: VF26A-2 CONTAINER 4 NAOH  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 9  
Injection Vol: 1.0 ul Dil. Factor: 5.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

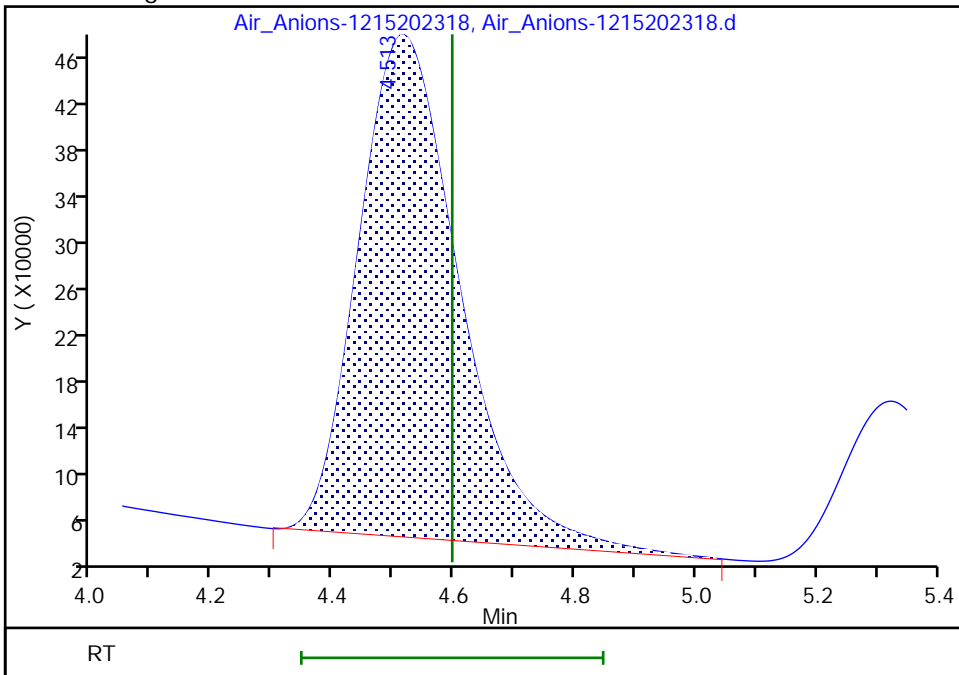
RT: 4.51  
Area: 5460967  
Amount: 0.183323  
Amount Units: ug/ml

Processing Integration Results



RT: 4.51  
Area: 5064115  
Amount: 0.170122  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 18-Dec-2023 12:01:33 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202324.d  
 Lims ID: 140-34757-A-5-B DU  
 Client ID: VF26A-4 CONTAINER 3 H2SO4  
 Sample Type: DU  
 Inject. Date: 14-Dec-2023 16:04:00 ALS Bottle#: 0 Worklist Smp#: 15  
 Injection Vol: 1.0 ul Dil. Factor: 2.0000  
 Sample Info: 140-0030874-015  
 Misc. Info.: 140-34757-A-5-B DU  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:36:05 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:31:43

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.320				ND	
2 Chloride	4.593	4.593	0.000	1180205		0.0399	M
3 Nitrite as N	5.567	5.400	0.167	147297		0.002350	
4 Bromide		6.343				ND	
5 Nitrate as N	6.987	7.013	-0.026	5269005		0.0738	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.163				ND	
S 11 Nitrous Acid						0.007886	
S 12 Br		0.000				ND	
S 13 Chlorine						0.0399	
S 10 Nitric acid						0.3321	
S 7 Hydrogen Chloride						0.0411	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202324.d

Injection Date: 14-Dec-2023 16:04:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-5-B DU

Worklist Smp#: 15

Client ID: VF26A-4 CONTAINER 3 H2SO4

Injection Vol: 1.0 ul

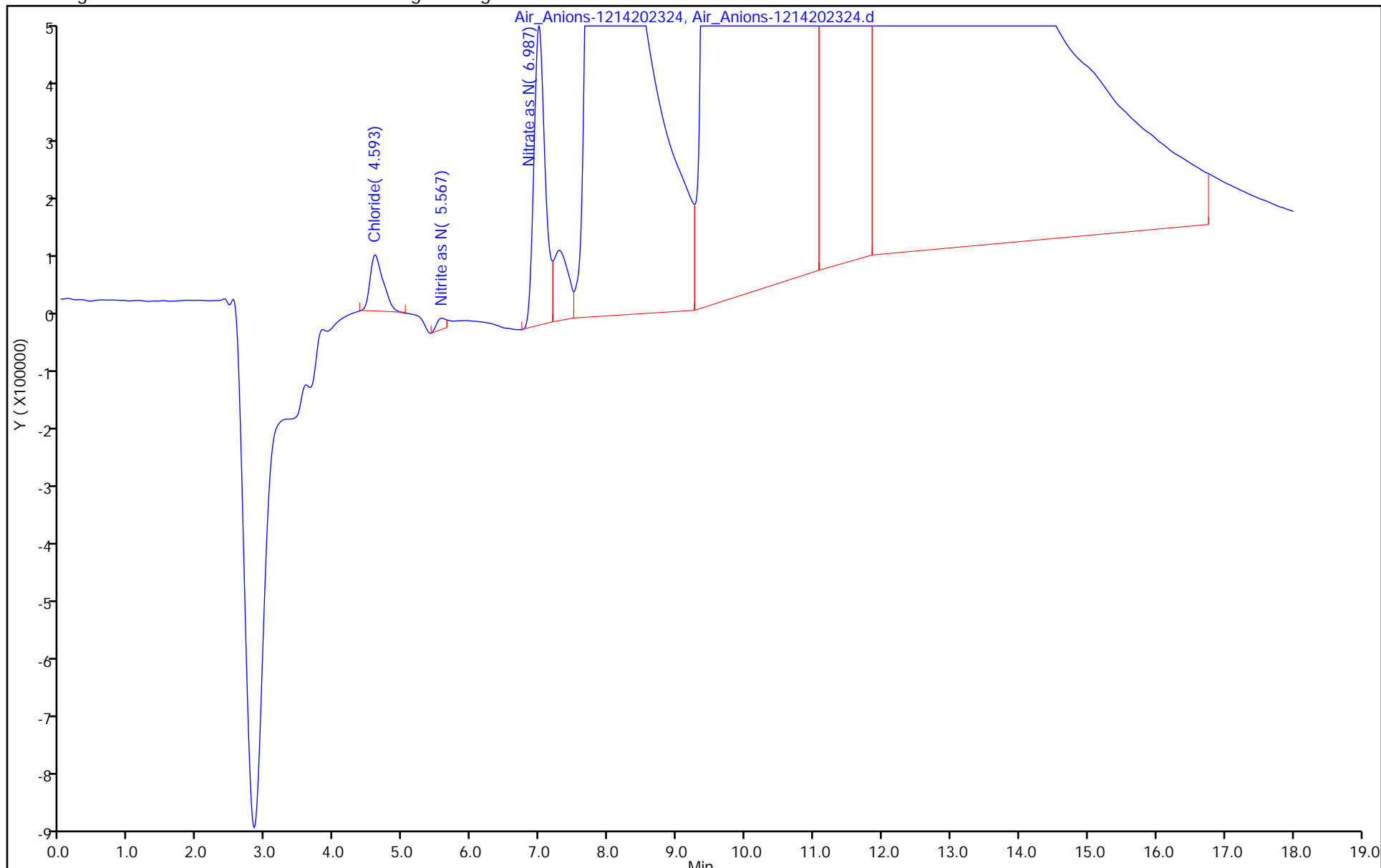
Dil. Factor: 2.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1





Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202324.d  
 Lims ID: 140-34757-A-6-B DU  
 Client ID: VF26A-4 CONTAINER 4 NAOH  
 Sample Type: DU  
 Inject. Date: 16-Dec-2023 03:10:00 ALS Bottle#: 0 Worklist Smp#: 15  
 Injection Vol: 1.0 ul Dil. Factor: 5.0000  
 Sample Info: 140-0030907-015  
 Misc. Info.: 140-34757-A-6-B DU  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:05:01 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.323				ND	
2 Chloride	4.510	4.597	-0.087	2190559		0.0740	
3 Nitrite as N	5.320	5.407	-0.087	1546031		0.0246	
4 Bromide		6.350				ND	
5 Nitrate as N	6.960	7.023	-0.063	1374397		0.0194	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.173				ND	
S 11 Nitrous Acid						0.0827	
S 12 Br		0.000				ND	
S 13 Chlorine						0.0740	
S 10 Nitric acid						0.0871	
S 7 Hydrogen Chloride						0.0761	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202324.d

Injection Date: 16-Dec-2023 03:10:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-6-B DU

Worklist Smp#: 15

Client ID: VF26A-4 CONTAINER 4 NAOH

Injection Vol: 1.0 ul

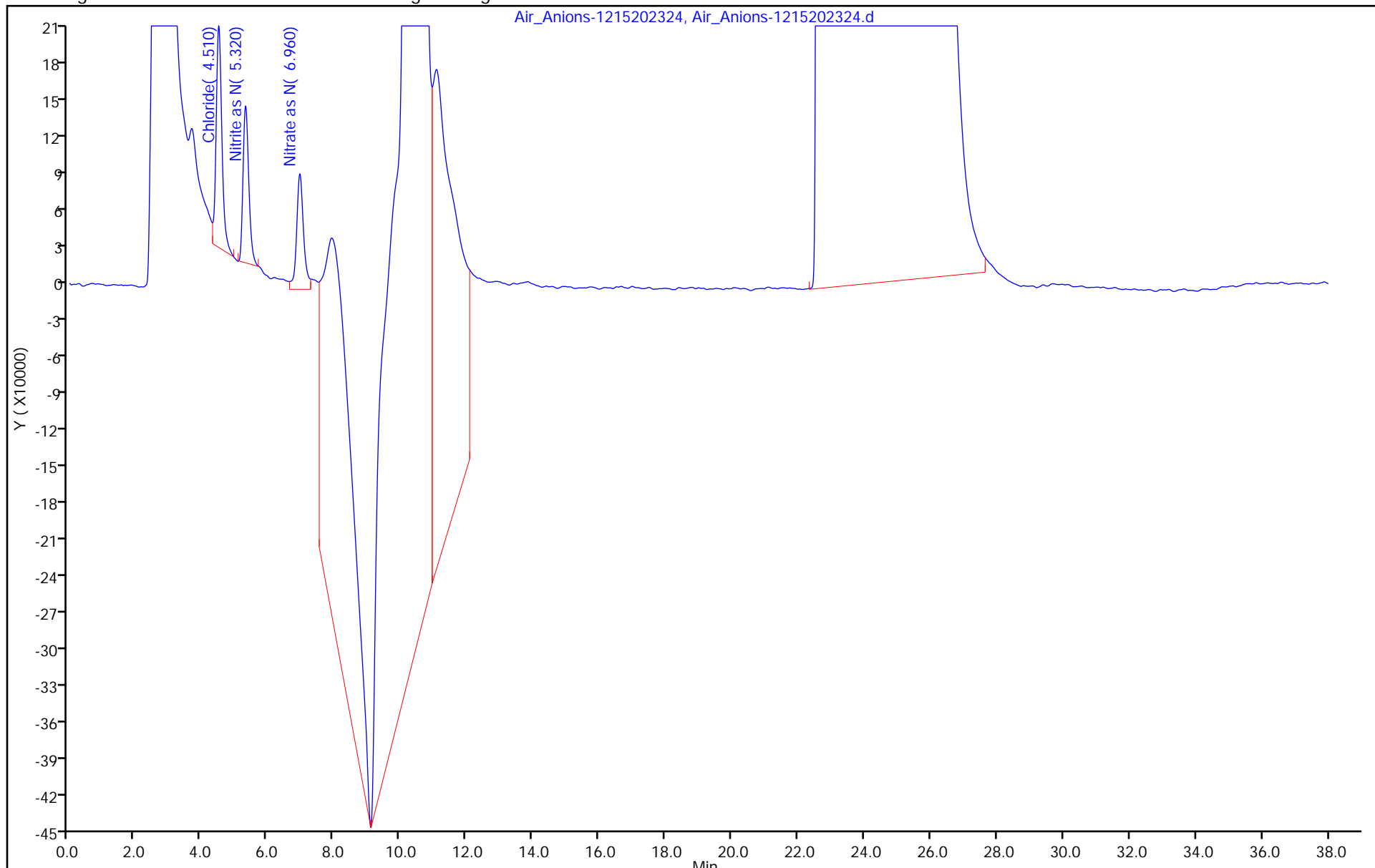
Dil. Factor: 5.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1







Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202326.d  
 Lims ID: 140-34757-A-7-B DU  
 Client ID: AS26-1 CONTAINER 3 H2SO4  
 Sample Type: DU  
 Inject. Date: 14-Dec-2023 16:48:00 ALS Bottle#: 0 Worklist Smp#: 17  
 Injection Vol: 1.0 ul Dil. Factor: 2.0000  
 Sample Info: 140-0030874-017  
 Misc. Info.: 140-34757-A-7-B DU  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:36:05 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:31:54

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.320				ND	
2 Chloride	4.587	4.593	-0.006	2618142		0.0883	M
3 Nitrite as N	5.567	5.400	0.167	146735		0.002341	
4 Bromide		6.343				ND	
5 Nitrate as N	6.987	7.013	-0.026	5207077		0.0730	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.163				ND	
S 11 Nitrous Acid						0.007856	
S 12 Br		0.000				ND	
S 13 Chlorine						0.0883	
S 10 Nitric acid						0.3283	
S 7 Hydrogen Chloride						0.0909	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202326.d

Injection Date: 14-Dec-2023 16:48:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-7-B DU

Worklist Smp#: 17

Client ID: AS26-1 CONTAINER 3 H2SO4

Injection Vol: 1.0 ul

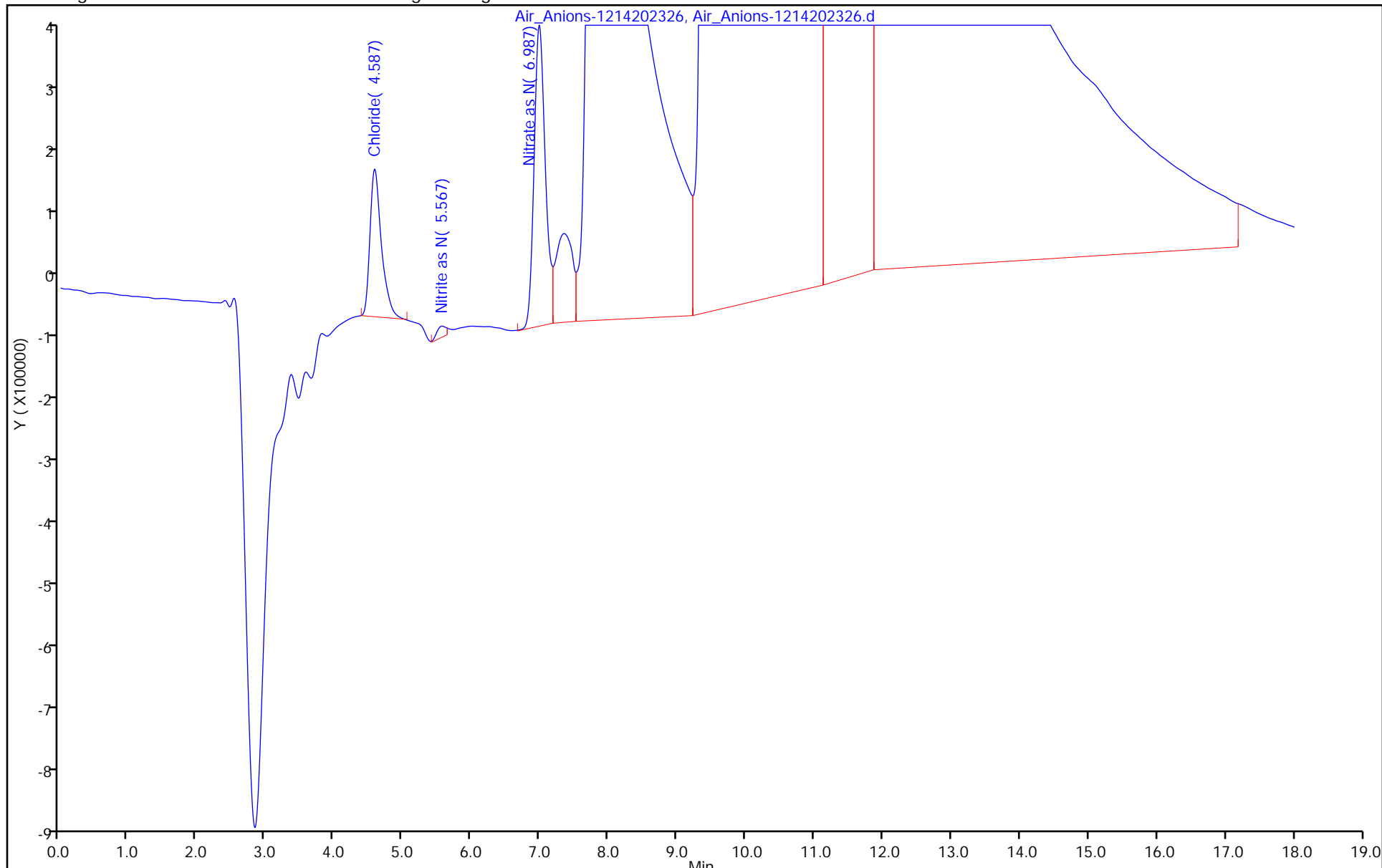
Dil. Factor: 2.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
SDG No.: \_\_\_\_\_  
Client Sample ID: AS26-1 CONTAINER 4 NAOH Lab Sample ID: 140-34757-8 DU  
DU  
Matrix: Air Lab File ID: Air\_Anions-1215202326.d  
Analysis Method: 0050/26A Date Collected: 11/30/2023 00:00  
Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:56  
Sample wt/vol: 1(Sample) Date Analyzed: 12/16/2023 04:34  
Con. Extract Vol.: 235(mL) Dilution Factor: 5  
Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
% Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
Cleanup Factor: \_\_\_\_\_  
Analysis Batch No.: 81494 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	89.22	J	118	58.8

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202326.d  
 Lims ID: 140-34757-A-8-B DU  
 Client ID: AS26-1 CONTAINER 4 NAOH  
 Sample Type: DU  
 Inject. Date: 16-Dec-2023 04:34:00 ALS Bottle#: 0 Worklist Smp#: 17  
 Injection Vol: 1.0 ul Dil. Factor: 5.0000  
 Sample Info: 140-0030907-017  
 Misc. Info.: 140-34757-A-8-B DU  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:05:01 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.323				ND	
2 Chloride	4.523	4.597	-0.074	2248736		0.0759	
3 Nitrite as N	5.337	5.407	-0.070	420887		0.006712	
4 Bromide		6.350				ND	
5 Nitrate as N	7.007	7.023	-0.016	5613232		0.0786	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.173				ND	
S 11 Nitrous Acid						0.0225	
S 12 Br		0.000				ND	
S 13 Chlorine						0.0759	
S 10 Nitric acid						0.3537	
S 7 Hydrogen Chloride						0.0781	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202326.d

Injection Date: 16-Dec-2023 04:34:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-8-B DU

Worklist Smp#: 17

Client ID: AS26-1 CONTAINER 4 NAOH

Injection Vol: 1.0 ul

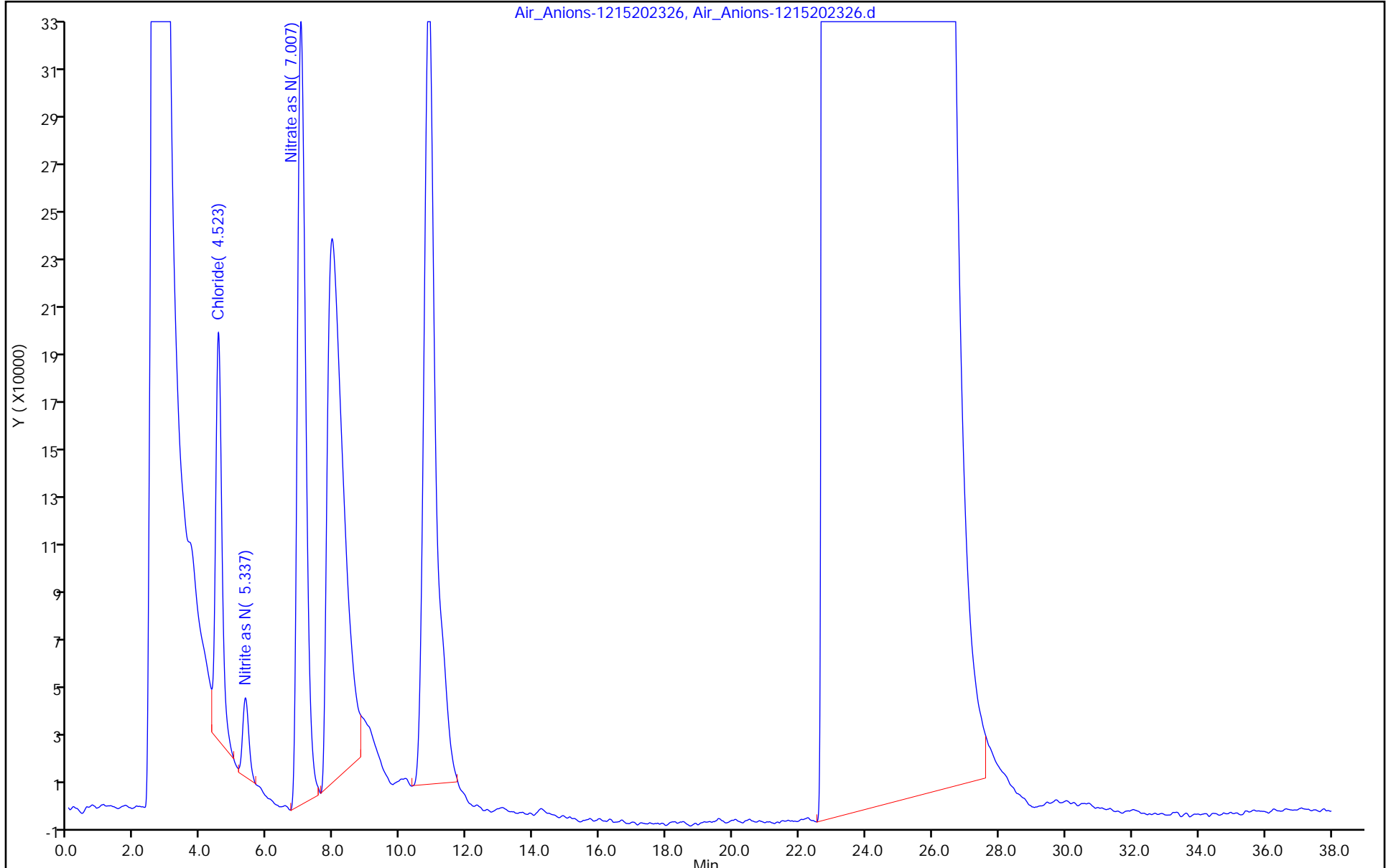
Dil. Factor: 5.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1





Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202328.d  
 Lims ID: 140-34757-A-9-B DU  
 Client ID: AS26-2 CONTAINER 3 H2SO4  
 Sample Type: DU  
 Inject. Date: 14-Dec-2023 17:33:00 ALS Bottle#: 0 Worklist Smp#: 19  
 Injection Vol: 1.0 ul Dil. Factor: 2.0000  
 Sample Info: 140-0030874-019  
 Misc. Info.: 140-34757-A-9-B DU  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:36:05 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:32:07

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.320				ND	
2 Chloride	4.587	4.593	-0.006	1989369		0.0672	M
3 Nitrite as N	5.567	5.400	0.167	186171		0.002970	
4 Bromide		6.343				ND	
5 Nitrate as N	6.983	7.013	-0.030	24273722		0.3323	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.163				ND	
S 11 Nitrous Acid						0.0100	
S 12 Br		0.000				ND	
S 13 Chlorine						0.0672	
S 10 Nitric acid						1.49	
S 7 Hydrogen Chloride						0.0691	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202328.d

Injection Date: 14-Dec-2023 17:33:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-9-B DU

Worklist Smp#: 19

Client ID: AS26-2 CONTAINER 3 H2SO4

Injection Vol: 1.0 ul

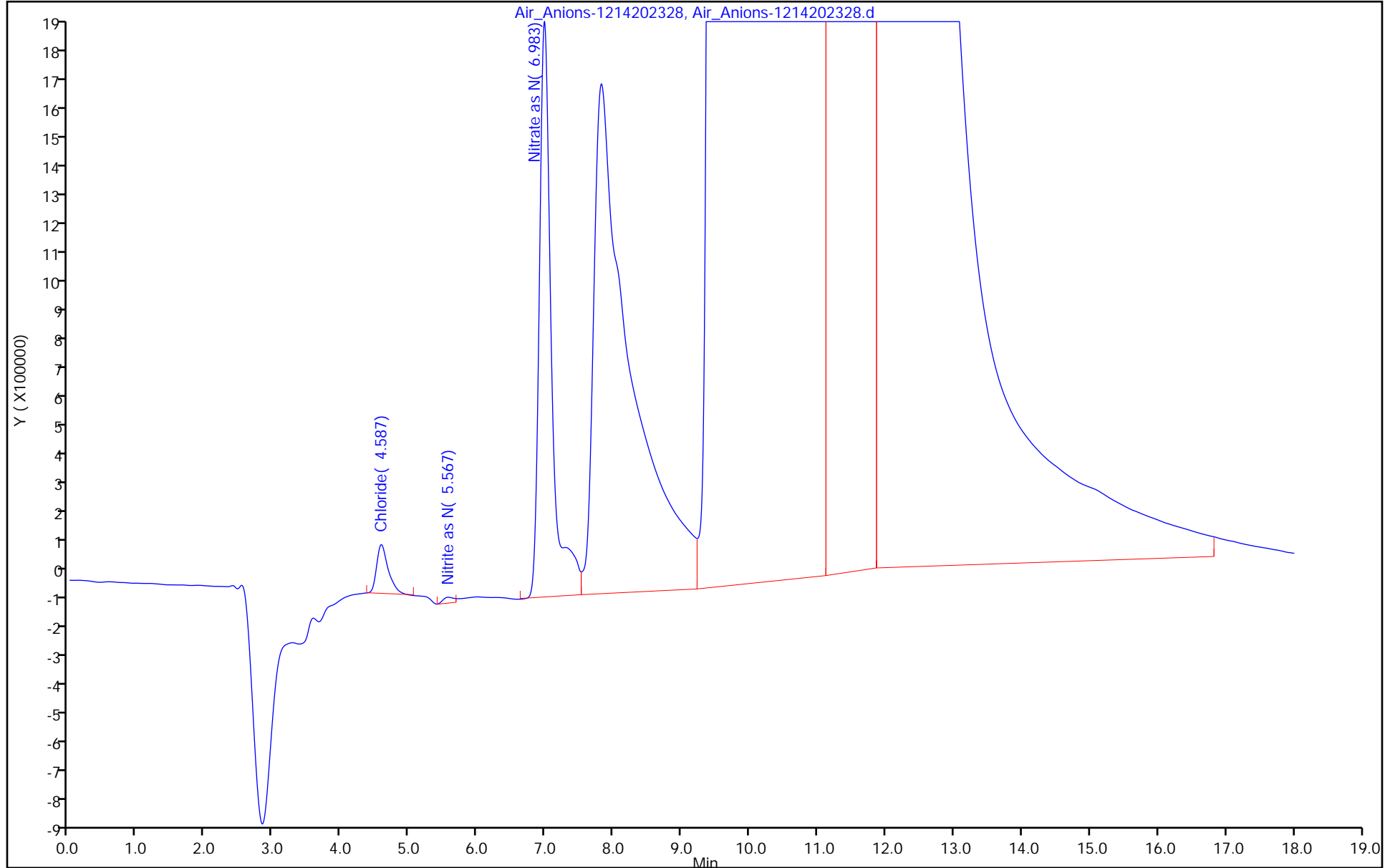
Dil. Factor: 2.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1





FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Eurofins Knoxville</u>	Job No.: <u>140-34757-1</u>
SDG No.: _____	
Client Sample ID: <u>AS26-2 CONTAINER 4 NAOH DU</u>	Lab Sample ID: <u>140-34757-10 DU</u>
Matrix: <u>Air</u>	Lab File ID: <u>Air_Anions-1215202328.d</u>
Analysis Method: <u>0050/26A</u>	Date Collected: <u>12/01/2023 00:00</u>
Extraction Method: <u>0050/26A</u>	Date Extracted: <u>12/14/2023 09:56</u>
Sample wt/vol: <u>1 (Sample)</u>	Date Analyzed: <u>12/16/2023 05:59</u>
Con. Extract Vol.: <u>235 (mL)</u>	Dilution Factor: <u>5</u>
Injection Volume: <u>1 (uL)</u>	GC Column: <u>AS22</u> ID: _____
% Moisture: _____ % Solids: _____	GPC Cleanup: (Y/N) <u>N</u>
Cleanup Factor: _____	
Analysis Batch No.: <u>81494</u>	Units: <u>ug/Sample</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	89.39	J	118	58.8

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202328.d  
 Lims ID: 140-34757-A-10-B DU  
 Client ID: AS26-2 CONTAINER 4 NAOH  
 Sample Type: DU  
 Inject. Date: 16-Dec-2023 05:59:00 ALS Bottle#: 0 Worklist Smp#: 19  
 Injection Vol: 1.0 ul Dil. Factor: 5.0000  
 Sample Info: 140-0030907-019  
 Misc. Info.: 140-34757-A-10-B DU  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:05:01 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

First Level Reviewer: EXJ2 Date: 18-Dec-2023 12:02:41

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.323				ND	
2 Chloride	4.517	4.597	-0.080	2253002		0.0761	M
3 Nitrite as N	5.323	5.407	-0.084	359832		0.005739	
4 Bromide		6.350				ND	
5 Nitrate as N	6.983	7.023	-0.040	8794398		0.1227	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.173				ND	
S 11 Nitrous Acid						0.0193	
S 12 Br		0.000				ND	
S 13 Chlorine						0.0761	
S 10 Nitric acid						0.5519	
S 7 Hydrogen Chloride						0.0782	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202328.d

Injection Date: 16-Dec-2023 05:59:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-10-B DU

Worklist Smp#: 19

Client ID: AS26-2 CONTAINER 4 NAOH

Injection Vol: 1.0 ul

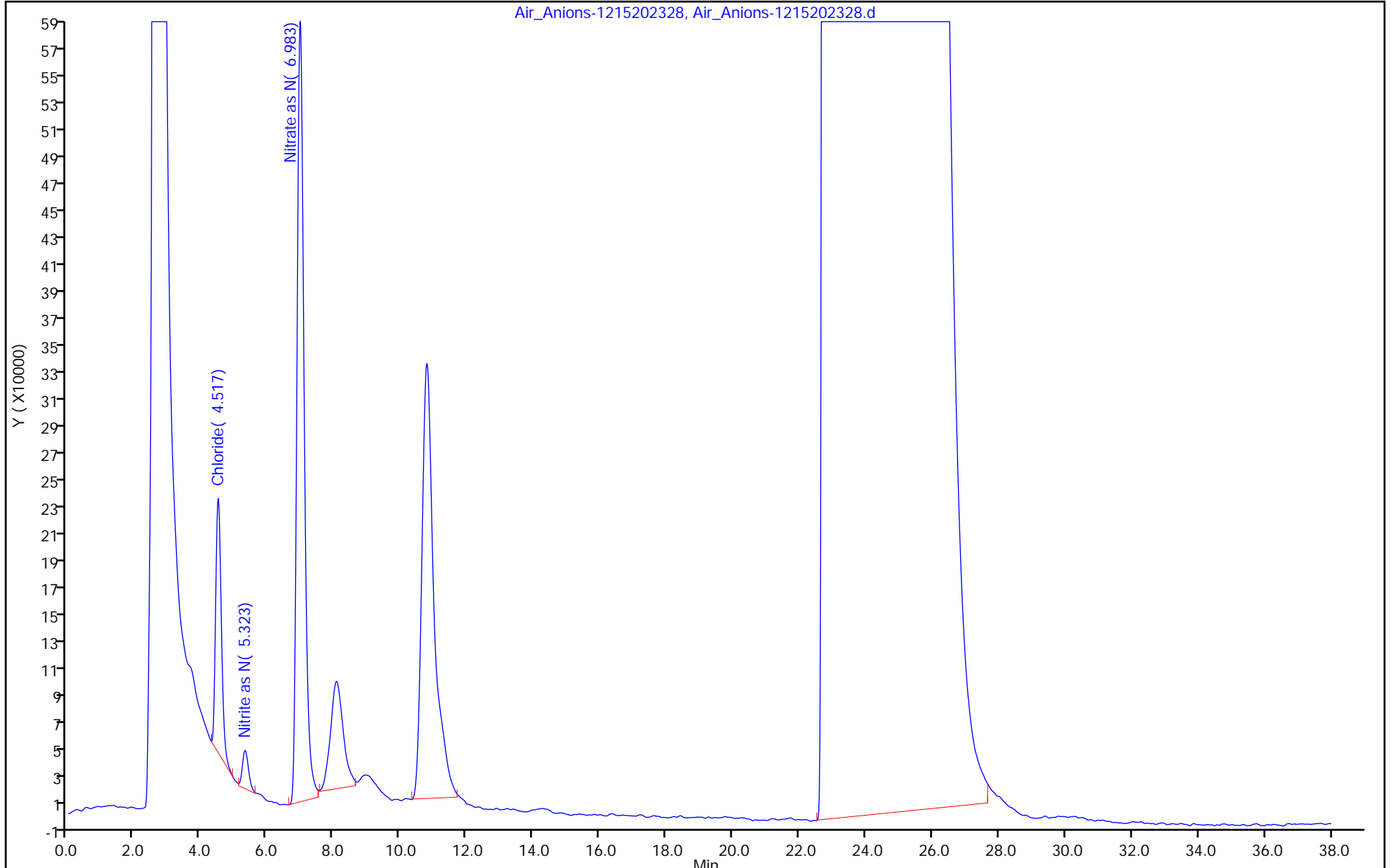
Dil. Factor: 5.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

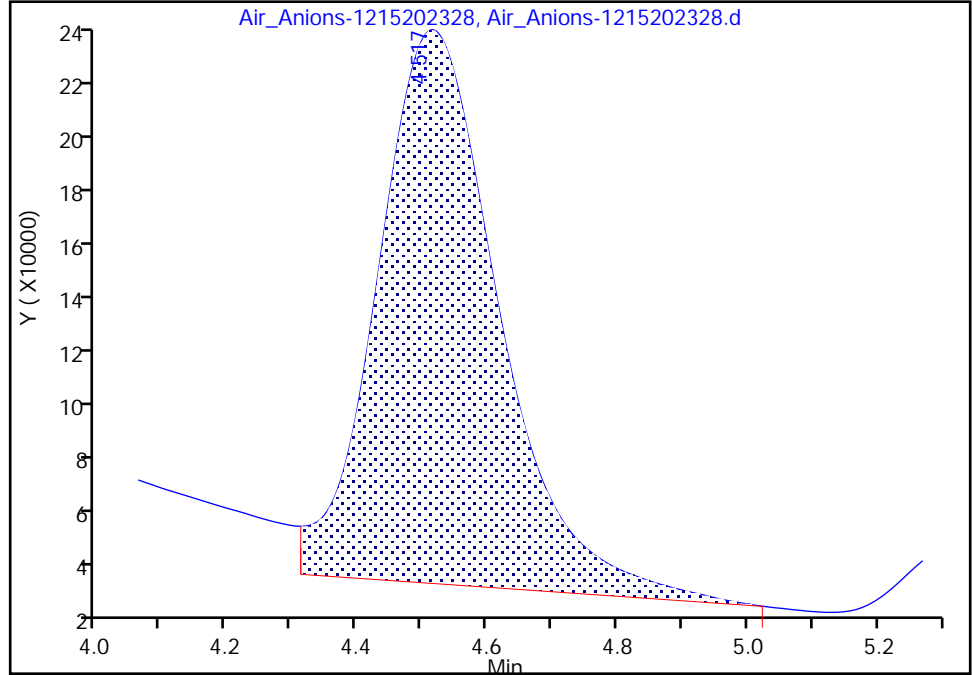
Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202328.d  
Injection Date: 16-Dec-2023 05:59:00 Instrument ID: IC4  
Lims ID: 140-34757-A-10-B DU  
Client ID: AS26-2 CONTAINER 4 NAOH  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 5.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

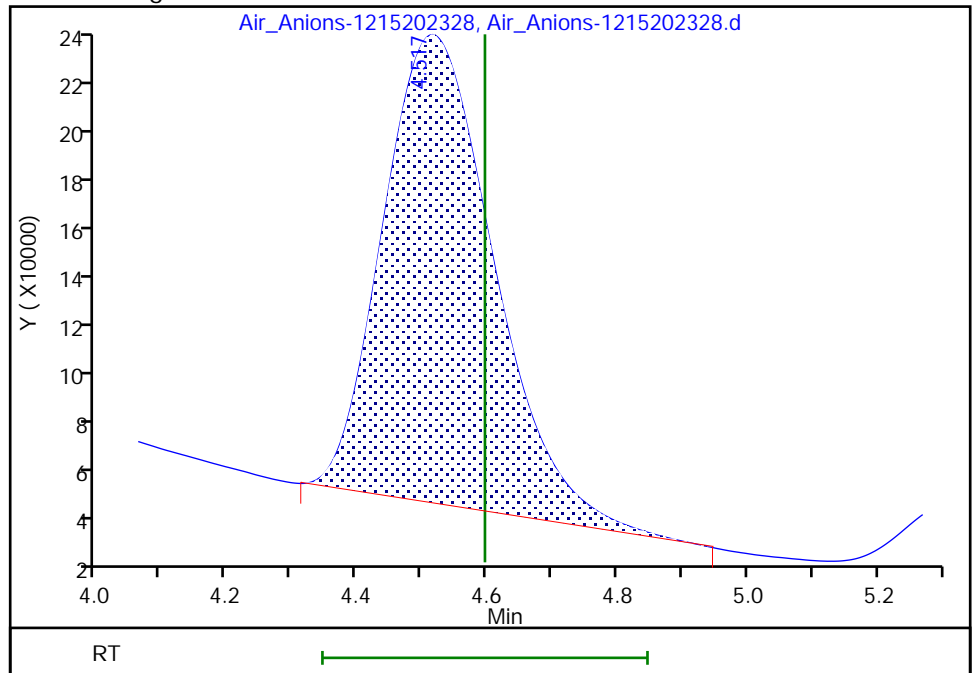
RT: 4.52  
Area: 2633944  
Amount: 0.088876  
Amount Units: ug/ml

Processing Integration Results



RT: 4.52  
Area: 2253002  
Amount: 0.076075  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 18-Dec-2023 12:02:37 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202332.d  
 Lims ID: 140-34757-A-11-B DU  
 Client ID: AS26-3 CONTAINER 3 H2SO4  
 Sample Type: DU  
 Inject. Date: 14-Dec-2023 19:02:00 ALS Bottle#: 0 Worklist Smp#: 23  
 Injection Vol: 1.0 ul Dil. Factor: 2.0000  
 Sample Info: 140-0030874-023  
 Misc. Info.: 140-34757-A-11-B DU  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:44:30 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:44:30

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.320				ND	
2 Chloride	4.583	4.593	-0.010	2212746		0.0747	M
3 Nitrite as N	5.560	5.400	0.160	226908		0.003619	
4 Bromide		6.343				ND	
5 Nitrate as N	6.990	7.013	-0.023	2428449		0.0341	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.163				ND	
S 11 Nitrous Acid						0.0121	
S 12 Br		0.000				ND	
S 13 Chlorine						0.0747	
S 10 Nitric acid						0.1536	
S 7 Hydrogen Chloride						0.0768	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202332.d

Injection Date: 14-Dec-2023 19:02:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-11-B DU

Worklist Smp#: 23

Client ID: AS26-3 CONTAINER 3 H2SO4

Injection Vol: 1.0 ul

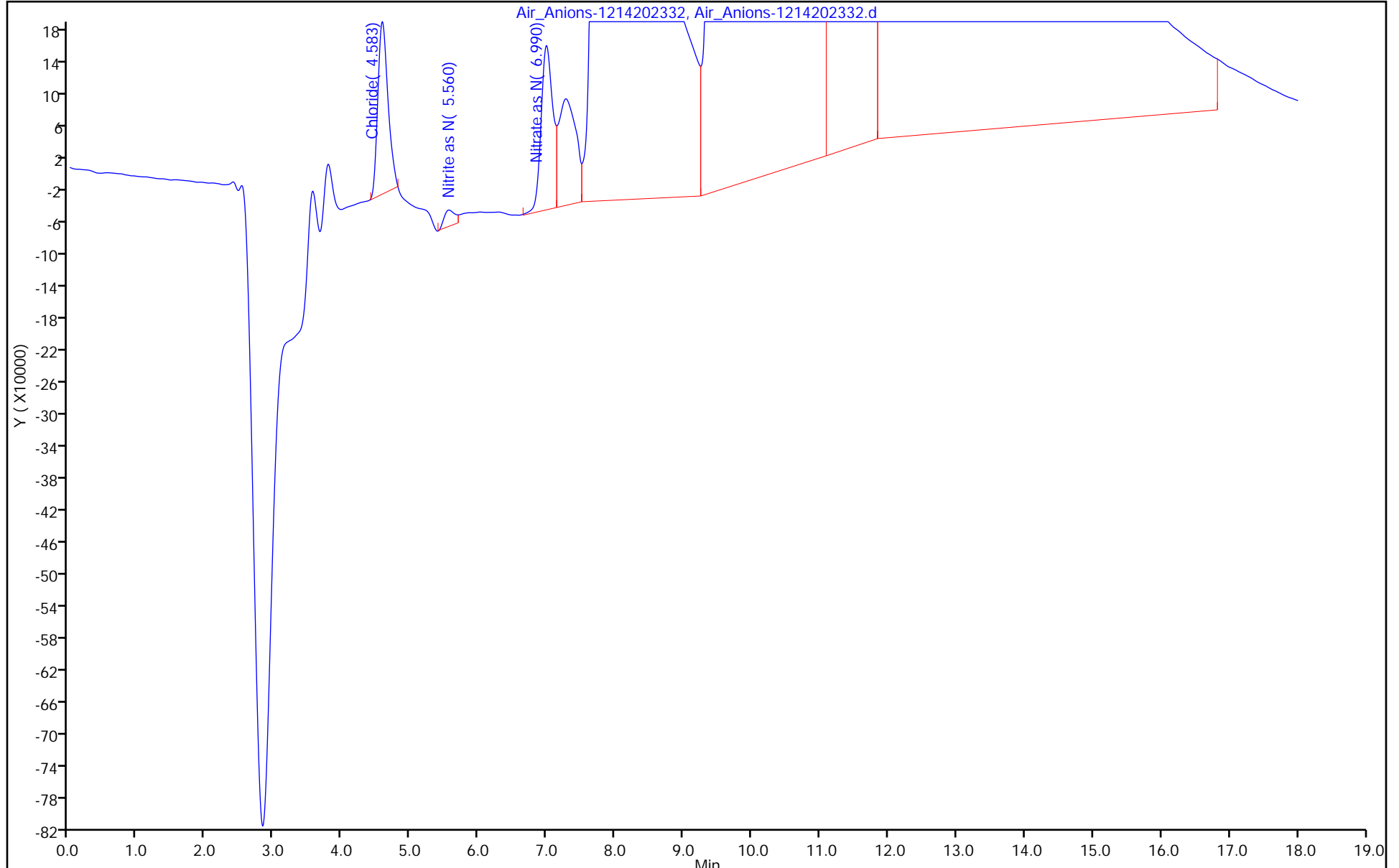
Dil. Factor: 2.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1







Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202332.d  
 Lims ID: 140-34757-A-12-B DU  
 Client ID: AS26-3 CONTAINER 4 NAOH  
 Sample Type: DU  
 Inject. Date: 16-Dec-2023 08:47:00 ALS Bottle#: 0 Worklist Smp#: 23  
 Injection Vol: 1.0 ul Dil. Factor: 5.0000  
 Sample Info: 140-0030907-023  
 Misc. Info.: 140-34757-A-12-B DU  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:05:01 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.323				ND	
2 Chloride	4.533	4.597	-0.064	1967022		0.0665	
3 Nitrite as N	5.343	5.407	-0.064	312476		0.004984	
4 Bromide		6.350				ND	
5 Nitrate as N	6.960	7.023	-0.063	290295		0.004093	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.173				ND	
S 11 Nitrous Acid						0.0167	
S 12 Br		0.000				ND	
S 13 Chlorine						0.0665	
S 10 Nitric acid						0.0184	
S 7 Hydrogen Chloride						0.0683	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202332.d

Injection Date: 16-Dec-2023 08:47:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-12-B DU

Worklist Smp#: 23

Client ID: AS26-3 CONTAINER 4 NAOH

Injection Vol: 1.0 ul

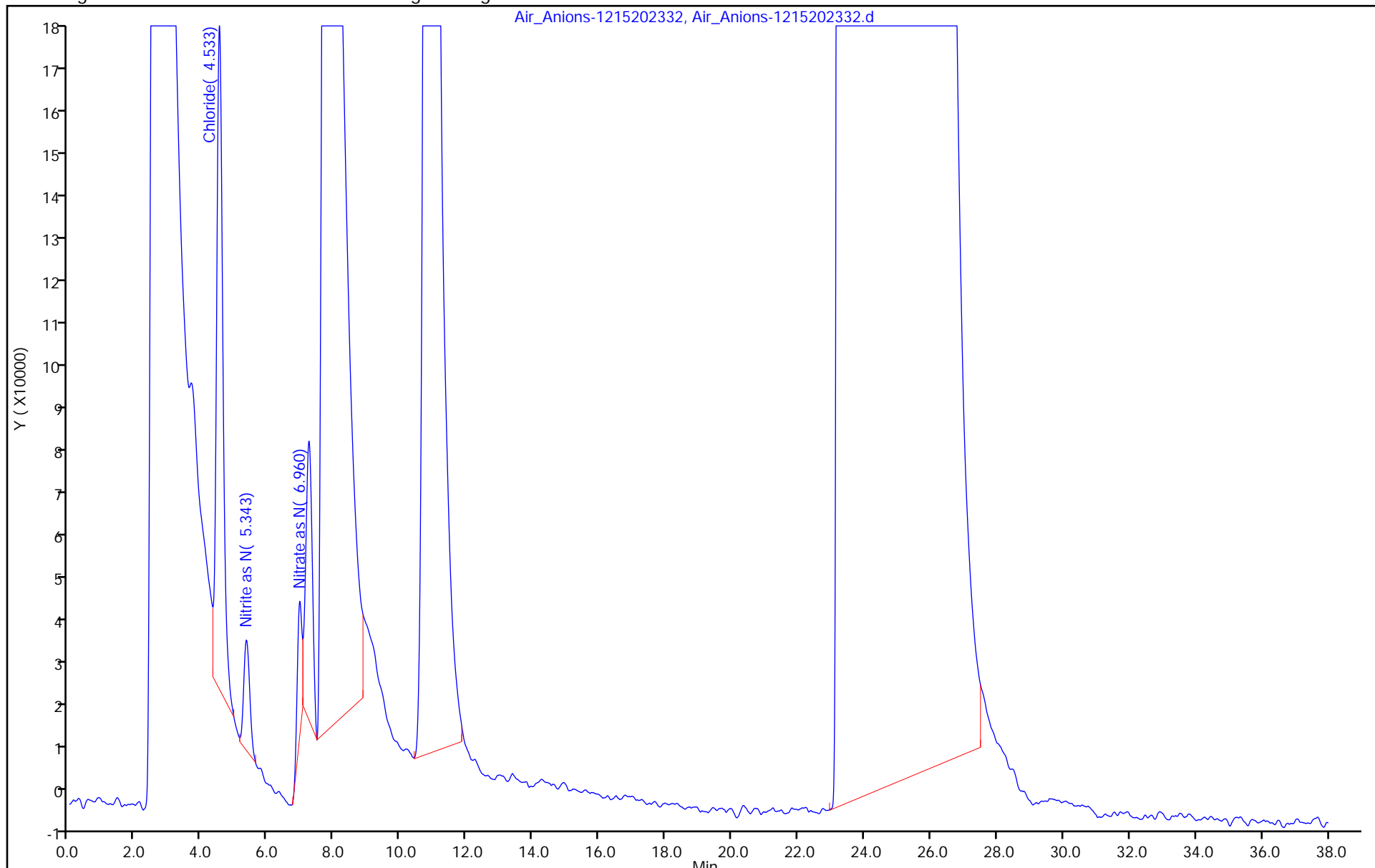
Dil. Factor: 5.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1





Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202336.d  
 Lims ID: 140-34757-A-13-B DU  
 Client ID: AP26-1 CONTAINER 3 H2SO4  
 Sample Type: DU  
 Inject. Date: 14-Dec-2023 20:30:00 ALS Bottle#: 0 Worklist Smp#: 27  
 Injection Vol: 1.0 ul Dil. Factor: 2.0000  
 Sample Info: 140-0030874-027  
 Misc. Info.: 140-34757-A-13-B DU  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:36:11 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:32:59

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.320				ND	
2 Chloride	4.587	4.593	-0.006	7566170		0.2530	M
3 Nitrite as N	5.370	5.400	-0.030	2091380		0.0333	
4 Bromide		6.343				ND	
5 Nitrate as N	6.990	7.013	-0.023	20702184		0.2846	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.163				ND	
S 11 Nitrous Acid						0.1117	
S 12 Br		0.000				ND	
S 13 Chlorine						0.2530	
S 10 Nitric acid						1.28	
S 7 Hydrogen Chloride						0.2602	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202336.d

Injection Date: 14-Dec-2023 20:30:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-13-B DU

Worklist Smp#: 27

Client ID: AP26-1 CONTAINER 3 H2SO4

Injection Vol: 1.0 ul

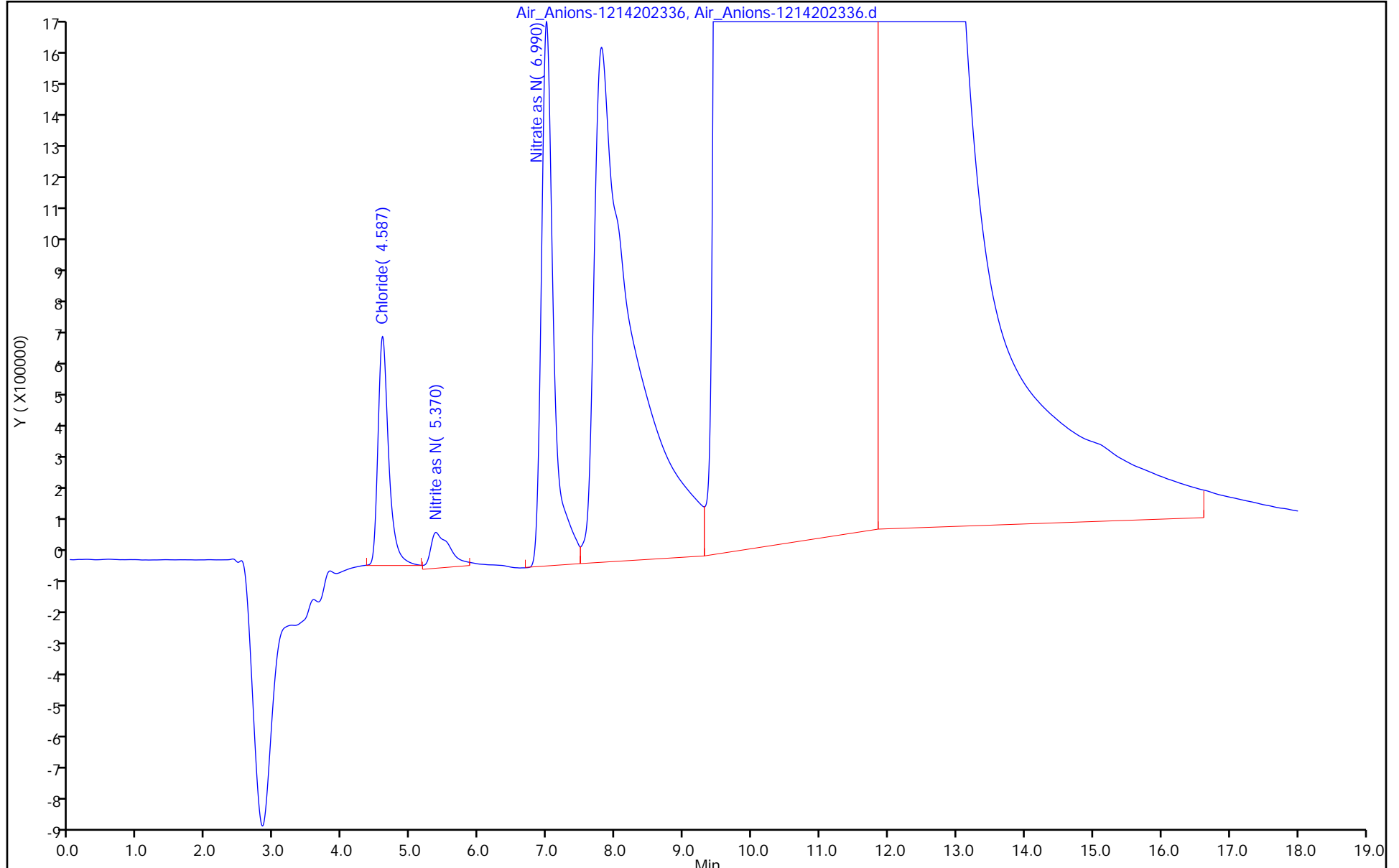
Dil. Factor: 2.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1





Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202336.d  
 Lims ID: 140-34757-A-14-B DU  
 Client ID: AP26-1 CONTAINER 4 NAOH  
 Sample Type: DU  
 Inject. Date: 16-Dec-2023 10:56:00 ALS Bottle#: 0 Worklist Smp#: 27  
 Injection Vol: 1.0 ul Dil. Factor: 5.0000  
 Sample Info: 140-0030907-027  
 Misc. Info.: 140-34757-A-14-B DU  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:05:07 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

First Level Reviewer: EXJ2 Date: 18-Dec-2023 12:03:26

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.323				ND	
2 Chloride	4.537	4.597	-0.060	1694758		0.0573	M
3 Nitrite as N	5.377	5.407	-0.030	76156119		1.13	
4 Bromide		6.350				ND	
5 Nitrate as N	6.867	7.023	-0.156	657543		0.009268	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.173				ND	
S 11 Nitrous Acid						3.79	
S 12 Br		0.000				ND	
S 13 Chlorine						0.0573	
S 10 Nitric acid						0.0417	
S 7 Hydrogen Chloride						0.0589	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202336.d

Injection Date: 16-Dec-2023 10:56:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-14-B DU

Worklist Smp#: 27

Client ID: AP26-1 CONTAINER 4 NAOH

Injection Vol: 1.0 ul

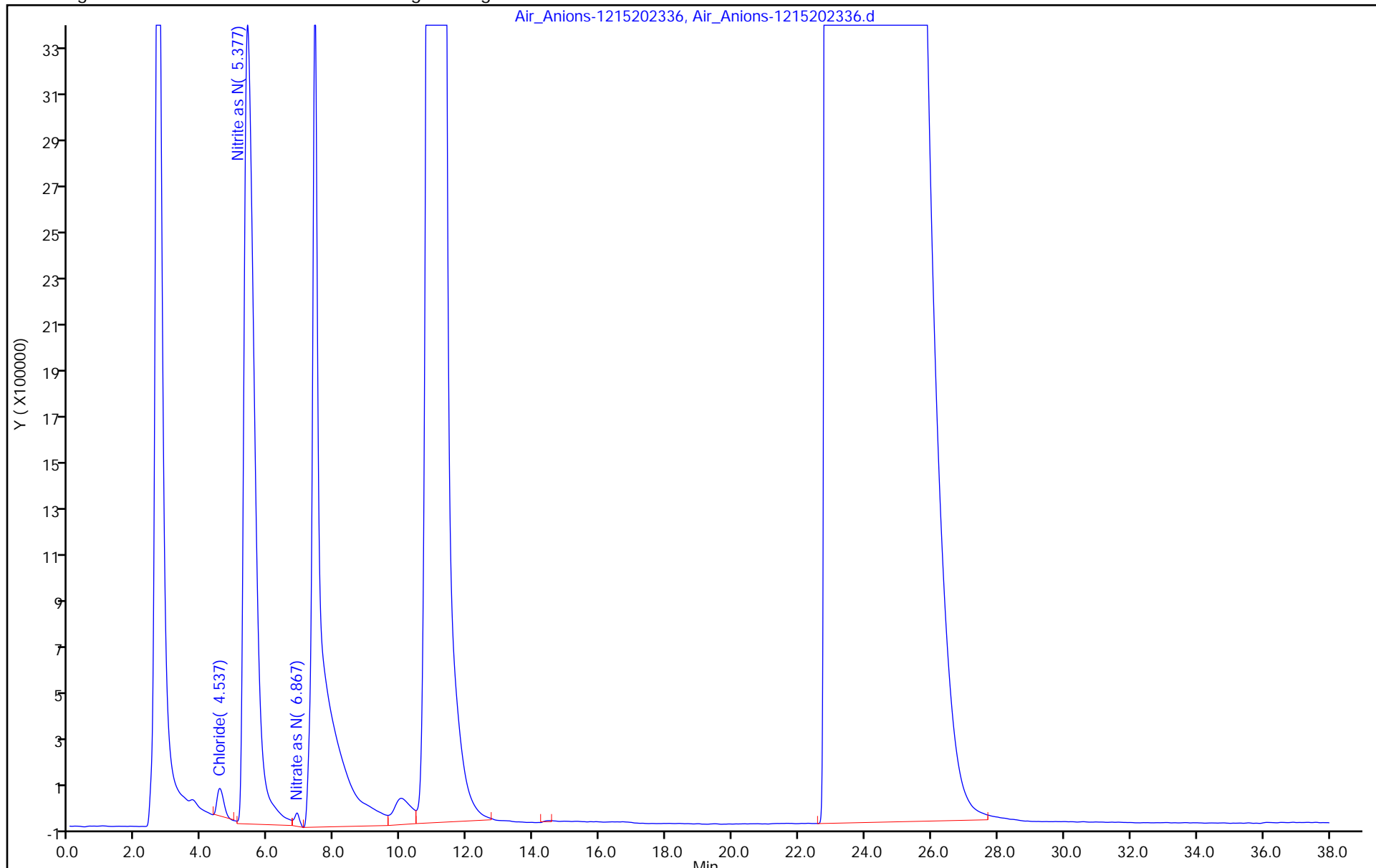
Dil. Factor: 5.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1





Eurofins Knoxville

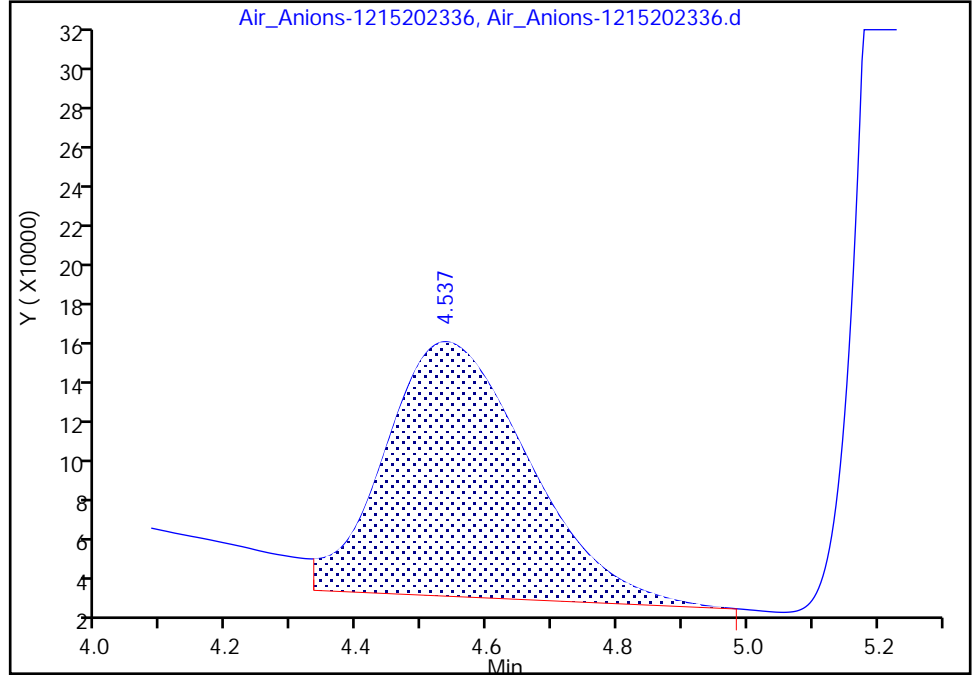
Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202336.d  
Injection Date: 16-Dec-2023 10:56:00 Instrument ID: IC4  
Lims ID: 140-34757-A-14-B DU  
Client ID: AP26-1 CONTAINER 4 NAOH  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 27  
Injection Vol: 1.0 ul Dil. Factor: 5.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

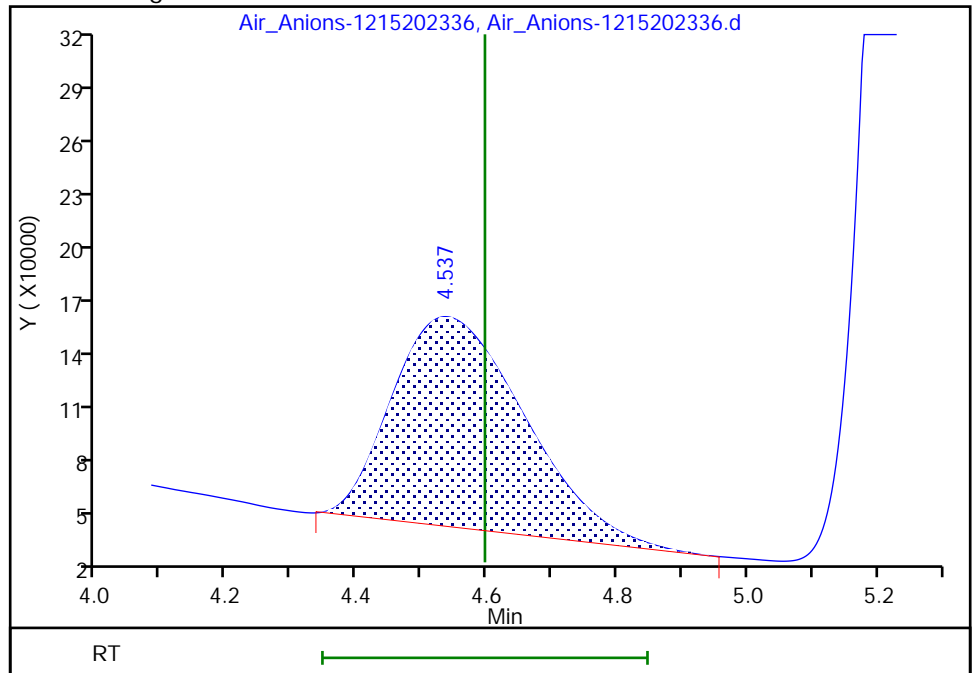
RT: 4.54  
Area: 2009840  
Amount: 0.067895  
Amount Units: ug/ml

Processing Integration Results



RT: 4.54  
Area: 1694758  
Amount: 0.057284  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 18-Dec-2023 12:03:23 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202338.d  
 Lims ID: 140-34757-A-15-B DU  
 Client ID: AP26-2 CONTAINER 3 H2SO4  
 Sample Type: DU  
 Inject. Date: 14-Dec-2023 21:15:00 ALS Bottle#: 0 Worklist Smp#: 29  
 Injection Vol: 1.0 ul Dil. Factor: 2.0000  
 Sample Info: 140-0030874-029  
 Misc. Info.: 140-34757-A-15-B DU  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:36:11 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:33:14

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.320				ND	
2 Chloride	4.587	4.593	-0.006	8246800		0.2755	M
3 Nitrite as N	5.363	5.400	-0.037	565133		0.009011	
4 Bromide		6.343				ND	
5 Nitrate as N	6.987	7.013	-0.026	20638147		0.2838	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.163				ND	
S 11 Nitrous Acid						0.0302	
S 12 Br		0.000				ND	
S 13 Chlorine						0.2755	
S 10 Nitric acid						1.28	
S 7 Hydrogen Chloride						0.2833	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202338.d

Injection Date: 14-Dec-2023 21:15:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-15-B DU

Worklist Smp#: 29

Client ID: AP26-2 CONTAINER 3 H2SO4

Injection Vol: 1.0 ul

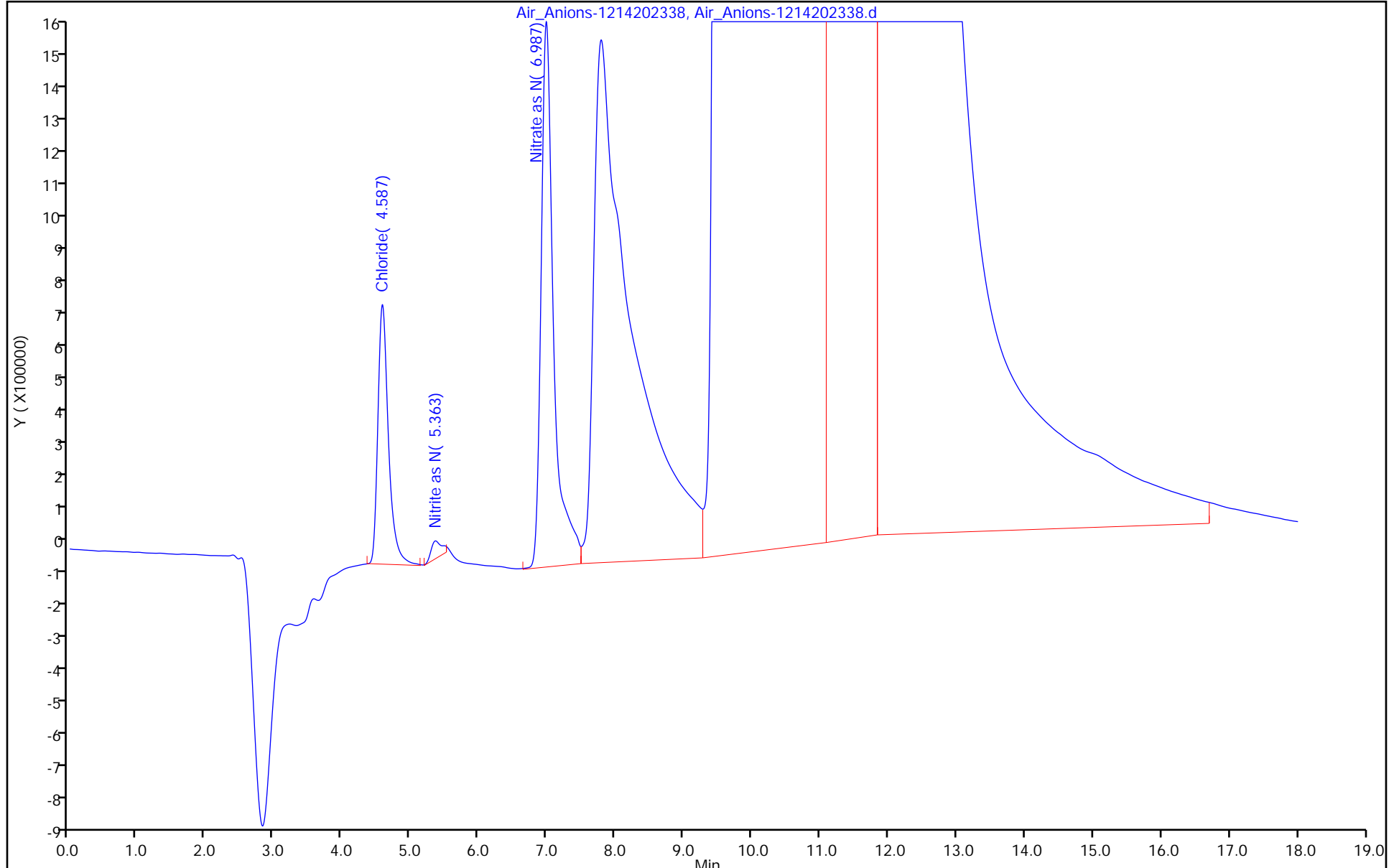
Dil. Factor: 2.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Eurofins Knoxville</u>	Job No.: <u>140-34757-1</u>
SDG No.: _____	
Client Sample ID: <u>AP26-2 CONTAINER 4 NAOH DU</u>	Lab Sample ID: <u>140-34757-16 DU</u>
Matrix: <u>Air</u>	Lab File ID: <u>Air_Anions-1215202338.d</u>
Analysis Method: <u>0050/26A</u>	Date Collected: <u>12/06/2023 00:00</u>
Extraction Method: <u>0050/26A</u>	Date Extracted: <u>12/14/2023 09:56</u>
Sample wt/vol: <u>1 (Sample)</u>	Date Analyzed: <u>12/16/2023 12:21</u>
Con. Extract Vol.: <u>240 (mL)</u>	Dilution Factor: <u>5</u>
Injection Volume: <u>1 (uL)</u>	GC Column: <u>AS22</u> ID: _____
% Moisture: _____ % Solids: _____	GPC Cleanup: (Y/N) <u>N</u>
Cleanup Factor: _____	
Analysis Batch No.: <u>81494</u>	Units: <u>ug/Sample</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	96.56	J	120	60.0

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202338.d  
 Lims ID: 140-34757-A-16-B DU  
 Client ID: AP26-2 CONTAINER 4 NAOH  
 Sample Type: DU  
 Inject. Date: 16-Dec-2023 12:21:00 ALS Bottle#: 0 Worklist Smp#: 29  
 Injection Vol: 1.0 ul Dil. Factor: 5.0000  
 Sample Info: 140-0030907-029  
 Misc. Info.: 140-34757-A-16-B DU  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:05:07 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

First Level Reviewer: EXJ2 Date: 18-Dec-2023 12:03:44

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.323				ND	
2 Chloride	4.537	4.597	-0.060	2383734		0.0805	M
3 Nitrite as N	5.373	5.407	-0.034	77372762		1.14	
4 Bromide		6.350				ND	
5 Nitrate as N	6.870	7.023	-0.153	747776		0.0105	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.173				ND	
S 11 Nitrous Acid						3.84	
S 12 Br		0.000				ND	
S 13 Chlorine						0.0805	
S 10 Nitric acid						0.0474	
S 7 Hydrogen Chloride						0.0828	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202338.d

Injection Date: 16-Dec-2023 12:21:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-16-B DU

Worklist Smp#: 29

Client ID: AP26-2 CONTAINER 4 NAOH

Injection Vol: 1.0 ul

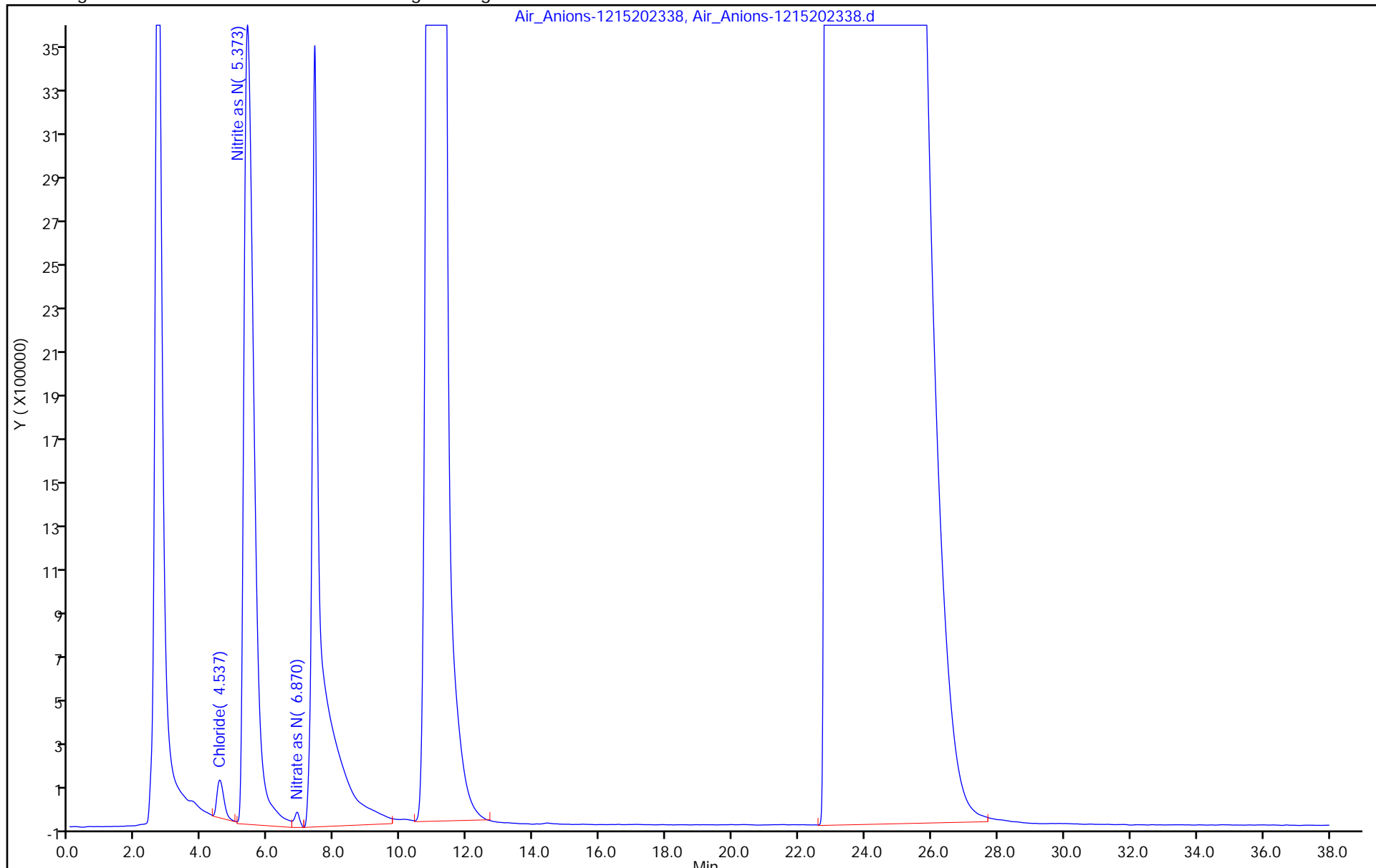
Dil. Factor: 5.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

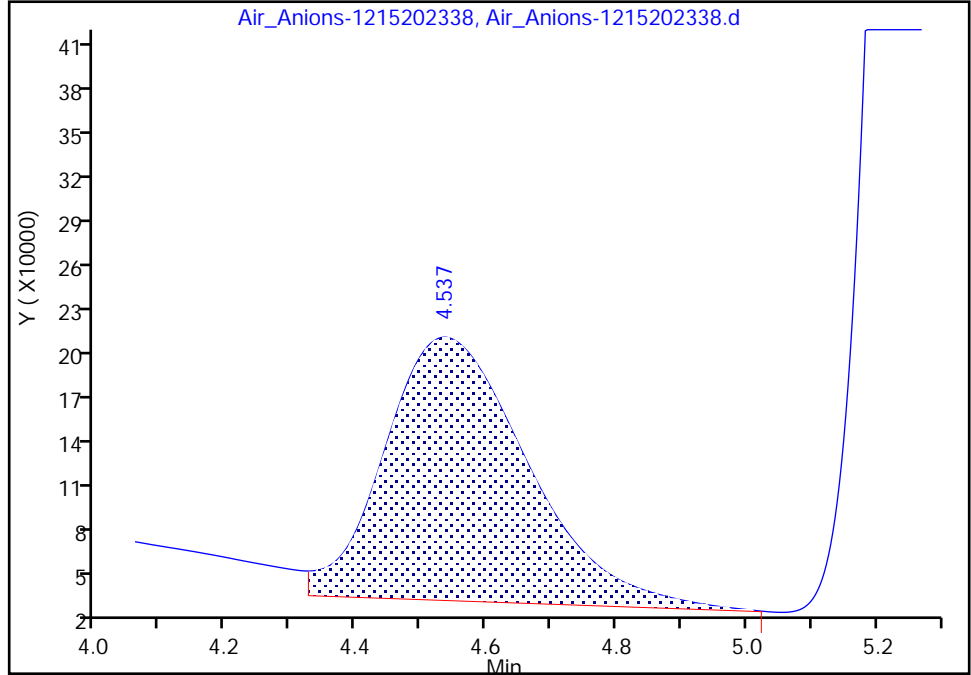
Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.bAir\_Anions-1215202338.d  
Injection Date: 16-Dec-2023 12:21:00 Instrument ID: IC4  
Lims ID: 140-34757-A-16-B DU  
Client ID: AP26-2 CONTAINER 4 NAOH  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 29  
Injection Vol: 1.0 ul Dil. Factor: 5.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

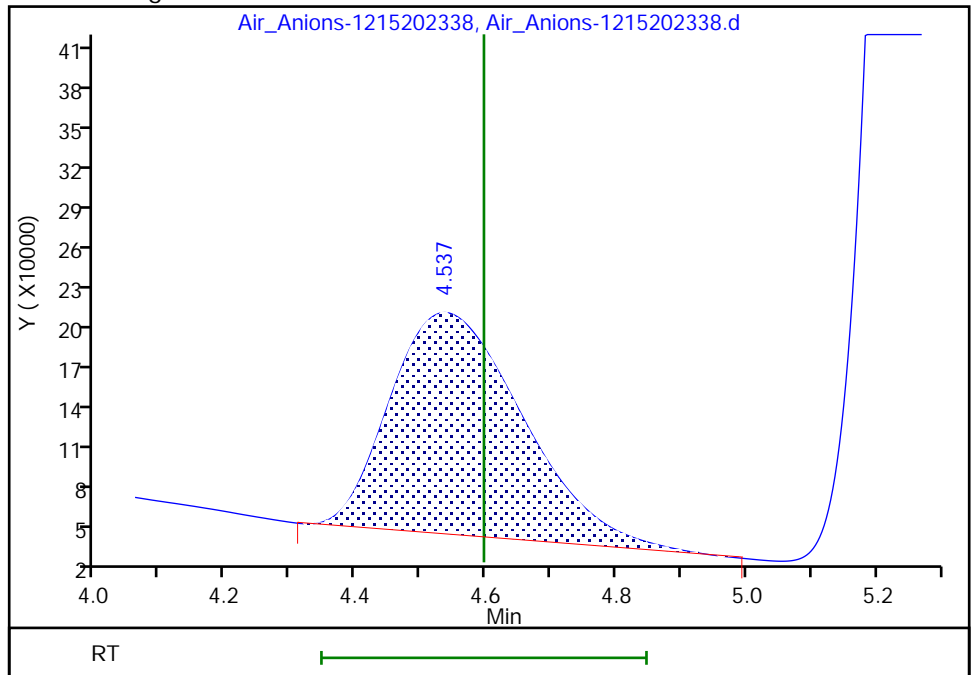
RT: 4.54  
Area: 2742429  
Amount: 0.092518  
Amount Units: ug/ml

Processing Integration Results



RT: 4.54  
Area: 2383734  
Amount: 0.080470  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 18-Dec-2023 12:03:41 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing





Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202342.d  
 Lims ID: 140-34757-A-17-B DU  
 Client ID: AP26-3 CONTAINER 3 H2SO4  
 Sample Type: DU  
 Inject. Date: 14-Dec-2023 22:43:00 ALS Bottle#: 0 Worklist Smp#: 33  
 Injection Vol: 1.0 ul Dil. Factor: 2.0000  
 Sample Info: 140-0030874-033  
 Misc. Info.: 140-34757-A-17-B DU  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:36:11 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.320				ND	
2 Chloride	4.587	4.593	-0.006	5434981		0.1825	
3 Nitrite as N	5.380	5.400	-0.020	1677846		0.0267	
4 Bromide		6.343				ND	
5 Nitrate as N	6.990	7.013	-0.023	13787735		0.1911	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.163				ND	
S 11 Nitrous Acid						0.0897	
S 12 Br		0.000				ND	
S 13 Chlorine						0.1825	
S 10 Nitric acid						0.8599	
S 7 Hydrogen Chloride						0.1876	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202342.d

Injection Date: 14-Dec-2023 22:43:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-17-B DU

Worklist Smp#: 33

Client ID: AP26-3 CONTAINER 3 H2SO4

Injection Vol: 1.0 ul

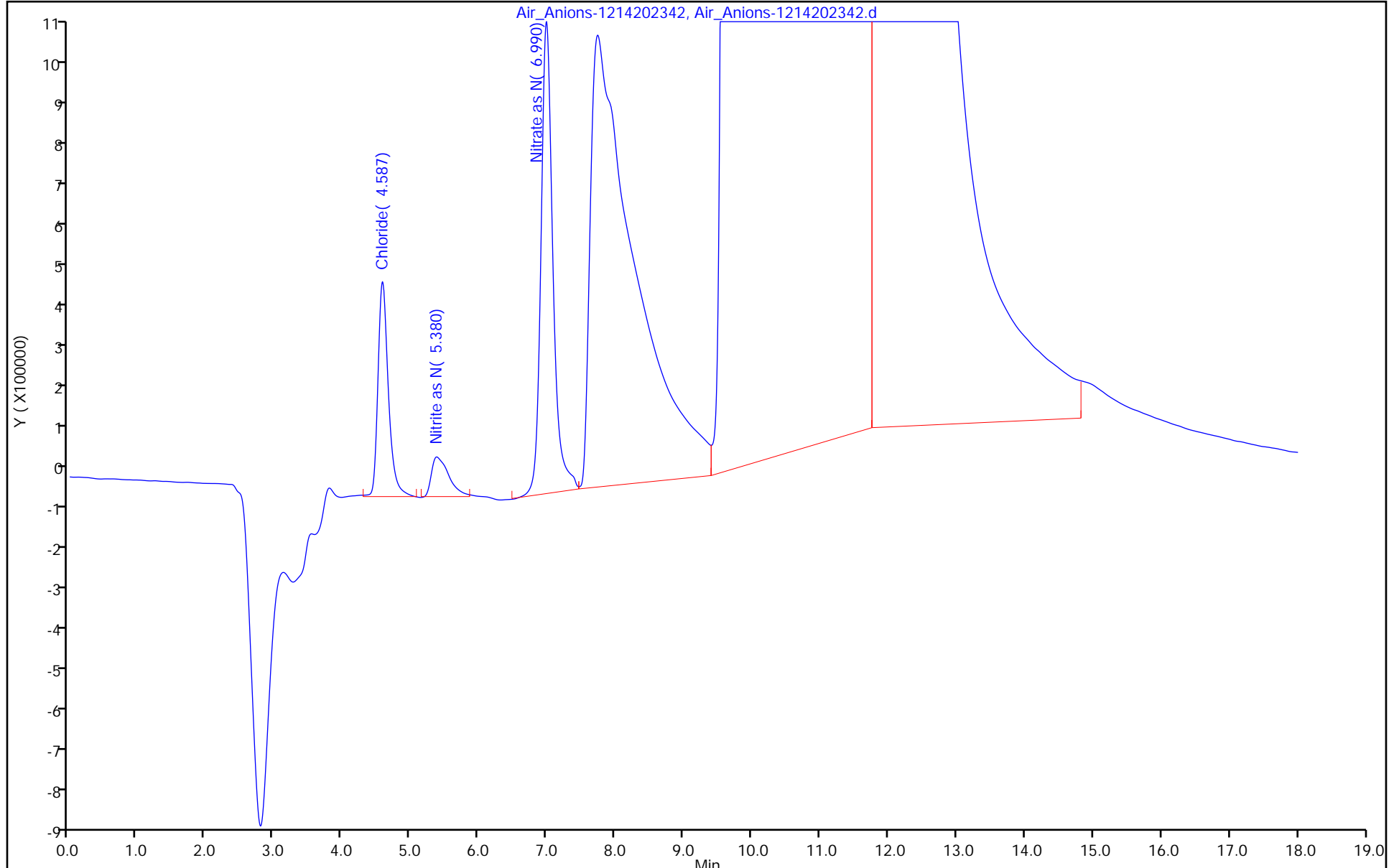
Dil. Factor: 2.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Eurofins Knoxville</u>	Job No.: <u>140-34757-1</u>
SDG No.: _____	
Client Sample ID: <u>AP26-3 CONTAINER 4 NAOH DU</u>	Lab Sample ID: <u>140-34757-18 DU</u>
Matrix: <u>Air</u>	Lab File ID: <u>Air_Anions-1215202342.d</u>
Analysis Method: <u>0050/26A</u>	Date Collected: <u>12/07/2023 00:00</u>
Extraction Method: <u>0050/26A</u>	Date Extracted: <u>12/14/2023 09:56</u>
Sample wt/vol: <u>1 (Sample)</u>	Date Analyzed: <u>12/16/2023 15:09</u>
Con. Extract Vol.: <u>250 (mL)</u>	Dilution Factor: <u>5</u>
Injection Volume: <u>1 (uL)</u>	GC Column: <u>AS22</u> ID: _____
% Moisture: _____ % Solids: _____	GPC Cleanup: (Y/N) <u>N</u>
Cleanup Factor: _____	
Analysis Batch No.: <u>81494</u>	Units: <u>ug/Sample</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	85.61	J	125	62.5

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202342.d  
 Lims ID: 140-34757-A-18-C DU  
 Client ID: AP26-3 CONTAINER 4 NAOH  
 Sample Type: DU  
 Inject. Date: 16-Dec-2023 15:09:00 ALS Bottle#: 0 Worklist Smp#: 33  
 Injection Vol: 1.0 ul Dil. Factor: 5.0000  
 Sample Info: 140-0030907-033  
 Misc. Info.: 140-34757-A-18-B  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:05:07 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

First Level Reviewer: EXJ2 Date: 18-Dec-2023 12:04:16

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.323				ND	
2 Chloride	4.537	4.597	-0.060	2027488		0.0685	M
3 Nitrite as N	5.373	5.407	-0.034	64490609		0.9651	
4 Bromide		6.350				ND	
5 Nitrate as N	6.863	7.023	-0.160	347483		0.004899	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.173				ND	
S 11 Nitrous Acid						3.24	
S 12 Br		0.000				ND	
S 13 Chlorine						0.0685	
S 10 Nitric acid						0.0220	
S 7 Hydrogen Chloride						0.0704	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202342.d

Injection Date: 16-Dec-2023 15:09:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-18-C DU

Worklist Smp#: 33

Client ID: AP26-3 CONTAINER 4 NAOH

Injection Vol: 1.0 ul

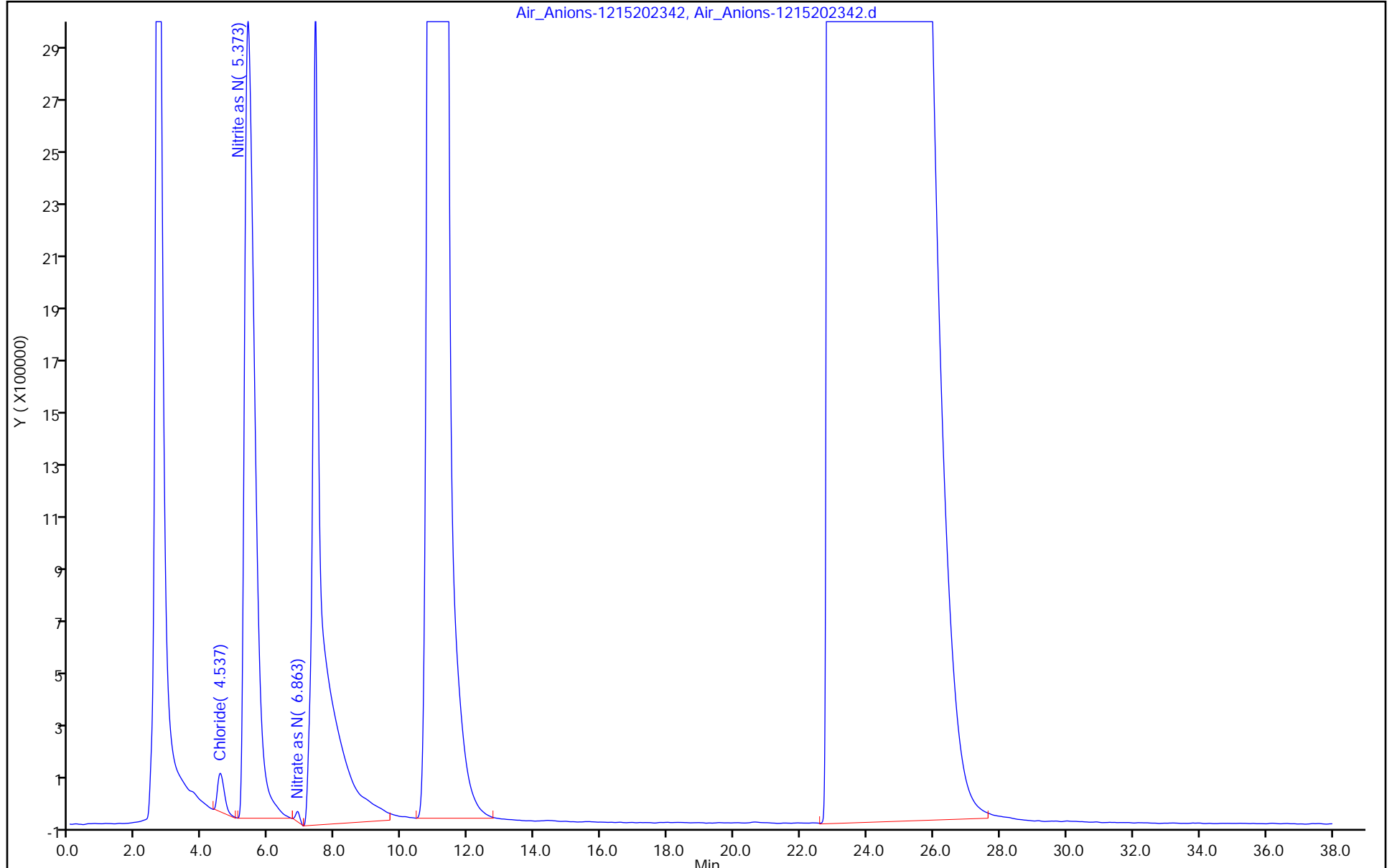
Dil. Factor: 5.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

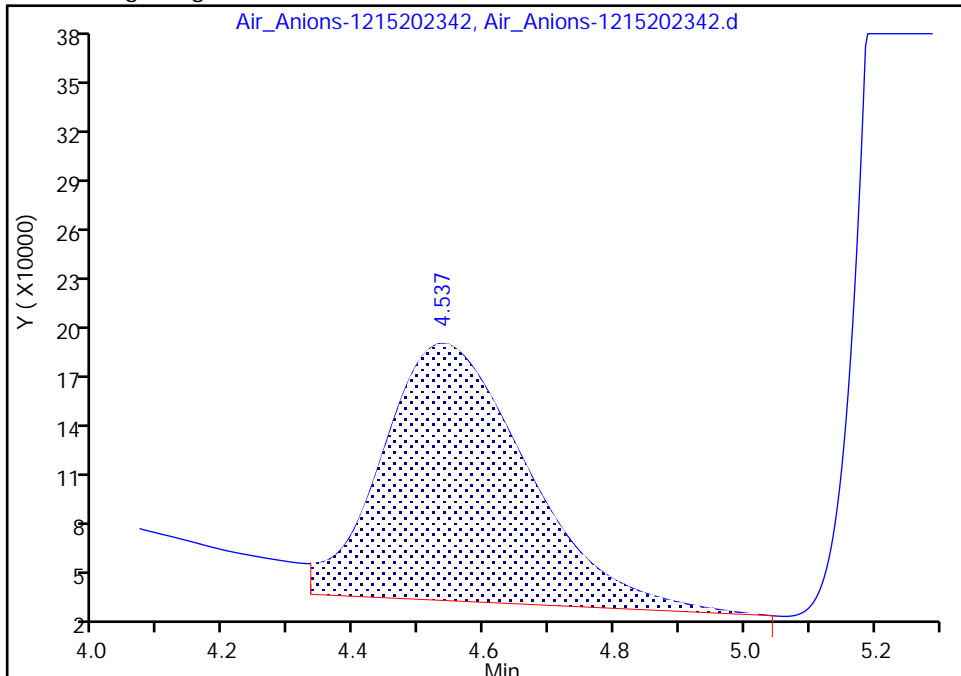
Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.bAir\_Anions-1215202342.d  
Injection Date: 16-Dec-2023 15:09:00 Instrument ID: IC4  
Lims ID: 140-34757-A-18-C DU  
Client ID: AP26-3 CONTAINER 4 NAOH  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 33  
Injection Vol: 1.0 ul Dil. Factor: 5.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

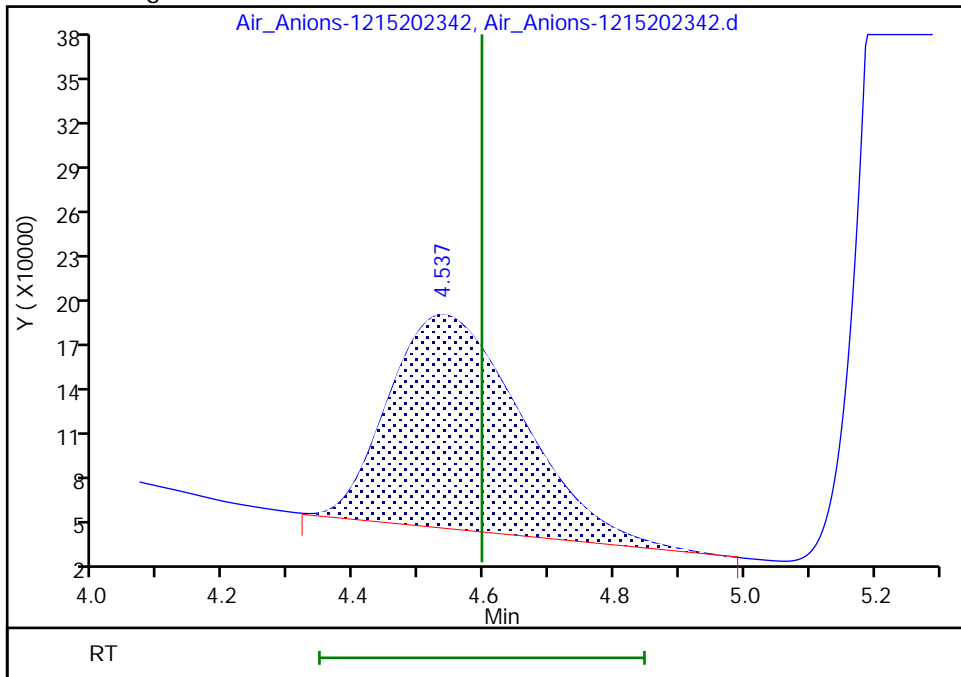
RT: 4.54  
Area: 2401823  
Amount: 0.081078  
Amount Units: ug/ml

Processing Integration Results



RT: 4.54  
Area: 2027488  
Amount: 0.068489  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 18-Dec-2023 12:04:14 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
SDG No.: \_\_\_\_\_  
Client Sample ID: BLANK CONTAINER 6 H2SO4 Lab Sample ID: 140-34757-19 DU  
DU  
Matrix: Air Lab File ID: Air\_Anions-1214202344.d  
Analysis Method: 0050/26A Date Collected: 12/07/2023 00:00  
Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:50  
Sample wt/vol: 1(Sample) Date Analyzed: 12/14/2023 23:28  
Con. Extract Vol.: 230(mL) Dilution Factor: 2  
Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
% Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
Cleanup Factor: \_\_\_\_\_  
Analysis Batch No.: 81419 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7647-01-0	Hydrogen Chloride	29.68	J	47.3	24.4



Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202344.d  
 Lims ID: 140-34757-A-19-B DU  
 Client ID: BLANK CONTAINER 6 H2SO4  
 Sample Type: DU  
 Inject. Date: 14-Dec-2023 23:28:00 ALS Bottle#: 0 Worklist Smp#: 35  
 Injection Vol: 1.0 ul Dil. Factor: 2.0000  
 Sample Info: 140-0030874-035  
 Misc. Info.: 140-34757-A-19-B DU  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:36:11 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:33:48

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.320				ND	
2 Chloride	4.417	4.593	-0.176	1856396		0.0627	M
3 Nitrite as N	5.630	5.400	0.230	140447		0.002240	
4 Bromide		6.343				ND	
5 Nitrate as N	6.803	7.013	-0.210	515922		0.007273	
19 Orthophosphate as P		9.280				ND	
6 Iodide	12.937	13.163	-0.226	301980711		26.2	E
S 11 Nitrous Acid						0.007520	
S 12 Br		0.000				ND	
S 13 Chlorine						0.0627	
S 10 Nitric acid						0.0327	
S 7 Hydrogen Chloride						0.0645	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide						26.4	E
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Review Flags

M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202344.d

Injection Date: 14-Dec-2023 23:28:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-19-B DU

Worklist Smp#: 35

Client ID: BLANK CONTAINER 6 H2SO4

Injection Vol: 1.0 ul

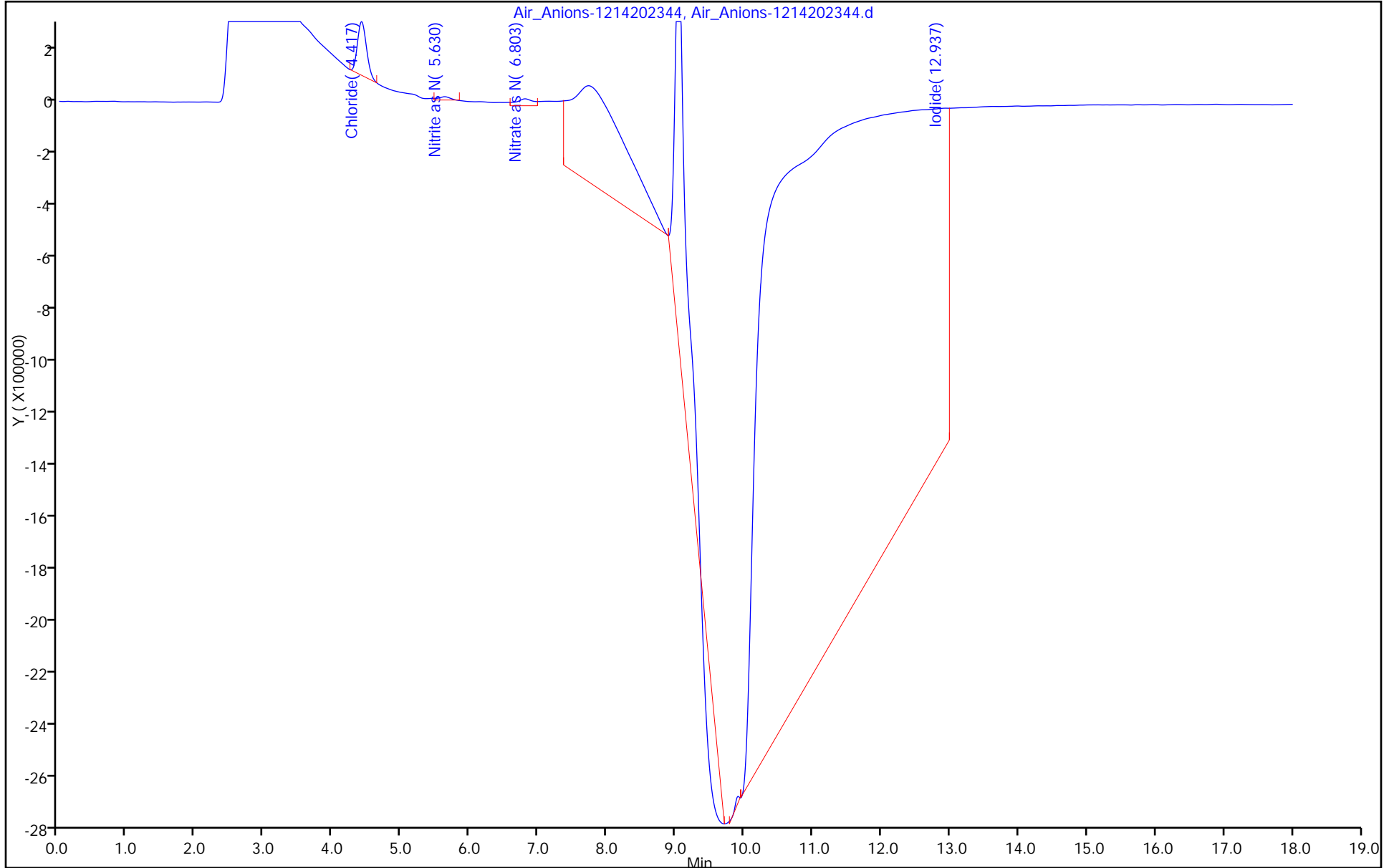
Dil. Factor: 2.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: BLANK CONTAINER 7 NAOH DU Lab Sample ID: 140-34757-20 DU  
 Matrix: Air Lab File ID: Air\_Anions-1215202344.d  
 Analysis Method: 0050/26A Date Collected: 12/07/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:56  
 Sample wt/vol: 1 (Sample) Date Analyzed: 12/16/2023 16:34  
 Con. Extract Vol.: 230 (mL) Dilution Factor: 5  
 Injection Volume: 1 (uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81494 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	73.82	J	115	57.5

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202344.d  
 Lims ID: 140-34757-A-20-B DU  
 Client ID: BLANK CONTAINER 7 NAOH  
 Sample Type: DU  
 Inject. Date: 16-Dec-2023 16:34:00 ALS Bottle#: 0 Worklist Smp#: 35  
 Injection Vol: 1.0 ul Dil. Factor: 5.0000  
 Sample Info: 140-0030907-035  
 Misc. Info.: 140-34757-A-20-B DU  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 18-Dec-2023 12:05:07 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1644

First Level Reviewer: EXJ2 Date: 18-Dec-2023 12:04:01

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.323				ND	
2 Chloride	4.490	4.597	-0.107	1899884		0.0642	M
3 Nitrite as N	5.267	5.407	-0.140	55845		0.000891	
4 Bromide		6.350				ND	
5 Nitrate as N	6.913	7.023	-0.110	175196		0.002471	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.173				ND	
S 11 Nitrous Acid						0.002990	
S 12 Br		0.000				ND	
S 13 Chlorine						0.0642	
S 10 Nitric acid						0.0111	
S 7 Hydrogen Chloride						0.0660	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202344.d

Injection Date: 16-Dec-2023 16:34:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-20-B DU

Worklist Smp#: 35

Client ID: BLANK CONTAINER 7 NAOH

Injection Vol: 1.0 ul

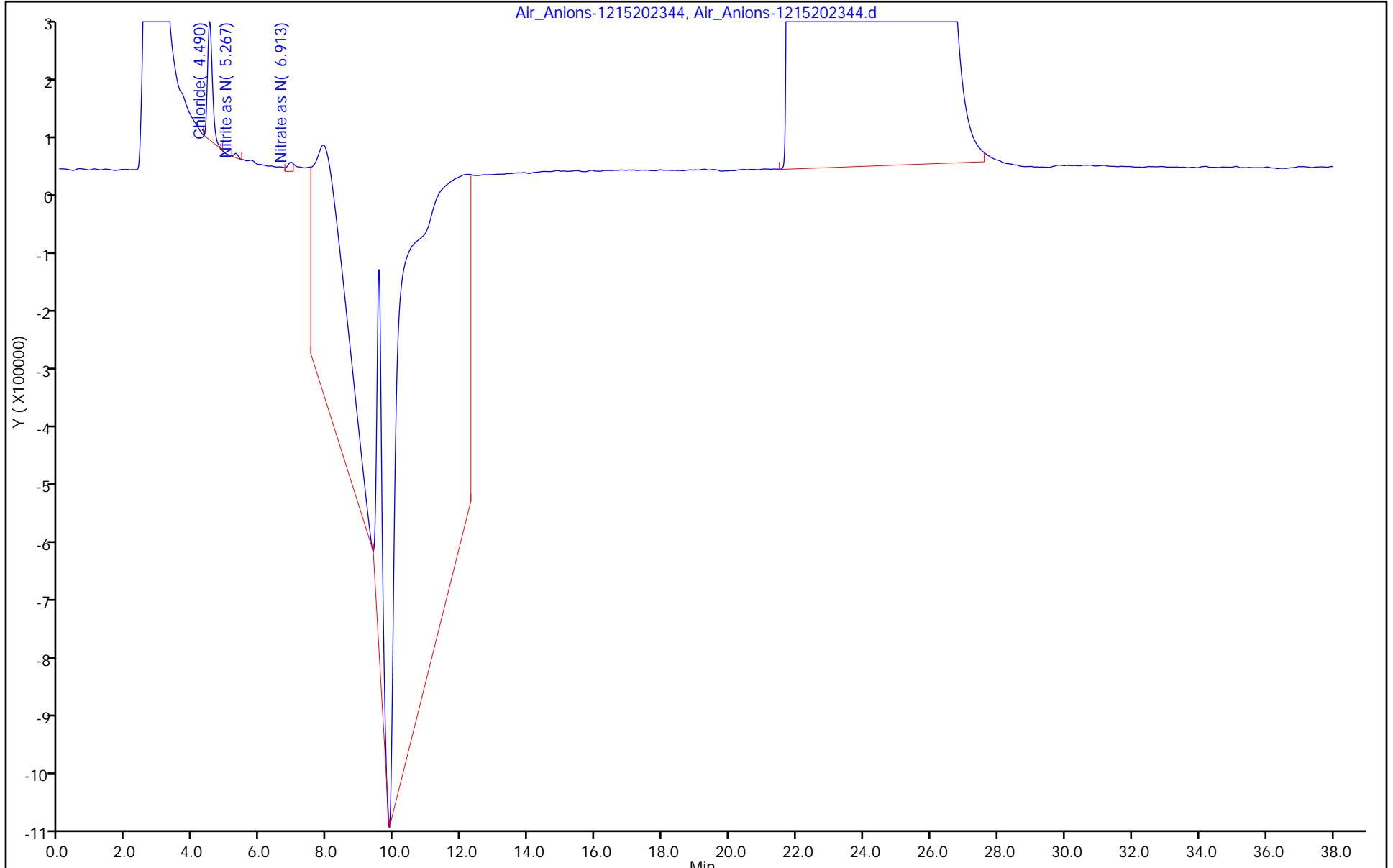
Dil. Factor: 5.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

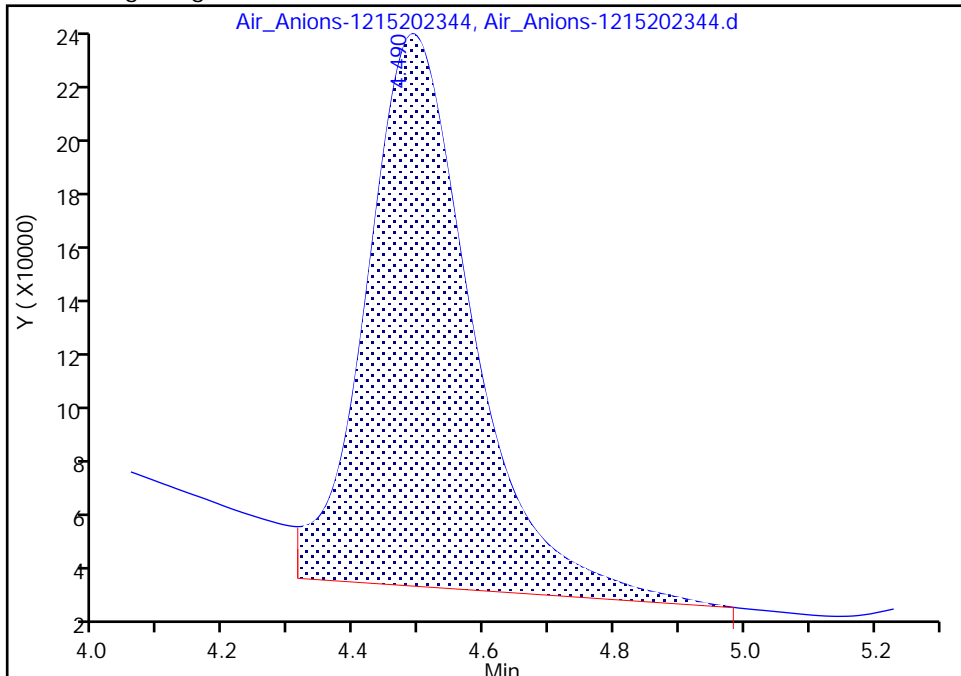
Data File: \\chromfs\Knoxville\ChromData\IC4\20231218-30907.b\Air\_Anions-1215202344.d  
Injection Date: 16-Dec-2023 16:34:00 Instrument ID: IC4  
Lims ID: 140-34757-A-20-B DU  
Client ID: BLANK CONTAINER 7 NAOH  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 35  
Injection Vol: 1.0 ul Dil. Factor: 5.0000  
Method: 0050\_26A\_IC4 Limit Group: IC 0050\_26A ICAL  
Column: Detector IC

2 Chloride, CAS: 16887-00-6

Signal: 1

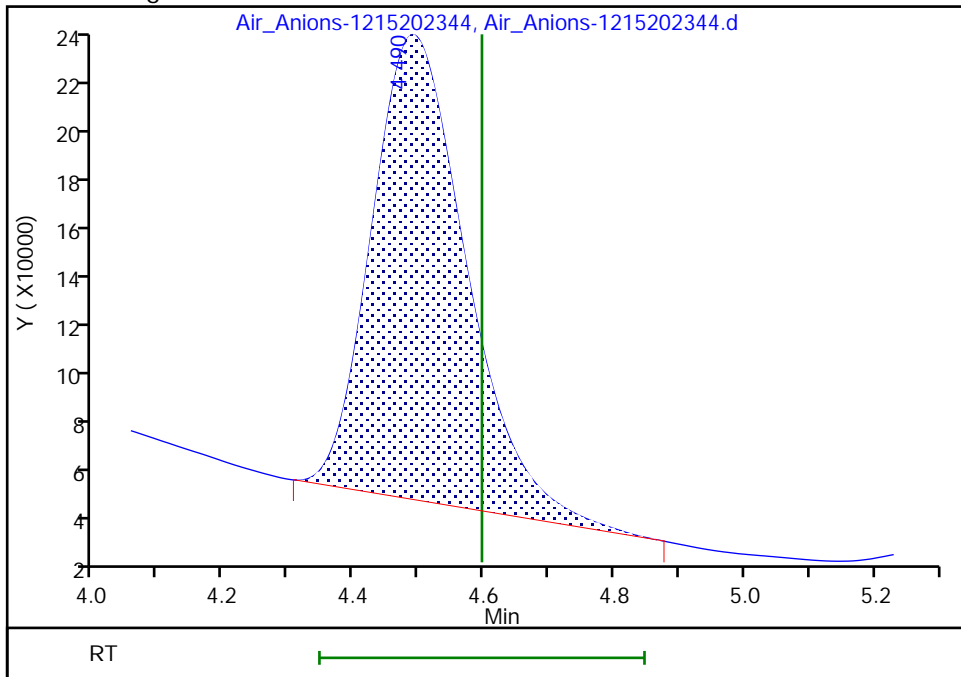
RT: 4.49  
Area: 2266494  
Amount: 0.076529  
Amount Units: ug/ml

Processing Integration Results



RT: 4.49  
Area: 1899884  
Amount: 0.064193  
Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 18-Dec-2023 12:03:59 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: BLANK CONTAINER 8 H2O DU Lab Sample ID: 140-34757-21 DU  
 Matrix: Air Lab File ID: Air\_Anions-1214202348.d  
 Analysis Method: 0050/26A Date Collected: 12/07/2023 00:00  
 Extraction Method: 0050/26A Date Extracted: 12/14/2023 09:50  
 Sample wt/vol: 1(Sample) Date Analyzed: 12/15/2023 01:16  
 Con. Extract Vol.: 100(mL) Dilution Factor: 2  
 Injection Volume: 1(uL) GC Column: AS22 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 81419 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
7782-50-5	Chlorine	ND		20.0	10.0
7647-01-0	Hydrogen Chloride	ND		20.6	10.6

Eurofins Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202348.d  
 Lims ID: 140-34757-A-21-B DU  
 Client ID: BLANK CONTAINER 8 H2O  
 Sample Type: DU  
 Inject. Date: 15-Dec-2023 01:16:00 ALS Bottle#: 0 Worklist Smp#: 39  
 Injection Vol: 1.0 ul Dil. Factor: 2.0000  
 Sample Info: 140-0030874-039  
 Misc. Info.: 140-34757-A-21-B DU  
 Operator ID: Instrument ID: IC4  
 Method: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\0050\_26A\_IC4.m  
 Limit Group: IC 0050\_26A ICAL  
 Last Update: 15-Dec-2023 09:36:16 Calib Date: 21-Aug-2023 21:01:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\IC4\20230822-29316.b\Air\_Anions-08212023 ICAL7.d  
 Column 1 : Det: IC  
 Process Host: CTX1648

First Level Reviewer: EXJ2 Date: 15-Dec-2023 09:34:21

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.320				ND	
2 Chloride	4.577	4.593	-0.016	145111		0.004919	M
3 Nitrite as N		5.400				ND	
4 Bromide		6.343				ND	
5 Nitrate as N		7.013				ND	
19 Orthophosphate as P		9.280				ND	
6 Iodide		13.163				ND	
S 11 Nitrous Acid		0.000				ND	
S 12 Br		0.000				ND	
S 13 Chlorine						0.004919	
S 10 Nitric acid		0.000				ND	
S 7 Hydrogen Chloride						0.005059	
S 20 Phosphorus as PO4		0.000				ND	
S 9 Hydrobromic Acid		0.000				ND	
S 22 Hydrogen Iodide		0.000				ND	
S 8 Hydro Fluoric Acid		0.000				ND	
S 21 Phosphate as H3PO4		0.000				ND	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated



Eurofins Knoxville

Data File: \\chromfs\Knoxville\ChromData\IC4\20231215-30874.b\Air\_Anions-1214202348.d

Injection Date: 15-Dec-2023 01:16:00

Instrument ID: IC4

Operator ID:

Lims ID: 140-34757-A-21-B DU

Worklist Smp#: 39

Client ID: BLANK CONTAINER 8 H2O

Injection Vol: 1.0 ul

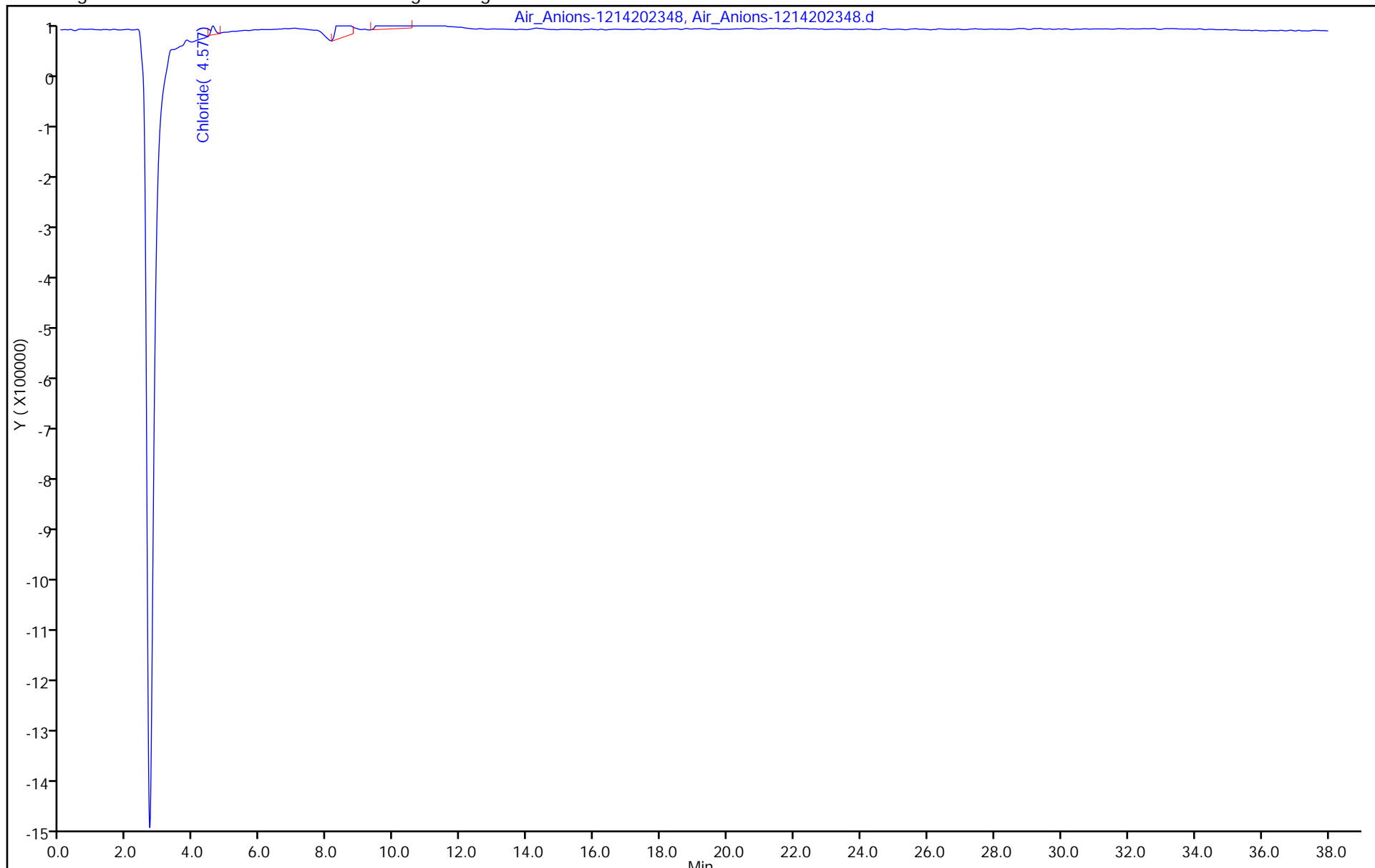
Dil. Factor: 2.0000

ALS Bottle#: 0

Method: 0050\_26A\_IC4

Limit Group: IC 0050\_26A ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins Knoxville

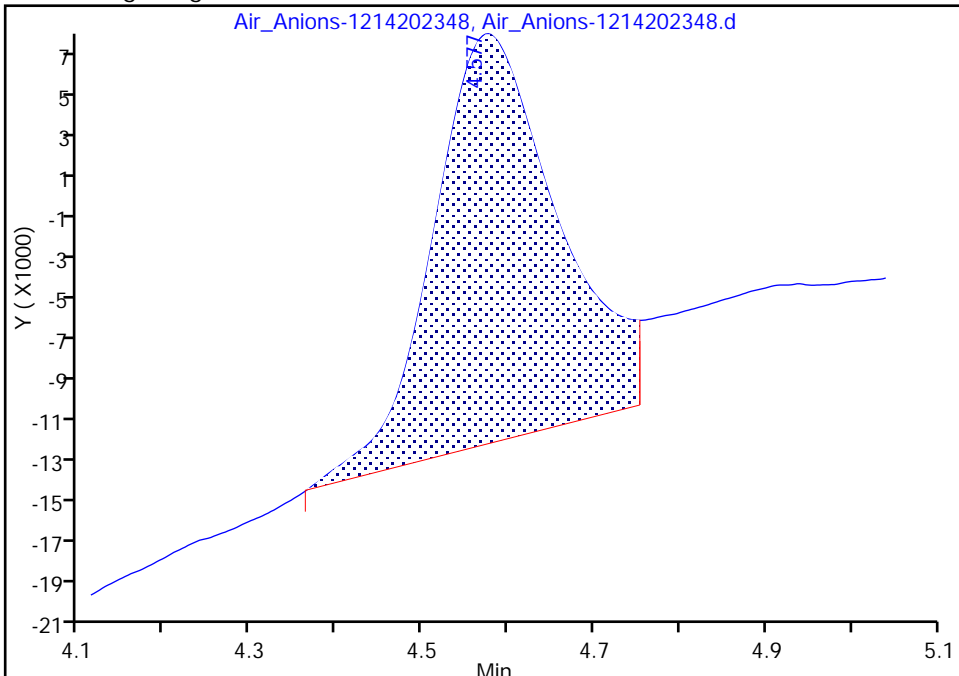
Data File:	\\chromfs\Knoxville\ChromData\IC4\20231215-30874.bAir_Anions-1214202348.d		
Injection Date:	15-Dec-2023 01:16:00	Instrument ID:	IC4
Lims ID:	140-34757-A-21-B DU		
Client ID:	BLANK CONTAINER 8 H2O		
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	2.0000
Method:	0050_26A_IC4	Limit Group:	IC 0050_26A ICAL
Column:		Detector:	IC
		Worklist Smp#:	39

2 Chloride, CAS: 16887-00-6

Signal: 1

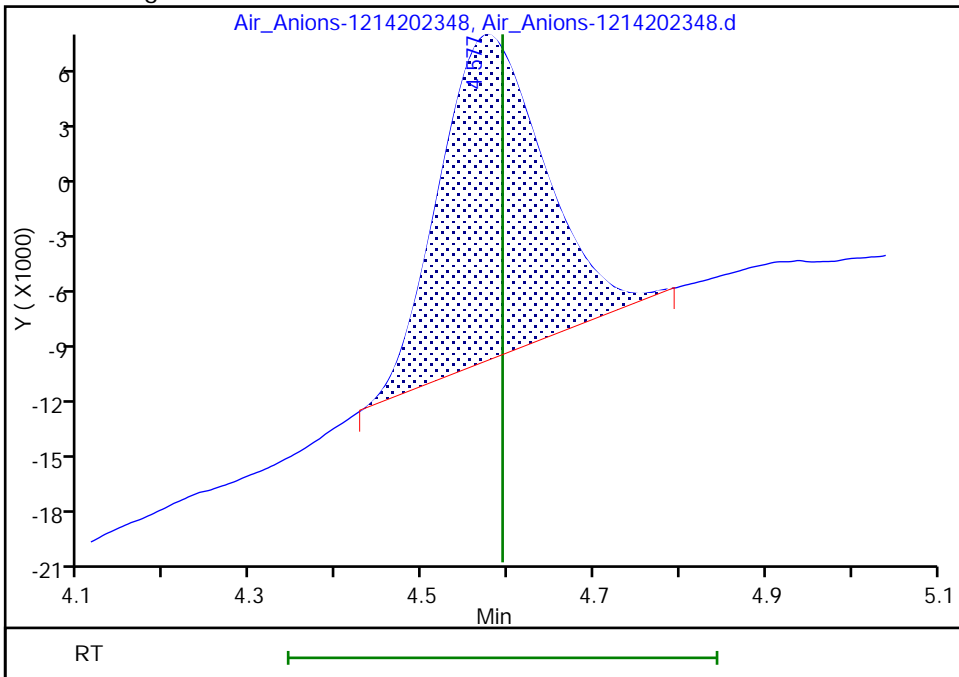
RT: 4.58  
 Area: 194486  
 Amount: 0.006592  
 Amount Units: ug/ml

Processing Integration Results



RT: 4.58  
 Area: 145111  
 Amount: 0.004919  
 Amount Units: ug/ml

Manual Integration Results



Reviewer: EXJ2, 15-Dec-2023 09:34:19 -05:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Knoxville Job No.: 140-34757-1

SDG No.: \_\_\_\_\_

Instrument ID: IC4 Start Date: 08/21/2023 18:48

Analysis Batch Number: 76764 End Date: 08/21/2023 21:46

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 140-76764/1		08/21/2023 18:48	1	Air Anions-0821 2023 ICAL1.d	AS22
IC 140-76764/2		08/21/2023 19:10	1	Air Anions-0821 2023 ICAL2.d	AS22
IC 140-76764/3		08/21/2023 19:32	1	Air Anions-0821 2023 ICAL3.d	AS22
IC 140-76764/4		08/21/2023 19:55	1	Air Anions-0821 2023 ICAL4.d	AS22
IC 140-76764/5		08/21/2023 20:17	1	Air Anions-0821 2023 ICAL5.d	AS22
IC 140-76764/6		08/21/2023 20:39	1	Air Anions-0821 2023 ICAL6.d	AS22
IC 140-76764/7		08/21/2023 21:01	1	Air Anions-0821 2023 ICAL7.d	AS22
ICV 140-76764/8		08/21/2023 21:23	1	Air Anions-0821 2023 ICAL8.d	AS22
ICB 140-76764/9		08/21/2023 21:46	1	Air Anions-0821 2023 ICAL9.d	AS22

**Eurofins TestAmerica Knoxville  
Dionex IC Runlog Cover Page**

Analyst: [Signature] Date: 8/21/23 Sequence ID: Air Anions - DB217023 KAL

Instrument: IC4  ICS-1500  DX-600  DX-320  
 Method:  KNOX-WC-0003,  KNOX-WC-0008 (NJ), SW-846 0061/7199  
 KNOX-WC-0005,  SW-846 9056  EPA 300.0  SW-846 9057-Mod  EPA 26A-Mod  
 Other:

Preventive Maintenance	Instrument Conditions
<p><b>Daily:</b></p> <input checked="" type="checkbox"/> Check all lines for crimping, leaks and discoloration <input checked="" type="checkbox"/> Check gas pressure <input checked="" type="checkbox"/> Check pump pressure <p><b>As Needed:</b></p> <input type="checkbox"/> Change column and guard column <input type="checkbox"/> Change column and/or guard column bed support <input type="checkbox"/> De-gas pump head when flow is erratic <input type="checkbox"/> Clean Reagent reservoir <input type="checkbox"/> Check/replace eluent end line filter <input type="checkbox"/> Clean conductivity cell <input type="checkbox"/> Clean UV/VIS cell <input type="checkbox"/> Change UV (Hg) Lamp <input type="checkbox"/> Change VIS (Tungston) Lamp	<p>Flow Rate = <u>1.20</u> mL/min                  Pressure = <u>1589.23</u> psi                  Conductance = <u>19.72</u> µS                  EC Suppressor Current = <u>41</u> mA                  VIS Adsorbance = <u>NA</u> AU                  Analytical/Guard Column: <input checked="" type="checkbox"/> AS22/AG22 <input type="checkbox"/> AS7/NG1                  Eluent Reagent ID: <u>85ELUENTAS22</u> Dilution: <u>NA</u>  <u>00058</u>                  Diphenylcarbazide reagent ID: <u>NA</u>                  pH Paper Lot No.: <u>NA</u></p>

**Reagent Spike Information (CCV/ICV/LCS/MS/MSD)**

Login Sample ID	Spiking Reagent ID	Spike Added (mL)	Final Volume (mL)
<u>IC1</u>	<u>85L1M26AP_00050</u>	<u>10</u>	<u>10</u>
<u>IC2</u>	<u>L2</u>	<u>50</u>	<u>50</u>
<u>IC3</u>	<u>L3</u>	<u>50</u>	<u>50</u>
<u>IC4</u>	<u>L4</u>	<u>51</u>	<u>51</u>
<u>IC5</u>	<u>L5</u>	<u>50</u>	<u>50</u>
<u>IC6</u>	<u>L6</u>	<u>55</u>	<u>55</u>
<u>IC7</u>	<u>L7</u>	<u>51</u>	<u>51</u>
<u>ICV</u>	<u>85ICVLCS_00118</u>	<u>↓</u>	<u>↓</u>

**Comments:**

Sodium Thiosulfate added to NaOH impinger samples as specified in SOP KNOX-WC-0005, Current Revision.

ECD_1	Name	Comment	Type	Level	Position	Dilution	Volume [µl]	Instrument Method
	140-0029316-001	ICAL 1	Calibration Standard	1	R1	1.0000	100.0	AS22 4mm (Push Partic
	140-0029316-002	ICAL 2	Calibration Standard	2	R2	1.0000	100.0	AS22 4mm (Push Partic
	140-0029316-003	ICAL 3	Calibration Standard	3	R3	1.0000	100.0	AS22 4mm (Push Partic
	140-0029316-004	ICAL 4	Calibration Standard	4	R4	1.0000	100.0	AS22 4mm (Push Partic
	140-0029316-005	ICAL 5	Calibration Standard	5	R5	1.0000	100.0	AS22 4mm (Push Partic
	140-0029316-006	ICAL 6	Calibration Standard	6	R6	1.0000	100.0	AS22 4mm (Push Partic
	140-0029316-007	ICAL 7	Calibration Standard	7	R7	1.0000	100.0	AS22 4mm (Push Partic
	140-0029316-008	ICV	Unknown		R8	1.0000	100.0	AS22 4mm (Push Partic
	140-0029316-009	ICB	Unknown		G5	1.0000	100.0	AS22 4mm (Push Partic

Processing Method	ECD_1	Name	Status	Inject Time	IntStd
Air_Anions		140-0029316-001	Finished	8/21/2023 6:48:30 PM -0	1.0000
Air_Anions		140-0029316-002	Finished	8/21/2023 7:10:42 PM -0	1.0000
Air_Anions		140-0029316-003	Finished	8/21/2023 7:32:53 PM -0	1.0000
Air_Anions		140-0029316-004	Finished	8/21/2023 7:55:04 PM -0	1.0000
Air_Anions		140-0029316-005	Finished	8/21/2023 8:17:15 PM -0	1.0000
Air_Anions		140-0029316-006	Finished	8/21/2023 8:39:27 PM -0	1.0000
Air_Anions		140-0029316-007	Finished	8/21/2023 9:01:38 PM -0	1.0000
Air_Anions		140-0029316-008	Finished	8/21/2023 9:23:50 PM -0	1.0000
Air_Anions		140-0029316-009	Finished	8/21/2023 9:46:03 PM -0	1.0000



HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Knoxville

Job No.: 140-34757-1

SDG No.:

Instrument ID: IC4

Start Date: 12/14/2023 10:53

Analysis Batch Number: 81419

End Date: 12/15/2023 02:21

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 140-81419/1		12/14/2023 10:53	1	Air Anions-1214 202310.d	AS22
CCB 140-81419/2		12/14/2023 11:15	1	Air Anions-1214 202311.d	AS22
MB 140-81372/1-A		12/14/2023 11:37	1	Air Anions-1214 202312.d	AS22
LCS 140-81372/2-A		12/14/2023 12:00	1	Air Anions-1214 202313.d	AS22
LCSD 140-81372/3-A		12/14/2023 12:22	1	Air Anions-1214 202314.d	AS22
140-34757-1	VF26A-1 CONTAINER 3 H2SO4	12/14/2023 12:44	2	Air Anions-1214 202315.d	AS22
140-34757-1 DU	VF26A-1 CONTAINER 3 H2SO4 DU	12/14/2023 13:06	2	Air Anions-1214 202316.d	AS22
140-34757-3	VF26A-2 CONTAINER 3 H2SO4	12/14/2023 13:29	2	Air Anions-1214 202317.d	AS22
140-34757-3 DU	VF26A-2 CONTAINER 3 H2SO4 DU	12/14/2023 13:51	2	Air Anions-1214 202318.d	AS22
140-34757-3 MS	VF26A-2 CONTAINER 3 H2SO4 MS	12/14/2023 14:13	2	Air Anions-1214 202319.d	AS22
140-34757-3 MSD	VF26A-2 CONTAINER 3 H2SO4 MSD	12/14/2023 14:35	2	Air Anions-1214 202320.d	AS22
140-34757-5	VF26A-4 CONTAINER 3 H2SO4	12/14/2023 14:57	2	Air Anions-1214 202321.d	AS22
CCV 140-81419/13		12/14/2023 15:19	1	Air Anions-1214 202322.d	AS22
CCB 140-81419/14		12/14/2023 15:42	1	Air Anions-1214 202323.d	AS22
140-34757-5 DU	VF26A-4 CONTAINER 3 H2SO4 DU	12/14/2023 16:04	2	Air Anions-1214 202324.d	AS22
140-34757-7	AS26-1 CONTAINER 3 H2SO4	12/14/2023 16:26	2	Air Anions-1214 202325.d	AS22
140-34757-7 DU	AS26-1 CONTAINER 3 H2SO4 DU	12/14/2023 16:48	2	Air Anions-1214 202326.d	AS22
140-34757-9	AS26-2 CONTAINER 3 H2SO4	12/14/2023 17:11	2	Air Anions-1214 202327.d	AS22
140-34757-9 DU	AS26-2 CONTAINER 3 H2SO4 DU	12/14/2023 17:33	2	Air Anions-1214 202328.d	AS22
140-34757-9 MS	AS26-2 CONTAINER 3 H2SO4 MS	12/14/2023 17:55	2	Air Anions-1214 202329.d	AS22
140-34757-9 MSD	AS26-2 CONTAINER 3 H2SO4 MSD	12/14/2023 18:17	2	Air Anions-1214 202330.d	AS22
140-34757-11	AS26-3 CONTAINER 3 H2SO4	12/14/2023 18:39	2	Air Anions-1214 202331.d	AS22
140-34757-11 DU	AS26-3 CONTAINER 3 H2SO4 DU	12/14/2023 19:02	2	Air Anions-1214 202332.d	AS22
140-34757-13	AP26-1 CONTAINER 3 H2SO4	12/14/2023 19:24	2	Air Anions-1214 202333.d	AS22
CCV 140-81419/25		12/14/2023 19:46	1	Air Anions-1214 202334.d	AS22
CCB 140-81419/26		12/14/2023 20:08	1	Air Anions-1214 202335.d	AS22
140-34757-13 DU	AP26-1 CONTAINER 3 H2SO4 DU	12/14/2023 20:30	2	Air Anions-1214 202336.d	AS22
140-34757-15	AP26-2 CONTAINER 3 H2SO4	12/14/2023 20:53	2	Air Anions-1214 202337.d	AS22
140-34757-15 DU	AP26-2 CONTAINER 3 H2SO4 DU	12/14/2023 21:15	2	Air Anions-1214 202338.d	AS22
140-34757-15 MS	AP26-2 CONTAINER 3 H2SO4 MS	12/14/2023 21:37	2	Air Anions-1214 202339.d	AS22
140-34757-15 MSD	AP26-2 CONTAINER 3 H2SO4 MSD	12/14/2023 21:59	2	Air Anions-1214 202340.d	AS22



HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Knoxville Job No.: 140-34757-1

SDG No.: \_\_\_\_\_

Instrument ID: IC4 Start Date: 12/14/2023 10:53

Analysis Batch Number: 81419 End Date: 12/15/2023 02:21

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
140-34757-17	AP26-3 CONTAINER 3 H2SO4	12/14/2023 22:21	2	Air Anions-1214 202341.d	AS22
140-34757-17 DU	AP26-3 CONTAINER 3 H2SO4 DU	12/14/2023 22:43	2	Air Anions-1214 202342.d	AS22
140-34757-19	BLANK CONTAINER 6 H2SO4	12/14/2023 23:06	2	Air Anions-1214 202343.d	AS22
140-34757-19 DU	BLANK CONTAINER 6 H2SO4 DU	12/14/2023 23:28	2	Air Anions-1214 202344.d	AS22
140-34757-21	BLANK CONTAINER 8 H2O	12/14/2023 23:50	2	Air Anions-1214 202345.d	AS22
CCV 140-81419/37		12/15/2023 00:32	1	Air Anions-1214 202346.d	AS22
CCB 140-81419/38		12/15/2023 00:54	1	Air Anions-1214 202347.d	AS22
140-34757-21 DU	BLANK CONTAINER 8 H2O DU	12/15/2023 01:16	2	Air Anions-1214 202348.d	AS22
CCV 140-81419/40		12/15/2023 01:59	1	Air Anions-1214 202349.d	AS22
CCB 140-81419/41		12/15/2023 02:21	1	Air Anions-1214 202350.d	AS22



ECD_1	Name	Comment	Type	Level	Position	Dilution	Volume [µl]	Instrument Method
	140-0029316-001	ICAL 1	Calibration Standard	1	R1	1.0000	100.0	AS22 4mm (Push Partiz
	140-0029316-002	ICAL 2	Calibration Standard	2	R2	1.0000	100.0	AS22 4mm (Push Partiz
	140-0029316-003	ICAL 3	Calibration Standard	3	R3	1.0000	100.0	AS22 4mm (Push Partiz
	140-0029316-004	ICAL 4	Calibration Standard	4	R4	1.0000	100.0	AS22 4mm (Push Partiz
	140-0029316-005	ICAL 5	Calibration Standard	5	R5	1.0000	100.0	AS22 4mm (Push Partiz
	140-0029316-006	ICAL 6	Calibration Standard	6	R6	1.0000	100.0	AS22 4mm (Push Partiz
	140-0029316-007	ICAL 7	Calibration Standard	7	R7	1.0000	100.0	AS22 4mm (Push Partiz
	140-0029316-008	ICV	Unknown		R8	1.0000	100.0	AS22 4mm (Push Partiz
	140-0029316-009	ICB	Unknown		G5	1.0000	100.0	AS22 4mm (Push Partiz
	140-0030874-001	CCV	Unknown		R1	1.0000	100.0	AS22 4mm (Push Partiz
	140-0030874-002	CCB	Unknown		R2	1.0000	100.0	AS22 4mm (Push Partiz
	140-0030874-003	MB 140-81372/1-A	Unknown		R2	1.0000	100.0	AS22 4mm (Push Partiz
	140-0030874-004	LCS 140-81372/2-A	Unknown		R3	1.0000	100.0	AS22 4mm (Push Partiz
	140-0030874-005	LCSD 140-81372/3-A	Unknown		R3	1.0000	100.0	AS22 4mm (Push Partiz
	140-0030874-006	140-34757-A-1-A	Unknown		RA1	2.0000	100.0	AS22 4mm (Push Partiz
	140-0030874-007	140-34757-A-1-B DU	Unknown		RA2	2.0000	100.0	AS22 4mm (Push Partiz
	140-0030874-008	140-34757-A-3-A	Unknown		RA3	2.0000	100.0	AS22 4mm (Push Partiz
	140-0030874-009	140-34757-A-3-B DU	Unknown		RA4	2.0000	100.0	AS22 4mm (Push Partiz
	140-0030874-010	140-34757-A-3-C MS	Unknown		RA5	2.0000	100.0	AS22 4mm (Push Partiz
	140-0030874-011	140-34757-A-3-D MSD	Unknown		RA6	2.0000	100.0	AS22 4mm (Push Partiz
	140-0030874-012	140-34757-A-5-A	Unknown		RA7	2.0000	100.0	AS22 4mm (Push Partiz
	140-0030874-013	CCV	Unknown		R1	1.0000	100.0	AS22 4mm (Push Partiz

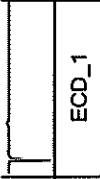


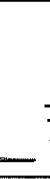


ECD_1	Name	Comment	Type	Level	Position	Dilution	Volume [µl]	Instrument Method
	140-0030874-014	CCB	Unknown		R2	1.0000	100.0	AS22 4mm (Push Partic)
	140-0030874-015	140-34757-A-5-B DU	Unknown		RA8	2.0000	100.0	AS22 4mm (Push Partic)
	140-0030874-016	140-34757-A-7-A	Unknown		RB1	2.0000	100.0	AS22 4mm (Push Partic)
	140-0030874-017	140-34757-A-7-B DU	Unknown		RB2	2.0000	100.0	AS22 4mm (Push Partic)
	140-0030874-018	140-34757-A-9-A	Unknown		RB3	2.0000	100.0	AS22 4mm (Push Partic)
	140-0030874-019	140-34757-A-9-B DU	Unknown		RB4	2.0000	100.0	AS22 4mm (Push Partic)
	140-0030874-020	140-34757-A-9-C MS	Unknown		RB5	2.0000	100.0	AS22 4mm (Push Partic)
	140-0030874-021	140-34757-A-9-D MSD	Unknown		RB6	2.0000	100.0	AS22 4mm (Push Partic)
	140-0030874-022	140-34757-A-11-A	Unknown		RB7	2.0000	100.0	AS22 4mm (Push Partic)
	140-0030874-023	140-34757-A-11-B DU	Unknown		RB8	2.0000	100.0	AS22 4mm (Push Partic)
	140-0030874-024	140-34757-A-13-A	Unknown		RC1	2.0000	100.0	AS22 4mm (Push Partic)
	140-0030874-025	CCV	Unknown		R1	1.0000	100.0	AS22 4mm (Push Partic)
	140-0030874-026	CCB	Unknown		R2	1.0000	100.0	AS22 4mm (Push Partic)
	140-0030874-027	140-34757-A-13-B DU	Unknown		RC2	2.0000	100.0	AS22 4mm (Push Partic)
	140-0030874-028	140-34757-A-15-A	Unknown		RC3	2.0000	100.0	AS22 4mm (Push Partic)
	140-0030874-029	140-34757-A-15-B DU	Unknown		RC4	2.0000	100.0	AS22 4mm (Push Partic)
	140-0030874-030	140-34757-A-15-C MS	Unknown		RC5	2.0000	100.0	AS22 4mm (Push Partic)
	140-0030874-031	140-34757-A-15-D MSD	Unknown		RC6	2.0000	100.0	AS22 4mm (Push Partic)
	140-0030874-032	140-34757-A-17-A	Unknown		RC7	2.0000	100.0	AS22 4mm (Push Partic)
	140-0030874-033	140-34757-A-17-B DU	Unknown		RC8	2.0000	100.0	AS22 4mm (Push Partic)
	140-0030874-034	140-34757-A-19-A	Unknown		RD1	2.0000	100.0	AS22 4mm (Push Partic)
	140-0030874-035	140-34757-A-19-B DU	Unknown		RD2	2.0000	100.0	AS22 4mm (Push Partic)

	140-0030874-036	140-34757-A-21-A	Unknown		RD3	2.0000	100.0	back half
ECD_1	Name	Comment	Type	Level	Position	Dilution	Volume [µl]	Instrument Method
	140-0030874-037	CCV	Unknown		R1	1.0000	100.0	AS22 4mm (Push Partic
	140-0030874-038	CCB	Unknown		R2	1.0000	100.0	AS22 4mm (Push Partic
	140-0030874-039	140-34757-A-21-B DU	Unknown		RD4	2.0000	100.0	back half
	140-0030874-040	CCV	Unknown		R1	1.0000	100.0	AS22 4mm (Push Partic
	140-0030874-041	CCB	Unknown		R2	1.0000	100.0	AS22 4mm (Push Partic

Processing Method	ECD_1	Name	Status	Inject Time	IntStd
Air_Anions		140-0029316-001	Finished	8/21/2023 6:48:30 PM -C	1.0000
Air_Anions		140-0029316-002	Finished	8/21/2023 7:10:42 PM -C	1.0000
Air_Anions		140-0029316-003	Finished	8/21/2023 7:32:53 PM -C	1.0000
Air_Anions		140-0029316-004	Finished	8/21/2023 7:55:04 PM -C	1.0000
Air_Anions		140-0029316-005	Finished	8/21/2023 8:17:15 PM -C	1.0000
Air_Anions		140-0029316-006	Finished	8/21/2023 8:39:27 PM -C	1.0000
Air_Anions		140-0029316-007	Finished	8/21/2023 9:01:38 PM -C	1.0000
Air_Anions		140-0029316-008	Finished	8/21/2023 9:23:50 PM -C	1.0000
Air_Anions		140-0029316-009	Finished	8/21/2023 9:46:03 PM -C	1.0000
Air_Anions		140-0030874-001	Finished	12/14/2023 10:53:33 AM	1.0000
Air_Anions		140-0030874-002	Finished	12/14/2023 11:15:44 AM	1.0000
Air_Anions		140-0030874-003	Finished	12/14/2023 11:37:55 AM	1.0000
Air_Anions		140-0030874-004	Finished	12/14/2023 12:00:06 PM	1.0000
Air_Anions		140-0030874-005	Finished	12/14/2023 12:22:17 PM	1.0000
Air_Anions		140-0030874-006	Finished	12/14/2023 12:44:27 PM	1.0000
Air_Anions		140-0030874-007	Finished	12/14/2023 1:06:37 PM	1.0000
Air_Anions		140-0030874-008	Finished	12/14/2023 1:29:00 PM	1.0000
Air_Anions		140-0030874-009	Finished	12/14/2023 1:51:11 PM	1.0000
Air_Anions		140-0030874-010	Finished	12/14/2023 2:13:21 PM	1.0000
Air_Anions		140-0030874-011	Finished	12/14/2023 2:35:31 PM	1.0000
Air_Anions		140-0030874-012	Finished	12/14/2023 2:57:47 PM	1.0000
Air_Anions		140-0030874-013	Finished	12/14/2023 3:19:58 PM	1.0000

Processing Method	ECD_1	Name	Status	Inject Time	IntStd
Air_Anions		140-0030874-014	Finished	12/14/2023 3:42:09 PM	1.0000
Air_Anions		140-0030874-015	Finished	12/14/2023 4:04:21 PM	1.0000
Air_Anions		140-0030874-016	Finished	12/14/2023 4:26:31 PM	1.0000
Air_Anions		140-0030874-017	Finished	12/14/2023 4:48:42 PM	1.0000
Air_Anions		140-0030874-018	Finished	12/14/2023 5:11:05 PM	1.0000
Air_Anions		140-0030874-019	Finished	12/14/2023 5:33:15 PM	1.0000
Air_Anions		140-0030874-020	Finished	12/14/2023 5:55:24 PM	1.0000
Air_Anions		140-0030874-021	Finished	12/14/2023 6:17:34 PM	1.0000
Air_Anions		140-0030874-022	Finished	12/14/2023 6:39:44 PM	1.0000
Air_Anions		140-0030874-023	Finished	12/14/2023 7:02:08 PM	1.0000
Air_Anions		140-0030874-024	Finished	12/14/2023 7:24:19 PM	1.0000
Air_Anions		140-0030874-025	Finished	12/14/2023 7:46:29 PM	1.0000
Air_Anions		140-0030874-026	Finished	12/14/2023 8:08:40 PM	1.0000
Air_Anions		140-0030874-027	Finished	12/14/2023 8:30:50 PM	1.0000
Air_Anions		140-0030874-028	Finished	12/14/2023 8:53:00 PM	1.0000
Air_Anions		140-0030874-029	Finished	12/14/2023 9:15:10 PM	1.0000
Air_Anions		140-0030874-030	Finished	12/14/2023 9:37:21 PM	1.0000
Air_Anions		140-0030874-031	Finished	12/14/2023 9:59:31 PM	1.0000
Air_Anions		140-0030874-032	Finished	12/14/2023 10:21:41 PM	1.0000
Air_Anions		140-0030874-033	Finished	12/14/2023 10:43:50 PM	1.0000
Air_Anions		140-0030874-034	Finished	12/14/2023 11:06:00 PM	1.0000
Air_Anions		140-0030874-035	Finished	12/14/2023 11:28:09 PM	1.0000

Sequence: Air\_Anions-12142023  
 Last Update Operator: knxinstic4

Air_Anions		140-0030874-036	Finished	12/14/2023 11:50:19 PM	1.0000
Processing Method	ECD_1	Name	Status	Inject Time	IntStd
Air_Anions		140-0030874-037	Finished	12/15/2023 12:32:32 AM	1.0000
Air_Anions		140-0030874-038	Finished	12/15/2023 12:54:44 AM	1.0000
Air_Anions		140-0030874-039	Finished	12/15/2023 1:16:54 AM	1.0000
Air_Anions		140-0030874-040	Finished	12/15/2023 1:59:14 AM	1.0000
Air_Anions		140-0030874-041	Finished	12/15/2023 2:21:25 AM	1.0000



**Eurofins Knoxville Anions by IC Batch Data Review Checklist**  
**Methods: 300.0, 9056 & 9056A; Air Anions by 0050/26A; SOP: KNOX-WC-0005, Rev. 18**

<b>Analytical Batch:</b>	81419	<b>Prep Batch(s):</b>	81372	<b>Instrument/Work List:</b>	IC4 / 30874
<b>Analysis Date:</b>	12/14/2023	<b>Job(s):</b>	140-34757		
<b>ICAL Date:</b>	8/21/2023	<b>ICAL Batch:</b>	140-76764	<b>ICAL Number:</b>	4504
<b>Method Limit Group:</b>	<input checked="" type="checkbox"/> IC 0050_26A ICAL <input type="checkbox"/> IC 0050_9056 ICAL <input type="checkbox"/> IC 300_9056_48HR ICAL <input type="checkbox"/> IC 300_9056_28Day ICAL <input type="checkbox"/> IC 9056_TotHAL ICAL <input type="checkbox"/> IC D129_OF & D3177_OF ICAL <input type="checkbox"/> IC 8A ICAL				

<b>Review Items</b>	NA	Y	N	<b>If No, why is data reportable?</b>	<b>2<sup>nd</sup> ✓</b>
<b>Section 1: Calibration/Instrument Run QC</b>					
1. Calibrated with minimum 5 standards (6 for quad)?		X			X
2. $r \geq 0.995$ , or $r^2 \geq 0.990$		X			X
3. Intercept < low standard response?		X			X
4. Read back error $\leq 30\%$ , at LLOQ $\leq 50\%$		X			X
5. Was the ICV within 90-110%R?		X			X
6. ICB < 1/2 RL? ICB $\leq 10\%$ LLOQ for 9056A?		X			X
7. Were CCVs/CCBs run after every 10 samples, and at end of sequence?		X			X
8. Is %D < 10% for each CCV?		X		<input type="checkbox"/> CCV - %D, High, Sample ND (NCM# _____)	X
9. If CCV failed, was it rerun only once?	X			<input type="checkbox"/> CCV reanalyzed one time; reanalysis within limits	X
10. CCB < 1/2 RL? CCB $\leq 10\%$ LLOQ for 9056A?		X		<input type="checkbox"/> CCB-Out, Samples ND or 10x (NCM# _____)	X
<b>Section 2: Prep Data</b>					
1. Appropriate prep batches created for prep chain?		X			X
2. Batch information complete?		X			X
3. Correct analyst identified?		X			X
4. Worksheet complete?		X			X
5. Reagents tab complete and correct?		X			X
6. Was pH adjustment required for Back Half samples?	X				X
7. External prep data attached to batch as external prep worksheet?		X			X
<b>Section 3: Sample Analysis/Prep QC</b>					
1. LCS/LCSD analytes within 90-110%R?		X		<input type="checkbox"/> LCS/LCSD -Insufficient Sample (NCM# _____) <input type="checkbox"/> LCS/LCSD - %R High (NCM# _____)	X
2. MB < 1/2 RL? MB $\leq 10\%$ LLOQ for 9056A		X		<input type="checkbox"/> Method Blank-Report, ND (NCM# _____) <input type="checkbox"/> Method Blank - Report, 10X (NCM# _____) <input type="checkbox"/> Method Blank-Insufficient Sample (NCM# _____)	X
3. MS/MSD/DUP run at required frequency?		X		<input type="checkbox"/> MS/MSD/DUP-Insufficient Vol (NCM# _____)	X
4. MS/MSD/DUP within QC limits?			X	<input type="checkbox"/> MS/MSD-%R, LCS Pass (NCM# _____-optional) <input checked="" type="checkbox"/> MS/MSD/DUP-%RPD (NCM#_51597_-optional)	X
5. Are OR, MS, MSD, & DU linked correctly?		X			X
6. Sample analyses done within holding time (HT)?		X		<input type="checkbox"/> Holding Time-Receipt (NCM# _____) <input type="checkbox"/> Holding Time- Insufficient Time (NCM# _____) <input type="checkbox"/> [Option-narrate] Analysis requested after HT expired.	X
7. Are positive results within the calibration range?		X			X
8. Are ND derived from undiluted runs?		X		<input type="checkbox"/> RL-Dilution, Matrix (NCM# _____) <input type="checkbox"/> RL-Dilution, Interferents (NCM# _____)	X
<b>Section 4: Raw Data &amp; Chrom/TALS Data Review</b>					
1. Does 1st prep in the chain have original Sample ID as starting point?		X			X
2. Does each additional step in the chain use the output ID of the previous step as the starting point?		X			X
3. Was Worklist built with final prep output ID?		X			X
4. Was Worklist Sample Number used as the sample ID in the Chromeleon sequence before upload?		X			X
5. Was Worklist Sample ID listed in the comment field of the Chromeleon sequence before upload?		X			X
6. Any unexplained triangles in the TALS lists after upload from Chrom?			X		X
<b>Raw Data</b>					
1. Chrom sample information complete and correct? Are any samples linked to unnecessary Method Limit Groups in sample information?		X			X
2. Chrom reagents entered correctly?		X			X
3. Is manual integration complete and correct?		X			X
4. Are unused data clearly identified?		X			X
5. Is out of control QC clearly identified?	X				X
6. Data with a qualifier or flag is repaired with appropriate action taken?		X			X

**Eurofins Knoxville Anions by IC Batch Data Review Checklist**  
**Methods: 300.0, 9056 & 9056A; Air Anions by 0050/26A; SOP: KNOX-WC-0005, Rev. 18**

<b>Section 4: Raw Data &amp; Chrom/TALS Data Review (continued)</b>				
<b>7. TALS Samples Tab</b>				
• LIMS Sample IDs / Containers are correct?		X		X
• Method and matrix are correct?		X		X
• Date and time match raw data?		X		X
• Dilutions are correct?		X		X
• Correct suffix designated (where applicable)?		X		X
8. TALS Worksheet Tab is complete and correct?		X		X
9. TALS Reagent Tab is complete and correct?		X		X
10. TALS QC Links Tab is correct?		X		X
<b>11. TALS Sample Results Tab</b>				
• All unused data are marked Rejected or Accepted?		X		X
• All reported analytes are marked Primary or Secondary?		X		X
12. TALS Batch Information Screen documentation is complete?		X		X
13. TALS Status set to appropriate review level?		X		X
14. Calculations checked for error? <i>(Document manual calculation checks in worksheet notes. Include all prep factor information from prep batch worksheets and the analytical batch.)</i>		X		X
15. Are any prep factor data (input-output volumes, etc.) duplicated in prep batches and analytical batches?			X If yes, re-check calculations and repair the data.	X
16. Is Run Log cover sheet and Chromeleon sequence scanned and attached to batch?		X		X
17. Correct Narrative NCM chosen?		X		X
• Anions in Water			<input type="checkbox"/> [5909]	
• Anions in DI Leachates			<input type="checkbox"/> [5910]	
• Anions in Soils			<input type="checkbox"/> [5912]	
• Anions in Waste			<input type="checkbox"/> [6307]	
• Anions in Impinger Solution			<input type="checkbox"/> [17881]	
• HCl, Cl <sub>2</sub> in Air			<input type="checkbox"/> [5819]	
• HCl in Air		X	<input checked="" type="checkbox"/> [5820]	X
• HF, HCl, Cl <sub>2</sub> in Air			<input type="checkbox"/> [6057]	
• HF, HCl, HBr, Cl <sub>2</sub> , Br <sub>2</sub> in Air			<input type="checkbox"/> [6058]	
• HF, HCl, HNO <sub>2</sub> , HNO <sub>3</sub> , Cl <sub>2</sub> in Air			<input type="checkbox"/> [6059]	
• HF, HCl, HBr, Cl <sub>2</sub> , Br <sub>2</sub> , I <sub>-</sub> in Air			<input type="checkbox"/> [6060]	
• Cl <sup>-</sup> , F <sup>-</sup> , NO <sub>2</sub> <sup>-</sup> , NO <sub>3</sub> <sup>-</sup> in Air			<input type="checkbox"/> [6077]	
• HF, HCl in Air			<input type="checkbox"/> [6078]	
• H <sub>2</sub> SO <sub>4</sub> in Air			<input type="checkbox"/> [6109]	
• HF, HCl, HNO <sub>3</sub> in Air			<input type="checkbox"/> [6779]	
• Sulfate in Air			<input type="checkbox"/> [6111]	
• Anions in HBr, Br <sub>2</sub> Only			<input type="checkbox"/> [11566]	
• Anions in Air, (generic)			<input type="checkbox"/> [17913]	
• Total Chlorine			<input type="checkbox"/> [5861]	
• Total Halogens (generic)			<input type="checkbox"/> [5876]	
• Total Sulfur			<input type="checkbox"/> [5896]	
• Other			<input type="checkbox"/> [            ]	
<b>1st Level Review by:</b>		<b>2nd Level Review by:</b> DCW 12/15/23		
JXP 12/15/2023				

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Knoxville

Job No.: 140-34757-1

SDG No.:

Instrument ID: IC4

Start Date: 12/15/2023 19:19

Analysis Batch Number: 81494

End Date: 12/16/2023 17:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 140-81494/1		12/15/2023 19:19	1	Air Anions-1215 202310.d	AS22
CCB 140-81494/2		12/15/2023 19:41	1	Air Anions-1215 202311.d	AS22
MB 140-81373/1-A		12/15/2023 20:03	1	Air Anions-1215 202312.d	AS22
LCS 140-81373/2-A		12/15/2023 20:46	1	Air Anions-1215 202313.d	AS22
LCSD 140-81373/3-A		12/15/2023 21:08	1	Air Anions-1215 202314.d	AS22
140-34757-2	VF26A-1 CONTAINER 4 NAOH	12/15/2023 21:30	5	Air Anions-1215 202315.d	AS22
140-34757-2 DU	VF26A-1 CONTAINER 4 NAOH DU	12/15/2023 22:12	5	Air Anions-1215 202316.d	AS22
140-34757-4	VF26A-2 CONTAINER 4 NAOH	12/15/2023 22:54	5	Air Anions-1215 202317.d	AS22
140-34757-4 DU	VF26A-2 CONTAINER 4 NAOH DU	12/15/2023 23:37	5	Air Anions-1215 202318.d	AS22
140-34757-4 MS	VF26A-2 CONTAINER 4 NAOH MS	12/16/2023 00:19	5	Air Anions-1215 202319.d	AS22
140-34757-4 MSD	VF26A-2 CONTAINER 4 NAOH MSD	12/16/2023 01:01	5	Air Anions-1215 202320.d	AS22
140-34757-6	VF26A-4 CONTAINER 4 NAOH	12/16/2023 01:43	5	Air Anions-1215 202321.d	AS22
CCV 140-81494/13		12/16/2023 02:25	1	Air Anions-1215 202322.d	AS22
CCB 140-81494/14		12/16/2023 02:48	1	Air Anions-1215 202323.d	AS22
140-34757-6 DU	VF26A-4 CONTAINER 4 NAOH DU	12/16/2023 03:10	5	Air Anions-1215 202324.d	AS22
140-34757-8	AS26-1 CONTAINER 4 NAOH	12/16/2023 03:52	5	Air Anions-1215 202325.d	AS22
140-34757-8 DU	AS26-1 CONTAINER 4 NAOH DU	12/16/2023 04:34	5	Air Anions-1215 202326.d	AS22
140-34757-10	AS26-2 CONTAINER 4 NAOH	12/16/2023 05:17	5	Air Anions-1215 202327.d	AS22
140-34757-10 DU	AS26-2 CONTAINER 4 NAOH DU	12/16/2023 05:59	5	Air Anions-1215 202328.d	AS22
140-34757-10 MS	AS26-2 CONTAINER 4 NAOH MS	12/16/2023 06:41	5	Air Anions-1215 202329.d	AS22
140-34757-10 MSD	AS26-2 CONTAINER 4 NAOH MSD	12/16/2023 07:23	5	Air Anions-1215 202330.d	AS22
140-34757-12	AS26-3 CONTAINER 4 NAOH	12/16/2023 08:05	5	Air Anions-1215 202331.d	AS22
140-34757-12 DU	AS26-3 CONTAINER 4 NAOH DU	12/16/2023 08:47	5	Air Anions-1215 202332.d	AS22
140-34757-14	AP26-1 CONTAINER 4 NAOH	12/16/2023 09:30	5	Air Anions-1215 202333.d	AS22
CCV 140-81494/25		12/16/2023 10:12	1	Air Anions-1215 202334.d	AS22
CCB 140-81494/26		12/16/2023 10:34	1	Air Anions-1215 202335.d	AS22
140-34757-14 DU	AP26-1 CONTAINER 4 NAOH DU	12/16/2023 10:56	5	Air Anions-1215 202336.d	AS22
140-34757-16	AP26-2 CONTAINER 4 NAOH	12/16/2023 11:38	5	Air Anions-1215 202337.d	AS22
140-34757-16 DU	AP26-2 CONTAINER 4 NAOH DU	12/16/2023 12:21	5	Air Anions-1215 202338.d	AS22
140-34757-16 MS	AP26-2 CONTAINER 4 NAOH MS	12/16/2023 13:03	5	Air Anions-1215 202339.d	AS22
140-34757-16 MSD	AP26-2 CONTAINER 4 NAOH MSD	12/16/2023 13:45	5	Air Anions-1215 202340.d	AS22

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Knoxville Job No.: 140-34757-1

SDG No.: \_\_\_\_\_

Instrument ID: IC4 Start Date: 12/15/2023 19:19



Analysis Batch Number: 81494 End Date: 12/16/2023 17:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
140-34757-18	AP26-3 CONTAINER 4 NAOH	12/16/2023 14:27	5	Air Anions-1215 202341.d	AS22
140-34757-18 DU	AP26-3 CONTAINER 4 NAOH DU	12/16/2023 15:09	5	Air Anions-1215 202342.d	AS22
140-34757-20	BLANK CONTAINER 7 NAOH	12/16/2023 15:51	5	Air Anions-1215 202343.d	AS22
140-34757-20 DU	BLANK CONTAINER 7 NAOH DU	12/16/2023 16:34	5	Air Anions-1215 202344.d	AS22
CCV 140-81494/36		12/16/2023 17:16	1	Air Anions-1215 202345.d	AS22
CCB 140-81494/37		12/16/2023 17:38	1	Air Anions-1215 202346.d	AS22



ECD_1	Name	Comment	Type	Level	Position	Dilution	Volume [µl]	Instrument Method
	140-0029316-001	ICAL 1	Calibration Standard	1	R1	1.0000	100.0	AS22 4mm (Push Partic
	140-0029316-002	ICAL 2	Calibration Standard	2	R2	1.0000	100.0	AS22 4mm (Push Partic
	140-0029316-003	ICAL 3	Calibration Standard	3	R3	1.0000	100.0	AS22 4mm (Push Partic
	140-0029316-004	ICAL 4	Calibration Standard	4	R4	1.0000	100.0	AS22 4mm (Push Partic
	140-0029316-005	ICAL 5	Calibration Standard	5	R5	1.0000	100.0	AS22 4mm (Push Partic
	140-0029316-006	ICAL 6	Calibration Standard	6	R6	1.0000	100.0	AS22 4mm (Push Partic
	140-0029316-007	ICAL 7	Calibration Standard	7	R7	1.0000	100.0	AS22 4mm (Push Partic
	140-0029316-008	ICV	Unknown		R8	1.0000	100.0	AS22 4mm (Push Partic
	140-0029316-009	ICB	Unknown		G5	1.0000	100.0	AS22 4mm (Push Partic
	140-0030907-001	CCV	Unknown		R1	1.0000	100.0	AS22 4mm (Push Partic
	140-0030907-002	CCB	Unknown		R2	1.0000	100.0	AS22 4mm (Push Partic
	140-0030907-003	MB 140-81373/1-A	Unknown		R4	1.0000	100.0	back half
	140-0030907-004	LCS 140-81373/2-A	Unknown		R3	1.0000	100.0	AS22 4mm (Push Partic
	140-0030907-005	LCSD 140-81373/3-A	Unknown		R3	1.0000	100.0	AS22 4mm (Push Partic
	140-0030907-006	140-34757-A-2-A	Unknown		RA1	5.0000	100.0	back half
	140-0030907-007	140-34757-A-2-B DU	Unknown		RA2	5.0000	100.0	back half
	140-0030907-008	140-34757-A-4-A	Unknown		RA3	5.0000	100.0	back half
	140-0030907-009	140-34757-A-4-B DU	Unknown		RA4	5.0000	100.0	back half
	140-0030907-010	140-34757-A-4-C MS	Unknown		RA5	5.0000	100.0	back half
	140-0030907-011	140-34757-A-4-D MSD	Unknown		RA6	5.0000	100.0	back half
	140-0030907-012	140-34757-A-6-A	Unknown		RA7	5.0000	100.0	back half
	140-0030907-013	CCV	Unknown		R1	1.0000	100.0	AS22 4mm (Push Partic

ECD_1	Name	Comment	Type	Level	Position	Dilution	Volume [µl]	Instrument Method
	140-0030907-014	CCB	Unknown		R2	1.0000	100.0	AS22 4mm (Push Partic
	140-0030907-015	140-34757-A-6-B DU	Unknown		RA8	5.0000	100.0	back half
	140-0030907-016	140-34757-A-8-A	Unknown		RB1	5.0000	100.0	back half
	140-0030907-017	140-34757-A-8-B DU	Unknown		RB2	5.0000	100.0	back half
	140-0030907-018	140-34757-A-10-A	Unknown		RB3	5.0000	100.0	back half
	140-0030907-019	140-34757-A-10-B DU	Unknown		RB4	5.0000	100.0	back half
	140-0030907-020	140-34757-A-10-C MS	Unknown		RB5	5.0000	100.0	back half
	140-0030907-021	140-34757-A-10-D MSD	Unknown		RB6	5.0000	100.0	back half
	140-0030907-022	140-34757-A-12-A	Unknown		RB7	5.0000	100.0	back half
	140-0030907-023	140-34757-A-12-B DU	Unknown		RB8	5.0000	100.0	back half
	140-0030907-024	140-34757-A-14-A	Unknown		RC1	5.0000	100.0	back half
	140-0030907-025	CCV	Unknown		R1	1.0000	100.0	AS22 4mm (Push Partic
	140-0030907-026	CCB	Unknown		R2	1.0000	100.0	AS22 4mm (Push Partic
	140-0030907-027	140-34757-A-14-B DU	Unknown		RC2	5.0000	100.0	back half
	140-0030907-028	140-34757-A-16-A	Unknown		RC3	5.0000	100.0	back half
	140-0030907-029	140-34757-A-16-B DU	Unknown		RC4	5.0000	100.0	back half
	140-0030907-030	140-34757-A-16-C MS	Unknown		RC5	5.0000	100.0	back half
	140-0030907-031	140-34757-A-16-D MSD	Unknown		RC6	5.0000	100.0	back half
	140-0030907-032	140-34757-A-18-A	Unknown		RC7	5.0000	100.0	back half
	140-0030907-033	140-34757-A-18-B	Unknown		RC8	5.0000	100.0	back half
	140-0030907-034	140-34757-A-20-A	Unknown		RD1	5.0000	100.0	back half
	140-0030907-035	140-34757-A-20-B DU	Unknown		RD2	5.0000	100.0	back half



	140-0030907-036	CCV	Unknown	R1	1.0000	100.0	AS22 4mm (Push Partic
ECD_1	Name	Comment	Type	Position	Dilution	Volume [µl]	Instrument Method
	140-0030907-037	CCB	Unknown	R2	1.0000	100.0	AS22 4mm (Push Partic



Processing Method	ECD_1	Name	Status	Inject Time	IntStd
Air_Anions		140-0029316-001	Finished	8/21/2023 6:48:30 PM -0	1.0000
Air_Anions		140-0029316-002	Finished	8/21/2023 7:10:42 PM -0	1.0000
Air_Anions		140-0029316-003	Finished	8/21/2023 7:32:53 PM -0	1.0000
Air_Anions		140-0029316-004	Finished	8/21/2023 7:55:04 PM -0	1.0000
Air_Anions		140-0029316-005	Finished	8/21/2023 8:17:15 PM -0	1.0000
Air_Anions		140-0029316-006	Finished	8/21/2023 8:39:27 PM -0	1.0000
Air_Anions		140-0029316-007	Finished	8/21/2023 9:01:38 PM -0	1.0000
Air_Anions		140-0029316-008	Finished	8/21/2023 9:23:50 PM -0	1.0000
Air_Anions		140-0029316-009	Finished	8/21/2023 9:46:03 PM -0	1.0000
Air_Anions		140-0030907-001	Finished	12/15/2023 7:19:24 PM -	1.0000
Air_Anions		140-0030907-002	Finished	12/15/2023 7:41:35 PM -	1.0000
Air_Anions		140-0030907-003	Finished	12/15/2023 8:03:45 PM -	1.0000
Air_Anions		140-0030907-004	Finished	12/15/2023 8:46:09 PM -	1.0000
Air_Anions		140-0030907-005	Finished	12/15/2023 9:08:21 PM -	1.0000
Air_Anions		140-0030907-006	Finished	12/15/2023 9:30:31 PM -	1.0000
Air_Anions		140-0030907-007	Finished	12/15/2023 10:12:42 PM	1.0000
Air_Anions		140-0030907-008	Finished	12/15/2023 10:54:56 PM	1.0000
Air_Anions		140-0030907-009	Finished	12/15/2023 11:37:06 PM	1.0000
Air_Anions		140-0030907-010	Finished	12/16/2023 12:19:16 AM	1.0000
Air_Anions		140-0030907-011	Finished	12/16/2023 1:01:28 AM	1.0000
Air_Anions		140-0030907-012	Finished	12/16/2023 1:43:47 AM	1.0000
Air_Anions		140-0030907-013	Finished	12/16/2023 2:25:58 AM	1.0000

Processing Method	ECD_1	Name	Status	Inject Time	IntStd
Air_Anions		140-0030907-014	Finished	12/16/2023 2:48:23 AM	1.0000
Air_Anions		140-0030907-015	Finished	12/16/2023 3:10:34 AM	1.0000
Air_Anions		140-0030907-016	Finished	12/16/2023 3:52:45 AM	1.0000
Air_Anions		140-0030907-017	Finished	12/16/2023 4:34:55 AM	1.0000
Air_Anions		140-0030907-018	Finished	12/16/2023 5:17:05 AM	1.0000
Air_Anions		140-0030907-019	Finished	12/16/2023 5:59:15 AM	1.0000
Air_Anions		140-0030907-020	Finished	12/16/2023 6:41:27 AM	1.0000
Air_Anions		140-0030907-021	Finished	12/16/2023 7:23:38 AM	1.0000
Air_Anions		140-0030907-022	Finished	12/16/2023 8:05:48 AM	1.0000
Air_Anions		140-0030907-023	Finished	12/16/2023 8:47:57 AM	1.0000
Air_Anions		140-0030907-024	Finished	12/16/2023 9:30:08 AM	1.0000
Air_Anions		140-0030907-025	Finished	12/16/2023 10:12:19 AM	1.0000
Air_Anions		140-0030907-026	Finished	12/16/2023 10:34:30 AM	1.0000
Air_Anions		140-0030907-027	Finished	12/16/2023 10:56:41 AM	1.0000
Air_Anions		140-0030907-028	Finished	12/16/2023 11:38:50 AM	1.0000
Air_Anions		140-0030907-029	Finished	12/16/2023 12:21:01 PM	1.0000
Air_Anions		140-0030907-030	Finished	12/16/2023 1:03:10 PM	1.0000
Air_Anions		140-0030907-031	Finished	12/16/2023 1:45:20 PM	1.0000
Air_Anions		140-0030907-032	Finished	12/16/2023 2:27:30 PM	1.0000
Air_Anions		140-0030907-033	Finished	12/16/2023 3:09:40 PM	1.0000
Air_Anions		140-0030907-034	Finished	12/16/2023 3:51:50 PM	1.0000
Air_Anions		140-0030907-035	Finished	12/16/2023 4:34:00 PM	1.0000

Sequence: Air\_Anions-12152023  
 Last Update Operator: knxinstic4

Air_Anions		140-0030907-036	Finished	12/16/2023 5:16:11 PM	1.0000
Processing Method	ECD_1	Name	Status	Inject Time	IntStd
Air_Anions		140-0030907-037	Finished	12/16/2023 5:38:22 PM	1.0000

**Eurofins Knoxville Anions by IC Batch Data Review Checklist**  
**Methods: 300.0, 9056 & 9056A; Air Anions by 0050/26A; SOP: KNOX-WC-0005, Rev. 18**

<b>Analytical Batch:</b>	81494	<b>Prep Batch(s):</b>	81373	<b>Instrument/Work List:</b>	IC4 / 30907
<b>Analysis Date:</b>	12/16/2023	<b>Job(s):</b>	140-34757		
<b>ICAL Date:</b>	8/21/2023	<b>ICAL Batch:</b>	140-76764	<b>ICAL Number:</b>	4504
<b>Method Limit Group:</b>	<input checked="" type="checkbox"/> IC 0050_26A ICAL <input type="checkbox"/> IC 0050_9056 ICAL <input type="checkbox"/> IC 300_9056_48HR ICAL <input type="checkbox"/> IC 300_9056_28Day ICAL <input type="checkbox"/> IC 9056_TotHAL ICAL <input type="checkbox"/> IC D129_OF & D3177_OF ICAL <input type="checkbox"/> IC 8A ICAL				

<b>Review Items</b>	NA	Y	N	If No, why is data reportable?	2 <sup>nd</sup> ✓
<b>Section 1: Calibration/Instrument Run QC</b>					
1. Calibrated with minimum 5 standards (6 for quad)?		X			X
2. $r \geq 0.995$ , or $r^2 \geq 0.990$		X			X
3. Intercept < low standard response?		X			X
4. Read back error $\leq 30\%$ , at LLOQ $\leq 50\%$		X			X
5. Was the ICV within 90-110%R?		X			X
6. ICB < 1/2 RL? ICB $\leq 10\%$ LLOQ for 9056A?		X			X
7. Were CCVs/CCBs run after every 10 samples, and at end of sequence?		X			X
8. Is %D < 10% for each CCV?		X		<input type="checkbox"/> CCV - %D, High, Sample ND (NCM# _____)	X
9. If CCV failed, was it rerun only once?	X			<input type="checkbox"/> CCV reanalyzed one time; reanalysis within limits	X
10. CCB < 1/2 RL? CCB $\leq 10\%$ LLOQ for 9056A?		X		<input type="checkbox"/> CCB-Out, Samples ND or 10x (NCM# _____)	X
<b>Section 2: Prep Data</b>					
1. Appropriate prep batches created for prep chain?		X			X
2. Batch information complete?		X			X
3. Correct analyst identified?		X			X
4. Worksheet complete?		X			X
5. Reagents tab complete and correct?		X			X
6. Was pH adjustment required for Back Half samples?	X				X
7. External prep data attached to batch as external prep worksheet?		X			X
<b>Section 3: Sample Analysis/Prep QC</b>					
1. LCS/LCSD analytes within 90-110%R?		X		<input type="checkbox"/> LCS/LCSD -Insufficient Sample (NCM# _____) <input type="checkbox"/> LCS/LCSD - %R High (NCM# _____)	X
2. MB < 1/2 RL? MB $\leq 10\%$ LLOQ for 9056A		X		<input type="checkbox"/> Method Blank-Report, ND (NCM# _____) <input type="checkbox"/> Method Blank - Report, 10X (NCM# _____) <input type="checkbox"/> Method Blank-Insufficient Sample (NCM# _____)	X
3. MS/MSD/DUP run at required frequency?		X		<input type="checkbox"/> MS/MSD/DUP-Insufficient Vol (NCM# _____)	X
4. MS/MSD/DUP within QC limits?			X	<input type="checkbox"/> MS/MSD-%R, LCS Pass (NCM# _____-optional) <input checked="" type="checkbox"/> MS/MSD/DUP-%RPD (NCM# 51694 -optional)	X
5. Are OR, MS, MSD, & DU linked correctly?		X			X
6. Sample analyses done within holding time (HT)?		X		<input type="checkbox"/> Holding Time-Receipt (NCM# _____) <input type="checkbox"/> Holding Time- Insufficient Time (NCM# _____) <input type="checkbox"/> [Option-narrate] Analysis requested after HT expired.	X
7. Are positive results within the calibration range?		X			X
8. Are ND derived from undiluted runs?		X		<input type="checkbox"/> RL-Dilution, Matrix (NCM# _____) <input type="checkbox"/> RL-Dilution, Interferents (NCM# _____)	X
<b>Section 4: Raw Data &amp; Chrom/TALS Data Review</b>					
1. Does 1st prep in the chain have original Sample ID as starting point?		X			X
2. Does each additional step in the chain use the output ID of the previous step as the starting point?		X			X
3. Was Worklist built with final prep output ID?		X			X
4. Was Worklist Sample Number used as the sample ID in the Chromeleon sequence before upload?		X			X
5. Was Worklist Sample ID listed in the comment field of the Chromeleon sequence before upload?		X			X
6. Any unexplained triangles in the TALS lists after upload from Chrom?			X		X
<b>Raw Data</b>					
1. Chrom sample information complete and correct? Are any samples linked to unnecessary Method Limit Groups in sample information?		X			X
2. Chrom reagents entered correctly?		X			X
3. Is manual integration complete and correct?		X			X
4. Are unused data clearly identified?		X			X
5. Is out of control QC clearly identified?	X				X
6. Data with a qualifier or flag is repaired with appropriate action taken?		X			X

**Eurofins Knoxville Anions by IC Batch Data Review Checklist**  
**Methods: 300.0, 9056 & 9056A; Air Anions by 0050/26A; SOP: KNOX-WC-0005, Rev. 18**

<b>Section 4: Raw Data &amp; Chrom/TALS Data Review (continued)</b>				
<b>7. TALS Samples Tab</b>				
• LIMS Sample IDs / Containers are correct?		X		X
• Method and matrix are correct?		X		X
• Date and time match raw data?		X		X
• Dilutions are correct?		X		X
• Correct suffix designated (where applicable)?		X		X
8. TALS Worksheet Tab is complete and correct?		X		X
9. TALS Reagent Tab is complete and correct?		X		X
10. TALS QC Links Tab is correct?		X		X
<b>11. TALS Sample Results Tab</b>				
• All unused data are marked Rejected or Accepted?		X		X
• All reported analytes are marked Primary or Secondary?		X		X
12. TALS Batch Information Screen documentation is complete?		X		X
13. TALS Status set to appropriate review level?		X		X
14. Calculations checked for error? <i>(Document manual calculation checks in worksheet notes. Include all prep factor information from prep batch worksheets and the analytical batch.)</i>		X		X
15. Are any prep factor data (input-output volumes, etc.) duplicated in prep batches and analytical batches?			X	If yes, re-check calculations and repair the data.
16. Is Run Log cover sheet and Chromeleon sequence scanned and attached to batch?		X		X
17. Correct Narrative NCM chosen?		X		X
• Anions in Water			<input type="checkbox"/> [5909]	
• Anions in DI Leachates			<input type="checkbox"/> [5910]	
• Anions in Soils			<input type="checkbox"/> [5912]	
• Anions in Waste			<input type="checkbox"/> [6307]	
• Anions in Impinger Solution			<input type="checkbox"/> [17881]	
• HCl, Cl <sub>2</sub> in Air		X	<input checked="" type="checkbox"/> [5819]	X
• HCl in Air			<input type="checkbox"/> [5820]	
• HF, HCl, Cl <sub>2</sub> in Air			<input type="checkbox"/> [6057]	
• HF, HCl, HBr, Cl <sub>2</sub> , Br <sub>2</sub> in Air			<input type="checkbox"/> [6058]	
• HF, HCl, HNO <sub>2</sub> , HNO <sub>3</sub> , Cl <sub>2</sub> in Air			<input type="checkbox"/> [6059]	
• HF, HCl, HBr, Cl <sub>2</sub> , Br <sub>2</sub> , I <sub>-</sub> in Air			<input type="checkbox"/> [6060]	
• Cl <sup>-</sup> , F <sup>-</sup> , NO <sub>2</sub> <sup>-</sup> , NO <sub>3</sub> <sup>-</sup> in Air			<input type="checkbox"/> [6077]	
• HF, HCl in Air			<input type="checkbox"/> [6078]	
• H <sub>2</sub> SO <sub>4</sub> in Air			<input type="checkbox"/> [6109]	
• HF, HCl, HNO <sub>3</sub> in Air			<input type="checkbox"/> [6779]	
• Sulfate in Air			<input type="checkbox"/> [6111]	
• Anions in HBr, Br <sub>2</sub> Only			<input type="checkbox"/> [11566]	
• Anions in Air, (generic)			<input type="checkbox"/> [17913]	
• Total Chlorine			<input type="checkbox"/> [5861]	
• Total Halogens (generic)			<input type="checkbox"/> [5876]	
• Total Sulfur			<input type="checkbox"/> [5896]	
• Other			<input type="checkbox"/> [            ]	
<b>1st Level Review by:</b>		<b>2nd Level Review by:</b> DCW 12/19/23		
JXP 12/18/2023				

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1

SDG No.: \_\_\_\_\_

Batch Number: 76764 Batch Start Date: 08/21/23 18:48 Batch Analyst: Perales, Jerrod X

Batch Method: 0050/26A Batch End Date: 08/22/23 04:23

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	85L1M26AP 00050	85L2M26AP 00050	85L3M26AP 00050	85L4M26AP 00051
IC 140-76764/1		0050/26A		10 mL	10 mL	10 mL			
IC 140-76764/2		0050/26A		10 mL	10 mL		10 mL		
IC 140-76764/3		0050/26A		10 mL	10 mL			10 mL	
IC 140-76764/4		0050/26A		10 mL	10 mL				10 mL
IC 140-76764/5		0050/26A		10 mL	10 mL				
IC 140-76764/6		0050/26A		10 mL	10 mL				
IC 140-76764/7		0050/26A		10 mL	10 mL				
ICV 140-76764/8		0050/26A		10 mL	10 mL				
ICB 140-76764/9		0050/26A		10 mL	10 mL				

Lab Sample ID	Client Sample ID	Method Chain	Basis	85L5M26AP 00050	85L6M26AP 00055	85L7M26AP 00051	85SPICVLCSS 00118		
IC 140-76764/1		0050/26A							
IC 140-76764/2		0050/26A							
IC 140-76764/3		0050/26A							
IC 140-76764/4		0050/26A							
IC 140-76764/5		0050/26A		10 mL					
IC 140-76764/6		0050/26A			10 mL				
IC 140-76764/7		0050/26A				10 mL			
ICV 140-76764/8		0050/26A					10 mL		
ICB 140-76764/9		0050/26A							

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1

SDG No.: \_\_\_\_\_

Batch Number: 81372 Batch Start Date: 12/14/23 09:50 Batch Analyst: Perales, Jerrod X

Batch Method: 0050/26A Batch End Date: 12/14/23 10:55

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ReceivedpH			
MB 140-81372/1		0050/26A, 0050/26A		1 Sample	100 mL				
LCS 140-81372/2		0050/26A, 0050/26A		1 Sample	100 mL				
LCSD 140-81372/3		0050/26A, 0050/26A		1 Sample	100 mL				
140-34757-A-1	VF26A-1 CONTAINER 3 H2SO4	0050/26A, 0050/26A	T	1 Sample	255 mL	1 SU			
140-34757-A-1 DU	VF26A-1 CONTAINER 3 H2SO4	0050/26A, 0050/26A	T	1 Sample	255 mL	1 SU			
140-34757-A-3	VF26A-2 CONTAINER 3 H2SO4	0050/26A, 0050/26A	T	1 Sample	255 mL	1 SU			
140-34757-A-3 DU	VF26A-2 CONTAINER 3 H2SO4	0050/26A, 0050/26A	T	1 Sample	255 mL	1 SU			
140-34757-A-3 MS	VF26A-2 CONTAINER 3 H2SO4	0050/26A, 0050/26A	T	1 Sample	255 mL	1 SU			
140-34757-A-3 MSD	VF26A-2 CONTAINER 3 H2SO4	0050/26A, 0050/26A	T	1 Sample	255 mL	1 SU			
140-34757-A-5	VF26A-4 CONTAINER 3 H2SO4	0050/26A, 0050/26A	T	1 Sample	250 mL	1 SU			
140-34757-A-5 DU	VF26A-4 CONTAINER 3 H2SO4	0050/26A, 0050/26A	T	1 Sample	250 mL	1 SU			
140-34757-A-7	AS26-1 CONTAINER 3 H2SO4	0050/26A, 0050/26A	T	1 Sample	250 mL	1 SU			
140-34757-A-7 DU	AS26-1 CONTAINER 3 H2SO4	0050/26A, 0050/26A	T	1 Sample	250 mL	1 SU			
140-34757-A-9	AS26-2 CONTAINER 3 H2SO4	0050/26A, 0050/26A	T	1 Sample	250 mL	1 SU			
140-34757-A-9 DU	AS26-2 CONTAINER 3 H2SO4	0050/26A, 0050/26A	T	1 Sample	250 mL	1 SU			
140-34757-A-9 MS	AS26-2 CONTAINER 3 H2SO4	0050/26A, 0050/26A	T	1 Sample	250 mL	1 SU			
140-34757-A-9 MSD	AS26-2 CONTAINER 3 H2SO4	0050/26A, 0050/26A	T	1 Sample	250 mL	1 SU			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1

SDG No.: \_\_\_\_\_

Batch Number: 81372 Batch Start Date: 12/14/23 09:50 Batch Analyst: Perales, Jerrod X

Batch Method: 0050/26A Batch End Date: 12/14/23 10:55

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ReceivedpH			
140-34757-A-11	AS26-3 CONTAINER 3 H2SO4	0050/26A, 0050/26A	T	1 Sample	255 mL	1 SU			
140-34757-A-11 DU	AS26-3 CONTAINER 3 H2SO4	0050/26A, 0050/26A	T	1 Sample	255 mL	1 SU			
140-34757-A-13	AP26-1 CONTAINER 3 H2SO4	0050/26A, 0050/26A	T	1 Sample	260 mL	1 SU			
140-34757-A-13 DU	AP26-1 CONTAINER 3 H2SO4	0050/26A, 0050/26A	T	1 Sample	260 mL	1 SU			
140-34757-A-15	AP26-2 CONTAINER 3 H2SO4	0050/26A, 0050/26A	T	1 Sample	265 mL	1 SU			
140-34757-A-15 DU	AP26-2 CONTAINER 3 H2SO4	0050/26A, 0050/26A	T	1 Sample	265 mL	1 SU			
140-34757-A-15 MS	AP26-2 CONTAINER 3 H2SO4	0050/26A, 0050/26A	T	1 Sample	265 mL	1 SU			
140-34757-A-15 MSD	AP26-2 CONTAINER 3 H2SO4	0050/26A, 0050/26A	T	1 Sample	265 mL	1 SU			
140-34757-A-17	AP26-3 CONTAINER 3 H2SO4	0050/26A, 0050/26A	T	1 Sample	315 mL	1 SU			
140-34757-A-17 DU	AP26-3 CONTAINER 3 H2SO4	0050/26A, 0050/26A	T	1 Sample	315 mL	1 SU			
140-34757-A-19	BLANK CONTAINER 6 H2SO4	0050/26A, 0050/26A	T	1 Sample	230 mL	13 SU			
140-34757-A-19 DU	BLANK CONTAINER 6 H2SO4	0050/26A, 0050/26A	T	1 Sample	230 mL	13 SU			
140-34757-A-21	BLANK CONTAINER 8 H2O	0050/26A, 0050/26A	T	1 Sample	100 mL	5 SU			
140-34757-A-21 DU	BLANK CONTAINER 8 H2O	0050/26A, 0050/26A	T	1 Sample	100 mL	5 SU			

Batch Notes	
pH Paper ID	HC991818

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.



Duall

**Eurofins TestAmerica Knoxville  
Source Air Analysis Sample Information**

Analyst	Date	Sample ID #	Analyte Group	FH or BH	Impinger Volume (mL)	Impinger pH as received	Impinger pH after adjustment	Amount added to adjust pH
JP	12/14/23	34757 A1	HCl	FH	255	1		
↓	↓	A3	↓	↓	255	↓		
↓	↓	A5	↓	↓	250	↓		
↓	↓	A7	↓	↓	250	↓		
↓	↓	A9	↓	↓	250	↓		
↓	↓	A11	↓	↓	255	↓		
↓	↓	A13	↓	↓	260	↓		
↓	↓	A15	↓	↓	265	↓		
↓	↓	A17	↓	↓	315	↓		
↓	↓	A19	↓	↓	230	13		
↓	↓	A21	↓	↓	100	5		
<hr/>								
					JP	12/14/23		

**Reagents Used**

<input checked="" type="checkbox"/> pH Paper	Lot Number: HC991818
<input type="checkbox"/> Sodium hydroxide	Reagent ID:
<input type="checkbox"/> Sodium thiosulfate	Reagent ID:
<input type="checkbox"/> Potassium hydroxide	Reagent ID:
<input type="checkbox"/> Other	Reagent ID:

Comments: Ignored A7 12/14/23

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1

SDG No.: \_\_\_\_\_

Batch Number: 81373 Batch Start Date: 12/14/23 09:56 Batch Analyst: Perales, Jerrod X

Batch Method: 0050/26A Batch End Date: 12/14/23 10:56

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ReceivedpH			
MB 140-81373/1		0050/26A, 0050/26A		1 Sample	100 mL				
LCS 140-81373/2		0050/26A, 0050/26A		1 Sample	100 mL				
LCSD 140-81373/3		0050/26A, 0050/26A		1 Sample	100 mL				
140-34757-A-2	VF26A-1 CONTAINER 4 NAOH	0050/26A, 0050/26A	T	1 Sample	245 mL	11 SU			
140-34757-A-2 DU	VF26A-1 CONTAINER 4 NAOH	0050/26A, 0050/26A	T	1 Sample	245 mL	11 SU			
140-34757-A-4	VF26A-2 CONTAINER 4 NAOH	0050/26A, 0050/26A	T	1 Sample	245 mL	11 SU			
140-34757-A-4 DU	VF26A-2 CONTAINER 4 NAOH	0050/26A, 0050/26A	T	1 Sample	245 mL	11 SU			
140-34757-A-4 MS	VF26A-2 CONTAINER 4 NAOH	0050/26A, 0050/26A	T	1 Sample	245 mL	11 SU			
140-34757-A-4 MSD	VF26A-2 CONTAINER 4 NAOH	0050/26A, 0050/26A	T	1 Sample	245 mL	11 SU			
140-34757-A-6	VF26A-4 CONTAINER 4 NAOH	0050/26A, 0050/26A	T	1 Sample	240 mL	11 SU			
140-34757-A-6 DU	VF26A-4 CONTAINER 4 NAOH	0050/26A, 0050/26A	T	1 Sample	240 mL	11 SU			
140-34757-A-8	AS26-1 CONTAINER 4 NAOH	0050/26A, 0050/26A	T	1 Sample	235 mL	11 SU			
140-34757-A-8 DU	AS26-1 CONTAINER 4 NAOH	0050/26A, 0050/26A	T	1 Sample	235 mL	11 SU			
140-34757-A-10	AS26-2 CONTAINER 4 NAOH	0050/26A, 0050/26A	T	1 Sample	235 mL	11 SU			
140-34757-A-10 DU	AS26-2 CONTAINER 4 NAOH	0050/26A, 0050/26A	T	1 Sample	235 mL	11 SU			
140-34757-A-10 MS	AS26-2 CONTAINER 4 NAOH	0050/26A, 0050/26A	T	1 Sample	235 mL	11 SU			
140-34757-A-10 MSD	AS26-2 CONTAINER 4 NAOH	0050/26A, 0050/26A	T	1 Sample	235 mL	11 SU			
140-34757-A-12	AS26-3 CONTAINER 4 NAOH	0050/26A, 0050/26A	T	1 Sample	245 mL	11 SU			
140-34757-A-12 DU	AS26-3 CONTAINER 4 NAOH	0050/26A, 0050/26A	T	1 Sample	245 mL	11 SU			
140-34757-A-14	AP26-1 CONTAINER 4 NAOH	0050/26A, 0050/26A	T	1 Sample	240 mL	11 SU			
140-34757-A-14 DU	AP26-1 CONTAINER 4 NAOH	0050/26A, 0050/26A	T	1 Sample	240 mL	11 SU			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Knoxville Job No.: 140-34757-1

SDG No.: \_\_\_\_\_

Batch Number: 81373 Batch Start Date: 12/14/23 09:56 Batch Analyst: Perales, Jerrod X

Batch Method: 0050/26A Batch End Date: 12/14/23 10:56

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ReceivedpH			
140-34757-A-16	AP26-2 CONTAINER 4 NAOH	0050/26A, 0050/26A	T	1 Sample	240 mL	11 SU			
140-34757-A-16	AP26-2 CONTAINER DU 4 NAOH	0050/26A, 0050/26A	T	1 Sample	240 mL	11 SU			
140-34757-A-16	AP26-2 CONTAINER MS 4 NAOH	0050/26A, 0050/26A	T	1 Sample	240 mL	11 SU			
140-34757-A-16	AP26-2 CONTAINER MSD 4 NAOH	0050/26A, 0050/26A	T	1 Sample	240 mL	11 SU			
140-34757-A-18	AP26-3 CONTAINER 4 NAOH	0050/26A, 0050/26A	T	1 Sample	250 mL	11 SU			
140-34757-A-18	AP26-3 CONTAINER DU 4 NAOH	0050/26A, 0050/26A	T	1 Sample	250 mL	11 SU			
140-34757-A-20	BLANK CONTAINER 7 NAOH	0050/26A, 0050/26A	T	1 Sample	230 mL	13 SU			
140-34757-A-20	BLANK CONTAINER DU 7 NAOH	0050/26A, 0050/26A	T	1 Sample	230 mL	13 SU			

Batch Notes	
pH Paper ID	HC991818
Sodium Thiosulfate ID	635581

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DU all

**Eurofins TestAmerica Knoxville  
Source Air Analysis Sample Information**

Analyst	Date	Sample ID #	Analyte Group	FH or BH	Impinger Volume (mL)	Impinger pH as received	Impinger pH after adjustment	Amount added to adjust pH
JP	12/14/23	34757 A2	Cl <sub>2</sub>	BH	245	11		
		A4			245			
		A6			240			
		A8			235			
		A10			235			
		A12			245			
		A14			240			
		A16			240			
		A18			250			
		A20			230	13		
<hr/> <p style="text-align: center;">JP 12/14/23</p> <hr/>								

JP  
JP  
JP

JP  
12/14/23

Reagents Used	
<input checked="" type="checkbox"/> pH Paper	Lot Number: HC991818
<input type="checkbox"/> Sodium hydroxide	Reagent ID:
<input checked="" type="checkbox"/> Sodium thiosulfate	Reagent ID: 635581
<input type="checkbox"/> Potassium hydroxide	Reagent ID:
<input type="checkbox"/> Other	Reagent ID:

Comments: 27200 JP 12/14/23

# Shipping and Receiving Documents

# Chain of Custody Record

No. 118.01290.00025\_M26A

SLR International Corporation  
 1612 Specht Point Road, Suite 119, Fort Collins, CO 80525  
 (970) 494-0805 Phone \* (970) 999-3998 Fax  
<http://www.slrconsulting.com/us>



Project Name: FMMI HAPs Testing		Project Number: 118.01290.00025 M26A		Analysis Required		Page 1 of 1	
Send Report To: Doug Bopray, John Rosburg		Sampler (Print Name): Doug Bopray		Chlorine (Cl)		Purchase Order No. 3036	
Address: 1612 Specht Point Road		Sampler (Print Name): John Rosburg		Hydrochloric acid (HCl)		Comments, Special Instructions, etc.	
Suite 119		Shipment Method: FED EX				Lab Sample ID (to be completed by lab)	
Fort Collins, CO 80525		Airbill Number					
Phone: 970-219-1431		Laboratory Receiving: Eurofins Knoxville					
Email: dbopray@slrconsulting.com, jrosburg@gmail.com							
Field Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Hydrochloric acid (HCl)	Chlorine (Cl)	Comments, Special Instructions, etc.
VF26A-1 Container 3	12/2/2023		0.1 N H2SO4	1	X	X	add sodium thiosulfate per method 26A
VF26A-1 Container 4	12/2/2023		0.1 N NaOH	1			
VF26A-2 Container 3	12/3/2023		0.1 N H2SO4	1	X	X	add sodium thiosulfate per method 26A
VF26A-2 Container 4	12/3/2023		0.1 N NaOH	1			
VF26A-4 Container 3	12/5/2023		0.1 N H2SO4	1	X	X	add sodium thiosulfate per method 26A
VF26A-4 Container 4	12/5/2023		0.1 N NaOH	1			
AS26-1 Container 3	11/30/2023		0.1 N H2SO4	1	X	X	add sodium thiosulfate per method 26A
AS26-1 Container 4	11/30/2023		0.1 N NaOH	1			
AS26-2 Container 3	12/1/2023		0.1 N H2SO4	1	X	X	add sodium thiosulfate per method 26A
AS26-2 Container 4	12/1/2023		0.1 N NaOH	1			
AS26-3 Container 3	12/1/2023		0.1 N H2SO4	1	X	X	add sodium thiosulfate per method 26A
AS26-3 Container 4	12/1/2023		0.1 N NaOH	1			
AP26-1 Container 3	12/6/2023		0.1 N H2SO4	1	X	X	add sodium thiosulfate per method 26A
AP26-1 Container 4	12/6/2023		0.1 N NaOH	1			
AP26-2 Container 3	12/6/2023		0.1 N H2SO4	1	X	X	add sodium thiosulfate per method 26A
AP26-2 Container 4	12/6/2023		0.1 N NaOH	1			
AP26-3 Container 3	12/7/2023		0.1 N H2SO4	1	X	X	add sodium thiosulfate per method 26A
AP26-3 Container 4	12/7/2023		0.1 N NaOH	1			
Blank Container 6	12/7/2023		0.1 N H2SO4	1	X	X	add sodium thiosulfate per method 26A
Blank Container 7	12/7/2023		0.1 N NaOH	1			
Blank Container 8	12/7/2023		H2O	1	X	X	add sodium thiosulfate per method 26A

Received by: (Signature) <i>John Rosburg</i>	Date: 12/12/23	Time: 16:00
Received by: (Signature)	Date:	Time:
Received by: (Signature)	Date:	Time:

Sample Custodian Remarks (Completed By Laboratory):	QA/QC Level	Turnaround	Sample Receipt
	Level I <input checked="" type="checkbox"/>	Routine <input type="checkbox"/>	Total # Containers Received?
	Level II <input type="checkbox"/>	24 Hour <input type="checkbox"/>	COC Seals Present?
	Level III <input type="checkbox"/>	1 Week <input type="checkbox"/>	COC Seals Intact?
	Other <input type="checkbox"/>	Other 14 days <input type="checkbox"/>	Received Containers Intact?
			Temperature?



140-34757 Chain of Custody

EUROFINS KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			<input type="checkbox"/> Containers, Broken	see 12-13-23 comments/actions taken
2. Were ambient air containers received intact?				<input type="checkbox"/> Checked in lab	ATO custody seal intact
3. The coolers/containers custody seal if present, is it intact?	/			<input type="checkbox"/> Yes <input type="checkbox"/> NA	Received ambient RT 18.0-17.5°C RT 16.0-17.8°C
4. Is the cooler temperature within limits? (> freezing temp. of water to 6°C, VOST: 10°C) Thermometer ID: <u>5176</u> Correction factor: <u>-0.01</u>			/	<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	CAP 12-13-23 Fridge #0477448062460 Fridge #0477448062460
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> COC; No Date/Time; Client Contacted	
10. Was the sampler identified on the COC?	/			<input type="checkbox"/> Sampler Not Listed on COC	Labeling Verified by: _____ Date: _____
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	pH test strip lot number: _____
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	Box 16A: pH Preservation Box 18A: Residual Chlorine
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	Preservative: _____
16. Were samples received with correct chemical preservative (excluding Encore)?			/	<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	Lot Number: _____ Exp Date: _____ Analyst: _____
17. Were VOA samples received without headspace?			/	<input type="checkbox"/> Headspace (VOA only) <input type="checkbox"/> Residual Chlorine	Date: _____ Time: _____
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____			/		
19. For 1613B water samples is pH<9?			/	<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?			/	<input type="checkbox"/> Project missing info	
Project #: <u>19003597</u> PM Instructions: _____					

Sample Receiving Associate: CAK Ralman Date: 12-13-23



# Appendix B Calibration Data

## **USEPA Proposed Amendments to Primary Copper Smelting NESHAP: Non-Metal HAPs Performance Test Report**

Freeport-McMoRan Miami Inc.

SLR Project No.: 118.01290.00025

January 28, 2024





**Alternative RM-5 Post Test Calibration**  
**FMMI**  
**Compliance Test - Reference Method 5**  
**Aisle Scrubber**  
**November 30, 2023**

RUN #	METER BOX	RUN TIME (min)	dH@	M <sub>d</sub>	P <sub>b</sub> (in. Hg)	T <sub>dm</sub> (°F)	T <sub>dm</sub> (°R)	V <sub>dm</sub> (acf)	dH <sub>avg</sub> (in. H <sub>2</sub> O)	(SQRT dH) <sub>avg</sub> SQRT (in. H <sub>2</sub> O)	Y <sub>qa</sub>
AS26A-1	Lightning	120	1.8246	28.84	26.05	69.5	529.5	83.270	1.39	1.18	1.0118
AS26A-2	Lightning	120	1.8246	28.84	26.15	75.5	535.5	82.476	1.36	1.16	1.0145
AS26A-3	Lightning	120	1.8246	28.84	26.15	78.0	538.0	90.601	1.60	1.26	1.0050
<b>Average</b>											1.0104

Average Y <sub>dq</sub>	Meter Y <sub>d</sub>	% Difference
1.0104	1.0347	2.40%

The difference between the average Y<sub>qa</sub> for the three runs and the meter box Y<sub>d</sub> must be within five percent to pass the calibration

Reference: Roger T. Shigehara, P.G. Royals, and E.W. Steward,  
 "Alternative Method 5 Post-Test Calibration", Entropy Inc.

**Alternative RM-5 Post Test Calibration  
FMMI  
Dioxin and Furans Sample Runs  
Aisle Scrubber  
November 30, 2023**

RUN #	METER BOX	RUN TIME (min)	dH@	M <sub>d</sub>	P <sub>b</sub> (in. Hg)	T <sub>dm</sub> (°F)	T <sub>dm</sub> (°R)	V <sub>dm</sub> (acf)	dH <sub>avg</sub> (in. H <sub>2</sub> O)	(SQRT dH) <sub>avg</sub> SQRT (in. H <sub>2</sub> O)	Y <sub>qa</sub>
AS23-1	Hawkeye	192	1.7674	28.84	26.05	67.6	527.6	136.514	1.39	1.18	1.0041
AS23-2	Hawkeye	192	1.7674	28.84	26.15	65.1	525.1	138.262	1.45	1.20	1.0043
AS23-3	Hawkeye	192	1.7674	28.84	26.15	70.4	530.4	144.962	1.56	1.25	0.9989
<b>Average</b>											1.0025

Average Y <sub>dq</sub>	Meter Y <sub>d</sub>	% Difference
1.0025	0.9932	0.92%

The difference between the average Y<sub>qa</sub> for the three runs and the meter box Y<sub>d</sub> must be within five percent to pass the calibration

Reference: Roger T. Shigehara, P.G. Royals, and E.W. Steward,  
"Alternative Method 5 Post-Test Calibration", Entropy Inc.

**Alternative RM-5 Post Test Calibration  
FMMI  
Compliance Test - Reference Method 5  
Vent Fume  
December 2, 2023**

<b>RUN #</b>	<b>METER BOX</b>	<b>RUN TIME (min)</b>	<b>dH@</b>	<b>M<sub>d</sub></b>	<b>P<sub>b</sub> (in. Hg)</b>	<b>T<sub>dm</sub> (°F)</b>	<b>T<sub>dm</sub> (°R)</b>	<b>V<sub>dm</sub> (acf)</b>	<b>dH<sub>avg</sub> (in. H<sub>2</sub>O)</b>	<b>(SQRT dH)<sub>avg</sub> SQRT (in. H<sub>2</sub>O)</b>	<b>Y<sub>qa</sub></b>
VF26A-1	Lightning	120	1.8246	28.84	26.30	69.8	529.8	99.829	2.05	1.43	1.0207
VF26A-2	Lightning	120	1.8246	28.84	26.30	71.3	531.3	97.274	1.91	1.38	1.0126
VF26A-4	Lightning	120	1.8246	28.84	26.35	69.2	529.2	96.277	1.90	1.38	1.0182
<b>Average</b>											1.0172

<b>Average Y<sub>dq</sub></b>	<b>Meter Y<sub>d</sub></b>	<b>% Difference</b>
1.0172	1.0347	1.72%

The difference between the average Y<sub>qa</sub> for the three runs and the meter box Y<sub>d</sub> must be within five percent to pass the calibration

Reference: Roger T. Shigehara, P.G. Royals, and E.W. Steward,  
"Alternative Method 5 Post-Test Calibration", Entropy Inc.

**Alternative RM-5 Post Test Calibration  
FMMI  
Dioxin and Furans Sample Runs  
Vent Fume  
December 2, 2023**

RUN #	METER BOX	RUN TIME (min)	dH@	M <sub>d</sub>	P <sub>b</sub> (in. Hg)	T <sub>dm</sub> (°F)	T <sub>dm</sub> (°R)	V <sub>dm</sub> (acf)	dH <sub>avg</sub> (in. H <sub>2</sub> O)	(SQRT dH) <sub>avg</sub> SQRT (in. H <sub>2</sub> O)	Y <sub>qa</sub>
VF23-1	Hawkeye	180	1.7674	28.84	26.30	62.0	522.0	151.169	1.92	1.38	0.9854
VF23-2	Hawkeye	180	1.7674	28.84	26.30	64.2	524.2	151.486	1.93	1.39	0.9897
VF23-4	Hawkeye	180	1.7674	28.84	26.35	63.0	523.0	154.926	2.08	1.44	1.0030
<b>Average</b>											0.9927

Average Y <sub>dq</sub>	Meter Y <sub>d</sub>	% Difference
0.9927	0.9932	0.05%

The difference between the average Y<sub>qa</sub> for the three runs and the meter box Y<sub>d</sub> must be within five percent to pass the calibration

Reference: Roger T. Shigehara, P.G. Royals, and E.W. Steward,  
"Alternative Method 5 Post-Test Calibration", Entropy Inc.

**Alternative RM-5 Post Test Calibration  
FMMI  
Compliance Test - Reference Method 5  
Acid Plant Tail Gas  
December 6, 2023**

<b>RUN #</b>	<b>METER BOX</b>	<b>RUN TIME (min)</b>	<b>dH@</b>	<b>M<sub>d</sub></b>	<b>P<sub>b</sub> (in. Hg)</b>	<b>T<sub>dm</sub> (°F)</b>	<b>T<sub>dm</sub> (°R)</b>	<b>V<sub>dm</sub> (acf)</b>	<b>dH<sub>avg</sub> (in. H<sub>2</sub>O)</b>	<b>(SQRT dH)<sub>avg</sub> SQRT (in. H<sub>2</sub>O)</b>	<b>Y<sub>qa</sub></b>
AP26A-1	Lightning	120	1.8246	28.56	26.35	73.3	533.3	95.943	1.83	1.35	1.0118
AP26A-2	Lightning	120	1.8246	28.52	26.35	85.9	545.9	98.303	1.91	1.38	1.0196
AP26A-3	Lightning	120	1.8246	28.52	26.25	74.4	534.4	95.171	1.80	1.34	1.0124
<b>Average</b>											1.0146

<b>Average Y<sub>dq</sub></b>	<b>Meter Y<sub>d</sub></b>	<b>% Difference</b>
1.0146	1.0347	1.98%

The difference between the average Y<sub>qa</sub> for the three runs and the meter box Y<sub>d</sub> must be within five percent to pass the calibration

Reference: Roger T. Shigehara, P.G. Royals, and E.W. Steward,  
"Alternative Method 5 Post-Test Calibration", Entropy Inc.

**Alternative RM-5 Post Test Calibration  
FMMI  
Dioxin and Furans Sample Runs  
APTG  
December 6, 2023**

RUN #	METER BOX	RUN TIME (min)	dH@	M <sub>d</sub>	P <sub>b</sub> (in. Hg)	T <sub>dm</sub> (°F)	T <sub>dm</sub> (°R)	V <sub>dm</sub> (acf)	dH <sub>avg</sub> (in. H <sub>2</sub> O)	(SQRT dH) <sub>avg</sub> SQRT (in. H <sub>2</sub> O)	Y <sub>qa</sub>
AP23-1	Hawkeye	180	1.7674	28.56	26.35	68.6	528.6	146.501	1.81	1.34	0.9972
AP23-2	Hawkeye	180	1.7674	28.52	26.35	71.1	531.1	148.769	1.86	1.36	1.0007
AP23-3	Hawkeye	180	1.7674	28.52	26.25	74.2	534.2	150.761	1.90	1.38	1.0029
<b>Average</b>											1.0002

Average Y <sub>dq</sub>	Meter Y <sub>d</sub>	% Difference
1.0002	0.9932	0.70%

The difference between the average Y<sub>qa</sub> for the three runs and the meter box Y<sub>d</sub> must be within five percent to pass the calibration

Reference: Roger T. Shigehara, P.G. Royals, and E.W. Steward,  
"Alternative Method 5 Post-Test Calibration", Entropy Inc.



# CleanAir Engineering - Meter Box Full Test Calibration

Client: SLR Reviewed By: R. Redel Calibration Signature: *Martin Vaquero*  
 ID No: Hawkeye Calibrated By: M. Vaquero Meter Box Yd: 0.9932  
 Dept No: \_\_\_\_\_ Date of Calibration: 01/23/23 Meter Box ΔH@: 1.7674  
 Meter Box Serial No: 28-041514-1 Due Date of Calibration: 01/23/24 Barometer Serial No: W12637  
 Manufacturer Part No: 0028 Meter Box Vacuum: 1.0 in. H<sub>2</sub>O Barometric Pressure: 29.43 in. Hg

				Standard Meter Gas Volume (ft <sup>3</sup> )			Meter Box Gas Volume (ft <sup>3</sup> )			Std. Meter Temperature (°F)			Meter Box Temperature (°F)			Time (min.)	Calibration Results	
Q	ΔH	ΔP	Y <sub>ds</sub>	Initial	Final	V <sub>ds</sub> Net	Initial	Final	V <sub>d</sub> Net	T <sub>is</sub> In	T <sub>os</sub> Out	T <sub>ds</sub> Avg.	T <sub>i</sub> In	T <sub>o</sub> Out	T <sub>d</sub> Avg.	Θ	Y <sub>d</sub>	ΔH@
0.390	0.50	-0.50	1.0000	0.000	5.000	5.000	448.920	454.086	5.166	68.0	68.0	68.00	85.0	81.0	83.00	12.60	0.9929	1.7735
0.390	0.50	-0.50	1.0000	0.000	5.000	5.000	454.086	459.259	5.173	68.0	68.0	68.00	85.0	81.0	83.00	12.60	0.9915	1.7735
0.679	1.50	-1.10	1.0000	0.000	10.000	10.000	425.125	435.456	10.331	68.0	68.0	68.00	90.0	82.0	86.00	14.47	0.9945	1.7510
0.679	1.50	-1.10	1.0000	0.000	10.000	10.000	435.456	445.799	10.343	68.0	68.0	68.00	90.0	82.0	86.00	14.47	0.9933	1.7510
0.957	3.00	-1.70	1.0000	0.000	10.000	10.000	378.720	388.985	10.265	68.0	68.0	68.00	91.0	79.0	85.00	10.27	0.9938	1.7740
0.955	3.00	-1.70	1.0000	0.000	10.000	10.000	388.985	399.273	10.288	68.0	68.0	68.00	92.0	80.0	86.00	10.30	0.9934	1.7810
Averages																0.99325	1.76736	

Nomenclature	
P <sub>b</sub>	Barometric Pressure (in. Hg)
Q	Flow Rate (cfm)
ΔH	Orifice Pressure differential (in. H <sub>2</sub> O)
ΔP	Inlet Pressure Differential (in. H <sub>2</sub> O)
V <sub>d</sub>	Gas Meter Volume - Dry (ft <sup>3</sup> )
V <sub>ds</sub>	Standard Meter Volume - Dry (ft <sup>3</sup> )
T <sub>d</sub>	Average Meter Box Temperature (°F)
T <sub>o</sub>	Outlet Meter Box Temperature (°F)
T <sub>ds</sub>	Average Standard Meter Temperature (°F)
Y <sub>d</sub>	Meter Correction Factor (unitless), Y <sub>i</sub> ≤ Y <sub>avg</sub> ± 0.02
Y <sub>ds</sub>	Standard Meter Correction Factor (unitless)
ΔH@	Orifice Pressure Differential giving 0.75 cfm of air at 68°F and 29.92 in. Hg (in. H <sub>2</sub> O)
	ΔH@ <sub>i</sub> ≤ ΔH@ <sub>avg</sub> ± 0.2
Θ	Duration of Run (minutes)

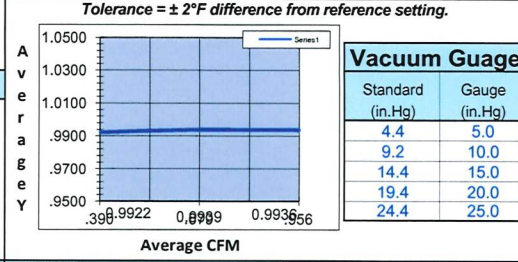
**Equations**

$$Y_d = (Y_{ds}) \left[ \frac{V_{ds}}{V_d} \right] \left[ \frac{T_d + 460}{T_{ds} + 460} \right] \left[ \frac{P_b + \Delta P / 13.6}{P_b + \Delta H / 13.6} \right]$$

$$\Delta H@ = \frac{(0.0319)(\Delta H)}{P_b(T_o + 460)} \left[ \frac{(T_{ds} + 460)\Theta}{(V_{ds})(Y_{ds})} \right]^2$$

$$Q = \frac{17.64(V_{ds})(P_b)}{(T_{ds} + 460)(\Theta)}$$

Pyrometer Calibration					
Calibration Reference	1 Stack	2 Probe	3 Filter	4 Imp. Outlet	3 Aux
50	50	50	50	50	50
100	100	100	100	101	100
150	150	151	150	150	150
200	201	200	201	200	200
250	250	250	250	250	250
300	300	300	300	300	300
350	350	350	350	350	350
400	400	400	400	400	400
450	450	450	450	450	450
500	501	500	500	501	501
550	550	550	550	550	550
600	600	300	600	600	600



Calibration Reference Information (Pyrometer)	
Reference Used: <u>Omega CL23A</u>	Serial No: <u>T-279500</u>
Calibrated By: <u>JH Metrology</u>	Date Calibrated: <u>6/28/2022</u>
Calibration Report No: <u>1000230501</u>	Calibration Due Date: <u>6/28/2023</u>

Calibration Reference Information (Standard Meter)	
Reference Used: <u>Wet Test Meter</u>	Serial No: <u>11AH6</u>
Calibrated By: <u>Martin Vaquero</u>	Date Calibrated: <u>10/20/2022</u>
Percent Error: <u>-0.0054%</u>	Calibration Due Date: <u>10/20/2023</u>

Meter Box Pre-Calibration Inspection			
Positive Leak Check:	Pass	Electrical Check:	Pass
Negative Leak Check:	Pass	Pyrometer Check:	Pass
Vacuum Gauge Check:	Pass	YD Tol.: ± 2% of 1.0	Pass



### DRY GAS METER (DGM) CALIBRATION

DGM ID: <u>⚡ Lightning ⚡</u>	Barometric Pressure: <u>25.05</u>	DGM Calibration Date: <u>7/8/2023</u>
DGM Serial Number: <u>0028CO-030420-1</u>	Reference Barometer: <u>Audit 1 Kestrel 2500</u>	Calibration Due Date: <u>7/8/2024</u>
Calibrated By: <u>Doug Bopray</u>	Calibration Date: <u>2/15/2023</u>	

		Standard Meter				Dry Gas Meter									
Q CFM	ΔH in. H <sub>2</sub> O	Initial Volume	Final Volume	Total Volume	Temperature	Initial Volume	Final Volume	Total Volume	Temperature			Time min.	DGM Coefficient Y <sub>d</sub>	DH@ in. H <sub>2</sub> O	
		L	L	ft <sup>3</sup>	°F	ft <sup>3</sup>	ft <sup>3</sup>	ft <sup>3</sup>	Inlet (°F)	Outlet (°F)	Average (°F)				
0.358	0.50	0.000	122.720	4.334	75	296.379	300.544	4.165	76	73	74.5	10.0	1.0380	1.8205	
0.358	0.50	122.720	245.590	4.339	75	300.544	304.714	4.170	79	74	76.5	10.0	1.0419	1.8127	
0.360	0.50	245.590	368.920	4.355	75	304.714	308.886	4.172	81	75	78.0	10.0	1.0483	1.7958	
0.510	1.00	368.920	526.460	5.563	76	308.886	314.230	5.344	83	77	80.0	9.0	1.0458	1.7829	
0.506	1.00	526.460	682.960	5.527	76	314.230	319.527	5.297	84	77	80.5	9.0	1.0491	1.8067	
0.512	1.00	682.960	841.280	5.591	76	319.527	324.893	5.366	85	78	81.5	9.0	1.0495	1.7621	
0.624	1.50	841.280	1012.750	6.055	76	324.893	330.717	5.824	87	79	83.0	8.0	1.0487	1.7771	
0.617	1.50	1012.750	1182.280	5.987	76	330.717	336.458	5.741	88	79	83.5	8.0	1.0528	1.8180	
0.611	1.50	1182.280	1350.270	5.933	76	336.458	342.293	5.835	89	80	84.5	8.0	1.0283	1.8480	
0.704	2.00	1350.270	1519.630	5.981	76	342.293	348.226	5.933	90	81	85.5	7.0	1.0200	1.8527	
0.706	2.00	1519.630	1689.320	5.993	76	348.226	354.164	5.938	90	81	85.5	7.0	1.0211	1.8455	
0.705	2.00	1689.320	1858.820	5.986	76	354.164	360.115	5.951	90	82	86.0	7.0	1.0186	1.8462	
0.858	3.00	1858.820	2035.590	6.243	76	360.115	366.305	6.190	91	82	86.5	6.0	1.0193	1.8707	
0.859	3.00	2035.590	2212.620	6.252	76	366.305	372.494	6.189	91	82	86.5	6.0	1.0209	1.8652	
0.859	3.00	2212.620	2389.640	6.251	76	372.494	378.700	6.206	91	82	86.5	6.0	1.0181	1.8654	
													Average:	1.0347	1.8246

Calibration Reference Information (Standard Meter)

Reference Used: <u>APEX DGM Reference</u>	Serial Number: <u>1501001</u>
Calibrated By: <u>Tracy Wilson</u>	Date Calibrated: <u>7/25/2022</u>
Standard Y <sub>d</sub> : <u>1.0000</u>	Calibration Due Date: <u>7/26/2023</u>





Revised: 2016/2/19

# Certificate of Calibration

Secondary Reference Meter Calibration - Cubic Meters (m<sup>3</sup>)

## Reference Meter Information

Model #: DGM-SK25EXSRD  
 Serial #: 1501001  
 DGM Model #: SK25EX  
 DGM Serial #: 20140570

## Calibration Conditions

Barometric Pressure (in Hg): 30.09  
 Ambient Temperature (°F): 79.1  
 Relative Humidity (%): 54  
 Altitude (ft): 414.0  
 Corrected Baro. Pressure (in Hg): 29.88

## Factors/Conversions

Standard Temperature (°K): 293.15  
 Standard Pressure (mm Hg): 760  
 K<sub>1</sub> Coefficient (°K/mm Hg): 0.3857

## Reference Equipment

WTM Model: W-NK00a-1B  
 WTM Cal. Due Date: Aug-2022  
 WTM Thermometer: Internal  
 WTM Serial: 546258  
 Gamma: 1.0019

## UUT Meter (DGM)

Run Time (minutes)	Office ΔH (mm H <sub>2</sub> O)	Volume (Pulse Count)			Outlet Temperature (°C)			Meter Pressure (mm H <sub>2</sub> O)			Volume (L)			Reference Meter (WTM)			Quiet Temperature (°C)			Calibration Factor			Flowsite Std. & Corr. (m <sup>3</sup> /min)								
		Initial	Final	Total	Standardized	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
5.00	-21.0	0	375041	375041	366208	24.0	24.0	-5.50	268.755	444.418	175.663	24.8	24.8	4.687E-07	0.9968	4.687E-07	0.9968	4.687E-07	0.9968	4.687E-07	0.9968	3.444E-02	0.0007	3.444E-02	0.0007	3.444E-02	0.0007	3.444E-02	0.0007	3.444E-02	0.0007
5.00	-21.0	375041	751734	376693	367821	24.0	24.0	-5.50	444.418	820.725	176.307	24.8	24.9	4.693E-07	0.9960	4.693E-07	0.9960	4.693E-07	0.9960	4.693E-07	0.9960	3.459E-02	-0.0002	3.459E-02	-0.0002	3.459E-02	-0.0002	3.459E-02	-0.0002	3.459E-02	-0.0002
5.00	-21.0	751734	1132036	380302	371348	24.0	24.0	-5.50	620.725	798.719	177.994	24.9	24.9	4.682E-07	0.9958	4.682E-07	0.9958	4.682E-07	0.9958	4.682E-07	0.9958	3.492E-02	0.0004	3.492E-02	0.0004	3.492E-02	0.0004	3.492E-02	0.0004	3.492E-02	0.0004
6.00	-14.5	0	366786	366786	358375	24.0	24.0	-4.00	798.719	970.979	172.260	24.9	24.9	4.696E-07	0.9987	4.696E-07	0.9987	4.696E-07	0.9987	4.696E-07	0.9987	2.808E-02	0.0004	2.808E-02	0.0004	2.808E-02	0.0004	2.808E-02	0.0004	2.808E-02	0.0004
6.00	-14.5	366786	731646	364860	356493	24.0	24.0	-4.00	970.979	1142.190	171.211	24.9	25.0	4.691E-07	0.9977	4.691E-07	0.9977	4.691E-07	0.9977	4.691E-07	0.9977	2.794E-02	-0.0006	2.794E-02	-0.0006	2.794E-02	-0.0006	2.794E-02	-0.0006	2.794E-02	-0.0006
6.00	-14.5	731646	1097923	366277	357878	24.0	24.0	-4.00	1142.190	1314.266	172.076	25.0	25.1	4.695E-07	0.9966	4.695E-07	0.9966	4.695E-07	0.9966	4.695E-07	0.9966	2.805E-02	0.0002	2.805E-02	0.0002	2.805E-02	0.0002	2.805E-02	0.0002	2.805E-02	0.0002
7.00	-9.0	0	338561	338561	330419	24.0	25.0	-3.00	1314.266	1473.199	158.933	25.1	25.2	4.696E-07	0.9987	4.696E-07	0.9987	4.696E-07	0.9987	4.696E-07	0.9987	2.219E-02	-0.0011	2.219E-02	-0.0011	2.219E-02	-0.0011	2.219E-02	-0.0011	2.219E-02	-0.0011
7.00	-9.0	338561	676637	338136	328451	25.0	25.0	-3.00	1473.199	1631.907	158.708	25.2	25.3	4.701E-07	0.9999	4.701E-07	0.9999	4.701E-07	0.9999	4.701E-07	0.9999	2.213E-02	0.0001	2.213E-02	0.0001	2.213E-02	0.0001	2.213E-02	0.0001	2.213E-02	0.0001
7.00	-9.0	676637	1014488	337789	329113	25.0	25.0	-3.00	1631.907	1790.608	158.701	25.3	25.3	4.705E-07	1.0007	4.705E-07	1.0007	4.705E-07	1.0007	4.705E-07	1.0007	2.211E-02	0.0009	2.211E-02	0.0009	2.211E-02	0.0009	2.211E-02	0.0009	2.211E-02	0.0009
10.00	-5.0	1014488	1356671	342185	333526	25.0	25.0	-2.00	1790.608	1951.600	160.992	25.3	25.4	4.710E-07	1.0016	4.710E-07	1.0016	4.710E-07	1.0016	4.710E-07	1.0016	1.568E-02	0.0000	1.568E-02	0.0000	1.568E-02	0.0000	1.568E-02	0.0000	1.568E-02	0.0000
10.00	-5.0	1356671	1700089	343418	334728	25.0	25.0	-2.00	1951.600	2113.301	161.701	25.4	25.5	4.712E-07	1.0021	4.712E-07	1.0021	4.712E-07	1.0021	4.712E-07	1.0021	1.574E-02	0.0005	1.574E-02	0.0005	1.574E-02	0.0005	1.574E-02	0.0005	1.574E-02	0.0005
10.00	-5.0	1700089	2045016	342927	334249	25.0	25.0	-2.00	2113.301	2274.680	161.379	25.5	25.6	4.708E-07	1.0012	4.708E-07	1.0012	4.708E-07	1.0012	4.708E-07	1.0012	1.572E-02	-0.0004	1.572E-02	-0.0004	1.572E-02	-0.0004	1.572E-02	-0.0004	1.572E-02	-0.0004
15.00	-2.5	0	373362	373362	364003	25.0	25.0	-1.00	2274.680	2450.933	176.253	25.6	25.6	4.721E-07	1.0040	4.721E-07	1.0040	4.721E-07	1.0040	4.721E-07	1.0040	1.141E-02	0.0000	1.141E-02	0.0000	1.141E-02	0.0000	1.141E-02	0.0000	1.141E-02	0.0000
15.00	-2.5	373362	745411	372049	362723	25.0	25.0	-1.00	2450.933	2626.536	176.603	25.6	25.6	4.720E-07	1.0038	4.720E-07	1.0038	4.720E-07	1.0038	4.720E-07	1.0038	1.137E-02	-0.0002	1.137E-02	-0.0002	1.137E-02	-0.0002	1.137E-02	-0.0002	1.137E-02	-0.0002
15.00	-2.5	745411	1116009	370598	361308	25.0	25.0	-1.00	2626.536	2801.538	176.003	25.6	25.6	4.722E-07	1.0043	4.722E-07	1.0043	4.722E-07	1.0043	4.722E-07	1.0043	1.133E-02	0.0003	1.133E-02	0.0003	1.133E-02	0.0003	1.133E-02	0.0003	1.133E-02	0.0003
Initial Scaling Factor	1.0000	Decimals		5	Readout		Cubic Meters	New Scaling Factor		0.0470	Calibration Average Y		4.702E-07	New Console Gamma (Y)		1.0000	Variation		Passed												

Note: For Calibration Factor Y, the ratio of the readings of the calibration meter to the dry gas meter, acceptable tolerance of individual values from the average is ±0.02.

Technician: Tracy Wilson

Signature: *Tracy Wilson*

Date: July 25, 2022

Apex Instruments - Address: 204 Technology Park Ln., Fuquay-Varina, NC 27628 USA | Tel: (919) 567-7300 | Web: www.apexinst.com

# Certificate of Calibration - Supplemental

Secondary Reference Meter Calibration - Cubic Meters (m<sup>3</sup>)

## Nomenclature

- $P_{bar}$  - Barometric Pressure, corrected for elevation
- DGM - Dry Gas Meter
- $K_1$  - Constant based on standard temp and press
- $\Theta$  - Run time, in minutes
- $P_m - \Delta H$  (Meter Pressure, gauge)
- $V_m$  - Volume collected by test meter, corrected for STP
- $Q_{test}$  - Calculated flow rate of test meter
- $K'$  - Critical orifice coefficient
- $P_w$  - Measured pressure of reference meter
- $t_w$  - Temperature measured in reference meter
- $t_m$  - Temperature measured in test meter
- $Y$  - Ratio of volume collected from reference meter and test meter
- sc - Scaling Factor
- Counts<sub>std</sub> - Number of pulse counts, standardized
- Counts<sub>raw</sub> - Number of raw pulse counts of a calibration run

## Equations

$$V_w(std) = Y * K_1 \frac{V_w * (P_{bar} + \frac{P_{m(g)}}{13.6})}{T_w}$$

$$V_m(std) = Counts_{std} * Y_{sc}(avg)$$

$$Counts_{std} = K_1 \frac{C_{total} * (P_{bar} + \frac{P_{m(g)}}{13.6})}{T_m}$$

$$K_1 = \frac{T_{std}}{P_{std}}$$

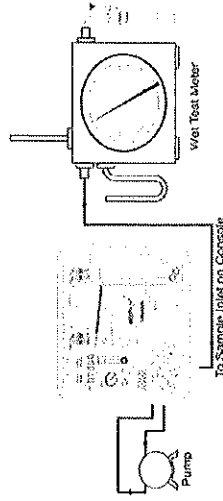
$$Y = \frac{V_w(std)}{V_m(std)}$$

$$Q_w(std) = \frac{V_w(std)}{\Theta}$$

$$Y_{sc} = \frac{V_w(std)}{Counts_{std}}$$

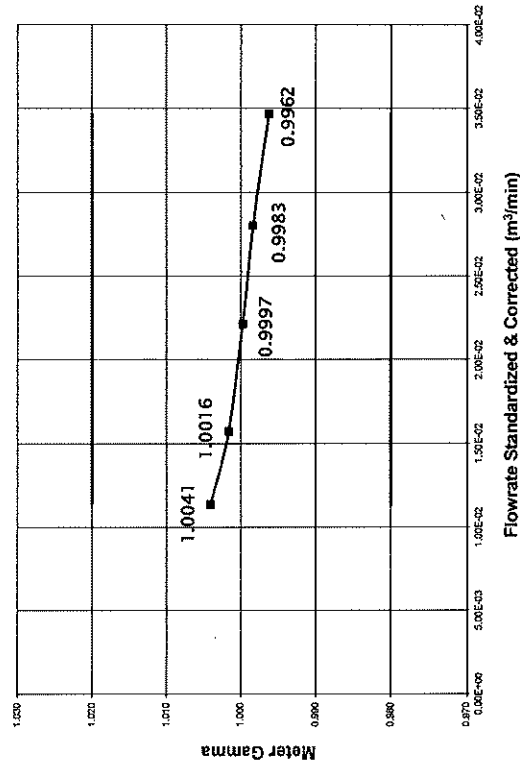
$$Metric \Delta H_{\bar{y}} = \frac{P_{m(g)} * 0.0011696 * (P_{bar} + \frac{P_{m(g)}}{13.6})}{T_m} * \left( \frac{T_w * \Theta}{V_w * P_{bar}} \right)^2$$

## Calibration Train

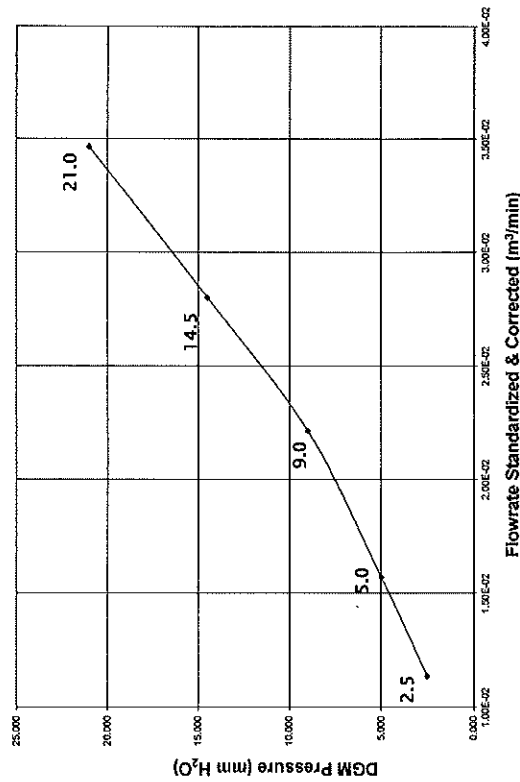


## Calibration Graphs

### Meter Flowrate vs Gamma



### Meter Flowrate vs. Pressure



## PROBE CALIBRATION FORM

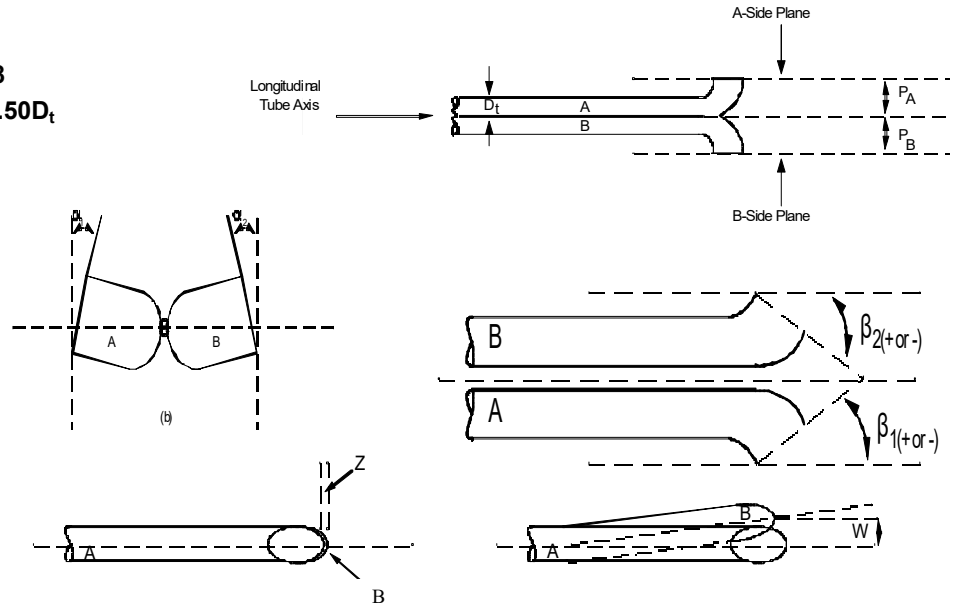
### S-TYPE CALIBRATION DATA

Probe ID: 419      Date: 2/28/2023      Technician: D. Bopray

$D_t = \underline{0.375}$  in.  $3/16 \leq D_t \leq 3/8$   
 $P_A = \underline{0.428}$  in.  $1.05D_t \leq P \leq 1.50D_t$   
 $P_B = \underline{0.428}$  in.  $P_A = P_B$

$a_1 = \underline{1}$  °       $a_1 \leq 10^\circ$   
 $a_2 = \underline{0}$  °       $a_2 \leq 10^\circ$   
 $b_1 = \underline{0}$  °       $b_1 \leq 5^\circ$   
 $b_2 = \underline{0}$  °       $b_2 \leq 5^\circ$

$Z = \underline{0.016}$  in.  $Z \leq 0.125"$   
 $W = \underline{0.016}$  in.  $W \leq 0.031"$



### THERMOCOUPLE CALIBRATION DATA

Thermocouple ID#: 419      Standard ID #: Omega T-305421  
 Ambient Temp (F°): 70      Barometric Pressure (in. Hg): 24.81

Temperature Reference Point	Source	Reference Temperature R °	Thermocouple Potentiometer Temperature R °	Temperature Difference (%) ≤ 1.5 %
0 C° (32 F°)	Ice Water	493.2	493.2	0.00
100 C° (212 F°)	Boiling Water	661	664	-0.45
~25° C (~75°F)	Ambient	529.7	530.2	-0.09
150-250 C° (300-500 F°)	Hot Filter Box	460	460	0.00

## PROBE CALIBRATION FORM

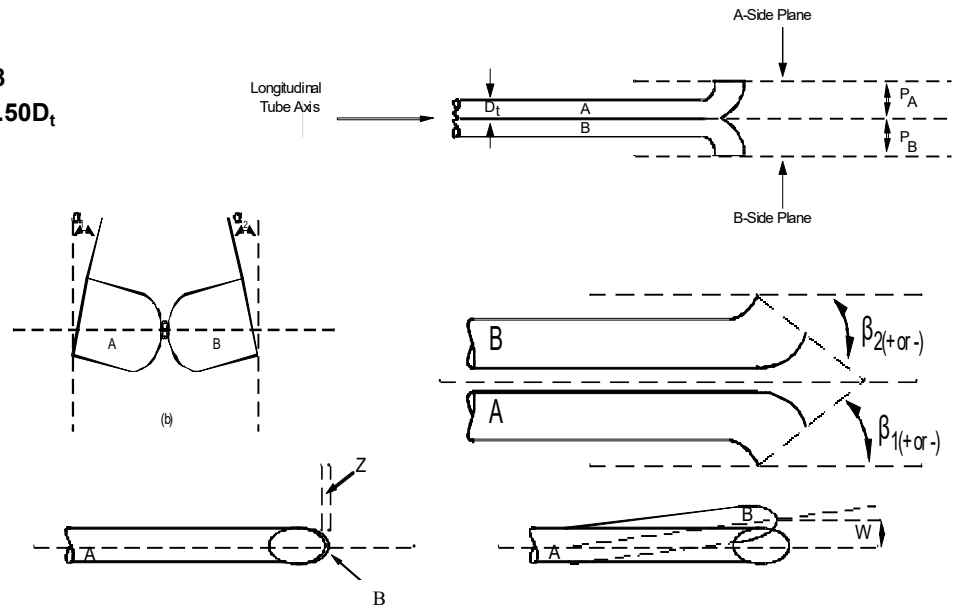
### S-TYPE CALIBRATION DATA

Probe ID: 414      Date: 2/28/2023      Technician: D. Bopray

$D_t = \underline{0.375}$  in.  $3/16 \leq D_t \leq 3/8$   
 $P_A = \underline{0.450}$  in.  $1.05D_t \leq P \leq 1.50D_t$   
 $P_B = \underline{0.450}$  in.  $P_A = P_B$

$a_1 = \underline{0}^\circ$        $a_1 \leq 10^\circ$   
 $a_2 = \underline{0}^\circ$        $a_2 \leq 10^\circ$   
 $b_1 = \underline{0}^\circ$        $b_1 \leq 5^\circ$   
 $b_2 = \underline{1}^\circ$        $b_2 \leq 5^\circ$

$Z = \underline{0.016}$  in.  $Z \leq 0.125"$   
 $W = \underline{0.000}$  in.  $W \leq 0.031"$



### THERMOCOUPLE CALIBRATION DATA

Thermocouple ID#: 414      Standard ID #: Omega T-305421  
 Ambient Temp (F°): 70      Barometric Pressure (in. Hg): 24.81

Temperature Reference Point	Source	Reference Temperature R °	Thermocouple Potentiometer Temperature R °	Temperature Difference (%) ≤ 1.5 %
0 C° (32 F°)	Ice Water	493.3	495.1	-0.36
100 C° (212 F°)	Boiling Water	660	659	0.15
~25° C (~75°F)	Ambient	529.7	529.7	0.00
150-250 C° (300-500 F°)	Hot Filter Box	460	460	0.00

## PROBE CALIBRATION FORM

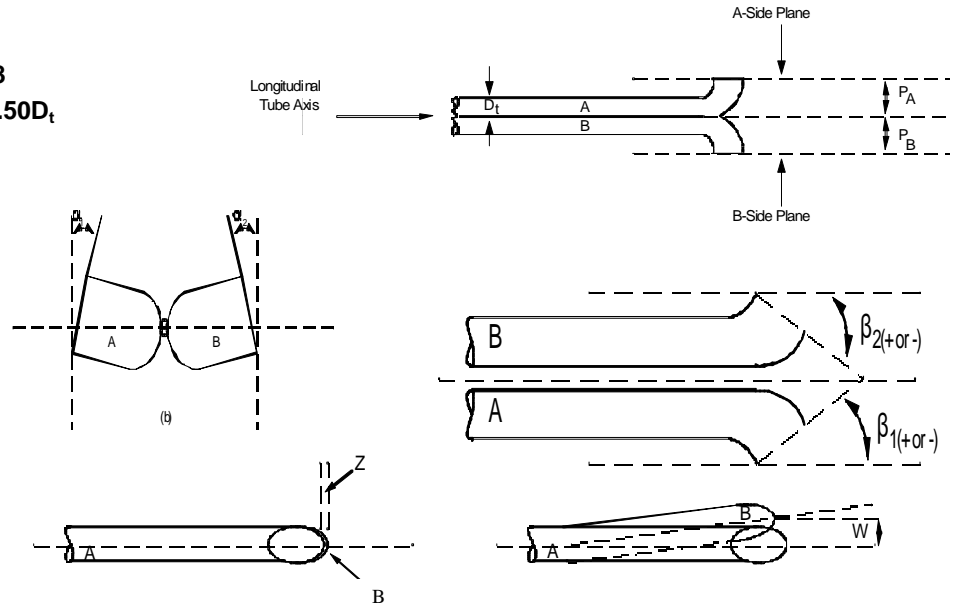
### S-TYPE CALIBRATION DATA

Probe ID: 1712724      Date: 2/28/2023      Technician: D. Bopray

$D_t = \underline{0.375}$  in.  $3/16 \leq D_t \leq 3/8$   
 $P_A = \underline{0.478}$  in.  $1.05D_t \leq P \leq 1.50D_t$   
 $P_B = \underline{0.478}$  in.  $P_A = P_B$

$a_1 = \underline{0}^\circ$        $a_1 \leq 10^\circ$   
 $a_2 = \underline{0}^\circ$        $a_2 \leq 10^\circ$   
 $b_1 = \underline{0}^\circ$        $b_1 \leq 5^\circ$   
 $b_2 = \underline{0}^\circ$        $b_2 \leq 5^\circ$

$Z = \underline{0.000}$  in.  $Z \leq 0.125"$   
 $W = \underline{0.000}$  in.  $W \leq 0.031"$



### THERMOCOUPLE CALIBRATION DATA

Thermocouple ID#: 1712724      Standard ID #: Omega T-305421  
 Ambient Temp (F°): 70      Barometric Pressure (in. Hg): 24.81

Temperature Reference Point	Source	Reference Temperature R °	Thermocouple Potentiometer Temperature R °	Temperature Difference (%) ≤ 1.5 %
0 C° (32 F°)	Ice Water	492.8	492.9	-0.02
100 C° (212 F°)	Boiling Water	666	668	-0.30
~25° C (~75°F)	Ambient	532.5	532.9	-0.08
150-250 C° (300-500 F°)	Hot Filter Box	NA	NA	NA

## PROBE CALIBRATION FORM

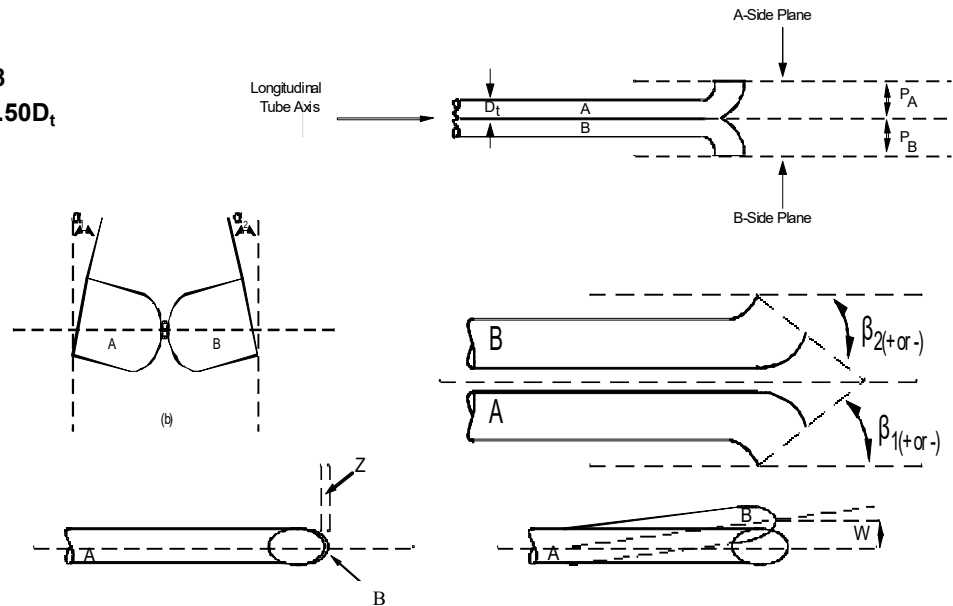
### S-TYPE CALIBRATION DATA

Probe ID: 1712725      Date: 2/28/2023      Technician: D. Bopray

$D_t = \underline{0.375}$  in.  $3/16 \leq D_t \leq 3/8$   
 $P_A = \underline{0.478}$  in.  $1.05D_t \leq P \leq 1.50D_t$   
 $P_B = \underline{0.478}$  in.  $P_A = P_B$

$a_1 = \underline{0}^\circ$        $a_1 \leq 10^\circ$   
 $a_2 = \underline{1}^\circ$        $a_2 \leq 10^\circ$   
 $b_1 = \underline{0}^\circ$        $b_1 \leq 5^\circ$   
 $b_2 = \underline{1}^\circ$        $b_2 \leq 5^\circ$

$Z = \underline{0.000}$  in.  $Z \leq 0.125"$   
 $W = \underline{0.017}$  in.  $W \leq 0.031"$



### THERMOCOUPLE CALIBRATION DATA

Thermocouple ID#: 1712725      Standard ID #: Omega T-305421  
 Ambient Temp (F°): 70      Barometric Pressure (in. Hg): 24.81

Temperature Reference Point	Source	Reference Temperature R °	Thermocouple Potentiometer Temperature R °	Temperature Difference (%) ≤ 1.5 %
0 C° (32 F°)	Ice Water	493.2	493.2	0.00
100 C° (212 F°)	Boiling Water	661	664	-0.45
~25° C (~75°F)	Ambient	529.7	530.2	-0.09
150-250 C° (300-500 F°)	Hot Filter Box	NA	NA	NA



### IMPINGER OUTLET CALIBRATION FORM

Impinger Outlet ID Blue  
Date 2/28/2023  
Barometric Pressure (in Hg) 24.81  
Calibrator D. Bopray

Standard ID Omega T-305421  
Ambient Temp.(°F) 70

Temperature Reference Point	Source	Reference Temperature (R)	Thermocouple Potentiometer Temperature (R)	Temperature Difference (%)
(32°F)	Ice Water	492	493	-0.20
(75°F)	Ambient	529	531	-0.38
(212°F)	Boiling Water	669	670	-0.15

$R = °F + 460$

Temperature Difference (%)  $\leq 1.5\%$

Temperature Difference (%) =  $(\text{Reference Temp.} - \text{Thermocouple temp.}) / \text{Reference temp.}$



### IMPINGER OUTLET CALIBRATION FORM

Impinger Outlet ID Green Standard ID Omega T-305421  
Date 2/28/2023 Ambient Temp.(°F) 72  
Barometric Pressure (in Hg) 24.81  
Calibrator D. Bopray

Temperature Reference Point	Source	Reference Temperature (R)	Thermocouple Potentiometer Temperature (R)	Temperature Difference (%)
(32°F)	Ice Water	492	493	-0.20
(75°F)	Ambient	529	532	-0.57
(212°F)	Boiling Water	669	671	-0.30

$R = °F + 460$

Temperature Difference (%)  $\leq 1.5\%$

Temperature Difference (%) =  $(\text{Reference Temp.} - \text{Thermocouple temp.}) / \text{Reference temp.}$





### IMPINGER OUTLET CALIBRATION FORM

Impinger Outlet ID Yellow Standard ID Omega T-305421  
Date 2/28/2023 Ambient Temp.(°F) 72  
Barometric Pressure (in Hg) 28.41  
Calibrator D. Bopray

Temperature Reference Point	Source	Reference Temperature (R)	Thermocouple Potentiometer Temperature (R)	Temperature Difference (%)
(32°F)	Ice Water	492	493	-0.20
(75°F)	Ambient	530	533	-0.57
(212°F)	Boiling Water	670	671	-0.15

$R = °F + 460$

Temperature Difference (%)  $\leq 1.5\%$

Temperature Difference (%) =  $(\text{Reference Temp.} - \text{Thermocouple temp.}) / \text{Reference temp.}$



### IMPINGER OUTLET CALIBRATION FORM

Impinger Outlet ID Red Standard ID Omega T-305421  
Date 2/28/2023 Ambient Temp.(°F) 72  
Barometric Pressure (in Hg) 24.81  
Calibrator D. Bopray

Temperature Reference Point	Source	Reference Temperature (R)	Thermocouple Potentiometer Temperature (R)	Temperature Difference (%)
(32°F)	Ice Water	492	492	0.00
(75°F)	Ambient	529	533	-0.76
(212°F)	Boiling Water	670	672	-0.30

$R = °F + 460$

Temperature Difference (%)  $\leq 1.5\%$

Temperature Difference (%) = (Reference Temp.-Thermocouple temp.)/Reference temp.



# Appendix C Process Operations Data

## **USEPA Proposed Amendments to Primary Copper Smelting NESHAP: Non-Metal HAPs Performance Test Report**

Freeport-McMoRan Miami Inc.

SLR Project No.: 118.01290.00025

January 28, 2024









	Isa Feed Rate (tons/hour)	#2 Converter Blast Air (kscfm)	#3 Converter Blast Air (kscfm)	#4 Converter Blast Air (kscfm)	#5 Converter Blast Air (kscfm)	#1 Anode Barrel Air (scfm)	#1 Anode Barrel Gas (scfm)	#2 Anode Barrel Air (scfm)	#2 Anode Barrel Gas (scfm)	Steam Use (lbs/hr)	Electric Furnace Power (MW)	
12/1/23 12:06	125.3	0.0	13.3	1.2	0.0	0.1	0.3	0.2	0.4	-0.8	8.4	Aisle Scrubber Stack
12/1/23 12:07	125.0	0.0	0.2	1.5	0.0	0.1	0.3	0.2	0.4	-0.8	8.4	Aisle Scrubber Stack
12/1/23 12:08	125.0	0.0	0.3	0.5	0.0	0.1	0.3	0.2	0.4	-0.8	8.4	Aisle Scrubber Stack
12/1/23 12:09	125.2	0.0	0.3	0.5	0.0	0.1	0.3	0.2	0.4	-0.8	8.4	Aisle Scrubber Stack
12/1/23 12:10	125.3	0.0	0.3	0.5	0.0	0.1	0.3	0.2	0.4	-0.8	8.4	Aisle Scrubber Stack
12/1/23 12:11	125.2	0.0	0.4	0.8	0.1	0.1	0.3	0.2	0.4	-0.8	8.4	Aisle Scrubber Stack
12/1/23 12:12	125.0	0.0	0.3	1.1	7.1	0.1	0.3	0.2	0.4	-0.8	8.3	Aisle Scrubber Stack
12/1/23 12:13	124.9	0.0	0.8	0.8	15.8	0.1	0.3	0.2	0.4	-0.8	8.2	Aisle Scrubber Stack
12/1/23 12:14	124.9	0.0	9.4	0.6	17.8	0.1	0.3	0.2	0.4	-0.8	8.1	Aisle Scrubber Stack
12/1/23 12:15	125.0	0.0	15.9	0.5	18.1	0.1	0.3	0.2	0.4	-0.8	8.0	Aisle Scrubber Stack
12/1/23 12:16	125.1	0.0	17.9	1.5	10.3	0.1	0.3	0.2	0.4	-0.8	8.0	Aisle Scrubber Stack
12/1/23 12:17	125.2	0.0	18.3	0.7	0.0	0.1	0.3	0.2	0.4	-0.8	8.0	Aisle Scrubber Stack
12/1/23 12:18	125.1	0.0	18.2	0.8	0.0	0.1	0.3	0.2	0.4	-0.8	8.0	Aisle Scrubber Stack
12/1/23 12:19	124.9	0.0	18.0	1.0	0.0	0.1	0.3	0.2	0.4	-0.8	8.0	Aisle Scrubber Stack
12/1/23 12:20	125.0	0.0	18.1	0.4	0.0	0.1	0.3	0.2	0.5	-0.8	8.1	Aisle Scrubber Stack
12/1/23 12:21	125.1	0.0	18.0	0.8	0.0	0.1	0.3	0.2	0.5	-0.8	8.1	Aisle Scrubber Stack
12/1/23 12:22	125.4	0.0	18.0	0.9	0.0	420.7	0.3	0.2	0.5	-0.8	8.1	Aisle Scrubber Stack
12/1/23 12:23	125.1	0.0	18.0	0.9	0.0	90.8	0.3	0.2	0.5	-0.8	8.1	Aisle Scrubber Stack
12/1/23 12:24	124.9	0.0	18.0	0.6	0.0	843.6	0.3	0.2	0.5	-0.8	8.1	Aisle Scrubber Stack
12/1/23 12:25	124.7	0.0	18.0	0.4	0.0	917.2	0.3	0.2	0.5	-0.8	8.1	Aisle Scrubber Stack
12/1/23 12:26	124.8	0.0	18.0	0.6	0.0	936.6	0.3	0.2	0.5	-0.8	8.2	Aisle Scrubber Stack
12/1/23 12:27	124.9	0.0	17.9	0.8	0.0	939.9	0.3	0.2	0.5	-0.8	8.2	Aisle Scrubber Stack
12/1/23 12:28	125.0	0.0	17.8	0.8	0.0	941.8	0.3	0.2	0.5	-0.8	8.2	Aisle Scrubber Stack
12/1/23 12:29	124.8	0.0	17.6	0.7	0.0	928.6	0.3	0.2	0.5	-0.8	8.2	Aisle Scrubber Stack
12/1/23 12:30	125.0	0.0	17.2	0.6	0.0	930.5	0.3	0.2	0.5	-0.8	8.2	Aisle Scrubber Stack
12/1/23 12:31	124.8	0.0	16.3	0.8	0.0	926.4	0.3	0.2	0.5	-0.8	8.2	Aisle Scrubber Stack
12/1/23 12:32	124.8	0.0	15.7	0.9	0.0	930.3	0.3	0.2	0.5	-0.8	8.2	Aisle Scrubber Stack
12/1/23 12:33	124.8	0.0	15.1	0.8	0.0	925.2	0.3	0.2	0.5	-0.8	8.2	Aisle Scrubber Stack
12/1/23 12:34	124.9	0.0	14.5	0.8	0.0	928.5	0.3	0.2	0.5	-0.8	8.2	Aisle Scrubber Stack
12/1/23 12:35	125.1	0.0	14.1	0.6	0.0	924.2	0.3	0.2	0.5	-0.8	8.2	Aisle Scrubber Stack
12/1/23 12:36	125.2	0.0	13.8	0.7	0.0	934.9	0.3	0.2	0.5	-0.8	8.3	Aisle Scrubber Stack
12/1/23 12:37	125.1	0.0	14.1	0.5	0.0	934.7	0.3	0.2	0.5	-0.8	8.3	Aisle Scrubber Stack
12/1/23 12:38	125.1	0.0	13.8	0.9	0.0	937.7	0.3	0.2	0.5	-0.8	8.3	Aisle Scrubber Stack
12/1/23 12:39	125.1	0.0	14.0	0.7	0.0	929.8	0.3	0.2	0.5	-0.8	8.3	Aisle Scrubber Stack
12/1/23 12:40	125.1	0.0	14.1	0.6	0.0	926.3	0.3	0.2	0.5	-0.8	8.3	Aisle Scrubber Stack
12/1/23 12:41	125.1	0.0	14.3	1.0	0.0	924.6	0.3	0.2	0.5	-0.8	8.4	Aisle Scrubber Stack
12/1/23 12:42	125.1	0.0	14.3	0.6	0.0	926.0	0.3	0.2	0.5	-0.8	8.4	Aisle Scrubber Stack
12/1/23 12:43	125.1	0.0	14.0	0.9	0.0	917.4	0.3	0.3	0.5	-0.8	8.4	Aisle Scrubber Stack
12/1/23 12:44	125.1	0.0	13.9	0.6	0.0	922.2	0.3	0.3	0.5	-0.8	8.3	Aisle Scrubber Stack
12/1/23 12:45	125.0	0.0	13.8	1.4	0.0	926.1	0.3	0.2	0.5	-0.8	8.2	Aisle Scrubber Stack
12/1/23 12:46	124.9	0.0	14.0	0.8	0.0	931.0	0.3	0.3	0.5	-0.8	8.2	Aisle Scrubber Stack
12/1/23 12:47	124.8	0.0	14.0	0.6	0.0	916.6	0.3	0.3	0.5	-0.8	8.1	Aisle Scrubber Stack
12/1/23 12:48	124.6	0.0	13.9	0.8	0.0	907.7	0.3	0.3	0.5	-0.8	8.1	Aisle Scrubber Stack
12/1/23 12:49	124.5	0.0	14.1	0.9	0.0	908.7	0.3	0.2	0.5	-0.8	8.1	Aisle Scrubber Stack
12/1/23 12:50	124.7	0.0	14.2	0.7	0.0	916.5	0.3	0.2	0.5	-0.8	8.1	Aisle Scrubber Stack
12/1/23 12:51	125.2	0.0	8.3	1.8	0.0	918.3	0.3	0.2	0.5	-0.8	8.1	Aisle Scrubber Stack
12/1/23 12:52	125.1	0.0	0.5	0.6	0.0	929.4	0.3	0.2	0.5	-0.8	8.1	Aisle Scrubber Stack
12/1/23 12:53	125.0	0.0	0.5	0.6	0.0	937.9	0.3	0.2	0.5	-0.8	8.1	Aisle Scrubber Stack
12/1/23 12:54	125.0	0.0	0.5	0.4	0.0	940.7	0.3	0.2	0.5	-0.8	8.1	Aisle Scrubber Stack
12/1/23 13:36	125.2	13.0	0.5	0.9	0.0	864.3	0.3	0.3	0.5	-0.8	8.4	Aisle Scrubber Stack
12/1/23 13:37	125.2	13.0	0.5	1.1	0.0	100.6	0.3	0.2	0.5	-0.8	8.4	Aisle Scrubber Stack
12/1/23 13:38	124.9	13.0	0.4	0.8	0.0	0.1	0.3	0.2	0.5	-0.8	8.4	Aisle Scrubber Stack
12/1/23 13:39	124.7	13.0	0.4	0.4	0.0	0.1	0.3	0.2	0.5	-0.8	8.5	Aisle Scrubber Stack
12/1/23 13:40	124.6	13.0	0.4	0.6	0.0	0.1	0.3	0.2	0.5	-0.8	8.5	Aisle Scrubber Stack
12/1/23 13:41	125.2	13.0	0.4	0.6	0.0	0.1	0.3	0.2	0.5	-0.8	8.4	Aisle Scrubber Stack
12/1/23 13:42	125.5	13.0	0.4	0.5	0.0	0.1	0.3	0.2	0.5	-0.8	8.4	Aisle Scrubber Stack
12/1/23 13:43	125.2	13.0	0.5	0.7	0.0	0.1	0.3	0.2	0.5	-0.8	8.4	Aisle Scrubber Stack
12/1/23 13:44	124.9	13.0	0.4	0.6	0.0	0.1	0.3	0.2	0.5	6245.2	8.4	Aisle Scrubber Stack
12/1/23 13:45	125.0	13.0	0.4	0.9	0.0	0.1	0.3	0.2	0.5	7748.5	8.4	Aisle Scrubber Stack
12/1/23 13:46	125.2	13.0	0.5	0.9	0.0	0.1	0.3	0.2	0.5	7640.1	8.4	Aisle Scrubber Stack
12/1/23 13:47	125.3	13.0	0.5	0.7	0.0	195.1	0.3	0.2	0.5	4332.3	8.4	Aisle Scrubber Stack
12/1/23 13:48	125.2	13.0	0.4	0.7	0.0	348.4	0.3	0.2	0.5	3748.1	8.4	Aisle Scrubber Stack
12/1/23 13:49	125.1	13.0	0.4	0.6	0.0	0.1	0.3	0.2	0.5	1.1	8.4	Aisle Scrubber Stack
12/1/23 13:50	125.0	12.9	0.3	1.0	0.0	0.1	292.5	0.2	0.5	5266.1	8.4	Aisle Scrubber Stack
12/1/23 13:51	125.1	12.9	0.4	0.7	0.0	0.1	463.9	0.2	0.5	6265.0	8.4	Aisle Scrubber Stack
12/1/23 13:52	125.1	12.7	0.5	0.4	0.0	0.1	530.3	0.2	0.5	6192.5	8.4	Aisle Scrubber Stack
12/1/23 13:53	124.9	12.4	0.5	0.7	0.0	0.1	563.2	0.2	0.5	6129.7	8.4	Aisle Scrubber Stack
12/1/23 13:54	124.5	11.8	0.6	0.7	0.0	0.1	580.0	0.2	0.5	6090.8	8.4	Aisle Scrubber Stack
12/1/23 13:55	124.6	11.5	0.5	0.9	0.0	0.1	592.3	0.2	0.5	6065.7	8.4	Aisle Scrubber Stack
12/1/23 13:56	124.9	11.9	0.5	0.8	0.0	0.1	596.2	0.2	0.5	6045.4	8.4	Aisle Scrubber Stack
12/1/23 13:57	125.3	11.8	0.5	1.0	0.0	0.1	599.5	0.2	0.5	6033.9	8.4	Aisle Scrubber Stack
12/1/23 13:58	125.1	11.3	0.5	1.0	0.0	0.1	599.9	0.2	0.5	6022.7	8.4	Aisle Scrubber Stack
12/1/23 13:59	125.0	11.6	0.5	1.0	0.0	0.1	599.8	0.2	0.5	6015.5	8.4	Aisle Scrubber Stack
12/1/23 14:00	125.0	11.4	0.5	0.5	0.0	0.1	599.7	0.2	0.5	6010.0	8.5	Aisle Scrubber Stack
12/1/23 14:01	125.0	10.7	0.5	0.7	0.0	0.1	599.5	0.3	0.5	6002.2	8.5	Aisle Scrubber Stack
12/1/23 14:02	124.9	11.0	0.5	1.0	0.0	0.1	599.4	0.2	0.5	6002.0	8.5	Aisle Scrubber Stack
12/1/23 14:03	124.8	10.8	0.5	0.7	0.0	0.1	599.3	0.2	0.5	5998.3	8.5	Aisle Scrubber Stack
12/1/23 14:04	124.8	10.8	0.6	0.9	0.0	0.1	599.1	0.2	0.5	5998.9	8.5	Aisle Scrubber Stack
12/1/23 14:05	125.1	11.4	0.5	0.9	0.0	0.1	599.0	0.2	0.5	5996.3	8.6	Aisle Scrubber Stack
12/1/23 14:06	124.8	12.3	0.6	1.0	0.0	0.1	598.8	0.2	0.5	5989.3	8.6	Aisle Scrubber Stack
12/1/23 14:07	124.7	13.6	0.5	0.7	0.0	0.1	598.7	0.2	0.5	5993.0	8.6	Aisle Scrubber Stack
12/1/23 14:08	124.9	14.1	0.6	0.6	0.0	0.1	598.6	0.3	0.5	5990.0	8.6	Aisle Scrubber Stack
12/1/23 14:09	124.9	14.4	0.6	0.9	0.0	0.1	598.4	0.3	0.5	5989.2	8.6	Aisle Scrubber Stack
12/1/23 14:10	124.9	15.0	0.5	0.7	0.0	0.1	598.3	0.3	0.5	5988.2	8.5	Aisle Scrubber Stack
12/1/23 14:11	125.0	16.0	0.6	0.7	0.0	0.1	598.2	0.3	0.5	5984.8	8.5	Aisle Scrubber Stack
12/1/23 14:12	125.2	16.8	0.6	0.8	0.0	0.1	598.0	0.3	0.5	5986.7	8.5	Aisle Scrubber Stack



	Isa Feed Rate (tons/hour)	#2 Converter Blast Air (kscfm)	#3 Converter Blast Air (kscfm)	#4 Converter Blast Air (kscfm)	#5 Converter Blast Air (kscfm)	#1 Anode Barrel Air (scfm)	#1 Anode Barrel Gas (scfm)	#2 Anode Barrel Air (scfm)	#2 Anode Barrel Gas (scfm)	Steam Use (lbs/hr)	Electric Furnace Power (MW)	
12/1/23 14:13	125.2	17.4	0.6	1.0	0.0	0.1	597.9	0.3	0.5	5984.8	8.5	Aisle Scrubber Stack
12/1/23 14:14	125.1	17.8	0.6	1.2	0.0	0.1	597.8	0.3	0.5	5983.1	8.5	Aisle Scrubber Stack
12/1/23 14:15	125.2	18.1	0.6	1.0	0.0	0.1	597.6	0.3	0.5	5981.0	8.5	Aisle Scrubber Stack
12/1/23 14:16	125.2	18.3	0.6	0.9	0.0	0.1	597.5	0.3	0.5	5978.6	8.5	Aisle Scrubber Stack
12/1/23 14:17	125.1	18.2	0.6	1.1	0.0	0.1	597.4	0.3	0.5	5968.2	8.5	Aisle Scrubber Stack
12/1/23 14:18	124.3	18.2	0.6	0.8	0.0	0.1	597.2	0.3	0.5	5966.1	8.5	Aisle Scrubber Stack
12/1/23 14:19	124.7	18.1	0.5	0.7	0.0	0.1	597.1	0.3	0.5	5966.3	8.5	Aisle Scrubber Stack
12/1/23 14:20	125.0	18.0	0.5	1.0	0.0	0.1	596.9	0.3	0.5	5961.8	8.4	Aisle Scrubber Stack
12/1/23 14:21	124.9	18.0	0.6	2.3	0.0	0.1	596.8	0.3	0.5	5964.3	8.4	Aisle Scrubber Stack
12/1/23 14:22	125.1	18.0	0.6	12.6	0.0	0.1	596.7	0.3	0.5	5961.1	8.4	Aisle Scrubber Stack
12/1/23 14:23	125.1	18.0	0.5	16.7	0.0	0.1	596.5	0.3	0.5	5958.6	8.4	Aisle Scrubber Stack
12/1/23 14:24	125.2	18.0	0.5	17.0	0.0	0.1	596.4	0.3	0.5	5958.8	8.3	Aisle Scrubber Stack
12/1/23 14:25	125.4	18.0	0.6	17.1	0.0	0.1	596.2	0.3	0.5	5955.2	8.3	Aisle Scrubber Stack
12/1/23 14:26	125.1	18.0	0.6	17.1	0.0	0.1	596.1	0.3	0.5	5952.8	8.3	Aisle Scrubber Stack
12/1/23 14:27	125.1	18.0	0.5	17.1	0.0	0.1	595.9	0.3	0.5	5953.7	8.3	Aisle Scrubber Stack
12/1/23 14:28	125.1	18.0	0.5	17.1	0.0	0.1	595.8	0.3	0.5	5954.7	8.3	Aisle Scrubber Stack
12/1/23 14:29	125.1	18.0	0.6	17.1	0.0	0.1	595.6	0.3	0.5	5956.6	8.3	Aisle Scrubber Stack
12/1/23 14:30	125.0	18.0	0.5	17.1	0.0	0.1	595.5	0.3	0.5	5955.8	8.3	Aisle Scrubber Stack
12/1/23 14:31	124.9	18.0	0.6	17.1	0.0	0.1	595.5	0.3	0.5	5956.2	8.3	Aisle Scrubber Stack
12/1/23 14:32	125.1	18.0	0.5	17.1	0.0	0.1	598.0	0.3	0.5	5956.0	8.3	Aisle Scrubber Stack
12/1/23 14:33	125.0	18.0	0.5	17.1	0.0	0.1	597.1	0.3	0.5	5955.5	8.3	Aisle Scrubber Stack
12/1/23 14:34	125.1	18.0	0.5	17.1	0.0	0.1	599.1	0.3	0.5	5956.0	8.3	Aisle Scrubber Stack
12/1/23 14:35	125.2	18.0	0.5	17.1	0.0	0.1	599.0	0.3	0.5	5955.0	8.3	Aisle Scrubber Stack
12/1/23 14:36	125.0	18.0	0.6	17.1	0.0	0.1	598.7	0.3	0.5	5956.2	8.3	Aisle Scrubber Stack
12/1/23 14:37	124.8	18.0	0.6	17.1	0.0	0.1	598.4	0.3	0.5	5957.8	8.3	Aisle Scrubber Stack
12/1/23 14:38	124.5	18.0	0.6	17.1	0.0	0.1	598.1	0.3	0.5	5959.5	8.3	Aisle Scrubber Stack
12/1/23 14:39	124.6	18.0	0.6	17.1	0.0	0.1	597.9	0.3	0.5	5960.1	8.3	Aisle Scrubber Stack
12/1/23 14:40	125.6	18.0	0.6	17.1	0.0	0.1	597.6	0.3	0.5	5961.5	8.3	Aisle Scrubber Stack
12/1/23 14:41	125.3	18.0	0.6	17.1	0.0	0.1	597.3	0.3	0.5	5961.0	8.3	Aisle Scrubber Stack
12/1/23 14:42	125.0	18.0	0.6	17.1	0.0	0.1	597.0	0.3	0.5	5960.2	8.2	Aisle Scrubber Stack
12/1/23 14:43	125.0	18.0	0.6	17.1	0.0	0.1	596.7	0.3	0.5	5959.4	8.2	Aisle Scrubber Stack
12/1/23 14:44	125.2	18.0	0.7	17.1	0.0	0.1	596.4	0.3	0.5	5960.9	8.2	Aisle Scrubber Stack
12/1/23 14:45	125.0	18.0	0.6	17.1	0.0	0.1	596.1	0.3	0.5	5961.1	8.2	Aisle Scrubber Stack
12/1/23 14:46	124.9	18.0	0.6	17.1	0.0	0.1	596.0	0.3	0.5	5963.6	8.1	Aisle Scrubber Stack
12/1/23 14:47	125.0	18.0	0.6	17.1	0.0	0.1	596.1	0.3	0.5	5964.7	8.1	Aisle Scrubber Stack
12/1/23 14:48	125.1	18.0	0.6	17.1	0.0	0.1	596.3	0.3	0.5	5964.2	8.1	Aisle Scrubber Stack
12/1/23 14:49	125.2	17.9	0.7	17.0	0.0	0.1	596.4	0.3	0.5	5967.8	8.1	Aisle Scrubber Stack
12/1/23 14:50	124.9	17.9	0.6	17.0	0.0	0.1	596.5	0.3	0.5	5968.1	8.2	Aisle Scrubber Stack
12/1/23 14:51	125.2	17.9	0.6	17.0	0.0	0.1	596.6	0.3	0.5	5970.4	8.2	Aisle Scrubber Stack
12/1/23 14:52	125.1	17.8	0.7	17.1	0.0	0.1	596.8	0.3	0.5	5970.8	8.1	Aisle Scrubber Stack
12/1/23 14:53	124.8	17.8	0.7	17.2	0.0	0.1	596.9	0.3	0.5	5969.8	8.1	Aisle Scrubber Stack
12/1/23 14:54	124.8	17.9	0.7	17.1	0.0	0.1	597.0	0.3	0.5	5972.8	8.1	Aisle Scrubber Stack
12/1/23 14:55	125.0	17.8	0.7	17.1	0.0	0.1	597.2	0.3	0.5	5974.2	8.1	Aisle Scrubber Stack
12/1/23 14:56	125.2	17.2	0.7	17.1	0.0	0.1	597.3	0.3	0.5	5977.0	8.1	Aisle Scrubber Stack
12/1/23 14:57	125.1	17.0	0.8	17.1	0.0	0.1	597.4	0.3	0.5	5976.0	8.1	Aisle Scrubber Stack
12/1/23 14:58	125.0	17.0	0.7	17.2	0.0	0.1	597.5	0.3	0.5	5975.5	8.1	Aisle Scrubber Stack
12/1/23 14:59	124.9	17.1	0.7	17.6	0.0	0.1	597.7	0.3	0.5	5977.0	8.1	Aisle Scrubber Stack
12/1/23 15:00	124.8	16.9	0.7	18.0	0.0	0.1	597.8	0.3	0.5	5976.4	8.1	Aisle Scrubber Stack
12/1/23 15:01	124.7	16.7	0.8	18.0	0.0	0.1	597.9	0.3	0.5	5978.1	8.1	Aisle Scrubber Stack
12/1/23 15:02	124.7	16.4	0.7	18.0	0.0	0.1	598.0	0.3	0.5	5977.2	8.1	Aisle Scrubber Stack
12/1/23 15:03	124.8	16.1	0.7	18.0	0.0	0.1	598.2	0.3	0.5	5976.2	8.1	Aisle Scrubber Stack
12/1/23 15:04	125.0	15.7	0.7	18.0	0.0	0.1	598.3	0.3	0.5	5978.2	8.1	Aisle Scrubber Stack
12/1/23 15:05	125.1	15.2	0.7	18.0	0.0	0.1	598.4	0.3	0.5	5978.2	8.1	Aisle Scrubber Stack
12/1/23 15:06	125.1	14.4	0.6	18.0	0.0	0.1	598.6	0.3	0.5	5979.3	8.1	Aisle Scrubber Stack
12/1/23 15:07	125.0	13.6	0.5	18.0	0.0	0.1	598.7	0.3	0.5	5977.4	8.2	Aisle Scrubber Stack
12/1/23 15:08	125.0	12.3	0.5	18.0	0.0	0.1	598.8	0.3	0.5	5977.3	8.2	Aisle Scrubber Stack
12/1/23 15:09	124.9	11.2	0.5	18.0	0.0	0.1	598.7	0.3	0.5	5978.5	8.2	Aisle Scrubber Stack
12/1/23 15:10	124.8	10.9	0.5	18.0	0.0	0.1	598.7	0.3	0.5	5980.0	8.2	Aisle Scrubber Stack
12/1/23 15:11	124.7	10.6	0.5	18.0	0.0	0.1	598.7	0.3	0.5	5986.0	8.2	Aisle Scrubber Stack
12/1/23 15:12	125.0	10.2	0.5	18.0	0.0	0.1	598.7	0.3	0.5	5987.2	8.2	Aisle Scrubber Stack
12/1/23 15:13	124.9	9.9	0.5	18.0	0.0	0.1	598.6	0.3	0.5	5989.4	8.2	Aisle Scrubber Stack
12/1/23 15:14	124.9	10.0	0.5	18.0	0.0	0.1	598.6	0.3	0.5	5987.6	8.2	Aisle Scrubber Stack
12/1/23 15:15	125.0	9.9	0.5	18.0	0.0	0.1	598.6	0.3	0.5	5985.6	8.2	Aisle Scrubber Stack
12/1/23 15:16	125.0	9.8	0.5	18.0	0.0	0.1	598.6	0.3	0.5	5984.7	8.2	Aisle Scrubber Stack
12/1/23 15:17	125.0	4.5	0.4	18.0	0.0	0.1	598.5	0.3	0.5	5982.9	8.2	Aisle Scrubber Stack
12/1/23 15:18	124.9	0.0	0.4	18.0	0.0	0.1	598.4	0.3	0.5	5978.9	8.1	Aisle Scrubber Stack
12/1/23 15:19	124.9	0.0	0.4	18.0	0.0	0.1	597.9	0.3	0.5	5976.5	8.0	Aisle Scrubber Stack
12/1/23 15:20	124.8	0.0	0.4	16.7	0.0	0.1	597.3	0.3	0.5	5974.8	8.0	Aisle Scrubber Stack
12/1/23 15:21	124.9	0.0	0.4	0.8	0.0	0.1	596.8	0.3	0.5	5970.7	7.9	Aisle Scrubber Stack
12/1/23 15:22	125.2	0.0	0.4	0.3	0.0	0.1	596.2	0.3	0.5	5970.6	7.9	Aisle Scrubber Stack
12/1/23 15:23	125.0	0.0	0.4	0.2	0.0	0.1	596.0	0.3	0.5	5969.6	7.9	Aisle Scrubber Stack
12/1/23 15:24	124.8	0.0	0.4	0.2	0.0	0.1	596.0	0.3	0.5	5970.7	8.0	Aisle Scrubber Stack
12/1/23 15:25	124.9	0.0	0.4	0.3	0.0	0.1	596.0	0.3	0.5	5972.3	8.0	Aisle Scrubber Stack
12/1/23 15:26	125.0	0.0	0.4	0.3	0.0	0.1	596.0	0.3	0.5	5972.5	8.1	Aisle Scrubber Stack
12/1/23 15:27	124.8	1.0	0.5	0.7	0.0	0.1	596.0	0.3	0.5	5974.9	8.1	Aisle Scrubber Stack
12/1/23 15:28	125.0	6.9	0.4	0.2	0.0	0.1	596.0	0.3	0.5	5970.9	8.2	Aisle Scrubber Stack
12/1/23 15:29	125.2	9.7	0.4	0.3	0.0	0.1	596.0	0.3	0.5	5970.7	8.3	Aisle Scrubber Stack
12/1/23 15:30	125.0	11.9	0.7	0.9	0.0	0.1	596.0	0.3	0.5	5971.3	8.3	Aisle Scrubber Stack
12/1/23 15:31	125.0	14.5	0.7	0.8	0.0	0.1	596.0	0.3	0.5	5969.1	8.3	Aisle Scrubber Stack
12/1/23 15:32	125.0	15.1	0.8	0.8	0.0	0.1	596.0	0.3	0.5	5970.5	8.3	Aisle Scrubber Stack
12/1/23 15:33	125.1	15.3	0.7	0.7	0.0	0.1	596.0	0.3	0.5	5967.6	8.4	Aisle Scrubber Stack
12/1/23 15:34	124.9	15.3	0.7	0.8	0.0	0.1	596.0	0.3	0.5	5968.1	8.3	Aisle Scrubber Stack
12/1/23 15:35	124.7	15.2	0.8	0.8	0.0	0.1	596.0	0.3	0.5	5965.8	8.2	Aisle Scrubber Stack
12/1/23 15:36	124.7	15.2	0.8	0.8	0.0	0.1	596.0	0.3	0.5	5965.7	8.3	Aisle Scrubber Stack
12/1/23 15:37	125.0	15.4	0.7	0.8	0.0	0.1	596.0	0.3	0.5	5964.8	8.3	Aisle Scrubber Stack
12/1/23 15:38	125.3	15.4	0.7	1.1	0.0	0.1	596.0	0.3	0.5	5964.9	8.3	Aisle Scrubber Stack
12/1/23 15:39	125.3	15.1	0.6	10.2	0.0	0.1	596.0	0.3	0.5	5962.1	8.3	Aisle Scrubber Stack

	Isa Feed Rate (tons/hour)	#2 Converter Blast Air (kscfm)	#3 Converter Blast Air (kscfm)	#4 Converter Blast Air (kscfm)	#5 Converter Blast Air (kscfm)	#1 Anode Barrel Air (scfm)	#1 Anode Barrel Gas (scfm)	#2 Anode Barrel Air (scfm)	#2 Anode Barrel Gas (scfm)	Steam Use (lbs/hr)	Electric Furnace Power (MW)	
12/1/23 15:40	125.1	15.3	0.8	17.0	0.0	0.1	596.0	0.3	0.5	5962.8	8.3	Aisle Scrubber Stack
12/1/23 15:41	124.9	15.3	0.8	17.8	0.0	0.1	596.0	0.3	0.5	5963.1	8.3	Aisle Scrubber Stack
12/1/23 15:42	124.8	15.3	0.7	17.9	0.0	0.1	596.0	0.3	0.5	5962.1	8.4	Aisle Scrubber Stack
12/1/23 15:43	125.2	15.3	0.8	17.8	0.0	0.1	596.1	0.3	0.5	5962.2	8.4	Aisle Scrubber Stack
12/1/23 15:44	125.1	15.5	0.7	17.8	0.0	0.1	596.1	0.3	0.5	5961.0	8.4	Aisle Scrubber Stack
12/1/23 15:45	125.0	15.4	0.7	17.8	0.0	0.1	596.1	0.3	0.5	5962.5	8.4	Aisle Scrubber Stack
12/1/23 15:46	124.8	15.4	0.7	17.9	0.0	0.1	596.1	0.3	0.5	5963.9	8.4	Aisle Scrubber Stack
12/1/23 15:47	125.0	15.4	0.7	17.8	0.0	0.1	596.1	0.3	0.5	5962.9	8.5	Aisle Scrubber Stack
12/1/23 15:48	125.1	15.5	0.7	17.7	0.0	0.1	596.2	0.3	0.5	5963.5	8.5	Aisle Scrubber Stack
12/1/23 15:49	125.3	15.5	0.7	17.4	0.0	0.1	596.2	0.3	0.5	5965.5	8.3	Aisle Scrubber Stack
12/1/23 15:50	125.1	15.6	0.7	17.0	0.0	0.1	596.4	0.3	0.5	5966.2	8.1	Aisle Scrubber Stack
12/1/23 15:51	125.1	15.6	0.7	17.0	0.0	0.1	596.7	0.3	0.5	5965.5	8.1	Aisle Scrubber Stack
12/1/23 15:52	125.1	15.5	0.7	17.0	0.0	0.1	597.0	0.3	0.5	5968.0	8.1	Aisle Scrubber Stack
12/1/23 15:53	125.1	15.3	0.7	17.2	0.0	0.1	597.3	0.3	0.5	5968.7	8.0	Aisle Scrubber Stack
12/1/23 15:54	125.0	14.9	0.8	17.5	0.0	0.2	597.6	0.3	0.5	5970.3	8.0	Aisle Scrubber Stack
12/1/23 15:55	125.0	14.6	0.7	17.4	0.0	0.1	597.7	0.3	0.5	5971.6	8.0	Aisle Scrubber Stack
12/1/23 15:56	125.0	14.6	0.7	17.6	0.0	0.1	597.8	0.3	0.5	5975.4	8.0	Aisle Scrubber Stack
12/1/23 15:57	124.9	14.6	0.7	17.4	0.0	0.2	597.9	0.3	0.5	5976.1	8.0	Aisle Scrubber Stack
12/1/23 15:58	124.9	14.6	0.8	18.1	0.0	0.1	598.0	0.3	0.5	5977.2	8.0	Aisle Scrubber Stack
12/1/23 15:59	125.1	14.6	0.7	18.5	0.0	0.1	598.2	0.3	0.5	5978.4	8.0	Aisle Scrubber Stack
12/1/23 16:00	125.0	14.5	0.7	18.2	0.0	0.1	598.3	0.3	0.5	5980.0	8.1	Aisle Scrubber Stack
12/1/23 16:01	124.9	14.5	0.7	18.1	0.0	0.1	598.4	0.3	0.5	5983.9	8.1	Aisle Scrubber Stack
12/1/23 16:02	124.8	14.6	0.7	17.9	0.0	0.1	598.5	0.3	0.5	5981.5	8.1	Aisle Scrubber Stack
12/1/23 16:03	124.7	14.8	0.7	17.9	0.0	0.1	599.1	0.3	0.5	5981.8	8.1	Aisle Scrubber Stack
12/1/23 16:04	124.9	14.8	0.7	18.1	0.0	0.1	599.0	0.3	0.5	5980.0	8.1	Aisle Scrubber Stack
12/1/23 16:05	125.1	14.8	0.7	18.1	0.0	0.1	598.0	0.3	0.5	5977.0	8.1	Aisle Scrubber Stack
12/1/23 16:06	125.3	14.8	0.7	18.0	0.0	0.1	597.1	0.3	0.5	5980.8	8.2	Aisle Scrubber Stack
12/1/23 16:07	125.2	14.8	0.7	18.0	0.0	0.1	596.9	0.3	0.5	5980.2	8.2	Aisle Scrubber Stack
12/1/23 16:08	125.0	14.8	0.8	18.1	0.0	0.1	597.2	0.3	0.5	5979.0	8.2	Aisle Scrubber Stack
12/1/23 16:09	124.9	15.0	0.7	18.0	0.0	0.1	597.4	0.3	0.5	5980.5	8.3	Aisle Scrubber Stack
12/1/23 16:10	125.0	15.1	0.8	18.0	0.0	0.1	597.7	0.3	0.5	5981.9	8.3	Aisle Scrubber Stack
12/1/23 16:11	125.1	15.2	0.7	18.0	0.0	0.1	597.9	0.3	0.5	5981.7	8.3	Aisle Scrubber Stack
12/1/23 16:12	125.0	15.2	0.7	18.0	0.0	0.1	598.1	0.3	0.5	5983.3	8.4	Aisle Scrubber Stack
12/1/23 16:13	124.9	15.5	0.8	18.0	0.0	0.1	598.2	0.3	0.5	5985.2	8.4	Aisle Scrubber Stack
12/1/23 16:14	124.7	15.7	0.7	18.0	0.0	0.1	598.4	0.3	0.5	5986.8	8.4	Aisle Scrubber Stack
12/1/23 16:15	125.1	15.9	0.8	18.0	0.0	0.1	598.6	0.3	0.5	5987.4	8.4	Aisle Scrubber Stack
12/1/23 16:16	125.2	16.0	0.8	18.0	0.0	0.2	598.7	0.3	0.5	5988.2	8.4	Aisle Scrubber Stack
12/1/23 16:17	125.0	16.0	0.7	18.0	0.0	0.1	598.9	0.3	0.5	5987.0	8.4	Aisle Scrubber Stack
12/1/23 16:18	124.9	16.0	0.7	18.0	0.0	0.1	599.0	0.3	0.5	5990.2	8.4	Aisle Scrubber Stack
12/1/23 16:19	124.9	16.2	0.7	5.3	0.0	0.1	599.2	0.3	0.5	5991.0	8.5	Aisle Scrubber Stack
12/1/23 16:20	125.0	16.3	0.7	0.6	0.0	0.1	407.8	0.3	0.5	4245.8	8.5	Aisle Scrubber Stack
12/1/23 16:21	125.1	16.2	0.7	0.6	0.0	0.1	1.0	0.3	0.5	6.6	8.5	Aisle Scrubber Stack
12/1/23 16:22	125.1	16.3	0.7	0.6	0.0	0.1	0.9	0.3	0.5	-0.2	8.6	Aisle Scrubber Stack
12/1/23 16:23	125.1	16.5	0.7	0.6	0.0	0.1	0.9	0.3	0.5	-0.2	8.5	Aisle Scrubber Stack
12/1/23 16:24	125.0	16.5	0.7	0.6	0.0	0.1	0.9	0.3	0.5	-0.2	8.5	Aisle Scrubber Stack
12/1/23 16:25	124.8	16.8	0.7	0.6	0.0	0.1	0.9	0.3	0.5	-0.2	8.5	Aisle Scrubber Stack
12/1/23 16:26	124.5	16.9	0.7	0.5	0.0	0.1	0.9	0.3	0.5	-0.2	8.5	Aisle Scrubber Stack
12/1/23 16:27	124.8	17.0	0.8	0.8	0.0	0.1	0.9	0.3	0.5	-0.2	8.5	Aisle Scrubber Stack
12/1/23 16:28	125.4	17.0	0.7	0.7	0.0	0.1	0.9	0.3	0.5	-0.2	8.4	Aisle Scrubber Stack
12/1/23 16:29	125.0	17.0	0.7	0.6	0.0	0.1	0.8	0.3	0.5	-0.2	8.2	Aisle Scrubber Stack
12/1/23 16:30	124.9	17.0	0.7	0.8	0.0	0.1	0.8	0.3	0.5	-0.2	8.1	Aisle Scrubber Stack
12/1/23 16:31	124.9	16.9	0.7	6.5	0.0	0.1	0.8	0.3	0.5	-0.2	8.0	Aisle Scrubber Stack
12/1/23 16:32	124.8	17.0	0.7	15.7	0.0	0.1	0.8	0.3	0.5	-0.2	8.0	Aisle Scrubber Stack
12/1/23 16:33	124.9	17.3	0.7	17.6	0.0	0.1	0.8	0.3	0.5	-0.2	7.9	Aisle Scrubber Stack
12/1/23 16:34	125.4	17.4	0.7	17.7	0.0	0.1	0.8	0.3	0.5	-0.2	7.9	Aisle Scrubber Stack
12/1/23 16:35	125.1	17.4	0.7	17.8	0.0	0.1	0.8	0.3	0.5	-0.2	7.9	Aisle Scrubber Stack
12/1/23 16:36	125.0	17.2	0.7	17.6	0.0	0.1	0.8	0.3	0.5	-0.2	7.9	Aisle Scrubber Stack
12/1/23 16:37	125.0	17.3	0.7	17.6	0.0	0.1	0.8	0.3	0.5	-0.2	7.9	Aisle Scrubber Stack
12/1/23 16:38	125.1	17.4	0.7	17.2	0.0	0.1	0.8	0.3	0.5	-0.2	7.9	Aisle Scrubber Stack
12/1/23 16:39	124.8	17.4	0.7	16.8	0.0	0.1	0.7	0.3	0.5	-0.2	7.9	Aisle Scrubber Stack
12/1/23 16:40	124.9	17.5	0.7	17.2	0.0	0.1	0.7	0.3	0.5	-0.2	7.9	Aisle Scrubber Stack
12/1/23 16:41	125.0	17.6	0.7	18.0	0.0	0.1	0.7	0.3	0.5	-0.2	7.9	Aisle Scrubber Stack
12/1/23 16:42	125.0	17.8	0.8	18.4	0.0	0.1	0.7	0.3	0.5	-0.2	7.9	Aisle Scrubber Stack
12/1/23 16:43	125.0	17.8	0.7	18.1	0.0	0.1	0.7	0.3	0.5	-0.2	7.9	Aisle Scrubber Stack
12/1/23 16:44	125.0	18.0	0.8	17.9	0.0	0.1	0.7	0.3	0.5	-0.2	7.9	Aisle Scrubber Stack
12/1/23 16:45	125.0	18.0	0.7	18.1	0.0	0.1	0.7	0.3	0.5	-0.2	7.9	Aisle Scrubber Stack
12/1/23 16:46	124.9	18.1	0.7	18.2	0.0	0.1	0.7	0.3	0.5	-0.2	7.9	Aisle Scrubber Stack
12/1/23 16:47	124.7	18.1	0.7	18.1	0.0	0.1	0.7	0.3	0.5	-0.2	7.9	Aisle Scrubber Stack
12/1/23 16:48	124.6	18.0	0.8	17.8	0.0	0.1	0.6	0.3	0.5	-0.2	7.9	Aisle Scrubber Stack
12/1/23 16:49	125.1	18.1	0.8	18.4	0.0	0.1	0.6	0.3	0.5	-0.2	7.9	Aisle Scrubber Stack
12/1/23 16:50	125.3	18.1	0.7	17.8	0.0	0.1	0.6	0.3	0.5	-0.2	7.9	Aisle Scrubber Stack
12/1/23 16:51	125.1	18.1	0.7	17.9	0.0	0.1	0.6	0.3	0.5	-0.2	7.9	Aisle Scrubber Stack
12/1/23 16:52	124.8	18.1	0.8	18.0	0.0	0.1	0.6	0.3	0.5	-0.2	7.9	Aisle Scrubber Stack
12/1/23 16:53	124.9	18.1	0.7	18.1	0.0	0.1	0.6	0.3	0.5	-0.2	7.9	Aisle Scrubber Stack
12/1/23 16:54	125.3	18.1	0.7	18.1	0.0	0.1	0.6	0.3	0.5	-0.2	7.9	Aisle Scrubber Stack
12/1/23 16:55	125.1	18.0	0.7	17.5	0.0	0.1	0.6	0.3	0.5	-0.2	7.9	Aisle Scrubber Stack
12/2/23 11:35	124.7	17.1	0.5	0.5	17.0	0.1	0.5	0.2	0.4	-0.7	7.5	Vent Fume Stack
12/2/23 11:36	124.7	17.1	0.4	0.4	17.0	0.1	0.5	0.2	0.4	-0.7	7.5	Vent Fume Stack
12/2/23 11:37	124.6	17.1	0.4	0.7	16.8	0.1	0.4	0.2	0.4	-0.7	7.5	Vent Fume Stack
12/2/23 11:38	124.9	17.1	0.4	0.4	16.0	0.1	0.4	0.2	0.4	-0.7	7.5	Vent Fume Stack
12/2/23 11:39	125.1	17.1	0.4	0.3	16.0	0.1	0.4	0.2	0.4	-0.7	7.5	Vent Fume Stack
12/2/23 11:40	125.0	17.1	0.4	0.3	16.0	0.1	0.3	0.2	0.4	-0.7	7.5	Vent Fume Stack
12/2/23 11:41	125.0	15.3	0.4	0.3	16.0	0.1	0.3	0.2	0.4	-0.7	7.5	Vent Fume Stack
12/2/23 11:42	124.8	0.2	0.4	0.9	16.0	0.1	0.3	0.2	0.4	-0.7	7.5	Vent Fume Stack
12/2/23 11:43	124.7	0.0	0.3	0.4	16.0	0.1	0.2	0.2	0.4	-0.7	7.5	Vent Fume Stack
12/2/23 11:44	124.9	0.0	0.4	0.4	16.0	0.1	0.2	0.2	0.4	-0.7	7.5	Vent Fume Stack



	Isa Feed Rate (tons/hour)	#2 Converter Blast Air (kscfm)	#3 Converter Blast Air (kscfm)	#4 Converter Blast Air (kscfm)	#5 Converter Blast Air (kscfm)	#1 Anode Barrel Air (scfm)	#1 Anode Barrel Gas (scfm)	#2 Anode Barrel Air (scfm)	#2 Anode Barrel Gas (scfm)	Steam Use (lbs/hr)	Electric Furnace Power (MW)	
12/2/23 13:12	125.1	0.0	16.3	0.5	16.0	0.1	0.3	0.2	0.4	-0.7	7.7	Vent Fume Stack
12/2/23 13:13	125.1	0.0	16.3	0.6	16.0	0.1	0.3	0.2	0.4	-0.7	7.7	Vent Fume Stack
12/2/23 13:14	125.1	0.0	16.8	0.6	16.0	0.1	0.3	0.2	0.4	-0.7	7.7	Vent Fume Stack
12/2/23 13:15	125.0	0.0	17.3	0.6	16.0	0.1	0.3	0.2	0.4	-0.7	7.7	Vent Fume Stack
12/2/23 13:16	124.9	0.0	17.3	0.5	16.0	0.1	0.3	0.2	0.4	-0.7	7.7	Vent Fume Stack
12/2/23 13:17	124.8	0.0	17.2	0.5	16.0	0.1	0.3	0.2	0.4	-0.7	7.7	Vent Fume Stack
12/2/23 13:18	124.8	0.0	17.1	0.6	16.0	0.1	0.3	0.2	0.4	-0.7	7.7	Vent Fume Stack
12/2/23 13:19	125.0	0.0	17.3	0.6	16.6	0.1	0.3	0.2	0.4	-0.7	7.7	Vent Fume Stack
12/2/23 13:20	125.0	0.0	17.2	0.5	18.1	0.1	0.3	0.2	0.4	-0.7	7.7	Vent Fume Stack
12/2/23 13:21	125.1	0.0	17.1	0.5	17.9	0.1	0.3	0.2	0.4	-0.7	7.7	Vent Fume Stack
12/2/23 13:22	125.0	0.0	17.0	0.7	17.8	0.1	0.3	0.2	0.4	-0.7	7.7	Vent Fume Stack
12/2/23 13:23	124.9	0.0	17.1	0.8	17.7	0.1	0.3	0.2	0.4	-0.7	7.7	Vent Fume Stack
12/2/23 13:24	125.2	0.0	17.2	0.6	17.6	0.1	0.3	0.2	0.4	-0.7	7.7	Vent Fume Stack
12/2/23 13:25	125.2	0.0	17.2	0.8	17.5	0.1	0.3	0.2	0.4	-0.7	7.7	Vent Fume Stack
12/2/23 13:26	125.2	0.0	17.2	0.7	17.6	0.1	0.3	0.2	0.4	-0.7	7.7	Vent Fume Stack
12/2/23 13:27	125.1	0.0	17.1	0.8	17.9	0.1	0.3	0.2	0.4	-0.7	7.7	Vent Fume Stack
12/2/23 13:28	125.0	0.0	17.1	0.8	18.0	0.1	0.3	0.2	0.4	-0.7	7.7	Vent Fume Stack
12/2/23 13:29	124.9	0.0	17.1	0.6	18.1	0.1	0.3	0.2	0.4	-0.7	7.7	Vent Fume Stack
12/2/23 13:30	125.0	0.0	17.0	0.7	18.1	0.1	0.3	0.2	0.4	-0.7	7.7	Vent Fume Stack
12/2/23 13:31	124.8	0.0	17.1	0.8	18.1	0.1	0.3	0.2	0.4	-0.7	7.6	Vent Fume Stack
12/2/23 13:32	125.0	0.0	17.2	0.8	18.2	0.1	0.3	0.2	0.4	-0.7	7.6	Vent Fume Stack
12/2/23 13:33	125.4	0.0	17.1	0.7	18.3	0.1	0.3	0.2	0.4	-0.7	7.6	Vent Fume Stack
12/2/23 13:34	125.1	0.0	17.1	1.0	18.2	0.1	0.3	0.2	0.4	-0.7	7.6	Vent Fume Stack
12/2/23 13:35	124.7	0.0	6.8	1.7	18.1	0.1	0.3	0.2	0.4	-0.7	7.6	Vent Fume Stack
12/2/23 13:36	124.9	0.0	0.5	0.6	18.1	0.1	0.3	0.2	0.4	-0.7	7.6	Vent Fume Stack
12/2/23 13:37	124.8	0.0	0.5	0.6	18.0	0.1	0.3	0.2	0.4	-0.7	7.6	Vent Fume Stack
12/2/23 13:38	124.9	0.0	0.5	0.5	18.0	0.1	0.3	0.2	0.4	-0.7	7.6	Vent Fume Stack
12/2/23 13:39	125.3	0.0	0.5	0.9	18.0	0.1	0.3	0.2	0.4	-0.7	7.7	Vent Fume Stack
12/2/23 13:40	125.2	0.0	0.4	0.6	18.0	0.1	0.3	0.2	0.4	-0.7	7.7	Vent Fume Stack
12/2/23 13:41	125.0	0.0	0.5	0.7	18.0	0.1	0.3	0.2	0.4	-0.7	7.7	Vent Fume Stack
12/2/23 13:42	124.9	0.0	0.5	0.6	18.0	0.1	0.3	0.2	0.4	-0.7	7.8	Vent Fume Stack
12/2/23 13:43	125.0	0.0	0.5	0.7	18.0	0.1	0.3	0.2	0.4	-0.7	7.8	Vent Fume Stack
12/2/23 13:44	124.9	0.0	0.5	0.6	18.0	0.1	0.3	0.2	0.4	-0.7	7.8	Vent Fume Stack
12/2/23 13:45	124.5	0.0	0.5	0.8	18.0	0.1	0.3	0.2	0.4	-0.7	7.9	Vent Fume Stack
12/2/23 13:46	124.6	0.0	0.4	0.7	18.0	0.1	0.3	0.2	0.4	-0.7	7.7	Vent Fume Stack
12/2/23 13:47	125.0	0.0	4.3	1.5	18.0	0.1	0.3	0.2	0.4	-0.7	7.7	Vent Fume Stack
12/2/23 13:48	125.2	0.0	13.1	0.6	18.0	0.1	0.3	0.2	0.4	-0.7	7.7	Vent Fume Stack
12/2/23 13:49	124.9	0.0	14.0	0.9	18.0	0.1	0.3	0.2	0.4	-0.7	7.8	Vent Fume Stack
12/2/23 13:50	125.1	0.0	0.9	1.9	18.0	0.1	0.3	0.2	0.4	-0.7	7.8	Vent Fume Stack
12/2/23 13:51	125.2	3.4	0.5	1.5	18.0	0.1	0.3	0.2	0.4	-0.7	7.8	Vent Fume Stack
12/2/23 13:52	124.8	14.2	0.5	0.6	18.0	0.1	0.3	0.2	0.4	-0.7	7.9	Vent Fume Stack
12/2/23 13:53	125.0	16.7	0.5	0.9	18.0	0.1	0.3	0.2	0.4	-0.7	7.9	Vent Fume Stack
12/2/23 13:54	124.6	17.0	0.5	0.6	18.0	0.1	0.3	0.2	0.4	-0.8	7.9	Vent Fume Stack
12/2/23 13:55	124.6	17.1	0.4	0.6	18.0	0.1	0.3	0.2	0.4	-0.8	7.9	Vent Fume Stack
12/2/23 13:56	124.8	17.1	0.5	0.7	18.0	0.1	0.3	0.2	0.4	-0.8	7.9	Vent Fume Stack
12/2/23 13:57	124.9	17.1	0.4	0.3	18.0	0.1	0.3	0.2	0.4	-0.8	7.9	Vent Fume Stack
12/2/23 13:58	125.0	17.1	0.5	0.5	18.0	0.1	0.3	0.2	0.4	-0.8	7.9	Vent Fume Stack
12/2/23 13:59	124.5	17.1	0.5	0.6	18.0	0.1	0.3	0.2	0.4	-0.8	7.9	Vent Fume Stack
12/2/23 14:00	124.7	17.1	0.5	0.4	18.0	0.1	0.3	0.2	0.4	-0.8	7.9	Vent Fume Stack
12/2/23 14:01	125.0	17.1	0.5	0.7	18.0	0.1	0.3	0.2	0.4	-0.8	7.8	Vent Fume Stack
12/2/23 14:02	125.2	17.1	0.6	0.6	18.0	0.1	0.3	0.2	0.4	-0.8	7.7	Vent Fume Stack
12/2/23 14:03	125.0	17.1	0.6	0.6	18.0	0.1	0.3	0.2	0.4	-0.8	7.7	Vent Fume Stack
12/2/23 14:04	125.1	17.1	0.6	0.6	18.0	0.1	0.3	0.2	0.4	-0.8	7.7	Vent Fume Stack
12/2/23 14:05	125.5	17.1	0.6	0.6	18.0	0.1	0.3	0.2	0.4	-0.8	7.7	Vent Fume Stack
12/2/23 14:06	124.7	17.1	0.5	0.5	18.0	0.1	0.3	0.2	0.4	-0.8	7.6	Vent Fume Stack
12/2/23 14:07	124.6	17.1	0.6	0.7	18.0	0.1	0.3	0.2	0.4	-0.8	7.7	Vent Fume Stack
12/2/23 14:08	125.0	17.1	0.6	0.6	18.0	0.1	0.3	0.2	0.4	-0.8	7.7	Vent Fume Stack
12/2/23 14:09	125.1	17.1	0.6	0.6	18.0	0.1	0.3	0.2	0.4	-0.8	7.7	Vent Fume Stack
12/2/23 14:10	125.3	17.1	0.6	0.5	18.0	0.1	0.3	0.2	0.4	-0.8	7.8	Vent Fume Stack
12/2/23 14:11	125.1	17.1	0.6	0.4	18.0	0.1	0.3	0.2	0.4	-0.8	7.8	Vent Fume Stack
12/2/23 14:12	124.8	17.1	0.6	0.8	18.0	0.1	0.3	0.2	0.4	-0.8	7.8	Vent Fume Stack
12/2/23 14:13	124.9	17.1	0.6	0.7	18.0	0.1	0.3	0.2	0.4	-0.8	7.9	Vent Fume Stack
12/2/23 14:14	125.0	17.1	0.6	0.5	18.0	0.1	0.3	0.2	0.4	-0.8	7.9	Vent Fume Stack
12/2/23 14:15	125.1	17.1	0.6	0.6	18.0	0.1	0.3	0.2	0.4	-0.8	7.9	Vent Fume Stack
12/2/23 14:16	125.2	17.1	0.6	0.5	18.0	0.1	0.3	0.2	0.4	-0.8	7.9	Vent Fume Stack
12/2/23 14:17	125.1	17.1	0.6	0.5	18.0	0.1	0.3	0.2	0.4	-0.8	7.9	Vent Fume Stack
12/2/23 14:18	125.5	17.1	0.6	0.6	18.0	0.1	0.3	0.2	0.4	-0.8	8.0	Vent Fume Stack
12/2/23 14:19	125.3	17.1	0.6	0.7	18.0	0.1	0.3	0.2	0.4	-0.8	8.0	Vent Fume Stack
12/2/23 14:20	125.2	17.1	0.6	0.6	18.0	0.1	0.3	0.2	0.4	-0.8	8.0	Vent Fume Stack
12/2/23 14:21	125.1	17.1	0.6	0.5	18.0	0.1	0.3	0.2	0.4	-0.8	8.0	Vent Fume Stack
12/2/23 14:22	125.1	17.1	0.6	0.5	18.0	0.1	0.3	0.2	0.4	-0.8	8.0	Vent Fume Stack
12/2/23 14:23	125.0	17.1	0.6	0.6	18.0	0.1	0.3	0.2	0.4	-0.8	8.0	Vent Fume Stack
12/2/23 14:24	125.0	17.1	0.6	0.8	18.0	0.1	0.3	0.2	0.4	-0.8	8.0	Vent Fume Stack
12/2/23 14:25	124.9	17.1	0.6	0.6	18.0	0.1	0.3	0.2	0.4	-0.8	8.0	Vent Fume Stack
12/2/23 14:26	124.9	17.1	0.5	0.5	17.8	0.1	0.3	0.2	0.4	-0.8	8.0	Vent Fume Stack
12/2/23 14:27	125.0	17.1	0.4	1.7	0.8	0.1	0.3	0.2	0.4	-0.8	8.0	Vent Fume Stack
12/2/23 14:28	125.1	17.1	0.4	0.9	0.0	0.1	0.3	0.2	0.4	-0.8	8.0	Vent Fume Stack
12/2/23 14:29	125.1	17.1	0.5	0.6	0.0	0.1	0.3	0.2	0.4	-0.8	8.0	Vent Fume Stack
12/2/23 14:30	124.8	17.1	0.4	0.7	0.0	0.1	0.3	0.2	0.4	-0.8	8.0	Vent Fume Stack
12/2/23 14:31	125.0	17.1	0.4	0.6	0.0	0.1	0.3	0.2	0.4	-0.8	8.0	Vent Fume Stack
12/2/23 14:32	125.1	17.1	0.4	0.6	0.0	0.1	0.3	0.2	0.4	-0.8	7.9	Vent Fume Stack
12/2/23 14:33	124.9	17.1	0.4	0.5	0.0	0.1	0.3	0.2	0.4	-0.8	7.8	Vent Fume Stack
12/2/23 14:34	124.7	17.1	0.4	0.5	0.0	0.1	0.3	0.2	0.4	-0.8	7.8	Vent Fume Stack
12/2/23 14:35	123.9	17.1	0.5	1.0	0.0	0.1	0.3	0.2	0.4	-0.8	7.7	Vent Fume Stack
12/2/23 14:36	124.4	17.1	0.5	0.4	0.0	0.1	0.3	0.2	0.4	-0.8	7.7	Vent Fume Stack
12/2/23 14:37	125.3	17.1	0.4	0.4	0.0	0.1	0.3	0.2	0.4	-0.8	7.6	Vent Fume Stack
12/2/23 14:38	125.3	17.1	0.5	0.7	0.0	0.1	0.3	0.2	0.4	-0.8	7.6	Vent Fume Stack

	Isa Feed Rate (tons/hour)	#2 Converter Blast Air (kscfm)	#3 Converter Blast Air (kscfm)	#4 Converter Blast Air (kscfm)	#5 Converter Blast Air (kscfm)	#1 Anode Barrel Air (scfm)	#1 Anode Barrel Gas (scfm)	#2 Anode Barrel Air (scfm)	#2 Anode Barrel Gas (scfm)	Steam Use (lbs/hr)	Electric Furnace Power (MW)	
12/2/23 14:39	125.2	17.1	0.5	0.5	0.0	0.1	0.3	0.2	0.4	-0.8	7.6	Vent Fume Stack
12/2/23 14:40	125.0	17.1	0.5	0.6	0.0	0.1	0.3	0.2	0.4	-0.8	7.6	Vent Fume Stack
12/2/23 14:41	124.3	17.3	0.5	0.7	0.0	0.1	0.3	0.2	0.4	-0.8	7.6	Vent Fume Stack
12/2/23 14:42	124.6	18.1	0.6	0.7	0.0	0.1	0.3	0.2	0.4	-0.8	7.6	Vent Fume Stack
12/3/23 12:36	124.9	17.0	0.4	1.5	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 12:37	125.0	17.0	0.4	1.1	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 12:38	125.1	17.0	0.4	0.9	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 12:39	125.5	17.0	0.4	1.1	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 12:40	125.6	17.0	0.4	1.1	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 12:41	125.2	17.1	0.4	1.1	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 12:42	125.1	18.0	0.4	1.3	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 12:43	125.3	18.0	0.4	0.5	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 12:44	125.3	18.0	0.4	0.7	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 12:45	125.2	18.0	0.4	0.7	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 12:46	125.0	18.0	0.5	0.4	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 12:47	124.9	18.0	0.5	1.2	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 12:48	124.9	18.0	0.4	0.8	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 12:49	124.9	18.0	0.5	0.9	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 12:50	124.8	18.0	0.4	0.6	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 12:51	124.9	18.0	0.4	1.0	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 12:52	125.0	18.0	0.5	0.6	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 12:53	124.9	18.0	0.5	0.9	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 12:54	124.6	18.0	0.5	1.0	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 12:55	124.7	18.0	0.5	0.8	18.1	0.1	0.3	0.2	0.4	-0.5	8.7	Vent Fume Stack
12/3/23 12:56	125.0	18.0	0.5	1.3	18.1	0.1	0.3	0.2	0.4	-0.5	8.6	Vent Fume Stack
12/3/23 12:57	124.9	18.0	0.5	0.9	18.1	0.1	0.3	0.2	0.4	-0.5	8.6	Vent Fume Stack
12/3/23 12:58	124.8	18.0	0.5	0.6	18.1	0.1	0.3	0.2	0.4	-0.5	8.6	Vent Fume Stack
12/3/23 12:59	124.8	18.0	0.6	0.6	18.1	0.1	0.3	0.2	0.4	-0.5	8.7	Vent Fume Stack
12/3/23 13:00	125.1	18.0	0.6	0.7	18.1	0.1	0.3	0.2	0.4	-0.5	8.6	Vent Fume Stack
12/3/23 13:01	125.0	17.9	0.5	1.2	18.1	0.1	0.3	0.2	0.4	-0.5	8.6	Vent Fume Stack
12/3/23 13:02	125.0	18.0	0.6	0.6	18.2	0.1	0.3	0.2	0.4	-0.5	8.6	Vent Fume Stack
12/3/23 13:03	124.9	18.0	0.5	1.1	18.1	0.1	0.3	0.2	0.4	-0.5	8.6	Vent Fume Stack
12/3/23 13:04	124.8	18.1	0.6	1.0	18.1	0.1	0.3	0.2	0.4	-0.5	8.6	Vent Fume Stack
12/3/23 13:05	124.7	18.0	0.6	0.5	18.1	0.1	0.3	0.2	0.4	-0.5	8.7	Vent Fume Stack
12/3/23 13:06	124.7	18.0	0.6	0.8	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 13:07	124.7	18.0	0.5	1.0	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 13:08	124.9	18.0	0.5	1.2	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 13:09	125.0	18.0	0.5	0.9	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 13:10	124.8	18.0	0.5	0.9	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 13:11	124.8	18.0	0.5	1.4	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 13:12	125.1	18.0	0.5	0.6	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 13:13	125.3	18.0	0.5	1.0	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 13:14	125.4	18.0	0.5	0.8	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 13:15	125.0	18.0	0.5	0.6	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 13:16	125.1	18.0	0.5	1.2	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 13:17	125.1	18.0	0.5	0.9	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 13:18	125.3	18.0	0.5	0.4	18.1	0.1	0.3	0.2	0.4	-0.5	8.8	Vent Fume Stack
12/3/23 13:19	125.3	17.6	0.5	0.8	18.1	0.1	0.3	0.2	0.4	-0.5	8.9	Vent Fume Stack
12/3/23 13:20	125.3	0.9	0.5	2.7	18.1	0.1	0.3	0.2	0.4	-0.5	8.9	Vent Fume Stack
12/3/23 13:21	125.2	0.0	0.5	1.1	18.1	0.1	0.3	0.2	0.4	-0.5	8.9	Vent Fume Stack
12/3/23 13:22	125.2	0.0	0.5	1.0	18.1	0.1	0.3	0.2	0.4	-0.5	8.9	Vent Fume Stack
12/3/23 13:23	125.2	0.0	0.5	1.6	18.1	0.1	0.3	0.2	0.4	-0.5	9.0	Vent Fume Stack
12/3/23 13:24	125.0	0.0	0.5	1.5	18.1	0.1	0.3	0.2	0.4	-0.5	9.2	Vent Fume Stack
12/3/23 13:25	125.0	0.0	0.5	0.7	18.1	0.1	0.3	0.2	0.4	-0.5	9.3	Vent Fume Stack
12/3/23 13:26	125.0	0.0	0.6	0.9	18.1	0.1	0.3	0.2	0.4	-0.5	9.4	Vent Fume Stack
12/3/23 13:27	124.9	0.0	0.5	1.3	18.1	0.1	0.3	0.2	0.4	-0.5	9.0	Vent Fume Stack
12/3/23 13:28	124.9	0.0	0.4	1.0	18.1	0.1	0.3	0.2	0.5	-0.5	8.8	Vent Fume Stack
12/3/23 13:29	124.8	0.0	0.5	1.0	18.1	0.1	0.3	0.2	0.5	-0.5	8.8	Vent Fume Stack
12/3/23 13:30	124.8	0.0	0.5	1.4	18.1	0.1	0.3	0.2	0.5	-0.5	8.8	Vent Fume Stack
12/3/23 13:31	125.1	0.0	0.4	1.1	18.1	0.1	0.3	0.2	0.5	-0.5	8.8	Vent Fume Stack
12/3/23 13:32	125.0	0.0	0.5	1.0	18.1	0.1	0.3	0.2	0.5	-0.5	8.7	Vent Fume Stack
12/3/23 13:33	125.0	0.0	0.5	1.2	18.1	0.1	0.3	0.2	0.5	-0.5	8.7	Vent Fume Stack
12/3/23 13:34	125.1	0.0	0.5	0.7	18.1	0.1	0.3	0.2	0.5	-0.6	8.7	Vent Fume Stack
12/3/23 13:35	125.1	0.0	0.5	0.9	18.1	0.1	0.3	0.2	0.5	-0.6	8.7	Vent Fume Stack
12/3/23 13:36	124.9	0.0	0.5	0.9	18.1	0.1	0.3	0.2	0.5	-0.6	8.8	Vent Fume Stack
12/3/23 13:37	124.9	0.0	0.5	1.1	18.1	0.1	0.3	0.2	0.5	-0.6	8.7	Vent Fume Stack
12/3/23 13:38	125.2	0.0	0.5	1.0	18.1	0.1	0.3	0.2	0.5	-0.6	8.7	Vent Fume Stack
12/3/23 13:39	125.2	0.0	0.5	1.5	18.1	0.1	0.3	0.2	0.5	-0.6	8.7	Vent Fume Stack
12/3/23 13:40	125.2	0.0	0.5	0.8	18.1	0.1	0.3	0.2	0.5	-0.6	8.7	Vent Fume Stack
12/3/23 13:41	125.3	2.7	0.5	2.7	18.1	0.1	0.3	0.2	0.5	-0.6	8.8	Vent Fume Stack
12/3/23 13:42	125.2	14.0	0.5	0.8	18.1	0.1	0.3	0.2	0.5	-0.6	8.8	Vent Fume Stack
12/3/23 13:43	124.8	17.5	0.5	1.2	18.1	0.1	0.3	0.2	0.5	-0.6	8.9	Vent Fume Stack
12/3/23 13:44	125.1	17.9	0.5	0.7	18.1	0.1	0.3	0.2	0.5	-0.6	8.9	Vent Fume Stack
12/3/23 13:45	125.1	18.0	0.5	0.7	18.1	0.1	0.3	0.2	0.5	-0.6	9.0	Vent Fume Stack
12/3/23 13:46	125.1	18.0	0.5	0.7	18.1	0.1	0.3	0.2	0.5	-0.6	9.1	Vent Fume Stack
12/3/23 13:47	125.0	18.0	0.5	0.8	18.1	0.1	0.3	0.2	0.5	-0.6	9.2	Vent Fume Stack
12/3/23 13:48	125.0	18.0	0.5	0.6	18.1	0.1	0.3	0.2	0.5	-0.6	9.3	Vent Fume Stack
12/3/23 13:49	125.1	18.0	0.5	1.4	18.1	0.1	0.3	0.2	0.5	-0.6	9.3	Vent Fume Stack
12/3/23 13:50	125.0	18.0	0.5	0.8	18.1	0.1	0.3	0.2	0.5	-0.6	9.2	Vent Fume Stack
12/3/23 13:51	124.7	18.0	0.6	0.8	18.1	0.1	0.3	0.2	0.5	-0.6	9.2	Vent Fume Stack
12/3/23 13:52	124.8	17.9	0.6	0.8	18.1	0.1	0.3	0.2	0.5	-0.6	9.3	Vent Fume Stack
12/3/23 13:53	124.9	18.0	0.6	0.7	18.1	0.1	0.3	0.2	0.5	-0.6	9.3	Vent Fume Stack
12/3/23 13:54	124.9	18.0	0.5	0.9	18.1	0.1	0.3	0.2	0.5	-0.6	9.3	Vent Fume Stack
12/3/23 13:55	125.0	18.0	0.6	1.1	18.1	0.1	0.3	0.2	0.5	-0.6	9.3	Vent Fume Stack
12/3/23 13:56	125.0	18.0	0.6	0.9	18.1	0.1	0.3	0.2	0.5	-0.6	9.3	Vent Fume Stack
12/3/23 13:57	125.2	18.0	0.6	1.0	18.1	0.1	0.3	0.2	0.5	-0.6	9.3	Vent Fume Stack

	Isa Feed Rate (tons/hour)	#2 Converter Blast Air (kscfm)	#3 Converter Blast Air (kscfm)	#4 Converter Blast Air (kscfm)	#5 Converter Blast Air (kscfm)	#1 Anode Barrel Air (scfm)	#1 Anode Barrel Gas (scfm)	#2 Anode Barrel Air (scfm)	#2 Anode Barrel Gas (scfm)	Steam Use (lbs/hr)	Electric Furnace Power (MW)	
12/3/23 13:58	125.2	18.0	0.5	1.1	18.1	0.1	0.3	0.2	0.5	-0.6	9.3	Vent Fume Stack
12/3/23 13:59	125.0	18.1	0.6	1.7	18.1	0.1	0.3	0.2	0.5	-0.6	9.4	Vent Fume Stack
12/3/23 14:00	124.9	18.0	0.6	1.1	18.1	0.1	0.3	0.2	0.5	-0.6	9.5	Vent Fume Stack
12/3/23 14:01	125.0	18.0	0.6	0.8	18.1	0.1	0.3	0.2	0.5	-0.6	9.6	Vent Fume Stack
12/3/23 14:02	125.2	18.0	0.5	1.1	18.1	0.1	0.3	0.2	0.5	-0.6	9.7	Vent Fume Stack
12/3/23 14:03	124.7	18.1	0.6	1.2	18.1	0.1	0.3	0.2	0.5	-0.6	9.6	Vent Fume Stack
12/3/23 14:04	125.1	18.1	0.5	1.1	18.1	0.1	0.3	0.2	0.5	-0.6	9.3	Vent Fume Stack
12/3/23 14:05	125.2	18.0	0.6	0.8	18.1	0.1	0.3	0.2	0.5	-0.6	9.4	Vent Fume Stack
12/3/23 14:06	124.9	18.0	0.5	0.9	18.1	0.1	0.3	0.2	0.5	-0.6	9.6	Vent Fume Stack
12/3/23 14:07	124.9	18.0	0.6	1.1	18.1	0.1	0.3	0.2	0.5	-0.6	9.7	Vent Fume Stack
12/3/23 14:08	124.9	18.0	0.5	0.8	18.1	0.1	0.3	0.2	0.5	-0.6	9.5	Vent Fume Stack
12/3/23 14:09	124.9	18.0	0.5	1.0	18.1	0.1	0.3	0.2	0.5	-0.6	9.3	Vent Fume Stack
12/3/23 14:10	125.0	18.0	0.5	0.7	18.1	0.1	0.3	0.2	0.5	-0.6	9.1	Vent Fume Stack
12/3/23 14:11	124.9	14.0	0.4	2.1	18.1	0.1	0.3	0.2	0.5	-0.6	8.9	Vent Fume Stack
12/3/23 14:12	124.8	0.0	0.5	2.7	18.1	0.1	0.3	0.2	0.5	-0.6	8.9	Vent Fume Stack
12/3/23 14:13	124.8	0.0	0.5	1.5	18.1	0.1	0.3	0.2	0.5	-0.6	8.8	Vent Fume Stack
12/3/23 14:14	124.7	0.0	0.5	0.8	18.1	0.1	0.3	0.2	0.5	-0.6	8.7	Vent Fume Stack
12/3/23 14:15	124.7	0.0	0.4	0.8	18.1	0.1	0.3	0.2	0.5	-0.6	8.7	Vent Fume Stack
12/3/23 14:16	124.7	0.0	0.5	1.1	18.1	0.1	0.3	0.2	0.5	-0.6	8.6	Vent Fume Stack
12/3/23 14:17	124.8	0.0	0.5	0.7	18.1	0.1	0.3	0.2	0.5	-0.6	8.6	Vent Fume Stack
12/3/23 14:18	125.0	0.0	0.5	0.6	18.1	0.1	0.3	0.2	0.5	-0.6	8.8	Vent Fume Stack
12/3/23 14:19	125.1	0.0	0.5	0.9	18.1	0.1	0.3	0.2	0.5	-0.6	9.2	Vent Fume Stack
12/3/23 14:20	124.8	0.0	0.5	1.0	18.1	0.1	0.3	0.2	0.5	-0.6	9.3	Vent Fume Stack
12/3/23 14:21	124.9	0.0	0.5	0.7	18.1	0.1	0.3	0.2	0.5	-0.6	9.4	Vent Fume Stack
12/3/23 14:22	125.7	0.0	0.5	1.3	18.1	0.1	0.3	0.2	0.4	-0.6	9.2	Vent Fume Stack
12/3/23 14:23	125.3	0.0	0.5	0.8	18.1	0.1	0.3	0.2	0.4	-0.6	9.1	Vent Fume Stack
12/3/23 14:24	125.1	0.0	0.5	1.0	18.1	0.1	0.3	0.2	0.4	-0.6	9.2	Vent Fume Stack
12/3/23 14:25	125.1	0.0	0.6	1.2	18.1	0.1	0.3	0.2	0.4	-0.6	9.4	Vent Fume Stack
12/3/23 14:26	124.9	4.7	0.4	2.4	18.1	0.1	0.3	0.2	0.4	-0.6	9.5	Vent Fume Stack
12/3/23 14:27	125.2	15.4	0.5	1.0	18.1	0.1	0.3	0.2	0.4	-0.6	9.5	Vent Fume Stack
12/3/23 14:28	125.0	17.7	0.5	0.7	18.1	0.1	0.3	0.2	0.4	-0.6	9.6	Vent Fume Stack
12/3/23 14:29	124.9	17.9	0.6	1.0	18.1	0.1	0.3	0.2	0.4	-0.6	9.4	Vent Fume Stack
12/3/23 14:30	124.9	17.9	0.6	0.9	18.1	0.1	0.3	0.2	0.4	-0.6	9.4	Vent Fume Stack
12/3/23 14:31	125.0	17.9	0.6	1.0	18.1	0.1	0.3	0.2	0.4	-0.6	9.4	Vent Fume Stack
12/3/23 14:32	125.0	17.9	0.6	0.6	18.1	0.1	0.3	0.2	0.4	-0.6	9.4	Vent Fume Stack
12/3/23 14:33	125.1	17.9	0.6	0.9	18.1	0.1	0.3	0.2	0.4	-0.6	9.6	Vent Fume Stack
12/3/23 14:34	125.3	17.9	0.6	1.1	18.1	0.1	0.3	0.2	0.4	-0.6	9.6	Vent Fume Stack
12/3/23 14:35	125.0	17.9	0.7	1.0	18.1	0.1	0.3	0.2	0.4	-0.6	9.5	Vent Fume Stack
12/3/23 14:36	124.7	18.0	0.7	0.9	18.1	0.1	0.3	0.2	0.4	-0.6	9.4	Vent Fume Stack
12/3/23 14:37	124.8	17.9	0.7	1.2	18.1	0.1	0.3	0.2	0.4	-0.6	9.4	Vent Fume Stack
12/3/23 14:38	125.3	18.1	0.7	1.6	18.1	0.1	0.3	0.2	0.4	-0.6	9.5	Vent Fume Stack
12/3/23 14:39	125.1	18.2	0.6	0.9	18.1	0.1	0.3	0.2	0.4	-0.6	9.5	Vent Fume Stack
12/3/23 14:40	124.8	18.0	0.6	0.9	18.1	0.1	0.3	0.2	0.4	-0.6	9.6	Vent Fume Stack
12/3/23 14:41	124.9	18.1	0.5	1.3	18.1	0.1	0.3	0.2	0.4	-0.6	9.7	Vent Fume Stack
12/3/23 14:42	124.9	18.1	0.6	0.9	18.1	0.1	0.3	0.2	0.4	-0.6	9.7	Vent Fume Stack
12/3/23 14:43	124.7	18.0	0.6	1.0	18.1	0.1	0.3	0.2	0.4	-0.6	9.7	Vent Fume Stack
12/3/23 14:44	124.9	18.0	0.6	0.8	18.1	0.1	0.3	0.2	0.4	-0.6	9.7	Vent Fume Stack
12/3/23 14:45	125.0	18.0	0.6	0.7	18.1	0.1	0.3	0.2	0.5	-0.6	9.4	Vent Fume Stack
12/3/23 14:46	125.0	18.0	0.6	1.0	18.1	0.1	0.3	0.2	0.5	-0.6	9.3	Vent Fume Stack
12/3/23 14:47	125.0	18.0	0.6	1.0	18.1	0.1	0.3	0.2	0.5	-0.6	9.2	Vent Fume Stack
12/3/23 14:48	125.0	18.0	0.5	0.7	18.1	0.1	0.3	0.2	0.5	-0.6	9.1	Vent Fume Stack
12/3/23 14:49	125.1	18.0	0.6	0.9	18.1	0.1	0.3	0.2	0.5	-0.6	9.0	Vent Fume Stack
12/3/23 14:50	125.1	18.0	0.6	1.0	18.1	0.1	0.3	0.2	0.5	-0.6	8.9	Vent Fume Stack
12/3/23 14:51	125.0	18.0	0.6	0.7	18.1	0.1	0.3	0.2	0.5	-0.6	8.9	Vent Fume Stack
12/3/23 14:52	124.9	18.0	0.5	0.8	18.1	0.1	0.3	0.2	0.5	-0.6	8.9	Vent Fume Stack
12/3/23 14:53	125.1	2.2	0.5	2.5	18.1	0.1	0.3	0.2	0.5	-0.6	8.9	Vent Fume Stack
12/3/23 14:54	125.4	0.0	0.5	1.4	18.1	0.1	0.3	0.2	0.5	-0.6	9.0	Vent Fume Stack
12/3/23 14:55	124.9	0.0	0.5	1.1	18.1	0.1	0.3	0.2	0.5	-0.6	9.0	Vent Fume Stack
12/3/23 14:56	124.9	0.0	0.5	0.8	18.1	0.1	0.3	0.2	0.5	-0.6	9.1	Vent Fume Stack
12/3/23 14:57	124.9	0.0	0.5	1.3	18.1	0.1	0.3	0.2	0.5	-0.6	9.2	Vent Fume Stack
12/3/23 14:58	124.8	0.0	0.5	1.0	18.1	0.1	0.3	0.2	0.5	-0.6	9.3	Vent Fume Stack
12/3/23 14:59	124.8	0.0	0.5	1.2	18.1	0.1	0.3	0.2	0.5	-0.6	9.3	Vent Fume Stack
12/3/23 15:00	124.7	0.5	0.5	2.0	18.1	0.1	0.3	0.2	0.5	-0.6	9.4	Vent Fume Stack
12/3/23 15:01	125.0	9.9	0.5	1.7	18.1	0.1	0.3	0.2	0.5	-0.6	9.5	Vent Fume Stack
12/3/23 15:02	125.1	16.9	0.6	0.4	18.1	0.1	0.3	0.2	0.5	-0.6	9.6	Vent Fume Stack
12/3/23 15:03	125.1	17.8	0.6	3.3	7.7	0.1	0.3	0.2	0.5	-0.6	9.7	Vent Fume Stack
12/3/23 15:04	125.0	17.8	0.6	1.0	0.1	0.1	0.3	0.2	0.5	-0.6	9.7	Vent Fume Stack
12/3/23 15:05	125.2	17.9	0.6	1.6	0.0	0.1	0.3	0.3	0.5	-0.6	9.5	Vent Fume Stack
12/3/23 15:06	125.1	17.9	0.6	1.4	0.0	0.1	0.3	0.2	0.5	-0.6	9.1	Vent Fume Stack
12/3/23 15:07	125.0	18.1	0.6	1.1	0.0	0.1	0.3	0.3	0.5	-0.6	9.1	Vent Fume Stack
12/3/23 15:08	125.2	18.0	0.5	3.0	2.2	0.1	0.3	0.2	0.5	-0.6	9.1	Vent Fume Stack
12/3/23 15:09	125.0	17.9	0.6	0.8	12.7	0.1	0.3	0.2	0.5	-0.6	9.2	Vent Fume Stack
12/3/23 15:10	124.8	18.1	0.6	0.7	17.5	0.1	0.3	0.2	0.5	-0.6	9.2	Vent Fume Stack
12/3/23 15:11	124.7	18.1	0.6	1.4	18.1	0.1	0.3	0.2	0.5	-0.6	9.2	Vent Fume Stack
12/3/23 15:12	125.0	18.0	0.6	0.7	18.1	0.1	0.3	0.3	0.5	-0.6	9.3	Vent Fume Stack
12/3/23 15:13	125.1	18.0	0.5	3.2	11.2	0.1	0.3	0.3	0.5	-0.6	9.3	Vent Fume Stack
12/3/23 15:14	125.0	18.0	0.6	1.8	0.0	0.1	0.3	0.3	0.5	-0.6	9.3	Vent Fume Stack
12/3/23 15:15	124.9	18.0	0.5	1.3	0.0	0.1	0.3	0.3	0.5	-0.6	9.3	Vent Fume Stack
12/3/23 15:16	124.8	18.0	0.6	1.3	0.0	0.1	0.3	0.2	0.5	-0.6	9.3	Vent Fume Stack
12/3/23 15:17	124.6	18.0	0.6	1.2	0.0	0.1	0.3	0.3	0.5	-0.6	9.2	Vent Fume Stack
12/3/23 15:18	124.8	18.0	0.5	1.1	0.0	0.1	0.3	0.2	0.5	-0.6	9.0	Vent Fume Stack
12/3/23 15:19	125.0	18.0	0.5	1.5	0.0	0.1	0.3	0.3	0.5	-0.6	8.9	Vent Fume Stack
12/3/23 15:20	125.3	18.0	0.5	1.2	0.0	0.1	0.3	0.3	0.5	-0.6	8.8	Vent Fume Stack
12/3/23 15:21	125.0	18.0	0.5	0.9	0.0	0.1	0.3	0.3	0.5	-0.6	8.8	Vent Fume Stack
12/3/23 15:22	125.1	18.0	0.5	1.0	0.0	0.1	0.3	0.3	0.5	-0.6	8.7	Vent Fume Stack
12/3/23 15:23	124.8	18.0	0.6	1.0	0.0	758.2	0.3	0.3	0.5	-0.6	8.7	Vent Fume Stack
12/3/23 15:24	124.6	18.0	0.5	1.1	0.0	785.7	0.3	0.3	0.5	-0.6	8.7	Vent Fume Stack

	Isa Feed Rate (tons/hour)	#2 Converter Blast Air (kscfm)	#3 Converter Blast Air (kscfm)	#4 Converter Blast Air (kscfm)	#5 Converter Blast Air (kscfm)	#1 Anode Barrel Air (scfm)	#1 Anode Barrel Gas (scfm)	#2 Anode Barrel Air (scfm)	#2 Anode Barrel Gas (scfm)	Steam Use (lbs/hr)	Electric Furnace Power (MW)	
12/3/23 15:25	124.9	18.0	0.5	0.9	0.0	9.9	0.3	0.3	0.5	-0.6	8.7	Vent Fume Stack
12/3/23 15:26	125.2	18.0	0.5	0.9	0.0	883.2	0.3	0.3	0.5	-0.6	8.7	Vent Fume Stack
12/3/23 15:27	125.1	18.0	0.6	1.0	0.0	905.0	0.3	0.3	0.5	-0.6	8.7	Vent Fume Stack
12/3/23 15:28	124.7	10.2	0.5	2.1	0.0	899.4	0.3	0.3	0.5	-0.6	8.7	Vent Fume Stack
12/3/23 15:29	125.0	0.0	0.5	1.8	0.0	889.0	0.3	0.3	0.5	-0.6	8.7	Vent Fume Stack
12/3/23 15:30	125.0	0.0	0.4	0.9	0.0	883.6	0.3	0.3	0.5	-0.6	8.7	Vent Fume Stack
12/3/23 15:31	125.0	0.0	0.4	1.0	0.0	877.0	0.3	0.3	0.5	-0.6	8.7	Vent Fume Stack
12/3/23 15:32	125.0	0.0	0.4	0.8	0.0	872.1	0.3	0.3	0.5	-0.6	8.7	Vent Fume Stack
12/3/23 15:33	125.3	0.0	0.4	0.8	0.0	869.1	0.3	0.3	0.5	-0.6	8.7	Vent Fume Stack
12/3/23 15:34	125.1	0.0	0.5	0.6	0.0	866.0	0.3	0.3	0.5	-0.6	8.7	Vent Fume Stack
12/3/23 15:35	124.7	0.0	0.4	0.7	0.0	862.1	0.3	0.3	0.5	-0.6	8.7	Vent Fume Stack
12/3/23 15:36	124.8	5.6	0.3	3.1	0.0	857.6	0.3	0.3	0.5	-0.6	8.6	Vent Fume Stack
12/3/23 15:37	124.9	15.8	0.4	0.7	0.0	847.5	0.3	0.3	0.5	-0.6	8.7	Vent Fume Stack
12/3/23 15:38	124.7	17.7	0.5	1.4	0.0	836.6	0.3	0.3	0.5	-0.6	8.8	Vent Fume Stack
12/3/23 15:39	124.7	17.9	0.5	1.6	0.0	831.8	0.3	0.3	0.5	-0.6	8.9	Vent Fume Stack
12/3/23 15:40	125.1	18.0	0.5	1.6	0.0	826.6	0.3	0.3	0.5	-0.6	8.9	Vent Fume Stack
12/3/23 15:41	125.1	18.0	0.6	1.3	0.0	827.4	0.3	0.3	0.5	-0.6	8.9	Vent Fume Stack
12/3/23 15:42	125.0	18.0	0.5	1.3	0.0	827.8	0.3	0.3	0.5	-0.6	8.9	Vent Fume Stack
12/3/23 15:43	125.0	18.0	0.5	1.1	0.0	828.0	0.3	0.3	0.5	-0.6	8.9	Vent Fume Stack
12/5/23 9:04	124.8	0.0	0.5	17.0	17.1	0.1	0.3	0.2	0.4	-0.4	0.1	Vent Fume Stack
12/5/23 9:05	124.7	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.4	-0.4	0.1	Vent Fume Stack
12/5/23 9:06	124.9	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.4	-0.4	0.1	Vent Fume Stack
12/5/23 9:07	125.4	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.4	-0.4	0.1	Vent Fume Stack
12/5/23 9:08	125.0	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.4	-0.4	0.1	Vent Fume Stack
12/5/23 9:09	125.1	0.0	0.5	17.0	17.1	0.1	0.3	0.2	0.5	-0.4	0.1	Vent Fume Stack
12/5/23 9:10	124.9	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	0.1	Vent Fume Stack
12/5/23 9:11	124.9	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	0.1	Vent Fume Stack
12/5/23 9:12	124.8	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	0.1	Vent Fume Stack
12/5/23 9:13	125.0	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	0.1	Vent Fume Stack
12/5/23 9:14	124.9	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	0.1	Vent Fume Stack
12/5/23 9:15	124.9	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	0.1	Vent Fume Stack
12/5/23 9:16	125.1	0.0	0.5	17.0	17.0	0.1	0.3	0.3	0.5	-0.4	0.1	Vent Fume Stack
12/5/23 9:17	125.3	0.0	0.5	17.0	17.0	0.1	0.3	0.3	0.5	-0.4	0.1	Vent Fume Stack
12/5/23 9:18	125.1	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	0.1	Vent Fume Stack
12/5/23 9:19	124.9	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	0.1	Vent Fume Stack
12/5/23 9:20	125.1	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	0.1	Vent Fume Stack
12/5/23 9:21	125.0	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	0.1	Vent Fume Stack
12/5/23 9:22	125.0	0.0	0.5	17.0	17.2	0.1	0.3	0.3	0.5	-0.4	0.1	Vent Fume Stack
12/5/23 9:23	124.7	0.0	0.6	17.0	17.2	0.1	0.3	0.3	0.5	-0.4	0.1	Vent Fume Stack
12/5/23 9:24	124.5	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	0.1	Vent Fume Stack
12/5/23 9:25	125.0	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	0.1	Vent Fume Stack
12/5/23 9:26	125.5	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	0.1	Vent Fume Stack
12/5/23 9:27	125.5	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	0.1	Vent Fume Stack
12/5/23 9:28	125.5	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	0.1	Vent Fume Stack
12/5/23 9:29	124.9	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	0.1	Vent Fume Stack
12/5/23 9:30	125.1	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	0.1	Vent Fume Stack
12/5/23 9:31	124.9	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	0.1	Vent Fume Stack
12/5/23 9:32	124.8	0.0	0.6	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	3.5	Vent Fume Stack
12/5/23 9:33	124.8	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	4.5	Vent Fume Stack
12/5/23 9:34	124.8	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	4.8	Vent Fume Stack
12/5/23 9:35	124.9	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	4.8	Vent Fume Stack
12/5/23 9:36	124.9	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	4.8	Vent Fume Stack
12/5/23 9:37	124.9	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	4.7	Vent Fume Stack
12/5/23 9:38	125.3	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	4.7	Vent Fume Stack
12/5/23 9:39	125.3	0.0	0.6	17.0	17.0	0.1	0.3	0.3	0.5	-0.4	4.7	Vent Fume Stack
12/5/23 9:40	124.7	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	4.7	Vent Fume Stack
12/5/23 9:41	124.6	0.0	0.6	17.0	5.2	0.1	0.3	0.3	0.5	-0.4	4.7	Vent Fume Stack
12/5/23 9:42	124.7	0.0	0.5	17.0	0.0	0.1	0.3	0.3	0.5	-0.4	4.7	Vent Fume Stack
12/5/23 9:43	125.2	0.0	0.5	17.0	0.0	0.1	0.3	0.3	0.5	-0.4	4.7	Vent Fume Stack
12/5/23 9:44	125.4	0.0	0.5	17.0	0.0	0.1	0.3	0.3	0.5	-0.4	4.9	Vent Fume Stack
12/5/23 9:45	125.6	0.0	0.5	17.0	0.0	0.1	0.3	0.3	0.5	-0.4	5.8	Vent Fume Stack
12/5/23 9:46	125.1	0.0	0.5	17.0	0.0	0.1	0.3	0.3	0.5	-0.4	6.0	Vent Fume Stack
12/5/23 9:47	125.1	0.0	0.5	17.4	0.0	0.1	0.3	0.3	0.5	-0.4	6.3	Vent Fume Stack
12/5/23 9:48	125.2	0.0	0.6	18.3	0.0	0.1	0.3	0.3	0.5	-0.4	6.9	Vent Fume Stack
12/5/23 9:49	124.7	0.0	0.5	18.5	0.0	0.1	0.3	0.3	0.5	-0.4	7.0	Vent Fume Stack
12/5/23 9:50	124.8	0.0	0.5	18.5	0.0	0.1	0.3	0.3	0.5	-0.4	7.0	Vent Fume Stack
12/5/23 9:51	125.2	0.0	0.5	18.5	0.0	0.1	0.3	0.3	0.5	-0.4	7.3	Vent Fume Stack
12/5/23 9:52	125.4	0.0	0.5	18.5	0.0	0.1	0.3	0.3	0.5	-0.4	7.9	Vent Fume Stack
12/5/23 9:53	125.1	0.0	0.6	18.5	0.0	0.1	0.3	0.3	0.5	-0.4	8.0	Vent Fume Stack
12/5/23 9:54	124.9	0.0	0.5	18.5	0.1	0.1	0.3	0.3	0.5	-0.4	8.1	Vent Fume Stack
12/5/23 9:55	125.1	0.0	0.5	17.9	6.3	0.1	0.3	0.3	0.5	-0.4	8.1	Vent Fume Stack
12/5/23 9:56	124.9	0.0	0.5	17.1	15.2	0.1	0.3	0.3	0.5	-0.4	8.4	Vent Fume Stack
12/5/23 9:57	124.9	0.0	0.5	17.0	16.9	0.1	0.3	0.3	0.5	-0.4	9.0	Vent Fume Stack
12/5/23 9:58	125.3	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	9.1	Vent Fume Stack
12/5/23 9:59	125.4	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	9.2	Vent Fume Stack
12/5/23 10:00	125.3	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	9.2	Vent Fume Stack
12/5/23 10:01	125.2	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	9.2	Vent Fume Stack
12/5/23 10:02	125.0	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	9.3	Vent Fume Stack
12/5/23 10:03	125.0	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	9.3	Vent Fume Stack
12/5/23 10:04	124.8	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	9.3	Vent Fume Stack
12/5/23 10:05	125.1	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	8.0	Vent Fume Stack
12/5/23 10:06	124.8	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	2.8	Vent Fume Stack
12/5/23 10:07	124.8	0.0	0.5	17.0	17.0	0.1	0.3	0.3	0.5	-0.4	0.1	Vent Fume Stack
12/5/23 10:08	124.8	0.0	0.5	17.0	17.0	0.1	0.3	0.3	0.5	-0.4	2.7	Vent Fume Stack
12/5/23 10:09	124.8	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	4.6	Vent Fume Stack
12/5/23 10:10	124.8	0.0	0.5	17.0	17.2	0.1	0.3	0.3	0.5	-0.4	5.0	Vent Fume Stack

	Isa Feed Rate (tons/hour)	#2 Converter Blast Air (kscfm)	#3 Converter Blast Air (kscfm)	#4 Converter Blast Air (kscfm)	#5 Converter Blast Air (kscfm)	#1 Anode Barrel Air (scfm)	#1 Anode Barrel Gas (scfm)	#2 Anode Barrel Air (scfm)	#2 Anode Barrel Gas (scfm)	Steam Use (lbs/hr)	Electric Furnace Power (MW)	
12/5/23 10:11	124.7	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	5.0	Vent Fume Stack
12/5/23 10:12	124.7	0.0	0.5	17.0	17.1	0.1	0.3	0.3	0.5	-0.4	5.0	Vent Fume Stack
12/5/23 10:13	124.9	0.0	0.5	17.0	17.0	0.1	0.4	0.3	0.5	-0.4	5.0	Vent Fume Stack
12/5/23 10:14	124.9	0.0	0.5	17.0	17.1	0.2	0.4	0.3	0.5	-0.4	5.0	Vent Fume Stack
12/5/23 10:15	125.0	0.0	0.5	17.0	17.2	0.1	0.4	0.3	0.5	-0.4	5.1	Vent Fume Stack
12/5/23 10:16	125.2	0.0	0.5	17.0	17.1	0.1	0.4	0.3	0.5	-0.4	5.9	Vent Fume Stack
12/5/23 10:17	124.7	0.0	0.5	17.0	17.0	0.2	0.4	0.3	0.5	-0.4	6.5	Vent Fume Stack
12/5/23 10:18	125.1	0.0	0.5	17.0	17.1	0.2	0.4	0.3	0.5	-0.4	7.2	Vent Fume Stack
12/5/23 10:19	125.1	0.0	0.5	17.0	17.2	0.2	0.4	0.3	0.5	-0.4	7.3	Vent Fume Stack
12/5/23 10:20	124.9	0.0	0.5	17.0	17.0	0.1	0.4	0.3	0.5	-0.4	7.3	Vent Fume Stack
12/5/23 10:21	124.9	0.0	0.5	17.0	17.0	0.2	0.4	0.3	0.5	-0.4	7.3	Vent Fume Stack
12/5/23 10:22	125.0	0.0	0.5	17.0	17.1	0.1	0.4	0.3	0.5	-0.4	7.3	Vent Fume Stack
12/5/23 10:23	125.1	0.0	0.5	17.0	17.4	0.2	0.4	0.3	0.5	-0.4	7.3	Vent Fume Stack
12/5/23 10:24	125.3	0.0	0.5	17.0	17.1	0.2	0.4	0.3	0.5	-0.4	7.4	Vent Fume Stack
12/5/23 10:25	125.8	0.0	0.5	17.0	17.1	0.2	0.4	0.3	0.5	-0.4	7.9	Vent Fume Stack
12/5/23 10:26	125.6	0.0	0.5	17.0	17.1	0.1	0.4	0.3	0.5	-0.4	8.4	Vent Fume Stack
12/5/23 10:27	125.3	0.0	0.5	17.0	17.2	0.2	0.4	0.3	0.5	-0.4	8.7	Vent Fume Stack
12/5/23 10:28	125.0	0.0	0.6	17.0	17.2	0.2	0.4	0.3	0.5	-0.4	8.8	Vent Fume Stack
12/5/23 10:29	124.4	0.0	0.5	17.0	17.1	0.1	0.4	0.3	0.5	-0.4	9.0	Vent Fume Stack
12/5/23 10:30	124.8	0.0	0.5	17.0	17.1	0.2	0.4	0.3	0.5	-0.4	9.4	Vent Fume Stack
12/5/23 10:31	125.1	0.0	0.5	17.0	17.1	0.2	0.4	0.3	0.5	-0.4	9.5	Vent Fume Stack
12/5/23 10:32	124.7	0.0	0.4	17.0	2.3	0.2	0.4	0.3	0.5	-0.4	9.6	Vent Fume Stack
12/5/23 10:33	124.7	0.0	0.5	17.0	0.0	0.2	0.4	0.3	0.5	-0.4	9.6	Vent Fume Stack
12/5/23 10:34	124.7	0.0	0.4	17.0	0.0	0.2	0.4	0.3	0.5	-0.4	9.6	Vent Fume Stack
12/5/23 10:35	125.2	0.0	0.4	17.0	0.0	0.2	0.4	0.3	0.5	-0.4	9.6	Vent Fume Stack
12/5/23 10:36	125.0	0.0	0.5	17.0	0.0	0.2	0.4	0.3	0.5	-0.4	9.6	Vent Fume Stack
12/5/23 10:37	124.8	0.0	0.4	17.0	0.0	0.2	0.4	0.3	0.5	-0.4	9.5	Vent Fume Stack
12/5/23 10:38	124.8	0.0	0.4	17.0	0.0	0.2	0.4	0.3	0.5	-0.4	9.2	Vent Fume Stack
12/5/23 10:39	125.0	0.0	0.4	17.0	0.0	0.2	0.4	0.3	0.5	-0.4	9.4	Vent Fume Stack
12/5/23 10:40	125.0	0.0	0.4	17.0	0.0	0.2	0.4	0.3	0.5	-0.4	9.5	Vent Fume Stack
12/5/23 10:41	125.2	0.0	0.4	17.0	0.0	0.2	0.4	0.3	0.5	-0.4	9.5	Vent Fume Stack
12/5/23 10:42	125.3	0.0	0.5	17.0	0.0	0.2	0.4	0.3	0.5	-0.4	9.4	Vent Fume Stack
12/5/23 10:43	125.0	0.0	0.4	17.0	0.0	0.2	0.4	0.3	0.5	-0.4	9.3	Vent Fume Stack
12/5/23 10:44	125.0	0.0	0.4	17.0	0.0	0.2	0.4	0.3	0.5	-0.4	9.2	Vent Fume Stack
12/5/23 10:45	124.9	0.0	0.4	17.0	0.0	0.2	0.4	0.3	0.5	-0.4	9.2	Vent Fume Stack
12/5/23 10:46	124.8	0.0	0.4	17.0	5.1	0.2	0.4	0.3	0.5	-0.4	9.2	Vent Fume Stack
12/5/23 10:47	124.7	0.0	0.5	17.0	14.7	0.2	0.4	0.3	0.5	-0.4	9.4	Vent Fume Stack
12/5/23 10:48	125.2	0.0	0.4	17.0	16.9	0.2	0.4	0.3	0.5	-0.4	9.7	Vent Fume Stack
12/5/23 10:49	125.3	0.0	0.4	17.0	17.1	0.2	0.4	0.3	0.5	-0.4	9.9	Vent Fume Stack
12/5/23 10:50	125.4	0.0	0.5	17.0	17.1	0.2	0.4	0.3	0.5	-0.4	9.9	Vent Fume Stack
12/5/23 10:51	125.1	0.0	0.4	17.0	17.1	0.2	0.4	0.3	0.5	-0.4	10.0	Vent Fume Stack
12/5/23 10:52	125.1	0.0	0.5	17.0	17.1	0.2	0.4	0.3	0.5	-0.4	10.0	Vent Fume Stack
12/5/23 10:53	125.4	0.0	0.5	17.0	17.1	0.2	0.4	0.3	0.5	-0.4	10.0	Vent Fume Stack
12/5/23 10:54	125.0	0.0	0.5	17.0	17.0	0.2	0.4	0.3	0.5	-0.4	10.1	Vent Fume Stack
12/5/23 10:55	124.9	0.0	0.5	17.0	17.0	0.2	0.4	0.3	0.5	-0.4	10.1	Vent Fume Stack
12/5/23 10:56	125.1	0.0	0.5	17.0	17.0	0.2	0.4	0.3	0.5	-0.4	10.1	Vent Fume Stack
12/5/23 10:57	125.0	0.0	0.5	17.0	17.0	0.2	0.4	0.3	0.5	-0.4	10.2	Vent Fume Stack
12/5/23 10:58	124.9	0.0	0.6	17.0	17.0	0.2	0.4	0.3	0.5	-0.4	10.2	Vent Fume Stack
12/5/23 10:59	124.9	0.0	0.6	17.0	17.0	0.2	0.4	0.3	0.5	-0.4	10.2	Vent Fume Stack
12/5/23 11:00	125.0	0.0	0.5	17.0	16.9	0.2	0.4	0.3	0.5	-0.4	10.2	Vent Fume Stack
12/5/23 11:01	125.0	0.0	0.5	17.0	16.9	0.2	0.4	0.3	0.5	-0.4	10.2	Vent Fume Stack
12/5/23 11:02	124.9	0.0	0.5	17.0	17.5	0.2	0.4	0.3	0.5	-0.4	10.1	Vent Fume Stack
12/5/23 11:03	124.8	0.0	0.6	17.0	17.1	0.2	0.4	0.3	0.5	-0.4	8.5	Vent Fume Stack
12/5/23 11:04	124.7	0.0	0.6	17.0	17.1	0.2	0.4	0.3	0.5	-0.4	4.7	Vent Fume Stack
12/5/23 11:05	124.6	0.0	0.5	17.0	17.1	0.2	0.4	0.3	0.5	-0.4	0.1	Vent Fume Stack
12/5/23 11:06	124.5	0.0	0.6	17.0	17.4	0.2	0.4	0.3	0.5	-0.4	0.1	Vent Fume Stack
12/5/23 11:07	124.5	0.0	0.6	17.0	17.3	0.2	0.4	0.3	0.5	-0.4	0.1	Vent Fume Stack
12/5/23 11:08	124.8	0.0	0.5	17.0	17.0	0.2	0.4	0.3	0.5	-0.4	0.9	Vent Fume Stack
12/5/23 11:09	125.0	0.0	0.5	17.0	17.0	0.2	0.4	0.3	0.5	-0.4	4.4	Vent Fume Stack
12/5/23 11:10	124.9	0.0	0.5	17.0	17.3	0.2	0.4	0.3	0.5	-0.4	5.7	Vent Fume Stack
12/5/23 11:11	124.7	0.0	0.5	17.0	17.1	0.2	0.4	0.3	0.5	-0.4	6.1	Vent Fume Stack
12/5/23 11:12	124.9	0.0	0.5	17.0	17.1	0.2	0.4	0.3	0.5	-0.4	6.1	Vent Fume Stack
12/5/23 11:13	124.8	0.0	0.6	17.0	17.2	0.2	0.4	0.3	0.5	-0.4	6.3	Vent Fume Stack
12/5/23 11:14	124.9	0.0	0.6	17.0	17.1	0.2	0.4	0.3	0.5	-0.4	7.1	Vent Fume Stack
12/5/23 11:15	125.2	0.0	0.5	17.0	17.1	0.2	0.4	0.3	0.5	-0.4	7.7	Vent Fume Stack
12/5/23 11:16	124.9	0.0	0.5	17.0	17.1	0.2	0.4	0.3	0.5	-0.4	7.8	Vent Fume Stack
12/5/23 11:17	125.3	0.0	0.6	17.0	17.1	0.2	0.4	0.3	0.5	-0.4	8.4	Vent Fume Stack
12/5/23 11:18	125.3	0.0	0.5	17.0	17.1	0.2	0.4	0.3	0.5	-0.4	9.5	Vent Fume Stack
12/5/23 11:19	125.0	0.0	0.4	10.6	17.1	0.2	0.4	0.3	0.5	-0.4	9.8	Vent Fume Stack
12/5/23 11:20	124.9	0.0	0.3	1.0	17.2	0.2	0.4	0.3	0.5	-0.4	9.7	Vent Fume Stack
12/5/23 11:21	125.0	0.0	0.3	0.6	17.1	0.2	0.4	0.3	0.5	-0.4	9.7	Vent Fume Stack
12/5/23 11:22	125.1	0.0	0.3	0.8	17.1	0.2	0.4	0.3	0.5	-0.4	9.6	Vent Fume Stack
12/5/23 11:23	125.2	0.0	0.3	0.6	17.1	0.2	0.4	0.3	0.5	-0.4	9.5	Vent Fume Stack
12/5/23 11:24	125.1	0.0	0.4	0.8	17.1	0.2	0.4	0.3	0.5	-0.4	9.5	Vent Fume Stack
12/5/23 11:25	125.0	0.0	0.3	1.5	13.6	0.2	0.4	0.3	0.5	-0.4	9.5	Vent Fume Stack
12/5/23 11:26	124.8	0.0	0.4	1.7	0.0	0.2	0.4	0.3	0.5	-0.4	9.5	Vent Fume Stack
12/5/23 11:27	124.9	0.0	0.4	0.7	0.0	0.2	0.4	0.3	0.5	-0.4	9.5	Vent Fume Stack
12/5/23 11:28	125.1	0.0	0.4	0.7	0.0	0.2	0.4	0.3	0.5	-0.4	9.5	Vent Fume Stack
12/5/23 11:29	125.1	0.0	0.4	0.6	0.0	0.2	0.4	0.3	0.5	-0.4	9.5	Vent Fume Stack
12/5/23 11:30	124.9	0.0	0.3	0.7	0.0	0.2	0.4	0.3	0.5	-0.4	9.4	Vent Fume Stack
12/5/23 11:31	125.1	0.0	0.3	0.3	0.0	0.2	0.4	0.3	0.5	-0.4	9.5	Vent Fume Stack
12/5/23 11:32	125.7	0.0	0.4	0.3	0.0	0.2	0.4	0.3	0.5	-0.4	9.6	Vent Fume Stack
12/5/23 11:33	125.5	0.0	0.4	0.3	0.0	0.2	0.4	0.3	0.5	-0.4	9.6	Vent Fume Stack
12/5/23 11:34	125.3	0.0	0.4	0.3	0.0	0.2	0.4	0.3	0.5	-0.4	9.7	Vent Fume Stack
12/5/23 11:35	125.0	0.0	0.4	0.3	0.0	0.2	0.4	0.3	0.5	-0.4	10.0	Vent Fume Stack
12/5/23 11:36	124.9	0.0	0.4	0.4	0.0	0.2	0.4	0.3	0.5	-0.4	10.1	Vent Fume Stack
12/5/23 11:37	124.8	0.0	0.3	0.4	0.0	0.2	0.4	0.3	0.5	-0.4	10.2	Vent Fume Stack



	Isa Feed Rate (tons/hour)	#2 Converter Blast Air (kscfm)	#3 Converter Blast Air (kscfm)	#4 Converter Blast Air (kscfm)	#5 Converter Blast Air (kscfm)	#1 Anode Barrel Air (scfm)	#1 Anode Barrel Gas (scfm)	#2 Anode Barrel Air (scfm)	#2 Anode Barrel Gas (scfm)	Steam Use (lbs/hr)	Electric Furnace Power (MW)	
12/5/23 11:38	124.7	0.0	0.3	0.4	0.0	573.6	0.4	0.3	0.5	-0.4	10.2	Vent Fume Stack
12/5/23 11:39	124.7	0.0	0.4	0.3	0.0	229.8	0.4	0.3	0.5	-0.4	10.2	Vent Fume Stack
12/5/23 11:40	124.6	0.0	0.4	0.3	0.0	0.2	0.4	0.3	0.5	-0.4	10.3	Vent Fume Stack
12/5/23 11:41	124.6	0.0	0.4	0.4	0.0	778.7	0.4	0.3	0.5	-0.4	10.3	Vent Fume Stack
12/5/23 11:42	124.9	0.0	0.4	0.5	0.0	913.8	0.4	0.3	0.5	-0.4	10.3	Vent Fume Stack
12/5/23 11:43	124.9	0.5	0.4	1.4	0.0	925.7	0.4	0.3	0.5	-0.4	10.4	Vent Fume Stack
12/5/23 11:44	124.9	10.4	0.3	0.6	0.0	929.5	0.4	0.3	0.5	-0.4	10.4	Vent Fume Stack
12/5/23 11:45	124.8	17.2	0.4	1.7	1.1	917.3	0.4	0.3	0.5	-0.4	10.4	Vent Fume Stack
12/5/23 11:46	124.9	18.0	0.4	0.8	11.0	903.4	0.4	0.3	0.5	-0.4	10.4	Vent Fume Stack
12/5/23 11:47	125.1	18.1	0.4	0.6	16.4	891.5	0.4	0.3	0.5	-0.4	10.4	Vent Fume Stack
12/5/23 11:48	125.0	18.1	0.4	0.6	17.0	888.8	0.4	0.3	0.5	-0.4	10.4	Vent Fume Stack
12/5/23 11:49	124.7	18.1	0.4	0.7	17.0	889.4	0.4	0.3	0.5	-0.4	10.3	Vent Fume Stack
12/5/23 11:50	125.0	18.1	0.4	0.8	17.0	886.2	0.4	0.3	0.5	-0.4	10.2	Vent Fume Stack
12/5/23 11:51	125.1	18.1	0.4	0.9	17.0	887.1	0.4	0.3	0.5	-0.4	10.0	Vent Fume Stack
12/5/23 11:52	125.2	18.1	0.4	0.5	17.0	888.5	0.4	0.3	0.5	-0.4	9.9	Vent Fume Stack
12/5/23 11:53	125.0	18.1	0.5	0.4	17.0	885.2	0.4	0.3	0.5	-0.4	9.9	Vent Fume Stack
12/5/23 11:54	125.1	18.1	0.5	0.5	17.1	882.8	0.4	0.3	0.5	-0.4	9.9	Vent Fume Stack
12/5/23 11:55	125.1	18.1	0.4	0.6	17.1	882.5	0.4	0.3	0.5	-0.4	9.9	Vent Fume Stack
12/5/23 11:56	125.0	18.1	0.4	0.4	17.1	885.1	0.4	0.3	0.5	-0.4	9.9	Vent Fume Stack
12/5/23 11:57	125.1	18.1	0.4	0.7	17.1	884.8	0.4	0.3	0.5	-0.4	9.9	Vent Fume Stack
12/5/23 11:58	125.0	18.1	0.5	0.8	17.1	883.3	0.4	0.3	0.5	-0.4	9.9	Vent Fume Stack
12/5/23 11:59	125.1	18.1	0.5	0.6	17.1	887.8	0.4	0.3	0.5	-0.4	9.9	Vent Fume Stack
12/5/23 12:00	124.9	18.1	0.4	0.6	17.1	889.6	0.4	0.3	0.5	-0.4	9.9	Vent Fume Stack
12/5/23 12:01	124.8	18.1	0.5	0.7	17.1	888.8	0.4	0.3	0.5	-0.4	9.9	Vent Fume Stack
12/5/23 12:02	124.7	18.1	0.4	0.9	17.2	881.6	0.4	0.3	0.5	-0.4	9.9	Vent Fume Stack
12/5/23 12:03	124.7	18.1	0.5	0.3	17.3	876.7	0.4	0.3	0.5	-0.4	9.9	Vent Fume Stack
12/5/23 12:04	124.7	18.1	0.4	0.8	16.9	884.5	0.4	0.3	0.5	-0.4	9.9	Vent Fume Stack
12/5/23 12:05	124.8	18.1	0.5	0.7	17.4	885.7	0.4	0.3	0.5	-0.4	9.9	Vent Fume Stack
12/5/23 12:06	124.9	18.1	0.5	0.5	17.1	885.2	0.4	0.3	0.5	-0.4	9.9	Vent Fume Stack
12/5/23 12:07	125.1	18.1	0.5	0.8	16.9	881.7	0.4	0.3	0.5	-0.4	9.6	Vent Fume Stack
12/5/23 12:08	125.2	18.1	0.5	0.6	17.1	880.1	0.4	0.3	0.5	-0.4	7.2	Vent Fume Stack
12/5/23 12:09	125.2	18.1	0.5	0.9	17.1	871.3	0.4	0.3	0.5	-0.4	1.4	Vent Fume Stack
12/6/23 8:40	125.1	17.1	0.5	17.1	0.0	805.3	0.4	0.3	0.5	-0.6	9.3	Acid Plant Tailstack
12/6/23 8:41	125.1	17.1	0.5	17.1	0.0	803.8	0.4	0.3	0.5	-0.6	9.4	Acid Plant Tailstack
12/6/23 8:42	125.1	17.1	0.5	17.0	0.0	807.0	0.4	0.3	0.5	-0.6	9.5	Acid Plant Tailstack
12/6/23 8:43	124.9	17.1	0.5	17.0	0.0	806.6	0.4	0.3	0.5	-0.6	9.6	Acid Plant Tailstack
12/6/23 8:44	124.7	17.1	0.5	17.1	0.0	808.5	0.4	0.3	0.5	-0.6	9.8	Acid Plant Tailstack
12/6/23 8:45	125.1	17.1	0.6	17.2	0.0	810.6	0.4	0.3	0.5	-0.6	9.6	Acid Plant Tailstack
12/6/23 8:46	124.9	17.1	0.5	17.2	0.0	817.6	0.4	0.3	0.5	-0.6	9.6	Acid Plant Tailstack
12/6/23 8:47	125.0	17.1	0.5	17.2	0.0	818.0	0.4	0.3	0.5	-0.6	9.7	Acid Plant Tailstack
12/6/23 8:48	125.1	17.1	0.5	14.4	0.0	815.3	0.4	0.3	0.5	-0.6	9.8	Acid Plant Tailstack
12/6/23 8:49	125.2	17.1	0.5	1.7	0.0	816.3	0.4	0.3	0.5	-0.6	7.7	Acid Plant Tailstack
12/6/23 8:50	125.0	17.1	0.4	0.8	0.0	825.1	0.3	0.3	0.5	-0.6	3.0	Acid Plant Tailstack
12/6/23 8:51	124.7	17.1	0.5	0.7	0.0	829.2	0.3	0.3	0.5	-0.6	0.1	Acid Plant Tailstack
12/6/23 8:52	124.7	17.1	0.5	0.6	0.0	834.6	0.3	0.3	0.5	-0.6	0.1	Acid Plant Tailstack
12/6/23 8:53	124.8	17.1	0.5	0.8	0.0	838.6	0.3	0.3	0.5	-0.6	2.7	Acid Plant Tailstack
12/6/23 8:54	124.9	17.1	0.5	0.6	0.0	845.9	0.3	0.3	0.5	-0.6	4.4	Acid Plant Tailstack
12/6/23 8:55	124.9	17.1	0.5	0.5	0.0	850.6	0.3	0.3	0.5	-0.6	4.6	Acid Plant Tailstack
12/6/23 8:56	125.1	17.1	0.5	0.8	0.0	851.5	0.3	0.3	0.5	-0.6	5.0	Acid Plant Tailstack
12/6/23 8:57	125.1	17.1	0.5	0.9	0.0	850.3	0.3	0.3	0.5	-0.6	5.1	Acid Plant Tailstack
12/6/23 8:58	124.9	17.1	0.5	0.7	0.0	850.2	0.3	0.3	0.5	-0.6	5.3	Acid Plant Tailstack
12/6/23 8:59	124.7	17.1	0.4	0.7	0.0	852.1	0.3	0.3	0.5	-0.6	5.3	Acid Plant Tailstack
12/6/23 9:00	125.5	17.1	0.5	0.3	0.0	853.0	0.3	0.3	0.5	-0.6	5.8	Acid Plant Tailstack
12/6/23 9:01	125.6	17.1	0.5	0.6	0.0	850.3	0.3	0.3	0.5	-0.6	6.2	Acid Plant Tailstack
12/6/23 9:02	125.1	17.1	0.5	0.6	0.0	848.2	0.3	0.3	0.5	-0.6	6.3	Acid Plant Tailstack
12/6/23 9:03	125.0	17.1	0.5	0.6	0.0	846.3	0.3	0.3	0.5	-0.6	6.4	Acid Plant Tailstack
12/6/23 9:04	124.9	17.1	0.5	0.6	0.0	845.3	0.3	0.3	0.5	-0.6	6.9	Acid Plant Tailstack
12/6/23 9:05	124.9	17.1	0.5	0.7	0.0	846.9	0.3	0.3	0.5	-0.6	7.2	Acid Plant Tailstack
12/6/23 9:06	124.8	17.1	0.5	0.6	0.0	850.9	0.3	0.3	0.5	-0.6	7.3	Acid Plant Tailstack
12/6/23 9:07	124.6	17.1	0.5	0.5	0.0	853.0	0.3	0.3	0.5	-0.6	7.7	Acid Plant Tailstack
12/6/23 9:08	124.4	17.1	0.5	0.5	0.0	854.6	0.3	0.3	0.5	-0.6	7.9	Acid Plant Tailstack
12/6/23 9:09	125.0	17.1	0.5	0.9	0.0	854.7	0.3	0.3	0.5	-0.6	7.8	Acid Plant Tailstack
12/6/23 9:10	125.3	17.1	0.5	0.9	0.0	850.9	0.3	0.3	0.5	-0.6	8.9	Acid Plant Tailstack
12/6/23 9:11	125.2	17.1	0.5	0.6	0.0	851.3	0.3	0.3	0.5	-0.6	9.5	Acid Plant Tailstack
12/6/23 9:12	125.0	17.1	0.5	0.8	0.0	847.0	0.3	0.3	0.5	-0.6	9.8	Acid Plant Tailstack
12/6/23 9:13	125.0	17.1	0.5	0.5	0.0	837.2	0.3	0.3	0.5	-0.6	9.7	Acid Plant Tailstack
12/6/23 9:14	125.0	17.1	0.5	0.5	0.0	823.5	0.3	0.3	0.5	-0.6	9.7	Acid Plant Tailstack
12/6/23 9:15	125.2	17.1	0.5	0.8	0.0	803.7	0.3	0.3	0.5	-0.6	9.7	Acid Plant Tailstack
12/6/23 9:16	125.2	17.1	0.5	0.5	0.0	791.3	0.3	0.3	0.5	-0.6	9.9	Acid Plant Tailstack
12/6/23 9:17	124.9	17.1	0.5	0.8	0.0	794.7	0.3	0.3	0.5	-0.6	10.0	Acid Plant Tailstack
12/6/23 9:18	124.9	17.5	0.5	1.4	0.0	794.9	0.3	0.3	0.5	-0.6	10.2	Acid Plant Tailstack
12/6/23 9:19	124.9	18.1	0.6	0.6	0.0	792.4	0.3	0.3	0.5	-0.6	10.2	Acid Plant Tailstack
12/6/23 9:20	124.9	18.1	0.6	0.8	0.0	784.8	0.3	0.3	0.5	-0.6	9.7	Acid Plant Tailstack
12/6/23 9:21	124.8	18.1	0.6	0.7	0.0	778.8	0.3	0.3	0.5	-0.6	9.8	Acid Plant Tailstack
12/6/23 9:22	124.8	18.1	0.5	0.7	0.0	775.5	0.3	0.3	0.5	-0.6	9.8	Acid Plant Tailstack
12/6/23 9:23	125.1	18.1	0.6	0.7	0.0	766.0	0.3	0.3	0.5	-0.6	9.9	Acid Plant Tailstack
12/6/23 9:24	125.1	18.1	0.5	0.7	0.0	772.5	0.3	0.3	0.5	-0.6	9.8	Acid Plant Tailstack
12/6/23 9:25	125.1	18.1	0.6	0.6	0.0	790.4	0.3	0.3	0.5	-0.6	9.7	Acid Plant Tailstack
12/6/23 9:26	125.1	18.1	0.5	0.6	0.0	503.3	0.3	0.3	0.5	-0.6	9.9	Acid Plant Tailstack
12/6/23 9:27	125.2	18.1	0.5	0.5	0.0	0.1	0.3	0.3	0.5	-0.6	10.0	Acid Plant Tailstack
12/6/23 9:28	125.1	18.1	0.5	0.7	0.0	0.1	0.3	0.3	0.5	-0.6	10.1	Acid Plant Tailstack
12/6/23 9:29	125.0	18.1	0.5	5.7	0.0	0.1	0.3	0.3	0.5	-0.6	9.9	Acid Plant Tailstack
12/6/23 9:30	125.0	18.1	0.5	14.8	0.0	0.1	0.3	0.3	0.5	-0.6	10.0	Acid Plant Tailstack
12/6/23 9:31	125.1	18.1	0.6	16.8	0.0	0.1	0.3	0.3	0.5	-0.6	10.1	Acid Plant Tailstack
12/6/23 9:32	125.0	18.1	0.6	17.1	0.0	0.1	0.3	0.3	0.5	-0.6	10.0	Acid Plant Tailstack
12/6/23 9:33	125.1	18.1	0.5	17.1	0.0	0.1	0.3	0.3	0.5	-0.6	10.1	Acid Plant Tailstack

	Isa Feed Rate (tons/hour)	#2 Converter Blast Air (kscfm)	#3 Converter Blast Air (kscfm)	#4 Converter Blast Air (kscfm)	#5 Converter Blast Air (kscfm)	#1 Anode Barrel Air (scfm)	#1 Anode Barrel Gas (scfm)	#2 Anode Barrel Air (scfm)	#2 Anode Barrel Gas (scfm)	Steam Use (lbs/hr)	Electric Furnace Power (MW)	
12/6/23 9:34	124.9	18.1	0.5	17.1	0.0	0.1	0.3	0.3	0.5	-0.6	10.1	Acid Plant Tailstack
12/6/23 9:35	124.7	18.1	0.6	17.1	0.0	0.1	0.3	0.3	0.5	-0.6	10.1	Acid Plant Tailstack
12/6/23 9:36	125.0	18.1	0.5	17.1	0.0	0.1	0.3	0.3	0.5	-0.6	10.0	Acid Plant Tailstack
12/6/23 9:37	125.3	18.1	0.5	17.1	0.0	0.1	0.3	0.3	0.5	-0.6	9.7	Acid Plant Tailstack
12/6/23 9:38	125.3	18.1	0.5	17.1	0.0	0.1	0.3	0.3	0.5	-0.6	9.8	Acid Plant Tailstack
12/6/23 9:39	125.0	18.1	0.5	17.1	0.0	0.1	0.3	0.3	0.5	-0.6	9.6	Acid Plant Tailstack
12/6/23 9:40	125.2	18.1	0.5	17.1	0.0	0.1	0.3	0.3	0.5	25.9	9.3	Acid Plant Tailstack
12/6/23 9:41	125.2	18.1	0.6	17.1	0.0	0.1	0.3	0.3	0.5	7240.7	9.3	Acid Plant Tailstack
12/6/23 9:42	125.0	18.1	0.6	17.1	0.0	0.1	0.3	0.3	0.5	7674.1	9.4	Acid Plant Tailstack
12/6/23 9:43	124.9	17.2	0.5	17.1	0.0	0.1	0.3	0.3	0.5	7200.7	9.3	Acid Plant Tailstack
12/6/23 9:44	124.9	17.1	0.6	17.0	0.0	0.1	0.3	0.3	0.5	309.6	9.2	Acid Plant Tailstack
12/6/23 9:45	124.8	17.1	0.5	17.0	0.0	0.1	0.3	0.3	0.5	6425.2	9.3	Acid Plant Tailstack
12/6/23 9:46	124.9	17.1	0.5	16.9	0.0	0.1	0.3	0.3	0.5	7389.1	9.4	Acid Plant Tailstack
12/6/23 9:47	125.0	17.1	0.5	16.8	0.0	0.1	0.3	0.3	0.5	5797.5	9.5	Acid Plant Tailstack
12/6/23 9:48	124.9	17.1	0.5	16.9	0.0	190.4	0.3	0.3	0.5	3538.6	8.0	Acid Plant Tailstack
12/6/23 9:49	124.8	17.1	0.6	16.9	0.0	275.8	0.3	0.3	0.5	2895.5	3.5	Acid Plant Tailstack
12/6/23 9:50	124.8	17.1	0.5	17.3	0.0	0.1	0.3	0.3	0.5	0.3	0.1	Acid Plant Tailstack
12/6/23 9:51	124.8	17.1	0.5	17.4	0.0	0.1	0.3	0.3	0.5	-0.4	0.1	Acid Plant Tailstack
12/6/23 9:52	124.7	17.1	0.5	17.5	0.0	0.1	262.8	0.3	0.5	4654.4	0.8	Acid Plant Tailstack
12/6/23 9:53	125.4	17.1	0.5	17.1	0.0	0.2	517.3	0.3	0.5	5803.5	3.7	Acid Plant Tailstack
12/6/23 9:54	125.2	17.1	0.5	17.1	0.0	0.2	540.4	0.3	0.5	5745.5	4.5	Acid Plant Tailstack
12/6/23 9:55	125.1	17.1	0.5	17.2	0.0	0.2	549.6	0.3	0.5	5698.2	4.9	Acid Plant Tailstack
12/6/23 9:56	125.0	17.1	0.5	17.2	0.0	0.2	556.3	0.3	0.5	5677.7	5.2	Acid Plant Tailstack
12/6/23 9:57	125.0	17.1	0.5	17.1	0.0	0.2	558.3	0.3	0.5	5661.3	5.7	Acid Plant Tailstack
12/6/23 9:58	125.1	17.1	0.5	17.1	0.0	0.2	559.0	0.3	0.5	5649.3	6.6	Acid Plant Tailstack
12/6/23 9:59	124.8	17.1	0.5	17.1	0.0	0.2	559.8	0.3	0.5	5630.6	7.2	Acid Plant Tailstack
12/6/23 10:00	124.9	17.1	0.5	5.2	0.0	0.2	560.5	0.3	0.5	5623.9	7.2	Acid Plant Tailstack
12/6/23 10:01	125.1	17.1	0.5	1.1	0.0	0.2	561.2	0.3	0.5	5615.2	8.4	Acid Plant Tailstack
12/6/23 10:02	124.9	17.1	0.5	1.0	0.0	0.2	561.8	0.3	0.5	5609.0	8.9	Acid Plant Tailstack
12/6/23 10:03	125.0	17.1	0.5	0.7	0.0	0.2	561.3	0.3	0.5	5599.6	9.0	Acid Plant Tailstack
12/6/23 10:04	125.0	17.1	0.5	0.8	0.0	0.2	560.5	0.3	0.5	5593.2	8.9	Acid Plant Tailstack
12/6/23 10:05	125.1	17.1	0.4	0.7	0.0	0.2	559.7	0.3	0.5	5588.6	8.6	Acid Plant Tailstack
12/6/23 10:06	125.0	17.1	0.4	0.7	0.0	0.2	558.9	0.3	0.5	5587.2	8.3	Acid Plant Tailstack
12/6/23 10:07	125.2	17.1	0.5	4.0	0.0	0.2	558.1	0.3	0.5	5584.3	8.9	Acid Plant Tailstack
12/6/23 10:08	125.1	17.1	0.5	13.3	0.0	0.2	558.0	0.3	0.5	5585.2	9.7	Acid Plant Tailstack
12/6/23 10:09	125.1	17.1	0.4	16.6	0.0	0.2	558.2	0.3	0.5	5579.7	9.6	Acid Plant Tailstack
12/6/23 10:10	125.1	17.1	0.5	17.0	0.0	0.2	558.2	0.3	0.5	5581.9	9.7	Acid Plant Tailstack
12/6/23 10:11	124.7	17.1	0.5	17.0	0.0	0.2	558.0	0.3	0.5	5571.7	9.7	Acid Plant Tailstack
12/6/23 10:12	124.9	17.1	0.5	17.1	0.0	0.2	557.9	0.3	0.5	5576.3	9.5	Acid Plant Tailstack
12/6/23 10:13	125.0	17.1	0.5	17.0	0.0	0.2	557.7	0.3	0.5	5570.4	9.2	Acid Plant Tailstack
12/6/23 10:14	125.1	17.1	0.5	17.0	0.0	0.2	557.6	0.3	0.5	5574.7	9.2	Acid Plant Tailstack
12/6/23 10:15	125.1	17.1	0.5	16.9	0.0	0.2	557.6	0.3	0.5	5572.8	9.1	Acid Plant Tailstack
12/6/23 10:16	125.1	17.1	0.5	16.7	0.0	0.2	557.5	0.3	0.5	5571.8	9.2	Acid Plant Tailstack
12/6/23 10:17	125.1	17.1	0.5	16.3	0.0	0.2	557.5	0.3	0.5	5574.1	9.3	Acid Plant Tailstack
12/6/23 10:18	124.8	17.1	0.5	16.0	0.0	0.2	557.5	0.3	0.5	5573.2	9.4	Acid Plant Tailstack
12/6/23 10:19	125.0	17.1	0.5	16.2	0.0	0.2	557.5	0.3	0.5	5574.8	9.6	Acid Plant Tailstack
12/6/23 10:20	125.0	17.1	0.5	16.5	0.0	0.2	557.4	0.3	0.5	5572.1	9.7	Acid Plant Tailstack
12/6/23 10:21	125.0	17.1	0.5	16.9	0.0	0.2	557.5	0.3	0.5	5576.9	9.7	Acid Plant Tailstack
12/6/23 10:22	125.1	17.1	0.6	16.7	0.0	0.2	557.5	0.3	0.5	5572.2	9.7	Acid Plant Tailstack
12/6/23 10:23	125.1	17.1	0.6	16.9	0.0	0.2	557.5	0.3	0.5	5575.2	9.9	Acid Plant Tailstack
12/6/23 10:24	125.1	17.1	0.6	17.5	0.0	0.2	557.5	0.3	0.5	5577.5	10.2	Acid Plant Tailstack
12/6/23 10:25	125.0	17.1	0.6	17.3	0.0	0.2	557.5	0.3	0.5	5577.3	10.1	Acid Plant Tailstack
12/6/23 10:26	124.7	17.1	0.6	17.2	0.0	0.2	557.5	0.3	0.5	5572.3	9.7	Acid Plant Tailstack
12/6/23 10:27	125.0	17.1	0.6	16.5	0.0	0.2	557.5	0.3	0.5	5576.1	9.8	Acid Plant Tailstack
12/6/23 10:28	125.4	17.1	0.7	16.0	0.0	0.2	557.6	0.3	0.5	5574.1	10.0	Acid Plant Tailstack
12/6/23 10:29	125.2	17.1	0.6	16.0	0.0	0.2	557.6	0.3	0.5	5580.5	10.1	Acid Plant Tailstack
12/6/23 10:30	124.9	17.1	0.6	16.2	0.0	0.2	557.6	0.3	0.5	5578.9	10.1	Acid Plant Tailstack
12/6/23 10:31	124.9	17.1	0.6	16.0	0.0	0.2	557.6	0.3	0.5	5580.6	9.9	Acid Plant Tailstack
12/6/23 10:32	125.0	17.1	0.6	15.9	0.0	0.2	557.6	0.3	0.5	5576.5	9.6	Acid Plant Tailstack
12/6/23 10:33	125.0	14.0	0.6	16.0	0.0	0.2	557.6	0.3	0.5	5579.8	9.4	Acid Plant Tailstack
12/6/23 10:34	125.1	0.0	0.6	16.0	0.0	0.2	557.7	0.3	0.5	5580.8	9.4	Acid Plant Tailstack
12/6/23 10:35	125.1	0.0	0.5	16.1	0.0	0.2	557.7	0.3	0.5	5587.6	9.6	Acid Plant Tailstack
12/6/23 10:36	125.0	0.0	0.5	16.0	0.0	0.2	557.7	0.3	0.5	5590.2	9.7	Acid Plant Tailstack
12/6/23 10:37	124.9	0.0	0.5	15.9	0.0	0.2	557.7	0.3	0.5	5593.3	9.8	Acid Plant Tailstack
12/6/23 10:38	124.9	0.0	0.6	16.0	0.0	0.2	558.3	0.3	0.5	5592.5	10.0	Acid Plant Tailstack
12/6/23 10:39	125.0	0.0	0.6	16.1	0.0	0.2	558.9	0.3	0.5	5598.9	9.9	Acid Plant Tailstack
12/6/23 10:40	125.0	0.0	0.6	16.0	0.0	0.2	559.0	0.3	0.5	5607.7	9.9	Acid Plant Tailstack
12/6/23 10:41	125.1	0.0	0.5	16.0	0.0	0.2	559.3	0.3	0.5	5603.4	9.8	Acid Plant Tailstack
12/6/23 10:42	125.0	0.0	0.4	16.0	0.0	0.2	559.5	0.3	0.5	5604.8	9.6	Acid Plant Tailstack
12/6/23 10:43	124.9	0.0	0.4	16.1	0.0	0.2	559.7	0.3	0.5	5605.6	9.6	Acid Plant Tailstack
12/6/23 10:44	124.9	0.0	0.5	15.9	0.0	0.2	560.0	0.3	0.5	5603.7	9.5	Acid Plant Tailstack
12/6/23 10:45	125.1	0.0	0.5	16.0	0.0	0.2	560.1	0.3	0.5	5597.6	9.5	Acid Plant Tailstack
12/6/23 10:46	125.2	0.0	0.5	16.0	0.0	0.2	560.2	0.3	0.5	5601.1	9.5	Acid Plant Tailstack
12/6/23 10:47	125.3	0.0	0.5	16.0	0.0	0.2	560.2	0.3	0.5	5594.8	9.4	Acid Plant Tailstack
12/6/23 10:48	125.2	0.0	0.5	16.0	0.0	0.2	560.2	0.3	0.5	5597.9	9.5	Acid Plant Tailstack
12/6/23 10:49	125.0	0.0	0.5	16.3	0.0	0.2	560.2	0.3	0.5	5591.8	9.6	Acid Plant Tailstack
12/6/23 10:50	124.9	0.0	0.5	17.3	0.0	0.2	560.2	0.3	0.5	5597.6	9.6	Acid Plant Tailstack
12/6/23 10:51	125.2	0.0	0.6	17.9	0.0	0.2	560.2	0.3	0.5	5596.2	9.7	Acid Plant Tailstack
12/6/23 10:52	125.2	0.0	0.5	17.9	0.0	0.2	560.2	0.3	0.5	5601.4	9.7	Acid Plant Tailstack
12/6/23 10:53	125.6	0.0	0.5	18.1	0.0	0.2	560.2	0.3	0.5	5599.1	9.8	Acid Plant Tailstack
12/6/23 10:54	124.9	0.0	0.5	18.3	0.0	0.2	560.2	0.3	0.5	5601.8	9.8	Acid Plant Tailstack
12/6/23 10:55	124.8	0.0	0.5	18.1	0.0	0.2	560.2	0.3	0.5	5602.7	9.9	Acid Plant Tailstack
12/6/23 10:56	124.9	0.0	0.5	18.0	0.0	0.2	560.2	0.3	0.5	5605.4	10.0	Acid Plant Tailstack
12/6/23 10:57	125.0	0.0	0.5	17.8	0.0	0.2	560.2	0.3	0.5	5601.1	10.0	Acid Plant Tailstack
12/6/23 10:58	124.9	0.0	0.6	17.8	0.0	0.2	560.2	0.3	0.5	5601.2	10.0	Acid Plant Tailstack
12/6/23 10:59	125.0	0.0	0.6	18.0	0.0	0.2	560.2	0.3	0.5	5594.1	10.0	Acid Plant Tailstack
12/6/23 11:00	125.1	0.0	0.5	18.1	0.0	0.2	560.2	0.3	0.5	5593.2	10.1	Acid Plant Tailstack

	Isa Feed Rate (tons/hour)	#2 Converter Blast Air (kscfm)	#3 Converter Blast Air (kscfm)	#4 Converter Blast Air (kscfm)	#5 Converter Blast Air (kscfm)	#1 Anode Barrel Air (scfm)	#1 Anode Barrel Gas (scfm)	#2 Anode Barrel Air (scfm)	#2 Anode Barrel Gas (scfm)	Steam Use (lbs/hr)	Electric Furnace Power (MW)	
12/6/23 11:01	125.5	0.0	0.6	17.8	0.0	0.2	560.2	0.3	0.5	5593.0	10.2	Acid Plant Tailstack
12/6/23 11:02	125.4	0.0	0.5	17.3	0.0	0.2	560.2	0.3	0.5	5591.1	10.2	Acid Plant Tailstack
12/6/23 11:03	125.2	0.0	0.6	16.9	0.0	0.2	560.1	0.3	0.5	5585.1	10.3	Acid Plant Tailstack
12/6/23 11:04	125.0	0.0	0.5	16.5	0.0	0.2	560.0	0.3	0.5	5585.6	10.3	Acid Plant Tailstack
12/6/23 11:05	124.9	0.0	0.5	16.4	0.0	0.2	559.9	0.3	0.5	5586.4	10.4	Acid Plant Tailstack
12/6/23 11:06	125.0	0.0	0.5	16.2	0.0	0.2	559.8	0.3	0.5	5587.6	10.4	Acid Plant Tailstack
12/6/23 11:07	124.9	0.0	0.5	16.0	0.0	0.2	559.7	0.3	0.5	5582.8	10.3	Acid Plant Tailstack
12/6/23 11:08	124.8	0.0	0.5	15.9	0.0	0.2	559.6	0.3	0.5	5588.4	10.1	Acid Plant Tailstack
12/6/23 11:09	124.7	0.0	0.5	15.9	3.4	0.2	559.5	0.3	0.5	5591.3	10.0	Acid Plant Tailstack
12/6/23 11:10	124.9	0.0	0.5	16.0	13.0	0.2	559.4	0.3	0.5	5596.6	9.8	Acid Plant Tailstack
12/6/23 11:11	125.0	0.0	0.5	16.2	14.9	0.2	559.3	0.3	0.5	5594.1	9.6	Acid Plant Tailstack
12/6/23 11:12	124.8	0.0	0.6	16.2	15.1	0.2	559.3	0.3	0.5	5600.2	9.4	Acid Plant Tailstack
12/6/23 11:13	124.9	0.0	0.5	16.3	15.8	0.2	559.3	0.3	0.5	5596.5	9.3	Acid Plant Tailstack
12/6/23 11:14	125.1	0.0	0.5	16.4	16.1	0.2	559.3	0.3	0.5	5598.3	9.2	Acid Plant Tailstack
12/6/23 11:15	124.9	0.0	0.5	16.6	16.7	0.2	559.3	0.3	0.5	5593.2	9.2	Acid Plant Tailstack
12/6/23 11:16	125.2	0.0	0.6	16.8	17.1	0.2	559.3	0.3	0.5	5595.7	9.2	Acid Plant Tailstack
12/6/23 11:17	125.0	0.0	0.5	16.9	17.1	0.2	559.0	0.3	0.5	5593.6	9.2	Acid Plant Tailstack
12/6/23 11:18	124.9	0.0	0.5	16.9	17.1	0.2	558.7	0.3	0.5	5590.6	9.2	Acid Plant Tailstack
12/6/23 11:19	125.0	0.0	0.5	16.9	17.1	0.2	558.4	0.3	0.5	5581.0	9.2	Acid Plant Tailstack
12/6/23 11:20	125.0	0.0	0.5	16.9	17.1	0.2	558.0	0.3	0.5	5581.7	9.2	Acid Plant Tailstack
12/6/23 11:21	125.0	0.0	0.5	16.9	17.1	0.2	557.7	0.3	0.5	5576.0	9.2	Acid Plant Tailstack
12/6/23 11:22	125.3	0.0	0.5	16.9	17.1	0.2	557.7	0.3	0.5	5583.9	9.2	Acid Plant Tailstack
12/6/23 11:23	125.1	0.0	0.5	16.9	17.1	0.2	558.6	0.3	0.5	5582.9	9.2	Acid Plant Tailstack
12/6/23 11:24	124.7	0.0	0.6	17.0	17.1	0.2	559.4	0.3	0.5	5586.0	9.2	Acid Plant Tailstack
12/6/23 11:25	124.6	0.0	0.6	17.3	17.1	0.2	559.3	0.3	0.5	5584.8	9.2	Acid Plant Tailstack
12/6/23 11:26	124.6	0.0	0.6	17.0	17.1	0.2	558.1	0.3	0.5	5595.5	9.2	Acid Plant Tailstack
12/6/23 11:27	124.7	0.0	0.6	16.6	17.1	0.2	558.2	0.3	0.5	5593.5	9.2	Acid Plant Tailstack
12/6/23 11:28	125.0	0.0	0.6	16.2	17.1	0.2	558.5	0.3	0.5	5595.4	9.2	Acid Plant Tailstack
12/6/23 11:29	125.3	0.0	0.5	15.8	17.1	0.2	558.7	0.3	0.5	5596.1	9.2	Acid Plant Tailstack
12/6/23 11:30	125.4	0.0	0.6	15.6	17.0	0.2	559.0	0.3	0.5	5595.0	9.2	Acid Plant Tailstack
12/6/23 11:31	125.2	0.0	0.6	15.4	17.0	0.2	559.2	0.3	0.5	5590.8	7.6	Acid Plant Tailstack
12/6/23 11:32	125.0	0.0	0.6	15.4	17.0	0.2	559.5	0.3	0.5	5600.6	4.3	Acid Plant Tailstack
12/6/23 11:33	125.1	0.0	0.5	15.2	17.1	0.2	559.7	0.3	0.5	5593.7	0.1	Acid Plant Tailstack
12/6/23 11:34	124.8	0.0	0.5	15.1	17.1	0.2	559.9	0.3	0.5	5591.2	0.1	Acid Plant Tailstack
12/6/23 11:35	124.8	0.0	0.5	14.9	17.1	0.2	559.8	0.3	0.5	5586.8	0.1	Acid Plant Tailstack
12/6/23 11:36	125.0	0.0	0.5	14.8	17.2	0.2	559.7	0.3	0.5	5586.5	1.5	Acid Plant Tailstack
12/6/23 11:37	125.2	0.0	0.5	14.9	17.0	0.2	559.6	0.3	0.5	5582.0	3.3	Acid Plant Tailstack
12/6/23 11:38	125.3	0.0	0.5	14.7	17.0	0.2	559.4	0.3	0.5	5583.7	3.5	Acid Plant Tailstack
12/6/23 11:39	125.3	0.0	0.5	14.8	17.0	0.2	559.3	0.3	0.5	5582.9	3.8	Acid Plant Tailstack
12/6/23 11:40	125.0	0.0	0.6	14.6	17.1	0.2	559.1	0.3	0.5	5587.5	4.3	Acid Plant Tailstack
12/6/23 11:41	124.9	0.0	0.5	14.7	17.1	0.2	559.0	0.3	0.5	5584.8	4.8	Acid Plant Tailstack
12/6/23 11:42	125.1	0.0	0.6	14.7	17.0	0.2	558.9	0.3	0.5	5588.2	5.5	Acid Plant Tailstack
12/6/23 11:43	125.2	0.0	0.6	15.2	17.1	0.2	558.9	0.3	0.5	5591.1	6.0	Acid Plant Tailstack
12/6/23 11:44	125.4	0.0	0.6	15.6	16.9	0.2	559.1	0.3	0.5	5598.7	6.6	Acid Plant Tailstack
12/6/23 11:45	125.3	0.0	0.6	16.0	16.9	0.2	560.1	0.3	0.5	5606.6	7.0	Acid Plant Tailstack
12/6/23 11:46	125.0	0.0	0.6	16.6	17.0	0.2	323.0	0.3	0.5	3429.3	7.3	Acid Plant Tailstack
12/6/23 12:30	124.8	0.0	0.5	17.9	16.1	0.1	0.8	0.3	0.5	-0.6	4.9	Acid Plant Tailstack
12/6/23 12:31	125.0	0.0	0.5	17.9	16.1	0.1	0.7	0.3	0.5	-0.6	4.9	Acid Plant Tailstack
12/6/23 12:32	124.9	0.0	0.5	17.9	16.1	0.1	0.7	0.3	0.5	-0.6	4.9	Acid Plant Tailstack
12/6/23 12:33	125.1	0.0	0.5	17.9	16.5	0.1	0.7	0.3	0.5	-0.6	5.0	Acid Plant Tailstack
12/6/23 12:34	125.1	0.0	0.5	17.9	17.2	0.1	0.7	0.3	0.5	-0.6	5.4	Acid Plant Tailstack
12/6/23 12:35	125.3	0.0	0.6	17.9	17.1	0.1	0.6	0.3	0.5	-0.6	5.7	Acid Plant Tailstack
12/6/23 12:36	125.0	0.0	0.6	17.8	17.0	0.1	0.6	0.3	0.5	-0.6	5.7	Acid Plant Tailstack
12/6/23 12:37	124.7	0.0	0.5	17.7	17.0	0.1	0.6	0.3	0.5	-0.6	5.7	Acid Plant Tailstack
12/6/23 12:38	125.5	0.0	0.6	17.9	17.0	0.1	0.5	0.3	0.5	-0.6	5.8	Acid Plant Tailstack
12/6/23 12:39	125.6	0.0	0.6	18.0	17.1	0.1	0.5	0.3	0.5	-0.6	6.6	Acid Plant Tailstack
12/6/23 12:40	125.5	0.0	0.6	18.0	17.1	0.1	0.5	0.3	0.5	-0.6	7.5	Acid Plant Tailstack
12/6/23 12:41	125.0	0.0	0.5	17.9	17.1	0.1	0.5	0.3	0.5	-0.6	8.1	Acid Plant Tailstack
12/6/23 12:42	125.1	0.0	0.6	17.8	17.2	0.1	0.4	0.3	0.5	-0.6	8.2	Acid Plant Tailstack
12/6/23 12:43	124.9	0.0	0.6	17.7	17.1	0.1	0.4	0.3	0.5	-0.6	8.8	Acid Plant Tailstack
12/6/23 12:44	124.8	0.0	0.6	17.5	17.0	0.2	0.4	0.2	0.5	-0.6	9.2	Acid Plant Tailstack
12/6/23 12:45	124.9	0.0	0.6	17.1	16.9	0.1	0.4	0.2	0.5	-0.6	9.3	Acid Plant Tailstack
12/6/23 12:46	124.9	0.0	0.6	16.5	17.3	0.2	0.3	0.3	0.5	-0.6	9.3	Acid Plant Tailstack
12/6/23 12:47	125.0	0.0	0.6	16.0	17.2	0.2	0.3	0.2	0.5	-0.6	9.2	Acid Plant Tailstack
12/6/23 12:48	125.0	0.0	0.5	15.6	17.2	0.2	0.3	0.2	0.5	-0.6	8.7	Acid Plant Tailstack
12/6/23 12:49	125.0	0.0	0.6	15.3	17.2	0.1	0.3	0.2	0.5	-0.6	9.0	Acid Plant Tailstack
12/6/23 12:50	125.0	0.0	0.6	15.2	17.1	0.1	0.3	0.2	0.5	-0.6	9.5	Acid Plant Tailstack
12/6/23 12:51	124.8	0.0	0.5	15.2	17.0	0.1	0.3	0.2	0.5	-0.6	9.6	Acid Plant Tailstack
12/6/23 12:52	125.1	0.0	0.6	15.2	17.1	0.1	0.3	0.2	0.5	-0.6	9.7	Acid Plant Tailstack
12/6/23 12:53	125.0	0.0	0.5	15.1	17.2	0.1	0.3	0.2	0.5	-0.6	9.7	Acid Plant Tailstack
12/6/23 12:54	125.0	0.0	0.6	15.0	17.1	0.1	0.3	0.2	0.5	-0.6	9.8	Acid Plant Tailstack
12/6/23 12:55	125.0	0.0	0.6	15.1	17.1	0.1	0.3	0.2	0.5	-0.6	9.8	Acid Plant Tailstack
12/6/23 12:56	125.1	0.0	0.7	15.1	17.1	0.1	0.3	0.2	0.5	-0.6	9.9	Acid Plant Tailstack
12/6/23 12:57	124.9	0.0	0.8	15.0	17.1	0.1	0.3	0.3	0.5	-0.6	10.0	Acid Plant Tailstack
12/6/23 12:58	124.8	0.0	0.8	15.1	17.1	0.1	0.3	0.2	0.5	-0.6	10.0	Acid Plant Tailstack
12/6/23 12:59	124.8	0.0	0.8	15.1	17.1	0.1	0.3	0.2	0.5	-0.6	9.8	Acid Plant Tailstack
12/6/23 13:00	124.7	0.0	0.7	15.1	17.1	0.1	0.3	0.2	0.5	-0.6	9.8	Acid Plant Tailstack
12/6/23 13:01	124.9	0.0	0.7	15.1	17.1	0.1	0.3	0.3	0.5	-0.6	9.8	Acid Plant Tailstack
12/6/23 13:02	125.1	0.0	0.7	15.0	13.7	0.1	0.3	0.2	0.5	-0.6	9.9	Acid Plant Tailstack
12/6/23 13:03	124.9	0.0	0.6	15.3	0.0	0.1	0.3	0.2	0.5	-0.6	10.1	Acid Plant Tailstack
12/6/23 13:04	125.1	0.0	0.6	15.3	0.0	0.1	0.3	0.3	0.5	-0.6	10.3	Acid Plant Tailstack
12/6/23 13:05	125.2	0.0	0.6	15.2	0.0	0.1	0.3	0.3	0.5	-0.6	10.5	Acid Plant Tailstack
12/6/23 13:06	125.1	0.0	0.6	15.1	0.0	0.1	0.3	0.2	0.5	-0.6	10.3	Acid Plant Tailstack
12/6/23 13:07	125.0	0.0	0.5	15.0	0.0	0.1	0.3	0.3	0.5	-0.6	10.1	Acid Plant Tailstack
12/6/23 13:08	124.8	0.0	0.6	15.0	0.0	0.1	0.3	0.3	0.5	-0.6	9.6	Acid Plant Tailstack
12/6/23 13:09	124.8	0.0	0.5	15.0	0.0	0.1	0.3	0.2	0.5	-0.6	9.5	Acid Plant Tailstack

	Isa Feed Rate (tons/hour)	#2 Converter Blast Air (kscfm)	#3 Converter Blast Air (kscfm)	#4 Converter Blast Air (kscfm)	#5 Converter Blast Air (kscfm)	#1 Anode Barrel Air (scfm)	#1 Anode Barrel Gas (scfm)	#2 Anode Barrel Air (scfm)	#2 Anode Barrel Gas (scfm)	Steam Use (lbs/hr)	Electric Furnace Power (MW)	
12/6/23 13:10	125.2	0.0	0.5	15.0	0.0	0.1	0.3	0.2	0.5	-0.6	9.4	Acid Plant Tailstack
12/6/23 13:11	125.1	0.0	0.6	15.0	4.8	0.1	0.3	0.2	0.5	-0.6	9.3	Acid Plant Tailstack
12/6/23 13:12	124.7	0.0	0.6	15.0	13.4	0.1	0.3	0.2	0.5	-0.6	8.0	Acid Plant Tailstack
12/6/23 13:13	124.8	0.0	0.6	15.1	14.9	0.1	0.3	0.2	0.5	-0.6	4.6	Acid Plant Tailstack
12/6/23 13:14	125.0	0.0	0.6	15.2	15.0	0.1	0.3	0.2	0.5	-0.6	0.1	Acid Plant Tailstack
12/6/23 13:15	125.2	0.0	0.6	15.2	15.1	0.1	0.3	0.2	0.5	-0.6	0.1	Acid Plant Tailstack
12/6/23 13:16	125.2	0.0	0.6	15.2	16.0	0.1	0.3	0.2	0.5	-0.6	1.4	Acid Plant Tailstack
12/6/23 13:17	125.2	0.0	0.6	15.2	16.3	0.1	0.3	0.2	0.5	-0.6	3.6	Acid Plant Tailstack
12/6/23 13:18	125.1	0.0	0.7	15.2	17.1	0.1	0.3	0.2	0.5	-0.6	3.7	Acid Plant Tailstack
12/6/23 13:19	124.8	0.0	0.6	15.3	17.2	0.1	0.3	0.2	0.5	-0.6	4.1	Acid Plant Tailstack
12/6/23 13:20	124.8	0.0	0.6	15.3	17.0	0.1	0.3	0.2	0.5	-0.6	4.8	Acid Plant Tailstack
12/6/23 13:21	124.9	0.0	0.7	15.3	17.0	0.1	0.3	0.2	0.5	-0.6	5.3	Acid Plant Tailstack
12/6/23 13:22	124.9	0.0	0.6	15.3	17.1	0.1	0.3	0.2	0.5	-0.6	5.7	Acid Plant Tailstack
12/6/23 13:23	125.0	0.0	0.6	15.3	17.1	0.1	0.3	0.2	0.5	-0.6	6.1	Acid Plant Tailstack
12/6/23 13:24	125.1	0.0	0.6	15.3	17.1	0.1	0.3	0.2	0.5	-0.6	6.6	Acid Plant Tailstack
12/6/23 13:25	124.9	0.0	0.6	15.4	17.1	0.1	0.3	0.2	0.5	-0.6	7.2	Acid Plant Tailstack
12/6/23 13:26	124.8	0.0	0.6	15.4	17.1	0.1	0.3	0.2	0.5	-0.6	7.9	Acid Plant Tailstack
12/6/23 13:27	125.2	0.0	0.6	15.3	17.2	0.1	0.3	0.2	0.5	-0.6	8.2	Acid Plant Tailstack
12/6/23 13:28	125.1	0.0	0.6	15.3	17.1	0.1	0.3	0.2	0.5	-0.6	8.2	Acid Plant Tailstack
12/6/23 13:29	125.0	0.0	0.6	15.3	17.1	0.1	0.3	0.2	0.5	-0.6	9.0	Acid Plant Tailstack
12/6/23 13:30	125.2	0.0	0.6	15.3	17.2	0.1	0.3	0.2	0.5	-0.6	9.7	Acid Plant Tailstack
12/6/23 13:31	125.0	0.0	0.6	15.4	17.1	0.1	0.3	0.2	0.5	-0.6	10.0	Acid Plant Tailstack
12/6/23 13:32	124.9	0.0	0.6	15.5	17.1	0.1	0.3	0.2	0.5	-0.6	10.2	Acid Plant Tailstack
12/6/23 13:33	125.0	0.0	0.6	15.5	17.1	0.1	0.3	0.2	0.5	-0.6	10.4	Acid Plant Tailstack
12/6/23 13:34	124.9	0.0	0.6	15.5	17.1	0.1	0.3	0.2	0.5	-0.6	10.5	Acid Plant Tailstack
12/6/23 13:35	124.8	0.0	0.6	15.5	17.1	0.1	0.3	0.2	0.5	-0.6	10.5	Acid Plant Tailstack
12/6/23 13:36	124.7	0.0	0.6	15.6	17.1	0.1	0.3	0.2	0.5	-0.6	10.4	Acid Plant Tailstack
12/6/23 13:37	124.6	0.0	0.6	15.6	17.1	0.1	0.3	0.2	0.5	-0.6	10.1	Acid Plant Tailstack
12/6/23 13:38	124.8	0.0	0.6	15.6	17.1	0.1	0.3	0.2	0.5	-0.6	9.8	Acid Plant Tailstack
12/6/23 13:39	125.1	0.0	0.6	15.7	17.1	0.1	0.3	0.2	0.5	-0.6	9.5	Acid Plant Tailstack
12/6/23 13:40	125.1	0.0	0.5	15.8	17.1	0.1	0.3	0.2	0.5	-0.6	9.4	Acid Plant Tailstack
12/6/23 13:41	125.2	0.0	0.6	15.9	17.1	0.1	0.3	0.2	0.5	-0.6	9.4	Acid Plant Tailstack
12/6/23 13:42	125.1	0.0	0.7	15.9	17.1	0.1	0.3	0.2	0.5	-0.6	9.5	Acid Plant Tailstack
12/6/23 13:43	125.1	0.0	0.6	15.9	16.6	0.1	0.3	0.2	0.5	-0.6	9.7	Acid Plant Tailstack
12/6/23 13:44	124.8	0.0	0.6	16.2	0.6	0.1	0.3	0.2	0.5	-0.6	9.8	Acid Plant Tailstack
12/6/23 13:45	125.1	0.0	0.7	16.3	0.0	0.1	0.3	0.2	0.5	-0.6	10.0	Acid Plant Tailstack
12/6/23 13:46	125.2	0.0	0.6	16.3	0.0	0.1	0.3	0.2	0.5	-0.6	10.2	Acid Plant Tailstack
12/6/23 13:47	125.2	0.0	0.6	16.3	1.5	0.1	0.3	0.2	0.5	-0.6	10.3	Acid Plant Tailstack
12/6/23 13:48	125.0	0.0	0.6	16.0	10.6	0.1	0.3	0.2	0.5	-0.6	9.9	Acid Plant Tailstack
12/6/23 13:49	124.9	0.0	0.6	16.0	14.6	0.1	0.3	0.2	0.5	-0.6	9.8	Acid Plant Tailstack
12/6/23 13:50	124.8	0.0	0.6	16.2	15.2	0.1	0.3	0.2	0.5	-0.6	9.8	Acid Plant Tailstack
12/6/23 13:51	124.9	0.0	0.6	16.1	16.9	0.1	0.3	0.2	0.5	-0.6	9.8	Acid Plant Tailstack
12/6/23 13:52	125.0	0.0	0.6	16.3	17.1	0.1	0.3	0.2	0.5	-0.6	9.8	Acid Plant Tailstack
12/6/23 13:53	125.1	0.0	0.6	16.3	17.1	0.1	0.3	0.2	0.5	-0.6	9.8	Acid Plant Tailstack
12/6/23 13:54	125.0	0.0	0.6	16.5	17.1	0.1	0.3	0.2	0.5	-0.6	9.8	Acid Plant Tailstack
12/6/23 13:55	124.7	0.0	0.6	16.5	17.1	0.1	0.3	0.2	0.5	-0.6	9.7	Acid Plant Tailstack
12/6/23 13:56	124.8	0.0	0.6	16.5	17.1	0.1	0.3	0.2	0.5	-0.6	9.7	Acid Plant Tailstack
12/6/23 13:57	124.9	0.0	0.6	16.5	17.1	0.1	0.3	0.2	0.5	-0.6	9.7	Acid Plant Tailstack
12/6/23 13:58	125.1	0.0	0.6	16.6	17.1	0.1	0.3	0.2	0.5	-0.6	9.7	Acid Plant Tailstack
12/6/23 13:59	125.3	0.0	0.6	16.7	17.1	0.1	0.3	0.2	0.5	-0.6	9.7	Acid Plant Tailstack
12/6/23 14:00	125.1	0.0	0.6	16.9	17.2	0.1	0.3	0.2	0.5	-0.6	9.7	Acid Plant Tailstack
12/6/23 14:01	125.0	0.0	0.6	17.0	17.2	0.1	0.3	0.2	0.5	-0.6	9.7	Acid Plant Tailstack
12/6/23 14:02	124.9	0.0	0.6	17.1	1.9	0.1	0.3	0.2	0.5	-0.6	9.7	Acid Plant Tailstack
12/6/23 14:03	124.9	0.0	0.6	17.3	0.0	0.1	0.3	0.2	0.5	-0.6	9.7	Acid Plant Tailstack
12/6/23 14:04	125.0	0.0	0.5	17.4	0.0	0.1	0.3	0.2	0.5	-0.6	9.7	Acid Plant Tailstack
12/6/23 14:05	125.1	0.0	0.6	17.5	0.0	0.1	0.3	0.2	0.5	-0.6	9.6	Acid Plant Tailstack
12/6/23 14:06	125.2	0.0	0.6	17.5	0.0	0.1	0.3	0.2	0.5	-0.5	9.4	Acid Plant Tailstack
12/6/23 14:07	125.2	0.0	0.5	17.4	1.3	0.1	0.3	0.2	0.5	-0.5	9.3	Acid Plant Tailstack
12/6/23 14:08	125.3	0.0	0.6	17.2	10.3	0.1	0.3	0.2	0.5	-0.5	9.4	Acid Plant Tailstack
12/6/23 14:09	125.1	0.0	0.6	17.4	15.0	0.1	0.3	0.2	0.5	-0.5	9.2	Acid Plant Tailstack
12/6/23 14:10	125.1	0.0	0.6	17.7	16.1	0.1	0.3	0.2	0.5	-0.5	9.3	Acid Plant Tailstack
12/6/23 14:11	124.9	0.0	0.6	18.0	16.1	0.1	0.3	0.2	0.5	-0.5	9.3	Acid Plant Tailstack
12/6/23 14:12	125.1	0.0	0.6	18.1	16.1	0.1	0.3	0.2	0.5	-0.5	9.4	Acid Plant Tailstack
12/6/23 14:13	124.9	0.0	0.7	18.2	16.4	0.1	0.3	0.2	0.5	-0.5	9.5	Acid Plant Tailstack
12/6/23 14:14	124.8	0.0	0.7	18.3	17.2	0.1	0.3	0.2	0.5	-0.5	9.2	Acid Plant Tailstack
12/6/23 14:15	124.9	0.0	0.7	18.2	17.1	0.1	0.3	0.2	0.5	-0.5	9.3	Acid Plant Tailstack
12/6/23 14:16	125.3	0.0	0.6	18.1	17.1	0.1	0.3	0.2	0.5	-0.5	9.7	Acid Plant Tailstack
12/6/23 14:17	125.3	0.0	0.6	18.1	17.1	0.1	0.3	0.2	0.5	-0.5	9.8	Acid Plant Tailstack
12/6/23 14:18	125.1	0.0	0.6	18.0	17.1	0.1	0.3	0.2	0.5	-0.5	10.1	Acid Plant Tailstack
12/6/23 14:19	124.9	0.0	0.6	18.0	17.1	0.1	0.3	0.2	0.5	-0.5	10.3	Acid Plant Tailstack
12/6/23 14:20	124.7	0.0	0.6	18.0	17.1	0.1	0.3	0.2	0.5	-0.5	9.1	Acid Plant Tailstack
12/6/23 14:21	124.8	0.0	0.6	17.5	17.1	0.1	0.3	0.2	0.5	-0.5	5.4	Acid Plant Tailstack
12/6/23 14:22	125.1	0.0	0.6	17.1	17.1	0.1	0.3	0.2	0.5	-0.5	0.1	Acid Plant Tailstack
12/6/23 14:23	125.0	0.0	0.6	17.0	17.1	0.1	0.3	0.2	0.5	-0.5	0.1	Acid Plant Tailstack
12/6/23 14:24	124.8	0.0	0.6	17.0	17.1	0.1	0.3	0.2	0.5	-0.5	0.9	Acid Plant Tailstack
12/6/23 14:25	125.0	0.0	0.6	17.0	17.1	0.1	0.3	0.2	0.5	-0.5	5.5	Acid Plant Tailstack
12/6/23 14:26	125.2	0.0	0.6	17.0	17.1	0.1	0.3	0.2	0.5	-0.5	8.0	Acid Plant Tailstack
12/6/23 14:27	125.0	0.0	0.7	17.0	17.1	0.1	0.3	0.2	0.5	-0.5	9.4	Acid Plant Tailstack
12/6/23 14:28	124.9	0.0	0.6	17.0	17.1	0.1	0.3	0.2	0.5	-0.5	9.9	Acid Plant Tailstack
12/6/23 14:29	124.9	0.0	0.6	17.0	17.1	0.1	0.3	0.2	0.5	-0.5	9.9	Acid Plant Tailstack
12/6/23 14:30	124.9	0.0	0.6	17.0	17.1	0.1	0.3	0.2	0.5	-0.5	10.1	Acid Plant Tailstack
12/6/23 14:31	124.9	0.0	0.6	17.0	17.1	0.1	0.3	0.2	0.5	-0.5	10.3	Acid Plant Tailstack
12/6/23 14:32	125.0	0.0	0.5	17.0	17.1	0.1	0.3	0.2	0.5	-0.5	10.2	Acid Plant Tailstack
12/6/23 14:33	125.0	0.0	0.6	17.0	17.1	0.1	0.3	0.2	0.5	-0.5	10.1	Acid Plant Tailstack
12/6/23 14:34	125.1	0.0	0.5	17.0	17.1	0.1	0.3	0.2	0.5	-0.5	10.1	Acid Plant Tailstack
12/6/23 14:35	125.4	0.0	0.5	17.0	17.1	0.1	0.3	0.2	0.5	-0.5	9.9	Acid Plant Tailstack
12/6/23 14:36	125.6	0.0	0.6	17.0	17.1	0.1	0.3	0.2	0.5	-0.5	9.7	Acid Plant Tailstack



	Isa Feed Rate (tons/hour)	#2 Converter Blast Air (kscfm)	#3 Converter Blast Air (kscfm)	#4 Converter Blast Air (kscfm)	#5 Converter Blast Air (kscfm)	#1 Anode Barrel Air (scfm)	#1 Anode Barrel Gas (scfm)	#2 Anode Barrel Air (scfm)	#2 Anode Barrel Gas (scfm)	Steam Use (lbs/hr)	Electric Furnace Power (MW)	
12/7/23 8:53	125.1	17.1	0.0	0.6	17.5	0.1	0.3	0.2	0.5	-0.5	9.9	Acid Plant Tailstack
12/7/23 8:54	125.1	17.1	0.0	0.9	17.5	0.1	0.3	0.2	0.5	-0.6	9.9	Acid Plant Tailstack
12/7/23 8:55	125.0	17.1	0.0	0.5	17.5	0.1	0.3	0.2	0.5	-0.6	9.9	Acid Plant Tailstack
12/7/23 8:56	125.0	17.1	0.0	0.7	17.5	0.1	0.3	0.2	0.5	-0.6	10.0	Acid Plant Tailstack
12/7/23 8:57	125.0	17.1	0.0	2.9	10.3	0.1	0.3	0.3	0.5	-0.6	10.1	Acid Plant Tailstack
12/7/23 8:58	125.0	17.1	0.0	0.8	0.0	0.1	0.3	0.2	0.5	-0.6	10.2	Acid Plant Tailstack
12/7/23 8:59	124.9	17.1	0.0	1.3	0.0	0.1	0.3	0.2	0.5	-0.6	10.2	Acid Plant Tailstack
12/7/23 9:00	125.0	17.1	0.0	1.5	0.0	0.1	0.3	0.2	0.5	-0.6	10.2	Acid Plant Tailstack
12/7/23 9:01	125.0	17.1	0.0	1.3	0.0	0.1	0.3	0.2	0.5	-0.6	10.2	Acid Plant Tailstack
12/7/23 9:02	125.0	17.1	0.0	0.8	0.0	0.1	0.3	0.2	0.5	-0.6	10.1	Acid Plant Tailstack
12/7/23 9:03	125.0	17.1	0.0	1.0	0.0	0.1	0.3	0.2	0.5	-0.6	10.1	Acid Plant Tailstack
12/7/23 9:04	124.9	17.1	0.0	0.7	0.0	0.1	0.3	0.2	0.5	-0.6	10.1	Acid Plant Tailstack
12/7/23 9:05	124.7	17.1	0.0	0.8	0.0	0.1	0.3	0.2	0.5	-0.6	10.1	Acid Plant Tailstack
12/7/23 9:06	124.6	17.1	0.0	0.7	0.0	0.1	0.3	0.2	0.5	-0.6	10.1	Acid Plant Tailstack
12/7/23 9:07	125.0	17.1	0.0	1.1	0.0	0.1	0.3	0.2	0.5	-0.6	10.1	Acid Plant Tailstack
12/7/23 9:08	125.1	17.1	0.0	1.2	0.0	0.1	0.3	0.2	0.5	-0.6	10.1	Acid Plant Tailstack
12/7/23 9:09	125.3	17.2	0.0	0.9	0.0	0.1	0.3	0.2	0.5	-0.6	10.1	Acid Plant Tailstack
12/7/23 9:10	125.3	17.1	0.0	0.6	0.0	0.1	0.3	0.2	0.5	-0.6	10.1	Acid Plant Tailstack
12/7/23 9:11	125.3	17.0	0.0	0.8	0.0	0.1	0.3	0.2	0.5	-0.6	10.1	Acid Plant Tailstack
12/7/23 9:12	125.2	17.0	0.0	1.0	0.0	0.1	0.3	0.2	0.5	-0.6	10.1	Acid Plant Tailstack
12/7/23 9:13	124.8	17.1	0.0	0.6	0.0	0.1	0.3	0.2	0.5	-0.6	10.1	Acid Plant Tailstack
12/7/23 9:14	124.8	17.1	0.0	0.8	0.0	0.1	0.3	0.2	0.5	-0.6	10.1	Acid Plant Tailstack
12/7/23 9:15	125.0	17.1	0.0	1.1	0.0	0.1	0.3	0.2	0.5	-0.6	10.0	Acid Plant Tailstack
12/7/23 9:16	125.2	17.0	0.0	1.4	0.0	0.1	0.3	0.2	0.5	-0.6	9.8	Acid Plant Tailstack
12/7/23 9:17	125.4	17.0	0.0	0.9	0.0	0.1	0.3	273.8	0.5	-0.6	9.7	Acid Plant Tailstack
12/7/23 9:18	125.2	17.1	0.0	0.9	0.0	0.1	0.3	461.0	0.5	-0.6	9.7	Acid Plant Tailstack
12/7/23 9:19	125.0	17.1	0.0	0.8	0.0	0.1	0.3	0.3	0.5	-0.6	9.6	Acid Plant Tailstack
12/7/23 9:20	125.0	17.1	0.0	0.9	0.0	0.1	0.3	0.3	0.5	-0.6	9.6	Acid Plant Tailstack
12/7/23 9:21	125.0	17.0	0.0	0.7	0.0	0.1	0.3	0.2	0.5	-0.6	9.6	Acid Plant Tailstack
12/7/23 9:22	124.9	17.0	0.0	1.1	0.0	0.1	0.3	239.5	0.5	-0.6	9.6	Acid Plant Tailstack
12/7/23 9:23	124.6	17.1	0.0	0.8	0.0	0.1	0.3	904.7	0.5	-0.6	9.7	Acid Plant Tailstack
12/7/23 9:24	124.7	17.0	0.0	0.8	0.0	0.1	0.3	897.2	0.5	-0.6	9.8	Acid Plant Tailstack
12/7/23 9:25	124.9	16.9	0.0	9.5	0.0	0.1	0.3	892.1	0.5	-0.6	9.8	Acid Plant Tailstack
12/7/23 9:26	125.0	17.1	0.0	16.5	0.0	0.1	0.3	880.7	0.5	-0.6	9.8	Acid Plant Tailstack
12/7/23 9:27	125.0	17.1	0.0	17.0	0.0	0.1	0.3	879.9	0.5	-0.6	9.8	Acid Plant Tailstack
12/7/23 9:28	124.9	17.1	0.0	17.1	0.0	0.1	0.3	875.6	0.5	-0.6	9.8	Acid Plant Tailstack
12/7/23 9:29	124.9	17.0	0.0	17.1	0.0	0.1	0.3	870.2	0.5	-0.6	9.8	Acid Plant Tailstack
12/7/23 9:30	124.8	17.0	0.0	17.1	0.0	0.1	0.3	869.6	0.5	-0.6	9.8	Acid Plant Tailstack
12/7/23 9:31	124.8	17.1	0.0	17.1	0.0	0.1	0.3	870.2	0.5	-0.6	9.8	Acid Plant Tailstack
12/7/23 9:32	124.8	17.1	0.0	17.1	0.0	0.1	0.3	866.9	0.5	-0.6	9.8	Acid Plant Tailstack
12/7/23 9:33	124.8	17.1	0.0	17.1	0.0	0.1	0.3	861.7	0.5	-0.6	9.8	Acid Plant Tailstack
12/7/23 9:34	124.9	17.1	0.0	17.1	0.0	0.1	0.3	863.4	0.5	-0.6	9.8	Acid Plant Tailstack
12/7/23 9:35	125.0	17.1	0.0	17.1	0.0	0.1	0.3	863.4	0.5	-0.6	9.8	Acid Plant Tailstack
12/7/23 9:36	125.1	17.1	0.0	17.1	0.0	0.1	0.3	863.1	0.5	-0.6	9.8	Acid Plant Tailstack
12/7/23 9:37	124.9	17.1	0.0	17.1	0.0	0.1	0.3	863.2	0.5	-0.6	9.9	Acid Plant Tailstack
12/7/23 9:38	124.8	17.1	0.0	17.1	0.0	0.1	0.3	855.6	0.5	-0.6	9.9	Acid Plant Tailstack
12/7/23 9:39	124.9	17.1	0.0	17.1	0.0	0.1	0.3	863.4	0.5	-0.6	9.9	Acid Plant Tailstack
12/7/23 9:40	125.1	17.1	0.0	17.1	0.0	0.1	0.3	862.1	0.5	-0.6	9.9	Acid Plant Tailstack
12/7/23 9:41	125.1	17.0	0.0	17.1	0.0	0.1	0.3	865.7	0.5	-0.6	9.9	Acid Plant Tailstack
12/7/23 9:42	125.0	16.9	0.0	17.1	0.0	0.1	0.3	858.2	0.5	-0.6	9.9	Acid Plant Tailstack
12/7/23 9:43	125.0	16.9	0.0	17.1	0.0	0.1	0.3	858.3	0.5	-0.6	9.9	Acid Plant Tailstack
12/7/23 9:44	125.0	16.8	0.0	17.1	0.0	0.1	0.3	856.1	0.5	-0.6	9.9	Acid Plant Tailstack
12/7/23 9:45	124.9	16.6	0.0	17.1	0.0	0.1	0.3	855.6	0.5	-0.6	9.9	Acid Plant Tailstack
12/7/23 9:46	124.8	16.5	0.0	17.1	0.0	0.1	0.3	856.3	0.5	-0.6	9.9	Acid Plant Tailstack
12/7/23 9:47	125.0	16.5	0.0	17.1	0.0	0.1	0.3	852.9	0.5	-0.6	9.8	Acid Plant Tailstack
12/7/23 9:48	125.3	16.7	0.0	17.1	0.0	0.1	0.3	853.9	0.5	-0.6	9.6	Acid Plant Tailstack
12/7/23 9:49	125.2	16.7	0.0	17.1	0.0	0.1	0.3	855.6	0.5	-0.6	9.6	Acid Plant Tailstack
12/7/23 9:50	125.1	16.6	0.0	17.1	0.0	0.1	0.3	856.6	0.5	-0.6	9.8	Acid Plant Tailstack
12/7/23 9:51	124.9	16.6	0.0	17.1	0.0	0.1	0.3	858.4	0.5	-0.6	9.6	Acid Plant Tailstack
12/7/23 9:52	124.8	16.5	0.0	17.1	0.0	0.1	0.3	858.5	0.5	-0.6	9.7	Acid Plant Tailstack
12/7/23 9:53	124.9	16.7	0.0	17.1	0.0	0.1	0.3	860.2	0.5	-0.6	10.1	Acid Plant Tailstack
12/7/23 9:54	125.1	16.7	0.0	17.1	0.0	0.1	0.3	859.3	0.5	-0.6	10.2	Acid Plant Tailstack
12/7/23 9:55	125.3	16.8	0.0	17.1	0.0	0.1	0.3	861.8	0.5	-0.6	10.2	Acid Plant Tailstack
12/7/23 9:56	125.2	16.8	0.0	17.1	0.0	0.1	0.3	857.8	0.5	-0.6	10.3	Acid Plant Tailstack
12/7/23 9:57	125.0	16.9	0.0	17.0	0.0	0.1	0.3	835.0	0.5	-0.6	10.3	Acid Plant Tailstack
12/7/23 9:58	124.9	17.0	0.0	17.1	0.0	0.1	0.3	827.4	0.6	-0.6	10.3	Acid Plant Tailstack
12/7/23 9:59	124.7	16.8	0.0	17.1	0.0	0.1	0.3	824.0	0.6	-0.6	10.3	Acid Plant Tailstack
12/7/23 10:00	124.6	16.7	0.0	17.1	0.0	0.1	0.3	830.7	0.6	-0.6	10.2	Acid Plant Tailstack
12/7/23 10:01	124.7	16.7	0.0	17.1	0.0	0.1	0.3	829.6	0.6	-0.6	9.9	Acid Plant Tailstack
12/7/23 10:02	124.8	16.8	0.0	17.1	0.0	0.1	0.3	828.9	0.6	-0.6	10.0	Acid Plant Tailstack
12/7/23 10:03	124.9	16.9	0.0	17.0	0.0	0.1	0.3	822.2	0.6	-0.7	10.0	Acid Plant Tailstack
12/7/23 10:04	124.9	16.8	0.0	17.1	0.0	0.1	0.3	816.4	0.6	-0.7	10.1	Acid Plant Tailstack
12/7/23 10:05	124.7	16.7	0.0	17.1	0.0	0.1	0.3	815.6	0.6	-0.7	10.2	Acid Plant Tailstack
12/7/23 10:06	124.8	16.6	0.0	17.1	0.0	0.1	0.3	821.3	0.6	-0.7	10.3	Acid Plant Tailstack
12/7/23 10:07	125.0	16.5	0.0	17.1	0.0	0.1	0.3	812.4	0.6	-0.7	10.4	Acid Plant Tailstack
12/7/23 10:08	125.0	16.6	0.0	17.1	0.0	0.1	0.3	808.7	0.6	-0.7	10.5	Acid Plant Tailstack
12/7/23 10:09	125.0	16.9	0.0	17.1	0.0	0.1	0.3	815.4	0.6	-0.7	10.6	Acid Plant Tailstack
12/7/23 10:10	125.1	16.8	0.0	17.1	0.0	0.1	0.3	819.4	0.7	-0.7	10.7	Acid Plant Tailstack
12/7/23 10:11	125.1	16.7	0.0	17.2	0.0	0.1	0.3	817.7	0.7	-0.7	10.7	Acid Plant Tailstack
12/7/23 10:12	125.0	16.7	0.0	17.1	0.0	0.1	0.3	817.5	0.7	-0.7	10.2	Acid Plant Tailstack
12/7/23 10:13	125.0	16.5	0.0	17.1	0.0	0.1	0.3	813.6	0.7	-0.7	9.8	Acid Plant Tailstack
12/7/23 10:14	124.9	16.5	0.0	17.1	0.0	0.1	0.3	814.7	0.7	-0.7	10.0	Acid Plant Tailstack
12/7/23 10:15	124.9	16.6	0.0	17.1	0.0	0.1	0.3	826.5	0.7	-0.7	10.2	Acid Plant Tailstack
12/7/23 10:16	124.8	16.6	0.0	17.1	0.0	0.1	0.3	576.9	0.7	-0.7	10.3	Acid Plant Tailstack
12/7/23 10:17	125.0	16.8	0.0	17.2	0.0	0.1	0.3	0.3	0.7	-0.7	10.0	Acid Plant Tailstack
12/7/23 10:18	125.0	17.1	0.0	4.9	0.0	0.1	0.3	0.3	0.7	-0.7	9.8	Acid Plant Tailstack
12/7/23 10:19	125.0	17.0	0.0	0.6	0.0	0.1	0.3	0.3	0.7	-0.7	9.8	Acid Plant Tailstack

	Isa Feed Rate (tons/hour)	#2 Converter Blast Air (kscfm)	#3 Converter Blast Air (kscfm)	#4 Converter Blast Air (kscfm)	#5 Converter Blast Air (kscfm)	#1 Anode Barrel Air (scfm)	#1 Anode Barrel Gas (scfm)	#2 Anode Barrel Air (scfm)	#2 Anode Barrel Gas (scfm)	Steam Use (lbs/hr)	Electric Furnace Power (MW)	
12/7/23 10:20	124.7	17.0	0.0	0.7	0.0	0.1	0.3	0.3	0.7	-0.7	9.7	Acid Plant Tailstack
12/7/23 10:21	124.4	18.2	0.0	0.6	0.0	0.1	0.3	0.3	0.7	-0.7	9.7	Acid Plant Tailstack
12/7/23 10:22	125.8	17.3	0.0	0.7	0.0	0.1	0.3	0.3	0.8	-0.7	9.8	Acid Plant Tailstack
12/7/23 10:23	125.8	17.1	0.0	0.6	0.0	0.1	0.3	0.3	0.8	-0.7	9.9	Acid Plant Tailstack
12/7/23 10:24	125.5	17.1	0.0	0.5	0.0	0.1	0.3	0.3	0.8	-0.7	9.8	Acid Plant Tailstack
12/7/23 10:25	125.3	17.1	0.0	0.6	0.0	0.1	0.3	0.3	0.8	-0.7	10.1	Acid Plant Tailstack
12/7/23 10:26	125.1	17.1	0.0	0.5	0.0	0.1	0.3	0.3	0.8	-0.7	10.4	Acid Plant Tailstack
12/7/23 10:27	125.0	17.1	0.0	0.6	0.0	0.1	0.3	0.3	0.8	-0.7	10.2	Acid Plant Tailstack
12/7/23 10:28	125.0	17.1	0.0	0.5	0.0	0.1	0.3	0.3	0.8	-0.7	10.3	Acid Plant Tailstack
12/7/23 10:29	125.0	17.1	0.0	0.6	0.0	0.1	0.3	0.3	0.8	-0.7	10.4	Acid Plant Tailstack
12/7/23 10:30	125.0	17.1	0.0	0.7	0.0	0.1	0.3	0.3	0.8	-0.7	10.2	Acid Plant Tailstack
12/7/23 10:31	125.0	17.1	0.0	2.6	0.0	0.1	0.3	0.3	0.8	-0.7	10.3	Acid Plant Tailstack
12/7/23 10:32	124.8	17.1	0.0	13.1	0.0	0.1	0.3	0.3	0.8	-0.7	10.7	Acid Plant Tailstack
12/7/23 10:33	124.7	17.1	0.0	16.6	0.0	0.1	0.3	0.3	0.8	-0.7	10.8	Acid Plant Tailstack
12/7/23 10:34	124.8	17.1	0.0	17.0	0.0	0.1	0.3	0.3	0.9	-0.7	10.8	Acid Plant Tailstack
12/7/23 10:35	124.9	17.1	0.0	17.1	0.0	0.1	0.3	0.3	0.9	4351.0	10.8	Acid Plant Tailstack
12/7/23 10:36	125.0	17.1	0.0	17.1	0.0	0.1	0.3	0.3	0.9	7748.4	10.9	Acid Plant Tailstack
12/7/23 10:37	125.1	17.1	0.0	17.1	0.0	0.1	0.3	0.2	0.9	7489.3	10.9	Acid Plant Tailstack
12/7/23 10:38	125.1	17.1	0.0	17.1	0.0	0.1	0.3	0.3	0.9	2995.5	10.7	Acid Plant Tailstack
12/7/23 10:39	124.9	17.1	0.0	17.0	0.0	0.1	0.3	0.3	0.9	7258.3	10.8	Acid Plant Tailstack
12/7/23 10:40	124.8	17.1	0.0	17.0	0.0	0.1	0.3	0.3	0.9	7756.5	10.8	Acid Plant Tailstack
12/7/23 10:41	124.9	17.1	0.0	17.0	0.0	0.1	0.3	0.3	0.9	7495.7	10.8	Acid Plant Tailstack
12/7/23 10:42	124.9	17.1	0.0	17.1	0.0	0.1	0.3	309.2	0.9	4524.8	10.7	Acid Plant Tailstack
12/7/23 10:43	124.8	17.1	0.0	17.1	0.0	0.1	0.3	777.8	0.9	1374.5	9.9	Acid Plant Tailstack
12/7/23 10:44	124.8	17.1	0.0	17.1	0.0	0.1	0.3	1.7	0.9	-0.5	9.9	Acid Plant Tailstack
12/7/23 10:45	124.9	17.1	0.0	17.1	0.0	0.1	0.3	0.3	329.8	4596.1	9.9	Acid Plant Tailstack
12/7/23 10:46	125.1	17.1	0.0	17.0	0.0	0.1	0.3	0.3	580.7	5796.3	9.9	Acid Plant Tailstack
12/7/23 10:47	125.3	17.1	0.0	17.0	0.0	0.1	0.3	0.3	576.5	5739.5	9.8	Acid Plant Tailstack
12/7/23 10:48	125.1	17.1	0.0	17.2	0.0	0.1	0.3	0.3	570.3	5695.4	9.8	Acid Plant Tailstack
12/7/23 10:49	125.1	17.1	0.0	17.2	0.0	0.1	0.3	0.3	567.7	5671.7	9.9	Acid Plant Tailstack
12/7/23 10:50	124.8	17.1	0.0	17.1	0.0	0.1	0.3	0.3	564.9	5651.9	10.0	Acid Plant Tailstack
12/7/23 10:51	125.0	17.1	0.0	17.1	0.0	0.1	0.3	0.3	564.2	5636.6	10.0	Acid Plant Tailstack
12/7/23 10:52	125.3	17.1	0.0	17.2	0.0	0.1	0.3	0.3	564.3	5634.4	10.0	Acid Plant Tailstack
12/7/23 10:53	125.2	17.1	0.0	17.1	0.0	0.1	0.3	0.3	563.6	5631.5	10.0	Acid Plant Tailstack
12/7/23 10:54	124.9	17.1	0.0	17.1	0.0	0.1	0.3	0.3	563.0	5628.7	10.0	Acid Plant Tailstack
12/7/23 10:55	125.0	17.1	0.0	17.1	0.0	0.1	0.3	0.3	562.3	5626.8	10.0	Acid Plant Tailstack
12/7/23 10:56	125.0	17.1	0.0	17.1	0.0	0.1	0.3	0.3	561.6	5621.1	10.1	Acid Plant Tailstack
12/7/23 10:57	125.1	17.1	0.0	17.1	0.0	0.1	0.3	0.3	561.0	5617.8	10.1	Acid Plant Tailstack
12/7/23 10:58	125.1	17.1	0.0	17.1	0.0	0.1	0.3	0.3	562.0	5613.2	10.1	Acid Plant Tailstack
12/7/23 10:59	125.1	17.1	0.0	17.1	0.0	0.1	0.3	0.3	561.6	5606.5	10.0	Acid Plant Tailstack
12/7/23 11:00	125.2	17.1	0.0	17.1	0.0	0.1	0.3	0.3	561.1	5603.0	10.1	Acid Plant Tailstack
12/7/23 11:01	125.1	17.1	0.0	17.1	0.0	0.1	0.3	0.3	560.6	5603.6	10.1	Acid Plant Tailstack
12/7/23 11:02	124.9	17.1	0.0	17.1	0.0	0.1	0.3	0.3	559.4	5601.8	10.1	Acid Plant Tailstack
12/7/23 11:03	124.7	17.1	0.0	17.1	0.0	0.1	0.3	0.3	559.3	5597.2	10.1	Acid Plant Tailstack
12/7/23 11:04	124.8	17.1	0.0	17.1	0.0	0.1	0.3	0.3	559.4	5599.0	10.1	Acid Plant Tailstack
12/7/23 11:05	124.8	17.1	0.0	17.1	0.0	0.1	0.3	0.3	559.4	5596.0	10.1	Acid Plant Tailstack
12/7/23 11:06	124.8	17.2	0.0	17.1	0.0	0.1	0.3	0.3	559.4	5597.5	10.1	Acid Plant Tailstack
12/7/23 11:07	124.8	17.1	0.0	17.1	0.0	0.1	0.3	0.3	559.4	5593.4	10.1	Acid Plant Tailstack
12/7/23 11:08	124.9	17.1	0.0	17.1	0.0	0.2	0.3	0.3	559.5	5594.7	10.1	Acid Plant Tailstack
12/7/23 11:09	125.1	17.1	0.0	17.1	0.0	0.1	0.3	0.3	559.5	5593.1	10.1	Acid Plant Tailstack
12/7/23 11:10	125.2	17.1	0.0	17.1	0.0	0.1	0.3	0.3	559.5	5595.4	10.2	Acid Plant Tailstack
12/7/23 11:11	125.3	17.2	0.0	4.9	0.0	0.1	0.3	0.3	559.5	5592.4	10.3	Acid Plant Tailstack
12/7/23 11:12	125.5	17.1	0.0	1.2	0.0	0.1	0.3	0.3	559.6	5594.0	10.5	Acid Plant Tailstack
12/7/23 11:13	125.4	17.1	0.0	1.0	0.0	0.1	0.3	0.3	559.6	5592.6	10.6	Acid Plant Tailstack
12/7/23 11:14	124.9	17.1	0.0	0.7	0.0	0.1	0.3	0.3	559.7	5594.1	10.3	Acid Plant Tailstack
12/7/23 11:15	125.1	17.1	0.0	0.8	0.0	0.1	0.3	0.3	559.8	5591.1	10.4	Acid Plant Tailstack
12/7/23 11:16	125.2	17.1	0.0	0.8	0.0	0.1	0.3	0.3	559.6	5592.7	10.5	Acid Plant Tailstack
12/7/23 11:17	125.2	17.1	0.0	0.7	0.0	0.1	0.3	0.3	559.3	5588.4	10.4	Acid Plant Tailstack
12/7/23 11:18	125.0	17.1	0.0	3.8	0.0	0.1	0.3	0.3	559.0	5590.1	10.3	Acid Plant Tailstack
12/7/23 11:19	124.7	17.1	0.0	14.2	0.0	0.1	0.3	0.3	558.2	5585.7	10.0	Acid Plant Tailstack
12/7/23 11:20	125.0	17.1	0.0	16.7	0.0	0.2	0.3	0.3	557.8	5586.5	9.8	Acid Plant Tailstack
12/7/23 11:21	125.1	17.1	0.0	17.0	0.0	0.1	0.3	0.3	558.2	5584.7	9.9	Acid Plant Tailstack
12/7/23 11:22	125.0	17.1	0.0	17.1	0.0	0.2	0.3	0.3	558.5	5583.4	10.1	Acid Plant Tailstack
12/7/23 11:23	124.9	17.1	0.0	17.1	0.0	0.2	0.3	0.3	558.5	5581.5	10.2	Acid Plant Tailstack
12/7/23 11:24	124.8	17.1	0.0	17.1	0.0	0.2	0.3	0.3	558.4	5581.6	10.3	Acid Plant Tailstack
12/7/23 11:25	124.8	17.1	0.0	17.1	0.0	0.2	0.3	0.3	558.4	5584.6	10.3	Acid Plant Tailstack
12/7/23 11:26	124.8	17.1	0.0	17.0	0.0	0.2	0.3	0.3	558.3	5582.7	10.3	Acid Plant Tailstack
12/7/23 11:27	124.9	17.1	0.0	17.1	0.0	0.2	0.3	0.3	558.2	5580.9	10.3	Acid Plant Tailstack
12/7/23 11:28	125.0	17.1	0.0	17.1	0.0	0.2	0.3	0.3	558.1	5583.4	10.4	Acid Plant Tailstack
12/7/23 11:29	125.1	17.1	0.0	17.1	0.0	0.2	0.3	0.3	558.3	5585.1	10.6	Acid Plant Tailstack
12/7/23 11:30	125.2	17.1	0.0	17.1	0.0	0.2	0.3	0.3	558.3	5585.9	10.8	Acid Plant Tailstack
12/7/23 11:31	124.9	17.1	0.0	17.1	0.0	0.2	0.3	0.3	558.0	5586.1	10.9	Acid Plant Tailstack
12/7/23 11:32	125.2	17.8	0.0	17.1	0.0	0.2	0.3	0.3	558.0	5584.1	10.6	Acid Plant Tailstack
12/7/23 11:33	125.2	18.1	0.0	17.1	0.0	0.2	0.3	0.3	557.8	5585.7	10.4	Acid Plant Tailstack
12/7/23 11:34	125.0	18.1	0.0	17.1	0.0	0.2	0.3	0.3	557.6	5584.0	10.2	Acid Plant Tailstack
12/7/23 11:35	124.8	18.1	0.0	17.1	0.0	0.2	0.3	0.3	557.4	5585.7	10.6	Acid Plant Tailstack
12/7/23 11:36	124.7	18.1	0.0	17.2	0.0	0.2	0.3	0.3	557.2	5590.6	10.7	Acid Plant Tailstack



# Appendix D Process Flow Diagram

## **USEPA Proposed Amendments to Primary Copper Smelting NESHAP: Non-Metal HAPs Performance Test Report**

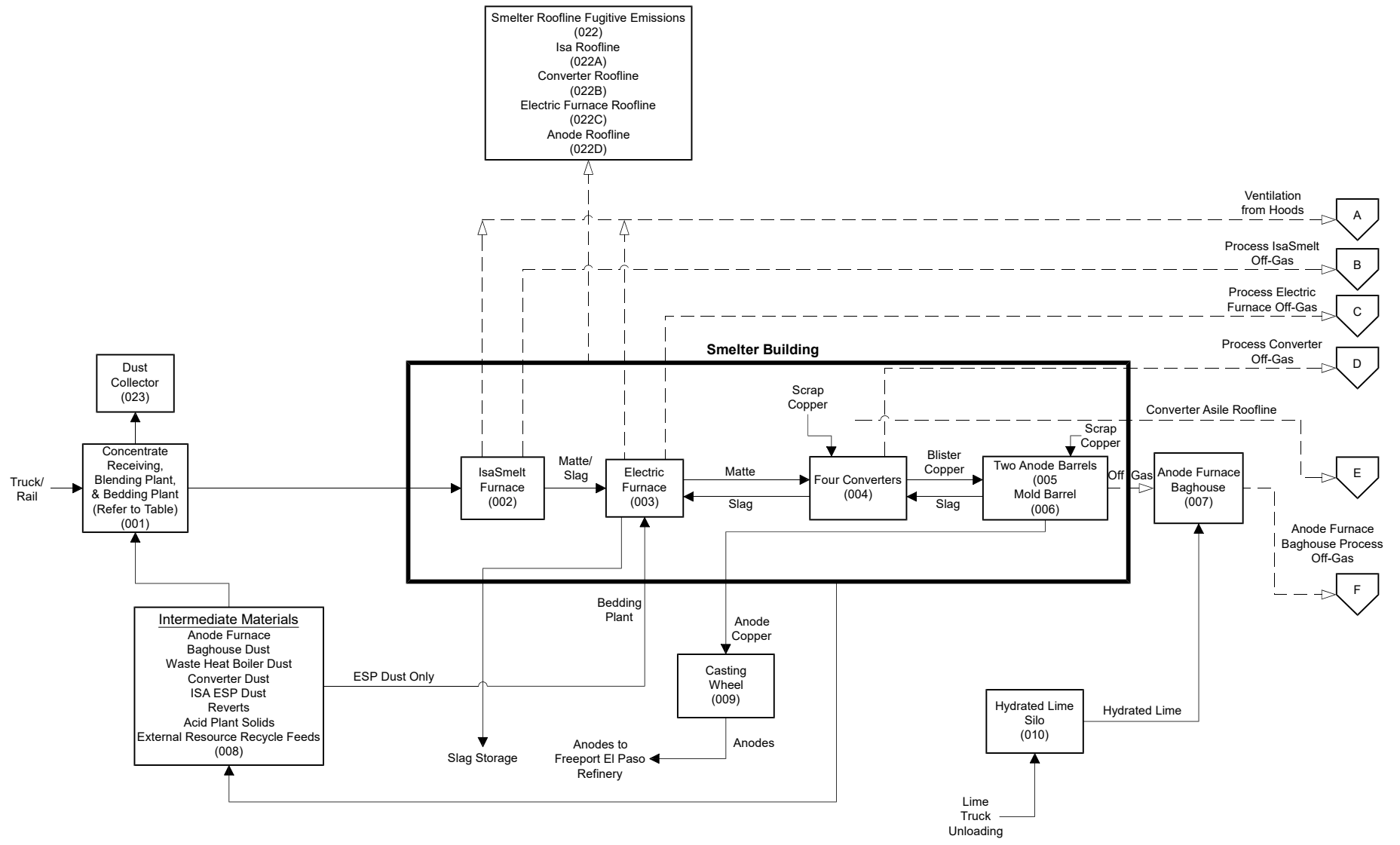
Freeport-McMoRan Miami Inc.

SLR Project No.: 118.01290.00025

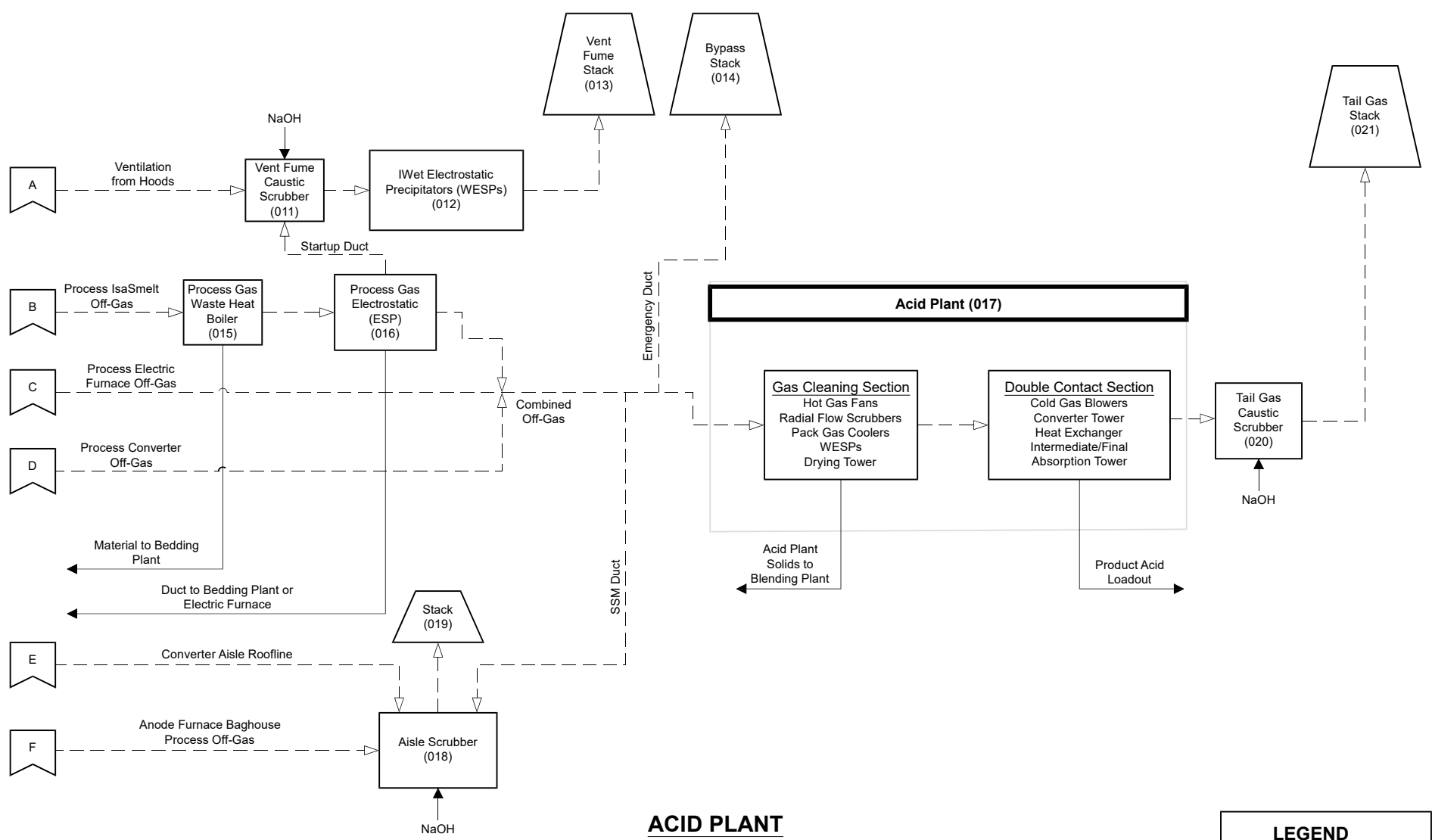
January 28, 2024







**SMELTER  
PROCESS FLOW DIAGRAM**



**ACID PLANT  
PROCESS FLOW DIAGRAM**

**LEGEND**

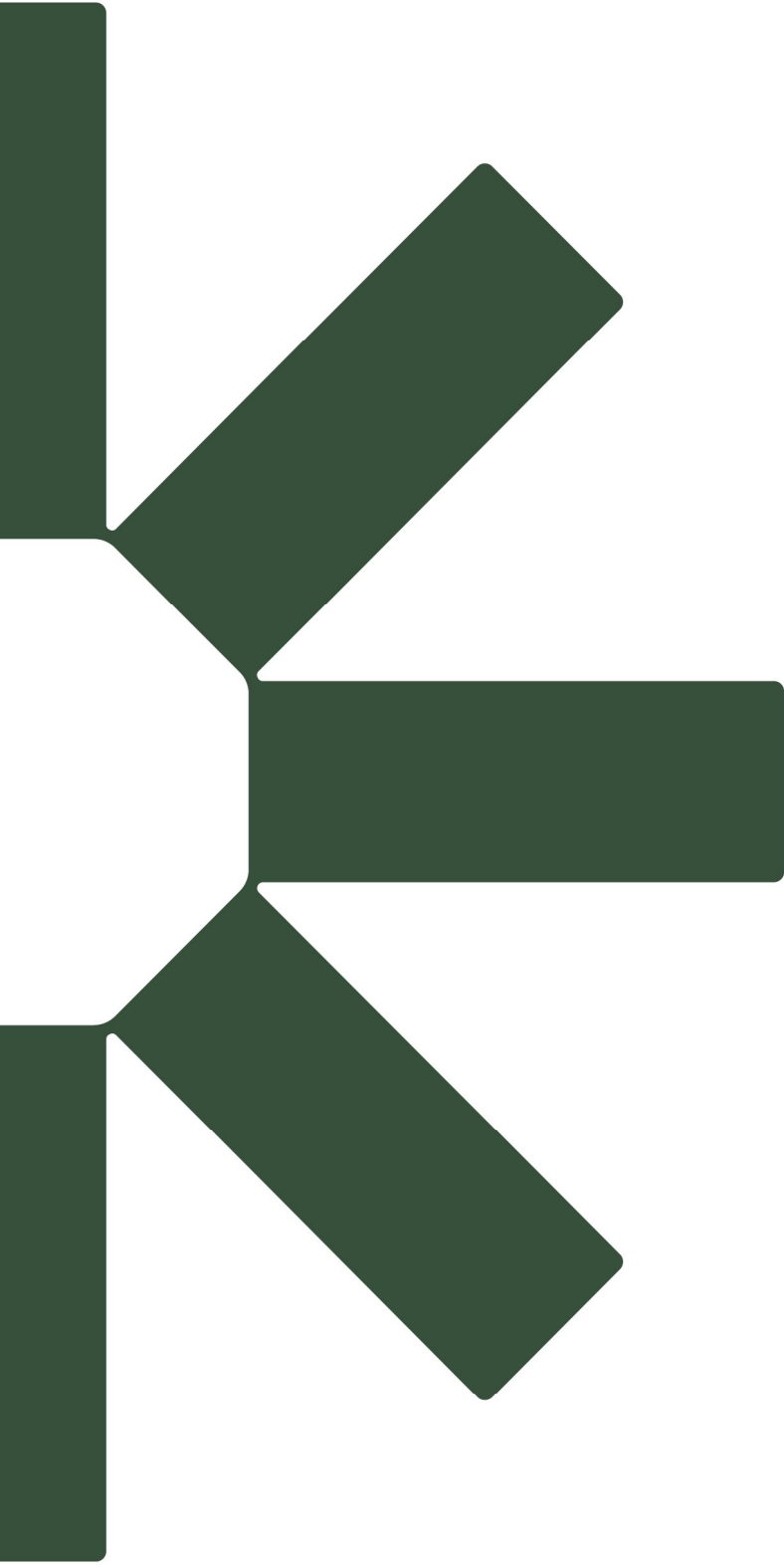
- > Emissions
- > Material Flow

PFD does not include affected facilities/sources subject to other NSPS/NESHAP Subparts or all auxiliary process fugitive emission sources that are not affected sources under NESHAP Subpart QQQ

**Freeport-McMoRan Miami Inc.**

**Smelter and Acid Plant  
Process Flow Diagrams**

September 2022      Figure 1



Making Sustainability Happen