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Periodic Review Report

Review Period July 2022 –August 2023

Swivelier Company

33 Route 304, Nanuet, Rockland County, New York 10954

NYSDEC Site Nos. 3-44-036 & V00520

Submitted to:
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Submitted by:
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August 2023

Project 202530
Volume 1 of 1

Prepared by Jacob M. Strauss, PE
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Certification

I, Jacob M. Strauss, certify that I am currently a New York State Registered Professional Engineer. In accordance with the DER Technical Guidance for Site Remediation (DER-10) Section 1.5 Certification Requirement 1.5(b)5, for each institutional or engineering control identified for the Site, I certify that all of the following statements are true:

(a) the institutional control and/or engineering control employed at this Site is unchanged from the date the control was put in place, or last approved by NYSDEC;

(b) nothing has occurred that would impair the ability of such control to protect public health and the environment;

(c) nothing has occurred that would constitute a violation or failure to comply with any Site Management Plan for this control;

(d) access to the Site will continue to be provided to NYSDEC to evaluate the remedy, including access to evaluate the continued maintenance of this control.

By: EWMA Engineering Services LLC

NYS Certificate of Authorization No. 0016891

8/18/2023

Jacob M. Strauss, NYSPE No. 097765

EWMA Project No. 202530

Note: It is a violation of Article 145 of New York State Education Law for any person, unless he is acting under the direction of a licensed professional engineer, to alter an item of this Periodic Review Report in any way. If an item is altered, the altering engineer shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

1. Executive Summary

1.1 Containment Conditions and Remedial History

The Property, which housed the former Swivelier Company, is listed as a Class 2 site on the New York State Registry of Inactive Disposal Waste Sites. The Property is located at 33 Route 304 in an industrial/commercial area of Nanuet, Rockland County, New York. A 132,000 square-foot building is located on a six-acre parcel surrounded by paved parking lots. The Site is zoned commercial and industrial and is currently utilized for commercial and industrial uses.

The Swivelier Company operated in a portion of the building for the assembly, manufacture, warehousing and distribution of lighting fixtures from 1956 to 1997. Non-contact process water and cooling water, as well as wastewater from the building floor drain system, was discharged to a drainage ditch on the western portion of the property. In 1979, the Rockland County Department of Health received a complaint citing discolored water flowing in the ditch. Samples collected by the Spring Valley Water Company in 1980 from the outfall pipe and in the surface waters indicated total volatile organic compounds (VOC) of 14,425 parts per billion (ppb)and 8,962 ppb, respectively. In 1980, Swivelier eliminated the use of the VOC compounds TCE and methylene chloride (MCl) in their processes and directed the site process, process waters, and waste waters to the municipal sewer system rather than to the on-site drainage ditch.

In 1991, the Rockland County Department of Health (RCDH) collected groundwater samples from several businesses and residential wells in this area. TCE was detected at 5,400 ppb in a sample from the L.A. Woman nightclub, located 0.4 miles to the south of the Property. Several other wells in the vicinity of L.A. Woman also contained TCE, but at lower concentrations. The RCDH identified numerous potential sources, including Swivelier, for the TCE contamination in the L.A. Woman well. The New York State Department of Environmental Conservation (NYSDEC) listed the Property on the New York State Registry of Inactive Waste Sites in July 1991 as a Class 2 site.

The NYSDEC retained Camp Dresser & McKee (CDM) to perform a Remedial Investigation/Feasibility Study (RI/FS) at the Property. The RI/FS was completed in two separate phases in 1994 and 1995. The results of the RI/FS identified VOC contaminated soils in the drainage ditch (discharge area) and VOC contamination in the underlying bedrock aquifer.

A hot spot excavation and soil removal was performed at the source area (on-site drainage ditch) in June 1999 by CDM. Soils were excavated within and adjacent to the ditch to the

zone of saturation, approximately 8-feet below ground surface (bgs). All soils were transported off-site and disposed of at a licensed waste handling facility.

Post excavation sample results of 1,100 parts per million (ppm) indicated that a small area of impacted soils approximately 10 by 10-feet by the former discharge pipe location remained in the subsurface soils below the water table. No further remediation activities were carried out at this location by CDM. S.F. Properties, LLC (S.F. Properties) entered into a Voluntary Cleanup Agreement (VCA) in April 2002 with the NYSDEC to remediate the site.

In-Situ Oxidation Technologies, Inc. (ISOTEC) in-situ chemox treatment processes were conducted in November 2002 for the field pilot study, and again in May 2005 for the full-scale treatment program, to remediate subsurface contamination via injection of peroxide and proprietary catalysts, thereby oxidizing contamination using Fenton's Reaction.

In accordance with the November 2004 RAWP, an SSDS was installed in March 2008 to address concerns regarding a potential source of vapor intrusion beneath the building. The results of the diagnostic field pilot test, conducted by EWMA on August 23, 2004, provided a basis to determine the locations and number of extraction points necessary to achieve adequate depressurization underneath the entire building. Upon instructions from the property representative, all SSDS installation activities were conducted within the empty warehouse portion of the building.

Long-term monitored natural attenuation (MNA) of groundwater within the overburden aquifers is currently being utilized, relying on natural attenuation processes to achieve applicable groundwater remediation standards.

This Periodic Review Report (PRR) is issued for the July 2022 through August 2023 review period.

1.2 Effectiveness of the Remedial Program

The impacted media are now either beneath the existing buildings or have been excavated to the groundwater table, a depth of approximately 8-feet bgs in the former drainage ditch (CDM Supplemental Investigation Report, July 2000). The remaining area of the drainage ditch and exposed soils onsite have been covered with either an asphalt parking lot, landscaping, or buildings. The storm water that flowed from the site through an open ditch has been diverted through underground storm sewers to the off-site surface water body. The exposure pathways have been eliminated on-site by engineering controls, which removed the point of exposure from surficial contact. However, impacted subsurface soil remains on site and constitutes a potential point of exposure through vapor intrusion.

Impacted groundwater at the site can be found within the overlying unconsolidated sediments and within the underlying bedrock. The groundwater is found at depths of 8-feet or greater at the site. No wells, either potable or industrial exist at the site. No groundwater discharge points exist on the site. Groundwater, and dissolved contaminants associated with the groundwater, flows in the subsurface toward the south-southwest. The contamination appears to be within the unconsolidated sediments, which are not considered a major aquifer in the area, and within the deep underlying bedrock aquifer, which is utilized as a potable water source off-site. Therefore, there are no points of exposure related to the on-site groundwater, except through potential vapor intrusion.

The approved ROD included No Action, i.e. natural attenuation for treatment of the groundwater contamination in the on-site overburden aquifers. Continued natural attenuation of the groundwater within the overburden aquifers is proposed based upon the current contamination concentrations.

1.3 Compliance Status

The Site is being managed in compliance with the NYSDEC approved SMP. EWMA conducted a site inspection on July 20, 2023 and confirmed that the SSDS remained fully operational and effective following repairs in September 2022.

1.4 Conclusions and Recommendations

During the review period from July 2022 to August 2023, the SMP has been implemented and the remedy, along with the institutional and engineering controls, continues to be protective of human health and the environment.

Other SMP Elements – Operation and monitoring information as specified in the SMP for this PRR period is detailed in this document.

Periodic Review Report Schedule – The next PRR will be prepared to cover the August 2023 to August 2024 reporting period.

Site Management Plan Implementation – Based on the continued need for institutional controls and engineering controls, it is recommended that the SMP remain in effect.

2. Site Overview

2.1 Description

The approximately six-acre Site contains a 132,000 square-foot building surrounded by paved parking lots. The Site is zoned commercial and industrial and is currently utilized for commercial and industrial uses. The Site is bordered by Demarest Mill Road to the north; Route 304 to the east; West Nyack Road to the south; and Teplitz Inc., an auto salvage facility to the west, **Figure 1**. Commercial enterprises, including a gas station and an automobile dealership, are located along the eastern side of Route 304. A bakery, delicatessen, and commercial buildings are located to the North across Demarest Road. An abandoned house is located on the southeast corner of Route 304 and Nyack Road, and an auto repair shop is located along Nyack Road directly adjacent to the Property. Apartment buildings are located to the south across Nyack Road. Directly adjacent to the Property on the west is Teplitz Salvage Yard. Further west of Teplitz along Nyack Road are additional automobile salvage/repair shops and trucking/shipping companies.

The Swivelier Company operated in a portion of the building for the assembly, manufacture, warehousing, and distribution of lighting fixtures from 1956 to 1997. Non-contact process water and cooling water, as well as wastewater from the building floor drain system, was discharged to a drainage ditch on the western portion of the property.

2.2 Chronology, Remedy Components, Remediation Goals, and Remedy Changes

A chronology of significant site compliance milestones is provided as follows:

In 1979, the Rockland County Department of Health received a complaint citing discolored water flowing in the ditch. Samples collected by the Spring Valley Water Company in 1980 from the outfall pipe and in the surface waters indicated total volatile organic compounds (VOC) of 14,425 parts per billion (ppb)and 8,962 ppb, respectively. In 1980, Swivelier eliminated the use of the VOC compounds TCE and methylene chloride (MCl) in their processes and directed the site process, process waters, and waste waters to the municipal sewer system rather than to the on-site drainage ditch.

In 1991, the Rockland County Department of Health (RCDH) collected groundwater samples from several businesses and residential wells in this area. TCE was detected at 5,400 ppb in a sample from the L.A. Woman nightclub, located 0.4 miles to the south of the Property. Several other wells in the vicinity of L.A. Woman also contained TCE, but at lower concentrations. The RCDH identified numerous potential sources, including Swivelier, for the

TCE contamination in the L.A. Woman well. The New York State Department of Environmental Conservation (NYSDEC) listed the Property on the New York State Registry of Inactive Waste Sites in July 1991 as a Class 2 site.

The NYSDEC retained Camp Dresser & McKee (CDM) to perform a Remedial Investigation/Feasibility Study (RI/FS) at the Property. The RI/FS was completed in two separate phases in 1994 and 1995. The results of the RI/FS identified VOC contaminated soils in the drainage ditch (discharge area) and VOC contamination in the underlying bedrock aquifer.

In 1995 two concrete lined pits located in a retail store on the Property were identified as containing TCE and 1,2-DCE and the contents were subsequently removed. A soil gas survey was performed at the concrete lined pits and based on this survey the NYSDEC required no further action at this area. Soils in the drainage ditch located on the western portion of the Property were identified as a source area for the VOC contamination to the underlying bedrock aquifer. In addition, sediments carried to the drainage ditch located across Nyack Road were identified as being above the NYSDEC action levels. The on-site drainage ditch and the off-site drainage ditch were identified as environmental areas of concern. Groundwater within the shallow unconsolidated zone and the deeper bedrock aquifer were identified as areas of environmental concern. Groundwater in the shallow unconsolidated zone was identified as moving slowly south-southeast. Petroleum impacts to the shallow groundwater were attributed to the Teplitz auto salvage facility on the adjacent property to the southwest. A plume of contaminated groundwater was identified in the deeper bedrock aquifer and was noted to be moving in a south-southwest direction. NYSDEC concluded that this plume was not the cause of the VOC contamination discovered in the L.A. Woman well. No receptors of the groundwater contamination from the subject were identified in the vicinity.

In March 1996, the NYSDEC presented a selected remedial action for the Property in a ROD. The approved ROD included No Action, i.e. natural attenuation for treatment of the groundwater contamination in the on-site overburden aquifers. The drainage ditch is shallow pathway designed to transport with no known recreational uses. CDM completed a remediation of the sediments by excavating impacted sediments and constructing a temporary streambed in June 1999. Post excavation analysis indicated that the remaining sediments were below NY SCC.

A hot spot excavation and soil removal was performed at the source area (on-site drainage ditch) in June 1999 by CDM. Soils were excavated within and adjacent to the ditch to the zone of saturation, approximately 8-feet below ground surface (bgs). All soils were transported off-site and disposed of at a licensed waste handling facility. Post excavation sample results of 1,100 parts per million (ppm) indicated that a small area of impacted soils approximately 10 by 10-feet by the former discharge pipe location remained in the subsurface soils below the water table. No further remediation activities were carried out at this location by CDM.

Groundwater samples were collected in November 1999 by CDM. TCE was identified in MW-3S, 3I, 6I, 6R, 8DI, 9ID, and 9D at concentrations of 22, 18, 130, 200, 160, 68, and 13,300 ppb, respectively. Based upon the results of the November 1999 post-excavation well sampling, CDM performed a Supplemental Groundwater Investigation from April 19, 2000 to May 25, 2000. The supplemental investigation consisted of the installation of MW-10D and collection of groundwater samples from MW-6I, 6R, 8I, 9I, 9D and 10D. TCE was identified in all samples with concentrations of 56, 25, 200, 33, 5,300 and 3,100 ppb, respectively.

In-Situ Oxidation Technologies, Inc. (ISOTEC) in-situ chemox treatment processes were conducted in November 2002 for the field pilot study, and again in May 2005 for the full-scale treatment program, to remediate subsurface contamination via injection of peroxide and proprietary catalysts, thereby oxidizing contamination using Fenton's Reaction.

In accordance with the November 2004 RAWP, an SSDS was installed in March 2008 to address concerns regarding a potential source of vapor intrusion beneath the building. The results of the diagnostic field pilot test, conducted by EWMA on August 23, 2004, provided a basis to determine the locations and number of extraction points necessary to achieve adequate depressurization underneath the entire building. Upon instructions from the property representative, all SSDS installation activities were conducted within the empty warehouse portion of the building.

The impacted media are now either beneath the existing buildings or have been excavated to the groundwater table, a depth of approximately 8-feet bgs in the former drainage ditch (CDM Supplemental Investigation Report, July 2000). The remaining area of the drainage ditch and exposed soils onsite have been covered with either an asphalt parking lot, landscaping, or buildings. The storm water that flowed from the site through an open ditch has been diverted through underground storm sewers to the off-site surface water body. However, impacted subsurface soil remains on site and constitutes a potential point of exposure through vapor intrusion, as discussed later.

Impacted groundwater at the site can be found within the overlying unconsolidated sediments and within the underlying bedrock. The groundwater is found at depths of 8-feet or greater at the site. No wells, either potable or industrial exist at the site. No groundwater discharge points on the site. Groundwater, and dissolved contaminants associated with the groundwater, flows in the subsurface toward the south-southwest. The contamination appears to be within the unconsolidated sediments, which are not considered a major aquifer in the area, and within the deep underlying bedrock aquifer, which is utilized as a potable water source off-site. Therefore, there are no points of exposure related to the on-site groundwater, except through potential vapor intrusion, as discussed later.

Long-term monitored natural attenuation (MNA) of groundwater within the overburden aquifers is currently being utilized, relying on natural attenuation processes to achieve applicable groundwater remediation standards.

Site activities have been documented in the following reports; Final Remediation Report prepared by CDM dated February 2000; a Supplemental Investigation Report prepared by CDM dated July 2000; five Voluntary Cleanup Program Remedial Action Workplan-Groundwater prepared by EWMA dated June 18, 2002, February 2003, July 2003, November 2004 and December 2004; an Environmental Status Update prepared by EWMA dated June 7, 2013; a Voluntary Cleanup Program Remedial Action Workplan prepared by EWMA dated August 2013, a Voluntary Cleanup Program RAW Addendum prepared by EWMA dated November 25, 2013; two Voluntary Cleanup Program Revised RI Progress Report prepared by EWMA dated May 4, 2015 and August 16, 2015; a Voluntary Cleanup Program revised Supplemental RI Progress Report prepared by EWMA dated August 26, 2015; a Site Management Plan prepared by EWMA dated June 2018; Field Sampling Plan prepared by EWMA dated November 2018; Annual Inspection Report prepared by EWMA dated January 24, 2019; and Periodic Review Report prepared by EWMA dated November 2022.

The key components of the remedy were excavation with end-point soil sampling, backfilling with certified clean fill, groundwater sampling and annual engineering inspections, engineering controls that include a cover system, a sub-slab depressurization system, and compliance with the SMP.

The goals of the remedy were:

1. Reducing, controlling, or eliminating the contamination present within the on-site soils and sediments;
2. Eliminating the threat to surface waters by remediating any contaminated sediments and soils on-site;
3. Eliminating the potential for direct human or animal contact with contaminated soils, sediments and groundwater on-site; and
4. Mitigating continuing impacts to contaminated groundwater.

In summary, during the July 2022 through August 2023 PRR period, the following deliverables were submitted and the following activities occurred:

- A site-wide inspection was conducted in September 2022 and the findings confirmed that IC/ECs, including the sub-slab vapor intrusion (VIC) system, are performing properly and remain effective; The results of this inspection were included in the July 2020-November 2022 PRR submission.
- A site-wide inspection was conducted in July 2023 and the findings confirmed that IC/ECs, including the sub-slab vapor intrusion (VIC) system, continue to perform

properly and remain effective.Sampling of monitoring wells MW-10D, 11D and 13D in July 2023, (Section 4.1.3); and
- This PRR was prepared for the July 2022 – August 2023 period.

Refer to **Figure 2** for the current monitoring well locations as of the date of this PRR.

The sub-slab vapor mitigation control system (installed beneath the building) was subjected to quality assurance testing and remains effective. The annual inspection results are provided in **Appendix 2**.

2.3 Remedy Performance, Effectiveness and Protectiveness

As of the date of this PRR submittal, the remedy has been performed as required and has been effective and protective in achieving the remedy goals as follows:

1. Reducing, controlling, or eliminating the contamination present within the on-site soils and sediments;
2. Eliminating the threat to surface waters by remediating any contaminated sediments and soils on-site;
3. Eliminating the potential for direct human or animal contact with contaminated soils, sediments and groundwater on-site; and
4. Mitigating continuing impacts to contaminated groundwater.

Supportive data is provided in the figures and appendices to this PRR for the purpose of demonstrating the remedy performance, effectiveness and protectiveness.

3. IC/EC Plan Compliance Report

3.1 IC/EC Requirements and Compliance

To address residual contaminated soil, groundwater and soil vapor beneath the Site, the SMP provided for several ECs and ICs to protect human health and the environment. ECs include a cover system and a Sub-Slab Depressurization System (SSDS). ICs include implementation, maintenance and monitoring of all ECs, compliance with the SMP, permitted uses of the property, limited disturbance of the remaining impacts in the subsurface, inspections, media monitoring, and reporting of data.

3.1.1 Cover System

Exposure to remaining contamination in groundwater at the site is prevented by asphalt pavement, concrete-covered sidewalks, and concrete building slabs. The cover system is a permanent EC designed to prevent exposure to soil contamination.

The cover system is inspected annually by a licensed professional engineer, including a Site walk, visual examination of cover integrity, and interviews with personnel familiar with Site operations. A summary of the annual inspection results is provided in **Appendix 2**. See Section 4.1.1 below, for a discussion of the recent inspection of the composite cover system.

3.1.2 Sub-Slab Depressurization System (SSDS)

In accordance with the November 2004 RAWP, an SSDS was installed in March 2008 to address concerns regarding a potential source of vapor intrusion beneath the building.

The results of the diagnostic field pilot test, conducted by EWMA on August 23, 2004, provided a basis to determine the locations and number of extraction points necessary to achieve adequate depressurization underneath the entire building. Upon instructions from the property representative, all SSDS installation activities were conducted within the empty warehouse portion of the building.

The following provides a summary of the SSDS design:

- Two (2) separate SSDSs are installed along the western and eastern portions of the building and connected to vacuum blower #1 and #2, respectively, which are located on the roof of the building;

• Each SSDS consists of a 4-inch PVC main header pipe installed along the ceiling in order to connect all extraction points to the header pipe, and extending to the outside of the building into the vacuum blower;

• A total of nine (9) extraction points were connected to the western SSDS and eight (8) extraction points were connected to the eastern SSDS, each via 2-inch PVC connecting pipes extending upwards from the extraction points along the walls and corner and along the ceiling to the 4-inch PVC main header pipe;

• Extraction point connecter pipes and main header inlets to the vacuum blowers were equipped with ball valves and sampling ports in order to optimize the vacuum and flow through all points, and collect flow readings and air samples, as necessary;

• The vacuum blowers are 7.5 HP Regenerative Blowers capable of providing a total flow rate of 250 to 300 CFM.

Vapor intrusion controls beneath the subject building slab and above-slab mechanical portion of the system (piping, suction blowers, and valves) have been installed, and the SSDS is currently operational. See **Appendix 2** for a discussion of the recent inspection of the SSDS. Vapor intrusion controls will be integrated with all future building construction at the Site.

3.1.3 Institutional and Engineering Controls

- Cover System
- Sub-Slab Depressurization System

These ICs/ECs remain in place and are being implemented at the Site and annual testing was completed during this PRR period. Currently, the building is occupied and the VIC system is operating in accordance with the SMP.

3.2 IC/EC Certification

The required IC/EC Certifications are provided in **Appendix 1** of this PRR.

4. Monitoring Plan Compliance Report

4.1 Components of the Monitoring Plan

The components of the monitoring plan are set forth below. A summary of the monitoring efforts specific to each monitoring plan component is provided below, along with the location of the associated monitoring data within this PRR:

- *Cover System* – The cover was monitored visually for integrity during an annual inspection in July 2023 (see **Appendix 2** for annual inspection results);
- *Sub-Slab Depressurization System* – The Sub-Slab Depressurization System (SSDS) is currently operating. Monitoring is ongoing and inspections are conducted on an annual basis to ensure proper functionality (see **Appendix 2** for annual inspection results); the most recent inspection was conducted in July 2023.
- *Sampling of Monitoring Wells* – Groundwater monitoring wells associated with natural attenuation (MW-10D, 11D and 13D) were sampled in July 2023.

4.1.1 Cover System Monitoring

The quality and integrity of the cover system was inspected (monitored) annually and deemed intact and protective by the EWMA Certifying Engineer of Record.

4.1.2 Vapor Intrusion Control System Monitoring

The construction and effectiveness of the vapor intrusion control system installed beneath the building was inspected by qualified EWMA field technicians to ensure proper functionality. The system components and monitoring points have been inspected in July 2023, vacuum and air flow measurements confirm that the system is operating in conformance with the design requirements (see **Appendix 2 and Figure 3**), and the system has been certified.

4.1.3 Groundwater Monitoring

On July 26 and 27, 2023, EWMA collected ground water samples from on-site monitoring wells MW-10D, MW-11D, and MW-13D analyzed for TCL VO + 15, iron, manganese, sodium, bacterial counts, and general chemistry. **Figure 2** depicts the wells at the Site and **Table 1** illustrates the sample results. The ground water sampling activities were conducted in accordance with the ground water monitoring program approved by the NYSDEC.

The monitoring wells were purged utilizing a Grundfos Redi-Flo 2-inch diameter submersible pump equipped with a variable speed control box via three-volume purge rate to purge the

monitoring wells. The Redi-Flow pump and electrical line was field decontaminated between each well in accordance with pump decontamination procedures. No sheen or free phase product was observed and no odors were detected during the July 2023 ground water sampling event. The field sampling observations are summarized on the Purge Guide provided in **Appendix 4**.

As illustrated on **Table 1**, analytical results for MW-11D were all reported as non-detect or below the New York State Ambient Water Quality Standards and Guidance Values. MW-10D reported cis-1,2-dichloroethene cis-1,2-DCE), trans-1,2-dichloroethene (trans-1,2-DCE), and trichloroethene (TCE) at concentrations exceeding the New Work State Ambient Water Quality Standard (AWQS) of 5 µg/l for each compound. MW-13D reported concentrations of cis-1,2-DCE, TCE, tetrachloroethene (PCE), vinyl chloride, and 1,2-Dichlorobenzene above the New York AWQS and Guidance Values. The laboratory analytical packages are provided in **Appendix 3.**

As illustrated on the Historic Ground Water Results Table (**Table 2**), historically, MW-10D, MW-11D, and MW-13D have had fluctuating chlorinated solvent concentrations which is consistent with the July 2023 sampling event.

4.2 Summary of Monitoring Completed During the Reporting Period

The monitoring during the reporting period was completed as set forth above. The monitoring data is presented in the figures and appendices of this PRR.

4.3 Comparison with Remedial Objectives

Based on the monitoring data collected during the reporting period and presented in the figures and appendices of this PRR, the remedial objectives are being met. The cover system is effectively preventing exposure to residual contamination; and the VIC system is maintaining sub-slab de-pressurization and operating in conformance with the design and as required by NYSDOH and NYSDEC.

4.4 Monitoring Deficiencies

There are currently no known monitoring deficiencies. During the most recent site inspection in July 2023, it was confirmed that the SSDS remained functional and effective following repairs in September 2022.

4.5 Conclusions

All monitoring was performed in accordance with the NYSDEC approved SMP and pursuant to subsequent work plans and monitoring enhancements that have been approved by the NYSDEC.

5. Operation and Maintenance Plan (O&M) Compliance Report

5.1 Components of the O&M Plan

The components of the O&M Plan include inspections and completion of inspection forms.

5.1.1 Summary of O&M Activities and Data Collected During the Reporting Period

The inspection forms and records that were generated for the Site during the reporting period include the following:

- Annual Inspection of Cover System and VIC System (**Appendix 2**).

5.1.2 O&M Deficiencies

EWMA conducted a site inspection on July 20, 2023 and confirmed the SSDS remains functional and effective following repairs in September 2022. No new deficiencies were noted during this inspection.

5.2 Conclusions and Recommendations for Improvements

Project Review Report Schedule – The next PRR will be prepared to cover the July 2023 through August 2024 reporting period.

Site Management Plan Implementation – Based on the continued need for institutional controls and engineering controls, it is recommended that the SMP remain in effect.

6. Overall PRR Conclusions and Recommendations

6.1 Compliance with SMP

As of the date of this PRR, the remedy has been performed as required under the SMP and has been effective and protective in achieving the remedy goals as follows:

1. Reducing, controlling, or eliminating the contamination present within the on-site soils and sediments;
2. Eliminating the threat to surface waters by remediating any contaminated sediments and soils on-site;
3. Eliminating the potential for direct human or animal contact with contaminated soils, sediments and groundwater on-site; and
4. Mitigating continuing impacts to contaminated groundwater.

Supportive data is provided in the tables, figures and appendices to this PRR for the purpose of demonstrating the remedy performance, effectiveness and protectiveness.

6.2 Performance and Effectiveness of the Remedy

The performance and effectiveness of the remedy are in conformance with the project objectives.

6.3 Future PRR Submittals

The next PRR to be prepared and submitted will cover the period from August 2023 through August 2024.

Periodic Review Report – Review Period July 2022 to August 2023

Property Known As:

Swivelier Company
33 Route 304
Nanuet, Rockland County, New York 10954
NYSDEC Site Nos. 3-44-036 & V00520
EWMA Project No. 202530

Table 1 – July 2023 Groundwater Results Summary

August 2023

Table 1
July 2023 Groundwater Analytical Results Summary
Swivelier Company
33 Route 304, Nanuet, New York
EWMA Project No. 202530
NYSDEC Site Nos. 3-44-036 V00520

Sample #: / Field ID: / Lab ID: / Date Sampled: / Depth(ft):	CAS	TOGs - Table 1 Ambient Water Quality Standards And Guidance Values (ug/L)	MW-10D-072623 03407-002 07/26/2023				MW-11D-072623 03407-001 07/26/2023				MW-13D-072723 03408-001 07/27/2023			
Volatiles (ug/L)			**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**
Dichlorodifluoromethane	75-71-8	**5**	ND		**100**	**55.2**	ND		1.00	0.552	ND		**50.0**	**27.6**
Chloromethane	74-87-3	**5**	ND		**50.0**	**30.9**	ND		0.500	0.309	ND		**25.0**	**15.5**
Vinyl chloride	75-01-4	**2**	ND		**100**	**35.2**	ND		1.00	0.352	**43.0**	DJ	**50.0**	**17.6**
Bromomethane	74-83-9	**5**	ND		**100**	**38.6**	ND		1.00	0.386	ND		**50.0**	**19.3**
Chloroethane	75-00-3	**5**	ND		**50.0**	**32.4**	ND		0.500	0.324	ND		**25.0**	**16.2**
Trichlorofluoromethane	75-69-4	**5**	ND		**100**	**50.3**	ND		1.00	0.503	ND		**50.0**	**25.2**
1,1-Dichloroethene	75-35-4	**0.07**	ND		**50.0**	**36.3**	ND		**0.500**	**0.363**	ND		**25.0**	**18.2**
Acetone	67-64-1	**NS**	ND		**200**	**84.7**	ND		2.00	0.847	ND		**100**	42.4
Carbon disulfide	75-15-0	**NS**	ND		**100**	40.3	ND		1.00	0.403	ND		50.0	20.2
Methylene chloride	75-09-2	**5**	ND		**100**	**50.0**	ND		1.00	0.500	ND		**50.0**	**25.0**
trans-1,2-Dichloroethene	156-60-5	**5**	**48.4**	DJ	**50.0**	**37.2**	ND		0.500	0.372	ND		**25.0**	**18.6**
Methyl tert-butyl ether (MTBE)	1634-04-4	**NS**	ND		**50.0**	**24.5**	0.349	J	0.500	0.245	ND		**25.0**	**12.3**
1,1-Dichloroethane	75-34-3	**5**	ND		**50.0**	**28.5**	ND		0.500	0.285	ND		**25.0**	**14.3**
cis-1,2-Dichloroethene	156-59-2	**5**	**5970**	D	**50.0**	**27.7**	1.09		0.500	0.277	**4080**	D	**25.0**	**13.9**
2-Butanone (MEK)	78-93-3	**NS**	ND		**200**	**80.2**	ND		2.00	0.802	ND		**100**	40.1
Bromochloromethane	74-97-5	**NS**	ND		**100**	**37.9**	ND		1.00	0.379	ND		**50.0**	**19.0**
Chloroform	67-66-3	**7**	ND		**50.0**	**28.5**	ND		0.500	0.285	ND		**25.0**	**14.3**
1,1,1-Trichloroethane	71-55-6	**5**	ND		**50.0**	**38.1**	ND		0.500	0.381	ND		**25.0**	**19.1**
Carbon tetrachloride	56-23-5	**0.4**	ND		**50.0**	**34.9**	ND		**0.500**	0.349	ND		**25.0**	**17.5**
1,2-Dichloroethane (EDC)	107-06-2	**0.6**	ND		**50.0**	**27.3**	ND		0.500	0.273	ND		**25.0**	**13.7**
Benzene	71-43-2	**NS**	ND		**50.0**	**27.0**	ND		0.500	0.270	ND		**25.0**	**13.5**
Trichloroethene	79-01-6	**5**	**11200**	D	**50.0**	**34.7**	1.16		0.500	0.347	**8270**	D	**25.0**	**17.4**
1,2-Dichloropropane	78-87-5	**1**	ND		**50.0**	**27.2**	ND		0.500	0.272	ND		**25.0**	**13.6**
Bromodichloromethane	75-27-4	**50**	ND		50.0	25.8	ND		0.500	0.258	ND		25.0	12.9
cis-1,3-Dichloropropene	10061-01-5	**NS**	ND		100	26.4	ND		1.00	0.264	ND		50.0	13.2
4-Methyl-2-pentanone (MIBK)	108-10-1	**NS**	ND		100	61.1	ND		1.00	0.611	ND		50.0	30.6
Toluene	108-88-3	**NS**	ND		**50.0**	**30.2**	ND		0.500	0.302	ND		**25.0**	**15.1**
trans-1,3-Dichloropropene	10061-02-6	**NS**	ND		100	33.0	ND		1.00	0.330	ND		50.0	16.5
1,1,2-Trichloroethane	79-00-5	**1**	ND		**50.0**	**31.3**	ND		0.500	0.313	ND		**25.0**	**15.7**
Tetrachloroethene	127-18-4	**0.7**	ND		**50.0**	**36.5**	ND		0.500	0.365	**34.5**	D	**25.0**	**18.3**
2-Hexanone	591-78-6	**NS**	ND		**100**	**81.8**	ND		1.00	0.818	ND		50.0	40.9
Dibromochloromethane	124-48-1	**50**	ND		50.0	26.3	ND		0.500	0.263	ND		25.0	13.2
1,2-Dibromoethane (EDB)	106-93-4	**NS**	ND		**50.0**	**28.9**	ND		**0.500**	**0.289**	ND		**25.0**	**14.5**
Chlorobenzene	108-90-7	**5**	ND		**50.0**	**30.4**	ND		0.500	0.304	ND		**25.0**	**15.2**
Ethylbenzene	100-41-4	**NS**	ND		**50.0**	**31.3**	ND		0.500	0.313	ND		**25.0**	**15.7**
Total Xylenes	1330-20-7	**NS**	ND		100	34.5	ND		1.00	0.345	ND		50.0	17.3
Styrene	100-42-5	**NS**	ND		**100**	**31.7**	ND		1.00	0.317	ND		**50.0**	**15.9**
Bromoform	75-25-2	**50**	ND		50.0	32.8	ND		0.500	0.328	ND		25.0	16.4
Isopropylbenzene	98-82-8	**NS**	ND		**100**	**33.2**	ND		1.00	0.332	ND		**50.0**	**16.6**
1,1,2,2-Tetrachloroethane	79-34-5	**0.2**	ND		**100**	**28.4**	ND		**1.00**	**0.284**	ND		**50.0**	**14.2**
1,3-Dichlorobenzene	541-73-1	**3**	ND		**50.0**	**38.6**	ND		0.500	0.386	ND		**25.0**	**19.3**
1,4-Dichlorobenzene	106-46-7	**3**	ND		**50.0**	**39.7**	ND		0.500	0.397	ND		**25.0**	**19.9**
1,2-Dichlorobenzene	95-50-1	**3**	ND		**50.0**	**35.4**	ND		0.500	0.354	**94.1**	D	**25.0**	**17.7**
1,2-Dibromo-3-chloropropane	96-12-8	**NS**	ND		**100**	**41.0**	ND		**1.00**	**0.410**	ND		**50.0**	**20.5**
1,2,4-Trichlorobenzene	120-82-1	**NS**	ND		**100**	**35.8**	ND		1.00	0.358	ND		**50.0**	**17.9**
1,2,3-Trichlorobenzene	87-61-6	**NS**	ND		**100**	**40.6**	ND		1.00	0.406	ND		**50.0**	**20.3**
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	**NS**	ND		**100**	**53.8**	ND		1.00	0.538	ND		**50.0**	**26.9**
Methyl acetate	79-20-9	**NS**	ND		50.0	34.5	ND		0.500	0.345	ND		25.0	17.3
Cyclohexane	110-82-7	**NS**	ND		100	46.9	ND		1.00	0.469	ND		50.0	23.5
Methylcyclohexane	108-87-2	**NS**	ND		100	42.1	ND		1.00	0.421	ND		50.0	21.1
1,3-Dichloropropene (cis- and trans-)	542-75-6	**NS**	ND		**100**	**26.4**	ND		**1.00**	0.264	ND		**50.0**	**13.2**
TOTAL VO's:		**NS**	17200	DJ		NA	2.60	J		NA	12500	DJ		NA
TOTAL TIC's:		**NS**	ND			NA	ND			NA	ND			NA
TOTAL VO's & TIC's:		**NS**	17200	DJ		NA	2.60	J		NA	12500	DJ		NA

New York State Division of Water Technical and Operational Guidance Series (TOGS), Issued October 22, 1993, Reissued June 1998.

BOLD Conc Indicates a concentration that exceeds the applicable criteria.

BOLD RL Indicates RL that exceeds applicable criteria.

BOLD MDL Indicates MDL that exceeds applicable criteria.

NS = No Standard Available

ND = Analyzed for but Not Detected at the MDL

J = Indicates an estimated value either when the concentration in the sample is greater than MDL and less than RL, or for qualification of TICs

D = The compound was reported from the Diluted analysis

All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.

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

Periodic Review Report – Review Period July 2022 to August 2023

Property Known As:

Swivelier Company
33 Route 304
Nanuet, Rockland County, New York 10954
NYSDEC Site Nos. 3-44-036 & V00520
EWMA Project No. 202530

Table 2 – Historical Groundwater Results Summary

August 2023

Table 2 - Historic Groundwater Results
Former Swivelier Site
Route 304, Nanuet NY
EWMA Project No. 202530

Well Information (ft.)	Sampling Date	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	Acetone	Chloroethane	Chloroform	2-Butanone	Methyl tert-butyl ether (MTBE)	Benzene	Bromodichloromethane	1,4-Dichlorobenzene	1,2-Dichlorobenzene	Toluene	1,1-Dichloroethene	TOTAL VO's:	TOTAL TIC's:	TOTAL VO's & TIC's:
TOGS 1.1.1 GW STANDARDS GA CLASS		**5**	**5**	**5**	**5**	**2**	**50***	**5**	**7**	**50***	**NS**	**1**	**50***	**3**	**3**	**5**	**5**	**NS**	**NS**	**NS**
MW-10D	9/2/2005	ND	**249**	NA	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	**2.03**	ND	ND	262	97	359
	12/21/2005	ND	**14500**	**4390**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	18,900	ND	18,900
	8/9/2006	ND	**131**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.13	ND	ND	132	44.0	176
	3/14/2007	**32.6**	**10900**	ND	**73**	ND	23.4	ND	ND	ND	ND	ND	ND	**12.9**	**95.7**	ND	ND	11,100	NA	NA
	10/16/2007	ND	**861**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	861	232	861
	5/5/2008	ND	**330**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	58.0	388
	10/29/2008	ND	**2920**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,920	875	3,800
	5/14/2009	ND	**4260**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4,260	1,800	6,060
	11/10/2009	ND	**5000**	**2010**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7,010	ND	7,010
	4/29/2014	ND	**3700**	**1720**	**9.6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5,430	NA	NA
	10/16/2015	ND	**4420**	**1960**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6,380	NA	NA
	5/18/2017	**24.6**	**7480**	**3760**	**29.8**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11,300	NA	NA
	11/21/2017	ND	**7210**	**3620**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10,800	ND	10,800
	11/27/2018	ND	**4950**	**2960**	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND	ND	NA	ND	7910	NA	NA
	6/9/2022	**27.8**	**6260**	**2990**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9280	ND	9280
	7/26/2023	ND	**11200**	**5970**	**48.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	17200	17200
MW-11D	11/19/2002	4.24	**617**	**91**	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.12	**9.4**	2.66	ND	635	91	726
	9/2/2005	ND	**6.86**	NA	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	6.86	27.8	34.7
	12/21/2005	ND	**10.9**	**13.6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	24.5	6.8	31.3
	8/9/2006	ND	2.82	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.82	201	204
	3/14/2007	ND	**8.72**	ND	ND	ND	11.3	ND	ND	13.0	ND	ND	ND	ND	ND	ND	ND	33.0	NA	NA
	10/16/2007	ND	**25.0**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	25.0	99.4	124
	5/5/2008	ND	**5.29**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.29	ND	5.29
	10/29/2008	ND	**7.62**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.62	ND	7.62
	5/14/2009	ND	**6.00**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.00	ND	6.00
	11/10/2009	ND	**17.0**	2.07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19.1	ND	19.1
	4/29/2014	ND	3.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.37	NA	NA
	10/16/2015	ND	3.08	2.69	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.77	NA	NA
	5/18/2017	ND	4.64	1.95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.59	NA	NA
	11/21/2017	ND	1.84	1.72	ND	ND	ND	ND	ND	ND	0.575	ND	ND	ND	ND	ND	ND	4.14	ND	4.14
	11/28/2018	ND	**7.79**	1.58	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND	ND	NA	ND	9.37	NA	NA
	6/9/2022	ND	1.47	1.16	ND	ND	ND	ND	ND	ND	0.33	ND	ND	ND	ND	ND	ND	2.96	ND	2.96
	7/26/2023	ND	1.16	1.09	ND	ND	ND	ND	ND	ND	0.349	ND	ND	ND	ND	ND	ND	ND	2.6	2.6
MW-12D	11/19/2002	ND	**9.45**	**9.7**	ND	ND	ND	ND	ND	ND	**222**	ND	ND	ND	0.35	ND	ND	9.8	232	242
	9/2/2005	ND	ND	NA	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	23.1	23.1
	12/21/2005	ND	2.09	1.59	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.68	82.2	85.9
	8/9/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	21.1	21.1
	3/13/2007	ND	1.14	ND	ND	ND	8.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.19	NA	NA
	10/16/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/2/2008	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	10/29/2008	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/14/2009	ND	0.587	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.587	5.50	6.09
	11/21/2017	ND	3.90	3.33	ND	ND	ND	ND	ND	ND	0.733	ND	ND	ND	ND	ND	ND	7.69	ND	7.69

Table 2 - Historic Groundwater Results
Former Swivelier Site
Route 304, Nanuet NY
EWMA Project No. 202530

Well Information (ft.)	Sampling Date	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	Acetone	Chloroethane	Chloroform	2-Butanone	Methyl tert-butyl ether (MTBE)	Benzene	Bromodichloromethane	1,4-Dichlorobenzene	1,2-Dichlorobenzene	Toluene	1,1-Dichloroethene	TOTAL VO's:	TOTAL TIC's:	TOTAL VO's & TIC's:
TOGS 1.1.1 GW STANDARDS GA CLASS		**5**	**5**	**5**	**5**	**2**	**50***	**5**	**7**	**50***	**NS**	**1**	**50***	**3**	**3**	**5**	**5**	**NS**	**NS**	**NS**
MW-13D	11/19/2002	ND	**255**	**58.5**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.14	ND	ND	257	58.5	316
	9/2/2005	ND	**39.4**	NA	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	39	5.8	45.2
	12/21/2005	ND	**9.00**	1.95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11.0	ND	11.0
	8/9/2006	ND	**32.6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	32.6	9.00	41.6
	3/13/2007	0.722	**208**	ND	1.75	ND	2.12	ND	ND	ND	ND	ND	ND	ND	1.57	ND	ND	214	NA	NA
	10/16/2007	0.827	**130**	ND	ND	0.637	ND	ND	ND	ND	ND	ND	ND	ND	1.99	ND	ND	133	86.2	219
	5/2/2008	ND	**22.0**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	22.0	10.6	32.6
	10/29/2008	ND	**4120**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4120	1130	5250
	5/14/2009	2	**337**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	339	309	648
	11/10/2009	ND	1.72	**24.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	26.1	ND	26.1
	4/29/2014	ND	**36.1**	**15.20**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	51.3	NA	NA
	10/16/2015	ND	**4300**	**1750**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6050	NA	NA
	5/18/2017	**16.2**	**3910**	**1830**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5790	NA	NA
	11/20/2017	ND	**1350**	**517**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1870	ND	1870
	11/29/2018	**61**	**13000**	**5920**	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND	**143**	NA	ND	19100	NA	NA
	6/1/2022	**42.5**	**9980**	**4550**	ND	**43.3**	ND	ND	ND	ND	ND	ND	ND	ND	**101**	ND	ND	14700	ND	14700
	7/26/2023	**34.5**	**8270**	**4080**	ND	**43.0**	ND	ND	ND	ND	ND	ND	ND	ND	**94.1**	ND	ND	12500	ND	12500
MW-1R	9/2/2005	ND	ND	NA	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12/21/2005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	8/9/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	27.2	27.2
	3/13/2007	ND	0.770	ND	ND	ND	2.76	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.53	NA	NA
	11/22/2017	ND	0.531	ND	ND	ND	ND	ND	ND	ND	3.26	ND	ND	ND	ND	ND	ND	3.79	ND	3.79
MW-6I	9/2/2005	ND	**54.7**	NA	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	54.7	ND	54.7
	12/21/2005	ND	**24.5**	**153**	ND	**60.6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	238	ND	238
	8/9/2006	ND	**33.1**	ND	ND	**15.1**	ND	0.911	ND	ND	ND	ND	ND	ND	ND	ND	ND	49.1	65.4	115
	3/14/2007	ND	1.95	ND	ND	**4.04**	4.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10.5	NA	NA
	11/21/2017	ND	**17.2**	**170**	ND	**121**	ND	ND	ND	ND	0.940	ND	ND	ND	ND	ND	0.546	310	ND	310
MW-6R	9/2/2005	ND	ND	NA	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12/21/2005	ND	**83.6**	**22.8**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	106	58.5	165
	8/9/2006	ND	**8.14**	ND	ND	ND	ND	ND	0.929	ND	ND	ND	0.33	ND	ND	ND	ND	9.40	55.1	64.5
	3/13/2007	ND	**6.54**	ND	ND	ND	**186**	ND	0.776	6.88	ND	**2.12**	ND	ND	ND	ND	ND	202	NA	NA
	11/21/2017	ND	**10.2**	**7.39**	ND	ND	ND	ND	ND	ND	8.29	0.544	ND	ND	ND	1.09	ND	27.5	ND	27.5
MW-1N	11/22/2017	ND	ND	**5.12**	ND	ND	ND	ND	ND	ND	1.37	ND	ND	ND	ND	ND	ND	6.49	ND	6.49
	11/27/2018	ND	ND	3.45	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND	ND	NA	ND	3.45	NA	NA
MW-1S	11/22/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-1SE	11/22/2017	ND	0.719	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.719	ND	0.719
MW-2I	11/22/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.43	ND	ND	ND	ND	ND	ND	6.43	ND	6.43
MW-2N	11/22/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.504	ND	ND	ND	ND	ND	ND	0.504	39.4	39.9
	11/27/2018	ND	ND	ND	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND	ND	NA	ND	ND	NA	NA
MW-2S	11/22/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 2 - Historic Groundwater Results
Former Swivelier Site
Route 304, Nanuet NY
EWMA Project No. 202530

Well Information (ft.)	Sampling Date	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	Acetone	Chloroethane	Chloroform	2-Butanone	Methyl tert-butyl ether (MTBE)	Benzene	Bromodichloromethane	1,4-Dichlorobenzene	1,2-Dichlorobenzene	Toluene	1,1-Dichloroethene	TOTAL VO's:	TOTAL TIC's:	TOTAL VO's & TIC's:
TOGS 1.1.1 GW STANDARDS GA CLASS		**5**	**5**	**5**	**5**	**2**	**50***	**5**	**7**	**50***	**NS**	**1**	**50***	**3**	**3**	**5**	**5**	**NS**	**NS**	**NS**
MW-3N	11/22/2017	ND	ND	**9.93**	ND	**2.08**	ND	ND	ND	ND	2.47	ND	ND	ND	ND	ND	1.39	15.9	131	147
	11/28/2018	ND	0.32J	**7.89**	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND	ND	NA	ND	9.4 J	NA	NA
MW-4I	11/22/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	66.6	ND	ND	ND	ND	ND	ND	66.6	14.7	81.3
MW-4S	11/21/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	13.7	ND	ND	ND	ND	ND	ND	13.7	ND	13.7
MW-7I	11/21/2017	ND	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.31	ND	1.31
MW-7SE	11/21/2017	ND	ND	4.50	ND	1.20	ND	ND	ND	ND	7.32	ND	ND	ND	ND	ND	ND	13.0	ND	13.0
MW-7SW	11/21/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	46.2	ND	ND	ND	ND	ND	ND	46.2	ND	46.2
	11/28/2018	ND	ND	ND	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND	ND	NA	ND	ND	NA	NA
MW-8DI	11/21/2017	ND	**3780**	**1660**	ND	**17.9**	ND	ND	ND	ND	**90.8**	ND	ND	ND	ND	ND	ND	5550	ND	5550
	11/28/2018	ND	**143**	**68.1**	0.514	ND	NA	ND	ND	NA	NA	NA	ND	ND	ND	NA	0.554	212	NA	NA
MW-9D	11/21/2017	ND	**84.2**	**6.79**	ND	ND	15.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	107	ND	107
	11/28/2018	ND	**1080**	**212**	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND	ND	NA	ND	1290	NA	NA
MW-9DI	11/21/2017	ND	**82.9**	1.37	ND	ND	ND	ND	ND	ND	58.4	ND	ND	ND	ND	ND	ND	143	ND	143
MW-9SI	11/21/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.53	ND	ND	ND	ND	ND	ND	3.53	ND	3.53
TW-1	4/29/2014	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TW-2	4/29/2014	ND	4.95	1.14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.09	ND	ND
TW-3	4/29/2014	ND	3.48	4.33	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.81	ND	ND
TW-4	4/29/2014	ND	0.993	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.49	ND	ND
TW-5	4/29/2014	ND	**15**	**5.21**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	20.2	ND	ND
TW-6	4/29/2014	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TW-7	4/29/2014	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TW-8	4/29/2014	ND	0.48	3.61	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.09	ND	ND

Exceeds TOGS
ND = Non-detect
NA = Not Analyzed

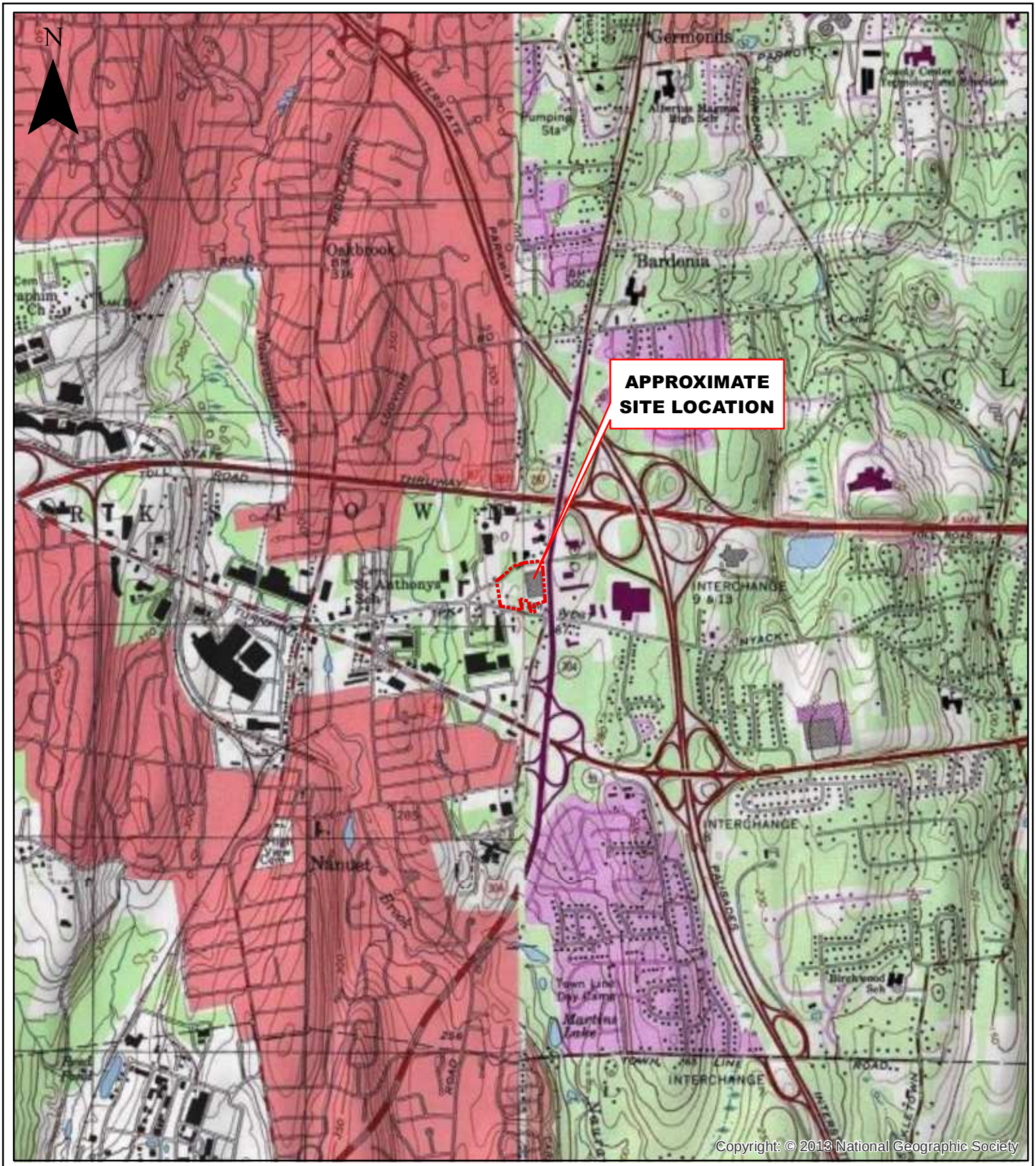
Periodic Review Report – Review Period July 2022 to August 2023

Property Known As:

Swivelier Company
33 Route 304
Nanuet, Rockland County, New York 10954
NYSDEC Site Nos. 3-44-036 & V00520
EWMA Project No. 202530

Figure 1 – Site Location Map

August 2023



NEW JERSEY QUADRANGLE LOCATION

2,000 1,000 0 2,000 Feet

SOURCE: USGS PARK RIDGE, N.J.-N.Y. 7.5 MINUTE. QUADRANGLE, TOPOGRAPHIC IMAGERY OBTAINED FROM ARCGIS ONLINE

EWMA
INNOVATIVE | EXPERIENCED | RESPONSIVE
100 MISTY LANE
P.O. BOX 5430
PARSIPPANY, NEW JERSEY

DATE:	PROJECT #
1/29/18	205548

DRAWN BY: RR
CHECKED BY: JS

Document Path: G:\Job Data\205000\205548\Drawings\205548F1 Site Loation map.mxd

SITE LOCATION
FORMER SWIVELIER COMPANY SITE
33 ROUTE 304
VILLAGE OF NANUET, NEW YORK

Figure # 1

Periodic Review Report – Review Period July 2022 to August 2023

Property Known As:

Swivelier Company
33 Route 304
Nanuet, Rockland County, New York 10954
NYSDEC Site Nos. 3-44-036 & V00520
EWMA Project No. 202530

Figure 2 – Well Location Map

August 2023

MW-9DI
MW-9D
MW-9SI

ACTUAL LOCATION OF MW-9 CLUSTER IS 70' WEST OF MW-9D

SECT. 33, BLK. B, LOT 19
N/F
SIMMON TOV PROPERTIES, LTD.
Tepiltz

PROPERTY BOUNDARY
LANDSCAPED BUFFER AREA
GRASS
DUMPSTER 20' x 60'
U.P. W/ LIGHT
MW-13D
MW-5S
MW-1S
MW-1R
MW-10D
MW-8DI
GRASS
24" x 24" RCP (culvert) replace w/ new 24" RCP
connect new 24" RCP to ex. 24" RCP
ex.INV=86.30
ex.INV=85.69
ex. 12"-24" RCP to remain
new drainage precast conc. catch basin
connect new roof drains to drainage mh
MW-12D
MW-7I
MW-7SW
MW-3I
MW-3S
MW-6R
MW-7SE
CONCRETE CURB
ROAD
NYACK
ex. drainage swale to be piped
MW-6I
MW-11D/ESB-2
MW-6S
NYSDOT DRAINAGE EASEMENT
DEMAREST MILL ROAD
U.P. W/ LIGHT
EXISTING MACADAM AREA
ex.CONC. HEADWALL to be removed
NYSDOT drainage easement
MW-2N
MW-1N
MW-3N
EX.CB
EX.DMH TOP=91.53
FENCE (TYP.)
LIGHT POLE
1 STORY FRAME BUILDING
1 STORY BLOCK AND METAL 18,000 SQ. FT. PHASE I – VERIZON
VERIZON
ROCKLAND GYMNASTICS
EMPTY
LOWER ELEVATION AREA
EXISTING MACADAM
SECT. 33, BLK. B, LOT 17
N/F
J.N.T. PROPERTIES CORP.
METAL SHED
WOOD SHED
WOOD POLE
SIGN
U.P. W/ LIGHTS
MW-4I
MW-4S
MW-2SW
WEE PLAY
1 STORY BRICK BUILDING 102,500 SQ. FT. BALANCE OF BUILDING
MW-1SE
STEPS TO GRADE
NEW STONE WALL
WEST
C.O.
U.P.
MACADAM
EDGE OF PAVEMENT
M.K.
1 STORY FRAME BRACING
EXISTING MACADAM
SECT. 33, BLK. B, LOT 16
N/F
JOHN & ROBERT MAIER
LAZY BOY
EMPTY
BASSET FURNITURE DIRECT
MW-2S
MW-2I
METAL COVER
EDGE OF PAVEMENT
MACADAM
GRASS
FLAG POLE
U.P. W/ LIGHT
METAL POLE
SIGN
BUS SHELTER
TMH
TRAFFIC POLE
MAC. WALK
MACADAM WALKWAY
CONCRETE CURB

N. Y. S. HIGHWAY ROUTE 304

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)

Environmental Waste Management Associates, LLC P.O. Box 5430 Parsippany, NJ 07054 Tel: (973) 560-1400	SCALE: AS SHOWN DATE: DRAWN BY: CHECKED BY: FILE: k:\drawings\202000\202530\20253012.dwg	PROJECT# 202530
WELL LOCATION MAP FORMER SWIVELIER COMPANY SITE ROUTE 304 VILLAGE OF NANUET, NEW YORK		FIGURE# 2

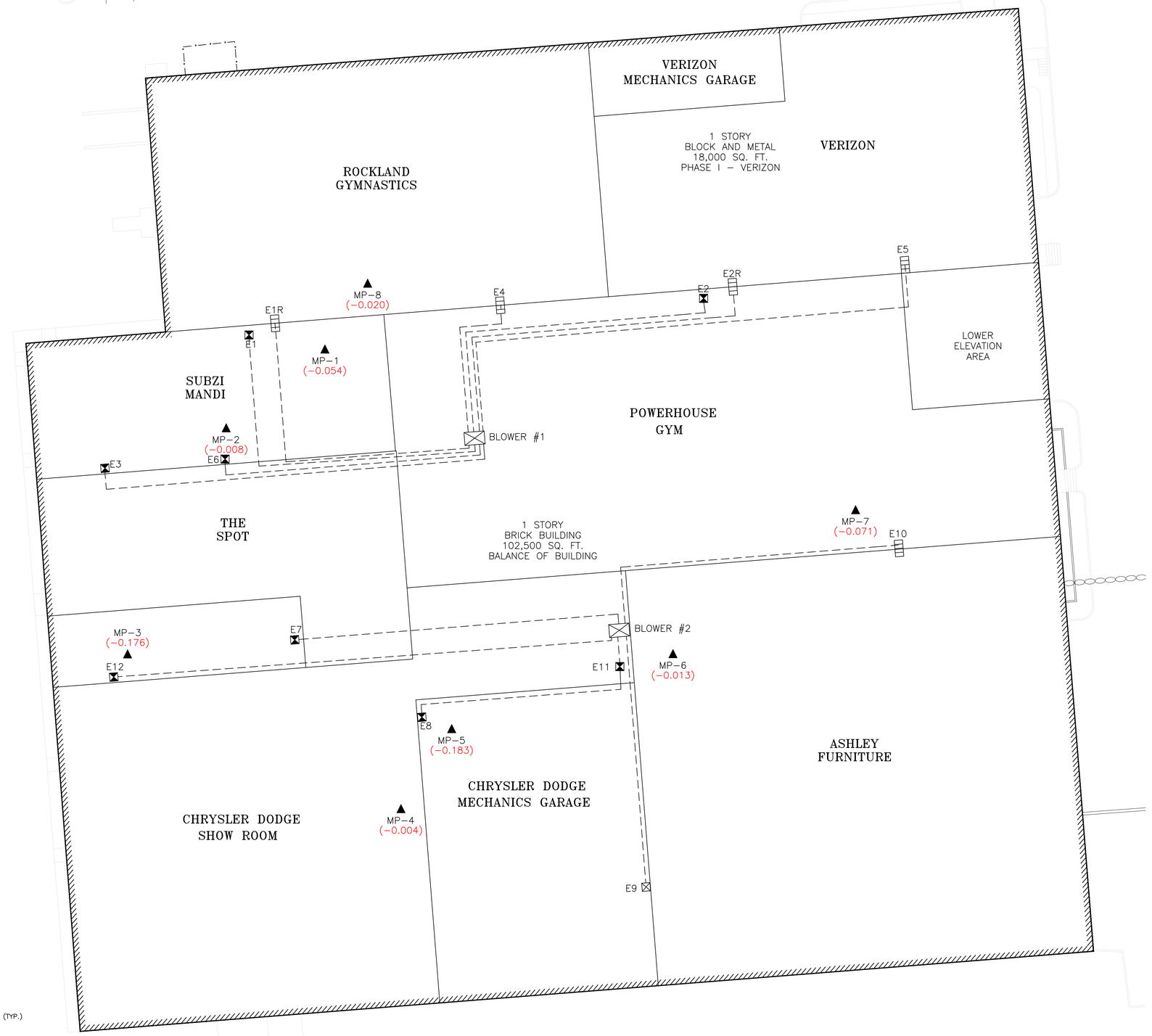
Periodic Review Report – Review Period July 2022 to August 2023

Property Known As:

Swivelier Company
33 Route 304
Nanuet, Rockland County, New York 10954
NYSDEC Site Nos. 3-44-036 & V00520
EWMA Project No. 202530

Figure 3 – Sub-Slab Depressurization System & Vacuum Readings July 2023

August 2023



LEGEND

- VERTICAL 4" PVC EXTRACTION POINT LOCATION
- MP–1 (–0.004) SUB–SLAB MONITORING POINT LOCATION – INSTALLED SEPTEMBER 2022 (TYP.) WITH JULY 20, 2023 VACUUM READING ("WC)
- LATERAL (3') 4" SLOTTED PVC EXTRACTION POINT LOCATION
- 2" PVC SCH.40 CONNECTOR PIPE ALONG THE CEILING
- VACUUM BLOWER LOCATION

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)

NOTE: AS–BUILT PLAN HAS BEEN MAPPED TO THE BEST OF EWMA'S ABILITY BASED ON SITE VISITS PERFORMED BY EWMA IN MAY AND NOVEMBER 2017. DURING THESE SITE VISITS, LIMITED OR NO ACCESS WAS PERMITTED FOR SOME FACILITIES, AND THEREFORE NOT ALL POINTS WERE ABLE TO BE MAPPED. IT IS BELIEVED THAT THERE ARE A TOTAL OF 9 POINTS CONNECTED TO BLOWER #1, AND 8 POINTS CONNECTED TO BLOWER #2.

EWMA
INNOVATIVE | EXPERIENCED | RESPONSIVE
100 Misty Lane
P.O. Box 5430
Parsippany, NJ 07054

SCALE: AS SHOWN	PROJECT# 202530
DATE: 8/17/23	
DRAWN BY: CL/JS	
CHECKED BY: JS	
P:\2_Drawings\202500_202599_DWG\202501 2023 VAC.dwg	

SUB–SLAB DEPRESSURIZATION SYSTEM (SSDS)
VACUUM READINGS – JULY 2023
FORMER SWIVELIER COMPANY SITE
ROUTE 304
VILLAGE OF NANUET, NEW YORK

FIGURE# 3

Periodic Review Report – Review Period July 2022 to August 2023

Property Known As:

Swivelier Company
33 Route 304
Nanuet, Rockland County, New York 10954
NYSDEC Site Nos. 3-44-036 & V00520
EWMA Project No. 202530

Appendix 1 – IC/EC Certifications

August 2023

Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. **V00520**

Site Name Swivelier Company

Site Address: 33 Route 304 Zip Code: 10954
City/Town: Nanuet
County: Rockland
Site Acreage:

Reporting Period: July 1, 2022 to August 1, 2023

		YES	NO
1.	Is the information above correct?	✓	❑
	If NO, include handwritten above or on a separate sheet.		
2.	Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	❑	✓
3.	Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	❑	✓
4.	Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	❑	✓
	If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5.	Is the site currently undergoing development?	❑	✓

Box 2

		YES	NO
6.	Is the current site use consistent with the use(s) listed below? Industrial	✓	❑
7.	Are all ICs/ECs in place and functioning as designed?	✓	❑

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative Date

SITE NO. V00520 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
	S.F Properties LLC	Ground Water Use Restriction Soil Management Plan Landuse Restriction Building Use Restriction Surface Water Use Restriction Monitoring Plan Site Management Plan O&M Plan IC/EC Plan

Commercial development, Land and GW restrictions Soil Management Plan under SMP

Box 4

Description of Engineering Controls

Parcel	Engineering Control
	Vapor Mitigation Cover System Fencing/Access Control Monitoring Wells

Controlled access, SSDS operational in building, Monitoring well sampling, Cover system with asphalt pavement

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
✓	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
✓	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative — Date

IC CERTIFICATIONS
SITE NO. V00520

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Jacob M. Strauss (print name) at EWMA, 100 Misty Lane, Parsippany, New Jersey 07054 (print business address),

am certifying as Designated Representative of Owner (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Jacob M. Strauss — Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

8/18/2023 — Date

IC/EC CERTIFICATIONS

Box 7

Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Jacob M. Strauss (print name) at EWMA Engineering Services, LLC and EWMA, 100 Misty Lane, Parsippany, New Jersey 07054 (print business address),

am certifying as a Professional Engineer for the Owner (Owner or Remedial Party)

STATE OF NEW YORK
JACOB M. STRAUSS
097765
LICENSED PROFESSIONAL ENGINEER

Jacob M. Strauss
Signature of , for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE)

8/18/2023
Date

Enclosure 3
Periodic Review Report (PRR) General Guidance

I. Executive Summary: (1/2-page or less)
   A. Provide a brief summary of site, nature and extent of contamination, and remedial history.
   B. Effectiveness of the Remedial Program - Provide overall conclusions regarding;
      1. progress made during the reporting period toward meeting the remedial objectives for the site
      2. the ultimate ability of the remedial program to achieve the remedial objectives for the site.
   C. Compliance
      1. Identify any areas of non-compliance regarding the major elements of the Site Management Plan (SMP, i.e., the Institutional/Engineering Control (IC/EC) Plan, the Monitoring Plan, and the Operation & Maintenance (O&M) Plan).
      2. Propose steps to be taken and a schedule to correct any areas of non-compliance.
   D. Recommendations
      1. recommend whether any changes to the SMP are needed
      2. recommend any changes to the frequency for submittal of PRRs (increase, decrease)
      3. recommend whether the requirements for discontinuing site management have been met.

II. Site Overview (one page or less)
   A. Describe the site location, boundaries (figure), significant features, surrounding area, and the nature and extent of contamination prior to site remediation.
   B. Describe the chronology of the main features of the remedial program for the site, the components of the selected remedy, cleanup goals, site closure criteria, and any significant changes to the selected remedy that have been made since remedy selection.

III. Evaluate Remedy Performance, Effectiveness, and Protectiveness
   Using tables, graphs, charts and bulleted text to the extent practicable, describe the effectiveness of the remedy in achieving the remedial goals for the site. Base findings, recommendations, and conclusions on objective data. Evaluations and should be presented simply and concisely.

IV. IC/EC Plan Compliance Report (if applicable)
   A. IC/EC Requirements and Compliance
      1. Describe each control, its objective, and how performance of the control is evaluated.
      2. Summarize the status of each goal (whether it is fully in place and its effectiveness).
      3. Corrective Measures: describe steps proposed to address any deficiencies in ICECs.
      4. Conclusions and recommendations for changes.
   B. IC/EC Certification
      1. The certification must be complete (even if there are IC/EC deficiencies), and certified by the appropriate party as set forth in a Department-approved certification form(s).

V. Monitoring Plan Compliance Report (if applicable)
   A. Components of the Monitoring Plan (tabular presentations preferred) - Describe the requirements of the monitoring plan by media (i.e., soil, groundwater, sediment, etc.) and by any remedial technologies being used at the site.
   B. Summary of Monitoring Completed During Reporting Period - Describe the monitoring tasks actually completed during this PRR reporting period. Tables and/or figures should be used to show all data.
   C. Comparisons with Remedial Objectives - Compare the results of all monitoring with the remedial objectives for the site. Include trend analyses where possible.
   D. Monitoring Deficiencies - Describe any ways in which monitoring did not fully comply with the monitoring plan.
   E. Conclusions and Recommendations for Changes - Provide overall conclusions regarding the monitoring completed and the resulting evaluations regarding remedial effectiveness.

VI. Operation & Maintenance (O&M) Plan Compliance Report (if applicable)
   A. Components of O&M Plan - Describe the requirements of the O&M plan including required activities, frequencies, recordkeeping, etc.
   B. Summary of O&M Completed During Reporting Period - Describe the O&M tasks actually completed during this PRR reporting period.
   C. Evaluation of Remedial Systems - Based upon the results of the O&M activities completed, evaluated

the ability of each component of the remedy subject to O&M requirements to perform as designed/expected.

D. O&M Deficiencies - Identify any deficiencies in complying with the O&M plan during this PRR reporting period.

E. Conclusions and Recommendations for Improvements - Provide an overall conclusion regarding O&M for the site and identify any suggested improvements requiring changes in the O&M Plan.

VII. Overall PRR Conclusions and Recommendations

A. Compliance with SMP - For each component of the SMP (i.e., IC/EC, monitoring, O&M), summarize;
   1. whether all requirements of each plan were met during the reporting period
   2. any requirements not met
   3. proposed plans and a schedule for coming into full compliance.

B. Performance and Effectiveness of the Remedy - Based upon your evaluation of the components of the SMP, form conclusions about the performance of each component and the ability of the remedy to achieve the remedial objectives for the site.

C. Future PRR Submittals
   1. Recommend, with supporting justification, whether the frequency of the submittal of PRRs should be changed (either increased or decreased).
   2. If the requirements for site closure have been achieved, contact the Departments Project Manager for the site to determine what, if any, additional documentation is needed to support a decision to discontinue site management.

VIII. Additional Guidance

Additional guidance regarding the preparation and submittal of an acceptable PRR can be obtained from the Departments Project Manager for the site.

Periodic Review Report – Review Period July 2022 to August 2023

Property Known As:

Swivelier Company
33 Route 304
Nanuet, Rockland County, New York 10954
NYSDEC Site Nos. 3-44-036 & V00520
EWMA Project No. 202530

Appendix 2 – Annual Inspection of Cover System and Vapor Intrusion Control System

August 2023

INNOVATIVE | EXPERIENCED | RESPONSIVE
www.ewma.com

Toll Free: (800) 969-3159
Phone: (973) 560-1400
Fax: (973) 560-0400

Provided as Appendix 2 to the July 2022 – August 2023 Periodic Review Report

August 18, 2023

Mr. Salvatore F. Priore, P.E.
Project Manager
NYSDEC
Division of Environmental Remediation
Remedial Bureau C
625 Broadway, 11th Floor
Albany, NY 12233-7014

Re: Annual Inspection Report for Vapor Mitigation System & Cover System
Swivelier Company
33 Route 304, Nanuet, Rockland County, New York 11101
NYSDEC Site Nos. 3-44-036 & V00520
EWMA Project No. 202530

Dear Mr. Priore:

EWMA is submitting this Annual Inspection Report, prepared in accordance with NYSDEC and Site Management Plan (SMP) requirements, for the vapor mitigation system (VMS) and cover system at the Former Swivelier Company site (Property).

The VMS for the subject building includes sub-slab de-pressurization, and is fully operational on continuous duty. EWMA conducted initial site inspections on July 20, 2023 and confirmed that the SSDS remained fully operational following repairs in September 2022. Additionally, eight new permanent sub-slab monitoring points were installed on September 22 and 23, 2022 and detailed in EWMA's previous Annual Inspection Report.

The VMS is performing in compliance with SMP requirements, NYSDOH guidelines, and good vapor intrusion control practices. During the July 20, 2023 inspection, vacuum measurements in inches of water column (inch wc) were obtained at permanent sub-slab monitoring points as follows:

Vapor Mitigation System (VMS) Sub-Slab Vacuum Measurements		
Monitoring Point ID	**Location**	**Vacuum (inch wc)**
MP-1	Subzi Mandi	-0.054
MP-2	Subzi Mandi	-0.008
MP-3	Construction Hallway	-0.176
MP-4	Chrysler Dodge Showroom	-0.004
MP-5	Chrysler Dodge Maintenance Garage	-0.183
MP-6	Ashley Furniture Electrical Closet	-0.013
MP-7	Powerhouse Gym Break Room	-0.071
MP-8	Gymnastics Academy Utility Closet	-0.020

The cover system for the Property consists of asphalt pavement, concrete sidewalks, and concrete building slabs, and was found to be intact and functional during our annual inspection.

If you have any questions or require any additional information please feel free to contact the undersigned at our Parsippany, New Jersey office, (973) 560-1400, ext. 195.

Sincerely,
EWMA

Jacob Strauss, PE
Senior Project Engineer

Att.: Site Inspection Checklist

Cc: NYSDEC
NYSDOH
Client
Cathy Bryant, Director, EWMA

APPENDIX 2

FORMER SWIVELIER COMPANY

ANNUAL SITE INSPECTION REPORT/CHECKLIST

Date:	July 20, 2023
Inspector:	Jacob Strauss, EWMA, Sr. Project Engineer
Reason for Inspection:	2023 Annual Site Inspection Checklist

1. *Is the Site compliant with all Institutional Controls, including Site usage (yes/no)?* Yes.
   If no, describe:

2. *Provide a general evaluation of Site conditions:*

   The site was secure and in good condition. The subject building is approximately 32,000 square feet, consisting of multiple commercial and light industrial office tenants, and is surrounded by paved asphalt parking areas.

3. *Provide a general evaluation of the condition and effectiveness of composite cover systems:*
   The cover system for the Property consists of asphalt pavement, concrete sidewalks, and concrete building slabs, and was found to be intact and functional during our annual inspection.

4. *Provide a general evaluation of the condition and effectiveness of Vapor Intrusion Controls:*
   The vapor mitigation system (VMS) is performing in compliance with SMP requirements, NYSDOH guidelines, and good vapor intrusion control practices. See attached Annual Inspection Report for sub-slab vacuum measurements.

5. *Provide a general evaluation of the condition of monitoring wells:*
   All monitoring wells located onsite are in good condition.

6. *Are Site management activities being conducted according to Site Management Plan (yes/no)?* Yes.
   If no, describe:

7. *Is Site documentation as required by the Site Management Plan up to date (yes/no)?* Yes.
   If no, describe:

8. *Are any changes to the monitoring program recommended (yes/no)?* No.
   If yes, describe:

Periodic Review Report – Review Period July 2022 to August 2023

Property Known As:

Swivelier Company
33 Route 304
Nanuet, Rockland County, New York 10954
NYSDEC Site Nos. 3-44-036 & V00520
EWMA Project No. 202530

Appendix 3 – Laboratory Analytical Packages

August 2023

Integrated Analytical Laboratories LLC

ANALYTICAL DATA REPORT

Environmental Waste Management Associates, LLC.
Lanidex Center
100 Misty Lane
Parsippany, NJ 07054

Project Name: **SWIVELIER - 202530**
IAL Case Number: **E23-03407**

These data have been reviewed and accepted by:

Michael H. Leffin, Ph.D.
Laboratory Director

This report shall not be reproduced, except in its entirety, without the written consent of Integrated Analytical Laboratories, LLC. The test results included in this report relate only to the samples analyzed. The results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252

IAL is a NELAP accredited lab (TNI01284) and maintains certification in Connecticut (PH-0699), New Jersey (14751), New York (11402) and Pennsylvania (68-00773).

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Sample Summary

IAL Case No.
E23-03407

Client EWMA - HQ

Project SWIVELIER - 202530

Received On 7/27/2023@15:50

Lab ID	*Client Sample ID*	*Depth Top/Bottom*	*Sampling Time*	*Matrix*	*# of Container*
03407-001	MW-11D-072623	n/a	7/26/2023@12:53	Aqueous	8
03407-002	MW-10D-072623	n/a	7/26/2023@14:15	Aqueous	8
03407-003	FB-072623	n/a	7/26/2023@14:30	Aqueous	2
03407-004	TB-072623	n/a	7/26/2023	Aqueous	2

DATA QUALIFIERS AND FLAGS

B	Indicates the analyte found in the associated method blank and in the sample due to potential lab contamination.
C	Indicates analyte is a common laboratory contaminant.
D	Indicates analyte was reported from diluted analysis.
E	Identifies a compound concentration that exceeds the upper level of the calibration range of the instrument
J	Indicates an estimated value either when the concentration in the sample is less than the RL or for qualification of TICs
J1	Indicates an estimated value when ICC or CCV did not meet the criteria.
M	Indicates matrix interference
N	Presumptive evidence of a compound from the use of GC/MS library search.
T	Sample analyzed outside of holding time
X	Indicates samples analyzed for total and dissolved metals differ at ≤20% RPD.
Y	Indicates DO depletion in the BOD blank is >0.20ppm
Z	Indicates internal standard failure. Sample results are either biased high or biased low.
$	Value outside NJDEP DKQP Limits
*	Result outside of QC limits

PROJECT NOTES

- All results for soils, solids, and sludges are reported on a dry-weight basis except where noted
- All test results and QC are compliant with TNI or other applicable state agency requirements/guidance unless otherwise notated in the case narrative and/or project information page.
- The case narrative for this SDG should be consulted to determine any non-conformances.
- Any samples with 15-minute or "analyze immediately" holding times (e.g. pH, Dissolved Oxygen, Sulfite, etc.) which are analyzed in the laboratory are considered out of holding time.
- IAL is a NELAP/TNI certified laboratory (TNI ID# TNI01284). IAL retains certification in Connecticut (PH-0699), New Jersey (14751), New York (11402), and Pennsylvania (68-00773).
- Certification is not required to perform analyses in the following states: AL, CO, DE, GA, HI, ID, IN, KY, MD, MI, MS, MO, MT, NE, NM, SD and TN. IAL can perform all analyses, except Drinking Water, within its scope of capabilities in these states.

ACRONYMS AND ABBREVIATIONS

CFU	Colony Forming Unit	**ND**	Indicates analyte was analyzed for but not detected at MDL or RL (only if MDL is not used)
CCB	Continuing Calibration Blank		
CCV	Continuing Calibration Verification	**NTU**	Nephelometric Turbidity Units
DF	Dilution Factor	**ppb**	Parts per billion. Reported as µg/L or µg/kg
DL	Attached as a suffix to a diluted sample	**ppm**	Parts per million. Reported as mg/L, µg/mL or mg/kg
DUP	Duplicate	**QC**	Quality Control
ICB	Initial Calibration Blank	**% Rec**	Percent Recovery
ICC	Initial Calibration Curve	**RL**	Reporting Limit. The RL is typically determined by the concentration of the lowest standard in the calibration curve
ICV	Initial Calibration Verification		
kg	kilogram		
L	Liter	**RPD**	Relative Percent Difference
LCS	Laboratory Control Sample	**RSD**	Relative Standard Deviation
LCSD	Laboratory Control Sample Duplicate	**RT**	Retention Time
MDL	Method Detection Limit as determined according to 40 CFR Part 136 Appendix B	**SU**	Standard Units
		TIC	Tentatively Identified Compound AKA Library Search Compounds
MF	Membrane Filter		
mg	milligram (1000mg = 1g)	**TNI**	The NELAC (National Environmental Laboratory Accreditation Council) Institute
µg	microgram (1000µg = 1mg)		
ml	milliliter (1000ml = 1L)	**TNTC**	Too numerous to count
µl	microliter (1000µl = 1ml)	*	When attached to a compound name, indicates this analyte was analyzed by Method SW-846 8270 SIM
µmhos	Conductivity units - resistance expressed in ohms		
MPN	Most Probable Number	^	When attached to a compound name, indicates this analyte was analyzed by Method SW-846 8011 or EPA 504.1
MS	Matrix Spike		
MSD	Matrix Spike Duplicate		
NA	Not applicable	<	Less than; In conjunction with a numerical value, indicates a concentration less than the RL or MDL
NC	Not calculated		

SAMPLE DELIVERY GROUP CASE NARRATIVE
(Conformance / Non-Conformance Summary)

SAMPLE DELIVERY GROUP CASE NARRATIVE

SDG#: E23-03407

Integrated Analytical Laboratories, LLC. received four (4) samples** from EWMA - HQ (IAL SDG# **E23-03407**, Project: SWIVELIER - 202530) on July 27, 2023 for the analysis of :

(4) TCL VO + 15
(2) Dissolved Gasses (RSK-175) by Eurofins Lancaster Labs
(2) Volatile Fatty Acid (EPA Method 8015D) by Eurofins Lancaster Laboratories

**Number of samples listed above may be greater than what is listed on the chain of custody. Any samples that require in-house filtration or splitting will be counted as separate samples.

Samples were received in good condition with documentation in order.
Cooler temperature was acceptable at 4 ± 2 degree C.

Volatiles By SW 8260D **Batch: 230731-02** **Matrix: Aqueous**

QC
- Calibration curve met QC criteria.
- Internal standards recovery met QC criteria.
- Surrogate percent recovery met QC criteria.
- Method blank met QC criteria.
- LCS percent recovery met QC criteria.
- MS/MSD RPD met QC criteria.
- MS/MSD percent recovery met QC criteria.

E23-03407
- All samples were received within holding time.
- All samples were analyzed within holding time.

Dilution Summary:

Sample ID	DF(s)	Dilution For
E23-03407-001	1	NA
E23-03407-002	100	Target compound(s).
E23-03407-003	1	NA
E23-03407-004	1	NA

Subcontracted to Eurofins Lancaster Laboratories, TNI certified*, #TNI02128, NJ certified

Method: RSK-175; 8015D **Matrix: Aqueous**

QC - All analyses met QC criteria.

E23-03407 - Please see Case Narrative of Subcontracted Report.

Integrated Analytical Laboratories has subcontracted part or all of the results in this report. The laboratory performing the subcontracted work is listed above. These analyses were performed by a NELAP/TNI accredited laboratory, unless otherwise specified. This work was placed with a laboratory accredited for TNI standards for the tests to be performed OR with a laboratory that meets applicable statutory and regulatory requirements for performing the tests and submitting the results of tests performed. Integrated Analytical Laboratories will keep a copy of the subcontractor's report on file.
*TNI, The NELAC Institute, is a nationally recognized laboratory accreditation program. The TNI Standard is intended as an application of ISO/IEC 17025:2005(E), General Requirements for the Competence of Testing and Calibration Laboratories. While individual states and entities offer certification, TNI standards foster the generation of environmental data of known and documented quality through an open, inclusive, and transparent process that is responsive to the needs of the community.

A review of the QA/QC measures for the analysis of the sample(s) contained in this report has been performed by:

Reviewed by

8/14/2023
Date

RESULTS SUMMARY REPORT

SUMMARY REPORT
Client: Environmental Waste Management Associates, LLC.
Project: SWIVELIER - 202530
Lab Case No.: E23-03407

Lab ID:	03407-001			03407-002			03407-003			03407-004		
Client ID:	MW-11D-072623			MW-10D-072623			FB-072623			TB-072623		
Matrix:	Aqueous			Aqueous			Aqueous			Aqueous		
Sampled Date	7/26/23			7/26/23			7/26/23			7/26/23		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Volatiles (Units)	*(ug/L)*			*(ug/L)*			*(ug/L)*			*(ug/L)*		
trans-1,2-Dichloroethene	ND		0.372	48.4	DJ	37.2	ND		0.372	ND		0.372
Methyl tert-butyl ether (MTBE)	0.349	J	0.245	ND		24.5	ND		0.245	ND		0.245
cis-1,2-Dichloroethene	1.09		0.277	5970	D	27.7	ND		0.277	ND		0.277
Trichloroethene	1.16		0.347	11200	D	34.7	ND		0.347	ND		0.347
TOTAL VO's:	2.60	J		17200	DJ		ND			ND		
TOTAL TIC's:	ND			ND			ND			ND		
TOTAL VO's & TIC's:	2.60	J		17200	DJ		ND			ND		

ND = Analyzed for but Not Detected at the MDL
J = Indicates an estimated value either when the concentration in the sample is greater than MDL and less than RL, or for qualification of TICs
D = The compound was reported from the Diluted analysis
All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.

+ Subcontracted data for Dissolved Gasses (RSK-175) by Eurofins Lancaster Labs is available in the Subcontracted Reports section.
+ Subcontracted data for Volatile Fatty Acid (EPA Method 8015D) by Eurofins Lancaster Laboratories is available in the Subcontracted Reports section.

ANALYTICAL RESULTS

VOLATILE ORGANICS

Lab ID: E23-03407-001
Client ID: MW-11D-072623
Date Received: 07/27/2023
Date Analyzed: 08/01/2023
Data file: K3887.D 08/01/2023 08:59

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.552
Chloromethane	ND		0.500	0.309
Vinyl chloride	ND		1.00	0.352
Bromomethane	ND		1.00	0.386
Chloroethane	ND		0.500	0.324
Trichlorofluoromethane	ND		1.00	0.503
1,1-Dichloroethene	ND		0.500	0.363
Acetone	ND		2.00	0.847
Carbon disulfide	ND		1.00	0.403
Methylene chloride	ND		1.00	0.500
trans-1,2-Dichloroethene	ND		0.500	0.372
Methyl tert-butyl ether (MTBE)	0.349	J	0.500	0.245
1,1-Dichloroethane	ND		0.500	0.285
cis-1,2-Dichloroethene	1.09		0.500	0.277
2-Butanone (MEK)	ND		2.00	0.802
Bromochloromethane	ND		1.00	0.379
Chloroform	ND		0.500	0.285
1,1,1-Trichloroethane	ND		0.500	0.381
Carbon tetrachloride	ND		0.500	0.349
1,2-Dichloroethane (EDC)	ND		0.500	0.273
Benzene	ND		0.500	0.270
Trichloroethene	1.16		0.500	0.347
1,2-Dichloropropane	ND		0.500	0.272
Bromodichloromethane	ND		0.500	0.258
cis-1,3-Dichloropropene	ND		1.00	0.264
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.611

VOLATILE ORGANICS

Lab ID: E23-03407-001
Client ID: MW-11D-072623
Date Received: 07/27/2023
Date Analyzed: 08/01/2023
Data file: K3887.D 08/01/2023 08:59

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Concentration	Q	RL	MDL
Toluene	ND		0.500	0.302
trans-1,3-Dichloropropene	ND		1.00	0.330
1,1,2-Trichloroethane	ND		0.500	0.313
Tetrachloroethene	ND		0.500	0.365
2-Hexanone	ND		1.00	0.818
Dibromochloromethane	ND		0.500	0.263
1,2-Dibromoethane (EDB)	ND		0.500	0.289
Chlorobenzene	ND		0.500	0.304
Ethylbenzene	ND		0.500	0.313
Total Xylenes	ND		1.00	0.345
Styrene	ND		1.00	0.317
Bromoform	ND		0.500	0.328
Isopropylbenzene	ND		1.00	0.332
1,1,2,2-Tetrachloroethane	ND		1.00	0.284
1,3-Dichlorobenzene	ND		0.500	0.386
1,4-Dichlorobenzene	ND		0.500	0.397
1,2-Dichlorobenzene	ND		0.500	0.354
1,2-Dibromo-3-chloropropane	ND		1.00	0.410
1,2,4-Trichlorobenzene	ND		1.00	0.358
1,2,3-Trichlorobenzene	ND		1.00	0.406
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.538
Methyl acetate	ND		0.500	0.345
Cyclohexane	ND		1.00	0.469
Methylcyclohexane	ND		1.00	0.421
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.264
Total Target Compounds (51):	2.60	J		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: E23-03407-001
Client ID: MW-11D-072623
Date Received: 07/27/2023
Date Analyzed: 08/01/2023
Date File: K3887.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time

No peaks detected

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

VOLATILE ORGANICS

Lab ID: E23-03407-002
Client ID: MW-10D-072623
Date Received: 07/27/2023
Date Analyzed: 08/01/2023
Data file: K3888.D 08/01/2023 09:28

GC/MS Column: DB-624
Sample wt/vol: 0.05mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		100	55.2
Chloromethane	ND		50.0	30.9
Vinyl chloride	ND		100	35.2
Bromomethane	ND		100	38.6
Chloroethane	ND		50.0	32.4
Trichlorofluoromethane	ND		100	50.3
1,1-Dichloroethene	ND		50.0	36.3
Acetone	ND		200	84.7
Carbon disulfide	ND		100	40.3
Methylene chloride	ND		100	50.0
trans-1,2-Dichloroethene	48.4	DJ	50.0	37.2
Methyl tert-butyl ether (MTBE)	ND		50.0	24.5
1,1-Dichloroethane	ND		50.0	28.5
cis-1,2-Dichloroethene	5970	D	50.0	27.7
2-Butanone (MEK)	ND		200	80.2
Bromochloromethane	ND		100	37.9
Chloroform	ND		50.0	28.5
1,1,1-Trichloroethane	ND		50.0	38.1
Carbon tetrachloride	ND		50.0	34.9
1,2-Dichloroethane (EDC)	ND		50.0	27.3
Benzene	ND		50.0	27.0
Trichloroethene	11200	D	50.0	34.7
1,2-Dichloropropane	ND		50.0	27.2
Bromodichloromethane	ND		50.0	25.8
cis-1,3-Dichloropropene	ND		100	26.4
4-Methyl-2-pentanone (MIBK)	ND		100	61.1

VOLATILE ORGANICS

Lab ID: E23-03407-002
Client ID: MW-10D-072623
Date Received: 07/27/2023
Date Analyzed: 08/01/2023
Data file: K3888.D 08/01/2023 09:28

GC/MS Column: DB-624
Sample wt/vol: 0.05mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		50.0	30.2
trans-1,3-Dichloropropene	ND		100	33.0
1,1,2-Trichloroethane	ND		50.0	31.3
Tetrachloroethene	ND		50.0	36.5
2-Hexanone	ND		100	81.8
Dibromochloromethane	ND		50.0	26.3
1,2-Dibromoethane (EDB)	ND		50.0	28.9
Chlorobenzene	ND		50.0	30.4
Ethylbenzene	ND		50.0	31.3
Total Xylenes	ND		100	34.5
Styrene	ND		100	31.7
Bromoform	ND		50.0	32.8
Isopropylbenzene	ND		100	33.2
1,1,2,2-Tetrachloroethane	ND		100	28.4
1,3-Dichlorobenzene	ND		50.0	38.6
1,4-Dichlorobenzene	ND		50.0	39.7
1,2-Dichlorobenzene	ND		50.0	35.4
1,2-Dibromo-3-chloropropane	ND		100	41.0
1,2,4-Trichlorobenzene	ND		100	35.8
1,2,3-Trichlorobenzene	ND		100	40.6
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		100	53.8
Methyl acetate	ND		50.0	34.5
Cyclohexane	ND		100	46.9
Methylcyclohexane	ND		100	42.1
1,3-Dichloropropene (cis- and trans-)	ND		100	26.4
Total Target Compounds (51):	17200	DJ		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: E23-03407-002
Client ID: MW-10D-072623
Date Received: 07/27/2023
Date Analyzed: 08/01/2023
Date File: K3888.D

GC/MS Column: DB-624
Sample wt/vol: 0.05mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 100
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

VOLATILE ORGANICS

Lab ID: E23-03407-003
Client ID: FB-072623
Date Received: 07/27/2023
Date Analyzed: 08/01/2023
Data file: K3886.D 08/01/2023 08:30

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.552
Chloromethane	ND		0.500	0.309
Vinyl chloride	ND		1.00	0.352
Bromomethane	ND		1.00	0.386
Chloroethane	ND		0.500	0.324
Trichlorofluoromethane	ND		1.00	0.503
1,1-Dichloroethene	ND		0.500	0.363
Acetone	ND		2.00	0.847
Carbon disulfide	ND		1.00	0.403
Methylene chloride	ND		1.00	0.500
trans-1,2-Dichloroethene	ND		0.500	0.372
Methyl tert-butyl ether (MTBE)	ND		0.500	0.245
1,1-Dichloroethane	ND		0.500	0.285
cis-1,2-Dichloroethene	ND		0.500	0.277
2-Butanone (MEK)	ND		2.00	0.802
Bromochloromethane	ND		1.00	0.379
Chloroform	ND		0.500	0.285
1,1,1-Trichloroethane	ND		0.500	0.381
Carbon tetrachloride	ND		0.500	0.349
1,2-Dichloroethane (EDC)	ND		0.500	0.273
Benzene	ND		0.500	0.270
Trichloroethene	ND		0.500	0.347
1,2-Dichloropropane	ND		0.500	0.272
Bromodichloromethane	ND		0.500	0.258
cis-1,3-Dichloropropene	ND		1.00	0.264
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.611

VOLATILE ORGANICS

Lab ID: E23-03407-003
Client ID: FB-072623
Date Received: 07/27/2023
Date Analyzed: 08/01/2023
Data file: K3886.D 08/01/2023 08:30

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Concentration	Q	RL	MDL
Toluene	ND		0.500	0.302
trans-1,3-Dichloropropene	ND		1.00	0.330
1,1,2-Trichloroethane	ND		0.500	0.313
Tetrachloroethene	ND		0.500	0.365
2-Hexanone	ND		1.00	0.818
Dibromochloromethane	ND		0.500	0.263
1,2-Dibromoethane (EDB)	ND		0.500	0.289
Chlorobenzene	ND		0.500	0.304
Ethylbenzene	ND		0.500	0.313
Total Xylenes	ND		1.00	0.345
Styrene	ND		1.00	0.317
Bromoform	ND		0.500	0.328
Isopropylbenzene	ND		1.00	0.332
1,1,2,2-Tetrachloroethane	ND		1.00	0.284
1,3-Dichlorobenzene	ND		0.500	0.386
1,4-Dichlorobenzene	ND		0.500	0.397
1,2-Dichlorobenzene	ND		0.500	0.354
1,2-Dibromo-3-chloropropane	ND		1.00	0.410
1,2,4-Trichlorobenzene	ND		1.00	0.358
1,2,3-Trichlorobenzene	ND		1.00	0.406
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.538
Methyl acetate	ND		0.500	0.345
Cyclohexane	ND		1.00	0.469
Methylcyclohexane	ND		1.00	0.421
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.264

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: E23-03407-003
Client ID: FB-072623
Date Received: 07/27/2023
Date Analyzed: 08/01/2023
Date File: K3886.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	Column/Septa bleed	0	J	5.15

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

VOLATILE ORGANICS

Lab ID: E23-03407-004
Client ID: TB-072623
Date Received: 07/27/2023
Date Analyzed: 08/01/2023
Data file: K3885.D 08/01/2023 08:02

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.552
Chloromethane	ND		0.500	0.309
Vinyl chloride	ND		1.00	0.352
Bromomethane	ND		1.00	0.386
Chloroethane	ND		0.500	0.324
Trichlorofluoromethane	ND		1.00	0.503
1,1-Dichloroethene	ND		0.500	0.363
Acetone	ND		2.00	0.847
Carbon disulfide	ND		1.00	0.403
Methylene chloride	ND		1.00	0.500
trans-1,2-Dichloroethene	ND		0.500	0.372
Methyl tert-butyl ether (MTBE)	ND		0.500	0.245
1,1-Dichloroethane	ND		0.500	0.285
cis-1,2-Dichloroethene	ND		0.500	0.277
2-Butanone (MEK)	ND		2.00	0.802
Bromochloromethane	ND		1.00	0.379
Chloroform	ND		0.500	0.285
1,1,1-Trichloroethane	ND		0.500	0.381
Carbon tetrachloride	ND		0.500	0.349
1,2-Dichloroethane (EDC)	ND		0.500	0.273
Benzene	ND		0.500	0.270
Trichloroethene	ND		0.500	0.347
1,2-Dichloropropane	ND		0.500	0.272
Bromodichloromethane	ND		0.500	0.258
cis-1,3-Dichloropropene	ND		1.00	0.264
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.611

VOLATILE ORGANICS

Lab ID: E23-03407-004
Client ID: TB-072623
Date Received: 07/27/2023
Date Analyzed: 08/01/2023
Data file: K3885.D 08/01/2023 08:02

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Concentration	Q	RL	MDL
Toluene	ND		0.500	0.302
trans-1,3-Dichloropropene	ND		1.00	0.330
1,1,2-Trichloroethane	ND		0.500	0.313
Tetrachloroethene	ND		0.500	0.365
2-Hexanone	ND		1.00	0.818
Dibromochloromethane	ND		0.500	0.263
1,2-Dibromoethane (EDB)	ND		0.500	0.289
Chlorobenzene	ND		0.500	0.304
Ethylbenzene	ND		0.500	0.313
Total Xylenes	ND		1.00	0.345
Styrene	ND		1.00	0.317
Bromoform	ND		0.500	0.328
Isopropylbenzene	ND		1.00	0.332
1,1,2,2-Tetrachloroethane	ND		1.00	0.284
1,3-Dichlorobenzene	ND		0.500	0.386
1,4-Dichlorobenzene	ND		0.500	0.397
1,2-Dichlorobenzene	ND		0.500	0.354
1,2-Dibromo-3-chloropropane	ND		1.00	0.410
1,2,4-Trichlorobenzene	ND		1.00	0.358
1,2,3-Trichlorobenzene	ND		1.00	0.406
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.538
Methyl acetate	ND		0.500	0.345
Cyclohexane	ND		1.00	0.469
Methylcyclohexane	ND		1.00	0.421
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.264

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: E23-03407-004
Client ID: TB-072623
Date Received: 07/27/2023
Date Analyzed: 08/01/2023
Date File: K3885.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	Column/Septa bleed	0	J	5.15

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

VOLATILE ORGANICS

VOLATILE ORGANICS QC SUMMARY

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 08/01/2023

Lab Sample ID	Matrix	File ID	SMC1 #	SMC2 #	SMC3 #
BLKA230731-02	AQUEOUS	K3869.D	112	99	102
E23-03431-004	AQUEOUS	K3870.D	115	99	102
E23-03431-003	AQUEOUS	K3871.D	114	101	104
E23-03431-002	AQUEOUS	K3872.D	116	100	102
E23-03431-001	AQUEOUS	K3873.D	117	99	102
LCSA230731-02	AQUEOUS	K3874.D	108	101	103
E23-03431-002MS	AQUEOUS	K3875.D	105	103	104
E23-03397-001	AQUEOUS	K3877.D	108	102	101
E23-03397-002	AQUEOUS	K3878.D	103	100	102
E23-03397-003	AQUEOUS	K3879.D	104	102	100
E23-03397-004	AQUEOUS	K3880.D	107	101	97
E23-03397-005	AQUEOUS	K3881.D	105	101	99
E23-03397-006	AQUEOUS	K3882.D	109	98	102
E23-03397-007	AQUEOUS	K3883.D	107	104	102
E23-03397-008	AQUEOUS	K3884.D	109	101	101
E23-03407-004	AQUEOUS	K3885.D	111	101	102
E23-03407-003	AQUEOUS	K3886.D	115	100	101
E23-03407-001	AQUEOUS	K3887.D	114	103	104
E23-03407-002	AQUEOUS	K3888.D	115	99	102
E23-03407-002DUP	AQUEOUS	K3889.D	115	99	102

	Concentration	DKQPs	Leachate Aqueous	Soil
SMC1 = 1,2-Dichloroethane-d4	50 ppb	70-130	70-131	51-148
SMC2 = Toluene-d8	50 ppb	70-130	70-130	53-149
SMC3 = Bromofluorobenzene	50 ppb	70-130	70-130	57-147

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
D Surrogate diluted out
M Matrix interference

FORM 2

8260

LCS ACCURACY REPORT

Lab ID: LCSA230731-02
Date Received: NA
Date Analyzed: 08/01/2023
LCS Data file: K3874.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Limits
Dichlorodifluoromethane	50.0	52.6	105		55-148
Chloromethane	50.0	52.1	104		46-136
Vinyl chloride	50.0	52.3	105		64-134
Bromomethane	50.0	51.1	102		62-142
Chloroethane	50.0	50.4	101		80-127
Trichlorofluoromethane	50.0	43.5	87		68-144
Acrolein	150	164.8	110		10-171
1,1-Dichloroethene	50.0	53.9	108		75-134
Acetone	100	111.2	111		48-142
Carbon disulfide	50.0	56.2	112		64-134
Vinyl acetate	50.0	54.9	110		43-151
Methylene chloride	50.0	48.9	98		71-132
Acrylonitrile	150.0	137.9	92		10-223
tert-Butyl alcohol (TBA)	100.0	111.1	111		64-131
trans-1,2-Dichloroethene	50.0	52.6	105		75-126
Methyl tert-butyl ether (MTBE)	50.0	56.7	113		69-133
1,1-Dichloroethane	50.0	56.0	112		79-125
Diisopropyl ether (DIPE)	50.0	54.6	109		79-120
cis-1,2-Dichloroethene	50.0	52.6	105		80-126
2,2-Dichloropropane	50.0	59.4	119		36-160
2-Butanone (MEK)	100	109.9	110		66-130
Bromochloromethane	50.0	53.5	107		66-132
Chloroform	50.0	54.5	109		75-139
1,1,1-Trichloroethane	50.0	59.2	118		68-151
Carbon tetrachloride	50.0	55.1	110		76-140
1,1-Dichloropropene	50.0	54.1	108		80-134
1,2-Dichloroethane (EDC)	50.0	57.3	115		72-139
Benzene	50.0	53.1	106		80-120
Trichloroethene	50.0	53.0	106		74-139
1,2-Dichloropropane	50.0	52.5	105		73-122
Dibromomethane	50.0	53.4	107		78-136
1,4-Dioxane	1500	0	0	*$	52-136
Bromodichloromethane	50.0	56.4	113		74-141
2-Chloroethyl vinyl ether	100	104.9	105		73-122
cis-1,3-Dichloropropene	50.0	53.2	106		73-129
4-Methyl-2-pentanone (MIBK)	100	107.6	108		77-124
Toluene	50.0	51.6	103		78-129
trans-1,3-Dichloropropene	50.0	54.8	110		66-135
1,1,2-Trichloroethane	50.0	53.1	106		78-120
Tetrachloroethene	50.0	52.7	105		65-145
1,3-Dichloropropane	50.0	53.7	107		80-122

LCS ACCURACY REPORT

Lab ID: LCSA230731-02
Date Received: NA
Date Analyzed: 08/01/2023
LCS Data file: K3874.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Limits
2-Hexanone	100	111.7	112		66-134
Dibromochloromethane	50.0	55.9	112		73-140
1,2-Dibromoethane (EDB)	50.0	54.0	108		73-137
Chlorobenzene	50.0	50.4	101		80-120
1,1,1,2-Tetrachloroethane	50.0	53.9	108		79-130
Ethylbenzene	50.0	52.4	105		80-124
m,p-Xylene	100.0	104.3	104		80-129
o-Xylene	50.0	51.0	102		80-128
Styrene	50.0	51.6	103		80-129
Bromoform	50.0	54.6	109		79-123
Isopropylbenzene	50.0	52.6	105		80-137
1,1,2,2-Tetrachloroethane	50.0	50.9	102		52-128
Bromobenzene	50.0	50.4	101		80-124
1,2,3-Trichloropropane	50.0	51.4	103		77-120
n-Propylbenzene	50.0	51.9	104		80-130
2-Chlorotoluene	50.0	52.2	104		76-136
1,3,5-Trimethylbenzene	50.0	51.3	103		76-140
4-Chlorotoluene	50.0	52.4	105		75-135
tert-Butylbenzene	50.0	50.1	100		78-142
1,2,4-Trimethylbenzene	50.0	50.8	102		74-143
sec-Butylbenzene	50.0	50.2	100		80-133
1,3-Dichlorobenzene	50.0	49.1	98		71-129
4-Isopropyltoluene	50.0	50.4	101		79-136
1,4-Dichlorobenzene	50.0	49.2	98		71-131
n-Butylbenzene	50.0	49.3	99		77-122
1,2-Dichlorobenzene	50.0	50.0	100		70-125
1,2-Dibromo-3-chloropropane	50.0	53.2	106		49-126
1,2,4-Trichlorobenzene	50.0	47.7	95		27-132
Hexachlorobutadiene	50.0	46.4	93		18-141
Naphthalene	50.0	48.2	96		38-140
1,2,3-Trichlorobenzene	50.0	45.2	90		47-131
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	54.9	110		68-140
Methyl acetate	50.0	51.6	103		53-124
Cyclohexane	50.0	47.6	95		61-132
Methylcyclohexane	50.0	51.0	102		61-144

Column used to flag recovery and RPD values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits

LCS ACCURACY REPORT

Lab ID: LCSA230731-02
Date Received: NA
Date Analyzed: 08/01/2023
LCS Data file: K3874.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	LCS	MS Conc.	%Rec	#

As per SW-846 8260C, up to 10% of the compounds may be out , but must be within 40-160%
As per NJDEP DKQPs, only the following compounds may be in the 40-160% range:
Acetone; Bromomethane; 2-Butanone (MEK); Carbon disulfide; Chloroethane; Chloromethane
1,2-Dibromo-3-chloropropane; Dichlorodifluoromethane; 1,4-Dioxane; 2-Hexanone
Naphthalene; 4-Methyl-2-pentanone (MIBK); Trichlorofluoromethane

	Leachate Aqueous/Meoh	Soil/Sediment
LCS ACCURACY (%REC)	70-130	70-130

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
NC Not calculable

8260

SAMPLE MS RESULTS SUMMARY

Lab ID: E23-03431-002
Client ID: MW-3
Date Received: NA
Date Analyzed: 08/01/2023
Sample Data file: K3872.D
Sample MS Data file: K3875.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Rec. Limits
Dichlorodifluoromethane	50.0	0.00	53.70	107		51-153
Chloromethane	50.0	0.00	50.40	101		61-146
Vinyl chloride	50.0	0.00	56.20	112		66-164
Bromomethane	50.0	0.00	54.20	108		56-159
Chloroethane	50.0	0.00	55.60	111		67-152
Trichlorofluoromethane	50.0	0.00	56.60	113		57-167
Acrolein	150.0	0.00	180.00	120		10-186
1,1-Dichloroethene	50.0	0.00	53.80	108		63-156
Acetone	100.0	0.00	113.80	114		39-168
Carbon disulfide	50.0	0.00	59.20	118		61-144
Vinyl acetate	50.0	0.00	52.80	106		31-152
Methylene chloride	50.0	0.00	53.50	107		66-133
Acrylonitrile	150.0	0.00	133.90	89		59-141
tert-Butyl alcohol (TBA)	100.0	0.00	113.50	114		61-137
trans-1,2-Dichloroethene	50.0	0.00	53.50	107		70-144
Methyl tert-butyl ether (MTBE	50.0	0.00	55.90	112		70-133
1,1-Dichloroethane	50.0	0.00	55.60	111		69-148
Diisopropyl ether (DIPE)	50.0	0.00	55.00	110		69-145
cis-1,2-Dichloroethene	50.0	0.00	54.50	109		70-140
2,2-Dichloropropane	50.0	0.00	60.60	121		37-149
2-Butanone (MEK)	100.0	0.00	107.00	107		65-147
Bromochloromethane	50.0	0.00	54.10	108		70-136
Chloroform	50.0	0.00	54.90	110		70-143
1,1,1-Trichloroethane	50.0	0.00	61.60	123		70-158
Carbon tetrachloride	50.0	0.00	57.40	115		59-174
1,1-Dichloropropene	50.0	0.00	54.70	109		70-148
1,2-Dichloroethane (EDC)	50.0	0.00	55.90	112		70-141
Benzene	50.0	0.00	54.60	109		70-131
Trichloroethene	50.0	0.00	55.80	112		56-160
1,2-Dichloropropane	50.0	0.00	53.80	108		68-134
Dibromomethane	50.0	0.00	52.60	105		70-130
1,4-Dioxane	1500.0	0.00	0.00	0	*$	67-132
Bromodichloromethane	50.0	0.00	58.00	116		70-135
2-Chloroethyl vinyl ether	100.0	0.00	107.60	108		0-132
cis-1,3-Dichloropropene	50.0	0.00	55.80	112		70-131
4-Methyl-2-pentanone (MIBK	100.0	0.00	107.60	108		70-130
Toluene	50.0	0.00	53.50	107		70-130
trans-1,3-Dichloropropene	50.0	0.00	55.80	112		70-130
1,1,2-Trichloroethane	50.0	0.00	54.10	108		70-130
Tetrachloroethene	50.0	0.00	54.20	108		70-133
1,3-Dichloropropane	50.0	0.00	54.00	108		70-130

SAMPLE MS RESULTS SUMMARY

Lab ID: E23-03431-002
Client ID: MW-3
Date Received: NA
Date Analyzed: 08/01/2023
Sample Data file: K3872.D
Sample MS Data file: K3875.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Rec. Limits
2-Hexanone	100	0.00	109.70	110		68-144
Dibromochloromethane	50	0.00	57.90	116		70-140
1,2-Dibromoethane (EDB)	50	0.00	54.90	110		63-137
Chlorobenzene	50	0.00	51.10	102		70-130
1,1,1,2-Tetrachloroethane	50	0.00	53.40	107		68-132
Ethylbenzene	50	0.00	53.20	106		70-131
m,p-Xylene	100	0.00	105.20	105		70-136
o-Xylene	50	0.00	51.30	103		70-130
Styrene	50	0.00	52.10	104		70-139
Bromoform	50	0.00	54.50	109		65-138
Isopropylbenzene	50	0.00	52.20	104		70-133
1,1,2,2-Tetrachloroethane	50	0.00	50.60	101		34-147
Bromobenzene	50	0.00	49.80	100		70-132
1,2,3-Trichloropropane	50	0.00	49.90	100		63-130
n-Propylbenzene	50	0.00	52.70	105		70-130
2-Chlorotoluene	50	0.00	51.90	104		70-130
1,3,5-Trimethylbenzene	50	0.00	51.40	103		70-130
4-Chlorotoluene	50	0.00	51.60	103		70-130
tert-Butylbenzene	50	0.00	50.20	100		70-130
1,2,4-Trimethylbenzene	50	0.00	50.40	101		70-130
sec-Butylbenzene	50	0.00	50.30	101		70-130
1,3-Dichlorobenzene	50	0.00	49.50	99		70-130
4-Isopropyltoluene	50	0.00	50.80	102		70-130
1,4-Dichlorobenzene	50	0.00	48.90	98		70-130
n-Butylbenzene	50	0.00	49.90	100		70-130
1,2-Dichlorobenzene	50	0.00	50.20	100		59-132
1,2-Dibromo-3-chloropropane	50	0.00	51.30	103		63-130
1,2,4-Trichlorobenzene	50	0.00	48.80	98		70-130
Hexachlorobutadiene	50	0.00	48.60	97		52-137
Naphthalene	50	0.00	49.20	98		49-151
1,2,3-Trichlorobenzene	50	0.00	46.40	93		59-130
1,1,2-Trichloro-1,2,2-trifluoro	50	0.00	54.10	108		59-156
Methyl acetate	50	0.00	49.40	99		58-134
Cyclohexane	50	0.00	48.40	97		61-151
Methylcyclohexane	50	0.00	52.30	105		63-142

	Leachate Aqueous/Meoh	Soil/Sediment
MS Recovery Limits (DKQP)	70-130	70-130

Column used to flag recovery and RPD values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
NC Not calculable

SAMPLE MS RESULTS SUMMARY

Lab ID: E23-03431-002
Client ID: MW-3
Date Received: NA
Date Analyzed: 08/01/2023
Sample Data file: K3872.D
Sample MS Data file: K3875.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Rec. Limits

2-Chloroethyl vinyl ether has zero spike recovery in the MS. This is due to the HCL acid preservation used on the samples. It is a known phenomenon, that this compound decomposes in the presence of acid.

As per SW-846 8260C, up to 10% of the compounds may be out , but may be within 40-160%
As per NJDEP DKQPs, only the following compounds may be in the 40-160% range:
Acetone; Bromomethane; 2-Butanone (MEK); Carbon disulfide; Chloroethane; Chloromethane
1,2-Dibromo-3-chloropropane; Dichlorodifluoromethane; 1,4-Dioxane; 2-Hexanone
Naphthalene; 4-Methyl-2-pentanone (MIBK); Trichlorofluoromethane

	Leachate Aqueous/Meoh	Soil/Sediment
MS Recovery Limits (DKQP)	70-130	70-130

Column used to flag recovery and RPD values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
NC Not calculable

SAMPLE DUPLICATE RESULTS SUMMARY

Lab ID: E23-03407-002
Client ID: MW-10D-072623
Date Received: 07/27/2023
Date Analyzed: 08/01/2023
Sample Data file: K3888.D
Sample Dup Data file: K3889.D

GC/MS Column: DB-624
Sample wt/vol: 0.05mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 100
Dilution Factor: 100

Compound	Sample Conc.	Sample Dup Conc.	% RPD	#	RPD Limits
Dichlorodifluoromethane	0.00	0.00	NC		30
Chloromethane	0.00	0.00	NC		30
Vinyl chloride	0.00	0.00	NC		30
Bromomethane	0.00	0.00	NC		30
Chloroethane	0.00	0.00	NC		30
Trichlorofluoromethane	0.00	0.00	NC		30
Acrolein	0.00	0.00	NC		30
1,1-Dichloroethene	0.00	0.00	NC		30
Acetone	0.00	0.00	NC		30
Carbon disulfide	0.00	0.00	NC		30
Vinyl acetate	0.00	0.00	NC		30
Methylene chloride	0.00	0.00	NC		30
Acrylonitrile	0.00	0.00	NC		30
tert-Butyl alcohol (TBA)	0.00	0.00	NC		30
trans-1,2-Dichloroethene	0.50	0.60	18		30
Methyl tert-butyl ether (MTBE)	0.00	0.00	NC		30
1,1-Dichloroethane	0.00	0.00	NC		30
Diisopropyl ether (DIPE)	0.00	0.00	NC		30
cis-1,2-Dichloroethene	59.70	59.80	0		30
2,2-Dichloropropane	0.00	0.00	NC		30
2-Butanone (MEK)	0.00	0.00	NC		30
Bromochloromethane	0.00	0.00	NC		30
Chloroform	0.00	0.00	NC		29
1,1,1-Trichloroethane	0.00	0.00	NC		29
Carbon tetrachloride	0.00	0.00	NC		30
1,1-Dichloropropene	0.00	0.00	NC		30
1,2-Dichloroethane (EDC)	0.00	0.00	NC		30
Benzene	0.00	0.00	NC		29
Trichloroethene	112.50	114.80	2		27
1,2-Dichloropropane	0.00	0.00	NC		30
Dibromomethane	0.00	0.00	NC		30
1,4-Dioxane	0.00	0.00	NC		30
Bromodichloromethane	0.00	0.00	NC		30
2-Chloroethyl vinyl ether	0.00	0.00	NC		30
cis-1,3-Dichloropropene	0.00	0.00	NC		30
4-Methyl-2-pentanone (MIBK)	0.00	0.00	NC		30
Toluene	0.00	0.00	NC		27
trans-1,3-Dichloropropene	0.00	0.00	NC		30
1,1,2-Trichloroethane	0.00	0.00	NC		30
Tetrachloroethene	0.00	0.00	NC		25
1,3-Dichloropropane	0.00	0.00	NC		30

SAMPLE DUPLICATE RESULTS SUMMARY

Lab ID: E23-03407-002
Client ID: MW-10D-072623
Date Received: 07/27/2023
Date Analyzed: 08/01/2023
Sample Data file: K3888.D
Sample Dup Data file: K3889.D

GC/MS Column: DB-624
Sample wt/vol: 0.05mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 100
Dilution Factor: 100

Compound	Sample Conc.	Sample Dup Conc.	% RPD	#	RPD Limits
2-Hexanone	0.00	0.00	NC		30
Dibromochloromethane	0.00	0.00	NC		30
1,2-Dibromoethane (EDB)	0.00	0.00	NC		30
Chlorobenzene	0.00	0.00	NC		29
1,1,1,2-Tetrachloroethane	0.00	0.00	NC		30
Ethylbenzene	0.00	0.00	NC		30
m,p-Xylene	0.00	0.00	NC		30
o-Xylene	0.00	0.00	NC		30
Styrene	0.00	0.00	NC		30
Bromoform	0.00	0.00	NC		30
Isopropylbenzene	0.00	0.00	NC		29
1,1,2,2-Tetrachloroethane	0.00	0.00	NC		30
Bromobenzene	0.00	0.00	NC		30
1,2,3-Trichloropropane	0.00	0.00	NC		30
n-Propylbenzene	0.00	0.00	NC		30
2-Chlorotoluene	0.00	0.00	NC		30
1,3,5-Trimethylbenzene	0.00	0.00	NC		30
4-Chlorotoluene	0.00	0.00	NC		30
tert-Butylbenzene	0.00	0.00	NC		30
1,2,4-Trimethylbenzene	0.00	0.00	NC		30
sec-Butylbenzene	0.00	0.00	NC		30
1,3-Dichlorobenzene	0.00	0.00	NC		30
4-Isopropyltoluene	0.00	0.00	NC		30
1,4-Dichlorobenzene	0.00	0.00	NC		32
n-Butylbenzene	0.00	0.00	NC		30
1,2-Dichlorobenzene	0.00	0.00	NC		32
1,2-Dibromo-3-chloropropane	0.00	0.00	NC		30
1,2,4-Trichlorobenzene	0.00	0.00	NC		30
Hexachlorobutadiene	0.00	0.00	NC		30
Naphthalene	0.00	0.00	NC		30
1,2,3-Trichlorobenzene	0.00	0.00	NC		30
1,1,2-Trichloro-1,2,2-trifluoroethane	0.00	0.00	NC		30
Methyl acetate	0.00	0.00	NC		29
Cyclohexane	0.00	0.00	NC		29
Methylcyclohexane					

Column used to flag RPD values that did not meet criteria
* Values outside of QC limits
NC Not calculable

VOLATILE METHOD BLANK SUMMARY

Lab File ID: K3869.D

Instrument ID: MSD_K

Date Analyzed: 08/01/2023

Time Analyzed: 00:19

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS & MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
TB	E23-03431-004	08/01/2023	0:48
FB	E23-03431-003	08/01/2023	1:17
MW-3	E23-03431-002	08/01/2023	1:45
MW-1	E23-03431-001	08/01/2023	2:14
LCSA230731-02	LCSA230731-02	08/01/2023	2:44
E23-03431-002MS	E23-03431-002MS	08/01/2023	3:13
MW-1R	E23-03397-001	08/01/2023	4:11
MW-2R	E23-03397-002	08/01/2023	4:39
MW-3R	E23-03397-003	08/01/2023	5:08
MW-5R	E23-03397-004	08/01/2023	5:37
MW-6R	E23-03397-005	08/01/2023	6:06
MW-8	E23-03397-006	08/01/2023	6:35
FIELD	E23-03397-007	08/01/2023	7:04
TRIP	E23-03397-008	08/01/2023	7:33
TB-072623	E23-03407-004	08/01/2023	8:02
FB-072623	E23-03407-003	08/01/2023	8:30
MW-11D-072623	E23-03407-001	08/01/2023	8:59
MW-10D-072623	E23-03407-002	08/01/2023	9:28
MW-10D-072623	E23-03407-002DUP	08/01/2023	9:57

FORM 4

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: K3740.D

Inst ID: MSD_K

BFB Injection Date: 07/24/2023

BFB Injection Time: 14:56

m/z	Ion Abudance Criteria	%Relative Abundance			
95	50 - 200% of mass 174	100			
96	5.0 - 9.0% of mass 95	7.0			
173	Less than 2.0% of mass 174	1.8	(	1.5	)1
174	50 - 200% of mass 95	81.5			
175	5.0 - 9.0% of mass 174	5.5	(	6.8	)1
176	95.0 - 105.0% of mass 174	79.8	(	97.9	)1
177	5.0 - 10.0% of mass 176	4.3	(	5.4	)2
	1-Value is % mass 174	2-Value is % mass 176			

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ICC100	ICC230724	K3745.D	07/24/2023	17:28
ICC001	ICC230724	K3741.D	07/24/2023	15:33
ICC00.5	ICC230724	K3742.D	07/24/2023	16:01
ICC005	ICC230724	K3743.D	07/24/2023	16:30
ICC020	ICC230724	K3744.D	07/24/2023	16:59
ICC150	ICC230724	K3746.D	07/24/2023	17:56
ICC200	ICC230724	K3747.D	07/24/2023	18:25
ICV100	ICV230724	K3749.D	07/24/2023	19:22

FORM 5

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: K3865.D
BFB Injection Date: 07/31/2023
Inst ID: MSD_K
BFB Injection Time: 22:24

m/z	Ion Abudance Criteria	%Relative Abundance	
95	50 - 200% of mass 174	100	
96	5.0 - 9.0% of mass 95	5.2	
173	Less than 2.0% of mass 174	2.0	(1.4)1
174	50 - 200% of mass 95	70.9	
175	5.0 - 9.0% of mass 174	6.0	(8.5)1
176	95.0 - 105.0% of mass 174	71.5	(100.8)1
177	5.0 - 10.0% of mass 176	4.3	(6.0)2
	1-Value is % mass 174	2-Value is % mass 176	

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
CCV100	CCV230731-02	K3867.D	07/31/2023	22:53
BLKA230731-02	BLKA230731-02	K3869.D	08/01/2023	0:19
TB	E23-03431-004	K3870.D	08/01/2023	0:48
FB	E23-03431-003	K3871.D	08/01/2023	1:17
MW-3	E23-03431-002	K3872.D	08/01/2023	1:45
MW-1	E23-03431-001	K3873.D	08/01/2023	2:14
LCSA230731-02	LCSA230731-02	K3874.D	08/01/2023	2:44
E23-03431-002MS	E23-03431-002MS	K3875.D	08/01/2023	3:13
MW-1R	E23-03397-001	K3877.D	08/01/2023	4:11
MW-2R	E23-03397-002	K3878.D	08/01/2023	4:39
MW-3R	E23-03397-003	K3879.D	08/01/2023	5:08
MW-5R	E23-03397-004	K3880.D	08/01/2023	5:37
MW-6R	E23-03397-005	K3881.D	08/01/2023	6:06
MW-8	E23-03397-006	K3882.D	08/01/2023	6:35
FIELD	E23-03397-007	K3883.D	08/01/2023	7:04
TRIP	E23-03397-008	K3884.D	08/01/2023	7:33
TB-072623	E23-03407-004	K3885.D	08/01/2023	8:02
FB-072623	E23-03407-003	K3886.D	08/01/2023	8:30
MW-11D-072623	E23-03407-001	K3887.D	08/01/2023	8:59
MW-10D-072623	E23-03407-002	K3888.D	08/01/2023	9:28

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: K3865.D

Inst ID: MSD_K

BFB Injection Date : 07/31/202

BFB Injection Time: 22:24

m/z	Ion Abudance Criteria	%Relative Abundance			
50		22.1			
75		56.3			
95	50 - 200% of mass 174	100.0			
96	5.0 - 9.0% of mass 95	5.2			
173	Less than 2.0% of mass 174	2.0	(	1.4	)1
174	50 - 200% of mass 95	70.9			
175	5.0 - 9.0% of mass 174	6.0	(	8.5	)1
176	95.0 - 105.0% of mass 174	71.5	(	100.8	)1
177	5.0 - 10.0% of mass 176	4.3	(	6.0	)2
	1-Value is % mass 174	2-Value is % mass 176			

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
MW-10D-072623	E23-03407-002DL	K3889.D	08/01/2023	9:57

VOLATILE INTERNAL STANDARD/SURROGATE AREA AND RT SUMMARY

Lab File ID (Standard): K3745.D

Date Analyzed: 07/24/2023

Instrument ID: MSD_K

Time Analyzed: 17:28

	5ug/L	IS1 AREA #	RT #	SS1 AREA #	RT #	SS2 AREA #	RT #
	12 HOUR STD	112	5.79	288821	6.61	510459	9.95
	UPPER LIMIT	145.6	6.29	375467.3	7.11	663596.7	10.45
	LOWER LIMIT	78.4	5.29	202174.7	6.11	357321.3	9.45
	LAB SAMPLE ID						
01	ICC230724	101	5.79	300225	6.61	513198	9.95
02	ICC230724	101	5.79	282396	6.61	479730	9.95
03	ICC230724	103	5.80	280189	6.61	480430	9.95
04	ICC230724	110	5.79	271970	6.62	476646	9.95
05	ICC230724	110	5.79	319841	6.61	559338	9.95
06	ICC230724	108	5.79	347693	6.61	612638	9.95
07	ICV230724	99	5.79	347405	6.61	605565	9.95
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 = Fluorobenzene
SS1 = Bromofluorobenzene
SS2 = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = +30% of internal standard area
AREA LOWER LIMIT = -30% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.
** CCV not subject to upper limit criteria (Sec 10.3.4, EPA 524.2)

FORM 8

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): K3867.D

Date Analyzed: 07/31/2023

Instrument ID: MSD_K

Time Analyzed: 22:53

	50UG/L	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	225356		5.79		391564		6.61		430006		9.95	
	UPPER LIMIT	450712		6.29		783128		7.11		860012		10.45	
	LOWER LIMIT	112678		5.29		195782		6.11		215003		9.45	
	LAB SAMPLE ID												
01	BLKA230731-02	218439		5.80		380577		6.61		389876		9.95	
02	E23-03431-004	214691		5.79		378051		6.61		390501		9.95	
03	E23-03431-003	212065		5.79		363296		6.61		378781		9.95	
04	E23-03431-002	208082		5.79		368464		6.61		387616		9.95	
05	E23-03431-001	210515		5.80		367543		6.62		372057		9.95	
06	LCSA230731-02	257014		5.79		456019		6.61		479964		9.95	
07	E23-03431-002MS	271836		5.80		474288		6.61		509954		9.95	
08	E23-03397-001	279590		5.80		499588		6.61		510897		9.95	
09	E23-03397-002	289760		5.79		510252		6.61		520268		9.95	
10	E23-03397-003	285907		5.79		504627		6.61		523326		9.95	
11	E23-03397-004	268957		5.79		476713		6.62		479500		9.95	
12	E23-03397-005	278456		5.79		481378		6.61		492224		9.95	
13	E23-03397-006	266117		5.79		472880		6.61		479987		9.95	
14	E23-03397-007	261049		5.80		443975		6.61		464325		9.95	
15	E23-03397-008	249760		5.79		430378		6.61		448060		9.95	
16	E23-03407-004	236116		5.79		410528		6.61		426636		9.95	
17	E23-03407-003	227565		5.79		404898		6.61		421095		9.95	
18	E23-03407-001	223050		5.79		383722		6.61		395285		9.95	
19	E23-03407-002	221261		5.80		390278		6.61		404986		9.95	
20	E23-03407-002DUP	216682		5.79		379796		6.61		391455		9.95	
21													
22													

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +200% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM 8

VOLATILE ORGANICS SAMPLE DATA

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3887.D
Acq On : 1 Aug 2023 8:59
Operator : BARBARA
Sample : MW-11D-072623,E23-03407-001,A,5mL,100
Misc : EWMA/SWIVELIER_-_2,07/26/23,07/27/23,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Aug 02 11:20:55 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

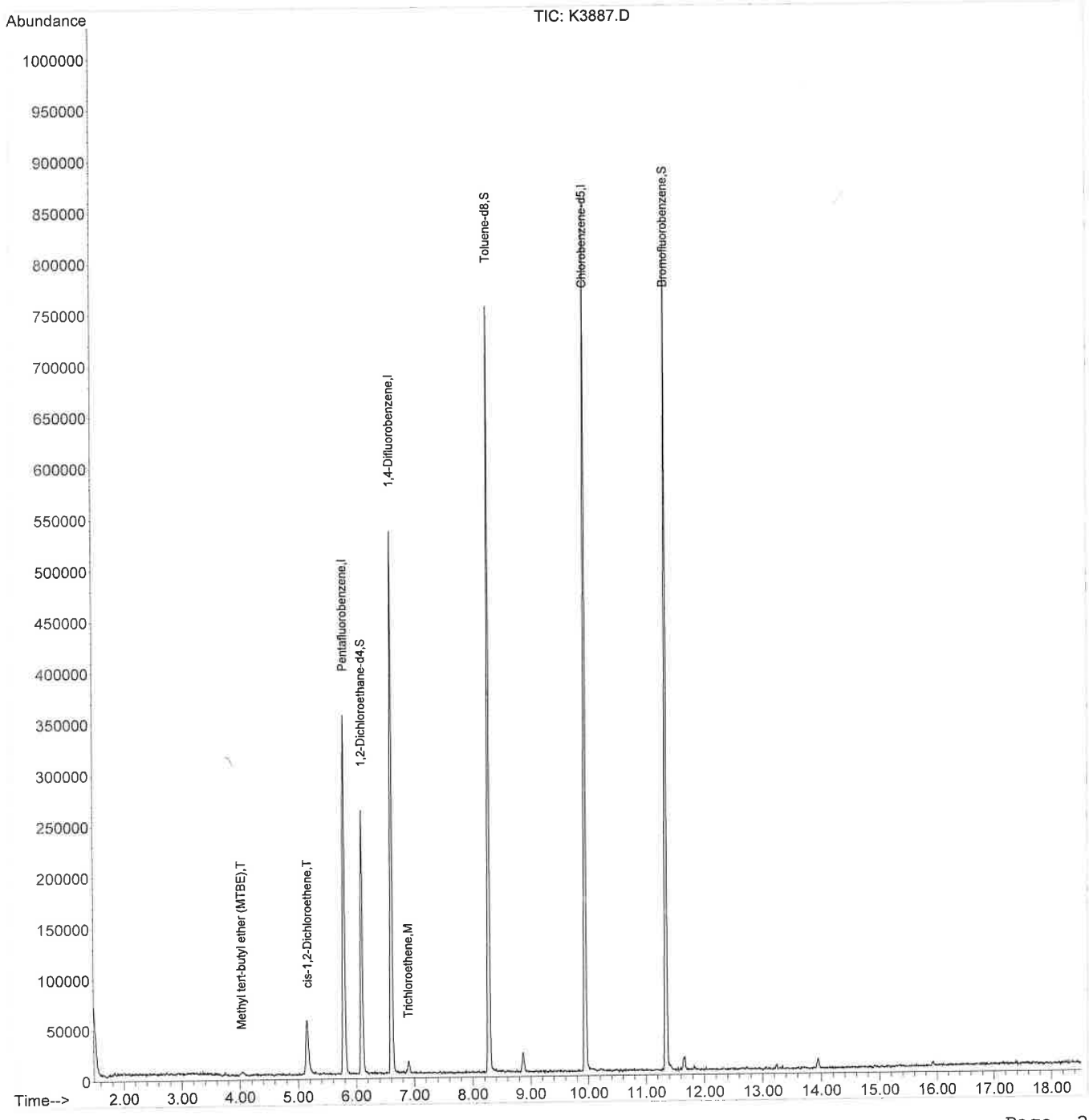
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	5.79	168	223050	50.00	UG		0.00
31) 1,4-Difluorobenzene	6.61	114	383722	50.00	UG		0.00
50) Chlorobenzene-d5	9.95	117	395285	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.10	65	237666	57.07	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 114.14%				
41) Toluene-d8	8.28	98	497567	51.28	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.56%				
59) Bromofluorobenzene	11.35	95	291236	51.89	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.78%				
Target Compounds							Qvalue
17) Methyl tert-butyl ether (M	4.03	73	4839	0.35	UG		100
20) cis-1,2-Dichloroethene	5.18	96	4165	1.09	UG	#	99
33) Trichloroethene	6.91	95	4434	1.16	UG	#	46

(#) = qualifier out of range (m) = manual integration (+) = signals summed

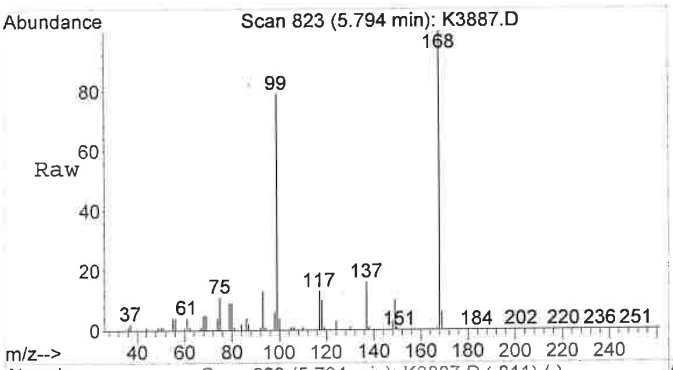
Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3887.D
Acq On : 1 Aug 2023 8:59
Operator : BARBARA
Sample : MW-11D-072623,E23-03407-001,A,5mL,100
Misc : EWMA/SWIVELIER_-_2,07/26/23,07/27/23,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Aug 02 11:20:55 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration



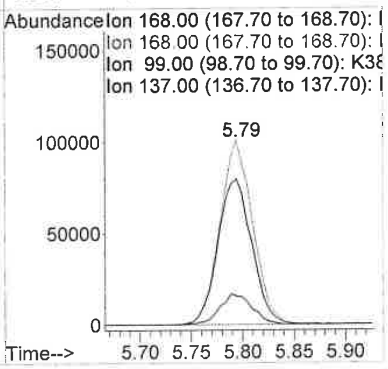
K8230724.M Fri Aug 11 12:06:49 2023

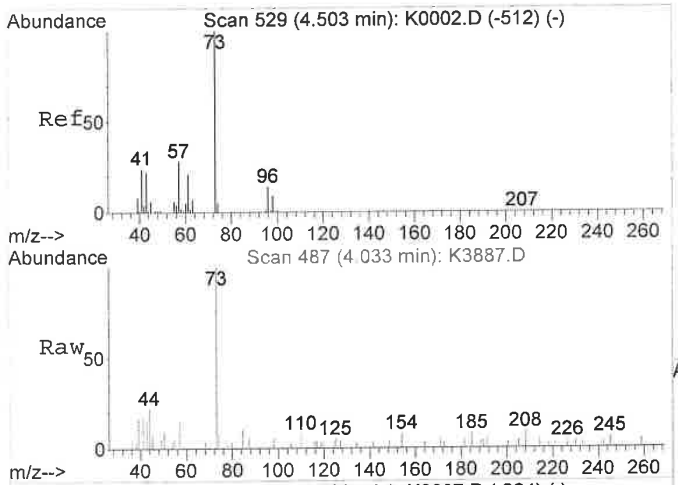


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 5.79 min Scan# 823
Delta R.T. -0.00 min
Lab File: K3887.D
Acq: 1 Aug 2023 8:59

Tgt Ion:168 Resp: 223050

Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	0.0	53.3	79.9#
137	0.0	13.5	20.3#

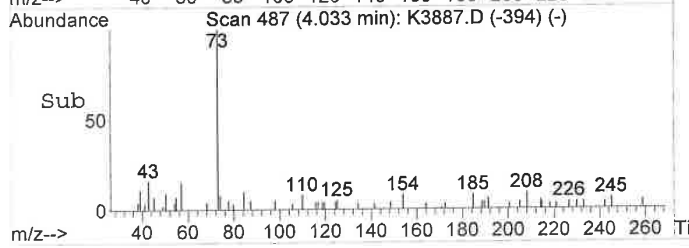


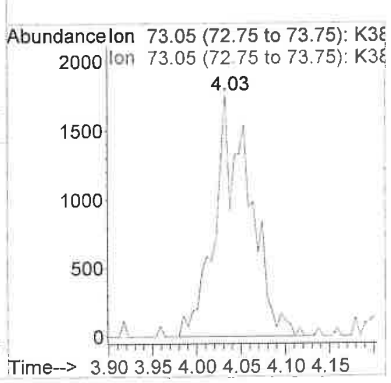


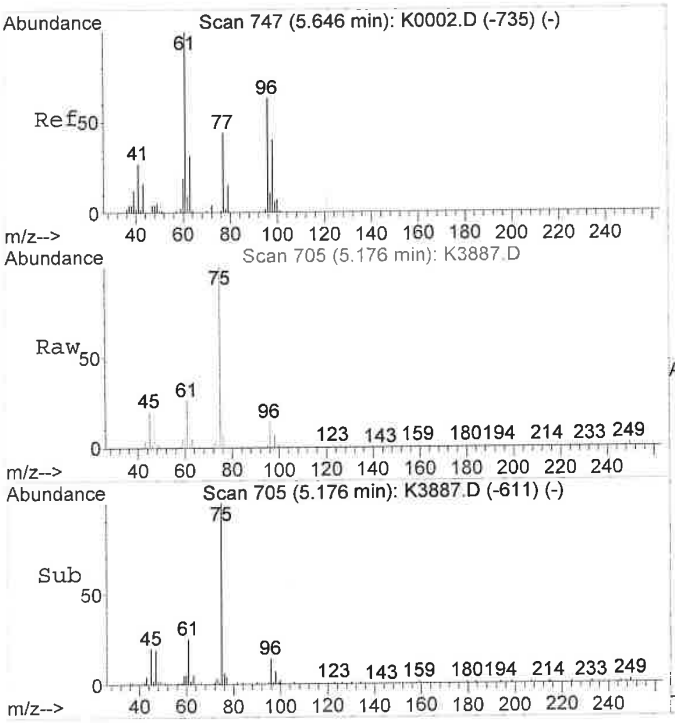
#17
Methyl tert-butyl ether (MTBE)
Concen: 0.35 UG
RT: 4.03 min Scan# 487
Delta R.T. -0.01 min
Lab File: K3887.D
Acq: 1 Aug 2023 8:59

Tgt Ion: 73 Resp: 4839

Ion	Ratio	Lower	Upper
73	100		
73	100.0	80.0	120.0



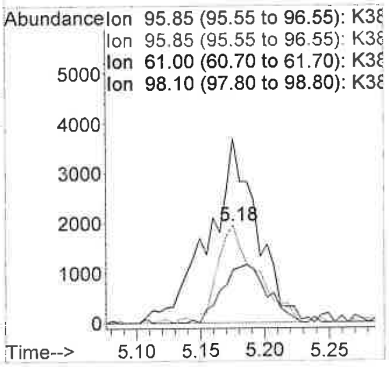


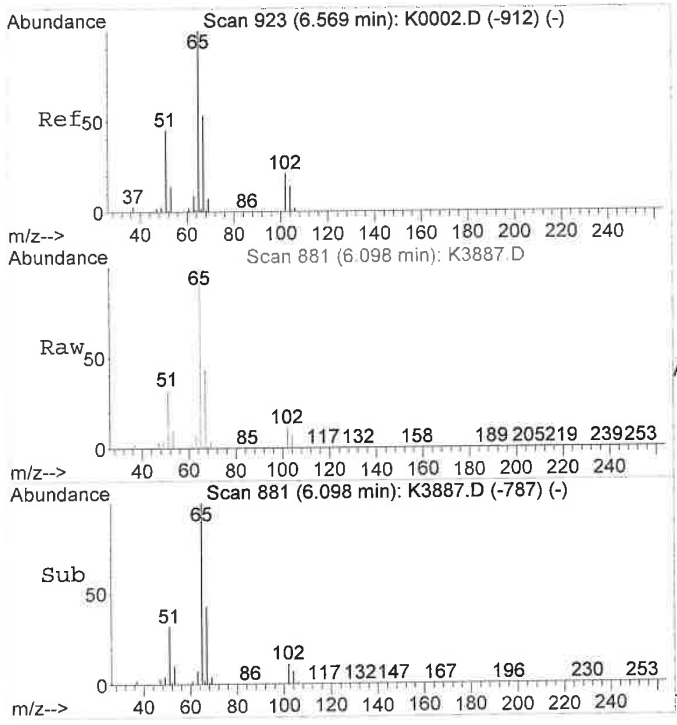


#20
cis-1,2-Dichloroethene
Concen: 1.09 UG
RT: 5.18 min Scan# 705
Delta R.T. -0.01 min
Lab File: K3887.D
Acq: 1 Aug 2023 8:59

Tgt Ion: 96 Resp: 4165

Ion	Ratio	Lower	Upper
96	100		
96	100.0	80.0	120.0
61	0.0	0.0	0.0
98	68.4	53.4	80.0

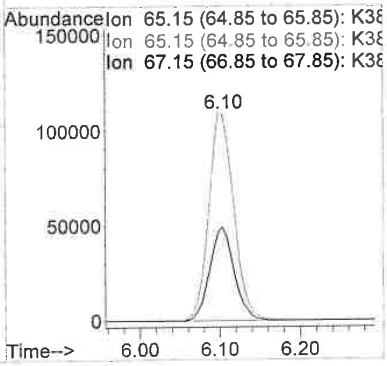


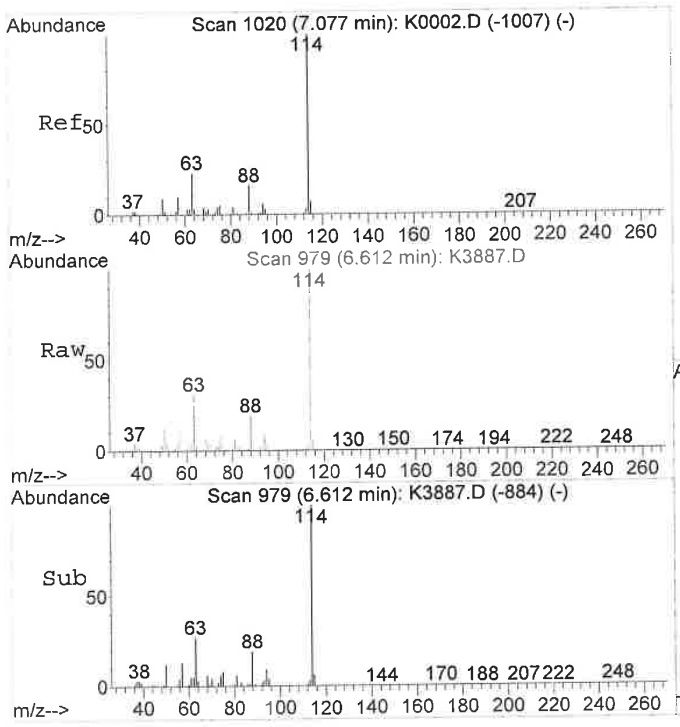


#30
1,2-Dichloroethane-d4
Concen: 57.07 UG
RT: 6.10 min Scan# 881
Delta R.T. -0.01 min
Lab File: K3887.D
Acq: 1 Aug 2023 8:59

Tgt Ion: 65 Resp: 237666

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	44.4	43.5	65.3

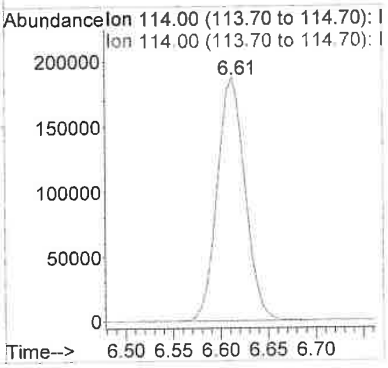


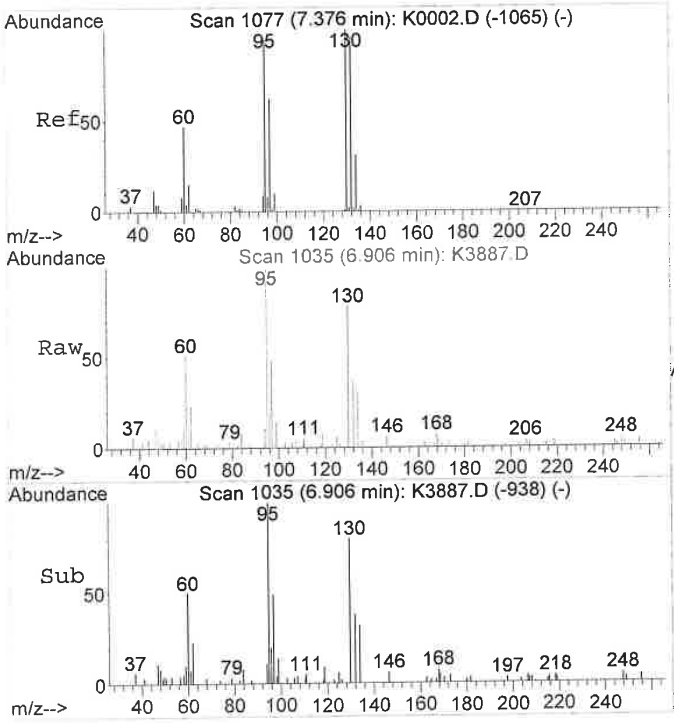


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 6.61 min Scan# 979
Delta R.T. -0.00 min
Lab File: K3887.D
Acq: 1 Aug 2023 8:59

Tgt Ion:114 Resp: 383722

Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

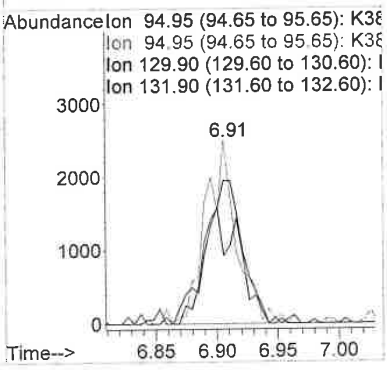


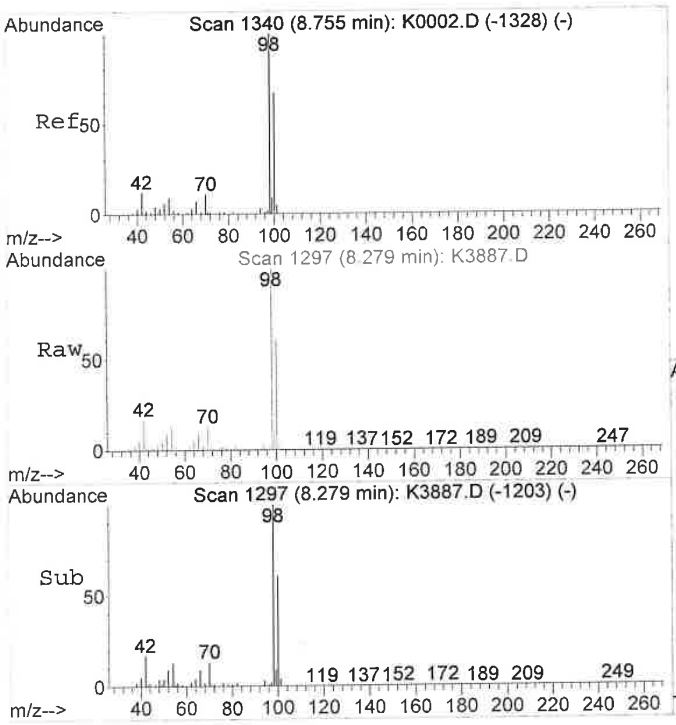


#33
Trichloroethene
Concen: 1.16 UG
RT: 6.91 min Scan# 1035
Delta R.T. 0.01 min
Lab File: K3887.D
Acq: 1 Aug 2023 8:59

Tgt Ion: 95 Resp: 4434

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
130	0.0	99.2	148.8#
132	73.3	95.7	143.5#

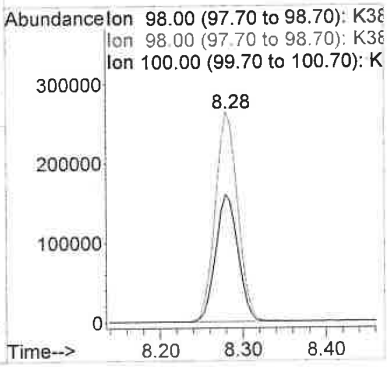


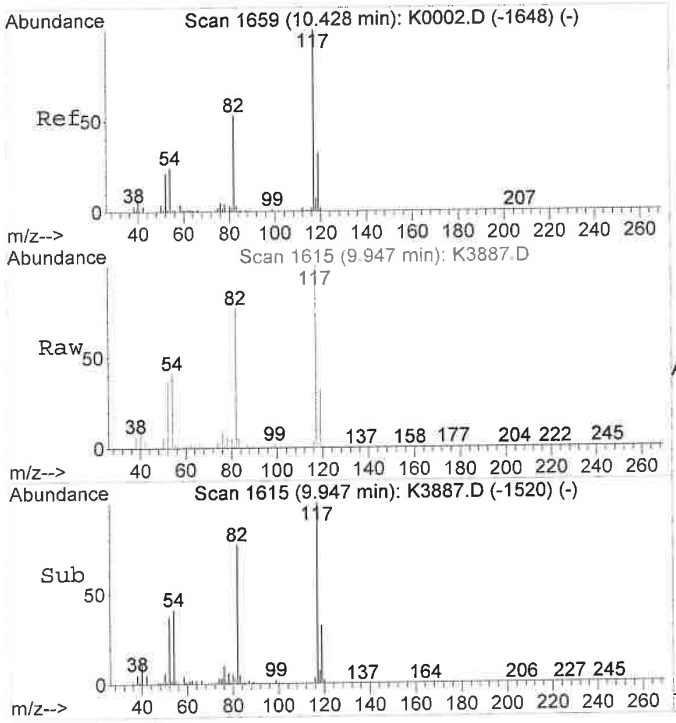


#41
Toluene-d8
Concen: 51.28 UG
RT: 8.28 min Scan# 1297
Delta R.T. -0.01 min
Lab File: K3887.D
Acq: 1 Aug 2023 8:59

Tgt Ion: 98 Resp: 497567

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	60.4	52.0	78.0

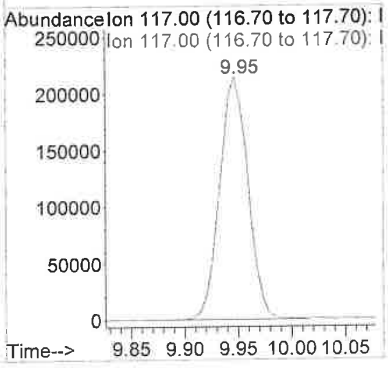


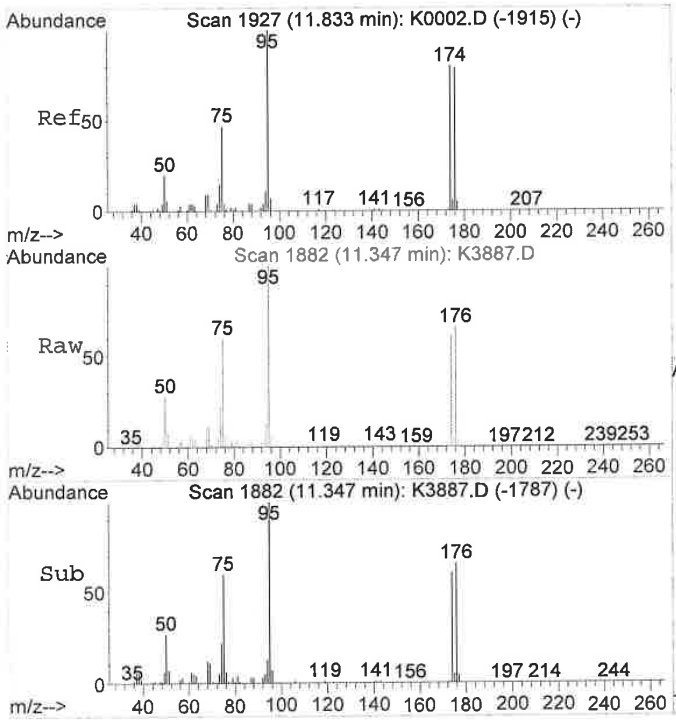


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 9.95 min Scan# 1615
Delta R.T. -0.00 min
Lab File: K3887.D
Acq: 1 Aug 2023 8:59

Tgt Ion:117 Resp: 395285

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0

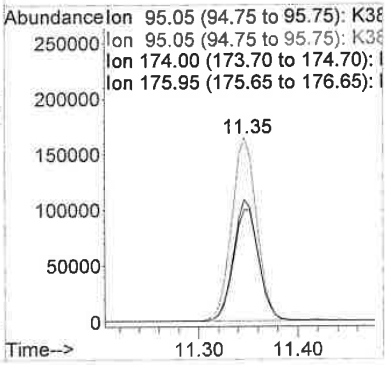




#59
Bromofluorobenzene
Concen: 51.89 UG
RT: 11.35 min Scan# 1882
Delta R.T. -0.00 min
Lab File: K3887.D
Acq: 1 Aug 2023 8:59

Tgt Ion: 95 Resp: 291236

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	62.6	89.0	133.6#
176	65.0	86.6	129.8#



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3887.D
Acq On : 1 Aug 2023 8:59
Operator : BARBARA
Sample : MW-11D-072623,E23-03407-001,A,5mL,100
Misc : EWMA/SWIVELIER_-_2,07/26/23,07/27/23,1
ALS Vial : 23 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.07 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\K8230724.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260D

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.054	475	491	500	rBV8	4261	16381	1.02%	0.223%
2	5.160	690	702	725	rBV2	53736	180971	11.30%	2.464%
3	5.794	810	823	839	rBV	353139	806254	50.34%	10.980%
4	6.104	870	882	904	rBV	260337	587178	36.66%	7.996%
5	6.612	969	979	994	rBV	532849	1089678	68.03%	14.839%
6	6.901	1024	1034	1049	rBV2	12460	33401	2.09%	0.455%
7	8.279	1284	1297	1318	rBV	752378	1449297	90.48%	19.737%
8	8.872	1400	1410	1419	rBV2	20311	53610	3.35%	0.730%
9	9.947	1605	1615	1628	rBV	854815	1601770	100.00%	21.813%
10	11.347	1873	1882	1909	rBV	814085	1464858	91.45%	19.949%
11	11.666	1932	1943	1950	rBV8	13798	36604	2.29%	0.498%
12	13.947	2368	2378	2387	rBV2	9721	23133	1.44%	0.315%

Sum of corrected areas: 7343135

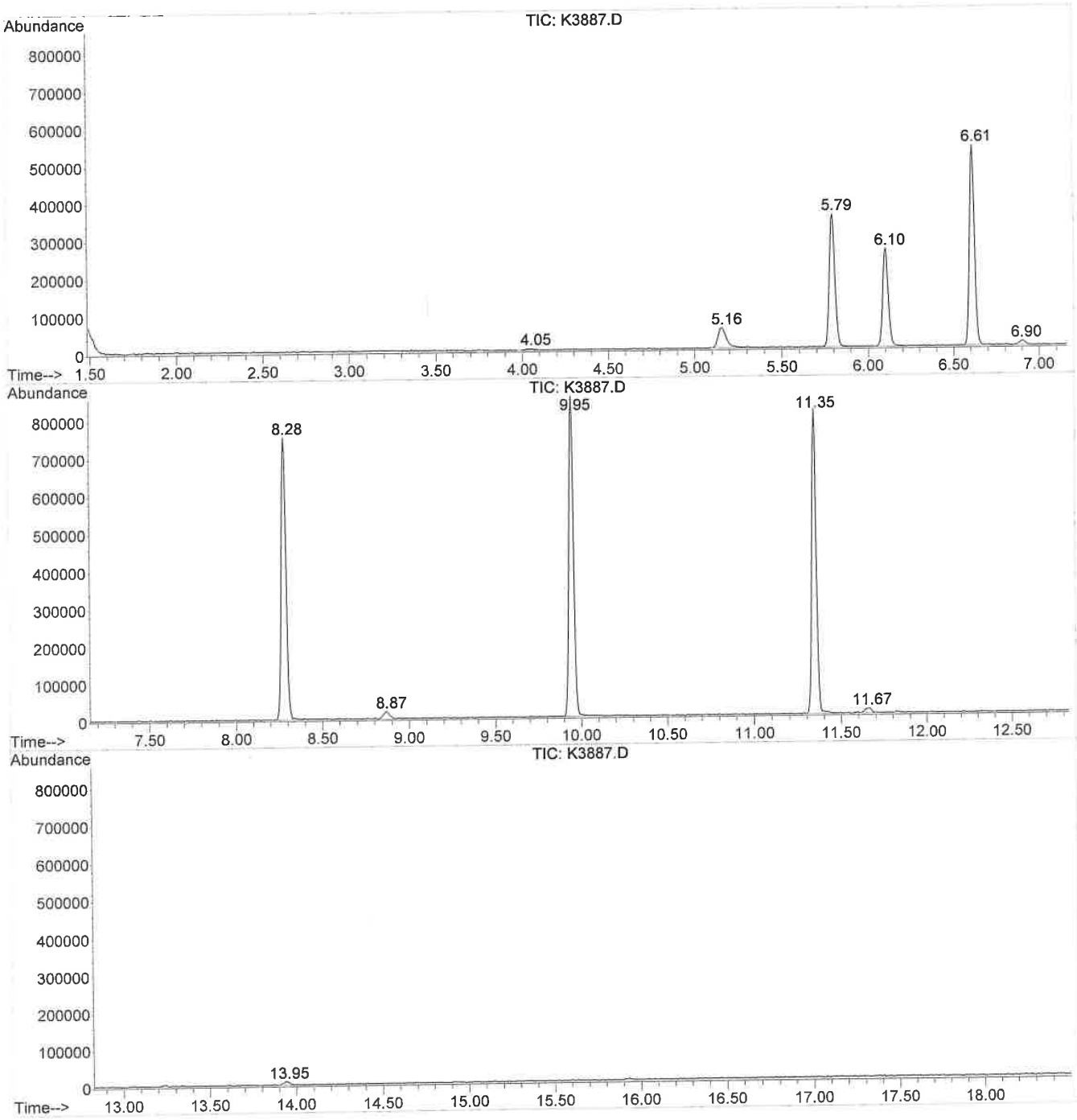
K8230724.M Fri Aug 11 12:06:55 2023 Page: 1

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3887.D
Acq On : 1 Aug 2023 8:59
Operator : BARBARA
Sample : MW-11D-072623,E23-03407-001,A,5mL,100
Misc : EWMA/SWIVELIER_-_2,07/26/23,07/27/23,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P



K8230724.M Fri Aug 11 12:06:55 2023 Page: 2

Tentatively Identified Compound (LSC) summary

Data Path : C:\MSDChem\1\DATA\23-08-01\\
Data File : K3887.D
Acq On : 1 Aug 2023 8:599
Operator : BARBARAA
Sample : MW-11D-072623,E23-03407-001,A,5mL,1000
Misc : EWMA/SWIVELIER_-_2,07/26/23,07/27/23,11
ALS Vial : 23 Sample Multiplier: 11

Quant Method : C:\MSDCHEM\1\METHODS\K8230724.MM
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260DD

TIC Library : C:\DATABASE\NIST05A.LL
TIC Integration Parameters: LSCINT.PP

TIC Top Hit name	RT	EstConc	Units	Response	--Internal Standard--- #	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3888.D
Acq On : 1 Aug 2023 9:28
Operator : BARBARA
Sample : MW-10D-072623,E23-03407-002,A,0.05mL,100
Misc : EWMA/SWIVELIER_-_2,07/26/23,07/27/23,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Aug 02 09:22:45 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

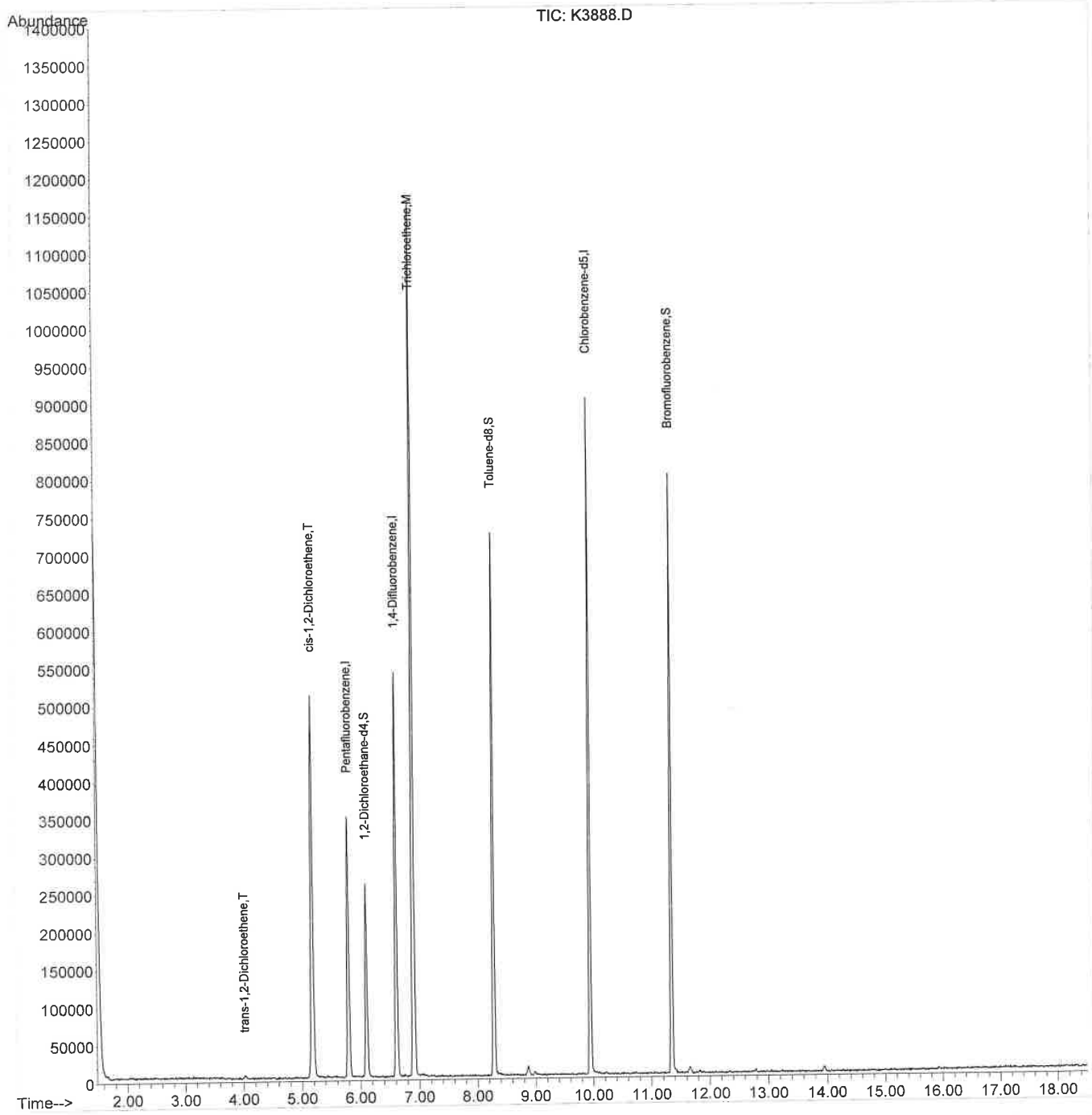
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	5.80	168	221261	50.00	UG	0.00
31) 1,4-Difluorobenzene	6.61	114	390278	50.00	UG	0.00
50) Chlorobenzene-d5	9.95	117	404986	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.10	65	238408	57.71	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 115.42%			
41) Toluene-d8	8.28	98	487554	49.40	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.80%			
59) Bromofluorobenzene	11.35	95	294144	51.15	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.30%			
Target Compounds						Qvalue
16) trans-1,2-Dichloroethene	4.02	96	1645	0.48	UG	# 100
20) cis-1,2-Dichloroethene	5.18	96	226511	59.73	UG	# 67
33) Trichloroethene	6.91	95	436490	112.49	UG	# 72

(#) = qualifier out of range (m) = manual integration (+) = signals summed

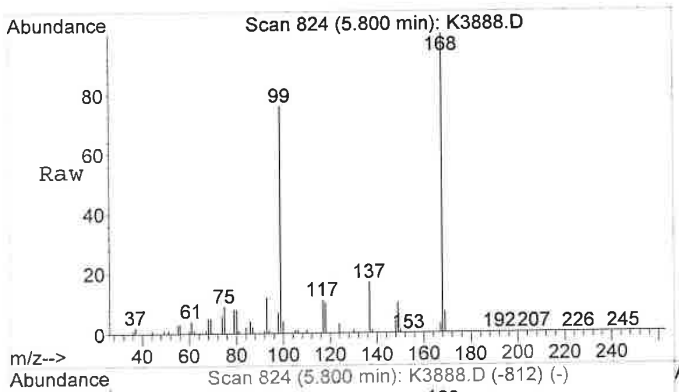
Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3888.D
Acq On : 1 Aug 2023 9:28
Operator : BARBARA
Sample : MW-10D-072623,E23-03407-002,A,0.05mL,100
Misc : EWMA/SWIVELIER_-_2,07/26/23,07/27/23,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Aug 02 09:22:45 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration



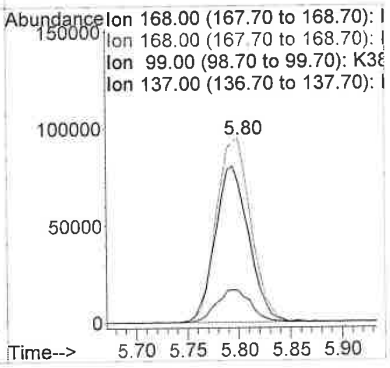
K8230724.M Fri Aug 11 12:07:10 2023 Page: 2

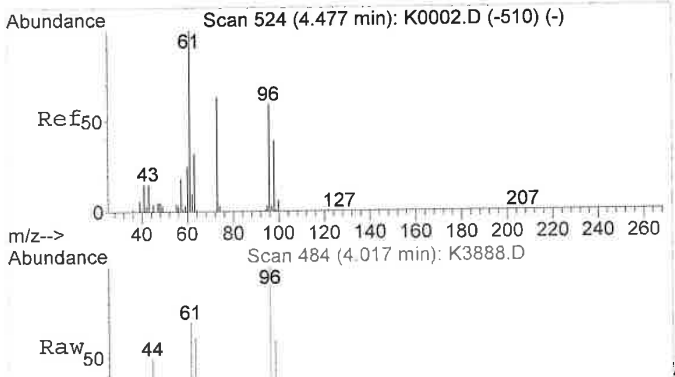


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 5.80 min Scan# 824
Delta R.T. 0.01 min
Lab File: K3888.D
Acq: 1 Aug 2023 9:28

Tgt Ion:168 Resp: 221261

Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	82.7	53.3	79.9#
137	17.8	13.5	20.3

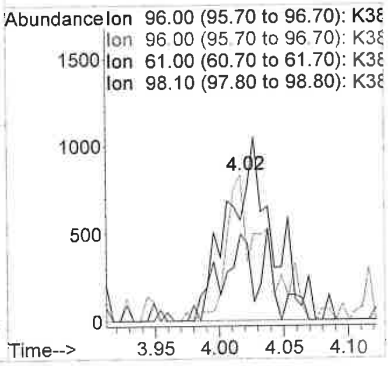


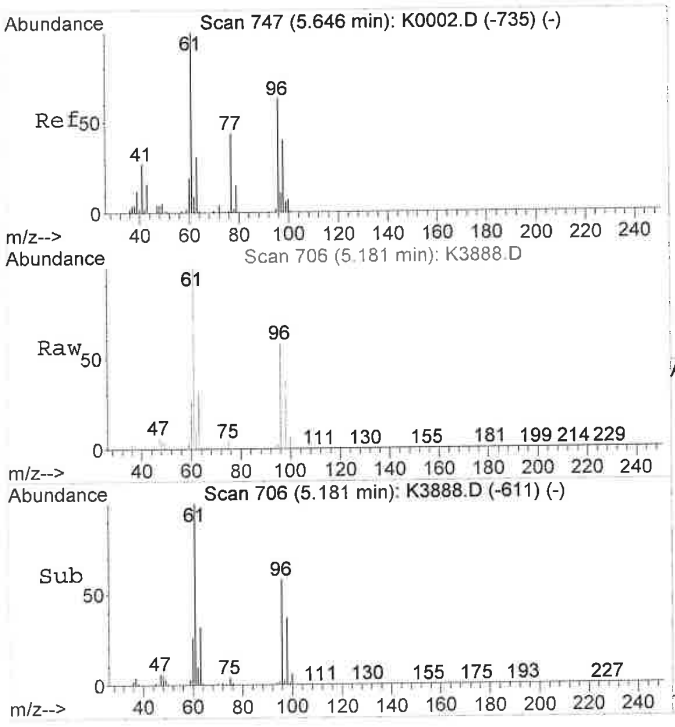


#16
trans-1,2-Dichloroethene
Concen: 0.48 UG
RT: 4.02 min Scan# 484
Delta R.T. -0.01 min
Lab File: K3888.D
Acq: 1 Aug 2023 9:28

Tgt Ion: 96 Resp: 1645

Ion	Ratio	Lower	Upper
96	100		
96	100.0	80.0	120.0
61	0.0	0.0	0.0
98	31.1	0.0	0.0#

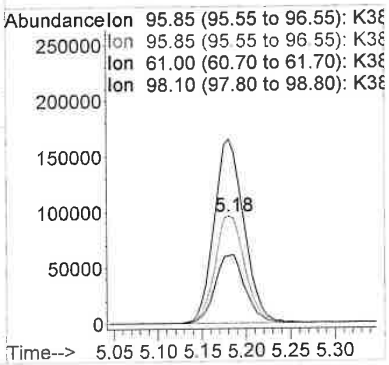


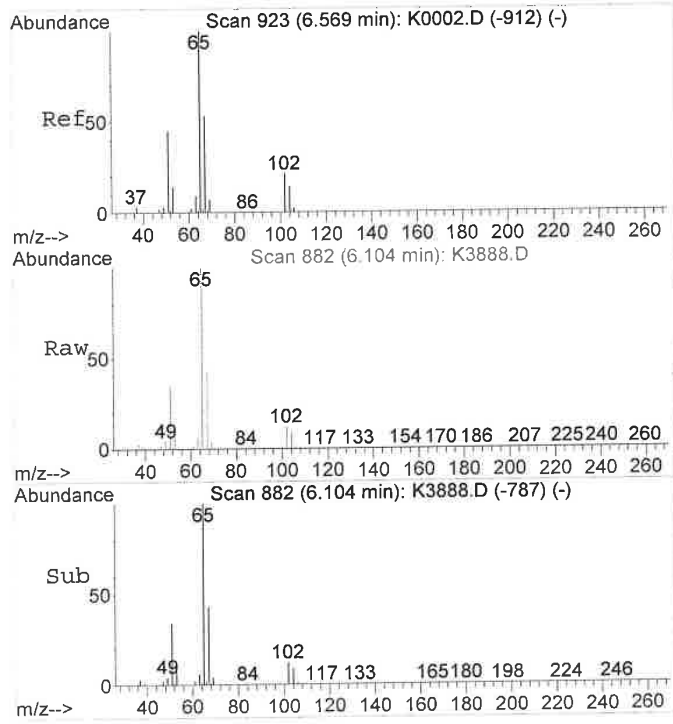


#20
cis-1,2-Dichloroethene
Concen: 59.73 UG
RT: 5.18 min Scan# 706
Delta R.T. -0.00 min
Lab File: K3888.D
Acq: 1 Aug 2023 9:28

Tgt Ion: 96 Resp: 226511

Ion	Ratio	Lower	Upper
96	100		
96	100.0	80.0	120.0
61	171.2	0.0	0.0#
98	0.0	53.4	80.0#

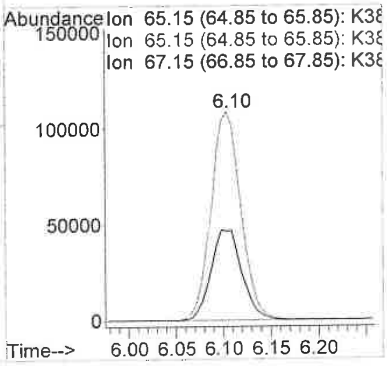


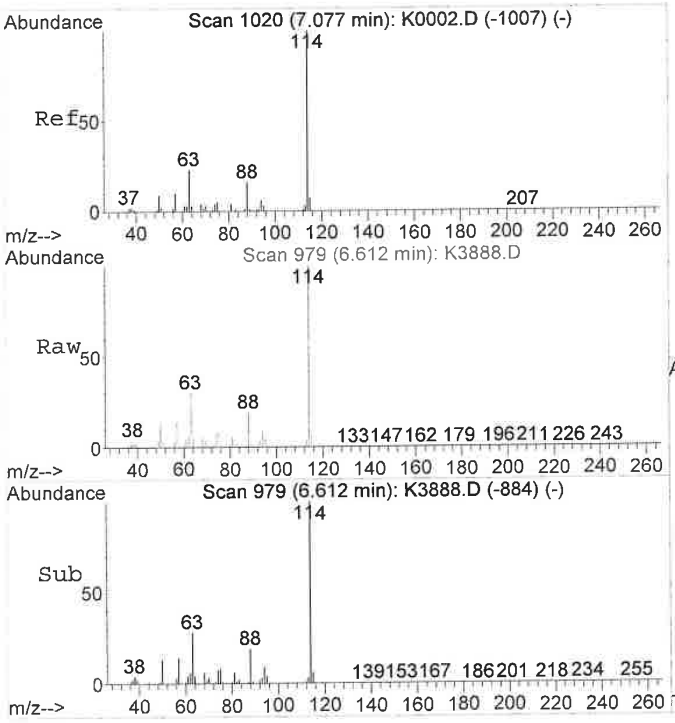


#30
1,2-Dichloroethane-d4
Concen: 57.71 UG
RT: 6.10 min Scan# 882
Delta R.T. -0.00 min
Lab File: K3888.D
Acq: 1 Aug 2023 9:28

Tgt Ion: 65 Resp: 238408

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	45.5	43.5	65.3

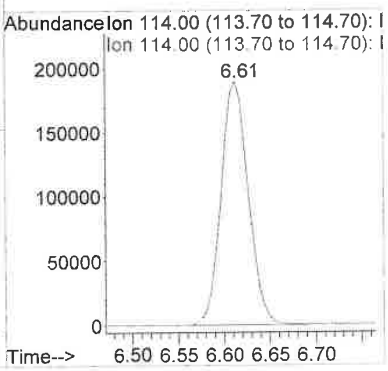


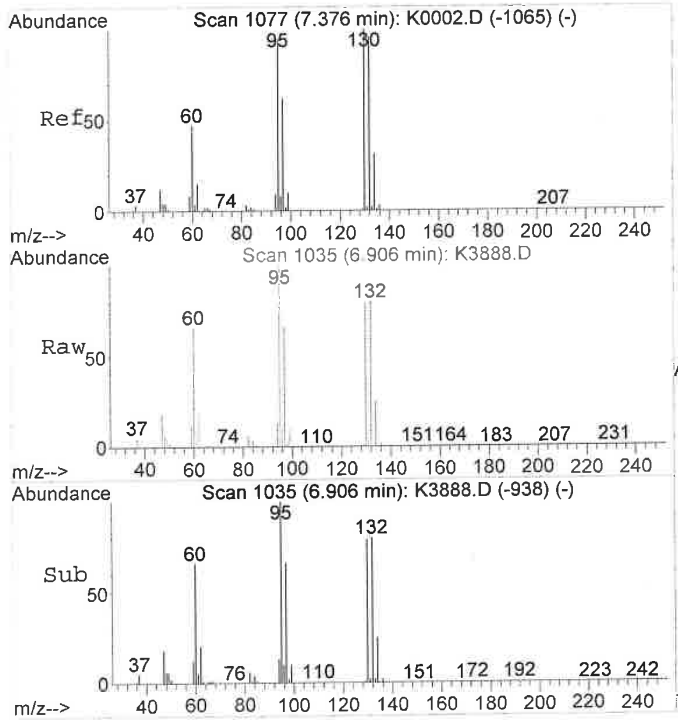


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 6.61 min Scan# 979
Delta R.T. -0.00 min
Lab File: K3888.D
Acq: 1 Aug 2023 9:28

Tgt Ion:114 Resp: 390278

Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

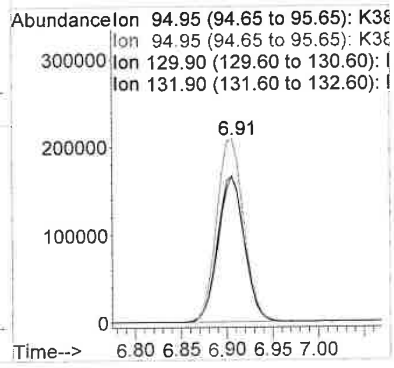


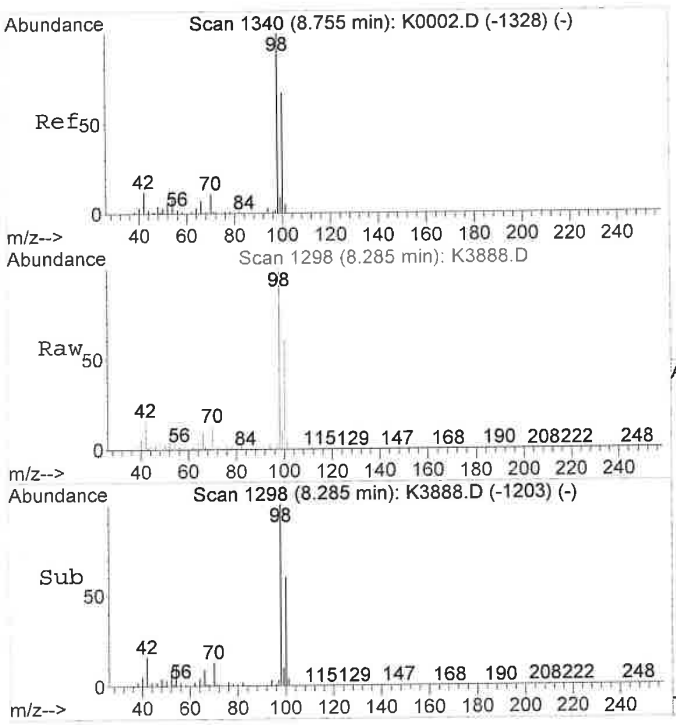


#33
Trichloroethene
Concen: 112.49 UG
RT: 6.91 min Scan# 1035
Delta R.T. 0.01 min
Lab File: K3888.D
Acq: 1 Aug 2023 9:28

Tgt Ion: 95 Resp: 436490

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
130	78.7	99.2	148.8#
132	76.3	95.7	143.5#

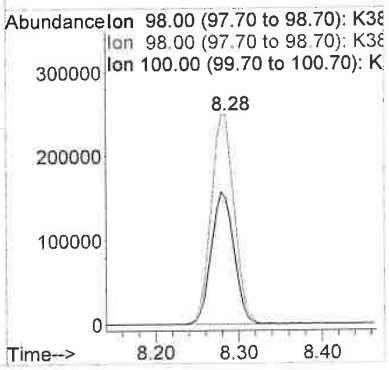


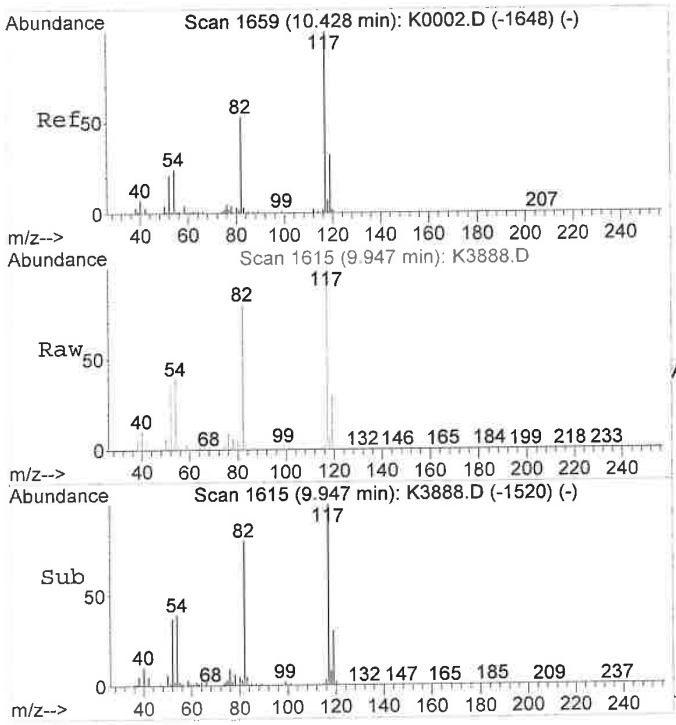


#41
Toluene-d8
Concen: 49.40 UG
RT: 8.28 min Scan# 1298
Delta R.T. -0.00 min
Lab File: K3888.D
Acq: 1 Aug 2023 9:28

Tgt Ion: 98 Resp: 487554

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	62.0	52.0	78.0

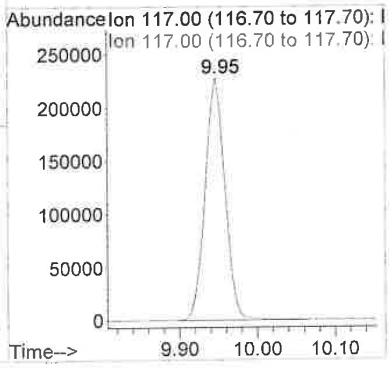


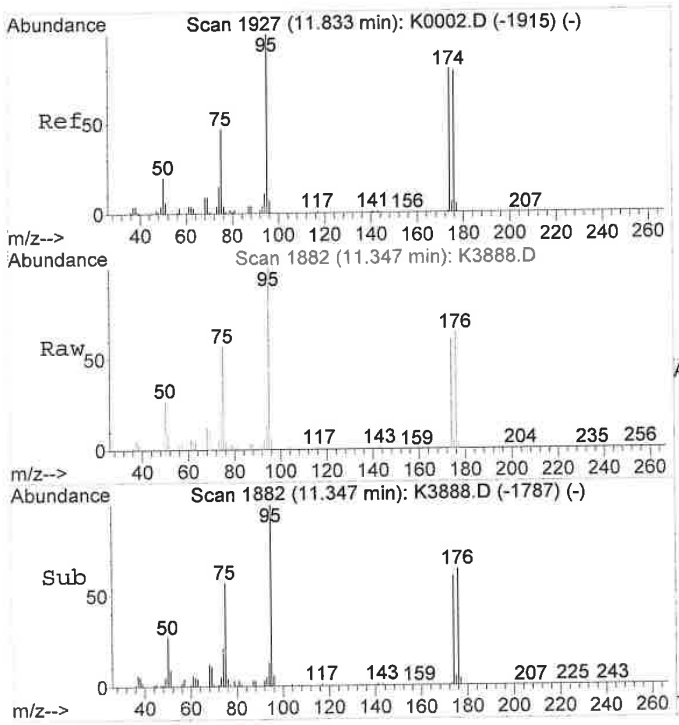


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 9.95 min Scan# 1615
Delta R.T. -0.00 min
Lab File: K3888.D
Acq: 1 Aug 2023 9:28

Tgt Ion:117 Resp: 404986

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0

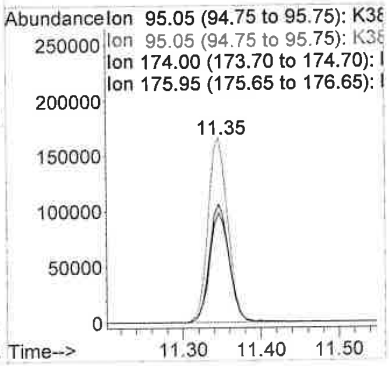




#59
Bromofluorobenzene
Concen: 51.15 UG
RT: 11.35 min Scan# 1882
Delta R.T. -0.00 min
Lab File: K3888.D
Acq: 1 Aug 2023 9:28

Tgt Ion: 95 Resp: 294144

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	59.9	89.0	133.6#
176	64.0	86.6	129.8#



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3888.D
Acq On : 1 Aug 2023 9:28
Operator : BARBARA
Sample : MW-10D-072623,E23-03407-002,A,0.05mL,100
Misc : EWMA/SWIVELIER_-_2,07/26/23,07/27/23,1
ALS Vial : 24 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.07 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\K8230724.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260D

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	5.181	688	706	731	rBV2	509807	1259609	52.17%	11.714%
2	5.794	808	823	839	rBV2	347929	799720	33.12%	7.437%
3	6.104	872	882	903	rVB2	258430	577752	23.93%	5.373%
4	6.612	969	979	995	rBV	538786	1098071	45.48%	10.212%
5	6.906	1021	1035	1055	rBV	1161671	2414405	100.00%	22.453%
6	8.280	1285	1297	1310	rBV	723694	1420895	58.85%	13.214%
7	8.867	1397	1409	1425	rBV2	13327	38318	1.59%	0.356%
8	9.947	1603	1615	1640	rBV	900261	1635077	67.72%	15.206%
9	11.347	1871	1882	1899	rVB	799331	1452268	60.15%	13.506%
10	11.651	1934	1940	1951	rVB10	9801	27897	1.16%	0.259%
11	18.241	3175	3197	3219	rVB10	3928	28967	1.20%	0.269%

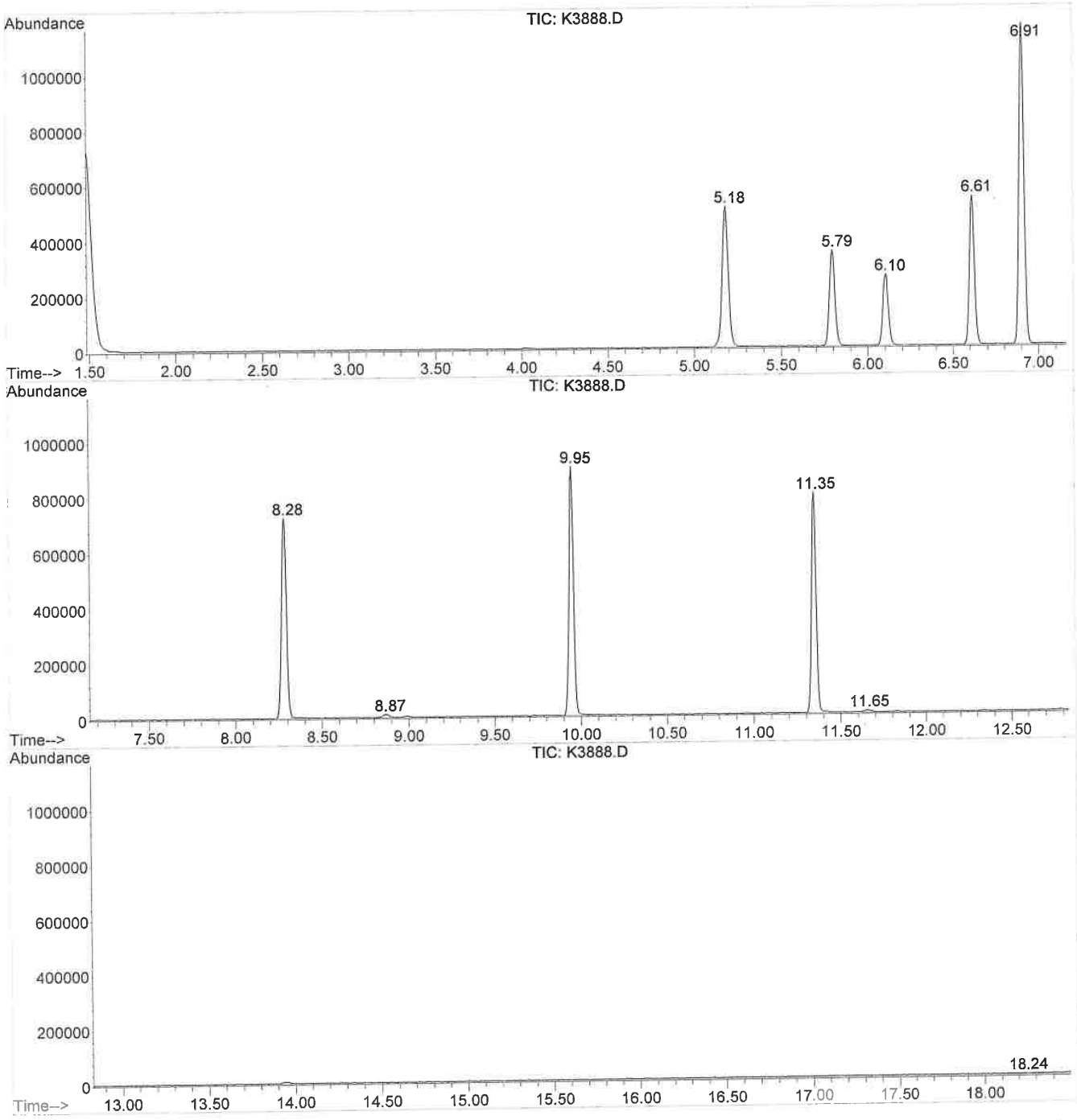
Sum of corrected areas: 10752979

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3888.D
Acq On : 1 Aug 2023 9:28
Operator : BARBARA
Sample : MW-10D-072623,E23-03407-002,A,0.05mL,100
Misc : EWMA/SWIVELIER_-_2,07/26/23,07/27/23,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P



K8230724.M Wed Aug 02 13:46:19 2023 Page: 2

Tentatively Identified Compound (LSC) summary

Data Path : C:\MSDChem\1\DATA\23-08-01\\
Data File : K3888.D
Acq On : 1 Aug 2023 9:288
Operator : BARBARAA
Sample : MW-10D-072623,E23-03407-002,A,0.05mL,1000
Misc : EWMA/SWIVELIER_-_2,07/26/23,07/27/23,11
ALS Vial : 24 Sample Multiplier: 11

Quant Method : C:\MSDCHEM\1\METHODS\K8230724.MM
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260DD

TIC Library : C:\DATABASE\NIST05A.LL
TIC Integration Parameters: LSCINT.PP

TIC Top Hit name	RT	EstConc	Units	Response	--Internal Standard--- #	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3886.D
Acq On : 1 Aug 2023 8:30
Operator : BARBARA
Sample : FB-072623,E23-03407-003,A,5mL,100
Misc : EWMA/SWIVELIER_-_2,07/26/23,07/27/23,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Aug 02 11:20:06 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	5.79	168	227565	50.00	UG	0.00
31) 1,4-Difluorobenzene	6.61	114	404898	50.00	UG	0.00
50) Chlorobenzene-d5	9.95	117	421095	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.10	65	243523	57.32	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 114.64%			
41) Toluene-d8	8.28	98	510629	49.87	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.74%			
59) Bromofluorobenzene	11.35	95	303149	50.70	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.40%			

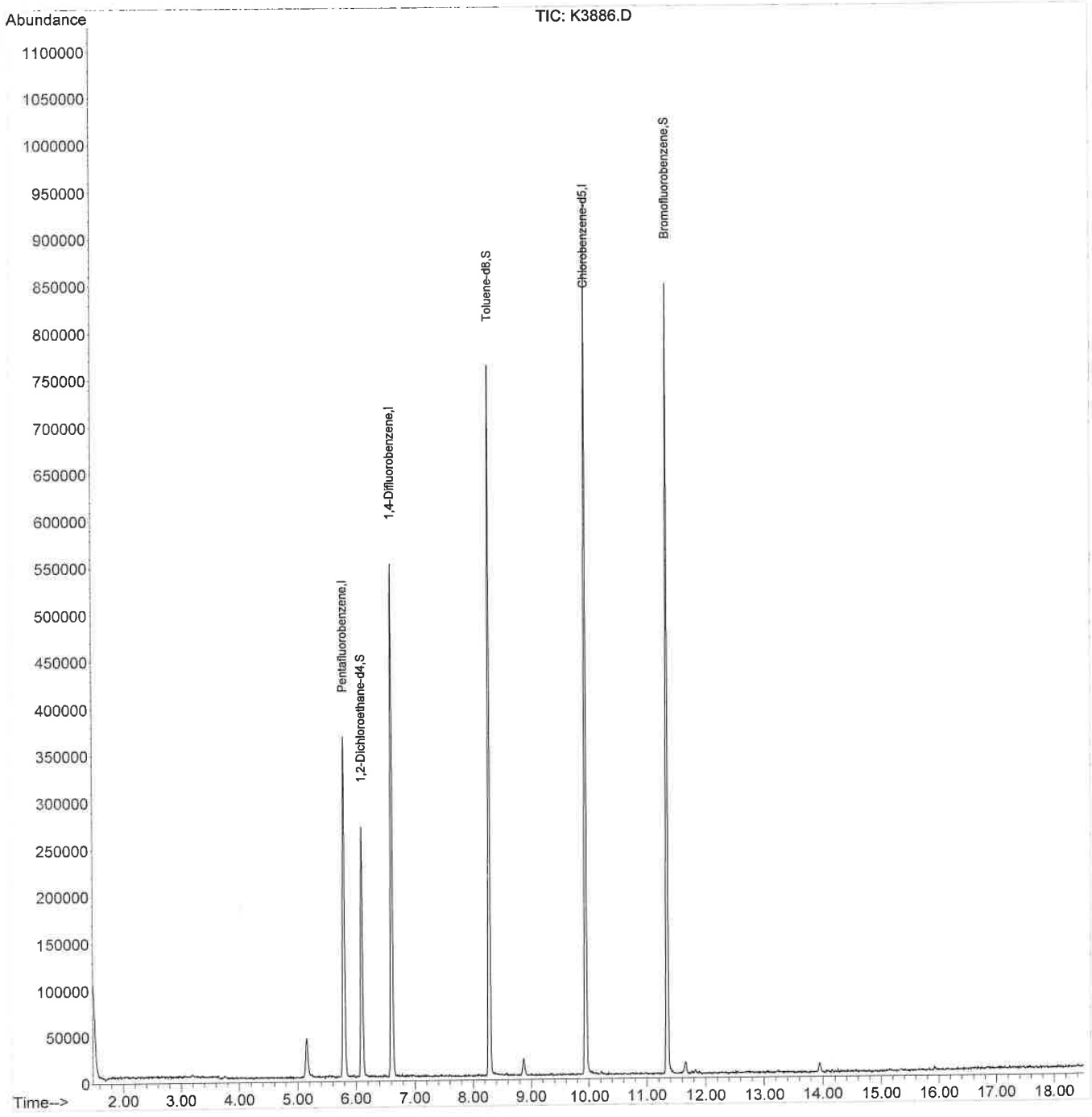
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

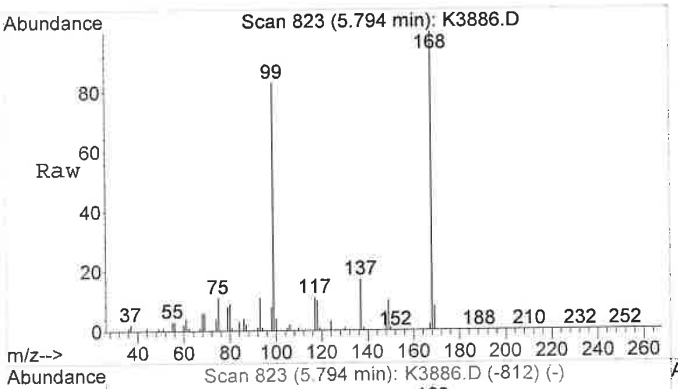
Quantitation Report (QT/LSC Reviewed)

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3886.D
Acq On : 1 Aug 2023 8:30
Operator : BARBARA
Sample : FB-072623,E23-03407-003,A,5mL,100
Misc : EWMA/SWIVELIER_-_2,07/26/23,07/27/23,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Aug 02 11:20:06 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration



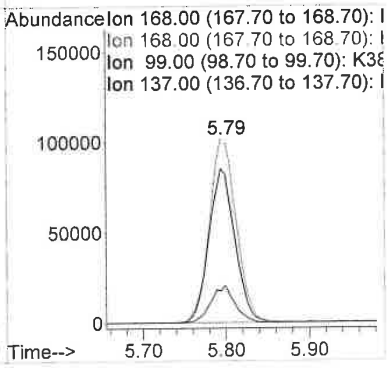
K8230724.M Fri Aug 11 12:07:27 2023 Page: 2

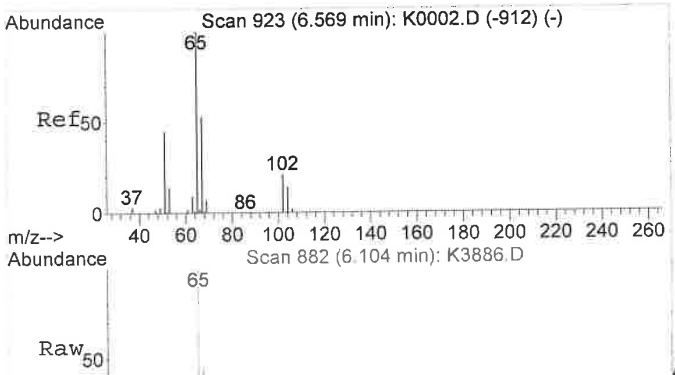


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 5.79 min Scan# 823
Delta R.T. -0.00 min
Lab File: K3886.D
Acq: 1 Aug 2023 8:30

Tgt Ion:168 Resp: 227565

Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	82.3	53.3	79.9#
137	0.0	13.5	20.3#

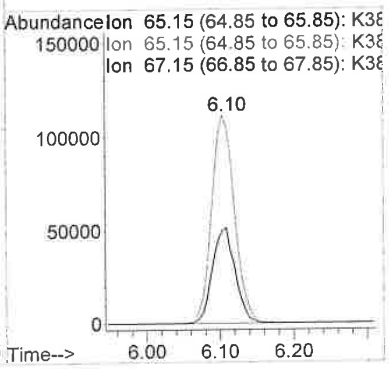


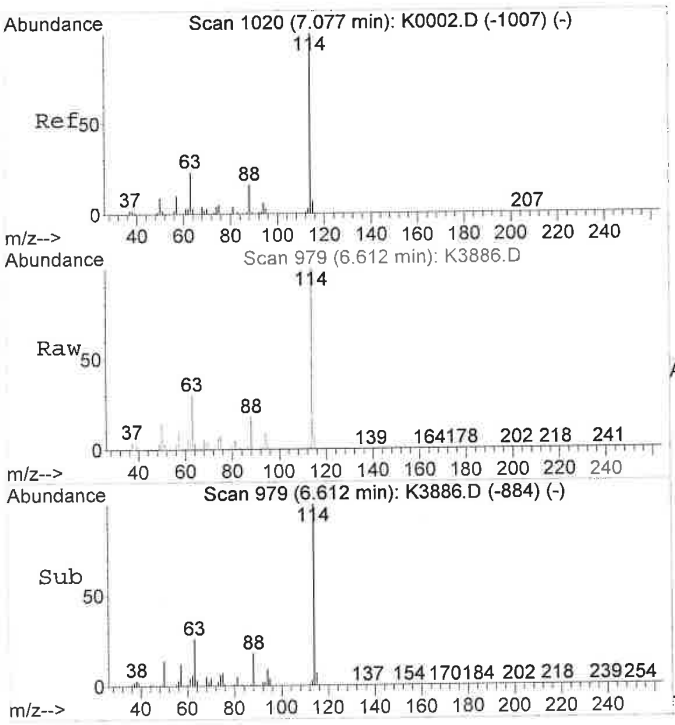


#30
1,2-Dichloroethane-d4
Concen: 57.32 UG
RT: 6.10 min Scan# 882
Delta R.T. -0.00 min
Lab File: K3886.D
Acq: 1 Aug 2023 8:30

Tgt Ion: 65 Resp: 243523

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	45.8	43.5	65.3

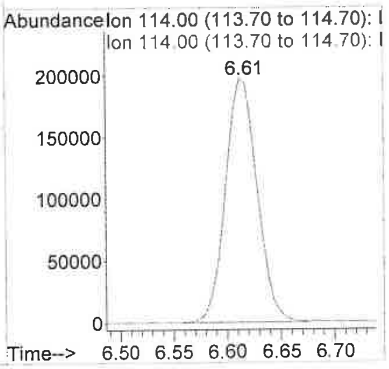


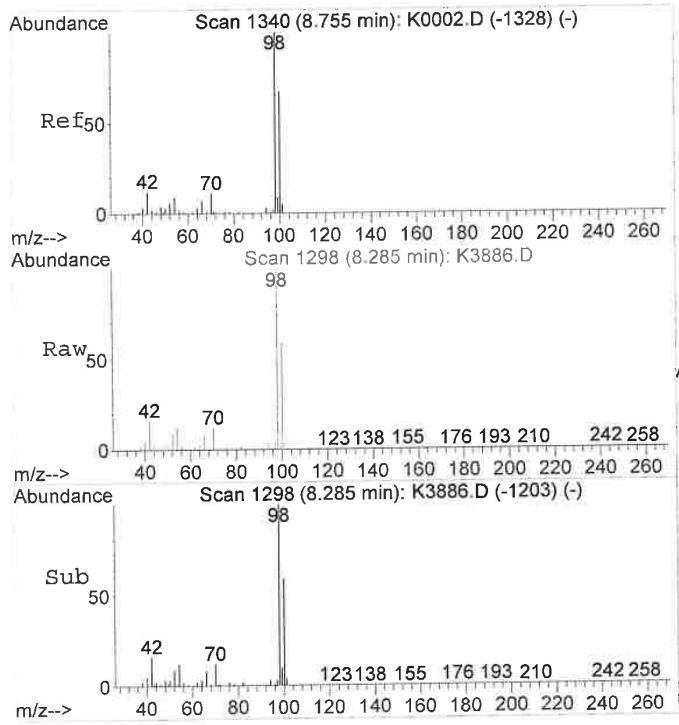


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 6.61 min Scan# 979
Delta R.T. -0.00 min
Lab File: K3886.D
Acq: 1 Aug 2023 8:30

Tgt Ion:114 Resp: 404898

Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

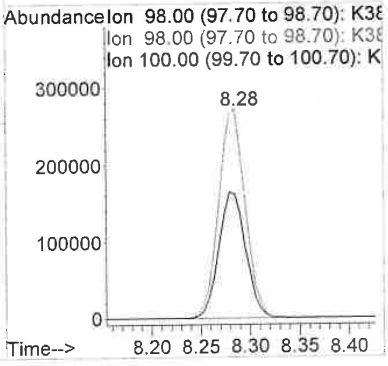


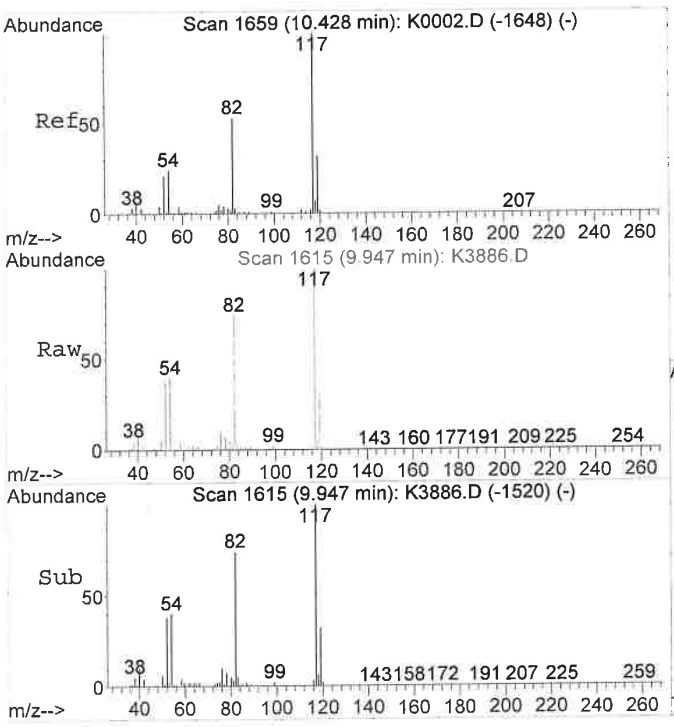


#41
Toluene-d8
Concen: 49.87 UG
RT: 8.28 min Scan# 1298
Delta R.T. -0.00 min
Lab File: K3886.D
Acq: 1 Aug 2023 8:30

Tgt Ion: 98 Resp: 510629

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	61.4	52.0	78.0

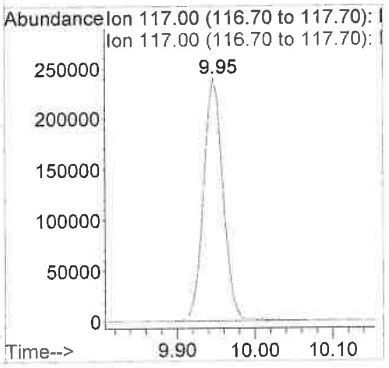


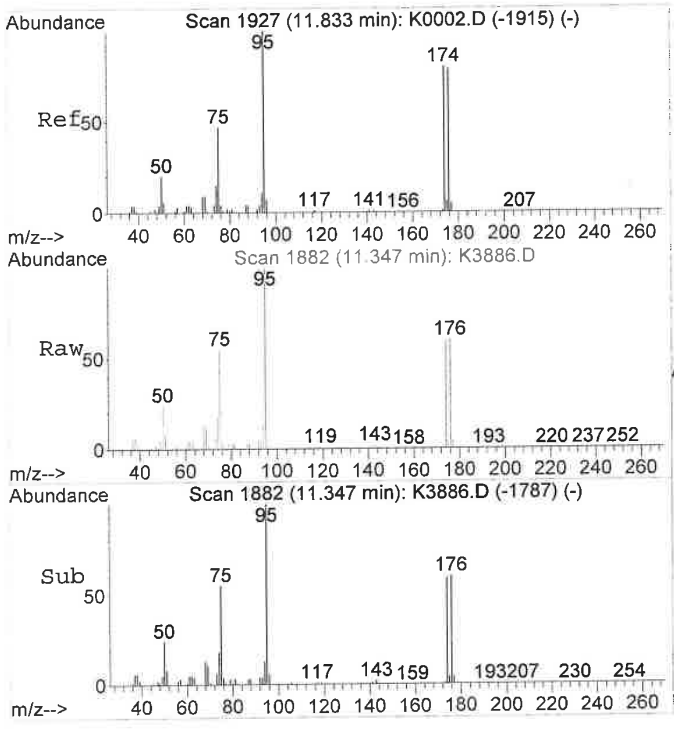


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 9.95 min Scan# 1615
Delta R.T. -0.00 min
Lab File: K3886.D
Acq: 1 Aug 2023 8:30

Tgt Ion:117 Resp: 421095

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0

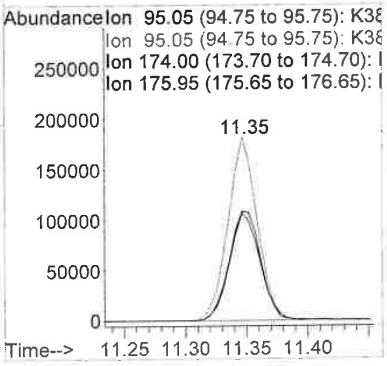




#59
Bromofluorobenzene
Concen: 50.70 UG
RT: 11.35 min Scan# 1882
Delta R.T. -0.00 min
Lab File: K3886.D
Acq: 1 Aug 2023 8:30

Tgt Ion: 95 Resp: 303149

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	61.3	89.0	133.6#
176	65.4	86.6	129.8#



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3886.D
Acq On : 1 Aug 2023 8:30
Operator : BARBARA
Sample : FB-072623,E23-03407-003,A,5mL,100
Misc : EWMA/SWIVELIER_-_2,07/26/23,07/27/23,1
ALS Vial : 22 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.07 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\K8230724.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260D

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	5.155	691	701	721	rBV2	42107	121880	7.28%	1.640%
2	5.794	812	823	842	rVB	364620	822758	49.17%	11.074%
3	6.104	871	882	896	rBV2	267981	591681	35.36%	7.964%
4	6.612	968	979	992	rBV	549995	1144435	68.40%	15.403%
5	8.279	1286	1297	1310	rBV	760015	1469748	87.84%	19.782%
6	8.867	1399	1409	1425	rBV3	18695	51735	3.09%	0.696%
7	9.947	1602	1615	1632	rBV	933341	1673230	100.00%	22.521%
8	11.347	1872	1882	1897	rBV	844703	1490117	89.06%	20.056%
9	11.656	1931	1941	1950	rVB	12462	33984	2.03%	0.457%
10	13.931	2369	2375	2390	rVB2	10716	30231	1.81%	0.407%

Sum of corrected areas: 7429799

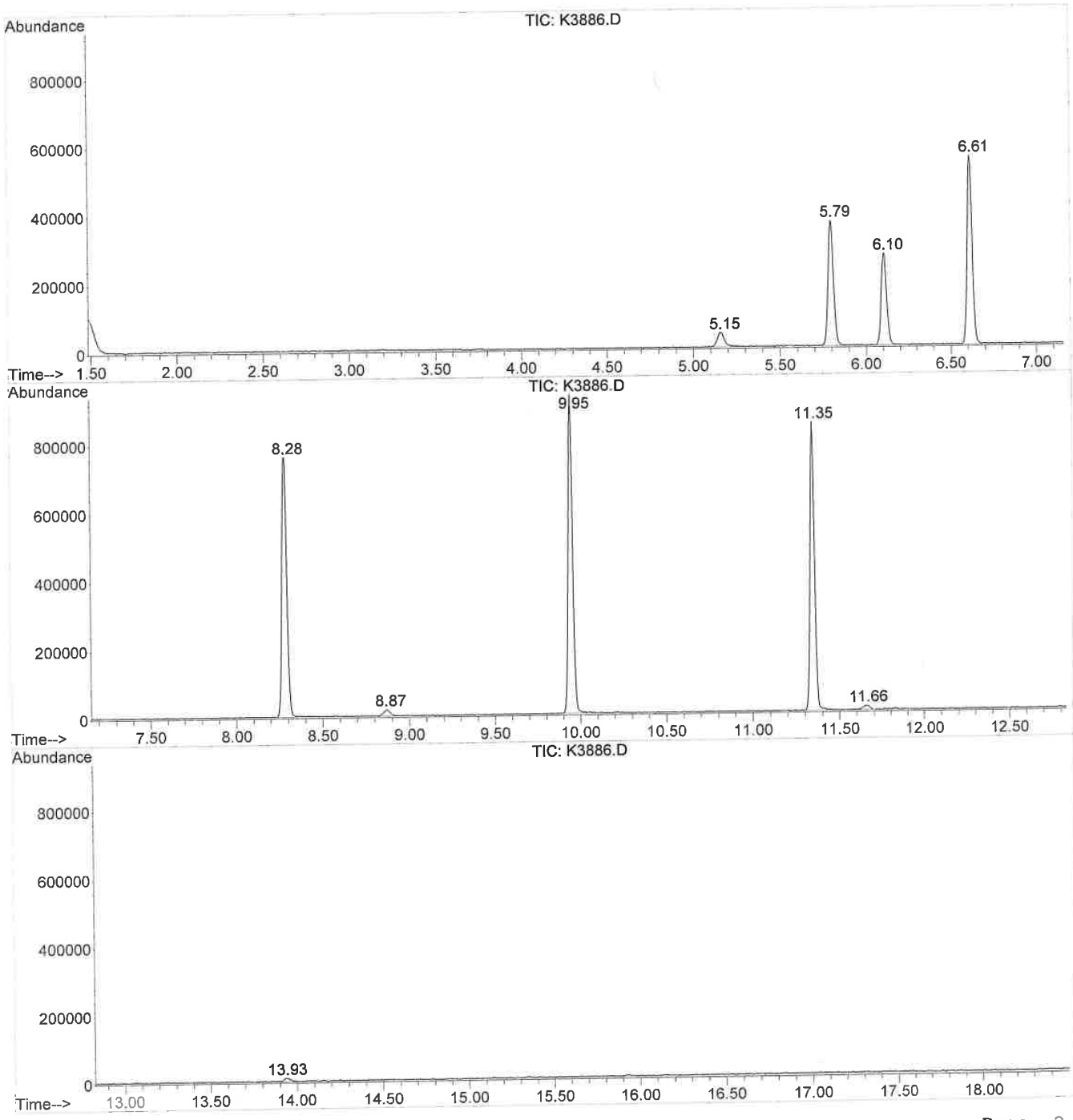
K8230724.M Wed Aug 02 13:45:47 2023

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3886.D
Acq On : 1 Aug 2023 8:30
Operator : BARBARA
Sample : FB-072623,E23-03407-003,A,5mL,100
Misc : EWMA/SWIVELIER_-_2,07/26/23,07/27/23,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P



K8230724.M Wed Aug 02 13:45:48 2023 Page: 2

Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3886.D
Acq On : 1 Aug 2023 8:30
Operator : BARBARA
Sample : FB-072623,E23-03407-003,A,5mL,100
Misc : EWMA/SWIVELIER_-_2,07/26/23,07/27/23,1
ALS Vial : 22 Sample Multiplier: 1

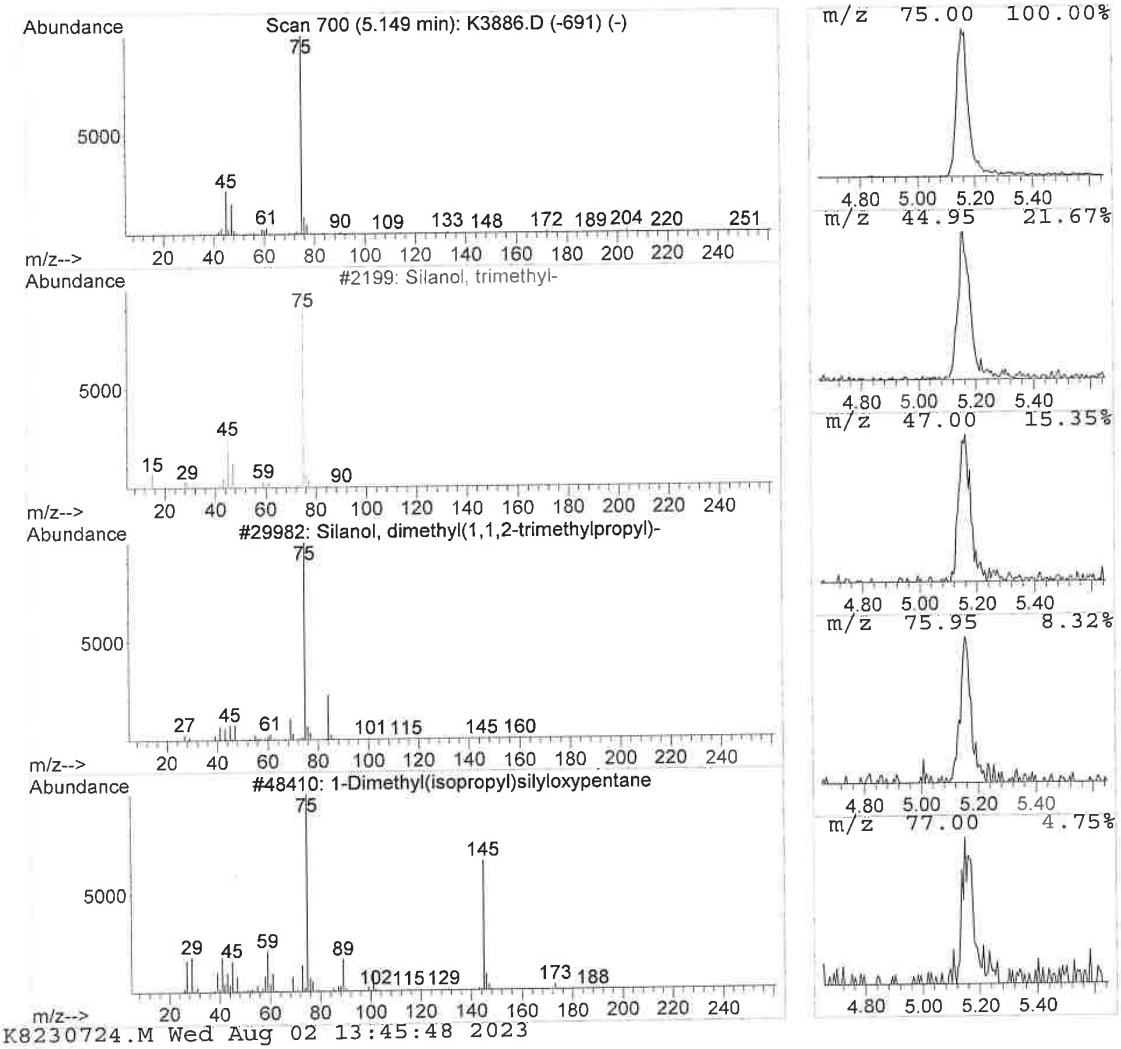
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

****
Peak Number 1 Column/Septa bleed Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.15	7.41 UG	121880	Pentafluorobenzene	5.79

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Silanol, trimethyl-	90	C3H10OSi	001066-40-6	64
2	Silanol, dimethyl(1,1,2-trimethy...	160	C8H20OSi	055644-10-5	56
3	1-Dimethyl(isopropyl)silyloxypen...	188	C10H24OSi	1000278-82-0	43
4	Pentanoic acid, 4-oxo-, trimethy...	188	C8H16O3Si	055557-12-5	43
5	4-Dimethyl(isopropyl)silyloxyoctane	230	C13H30OSi	1000278-74-6	43



K8230724.M Wed Aug 02 13:45:48 2023

Tentatively Identified Compound (LSC) summary

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3886.D
Acq On : 1 Aug 2023 8:30
Operator : BARBARA
Sample : FB-072623,E23-03407-003,A,5mL,100
Misc : EWMA/SWIVELIER_-_2,07/26/23,07/27/23,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

TIC Top Hit name	RT	EstConc	Units	Response	--Internal Standard--- #	RT	Resp	Conc
					5.15	7.4		
Column/Septa bleed								
121880 1	5.79	822758	50.0					

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3885.D
Acq On : 1 Aug 2023 8:02
Operator : BARBARA
Sample : TB-072623,E23-03407-004,A,5mL,100
Misc : EWMA/SWIVELIER_-_2,07/26/23,07/27/23,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Aug 02 11:19:43 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	5.79	168	236116	50.00	UG	0.00
31) 1,4-Difluorobenzene	6.61	114	410528	50.00	UG	0.00
50) Chlorobenzene-d5	9.95	117	426636	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.10	65	244646	55.50	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 111.00%			
41) Toluene-d8	8.28	98	526005	50.67	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.34%			
59) Bromofluorobenzene	11.35	95	307820	50.81	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.62%			

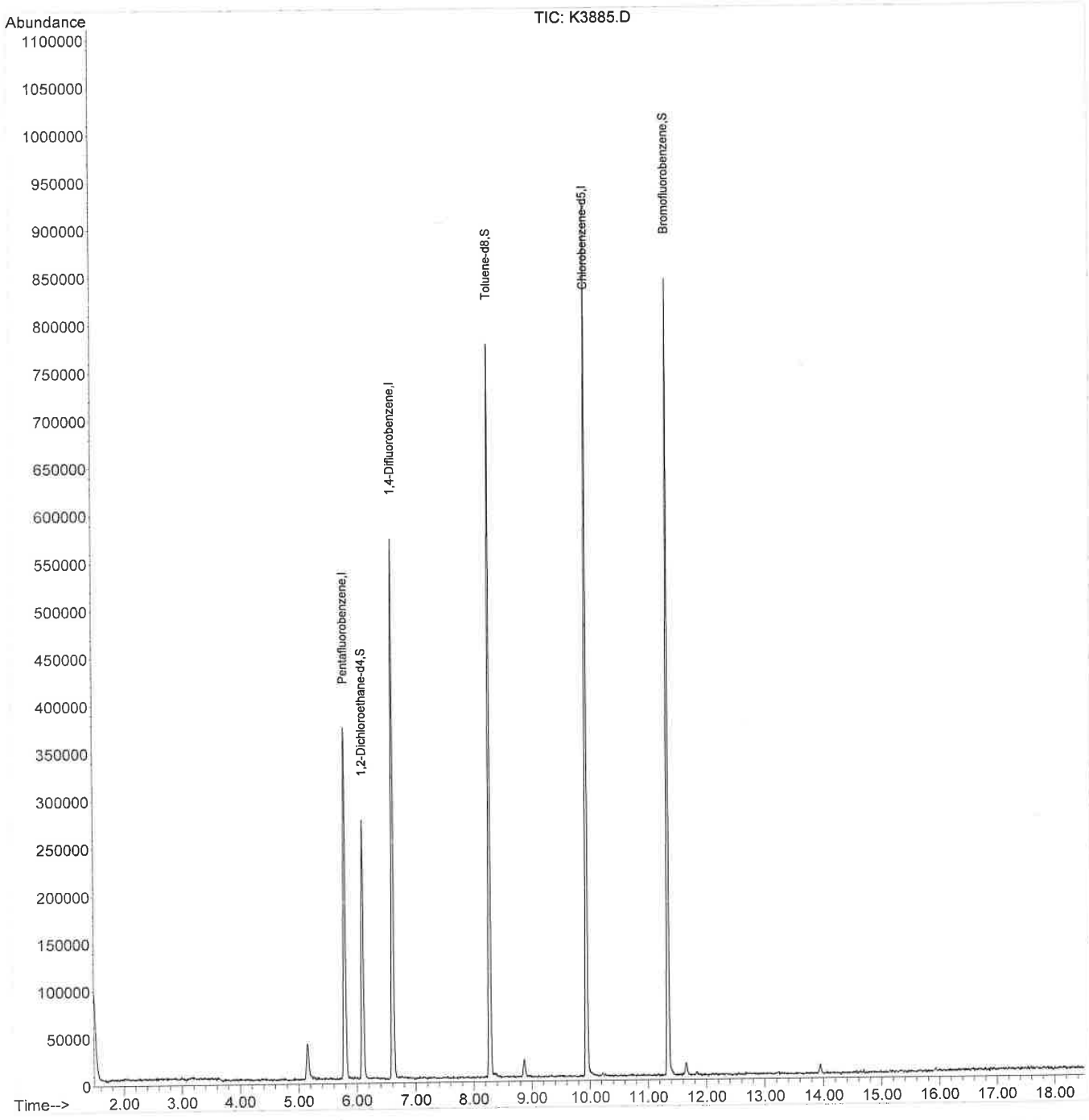
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

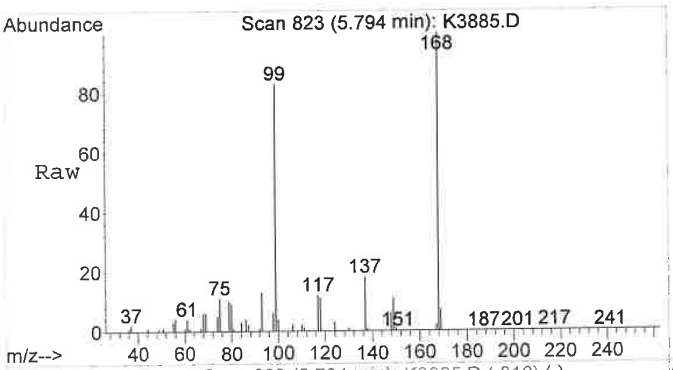
Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3885.D
Acq On : 1 Aug 2023 8:02
Operator : BARBARA
Sample : TB-072623,E23-03407-004,A,5mL,100
Misc : EWMA/SWIVELIER_-_2,07/26/23,07/27/23,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Aug 02 11:19:43 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration



K8230724.M Fri Aug 11 12:07:46 2023

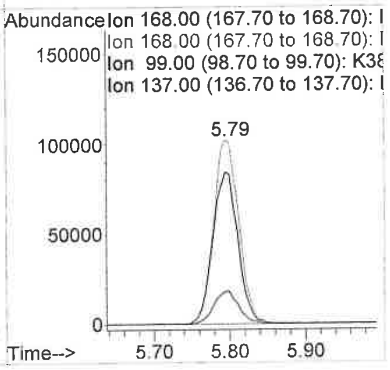
Page: 2

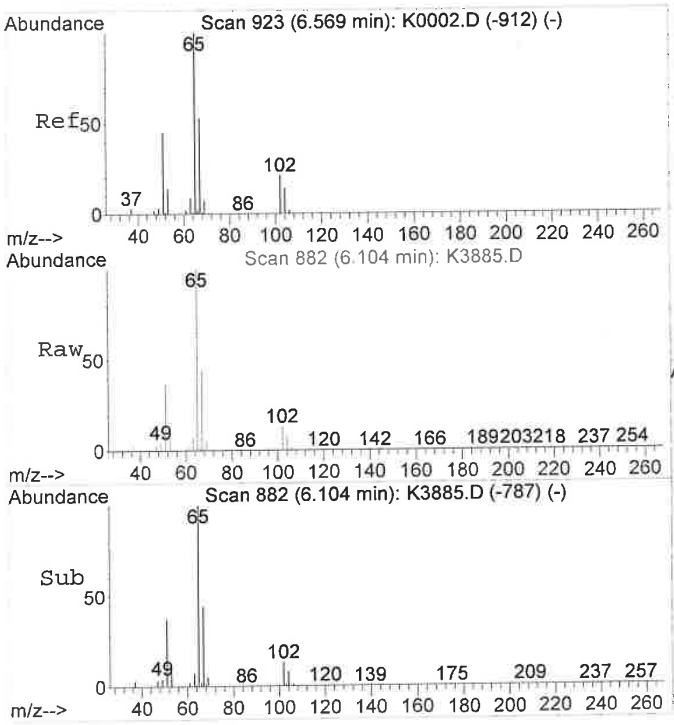


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 5.79 min Scan# 823
Delta R.T. -0.00 min
Lab File: K3885.D
Acq: 1 Aug 2023 8:02

Tgt Ion:168 Resp: 236116

Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	81.9	53.3	79.9#
137	0.0	13.5	20.3#

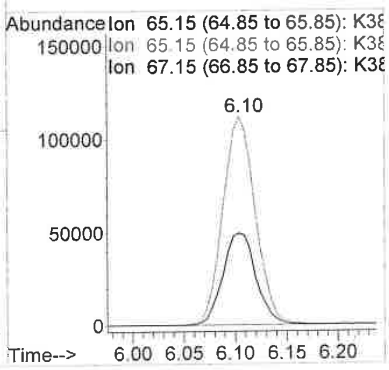


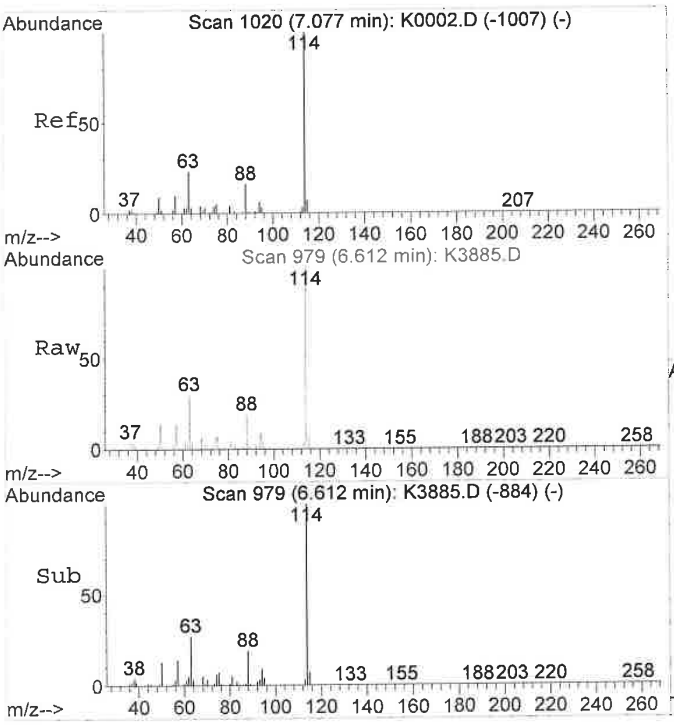


#30
1,2-Dichloroethane-d4
Concen: 55.50 UG
RT: 6.10 min Scan# 882
Delta R.T. -0.00 min
Lab File: K3885.D
Acq: 1 Aug 2023 8:02

Tgt Ion: 65 Resp: 244646

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	45.3	43.5	65.3

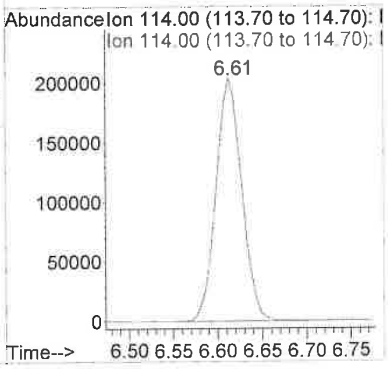


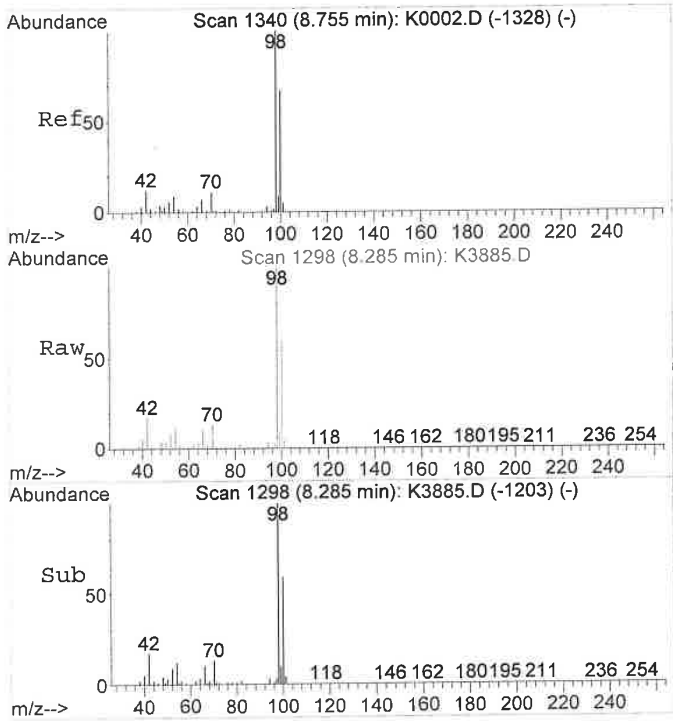


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 6.61 min Scan# 979
Delta R.T. -0.00 min
Lab File: K3885.D
Acq: 1 Aug 2023 8:02

Tgt Ion:114 Resp: 410528

Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

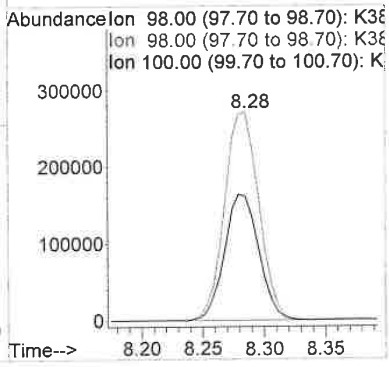


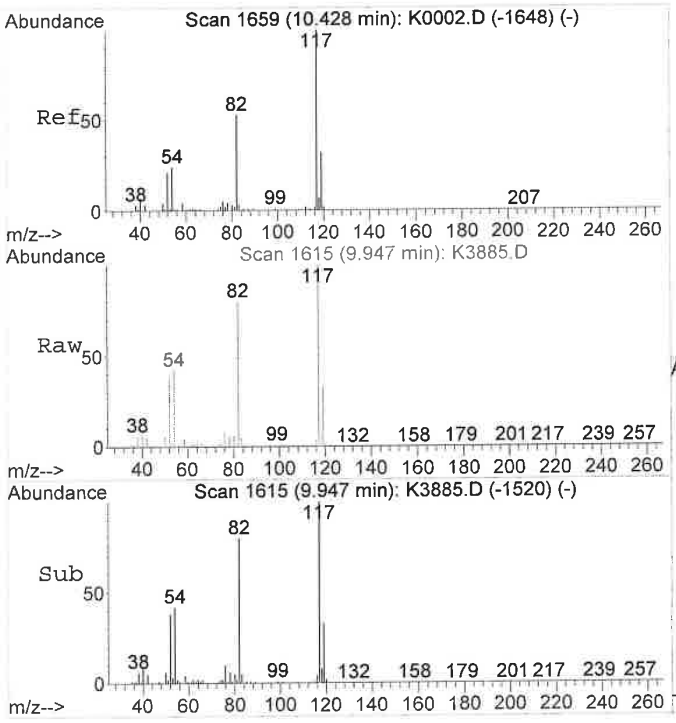


#41
Toluene-d8
Concen: 50.67 UG
RT: 8.28 min Scan# 1298
Delta R.T. -0.00 min
Lab File: K3885.D
Acq: 1 Aug 2023 8:02

Tgt Ion: 98 Resp: 526005

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	60.3	52.0	78.0

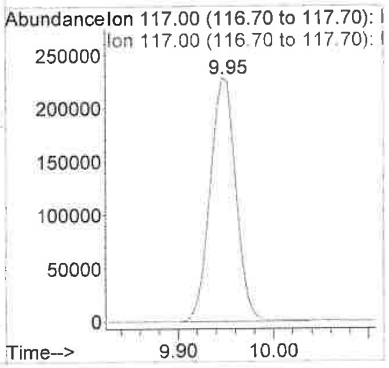


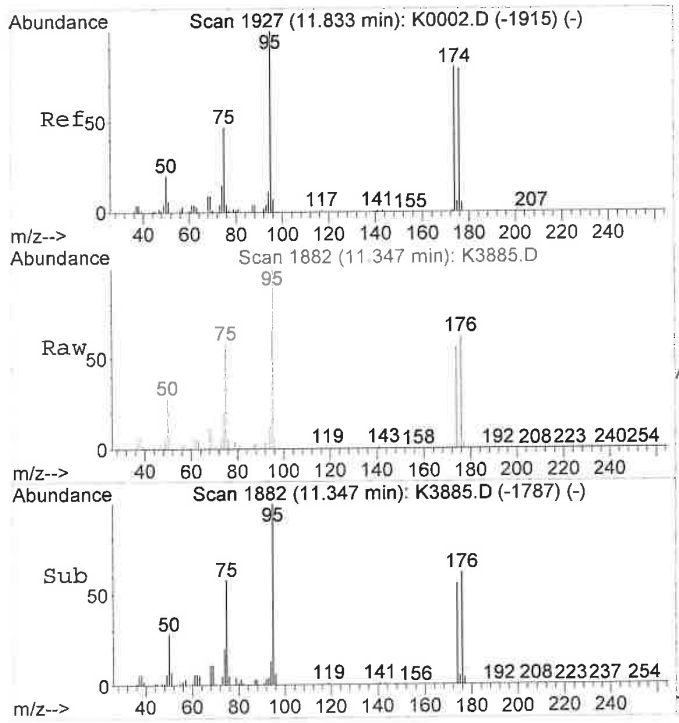


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 9.95 min Scan# 1615
Delta R.T. -0.00 min
Lab File: K3885.D
Acq: 1 Aug 2023 8:02

Tgt Ion:117 Resp: 426636

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0

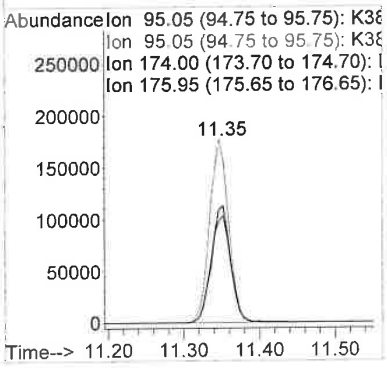




#59
Bromofluorobenzene
Concen: 50.81 UG
RT: 11.35 min Scan# 1882
Delta R.T. -0.00 min
Lab File: K3885.D
Acq: 1 Aug 2023 8:02

Tgt Ion: 95 Resp: 307820

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	0.0	89.0	133.6#
176	0.0	86.6	129.8#



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3885.D
Acq On : 1 Aug 2023 8:02
Operator : BARBARA
Sample : TB-072623,E23-03407-004,A,5mL,100
Misc : EWMA/SWIVELIER_-_2,07/26/23,07/27/23,1
ALS Vial : 21 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.07 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\K8230724.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260D

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	5.150	689	700	719	rBV2	38543	120852	7.04%	1.594%
2	5.794	812	823	836	rBV	371000	844396	49.17%	11.135%
3	6.104	873	882	903	rVB	273489	605805	35.27%	7.989%
4	6.612	965	979	996	rBV	570403	1159187	67.49%	15.286%
5	8.280	1288	1297	1308	rBV	773910	1500236	87.35%	19.784%
6	8.867	1400	1409	1419	rBV2	19048	48024	2.80%	0.633%
7	9.947	1602	1615	1630	rBV	922623	1717463	100.00%	22.648%
8	11.347	1873	1882	1910	rVB	841021	1521278	88.58%	20.061%
9	11.656	1931	1941	1955	rVB8	13650	37293	2.17%	0.492%
10	13.947	2368	2378	2389	rVB2	11245	28700	1.67%	0.378%

Sum of corrected areas: 7583234

LSC Report - Integrated Chromatogram

```
Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3885.D
Acq On    :  1 Aug 2023    8:02
Operator  : BARBARA
Sample    : TB-072623,E23-03407-004,A,5mL,100
Misc      : EWMA/SWIVELIER_-_2,07/26/23,07/27/23,1
ALS Vial  : 21   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title  : VOLATILE ORGANICS BY EPA METHOD 8260D

TIC Library   : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P
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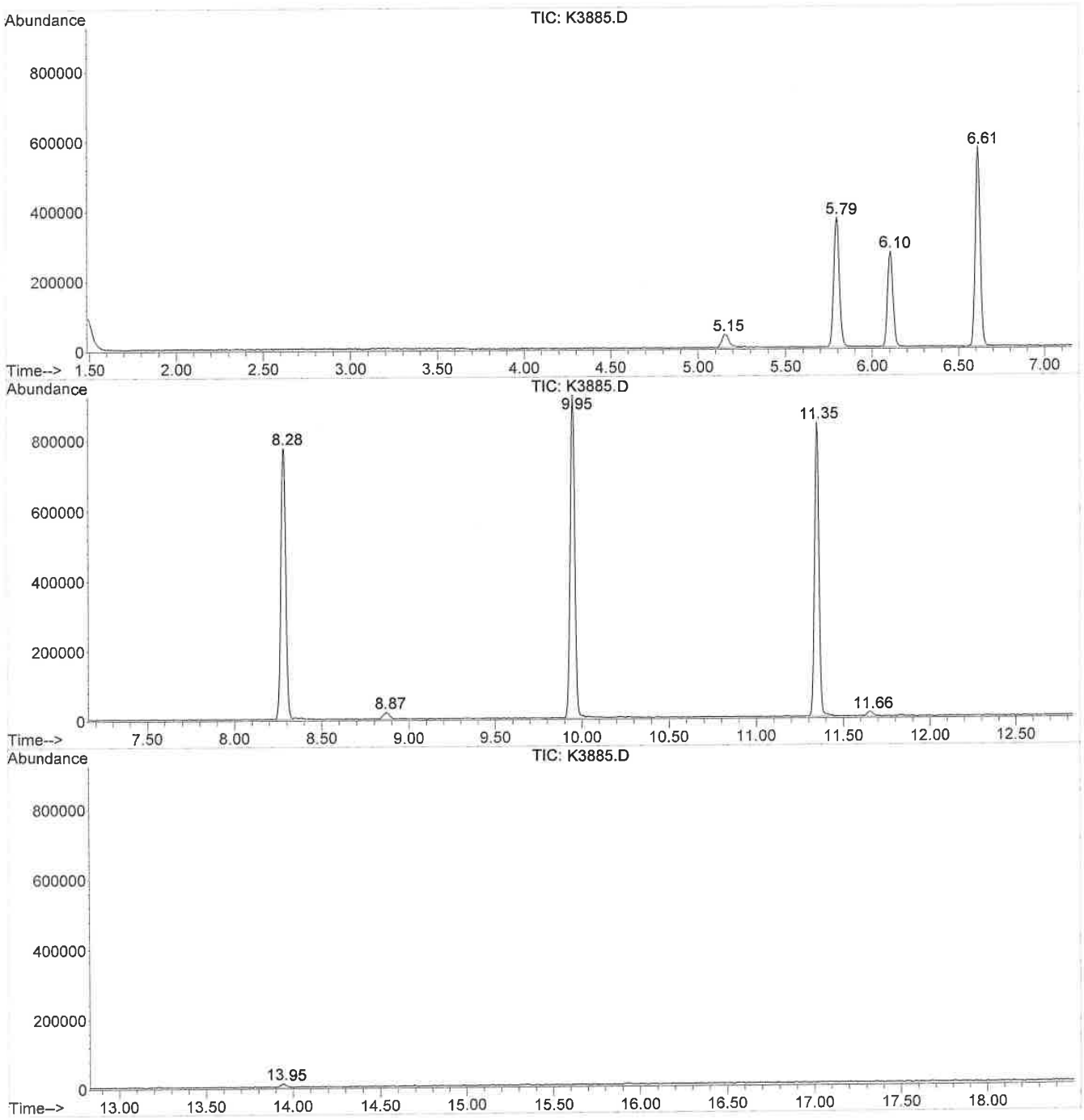


K8230724.M Wed Aug 02 13:45:29 2023 Page: 2

Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3885.D
Acq On : 1 Aug 2023 8:02
Operator : BARBARA
Sample : TB-072623,E23-03407-004,A,5mL,100
Misc : EWMA/SWIVELIER_-_2,07/26/23,07/27/23,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D

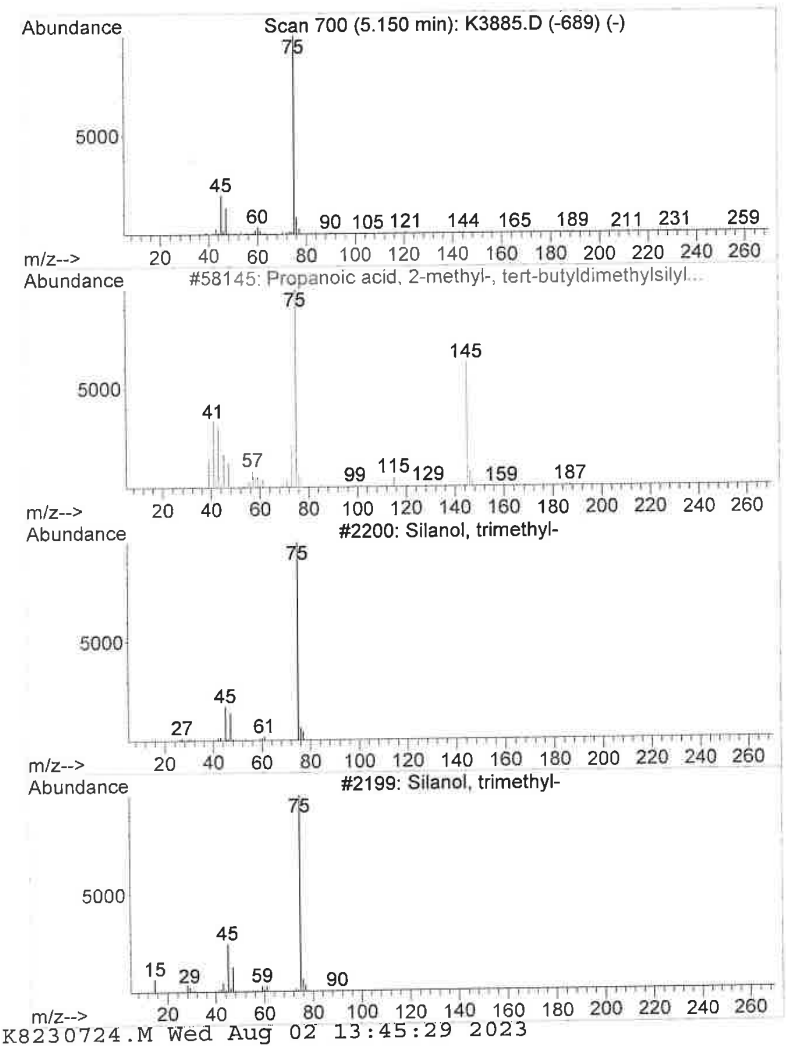
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

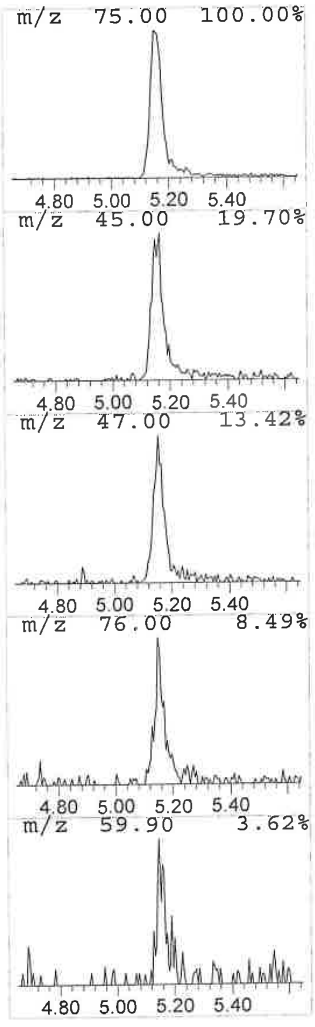
****

Peak Number 1 Column/Septa bleed Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.15	7.16 UG	120852	Pentafluorobenzene	5.79

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Propanoic acid, 2-methyl-, tert-...	202	C10H22O2Si	111864-21-2	83
2	Silanol, trimethyl-	90	C3H10OSi	001066-40-6	72
3	Silanol, trimethyl-	90	C3H10OSi	001066-40-6	59
4	Silanol, trimethyl-	90	C3H10OSi	001066-40-6	56
5	Pentanoic acid, 4-oxo-, trimethy...	188	C8H16O3Si	055557-12-5	43





K8230724.M Wed Aug 02 13:45:29 2023

Tentatively Identified Compound (LSC) summary

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3885.D
Acq On : 1 Aug 2023 8:02
Operator : BARBARA
Sample : TB-072623,E23-03407-004,A,5mL,100
Misc : EWMA/SWIVELIER_-_2,07/26/23,07/27/23,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

TIC Top Hit name	RT	EstConc	Units	Response	--Internal Standard--- #	RT	Resp	Conc
Column/Septa bleed					5.15	7.2		
120852 1	5.79	844396	50.0					

VOLATILE ORGANICS STANDARDS

Response Factor Report K_MSD

Method Path : C:\MSDCHEM\1\METHODS\
Method File : K8230724.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260D
Last Update : Wed Jul 26 09:29:59 2023
Response Via : Initial Calibration

Calibration Files
0.5 =K3742.D 1.0 =K3741.D 5.0 =K3743.D
20. =K3744.D 100 =K3745.D 150 =K3746.D 200 =K3747.D

		Compound	0.5	1.0	5.0	20.	100	150	200	Avg	%RSD
1)	I	Pentafluorobenzene	----------	ISTD	----------						
2)	T	Dichlorodifluorom		0.566	0.694	0.668	0.690	0.683	0.673	0.662	7.30
3)	P	Chloromethane	0.934	0.777	0.755	0.822	0.790	0.843	0.822	0.821	7.12
4)	C	Vinyl chloride		0.554	0.626	0.657	0.675	0.688	0.681	0.647	7.81
5)	T	Bromomethane		0.394	0.387	0.404	0.381	0.378	0.394	0.389	2.46
6)	T	Chloroethane	0.453	0.411	0.411	0.415	0.407	0.404	0.407	0.415	4.13
7)	T	Trichlorofluorome		0.970	1.157	1.118	1.082	1.048	1.028	1.067	6.22
8)	T	Acrolein	0.016	0.015	0.018	0.012	0.014	0.014	0.014	0.015	13.20
9)	MC	1,1-Dichloroethen	0.623	0.506	0.579	0.538	0.516	0.543	0.524	0.547	7.51
10)	T	Acetone		0.664	0.798	0.743	0.722	0.646	0.543	0.686	12.97
11)	T	Carbon disulfide		1.435	1.725	1.928	1.971	2.024	2.050	1.855	12.72
12)	T	Vinyl acetate		1.384	1.423	1.450	1.416	1.360	1.297	1.388	3.94
13)	T	Methylene chlorid		0.789	0.857	0.831	0.756	0.728	0.726	0.781	6.97
14)	T	Acrylonitrile	0.847	0.657	0.766	0.720	0.714	0.730	0.665	0.729	8.84
15)	T	tert-Butyl alcoho		0.218	0.247	0.255	0.261	0.232	0.176	0.232	13.55
16)	T	trans-1,2-Dichlor	0.742	0.669	0.810	0.828	0.794	0.773	0.763	0.768	6.85
17)	T	Methyl tert-butyl	3.080	2.685	3.151	3.240	3.286	3.192	3.112	3.107	6.41
18)	P	1,1-Dichloroethan	1.643	1.402	1.716	1.805	1.794	1.788	1.778	1.704	8.50
19)	T	Diisopropyl ether	3.401	3.301	3.618	3.950	3.960	3.841	3.740	3.687	7.06
20)	T	cis-1,2-Dichloroe	0.964	0.714	0.844	0.880	0.878	0.864	0.855	0.857	8.64
21)	T	2,2-Dichloropropa		0.726	0.867	0.893	0.822	0.738	0.699	0.791	10.22
22)	T	2-Butanone (MEK)		1.166	1.185	1.261	1.275	1.211	1.148	1.208	4.26
23)	T	Bromochloromethan		0.319	0.377	0.376	0.379	0.367	0.364	0.364	6.26
24)	T	Tetrahydrofuran								0.000	-1.00
25)	C	Chloroform	1.784	1.522	1.609	1.703	1.684	1.641	1.617	1.651	5.02
26)	T	1,1,1-Trichloroet	1.056	1.129	1.326	1.441	1.457	1.099	1.401	1.273	13.60
27)	T	Carbon tetrachlor	1.061	0.872	1.054	1.115	1.167	1.132	1.129	1.076	9.13
28)	T	1,1-Dichloroprope	1.295	0.950	1.235	1.229	1.212	1.193	1.194	1.187	9.25
29)	T	1,2-Dichloroethan	1.585	1.779	1.742	1.822	1.789	1.719	1.637	1.725	4.98
30)	S	1,2-Dichloroethan	0.941	0.948	0.932	0.975	0.945	0.903	0.890	0.933	3.08
31)	I	1,4-Difluorobenzene	----------	ISTD	----------						
32)	M	Benzene	1.794	1.565	1.901	1.987	1.904	1.889	1.870	1.844	7.36
33)	M	Trichloroethene	0.445	0.447	0.548	0.513	0.513	0.511	0.502	0.497	7.61
34)	C	1,2-Dichloropropa	0.600	0.587	0.569	0.592	0.580	0.575	0.562	0.581	2.30
35)	T	Dibromomethane	0.390	0.348	0.352	0.342	0.347	0.339	0.330	0.350	5.46
36)	T	1,4-Dioxane								0.000	-1.00
37)	T	Bromodichlorometh	0.700	0.664	0.684	0.764	0.780	0.776	0.755	0.732	6.55
38)	T	2-Chloroethyl vin	0.300	0.294	0.285	0.296	0.290	0.288	0.281	0.290	2.30
39)	T	cis-1,3-Dichlorop		0.805	0.805	0.917	0.917	0.911	0.887	0.874	6.21
40)	T	4-Methyl-2-pentan	1.034	1.280	1.170	1.233	1.246	1.217	1.128	1.187	7.07
41)	S	Toluene-d8	1.263	1.274	1.255	1.273	1.263	1.276	1.247	1.264	0.83
42)	MC	Toluene	1.169	1.089	1.197	1.233	1.234	1.212	1.196	1.190	4.19
43)	T	trans-1,3-Dichlor		0.828	0.858	0.939	0.977	0.962	0.930	0.916	6.50
44)	T	1,1,2-Trichloroet	0.392	0.453	0.395	0.430	0.437	0.426	0.410	0.420	5.38
45)	T	Tetrachloroethene	0.343	0.375	0.478	0.427	0.430	0.428	0.412	0.413	10.50
46)	T	1,3-Dichloropropa	0.863	0.875	0.908	0.919	0.937	0.917	0.883	0.900	2.98
47)	T	2-Hexanone	0.899	1.117	1.003	1.025	1.042	1.004	0.935	1.003	7.08
48)	T	Dibromochlorometh	0.343	0.430	0.398	0.454	0.506	0.505	0.479	0.445	13.41
49)	T	1,2-Dibromoethane	0.436	0.489	0.490	0.514	0.526	0.515	0.493	0.495	5.96
50)	I	Chlorobenzene-d5	----------	ISTD	----------						
51)	MP	Chlorobenzene	1.167	1.226	1.305	1.278	1.244	1.233	1.232	1.241	3.49

52)	T	1,1,1,2-Tetrachlo	0.388	0.377	0.386	0.420	0.427	0.418	0.415	0.405	4.98
53)	C	Ethylbenzene	2.095	1.900	2.330	2.364	2.304	2.283	2.274	2.222	7.45
54)	T	m,p-Xylene	0.749	0.688	0.860	0.851	0.824	0.816	0.815	0.800	7.63
55)	T	o-Xylene	0.819	0.753	0.867	0.860	0.838	0.831	0.822	0.827	4.54
56)	T	Styrene		1.290	1.353	1.438	1.432	1.414	1.406	1.389	4.09
57)	P	Bromoform	0.275	0.288	0.270	0.321	0.367	0.373	0.364	0.323	14.14
58)	T	Isopropylbenzene		1.795	2.162	2.259	2.228	2.214	2.165	2.137	8.03
59)	S	Bromofluorobenzen	0.696	0.705	0.696	0.725	0.718	0.722	0.708	0.710	1.69
60)	P	1,1,2,2-Tetrachlo		0.922	0.845	0.888	0.870	0.850	0.826	0.867	3.99
61)	T	Bromobenzene	0.541	0.506	0.525	0.520	0.504	0.495	0.485	0.511	3.78
62)	T	1,2,3-Trichloropr	0.740	0.882	0.778	0.770	0.761	0.750	0.722	0.772	6.75
63)	T	n-Propylbenzene	2.317	2.376	2.736	2.770	2.725	2.700	2.632	2.608	7.06
64)	T	2-Chlorotoluene	1.552	1.574	1.758	1.743	1.733	1.703	1.688	1.679	4.93
65)	T	1,3,5-Trimethylbe		1.764	1.906	1.989	1.948	1.908	1.864	1.897	4.08
66)	T	4-Chlorotoluene	1.870	1.840	2.159	2.095	2.071	2.034	1.995	2.009	5.83
67)	T	tert-Butylbenzene		1.336	1.495	1.493	1.512	1.477	1.426	1.456	4.52
68)	T	1,2,4-Trimethylbe		1.823	1.930	2.005	1.972	1.930	1.884	1.924	3.35
69)	T	sec-Butylbenzene		1.979	2.312	2.382	2.386	2.345	2.268	2.278	6.73
70)	T	1,3-Dichlorobenze	0.842	0.923	0.929	0.934	0.932	0.901	0.886	0.907	3.72
71)	T	4-Isopropyltoluen		1.577	1.832	1.933	1.917	1.885	1.818	1.827	7.15
72)	T	1,4-Dichlorobenze	0.894	0.946	0.951	0.966	0.935	0.922	0.904	0.931	2.75
73)	T	n-Butylbenzene			1.905	1.947	1.918	1.876	1.812	1.892	2.72
74)	T	1,2-Dichlorobenze	0.772	0.891	0.956	0.938	0.895	0.871	0.846	0.882	6.92
75)	T	1,2-Dibromo-3-chl		0.287	0.245	0.281	0.291	0.282	0.263	0.275	6.35
76)	T	1,2,4-Trichlorobe		0.779	0.739	0.732	0.744	0.728	0.699	0.737	3.53
77)	T	Hexachlorobutadie			0.302	0.295	0.287	0.272	0.270	0.285	5.02
78)	T	Naphthalene		2.182	2.389	2.437	2.379	2.349	2.250	2.331	4.13
79)	T	1,2,3-Trichlorobe		0.746	0.743	0.766	0.733	0.730	0.699	0.736	3.00
80)	T	1,1,2-Trichloro-1		0.324	0.334	0.326	0.289	0.303	0.312	0.315	5.26
81)	T	Methyl acetate	0.894	0.807	0.811	0.808	0.752	0.739	0.723	0.791	7.39
82)	T	Cyclohexane		0.980	1.267	1.037	0.930	0.952	0.980	1.024	12.11
83)	T	Methylcyclohexane		0.696	0.811	0.817	0.763	0.764	0.796	0.775	5.80

(#) = Out of Range ### Number of calibration levels exceeded format ###

K8230724.M Fri Jul 28 14:18:29 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3741.D
Acq On : 24 Jul 2023 15:33
Operator : BARBARA
Sample : ICC001,ICC230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 25 09:37:06 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Tue Jul 25 09:30:32 2023
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	5.79	168	300225	50.00	UG		0.00
31) 1,4-Difluorobenzene	6.61	114	513198	50.00	UG		0.00
50) Chlorobenzene-d5	9.95	117	514858	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.10	65	284532	51.03	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.06%				
41) Toluene-d8	8.28	98	653752	50.09	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.18%				
59) Bromofluorobenzene	11.35	95	362825	50.53	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.06%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.62	85	3398m	0.84	UG		
3) Chloromethane	1.79	50	4667m	0.90	UG		
4) Vinyl chloride	1.91	62	3327m	0.81	UG		
5) Bromomethane	2.23	94	2367m	1.00	UG		
6) Chloroethane	2.32	64	2465	0.93	UG		78
7) Trichlorofluoromethane	2.59	101	5827	0.90	UG		88
8) Acrolein	2.99	56	1753	19.24	UG	#	63
9) 1,1-Dichloroethene	3.17	96	3036	0.89	UG		80
10) Acetone	3.18	43	7976	1.94	UG		78
11) Carbon disulfide	3.44	76	8617	0.70	UG		80
12) Vinyl acetate	3.60	43	8308	0.96	UG	#	100
13) Methylene chloride	3.74	84	4740	0.95	UG		88
14) Acrylonitrile	3.98	53	78935	20.23	UG	#	100
15) tert-Butyl alcohol (TBA)	3.87	59	2620	1.81	UG		77
16) trans-1,2-Dichloroethene	4.02	96	4016	0.85	UG		89
17) Methyl tert-butyl ether (M	4.05	73	16124	0.85	UG		100
18) 1,1-Dichloroethane	4.51	63	8417	0.81	UG	#	85
19) Diisopropyl ether (DIPE)	4.63	45	19818	0.88	UG	#	100
20) cis-1,2-Dichloroethene	5.19	96	4289	0.81	UG	#	98
21) 2,2-Dichloropropane	5.19	77	4360	0.89	UG	#	94
22) 2-Butanone (MEK)	5.22	43	14005	1.91	UG		89
23) Bromochloromethane	5.44	128	1914	0.84	UG	#	1
25) Chloroform	5.55	83	9139	0.91	UG		99
26) 1,1,1-Trichloroethane	5.76	97	6777	0.89	UG		88
27) Carbon tetrachloride	5.95	117	5237	0.80	UG		87
28) 1,1-Dichloropropene	5.95	75	5707	0.76	UG	#	74
29) 1,2-Dichloroethane (EDC)	6.19	62	10680	1.06	UG	#	98
32) Benzene	6.18	78	16058	0.84	UG		99
33) Trichloroethene	6.90	95	4586	0.89	UG		89
34) 1,2-Dichloropropane	7.15	63	6026	1.02	UG	#	99
35) Dibromomethane	7.28	93	3572	1.02	UG	#	87
37) Bromodichloromethane	7.46	83	6820	0.92	UG	#	68
38) 2-Chloroethyl vinyl ether	7.15	63	6026	2.04	UG	#	100
39) cis-1,3-Dichloropropene	7.97	75	8261	0.94	UG	#	95
40) 4-Methyl-2-pentanone (MIBK	8.16	43	26270	2.15	UG		99
42) Toluene	8.36	92	11181	0.91	UG		92
43) trans-1,3-Dichloropropene	8.60	75	8499	0.92	UG	#	87

44) 1,1,2-Trichloroethane	8.81	83	4654	1.10 UG		96
45) Tetrachloroethene	8.99	166	3848	0.89 UG		96
46) 1,3-Dichloropropane	9.01	76	8984	1.00 UG		98
47) 2-Hexanone	9.11	43	22920	2.28 UG		99
48) Dibromochloromethane	9.27	129	4417	0.97 UG		98
49) 1,2-Dibromoethane (EDB)	9.40	107	5015	0.99 UG		100
51) Chlorobenzene	9.98	112	12629	1.01 UG		100
52) 1,1,1,2-Tetrachloroethane	10.08	131	3878	0.95 UG	#	92
53) Ethylbenzene	10.12	91	19567	0.86 UG		99
54) m,p-Xylene	10.26	106	14172	1.70 UG		93
55) o-Xylene	10.73	106	7750	0.91 UG	#	76
56) Styrene	10.74	104	13287	0.96 UG		90
57) Bromoform	10.95	173	2965	0.91 UG	#	96
58) Isopropylbenzene	11.18	105	18486	0.83 UG		98
60) 1,1,2,2-Tetrachloroethane	11.51	83	9497	1.12 UG	#	98
61) Bromobenzene	11.53	156	5209	1.02 UG	#	99
62) 1,2,3-Trichloropropane	11.57	75	9081	1.22 UG		98
63) n-Propylbenzene	11.68	91	24471	0.91 UG	#	97
64) 2-Chlorotoluene	11.77	91	16205	0.95 UG	#	91
65) 1,3,5-Trimethylbenzene	11.89	105	18168	0.95 UG		90
66) 4-Chlorotoluene	11.90	91	18947	0.93 UG	#	92
67) tert-Butylbenzene	12.29	119	13760	0.92 UG		90
68) 1,2,4-Trimethylbenzene	12.35	105	18767	0.95 UG	#	94
69) sec-Butylbenzene	12.55	105	20375	0.85 UG		99
70) 1,3-Dichlorobenzene	12.67	146	9500	1.03 UG		99
71) 4-Isopropyltoluene	12.74	119	16237	0.85 UG		100
72) 1,4-Dichlorobenzene	12.79	146	9740	1.03 UG		98
73) n-Butylbenzene	13.24	91	17099	0.88 UG	#	96
74) 1,2-Dichlorobenzene	13.24	146	9178	1.01 UG		99
75) 1,2-Dibromo-3-chloropropan	14.19	75	2952	1.12 UG		88
76) 1,2,4-Trichlorobenzene	15.15	180	8023	1.10 UG		100
77) Hexachlorobutadiene	15.35	225	3556	1.21 UG		100
78) Naphthalene	15.40	128	22467	0.94 UG		100
79) 1,2,3-Trichlorobenzene	15.67	180	7678	1.05 UG		99
80) 1,1,2-Trichloro-1,2,2-trif	3.18	101	3335	1.04 UG		88
81) Methyl acetate	3.60	43	8308	1.02 UG	#	78
82) Cyclohexane	5.81	56	10091	0.96 UG		84
83) Methylcyclohexane	7.14	83	7167	0.87 UG		88

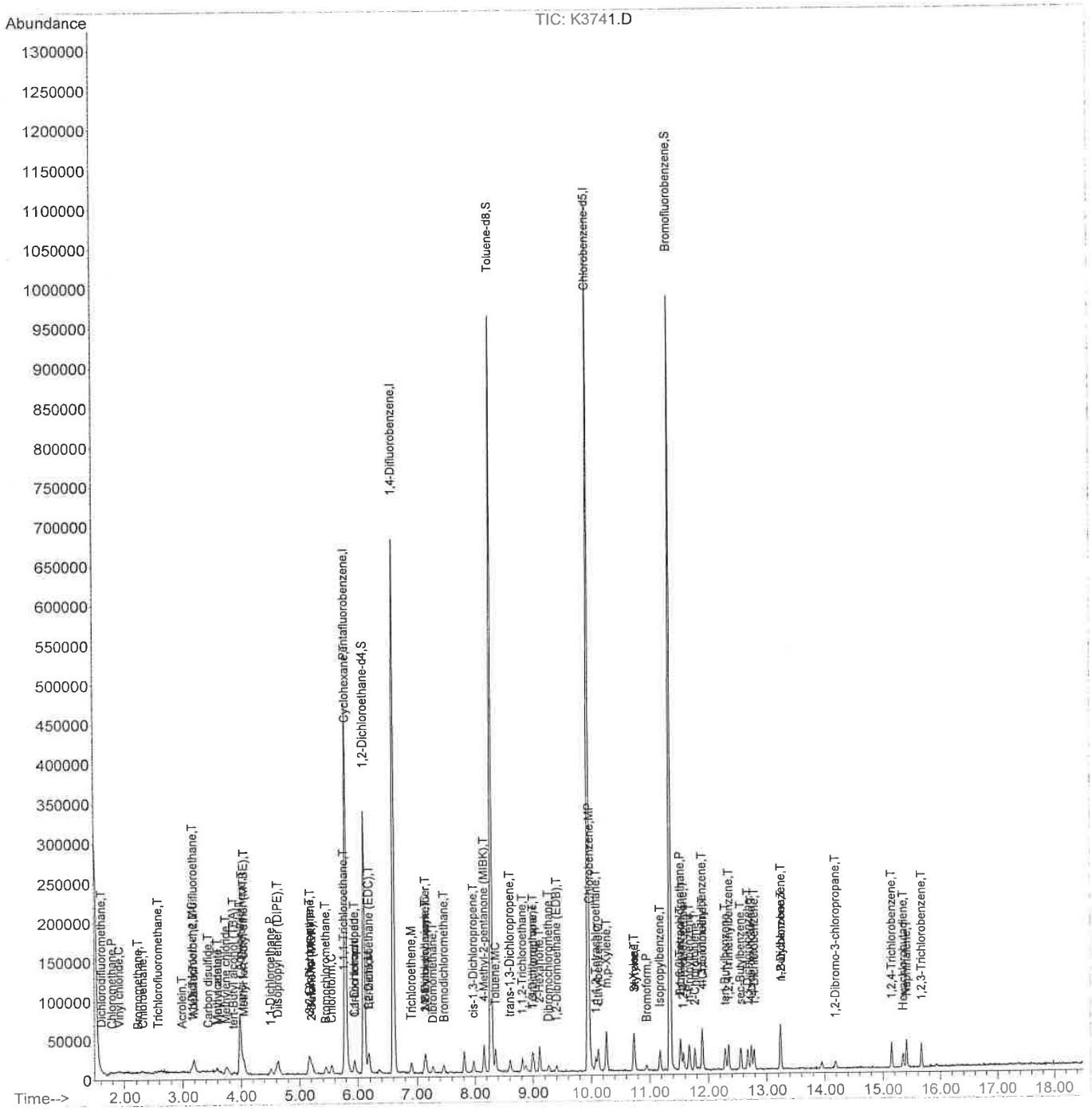
(#) = qualifier out of range (m) = manual integration (+) = signals summed

K8230724.M Mon Aug 14 10:36:37 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3741.D
Acq On : 24 Jul 2023 15:33
Operator : BARBARA
Sample : ICC001,ICC230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 25 09:37:06 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Tue Jul 25 09:30:32 2023
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3742.D
Acq On : 24 Jul 2023 16:01
Operator : BARBARA
Sample : ICC00.5,ICC230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 25 09:39:05 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Tue Jul 25 09:25:59 2023
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	5.79	168	282396	50.00	UG		0.00
31) 1,4-Difluorobenzene	6.61	114	479730	50.00	UG		0.00
50) Chlorobenzene-d5	9.95	117	481082	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.10	65	265798	51.11	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.22%				
41) Toluene-d8	8.28	98	606073	49.28	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.56%				
59) Bromofluorobenzene	11.35	95	334601	50.73	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.46%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.61	85	1631m	0.43	UG		
3) Chloromethane	1.82	50	2638m	0.54	UG		
4) Vinyl chloride	1.95	62	1792m	0.46	UG		
5) Bromomethane	2.29	94	1171m	0.53	UG		
6) Chloroethane	2.29	64	1280	0.50	UG		89
7) Trichlorofluoromethane	2.64	101	2593	0.43	UG		93
8) Acrolein	2.98	56	884	10.20	UG		90
9) 1,1-Dichloroethene	3.17	96	1760	0.56	UG		88
10) Acetone	3.19	43	3559	0.92	UG		98
11) Carbon disulfide	3.44	76	5101	0.44	UG		88
12) Vinyl acetate	3.59	43	4302	0.53	UG	#	100
13) Methylene chloride	3.73	84	2301	0.49	UG		95
14) Acrylonitrile	6.10	53	47837	11.23	UG		90
15) tert-Butyl alcohol (TBA)	3.88	59	2198	1.62	UG		98
16) trans-1,2-Dichloroethene	4.02	96	2095	0.45	UG		88
17) Methyl tert-butyl ether (M	4.04	73	8699	0.48	UG		100
18) 1,1-Dichloroethane	4.50	63	4641	0.47	UG	#	97
19) Diisopropyl ether (DIPE)	4.63	45	9603	0.43	UG	#	100
20) cis-1,2-Dichloroethene	5.18	96	2721	0.53	UG	#	93
21) 2,2-Dichloropropane	5.19	77	2959	0.64	UG		90
22) 2-Butanone (MEK)	5.23	43	7153	1.04	UG		98
23) Bromochloromethane	5.46	128	1125	0.52	UG		90
25) Chloroform	5.56	83	5038	0.52	UG		98
26) 1,1,1-Trichloroethane	5.76	97	2982	0.40	UG		89
27) Carbon tetrachloride	5.94	117	2995	0.49	UG		87
28) 1,1-Dichloropropene	5.95	75	3657	0.52	UG	#	90
29) 1,2-Dichloroethane (EDC)	6.19	62	4475	0.46	UG	#	98
32) Benzene	6.17	78	8607	0.47	UG		99
33) Trichloroethene	6.90	95	2136	0.43	UG	#	39
34) 1,2-Dichloropropane	7.16	63	2879	0.51	UG	#	100
35) Dibromomethane	7.27	93	1870	0.58	UG	#	70
37) Bromodichloromethane	7.46	83	3359	0.47	UG	#	98
38) 2-Chloroethyl vinyl ether	7.16	63	2879	1.03	UG	#	100
39) cis-1,3-Dichloropropene	7.98	75	3527	0.43	UG		88
40) 4-Methyl-2-pentanone (MIBK	8.16	43	9924	0.83	UG		88
42) Toluene	8.36	92	5607	0.48	UG		93
43) trans-1,3-Dichloropropene	8.60	75	4024	0.46	UG		88

44)	1,1,2-Trichloroethane	8.81	83	1880	0.46 UG	# 52
45)	Tetrachloroethene	8.99	166	1646	0.39 UG	96
46)	1,3-Dichloropropane	9.00	76	4138	0.48 UG	98
47)	2-Hexanone	9.11	43	8627	0.87 UG	99
48)	Dibromochloromethane	9.27	129	1646	0.37 UG	98
49)	1,2-Dibromoethane (EDB)	9.40	107	2094	0.42 UG	92
51)	Chlorobenzene	9.98	112	5614	0.48 UG	99
52)	1,1,1,2-Tetrachloroethane	10.08	131	1868	0.49 UG	# 99
53)	Ethylbenzene	10.13	91	10081	0.48 UG	# 97
54)	m,p-Xylene	10.26	106	7206	0.92 UG	# 100
55)	o-Xylene	10.73	106	3939	0.50 UG	91
56)	Styrene	10.74	104	6363	0.49 UG	# 80
57)	Bromoform	10.95	173	1324	0.43 UG	77
58)	Isopropylbenzene	11.18	105	8195	0.40 UG	98
60)	1,1,2,2-Tetrachloroethane	11.53	83	4018	0.51 UG	96
61)	Bromobenzene	11.53	156	2605	0.56 UG	# 52
62)	1,2,3-Trichloropropane	11.58	75	3561	0.50 UG	# 89
63)	n-Propylbenzene	11.67	91	11146	0.45 UG	78
64)	2-Chlorotoluene	11.77	91	7468	0.47 UG	# 91
65)	1,3,5-Trimethylbenzene	11.89	105	7804	0.44 UG	97
66)	4-Chlorotoluene	11.91	91	8997	0.48 UG	# 95
67)	tert-Butylbenzene	12.29	119	5576	0.40 UG	# 100
68)	1,2,4-Trimethylbenzene	12.34	105	7838	0.42 UG	97
69)	sec-Butylbenzene	12.55	105	9179	0.41 UG	98
70)	1,3-Dichlorobenzene	12.67	146	4049	0.47 UG	87
71)	4-Isopropyltoluene	12.74	119	7134	0.40 UG	98
72)	1,4-Dichlorobenzene	12.78	146	4303	0.48 UG	99
73)	n-Butylbenzene	13.24	91	7733	0.42 UG	# 86
74)	1,2-Dichlorobenzene	13.23	146	3716	0.43 UG	96
75)	1,2-Dibromo-3-chloropropan	14.18	75	1220	0.49 UG	# 19
76)	1,2,4-Trichlorobenzene	15.14	180	3519	0.52 UG	95
77)	Hexachlorobutadiene	15.35	225	1613	0.59 UG	100
78)	Naphthalene	15.41	128	9103	0.41 UG	100
79)	1,2,3-Trichlorobenzene	15.66	180	3688	0.54 UG	91
80)	1,1,2-Trichloro-1,2,2-trif	3.19	101	1394	0.46 UG	88
81)	Methyl acetate	3.59	43	4302	0.58 UG	# 52
82)	Cyclohexane	5.80	56	4328	0.44 UG	77
83)	Methylcyclohexane	7.13	83	3533	0.46 UG	# 72

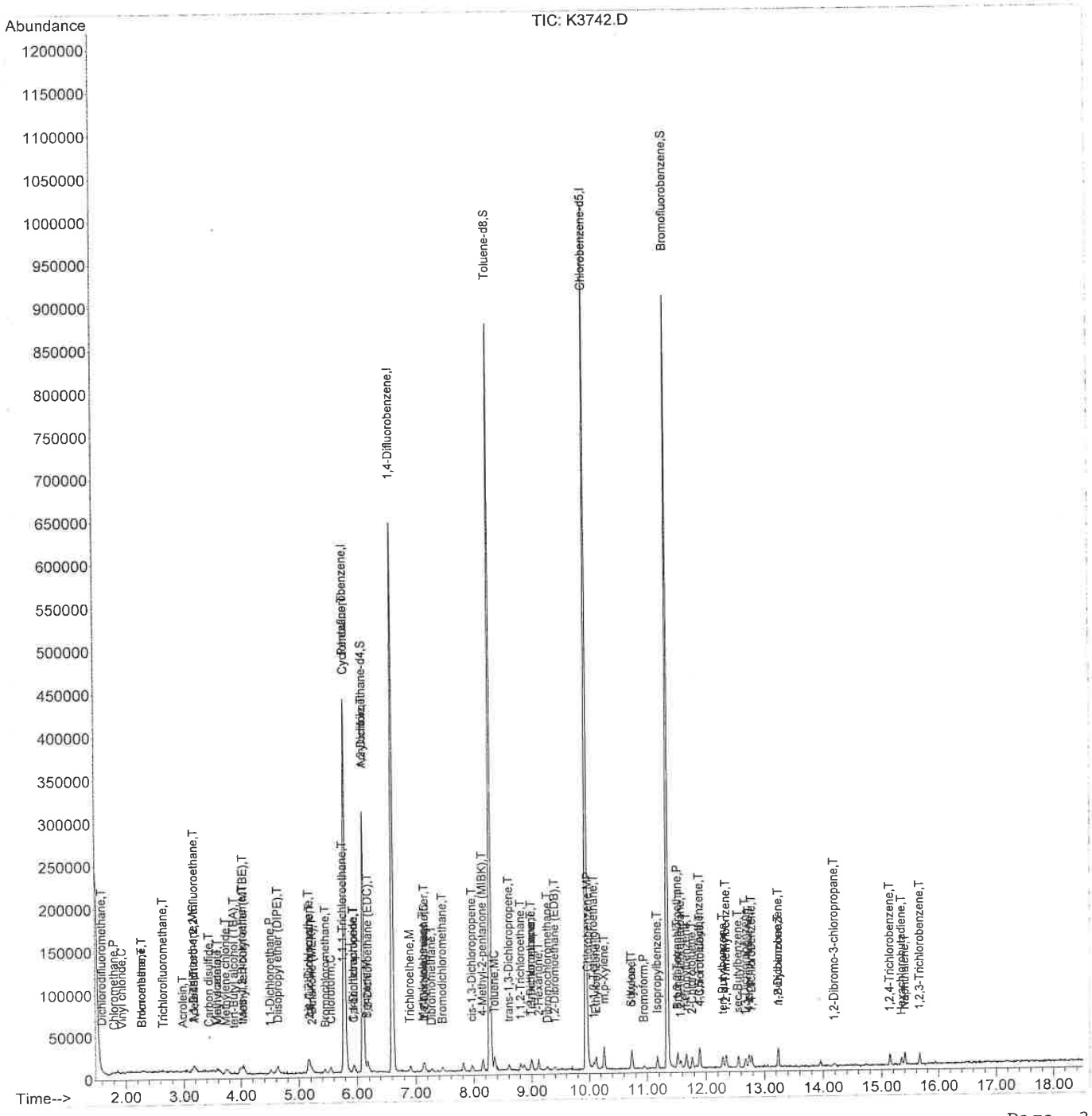
(#) = qualifier out of range (m) = manual integration (+) = signals summed

K8230724.M Mon Aug 14 10:41:05 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3742.D
Acq On : 24 Jul 2023 16:01
Operator : BARBARA
Sample : ICC00.5,ICC230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 25 09:39:05 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Tue Jul 25 09:25:59 2023
Response via : Initial Calibration



K8230724.M Mon Aug 14 10:41:05 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3743.D
Acq On : 24 Jul 2023 16:30
Operator : BARBARA
Sample : ICC005,ICC230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 25 09:25:42 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Tue Jul 25 09:24:28 2023
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	5.80	168	280189	50.00	UG		0.00
31) 1,4-Difluorobenzene	6.61	114	480430	50.00	UG		0.00
50) Chlorobenzene-d5	9.95	117	491292	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.11	65	261061	51.06	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.12%				
41) Toluene-d8	8.28	98	602997	48.57	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.14%				
59) Bromofluorobenzene	11.35	95	342022	51.71	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.42%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.62	85	19458	5.08	UG	#	65
3) Chloromethane	1.80	50	21150	4.15	UG	#	94
4) Vinyl chloride	1.91	62	17546m	4.39	UG		
5) Bromomethane	2.25	94	10848m	4.94	UG		
6) Chloroethane	2.31	64	11528	4.36	UG		99
7) Trichlorofluoromethane	2.64	101	32408	5.46	UG		84
8) Acrolein	3.00	56	10180	117.26	UG		89
9) 1,1-Dichloroethene	3.16	96	16209	5.15	UG	#	44
10) Acetone	3.19	43	44732	11.96	UG		98
11) Carbon disulfide	3.45	76	48332	4.08	UG		100
12) Vinyl acetate	3.60	43	39859	4.84	UG	#	100
13) Methylene chloride	3.76	84	24004	4.96	UG		97
14) Acrylonitrile	3.98	53	429421	100.31	UG	#	100
15) tert-Butyl alcohol (TBA)	3.88	59	13863	10.46	UG	#	100
16) trans-1,2-Dichloroethene	4.02	96	22685	4.89	UG	#	100
17) Methyl tert-butyl ether (M	4.05	73	88293	4.85	UG		100
18) 1,1-Dichloroethane	4.51	63	48091	4.79	UG	#	99
19) Diisopropyl ether (DIPE)	4.64	45	101366	4.53	UG	#	100
20) cis-1,2-Dichloroethene	5.19	96	23654	4.61	UG	#	99
21) 2,2-Dichloropropane	5.19	77	24302	5.25	UG	#	96
22) 2-Butanone (MEK)	5.21	43	66409	9.57	UG	#	96
23) Bromochloromethane	5.45	128	10562	4.90	UG	#	17
25) Chloroform	5.55	83	45089	4.68	UG		100
26) 1,1,1-Trichloroethane	5.76	97	37142	5.04	UG	#	84
27) Carbon tetrachloride	5.96	117	29533	4.84	UG		97
28) 1,1-Dichloropropene	5.95	75	34593	4.98	UG	#	63
29) 1,2-Dichloroethane (EDC)	6.19	62	48806	5.14	UG	#	98
32) Benzene	6.18	78	91329	5.02	UG		99
33) Trichloroethene	6.91	95	26350	5.38	UG	#	48
34) 1,2-Dichloropropane	7.15	63	27353	4.79	UG	#	99
35) Dibromomethane	7.28	93	16908	5.35	UG	#	61
37) Bromodichloromethane	7.47	83	32842	4.63	UG	#	99
38) 2-Chloroethyl vinyl ether	7.15	63	27353	9.71	UG	#	100
39) cis-1,3-Dichloropropene	7.97	75	38685	4.66	UG	#	97
40) 4-Methyl-2-pentanone (MIBK	8.16	43	112374	9.45	UG		99
42) Toluene	8.36	92	57502	4.96	UG		98
43) trans-1,3-Dichloropropene	8.60	75	41201	4.78	UG	#	87

44) 1,1,2-Trichloroethane	8.81	83	18966	4.64 UG		96
45) Tetrachloroethene	8.99	166	22977	5.64 UG		99
46) 1,3-Dichloropropane	9.01	76	43600	5.11 UG		99
47) 2-Hexanone	9.12	43	96388	9.79 UG		97
48) Dibromochloromethane	9.27	129	19111	4.24 UG		99
49) 1,2-Dibromoethane (EDB)	9.40	107	23529	4.74 UG		98
51) Chlorobenzene	9.98	112	64093	5.59 UG		99
52) 1,1,1,2-Tetrachloroethane	10.08	131	18972	4.95 UG	#	99
53) Ethylbenzene	10.12	91	114495	5.48 UG		98
54) m,p-Xylene	10.26	106	84499	10.83 UG	#	100
55) o-Xylene	10.73	106	42618	5.39 UG	#	80
56) Styrene	10.75	104	66487	5.11 UG	#	90
57) Bromoform	10.95	173	13269	4.32 UG	#	98
58) Isopropylbenzene	11.17	105	106204	5.14 UG		98
60) 1,1,2,2-Tetrachloroethane	11.52	83	41520	5.27 UG		98
61) Bromobenzene	11.53	156	25794	5.64 UG	#	99
62) 1,2,3-Trichloropropane	11.57	75	38231	5.40 UG	#	89
63) n-Propylbenzene	11.67	91	134413	5.46 UG	#	89
64) 2-Chlorotoluene	11.77	91	86350	5.53 UG	#	91
65) 1,3,5-Trimethylbenzene	11.89	105	93643	5.27 UG	#	94
66) 4-Chlorotoluene	11.90	91	106067	5.78 UG	#	91
67) tert-Butylbenzene	12.29	119	73436	5.28 UG	#	100
68) 1,2,4-Trimethylbenzene	12.34	105	94796	5.18 UG		95
69) sec-Butylbenzene	12.56	105	113588	5.12 UG		99
70) 1,3-Dichlorobenzene	12.68	146	45628	5.29 UG		99
71) 4-Isopropyltoluene	12.74	119	89999	5.03 UG		99
72) 1,4-Dichlorobenzene	12.79	146	46704	5.28 UG		99
73) n-Butylbenzene	13.24	91	93611	5.28 UG	#	95
74) 1,2-Dichlorobenzene	13.24	146	46980	5.51 UG		99
75) 1,2-Dibromo-3-chloropropan	14.18	75	12026	4.85 UG	#	65
76) 1,2,4-Trichlorobenzene	15.15	180	36292	5.41 UG		99
77) Hexachlorobutadiene	15.35	225	14850	5.64 UG		100
78) Naphthalene	15.41	128	117389	5.24 UG		100
79) 1,2,3-Trichlorobenzene	15.66	180	36501	5.45 UG		97
80) 1,1,2-Trichloro-1,2,2-trif	3.19	101	16409	5.42 UG	#	79
81) Methyl acetate	3.60	43	39859	5.30 UG	#	77
82) Cyclohexane	5.83	56	62244	6.38 UG	#	65
83) Methylcyclohexane	7.14	83	39864	5.14 UG	#	39

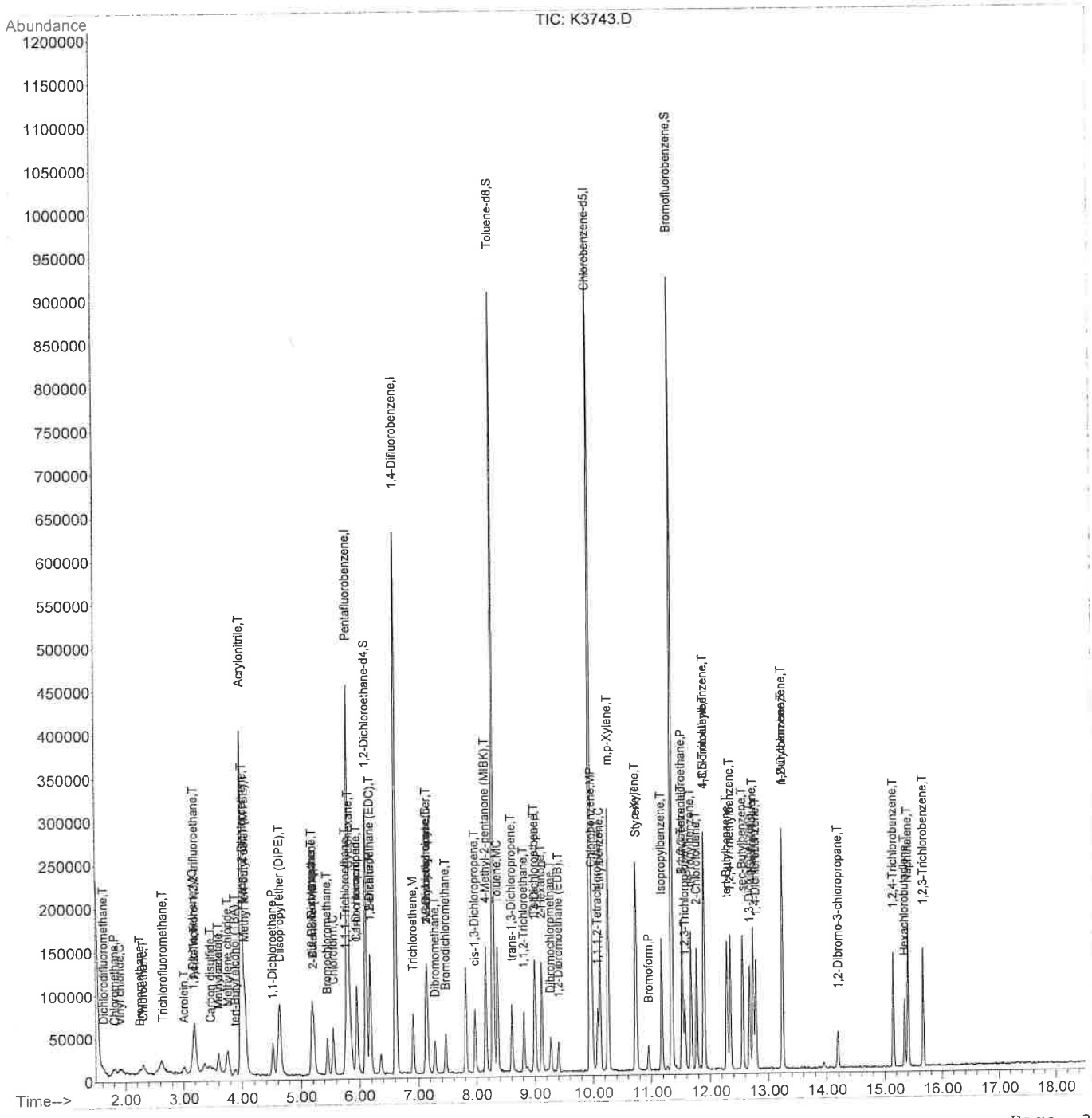
(#) = qualifier out of range (m) = manual integration (+) = signals summed

K8230724.M Mon Aug 14 10:45:38 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3743.D
Acq On : 24 Jul 2023 16:30
Operator : BARBARA
Sample : ICC005,ICC230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 25 09:25:42 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Tue Jul 25 09:24:28 2023
Response via : Initial Calibration



K8230724.M Mon Aug 14 10:45:30 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3744.D
Acq On : 24 Jul 2023 16:59
Operator : BARBARA
Sample : ICC020,ICC230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 25 09:24:09 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Tue Jul 25 09:23:38 2023
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	5.79	168	271970	50.00	UG		0.00
31) 1,4-Difluorobenzene	6.62	114	476646	50.00	UG		0.00
50) Chlorobenzene-d5	9.95	117	487908	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.10	65	265255	54.07	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 108.14%				
41) Toluene-d8	8.28	98	606638	48.88	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.76%				
59) Bromofluorobenzene	11.35	95	353740	55.19	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 110.38%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.61	85	72715	19.52	UG	#	58
3) Chloromethane	1.79	50	89442	17.60	UG		98
4) Vinyl chloride	1.90	62	71441	17.90	UG		100
5) Bromomethane	2.26	94	43912	20.69	UG	#	45
6) Chloroethane	2.31	64	45114	17.08	UG		99
7) Trichlorofluoromethane	2.64	101	121582m	21.45	UG		
8) Acrolein	2.99	56	13138	147.84	UG	#	98
9) 1,1-Dichloroethene	3.16	96	58512	18.93	UG	#	43
10) Acetone	3.19	43	161727	45.45	UG	#	97
11) Carbon disulfide	3.44	76	209782	17.90	UG		100
12) Vinyl acetate	3.59	43	157746	19.44	UG	#	100
13) Methylene chloride	3.75	84	90419	18.90	UG		99
14) Acrylonitrile	3.98	53	783170	183.01	UG	#	100
15) tert-Butyl alcohol (TBA)	3.89	59	55413	44.46	UG	#	100
16) trans-1,2-Dichloroethene	4.02	96	90109	19.92	UG	#	100
17) Methyl tert-butyl ether (M	4.04	73	352507	19.90	UG		100
18) 1,1-Dichloroethane	4.51	63	196404	20.01	UG	#	86
19) Diisopropyl ether (DIPE)	4.63	45	429741	19.55	UG	#	100
20) cis-1,2-Dichloroethene	5.18	96	95763	19.00	UG	#	67
21) 2,2-Dichloropropane	5.18	77	97177	21.67	UG	#	87
22) 2-Butanone (MEK)	5.21	43	274357	40.41	UG	#	95
23) Bromochloromethane	5.45	128	40949	18.98	UG	#	44
25) Chloroform	5.55	83	185292	19.86	UG		100
26) 1,1,1-Trichloroethane	5.75	97	156785	22.20	UG	#	84
27) Carbon tetrachloride	5.95	117	121285	20.56	UG		98
28) 1,1-Dichloropropene	5.95	75	133680	19.78	UG	#	73
29) 1,2-Dichloroethane (EDC)	6.19	62	198252	21.84	UG	#	85
32) Benzene	6.18	78	378855	21.07	UG		100
33) Trichloroethene	6.91	95	97819	20.34	UG	#	74
34) 1,2-Dichloropropane	7.15	63	112906	20.00	UG	#	99
35) Dibromomethane	7.28	93	65242	21.04	UG	#	67
37) Bromodichloromethane	7.46	83	145699	20.99	UG	#	97
38) 2-Chloroethyl vinyl ether	7.15	63	112906	40.49	UG	#	100
39) cis-1,3-Dichloropropene	7.97	75	174759	21.37	UG	#	96
40) 4-Methyl-2-pentanone (MIBK	8.16	43	470302	40.15	UG		99
42) Toluene	8.36	92	235082	20.57	UG		98
43) trans-1,3-Dichloropropene	8.60	75	179046	21.31	UG	#	87

44) 1,1,2-Trichloroethane	8.81	83	82035	20.31 UG		95
45) Tetrachloroethene	8.99	166	81445	20.38 UG		100
46) 1,3-Dichloropropane	9.01	76	175124	20.87 UG		99
47) 2-Hexanone	9.11	43	390714	40.45 UG		99
48) Dibromochloromethane	9.27	129	86642	19.41 UG		99
49) 1,2-Dibromoethane (EDB)	9.40	107	97962	19.86 UG		99
51) Chlorobenzene	9.98	112	249386	22.59 UG		99
52) 1,1,1,2-Tetrachloroethane	10.08	131	81929	21.86 UG	#	100
53) Ethylbenzene	10.12	91	461348	23.05 UG		98
54) m,p-Xylene	10.26	106	332265	43.75 UG	#	100
55) o-Xylene	10.73	106	167755	21.81 UG	#	17
56) Styrene	10.74	104	280577	22.29 UG	#	80
57) Bromoform	10.95	173	62600	21.08 UG	#	98
58) Isopropylbenzene	11.18	105	440865	22.08 UG		98
60) 1,1,2,2-Tetrachloroethane	11.52	83	173280	22.96 UG		98
61) Bromobenzene	11.52	156	101529	23.22 UG	#	99
62) 1,2,3-Trichloropropane	11.57	75	150220	21.85 UG		99
63) n-Propylbenzene	11.67	91	540560	22.94 UG	#	97
64) 2-Chlorotoluene	11.77	91	340205	22.73 UG	#	92
65) 1,3,5-Trimethylbenzene	11.89	105	388170	22.69 UG	#	94
66) 4-Chlorotoluene	11.90	91	408821	23.42 UG	#	81
67) tert-Butylbenzene	12.29	119	291301	21.68 UG	#	100
68) 1,2,4-Trimethylbenzene	12.34	105	391214	22.24 UG	#	95
69) sec-Butylbenzene	12.55	105	464838	21.85 UG	#	98
70) 1,3-Dichlorobenzene	12.68	146	182314	21.85 UG		99
71) 4-Isopropyltoluene	12.74	119	377191	21.87 UG		99
72) 1,4-Dichlorobenzene	12.78	146	188442	22.09 UG		99
73) n-Butylbenzene	13.24	91	380070	22.90 UG	#	95
74) 1,2-Dichlorobenzene	13.24	146	183052	22.17 UG		99
75) 1,2-Dibromo-3-chloropropan	14.19	75	54777	23.37 UG	#	19
76) 1,2,4-Trichlorobenzene	15.15	180	142848	22.14 UG		98
77) Hexachlorobutadiene	15.35	225	57611	23.76 UG		100
78) Naphthalene	15.40	128	475697	21.88 UG		100
79) 1,2,3-Trichlorobenzene	15.66	180	149416	23.53 UG		100
80) 1,1,2-Trichloro-1,2,2-trif	3.19	101	63658	21.75 UG		93
81) Methyl acetate	3.59	43	157746	21.51 UG	#	75
82) Cyclohexane	5.83	56	202438	21.23 UG	#	70
83) Methylcyclohexane	7.13	83	159539	21.28 UG	#	41

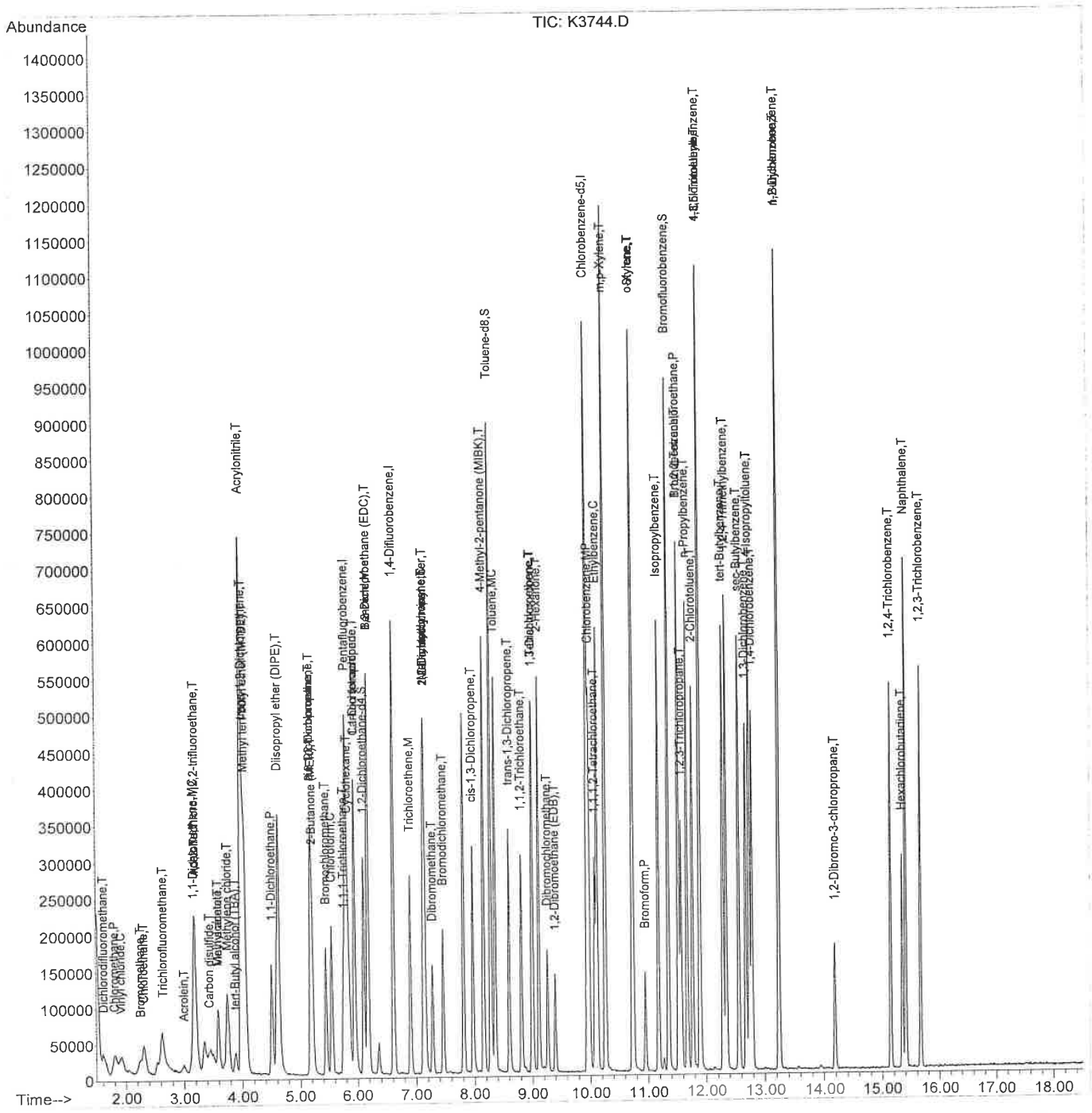
(#) = qualifier out of range (m) = manual integration (+) = signals summed

K8230724.M Mon Aug 14 10:50:58 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3744.D
Acq On : 24 Jul 2023 16:59
Operator : BARBARA
Sample : ICC020,ICC230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 25 09:24:09 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Tue Jul 25 09:23:38 2023
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3745.D
Acq On : 24 Jul 2023 17:28
Operator : BARBARA
Sample : ICC100,ICC230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 25 09:22:05 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Tue Jul 25 09:21:32 2023
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	5.79	168	288821	50.00	UG		0.00
31) 1,4-Difluorobenzene	6.61	114	510459	50.00	UG		0.00
50) Chlorobenzene-d5	9.95	117	544263	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.10	65	273015	53.10	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.20%				
41) Toluene-d8	8.28	98	644586	47.94	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.88%				
59) Bromofluorobenzene	11.35	95	390717	55.84	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 111.68%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.60	85	398664	99.69	UG	#	58
3) Chloromethane	1.80	50	456584	81.62	UG		98
4) Vinyl chloride	1.89	62	389752	88.69	UG		99
5) Bromomethane	2.25	94	219866	95.99	UG	#	45
6) Chloroethane	2.30	64	235077	81.59	UG		99
7) Trichlorofluoromethane	2.60	101	624946m	112.15	UG		
8) Acrolein	2.99	56	24136	254.60	UG	#	63
9) 1,1-Dichloroethene	3.17	96	297858	88.94	UG	#	39
10) Acetone	3.18	43	833660	230.51	UG	#	97
11) Carbon disulfide	3.44	76	1138397	88.74	UG		100
12) Vinyl acetate	3.59	43	818057	94.33	UG	#	100
13) Methylene chloride	3.74	84	436521	84.02	UG		99
14) Acrylonitrile	3.98	53	1237555	270.77	UG	#	100
15) tert-Butyl alcohol (TBA)	3.89	59	301821	245.23	UG	#	100
16) trans-1,2-Dichloroethene	4.01	96	458734	94.13	UG	#	100
17) Methyl tert-butyl ether (M	4.04	73	1898394	100.40	UG		100
18) 1,1-Dichloroethane	4.50	63	1036290	97.87	UG	#	83
19) Diisopropyl ether (DIPE)	4.63	45	2287661	96.42	UG	#	100
20) cis-1,2-Dichloroethene	5.18	96	507154	93.01	UG	#	67
21) 2,2-Dichloropropane	5.18	77	474885	99.88	UG	#	96
22) 2-Butanone (MEK)	5.21	43	1473289	206.03	UG	#	96
23) Bromochloromethane	5.44	128	218661	92.82	UG	#	12
25) Chloroform	5.55	83	972744	97.68	UG		100
26) 1,1,1-Trichloroethane	5.76	97	841550	112.68	UG	#	84
27) Carbon tetrachloride	5.95	117	673841	107.15	UG		100
28) 1,1-Dichloropropene	5.95	75	700347	96.41	UG	#	86
29) 1,2-Dichloroethane (EDC)	6.19	62	1033192	108.11	UG	#	98
32) Benzene	6.18	78	1943979	99.71	UG		100
33) Trichloroethene	6.91	95	524197	101.55	UG	#	73
34) 1,2-Dichloropropane	7.15	63	592598	97.15	UG	#	99
35) Dibromomethane	7.28	93	354198	107.27	UG	#	90
37) Bromodichloromethane	7.46	83	796649	107.77	UG	#	98
38) 2-Chloroethyl vinyl ether	7.15	63	592598	196.64	UG	#	100
39) cis-1,3-Dichloropropene	7.97	75	936260	106.36	UG	#	96
40) 4-Methyl-2-pentanone (MIBK	8.16	43	2543986	203.79	UG		100
42) Toluene	8.36	92	1260153	102.72	UG		98
43) trans-1,3-Dichloropropene	8.60	75	996927	111.74	UG	#	96

44) 1,1,2-Trichloroethane	8.81	83	445850	103.37 UG		95
45) Tetrachloroethene	8.99	166	439033	102.42 UG		100
46) 1,3-Dichloropropane	9.01	76	956230	106.94 UG		99
47) 2-Hexanone	9.12	43	2126611	206.27 UG		98
48) Dibromochloromethane	9.27	129	516816	107.87 UG		100
49) 1,2-Dibromoethane (EDB)	9.40	107	537193	100.62 UG		99
51) Chlorobenzene	9.98	112	1354296	112.02 UG		99
52) 1,1,1,2-Tetrachloroethane	10.08	131	465306	112.81 UG	#	99
53) Ethylbenzene	10.12	91	2507736	115.06 UG		98
54) m,p-Xylene	10.26	106	1794387	213.09 UG	#	100
55) o-Xylene	10.73	106	912257	107.21 UG	#	17
56) Styrene	10.74	104	1558338	112.36 UG	#	80
57) Bromoform	10.95	173	399249	123.97 UG	#	98
58) Isopropylbenzene	11.18	105	2425615	110.97 UG	#	97
60) 1,1,2,2-Tetrachloroethane	11.53	83	946837	115.66 UG		98
61) Bromobenzene	11.53	156	549029	115.58 UG	#	100
62) 1,2,3-Trichloropropane	11.57	75	828363	111.29 UG		99
63) n-Propylbenzene	11.68	91	2966498	115.95 UG	#	97
64) 2-Chlorotoluene	11.77	91	1886584	116.20 UG	#	91
65) 1,3,5-Trimethylbenzene	11.89	105	2120796	113.81 UG	#	94
66) 4-Chlorotoluene	11.90	91	2254003	119.68 UG	#	92
67) tert-Butylbenzene	12.29	119	1645483	112.15 UG	#	100
68) 1,2,4-Trimethylbenzene	12.35	105	2146802	112.17 UG	#	94
69) sec-Butylbenzene	12.56	105	2597169	112.12 UG	#	98
70) 1,3-Dichlorobenzene	12.68	146	1014620	110.78 UG		99
71) 4-Isopropyltoluene	12.74	119	2086474	111.09 UG		99
72) 1,4-Dichlorobenzene	12.78	146	1017390	108.66 UG		99
73) n-Butylbenzene	13.24	91	2088119	118.56 UG	#	95
74) 1,2-Dichlorobenzene	13.24	146	974612	107.35 UG		100
75) 1,2-Dibromo-3-chloropropan	14.19	75	316929	127.35 UG	#	19
76) 1,2,4-Trichlorobenzene	15.15	180	809885	116.29 UG		99
77) Hexachlorobutadiene	15.35	225	312094	122.96 UG		100
78) Naphthalene	15.41	128	2589692	108.12 UG		100
79) 1,2,3-Trichlorobenzene	15.66	180	797849	116.67 UG		98
80) 1,1,2-Trichloro-1,2,2-trif	3.18	101	315124	97.04 UG		92
81) Methyl acetate	3.59	43	818057	101.98 UG	#	77
82) Cyclohexane	5.83	56	1012725	94.70 UG	#	71
83) Methylcyclohexane	7.13	83	830417	100.14 UG	#	62

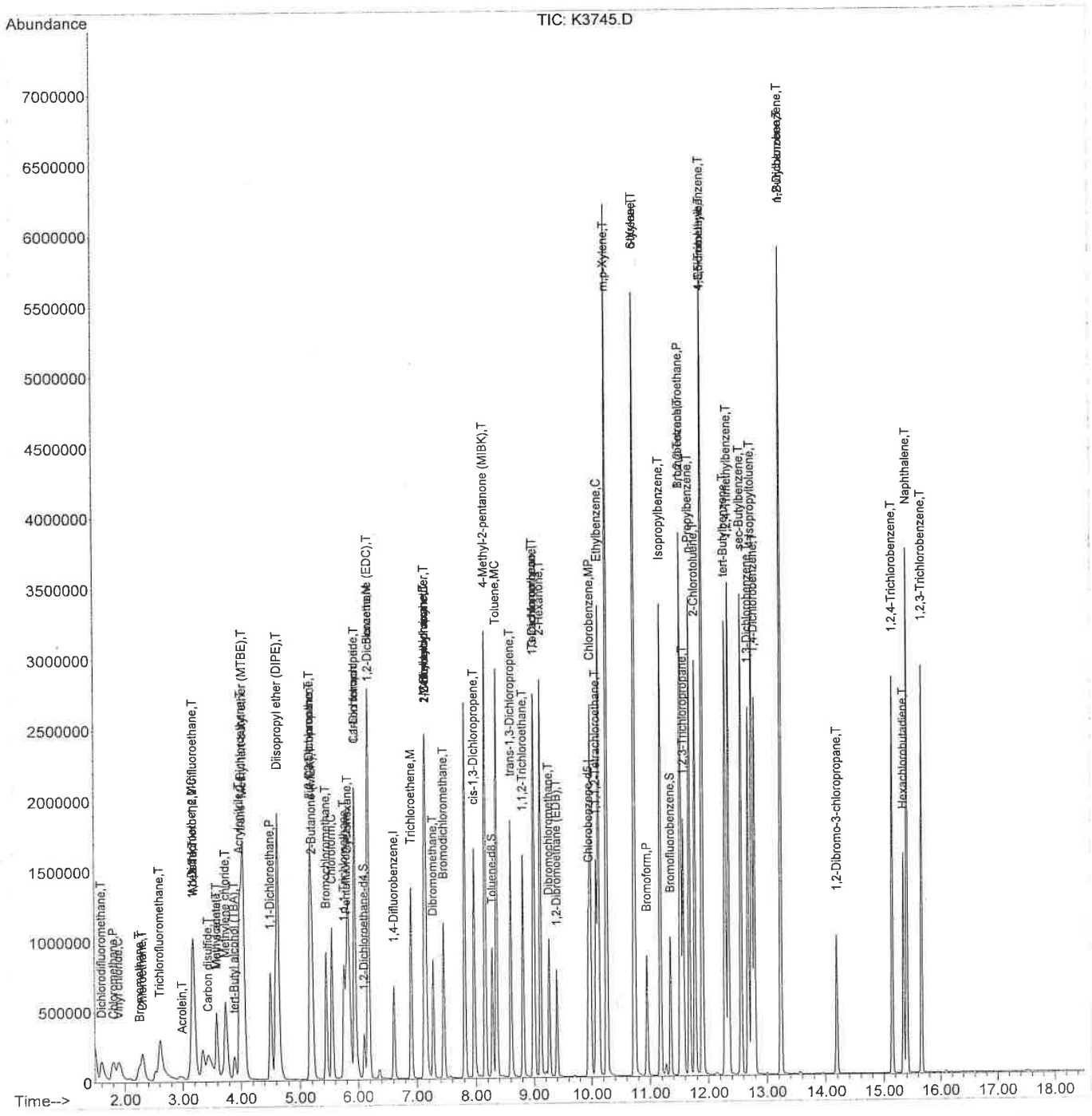
(#) = qualifier out of range (m) = manual integration (+) = signals summed

K8230724.M Mon Aug 14 10:52:05 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3745.D
Acq On : 24 Jul 2023 17:28
Operator : BARBARA
Sample : ICC100,ICC230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 25 09:22:05 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Tue Jul 25 09:21:32 2023
Response via : Initial Calibration



K8230724.M Mon Aug 14 10:52:06 2023 Page: 3

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3746.D
Acq On : 24 Jul 2023 17:56
Operator : BARBARA
Sample : ICC150,ICC230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 25 09:22:45 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Tue Jul 25 09:22:18 2023
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	5.79	168	319841	50.00	UG		0.00
31) 1,4-Difluorobenzene	6.61	114	559338	50.00	UG		0.00
50) Chlorobenzene-d5	9.95	117	588810	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.10	65	288955	50.08	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.16%				
41) Toluene-d8	8.28	98	713545	48.99	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.98%				
59) Bromofluorobenzene	11.35	95	425166	54.97	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 109.94%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.59	85	655406	149.60	UG	#	57
3) Chloromethane	1.80	50	808431	135.28	UG		98
4) Vinyl chloride	1.89	62	660262	140.67	UG		99
5) Bromomethane	2.25	94	362529	145.23	UG	#	45
6) Chloroethane	2.31	64	387234	124.66	UG		99
7) Trichlorofluoromethane	2.59	101	1005737m	162.69	UG		
8) Acrolein	3.00	56	35155	336.11	UG	#	96
9) 1,1-Dichloroethene	3.17	96	520783	143.27	UG	#	43
10) Acetone	3.19	43	1239201	296.10	UG		98
11) Carbon disulfide	3.45	76	1941832	140.90	UG		100
12) Vinyl acetate	3.59	43	1305410	136.79	UG	#	100
13) Methylene chloride	3.75	84	698393	124.11	UG		99
14) Acrylonitrile	3.98	53	1868793	371.34	UG	#	100
15) tert-Butyl alcohol (TBA)	3.90	59	444591	303.32	UG	#	100
16) trans-1,2-Dichloroethene	4.01	96	741458	139.39	UG	#	100
17) Methyl tert-butyl ether (M	4.05	73	3062713	147.02	UG		100
18) 1,1-Dichloroethane	4.50	63	1715299	148.62	UG	#	97
19) Diisopropyl ether (DIPE)	4.63	45	3685477	142.57	UG	#	100
20) cis-1,2-Dichloroethene	5.18	96	828696	139.85	UG	#	67
21) 2,2-Dichloropropane	5.18	77	708068	134.24	UG	#	96
22) 2-Butanone (MEK)	5.22	43	2323356	291.01	UG	#	96
23) Bromochloromethane	5.45	128	352294	138.89	UG	#	12
25) Chloroform	5.55	83	1574232	143.47	UG		100
26) 1,1,1-Trichloroethane	5.76	97	1054164	126.92	UG	#	84
27) Carbon tetrachloride	5.95	117	1086186	156.56	UG		100
28) 1,1-Dichloropropene	5.94	75	1145055	144.06	UG	#	74
29) 1,2-Dichloroethane (EDC)	6.19	62	1649163	154.46	UG	#	98
32) Benzene	6.18	78	3170098	150.22	UG		100
33) Trichloroethene	6.91	95	856711	151.79	UG	#	74
34) 1,2-Dichloropropane	7.15	63	965100	145.71	UG	#	99
35) Dibromomethane	7.28	93	569684	156.58	UG	#	91
37) Bromodichloromethane	7.46	83	1302860	159.97	UG	#	98
38) 2-Chloroethyl vinyl ether	7.15	63	965100	294.96	UG	#	100
39) cis-1,3-Dichloropropene	7.98	75	1528044	159.24	UG	#	96
40) 4-Methyl-2-pentanone (MIBK	8.16	43	4085846	297.21	UG		100
42) Toluene	8.36	92	2032942	151.61	UG		98
43) trans-1,3-Dichloropropene	8.60	75	1615003	163.82	UG	#	96

44) 1,1,2-Trichloroethane	8.81	83	714444	150.74 UG		95
45) Tetrachloroethene	8.99	166	717758	153.05 UG		100
46) 1,3-Dichloropropane	9.01	76	1538824	156.28 UG		99
47) 2-Hexanone	9.12	43	3368272	297.17 UG		99
48) Dibromochloromethane	9.27	129	847127	161.70 UG		100
49) 1,2-Dibromoethane (EDB)	9.40	107	864023	149.27 UG		98
51) Chlorobenzene	9.98	112	2178329	163.52 UG		99
52) 1,1,1,2-Tetrachloroethane	10.08	131	738527	163.29 UG	#	52
53) Ethylbenzene	10.12	91	4032531	166.92 UG		98
54) m,p-Xylene	10.26	106	2881783	314.39 UG	#	100
55) o-Xylene	10.73	106	1468462	158.19 UG	#	17
56) Styrene	10.74	104	2497532	164.44 UG	#	80
57) Bromoform	10.95	173	659507	184.04 UG	#	78
58) Isopropylbenzene	11.18	105	3911387	162.35 UG	#	97
60) 1,1,2,2-Tetrachloroethane	11.52	83	1501058	164.80 UG		98
61) Bromobenzene	11.53	156	874215	165.70 UG	#	99
62) 1,2,3-Trichloropropane	11.57	75	1323978	159.55 UG		99
63) n-Propylbenzene	11.68	91	4768518	167.70 UG	#	97
64) 2-Chlorotoluene	11.77	91	3008769	166.57 UG	#	91
65) 1,3,5-Trimethylbenzene	11.89	105	3371102	163.27 UG	#	73
66) 4-Chlorotoluene	11.90	91	3592146	170.50 UG	#	92
67) tert-Butylbenzene	12.29	119	2608443	160.85 UG	#	100
68) 1,2,4-Trimethylbenzene	12.35	105	3409002	160.61 UG	#	95
69) sec-Butylbenzene	12.56	105	4141397	161.30 UG	#	98
70) 1,3-Dichlorobenzene	12.68	146	1592218	158.14 UG		99
71) 4-Isopropyltoluene	12.74	119	3329481	159.97 UG		99
72) 1,4-Dichlorobenzene	12.79	146	1629086	158.21 UG		100
73) n-Butylbenzene	13.24	91	3314241	165.45 UG	#	86
74) 1,2-Dichlorobenzene	13.24	146	1538667	154.41 UG		100
75) 1,2-Dibromo-3-chloropropan	14.19	75	498018	176.08 UG	#	19
76) 1,2,4-Trichlorobenzene	15.15	180	1286535	165.26 UG		99
77) Hexachlorobutadiene	15.35	225	480006	164.06 UG		100
78) Naphthalene	15.41	128	4148624	158.12 UG		100
79) 1,2,3-Trichlorobenzene	15.67	180	1289677	168.32 UG		99
80) 1,1,2-Trichloro-1,2,2-trif	3.19	101	535261	151.57 UG		93
81) Methyl acetate	3.59	43	1305410	147.47 UG	#	78
82) Cyclohexane	5.82	56	1681173	146.07 UG	#	70
83) Methylcyclohexane	7.13	83	1350211	149.20 UG	#	41

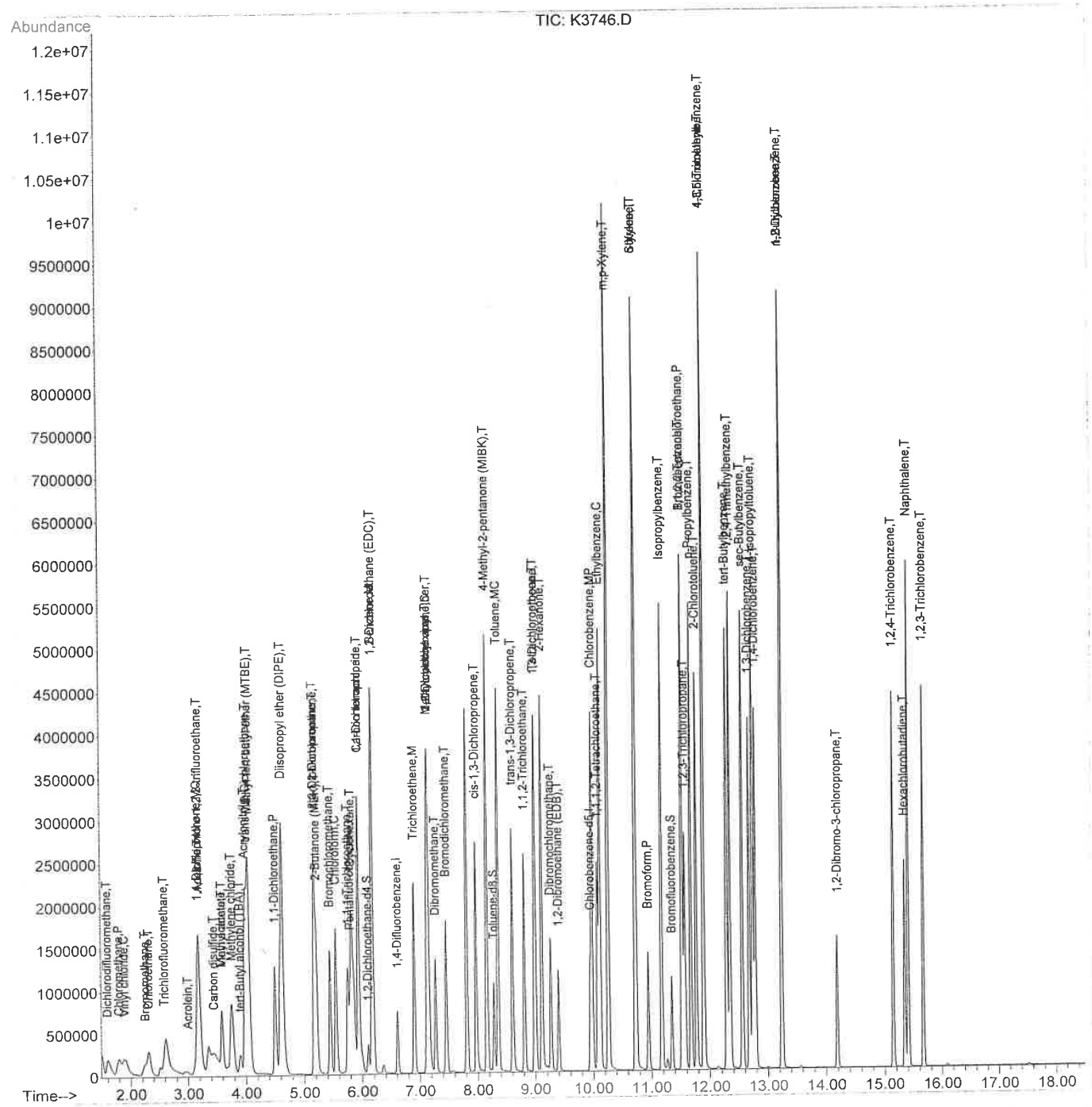
(#) = qualifier out of range (m) = manual integration (+) = signals summed

K8230724.M Mon Aug 14 11:41:17 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3746.D
Acq On : 24 Jul 2023 17:56
Operator : BARBARA
Sample : ICC150,ICC230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 25 09:22:45 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Tue Jul 25 09:22:18 2023
Response via : Initial Calibration



K8230724.M Mon Aug 14 11:41:18 2023

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Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3747.D
Acq On : 24 Jul 2023 18:25
Operator : BARBARA
Sample : ICC200,ICC230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 25 09:23:20 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Tue Jul 25 09:22:52 2023
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	5.79	168	347693	50.00	UG		0.00
31) 1,4-Difluorobenzene	6.61	114	612638	50.00	UG		0.00
50) Chlorobenzene-d5	9.95	117	623434	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.10	65	309343	49.32	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.64%				
41) Toluene-d8	8.28	98	764190	47.91	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.82%				
59) Bromofluorobenzene	11.35	95	441572	53.92	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 107.84%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.59	85	935965	196.52	UG	#	58
3) Chloromethane	1.79	50	1143727	176.06	UG		98
4) Vinyl chloride	1.88	62	947082	185.61	UG		99
5) Bromomethane	2.22	94	547296	201.68	UG	#	83
6) Chloroethane	2.29	64	565380	167.43	UG		99
7) Trichlorofluoromethane	2.60	101	1429665m	204.96	UG		
8) Acrolein	2.99	56	47707	419.93	UG	#	63
9) 1,1-Dichloroethene	3.15	96	729134	184.52	UG	#	43
10) Acetone	3.19	43	1511575	332.25	UG		98
11) Carbon disulfide	3.43	76	2851096	190.30	UG		100
12) Vinyl acetate	3.59	43	1803338	173.83	UG	#	100
13) Methylene chloride	3.73	84	1009324	165.00	UG		99
14) Acrylonitrile	3.98	53	2310705	422.37	UG	#	100
15) tert-Butyl alcohol (TBA)	3.90	59	489921	307.47	UG	#	100
16) trans-1,2-Dichloroethene	4.01	96	1060465	183.39	UG	#	100
17) Methyl tert-butyl ether (M	4.05	73	4328763	191.15	UG		100
18) 1,1-Dichloroethane	4.50	63	2472364	197.06	UG	#	97
19) Diisopropyl ether (DIPE)	4.63	45	5201427	185.09	UG	#	100
20) cis-1,2-Dichloroethene	5.18	96	1189247	184.61	UG	#	99
21) 2,2-Dichloropropane	5.18	77	972477	169.60	UG	#	87
22) 2-Butanone (MEK)	5.22	43	3192424	367.83	UG	#	96
23) Bromochloromethane	5.45	128	505967	183.49	UG	#	44
25) Chloroform	5.55	83	2248228	188.49	UG		100
26) 1,1,1-Trichloroethane	5.75	97	1948927	215.85	UG	#	84
27) Carbon tetrachloride	5.95	117	1570298	208.20	UG		100
28) 1,1-Dichloropropene	5.94	75	1660231	192.15	UG	#	74
29) 1,2-Dichloroethane (EDC)	6.19	62	2276348	196.12	UG		98
32) Benzene	6.17	78	4582623	198.26	UG		100
33) Trichloroethene	6.91	95	1231045	199.13	UG	#	74
34) 1,2-Dichloropropane	7.15	63	1376785	189.78	UG	#	99
35) Dibromomethane	7.28	93	807689	202.69	UG	#	91
37) Bromodichloromethane	7.46	83	1849986	207.39	UG	#	98
38) 2-Chloroethyl vinyl ether	7.15	63	1376785	384.17	UG	#	100
39) cis-1,3-Dichloropropene	7.98	75	2174843	206.92	UG	#	96
40) 4-Methyl-2-pentanone (MIBK	8.16	43	5529589	367.24	UG		99
42) Toluene	8.36	92	2931490	199.60	UG		98
43) trans-1,3-Dichloropropene	8.60	75	2279468	211.10	UG	#	96

44) 1,1,2-Trichloroethane	8.81	83	1003544	193.31 UG		95
45) Tetrachloroethene	8.99	166	1010096	196.64 UG		100
46) 1,3-Dichloropropane	9.01	76	2164977	200.75 UG		99
47) 2-Hexanone	9.12	43	4580691	368.97 UG		99
48) Dibromochloromethane	9.27	129	1173445	204.50 UG		100
49) 1,2-Dibromoethane (EDB)	9.40	107	1207752	190.51 UG		99
51) Chlorobenzene	9.98	112	3073055	217.87 UG		99
52) 1,1,1,2-Tetrachloroethane	10.08	131	1035420	216.22 UG	#	100
53) Ethylbenzene	10.12	91	5670071	221.67 UG		97
54) m,p-Xylene	10.27	106	4063364	418.68 UG	#	100
55) o-Xylene	10.73	106	2048756	208.44 UG	#	17
56) Styrene	10.75	104	3507057	218.09 UG	#	91
57) Bromoform	10.95	173	908909	239.55 UG	#	98
58) Isopropylbenzene	11.18	105	5399026	211.65 UG	#	97
60) 1,1,2,2-Tetrachloroethane	11.53	83	2058998	213.50 UG		98
61) Bromobenzene	11.53	156	1208524	216.34 UG	#	100
62) 1,2,3-Trichloropropane	11.57	75	1800126	204.89 UG		99
63) n-Propylbenzene	11.68	91	6563250	217.99 UG	#	97
64) 2-Chlorotoluene	11.77	91	4210118	220.14 UG	#	91
65) 1,3,5-Trimethylbenzene	11.89	105	4647448	212.59 UG	#	94
66) 4-Chlorotoluene	11.90	91	4975413	223.04 UG	#	92
67) tert-Butylbenzene	12.29	119	3555195	207.06 UG	#	100
68) 1,2,4-Trimethylbenzene	12.35	105	4697768	209.04 UG	#	94
69) sec-Butylbenzene	12.56	105	5654604	208.00 UG	#	91
70) 1,3-Dichlorobenzene	12.68	146	2209348	207.24 UG		99
71) 4-Isopropyltoluene	12.74	119	4534796	205.78 UG		99
72) 1,4-Dichlorobenzene	12.79	146	2255039	206.84 UG		100
73) n-Butylbenzene	13.24	91	4519001	213.06 UG	#	95
74) 1,2-Dichlorobenzene	13.24	146	2110447	200.03 UG		100
75) 1,2-Dibromo-3-chloropropan	14.19	75	657028	219.40 UG	#	19
76) 1,2,4-Trichlorobenzene	15.15	180	1742647	211.42 UG		99
77) Hexachlorobutadiene	15.35	225	672230	217.00 UG		100
78) Naphthalene	15.41	128	5609803	201.94 UG		100
79) 1,2,3-Trichlorobenzene	15.67	180	1742871	214.83 UG		98
80) 1,1,2-Trichloro-1,2,2-trif	3.17	101	777558	207.96 UG		93
81) Methyl acetate	3.59	43	1803338	192.41 UG	#	78
82) Cyclohexane	5.83	56	2445017	200.64 UG	#	70
83) Methylcyclohexane	7.13	83	1985650	207.24 UG	#	41

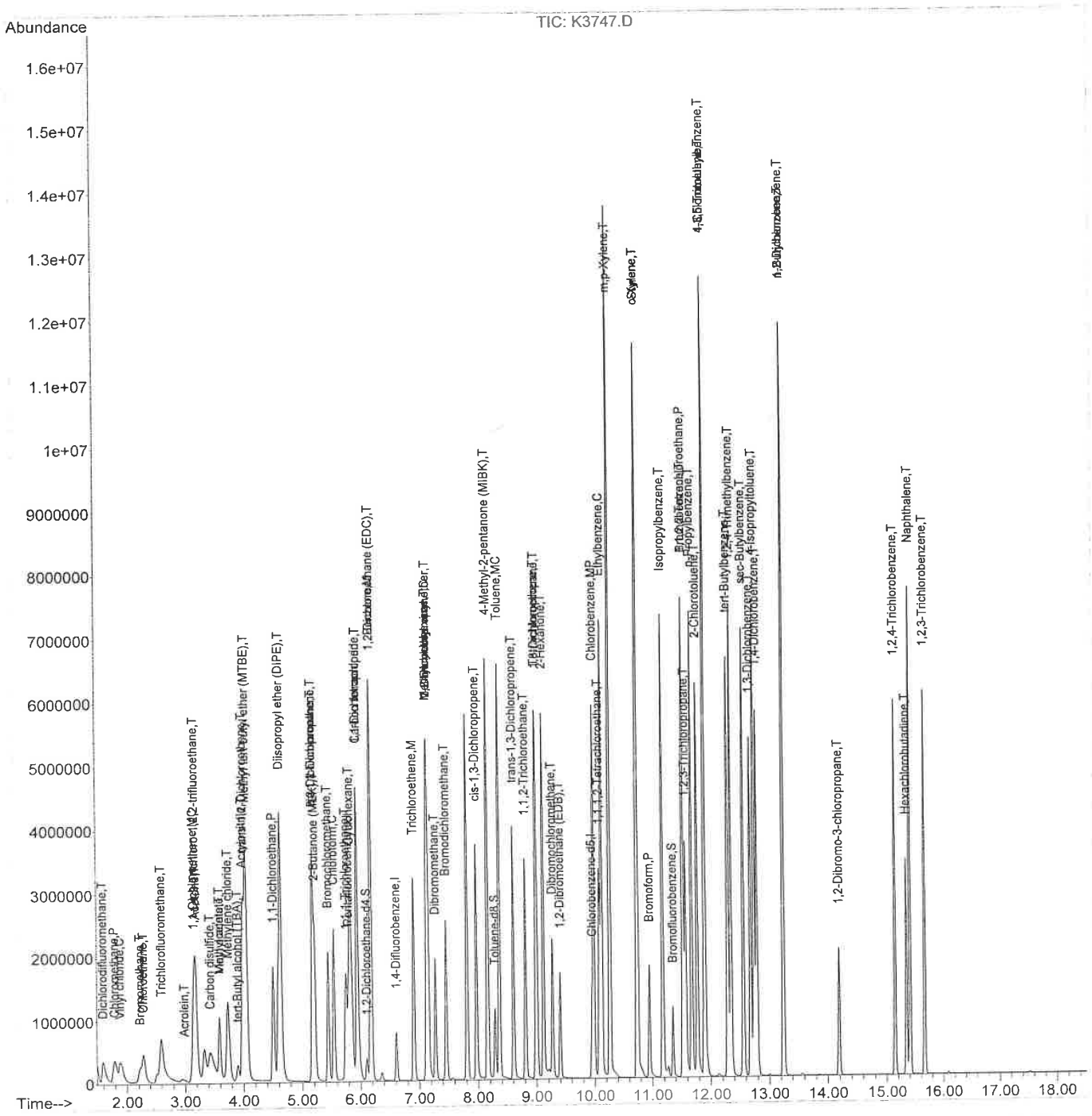
(#) = qualifier out of range (m) = manual integration (+) = signals summed

K8230724.M Mon Aug 14 11:42:44 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3747.D
Acq On : 24 Jul 2023 18:25
Operator : BARBARA
Sample : ICC200,ICC230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 25 09:23:20 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Tue Jul 25 09:22:52 2023
Response via : Initial Calibration



K8230724.M Mon Aug 14 11:42:45 2023

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Evaluate Continuing Calibration Report

Data Path : C:\MSDCHEM\1\DATA\23-07-24\
Data File : K3749.D
Acq On : 24 Jul 2023 19:22
Operator : BARBARA
Sample : ICV100,ICV230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 26 11:03:26 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	120	0.00
2	T	Dichlorodifluoromethane	0.662	0.674	-1.8	117	-0.01
3	P	Chloromethane	0.821	0.844	-2.8	128	-0.02
4	C	Vinyl chloride	0.647	0.674	-4.2	120	-0.05
5	T	Bromomethane	0.389	0.374	3.9	118	-0.04
6	T	Chloroethane	0.415	0.399	3.9	118	0.03
7	T	Trichlorofluoromethane	1.067	1.011	5.2	112	-0.03
8	T	Acrolein	0.015	0.017	-13.3	144	0.02
9	MC	1,1-Dichloroethene	0.547	0.539	1.5	126	0.01
10	T	Acetone	0.686	0.645	6.0	108	0.00
11	T	Carbon disulfide	1.855	2.040	-10.0	124	0.00
12	T	Vinyl acetate	1.388	1.337	3.7	114	0.00
13	T	Methylene chloride	0.781	0.765	2.0	122	0.03
15	T	tert-Butyl alcohol (TBA)	0.232	0.249	-7.3	115	0.01
16	T	trans-1,2-Dichloroethene	0.768	0.769	-0.1	116	-0.01
17	T	Methyl tert-butyl ether (MT	3.107	3.125	-0.6	114	0.00
18	P	1,1-Dichloroethane	1.704	1.792	-5.2	120	0.00
19	T	Diisopropyl ether (DIPE)	3.687	3.821	-3.6	116	0.00
20	T	cis-1,2-Dichloroethene	0.857	0.873	-1.9	120	0.00
21	T	2,2-Dichloropropane	0.791	0.691	12.6	101	-0.01
22	T	2-Butanone (MEK)	1.208	1.206	0.2	114	-0.02
23	T	Bromochloromethane	0.364	0.368	-1.1	117	-0.02
24	T	Tetrahydrofuran	0.000	0.000	0.0	0#	-4.87#
25	C	Chloroform	1.651	1.638	0.8	117	-0.01
26	T	1,1,1-Trichloroethane	1.273	1.372	-7.8	113	0.00
27	T	Carbon tetrachloride	1.076	1.114	-3.5	115	0.01
28	T	1,1-Dichloropropene	1.187	1.212	-2.1	120	0.00
29	T	1,2-Dichloroethane (EDC)	1.725	1.674	3.0	113	0.00
30	S	1,2-Dichloroethane-d4	0.933	0.885	5.1	113	0.00
31	I	1,4-Difluorobenzene	1.000	1.000	0.0	119	0.00
32	M	Benzene	1.844	1.943	-5.4	121	0.00
33	M	Trichloroethene	0.497	0.517	-4.0	119	0.01
34	C	1,2-Dichloropropane	0.581	0.591	-1.7	121	0.00
35	T	Dibromomethane	0.350	0.340	2.9	116	0.00
36	T	1,4-Dioxane	0.000	0.000	0.0	0#	-0.02
37	T	Bromodichloromethane	0.732	0.768	-4.9	117	0.00
38	T	2-Chloroethyl vinyl ether	0.290	0.295	-1.7	121	0.00
39	T	cis-1,3-Dichloropropene	0.874	0.911	-4.2	118	0.00
40	T	4-Methyl-2-pentanone (MIBK)	1.187	1.203	-1.3	115	0.00
41	S	Toluene-d8	1.264	1.259	0.4	118	0.00
42	MC	Toluene	1.190	1.229	-3.3	118	0.00
43	T	trans-1,3-Dichloropropene	0.916	0.936	-2.2	114	0.00
44	T	1,1,2-Trichloroethane	0.420	0.428	-1.9	116	0.00
45	T	Tetrachloroethene	0.413	0.430	-4.1	119	0.00
46	T	1,3-Dichloropropane	0.900	0.918	-2.0	116	0.00

47	T	2-Hexanone	1.003	1.004	-0.1	114	0.00
48	T	Dibromochloromethane	0.445	0.483	-8.5	113	0.00
49	T	1,2-Dibromoethane (EDB)	0.495	0.516	-4.2	116	0.00
50	I	Chlorobenzene-d5	1.000	1.000	0.0	117	0.00
51	MP	Chlorobenzene	1.241	1.244	-0.2	117	0.00
52	T	1,1,1,2-Tetrachloroethane	0.405	0.415	-2.5	114	0.00
53	C	Ethylbenzene	2.222	2.295	-3.3	116	0.00
54	T	m,p-Xylene	0.800	0.817	-2.1	116	0.00
55	T	o-Xylene	0.827	0.836	-1.1	117	0.00
56	T	Styrene	1.389	1.424	-2.5	116	0.00
57	P	Bromoform	0.323	0.358	-10.8	114	0.00
58	T	Isopropylbenzene	2.137	2.214	-3.6	116	0.00
59	S	Bromofluorobenzene	0.710	0.704	0.8	115	0.00
60	P	1,1,2,2-Tetrachloroethane	0.867	0.851	1.8	114	0.00
61	T	Bromobenzene	0.511	0.496	2.9	115	0.00
62	T	1,2,3-Trichloropropane	0.772	0.743	3.8	114	0.00
63	T	n-Propylbenzene	2.608	2.714	-4.1	116	0.00
64	T	2-Chlorotoluene	1.679	1.711	-1.9	115	0.00
65	T	1,3,5-Trimethylbenzene	1.897	1.888	0.5	113	0.00
66	T	4-Chlorotoluene	2.009	2.025	-0.8	114	0.00
67	T	tert-Butylbenzene	1.456	1.491	-2.4	115	0.00
68	T	1,2,4-Trimethylbenzene	1.924	1.926	-0.1	114	0.00
69	T	sec-Butylbenzene	2.278	2.350	-3.2	115	0.00
70	T	1,3-Dichlorobenzene	0.907	0.906	0.1	114	0.00
71	T	4-Isopropyltoluene	1.827	1.877	-2.7	114	0.00
72	T	1,4-Dichlorobenzene	0.931	0.923	0.9	115	0.01
73	T	n-Butylbenzene	1.892	1.884	0.4	115	0.00
74	T	1,2-Dichlorobenzene	0.882	0.878	0.5	115	0.00
75	T	1,2-Dibromo-3-chloropropane	0.275	0.275	0.0	111	0.00
76	T	1,2,4-Trichlorobenzene	0.737	0.725	1.6	114	0.02
77	T	Hexachlorobutadiene	0.285	0.283	0.7	115	0.00
78	T	Naphthalene	2.331	2.328	0.1	114	0.00
79	T	1,2,3-Trichlorobenzene	0.736	0.715	2.9	114	0.00
80	T	1,1,2-Trichloro-1,2,2-trifl	0.315	0.309	1.9	125	0.00
81	T	Methyl acetate	0.791	0.730	7.7	114	0.00
82	T	Cyclohexane	1.024	0.982	4.1	123	0.02
83	T	Methylcyclohexane	0.775	0.808	-4.3	124	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

K8230724.M Fri Jul 28 14:19:56 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3749.D
Acq On : 24 Jul 2023 19:22
Operator : BARBARA
Sample : ICV100,ICV230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 26 11:03:26 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	5.79	168	347405	50.00	UG		0.00
31) 1,4-Difluorobenzene	6.61	114	605565	50.00	UG		0.00
50) Chlorobenzene-d5	9.95	117	636179	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.10	65	307356	47.39	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 94.78%				
41) Toluene-d8	8.28	98	762109	49.77	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.54%				
59) Bromofluorobenzene	11.35	95	448108	49.61	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.22%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.59	85	468241	101.72	UG	#	58
3) Chloromethane	1.80	50	586090	102.80	UG		98
4) Vinyl chloride	1.89	62	468538m	104.26	UG		
5) Bromomethane	2.25	94	259902	96.04	UG	#	84
6) Chloroethane	2.32	64	277465	96.16	UG		99
7) Trichlorofluoromethane	2.61	101	702777	94.78	UG		85
8) Acrolein	3.00	56	34754	343.67	UG	#	99
9) 1,1-Dichloroethene	3.18	96	374186	98.48	UG	#	45
10) Acetone	3.19	43	896692	188.10	UG		98
11) Carbon disulfide	3.43	76	1417238	109.93	UG		100
12) Vinyl acetate	3.59	43	928994	96.31	UG	#	100
13) Methylene chloride	3.76	84	531461	97.93	UG		97
14) Acrylonitrile	5.82	53	137529	27.17	UG		85
15) tert-Butyl alcohol (TBA)	3.89	59	346012	215.07	UG	#	100
16) trans-1,2-Dichloroethene	4.01	96	534424	100.11	UG	#	100
17) Methyl tert-butyl ether (M	4.04	73	2171307	100.58	UG		100
18) 1,1-Dichloroethane	4.50	63	1244964	105.17	UG	#	83
19) Diisopropyl ether (DIPE)	4.63	45	2654570	103.62	UG	#	100
20) cis-1,2-Dichloroethene	5.18	96	606320	101.82	UG	#	98
21) 2,2-Dichloropropane	5.18	77	480090	87.35	UG	#	96
22) 2-Butanone (MEK)	5.21	43	1676056	199.75	UG	#	96
23) Bromochloromethane	5.45	128	255366	101.08	UG	#	44
25) Chloroform	5.55	83	1137988	99.18	UG		100
26) 1,1,1-Trichloroethane	5.76	97	953101	107.79	UG	#	84
27) Carbon tetrachloride	5.95	117	774223	103.60	UG		100
28) 1,1-Dichloropropene	5.95	75	842348	102.14	UG	#	74
29) 1,2-Dichloroethane (EDC)	6.19	62	1162955	97.06	UG	#	98
32) Benzene	6.18	78	2353740	105.37	UG		100
33) Trichloroethene	6.91	95	625999	103.97	UG	#	74
34) 1,2-Dichloropropane	7.15	63	715263	101.67	UG	#	99
35) Dibromomethane	7.28	93	412087	97.29	UG	#	91
37) Bromodichloromethane	7.46	83	930734	104.98	UG	#	98
38) 2-Chloroethyl vinyl ether	7.15	63	715263	203.34	UG	#	100
39) cis-1,3-Dichloropropene	7.98	75	1103860	104.32	UG	#	96
40) 4-Methyl-2-pentanone (MIBK	8.16	43	2914693	202.76	UG		99
42) Toluene	8.36	92	1489073	103.32	UG		99
43) trans-1,3-Dichloropropene	8.60	75	1133653	102.23	UG	#	96

44) 1,1,2-Trichloroethane	8.81	83	518371	101.82 UG		95
45) Tetrachloroethene	8.99	166	520889	104.05 UG		100
46) 1,3-Dichloropropane	9.01	76	1112347	102.03 UG		99
47) 2-Hexanone	9.12	43	2431431	200.09 UG		99
48) Dibromochloromethane	9.27	129	585515	108.62 UG		100
49) 1,2-Dibromoethane (EDB)	9.40	107	625483	104.40 UG		98
51) Chlorobenzene	9.98	112	1582569	100.24 UG		99
52) 1,1,1,2-Tetrachloroethane	10.08	131	528409	102.67 UG	#	52
53) Ethylbenzene	10.12	91	2920665	103.33 UG		98
54) m,p-Xylene	10.26	106	2079825	204.22 UG	#	100
55) o-Xylene	10.73	106	1063451	101.06 UG	#	17
56) Styrene	10.74	104	1811652	102.52 UG	#	80
57) Bromoform	10.95	173	455307	110.91 UG	#	78
58) Isopropylbenzene	11.18	105	2817158	103.60 UG	#	97
60) 1,1,2,2-Tetrachloroethane	11.52	83	1083062	98.21 UG		98
61) Bromobenzene	11.53	156	630492	96.99 UG	#	100
62) 1,2,3-Trichloropropane	11.57	75	945304	96.27 UG		99
63) n-Propylbenzene	11.68	91	3452774	104.05 UG	#	97
64) 2-Chlorotoluene	11.77	91	2176509	101.89 UG	#	91
65) 1,3,5-Trimethylbenzene	11.89	105	2401924	99.53 UG	#	94
66) 4-Chlorotoluene	11.90	91	2575948	100.77 UG	#	92
67) tert-Butylbenzene	12.29	119	1897630	102.41 UG	#	100
68) 1,2,4-Trimethylbenzene	12.35	105	2450919	100.13 UG	#	94
69) sec-Butylbenzene	12.56	105	2990012	103.14 UG	#	98
70) 1,3-Dichlorobenzene	12.68	146	1153022	99.95 UG		99
71) 4-Isopropyltoluene	12.74	119	2387918	102.73 UG		99
72) 1,4-Dichlorobenzene	12.79	146	1174222	99.12 UG		100
73) n-Butylbenzene	13.24	91	2397310	99.59 UG	#	86
74) 1,2-Dichlorobenzene	13.24	146	1117182	99.61 UG		100
75) 1,2-Dibromo-3-chloropropan	14.19	75	350284	100.19 UG	#	65
76) 1,2,4-Trichlorobenzene	15.15	180	922616	98.41 UG		99
77) Hexachlorobutadiene	15.35	225	360354	99.34 UG		100
78) Naphthalene	15.41	128	2961902	99.87 UG		100
79) 1,2,3-Trichlorobenzene	15.66	180	909554	97.12 UG		99
80) 1,1,2-Trichloro-1,2,2-trif	3.19	101	393040	98.15 UG		92
81) Methyl acetate	3.59	43	928994	92.35 UG	#	78
82) Cyclohexane	5.83	56	1249702	95.87 UG	#	71
83) Methylcyclohexane	7.13	83	1028226	104.31 UG	#	66

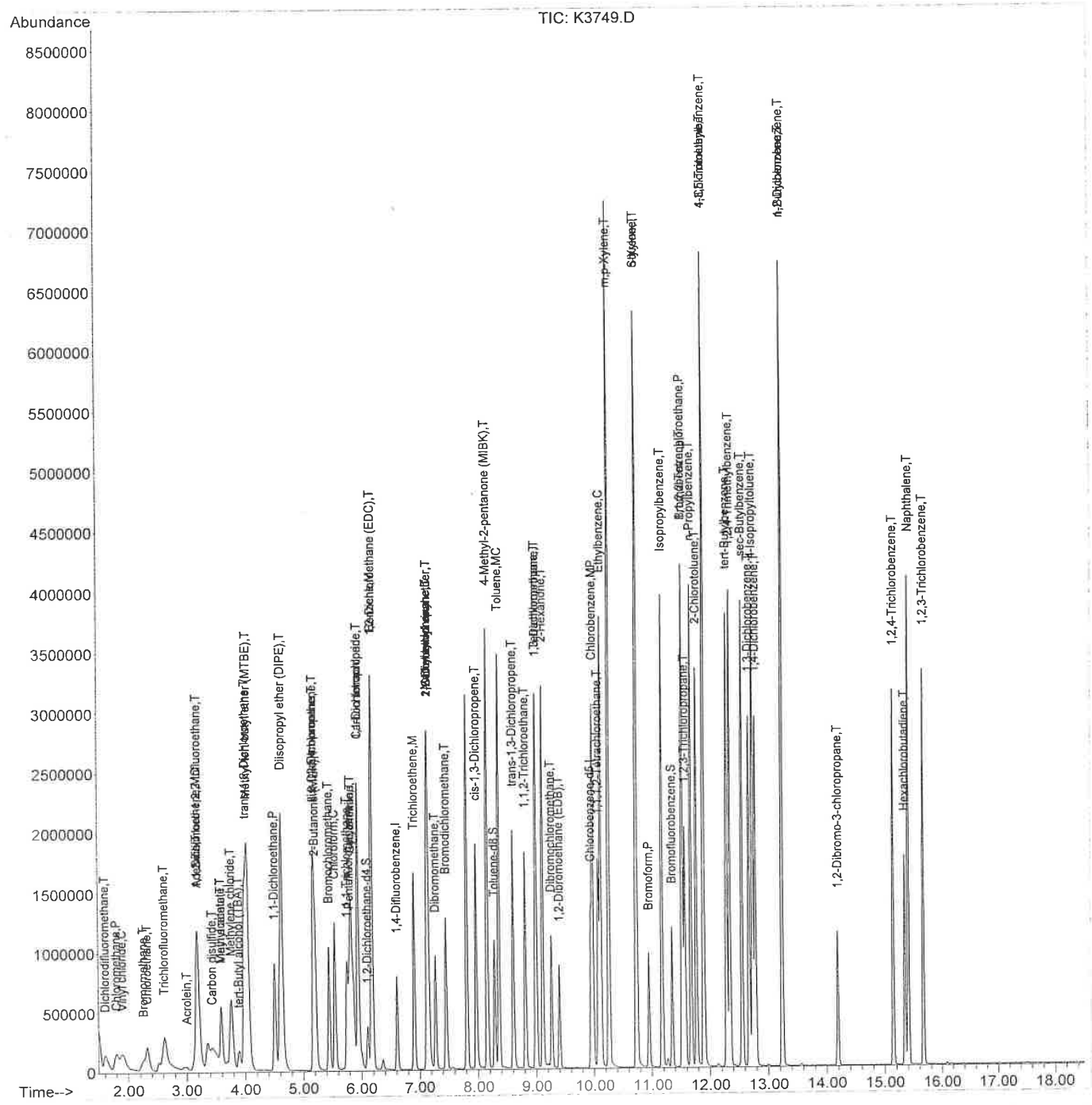
(#) = qualifier out of range (m) = manual integration (+) = signals summed

K8230724.M Mon Aug 14 11:45:17 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3749.D
Acq On : 24 Jul 2023 19:22
Operator : BARBARA
Sample : ICV100,ICV230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 26 11:03:26 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration



K8230724.M Mon Aug 14 11:45:17 2023 Page: 3

Evaluate Continuing Calibration Report

Data Path : C:\MSDCHEM\1\DATA\23-08-01\
Data File : K3867.D
Acq On : 31 Jul 2023 22:53
Operator : BARBARA
Sample : CCV100,CCV230731-02,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 02 09:32:32 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	78	0.00
2	T	Dichlorodifluoromethane	0.662	0.702	-6.0	79	0.00
3	P	Chloromethane	0.821	0.736	10.4	73	-0.01
4	C	Vinyl chloride	0.647	0.655	-1.2	76	-0.05
5	T	Bromomethane	0.389	0.400	-2.8	82	-0.04
6	T	Chloroethane	0.415	0.433	-4.3	83	0.03
7	T	Trichlorofluoromethane	1.067	0.944	11.5	68	-0.04
8	T	Acrolein	0.015	0.015	0.0	86	0.02
9	MC	1,1-Dichloroethene	0.547	0.570	-4.2	86	-0.01
10	T	Acetone	0.686	0.815	-18.8	88	0.00
11	T	Carbon disulfide	1.855	2.119	-14.2	84	-0.01
12	T	Vinyl acetate	1.388	1.449	-4.4	80	0.00
13	T	Methylene chloride	0.781	0.781	0.0	81	0.02
15	T	tert-Butyl alcohol (TBA)	0.232	0.271	-16.8	81	0.00
16	T	trans-1,2-Dichloroethene	0.768	0.846	-10.2	83	0.00
17	T	Methyl tert-butyl ether (MT	3.107	3.556	-14.5	84	0.00
18	P	1,1-Dichloroethane	1.704	1.950	-14.4	85	0.00
19	T	Diisopropyl ether (DIPE)	3.687	4.106	-11.4	81	0.00
20	T	cis-1,2-Dichloroethene	0.857	0.917	-7.0	81	0.00
21	T	2,2-Dichloropropane	0.791	0.837	-5.8	79	-0.01
22	T	2-Butanone (MEK)	1.208	1.357	-12.3	83	-0.02
23	T	Bromochloromethane	0.364	0.390	-7.1	80	-0.02
24	T	Tetrahydrofuran	0.000	0.000	0.0	0#	-4.87#
25	C	Chloroform	1.651	1.869	-13.2	87	-0.01
26	T	1,1,1-Trichloroethane	1.273	1.430	-12.3	77	0.00
27	T	Carbon tetrachloride	1.076	1.241	-15.3	83	0.01
28	T	1,1-Dichloropropene	1.187	1.309	-10.3	84	-0.01
29	T	1,2-Dichloroethane (EDC)	1.725	2.064	-19.7	90	0.00
30	S	1,2-Dichloroethane-d4	0.933	1.036	-11.0	86	0.00
31	I	1,4-Difluorobenzene	1.000	1.000	0.0	77	0.00
32	M	Benzene	1.844	2.010	-9.0	81	0.00
33	M	Trichloroethene	0.497	0.582	-17.1	87	0.01
34	C	1,2-Dichloropropane	0.581	0.616	-6.0	81	0.00
35	T	Dibromomethane	0.350	0.383	-9.4	85	0.00
36	T	1,4-Dioxane	0.000	0.000	0.0	0#	0.00
37	T	Bromodichloromethane	0.732	0.876	-19.7	86	0.00
38	T	2-Chloroethyl vinyl ether	0.290	0.308	-6.2	81	0.00
39	T	cis-1,3-Dichloropropene	0.874	0.977	-11.8	82	0.00
40	T	4-Methyl-2-pentanone (MIBK)	1.187	1.315	-10.8	81	0.00
41	S	Toluene-d8	1.264	1.328	-5.1	81	0.00
42	MC	Toluene	1.190	1.311	-10.2	81	0.00
43	T	trans-1,3-Dichloropropene	0.916	1.073	-17.1	84	0.00
44	T	1,1,2-Trichloroethane	0.420	0.449	-6.9	79	0.00
45	T	Tetrachloroethene	0.413	0.458	-10.9	82	0.00
46	T	1,3-Dichloropropane	0.900	0.994	-10.4	81	0.00

47 T	2-Hexanone	1.003	1.158	-15.5	85	0.00
48 T	Dibromochloromethane	0.445	0.514	-15.5	78	0.00
49 T	1,2-Dibromoethane (EDB)	0.495	0.555	-12.1	81	0.00
50 I	Chlorobenzene-d5	1.000	1.000	0.0	79	0.00
51 MP	Chlorobenzene	1.241	1.283	-3.4	81	0.00
52 T	1,1,1,2-Tetrachloroethane	0.405	0.451	-11.4	83	0.00
53 C	Ethylbenzene	2.222	2.380	-7.1	82	0.00
54 T	m,p-Xylene	0.800	0.844	-5.5	81	0.00
55 T	o-Xylene	0.827	0.876	-5.9	83	0.00
56 T	Styrene	1.389	1.420	-2.2	78	0.00
57 P	Bromoform	0.323	0.386	-19.5	83	0.00
58 T	Isopropylbenzene	2.137	2.334	-9.2	83	0.00
59 S	Bromofluorobenzene	0.710	0.753	-6.1	83	0.00
60 P	1,1,2,2-Tetrachloroethane	0.867	0.802	7.5	73	0.00
61 T	Bromobenzene	0.511	0.524	-2.5	82	0.00
62 T	1,2,3-Trichloropropane	0.772	0.802	-3.9	83	0.00
63 T	n-Propylbenzene	2.608	2.839	-8.9	82	0.00
64 T	2-Chlorotoluene	1.679	1.826	-8.8	83	0.00
65 T	1,3,5-Trimethylbenzene	1.897	2.047	-7.9	83	0.00
66 T	4-Chlorotoluene	2.009	2.188	-8.9	83	0.00
67 T	tert-Butylbenzene	1.456	1.549	-6.4	81	0.00
68 T	1,2,4-Trimethylbenzene	1.924	2.061	-7.1	83	0.00
69 T	sec-Butylbenzene	2.278	2.435	-6.9	81	0.00
70 T	1,3-Dichlorobenzene	0.907	0.939	-3.5	80	0.00
71 T	4-Isopropyltoluene	1.827	1.971	-7.9	81	0.00
72 T	1,4-Dichlorobenzene	0.931	0.955	-2.6	81	0.00
73 T	n-Butylbenzene	1.892	1.990	-5.2	82	0.00
74 T	1,2-Dichlorobenzene	0.882	0.924	-4.8	82	0.00
75 T	1,2-Dibromo-3-chloropropane	0.275	0.309	-12.4	84	0.00
76 T	1,2,4-Trichlorobenzene	0.737	0.722	2.0	77	0.01
77 T	Hexachlorobutadiene	0.285	0.287	-0.7	79	0.00
78 T	Naphthalene	2.331	2.307	1.0	77	0.00
79 T	1,2,3-Trichlorobenzene	0.736	0.702	4.6	76	0.00
80 T	1,1,2-Trichloro-1,2,2-trifl	0.315	0.319	-1.3	87	-0.02
81 T	Methyl acetate	0.791	0.759	4.0	80	0.00
82 T	Cyclohexane	1.024	0.938	8.4	80	0.02
83 T	Methylcyclohexane	0.775	0.767	1.0	79	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

K8230724.M Wed Aug 02 09:50:20 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3867.D
Acq On : 31 Jul 2023 22:53
Operator : BARBARA
Sample : CCV100,CCV230731-02,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 02 09:32:32 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	5.79	168	225356	50.00	UG		0.00
31) 1,4-Difluorobenzene	6.61	114	391564	50.00	UG		0.00
50) Chlorobenzene-d5	9.95	117	430006	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.10	65	233537	55.51	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 111.02%				
41) Toluene-d8	8.28	98	519937	52.51	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.02%				
59) Bromofluorobenzene	11.35	95	323737	53.02	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.04%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.60	85	316585	106.03	UG	#	58
3) Chloromethane	1.80	50	331640	89.67	UG		98
4) Vinyl chloride	1.90	62	295200	101.26	UG		99
5) Bromomethane	2.25	94	180183	102.64	UG	#	83
6) Chloroethane	2.31	64	195135	104.25	UG		99
7) Trichlorofluoromethane	2.60	101	425348	88.44	UG	#	76
8) Acrolein	3.00	56	20779m	316.76	UG		
9) 1,1-Dichloroethene	3.16	96	256736	104.17	UG	#	43
10) Acetone	3.19	43	734282	237.46	UG	#	97
11) Carbon disulfide	3.43	76	954848	114.18	UG		100
12) Vinyl acetate	3.59	43	652945	104.35	UG	#	100
13) Methylene chloride	3.75	84	351799	99.93	UG		100
14) Acrylonitrile	6.11	53	24619	7.50	UG	#	100
15) tert-Butyl alcohol (TBA)	3.88	59	244180	233.97	UG	#	100
16) trans-1,2-Dichloroethene	4.02	96	381126	110.06	UG	#	100
17) Methyl tert-butyl ether (M	4.05	73	1602766	114.46	UG		100
18) 1,1-Dichloroethane	4.51	63	879104	114.48	UG	#	94
19) Diisopropyl ether (DIPE)	4.63	45	1850444	111.35	UG	#	100
20) cis-1,2-Dichloroethene	5.18	96	413285	107.00	UG	#	99
21) 2,2-Dichloropropane	5.18	77	377453	105.87	UG		89
22) 2-Butanone (MEK)	5.21	43	1222937	224.68	UG	#	96
23) Bromochloromethane	5.45	128	175888	107.33	UG	#	44
25) Chloroform	5.55	83	842421	113.18	UG		100
26) 1,1,1-Trichloroethane	5.76	97	644564	112.38	UG		87
27) Carbon tetrachloride	5.95	117	559267	115.36	UG		88
28) 1,1-Dichloropropene	5.94	75	590114	110.31	UG	#	74
29) 1,2-Dichloroethane (EDC)	6.19	62	930489	119.71	UG	#	98
32) Benzene	6.18	78	1574264	109.00	UG		100
33) Trichloroethene	6.91	95	456103	117.15	UG		89
34) 1,2-Dichloropropane	7.15	63	482260	106.01	UG	#	99
35) Dibromomethane	7.27	93	300184	109.61	UG	#	37
37) Bromodichloromethane	7.46	83	686050	119.67	UG	#	98
38) 2-Chloroethyl vinyl ether	7.15	63	482260	212.03	UG	#	100
39) cis-1,3-Dichloropropene	7.97	75	765472	111.88	UG	#	96
40) 4-Methyl-2-pentanone (MIBK	8.16	43	2059160	221.53	UG		100
42) Toluene	8.36	92	1026387	110.13	UG		98
43) trans-1,3-Dichloropropene	8.60	75	840224	117.18	UG	#	95

44) 1,1,2-Trichloroethane	8.81	83	351498	106.78 UG		96
45) Tetrachloroethene	8.99	166	358792	110.84 UG		99
46) 1,3-Dichloropropane	9.01	76	778353	110.42 UG		99
47) 2-Hexanone	9.11	43	1813416	230.79 UG		98
48) Dibromochloromethane	9.27	129	402358	115.44 UG		99
49) 1,2-Dibromoethane (EDB)	9.40	107	434812	112.24 UG		99
51) Chlorobenzene	9.98	112	1103100	103.37 UG		99
52) 1,1,1,2-Tetrachloroethane	10.08	131	387756	111.46 UG	#	99
53) Ethylbenzene	10.12	91	2047138	107.15 UG		98
54) m,p-Xylene	10.26	106	1452034	210.94 UG	#	100
55) o-Xylene	10.73	106	753197	105.89 UG	#	17
56) Styrene	10.74	104	1221641	102.28 UG	#	80
57) Bromoform	10.95	173	332248	119.73 UG	#	78
58) Isopropylbenzene	11.18	105	2006858	109.18 UG	#	97
60) 1,1,2,2-Tetrachloroethane	11.52	83	689564	92.51 UG		98
61) Bromobenzene	11.53	156	450553	102.54 UG	#	52
62) 1,2,3-Trichloropropane	11.57	75	689946	103.95 UG		99
63) n-Propylbenzene	11.68	91	2441566	108.86 UG	#	96
64) 2-Chlorotoluene	11.77	91	1569952	108.74 UG	#	91
65) 1,3,5-Trimethylbenzene	11.89	105	1760120	107.91 UG	#	93
66) 4-Chlorotoluene	11.90	91	1881539	108.90 UG	#	91
67) tert-Butylbenzene	12.29	119	1332164	106.37 UG	#	100
68) 1,2,4-Trimethylbenzene	12.35	105	1772302	107.12 UG	#	94
69) sec-Butylbenzene	12.56	105	2094111	106.87 UG	#	98
70) 1,3-Dichlorobenzene	12.68	146	807428	103.55 UG		98
71) 4-Isopropyltoluene	12.74	119	1694991	107.88 UG		99
72) 1,4-Dichlorobenzene	12.78	146	821355	102.57 UG		99
73) n-Butylbenzene	13.24	91	1711138	105.17 UG	#	95
74) 1,2-Dichlorobenzene	13.24	146	794754	104.83 UG		100
75) 1,2-Dibromo-3-chloropropan	14.19	75	266082	112.60 UG	#	61
76) 1,2,4-Trichlorobenzene	15.15	180	621254	98.04 UG		99
77) Hexachlorobutadiene	15.35	225	246869	100.69 UG		100
78) Naphthalene	15.41	128	1984153	98.98 UG		100
79) 1,2,3-Trichlorobenzene	15.66	180	603999	95.42 UG		98
80) 1,1,2-Trichloro-1,2,2-trif	3.17	101	274455	101.40 UG		93
81) Methyl acetate	3.59	43	652945	96.03 UG	#	77
82) Cyclohexane	5.83	56	806862	91.58 UG	#	71
83) Methylcyclohexane	7.13	83	659940	99.05 UG	#	58

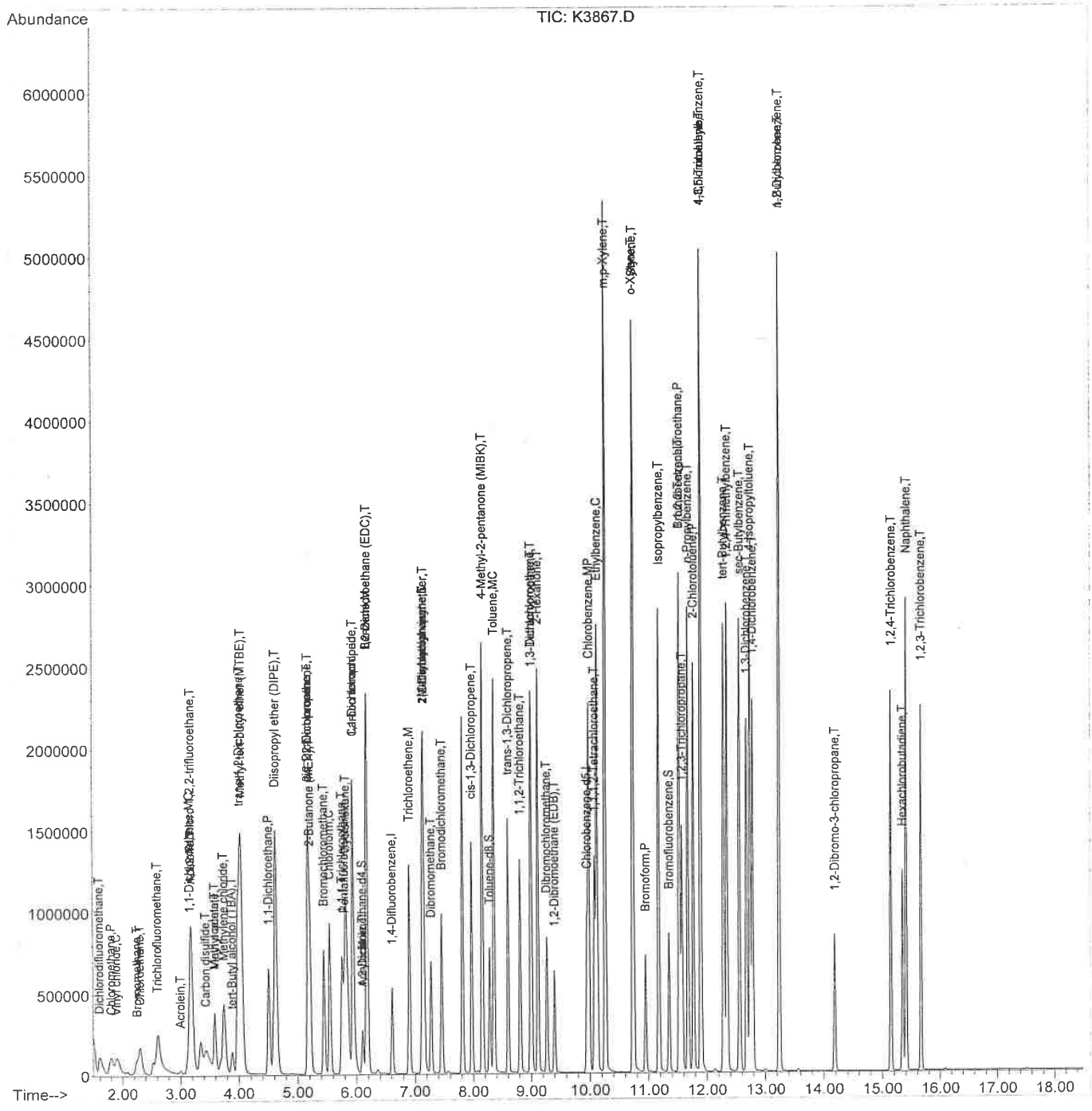
(#) = qualifier out of range (m) = manual integration (+) = signals summed

K8230724.M Fri Aug 11 12:13:34 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3867.D
Acq On : 31 Jul 2023 22:53
Operator : BARBARA
Sample : CCV100,CCV230731-02,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 02 09:32:32 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration



K8230724.M Fri Aug 11 12:13:35 2023 Page: 3

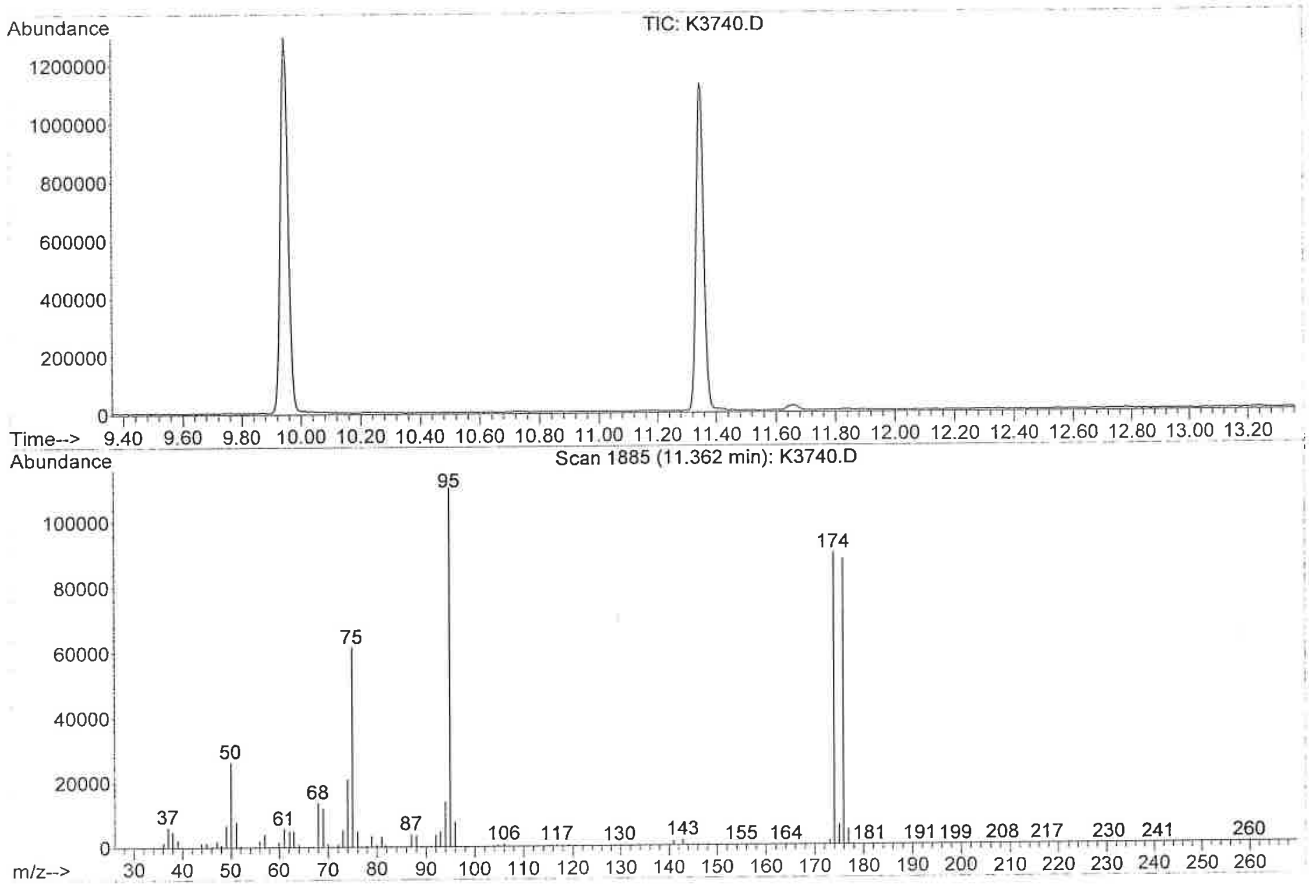
VOLATILE ORGANICS RAW QC DATA

BFB

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3740.D
Acq On : 24 Jul 2023 14:56
Operator : BARBARA
Sample : BFBA230724-01,BFBA230724-01,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 1 Sample Multiplier: 1

Integration File: LSCINT.P

Method : C:\MSDCHEM\1\METHODS\K8230724.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260D
Last Update : Wed Jul 26 09:29:59 2023



Spectrum Information: Scan 1885

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.8	26280	PASS
75	95	30	60	55.7	61472	PASS
95	95	100	100	100.0	110400	PASS
96	95	5	9	7.0	7684	PASS
173	174	0.00	2	1.5	1332	PASS
174	95	50	110	81.5	89992	PASS
175	174	5	9	6.8	6080	PASS
176	174	95	101	97.9	88096	PASS
177	176	5	9	5.4	4798	PASS

Scan 1885 (11.362 min): K3740.D
BFBA230724-01,BFBA230724-01,A,5mL,100

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	1413	49.00	6653	62.10	5078	75.00	61472
37.10	6234	50.00	26280	63.00	4957	76.00	4966
38.00	4731	51.10	7695	64.10	825	76.80	302
39.10	2336	52.10	449	65.60	66	77.90	501
39.90	90	55.20	376	67.00	268	78.90	3398
43.20	100	56.00	1940	68.00	13678	79.90	650
43.90	1329	57.00	4077	69.00	11943	81.00	3227
45.00	1392	58.00	178	70.00	1036	81.80	609
46.20	175	58.70	229	72.00	786	82.80	168
47.10	1862	59.90	1549	73.00	5172	87.00	3984
48.00	766	61.00	5731	74.00	20832	88.00	3427

Scan 1885 (11.362 min): K3740.D
BFBA230724-01,BFBA230724-01,A,5mL,100

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
89.10	71	103.90	243	116.80	673	131.00	275
90.20	157	104.70	413	117.90	374	133.80	157
91.00	455	106.00	813	118.90	321	135.00	269
92.00	3734	106.90	199	120.40	208	136.70	192
93.00	4598	110.10	75	123.00	64	137.50	165
94.00	13855	110.90	111	124.50	128	138.00	69
95.00	110400	112.00	126	125.80	55	139.00	163
96.00	7684	112.90	91	127.70	242	139.90	116
97.00	51	114.20	113	128.60	57	140.90	1506
100.00	58	115.00	184	129.10	83	142.00	200
100.70	92	115.90	364	129.80	407	142.90	1823

Scan 1885 (11.362 min): K3740.D
BFBA230724-01,BFBA230724-01,A,5mL,100

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
143.80	290	156.90	145	171.80	241	197.40	67
145.00	138	159.00	202	173.10	1332	198.80	63
146.00	145	159.70	84	174.00	89992	205.90	87
148.00	350	160.50	119	175.00	6080	208.40	109
149.70	89	161.30	138	175.90	88096	216.30	91
150.50	75	162.60	103	176.90	4798	217.60	110
151.70	59	163.40	123	177.90	175	220.30	50
153.10	187	164.10	238	181.20	109	230.40	151
154.00	97	167.20	163	184.80	91	231.40	65
155.00	314	167.90	140	190.10	58	234.80	135
155.90	92	170.80	254	191.50	163	240.80	58

Scan 1885 (11.362 min): K3740.D
BFBA230724-01,BFBA230724-01,A,5mL,100

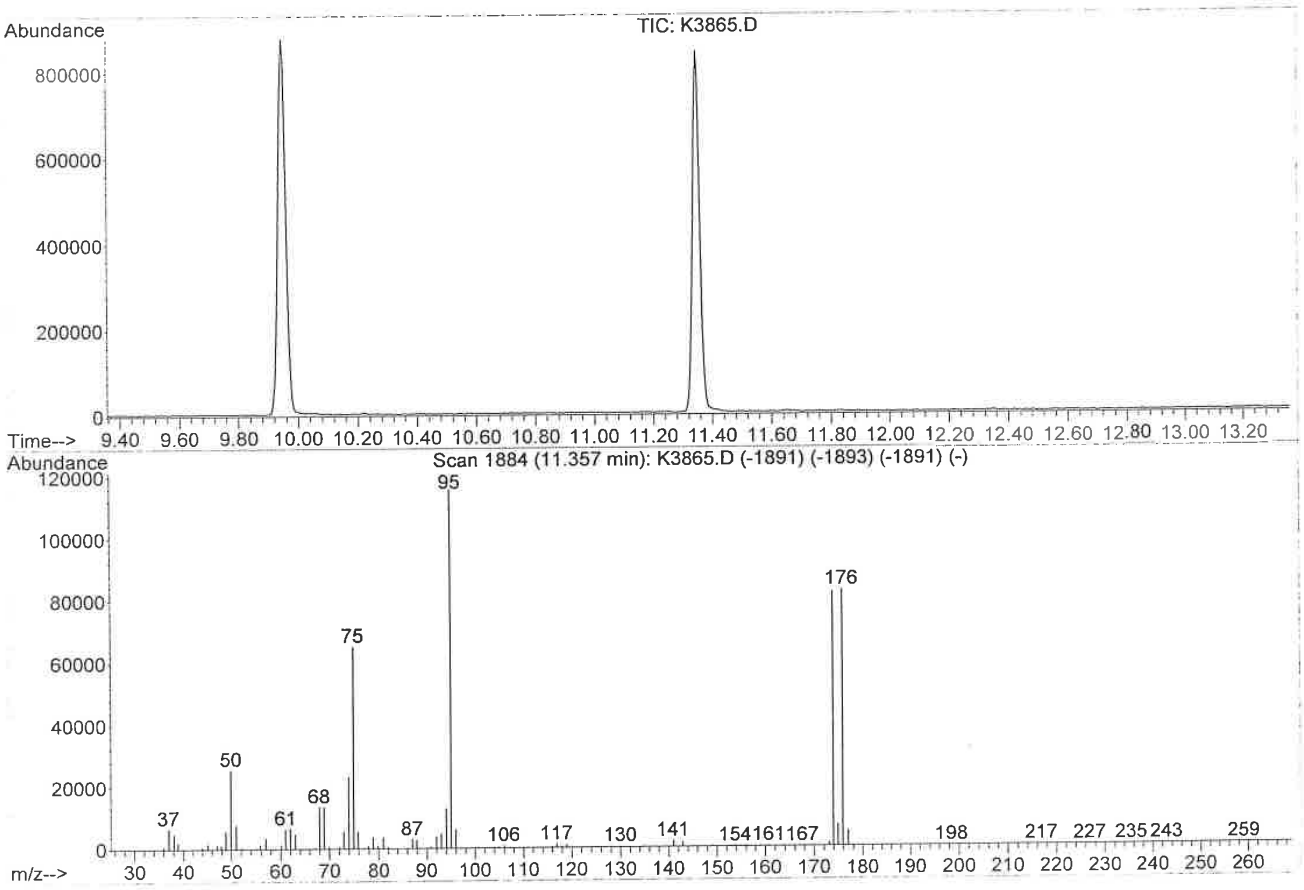
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
259.90	58						

BFB

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3865.D
Acq On : 31 Jul 2023 22:24
Operator : BARBARA
Sample : BFBmL,100
Misc : EWMA/SWIVE,07/25/23,07/25/23,1
ALS Vial : 26 Sample Multiplier: 1

Integration File: LSCINT.P

Method : C:\MSDCHEM\1\METHODS\K8230724.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260D
Last Update : Wed Jul 26 09:29:59 2023



Spectrum Information: Scan 1884

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.1	25576	PASS
75	95	30	60	56.3	65223	PASS
95	95	100	100	100.0	115799	PASS
96	95	5	9	5.2	6005	PASS
173	174	0.00	2	1.4	1132	PASS
174	95	50	110	70.9	82153	PASS
175	174	5	9	8.5	6976	PASS
176	174	95	101	100.8	82773	PASS
177	176	5	9	6.0	4981	PASS

Scan 1884 (11.357 min): K3865.D (-1891) (-1893) (-1891)
BFBmL,100
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.20	50	47.90	1272	62.00	6706	75.00	65223
36.05	847	48.90	5864	63.05	4779	75.90	5526
37.05	6641	50.00	25576	63.90	198	77.00	354
38.10	4926	51.05	7682	64.80	97	77.90	873
38.90	2092	52.20	440	67.00	410	78.90	3726
40.20	141	55.00	298	68.00	13540	79.90	1063
42.50	113	55.90	1428	68.90	13608	81.00	3704
43.20	145	57.00	3603	69.90	764	82.00	531
43.90	693	58.20	225	72.10	642	82.90	177
45.10	1711	60.10	1315	73.00	5770	85.80	96
47.10	1387	61.00	6455	74.00	23208	87.05	2997

Scan 1884 (11.357 min): K3865.D (-1891) (-1893) (-1891)
BFBmL,100
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
87.95	2763	104.90	390	118.90	990	138.10	95
89.40	113	106.00	772	120.90	54	138.90	222
90.30	156	107.00	174	125.50	70	139.70	179
90.90	589	110.90	236	127.00	108	141.00	2022
92.00	3744	111.90	94	128.00	382	141.85	11
93.00	4772	112.90	158	129.00	139	142.90	1500
94.00	12882	114.40	57	130.00	402	145.00	233
95.00	115799	115.00	112	134.10	91	145.70	159
96.00	6005	115.90	478	134.70	328	147.80	177
102.80	40	116.90	1209	136.40	69	148.80	89
103.90	365	117.90	515	137.00	200	151.60	65

Scan 1884 (11.357 min): K3865.D (-1891) (-1893) (-1891)
BFBmL,100
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
153.80	257	169.40	145	198.50	83		
154.90	262	170.10	198	200.20	80		
156.20	242	172.05	100	203.10	66		
156.80	226	173.10	1132	216.90	97		
158.00	156	173.95	82153	220.00	61		
159.00	243	174.90	6976	221.10	56		
160.20	81	175.90	82773	226.90	65		
160.80	296	177.00	4981	235.50	66		
161.30	94	177.90	189	241.50	54		
167.00	150	181.10	53	242.90	56		
167.60	147	192.90	74	259.10	56		

VOLATILE ORGANICS

Lab ID: BLKA230731-02
Client ID: BLKA230731-02
Date Received: NA
Date Analyzed: 08/01/2023
Data file: K3869.D 08/01/2023 00:19

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.552
Chloromethane	ND		0.500	0.309
Vinyl chloride	ND		1.00	0.352
Bromomethane	ND		1.00	0.386
Chloroethane	ND		0.500	0.324
Trichlorofluoromethane	ND		1.00	0.503
1,1-Dichloroethene	ND		0.500	0.363
Acetone	ND		2.00	0.847
Carbon disulfide	ND		1.00	0.403
Methylene chloride	ND		1.00	0.500
trans-1,2-Dichloroethene	ND		0.500	0.372
Methyl tert-butyl ether (MTBE)	ND		0.500	0.245
1,1-Dichloroethane	ND		0.500	0.285
cis-1,2-Dichloroethene	ND		0.500	0.277
2-Butanone (MEK)	ND		2.00	0.802
Bromochloromethane	ND		1.00	0.379
Chloroform	ND		0.500	0.285
1,1,1-Trichloroethane	ND		0.500	0.381
Carbon tetrachloride	ND		0.500	0.349
1,2-Dichloroethane (EDC)	ND		0.500	0.273
Benzene	ND		0.500	0.270
Trichloroethene	ND		0.500	0.347
1,2-Dichloropropane	ND		0.500	0.272
Bromodichloromethane	ND		0.500	0.258
cis-1,3-Dichloropropene	ND		1.00	0.264
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.611

VOLATILE ORGANICS

Lab ID: BLKA230731-02
Client ID: BLKA230731-02
Date Received: NA
Date Analyzed: 08/01/2023
Data file: K3869.D 08/01/2023 00:19

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Concentration	Q	RL	MDL
Toluene	ND		0.500	0.302
trans-1,3-Dichloropropene	ND		1.00	0.330
1,1,2-Trichloroethane	ND		0.500	0.313
Tetrachloroethene	ND		0.500	0.365
2-Hexanone	ND		1.00	0.818
Dibromochloromethane	ND		0.500	0.263
1,2-Dibromoethane (EDB)	ND		0.500	0.289
Chlorobenzene	ND		0.500	0.304
Ethylbenzene	ND		0.500	0.313
Total Xylenes	ND		1.00	0.345
Styrene	ND		1.00	0.317
Bromoform	ND		0.500	0.328
Isopropylbenzene	ND		1.00	0.332
1,1,2,2-Tetrachloroethane	ND		1.00	0.284
1,3-Dichlorobenzene	ND		0.500	0.386
1,4-Dichlorobenzene	ND		0.500	0.397
1,2-Dichlorobenzene	ND		0.500	0.354
1,2-Dibromo-3-chloropropane	ND		1.00	0.410
1,2,4-Trichlorobenzene	ND		1.00	0.358
1,2,3-Trichlorobenzene	ND		1.00	0.406
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.538
Methyl acetate	ND		0.500	0.345
Cyclohexane	ND		1.00	0.469
Methylcyclohexane	ND		1.00	0.421
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.264

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: BLKA230731-02
Client ID: BLKA230731-02
Date Received: NA
Date Analyzed: 08/01/2023
Date File: K3869.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3869.D
Acq On : 1 Aug 2023 00:19
Operator : BARBARA
Sample : BLKA230731-02,BLKA230731-02,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 02 09:19:29 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	5.80	168	218439	50.00	UG	0.00
31) 1,4-Difluorobenzene	6.61	114	380577	50.00	UG	0.00
50) Chlorobenzene-d5	9.95	117	389876	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.10	65	229268	56.22	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 112.44%			
41) Toluene-d8	8.28	98	476299	49.49	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.98%			
59) Bromofluorobenzene	11.35	95	281874	50.92	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.84%			

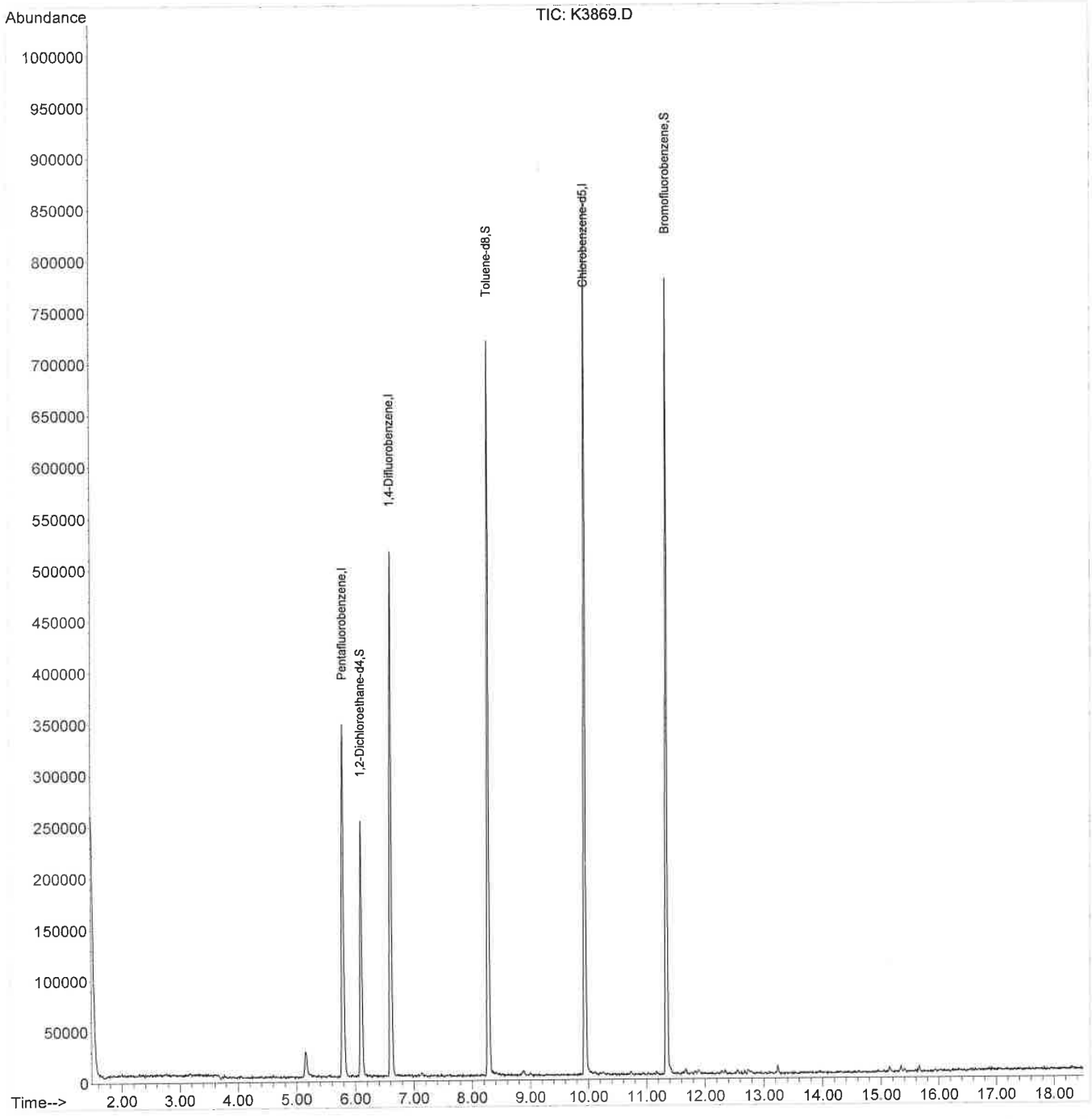
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

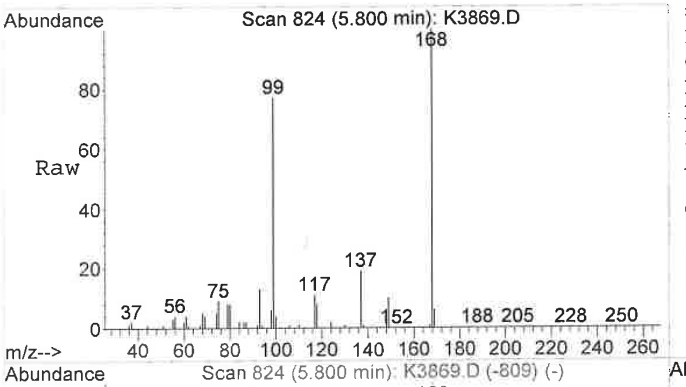
Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3869.D
Acq On : 1 Aug 2023 00:19
Operator : BARBARA
Sample : BLKA230731-02,BLKA230731-02,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 02 09:19:29 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration



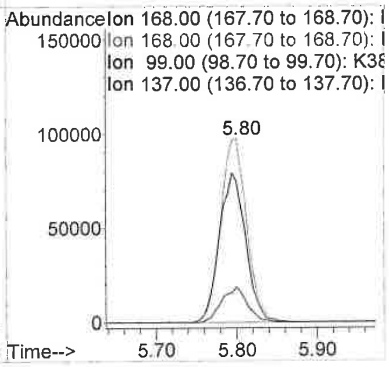
K8230724.M Fri Aug 11 12:08:09 2023 Page: 2

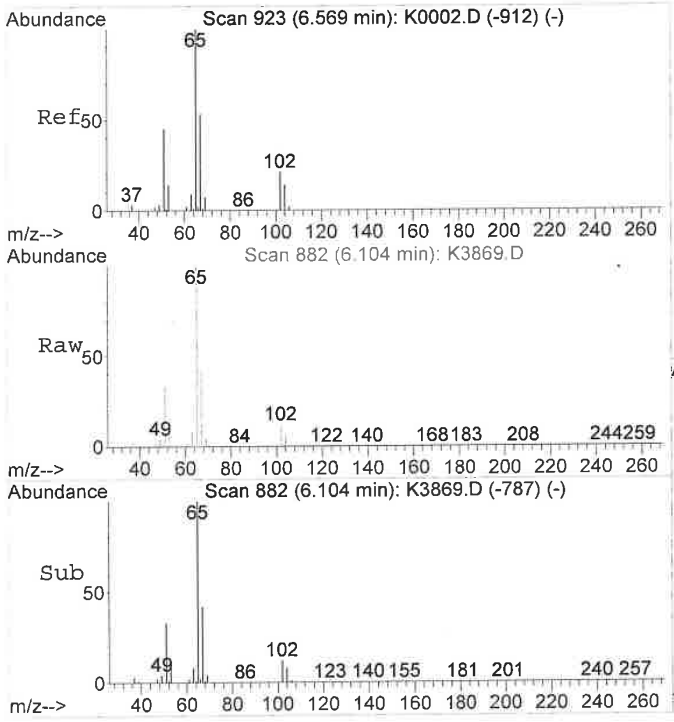


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 5.80 min Scan# 824
Delta R.T. 0.01 min
Lab File: K3869.D
Acq: 1 Aug 2023 00:19

Tgt Ion:168 Resp: 218439

Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	82.1	53.3	79.9#
137	19.0	13.5	20.3

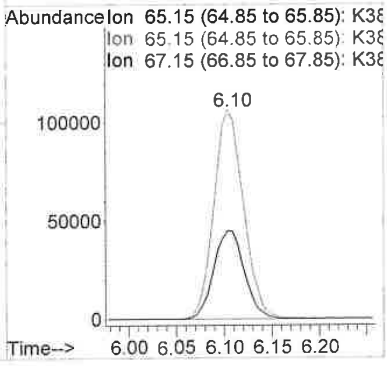


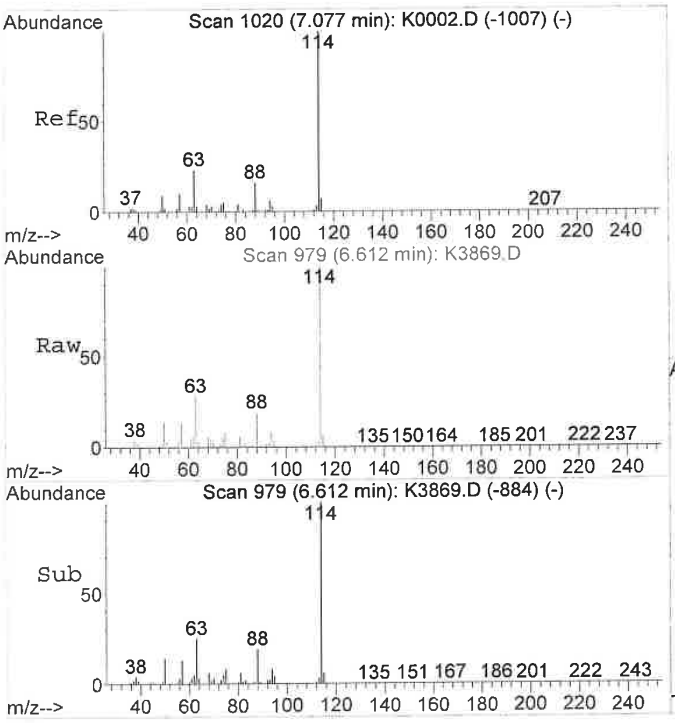


#30
1,2-Dichloroethane-d4
Concen: 56.22 UG
RT: 6.10 min Scan# 882
Delta R.T. -0.00 min
Lab File: K3869.D
Acq: 1 Aug 2023 00:19

Tgt Ion: 65 Resp: 229268

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	44.0	43.5	65.3

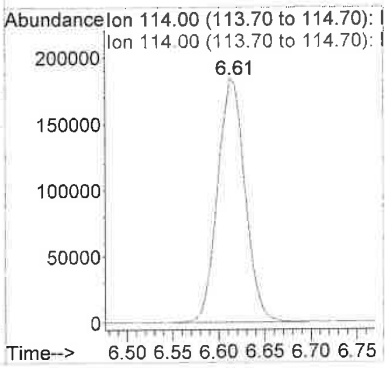


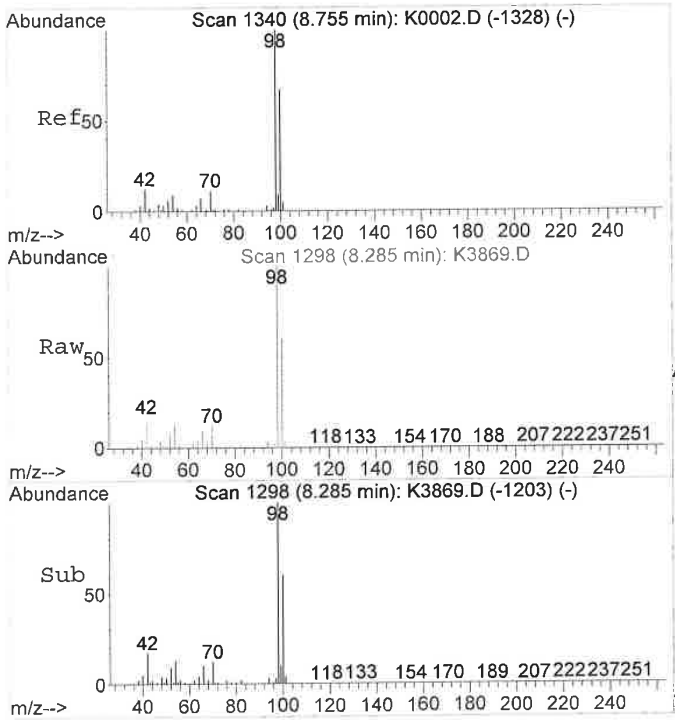


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 6.61 min Scan# 979
Delta R.T. -0.00 min
Lab File: K3869.D
Acq: 1 Aug 2023 00:19

Tgt Ion:114 Resp: 380577

Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

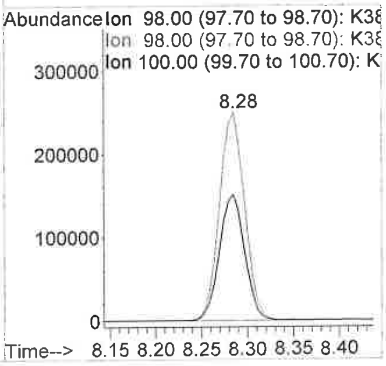


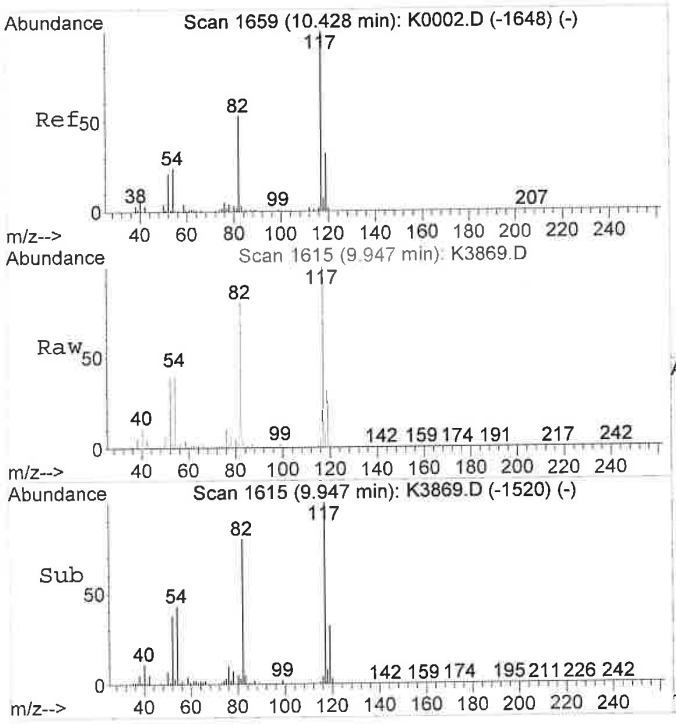


#41
Toluene-d8
Concen: 49.49 UG
RT: 8.28 min Scan# 1298
Delta R.T. -0.00 min
Lab File: K3869.D
Acq: 1 Aug 2023 00:19

Tgt Ion: 98 Resp: 476299

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	61.0	52.0	78.0

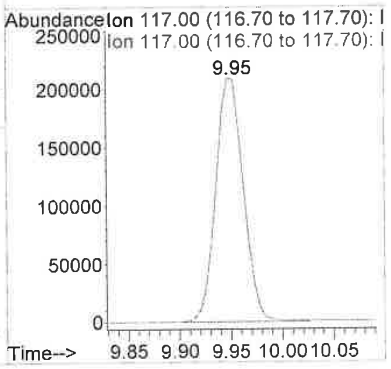


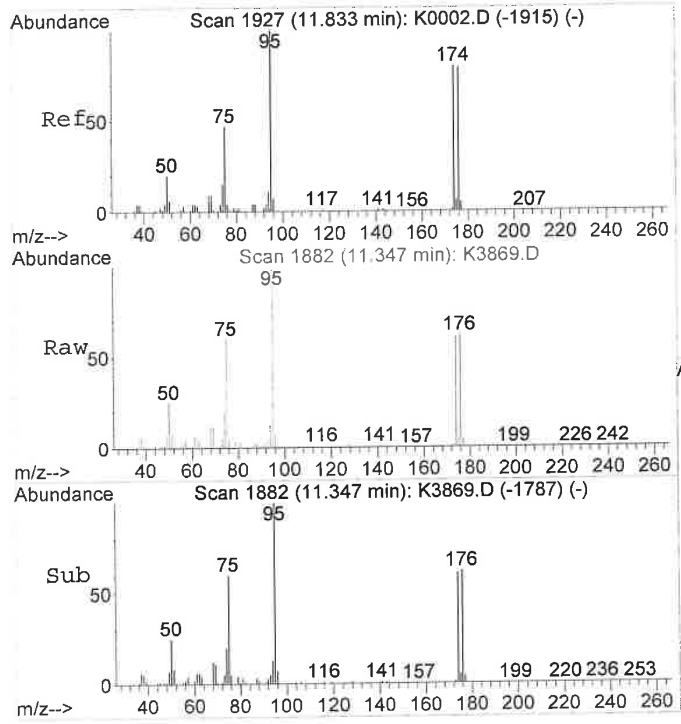


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 9.95 min Scan# 1615
Delta R.T. -0.00 min
Lab File: K3869.D
Acq: 1 Aug 2023 00:19

Tgt Ion:117 Resp: 389876

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0

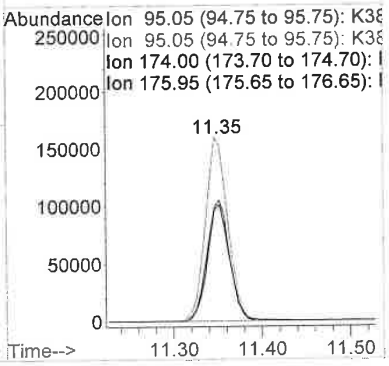




#59
Bromofluorobenzene
Concen: 50.92 UG
RT: 11.35 min Scan# 1882
Delta R.T. -0.00 min
Lab File: K3869.D
Acq: 1 Aug 2023 00:19

Tgt Ion: 95 Resp: 281874

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	0.0	89.0	133.6#
176	0.0	86.6	129.8#



LSC Area Percent Report

Data Path : C:\MSDCHEM\1\DATA\23-08-01\
Data File : K3869.D
Acq On : 1 Aug 2023 00:19
Operator : BARBARA
Sample : BLKA230731-02,BLKA230731-02,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 5 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.07 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\K8230724.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260D

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	5.155	690	701	717	rBV3	25072	74267	4.69%	1.073%
2	5.794	813	823	842	rBV2	345626	789690	49.86%	11.409%
3	6.104	873	882	907	rBV	251040	565619	35.71%	8.172%
4	6.612	969	979	996	rVV	513410	1074659	67.85%	15.526%
5	8.285	1287	1298	1313	rBV	718019	1388506	87.66%	20.060%
6	9.947	1606	1615	1638	rBV	854002	1583952	100.00%	22.884%
7	11.352	1870	1883	1906	rBV	777605	1425903	90.02%	20.601%
8	13.234	2237	2242	2252	rVB4	9470	19000	1.20%	0.275%

Sum of corrected areas: 6921596

K8230724.M Wed Aug 02 09:44:57 2023 Page: 1

LSC Report - Integrated Chromatogram

```
Data Path : C:\MSDCHEM\1\DATA\23-08-01\
Data File : K3869.D
Acq On    :  1 Aug 2023  00:19
Operator  : BARBARA
Sample    : BLKA230731-02,BLKA230731-02,A,5mL,100
Misc      : NA,NA,NA,1
ALS Vial  : 5   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title  : VOLATILE ORGANICS BY EPA METHOD 8260D

TIC Library   : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P
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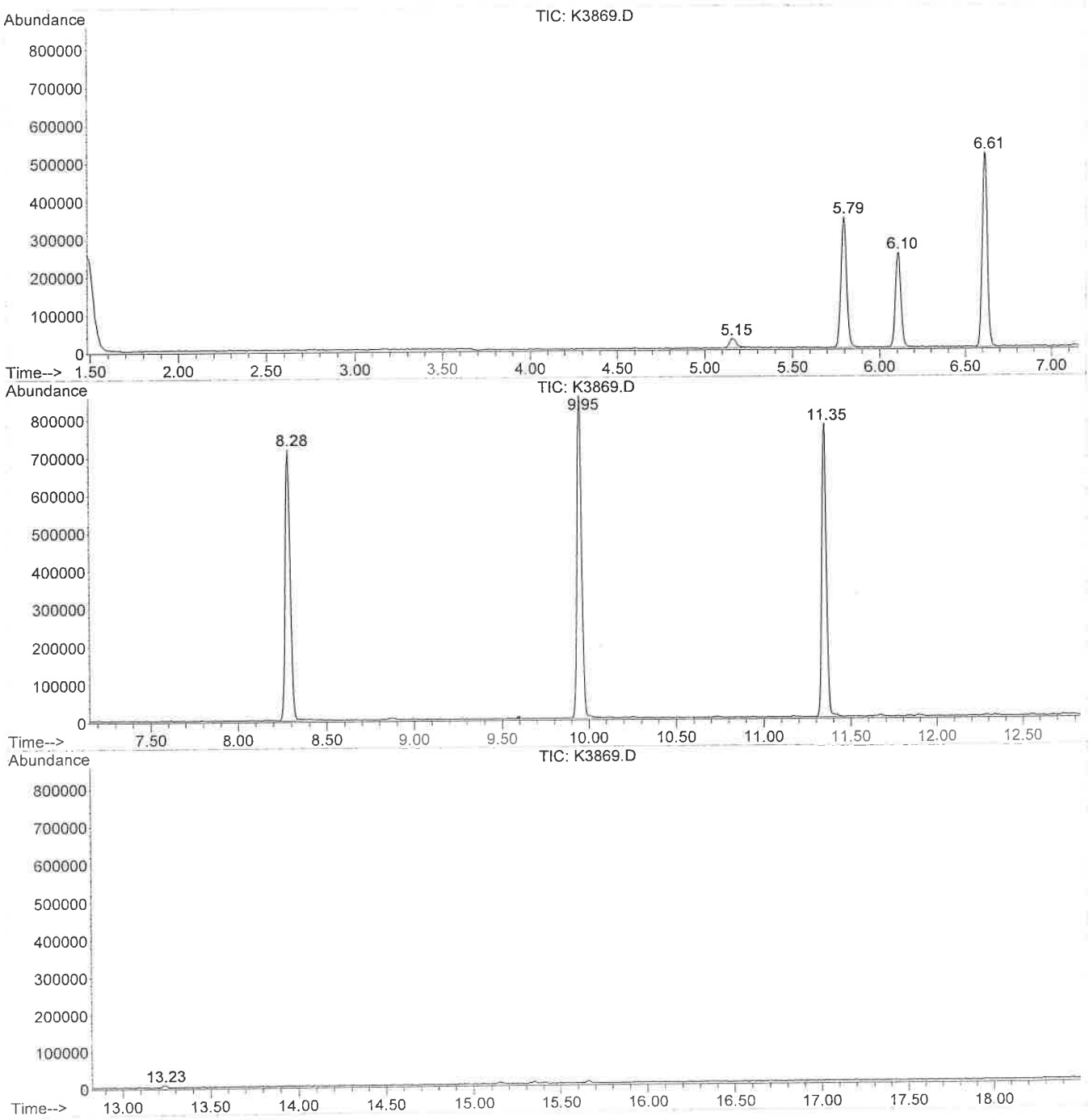


K8230724.M Wed Aug 02 09:44:57 2023 Page: 2

Tentatively Identified Compound (LSC) summary

Data Path : C:\MSDCHEM\1\DATA\23-08-01\\
Data File : K3869.D
Acq On : 1 Aug 2023 00:199
Operator : BARBARAA
Sample : BLKA230731-02,BLKA230731-02,A,5mL,1000
Misc : NA,NA,NA,11
ALS Vial : 5 Sample Multiplier: 11

Quant Method : C:\MSDCHEM\1\METHODS\K8230724.MM
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260DD

TIC Library : C:\DATABASE\NIST05A.LL
TIC Integration Parameters: LSCINT.PP

TIC Top Hit name	RT	EstConc	Units	Response	--Internal Standard--- #	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3875.D
Acq On : 1 Aug 2023 3:13
Operator : BARBARA
Sample : E23-03431-002MS,E23-03431-002MS,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 02 09:47:50 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	5.80	168	271836	50.00	UG		0.00
31) 1,4-Difluorobenzene	6.61	114	474288	50.00	UG		0.00
50) Chlorobenzene-d5	9.95	117	509954	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.10	65	266218	52.46	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.92%				
41) Toluene-d8	8.28	98	617039	51.45	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.90%				
59) Bromofluorobenzene	11.35	95	374737	51.75	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.50%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.59	85	193529	53.73	UG	#	58
3) Chloromethane	1.79	50	224758	50.38	UG		98
4) Vinyl chloride	1.89	62	191698m	54.51	UG		
5) Bromomethane	2.24	94	114736	54.18	UG	#	45
6) Chloroethane	2.31	64	125573	55.62	UG		100
7) Trichlorofluoromethane	2.63	101	328580	56.64	UG	#	76
8) Acrolein	3.00	56	14250	180.09	UG	#	98
9) 1,1-Dichloroethene	3.17	96	159969	53.81	UG	#	43
10) Acetone	3.18	43	424342	113.76	UG		98
11) Carbon disulfide	3.45	76	596640	59.14	UG		100
12) Vinyl acetate	3.59	43	398336	52.78	UG	#	100
13) Methylene chloride	3.75	84	227163	53.49	UG		99
14) Acrylonitrile	6.10	53	29716	7.50	UG	#	100
15) tert-Butyl alcohol (TBA)	3.88	59	142839	113.47	UG	#	100
16) trans-1,2-Dichloroethene	4.02	96	223436	53.49	UG	#	100
17) Methyl tert-butyl ether (M	4.04	73	943983	55.89	UG		100
18) 1,1-Dichloroethane	4.51	63	515084	55.61	UG	#	83
19) Diisopropyl ether (DIPE)	4.63	45	1101867	54.97	UG	#	100
20) cis-1,2-Dichloroethene	5.18	96	253714	54.45	UG	#	99
21) 2,2-Dichloropropane	5.18	77	260561	60.59	UG	#	87
22) 2-Butanone (MEK)	5.21	43	702537	107.00	UG	#	96
23) Bromochloromethane	5.45	128	106852	54.05	UG	#	44
25) Chloroform	5.55	83	493248	54.94	UG		100
26) 1,1,1-Trichloroethane	5.76	97	426078	61.58	UG	#	84
27) Carbon tetrachloride	5.95	117	335582	57.39	UG		100
28) 1,1-Dichloropropene	5.95	75	352927	54.69	UG	#	73
29) 1,2-Dichloroethane (EDC)	6.19	62	523973	55.89	UG	#	98
32) Benzene	6.18	78	955978	54.64	UG		100
33) Trichloroethene	6.91	95	263258	55.83	UG	#	73
34) 1,2-Dichloropropane	7.15	63	296461	53.80	UG	#	99
35) Dibromomethane	7.28	93	174455	52.59	UG	#	61
37) Bromodichloromethane	7.46	83	402706	58.00	UG	#	97
38) 2-Chloroethyl vinyl ether	7.15	63	296461	107.61	UG	#	100
39) cis-1,3-Dichloropropene	7.98	75	462534	55.81	UG	#	96
40) 4-Methyl-2-pentanone (MIBK	8.15	43	1211204	107.58	UG		99
42) Toluene	8.36	92	603717	53.48	UG		99
43) trans-1,3-Dichloropropene	8.60	75	484359	55.77	UG	#	96
44) 1,1,2-Trichloroethane	8.81	83	215774	54.12	UG	#	52
45) Tetrachloroethene	8.99	166	212395	54.17	UG		100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3875.D
Acq On : 1 Aug 2023 3:13
Operator : BARBARA
Sample : E23-03431-002MS,E23-03431-002MS,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 02 09:47:50 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

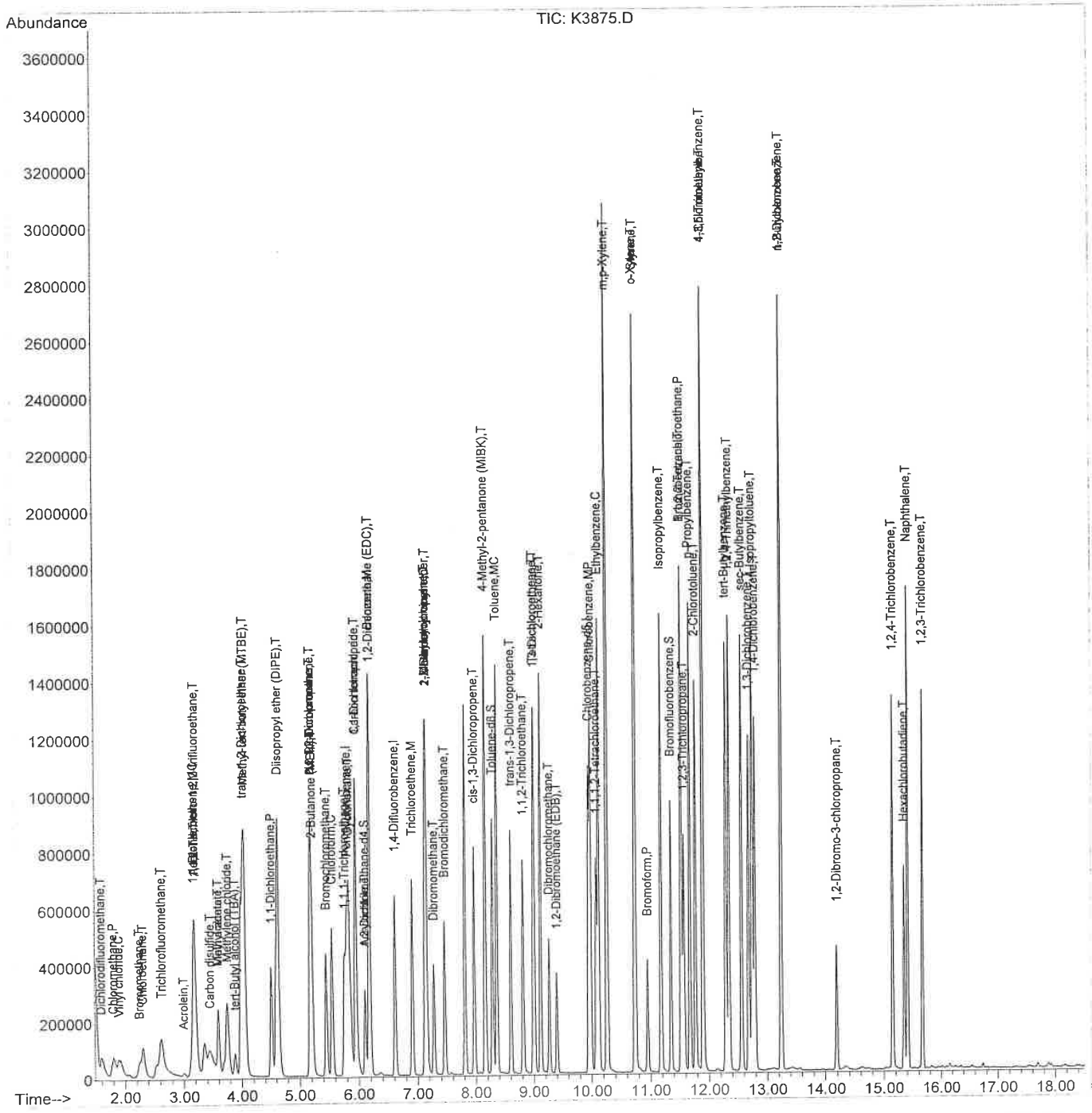
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
46) 1,3-Dichloropropane	9.01	76	461148	54.01 UG		99
47) 2-Hexanone	9.11	43	1043562	109.65 UG		99
48) Dibromochloromethane	9.27	129	244272	57.86 UG		100
49) 1,2-Dibromoethane (EDB)	9.40	107	257735	54.93 UG		98
51) Chlorobenzene	9.98	112	647120	51.14 UG		99
52) 1,1,1,2-Tetrachloroethane	10.08	131	220452	53.43 UG	#	100
53) Ethylbenzene	10.12	91	1204649	53.17 UG		98
54) m,p-Xylene	10.26	106	859021	105.23 UG	#	100
55) o-Xylene	10.73	106	432381	51.26 UG	#	17
56) Styrene	10.74	104	738506	52.14 UG	#	80
57) Bromoform	10.95	173	179419	54.52 UG	#	98
58) Isopropylbenzene	11.17	105	1138641	52.24 UG	#	97
60) 1,1,2,2-Tetrachloroethane	11.52	83	446888	50.55 UG		98
61) Bromobenzene	11.53	156	259483	49.80 UG	#	99
62) 1,2,3-Trichloropropane	11.57	75	392436	49.86 UG		99
63) n-Propylbenzene	11.67	91	1401946	52.71 UG	#	97
64) 2-Chlorotoluene	11.77	91	889150	51.93 UG	#	79
65) 1,3,5-Trimethylbenzene	11.89	105	993875	51.38 UG	#	93
66) 4-Chlorotoluene	11.90	91	1057684	51.62 UG	#	92
67) tert-Butylbenzene	12.29	119	745993	50.23 UG	#	100
68) 1,2,4-Trimethylbenzene	12.35	105	988600	50.39 UG	#	94
69) sec-Butylbenzene	12.56	105	1169831	50.34 UG	#	98
70) 1,3-Dichlorobenzene	12.68	146	457567	49.48 UG		99
71) 4-Isopropyltoluene	12.74	119	946720	50.81 UG		99
72) 1,4-Dichlorobenzene	12.78	146	464369	48.90 UG		100
73) n-Butylbenzene	13.24	91	962541	49.88 UG	#	95
74) 1,2-Dichlorobenzene	13.24	146	451410	50.21 UG		100
75) 1,2-Dibromo-3-chloropropan	14.19	75	143735	51.29 UG	#	62
76) 1,2,4-Trichlorobenzene	15.15	180	366563	48.78 UG		99
77) Hexachlorobutadiene	15.35	225	141388	48.63 UG		100
78) Naphthalene	15.40	128	1170058	49.22 UG		100
79) 1,2,3-Trichlorobenzene	15.66	180	348135	46.38 UG		98
80) 1,1,2-Trichloro-1,2,2-trif	3.19	101	173724	54.12 UG		93
81) Methyl acetate	3.59	43	398336	49.40 UG	#	79
82) Cyclohexane	5.83	56	505692	48.40 UG	#	70
83) Methylcyclohexane	7.13	83	413033	52.27 UG	#	62

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3875.D
Acq On : 1 Aug 2023 3:13
Operator : BARBARA
Sample : E23-03431-002MS,E23-03431-002MS,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 02 09:47:50 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration



K8230724.M Fri Aug 11 12:17:20 2023

Page: 3

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3874.D
Acq On : 1 Aug 2023 2:44
Operator : BARBARA
Sample : LCSA230731-02,LCSA230731-02,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 02 09:45:37 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	5.79	168	257014	50.00	UG		0.00
31) 1,4-Difluorobenzene	6.61	114	456019	50.00	UG		0.00
50) Chlorobenzene-d5	9.95	117	479964	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.10	65	258163	53.80	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 107.60%				
41) Toluene-d8	8.28	98	583405	50.59	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.18%				
59) Bromofluorobenzene	11.35	95	351774	51.62	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.24%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.61	85	179216	52.63	UG	#	58
3) Chloromethane	1.79	50	219889	52.13	UG		98
4) Vinyl chloride	1.89	62	176755m	53.16	UG		
5) Bromomethane	2.23	94	102246	51.07	UG	#	82
6) Chloroethane	2.32	64	107496	50.36	UG		99
7) Trichlorofluoromethane	2.61	101	238482	43.48	UG	#	76
8) Acrolein	3.00	56	12330	164.81	UG	#	95
9) 1,1-Dichloroethene	3.17	96	151509	53.90	UG	#	43
10) Acetone	3.18	43	392171	111.20	UG		97
11) Carbon disulfide	3.43	76	535865	56.18	UG		100
12) Vinyl acetate	3.58	43	391464	54.86	UG	#	100
13) Methylene chloride	3.77	84	196297	48.89	UG		99
14) Acrylonitrile	6.10	53	26792	7.15	UG	#	100
15) tert-Butyl alcohol (TBA)	3.88	59	132200	111.07	UG	#	100
16) trans-1,2-Dichloroethene	4.02	96	207827	52.62	UG	#	100
17) Methyl tert-butyl ether (M	4.04	73	906077	56.74	UG		100
18) 1,1-Dichloroethane	4.51	63	490365	55.99	UG	#	94
19) Diisopropyl ether (DIPE)	4.63	45	1033913	54.55	UG	#	100
20) cis-1,2-Dichloroethene	5.18	96	231483	52.55	UG	#	99
21) 2,2-Dichloropropane	5.18	77	241513	59.40	UG	#	96
22) 2-Butanone (MEK)	5.21	43	682445	109.94	UG	#	96
23) Bromochloromethane	5.45	128	99951	53.48	UG	#	44
25) Chloroform	5.55	83	462867	54.53	UG		100
26) 1,1,1-Trichloroethane	5.76	97	387442	59.23	UG	#	84
27) Carbon tetrachloride	5.95	117	304391	55.05	UG		100
28) 1,1-Dichloropropene	5.95	75	329914	54.07	UG	#	73
29) 1,2-Dichloroethane (EDC)	6.19	62	508327	57.34	UG	#	98
32) Benzene	6.17	78	893286	53.11	UG		100
33) Trichloroethene	6.91	95	240219	52.98	UG	#	47
34) 1,2-Dichloropropane	7.15	63	277887	52.45	UG	#	99
35) Dibromomethane	7.28	93	170157	53.35	UG	#	90
37) Bromodichloromethane	7.46	83	376724	56.43	UG	#	68
38) 2-Chloroethyl vinyl ether	7.15	63	277887	104.90	UG	#	100
39) cis-1,3-Dichloropropene	7.97	75	423500	53.15	UG	#	96
40) 4-Methyl-2-pentanone (MIBK	8.15	43	1164481	107.57	UG		99
42) Toluene	8.36	92	560517	51.64	UG		99
43) trans-1,3-Dichloropropene	8.60	75	457638	54.80	UG	#	96

44)	1,1,2-Trichloroethane	8.81	83	203506	53.08	UG	# 78
45)	Tetrachloroethene	8.99	166	198666	52.70	UG	100
46)	1,3-Dichloropropane	9.01	76	441089	53.73	UG	99
47)	2-Hexanone	9.11	43	1021627	111.64	UG	99
48)	Dibromochloromethane	9.27	129	226741	55.86	UG	100
49)	1,2-Dibromoethane (EDB)	9.40	107	243646	54.01	UG	98
51)	Chlorobenzene	9.98	112	600518	50.42	UG	99
52)	1,1,1,2-Tetrachloroethane	10.08	131	209374	53.92	UG	# 98
53)	Ethylbenzene	10.12	91	1118057	52.43	UG	98
54)	m,p-Xylene	10.26	106	800967	104.25	UG	# 100
55)	o-Xylene	10.73	106	404673	50.97	UG	# 17
56)	Styrene	10.74	104	687944	51.60	UG	# 80
57)	Bromoform	10.95	173	169131	54.61	UG	# 78
58)	Isopropylbenzene	11.18	105	1078507	52.57	UG	# 87
60)	1,1,2,2-Tetrachloroethane	11.52	83	423512	50.90	UG	98
61)	Bromobenzene	11.53	156	247310	50.42	UG	# 100
62)	1,2,3-Trichloropropane	11.57	75	381112	51.44	UG	99
63)	n-Propylbenzene	11.67	91	1299903	51.92	UG	# 97
64)	2-Chlorotoluene	11.77	91	841509	52.22	UG	# 91
65)	1,3,5-Trimethylbenzene	11.89	105	934179	51.31	UG	# 94
66)	4-Chlorotoluene	11.90	91	1009646	52.35	UG	# 91
67)	tert-Butylbenzene	12.29	119	699779	50.06	UG	# 100
68)	1,2,4-Trimethylbenzene	12.34	105	937774	50.78	UG	# 94
69)	sec-Butylbenzene	12.56	105	1096989	50.16	UG	# 98
70)	1,3-Dichlorobenzene	12.68	146	426900	49.05	UG	99
71)	4-Isopropyltoluene	12.74	119	883526	50.38	UG	99
72)	1,4-Dichlorobenzene	12.78	146	440043	49.23	UG	100
73)	n-Butylbenzene	13.24	91	894683	49.26	UG	# 95
74)	1,2-Dichlorobenzene	13.24	146	423404	50.04	UG	100
75)	1,2-Dibromo-3-chloropropan	14.19	75	140282	53.18	UG	# 62
76)	1,2,4-Trichlorobenzene	15.15	180	337161	47.67	UG	100
77)	Hexachlorobutadiene	15.35	225	126861	46.36	UG	100
78)	Naphthalene	15.40	128	1079325	48.24	UG	100
79)	1,2,3-Trichlorobenzene	15.66	180	319511	45.22	UG	98
80)	1,1,2-Trichloro-1,2,2-trif	3.19	101	165854	54.90	UG	92
81)	Methyl acetate	3.58	43	391464	51.58	UG	# 79
82)	Cyclohexane	5.83	56	468330	47.62	UG	# 70
83)	Methylcyclohexane	7.13	83	379071	50.97	UG	# 61

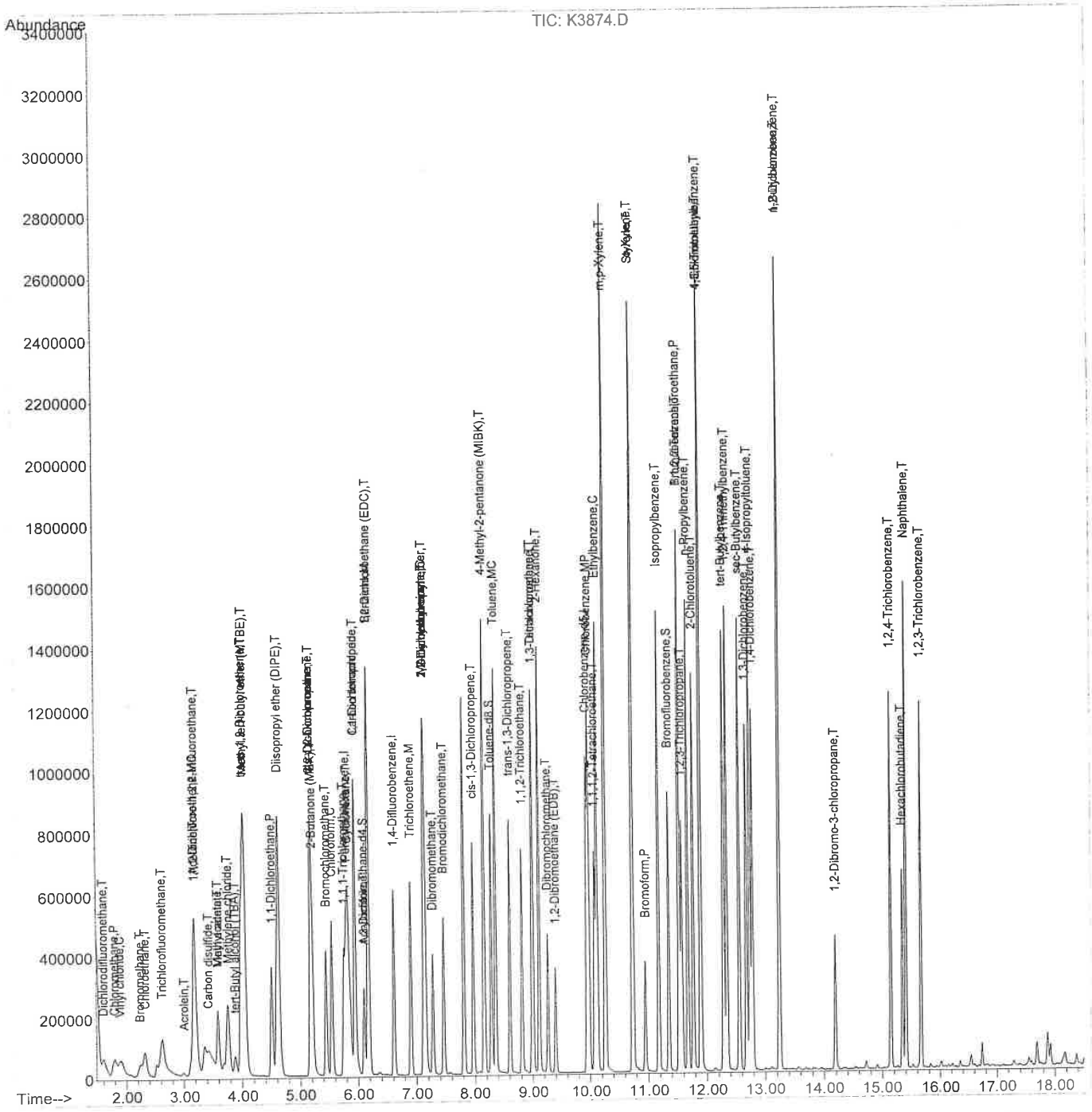
(#) = qualifier out of range (m) = manual integration (+) = signals summed

K8230724.M Fri Aug 11 12:16:26 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3874.D
Acq On : 1 Aug 2023 2:44
Operator : BARBARA
Sample : LCSA230731-02,LCSA230731-02,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 02 09:45:37 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3888.D
Acq On : 1 Aug 2023 9:28
Operator : BARBARA
Sample : MW-10D-072623,E23-03407-002,A,0.05mL,100
Misc : EWMA/SWIVELIER_-_2,07/26/23,07/27/23,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Aug 02 09:22:45 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

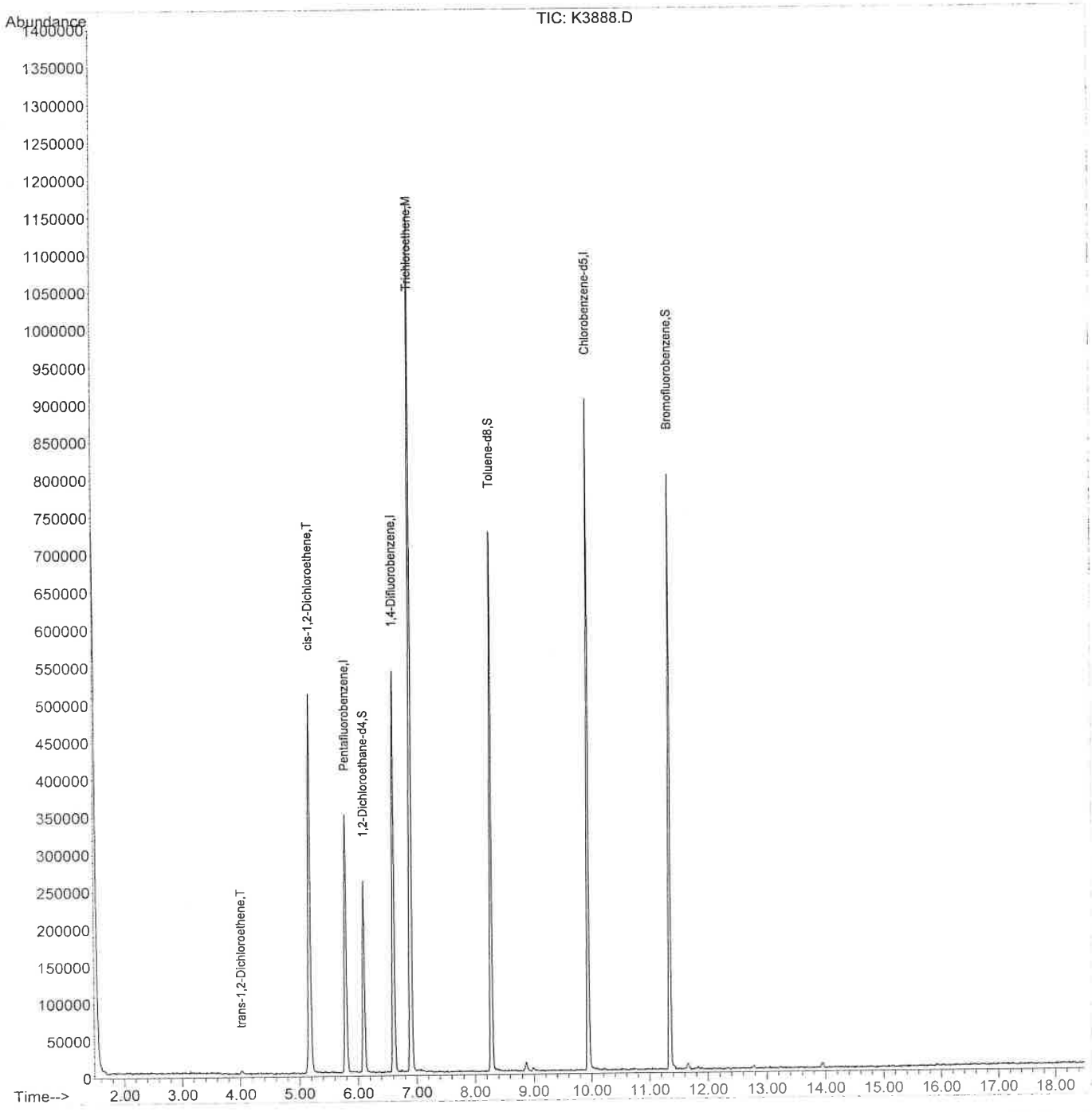
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	5.80	168	221261	50.00	UG	0.00
31) 1,4-Difluorobenzene	6.61	114	390278	50.00	UG	0.00
50) Chlorobenzene-d5	9.95	117	404986	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.10	65	238408	57.71	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 115.42%			
41) Toluene-d8	8.28	98	487554	49.40	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.80%			
59) Bromofluorobenzene	11.35	95	294144	51.15	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.30%			
Target Compounds						Qvalue
16) trans-1,2-Dichloroethene	4.02	96	1645	0.48	UG	# 100
20) cis-1,2-Dichloroethene	5.18	96	226511	59.73	UG	# 67
33) Trichloroethene	6.91	95	436490	112.49	UG	# 72

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3888.D
Acq On : 1 Aug 2023 9:28
Operator : BARBARA
Sample : MW-10D-072623,E23-03407-002,A,0.05mL,100
Misc : EWMA/SWIVELIER_-_2,07/26/23,07/27/23,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Aug 02 09:22:45 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration



K8230724.M Mon Aug 14 12:01:59 2023 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3889.D
Acq On : 1 Aug 2023 9:57
Operator : BARBARA
Sample : MW-10D-072623,E23-03407-002DUP,A,0.05mL,100
Misc : EWMA/SWIVELIER_-_2,07/26/23,07/27/23,1
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Aug 02 09:23:44 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

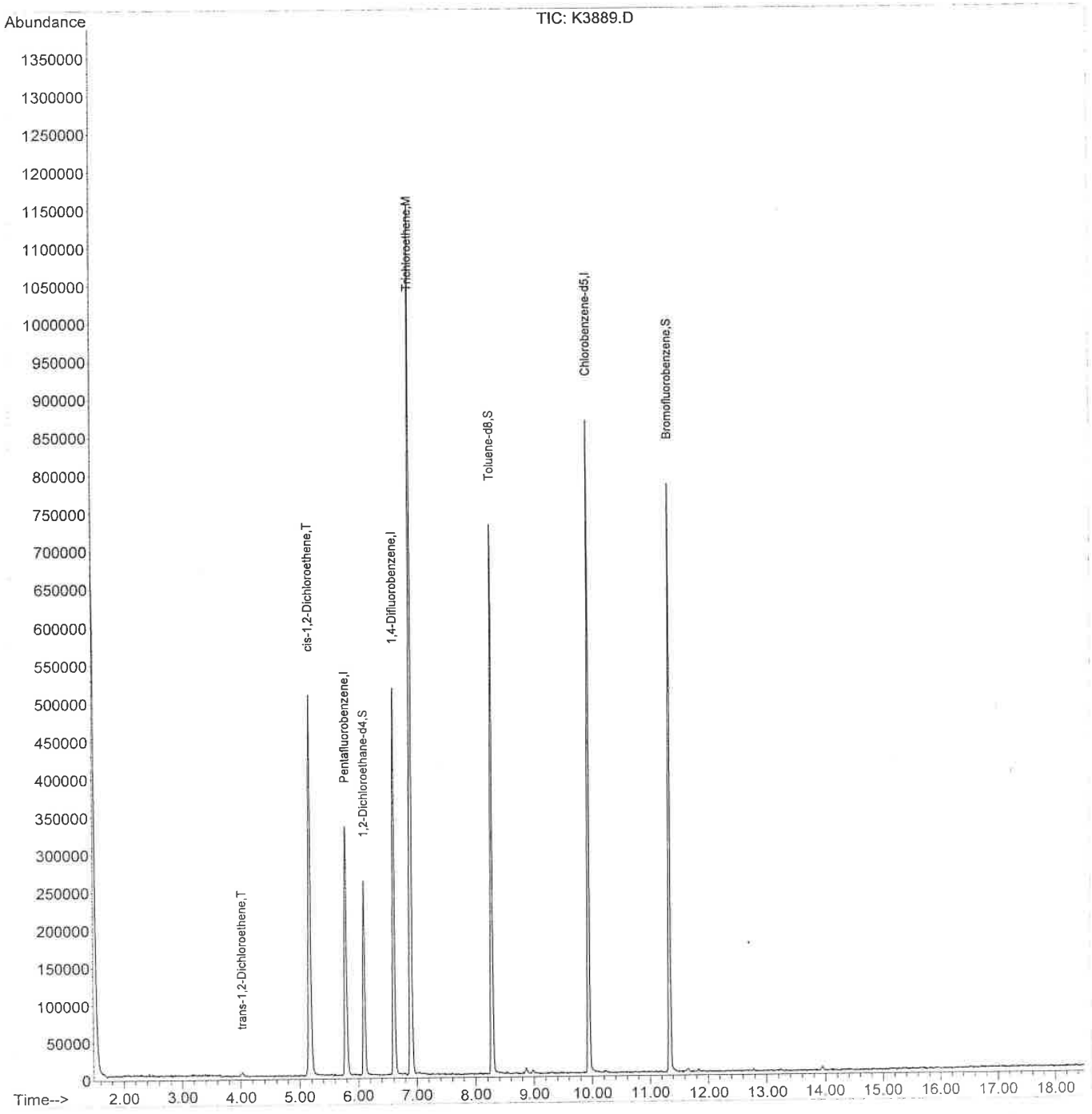
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	5.79	168	216682	50.00	UG	0.00
31) 1,4-Difluorobenzene	6.61	114	379796	50.00	UG	0.00
50) Chlorobenzene-d5	9.95	117	391455	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.10	65	232369	57.44	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 114.88%			
41) Toluene-d8	8.28	98	476956	49.66	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.32%			
59) Bromofluorobenzene	11.35	95	283108	50.93	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.86%			
Target Compounds						Qvalue
16) trans-1,2-Dichloroethene	4.03	96	2097m	0.63	UG	
20) cis-1,2-Dichloroethene	5.18	96	222149	59.81	UG	# 99
33) Trichloroethene	6.90	95	433495	114.80	UG	# 23

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-08-01\
Data File : K3889.D
Acq On : 1 Aug 2023 9:57
Operator : BARBARA
Sample : MW-10D-072623,E23-03407-002DUP,A,0.05mL,100
Misc : EWMA/SWIVELIER_-_2,07/26/23,07/27/23,1
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Aug 02 09:23:44 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration



K8230724.M Mon Aug 14 12:02:05 2023 Page: 2

VOLATILE ORGANICS RUN LOGS
STANDARD PREP LOGS

LABORATORY CHRONICLE - GC/MS VOA (Aq)

DATE: 7/24/2023
INSTRUMENT: MSD-K

BFB_VOK
8260D

METHOD: 8260D
INITIAL CALIBRATION: K072423
ANALYST: Barbara Berberian

BATCH ID: 230724-01

STANDARD	Lot #	Exp. Date	CONC.
BFB	L3186	09/28/23	25 ug/ml
ISTD/SURR (4100)	N/A	08/29/23	50 ug/ml
ISTD/SURR (4560)	L3187	10/12/23	250 ug/ml
Primary Mix	L3183	09/06/23	40 ug/ml
Primary Ac/Ac	L3189	10/21/23	1000 ug/ml
1,4-Dioxane	NA	NA	10000 ug/ml
Secondary Mix	L3182	09/03/23	40 ug/ml
Secondary Ac/Ac	L3185	09/19/23	1000 ug/ml
Secondary 1,4-Dioxane	NA	NA	1000 ug/ml
MeOH	L151278	06/01/26	
Reagent Water	VOA1	na	

#	File	Case #	Samp #	Vol (ml)	% Moist	Test	Method	Vial #	?	Status
1	K3740	BFBA230724-01	BFBA230724-01	5	100	2ul BFB Std direct inject	8260D			2:56
2	K3741	ICC001	ICC230724	5	100		8260D			OK
3	K3742	ICC00.5	ICC230724	5	100		8260D			OK
4	K3743	ICC005	ICC230724	5	100		8260D			OK
5	K3744	ICC020	ICC230724	5	100		8260D			OK
6	K3745	ICC100	ICC230724	5	100		8260D			OK
7	K3746	ICC150	ICC230724	5	100		8260D			OK
8	K3747	ICC200	ICC230724	5	100		8260D			OK
9	K3748	RB		5	100		8260D			
10	K3749	ICV100	ICV230724	5	100		8260D			OK

LABORATORY CHRONICLE - GC/MS VOA (Aq)

DATE: 7/31/2023
INSTRUMENT: MSD-K

BFB_VOK
8260D
METHOD: 8260D
INITIAL CALIBRATION: K072423
ANALYST: Barbara Berberian

BATCH ID: 230731-02

STANDARD	Lot #	Exp. Date	CONC.
BFB	L3186	09/28/23	25 ug/ml
ISTD/SURR (4100)	N/A	08/29/23	50 ug/ml
ISTD/SURR (4560)	L3187	10/12/23	250 ug/ml
Primary Mix	L3183	09/06/23	40 ug/ml
Primary Ac/Ac	L3189	10/21/23	1000 ug/ml
1,4-Dioxane	NA	NA	10000 ug/ml
Secondary Mix	L3182	09/02/23	40 ug/ml
Secondary Ac/Ac	L3185	09/19/23	1000 ug/ml
Secondary 1,4-Dioxane	NA	NA	1000 ug/ml
MeOH	L151278	06/01/26	
Reagent Water	VOA1	na	

#	File	Case #	Samp #	Vol (ml)	% Moist	Test	Method	Vial #	?	Status
1	K3865	BFBA230731-01	BFBA230731-01	5	100	2ul BFB Std direct inject	8260D			10:24
2	K3866	CCV100	CCV230731-01	5	100		8260D			OK
3	K3867	RB		5	100		8260D			
4	K3868	RB		5	100		8260D			
5	K3869	BLKA230731-02	BLKA230731-02	5	100		8260D			OK
6	K3870	3431	4	5	100	TCL VO + 15	8260D	2	YES	OK
7	K3871	3431	3	5	100	TCL VO + 15	8260D	2	YES	OK
8	K3872	3431	2	5	100	TCL VO + 15	8260D	2	YES	OK
9	K3873	3431	1	5	100	TCL VO + 15	8260D	2	YES	OK
10	K3874	LCSA230731-02	LCSA230731-02	5	100		8260D			OK
11	K3875	3431	2MS	5	100		8260D			OK
12	K3876	rb		5	100		8260D			
13	K3877	3397	1	5	100	TCL VO + 15	8260D	2	YES	OK
14	K3878	3397	2	5	100	TCL VO + 15	8260D	2	YES	OK
15	K3879	3397	3	5	100	TCL VO + 15	8260D	2	YES	OK
16	K3880	3397	4	5	100	TCL VO + 15	8260D	2	YES	OK
17	K3881	3397	5	5	100	TCL VO + 15	8260D	2	YES	OK
18	K3882	3397	6	5	100	TCL VO + 15	8260D	2	YES	OK
19	K3883	3397	7	5	100	TCL VO + 15	8260D	2	YES	OK
20	K3884	3397	8	5	100	TCL VO + 15	8260D	2	YES	OK
21	K3885	3407	4	5	100	TCL VO + 15	8260D	2	YES	OK
22	K3886	3407	3	5	100	TCL VO + 15	8260D	2	YES	OK
23	K3887	3407	1	5	100	TCL VO + 15	8260D	2	YES	OK
24	K3888	3407	2	0.05	100	TCL VO + 15	8260D	2	YES	OK
25	K3889	3407	2DUP	0.05	100	TCL VO + 15	8260D	3	YES	OK

L3179 IS/surrogate @ 50 ug/ml for Certain 8260
05/22/23
08/22/23 100 ul of IS./LS1432 @ 2500 ug/ml
100 surr. LS1433
into 5 ml of MeOH lot# (22080306)

L3180 Primary Working Std for 524.2 @ 20 ppm
RS
5/18/23 0.1ml of DWM-588-1
opened 5/18/23 @ 2000 ppm
into 10 mls MeOH
RA 123.13
expires 8/18/23

L3181 Primary REV 4 for 524.2 @ 2000 ppm
RS
5/18/23 1ml of DWM-592-1
opened 5/18/23 @ 2000 ppm
into 10 mls MeOH
RA 123.13
expires 8/18/23

L3182 Secondary/mix @ 100 ug/ml
06/02/23 0.4 ml of MTBE/TBA/DIPE @ 500/1000/5000 ppm
6/2/23 L3146 exp 12/24/23

exp. 1/4/24
1ml of ECS-A-524/8260 Main Mix 2000 ppm
ECS-A-033 lot# AA2012041002 rec. 12/28/22, exp.
1ml of ECS-A-053 volatiles gases mix @ 2000 p
lot# ~~2000~~ 220418C, rec. 12/28/22 exp. 5/10/2
2ml of M-8260-ADD-10x lot# 223041108-
received 6/02/23 exp. 10/8/23
into 50ml of MeOH
(lot# 220302

L3183 [redacted]
06/06/23
9/06/23 2ml of DMH-588-1, lot# 000672.6330 received
3/20/23, exp. 02/28/26
4ml of ECS-A-040 2-chloroethyl vinyl ether
lot# NA.221205024A, received 12/28/22, ex
0.8ml of TBA
0.8ml DIPE @ exp.
4ml of ECS-A-043 8260 ketones mix @ 2000 p
lot# ~~CP220902001~~, rec. 12/28/22
NA2303070 20, rec. 3/20/23, exp. 03/06/24
2ml of ECS-A-044 volatiles add #1 @ 2000 ppm
lot# NA2303080 06, rec. 3/20/23, exp. 03/07/24
2ml of VOA-IALNJ-1 @ 2000 ppm received 12/23/22
lot# NA221227005 exp. 12/20/25 into
100ml of MeOH
(lot# 22030263)

LS3184 IS/surrogate @ 30 ug/ml for Centurion 624.1

06/07/23 60 ml of I.S. LS1432 exp. 2/22/24 into
09/07/23 60 ml surrogate LS1433

5 ml of MeOH lot # (2203026S)

LS3185 Seconday Ac/Acylonitrile

06/19/23 1 ml of Acrolein/Acylonitrile Cat 46871-

5/18/23 rec. 10/21/21, exp. 09/30/25, into 10 ml of MeOH lot # 2203026S

LS3186 BFB tuning 25 ppm

6/28/25 0.5 ml of EQ-A-017 lot # MP220302
exp. 3/2/25 received 3/30/22 out
8/28/25 0.5 MeOH
(lot # 2203026S)

LS3187 Edge IS/Surr for Arsenic @ 25 ppm

1 ml of LS1432 @ 25 ppm Edge I.S.
7/12/23 1 ml of LS1433 @ 25 ppm Edge Surr
both exp 2/22/24

into 10 mls MeOH RA
1.24.13

exp 10/12/23

SUBCONTRACTED DATA
EUROFINS LANCASTER

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Melissa Simmons
Integrated Analytical Laboratories LLC
273 Franklin Road
Randolph NJ 07869

Generated 8/8/2023 4:09 AM

JOB DESCRIPTION

E23-03407

JOB NUMBER

410-136645-1

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster PA 17601

See page two for job notes and contact information.

my EOL

Eurofins Lancaster Laboratories Environment Testing, LLC

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.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Marrissa Williams

Generated
8/8/2023 4:09 AM

Authorized for release by
Marrissa Williams, Project Manager
Marrissa.Williams@et.eurofinsus.com
Designee for
Marrissa C Williams, Project Manager
Marrissa.Williams@et.eurofinsus.com
717 556-7246

Eurofins Lancaster Laboratories Environment Testing, LLC

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.
· QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
· Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
· Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Marrissa Williams

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Receipt

The samples were received on 7/28/2023 6:00 PM. 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 time was 4.6°C

GC VOA

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

HPLC/IC

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

Sample Summary

Client: Integrated Analytical Laboratories LLC
Project/Site: E23-03407

Job ID: 410-136645-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-136645-1	E23-03407-001_MW-11D-072623	Water	07/26/23 12:53	07/28/23 18:00
410-136645-2	E23-03407-002_MW-10D-072623	Water	07/26/23 14:15	07/28/23 18:00

Detection Summary

Client: Integrated Analytical Laboratories LLC
Project/Site: E23-03407

Job ID: 410-136645-1

Client Sample ID: E23-03407-001_MW-11D-072623 — Lab Sample ID: 410-136645-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Butyric acid (1C)	6700	J	10000	2000	ug/L	1		8015D VFA	Total/NA

Client Sample ID: E23-03407-002_MW-10D-072623 — Lab Sample ID: 410-136645-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethane (1C)	2.5	J	5.0	1.0	ug/L	1		RSK-175	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Integrated Analytical Laboratories LLC
Job ID: 410-136645-1
Project/Site: E23-03407

Method	Method Description	Protocol	Laboratory
RSK-175	Dissolved Gases (GC)	RSK	ELLE
8015D VFA	Volatile Fatty Acids - Direct Aqueous Injection (HPLC)	SW846	ELLE
8015 VFA	Volatile Fatty Acids - Water Prep	SW846	ELLE
RSK-175	Dissolved Gases Prep	RSK	ELLE

Protocol References:

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique , RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Client: Integrated Analytical Laboratories LLC
Project/Site: E23-03407

Job ID: 410-136645-1

Client Sample ID: E23-03407-001_MW-11D-072623

Lab Sample ID: 410-136645-1

Date Collected: 07/26/23 12:53
Matrix: Water
Date Received: 07/28/23 18:00

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane (1C)	ND		5.0	1.0	ug/L		08/03/23 10:40	08/03/23 17:23	1
Ethene (1C)	ND		5.0	1.0	ug/L		08/03/23 10:40	08/03/23 17:23	1
Methane (1C)	ND		5.0	3.0	ug/L		08/03/23 10:40	08/03/23 17:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Propene (1C)	*54*		*43 - 133*	*08/03/23 10:40*	*08/03/23 17:23*	*1*

Method: SW846 8015D VFA - Volatile Fatty Acids - Direct Aqueous Injection (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid (1C)	ND		10000	3200	ug/L		08/03/23 17:58	08/05/23 01:13	1
Butyric acid (1C)	**6700**	**J**	10000	2000	ug/L		08/03/23 17:58	08/05/23 09:11	1
Citric Acid (1C)	ND		5000	1000	ug/L		08/03/23 17:58	08/05/23 09:11	1
Formic-acid (1C)	ND		10000	2000	ug/L		08/03/23 17:58	08/05/23 01:13	1
Isovaleric acid (1C)	ND		7100	3500	ug/L		08/03/23 17:58	08/05/23 09:11	1
L-Lactic Acid (1C)	ND		5000	1000	ug/L		08/03/23 17:58	08/05/23 09:11	1
Oxalic Acid (1C)	ND		1300	250	ug/L		08/03/23 17:58	08/05/23 09:11	1
Propionic acid (1C)	ND		10000	2000	ug/L		08/03/23 17:58	08/05/23 01:13	1
Pyruvic Acid (1C)	ND		1300	250	ug/L		08/03/23 17:58	08/05/23 09:11	1
Quinic Acid (1C)	ND		5000	2400	ug/L		08/03/23 17:58	08/05/23 09:11	1
Succinic Acid (1C)	ND		2500	1000	ug/L		08/03/23 17:58	08/05/23 09:11	1
Tartaric Acid (1C)	ND		2500	1000	ug/L		08/03/23 17:58	08/05/23 09:11	1
Valeric acid (1C)	ND		5000	2000	ug/L		08/03/23 17:58	08/05/23 09:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fumaric Acid (1C)	*101*		*68 - 139*	*08/03/23 17:58*	*08/05/23 01:13*	*1*
Fumaric Acid (1C)	*106*		*68 - 139*	*08/03/23 17:58*	*08/05/23 09:11*	*1*

Client Sample ID: E23-03407-002_MW-10D-072623

Lab Sample ID: 410-136645-2

Date Collected: 07/26/23 14:15
Matrix: Water
Date Received: 07/28/23 18:00

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane (1C)	**2.5**	**J**	5.0	1.0	ug/L		08/03/23 10:40	08/03/23 17:38	1
Ethene (1C)	ND		5.0	1.0	ug/L		08/03/23 10:40	08/03/23 17:38	1
Methane (1C)	ND		5.0	3.0	ug/L		08/03/23 10:40	08/03/23 17:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Propene (1C)	*51*		*43 - 133*	*08/03/23 10:40*	*08/03/23 17:38*	*1*

Method: SW846 8015D VFA - Volatile Fatty Acids - Direct Aqueous Injection (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid (1C)	ND		10000	3200	ug/L		08/03/23 17:58	08/05/23 12:46	1
Butyric acid (1C)	ND		10000	2000	ug/L		08/03/23 17:58	08/05/23 12:46	1
Citric Acid (1C)	ND		5000	1000	ug/L		08/03/23 17:58	08/05/23 12:46	1
Formic-acid (1C)	ND		10000	2000	ug/L		08/03/23 17:58	08/05/23 01:44	1
Isovaleric acid (1C)	ND		7100	3500	ug/L		08/03/23 17:58	08/05/23 12:46	1
L-Lactic Acid (1C)	ND		5000	1000	ug/L		08/03/23 17:58	08/05/23 12:46	1
Oxalic Acid (1C)	ND		1300	250	ug/L		08/03/23 17:58	08/05/23 12:46	1
Propionic acid (1C)	ND		10000	2000	ug/L		08/03/23 17:58	08/05/23 01:44	1
Pyruvic Acid (1C)	ND		1300	250	ug/L		08/03/23 17:58	08/05/23 12:46	1

Client: Integrated Analytical Laboratories LLC
Project/Site: E23-03407

Job ID: 410-136645-1

Client Sample ID: E23-03407-002_MW-10D-072623
Date Collected: 07/26/23 14:15
Date Received: 07/28/23 18:00

Lab Sample ID: 410-136645-2
Matrix: Water

Method: SW846 8015D VFA - Volatile Fatty Acids - Direct Aqueous Injection (HPLC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Quinic Acid (1C)	ND		5000	2400	ug/L		08/03/23 17:58	08/05/23 12:46	1
Succinic Acid (1C)	ND		2500	1000	ug/L		08/03/23 17:58	08/05/23 12:46	1
Tartaric Acid (1C)	ND		2500	1000	ug/L		08/03/23 17:58	08/05/23 12:46	1
Valeric acid (1C)	ND		5000	2000	ug/L		08/03/23 17:58	08/05/23 12:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fumaric Acid (1C)	*101*		*68 - 139*	*08/03/23 17:58*	*08/05/23 01:44*	*1*
Fumaric Acid (1C)	*107*		*68 - 139*	*08/03/23 17:58*	*08/05/23 12:46*	*1*

Surrogate Summary

Client: Integrated Analytical Laboratories LLC
Project/Site: E23-03407

Job ID: 410-136645-1

Method: RSK-175 - Dissolved Gases (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	Propene1 (43-133)
410-136645-1	E23-03407-001_MW-11D-072623	54
410-136645-2	E23-03407-002_MW-10D-072623	51
LCS 410-404151/2-A	Lab Control Sample	95
LCSD 410-404151/3-A	Lab Control Sample Dup	95
MB 410-404151/1-A	Method Blank	95

Surrogate Legend

Propene = Propene

Method: 8015D VFA - Volatile Fatty Acids - Direct Aqueous Injection (HPLC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	FumAcd1 (68-139)
410-136645-1	E23-03407-001_MW-11D-072623	101
410-136645-1	E23-03407-001_MW-11D-072623	106
410-136645-2	E23-03407-002_MW-10D-072623	101
410-136645-2	E23-03407-002_MW-10D-072623	107
LCS 410-404256/2-A	Lab Control Sample	97
LCS 410-404256/2-A	Lab Control Sample	103
LCS 410-404256/4-A	Lab Control Sample	100
LCS 410-404256/4-A	Lab Control Sample	107
LCSD 410-404256/3-A	Lab Control Sample Dup	100
LCSD 410-404256/3-A	Lab Control Sample Dup	106
MB 410-404256/1-A	Method Blank	100
MB 410-404256/1-A	Method Blank	102

Surrogate Legend

FumAcd = Fumaric Acid

Client: Integrated Analytical Laboratories LLC
Project/Site: E23-03407

Job ID: 410-136645-1

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 410-404151/1-A
Matrix: Water
Analysis Batch: 403952

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 404151

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane (1C)	ND		5.0	1.0	ug/L		08/03/23 10:40	08/03/23 11:19	1
Ethene (1C)	ND		5.0	1.0	ug/L		08/03/23 10:40	08/03/23 11:19	1
Methane (1C)	ND		5.0	3.0	ug/L		08/03/23 10:40	08/03/23 11:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Propene (1C)	*95*		*43 - 133*	*08/03/23 10:40*	*08/03/23 11:19*	*1*

Lab Sample ID: LCS 410-404151/2-A
Matrix: Water
Analysis Batch: 403952

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 404151

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethane (1C)	61.7	56.9		ug/L		92	85 - 115
Ethene (1C)	58.3	54.0		ug/L		93	83 - 115
Methane (1C)	59.8	56.7		ug/L		95	85 - 115

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Propene (1C)	*95*		*43 - 133*

Lab Sample ID: LCSD 410-404151/3-A
Matrix: Water
Analysis Batch: 403952

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 404151

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethane (1C)	61.7	56.4		ug/L		91	85 - 115	1	20
Ethene (1C)	58.3	53.6		ug/L		92	83 - 115	1	20
Methane (1C)	59.8	56.0		ug/L		94	85 - 115	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Propene (1C)	*95*		*43 - 133*

Method: 8015D VFA - Volatile Fatty Acids - Direct Aqueous Injection (HPLC)

Lab Sample ID: MB 410-404256/1-A
Matrix: Water
Analysis Batch: 404643

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 404256

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid (1C)	ND		10000	3200	ug/L		08/03/23 17:57	08/04/23 16:55	1
Formic-acid (1C)	ND		10000	2000	ug/L		08/03/23 17:57	08/04/23 16:55	1
Propionic acid (1C)	ND		10000	2000	ug/L		08/03/23 17:57	08/04/23 16:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fumaric Acid (1C)	*100*		*68 - 139*	*08/03/23 17:57*	*08/04/23 16:55*	*1*

Method: 8015D VFA - Volatile Fatty Acids - Direct Aqueous Injection (HPLC) (Continued)

Lab Sample ID: MB 410-404256/1-A
Matrix: Water
Analysis Batch: 404646

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 404256

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid (1C)	ND		10000	3200	ug/L		08/03/23 17:57	08/04/23 18:09	1
Butyric acid (1C)	ND		10000	2000	ug/L		08/03/23 17:57	08/04/23 18:09	1
Citric Acid (1C)	ND		5000	1000	ug/L		08/03/23 17:57	08/04/23 18:09	1
Formic-acid (1C)	ND		10000	2000	ug/L		08/03/23 17:57	08/04/23 18:09	1
Isovaleric acid (1C)	ND		7100	3500	ug/L		08/03/23 17:57	08/04/23 18:09	1
L-Lactic Acid (1C)	ND		5000	1000	ug/L		08/03/23 17:57	08/04/23 18:09	1
Oxalic Acid (1C)	ND		1300	250	ug/L		08/03/23 17:57	08/04/23 18:09	1
Pyruvic Acid (1C)	ND		1300	250	ug/L		08/03/23 17:57	08/04/23 18:09	1
Quinic Acid (1C)	ND		5000	2400	ug/L		08/03/23 17:57	08/04/23 18:09	1
Succinic Acid (1C)	ND		2500	1000	ug/L		08/03/23 17:57	08/04/23 18:09	1
Tartaric Acid (1C)	ND		2500	1000	ug/L		08/03/23 17:57	08/04/23 18:09	1
Valeric acid (1C)	ND		5000	2000	ug/L		08/03/23 17:57	08/04/23 18:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fumaric Acid (1C)	*102*		*68 - 139*	*08/03/23 17:57*	*08/04/23 18:09*	*1*

Lab Sample ID: LCS 410-404256/2-A
Matrix: Water
Analysis Batch: 404643

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 404256

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Isovaleric acid (1C)	100000	107000		ug/L		107	70 - 115
Succinic Acid (1C)	50000	49900		ug/L		100	65 - 142
Tartaric Acid (1C)	50000	51100		ug/L		102	75 - 115
Valeric acid (1C)	100000	110000		ug/L		110	57 - 126

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Fumaric Acid (1C)	*97*		*68 - 139*

Lab Sample ID: LCS 410-404256/2-A
Matrix: Water
Analysis Batch: 404646

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 404256

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Isovaleric acid (1C)	100000	98300		ug/L		98	70 - 115
Succinic Acid (1C)	50000	48100		ug/L		96	65 - 142
Tartaric Acid (1C)	50000	51400		ug/L		103	75 - 115
Valeric acid (1C)	100000	101000		ug/L		101	57 - 126

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Fumaric Acid (1C)	*103*		*68 - 139*

Lab Sample ID: LCS 410-404256/4-A
Matrix: Water
Analysis Batch: 404643

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 404256

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetic acid (1C)	101000	102000		ug/L		101	77 - 123

Method: 8015D VFA - Volatile Fatty Acids - Direct Aqueous Injection (HPLC) (Continued)

Lab Sample ID: LCS 410-404256/4-A
Matrix: Water
Analysis Batch: 404643

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 404256

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Formic-acid (1C)			101000	98600		ug/L		98	73 - 129		
Propionic acid (1C)			101000	108000		ug/L		107	42 - 145		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Fumaric Acid (1C)	*100*		*68 - 139*

Lab Sample ID: LCS 410-404256/4-A
Matrix: Water
Analysis Batch: 404646

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 404256

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Acetic acid (1C)			101000	104000		ug/L		104	77 - 123		
Butyric acid (1C)			101000	103000		ug/L		102	73 - 134		
Citric Acid (1C)			50000	50200		ug/L		100	77 - 123		
Formic-acid (1C)			101000	105000		ug/L		104	73 - 129		
L-Lactic Acid (1C)			50200	39700		ug/L		79	71 - 115		
Oxalic Acid (1C)			12600	11300		ug/L		90	59 - 138		
Pyruvic Acid (1C)			12400	13000		ug/L		105	74 - 115		
Quinic Acid (1C)			50300	46800		ug/L		93	85 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Fumaric Acid (1C)	*107*		*68 - 139*

Lab Sample ID: LCSD 410-404256/3-A
Matrix: Water
Analysis Batch: 404643

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 404256

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Isovaleric acid (1C)			100000	108000		ug/L		107	70 - 115	1	30
Succinic Acid (1C)			50000	50900		ug/L		102	65 - 142	2	30
Tartaric Acid (1C)			50000	51800		ug/L		104	75 - 115	1	30
Valeric acid (1C)			100000	112000		ug/L		111	57 - 126	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Fumaric Acid (1C)	*100*		*68 - 139*

Lab Sample ID: LCSD 410-404256/3-A
Matrix: Water
Analysis Batch: 404646

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 404256

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Isovaleric acid (1C)			100000	99800		ug/L		99	70 - 115	1	30
Succinic Acid (1C)			50000	48500		ug/L		97	65 - 142	1	30
Tartaric Acid (1C)			50000	52000		ug/L		104	75 - 115	1	30
Valeric acid (1C)			100000	103000		ug/L		102	57 - 126	1	30

Client: Integrated Analytical Laboratories LLC
Project/Site: E23-03407

Job ID: 410-136645-1

Method: 8015D VFA - Volatile Fatty Acids - Direct Aqueous Injection (HPLC) (Continued)

Lab Sample ID: LCSD 410-404256/3-A
Matrix: Water
Analysis Batch: 404646

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 404256

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Fumaric Acid (1C)	106		68 - 139

Client: Integrated Analytical Laboratories LLC
Job ID: 410-136645-1
Project/Site: E23-03407

Qualifiers

GC 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.

HPLC/IC

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.

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

Client: Integrated Analytical Laboratories LLC
Project/Site: E23-03407

Job ID: 410-136645-1

GC VOA

Analysis Batch: 403952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136645-1	E23-03407-001_MW-11D-072623	Total/NA	Water	RSK-175	404151
410-136645-2	E23-03407-002_MW-10D-072623	Total/NA	Water	RSK-175	404151
MB 410-404151/1-A	Method Blank	Total/NA	Water	RSK-175	404151
LCS 410-404151/2-A	Lab Control Sample	Total/NA	Water	RSK-175	404151
LCSD 410-404151/3-A	Lab Control Sample Dup	Total/NA	Water	RSK-175	404151

Prep Batch: 404151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136645-1	E23-03407-001_MW-11D-072623	Total/NA	Water	RSK-175	
410-136645-2	E23-03407-002_MW-10D-072623	Total/NA	Water	RSK-175	
MB 410-404151/1-A	Method Blank	Total/NA	Water	RSK-175	
LCS 410-404151/2-A	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 410-404151/3-A	Lab Control Sample Dup	Total/NA	Water	RSK-175	

HPLC/IC

Prep Batch: 404256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136645-1	E23-03407-001_MW-11D-072623	Total/NA	Water	8015 VFA	
410-136645-2	E23-03407-002_MW-10D-072623	Total/NA	Water	8015 VFA	
MB 410-404256/1-A	Method Blank	Total/NA	Water	8015 VFA	
LCS 410-404256/2-A	Lab Control Sample	Total/NA	Water	8015 VFA	
LCS 410-404256/4-A	Lab Control Sample	Total/NA	Water	8015 VFA	
LCSD 410-404256/3-A	Lab Control Sample Dup	Total/NA	Water	8015 VFA	

Analysis Batch: 404643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136645-1	E23-03407-001_MW-11D-072623	Total/NA	Water	8015D VFA	404256
410-136645-2	E23-03407-002_MW-10D-072623	Total/NA	Water	8015D VFA	404256
MB 410-404256/1-A	Method Blank	Total/NA	Water	8015D VFA	404256
LCS 410-404256/2-A	Lab Control Sample	Total/NA	Water	8015D VFA	404256
LCS 410-404256/4-A	Lab Control Sample	Total/NA	Water	8015D VFA	404256
LCSD 410-404256/3-A	Lab Control Sample Dup	Total/NA	Water	8015D VFA	404256

Analysis Batch: 404646

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136645-1	E23-03407-001_MW-11D-072623	Total/NA	Water	8015D VFA	404256
410-136645-2	E23-03407-002_MW-10D-072623	Total/NA	Water	8015D VFA	404256
MB 410-404256/1-A	Method Blank	Total/NA	Water	8015D VFA	404256
LCS 410-404256/2-A	Lab Control Sample	Total/NA	Water	8015D VFA	404256
LCS 410-404256/4-A	Lab Control Sample	Total/NA	Water	8015D VFA	404256
LCSD 410-404256/3-A	Lab Control Sample Dup	Total/NA	Water	8015D VFA	404256

Client: Integrated Analytical Laboratories LLC
Job ID: 410-136645-1
Project/Site: E23-03407

Client Sample ID: E23-03407-001_MW-11D-072623
Lab Sample ID: 410-136645-1

Date Collected: 07/26/23 12:53
Matrix: Water
Date Received: 07/28/23 18:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	RSK-175			404151	HQR6	ELLE	08/03/23 10:40
Total/NA	Analysis	RSK-175		1	403952	LXF2	ELLE	08/03/23 17:23
Total/NA	Prep	8015 VFA			404256	UHEW	ELLE	08/03/23 17:58
Total/NA	Analysis	8015D VFA		1	404643	UHEW	ELLE	08/05/23 01:13
Total/NA	Prep	8015 VFA			404256	UHEW	ELLE	08/03/23 17:58
Total/NA	Analysis	8015D VFA		1	404646	UHEW	ELLE	08/05/23 09:11

Client Sample ID: E23-03407-002_MW-10D-072623
Lab Sample ID: 410-136645-2

Date Collected: 07/26/23 14:15
Matrix: Water
Date Received: 07/28/23 18:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	RSK-175			404151	HQR6	ELLE	08/03/23 10:40
Total/NA	Analysis	RSK-175		1	403952	LXF2	ELLE	08/03/23 17:38
Total/NA	Prep	8015 VFA			404256	UHEW	ELLE	08/03/23 17:58
Total/NA	Analysis	8015D VFA		1	404643	UHEW	ELLE	08/05/23 01:44
Total/NA	Prep	8015 VFA			404256	UHEW	ELLE	08/03/23 17:58
Total/NA	Analysis	8015D VFA		1	404646	UHEW	ELLE	08/05/23 12:46

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Client: Integrated Analytical Laboratories LLC
Job ID: 410-136645-1
Project/Site: E23-03407

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10670	04-01-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015D VFA	8015 VFA	Water	Acetic acid (1C)
8015D VFA	8015 VFA	Water	Butyric acid (1C)
8015D VFA	8015 VFA	Water	Citric Acid (1C)
8015D VFA	8015 VFA	Water	Formic-acid (1C)
8015D VFA	8015 VFA	Water	Isovaleric acid (1C)
8015D VFA	8015 VFA	Water	L-Lactic Acid (1C)
8015D VFA	8015 VFA	Water	Oxalic Acid (1C)
8015D VFA	8015 VFA	Water	Propionic acid (1C)
8015D VFA	8015 VFA	Water	Pyruvic Acid (1C)
8015D VFA	8015 VFA	Water	Quinic Acid (1C)
8015D VFA	8015 VFA	Water	Succinic Acid (1C)
8015D VFA	8015 VFA	Water	Tartaric Acid (1C)
8015D VFA	8015 VFA	Water	Valeric acid (1C)

Method RSK-175

Dissolved Gases (GC) by Method RSK_175

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-136645-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): HP Plot ID: 0.53 (mm)

Client Sample ID	Lab Sample ID	Propene1 #
E23-03407-001_MW-11D-072623	410-136645-1	54
E23-03407-002_MW-10D-072623	410-136645-2	51
	MB 410-404151/1-A	95
	LCS 410-404151/2-A	95
	LCSD 410-404151/3-A	95

	QC LIMITS
Propene = Propene	43-133

Column to be used to flag recovery values

FORM II RSK-175

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136645-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 312023_08_3.0007.d

Lab ID: LCS 410-404151/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethane	61.7	56.9	92	85-115	
Ethene	58.3	54.0	93	83-115	
Methane	59.8	56.7	95	85-115	

Column to be used to flag recovery and RPD values

FORM III RSK-175

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136645-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 312023_08_3.0008.d

Lab ID: LCSD 410-404151/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethane	61.7	56.4	91	1	20	85-115	
Ethene	58.3	53.6	92	1	20	83-115	
Methane	59.8	56.0	94	1	20	85-115	

Column to be used to flag recovery and RPD values

FORM III RSK-175

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136645-1

SDG No.:

Lab Sample ID: MB 410-404151/1-A

Matrix: Water Date Extracted: 08/03/2023 10:40

Lab File ID:(1) 312023_08_3.0006.d Lab File ID:(2)

Date Analyzed:(1) 08/03/2023 11:19 Date Analyzed:(2)

Instrument ID:(1) 19506 Instrument ID:(2)

GC Column:(1) HP Plot ID: 0.53(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 410-404151/2-A	08/03/2023 11:35	
	LCSD 410-404151/3-A	08/03/2023 11:50	
E23-03407-001_MW-11D-072623	410-136645-1	08/03/2023 17:23	
E23-03407-002_MW-10D-072623	410-136645-2	08/03/2023 17:38	

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136645-1

SDG No.:

Sample No.: ICRT 410-395069/5 Date Analyzed: 07/10/2023 11:02

Instrument ID: 19506 GC Column: HP Plot ID: 0.53(mm)

Lab File ID (Standard): 312023_07_10.0005.d Heated Purge: (Y/N) N

Calibration ID: 51805

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				Propene		
				RT #		
INITIAL CALIBRATION SURROGATE				2.51		
UPPER LIMIT				2.54		
LOWER LIMIT				2.48		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
ICRT 410-395069/5		07/10/2023 11:02	312023_07_10.0005.d	2.51		
ICV 410-395069/12		07/10/2023 12:49	312023_07_10.0012.d	2.52		
CCVRT 410-403952/2		08/03/2023 10:07	312023_08_3.0002.d	2.49		

Propene = Propene

Propene RT Limit = ± 0.03 minutes of surrogate RT

Column used to flag values outside QC limits

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136645-1

SDG No.:

Sample No.: CCVRT 410-403952/2 Date Analyzed: 08/03/2023 10:07

Instrument ID: 19506 GC Column: HP Plot ID: 0.53(mm)

Lab File ID (Standard): 312023_08_3.0002.d Heated Purge: (Y/N) N

Calibration ID: 51805

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				Propene		
				RT #		
CONTINUING CALIBRATION SURROGATE				2.49		
UPPER LIMIT				2.52		
LOWER LIMIT				2.46		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 410-403952/2		08/03/2023 10:07	312023_08_3.0002.d	2.49		
410-136645-1	E23-03407-001_MW-11D-072623	08/03/2023 17:23	312023_08_3.0027.d	2.52		
410-136645-2	E23-03407-002_MW-10D-072623	08/03/2023 17:38	312023_08_3.0028.d	2.52		

Propene = Propene

Propene RT Limit = ± 0.03 minutes of surrogate RT

Column used to flag values outside QC limits

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136645-1

SDG No.:

Client Sample ID: E23-03407-001_MW-11D-072623
Lab Sample ID: 410-136645-1

Matrix: Water
Lab File ID: 312023_08_3.0027.d

Analysis Method: RSK-175
Date Collected: 07/26/2023 12:53

Sample wt/vol: 5(mL)
Date Analyzed: 08/03/2023 17:23

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: HP Plot ID: 0.53(mm)

Purge Volume:
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 403952
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-84-0	Ethane	ND		5.0	1.0
74-85-1	Ethene	ND		5.0	1.0
74-82-8	Methane	ND		5.0	3.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
115-07-1	Propene	54		43-133

Report Date: 04-Aug-2023 04:08:19 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0027.d				
Lims ID:	410-136645-A-1-A				
Client ID:	E23-03407-001_MW-11D-072623				
Sample Type:	Client				
Inject. Date:	03-Aug-2023 17:23:00	ALS Bottle#:	0	Worklist Smp#:	27
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:					
Misc. Info.:	410-0090521-027				
Operator ID:		Instrument ID:	19506		
Method:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\RSK_19506A.m				
Limit Group:	GCV - RSK175				
Last Update:	04-Aug-2023 04:08:10	Calib Date:	10-Jul-2023 11:48:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d				
Column 1 :	HP Plot (0.53 mm)		Det: AFID0		
Process Host:	CTX1668				
First Level Reviewer: LXF2		Date:	04-Aug-2023 04:05:57		

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response		OnCol Amt ug/l	Flags
	1 Methane	0.757	0.743	0.014	2856347	H	1.67	M
	2 Ethane		0.880			ND		
	3 Ethylene		1.133			ND		
$	5 Propene	2.523	2.493	0.030	31530455	H	10.8	a

QC Flag Legend

Processing Flags

H - Response Measured by Height

Review Flags

M - Manually Integrated

a - User Assigned ID

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 04-Aug-2023 04:08:19 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0027.d

Injection Date: 03-Aug-2023 17:23:00 Instrument ID: 19506

Lims ID: 410-136645-A-1-A Lab Sample ID: 410-136645-1

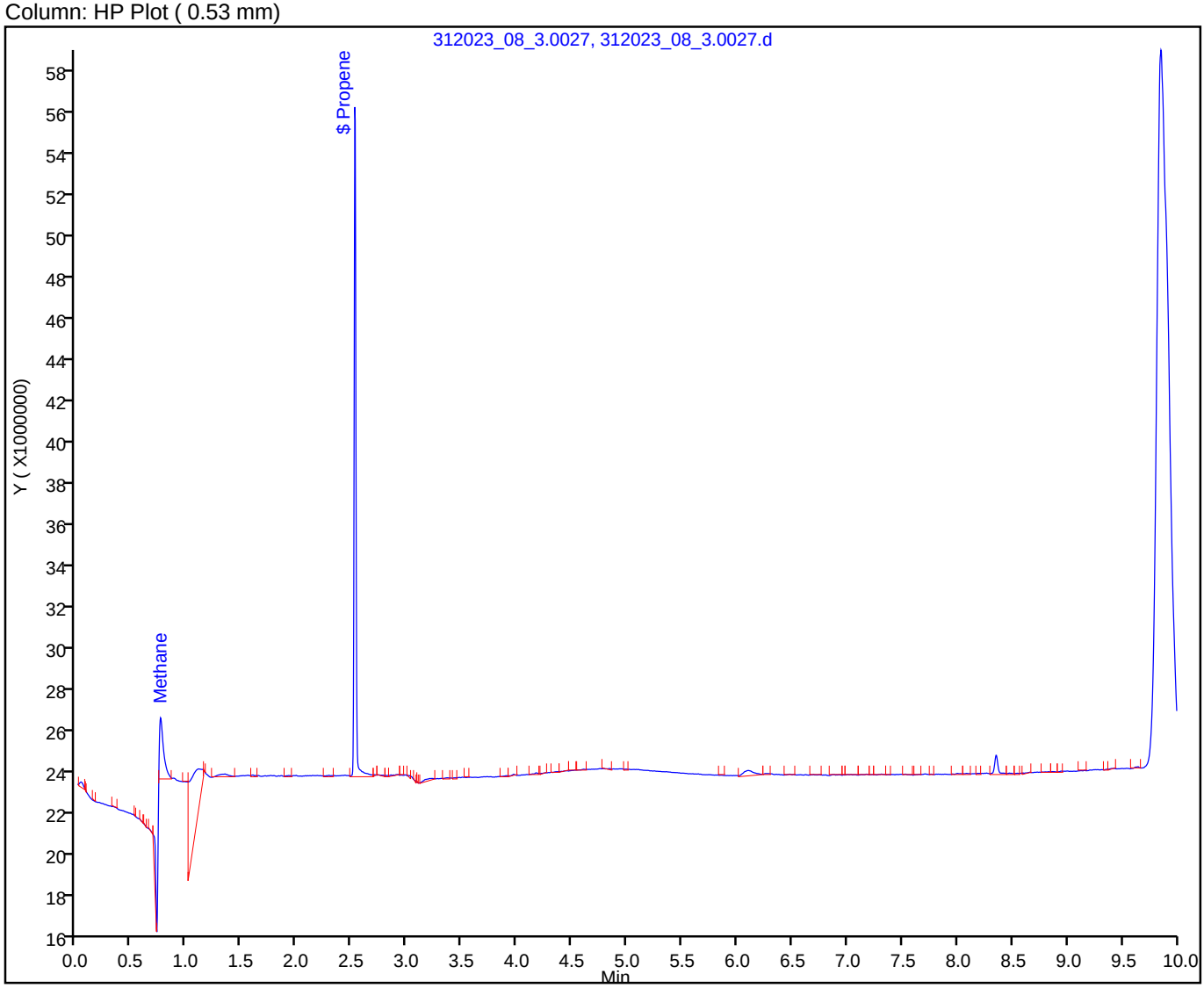
Client ID: E23-03407-001_MW-11D-072623

Operator ID: ALS Bottle#: 0 Worklist Smp#: 27

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Report Date: 04-Aug-2023 04:08:19 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0027.d				
Lims ID:	410-136645-A-1-A				
Client ID:	E23-03407-001_MW-11D-072623				
Sample Type:	Client				
Inject. Date:	03-Aug-2023 17:23:00	ALS Bottle#:	0	Worklist Smp#:	27
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:					
Misc. Info.:	410-0090521-027				
Operator ID:		Instrument ID:	19506		
Method:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\RSK_19506A.m				
Limit Group:	GCV - RSK175				
Last Update:	04-Aug-2023 04:08:10	Calib Date:	10-Jul-2023 11:48:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d				
Column 1 :	HP Plot (0.53 mm)		Det: AFID0		
Process Host:	CTX1668				
First Level Reviewer: LXF2		Date:	04-Aug-2023 04:05:57		

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Propene	20.2	10.8	53.55

Report Date: 04-Aug-2023 04:08:19 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

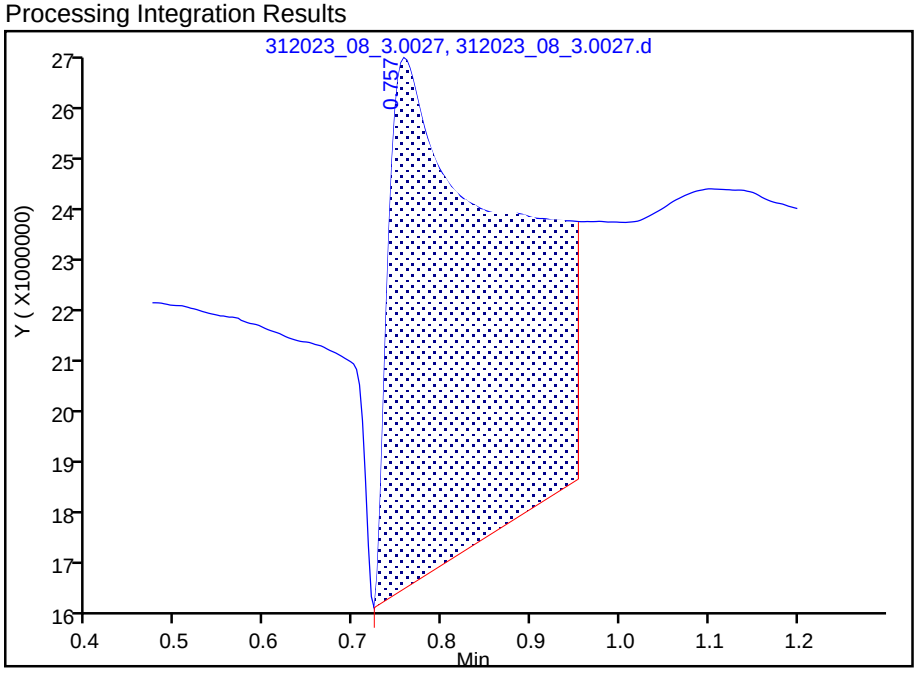
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0027.d				
Injection Date:	03-Aug-2023 17:23:00	Instrument ID:	19506		
Lims ID:	410-136645-A-1-A	Lab Sample ID:	410-136645-1		
Client ID:	E23-03407-001_MW-11D-072623				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	27
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

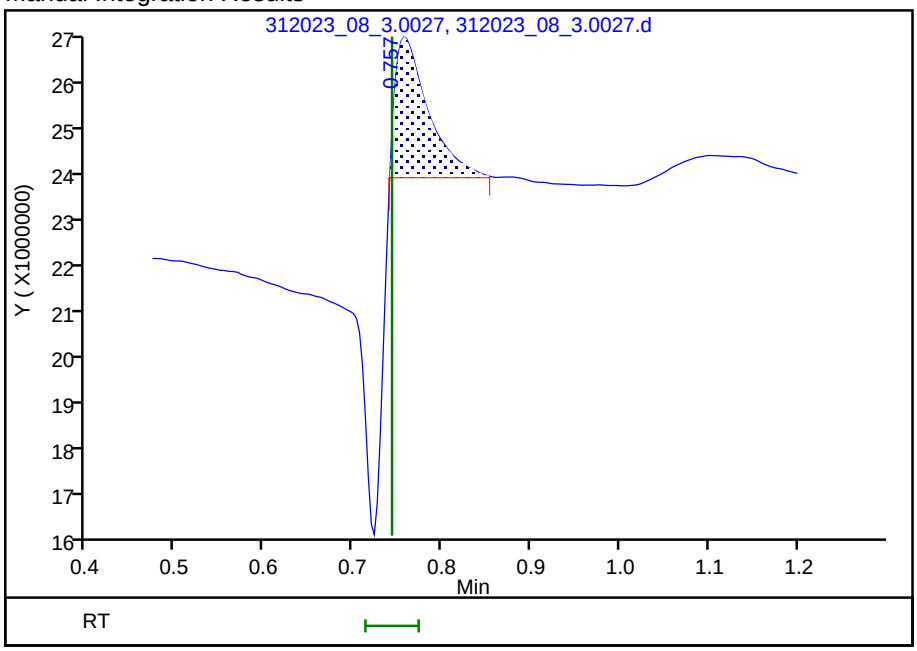
Processing Integration Results

RT: 0.76
Height: 9747007
Amount: 5.694834
Amount Units: ug/l



Manual Integration Results

RT: 0.76
Height: 2856347
Amount: 1.668863
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 04:07:10 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Instrument noise

Report Date: 04-Aug-2023 04:08:19 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

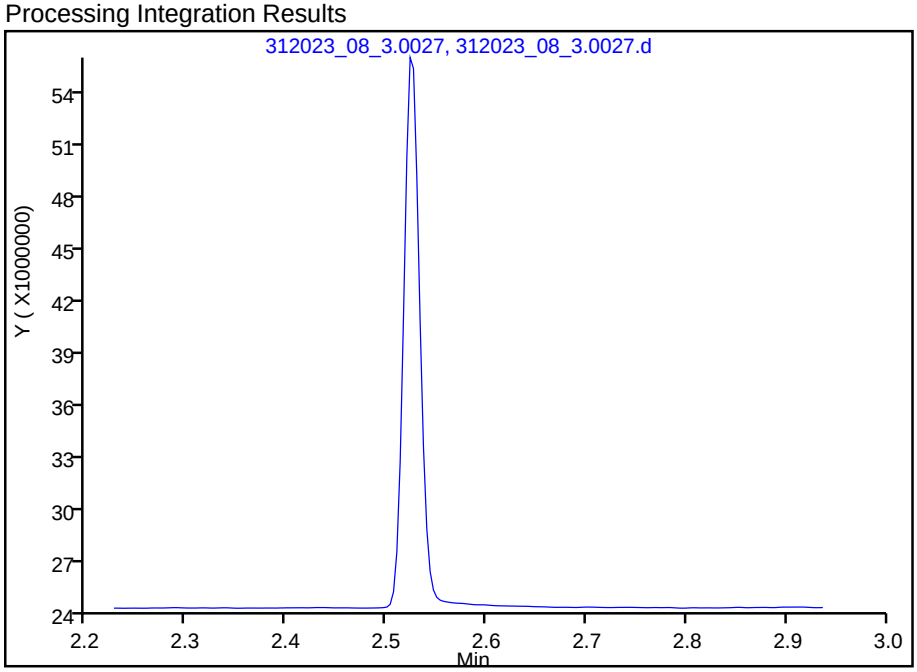
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0027.d				
Injection Date:	03-Aug-2023 17:23:00	Instrument ID:	19506		
Lims ID:	410-136645-A-1-A	Lab Sample ID:	410-136645-1		
Client ID:	E23-03407-001_MW-11D-072623				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	27
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

$ 5 Propene, CAS: 115-07-1

Signal: 1

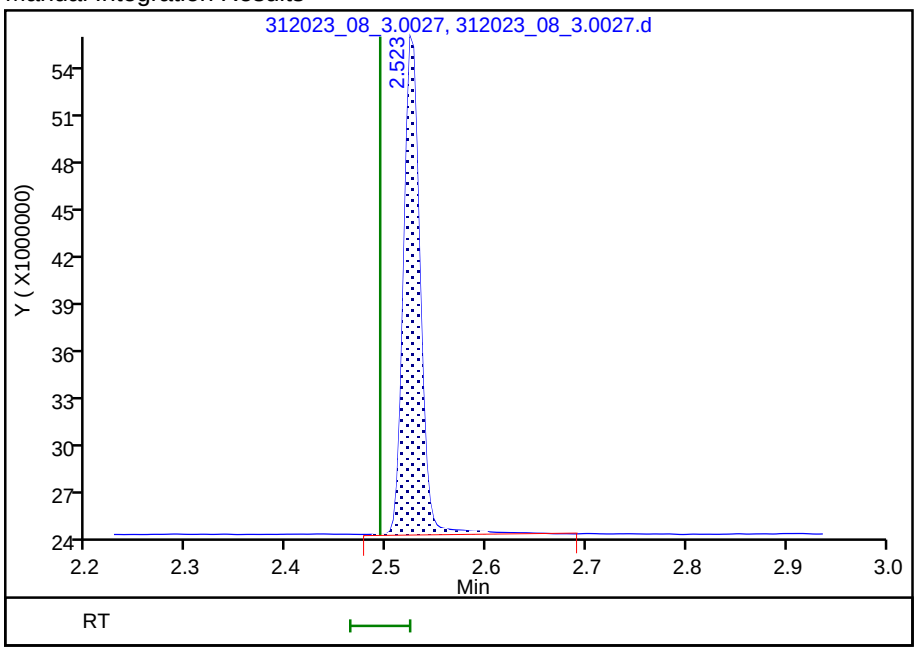
Processing Integration Results

Not Detected
Expected RT: 2.49



Manual Integration Results

RT: 2.52
Height: 31530455
Amount: 10.795318
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 04:05:56 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136645-1

SDG No.:

Client Sample ID: E23-03407-002_MW-10D-072623
Lab Sample ID: 410-136645-2

Matrix: Water
Lab File ID: 312023_08_3.0028.d

Analysis Method: RSK-175
Date Collected: 07/26/2023 14:15

Sample wt/vol: 5(mL)
Date Analyzed: 08/03/2023 17:38

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: HP Plot ID: 0.53(mm)

Purge Volume:
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 403952
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-84-0	Ethane	2.5	J	5.0	1.0
74-85-1	Ethene	ND		5.0	1.0
74-82-8	Methane	ND		5.0	3.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
115-07-1	Propene	51		43-133

Report Date: 04-Aug-2023 04:08:19 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0028.d
Lims ID: 410-136645-A-2-A
Client ID: E23-03407-002_MW-10D-072623
Sample Type: Client
Inject. Date: 03-Aug-2023 17:38:00 ALS Bottle#: 0 Worklist Smp#: 28
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 410-0090521-028
Operator ID: Instrument ID: 19506

Method: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\RSK_19506A.m
Limit Group: GCV - RSK175
Last Update: 04-Aug-2023 04:08:10 Calib Date: 10-Jul-2023 11:48:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Column 1 : HP Plot (0.53 mm) Det: AFID0
Process Host: CTX1668

First Level Reviewer: LXF2 Date: 04-Aug-2023 04:05:59

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
	1 Methane	0.763	0.743	0.020	1986183H	1.16	M
	2 Ethane	0.880	0.880	0.000	3583527H	2.47	M
	3 Ethylene		1.133		ND		
$	5 Propene	2.523	2.493	0.030	29761514H	10.2	a

QC Flag Legend

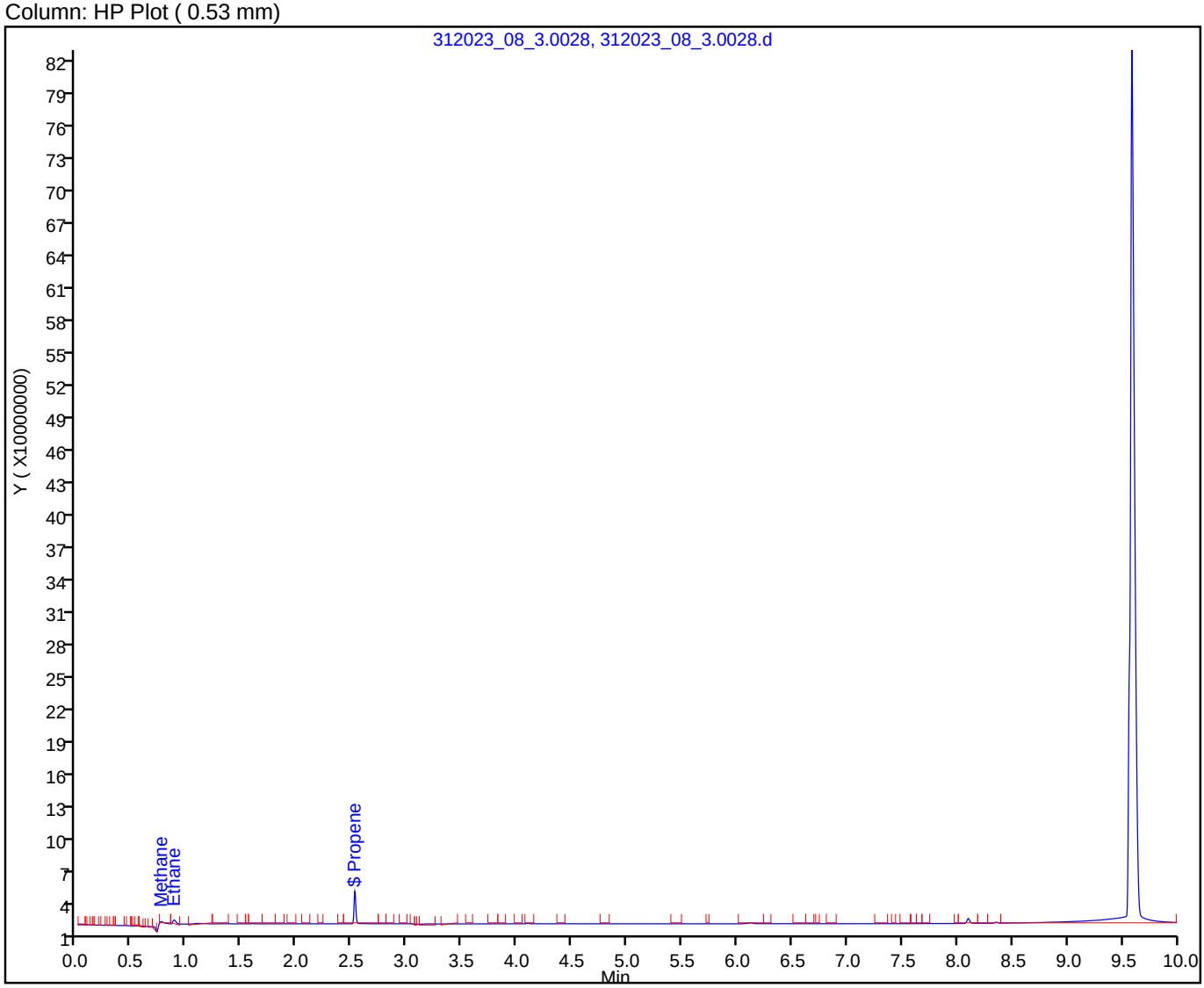
Processing Flags
H - Response Measured by Height
Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 04-Aug-2023 04:08:19 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0028.d				
Injection Date:	03-Aug-2023 17:38:00	Instrument ID:	19506		
Lims ID:	410-136645-A-2-A	Lab Sample ID:	410-136645-2		
Client ID:	E23-03407-002_MW-10D-072623				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	28
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		

Column: HP Plot (0.53 mm)



Report Date: 04-Aug-2023 04:08:19 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0028.d				
Lims ID:	410-136645-A-2-A				
Client ID:	E23-03407-002_MW-10D-072623				
Sample Type:	Client				
Inject. Date:	03-Aug-2023 17:38:00	ALS Bottle#:	0	Worklist Smp#:	28
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:					
Misc. Info.:	410-0090521-028				
Operator ID:		Instrument ID:	19506		
Method:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\RSK_19506A.m				
Limit Group:	GCV - RSK175				
Last Update:	04-Aug-2023 04:08:10	Calib Date:	10-Jul-2023 11:48:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d				
Column 1 :	HP Plot (0.53 mm)		Det: AFID0		
Process Host:	CTX1668				
First Level Reviewer: LXF2		Date:	04-Aug-2023 04:05:59		

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Propene	20.2	10.2	50.54

Eurofins Lancaster Laboratories Environment Testing, LLC

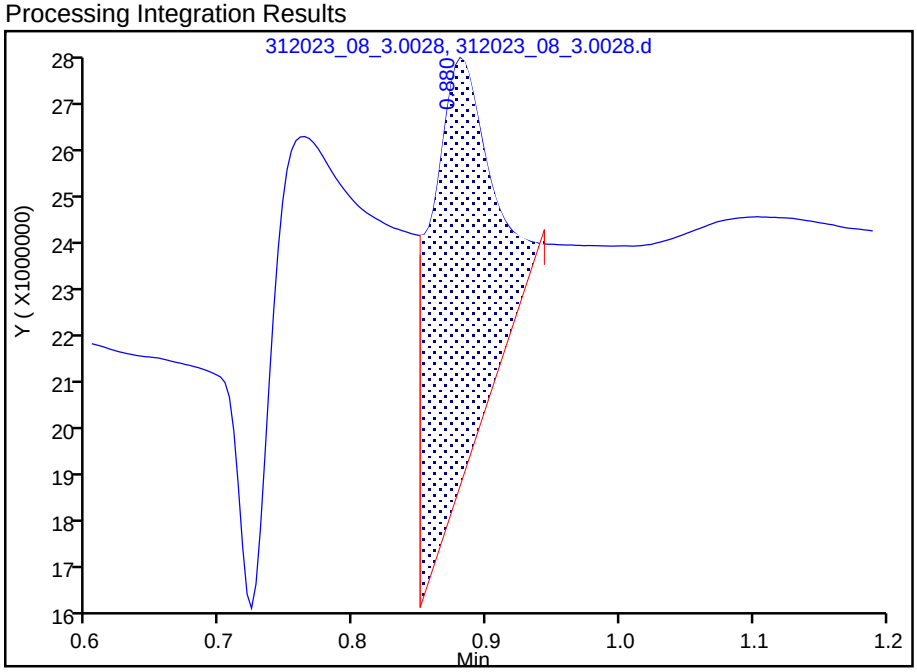
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0028.d				
Injection Date:	03-Aug-2023 17:38:00	Instrument ID:	19506		
Lims ID:	410-136645-A-2-A	Lab Sample ID:	410-136645-2		
Client ID:	E23-03407-002_MW-10D-072623				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	28
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

2 Ethane, CAS: 74-84-0

Signal: 1

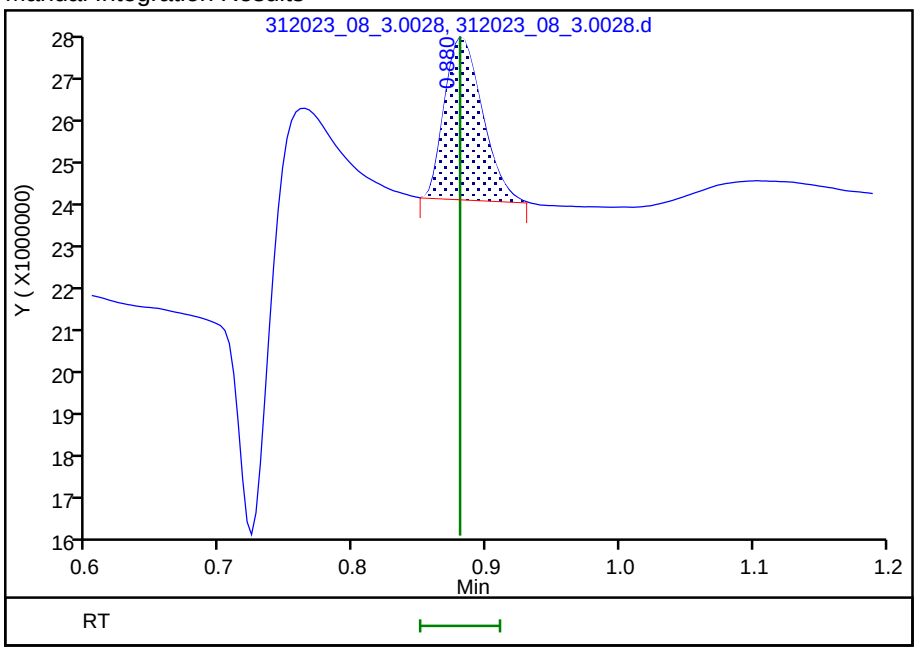
Processing Integration Results

RT: 0.88
Height: 9165622
Amount: 6.322453
Amount Units: ug/l



Manual Integration Results

RT: 0.88
Height: 3583527
Amount: 2.471920
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 04:07:36 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Lancaster Laboratories Environment Testing, LLC

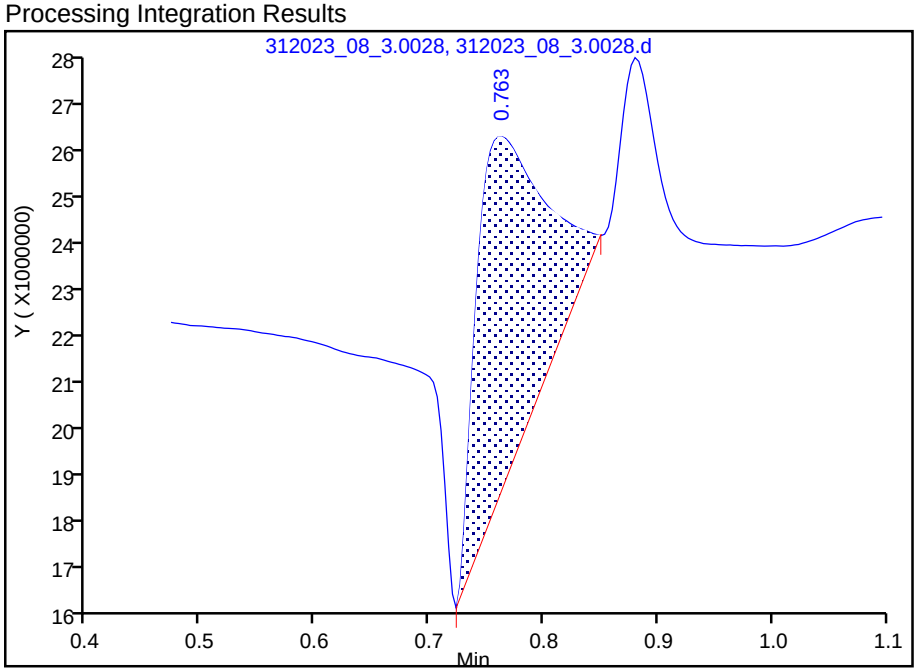
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0028.d				
Injection Date:	03-Aug-2023 17:38:00	Instrument ID:	19506		
Lims ID:	410-136645-A-2-A	Lab Sample ID:	410-136645-2		
Client ID:	E23-03407-002_MW-10D-072623				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	28
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

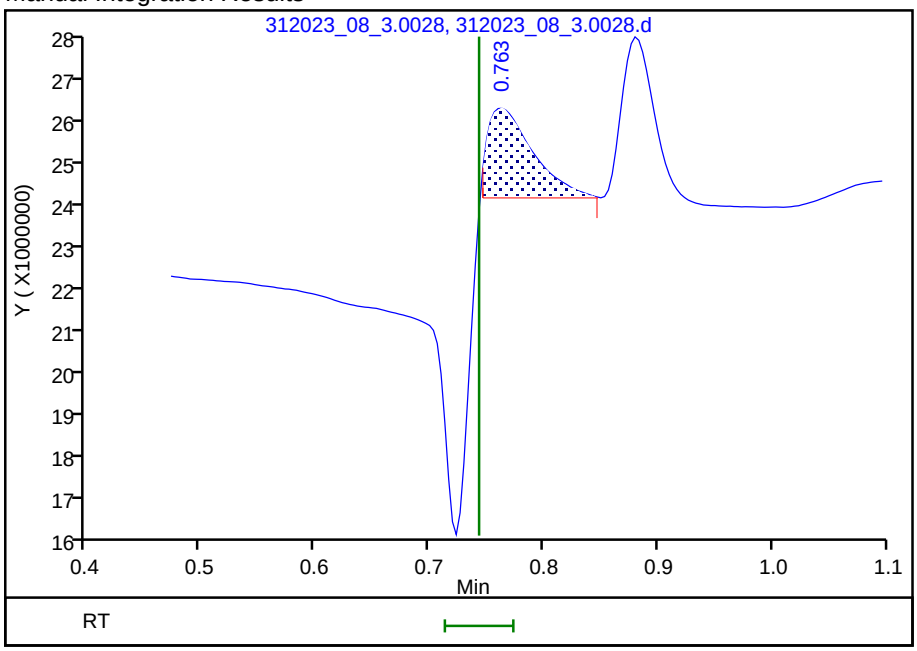
Processing Integration Results

RT: 0.76
Height: 7060530
Amount: 4.125220
Amount Units: ug/l



Manual Integration Results

RT: 0.76
Height: 1986183
Amount: 1.160457
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 04:07:28 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Instrument noise

Eurofins Lancaster Laboratories Environment Testing, LLC

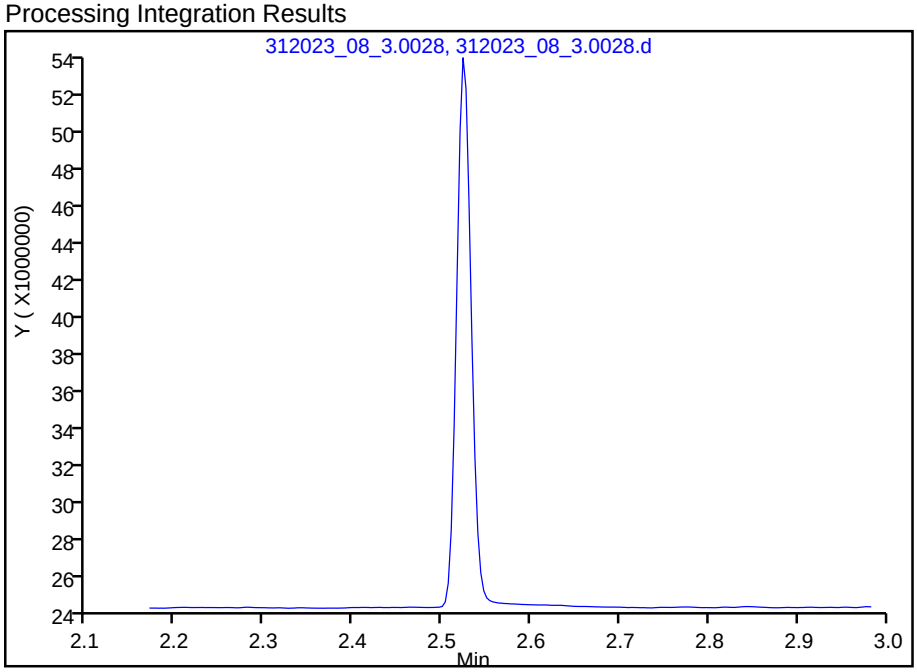
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0028.d				
Injection Date:	03-Aug-2023 17:38:00	Instrument ID:	19506		
Lims ID:	410-136645-A-2-A	Lab Sample ID:	410-136645-2		
Client ID:	E23-03407-002_MW-10D-072623				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	28
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

$ 5 Propene, CAS: 115-07-1

Signal: 1

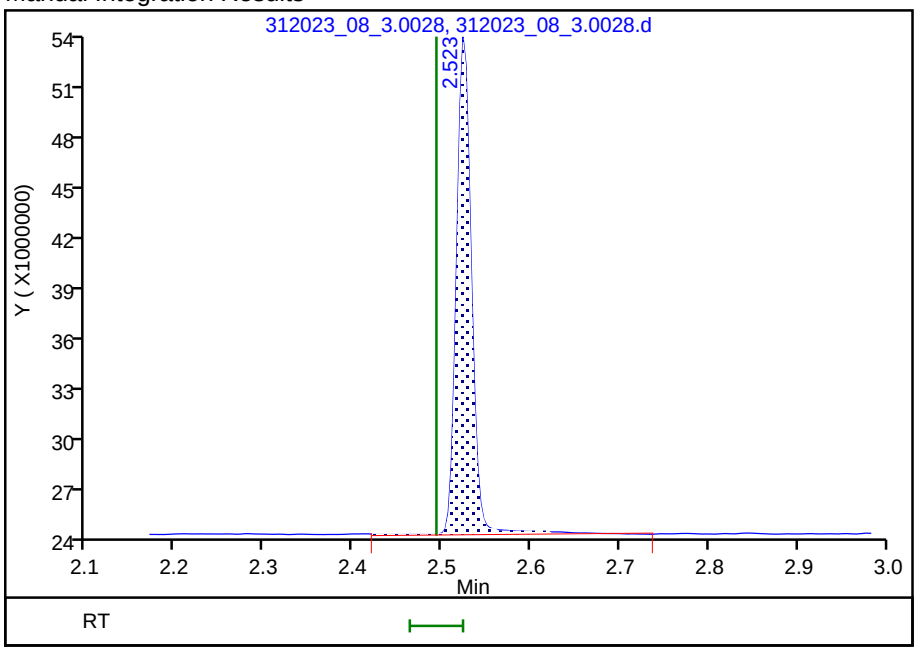
Not Detected
Expected RT: 2.49

Processing Integration Results



Manual Integration Results

RT: 2.52
Height: 29761514
Amount: 10.189672
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 04:05:58 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136645-1 Analy Batch No.: 395069

SDG No.:

Instrument ID: 19506 GC Column: HP Plot ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 10:31 Calibration End Date: 07/10/2023 11:48 Calibration ID: 51805

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-395069/3	312023_07_10.0003.d
Level 2	IC 410-395069/4	312023_07_10.0004.d
Level 3	ICRT 410-395069/5	312023_07_10.0005.d
Level 4	IC 410-395069/6	312023_07_10.0006.d
Level 5	IC 410-395069/7	312023_07_10.0007.d
Level 6	IC 410-395069/8	312023_07_10.0008.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
Methane	0.753	0.750	0.747	0.747	0.747	0.747					0.717 - 0.777	0.749
Ethane	0.887	0.887	0.887	0.887	0.887	0.887					0.857 - 0.917	0.887
Ethene	1.147	1.147	1.147	1.147	1.147	1.143					1.117 - 1.177	1.146
Propane	1.597	1.597	1.597	1.597	1.597	1.593					1.567 - 1.627	1.596
Isobutane	2.843	2.843	2.843	2.843	2.840	2.833					2.813 - 2.873	2.841
n-Butane	2.977	2.977	2.977	2.977	2.977	2.970					2.927 - 3.027	2.976
Acetylene	3.130	3.130	3.123	3.120	3.117	+++++					3.070 - 3.170	3.124
Propene	2.513	2.513	2.513	2.513	2.513	2.513					2.483 - 2.543	2.513

INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

GC VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136645-1 Analy Batch No.: 395069

SDG No.:

Instrument ID: 19506 GC Column: HP Plot ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 10:31 Calibration End Date: 07/10/2023 11:48 Calibration ID: 51805

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-395069/3	312023_07_10.0003.d
Level 2	IC 410-395069/4	312023_07_10.0004.d
Level 3	ICRT 410-395069/5	312023_07_10.0005.d
Level 4	IC 410-395069/6	312023_07_10.0006.d
Level 5	IC 410-395069/7	312023_07_10.0007.d
Level 6	IC 410-395069/8	312023_07_10.0008.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 4		B	M1	M2								
Methane	1620217 1724723	1669274 1644315	1819958	1790828	Ave		1711552.46				4.7		20.0			
Ethane	1397949 1437980	1449676 1397042	1521880	1493637	Ave		1449694.05				3.5		20.0			
Ethene	1487652 1566898	1590680 1524261	1664662	1627016	Ave		1576861.28				4.1		20.0			
Propane	1729844 1772582	1790754 1806907	1870662	1835271	Ave		1801003.10				2.7		20.0			
Isobutane	2386881 2418184	2493977 2361227	2604777	2526564	Ave		2465268.35				3.8		20.0			
n-Butane	2124483 2253124	2248516 2342605	2406498	2369806	Ave		2290838.73				4.5		20.0			
Acetylene	2138770 1506256	2116285 +++++	1931124	1719543	Ave		1882395.48				14.3		20.0			
Propene	2912944 2834168	2970692 2674692	3108727	3023294	Ave		2920752.83				5.2		20.0			

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.

INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

GC VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136645-1 Analy Batch No.: 395069

SDG No.:

Instrument ID: 19506 GC Column: HP Plot ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 10:31 Calibration End Date: 07/10/2023 11:48 Calibration ID: 51805

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-395069/3	312023_07_10.0003.d
Level 2	IC 410-395069/4	312023_07_10.0004.d
Level 3	ICRT 410-395069/5	312023_07_10.0005.d
Level 4	IC 410-395069/6	312023_07_10.0006.d
Level 5	IC 410-395069/7	312023_07_10.0007.d
Level 6	IC 410-395069/8	312023_07_10.0008.d

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
		LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Methane	Ave	8068679 818868913	24938956	108760667	178366469	257673649	4.98 498	14.9	59.8	99.6	149
Ethane	Ave	7185458 718079358	22354009	93869540	153545912	221736579	5.14 514	15.4	61.7	103	154
Ethene	Ave	7229989 740790614	23192115	97083060	158145942	228453680	4.86 486	14.6	58.3	97.2	146
Propane	Ave	8995190 939591421	27935760	116729285	190868152	276522736	5.20 520	15.6	62.4	104	156
Isobutane	Ave	12387912 1225476894	38831218	162225538	262257366	376511192	5.19 519	15.6	62.3	104	156
n-Butane	Ave	10856110 1197071246	34469750	147566441	242194144	345403973	5.11 511	15.3	61.3	102	153
Acetylene	Ave	9282262 +++++	27554030	100572916	149256351	196114478	4.34 +++++	13.0	52.1	86.8	130
Propene	Ave	4893746 449348241	14972289	62671931	101582671	142842078	1.68 168	5.04	20.2	33.6	50.4

Curve Type Legend

Ave = Average by Height

Report Date: 11-Jul-2023 04:35:12 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0003.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 10-Jul-2023 10:31:00 ALS Bottle#: 0 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 410-0088528-003
Operator ID: Instrument ID: 19506
Sublist: chrom-RSK_19506A*sub2

Method: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\RSK_19506A.m
Limit Group: GCV - RSK175
Last Update: 11-Jul-2023 04:35:12 Calib Date: 10-Jul-2023 11:48:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Column 1 : HP Plot (0.53 mm) Det: AFID0
Process Host: CTX1629

First Level Reviewer: LXF2 Date: 11-Jul-2023 04:31:43

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	1 Methane	0.753	0.747	0.006	8068679H	4.98	4.71	M
	2 Ethane	0.887	0.887	0.000	7185458H	5.14	4.96	
	3 Ethylene	1.147	1.147	0.000	7229989H	4.86	4.59	
	4 Propane	1.597	1.597	0.000	8995190H	5.20	4.99	M
$	5 Propene	2.513	2.513	0.000	4893746H	1.68	1.68	
	8 Propane, 2-methyl	2.843	2.843	0.000	12387912H	5.19	5.02	M
	6 Butane	2.977	2.977	0.000	10856110H	5.11	4.74	M
	7 Acetylene	3.130	3.120	0.010	9282262H	4.34	4.93	M

QC Flag Legend

Processing Flags
H - Response Measured by Height
Review Flags
M - Manually Integrated

Reagents:

EPH_HSSSS_00011 Amount Added: 5.00 Units: uL
EPH_HSSMS_00011 Amount Added: 5.00 Units: uL

Report Date: 11-Jul-2023 04:35:12 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0003.d

Injection Date: 10-Jul-2023 10:31:00 Instrument ID: 19506

Lims ID: IC

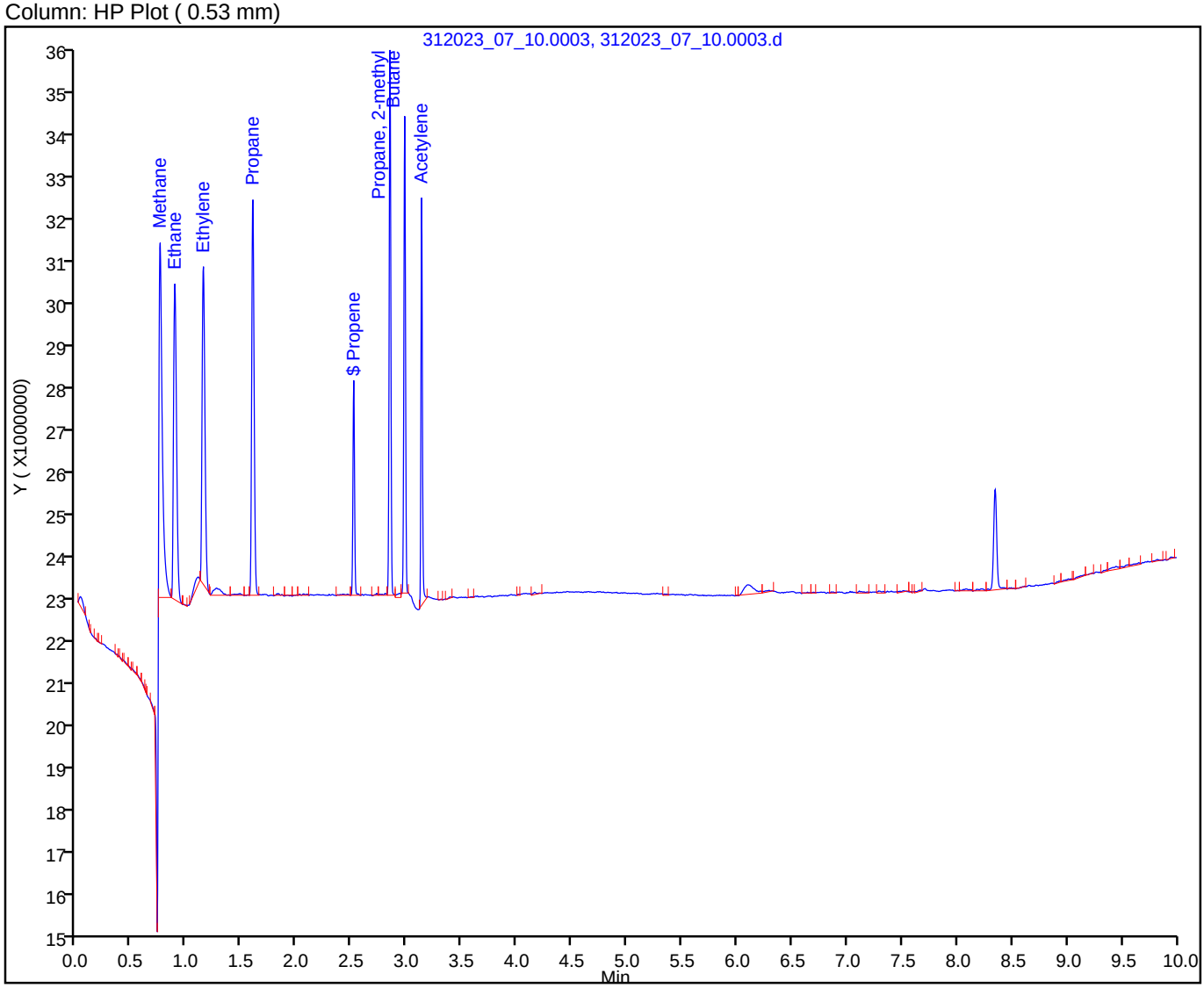
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 3

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Report Date: 11-Jul-2023 04:35:12 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

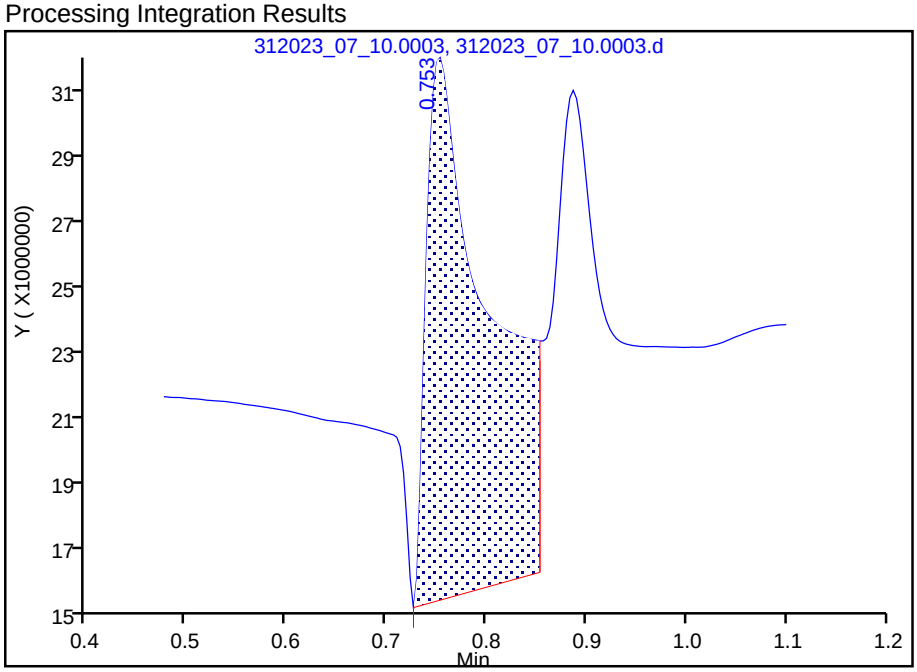
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0003.d				
Injection Date:	10-Jul-2023 10:31:00	Instrument ID:	19506		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	3
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

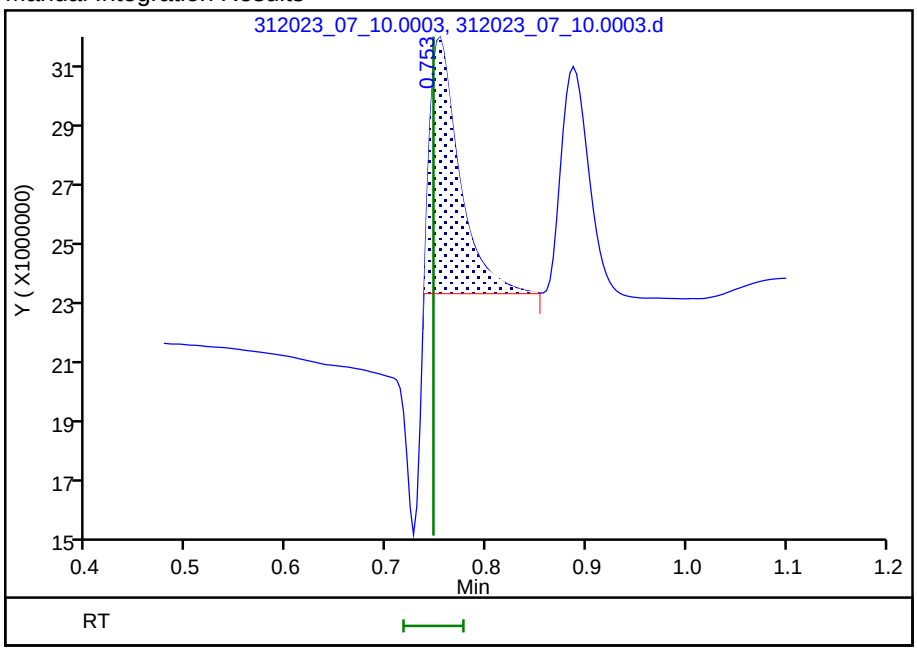
Processing Integration Results

RT: 0.75
Height: 15455403
Amount: 3.159020
Amount Units: ug/l



Manual Integration Results

RT: 0.75
Height: 8068679
Amount: 4.714246
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:31:10 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:35:12 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

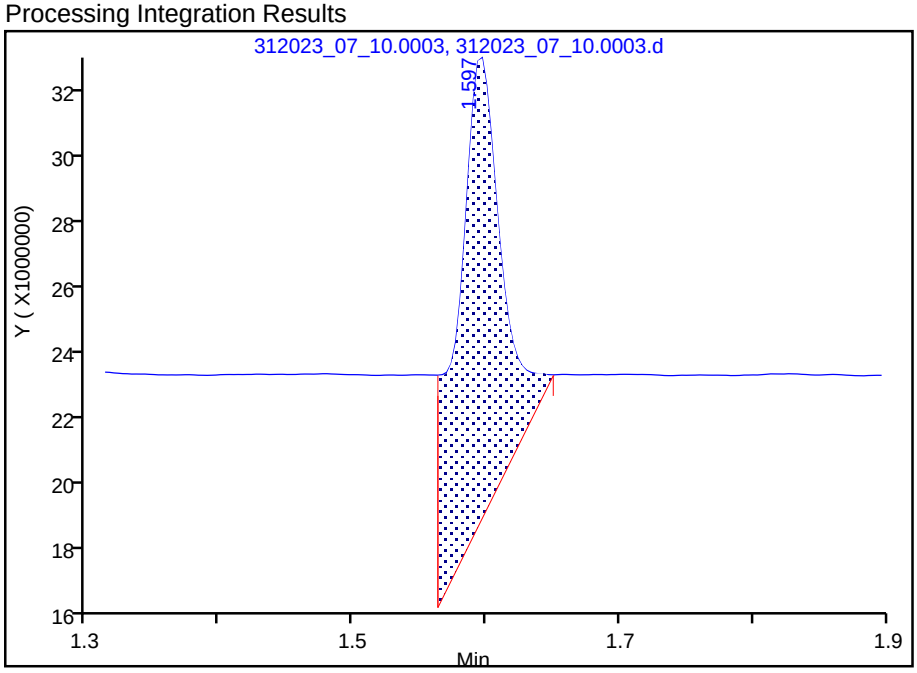
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0003.d				
Injection Date:	10-Jul-2023 10:31:00	Instrument ID:	19506		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	3
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

4 Propane, CAS: 74-98-6

Signal: 1

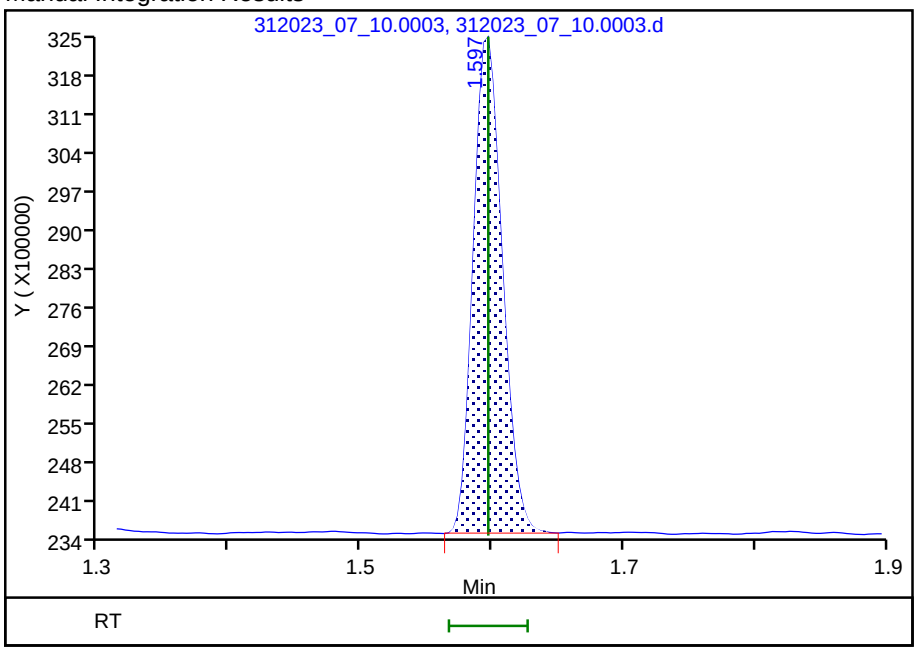
Processing Integration Results

RT: 1.60
Height: 9432935
Amount: 5.197114
Amount Units: ug/l



Manual Integration Results

RT: 1.60
Height: 8995190
Amount: 4.994544
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:31:02 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:35:12 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

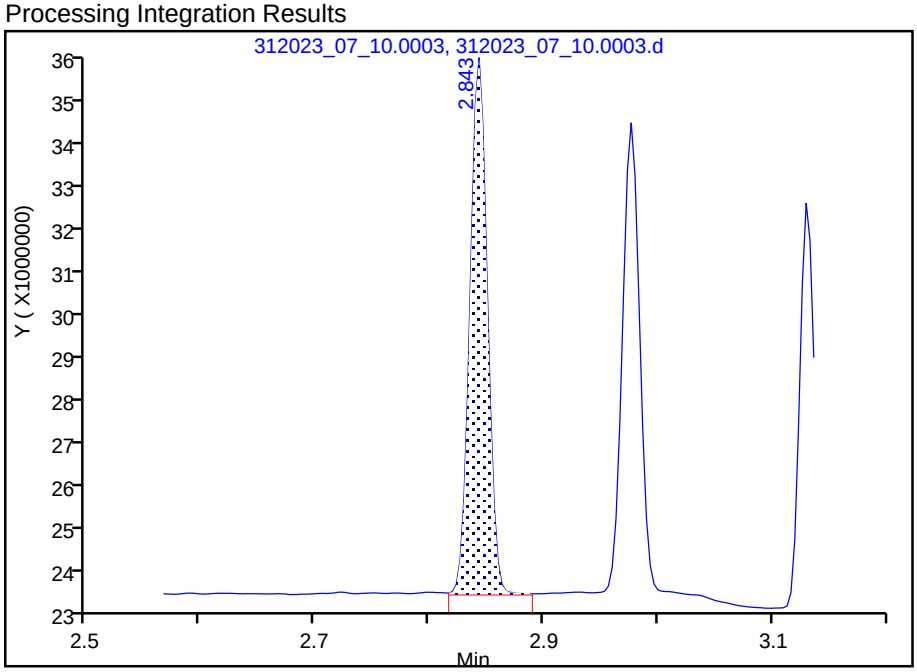
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0003.d				
Injection Date:	10-Jul-2023 10:31:00	Instrument ID:	19506		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	3
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

8 Propane, 2-methyl, CAS: 75-28-5

Signal: 1

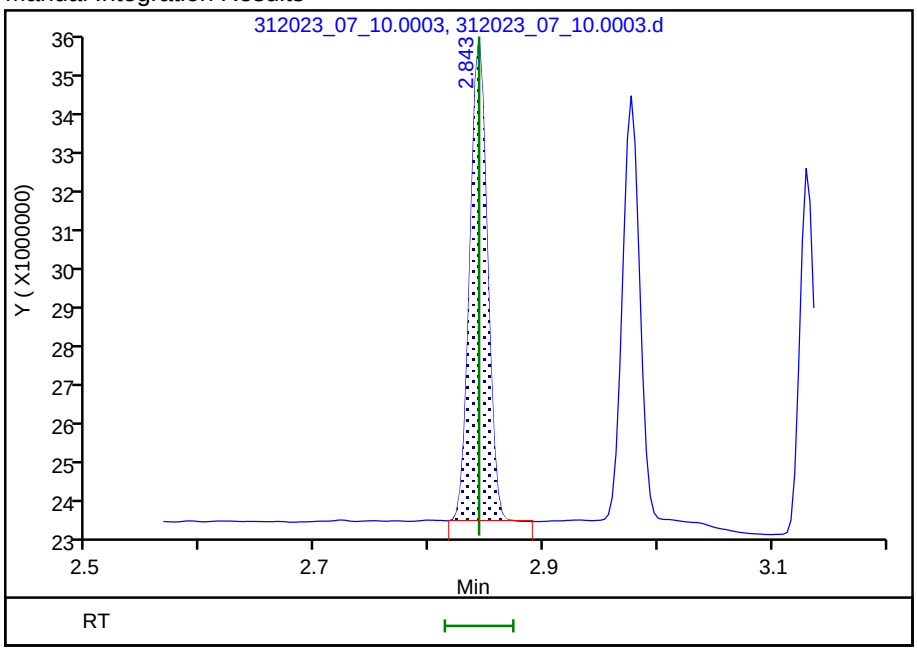
Processing Integration Results

RT: 2.84
Height: 12428383
Amount: 5.038735
Amount Units: ug/l



Manual Integration Results

RT: 2.84
Height: 12387912
Amount: 5.024975
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:31:21 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:35:12 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

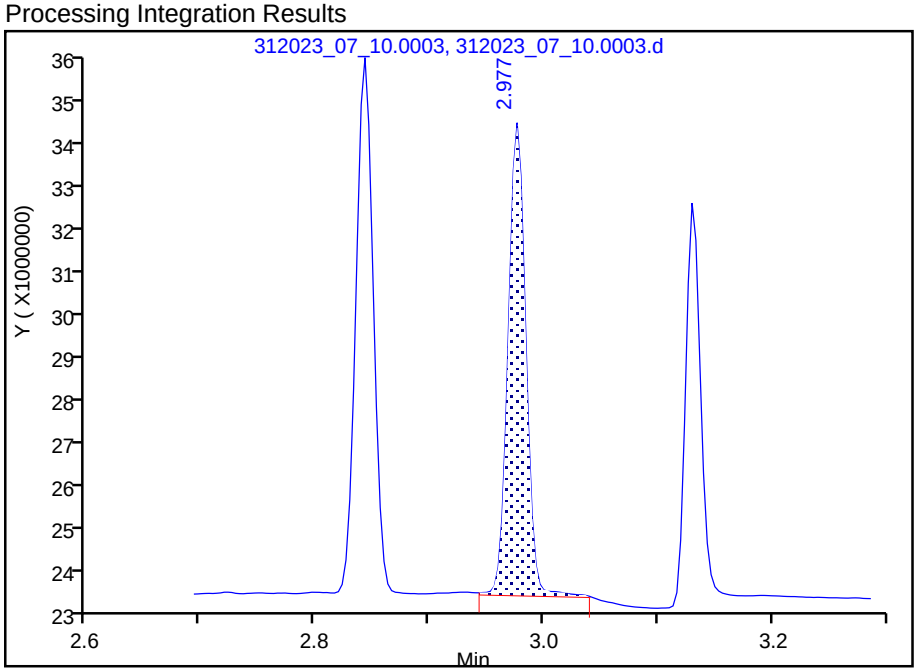
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0003.d				
Injection Date:	10-Jul-2023 10:31:00	Instrument ID:	19506		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	3
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

6 Butane, CAS: 106-97-8

Signal: 1

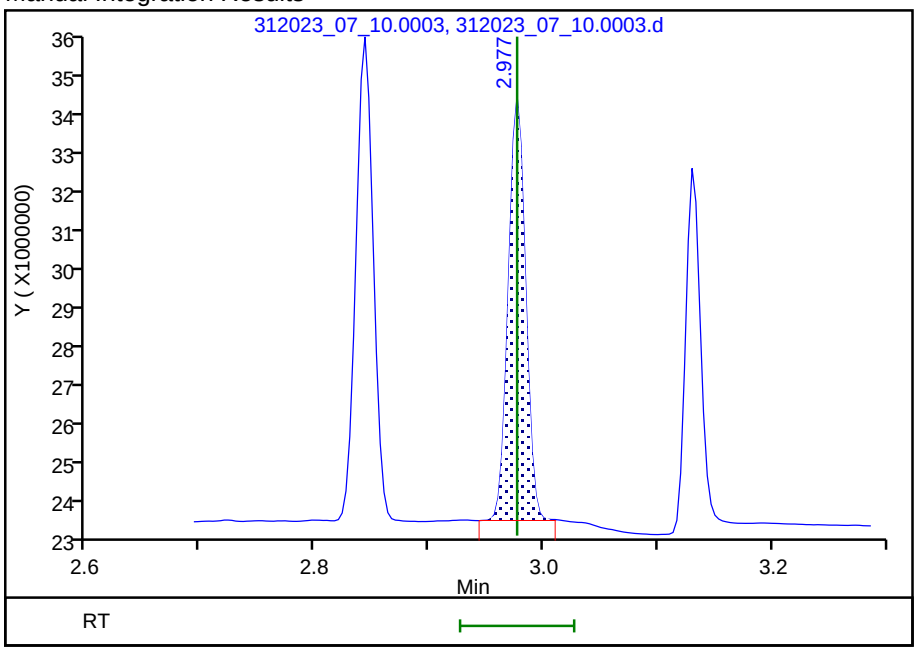
Processing Integration Results

RT: 2.98
Height: 10936944
Amount: 4.768220
Amount Units: ug/l



Manual Integration Results

RT: 2.98
Height: 10856110
Amount: 4.738924
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:31:51 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:35:12 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

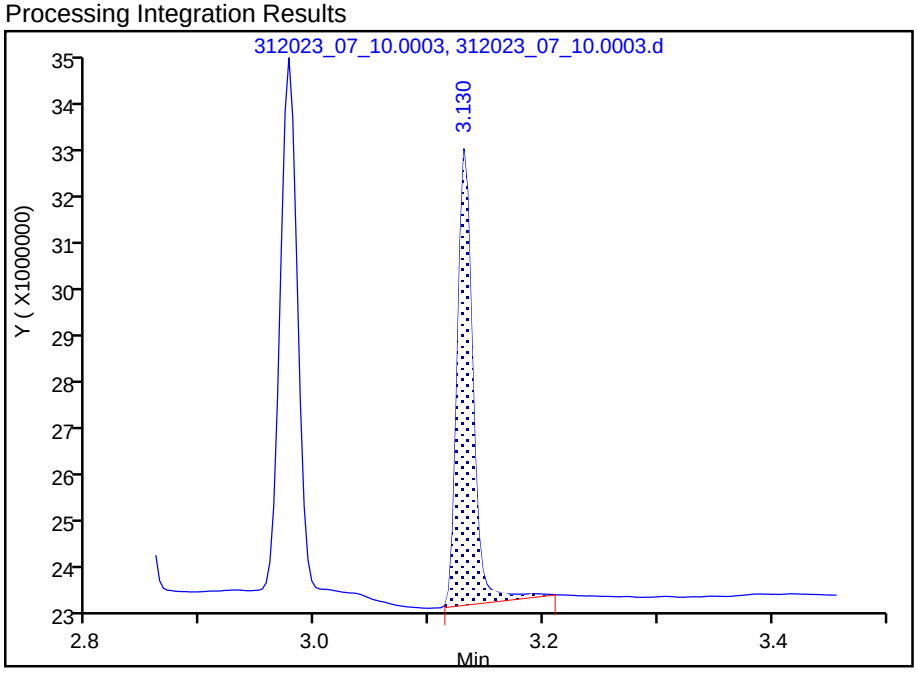
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0003.d				
Injection Date:	10-Jul-2023 10:31:00	Instrument ID:	19506		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	3
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

7 Acetylene, CAS: 74-86-2

Signal: 1

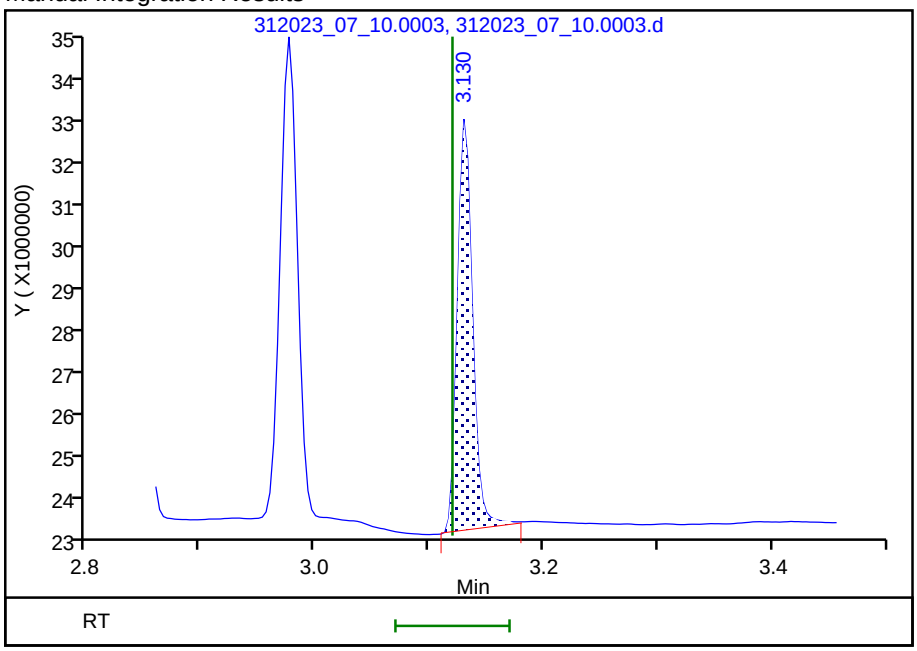
Processing Integration Results

RT: 3.13
Height: 9309507
Amount: 4.942267
Amount Units: ug/l



Manual Integration Results

RT: 3.13
Height: 9282262
Amount: 4.931090
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:31:37 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:35:13 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0004.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 10-Jul-2023 10:46:00 ALS Bottle#: 0 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 410-0088528-004
Operator ID: Instrument ID: 19506
Sublist: chrom-RSK_19506A*sub2

Method: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\RSK_19506A.m
Limit Group: GCV - RSK175
Last Update: 11-Jul-2023 04:35:13 Calib Date: 10-Jul-2023 11:48:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Column 1 : HP Plot (0.53 mm) Det: AFID0
Process Host: CTX1629

First Level Reviewer: LXF2 Date: 11-Jul-2023 04:30:46

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	1 Methane	0.750	0.747	0.003	24938956H	14.9	14.6	M
	2 Ethane	0.887	0.887	0.000	22354009H	15.4	15.4	
	3 Ethylene	1.147	1.147	0.000	23192115H	14.6	14.7	M
	4 Propane	1.597	1.597	0.000	27935760H	15.6	15.5	
$	5 Propene	2.513	2.513	0.000	14972289H	5.04	5.13	
	8 Propane, 2-methyl	2.843	2.843	0.000	38831218H	15.6	15.8	
	6 Butane	2.977	2.977	0.000	34469750H	15.3	15.0	M
	7 Acetylene	3.130	3.120	0.010	27554030H	13.0	14.6	

QC Flag Legend

Processing Flags
H - Response Measured by Height
Review Flags
M - Manually Integrated

Reagents:

EPH_HSSSS_00011 Amount Added: 15.00 Units: uL
EPH_HSSMS_00011 Amount Added: 15.00 Units: uL

Report Date: 11-Jul-2023 04:35:13 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0004.d

Injection Date: 10-Jul-2023 10:46:00 Instrument ID: 19506

Lims ID: IC

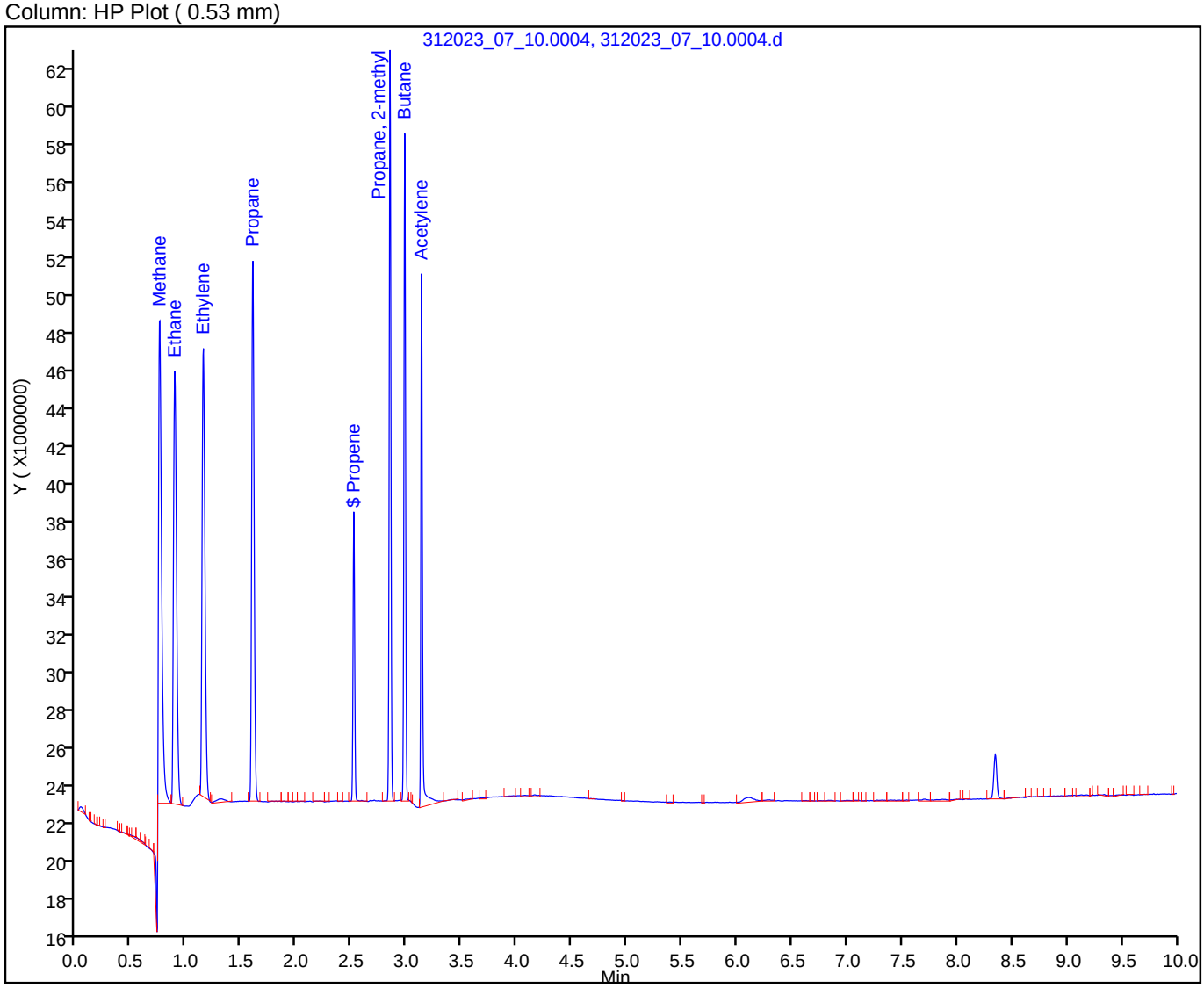
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 4

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Report Date: 11-Jul-2023 04:35:13 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

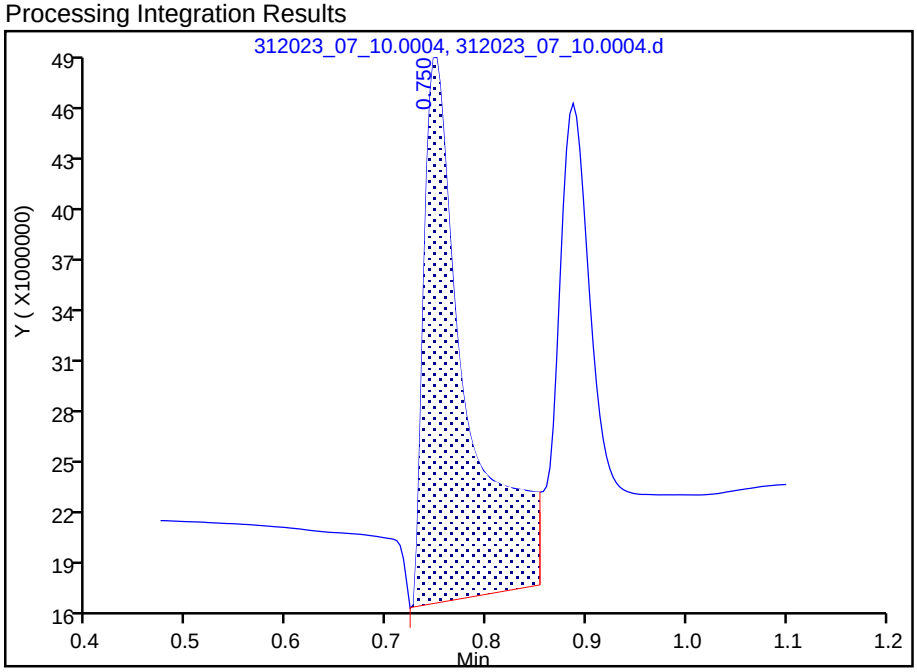
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0004.d				
Injection Date:	10-Jul-2023 10:46:00	Instrument ID:	19506		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

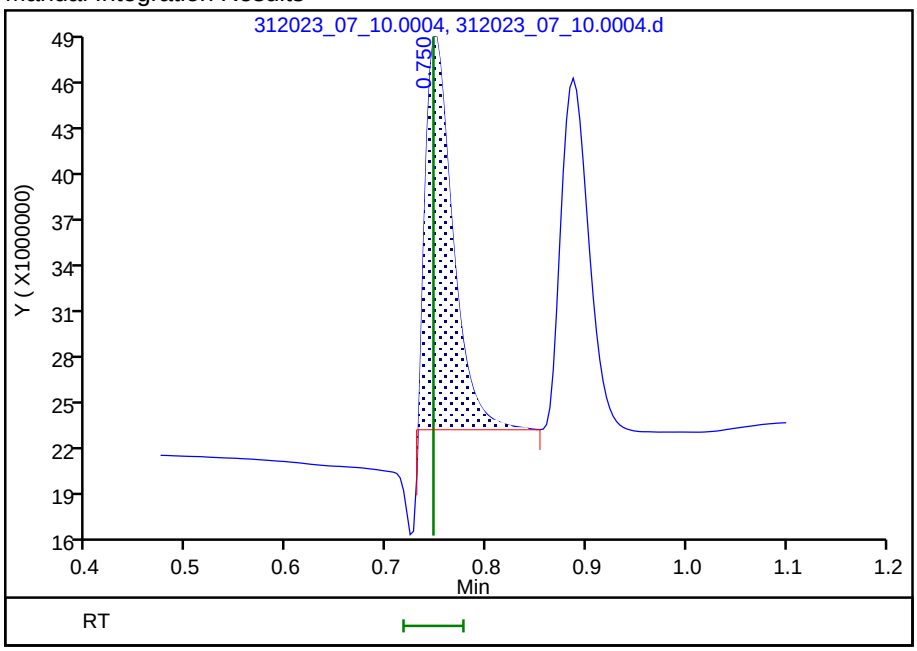
Processing Integration Results

RT: 0.75
Height: 31339351
Amount: 14.420449
Amount Units: ug/l



Manual Integration Results

RT: 0.75
Height: 24938956
Amount: 14.570956
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:30:44 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:35:13 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

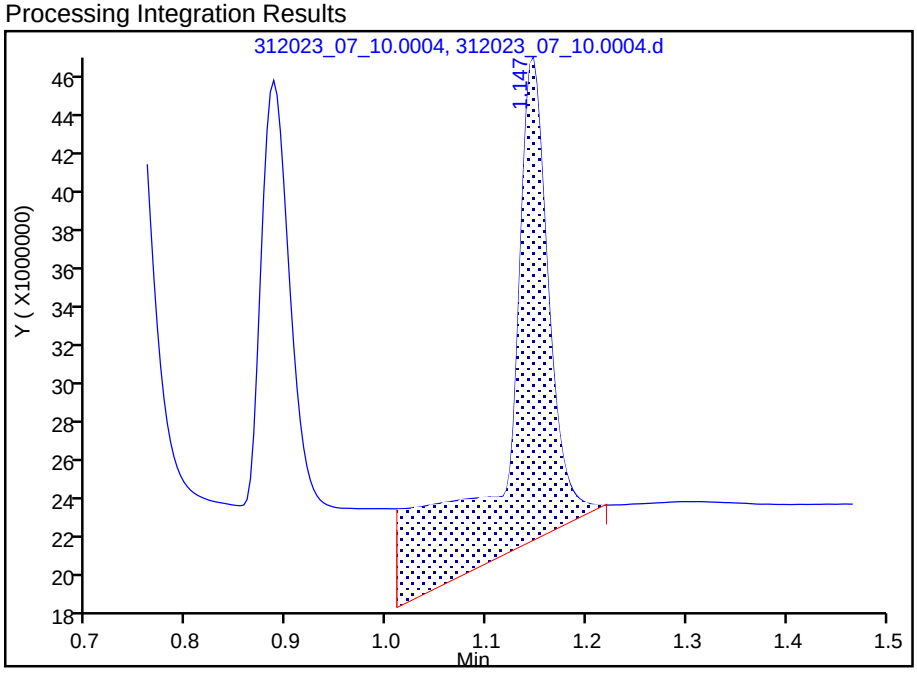
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0004.d				
Injection Date:	10-Jul-2023 10:46:00	Instrument ID:	19506		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

3 Ethylene, CAS: 74-85-1

Signal: 1

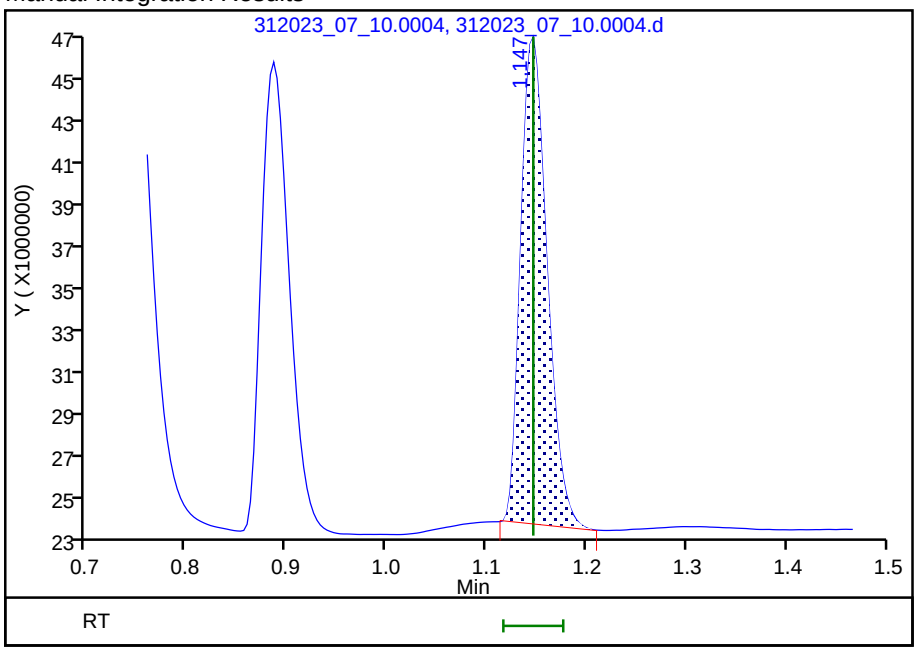
Processing Integration Results

RT: 1.15
Height: 25984316
Amount: 16.137409
Amount Units: ug/l



Manual Integration Results

RT: 1.15
Height: 23192115
Amount: 14.707771
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:30:17 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:35:13 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

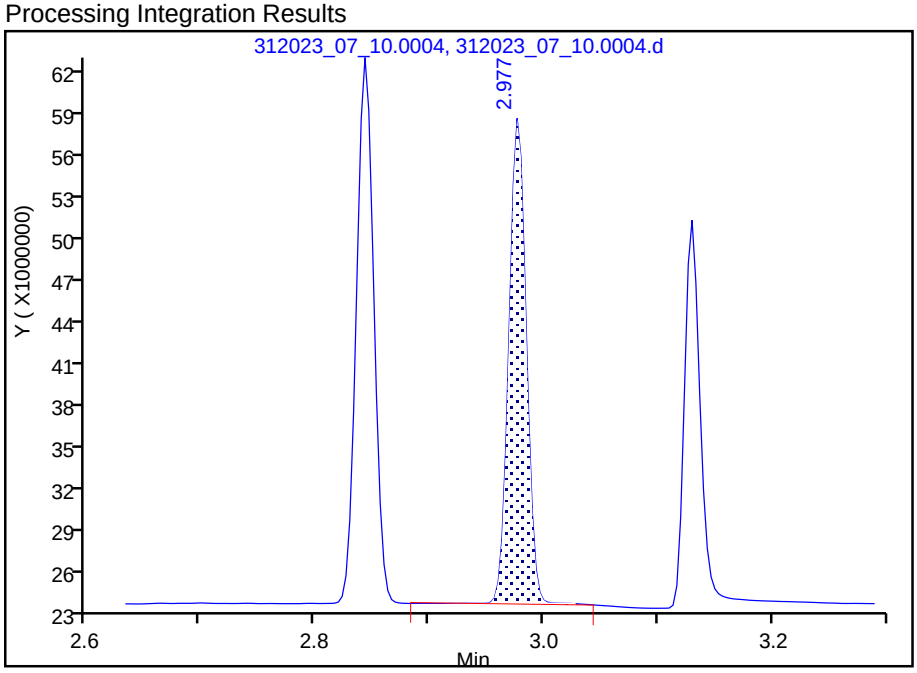
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0004.d				
Injection Date:	10-Jul-2023 10:46:00	Instrument ID:	19506		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

6 Butane, CAS: 106-97-8

Signal: 1

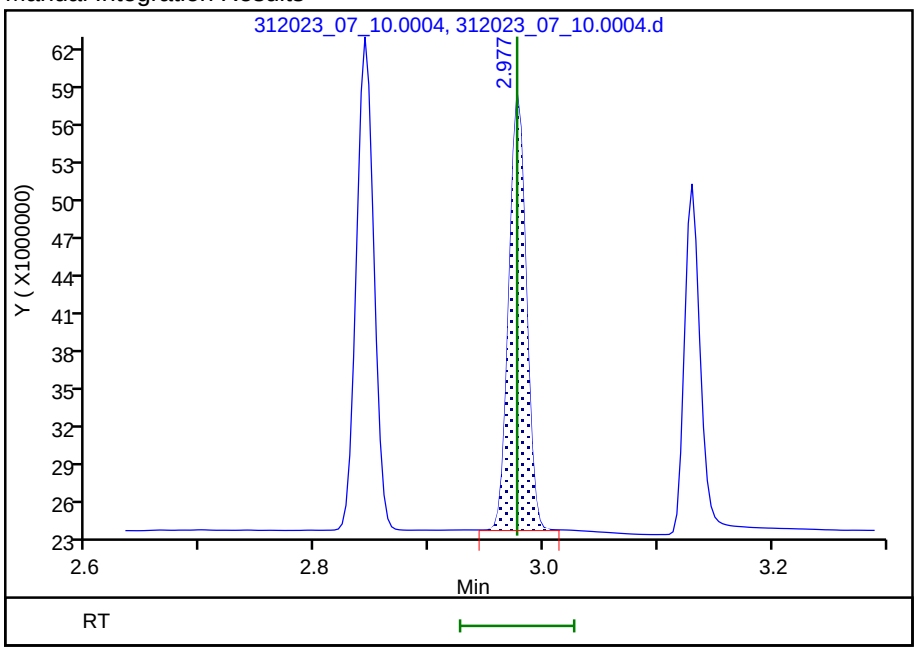
Processing Integration Results

RT: 2.98
Height: 34559899
Amount: 15.060771
Amount Units: ug/l



Manual Integration Results

RT: 2.98
Height: 34469750
Amount: 15.046782
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:30:24 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:35:14 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0005.d
Lims ID: ICRT
Client ID:
Sample Type: ICRT Calib Level: 3
Inject. Date: 10-Jul-2023 11:02:00 ALS Bottle#: 0 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 410-0088528-005
Operator ID: Instrument ID: 19506
Sublist: chrom-RSK_19506A*sub2

Method: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\RSK_19506A.m
Limit Group: GCV - RSK175
Last Update: 11-Jul-2023 04:35:14 Calib Date: 10-Jul-2023 11:48:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Column 1 : HP Plot (0.53 mm) Det: AFID0
Process Host: CTX1629

First Level Reviewer: LXF2 Date: 11-Jul-2023 04:30:00

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	1 Methane	0.747	0.747	0.000	108760667H	59.8	63.5	M
	2 Ethane	0.887	0.887	0.000	93869540H	61.7	64.8	
	3 Ethylene	1.147	1.147	0.000	97083060H	58.3	61.6	M
	4 Propane	1.597	1.597	0.000	116729285H	62.4	64.8	
$	5 Propene	2.513	2.513	0.000	62671931H	20.2	21.5	
	8 Propane, 2-methyl	2.843	2.843	0.000	162225538H	62.3	65.8	
	6 Butane	2.977	2.977	0.000	147566441H	61.3	64.4	M
	7 Acetylene	3.123	3.123	0.000	100572916H	52.1	53.4	

QC Flag Legend

Processing Flags
H - Response Measured by Height
Review Flags
M - Manually Integrated

Reagents:

EPH_HSSSS_00011 Amount Added: 60.00 Units: uL
EPH_HSSMS_00011 Amount Added: 60.00 Units: uL

Report Date: 11-Jul-2023 04:35:14 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0005.d

Injection Date: 10-Jul-2023 11:02:00 Instrument ID: 19506

Lims ID: ICRT

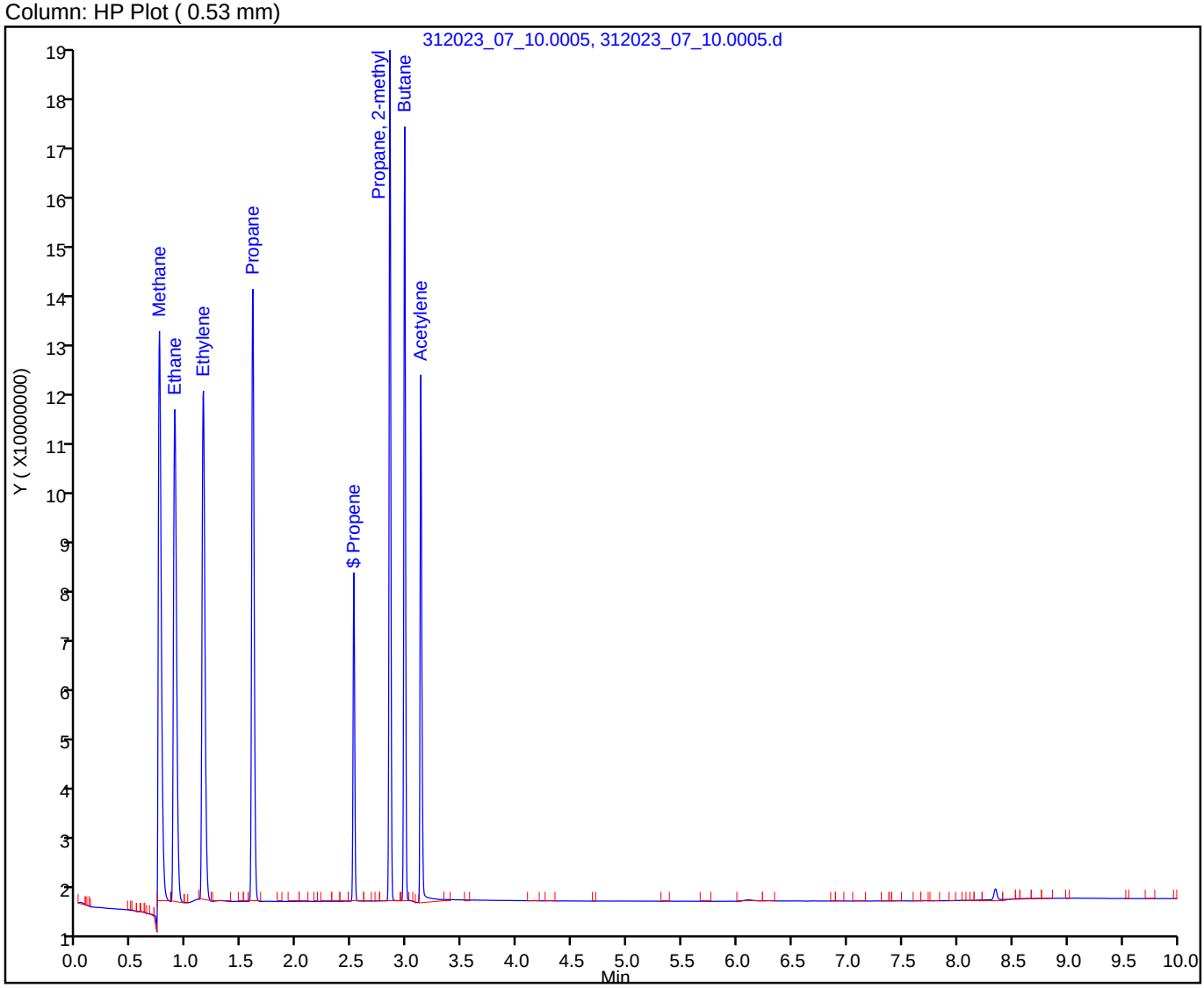
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 5

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Report Date: 11-Jul-2023 04:35:14 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

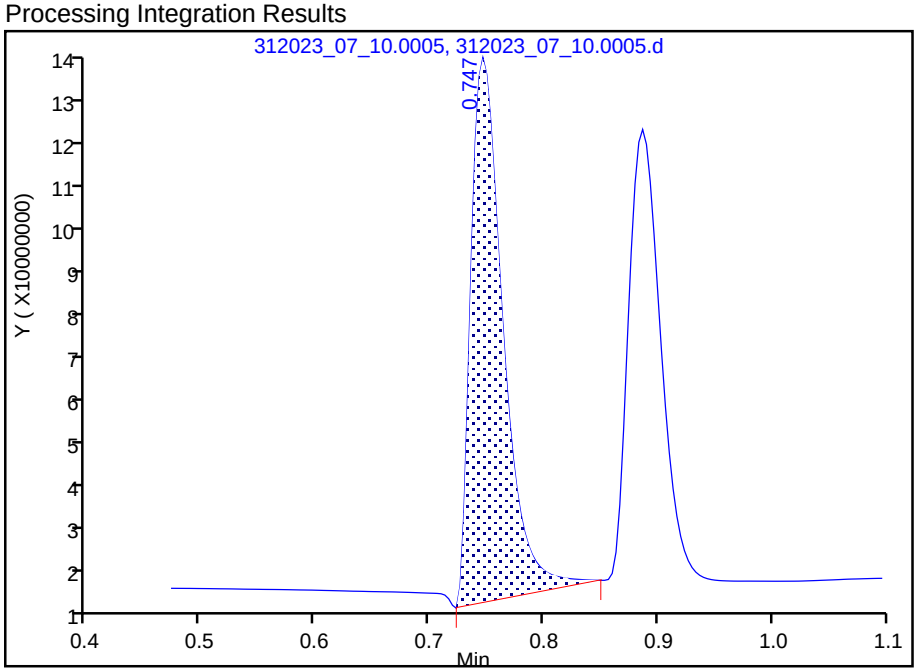
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0005.d				
Injection Date:	10-Jul-2023 11:02:00	Instrument ID:	19506		
Lims ID:	ICRT				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

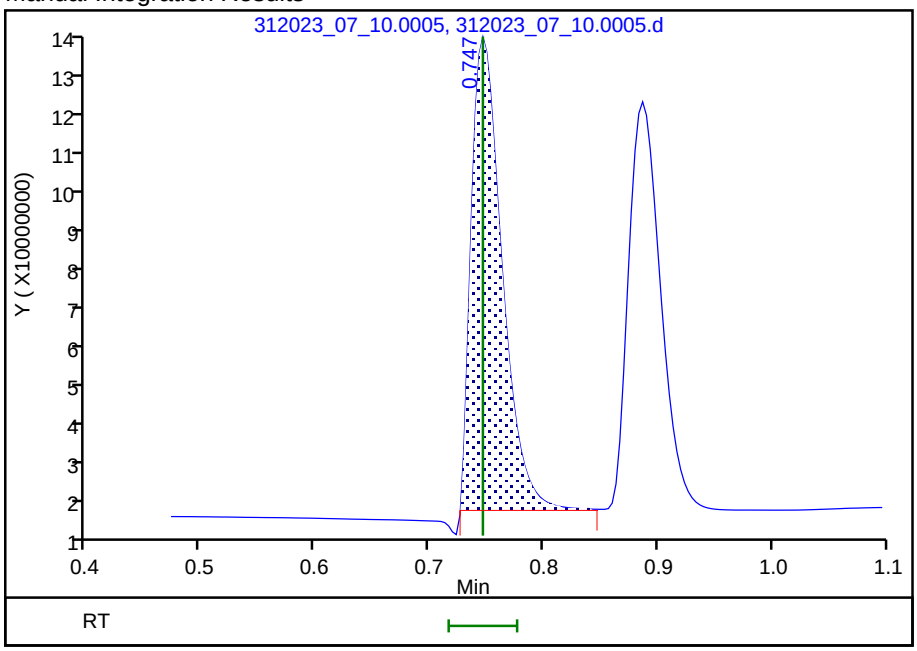
Processing Integration Results

RT: 0.75
Height: 113502842
Amount: 61.011017
Amount Units: ug/l



Manual Integration Results

RT: 0.75
Height: 108760667
Amount: 63.545039
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:29:56 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Eurofins Lancaster Laboratories Environment Testing, LLC

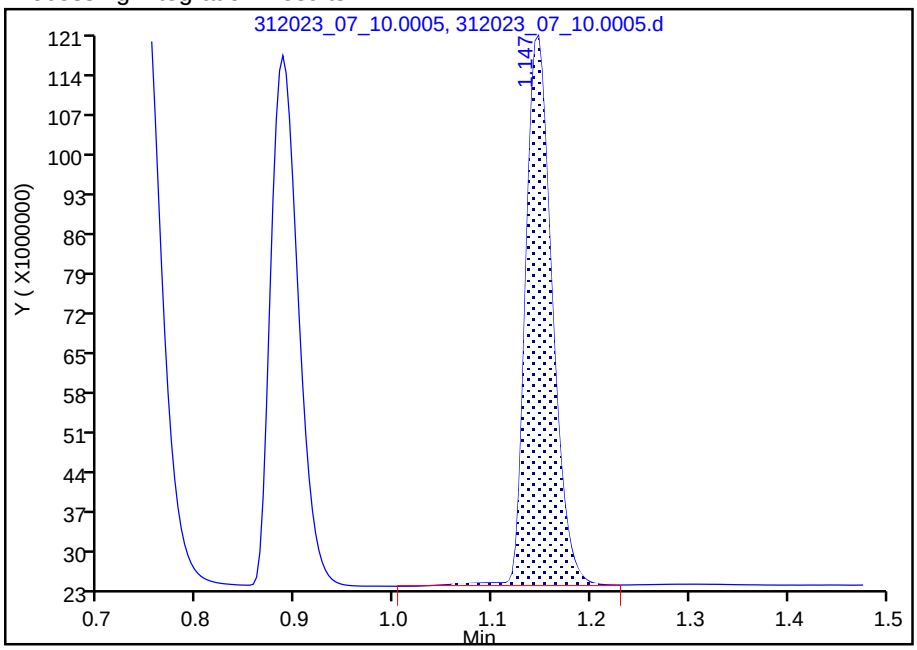
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0005.d				
Injection Date:	10-Jul-2023 11:02:00	Instrument ID:	19506		
Lims ID:	ICRT				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

3 Ethylene, CAS: 74-85-1

Signal: 1

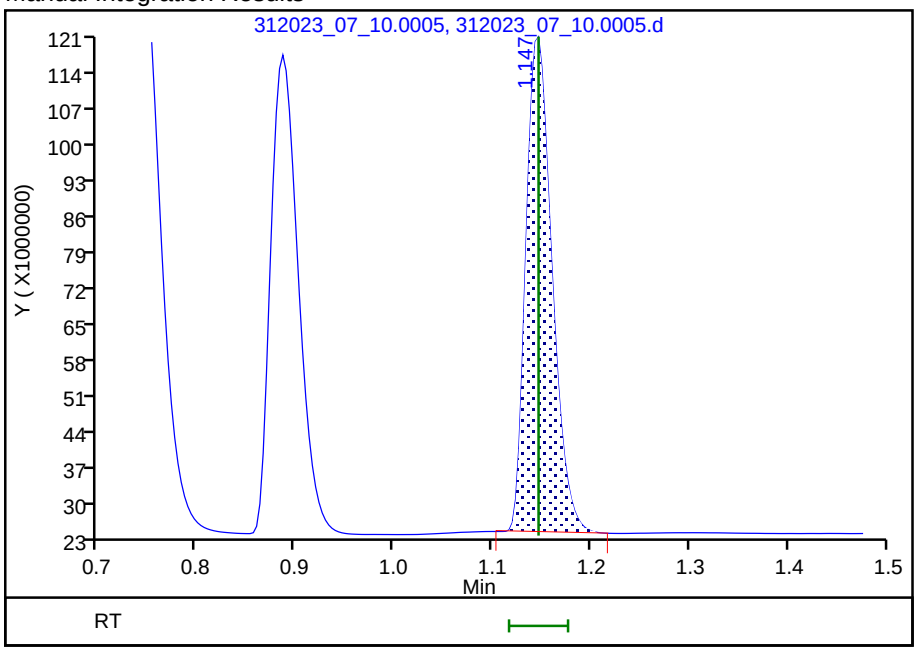
Processing Integration Results

RT: 1.15
Height: 97484876
Amount: 60.499274
Amount Units: ug/l



Manual Integration Results

RT: 1.15
Height: 97083060
Amount: 61.567280
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:29:41 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:35:14 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

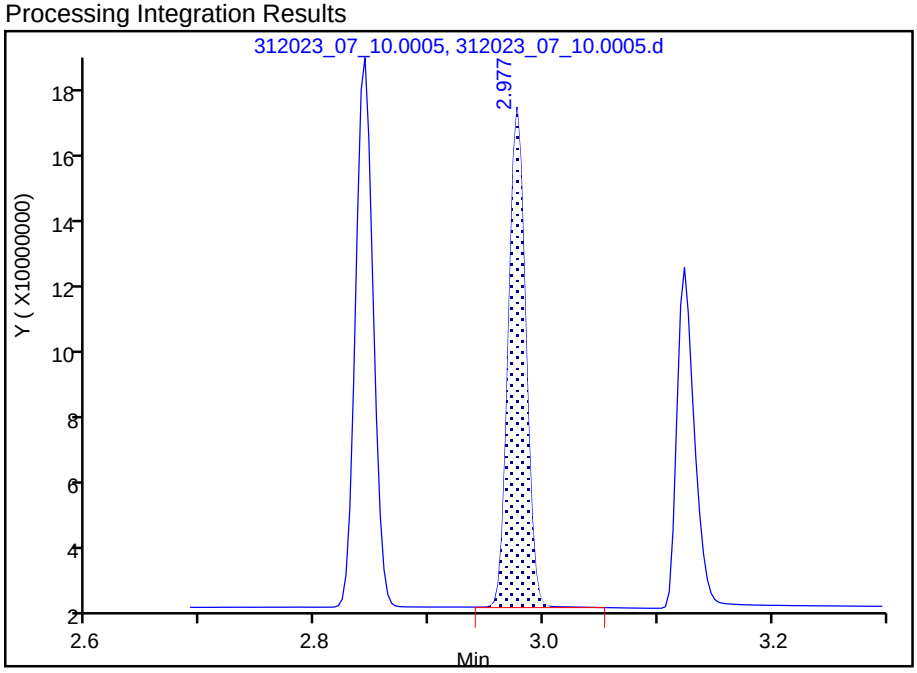
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0005.d				
Injection Date:	10-Jul-2023 11:02:00	Instrument ID:	19506		
Lims ID:	ICRT				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

6 Butane, CAS: 106-97-8

Signal: 1

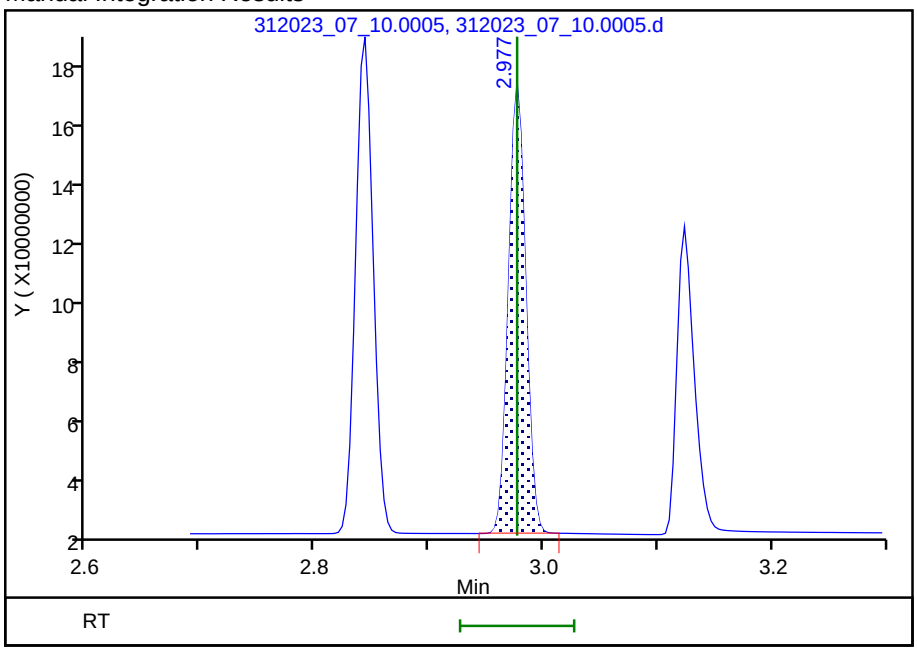
Processing Integration Results

RT: 2.98
Height: 147655181
Amount: 64.447852
Amount Units: ug/l



Manual Integration Results

RT: 2.98
Height: 147566441
Amount: 64.415901
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:32:15 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:35:15 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0006.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 10-Jul-2023 11:17:00 ALS Bottle#: 0 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 410-0088528-006
Operator ID: Instrument ID: 19506
Sublist: chrom-RSK_19506A*sub2

Method: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\RSK_19506A.m
Limit Group: GCV - RSK175
Last Update: 11-Jul-2023 04:35:15 Calib Date: 10-Jul-2023 11:48:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Column 1 : HP Plot (0.53 mm) Det: AFID0
Process Host: CTX1629

First Level Reviewer: LXF2 Date: 11-Jul-2023 04:32:40

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	1 Methane	0.747	0.747	0.000	178366469H	99.6	104.2	M
	2 Ethane	0.887	0.887	0.000	153545912H	102.8	105.9	
	3 Ethylene	1.147	1.147	0.000	158145942H	97.2	100.3	M
	4 Propane	1.597	1.597	0.000	190868152H	104.0	106.0	
$	5 Propene	2.513	2.513	0.000	101582671H	33.6	34.8	
	8 Propane, 2-methyl	2.843	2.843	0.000	262257366H	103.8	106.4	
	6 Butane	2.977	2.977	0.000	242194144H	102.2	105.7	
	7 Acetylene	3.120	3.120	0.000	149256351H	86.8	79.3	

QC Flag Legend

Processing Flags
H - Response Measured by Height
Review Flags
M - Manually Integrated

Reagents:

EPH_HSSSS_00011 Amount Added: 100.00 Units: uL
EPH_HSSMS_00011 Amount Added: 100.00 Units: uL

Report Date: 11-Jul-2023 04:35:15 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0006.d

Injection Date: 10-Jul-2023 11:17:00 Instrument ID: 19506

Lims ID: IC

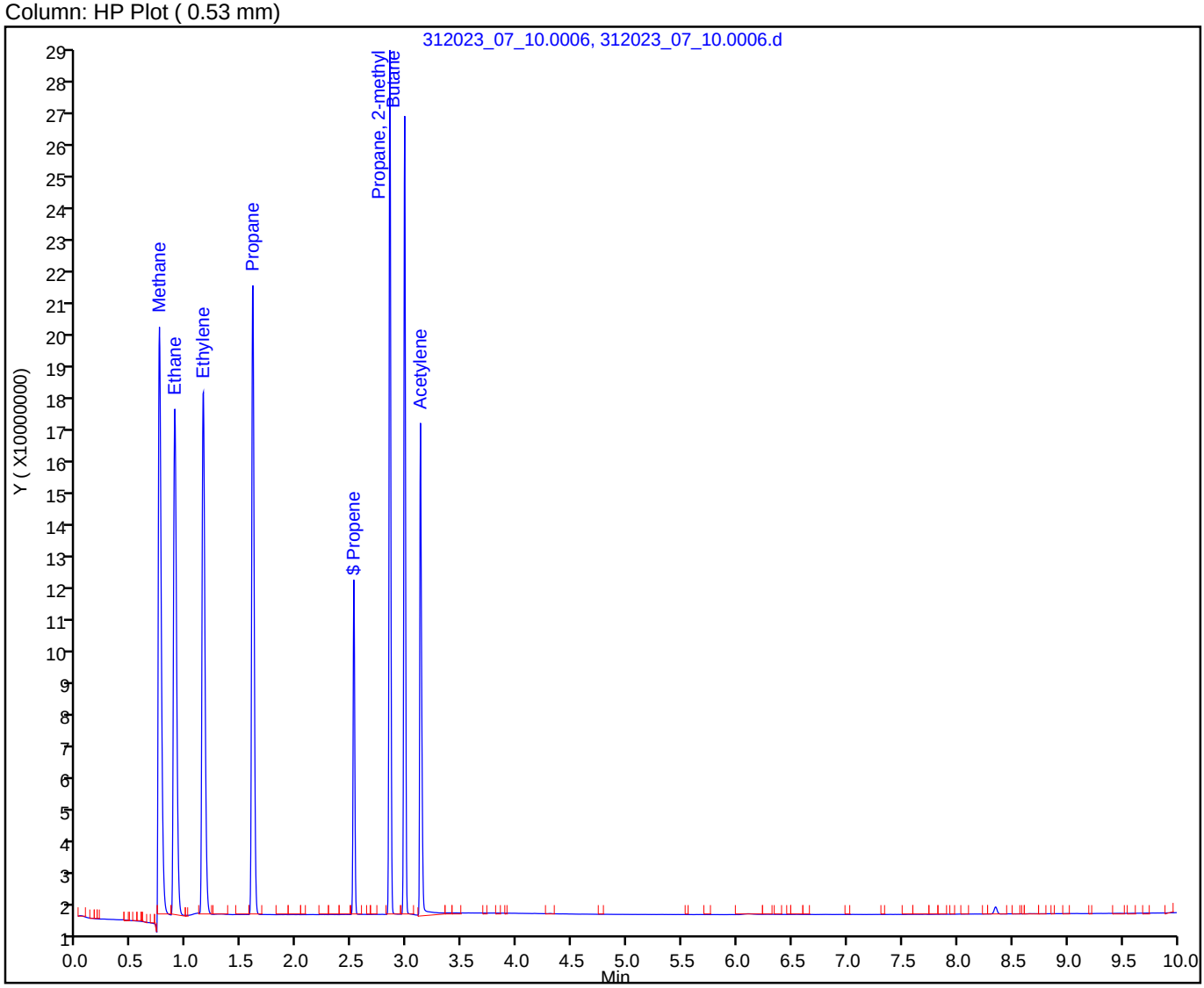
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 6

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Report Date: 11-Jul-2023 04:35:15 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

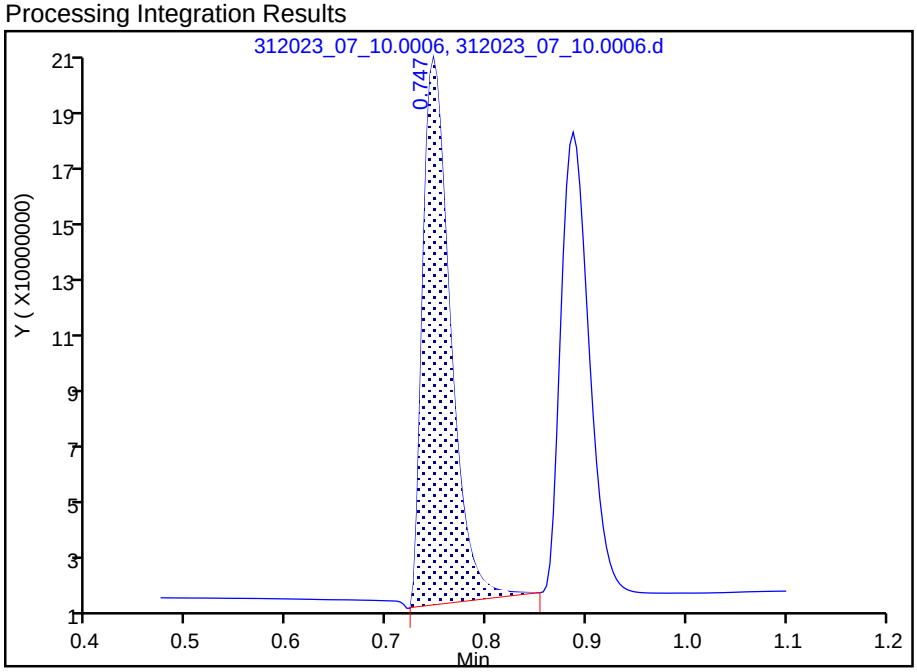
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0006.d				
Injection Date:	10-Jul-2023 11:17:00	Instrument ID:	19506		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

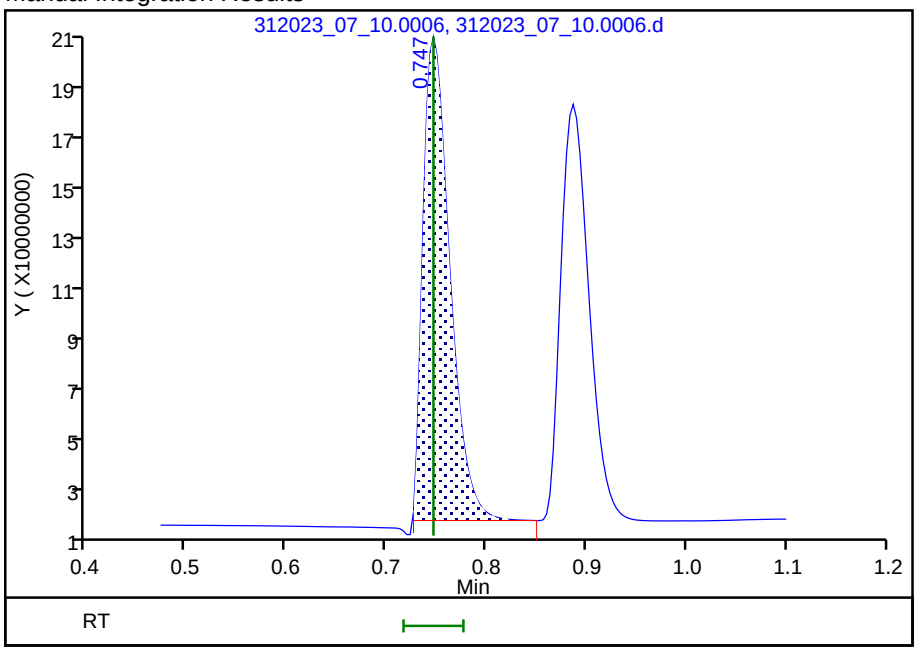
Processing Integration Results

RT: 0.75
Height: 182616859
Amount: 105.8953
Amount Units: ug/l



Manual Integration Results

RT: 0.75
Height: 178366469
Amount: 104.2133
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:32:35 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:35:16 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

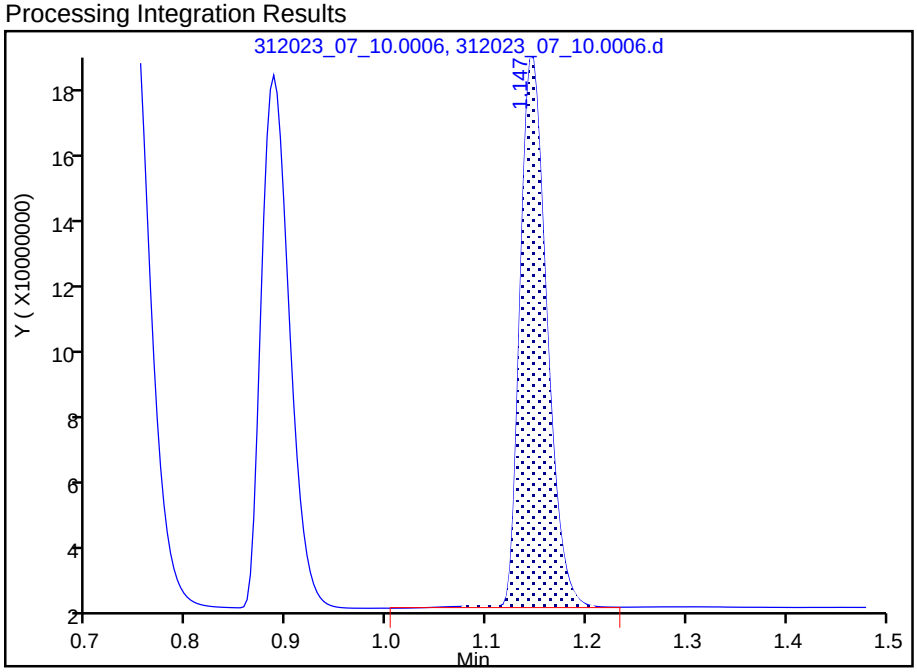
Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0006.d
Injection Date: 10-Jul-2023 11:17:00 Instrument ID: 19506
Lims ID: IC
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: RSK_19506A Limit Group: GCV - RSK175
Column: HP Plot (0.53 mm) Detector AFID0

3 Ethylene, CAS: 74-85-1

Signal: 1

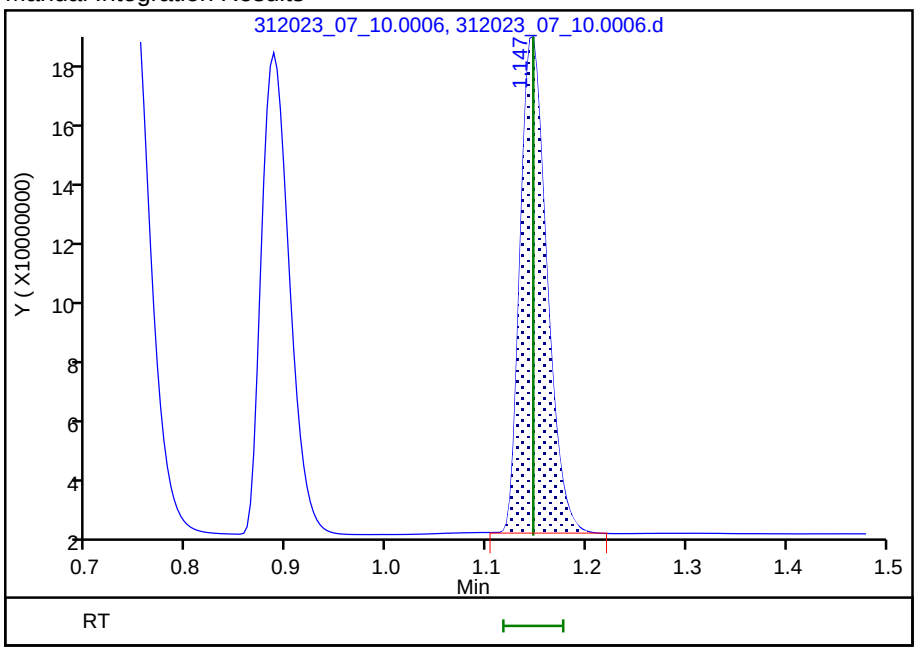
Processing Integration Results

RT: 1.15
Height: 158571623
Amount: 100.4716
Amount Units: ug/l



Manual Integration Results

RT: 1.15
Height: 158145942
Amount: 100.2916
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:32:25 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:35:17 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0007.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 10-Jul-2023 11:32:00 ALS Bottle#: 0 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 410-0088528-007
Operator ID: Instrument ID: 19506
Sublist: chrom-RSK_19506A*sub2

Method: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\RSK_19506A.m
Limit Group: GCV - RSK175
Last Update: 11-Jul-2023 04:35:17 Calib Date: 10-Jul-2023 11:48:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Column 1 : HP Plot (0.53 mm) Det: AFID0
Process Host: CTX1629

First Level Reviewer: LXF2 Date: 11-Jul-2023 04:33:12

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	1 Methane	0.747	0.747	0.000	257673649H	149.4	150.5	M
	2 Ethane	0.887	0.887	0.000	221736579H	154.2	153.0	
	3 Ethylene	1.147	1.147	0.000	228453680H	145.8	144.9	M
	4 Propane	1.597	1.597	0.000	276522736H	156.0	153.5	
$	5 Propene	2.513	2.513	0.000	142842078H	50.4	48.9	
	8 Propane, 2-methyl	2.840	2.843	-0.003	376511192H	155.7	152.7	
	6 Butane	2.977	2.977	0.000	345403973H	153.3	150.8	
	7 Acetylene	3.117	3.120	-0.003	196114478H	130.2	104.2	

QC Flag Legend

Processing Flags
H - Response Measured by Height
Review Flags
M - Manually Integrated

Reagents:

EPH_HSSSS_00011 Amount Added: 150.00 Units: uL
EPH_HSSMS_00011 Amount Added: 150.00 Units: uL

Report Date: 11-Jul-2023 04:35:17 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0007.d

Injection Date: 10-Jul-2023 11:32:00 Instrument ID: 19506

Lims ID: IC

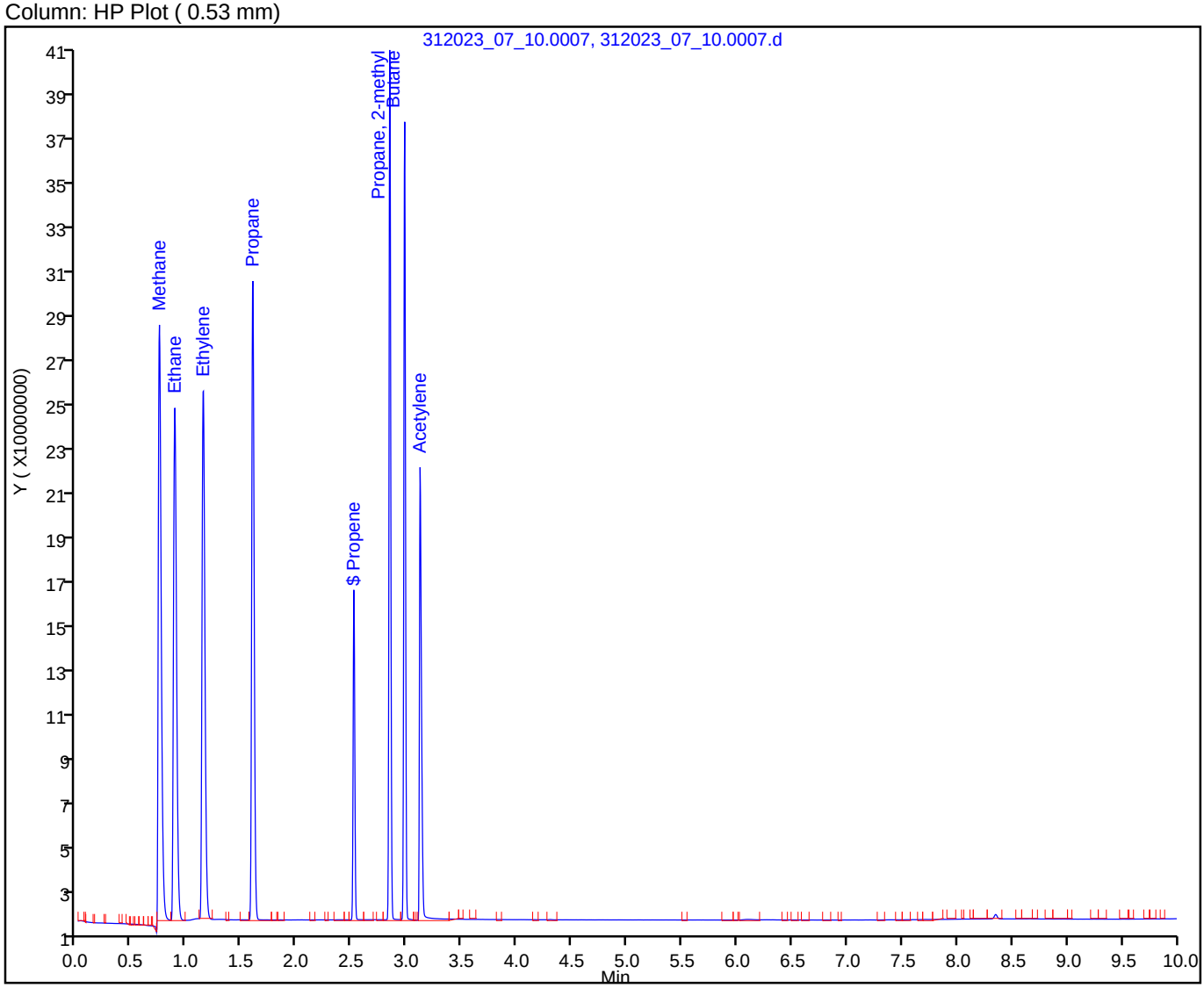
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 7

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Report Date: 11-Jul-2023 04:35:17 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

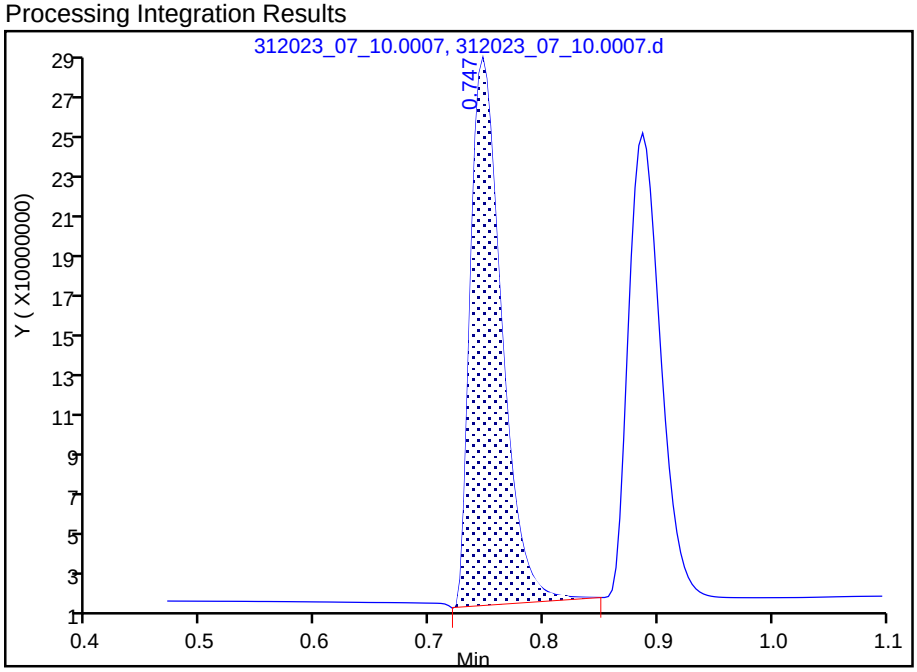
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0007.d				
Injection Date:	10-Jul-2023 11:32:00	Instrument ID:	19506		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

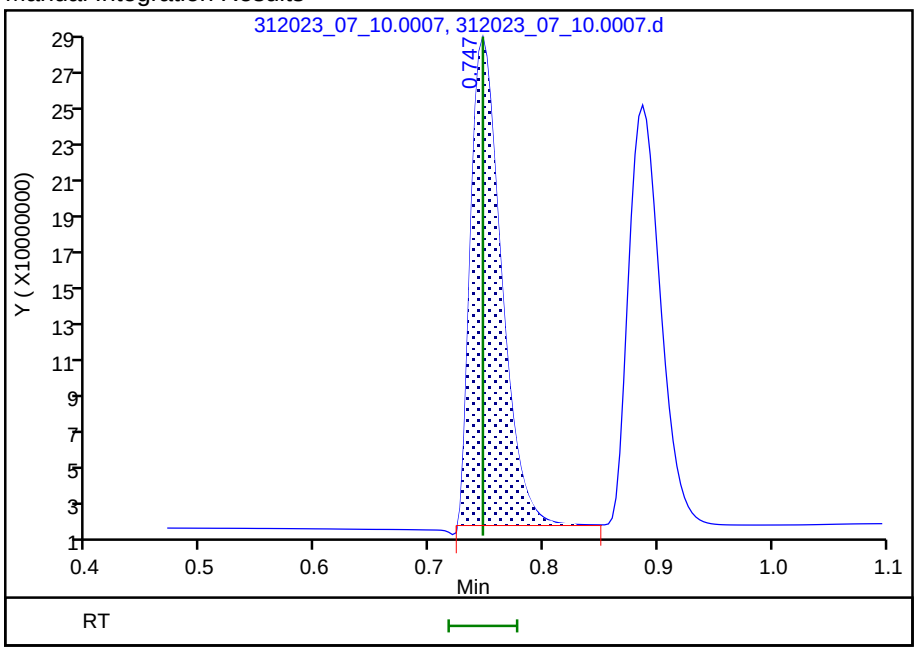
Processing Integration Results

RT: 0.75
Height: 261756913
Amount: 152.4155
Amount Units: ug/l



Manual Integration Results

RT: 0.75
Height: 257673649
Amount: 150.5497
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:33:10 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:35:17 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

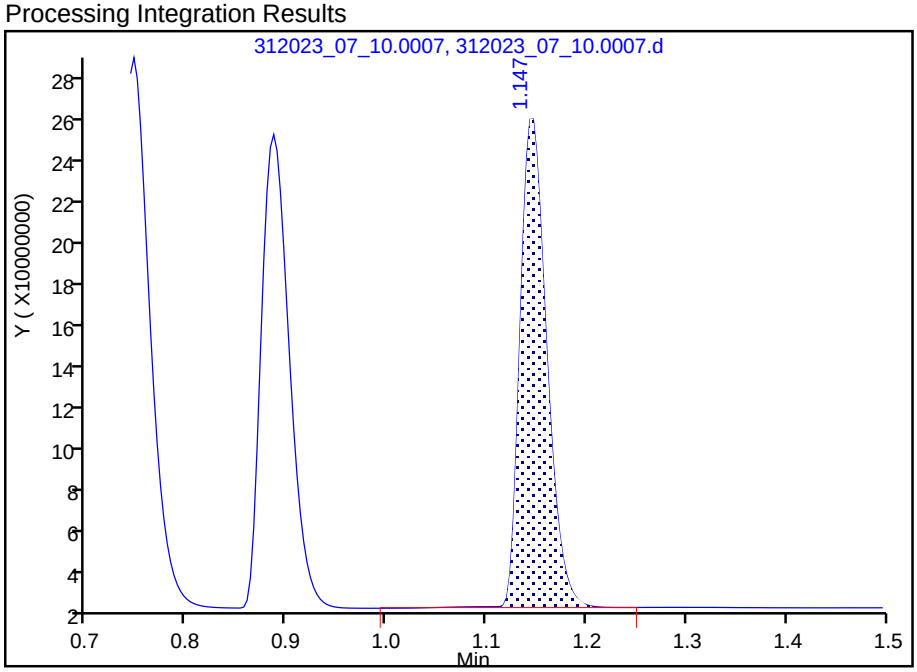
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0007.d				
Injection Date:	10-Jul-2023 11:32:00	Instrument ID:	19506		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

3 Ethylene, CAS: 74-85-1

Signal: 1

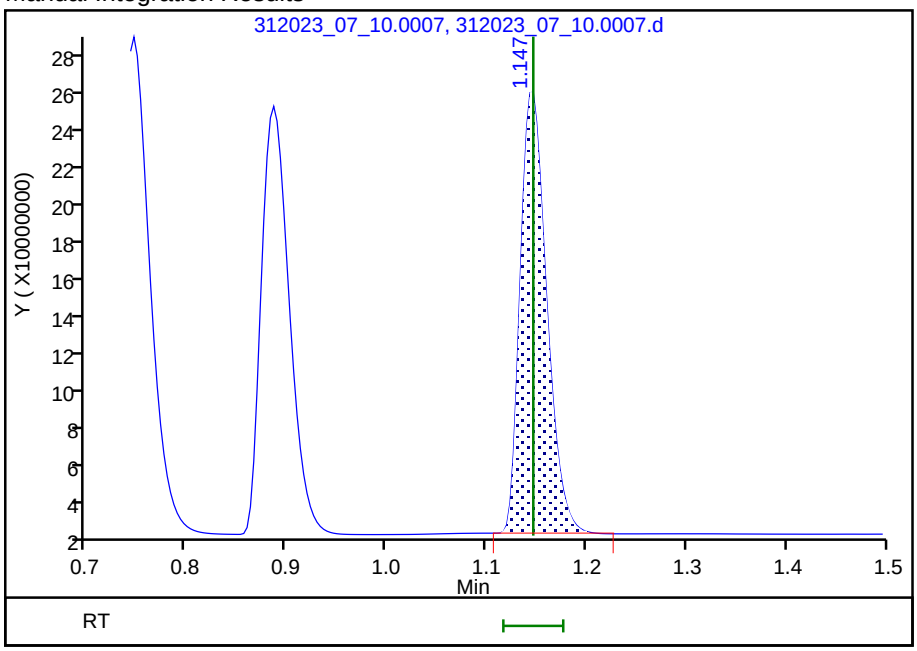
Processing Integration Results

RT: 1.15
Height: 228845570
Amount: 145.0645
Amount Units: ug/l



Manual Integration Results

RT: 1.15
Height: 228453680
Amount: 144.8787
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:32:48 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:35:18 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 10-Jul-2023 11:48:00 ALS Bottle#: 0 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 410-0088528-008
Operator ID: Instrument ID: 19506
Sublist: chrom-RSK_19506A*sub2

Method: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\RSK_19506A.m
Limit Group: GCV - RSK175
Last Update: 11-Jul-2023 04:35:18 Calib Date: 10-Jul-2023 11:48:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Column 1 : HP Plot (0.53 mm) Det: AFID0
Process Host: CTX1629

First Level Reviewer: LXF2 Date: 11-Jul-2023 02:56:25

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response		Cal Amt ug/l	OnCol Amt ug/l	Flags
	1 Methane	0.747	0.747	0.000	818868913	H	498.0	478.4	M
	2 Ethane	0.887	0.887	0.000	718079358	H	514.0	495.3	
	3 Ethylene	1.143	1.147	-0.004	740790614	H	486.0	469.8	M
	4 Propane	1.593	1.597	-0.004	939591421	H	520.0	521.7	
$	5 Propene	2.513	2.513	0.000	449348241	H	168.0	153.8	
	8 Propane, 2-methyl	2.833	2.843	-0.010	1225476894	H	519.0	497.1	
	6 Butane	2.970	2.977	-0.007	1197071246	H	511.0	522.5	
	7 Acetylene	3.100	3.120	-0.020	529150167	H	434.0	281.1	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Review Flags

M - Manually Integrated

Reagents:

EPH_HSSSS_00011 Amount Added: 500.00 Units: uL
EPH_HSSMS_00011 Amount Added: 500.00 Units: uL

Report Date: 11-Jul-2023 04:35:18 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Injection Date: 10-Jul-2023 11:48:00 Instrument ID: 19506

Lims ID: IC

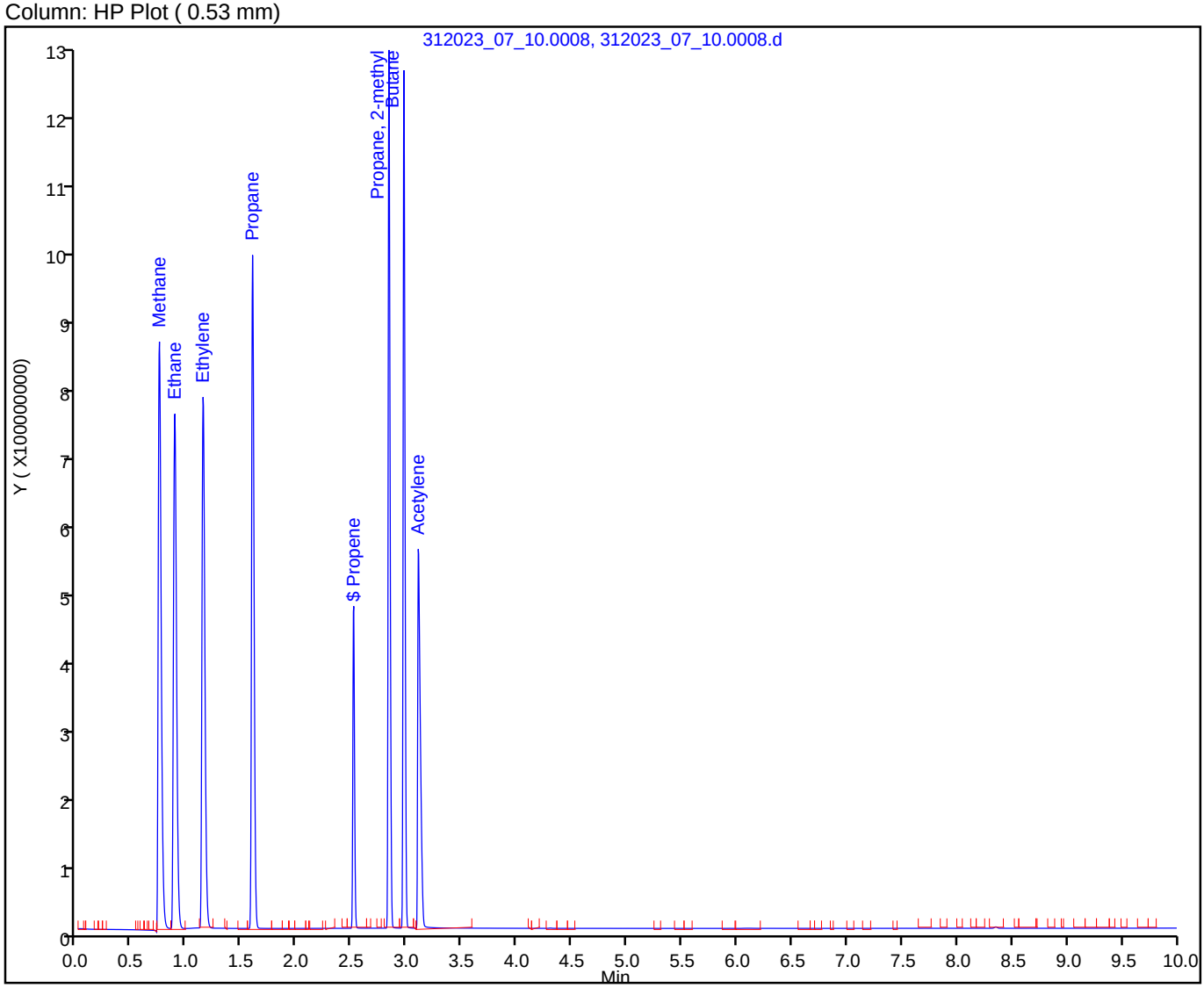
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 8

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Report Date: 11-Jul-2023 04:35:18 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

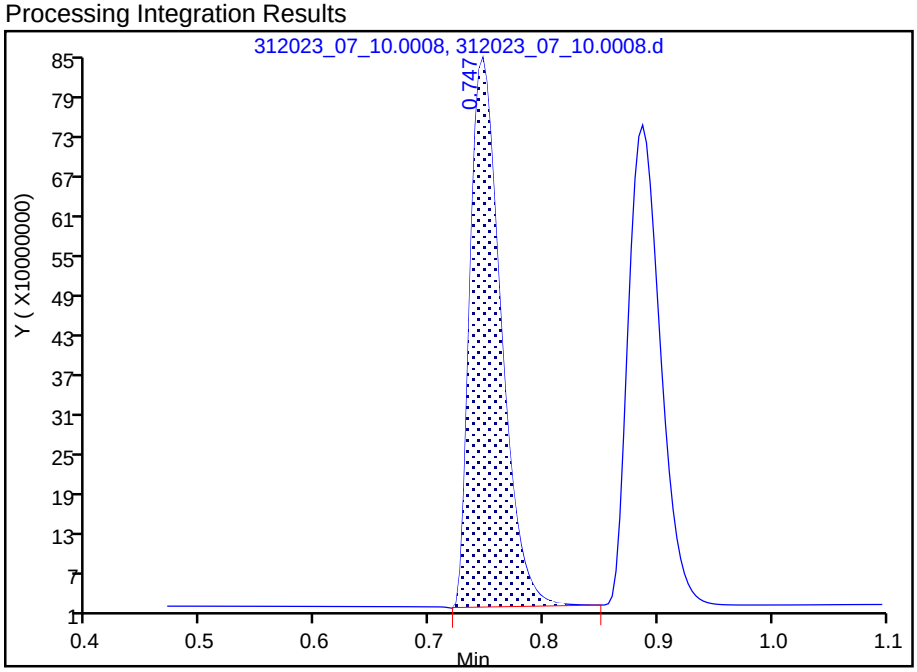
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d				
Injection Date:	10-Jul-2023 11:48:00	Instrument ID:	19506		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	8
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

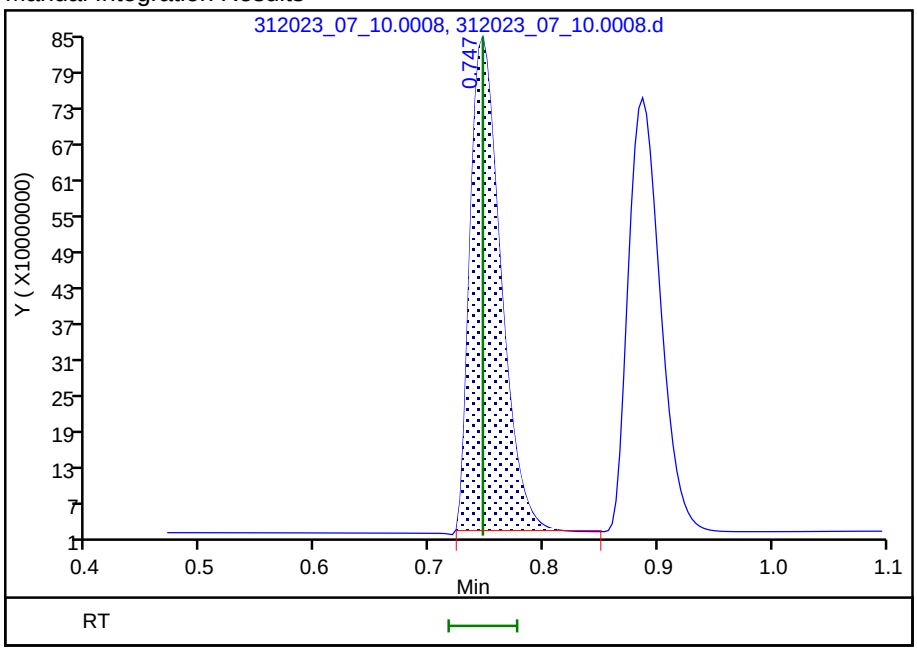
Processing Integration Results

RT: 0.75
Height: 822703332
Amount: 480.3165
Amount Units: ug/l



Manual Integration Results

RT: 0.75
Height: 818868913
Amount: 478.4364
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:33:45 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Eurofins Lancaster Laboratories Environment Testing, LLC

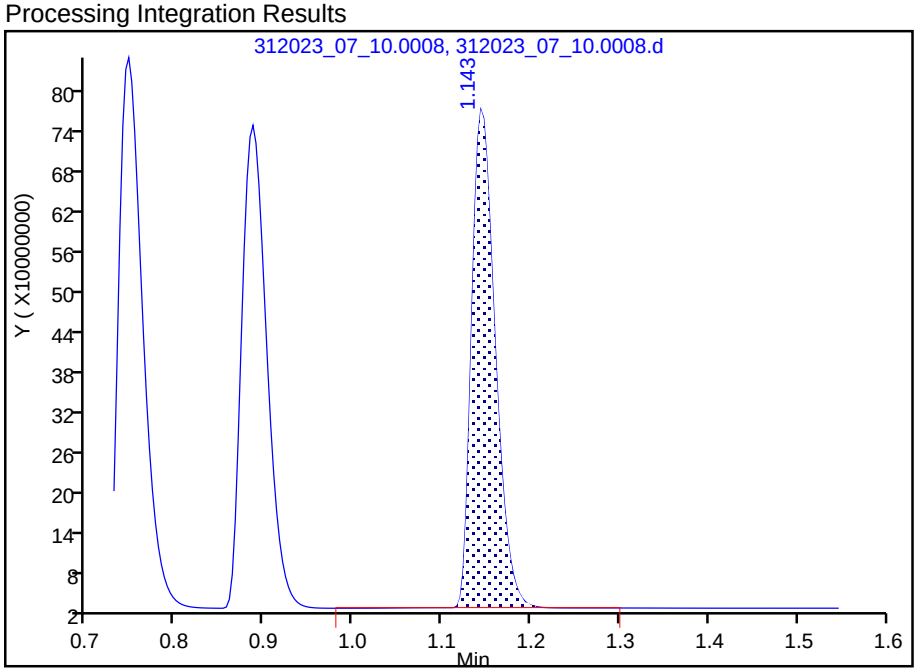
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d				
Injection Date:	10-Jul-2023 11:48:00	Instrument ID:	19506		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	8
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

3 Ethylene, CAS: 74-85-1

Signal: 1

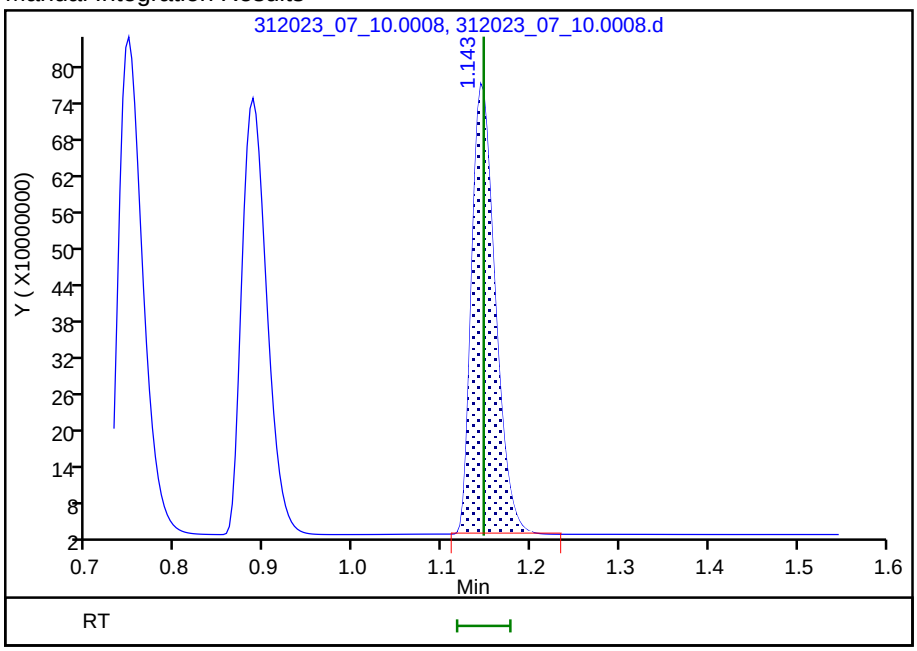
Processing Integration Results

RT: 1.14
Height: 741472823
Amount: 470.1510
Amount Units: ug/l



Manual Integration Results

RT: 1.14
Height: 740790614
Amount: 469.7881
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:33:21 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Peak not integrated

Calibration / Methane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

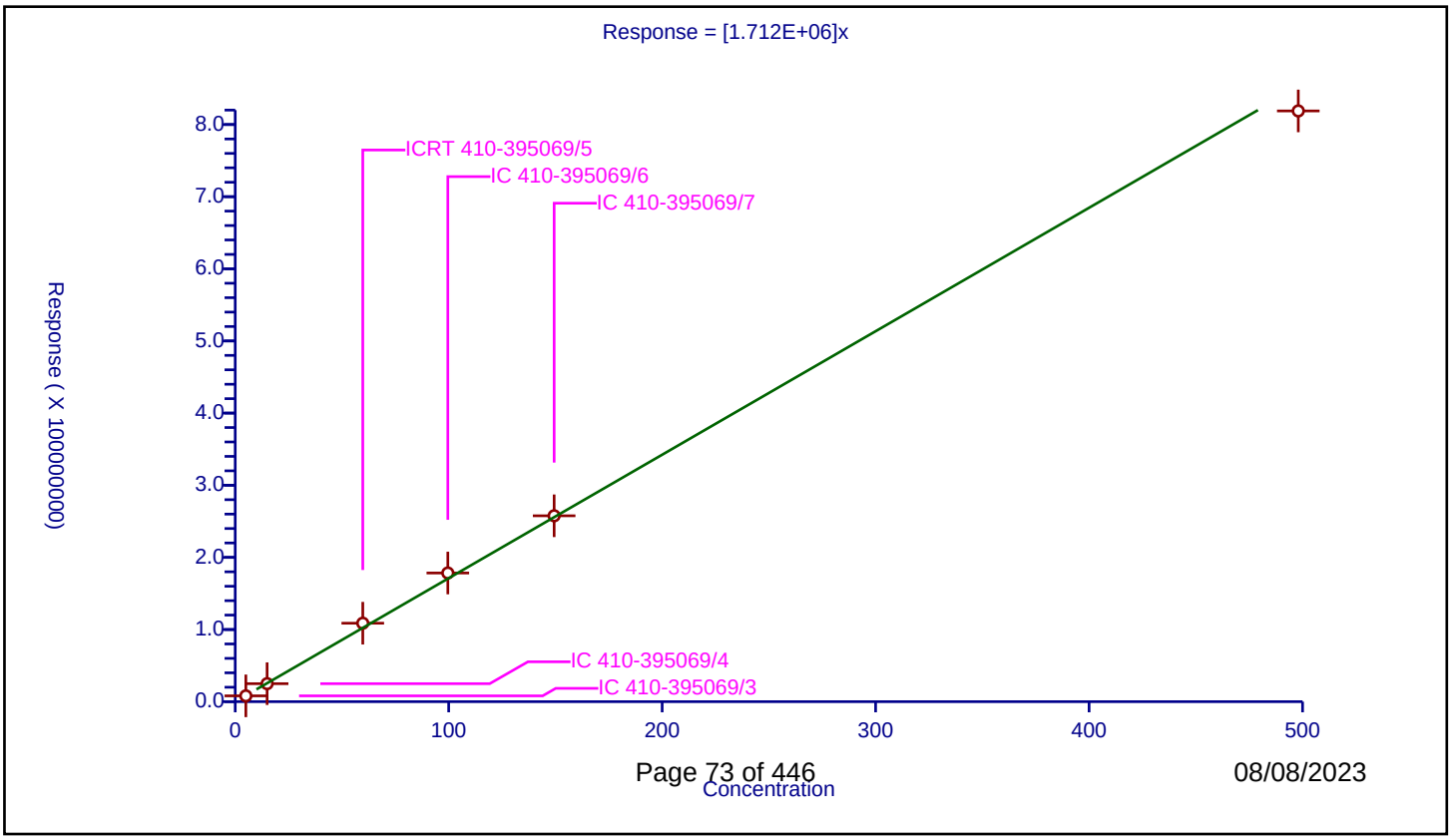
Curve Coefficients

Intercept:	0
Slope:	1.712E+06

Error Coefficients

Standard Error:	15700000
Relative Standard Error:	4.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-395069/3	4.98	8068679.0			1620216.666667	Y
2	IC 410-395069/4	14.94	24938956.0			1669274.16332	Y
3	ICRT 410-395069/5	59.76	108760667.0			1819957.613788	Y
4	IC 410-395069/6	99.6	178366469.0			1790828.002008	Y
5	IC 410-395069/7	149.4	257673649.0			1724723.219545	Y
6	IC 410-395069/8	498.0	818868913.0			1644315.086345	Y



Calibration / Ethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

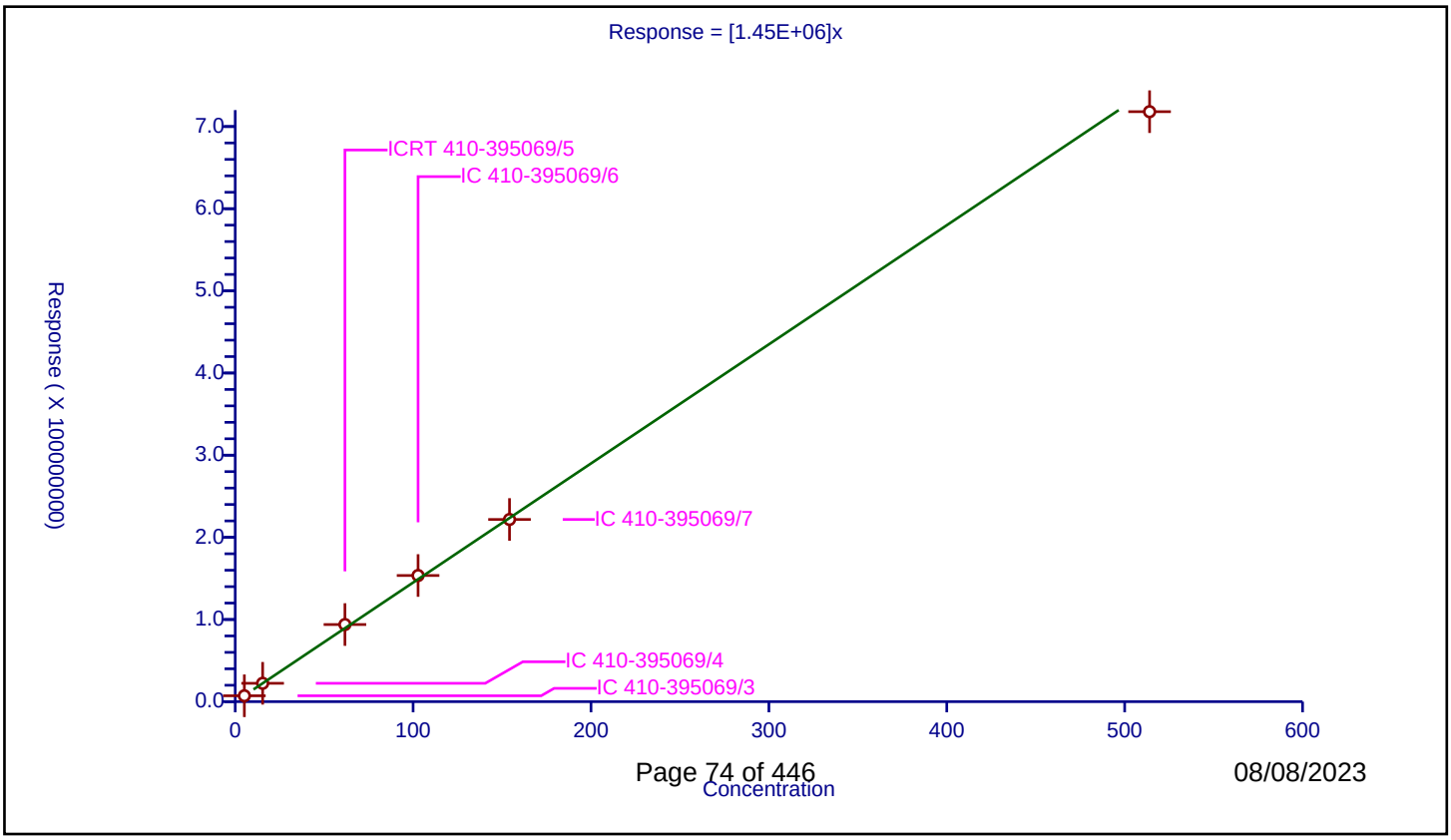
Curve Coefficients

Intercept:	0
Slope:	1.45E+06

Error Coefficients

Standard Error:	12500000
Relative Standard Error:	3.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-395069/3	5.14	7185458.0			1397949.027237	Y
2	IC 410-395069/4	15.42	22354009.0			1449676.329442	Y
3	ICRT 410-395069/5	61.68	93869540.0			1521879.701686	Y
4	IC 410-395069/6	102.8	153545912.0			1493637.276265	Y
5	IC 410-395069/7	154.2	221736579.0			1437980.40856	Y
6	IC 410-395069/8	514.0	718079358.0			1397041.552529	Y



Calibration / Ethylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

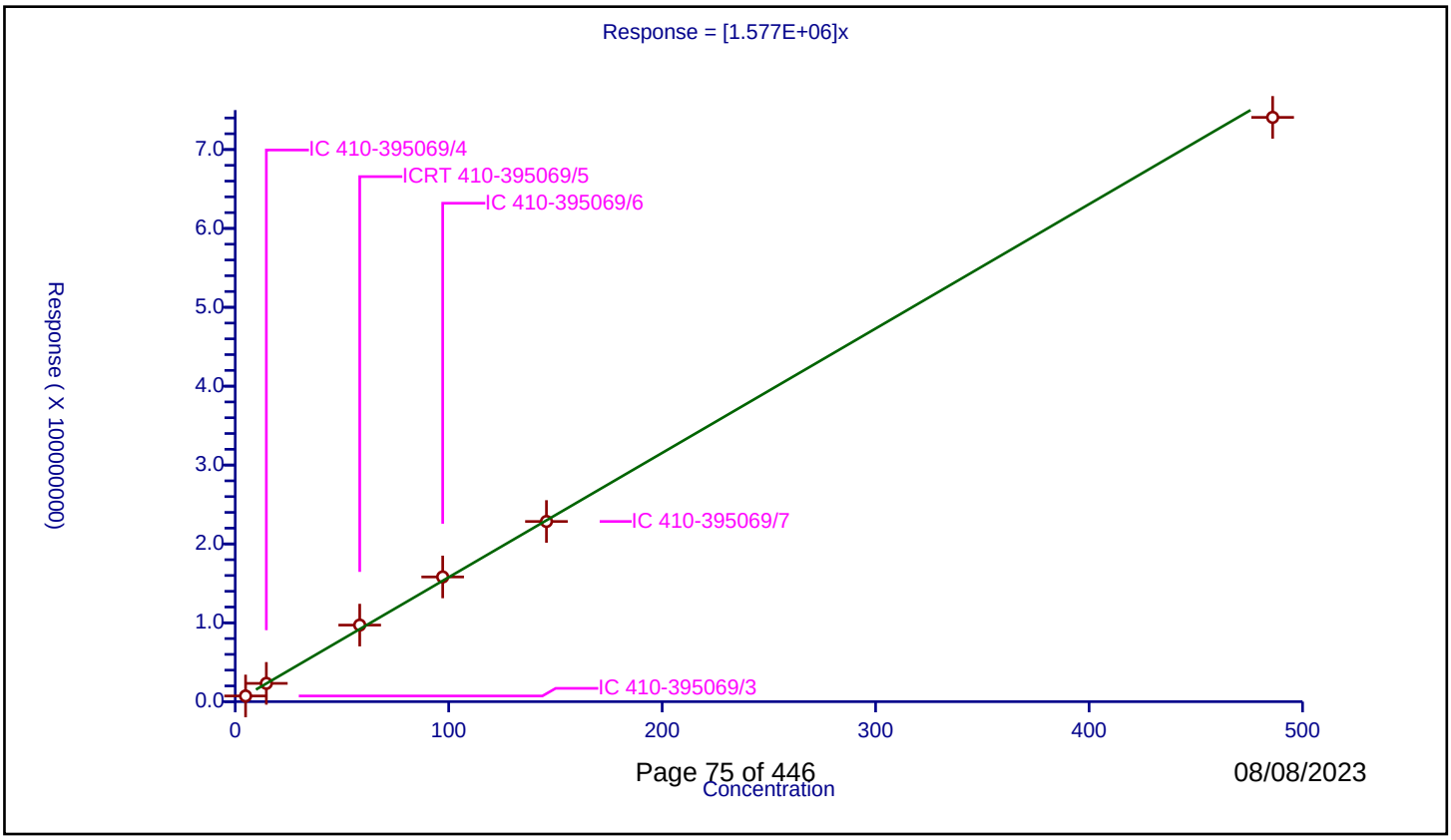
Curve Coefficients

Intercept:	0
Slope:	1.577E+06

Error Coefficients

Standard Error:	11900000
Relative Standard Error:	4.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-395069/3	4.86	7229989.0			1487652.057613	Y
2	IC 410-395069/4	14.58	23192115.0			1590680.041152	Y
3	ICRT 410-395069/5	58.32	97083060.0			1664661.522634	Y
4	IC 410-395069/6	97.2	158145942.0			1627015.864198	Y
5	IC 410-395069/7	145.8	228453680.0			1566897.668038	Y
6	IC 410-395069/8	486.0	740790614.0			1524260.522634	Y



Calibration / Propane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

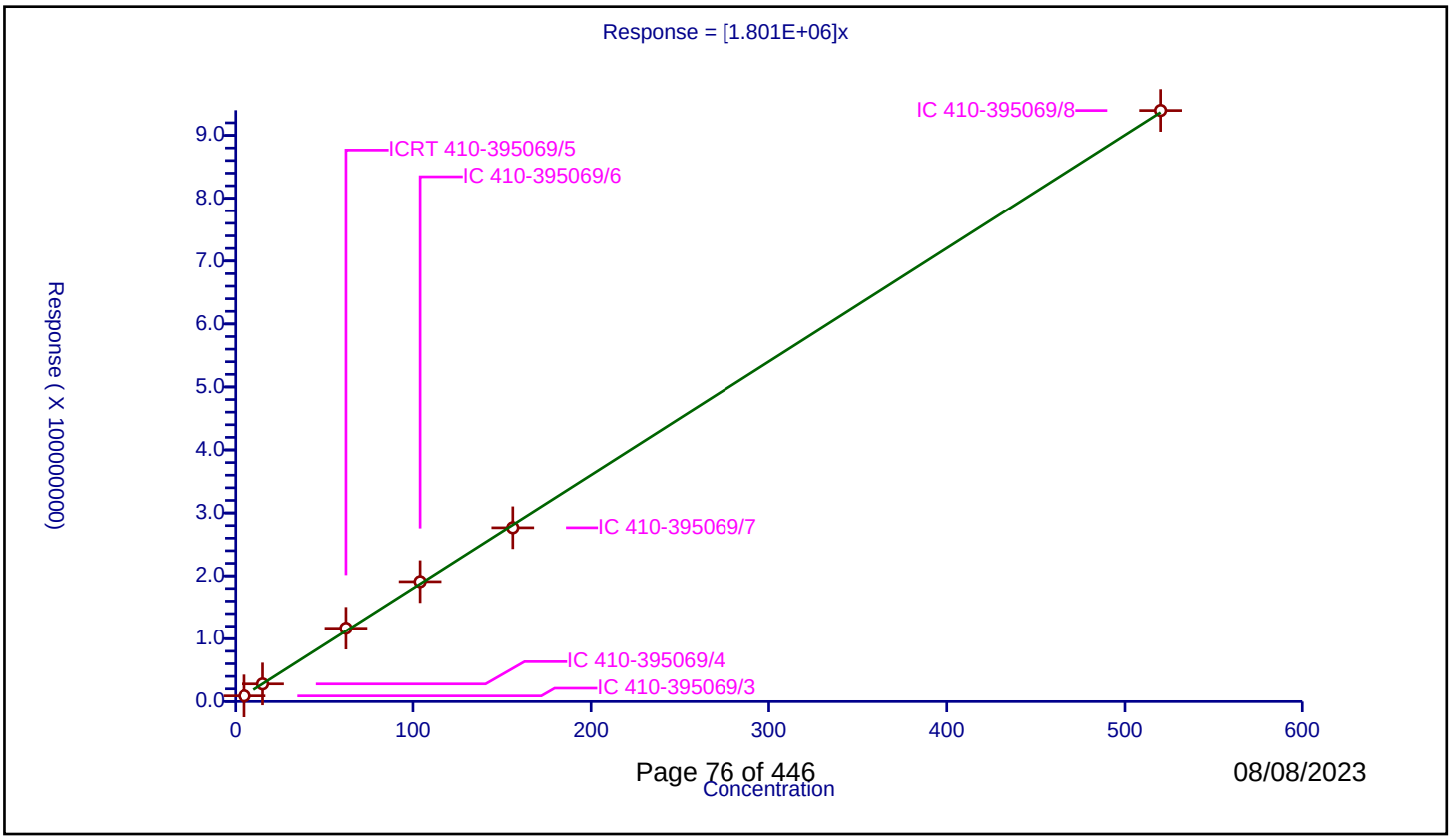
Curve Coefficients

Intercept:	0
Slope:	1.801E+06

Error Coefficients

Standard Error:	3490000
Relative Standard Error:	2.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-395069/3	5.2	8995190.0			1729844.230769	Y
2	IC 410-395069/4	15.6	27935760.0			1790753.846154	Y
3	ICRT 410-395069/5	62.4	116729285.0			1870661.61859	Y
4	IC 410-395069/6	104.0	190868152.0			1835270.692308	Y
5	IC 410-395069/7	156.0	276522736.0			1772581.641026	Y
6	IC 410-395069/8	520.0	939591421.0			1806906.578846	Y



Calibration / Propene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

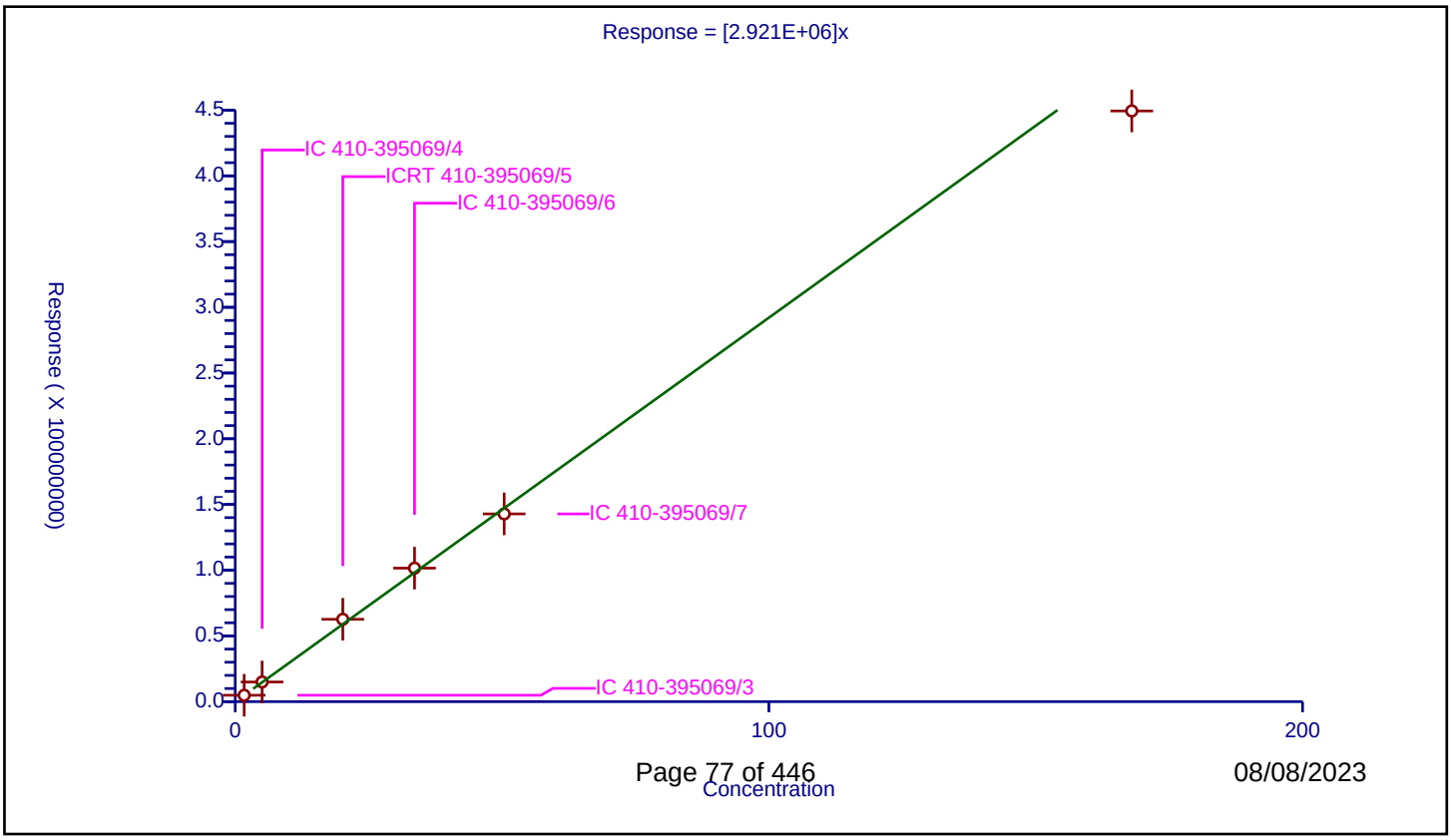
Curve Coefficients

Intercept:	0
Slope:	2.921E+06

Error Coefficients

Standard Error:	18700000
Relative Standard Error:	5.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-395069/3	1.68	4893746.0			2912944.047619	Y
2	IC 410-395069/4	5.04	14972289.0			2970692.261905	Y
3	ICRT 410-395069/5	20.16	62671931.0			3108726.736111	Y
4	IC 410-395069/6	33.6	101582671.0			3023293.779762	Y
5	IC 410-395069/7	50.4	142842078.0			2834168.214286	Y
6	IC 410-395069/8	168.0	449348241.0			2674691.910714	Y



Calibration / Propane, 2-methyl

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

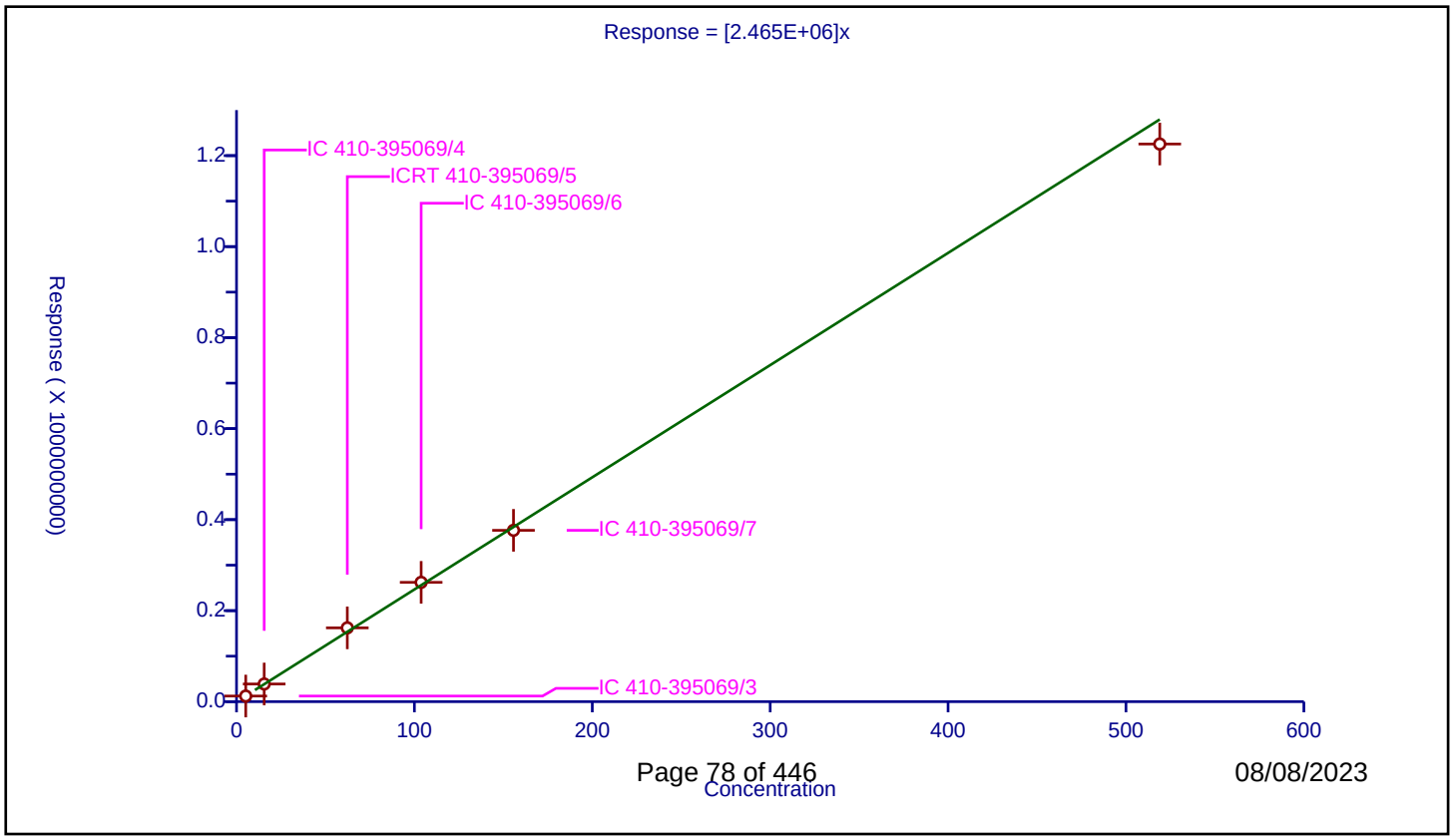
Curve Coefficients

Intercept:	0
Slope:	2.465E+06

Error Coefficients

Standard Error:	24800000
Relative Standard Error:	3.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-395069/3	5.19	12387912.0			2386880.924855	Y
2	IC 410-395069/4	15.57	38831218.0			2493976.750161	Y
3	ICRT 410-395069/5	62.28	162225538.0			2604777.424534	Y
4	IC 410-395069/6	103.8	262257366.0			2526564.219653	Y
5	IC 410-395069/7	155.7	376511192.0			2418183.635196	Y
6	IC 410-395069/8	519.0	1225476894.0			2361227.156069	Y



Calibration / Butane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

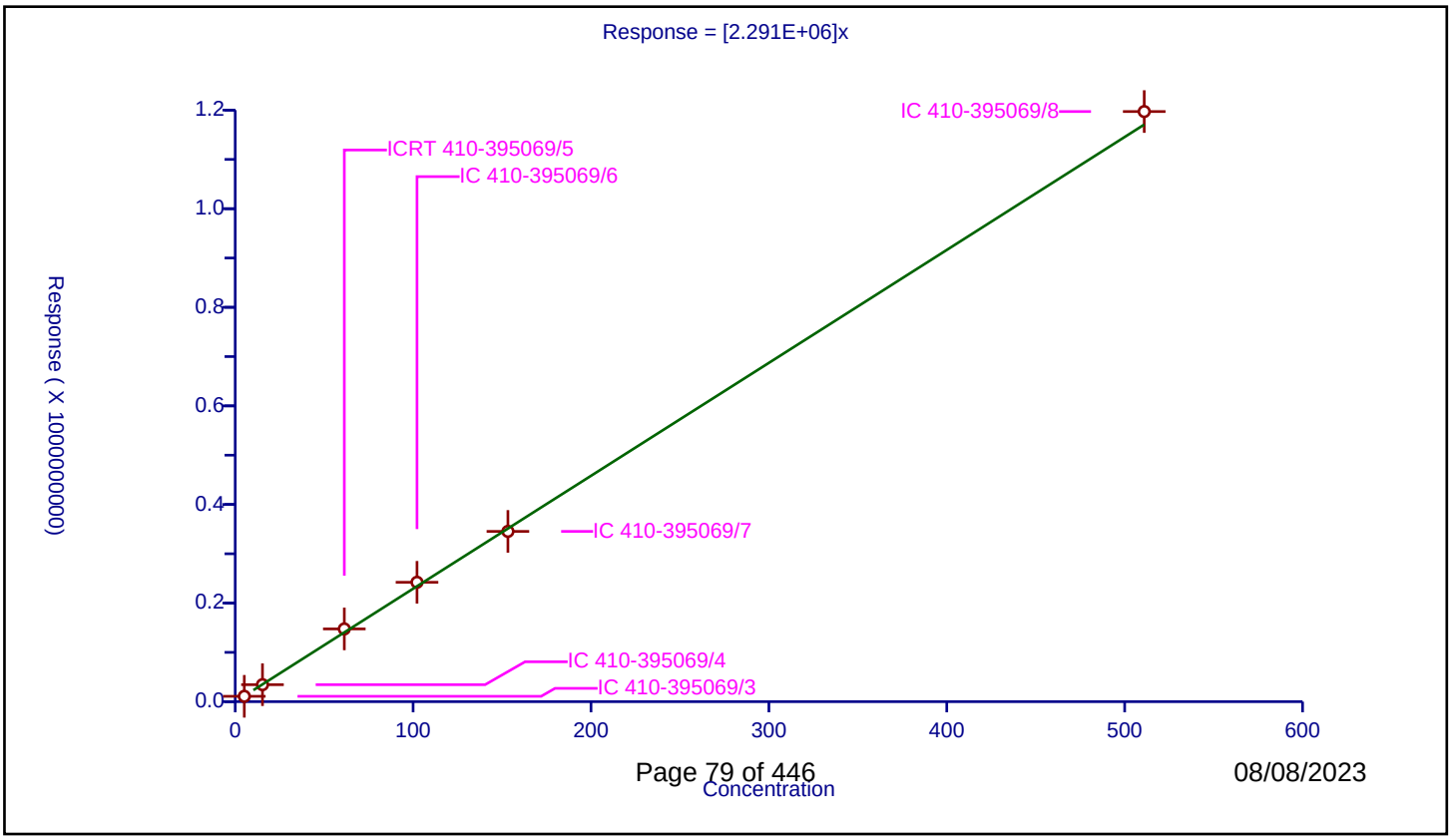
Curve Coefficients

Intercept:	0
Slope:	2.291E+06

Error Coefficients

Standard Error:	13000000
Relative Standard Error:	4.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-395069/3	5.11	10856110.0			2124483.365949	Y
2	IC 410-395069/4	15.33	34469750.0			2248515.981735	Y
3	ICRT 410-395069/5	61.32	147566441.0			2406497.733203	Y
4	IC 410-395069/6	102.2	242194144.0			2369805.714286	Y
5	IC 410-395069/7	153.3	345403973.0			2253124.416177	Y
6	IC 410-395069/8	511.0	1197071246.0			2342605.178082	Y



Calibration / Acetylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

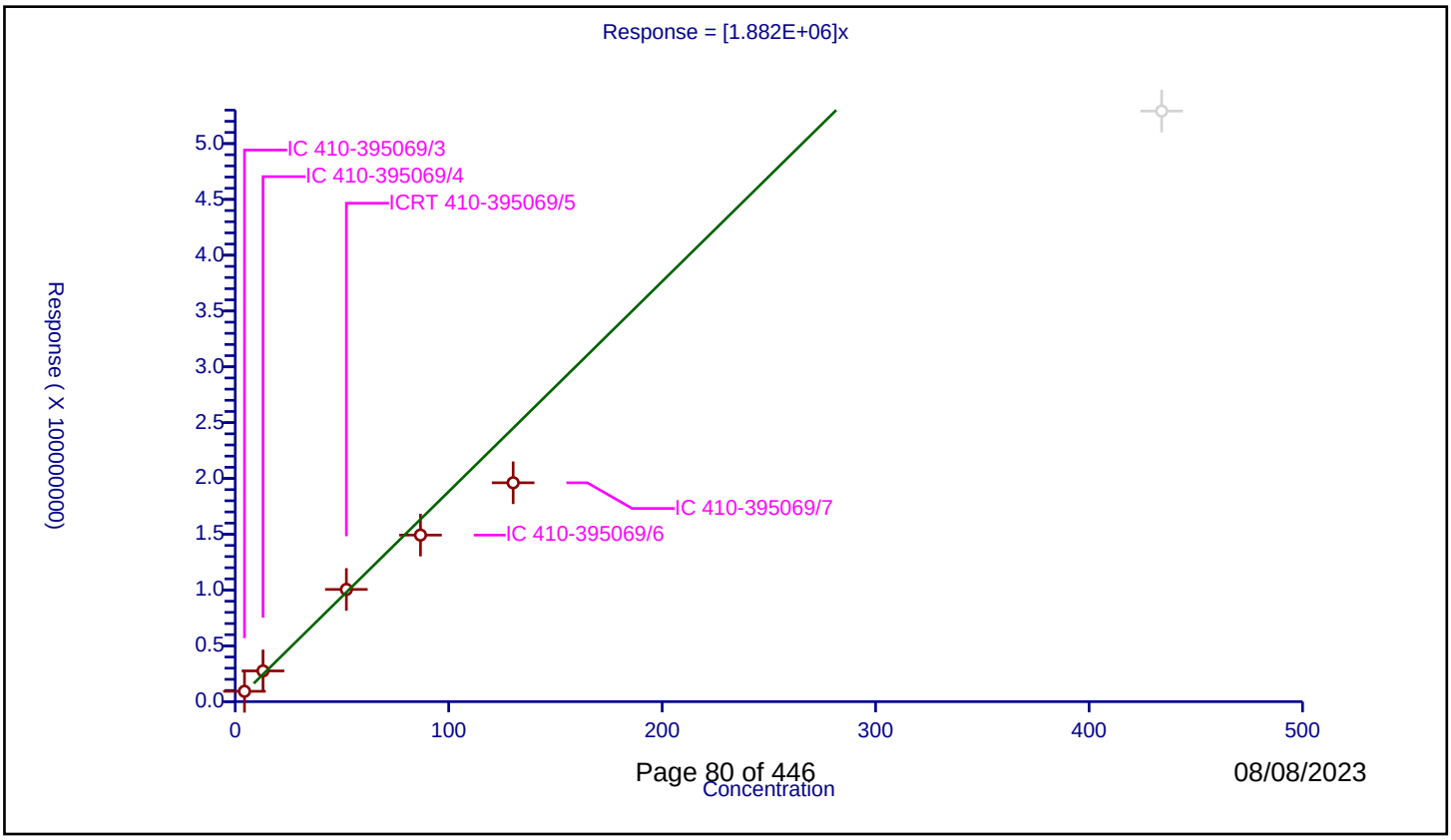
Curve Coefficients

Intercept:	0
Slope:	1.882E+06

Error Coefficients

Standard Error:	25600000
Relative Standard Error:	14.3
Correlation Coefficient:	0.985
Coefficient of Determination (Adjusted):	0.968

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-395069/3	4.34	9282262.0			2138770.046083	Y
2	IC 410-395069/4	13.02	27554030.0			2116284.946237	Y
3	ICRT 410-395069/5	52.08	100572916.0			1931123.579109	Y
4	IC 410-395069/6	86.8	149256351.0			1719543.214286	Y
5	IC 410-395069/7	130.2	196114478.0			1506255.591398	Y
6	IC 410-395069/8	434.0	529150167.0			1219240.016129	N



08/08/2023

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: ICV 410-395069/12 Calibration Date: 07/10/2023 12:49

Instrument ID: 19506 Calib Start Date: 07/10/2023 10:31

GC Column: HP Plot ID: 0.53(mm) Calib End Date: 07/10/2023 11:48

Lab File ID: 312023_07_10.0012.d Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	1711552	1758423		62.2	60.6	2.7	15.0
Ethane	Ave	1449694	1538224		63.4	59.7	6.1	15.0
Ethene	Ave	1576861	1633575		63.5	61.3	3.6	15.0
Propane	Ave	1801003	1949135		66.3	61.3	8.2	15.0
Isobutane	Ave	2465268	2968837		72.9	60.6	20.4*	15.0
n-Butane	Ave	2290839	2830758		74.8	60.6	23.6*	15.0
Acetylene	Ave	1882395	1807525		49.8	51.8	-4.0	15.0
Propene	Ave	2920753	3054728		21.1	20.2	4.6	15.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: ICV 410-395069/12 Calibration Date: 07/10/2023 12:49

Instrument ID: 19506 Calib Start Date: 07/10/2023 10:31

GC Column: HP Plot ID: 0.53(mm) Calib End Date: 07/10/2023 11:48

Lab File ID: 312023_07_10.0012.d Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.75	0.72	0.78
Ethane	0.89	0.86	0.92
Ethene	1.15	1.12	1.18
Propane	1.60	1.57	1.63
Isobutane	2.85	2.81	2.87
n-Butane	2.98	2.93	3.03
Acetylene	3.13	3.07	3.17
Propene	2.52	2.48	2.54

Report Date: 11-Jul-2023 04:38:49 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0012.d
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 10-Jul-2023 12:49:00 ALS Bottle#: 0 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 410-0088528-012
Operator ID: Instrument ID: 19506
Sublist:

Method: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\RSK_19506A.m
Limit Group: GCV - RSK175
Last Update: 11-Jul-2023 04:38:48 Calib Date: 10-Jul-2023 11:48:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Column 1 : HP Plot (0.53 mm) Det: AFID0
Process Host: CTX1629

First Level Reviewer: LXF2 Date: 11-Jul-2023 04:38:08

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	1 Methane	0.747	0.747	0.000	106482668H	60.6	62.2	M
	2 Ethane	0.887	0.887	0.000	91841666H	59.7	63.4	
	3 Ethylene	1.147	1.147	0.000	100111844H	61.3	63.5	M
	4 Propane	1.597	1.597	0.000	119450576H	61.3	66.3	
$	5 Propene	2.520	2.513	0.007	61583319H	20.2	21.1	
	8 Propane, 2-methyl	2.847	2.843	0.004	179780198H	60.6	72.9	
	6 Butane	2.980	2.977	0.003	171418741H	60.6	74.8	
	7 Acetylene	3.133	3.120	0.013	93662795H	51.8	49.8	

QC Flag Legend

Processing Flags
H - Response Measured by Height
Review Flags
M - Manually Integrated

Reagents:

EPH_HSSMS_00008 Amount Added: 60.00 Units: uL
EPH_HSSSS_00011 Amount Added: 60.00 Units: uL

Report Date: 11-Jul-2023 04:38:49 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0012.d

Injection Date: 10-Jul-2023 12:49:00 Instrument ID: 19506

Lims ID: icv

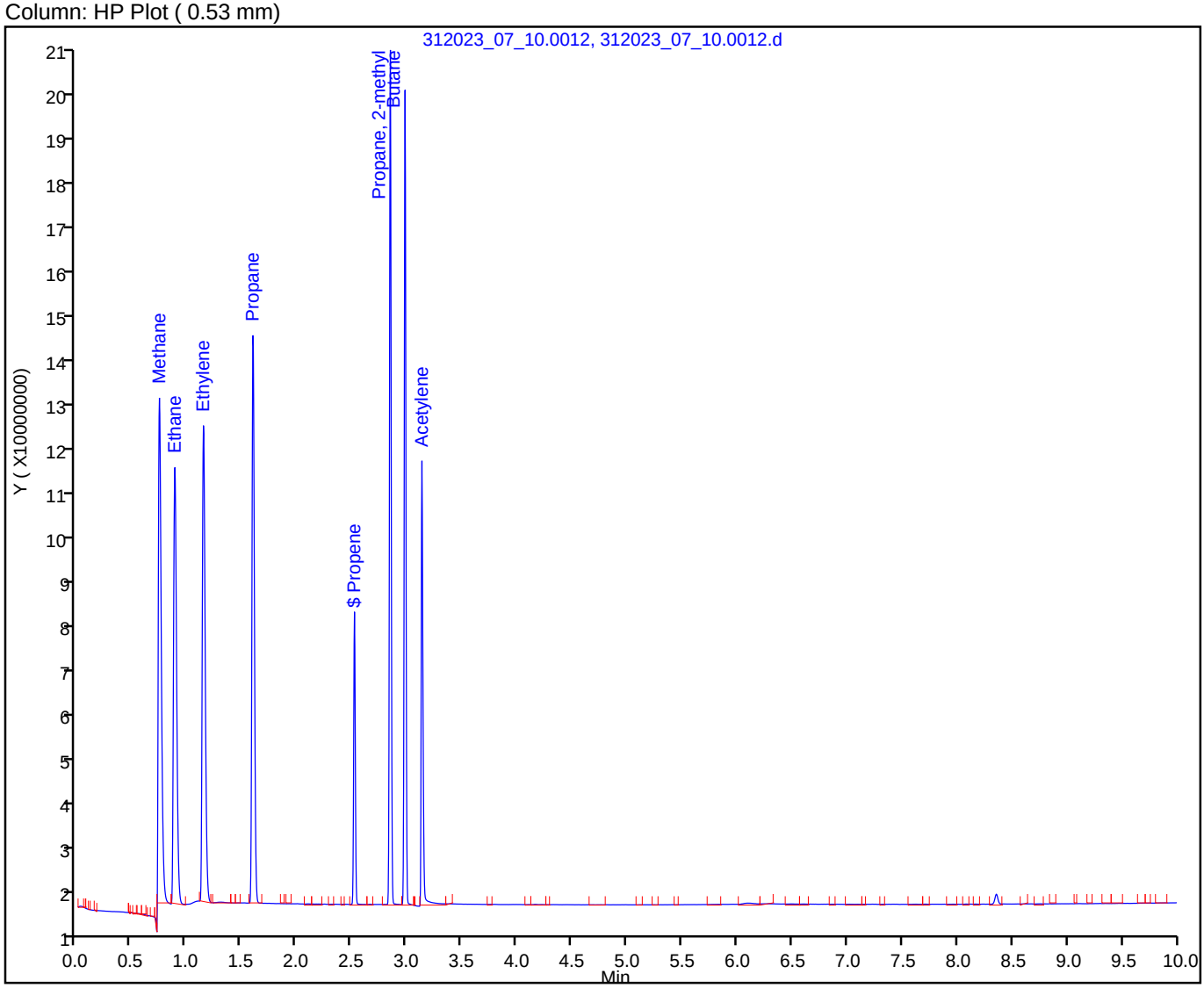
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 12

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Report Date: 11-Jul-2023 04:38:49 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

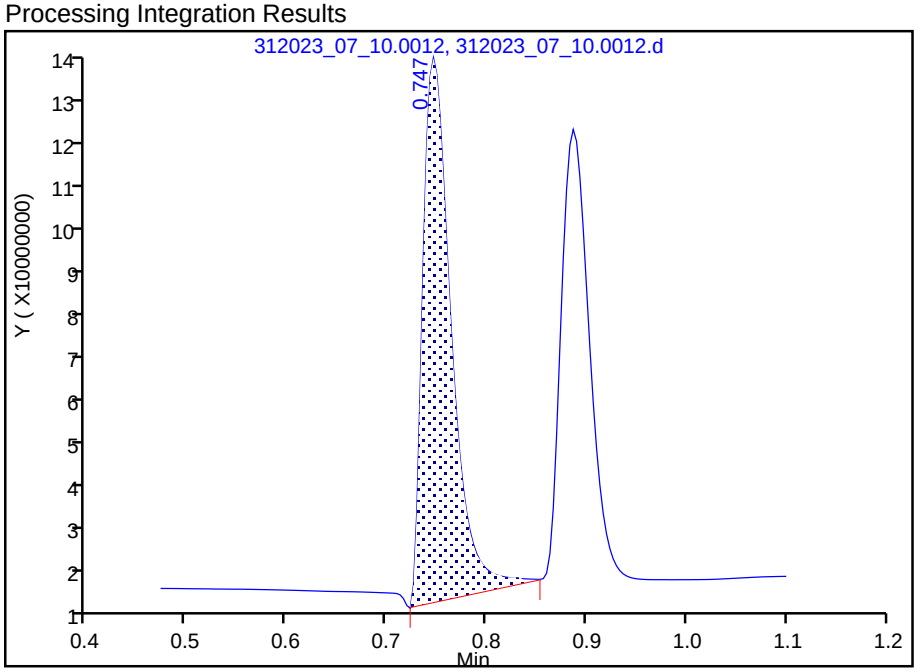
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0012.d				
Injection Date:	10-Jul-2023 12:49:00	Instrument ID:	19506		
Lims ID:	icv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	12
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

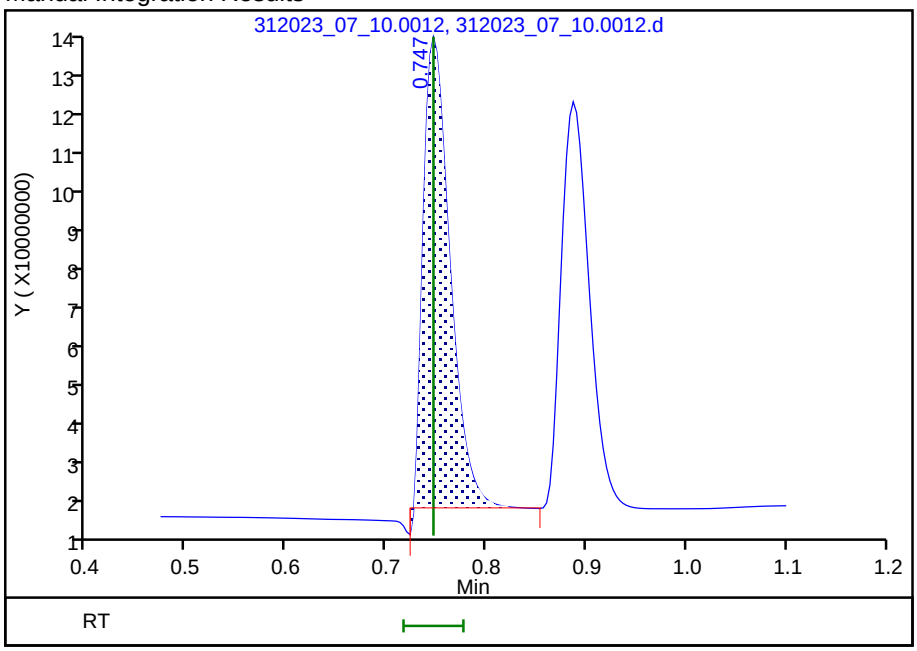
Processing Integration Results

RT: 0.75
Height: 111316732
Amount: 65.038458
Amount Units: ug/l



Manual Integration Results

RT: 0.75
Height: 106482668
Amount: 62.214084
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:37:57 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:38:49 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

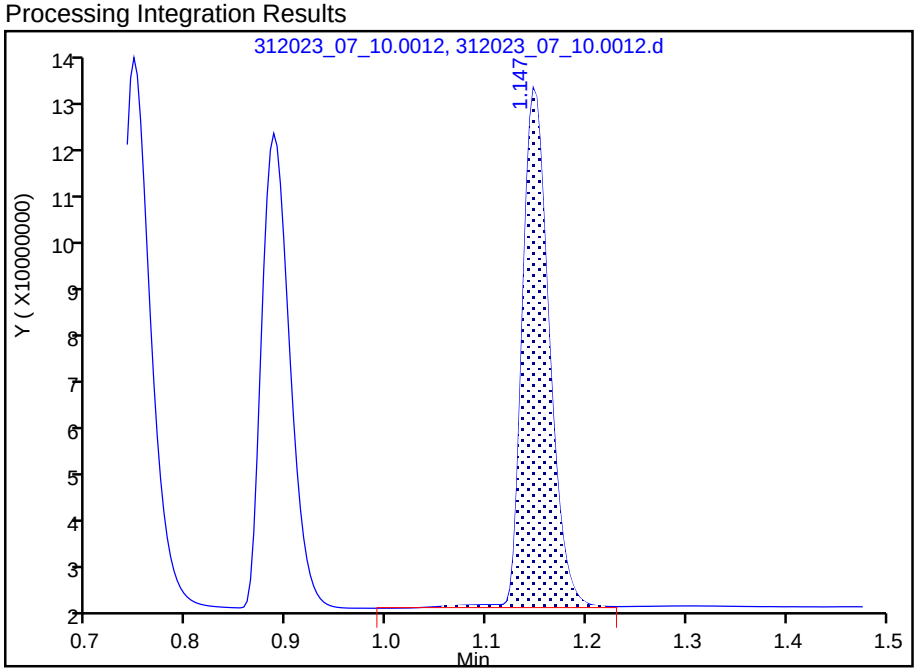
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0012.d				
Injection Date:	10-Jul-2023 12:49:00	Instrument ID:	19506		
Lims ID:	icv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	12
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

3 Ethylene, CAS: 74-85-1

Signal: 1

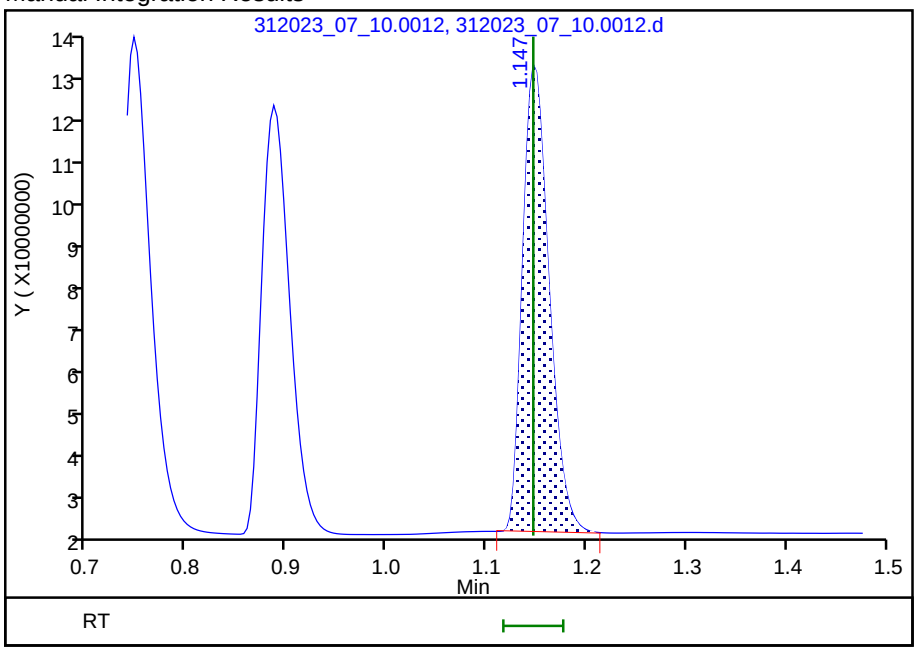
Processing Integration Results

RT: 1.15
Height: 100613521
Amount: 63.806197
Amount Units: ug/l



Manual Integration Results

RT: 1.15
Height: 100111844
Amount: 63.488048
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:38:06 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCVRT 410-403952/2 Calibration Date: 08/03/2023 10:07

Instrument ID: 19506 Calib Start Date: 07/10/2023 10:31

GC Column: HP Plot ID: 0.53(mm) Calib End Date: 07/10/2023 11:48

Lab File ID: 312023_08_3.0002.d Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	1711552	1668399		58.3	59.8	-2.5	15.0
Ethane	Ave	1449694	1358727		57.8	61.7	-6.3	15.0
Ethene	Ave	1576861	1491227		55.2	58.3	-5.4	15.0
Propane	Ave	1801003	1643108		56.9	62.4	-8.8	15.0
Isobutane	Ave	2465268	2274770		57.5	62.3	-7.7	15.0
n-Butane	Ave	2290839	2126529		56.9	61.3	-7.2	15.0
Acetylene	Ave	1882395	1728298		47.8	52.1	-8.2	15.0
Propene	Ave	2920753	2817588		19.4	20.2	-3.5	15.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCVRT 410-403952/2 Calibration Date: 08/03/2023 10:07

Instrument ID: 19506 Calib Start Date: 07/10/2023 10:31

GC Column: HP Plot ID: 0.53(mm) Calib End Date: 07/10/2023 11:48

Lab File ID: 312023_08_3.0002.d Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.74	0.71	0.77
Ethane	0.88	0.85	0.91
Ethene	1.13	1.10	1.16
Propane	1.58	1.55	1.61
Isobutane	2.83	2.80	2.86
n-Butane	2.96	2.91	3.01
Acetylene	3.10	3.05	3.15
Propene	2.49	2.46	2.52

Report Date: 04-Aug-2023 03:40:31 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0002.d
Lims ID: ccvrt
Client ID:
Sample Type: CCVRT
Inject. Date: 03-Aug-2023 10:07:00 ALS Bottle#: 0 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 410-0090521-002
Operator ID: Instrument ID: 19506
Sublist: chrom-RSK_19506A*sub2

Method: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\RSK_19506A.m
Limit Group: GCV - RSK175
Last Update: 04-Aug-2023 03:40:31 Calib Date: 10-Jul-2023 11:48:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Column 1 : HP Plot (0.53 mm) Det: AFID0
Process Host: CTX1668

First Level Reviewer: LXF2 Date: 04-Aug-2023 03:37:25

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	1 Methane	0.743	0.743	0.000	99703509H	59.8	58.3	M
	2 Ethane	0.880	0.880	0.000	83806290H	61.7	57.8	
	3 Ethylene	1.133	1.133	0.000	86968382H	58.3	55.2	M
	4 Propane	1.580	1.580	0.000	102529914H	62.4	56.9	
$	5 Propene	2.493	2.493	0.000	56802575H	20.2	19.4	
	8 Propane, 2-methyl	2.827	2.827	0.000	141672647H	62.3	57.5	
	6 Butane	2.960	2.960	0.000	130398788H	61.3	56.9	
	7 Acetylene	3.100	3.100	0.000	90009772H	52.1	47.8	

QC Flag Legend

Processing Flags
H - Response Measured by Height
Review Flags
M - Manually Integrated

Reagents:

EPH_HSSSS_00011 Amount Added: 60.00 Units: uL
EPH_HSSMS_00011 Amount Added: 60.00 Units: uL

Report Date: 04-Aug-2023 03:40:31 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0002.d

Injection Date: 03-Aug-2023 10:07:00 Instrument ID: 19506

Lims ID: ccvrt

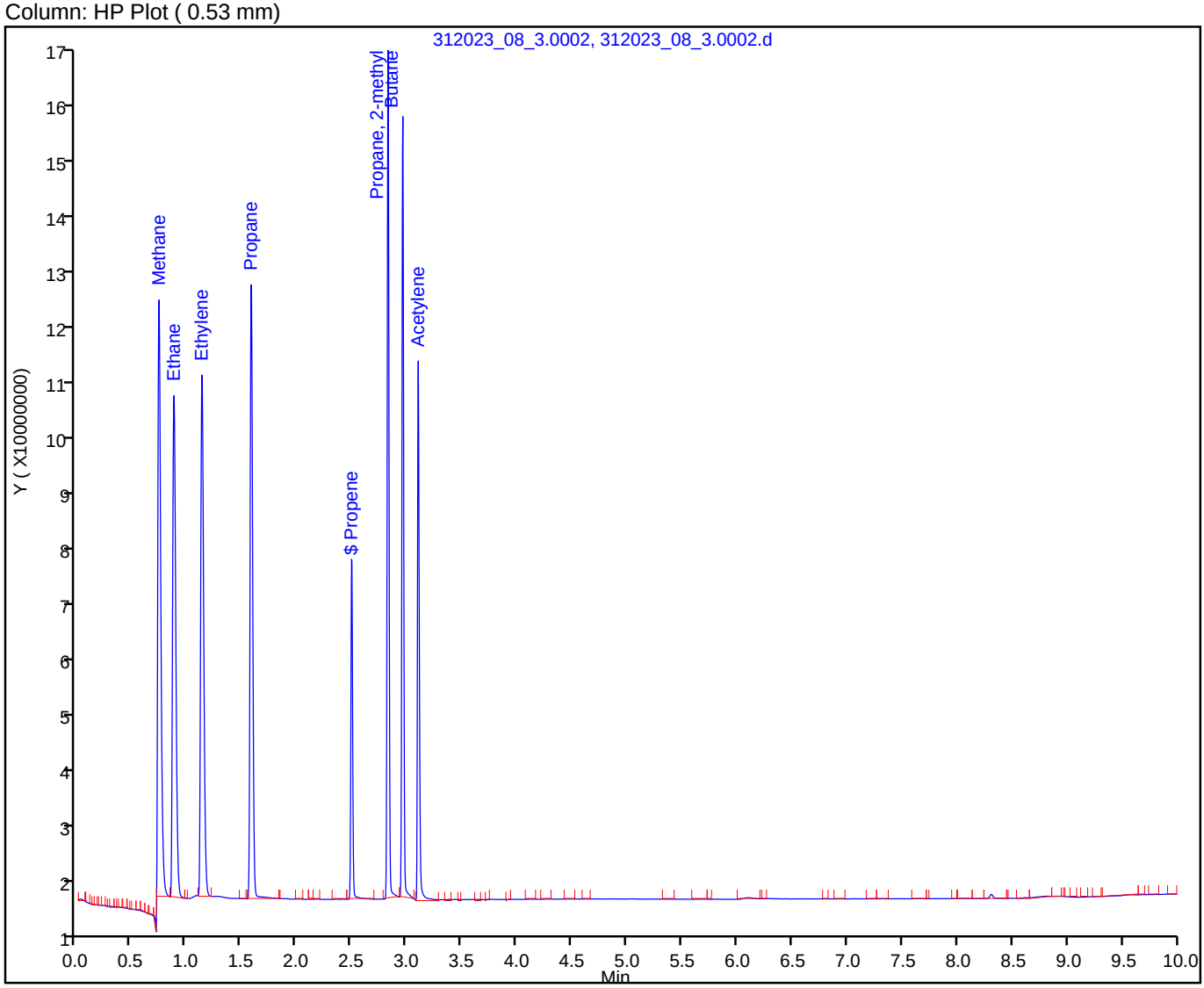
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 2

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Report Date: 04-Aug-2023 03:40:31 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

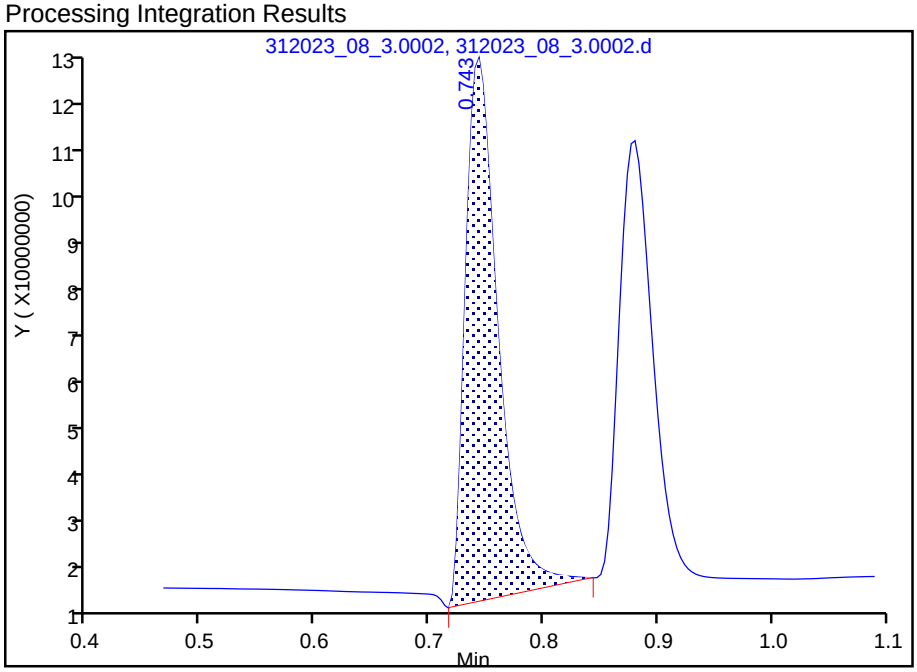
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0002.d				
Injection Date:	03-Aug-2023 10:07:00	Instrument ID:	19506		
Lims ID:	ccvrt				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	2
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

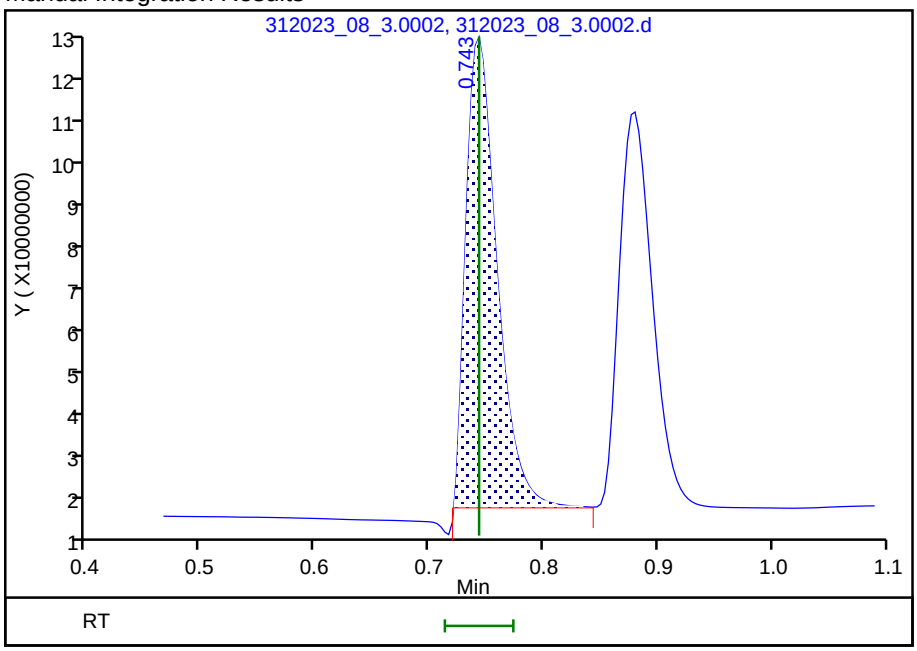
Processing Integration Results

RT: 0.74
Height: 104296306
Amount: 60.936669
Amount Units: ug/l



Manual Integration Results

RT: 0.74
Height: 99703509
Amount: 58.253259
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:38:11 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Instrument noise

Report Date: 04-Aug-2023 03:40:31 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

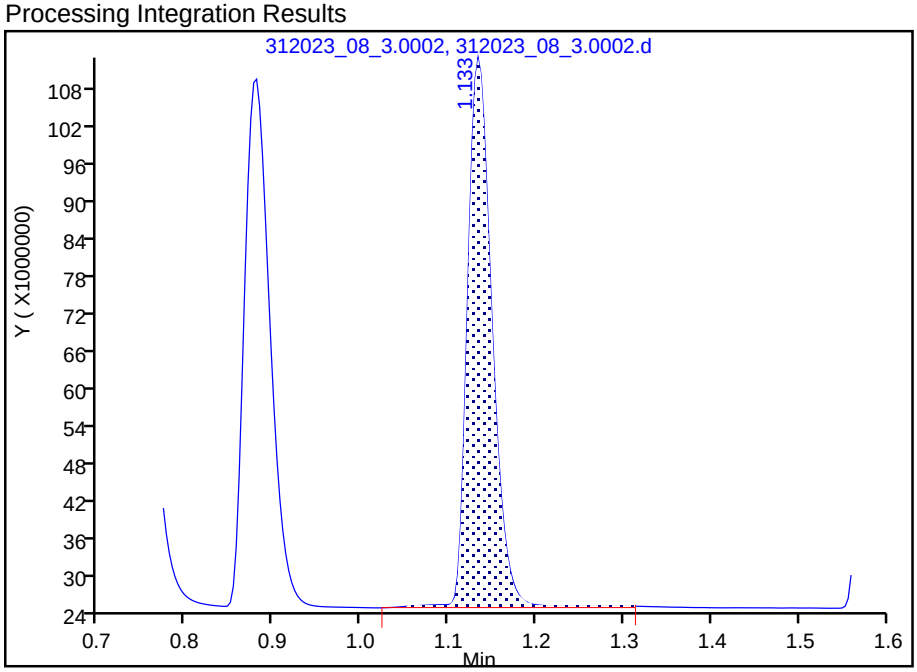
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0002.d				
Injection Date:	03-Aug-2023 10:07:00	Instrument ID:	19506		
Lims ID:	ccvrt				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	2
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

3 Ethylene, CAS: 74-85-1

Signal: 1

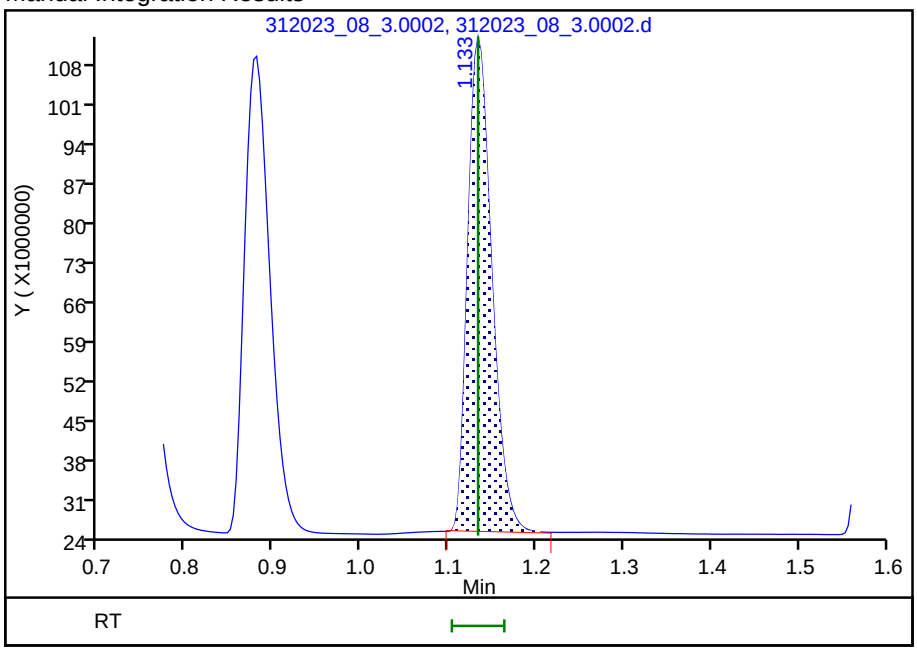
Processing Integration Results

RT: 1.13
Height: 87404596
Amount: 55.429477
Amount Units: ug/l



Manual Integration Results

RT: 1.13
Height: 86968382
Amount: 55.152843
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:37:54 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Instrument noise

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-403952/9 Calibration Date: 08/03/2023 12:05

Instrument ID: 19506 Calib Start Date: 07/10/2023 10:31

GC Column: HP Plot ID: 0.53(mm) Calib End Date: 07/10/2023 11:48

Lab File ID: 312023_08_3.0009.d Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	1711552	1586209		55.4	59.8	-7.3	15.0
Ethane	Ave	1449694	1337961		56.9	61.7	-7.7	15.0
Ethene	Ave	1576861	1446529		53.5	58.3	-8.3	15.0
Propane	Ave	1801003	1713764		59.4	62.4	-4.8	15.0
Isobutane	Ave	2465268	2497493		63.1	62.3	1.3	15.0
n-Butane	Ave	2290839	2389286		64.0	61.3	4.3	15.0
Acetylene	Ave	1882395	1677752		46.4	52.1	-10.9	15.0
Propene	Ave	2920753	2688693		18.6	20.2	-7.9	15.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-403952/9 Calibration Date: 08/03/2023 12:05

Instrument ID: 19506 Calib Start Date: 07/10/2023 10:31

GC Column: HP Plot ID: 0.53(mm) Calib End Date: 07/10/2023 11:48

Lab File ID: 312023_08_3.0009.d Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.74	0.71	0.77
Ethane	0.88	0.85	0.91
Ethene	1.14	1.10	1.16
Propane	1.59	1.55	1.61
Isobutane	2.83	2.80	2.86
n-Butane	2.97	2.91	3.01
Acetylene	3.12	3.05	3.15
Propene	2.51	2.46	2.52

Report Date: 04-Aug-2023 03:40:26 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0009.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 03-Aug-2023 12:05:00 ALS Bottle#: 0 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 410-0090521-009
Operator ID: Instrument ID: 19506
Sublist: chrom-RSK_19506A*sub2

Method: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\RSK_19506A.m
Limit Group: GCV - RSK175
Last Update: 04-Aug-2023 03:40:26 Calib Date: 10-Jul-2023 11:48:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Column 1 : HP Plot (0.53 mm) Det: AFID0
Process Host: CTX1668

First Level Reviewer: LXF2 Date: 04-Aug-2023 03:40:21

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	1 Methane	0.743	0.743	0.000	94791860H	59.8	55.4	M
	2 Ethane	0.880	0.880	0.000	82525414H	61.7	56.9	
	3 Ethylene	1.137	1.133	0.004	84361573H	58.3	53.5	M
	4 Propane	1.587	1.580	0.007	106938877H	62.4	59.4	
$	5 Propene	2.507	2.493	0.014	54204058H	20.2	18.6	
	8 Propane, 2-methyl	2.833	2.827	0.006	155543860H	62.3	63.1	
	6 Butane	2.967	2.960	0.007	146511038H	61.3	64.0	
	7 Acetylene	3.120	3.100	0.020	87377339H	52.1	46.4	

QC Flag Legend

Processing Flags
H - Response Measured by Height
Review Flags
M - Manually Integrated

Reagents:

EPH_HSSSS_00011 Amount Added: 60.00 Units: uL
EPH_HSSMS_00011 Amount Added: 60.00 Units: uL

Report Date: 04-Aug-2023 03:40:26 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0009.d

Injection Date: 03-Aug-2023 12:05:00 Instrument ID: 19506

Lims ID: ccv

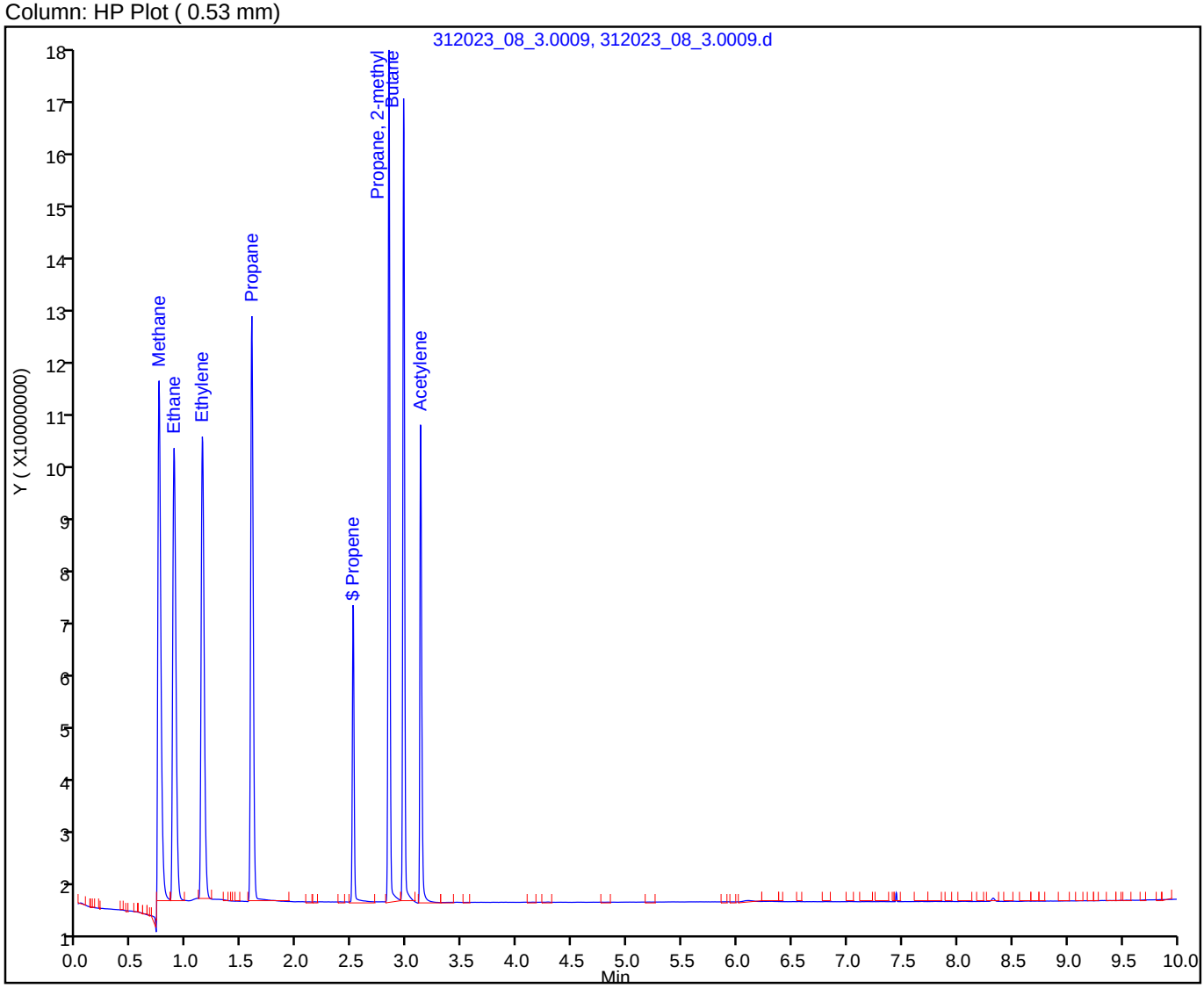
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 9

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Eurofins Lancaster Laboratories Environment Testing, LLC

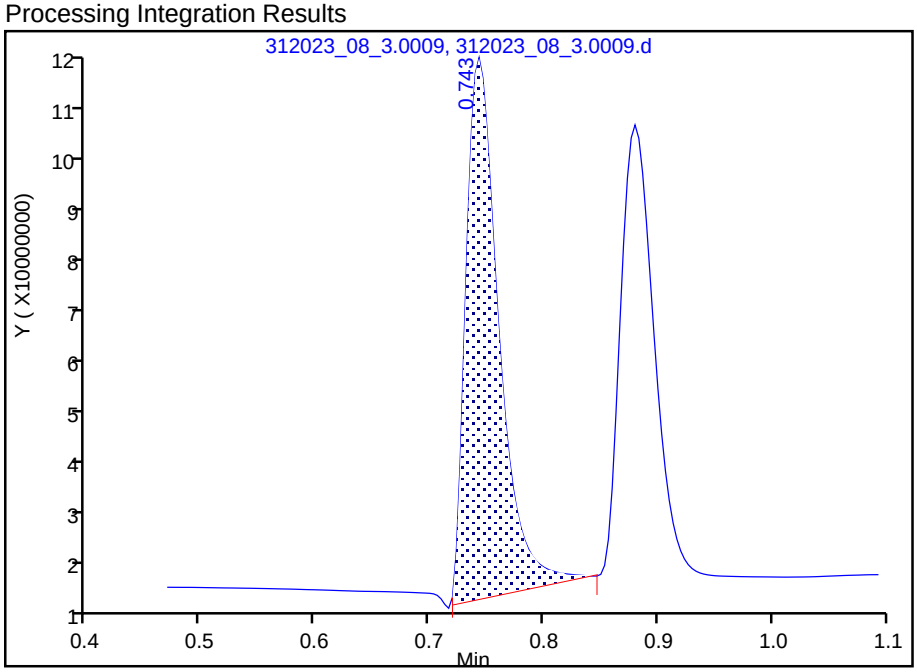
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0009.d				
Injection Date:	03-Aug-2023 12:05:00	Instrument ID:	19506		
Lims ID:	ccv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	9
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

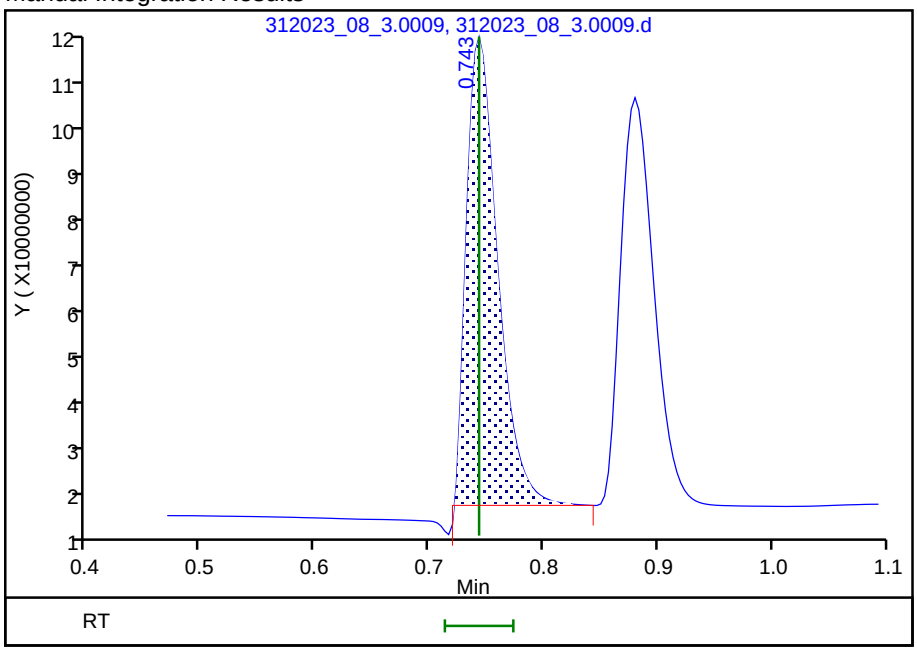
Processing Integration Results

RT: 0.74
Height: 99044229
Amount: 57.868065
Amount Units: ug/l



Manual Integration Results

RT: 0.74
Height: 94791860
Amount: 55.383555
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:40:18 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Instrument noise

Report Date: 04-Aug-2023 03:40:26 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

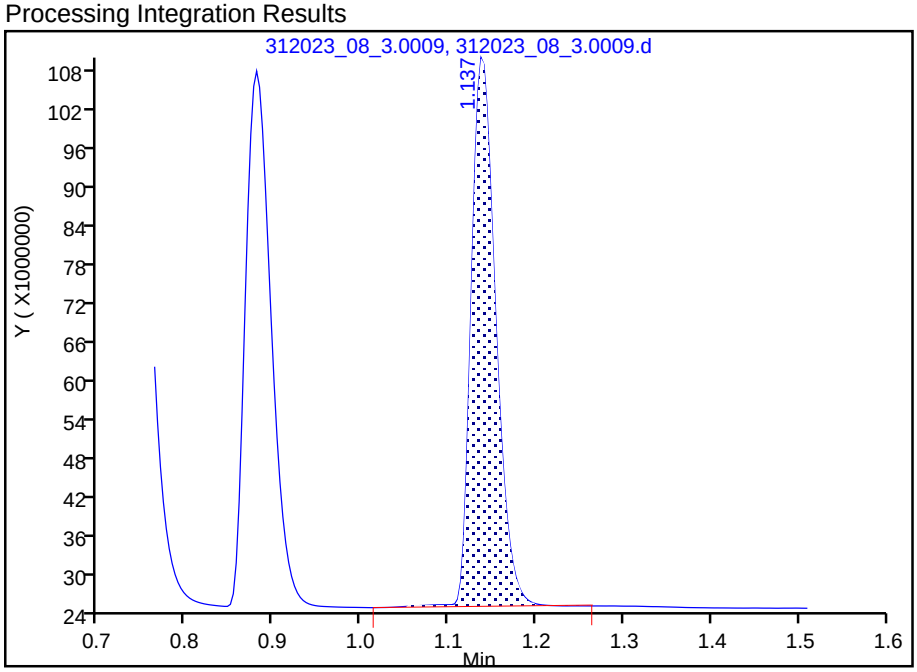
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0009.d				
Injection Date:	03-Aug-2023 12:05:00	Instrument ID:	19506		
Lims ID:	ccv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	9
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

3 Ethylene, CAS: 74-85-1

Signal: 1

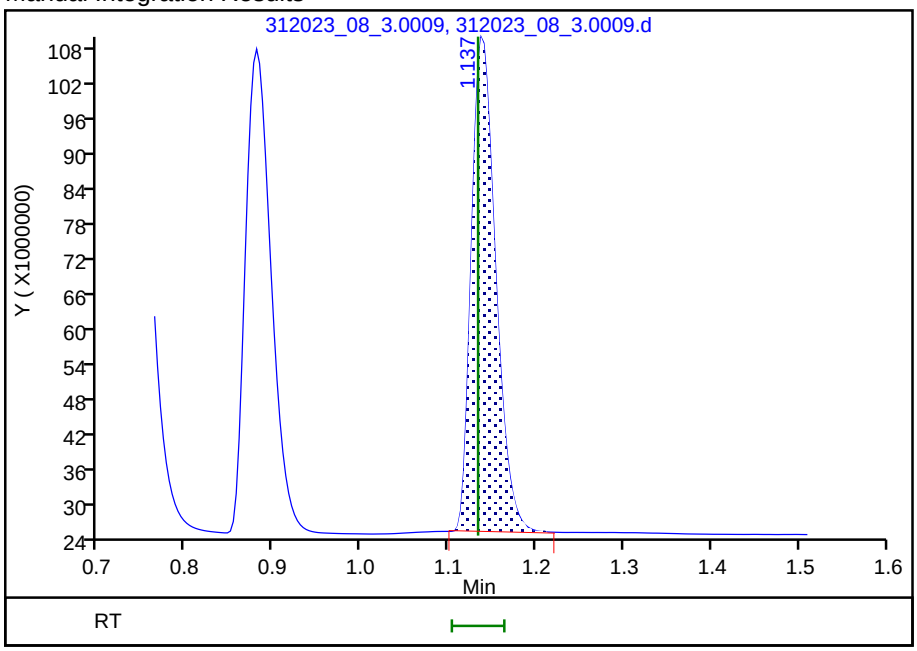
Processing Integration Results

RT: 1.14
Height: 84634605
Amount: 53.672828
Amount Units: ug/l



Manual Integration Results

RT: 1.14
Height: 84361573
Amount: 53.499679
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:40:04 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Instrument noise

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-403952/20 Calibration Date: 08/03/2023 15:34

Instrument ID: 19506 Calib Start Date: 07/10/2023 10:31

GC Column: HP Plot ID: 0.53(mm) Calib End Date: 07/10/2023 11:48

Lab File ID: 312023_08_3.0020.d Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	1711552	1628038		56.8	59.8	-4.9	15.0
Ethane	Ave	1449694	1377341		58.6	61.7	-5.0	15.0
Ethene	Ave	1576861	1493134		55.2	58.3	-5.3	15.0
Propane	Ave	1801003	1783032		61.8	62.4	-1.0	15.0
Isobutane	Ave	2465268	2612616		66.0	62.3	6.0	15.0
n-Butane	Ave	2290839	2539437		68.0	61.3	10.9	15.0
Acetylene	Ave	1882395	1662992		46.0	52.1	-11.7	15.0
Propene	Ave	2920753	2644427		18.3	20.2	-9.5	15.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-403952/20 Calibration Date: 08/03/2023 15:34

Instrument ID: 19506 Calib Start Date: 07/10/2023 10:31

GC Column: HP Plot ID: 0.53(mm) Calib End Date: 07/10/2023 11:48

Lab File ID: 312023_08_3.0020.d Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.74	0.71	0.77
Ethane	0.88	0.85	0.91
Ethene	1.14	1.10	1.16
Propane	1.59	1.55	1.61
Isobutane	2.84	2.80	2.86
n-Butane	2.98	2.91	3.01
Acetylene	3.14	3.05	3.15
Propene	2.52	2.46	2.52

Report Date: 04-Aug-2023 03:44:43 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0020.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 03-Aug-2023 15:34:00 ALS Bottle#: 0 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 410-0090521-020
Operator ID: Instrument ID: 19506
Sublist: chrom-RSK_19506A*sub2

Method: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\RSK_19506A.m
Limit Group: GCV - RSK175
Last Update: 04-Aug-2023 03:44:43 Calib Date: 10-Jul-2023 11:48:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Column 1 : HP Plot (0.53 mm) Det: AFID0
Process Host: CTX1668

First Level Reviewer: LXF2 Date: 04-Aug-2023 03:41:05

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	1 Methane	0.743	0.743	0.000	97291577H	59.8	56.8	M
	2 Ethane	0.880	0.880	0.000	84954401H	61.7	58.6	
	3 Ethylene	1.143	1.133	0.010	87079567H	58.3	55.2	M
	4 Propane	1.593	1.580	0.013	111261189H	62.4	61.8	
$	5 Propene	2.523	2.493	0.030	53311641H	20.2	18.3	a
	8 Propane, 2-methyl	2.843	2.827	0.016	162713731H	62.3	66.0	
	6 Butane	2.977	2.960	0.017	155718251H	61.3	68.0	
	7 Acetylene	3.143	3.100	0.043	86608649H	52.1	46.0	

QC Flag Legend

Processing Flags
H - Response Measured by Height
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

EPH_HSSSS_00011 Amount Added: 60.00 Units: uL
EPH_HSSMS_00011 Amount Added: 60.00 Units: uL

Report Date: 04-Aug-2023 03:44:43 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0020.d

Injection Date: 03-Aug-2023 15:34:00 Instrument ID: 19506

Lims ID: ccv

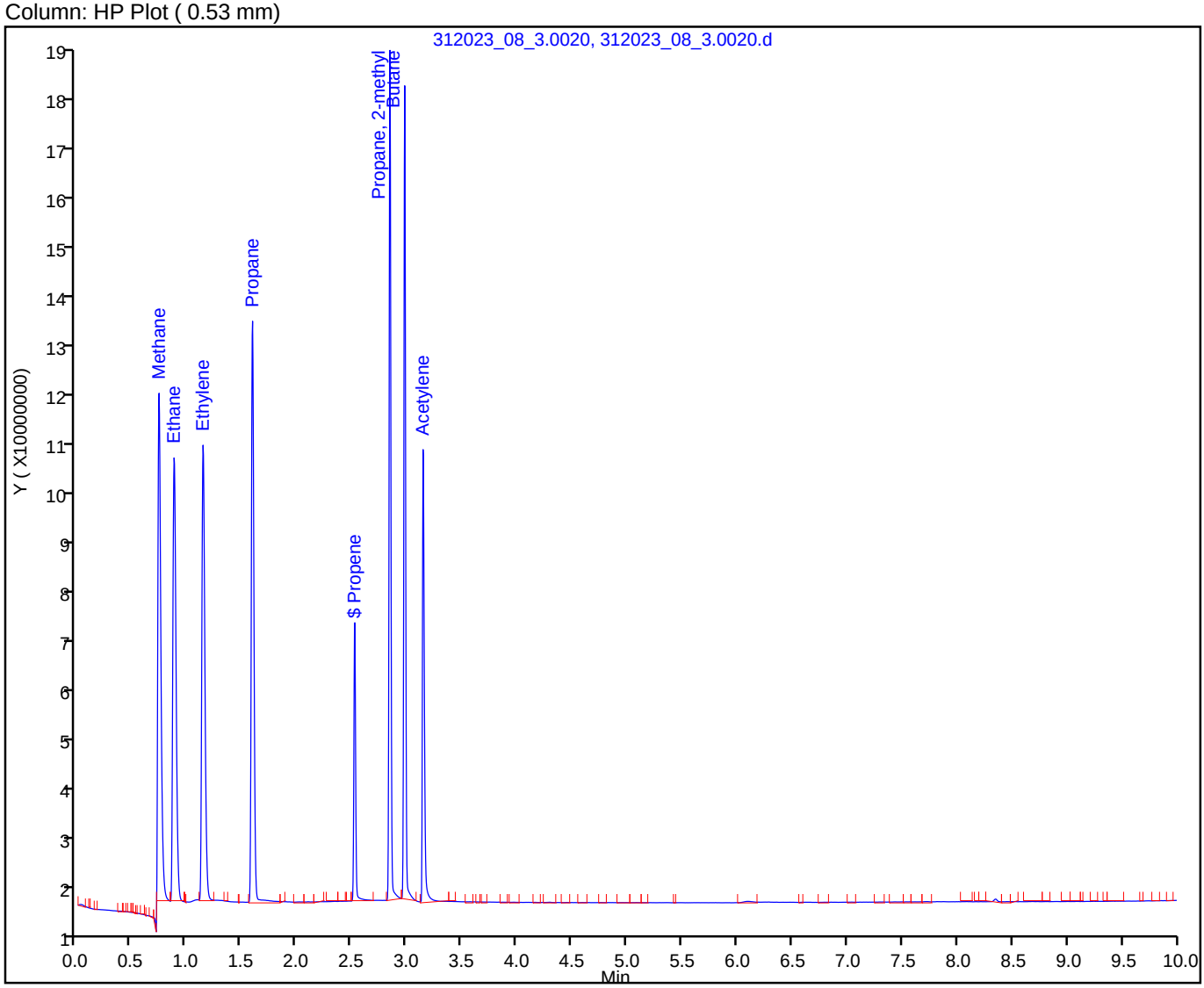
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 20

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Report Date: 04-Aug-2023 03:44:43 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

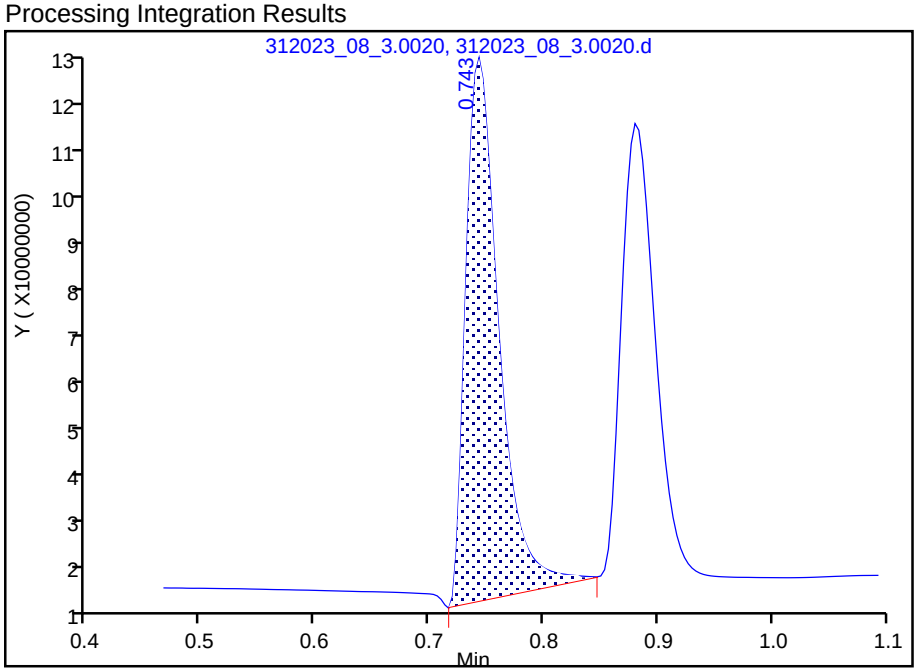
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0020.d				
Injection Date:	03-Aug-2023 15:34:00	Instrument ID:	19506		
Lims ID:	ccv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

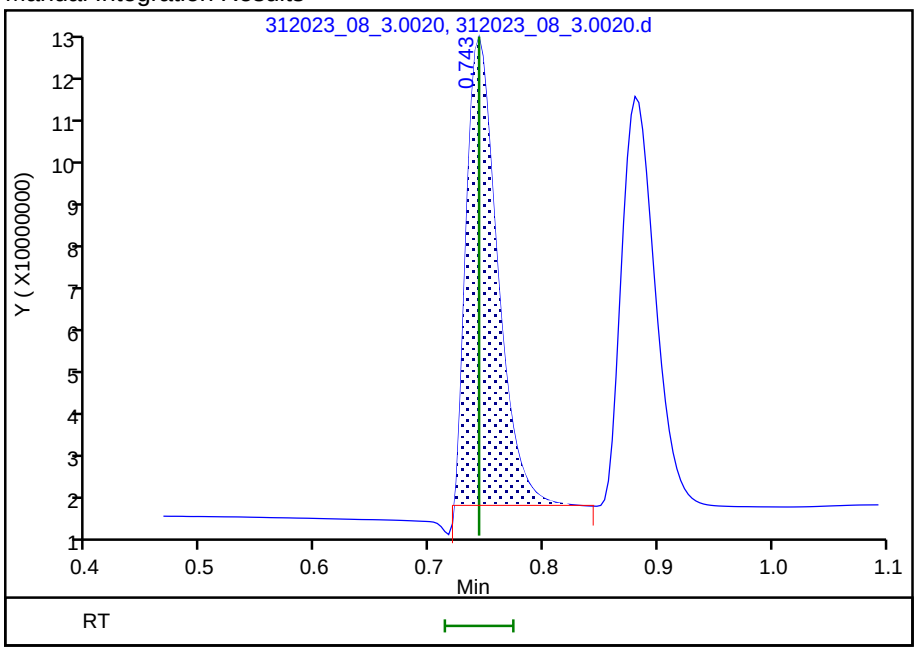
Processing Integration Results

RT: 0.74
Height: 101958912
Amount: 59.571012
Amount Units: ug/l



Manual Integration Results

RT: 0.74
Height: 97291577
Amount: 56.844052
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:44:05 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Instrument noise

Report Date: 04-Aug-2023 03:44:43 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

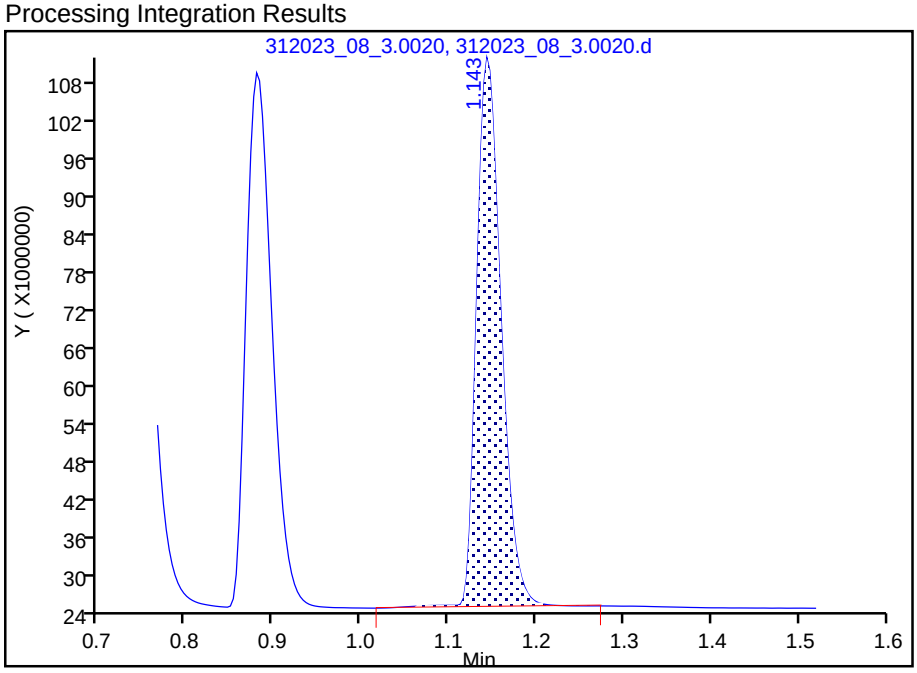
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0020.d				
Injection Date:	03-Aug-2023 15:34:00	Instrument ID:	19506		
Lims ID:	ccv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

3 Ethylene, CAS: 74-85-1

Signal: 1

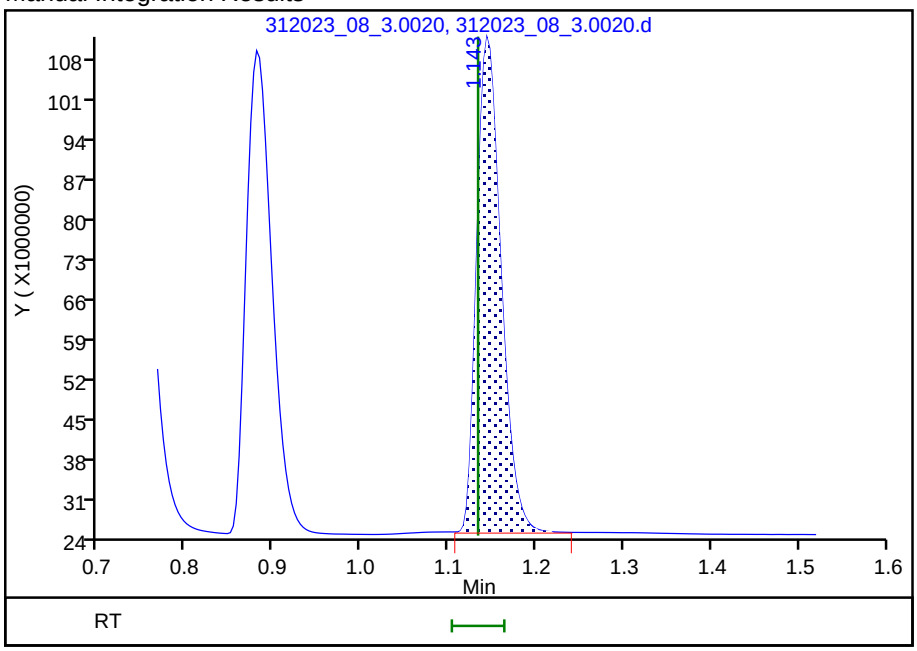
Processing Integration Results

RT: 1.14
Height: 87331300
Amount: 55.382995
Amount Units: ug/l



Manual Integration Results

RT: 1.14
Height: 87079567
Amount: 55.223353
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:42:54 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Instrument noise

Eurofins Lancaster Laboratories Environment Testing, LLC

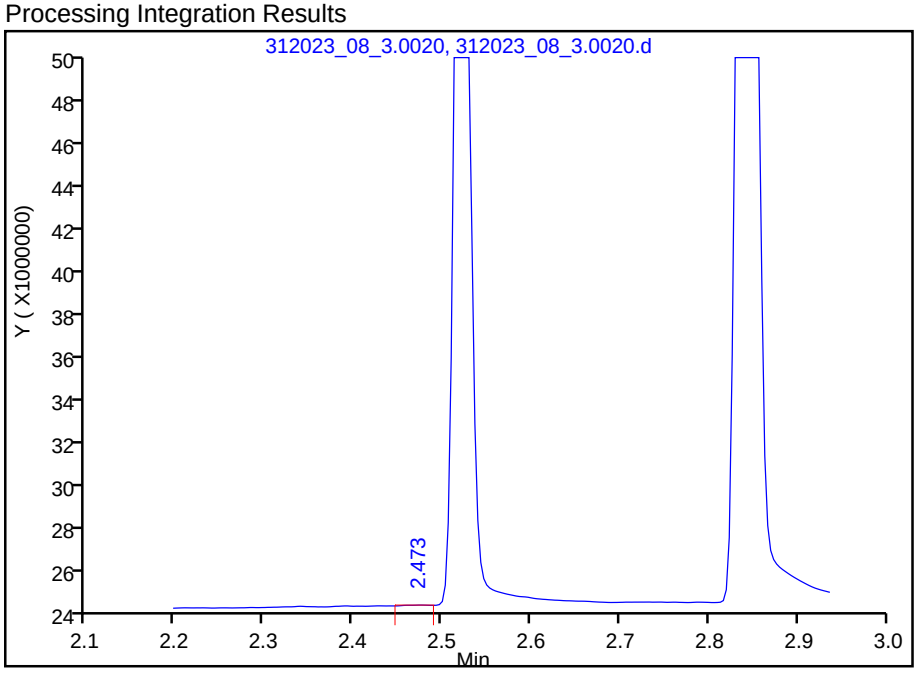
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0020.d				
Injection Date:	03-Aug-2023 15:34:00	Instrument ID:	19506		
Lims ID:	ccv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

$ 5 Propene, CAS: 115-07-1

Signal: 1

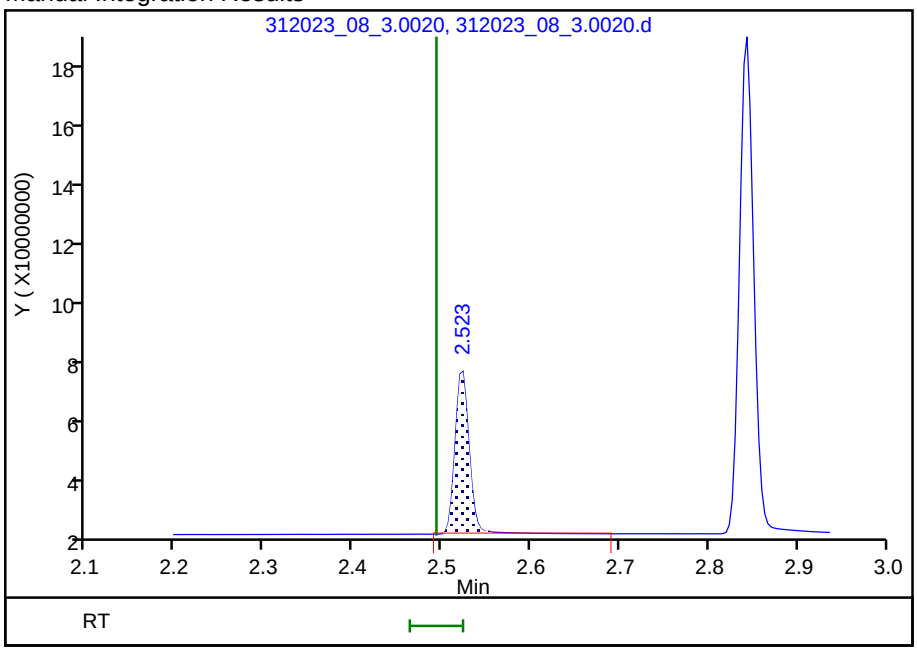
Processing Integration Results

RT: 2.47
Height: 23269
Amount: 0.007967
Amount Units: ug/l



Manual Integration Results

RT: 2.52
Height: 53311641
Amount: 18.252705
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:40:58 -04:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-403952/31 Calibration Date: 08/03/2023 18:25

Instrument ID: 19506 Calib Start Date: 07/10/2023 10:31

GC Column: HP Plot ID: 0.53(mm) Calib End Date: 07/10/2023 11:48

Lab File ID: 312023_08_3.0031.d Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	1711552	1624699		56.7	59.8	-5.1	15.0
Ethane	Ave	1449694	1364301		58.0	61.7	-5.9	15.0
Ethene	Ave	1576861	1479007		54.7	58.3	-6.2	15.0
Propane	Ave	1801003	1754432		60.8	62.4	-2.6	15.0
Isobutane	Ave	2465268	2523030		63.7	62.3	2.3	15.0
n-Butane	Ave	2290839	2433445		65.1	61.3	6.2	15.0
Acetylene	Ave	1882395	1726168		47.8	52.1	-8.3	15.0
Propene	Ave	2920753	2662606		18.4	20.2	-8.8	15.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-403952/31 Calibration Date: 08/03/2023 18:25

Instrument ID: 19506 Calib Start Date: 07/10/2023 10:31

GC Column: HP Plot ID: 0.53(mm) Calib End Date: 07/10/2023 11:48

Lab File ID: 312023_08_3.0031.d Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.74	0.71	0.77
Ethane	0.88	0.85	0.91
Ethene	1.15	1.10	1.16
Propane	1.59	1.55	1.61
Isobutane	2.84	2.80	2.86
n-Butane	2.98	2.91	3.01
Acetylene	3.15	3.05	3.15
Propene	2.53	2.46	2.52

Report Date: 04-Aug-2023 04:27:36 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0031.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 03-Aug-2023 18:25:00 ALS Bottle#: 0 Worklist Smp#: 31
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 410-0090521-031
Operator ID: Instrument ID: 19506
Sublist: chrom-RSK_19506A*sub2

Method: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\RSK_19506A.m
Limit Group: GCV - RSK175
Last Update: 04-Aug-2023 04:27:36 Calib Date: 10-Jul-2023 11:48:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Column 1 : HP Plot (0.53 mm) Det: AFID0
Process Host: CTX1668

First Level Reviewer: LXF2 Date: 04-Aug-2023 04:27:28

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	1 Methane	0.743	0.743	0.000	97091999H	59.8	56.7	M
	2 Ethane	0.880	0.880	0.000	84150099H	61.7	58.0	
	3 Ethylene	1.147	1.133	0.014	86255662H	58.3	54.7	M
	4 Propane	1.593	1.580	0.013	109476561H	62.4	60.8	
$	5 Propene	2.527	2.493	0.034	53678143H	20.2	18.4	a
	8 Propane, 2-methyl	2.843	2.827	0.016	157134323H	62.3	63.7	
	6 Butane	2.980	2.960	0.020	149218832H	61.3	65.1	
	7 Acetylene	3.150	3.100	0.050	89898826H	52.1	47.8	a

QC Flag Legend

Processing Flags
H - Response Measured by Height
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

EPH_HSSSS_00011 Amount Added: 60.00 Units: uL
EPH_HSSMS_00011 Amount Added: 60.00 Units: uL

Report Date: 04-Aug-2023 04:27:36 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0031.d

Injection Date: 03-Aug-2023 18:25:00 Instrument ID: 19506

Lims ID: ccv

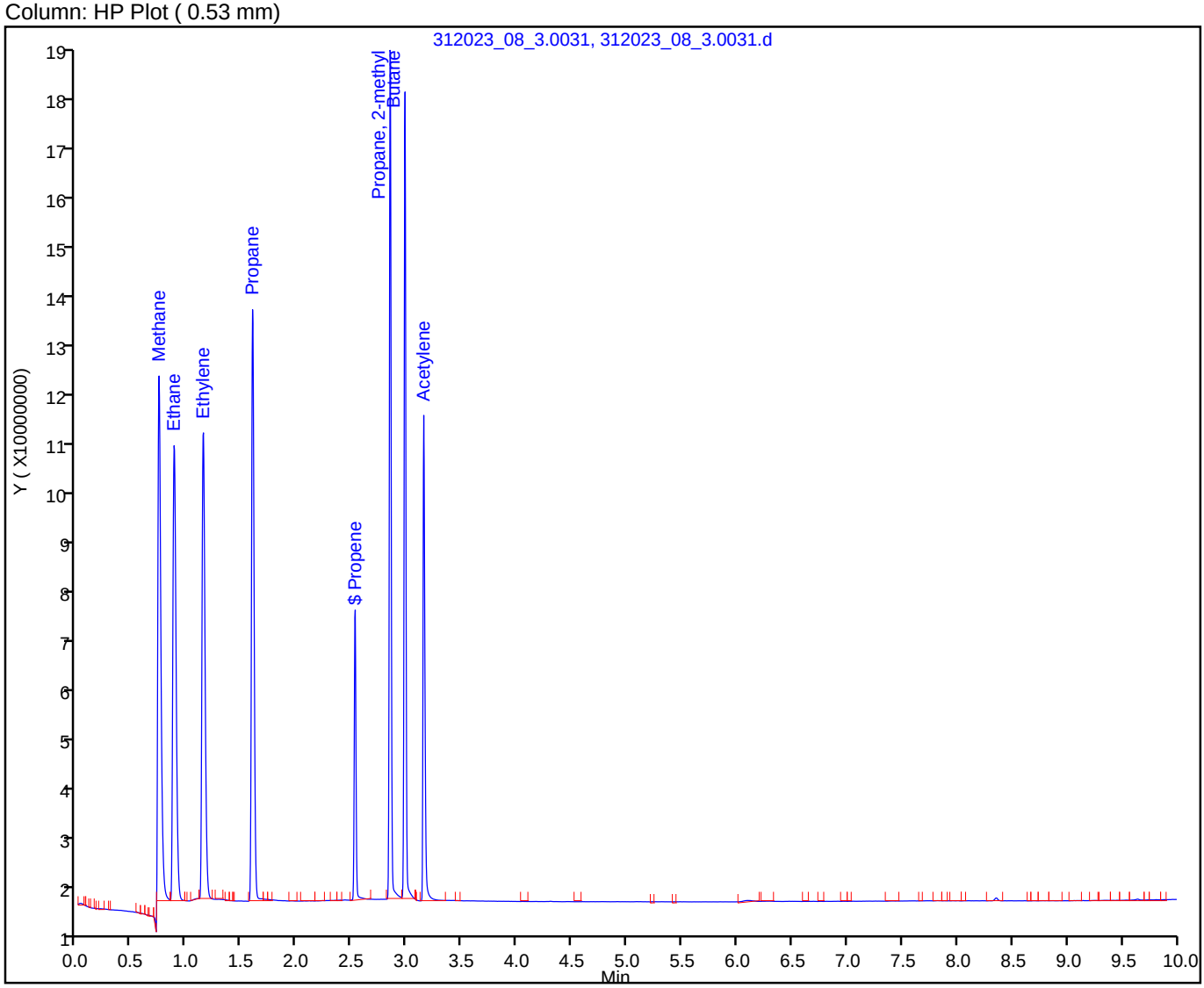
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 31

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Report Date: 04-Aug-2023 04:27:36 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

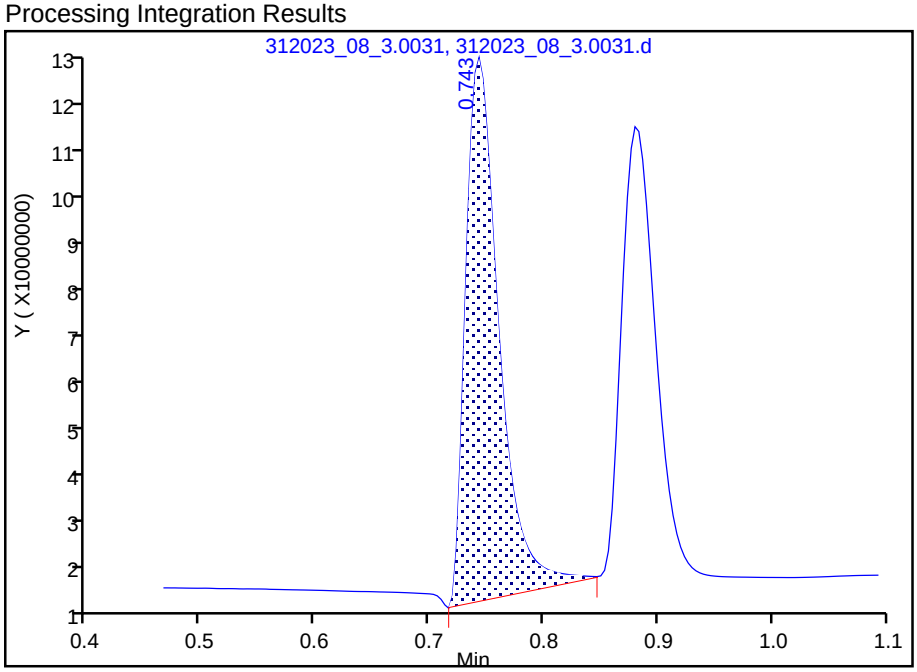
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0031.d				
Injection Date:	03-Aug-2023 18:25:00	Instrument ID:	19506		
Lims ID:	ccv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	31
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

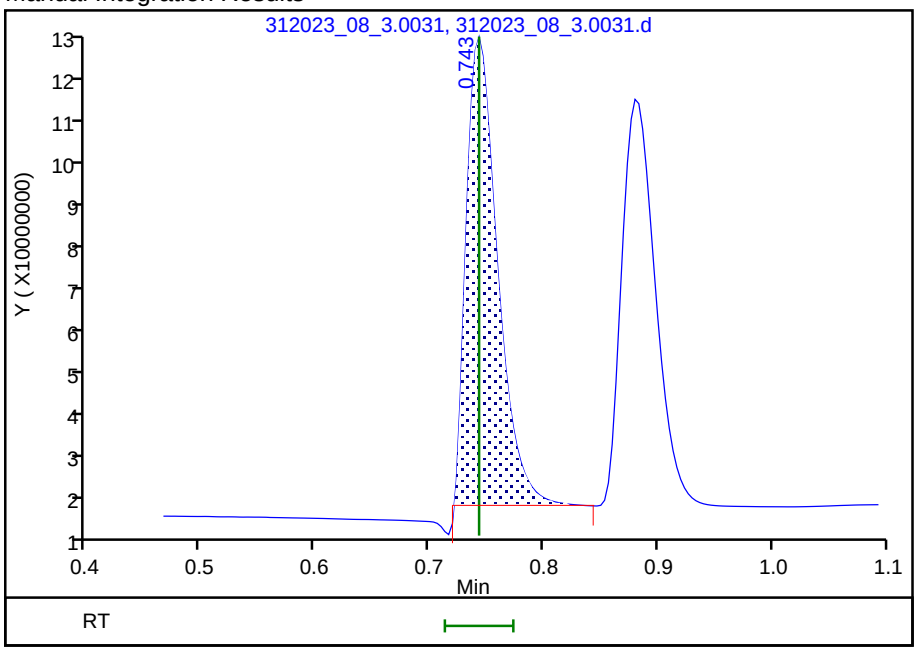
Processing Integration Results

RT: 0.74
Height: 101746799
Amount: 59.447082
Amount Units: ug/l



Manual Integration Results

RT: 0.74
Height: 97091999
Amount: 56.727446
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:44:22 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Instrument noise

Eurofins Lancaster Laboratories Environment Testing, LLC

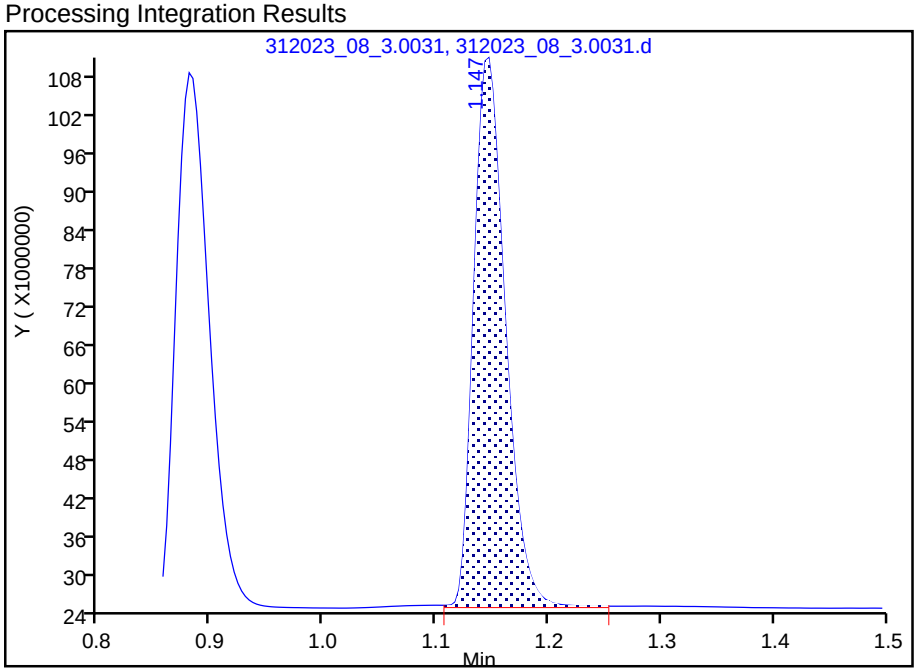
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0031.d				
Injection Date:	03-Aug-2023 18:25:00	Instrument ID:	19506		
Lims ID:	ccv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	31
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

3 Ethylene, CAS: 74-85-1

Signal: 1

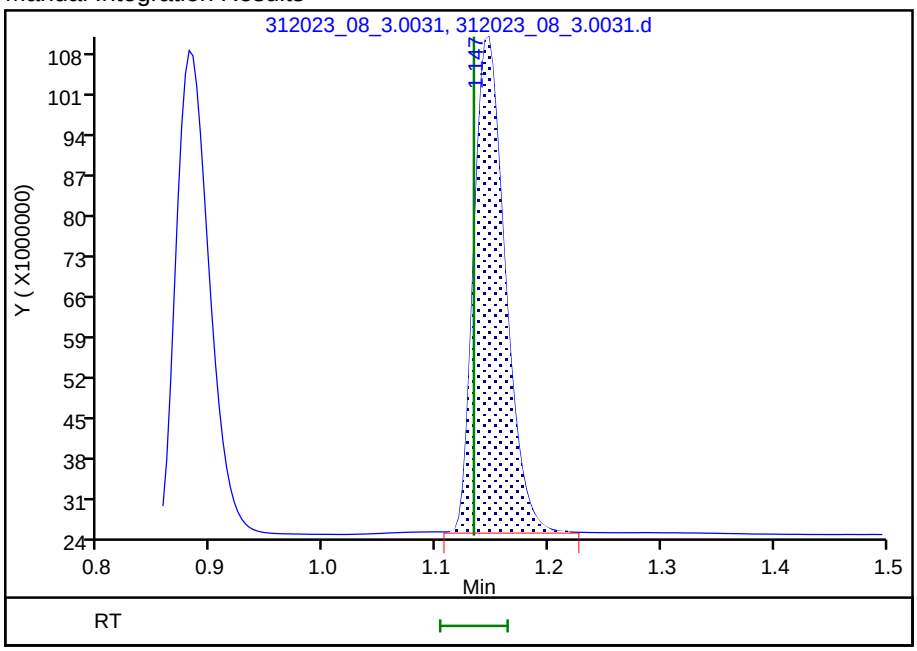
Processing Integration Results

RT: 1.15
Height: 86571831
Amount: 54.901361
Amount Units: ug/l



Manual Integration Results

RT: 1.15
Height: 86255662
Amount: 54.700856
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:43:05 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Instrument noise

Report Date: 04-Aug-2023 04:27:36 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

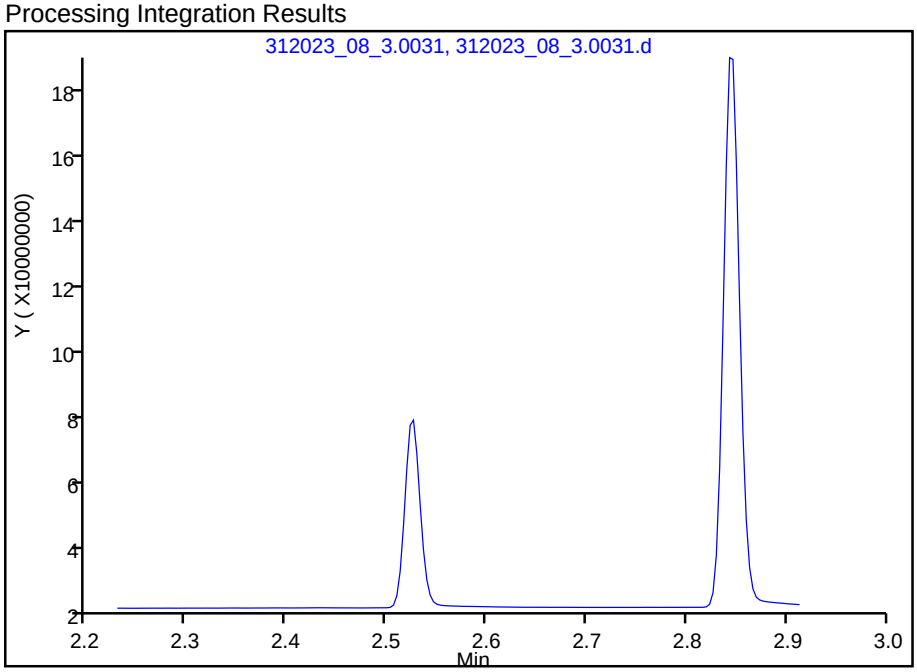
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0031.d				
Injection Date:	03-Aug-2023 18:25:00	Instrument ID:	19506		
Lims ID:	ccv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	31
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

$ 5 Propene, CAS: 115-07-1

Signal: 1

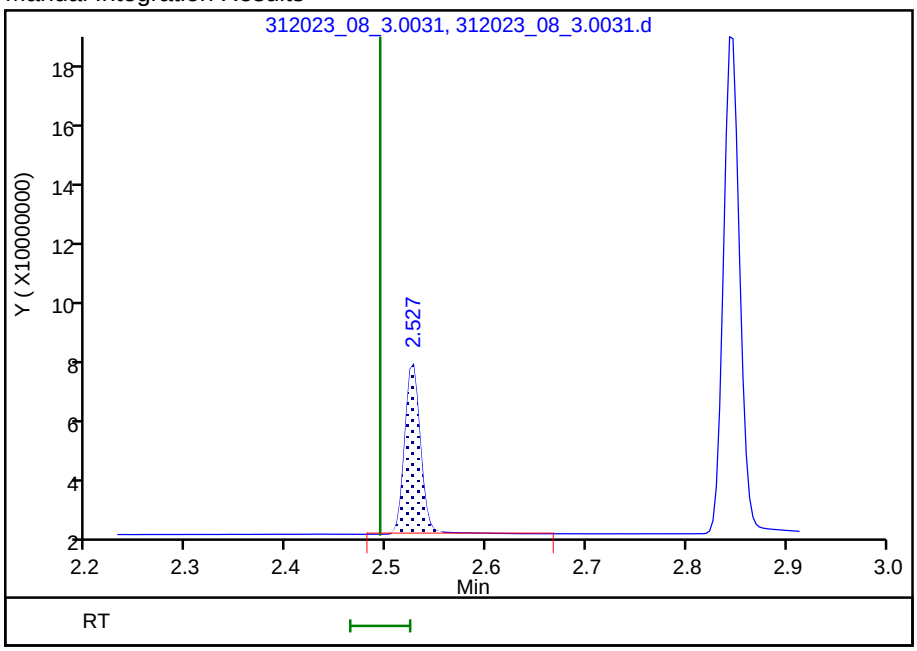
Processing Integration Results

Not Detected
Expected RT: 2.49



Manual Integration Results

RT: 2.53
Height: 53678143
Amount: 18.378187
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:41:09 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Report Date: 04-Aug-2023 04:27:36 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

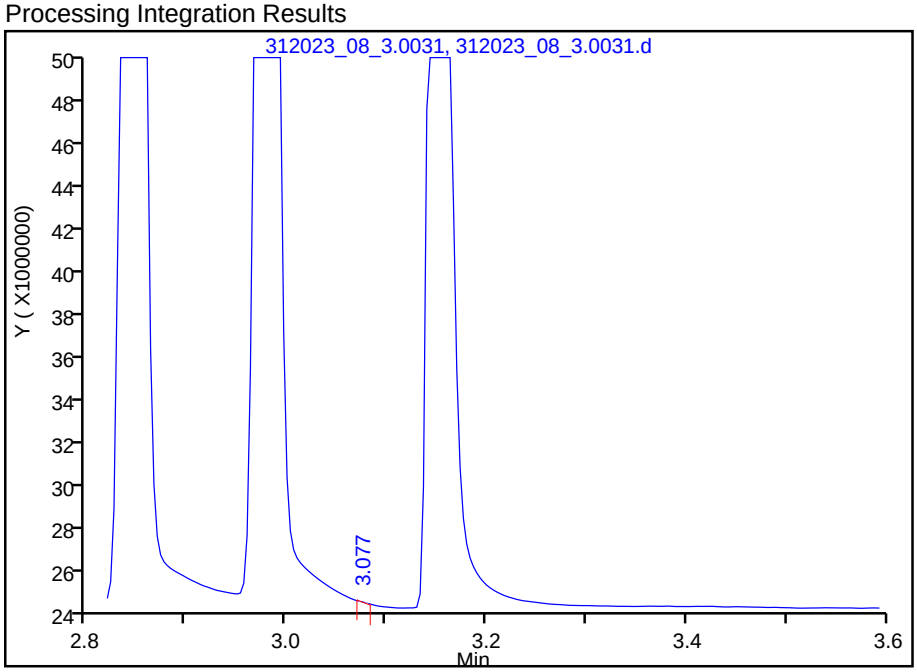
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0031.d				
Injection Date:	03-Aug-2023 18:25:00	Instrument ID:	19506		
Lims ID:	ccv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	31
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

7 Acetylene, CAS: 74-86-2

Signal: 1

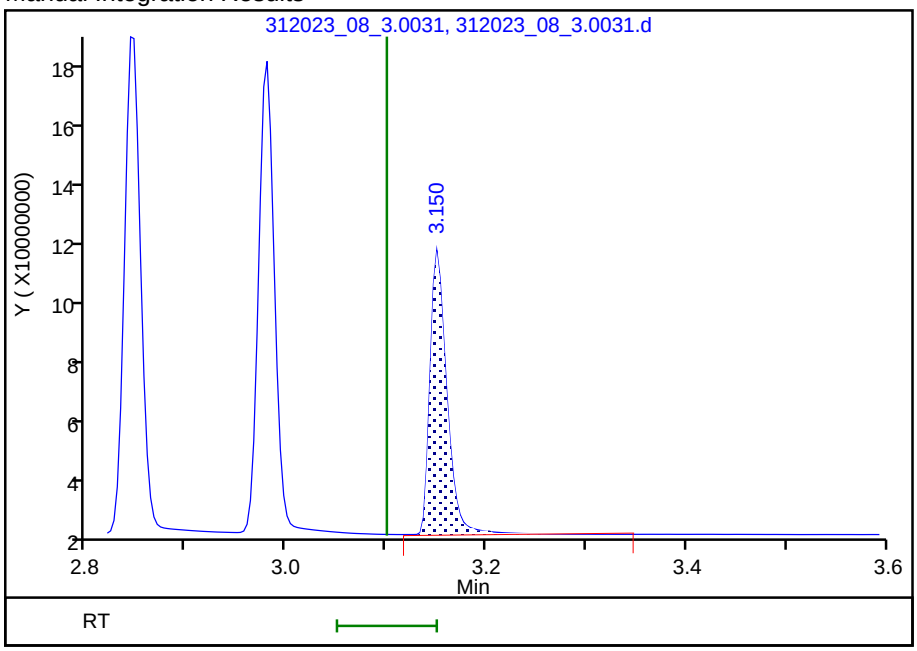
Processing Integration Results

RT: 3.08
Height: 4492
Amount: 0.002386
Amount Units: ug/l



Manual Integration Results

RT: 3.15
Height: 89898826
Amount: 47.757672
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 04:27:26 -04:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136645-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 410-404151/1-A

Matrix: Water Lab File ID: 312023_08_3.0006.d

Analysis Method: RSK-175 Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 08/03/2023 11:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: HP Plot ID: 0.53(mm)

Purge Volume: Heated Purge: (Y/N) N pH:

% Moisture: % Solids: Level: (low/med) Low

Analysis Batch No.: 403952 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-84-0	Ethane	ND		5.0	1.0
74-85-1	Ethene	ND		5.0	1.0
74-82-8	Methane	ND		5.0	3.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
115-07-1	Propene	95		43-133

Report Date: 04-Aug-2023 03:40:28 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0006.d
Lims ID: MB 410-404151/1-A
Client ID:
Sample Type: MB
Inject. Date: 03-Aug-2023 11:19:00 ALS Bottle#: 0 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 410-0090521-006
Operator ID: Instrument ID: 19506

Method: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\RSK_19506A.m
Limit Group: GCV - RSK175
Last Update: 04-Aug-2023 03:40:26 Calib Date: 10-Jul-2023 11:48:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Column 1 : HP Plot (0.53 mm) Det: AFID0
Process Host: CTX1668

First Level Reviewer: LXF2 Date: 04-Aug-2023 03:39:23

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	1 Methane	0.763	0.743	0.020	2158459H		1.26	M
	2 Ethane		0.880				ND	
	3 Ethylene		1.133				ND	
	4 Propane	1.583	1.580	0.003	54604H		0.0303	
$	5 Propene	2.503	2.493	0.010	55698627H	20.2	19.1	
	8 Propane, 2-methyl		2.827				ND	
	6 Butane		2.960				ND	
	7 Acetylene	3.097	3.100	-0.003	5665H		0.003009	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Review Flags

M - Manually Integrated

Report Date: 04-Aug-2023 03:40:28 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0006.d

Injection Date: 03-Aug-2023 11:19:00 Instrument ID: 19506

Lims ID: MB 410-404151/1-A

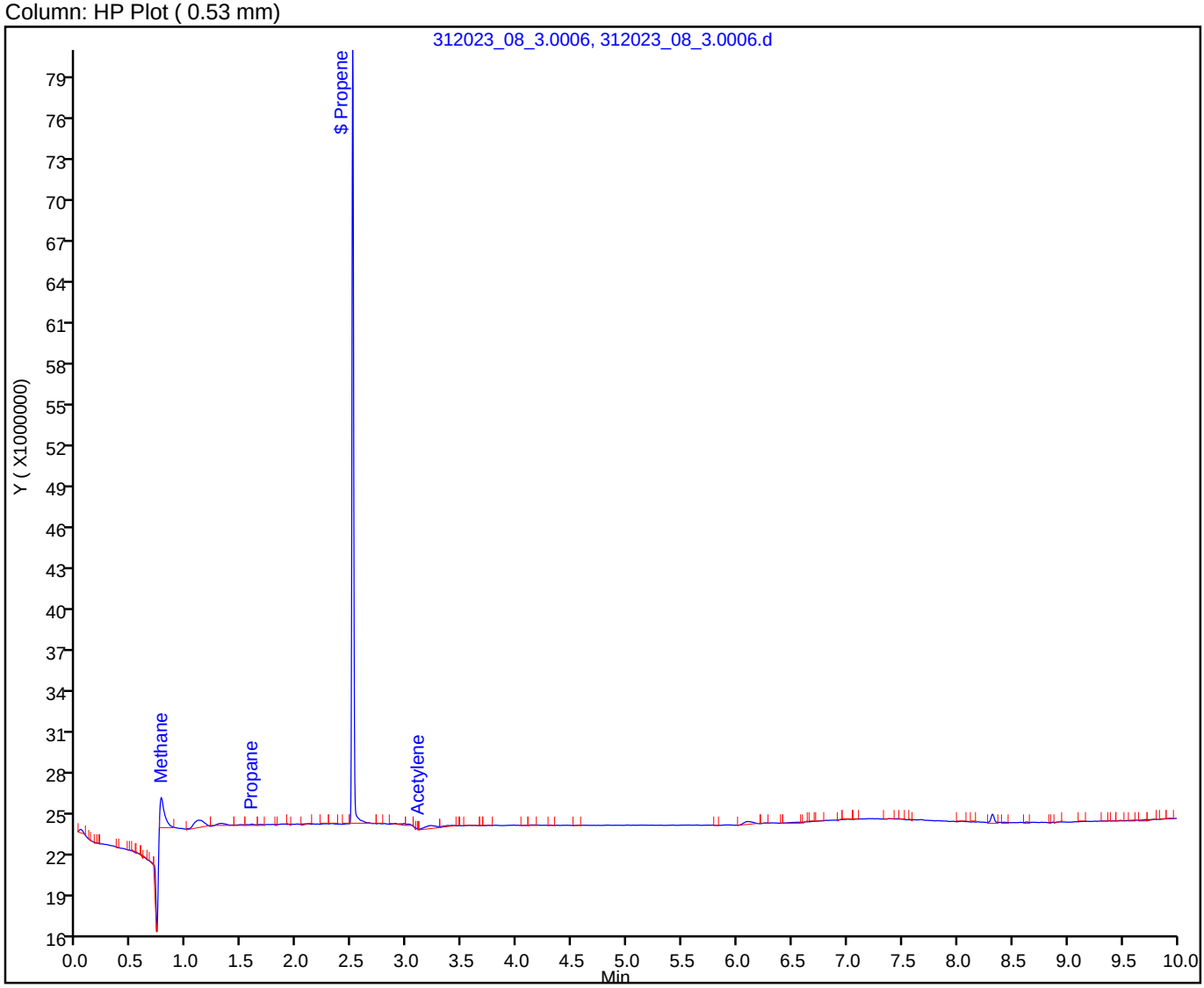
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 6

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Report Date: 04-Aug-2023 03:40:28 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0006.d				
Lims ID:	MB 410-404151/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	03-Aug-2023 11:19:00	ALS Bottle#:	0	Worklist Smp#:	6
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:					
Misc. Info.:	410-0090521-006				
Operator ID:		Instrument ID:	19506		
Method:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\RSK_19506A.m				
Limit Group:	GCV - RSK175				
Last Update:	04-Aug-2023 03:40:26	Calib Date:	10-Jul-2023 11:48:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d				
Column 1 :	HP Plot (0.53 mm)		Det: AFID0		
Process Host:	CTX1668				
First Level Reviewer: LXF2		Date:	04-Aug-2023 03:39:23		

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Propene	20.2	19.1	94.59

Eurofins Lancaster Laboratories Environment Testing, LLC

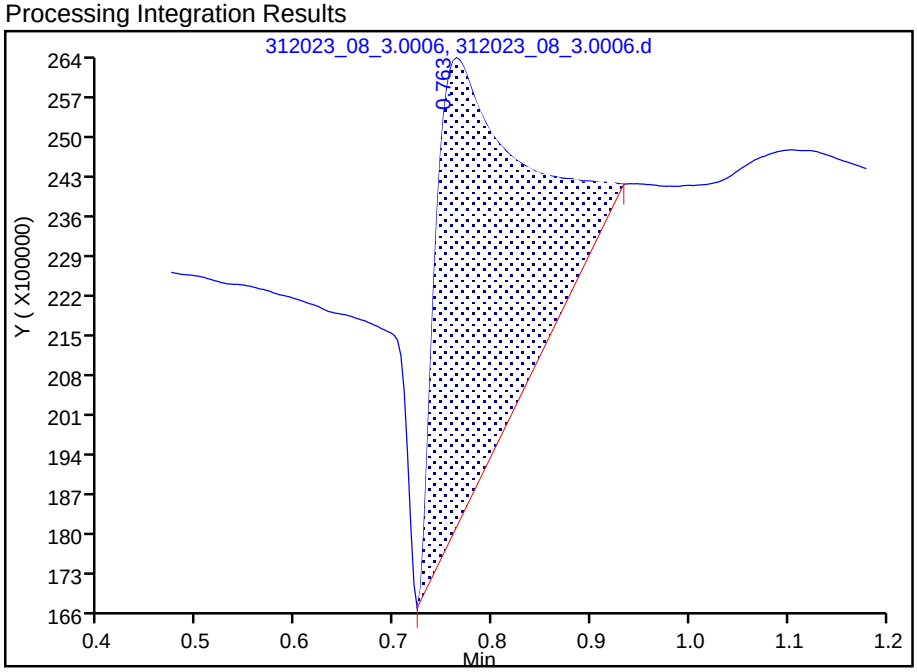
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0006.d				
Injection Date:	03-Aug-2023 11:19:00	Instrument ID:	19506		
Lims ID:	MB 410-404151/1-A				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

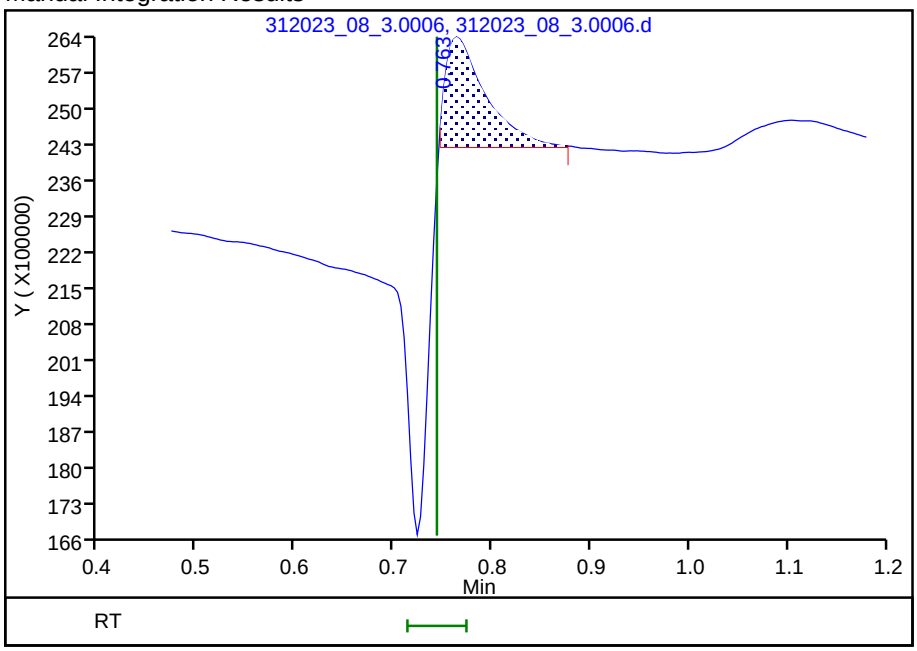
Processing Integration Results

RT: 0.76
Height: 8244206
Amount: 4.816800
Amount Units: ug/l



Manual Integration Results

RT: 0.76
Height: 2158459
Amount: 1.261112
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:39:20 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Instrument noise

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136645-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 410-404151/2-A

Matrix: Water Lab File ID: 312023_08_3.0007.d

Analysis Method: RSK-175 Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 08/03/2023 11:35

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: HP Plot ID: 0.53(mm)

Purge Volume: Heated Purge: (Y/N) N pH:

% Moisture: % Solids: Level: (low/med) Low

Analysis Batch No.: 403952 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-84-0	Ethane	56.9		5.0	1.0
74-85-1	Ethene	54.0		5.0	1.0
74-82-8	Methane	56.7		5.0	3.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
115-07-1	Propene	95		43-133

Report Date: 04-Aug-2023 03:40:28 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0007.d
Lims ID: LCS 410-404151/2-A
Client ID:
Sample Type: LCS
Inject. Date: 03-Aug-2023 11:35:00 ALS Bottle#: 0 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 410-0090521-007
Operator ID: Instrument ID: 19506

Method: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\RSK_19506A.m
Limit Group: GCV - RSK175
Last Update: 04-Aug-2023 03:40:26 Calib Date: 10-Jul-2023 11:48:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Column 1 : HP Plot (0.53 mm) Det: AFID0
Process Host: CTX1668

First Level Reviewer: LXF2 Date: 04-Aug-2023 03:39:41

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	1 Methane	0.743	0.743	0.000	97001650H	59.8	56.7	M
	2 Ethane	0.880	0.880	0.000	82511805H	61.7	56.9	
	3 Ethylene	1.137	1.133	0.004	85172160H	58.3	54.0	M
	4 Propane	1.583	1.580	0.003	102069483H	62.4	56.7	
$	5 Propene	2.507	2.493	0.014	55745463H	20.2	19.1	
	8 Propane, 2-methyl	2.833	2.827	0.006	143205457H	62.3	58.1	
	6 Butane	2.967	2.960	0.007	131907172H	61.3	57.6	
	7 Acetylene	3.117	3.100	0.017	88610730H	52.1	47.1	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Review Flags

M - Manually Integrated

Report Date: 04-Aug-2023 03:40:28 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0007.d

Injection Date: 03-Aug-2023 11:35:00 Instrument ID: 19506

Lims ID: LCS 410-404151/2-A

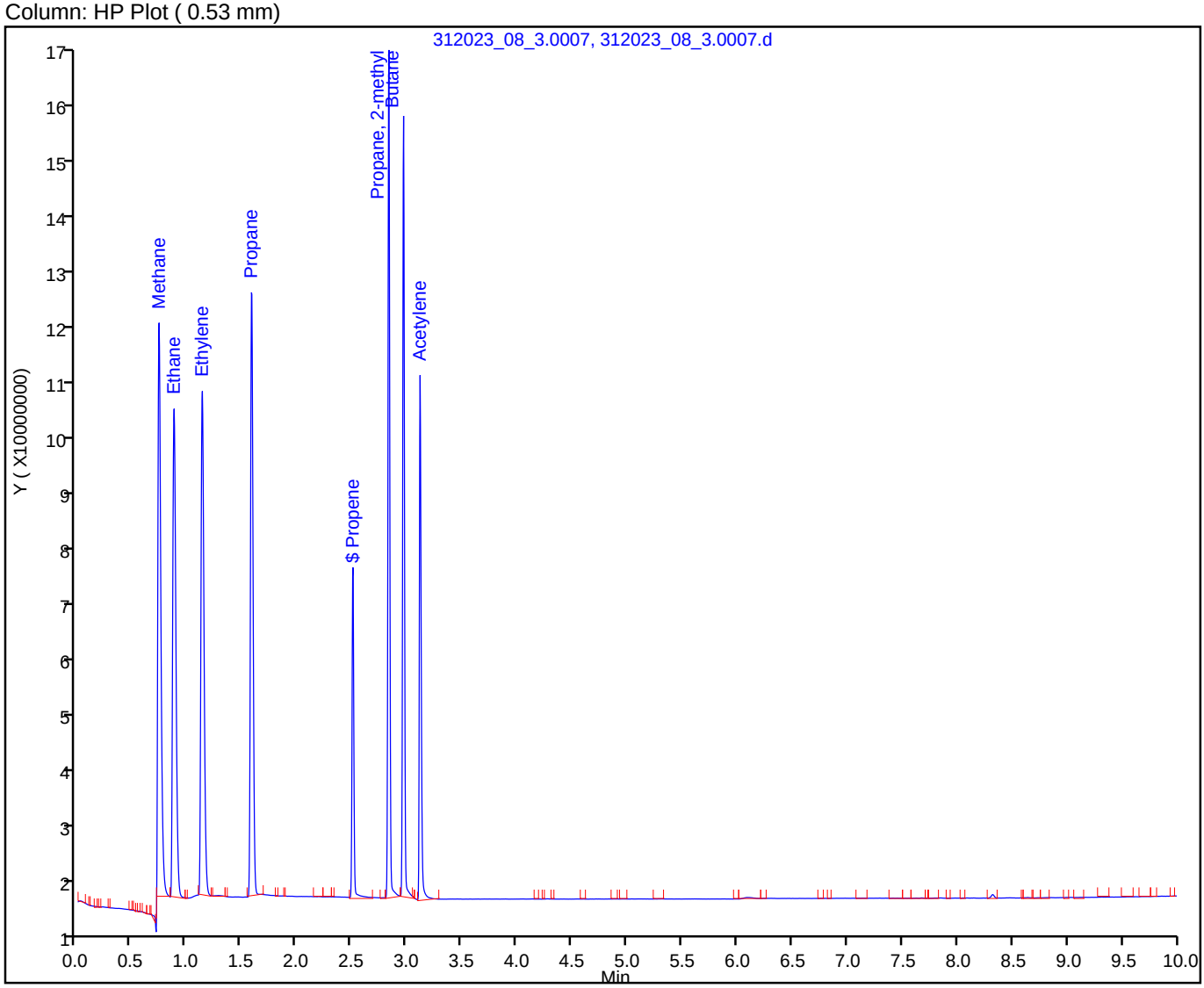
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 7

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Eurofins Lancaster Laboratories Environment Testing, LLC
Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0007.d				
Lims ID:	LCS 410-404151/2-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	03-Aug-2023 11:35:00	ALS Bottle#:	0	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:					
Misc. Info.:	410-0090521-007				
Operator ID:		Instrument ID:	19506		
Method:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\RSK_19506A.m				
Limit Group:	GCV - RSK175				
Last Update:	04-Aug-2023 03:40:26	Calib Date:	10-Jul-2023 11:48:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d				
Column 1 :	HP Plot (0.53 mm)		Det: AFID0		
Process Host:	CTX1668				
First Level Reviewer: LXF2		Date:	04-Aug-2023 03:39:41		

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Propene	20.2	19.1	94.67

Eurofins Lancaster Laboratories Environment Testing, LLC

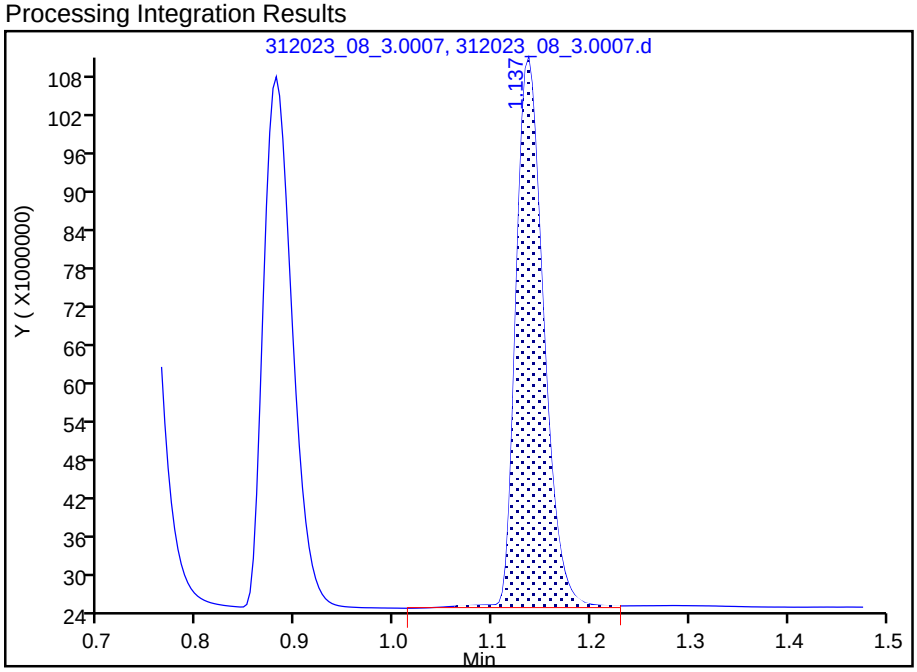
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0007.d				
Injection Date:	03-Aug-2023 11:35:00	Instrument ID:	19506		
Lims ID:	LCS 410-404151/2-A				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

3 Ethylene, CAS: 74-85-1

Signal: 1

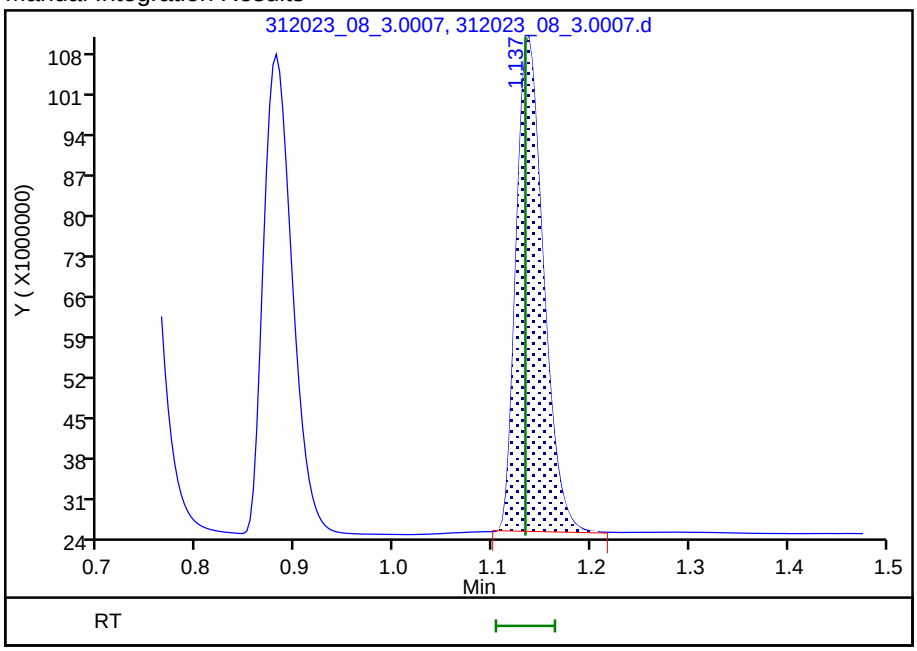
Processing Integration Results

RT: 1.14
Height: 85579262
Amount: 54.271903
Amount Units: ug/l



Manual Integration Results

RT: 1.14
Height: 85172160
Amount: 54.013730
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:39:30 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Instrument noise

Report Date: 04-Aug-2023 03:40:28 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

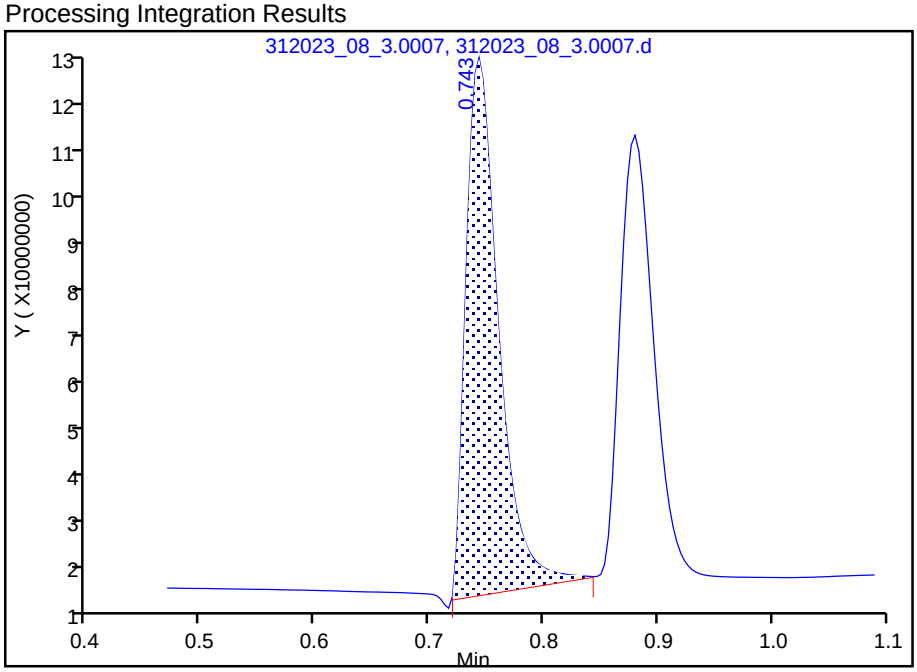
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0007.d				
Injection Date:	03-Aug-2023 11:35:00	Instrument ID:	19506		
Lims ID:	LCS 410-404151/2-A				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

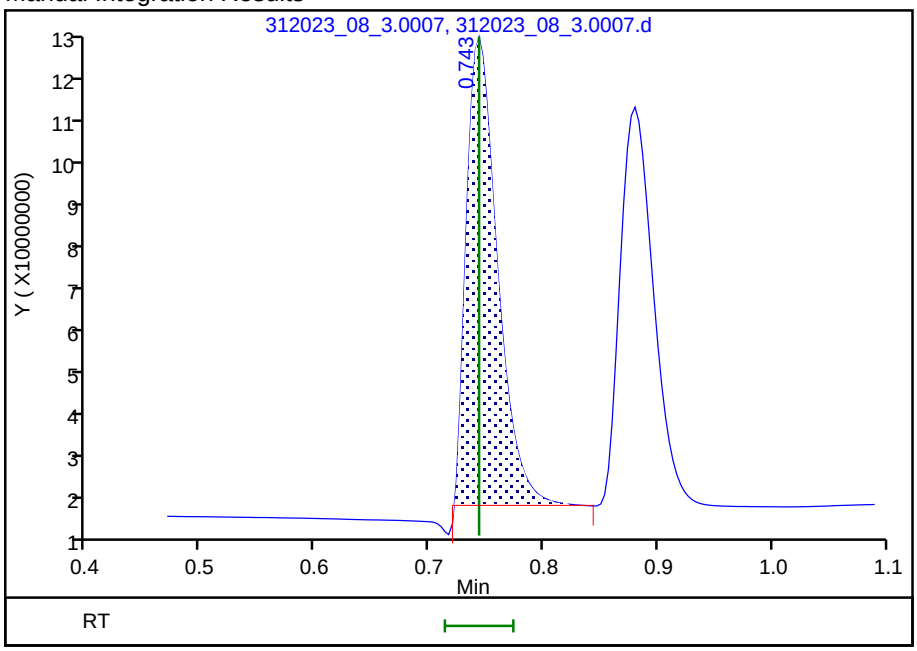
Processing Integration Results

RT: 0.74
Height: 100478688
Amount: 58.706169
Amount Units: ug/l



Manual Integration Results

RT: 0.74
Height: 97001650
Amount: 56.674658
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:39:39 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Instrument noise

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136645-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 410-404151/3-A

Matrix: Water Lab File ID: 312023_08_3.0008.d

Analysis Method: RSK-175 Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 08/03/2023 11:50

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: HP Plot ID: 0.53(mm)

Purge Volume: Heated Purge: (Y/N) N pH:

% Moisture: % Solids: Level: (low/med) Low

Analysis Batch No.: 403952 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-84-0	Ethane	56.4		5.0	1.0
74-85-1	Ethene	53.6		5.0	1.0
74-82-8	Methane	56.0		5.0	3.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
115-07-1	Propene	95		43-133

Report Date: 04-Aug-2023 03:40:27 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0008.d
Lims ID: LCSD 410-404151/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 03-Aug-2023 11:50:00 ALS Bottle#: 0 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 410-0090521-008
Operator ID: Instrument ID: 19506

Method: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\RSK_19506A.m
Limit Group: GCV - RSK175
Last Update: 04-Aug-2023 03:40:26 Calib Date: 10-Jul-2023 11:48:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Column 1 : HP Plot (0.53 mm) Det: AFID0
Process Host: CTX1668

First Level Reviewer: LXF2 Date: 04-Aug-2023 03:39:57

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1	Methane	0.743	0.743	0.000	95767515H	59.8	56.0	M
2	Ethane	0.880	0.880	0.000	81790804H	61.7	56.4	
3	Ethylene	1.137	1.133	0.004	84447413H	58.3	53.6	M
4	Propane	1.587	1.580	0.007	102527313H	62.4	56.9	
$ 5	Propene	2.507	2.493	0.014	55806621H	20.2	19.1	
8	Propane, 2-methyl	2.833	2.827	0.006	145983612H	62.3	59.2	
6	Butane	2.967	2.960	0.007	134948343H	61.3	58.9	
7	Acetylene	3.120	3.100	0.020	87643106H	52.1	46.6	

QC Flag Legend

Processing Flags
H - Response Measured by Height
Review Flags
M - Manually Integrated

Report Date: 04-Aug-2023 03:40:27 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0008.d

Injection Date: 03-Aug-2023 11:50:00 Instrument ID: 19506

Lims ID: LCSD 410-404151/3-A

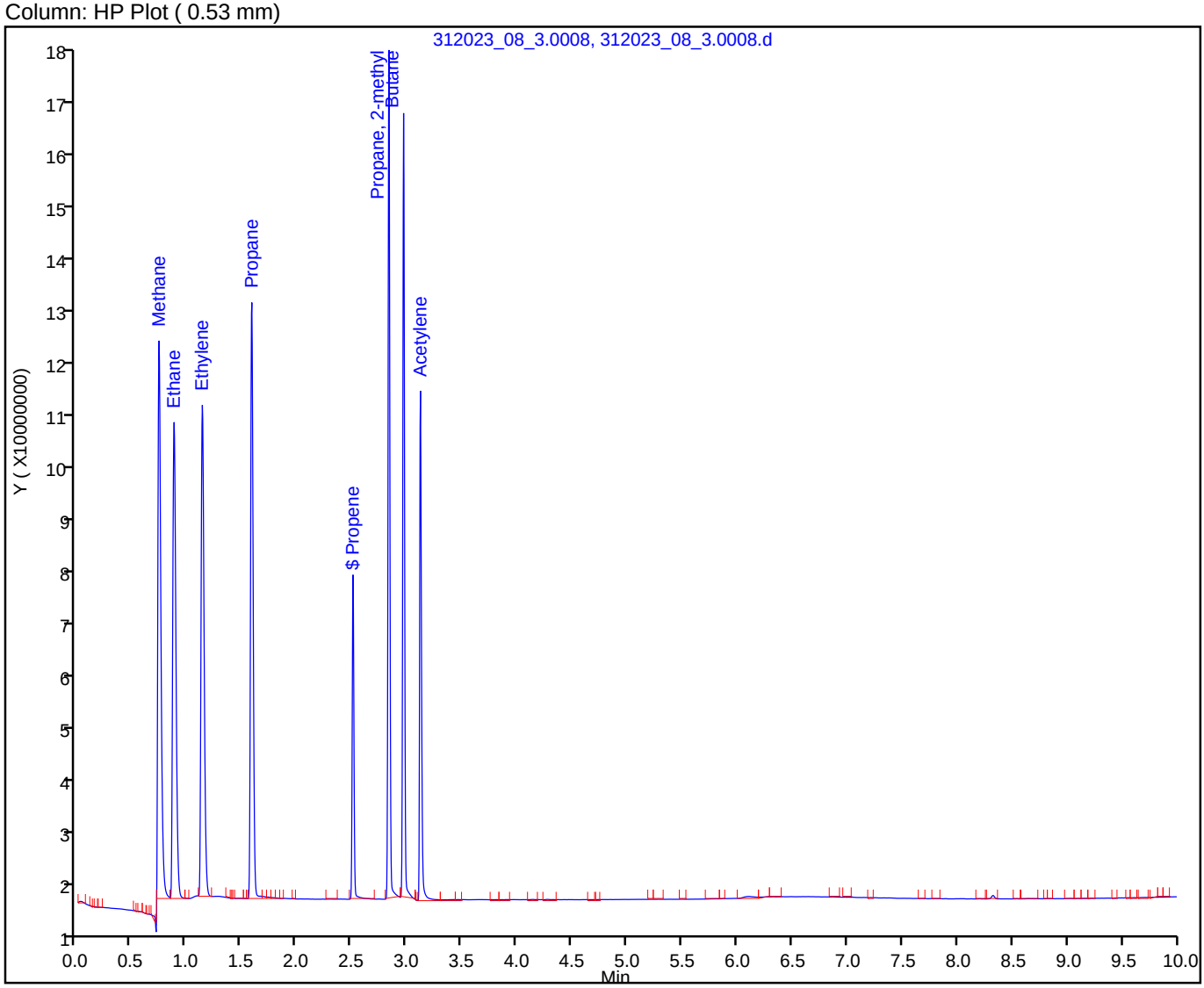
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 8

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Report Date: 04-Aug-2023 03:40:27 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0008.d				
Lims ID:	LCSD 410-404151/3-A				
Client ID:					
Sample Type:	LCSD				
Inject. Date:	03-Aug-2023 11:50:00	ALS Bottle#:	0	Worklist Smp#:	8
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:					
Misc. Info.:	410-0090521-008				
Operator ID:		Instrument ID:	19506		
Method:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\RSK_19506A.m				
Limit Group:	GCV - RSK175				
Last Update:	04-Aug-2023 03:40:26	Calib Date:	10-Jul-2023 11:48:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d				
Column 1 :	HP Plot (0.53 mm)		Det: AFID0		
Process Host:	CTX1668				
First Level Reviewer: LXF2		Date:	04-Aug-2023 03:39:57		

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Propene	20.2	19.1	94.78

Report Date: 04-Aug-2023 03:40:27 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

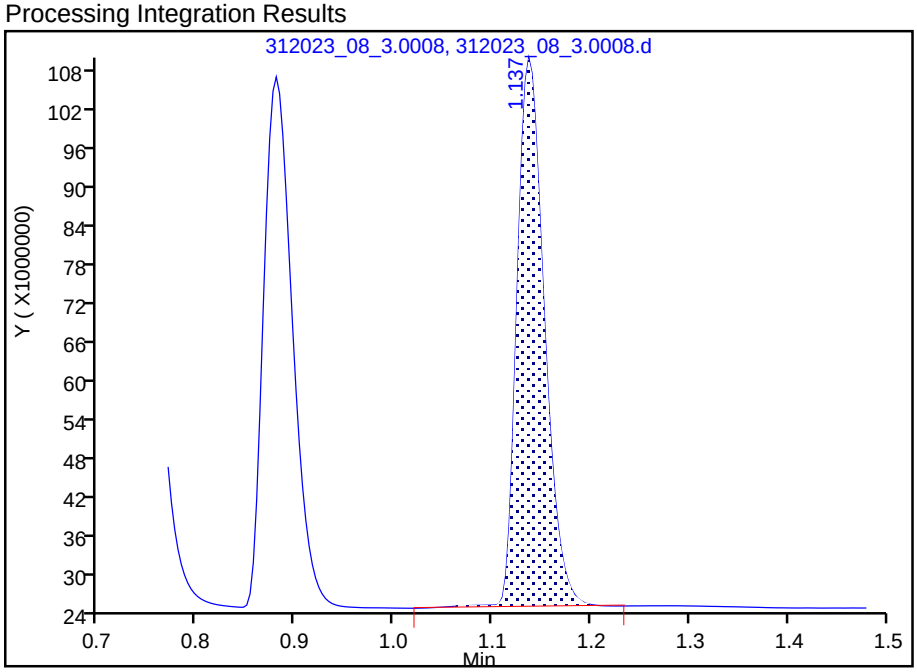
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0008.d				
Injection Date:	03-Aug-2023 11:50:00	Instrument ID:	19506		
Lims ID:	LCSD 410-404151/3-A				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	8
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

3 Ethylene, CAS: 74-85-1

Signal: 1

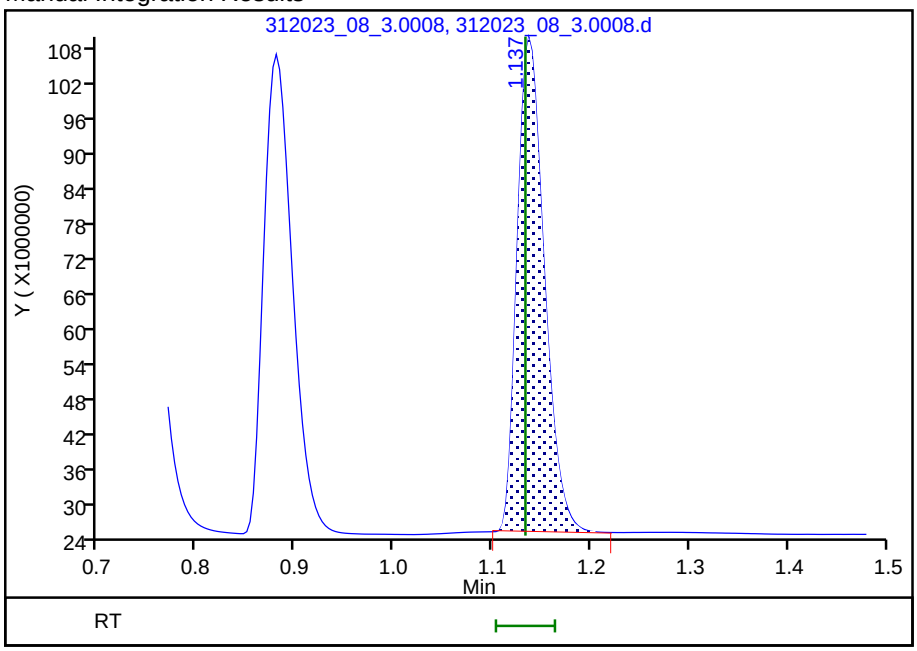
Processing Integration Results

RT: 1.14
Height: 84698507
Amount: 53.713353
Amount Units: ug/l



Manual Integration Results

RT: 1.14
Height: 84447413
Amount: 53.554117
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:39:49 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Instrument noise

Report Date: 04-Aug-2023 03:40:27 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

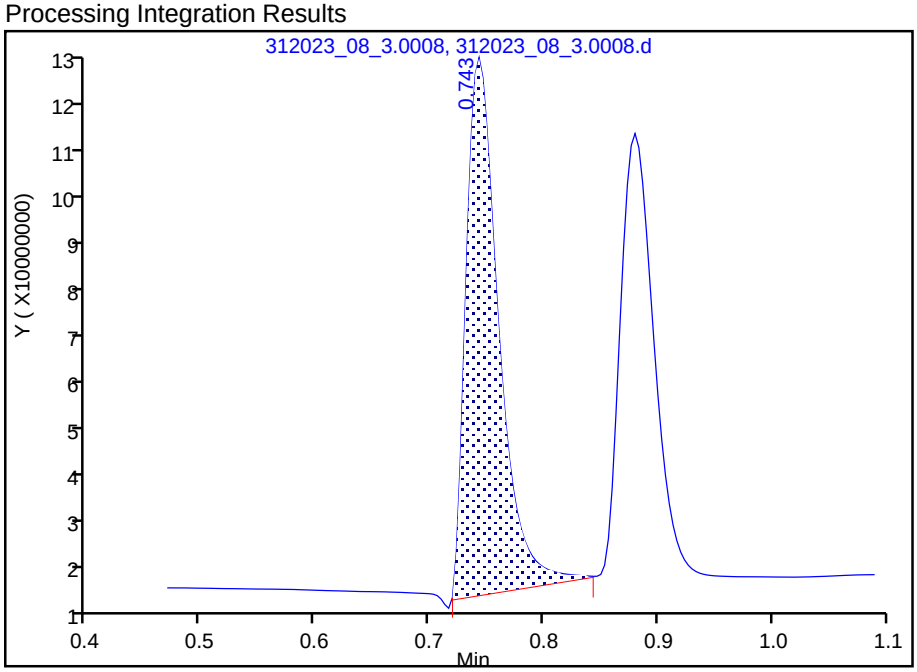
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0008.d				
Injection Date:	03-Aug-2023 11:50:00	Instrument ID:	19506		
Lims ID:	LCSD 410-404151/3-A				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	8
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

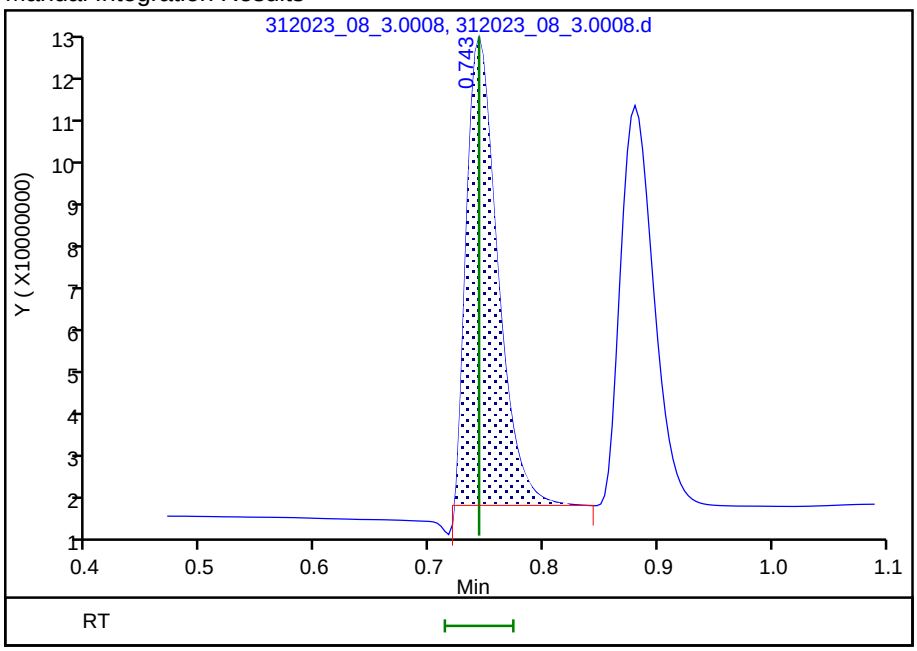
Processing Integration Results

RT: 0.74
Height: 99196203
Amount: 57.956858
Amount Units: ug/l



Manual Integration Results

RT: 0.74
Height: 95767515
Amount: 55.953596
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:39:56 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Instrument noise

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Instrument ID: 19506 Start Date: 07/10/2023 10:15

Analysis Batch Number: 395069 End Date: 07/10/2023 12:49

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
PIBLK 410-395069/2		07/10/2023 10:15	1		HP Plot 0.53(mm)
IC 410-395069/3		07/10/2023 10:31	1	312023_07_10.0003.d	HP Plot 0.53(mm)
IC 410-395069/4		07/10/2023 10:46	1	312023_07_10.0004.d	HP Plot 0.53(mm)
ICRT 410-395069/5		07/10/2023 11:02	1	312023_07_10.0005.d	HP Plot 0.53(mm)
IC 410-395069/6		07/10/2023 11:17	1	312023_07_10.0006.d	HP Plot 0.53(mm)
IC 410-395069/7		07/10/2023 11:32	1	312023_07_10.0007.d	HP Plot 0.53(mm)
IC 410-395069/8		07/10/2023 11:48	1	312023_07_10.0008.d	HP Plot 0.53(mm)
PIBLK 410-395069/9		07/10/2023 12:03	1		HP Plot 0.53(mm)
ICVL 410-395069/10		07/10/2023 12:19	1		HP Plot 0.53(mm)
ICVL 410-395069/11		07/10/2023 12:34	1		HP Plot 0.53(mm)
ICV 410-395069/12		07/10/2023 12:49	1	312023_07_10.0012.d	HP Plot 0.53(mm)

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Instrument ID: 19506 Start Date: 08/03/2023 10:07

Analysis Batch Number: 403952 End Date: 08/03/2023 22:39

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 410-403952/2		08/03/2023 10:07	1	312023_08_3.0002.d	HP Plot 0.53(mm)
ICVL 410-403952/3		08/03/2023 10:33	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 10:48	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 11:04	1		HP Plot 0.53(mm)
MB 410-404151/1-A		08/03/2023 11:19	1	312023_08_3.0006.d	HP Plot 0.53(mm)
LCS 410-404151/2-A		08/03/2023 11:35	1	312023_08_3.0007.d	HP Plot 0.53(mm)
LCSD 410-404151/3-A		08/03/2023 11:50	1	312023_08_3.0008.d	HP Plot 0.53(mm)
CCV 410-403952/9		08/03/2023 12:05	1	312023_08_3.0009.d	HP Plot 0.53(mm)
ZZZZZ		08/03/2023 12:59	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 13:14	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 13:30	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 13:45	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 14:01	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 14:16	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 14:32	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 14:47	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 15:03	1		HP Plot 0.53(mm)
CCV 410-403952/20		08/03/2023 15:34	1	312023_08_3.0020.d	HP Plot 0.53(mm)
ZZZZZ		08/03/2023 15:49	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 16:05	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 16:20	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 16:36	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 16:51	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 17:07	1		HP Plot 0.53(mm)
410-136645-1	E23-03407-001_MW-11D-072623	08/03/2023 17:23	1	312023_08_3.0027.d	HP Plot 0.53(mm)
410-136645-2	E23-03407-002_MW-10D-072623	08/03/2023 17:38	1	312023_08_3.0028.d	HP Plot 0.53(mm)
ZZZZZ		08/03/2023 17:54	1		HP Plot 0.53(mm)
CCV 410-403952/31		08/03/2023 18:25	1	312023_08_3.0031.d	HP Plot 0.53(mm)
ZZZZZ		08/03/2023 18:40	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 19:01	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 19:16	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 19:32	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 19:47	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 20:03	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 20:19	1		HP Plot 0.53(mm)
CCV 410-403952/40		08/03/2023 20:50	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 21:05	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 21:21	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 21:37	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 21:52	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 22:08	1		HP Plot 0.53(mm)

RSK-175

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Instrument ID: 19506 Start Date: 08/03/2023 10:07

Analysis Batch Number: 403952 End Date: 08/03/2023 22:39

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 410-403952/47		08/03/2023 22:39	1		HP Plot 0.53(mm)

INTEGRATED ANALYTICAL LABORATORIES, LLC

GC VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136645-1

SDG No.:

Batch Number: 395069 | Batch Start Date: 07/10/23 10:15 | Batch Analyst: Kennedy, Johanna C

Batch Method: RSK-175 | Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	EPH_HSSMS 00008	EPH_HSSMS 00011	EPH_HSSSS 00011	
IC 410-395069/3		RSK-175		5 mL	5 mL		5 uL	5 uL	
IC 410-395069/4		RSK-175		5 mL	5 mL		15 uL	15 uL	
ICRT 410-395069/5		RSK-175		5 mL	5 mL		60 uL	60 uL	
IC 410-395069/6		RSK-175		5 mL	5 mL		100 uL	100 uL	
IC 410-395069/7		RSK-175		5 mL	5 mL		150 uL	150 uL	
IC 410-395069/8		RSK-175		5 mL	5 mL		500 uL	500 uL	
ICV 410-395069/12		RSK-175		5 mL	5 mL	60 uL		60 uL	

Batch Notes	
Henry Law Calculation Spreadsheet	yes

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.

INTEGRATED ANALYTICAL LABORATORIES, LLC

GC VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136645-1

SDG No.:

Batch Number: 404151 | Batch Start Date: 08/03/23 10:40 | Batch Analyst: Omorogbe, Malachi

Batch Method: RSK-175 | Batch End Date: 08/03/23 15:12

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	Headspace	EPH_HSSMS 00011	EPH_HSSSS 00011
MB 410-404151/1		RSK-175, RSK-175			5 mL	5 mL			60 uL
LCS 410-404151/2		RSK-175, RSK-175			5 mL	5 mL		60 uL	60 uL
LCSD 410-404151/3		RSK-175, RSK-175			5 mL	5 mL		60 uL	60 uL
410-136645-A-1	E23-03407-001_MW-11D-072623	RSK-175, RSK-175	T	<2 SU	5 mL	5 mL	No		60 uL
410-136645-A-2	E23-03407-002_MW-10D-072623	RSK-175, RSK-175	T	<2 SU	5 mL	5 mL	No		60 uL

Batch Notes	
Pipette/Syringe/Dispenser ID	7105
pH Indicator ID	10BDH0431

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.

Method 8015D VFA

Volatile Fatty Acids-Direct Aqueous Injection(HPLC) by Method 8015D

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-136645-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Supelcosil P ID: 4.6 (mm)

Client Sample ID	Lab Sample ID	FumAcd1 #
E23-03407-001_MW-1 1D-072623	410-136645-1	101
E23-03407-001_MW-1 1D-072623	410-136645-1	106
E23-03407-002_MW-1 0D-072623	410-136645-2	101
E23-03407-002_MW-1 0D-072623	410-136645-2	107
	MB 410-404256/1-A	100
	MB 410-404256/1-A	102
	LCS 410-404256/2-A	97
	LCS 410-404256/2-A	103
	LCS 410-404256/4-A	100
	LCS 410-404256/4-A	107
	LCSD 410-404256/3-A	100
	LCSD 410-404256/3-A	106

	QC LIMITS
FumAcd = Fumaric Acid	68-139

Column to be used to flag recovery values

FORM II 8015D VFA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136645-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 11ORGC23193008.008.d

Lab ID: LCS 410-404256/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Isovaleric acid	100000	107000	107	70-115	
Succinic Acid	50000	49900	100	65-142	
Tartaric Acid	50000	51100	102	75-115	
Valeric acid	100000	110000	110	57-126	

Column to be used to flag recovery and RPD values

FORM III 8015D VFA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136645-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 48ORGA23186009.008.d

Lab ID: LCS 410-404256/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Isovaleric acid	100000	98300	98	70-115	
Succinic Acid	50000	48100	96	65-142	
Tartaric Acid	50000	51400	103	75-115	
Valeric acid	100000	101000	101	57-126	

Column to be used to flag recovery and RPD values

FORM III 8015D VFA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136645-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 11ORGC23193008.010.d

Lab ID: LCS 410-404256/4-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetic acid	101000	102000	101	77-123	
Formic-acid	101000	98600	98	73-129	
Propionic acid	101000	108000	107	42-145	

Column to be used to flag recovery and RPD values

FORM III 8015D VFA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136645-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 48ORGA23186009.010.d

Lab ID: LCS 410-404256/4-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetic acid	101000	104000	104	77-123	
Butyric acid	101000	103000	102	73-134	
Citric Acid	50000	50200	100	77-123	
Formic-acid	101000	105000	104	73-129	
L-Lactic Acid	50200	39700	79	71-115	
Oxalic Acid	12600	11300	90	59-138	
Pyruvic Acid	12400	13000	105	74-115	
Quinic Acid	50300	46800	93	85-115	

Column to be used to flag recovery and RPD values

FORM III 8015D VFA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136645-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 11ORGC23193008.009.d

Lab ID: LCSD 410-404256/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Isovaleric acid	100000	108000	107	1	30	70-115	
Succinic Acid	50000	50900	102	2	30	65-142	
Tartaric Acid	50000	51800	104	1	30	75-115	
Valeric acid	100000	112000	111	1	30	57-126	

Column to be used to flag recovery and RPD values

FORM III 8015D VFA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136645-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 48ORGA23186009.009.d

Lab ID: LCSD 410-404256/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Isovaleric acid	100000	99800	99	1	30	70-115	
Succinic Acid	50000	48500	97	1	30	65-142	
Tartaric Acid	50000	52000	104	1	30	75-115	
Valeric acid	100000	103000	102	1	30	57-126	

Column to be used to flag recovery and RPD values

FORM III 8015D VFA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136645-1

SDG No.:

Lab Sample ID: MB 410-404256/1-A

Matrix: Water Date Extracted: 08/03/2023 17:57

Lab File ID:(1) 11ORGC23193008.007.d Lab File ID:(2)

Date Analyzed:(1) 08/04/2023 16:55 Date Analyzed:(2)

Instrument ID:(1) 10136 Instrument ID:(2)

GC Column:(1) Supelcosil PA ID: 4.6(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 410-404256/2-A	08/04/2023 17:26	
	LCSD 410-404256/3-A	08/04/2023 17:57	
	LCS 410-404256/4-A	08/04/2023 18:28	
E23-03407-001_MW-11D-072623	410-136645-1	08/05/2023 01:13	
E23-03407-002_MW-10D-072623	410-136645-2	08/05/2023 01:44	

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136645-1

SDG No.:

Lab Sample ID: MB 410-404256/1-A

Matrix: Water Date Extracted: 08/03/2023 17:57

Lab File ID:(1) 48ORGA23186009.007.d Lab File ID:(2)

Date Analyzed:(1) 08/04/2023 18:09 Date Analyzed:(2)

Instrument ID:(1) 6854A Instrument ID:(2)

GC Column:(1) Supelcogel ID: 4.6(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 410-404256/2-A	08/04/2023 18:52	
	LCSD 410-404256/3-A	08/04/2023 19:35	
	LCS 410-404256/4-A	08/04/2023 20:18	
E23-03407-001_MW-11D-072623	410-136645-1	08/05/2023 09:11	
E23-03407-002_MW-10D-072623	410-136645-2	08/05/2023 12:46	

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136645-1

SDG No.:

Client Sample ID: E23-03407-001_MW-11D-072623
Lab Sample ID: 410-136645-1

Matrix: Water
Lab File ID: 11ORGC23193008.023.d

Analysis Method: 8015D VFA
Date Collected: 07/26/2023 12:53

Extraction Method: 8015 VFA
Date Extracted: 08/03/2023 17:58

Sample wt/vol: 1(mL)
Date Analyzed: 08/05/2023 01:13

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 50(uL)
GC Column: Supelcosil PAH ID: 4.6(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 404643
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
64-19-7	Acetic acid	ND		10000	3200
64-18-6	Formic-acid	ND		10000	2000
79-09-4	Propionic acid	ND		10000	2000

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-17-8	Fumaric Acid	101		68-139

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.023.d				
Lims ID:	410-136645-C-1-A				
Client ID:	E23-03407-001_MW-11D-072623				
Sample Type:	Client				
Inject. Date:	05-Aug-2023 01:13:00	ALS Bottle#:	0	Worklist Smp#:	23
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	410-136645-C-1-A				
Operator ID:	24470	Instrument ID:	10136		
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:08:24	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
	1 Oxalic Acid	3.767	3.725	0.042	10862518H	7.50	
$	10 Fumaric Acid	10.642	10.600	0.042	6259177H	0.4958	
	11 Propionic acid	12.967	12.913	0.055	185727H	1.63	
	12 n-Butyric Acid	14.658	14.579	0.079	1069553H	8.25	
	14 Isovaleric acid	15.788	15.813	-0.024	3028397H	13.6	
	15 Valeric acid	16.054	15.983	0.071	37486H	0.3668	

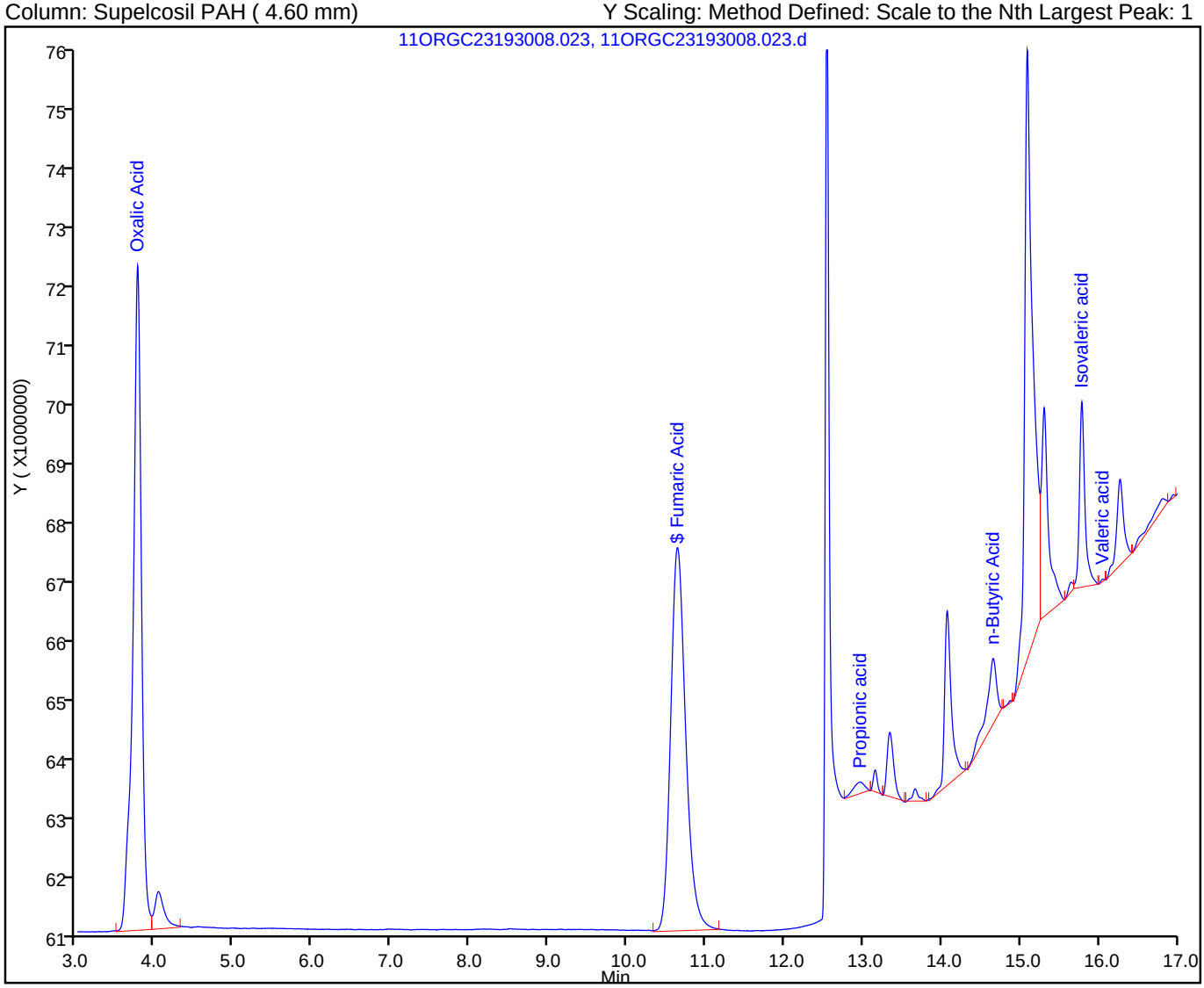
INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 07-Aug-2023 20:08:26 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.023.d				
Injection Date:	05-Aug-2023 01:13:00	Instrument ID:	10136		
Lims ID:	410-136645-C-1-A	Lab Sample ID:	410-136645-1		
Client ID:	E23-03407-001_MW-11D-072623				
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	23
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Lancaster Laboratories Environment Testing, LLC
Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.023.d				
Lims ID:	410-136645-C-1-A				
Client ID:	E23-03407-001_MW-11D-072623				
Sample Type:	Client				
Inject. Date:	05-Aug-2023 01:13:00	ALS Bottle#:	0	Worklist Smp#:	23
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	410-136645-C-1-A				
Operator ID:	24470	Instrument ID:	10136		
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:08:24	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 Fumaric Acid	0.4920	0.4958	100.77

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136645-1

SDG No.:

Client Sample ID: E23-03407-001_MW-11D-072623
Lab Sample ID: 410-136645-1

Matrix: Water
Lab File ID: 48ORGA23186009.028.d

Analysis Method: 8015D VFA
Date Collected: 07/26/2023 12:53

Extraction Method: 8015 VFA
Date Extracted: 08/03/2023 17:58

Sample wt/vol: 1(mL)
Date Analyzed: 08/05/2023 09:11

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 40(uL)
GC Column: Supelcogel ID: 4.6(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 404646
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
107-92-6	Butyric acid	6700	J	10000	2000
77-92-9	Citric Acid	ND		5000	1000
503-74-2	Isovaleric acid	ND		7100	3500
79-33-4	L-Lactic Acid	ND		5000	1000
144-62-7	Oxalic Acid	ND		1300	250
127-17-3	Pyruvic Acid	ND		1300	250
77-95-2	Quinic Acid	ND		5000	2400
110-15-6	Succinic Acid	ND		2500	1000
87-69-4	Tartaric Acid	ND		2500	1000
109-52-4	Valeric acid	ND		5000	2000

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-17-8	Fumaric Acid	106		68-139

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.028.d				
Lims ID:	410-136645-C-1-A				
Client ID:	E23-03407-001_MW-11D-072623				
Sample Type:	Client				
Inject. Date:	05-Aug-2023 09:11:00	ALS Bottle#:	0	Worklist Smp#:	28
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	410-136645-C-1-A				
Operator ID:	2027	Instrument ID:	6854A		
Method:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:06:37	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1674				

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
	8 Formic-acid					
	20.449	20.433	0.016	13803H	7.67	
	9 Acetic acid					
	21.384	21.372	0.012	34427H	5.18	
$	10 Fumaric Acid					
	22.420	22.436	-0.016	20627926H	0.5231	
	13 n-Butyric Acid					
	26.417	26.453	-0.036	4773H	6.66	

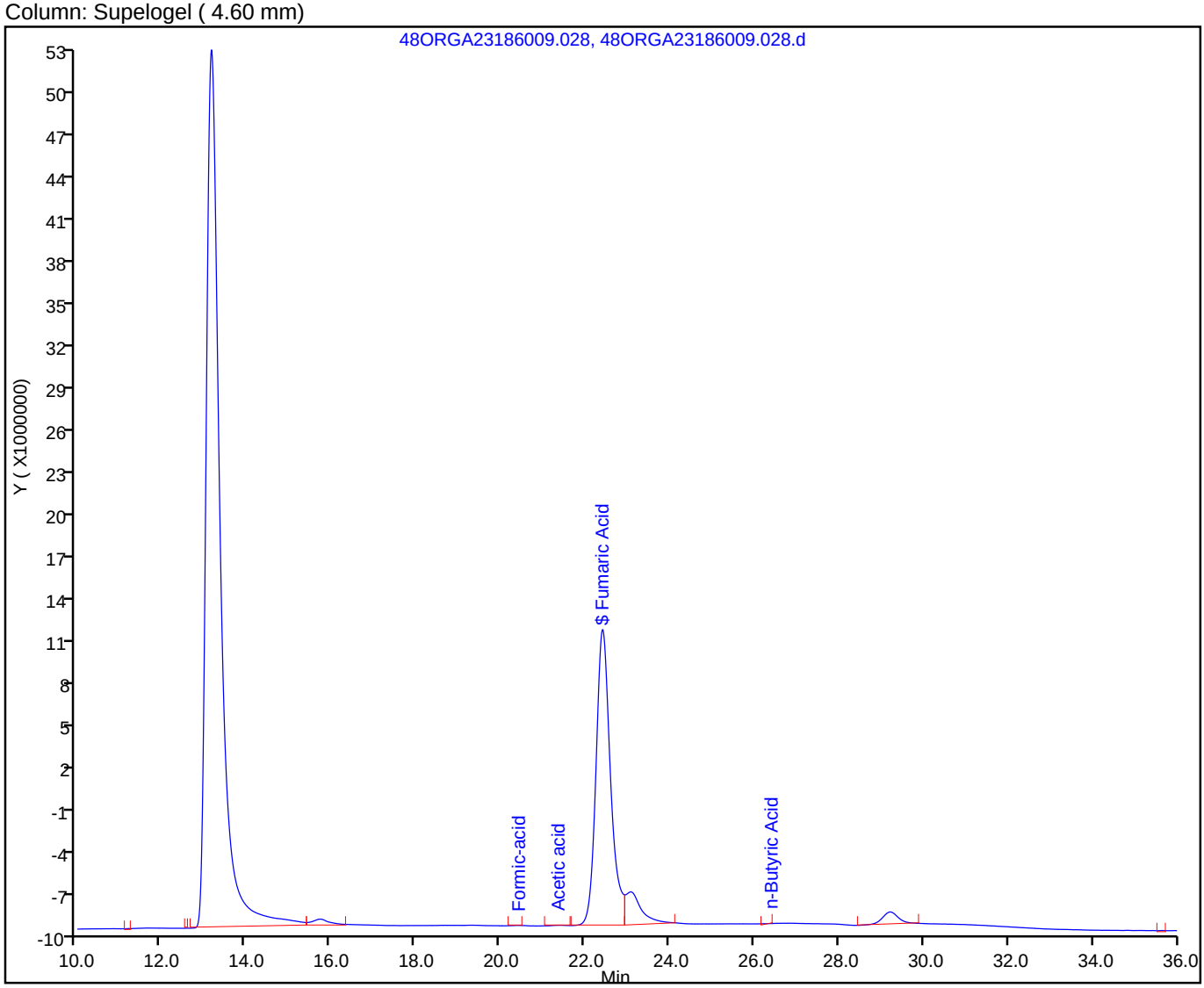
INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 07-Aug-2023 20:06:42 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.028.d				
Injection Date:	05-Aug-2023 09:11:00	Instrument ID:	6854A		
Lims ID:	410-136645-C-1-A	Lab Sample ID:	410-136645-1		
Client ID:	E23-03407-001_MW-11D-072623				
Operator ID:	2027	ALS Bottle#:	0	Worklist Smp#:	28
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Report Date: 07-Aug-2023 20:06:42 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.028.d				
Lims ID:	410-136645-C-1-A				
Client ID:	E23-03407-001_MW-11D-072623				
Sample Type:	Client				
Inject. Date:	05-Aug-2023 09:11:00	ALS Bottle#:	0	Worklist Smp#:	28
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	410-136645-C-1-A				
Operator ID:	2027	Instrument ID:	6854A		
Method:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:06:37	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1674				

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 Fumaric Acid	0.4920	0.5231	106.31

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136645-1

SDG No.:

Client Sample ID: E23-03407-002_MW-10D-072623
Lab Sample ID: 410-136645-2

Matrix: Water
Lab File ID: 11ORGC23193008.024.d

Analysis Method: 8015D VFA
Date Collected: 07/26/2023 14:15

Extraction Method: 8015 VFA
Date Extracted: 08/03/2023 17:58

Sample wt/vol: 1(mL)
Date Analyzed: 08/05/2023 01:44

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 50(uL)
GC Column: Supelcosil PAH ID: 4.6(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 404643
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
64-18-6	Formic-acid	ND		10000	2000
79-09-4	Propionic acid	ND		10000	2000

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-17-8	Fumaric Acid	101		68-139

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.024.d				
Lims ID:	410-136645-D-2-A				
Client ID:	E23-03407-002_MW-10D-072623				
Sample Type:	Client				
Inject. Date:	05-Aug-2023 01:44:00	ALS Bottle#:	0	Worklist Smp#:	24
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	410-136645-D-2-A				
Operator ID:	24470	Instrument ID:	10136		
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:08:24	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
	1 Oxalic Acid	3.729	3.725	0.004	77080857H	54.8	
$	10 Fumaric Acid	10.633	10.600	0.033	6263374H	0.4962	
	11 Propionic acid	12.971	12.913	0.059	186628H	1.63	
	12 n-Butyric Acid	14.663	14.579	0.083	1074287H	8.29	
	14 Isovaleric acid	15.792	15.813	-0.020	3133594H	14.4	
	15 Valeric acid	16.058	15.983	0.075	35085H	0.3433	

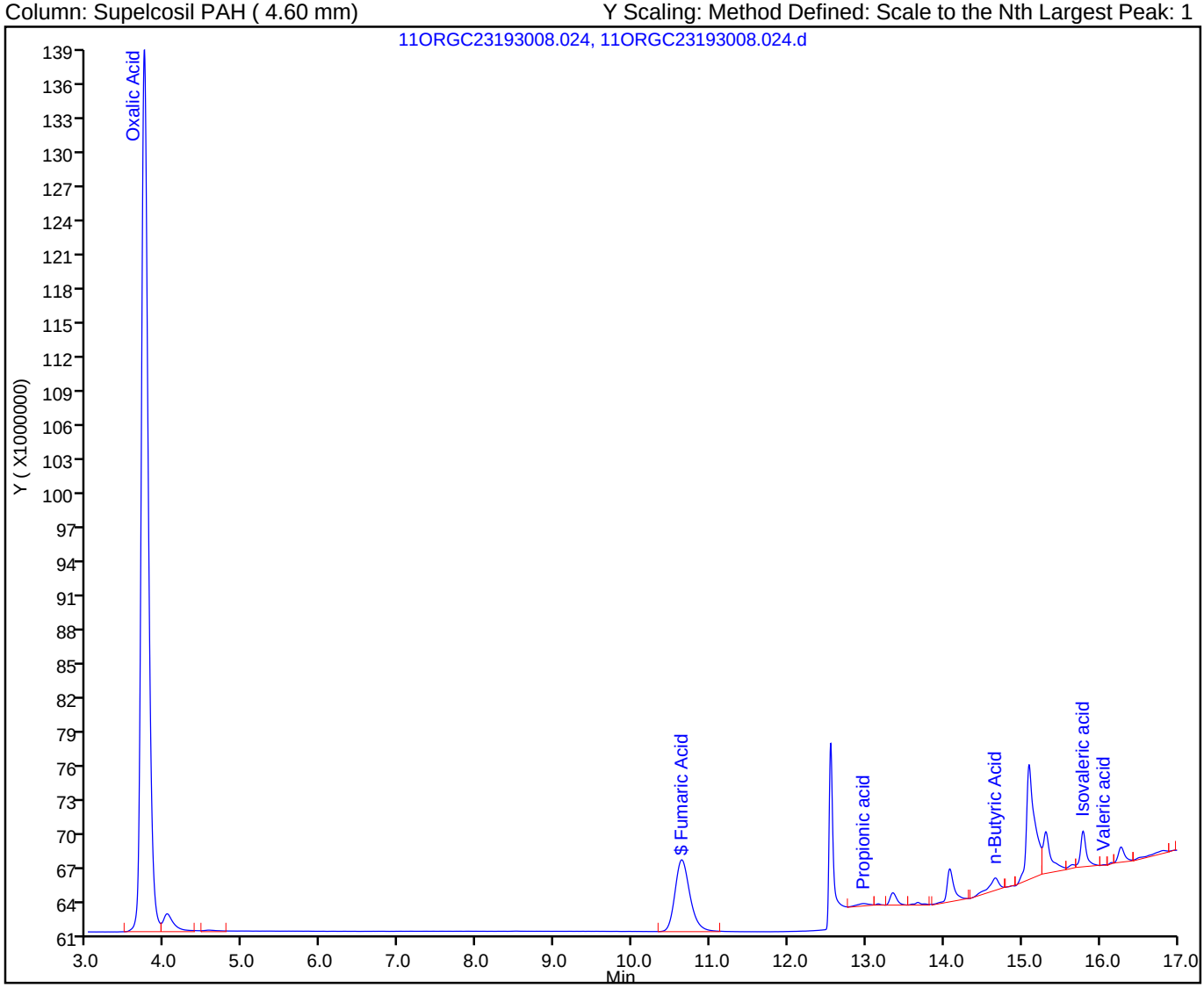
INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 07-Aug-2023 20:08:26 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.024.d				
Injection Date:	05-Aug-2023 01:44:00	Instrument ID:	10136		
Lims ID:	410-136645-D-2-A	Lab Sample ID:	410-136645-2		
Client ID:	E23-03407-002_MW-10D-072623				
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	24
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Lancaster Laboratories Environment Testing, LLC
Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.024.d				
Lims ID:	410-136645-D-2-A				
Client ID:	E23-03407-002_MW-10D-072623				
Sample Type:	Client				
Inject. Date:	05-Aug-2023 01:44:00	ALS Bottle#:	0	Worklist Smp#:	24
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	410-136645-D-2-A				
Operator ID:	24470	Instrument ID:	10136		
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:08:24	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 Fumaric Acid	0.4920	0.4962	100.84

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136645-1

SDG No.:

Client Sample ID: E23-03407-002_MW-10D-072623
Lab Sample ID: 410-136645-2

Matrix: Water
Lab File ID: 48ORGA23186009.033.d

Analysis Method: 8015D VFA
Date Collected: 07/26/2023 14:15

Extraction Method: 8015 VFA
Date Extracted: 08/03/2023 17:58

Sample wt/vol: 1(mL)
Date Analyzed: 08/05/2023 12:46

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 40(uL)
GC Column: Supelcogel ID: 4.6(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 404646
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
64-19-7	Acetic acid	ND		10000	3200
107-92-6	Butyric acid	ND		10000	2000
77-92-9	Citric Acid	ND		5000	1000
503-74-2	Isovaleric acid	ND		7100	3500
79-33-4	L-Lactic Acid	ND		5000	1000
144-62-7	Oxalic Acid	ND		1300	250
127-17-3	Pyruvic Acid	ND		1300	250
77-95-2	Quinic Acid	ND		5000	2400
110-15-6	Succinic Acid	ND		2500	1000
87-69-4	Tartaric Acid	ND		2500	1000
109-52-4	Valeric acid	ND		5000	2000

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-17-8	Fumaric Acid	107		68-139

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.033.d				
Lims ID:	410-136645-D-2-A				
Client ID:	E23-03407-002_MW-10D-072623				
Sample Type:	Client				
Inject. Date:	05-Aug-2023 12:46:00	ALS Bottle#:	0	Worklist Smp#:	33
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	410-136645-D-2-A				
Operator ID:	2027	Instrument ID:	6854A		
Method:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:06:33	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1674				

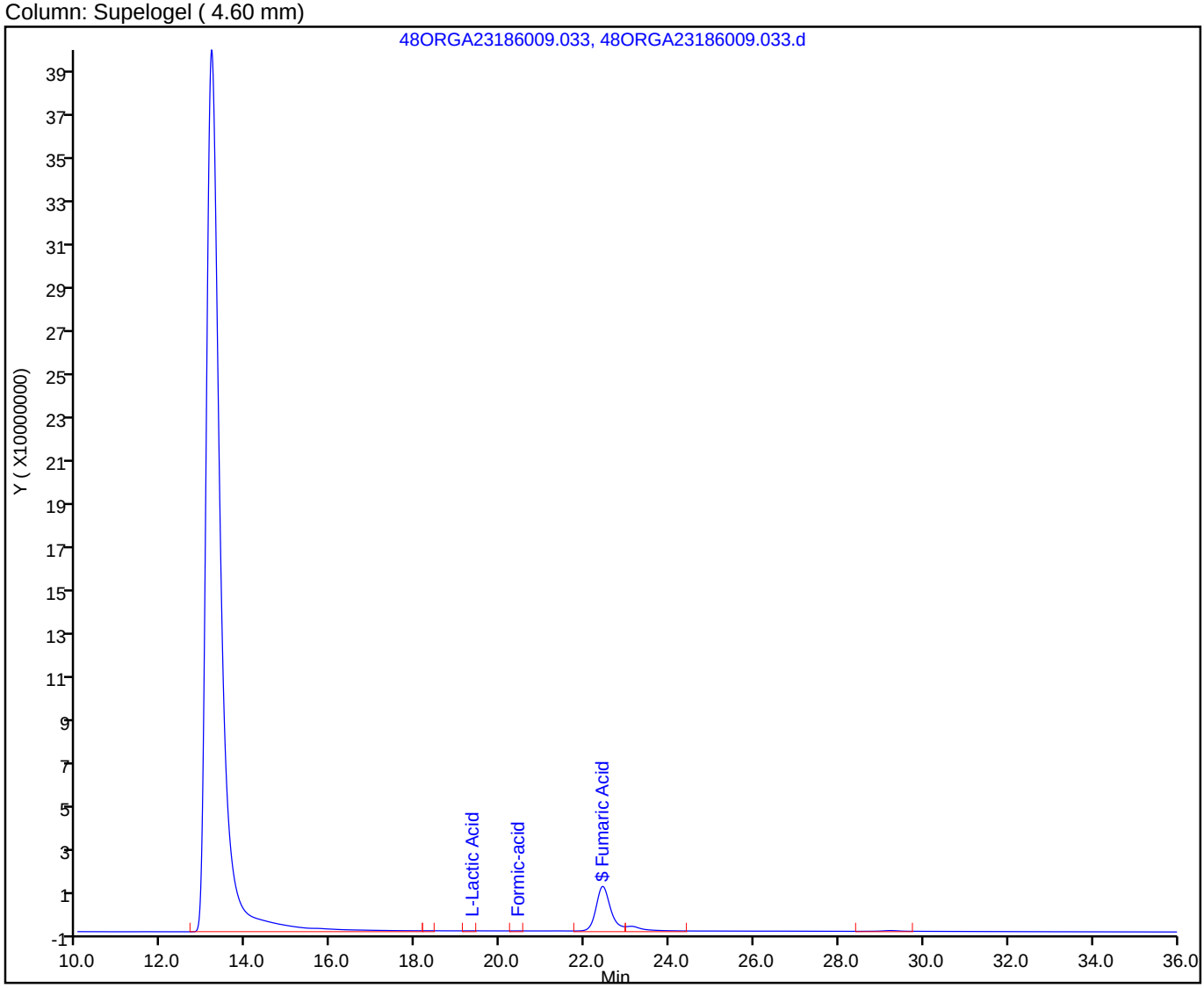
	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
	7 L-Lactic Acid					
	19.346	19.390	-0.044	10928H	0.0385	
	8 Formic-acid					
	20.425	20.433	-0.008	14182H	7.67	
$	10 Fumaric Acid					
	22.420	22.436	-0.016	20703941H	0.5250	

Report Date: 07-Aug-2023 20:06:34 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.033.d				
Injection Date:	05-Aug-2023 12:46:00	Instrument ID:	6854A		
Lims ID:	410-136645-D-2-A	Lab Sample ID:	410-136645-2		
Client ID:	E23-03407-002_MW-10D-072623				
Operator ID:	2027	ALS Bottle#:	0	Worklist Smp#:	33
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Report Date: 07-Aug-2023 20:06:34 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.033.d				
Lims ID:	410-136645-D-2-A				
Client ID:	E23-03407-002_MW-10D-072623				
Sample Type:	Client				
Inject. Date:	05-Aug-2023 12:46:00	ALS Bottle#:	0	Worklist Smp#:	33
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	410-136645-D-2-A				
Operator ID:	2027	Instrument ID:	6854A		
Method:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:06:33	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1674				

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 Fumaric Acid	0.4920	0.5250	106.71

INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136645-1 Analy Batch No.: 396213

SDG No.:

Instrument ID: 10136 GC Column: Supelcosil P ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/12/2023 19:50 Calibration End Date: 07/12/2023 22:57 Calibration ID: 51995

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-396213/6	11ORGC23193001.006.d
Level 2	IC 410-396213/7	11ORGC23193001.007.d
Level 3	IC 410-396213/8	11ORGC23193001.008.d
Level 4	IC 410-396213/9	11ORGC23193001.009.d
Level 5	IC 410-396213/10	11ORGC23193001.010.d
Level 6	IC 410-396213/11	11ORGC23193001.011.d
Level 7	IC 410-396213/12	11ORGC23193001.012.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7				RT WINDOW	AVG RT
Oxalic Acid	3.704	+++++	3.704	3.696	3.688	3.679	3.679				3.604 - 3.804	3.692
Quinic Acid	4.388	+++++	4.383	4.379	4.375	4.375	4.383				4.288 - 4.488	4.381
Formic-acid	4.671	+++++	4.667	4.663	4.650	4.650	4.654				4.571 - 4.771	4.659
Pyruvic Acid	5.279	+++++	5.271	5.263	5.250	5.246	5.254				5.179 - 5.379	5.261
L-Lactic Acid	6.371	+++++	6.354	6.346	6.317	6.308	6.317				6.271 - 6.471	6.336
Acetic acid	6.971	+++++	6.963	6.946	6.896	6.879	6.879				6.821 - 7.121	6.922
Citric Acid	9.458	+++++	9.433	9.413	9.308	9.288	9.300				9.308 - 9.608	9.367
Propionic acid	12.896	+++++	12.892	12.883	12.850	12.842	12.850				12.796 - 12.996	12.869
Butyric acid	14.583	+++++	14.571	14.563	14.550	14.546	14.550				14.483 - 14.683	14.561

INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136645-1 Analy Batch No.: 396213

SDG No.:

Instrument ID: 10136 GC Column: Supelcosil P ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/12/2023 19:50 Calibration End Date: 07/12/2023 22:57 Calibration ID: 51995

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-396213/6	11ORGC23193001.006.d
Level 2	IC 410-396213/7	11ORGC23193001.007.d
Level 3	IC 410-396213/8	11ORGC23193001.008.d
Level 4	IC 410-396213/9	11ORGC23193001.009.d
Level 5	IC 410-396213/10	11ORGC23193001.010.d
Level 6	IC 410-396213/11	11ORGC23193001.011.d
Level 7	IC 410-396213/12	11ORGC23193001.012.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								
Oxalic Acid	2483175 1462789	+++++ 1565690	1568414 1613382	1225901	Qua	1712297.05	1194508.37	3303.25990			10.9		30.0	0.9990		0.9900
Quinic Acid	141357 134267	+++++ 133942	133791 131158	128652	Ave		133861.147				3.2		20.0			
Formic-acid	191328 190000	+++++ 189023	191274 187904	185179	Ave		189117.989				1.2		20.0			
Pyruvic Acid	548715 623138	+++++ 622155	597729 616461	582234	Ave		598405.390				4.9		20.0			
L-Lactic Acid	65693 91487	+++++ 92528	83487 93061	79765	Ave		84336.734 9				12.6		20.0			
Acetic acid	54702 51529	+++++ 49785	55209 48018	52574	Ave		51969.438 1				5.4		20.0			
Citric Acid	125255 113011	+++++ 108062	124492 103160	120516	Ave		115749.331				7.9		20.0			
Propionic acid	119666 110921	+++++ 110606	120049 109124	115324	Ave		114281.904				4.2		20.0			
Butyric acid	180912 117217	+++++ 114705	129493 112630	122883	Ave		129639.839				19.9		20.0			

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.

INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136645-1 Analy Batch No.: 396213

SDG No.:

Instrument ID: 10136 GC Column: Supelcosil P ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/12/2023 19:50 Calibration End Date: 07/12/2023 22:57 Calibration ID: 51995

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-396213/6	11ORGC23193001.006.d
Level 2	IC 410-396213/7	11ORGC23193001.007.d
Level 3	IC 410-396213/8	11ORGC23193001.008.d
Level 4	IC 410-396213/9	11ORGC23193001.009.d
Level 5	IC 410-396213/10	11ORGC23193001.010.d
Level 6	IC 410-396213/11	11ORGC23193001.011.d
Level 7	IC 410-396213/12	11ORGC23193001.012.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
Oxalic Acid	Qua	3116385 157821566	+++++ 202479476	19683593	30892698	110586839	1.26 101	+++++ 126	12.6	25.2	75.6
Quinic Acid	Ave	713570 53684003	+++++ 66208656	6753753	12890908	40360705	5.05 401	+++++ 505	50.5	100	301
Formic-acid	Ave	1922850 152730712	+++++ 188843418	19222999	37406090	115140140	10.1 808	+++++ 1005	101	202	606
Pyruvic Acid	Ave	690284 62713236	+++++ 77550759	7519427	14672302	47109246	1.26 101	+++++ 126	12.6	25.2	75.6
L-Lactic Acid	Ave	329188 37159296	+++++ 46632977	4183521	8008372	27555757	5.01 402	+++++ 501	50.1	100	301
Acetic acid	Ave	548276 39907449	+++++ 48128051	5533638	10535924	30979007	10.0 802	+++++ 1002	100	200	601
Citric Acid	Ave	630031 43570613	+++++ 51889504	6261971	12147990	34174524	5.03 403	+++++ 503	50.3	101	302
Propionic acid	Ave	1196664 89369890	+++++ 109123707	12004938	23295480	67218416	10.0 808	+++++ 1000	100	202	606
Butyric acid	Ave	1811837 92497779	+++++ 112798500	12968681	24773217	70892823	10.0 806	+++++ 1002	100	202	605

Curve Type Legend

Ave = Average by Height
Qua = Quadratic by Height

Report Date: 17-Jul-2023 16:02:42 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.006.d				
Lims ID:	IC ORGA1				
Client ID:					
Sample Type:	IC	Calib Level:	1		
Inject. Date:	12-Jul-2023 19:50:00	ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGA1				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub4				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:02:42	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				
First Level Reviewer: UHEW		Date:	13-Jul-2023 00:05:46		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid	3.704	3.704	0.000	3116385H	1.26	1.17	
2 Quinic Acid	4.388	4.388	0.000	713570H	5.05	5.33	
4 Formic-acid	4.671	4.671	0.000	1922850H	10.1	10.2	
5 Pyruvic Acid	5.279	5.279	0.000	690284H	1.26	1.15	
6 L-Lactic Acid	6.371	6.371	0.000	329188H	5.01	3.90	
7 Acetic acid	6.971	6.971	0.000	548276H	10.0	10.5	
8 Citric Acid	9.458	9.458	0.000	630031H	5.03	5.44	
11 Propionic acid	12.896	12.896	0.000	1196664H	10.0	10.5	
12 n-Butyric Acid	14.583	14.583	0.000	1811837H	10.0	14.0	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGA1_00012 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 16:02:42 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.006.d

Injection Date: 12-Jul-2023 19:50:00 Instrument ID: 10136

Lims ID: IC ORGA1

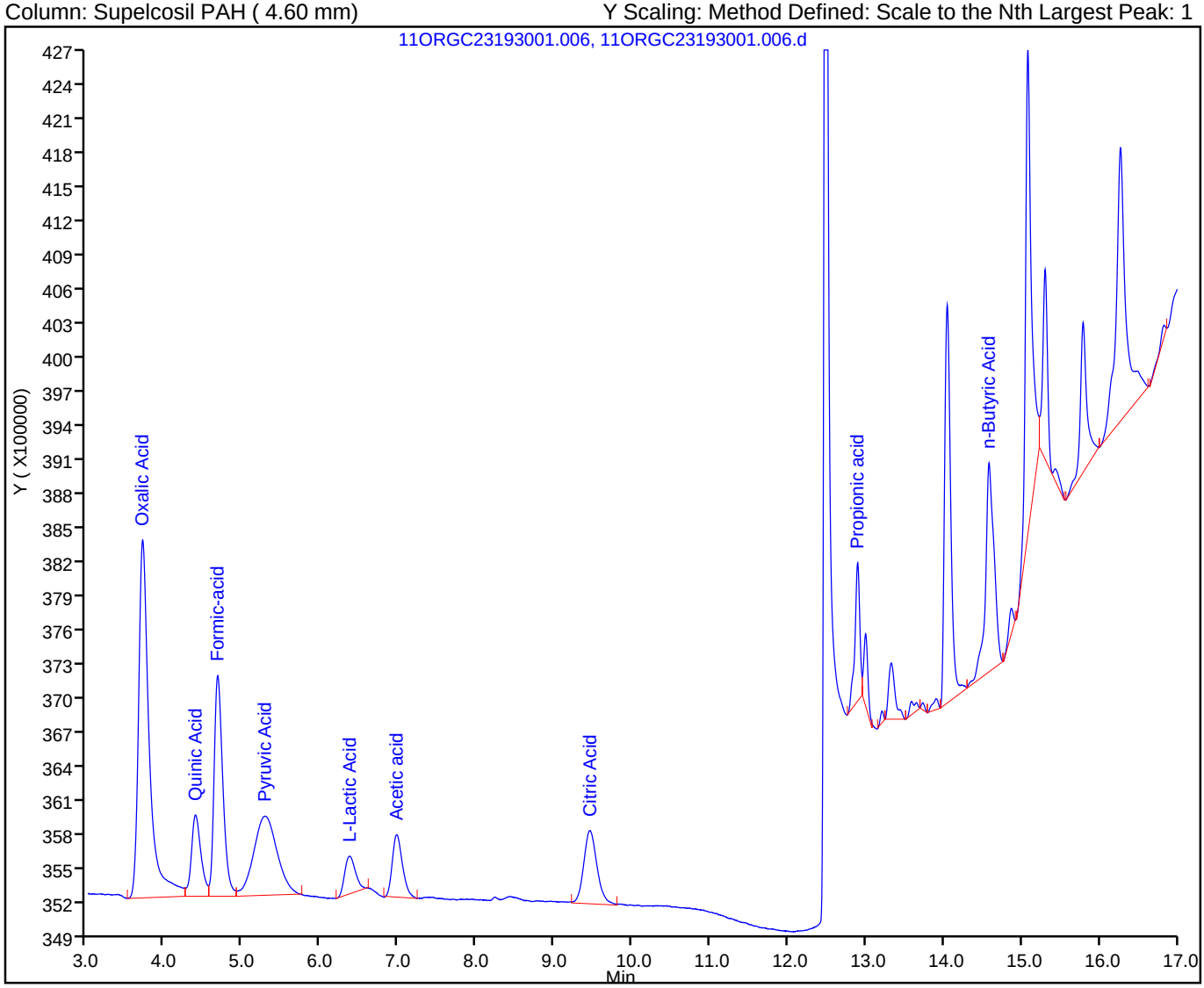
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 6

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:02:43 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.007.d				
Lims ID:	IC ORGA2				
Client ID:					
Sample Type:	IC	Calib Level:	2		
Inject. Date:	12-Jul-2023 20:21:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGA2				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub4				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:02:43	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid	3.713	3.704	0.008	2371794H	2.52	0.5513	
2 Quinic Acid	4.383	4.388	-0.005	1408177H	10.0	10.5	
4 Formic-acid	4.667	4.671	-0.004	602397H	20.2	3.19	
5 Pyruvic Acid	5.275	5.279	-0.004	1507336H	2.52	2.52	
6 L-Lactic Acid	6.358	6.371	-0.013	674369H	10.0	8.00	
7 Acetic acid	6.963	6.971	-0.009	93076H	20.0	1.79	
8 Citric Acid	9.446	9.458	-0.012	1227487H	10.1	10.6	
11 Propionic acid	12.892	12.896	-0.004	964211H	20.2	8.44	
12 n-Butyric Acid	14.625	14.583	0.042	1165211H	20.2	8.99	

Reagents:

GCS_ORGA2_00010 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 16:02:43 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.007.d

Injection Date: 12-Jul-2023 20:21:00 Instrument ID: 10136

Lims ID: IC ORGA2

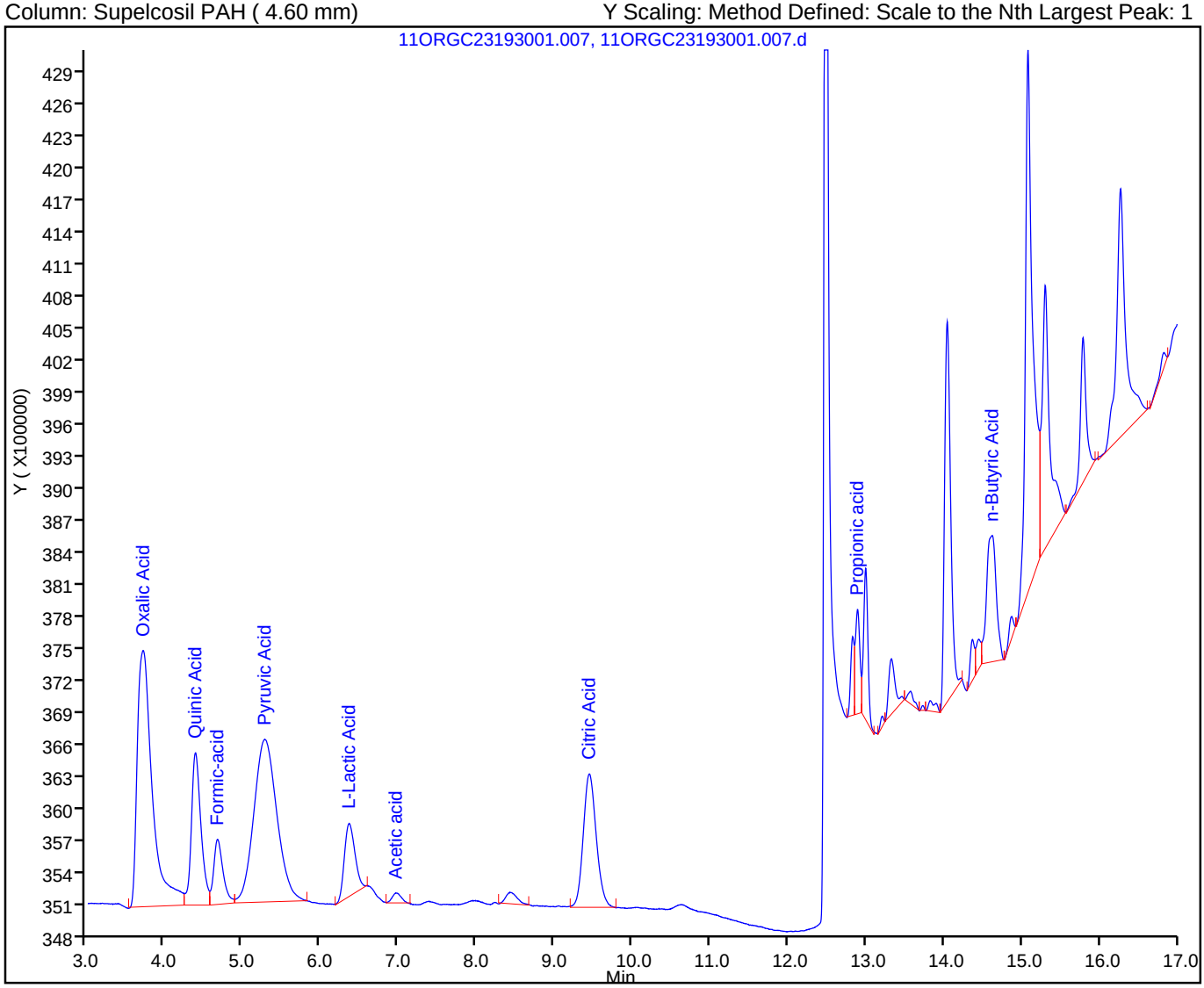
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 7

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.008.d				
Lims ID:	IC ORGA3				
Client ID:					
Sample Type:	IC	Calib Level:	3		
Inject. Date:	12-Jul-2023 20:53:00	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGA3				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub4				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:04:14	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				
First Level Reviewer: UHEW		Date:	17-Jul-2023 16:04:14		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid	3.704	3.704	0.000	19683593H	12.6	14.5	
2 Quinic Acid	4.383	4.383	0.000	6753753H	50.5	50.5	
4 Formic-acid	4.667	4.667	0.000	19222999H	100.5	101.6	
5 Pyruvic Acid	5.271	5.271	0.000	7519427H	12.6	12.6	
6 L-Lactic Acid	6.354	6.354	0.000	4183521H	50.1	49.6	
7 Acetic acid	6.963	6.963	0.000	5533638H	100.2	106.5	
8 Citric Acid	9.433	9.433	0.000	6261971H	50.3	54.1	
11 Propionic acid	12.892	12.892	0.000	12004938H	100.0	105.0	
12 n-Butyric Acid	14.571	14.571	0.000	12968681H	100.2	100.0	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGA3_00026 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 16:04:15 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.008.d

Injection Date: 12-Jul-2023 20:53:00 Instrument ID: 10136

Lims ID: IC ORGA3

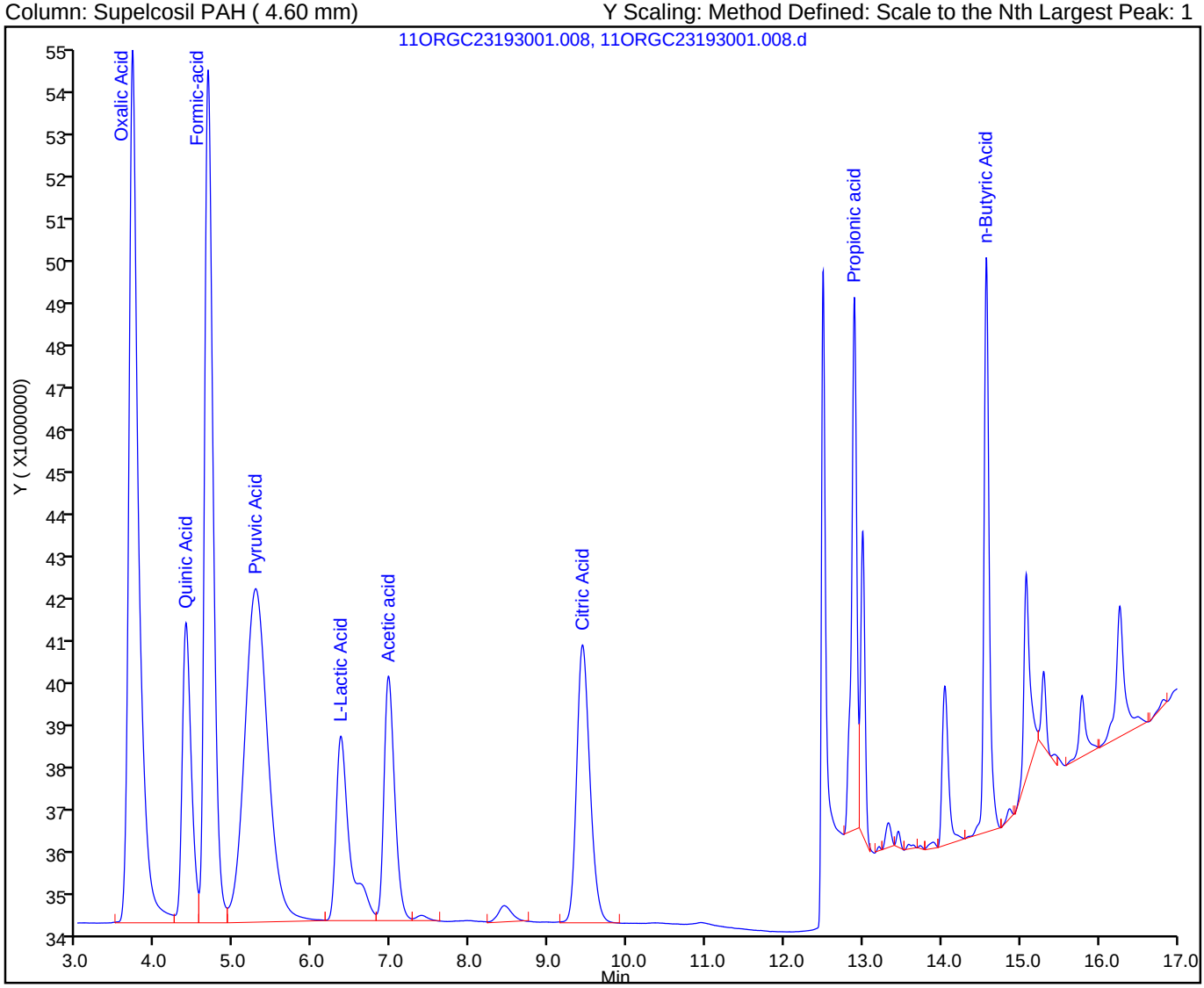
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 8

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:02:44 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.009.d				
Lims ID:	IC ORGA4				
Client ID:					
Sample Type:	IC	Calib Level:	4		
Inject. Date:	12-Jul-2023 21:24:00	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGA4				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub4				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:02:44	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid	3.696	3.704	-0.008	30892698H	25.2	23.0	
2 Quinic Acid	4.379	4.388	-0.009	12890908H	100.2	96.3	
4 Formic-acid	4.663	4.671	-0.009	37406090H	202.0	197.8	
5 Pyruvic Acid	5.263	5.279	-0.017	14672302H	25.2	24.5	
6 L-Lactic Acid	6.346	6.371	-0.025	8008372H	100.4	95.0	
7 Acetic acid	6.946	6.971	-0.025	10535924H	200.4	202.7	
8 Citric Acid	9.413	9.458	-0.046	12147990H	100.8	105.0	
11 Propionic acid	12.883	12.896	-0.013	23295480H	202.0	203.8	
12 n-Butyric Acid	14.563	14.583	-0.021	24773217H	201.6	191.1	

Reagents:

GCS_ORGA4_00009 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 16:02:44 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.009.d

Injection Date: 12-Jul-2023 21:24:00 Instrument ID: 10136

Lims ID: IC ORGA4

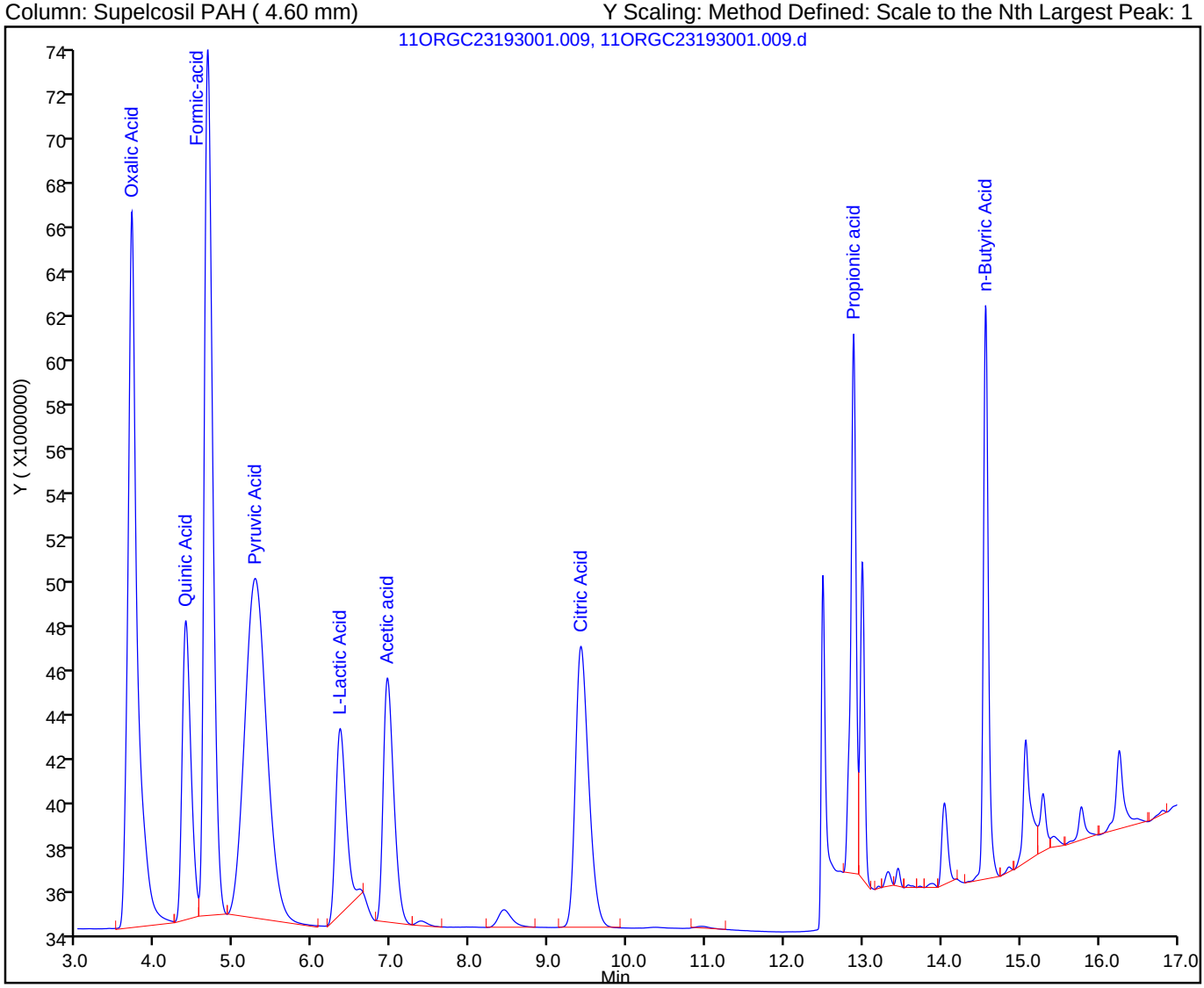
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 9

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:02:46 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.010.d				
Lims ID:	IC ORGA 80				
Client ID:					
Sample Type:	IC	Calib Level:	5		
Inject. Date:	12-Jul-2023 21:55:00	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGA @80				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub4				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:02:45	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid	3.688	3.704	-0.016	110586839H	75.6	75.4	
2 Quinic Acid	4.375	4.388	-0.013	40360705H	300.6	301.5	
4 Formic-acid	4.650	4.671	-0.021	115140140H	606.0	608.8	
5 Pyruvic Acid	5.250	5.279	-0.029	47109246H	75.6	78.7	
6 L-Lactic Acid	6.317	6.371	-0.054	27555757H	301.2	326.7	
7 Acetic acid	6.896	6.971	-0.075	30979007H	601.2	596.1	
8 Citric Acid	9.308	9.458	-0.150	34174524H	302.4	295.2	
11 Propionic acid	12.850	12.896	-0.046	67218416H	606.0	588.2	
12 n-Butyric Acid	14.550	14.583	-0.033	70892823H	604.8	546.8	

Reagents:

GCS_ORGAox5@8_00004 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 16:02:46 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.010.d

Injection Date: 12-Jul-2023 21:55:00 Instrument ID: 10136

Lims ID: IC ORGA 80

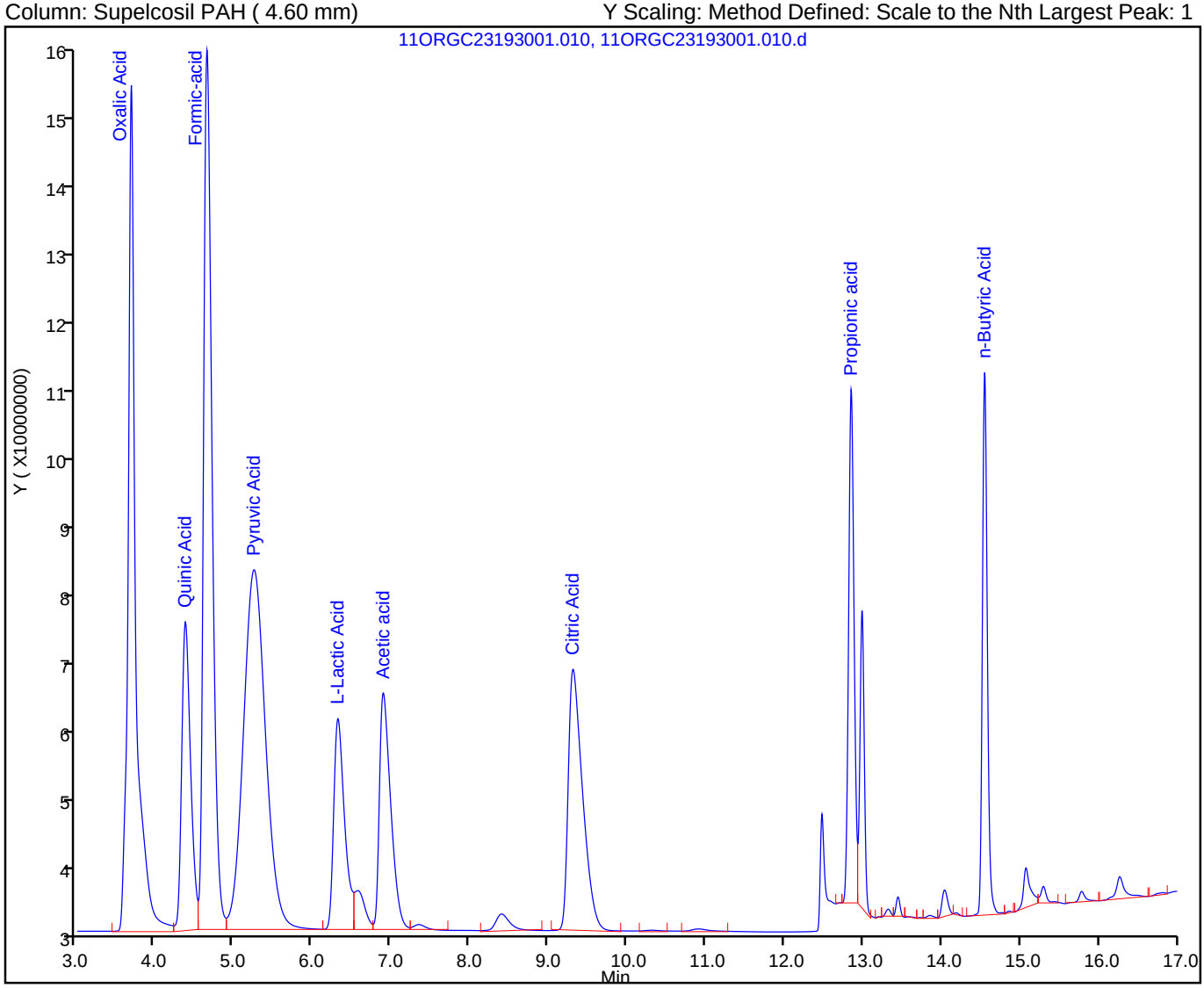
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 10

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:02:47 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.011.d				
Lims ID:	IC ORGA 100				
Client ID:					
Sample Type:	IC	Calib Level:	6		
Inject. Date:	12-Jul-2023 22:26:00	ALS Bottle#:	0	Worklist Smp#:	11
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGA @ 100				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub4				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:02:47	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid	3.679	3.704	-0.025	157821566H	100.8	101.9	
2 Quinic Acid	4.375	4.388	-0.013	53684003H	400.8	401.0	
4 Formic-acid	4.650	4.671	-0.021	152730712H	808.0	807.6	
5 Pyruvic Acid	5.246	5.279	-0.033	62713236H	100.8	104.8	
6 L-Lactic Acid	6.308	6.371	-0.063	37159296H	401.6	440.6	
7 Acetic acid	6.879	6.971	-0.092	39907449H	801.6	767.9	
8 Citric Acid	9.288	9.458	-0.170	43570613H	403.2	376.4	
11 Propionic acid	12.842	12.896	-0.054	89369890H	808.0	782.0	
12 n-Butyric Acid	14.546	14.583	-0.037	92497779H	806.4	713.5	

Reagents:

GCS_ORGAox5_00002 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 16:02:47 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.011.d

Injection Date: 12-Jul-2023 22:26:00 Instrument ID: 10136

Lims ID: IC ORGA 100

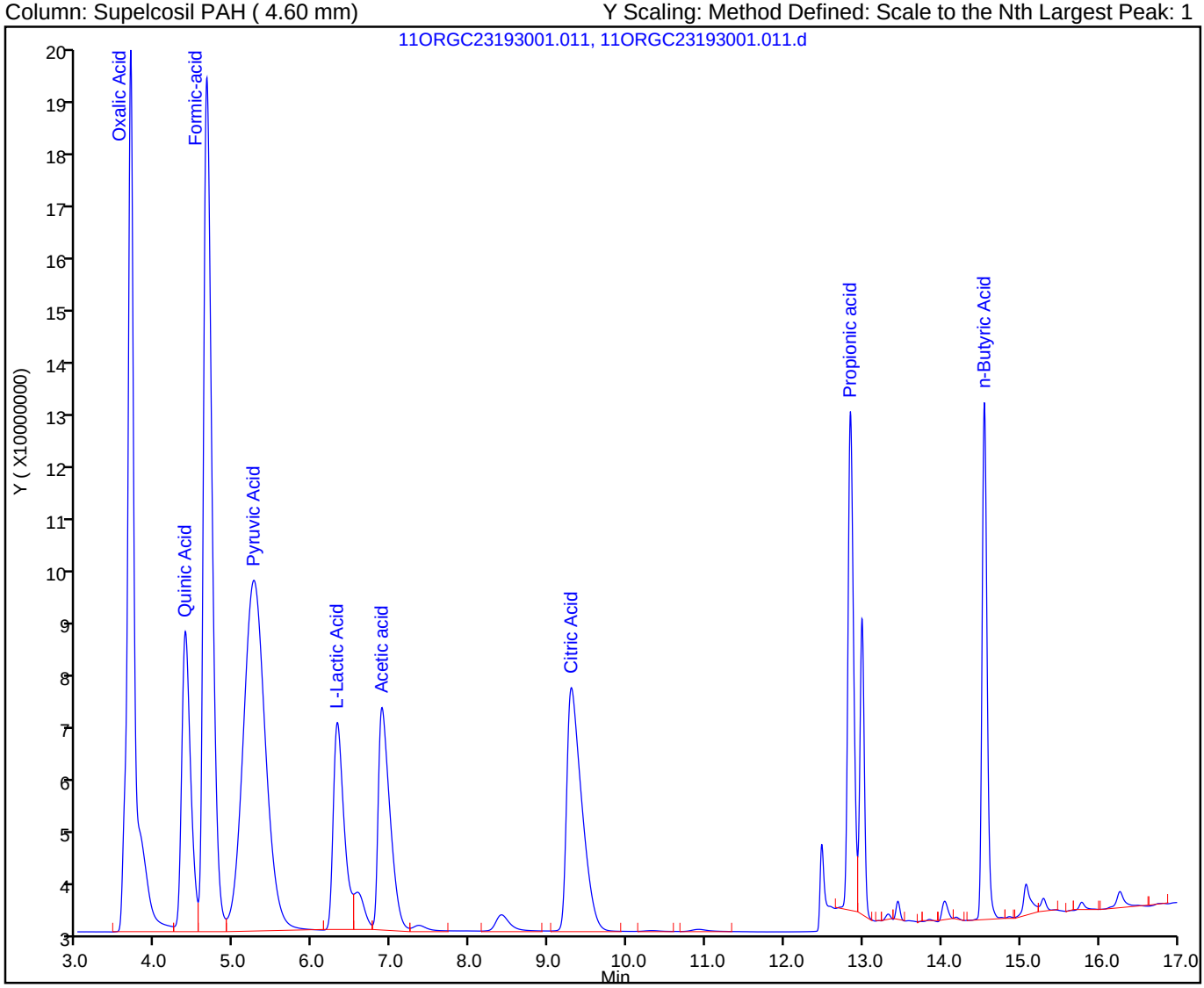
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 11

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:02:49 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.012.d				
Lims ID:	IC ORGA5				
Client ID:					
Sample Type:	IC	Calib Level:	7		
Inject. Date:	12-Jul-2023 22:57:00	ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGA5				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub4				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:02:49	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				
First Level Reviewer: UHEW		Date:	13-Jul-2023 13:57:10		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid	3.679	3.704	-0.025	202479476H	125.5	124.9	
2 Quinic Acid	4.383	4.388	-0.005	66208656H	504.8	494.6	
4 Formic-acid	4.654	4.671	-0.017	188843418H	1005.0	998.5	
5 Pyruvic Acid	5.254	5.279	-0.025	77550759H	125.8	129.6	
6 L-Lactic Acid	6.317	6.371	-0.054	46632977H	501.1	552.9	
7 Acetic acid	6.879	6.971	-0.092	48128051H	1002.3	926.1	
8 Citric Acid	9.300	9.458	-0.158	51889504H	503.0	448.3	
11 Propionic acid	12.850	12.896	-0.046	109123707H	1000.0	954.9	
12 n-Butyric Acid	14.550	14.583	-0.033	112798500H	1001.5	870.1	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGA5_00008 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 16:02:49 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.012.d

Injection Date: 12-Jul-2023 22:57:00 Instrument ID: 10136

Lims ID: IC ORGA5

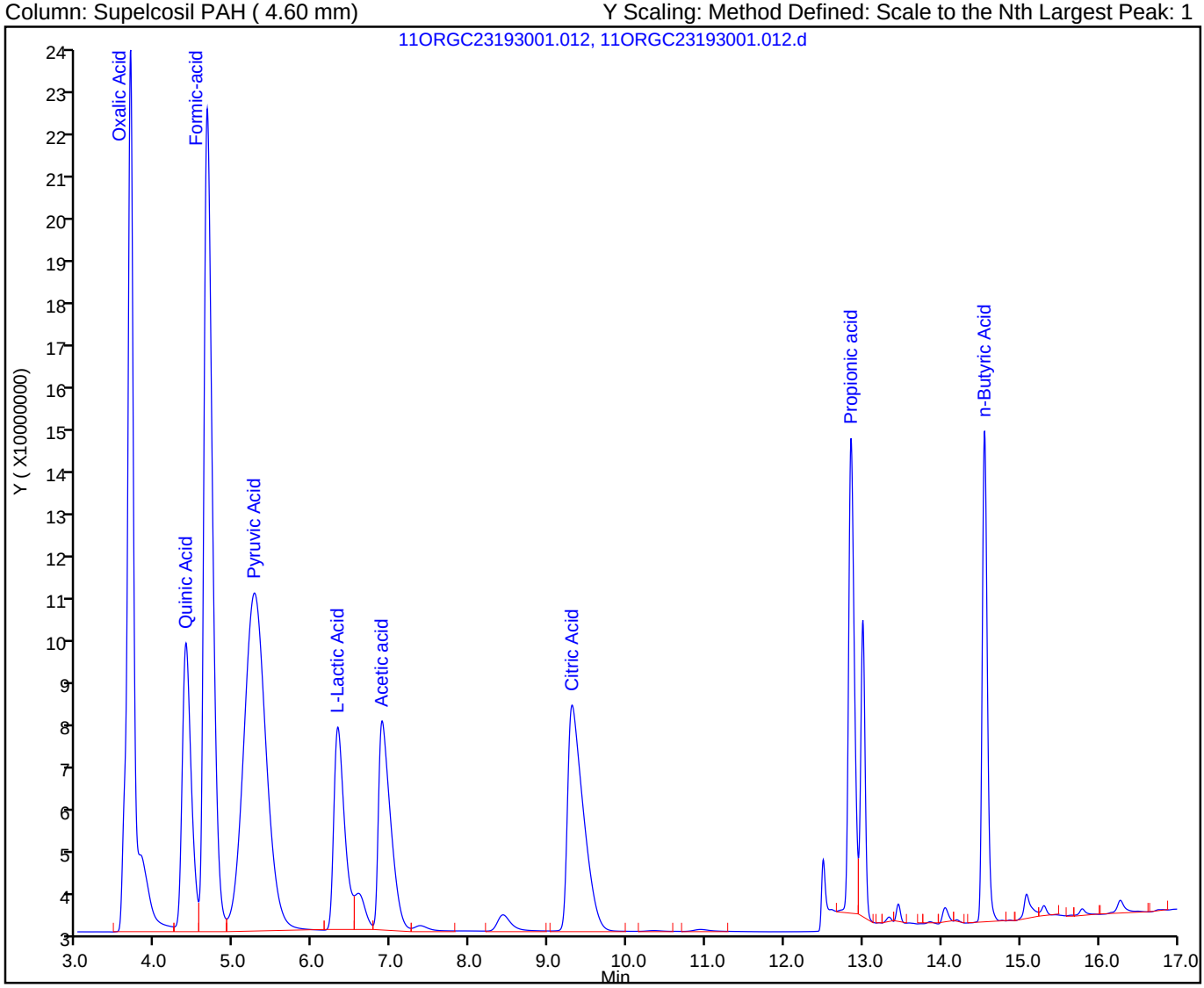
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 12

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Calibration / Oxalic Acid

Curve Type:	Quadratic
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

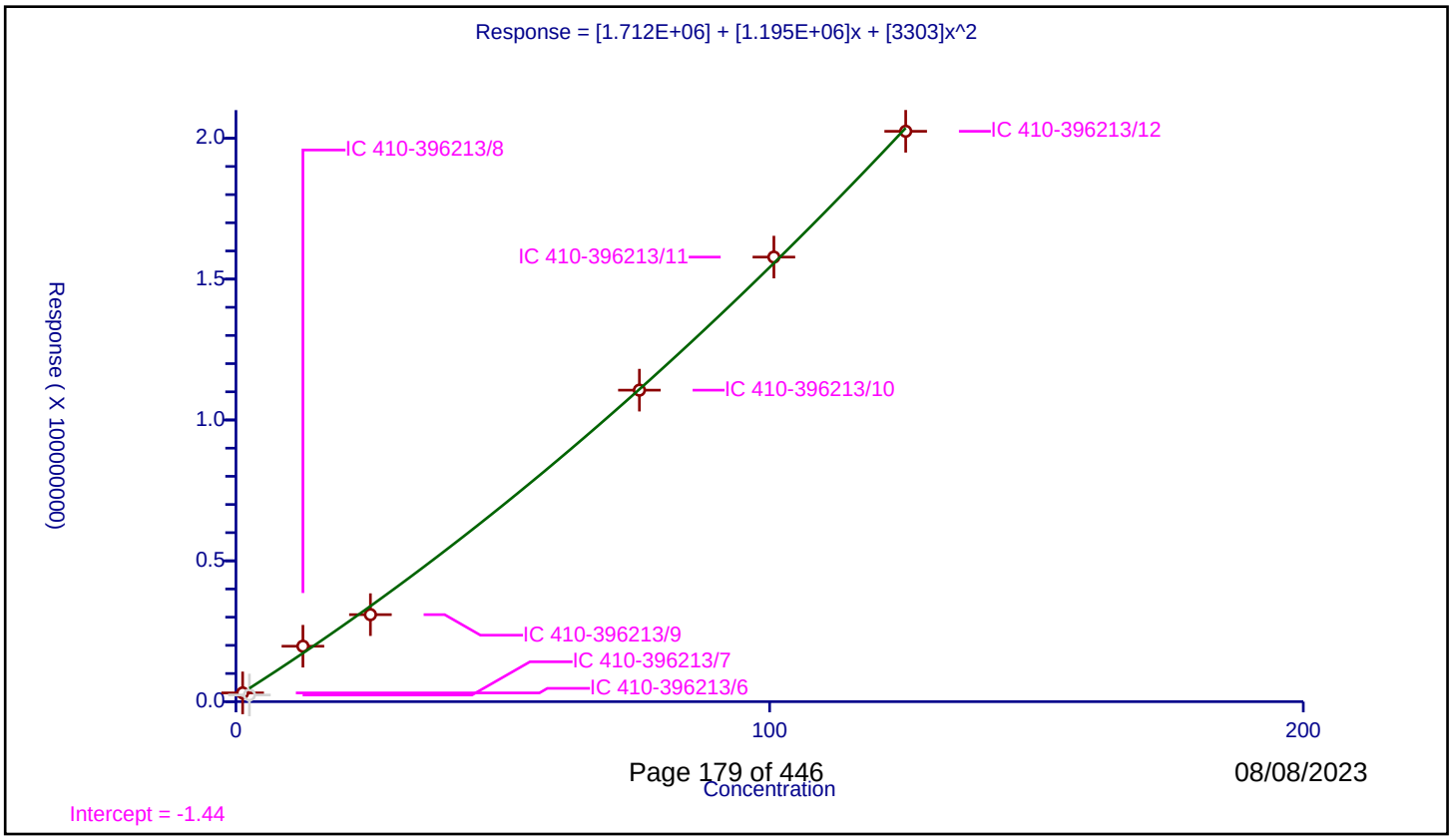
Curve Coefficients

Intercept:	1.712E+06
Slope:	1.195E+06
Second Order:	3303

Error Coefficients

Standard Error:	2660000
Relative Standard Error:	10.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/6	1.255	3116385.0			2483175.298805	Y
2	IC 410-396213/7	2.52	2371794.0			941188.095238	N
3	IC 410-396213/8	12.55	19683593.0			1568413.784861	Y
4	IC 410-396213/9	25.2	30892698.0			1225900.714286	Y
5	IC 410-396213/10	75.6	110586839.0			1462788.875661	Y
6	IC 410-396213/11	100.8	157821566.0			1565690.138889	Y
7	IC 410-396213/12	125.5	202479476.0			1613382.278884	Y



Calibration / Quinic Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

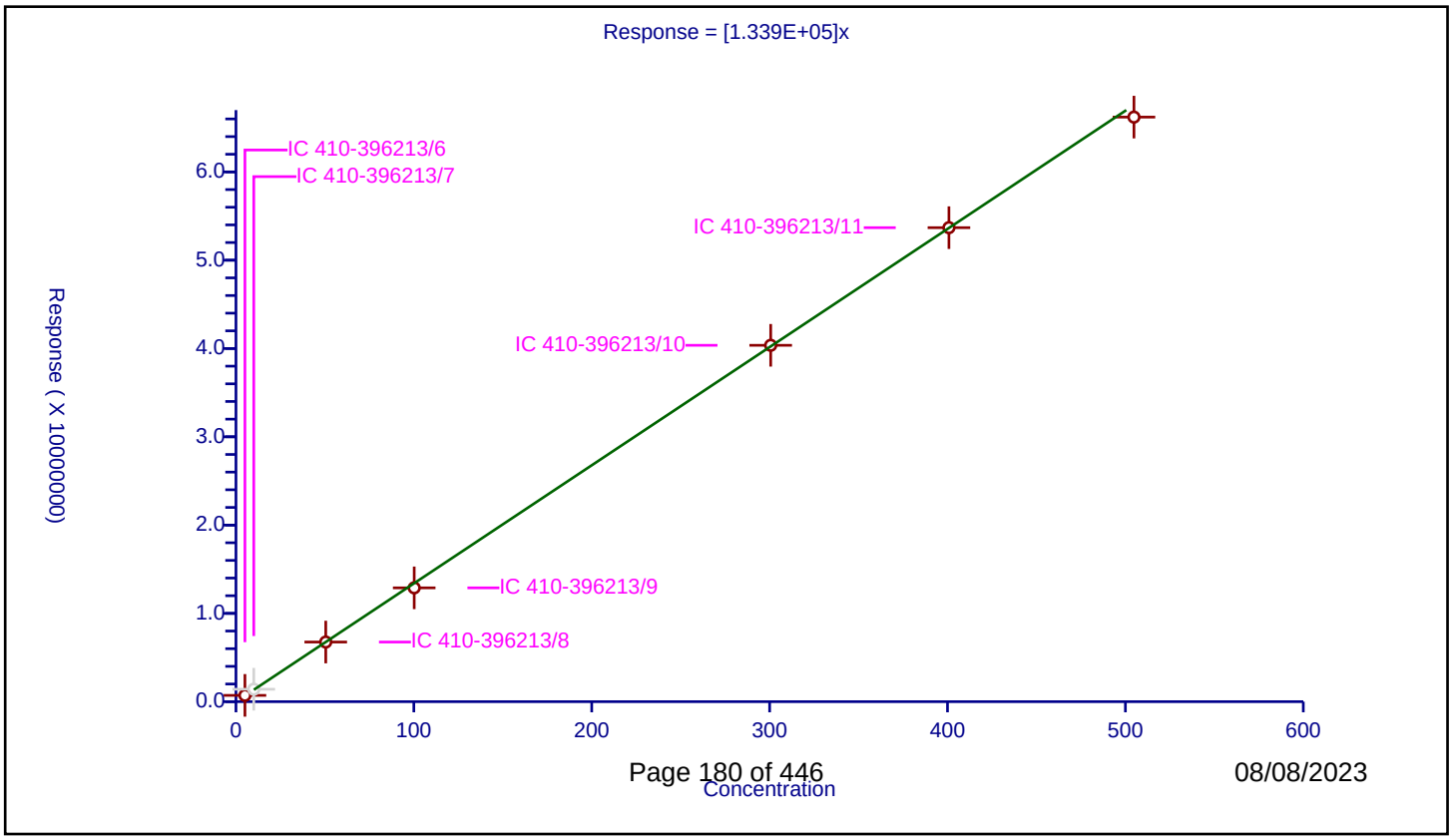
Curve Coefficients

Intercept:	0
Slope:	1.339E+05

Error Coefficients

Standard Error:	656000
Relative Standard Error:	3.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/6	5.048	713570.0			141356.973059	Y
2	IC 410-396213/7	10.02	1408177.0			140536.626747	N
3	IC 410-396213/8	50.48	6753753.0			133790.669572	Y
4	IC 410-396213/9	100.2	12890908.0			128651.776447	Y
5	IC 410-396213/10	300.6	40360705.0			134267.149035	Y
6	IC 410-396213/11	400.8	53684003.0			133942.123253	Y
7	IC 410-396213/12	504.8	66208656.0			131158.193344	Y



Calibration / Formic-acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

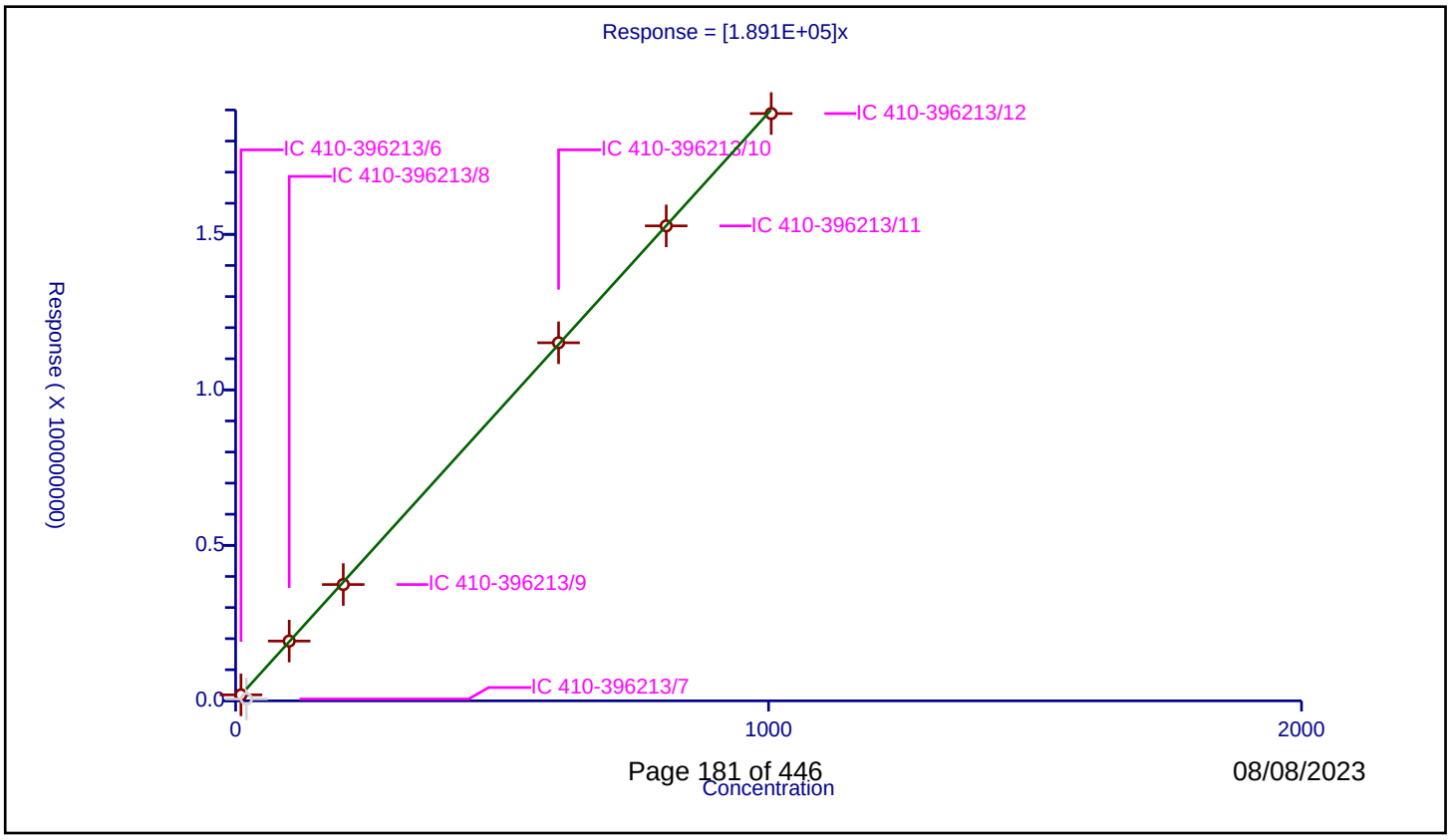
Curve Coefficients

Intercept:	0
Slope:	1.891E+05

Error Coefficients

Standard Error:	702000
Relative Standard Error:	1.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/6	10.05	1922850.0			191328.358209	Y
2	IC 410-396213/7	20.2	602397.0			29821.633663	N
3	IC 410-396213/8	100.5	19222999.0			191273.621891	Y
4	IC 410-396213/9	202.0	37406090.0			185178.663366	Y
5	IC 410-396213/10	606.0	115140140.0			190000.231023	Y
6	IC 410-396213/11	808.0	152730712.0			189023.158416	Y
7	IC 410-396213/12	1005.0	188843418.0			187903.898507	Y



Calibration / Pyruvic Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

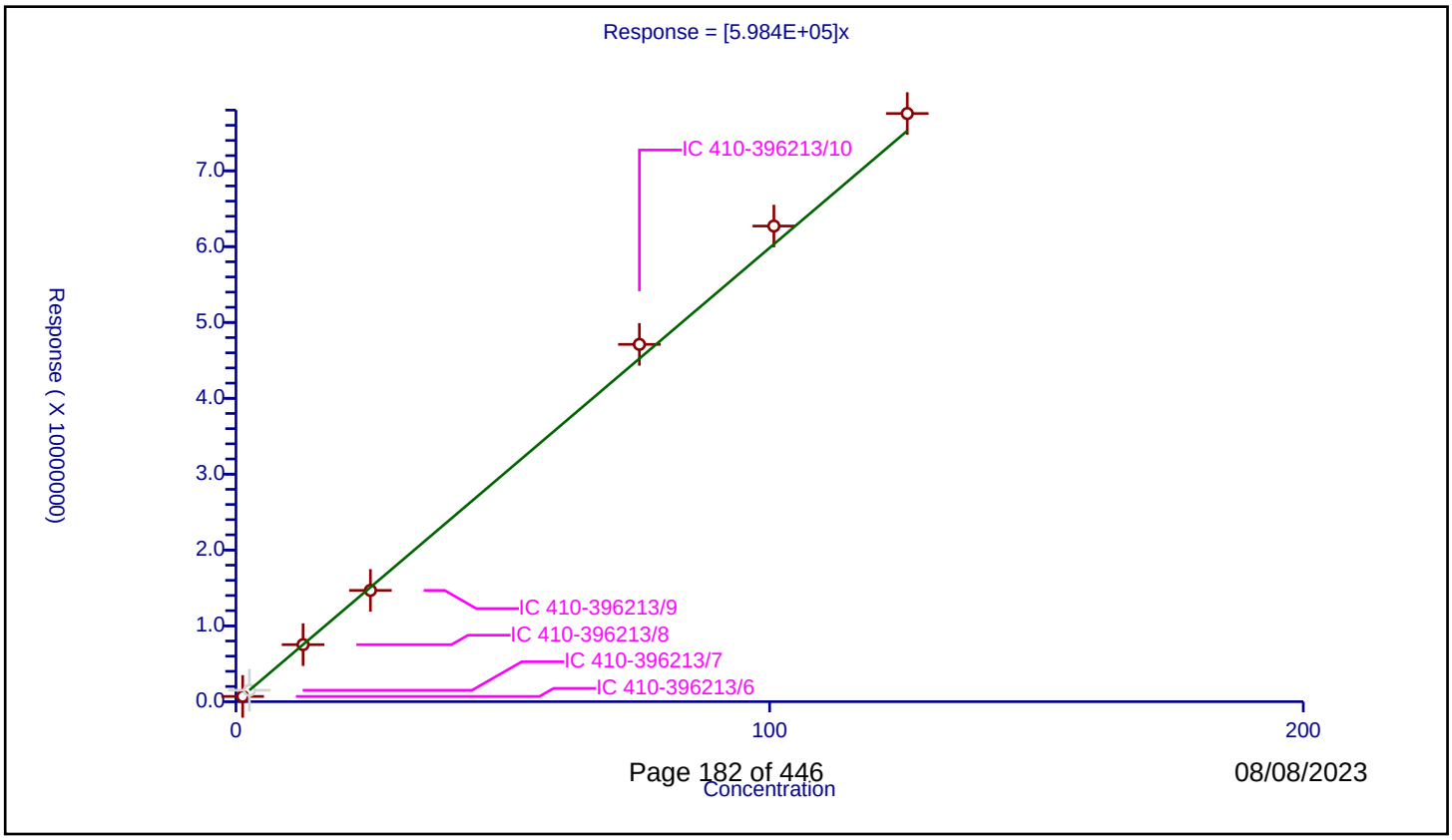
Curve Coefficients

Intercept:	0
Slope:	5.984E+05

Error Coefficients

Standard Error:	1710000
Relative Standard Error:	4.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/6	1.258	690284.0			548715.421304	Y
2	IC 410-396213/7	2.52	1507336.0			598149.206349	N
3	IC 410-396213/8	12.58	7519427.0			597728.696343	Y
4	IC 410-396213/9	25.2	14672302.0			582234.206349	Y
5	IC 410-396213/10	75.6	47109246.0			623138.174603	Y
6	IC 410-396213/11	100.8	62713236.0			622155.119048	Y
7	IC 410-396213/12	125.8	77550759.0			616460.72337	Y



Calibration / L-Lactic Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

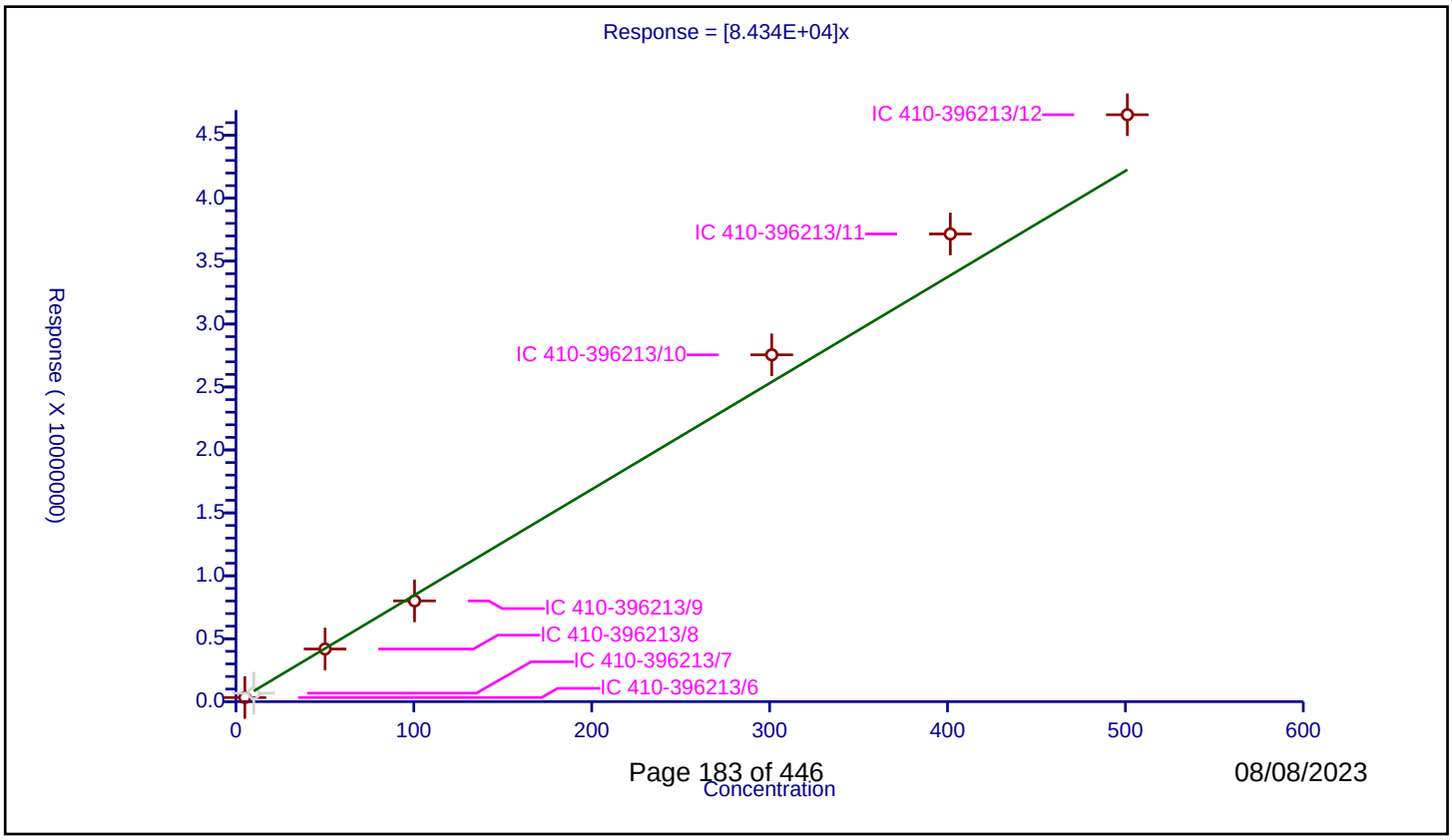
Curve Coefficients

Intercept:	0
Slope:	8.434E+04

Error Coefficients

Standard Error:	2640000
Relative Standard Error:	12.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/6	5.011	329188.0			65693.075234	Y
2	IC 410-396213/7	10.04	674369.0			67168.227092	N
3	IC 410-396213/8	50.11	4183521.0			83486.749152	Y
4	IC 410-396213/9	100.4	8008372.0			79764.661355	Y
5	IC 410-396213/10	301.2	27555757.0			91486.577025	Y
6	IC 410-396213/11	401.6	37159296.0			92528.12749	Y
7	IC 410-396213/12	501.1	46632977.0			93061.219318	Y



Calibration / Acetic acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

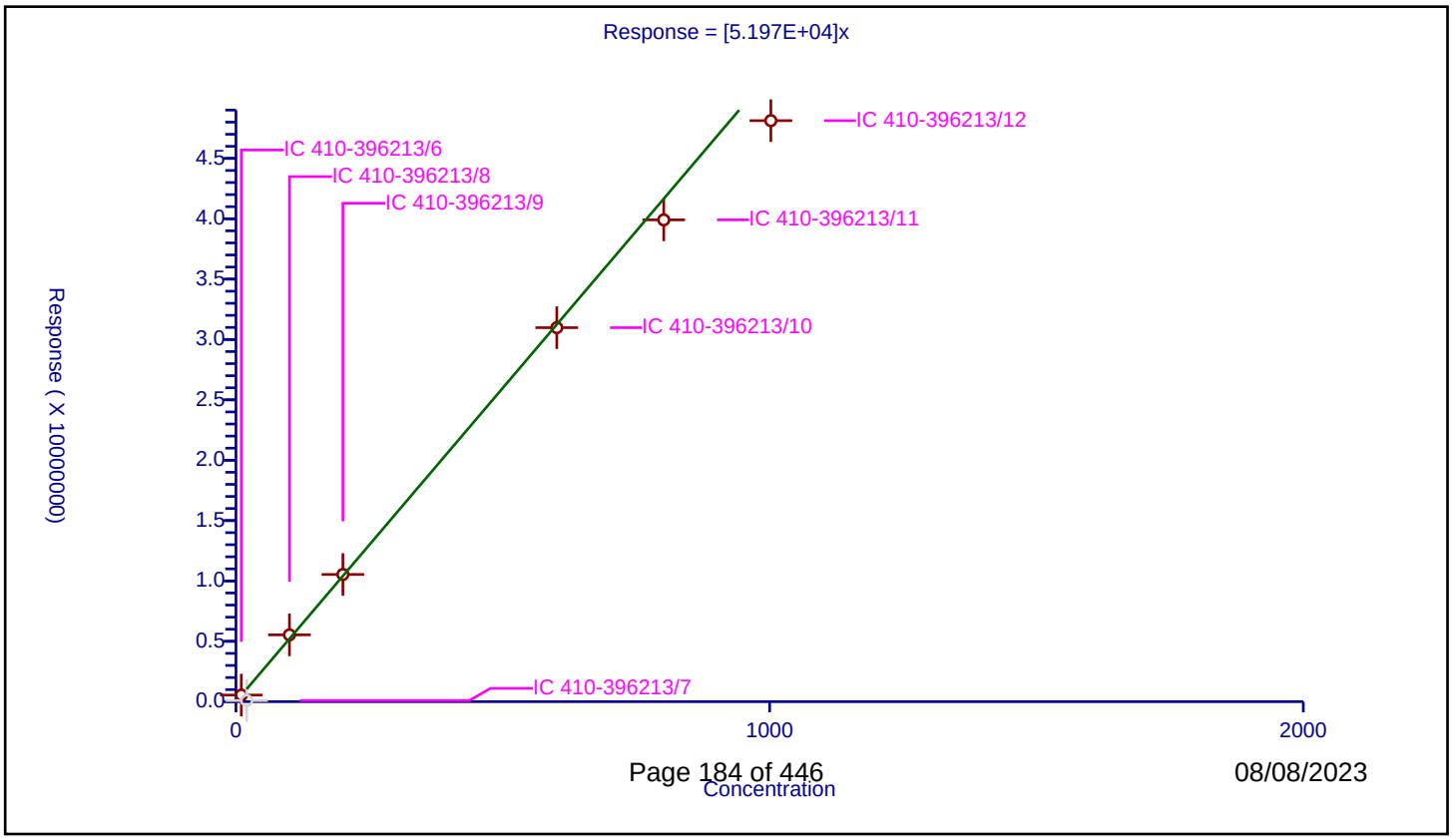
Curve Coefficients

Intercept:	0
Slope:	5.197E+04

Error Coefficients

Standard Error:	1950000
Relative Standard Error:	5.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/6	10.023	548276.0			54701.785892	Y
2	IC 410-396213/7	20.04	93076.0			4644.510978	N
3	IC 410-396213/8	100.23	5533638.0			55209.398384	Y
4	IC 410-396213/9	200.4	10535924.0			52574.471058	Y
5	IC 410-396213/10	601.2	30979007.0			51528.621091	Y
6	IC 410-396213/11	801.6	39907449.0			49784.741766	Y
7	IC 410-396213/12	1002.3	48128051.0			48017.610496	Y



Calibration / Citric Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

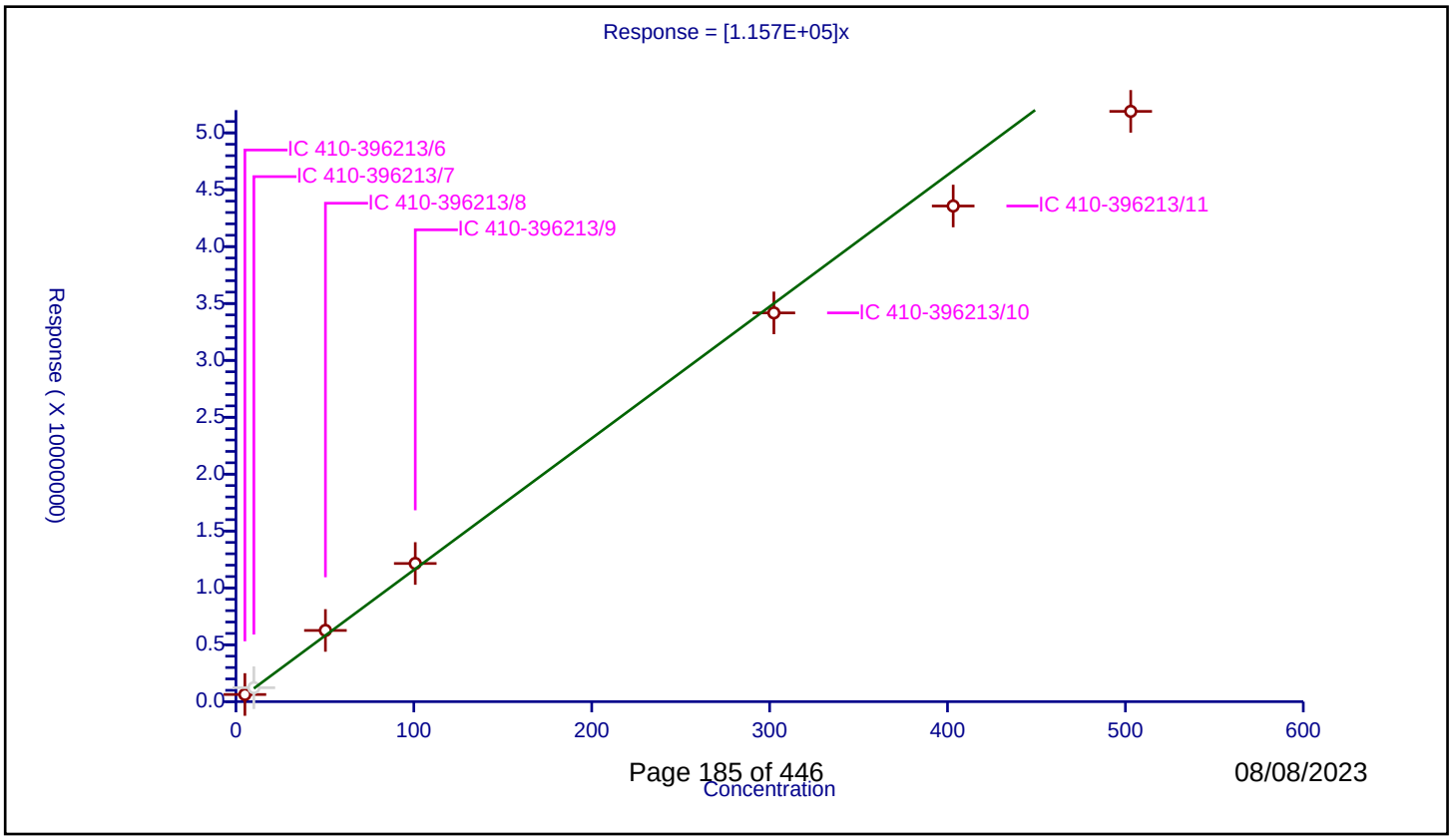
Curve Coefficients

Intercept:	0
Slope:	1.157E+05

Error Coefficients

Standard Error:	3190000
Relative Standard Error:	7.9
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/6	5.03	630031.0			125254.671968	Y
2	IC 410-396213/7	10.08	1227487.0			121774.503968	N
3	IC 410-396213/8	50.3	6261971.0			124492.465209	Y
4	IC 410-396213/9	100.8	12147990.0			120515.77381	Y
5	IC 410-396213/10	302.4	34174524.0			113010.992063	Y
6	IC 410-396213/11	403.2	43570613.0			108062.03621	Y
7	IC 410-396213/12	503.0	51889504.0			103160.047714	Y



Calibration / Propionic acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

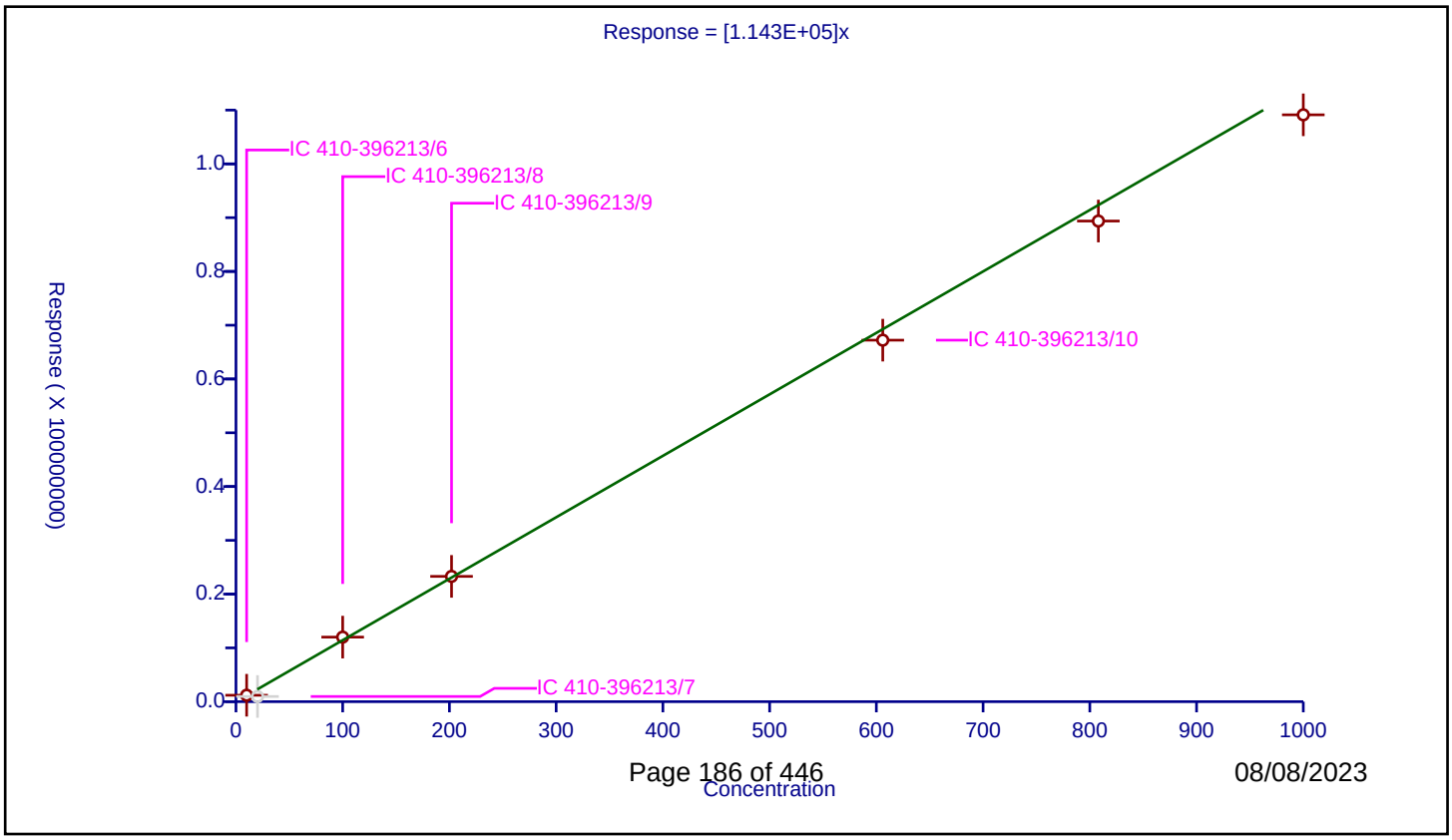
Curve Coefficients

Intercept:	0
Slope:	1.143E+05

Error Coefficients

Standard Error:	2830000
Relative Standard Error:	4.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/6	10.0	1196664.0			119666.4	Y
2	IC 410-396213/7	20.2	964211.0			47733.217822	N
3	IC 410-396213/8	100.0	12004938.0			120049.38	Y
4	IC 410-396213/9	202.0	23295480.0			115324.158416	Y
5	IC 410-396213/10	606.0	67218416.0			110921.478548	Y
6	IC 410-396213/11	808.0	89369890.0			110606.299505	Y
7	IC 410-396213/12	1000.0	109123707.0			109123.707	Y



Calibration / n-Butyric Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

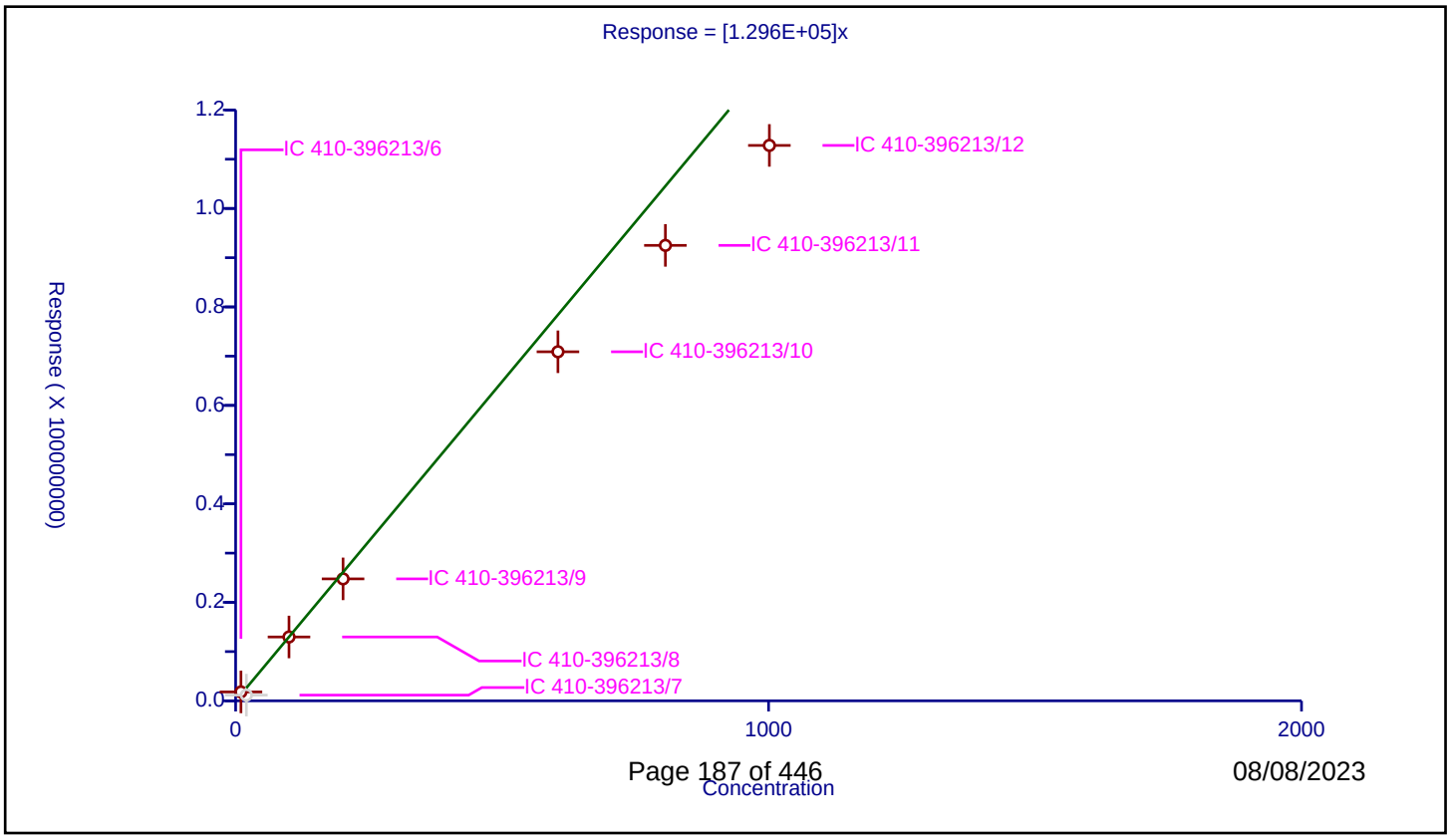
Curve Coefficients

Intercept:	0
Slope:	1.296E+05

Error Coefficients

Standard Error:	9940000
Relative Standard Error:	19.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.947

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/6	10.015	1811837.0			180912.331503	Y
2	IC 410-396213/7	20.16	1165211.0			57798.164683	N
3	IC 410-396213/8	100.15	12968681.0			129492.571143	Y
4	IC 410-396213/9	201.6	24773217.0			122883.020833	Y
5	IC 410-396213/10	604.8	70892823.0			117216.969246	Y
6	IC 410-396213/11	806.4	92497779.0			114704.587054	Y
7	IC 410-396213/12	1001.5	112798500.0			112629.555667	Y



INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136645-1 Analy Batch No.: 396213

SDG No.:

Instrument ID: 10136 GC Column: Supelcosil P ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/13/2023 00:31 Calibration End Date: 07/13/2023 03:06 Calibration ID: 51998

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-396213/20	11ORGC23193001.020.d
Level 2	IC 410-396213/15	11ORGC23193001.015.d
Level 3	IC 410-396213/16	11ORGC23193001.016.d
Level 4	IC 410-396213/17	11ORGC23193001.017.d
Level 5	IC 410-396213/18	11ORGC23193001.018.d
Level 6	IC 410-396213/19	11ORGC23193001.019.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
Tartaric Acid	4.354	4.350	4.350	4.350	4.354	4.350					4.304 - 4.404	4.351
Succinic Acid	10.204	10.238	10.229	10.217	10.204	10.050					10.054 - 10.354	10.190
Isobutyric acid	14.629	14.608	14.600	14.596	14.592	14.563					14.579 - 14.679	14.598
Isovaleric acid	15.788	15.796	15.813	15.817	15.813	15.792					15.658 - 15.918	15.803
Valeric acid	15.992	15.988	15.983	15.983	15.979	15.963					15.862 - 16.122	15.981

INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136645-1 Analy Batch No.: 396213

SDG No.:

Instrument ID: 10136 GC Column: Supelcosil P ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/13/2023 00:31 Calibration End Date: 07/13/2023 03:06 Calibration ID: 51998

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-396213/20	11ORGC23193001.020.d
Level 2	IC 410-396213/15	11ORGC23193001.015.d
Level 3	IC 410-396213/16	11ORGC23193001.016.d
Level 4	IC 410-396213/17	11ORGC23193001.017.d
Level 5	IC 410-396213/18	11ORGC23193001.018.d
Level 6	IC 410-396213/19	11ORGC23193001.019.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 4		B	M1	M2								
Tartaric Acid	306859 312118	306847 279019	314938	312495	Ave		305379.356				4.4		20.0			
Succinic Acid	37886 37856	35827 32703	38583	37815	Ave		36778.3250				6.0		20.0			
Isobutyric acid	630886 171666	335309 156887	209245	177899	Qua	857938.591	170349.494	-14.230538			11.8		30.0	1.0000		0.9900
Isovaleric acid	785173 141638	342467 134518	176881	146189	Lin	1212182.35	133392.088				22.2		30.0	1.0000		0.9900
Valeric acid	80055 109478	98484 107293	107656	110228	Ave		102199.183				11.4		20.0			

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.

INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136645-1 Analy Batch No.: 396213

SDG No.:

Instrument ID: 10136 GC Column: Supelcosil P ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/13/2023 00:31 Calibration End Date: 07/13/2023 03:06 Calibration ID: 51998

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-396213/20	11ORGC23193001.020.d
Level 2	IC 410-396213/15	11ORGC23193001.015.d
Level 3	IC 410-396213/16	11ORGC23193001.016.d
Level 4	IC 410-396213/17	11ORGC23193001.017.d
Level 5	IC 410-396213/18	11ORGC23193001.018.d
Level 6	IC 410-396213/19	11ORGC23193001.019.d

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Tartaric Acid	Ave	308577 140290655	771414	3167020	15712264	31386569	1.01 503	2.51	10.1	50.3	101
Succinic Acid	Ave	38098 16442906	90069	387995	1901354	3806771	1.01 503	2.51	10.1	50.3	101
Isobutyric acid	Qua	1269343 157827969	1686606	4210017	17896600	34539112	2.01 1006	5.03	20.1	101	201
Isovaleric acid	Lin	1570346 134517629	1712333	3537617	14618940	28327530	2.00 1000	5.00	20.0	100	200
Valeric acid	Ave	160751 107722246	494391	2161723	11066941	21983275	2.01 1004	5.02	20.1	100	201

Curve Type Legend

Ave = Average by Height
Lin = Linear by Height
Qua = Quadratic by Height

Report Date: 17-Jul-2023 16:02:51 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.015.d				
Lims ID:	IC ORGB1				
Client ID:					
Sample Type:	IC	Calib Level:	2		
Inject. Date:	13-Jul-2023 00:31:00	ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGB1				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub5				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:02:50	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				
First Level Reviewer: UHEW		Date:	13-Jul-2023 12:35:10		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid	4.350	4.354	-0.004	771414H	2.51	2.53	
9 Succinic Acid	10.238	10.204	0.034	90069H	2.51	2.45	
13 Isobutyric acid	14.608	14.629	-0.021	1686606H	5.03	4.87	
14 Isovaleric acid	15.796	15.788	0.008	1712333H	5.00	3.75	
15 Valeric acid	15.988	15.992	-0.005	494391H	5.02	4.84	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

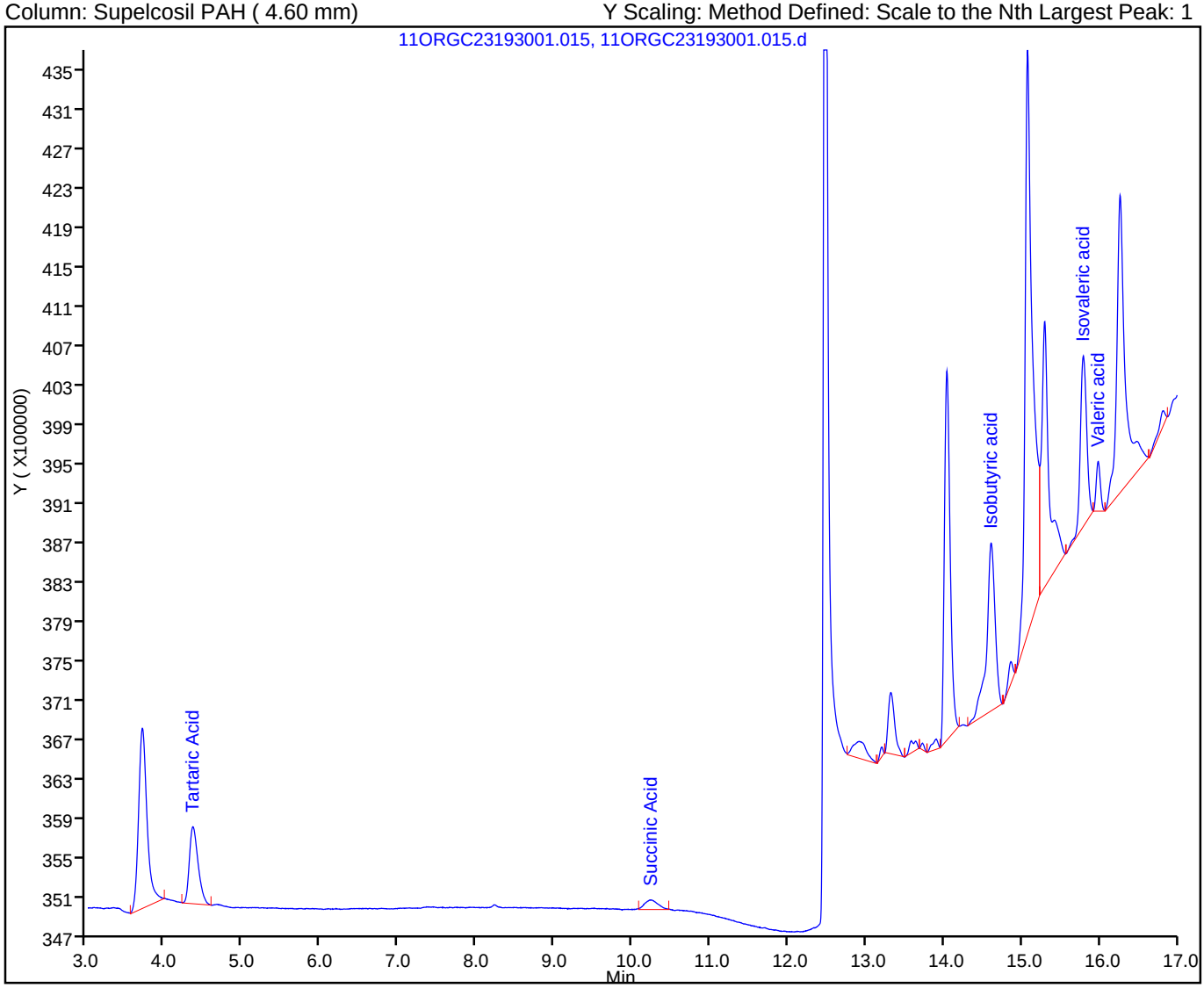
GCS_ORGB1_00009 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 16:02:51 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.015.d				
Injection Date:	13-Jul-2023 00:31:00	Instrument ID:	10136		
Lims ID:	IC ORGB1				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:02:52 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.016.d				
Lims ID:	IC ORGB2				
Client ID:					
Sample Type:	IC	Calib Level:	3		
Inject. Date:	13-Jul-2023 01:02:00	ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGB2				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub5				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:02:52	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid	4.350	4.354	-0.004	3167020H	10.1	10.4	
9 Succinic Acid	10.229	10.204	0.025	387995H	10.1	10.5	
13 Isobutyric acid	14.600	14.629	-0.029	4210017H	20.1	19.7	
14 Isovaleric acid	15.813	15.788	0.024	3537617H	20.0	17.4	
15 Valeric acid	15.983	15.992	-0.009	2161723H	20.1	21.2	

Reagents:

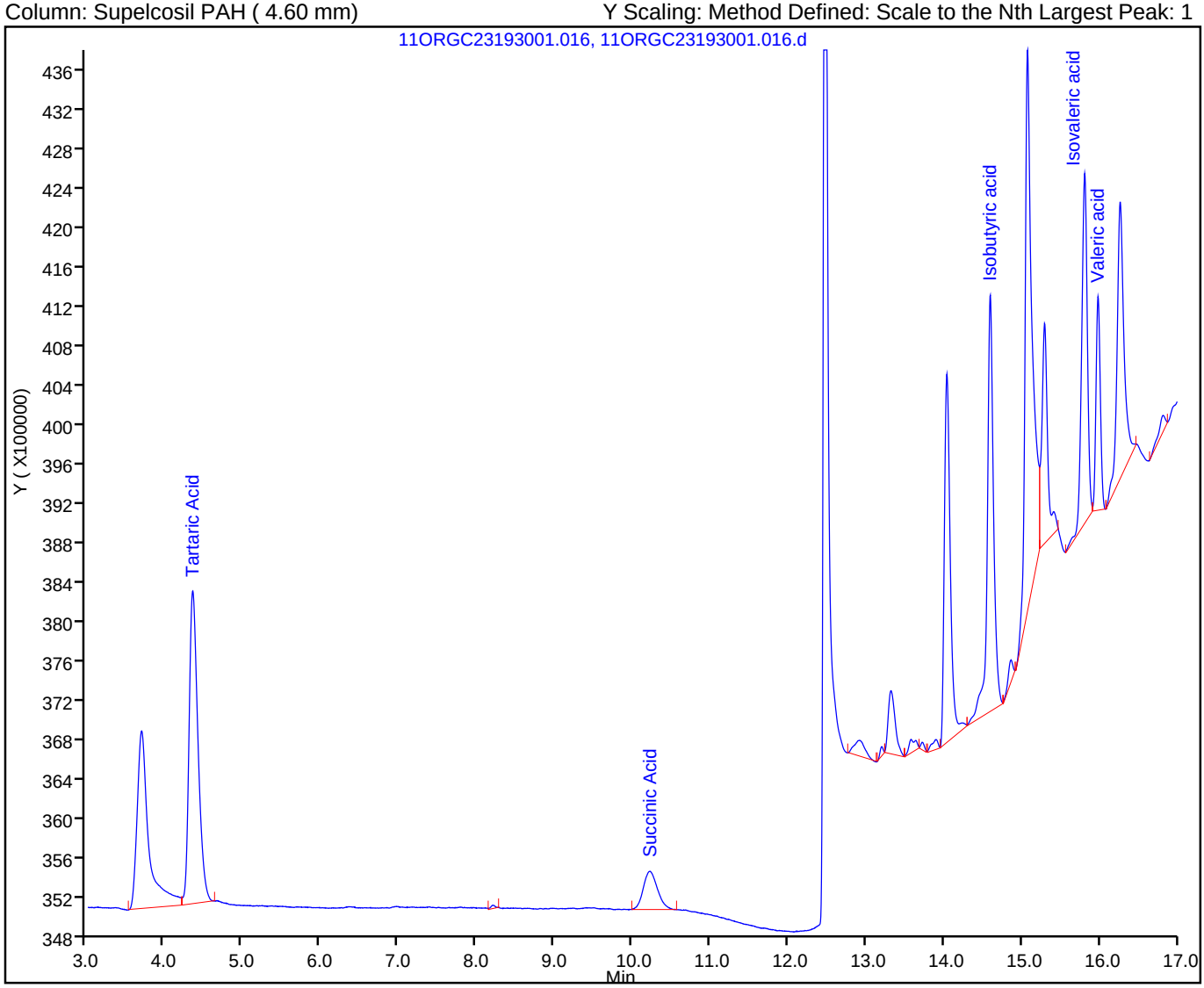
GCS_ORGB2_00009 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 16:02:52 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.016.d				
Injection Date:	13-Jul-2023 01:02:00	Instrument ID:	10136		
Lims ID:	IC ORGB2				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:02:54 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.017.d				
Lims ID:	IC ORGB3				
Client ID:					
Sample Type:	IC	Calib Level:	4		
Inject. Date:	13-Jul-2023 01:33:00	ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGB3				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub5				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:02:53	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				
First Level Reviewer: UHEW		Date:	13-Jul-2023 14:06:05		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid	4.350	4.350	0.000	15712264H	50.3	51.5	
9 Succinic Acid	10.217	10.217	0.000	1901354H	50.3	51.7	
13 Isobutyric acid	14.596	14.596	0.000	17896600H	100.6	100.9	
14 Isovaleric acid	15.817	15.817	0.000	14618940H	100.0	100.5	
15 Valeric acid	15.983	15.983	0.000	11066941H	100.4	108.3	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGB3_00021 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 16:02:54 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.017.d

Injection Date: 13-Jul-2023 01:33:00 Instrument ID: 10136

Lims ID: IC ORGB3

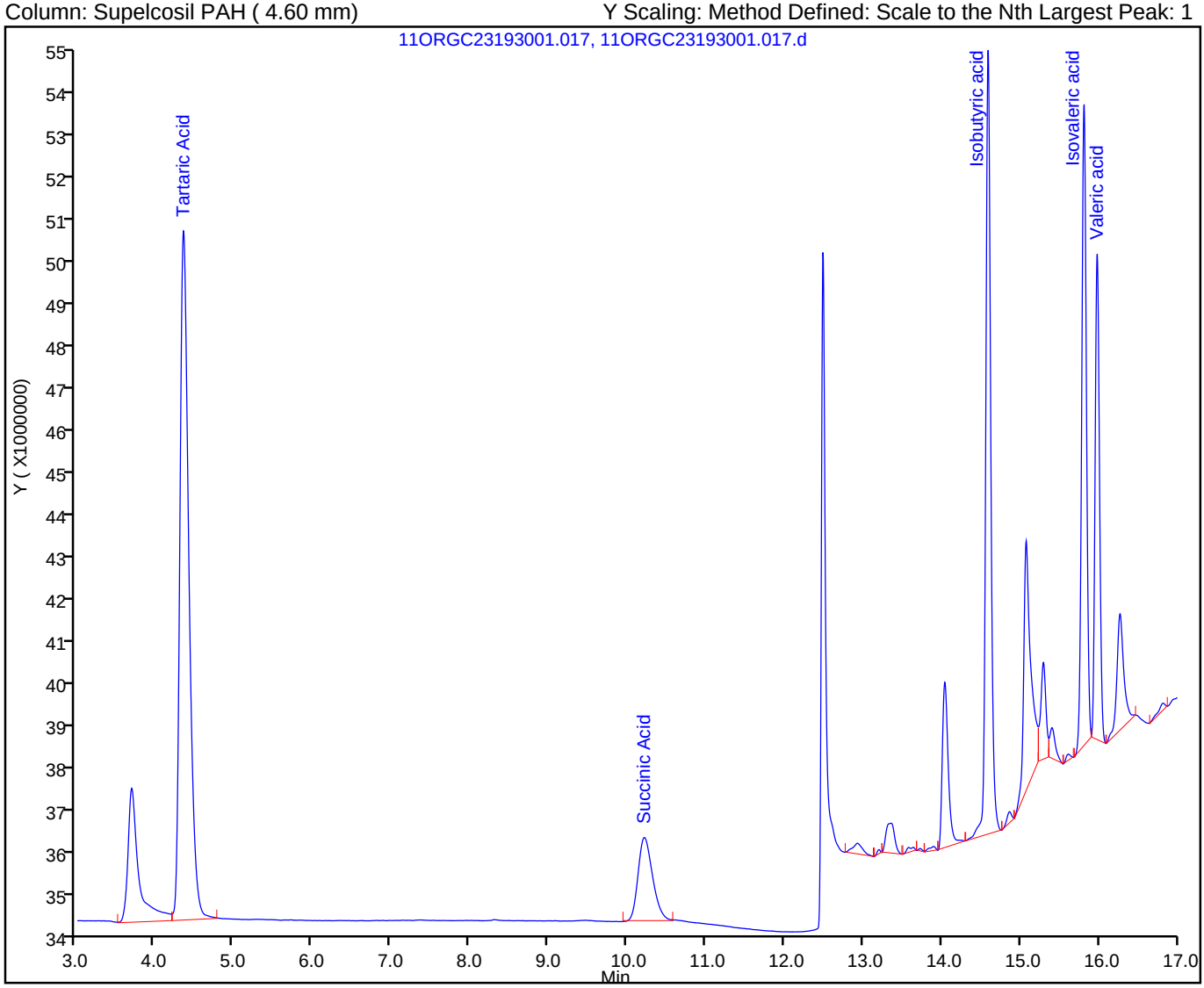
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 17

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:02:56 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.018.d				
Lims ID:	IC ORGB4				
Client ID:					
Sample Type:	IC	Calib Level:	5		
Inject. Date:	13-Jul-2023 02:04:00	ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGB4				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub5				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:02:55	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid	4.354	4.350	0.004	31386569H	100.6	102.8	
9 Succinic Acid	10.204	10.217	-0.013	3806771H	100.6	103.5	
13 Isobutyric acid	14.592	14.596	-0.004	34539112H	201.2	201.1	
14 Isovaleric acid	15.813	15.817	-0.005	28327530H	200.0	203.3	
15 Valeric acid	15.979	15.983	-0.004	21983275H	200.8	215.1	

Reagents:

GCS_ORGB4_00009 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 16:02:56 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.018.d

Injection Date: 13-Jul-2023 02:04:00 Instrument ID: 10136

Lims ID: IC ORGB4

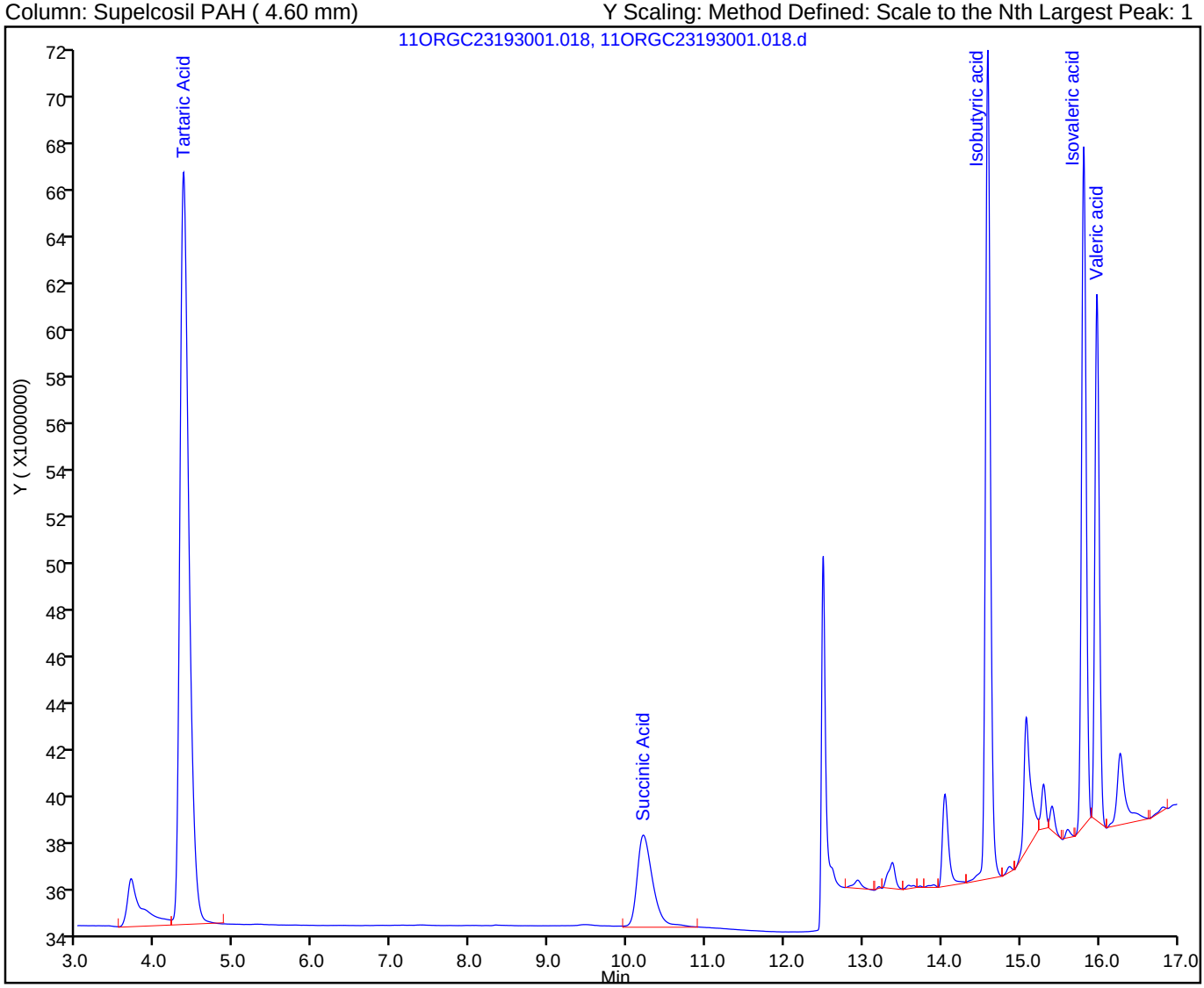
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 18

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:02:57 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.019.d				
Lims ID:	IC ORGB5				
Client ID:					
Sample Type:	IC	Calib Level:	6		
Inject. Date:	13-Jul-2023 02:35:00	ALS Bottle#:	0	Worklist Smp#:	19
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGB5				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub5				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:02:57	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				
First Level Reviewer: UHEW		Date:	13-Jul-2023 12:32:42		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid	4.350	4.350	0.000	140290655H	502.8	459.4	
9 Succinic Acid	10.050	10.217	-0.167	16442906H	502.8	447.1	a
13 Isobutyric acid	14.563	14.596	-0.034	157827969H	1006.0	1006.0	
14 Isovaleric acid	15.792	15.817	-0.025	134517629H	1000.0	999.4	
15 Valeric acid	15.963	15.983	-0.021	107722246H	1004.0	1054.0	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Review Flags

a - User Assigned ID

Reagents:

GCS_ORGB5_00008 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 16:02:57 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.019.d

Injection Date: 13-Jul-2023 02:35:00 Instrument ID: 10136

Lims ID: IC ORGB5

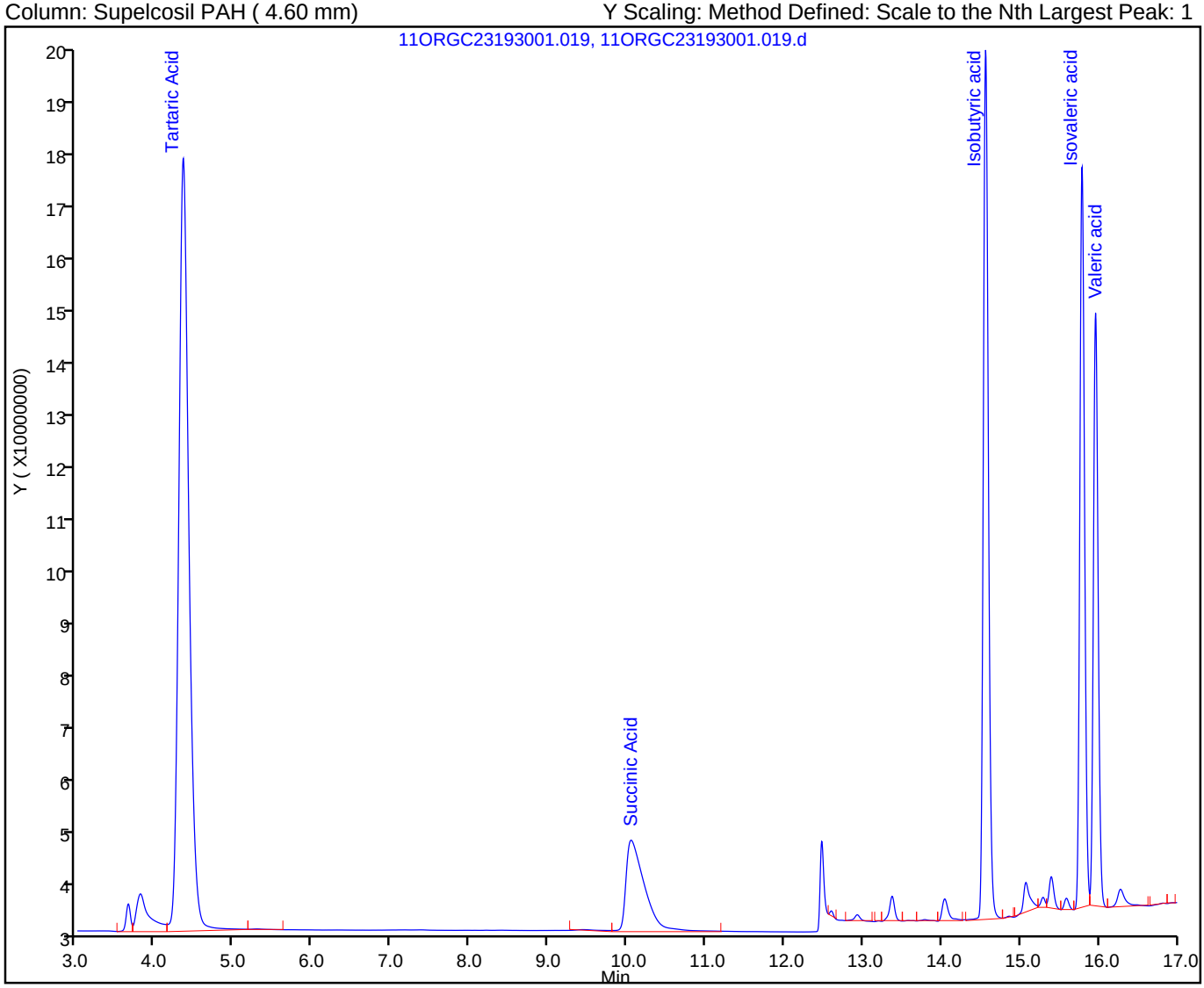
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 19

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:02:57 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

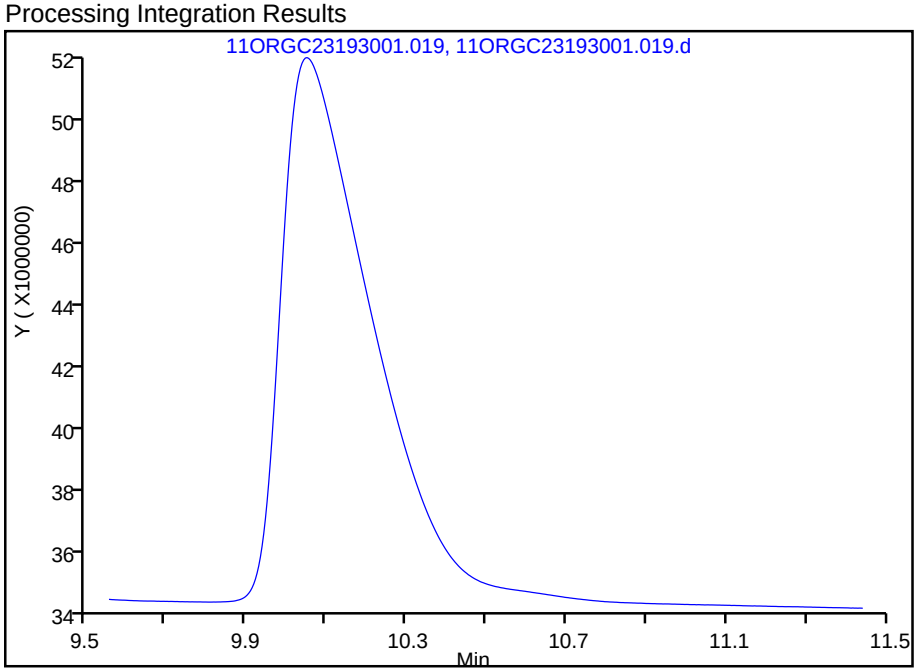
Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.019.d				
Injection Date:	13-Jul-2023 02:35:00	Instrument ID:	10136		
Lims ID:	IC ORGB5				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	19
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		
Column:	Supelcosil PAH (4.60 mm)	Detector	UV0		

9 Succinic Acid, CAS: 110-15-6

Signal: 1

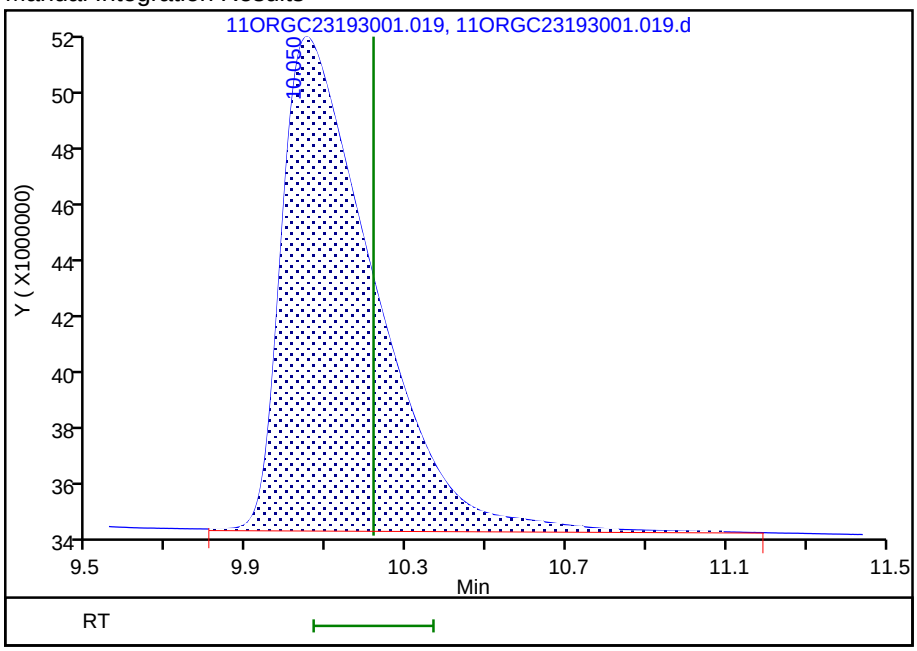
Not Detected
Expected RT: 10.22

Processing Integration Results



Manual Integration Results

RT: 10.05
Height: 16442906
Amount: 447.0814
Amount Units: ug/ml



Reviewer: UHEW, 13-Jul-2023 14:16:21 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Report Date: 17-Jul-2023 16:02:58 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.020.d				
Lims ID:	IC ORGBMDL				
Client ID:					
Sample Type:	IC	Calib Level:	1		
Inject. Date:	13-Jul-2023 03:06:00	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	ICVL ORGB				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub5				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:02:58	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				
First Level Reviewer: UHEW		Date:	13-Jul-2023 12:33:06		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid	4.354	4.354	0.000	308577H	1.01	1.01	
9 Succinic Acid	10.204	10.204	0.000	38098H	1.01	1.04	Ma
13 Isobutyric acid	14.629	14.629	0.000	1269343H	2.01	2.42	
14 Isovaleric acid	15.788	15.788	0.000	1570346H	2.00	2.69	
15 Valeric acid	15.992	15.992	0.000	160751H	2.01	1.57	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

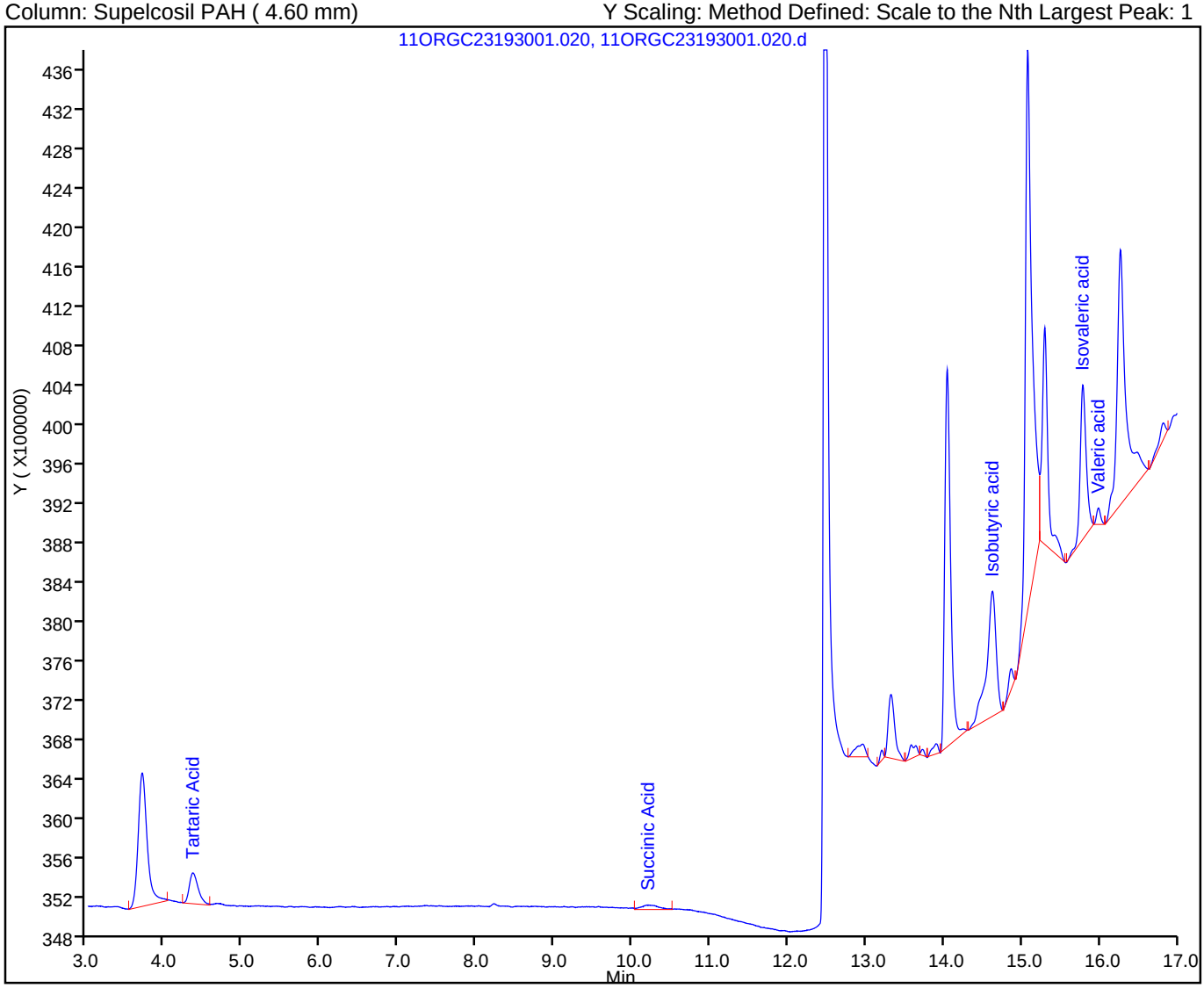
GCS_ORGBMDL_00006 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 16:02:58 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.020.d				
Injection Date:	13-Jul-2023 03:06:00	Instrument ID:	10136		
Lims ID:	IC ORGBMDL				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Lancaster Laboratories Environment Testing, LLC

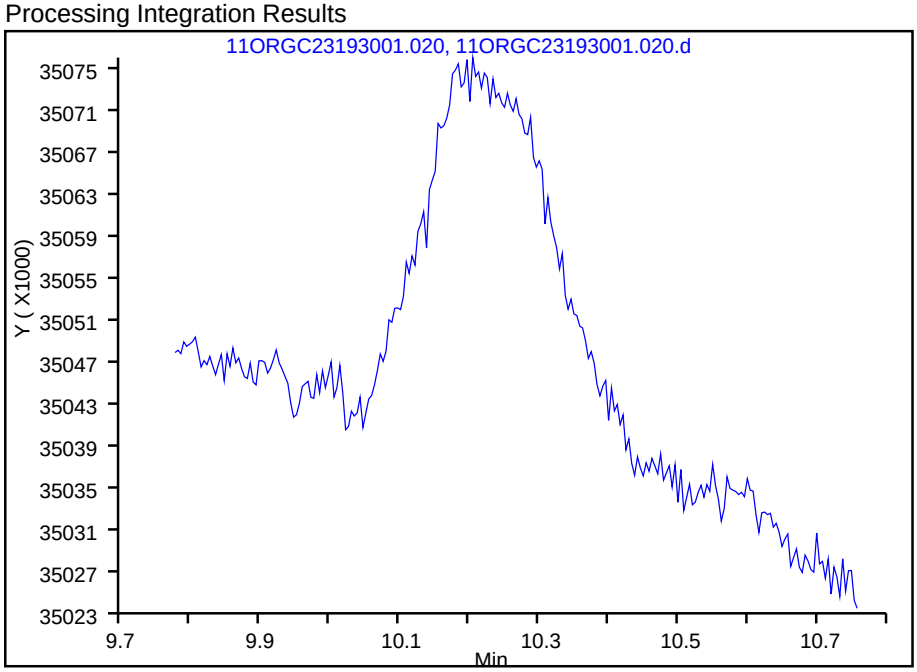
Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.020.d				
Injection Date:	13-Jul-2023 03:06:00	Instrument ID:	10136		
Lims ID:	IC ORGBMDL				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		
Column:	Supelcosil PAH (4.60 mm)	Detector	UV0		

9 Succinic Acid, CAS: 110-15-6

Signal: 1

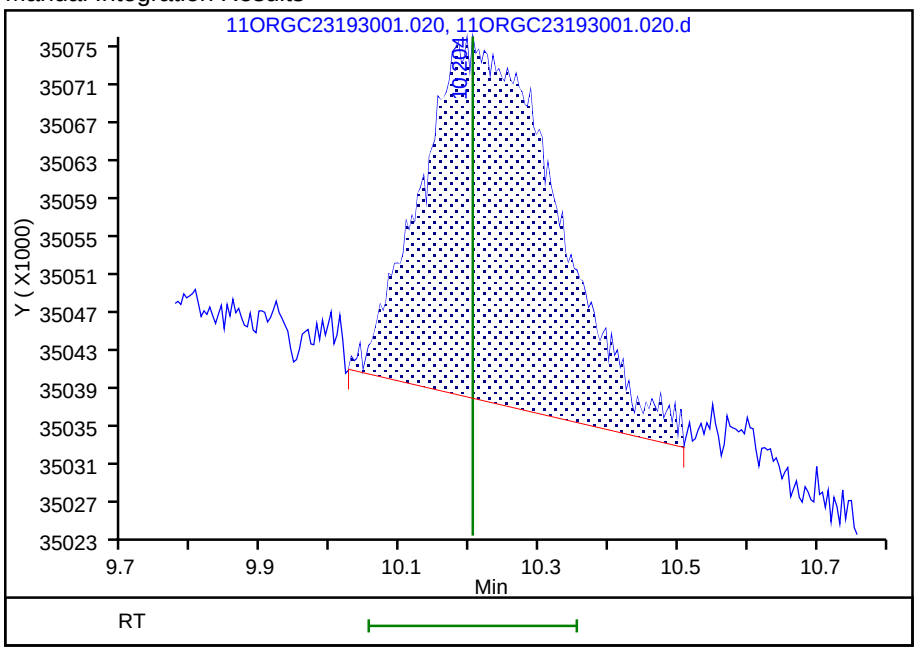
Not Detected
Expected RT: 10.20

Processing Integration Results



Manual Integration Results

RT: 10.20
Height: 38098
Amount: 1.035882
Amount Units: ug/ml



Reviewer: UHEW, 13-Jul-2023 14:06:26 -04:00:00 (UTC)
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Calibration / Tartaric Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

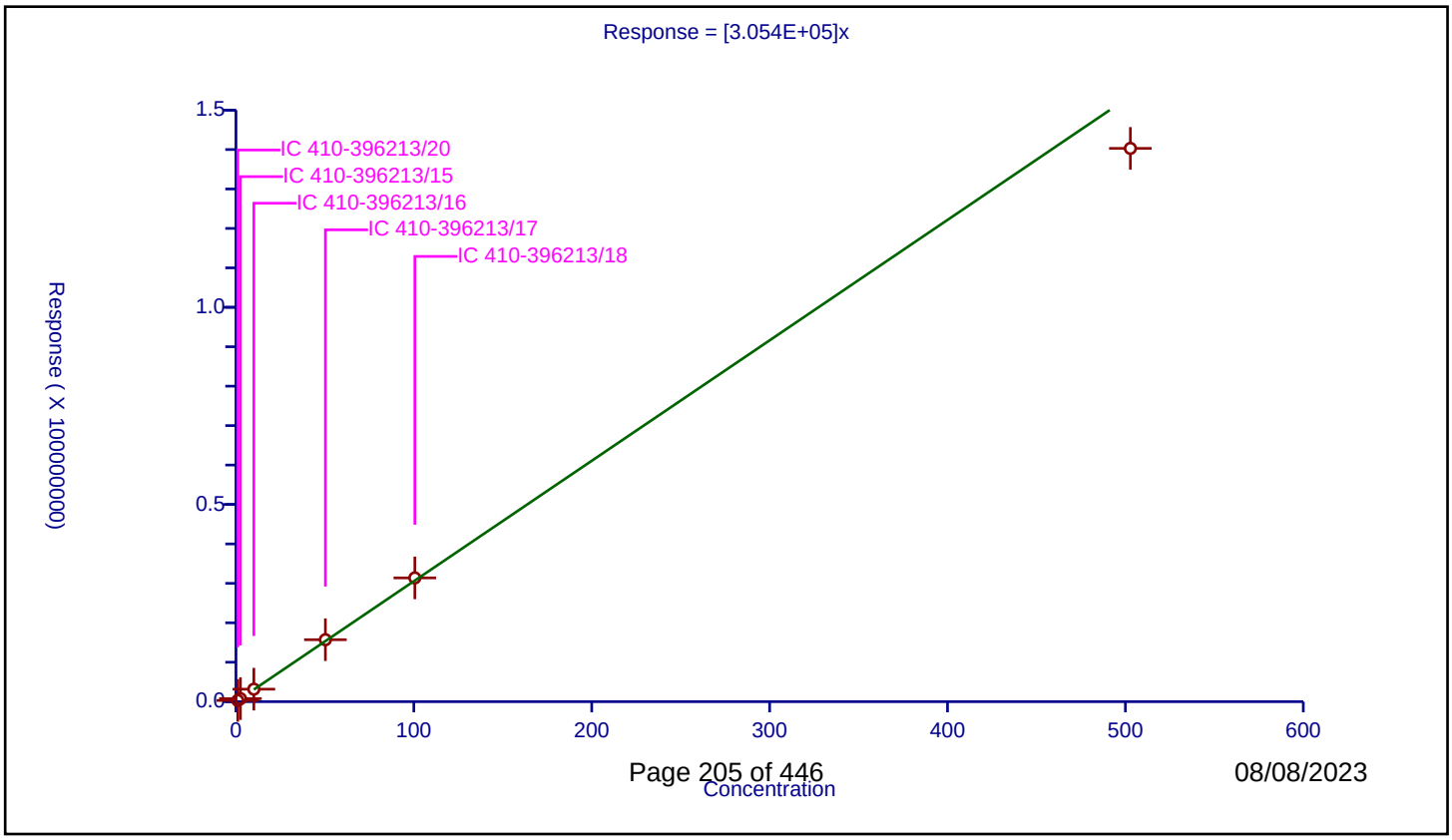
Curve Coefficients

Intercept:	0
Slope:	3.054E+05

Error Coefficients

Standard Error:	5940000
Relative Standard Error:	4.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/20	1.0056	308577.0			306858.591885	Y
2	IC 410-396213/15	2.514	771414.0			306847.25537	Y
3	IC 410-396213/16	10.056	3167020.0			314938.345267	Y
4	IC 410-396213/17	50.28	15712264.0			312495.306285	Y
5	IC 410-396213/18	100.56	31386569.0			312117.830151	Y
6	IC 410-396213/19	502.8	140290655.0			279018.804694	Y



Calibration / Succinic Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

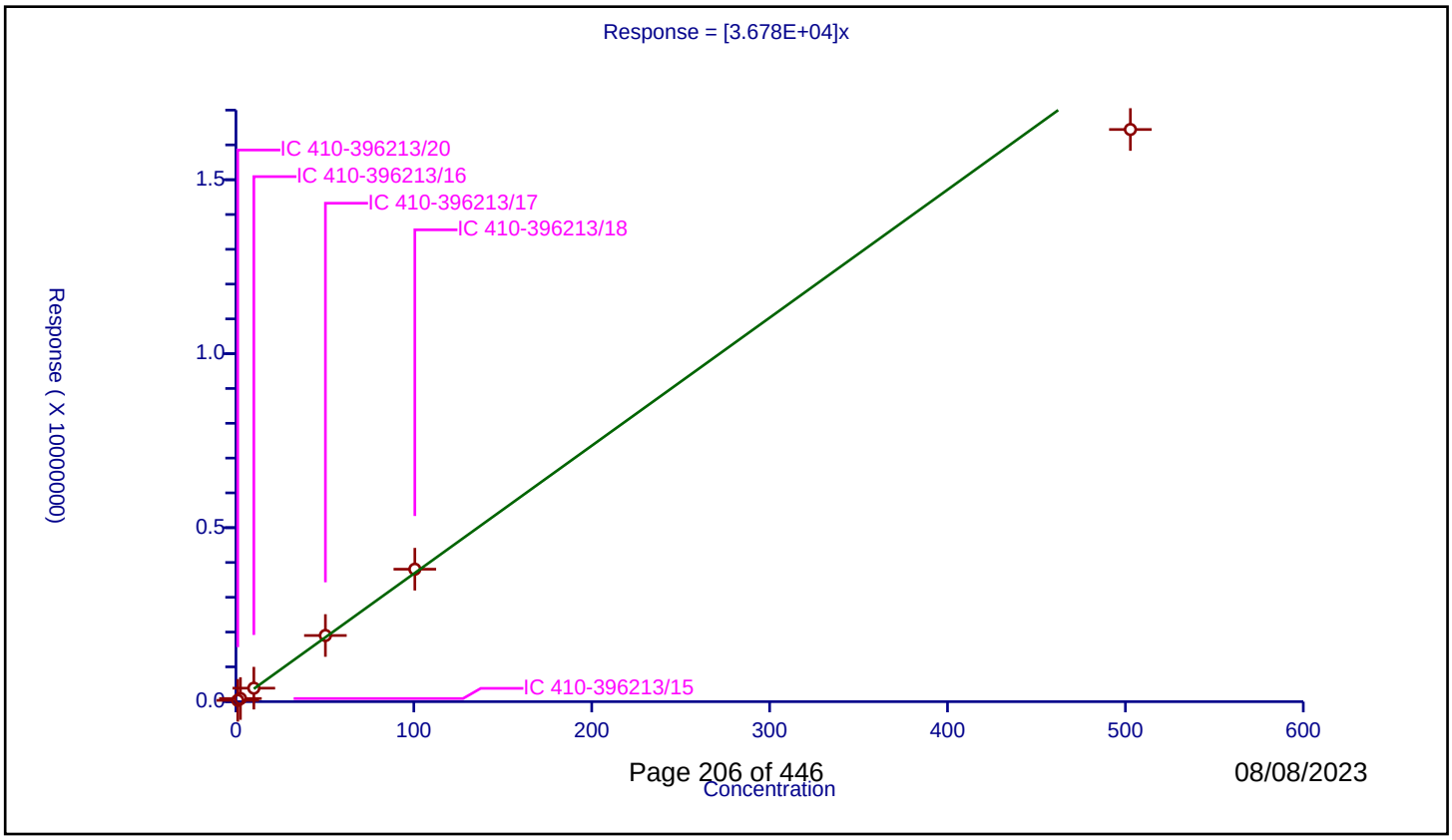
Curve Coefficients

Intercept:	0
Slope:	3.678E+04

Error Coefficients

Standard Error:	918000
Relative Standard Error:	6.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/20	1.0056	38098.0			37885.8393	Y
2	IC 410-396213/15	2.514	90069.0			35826.968974	Y
3	IC 410-396213/16	10.056	387995.0			38583.432776	Y
4	IC 410-396213/17	50.28	1901354.0			37815.31424	Y
5	IC 410-396213/18	100.56	3806771.0			37855.717979	Y
6	IC 410-396213/19	502.8	16442906.0			32702.677009	Y



Calibration / Isobutyric acid

Curve Type:	Quadratic
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

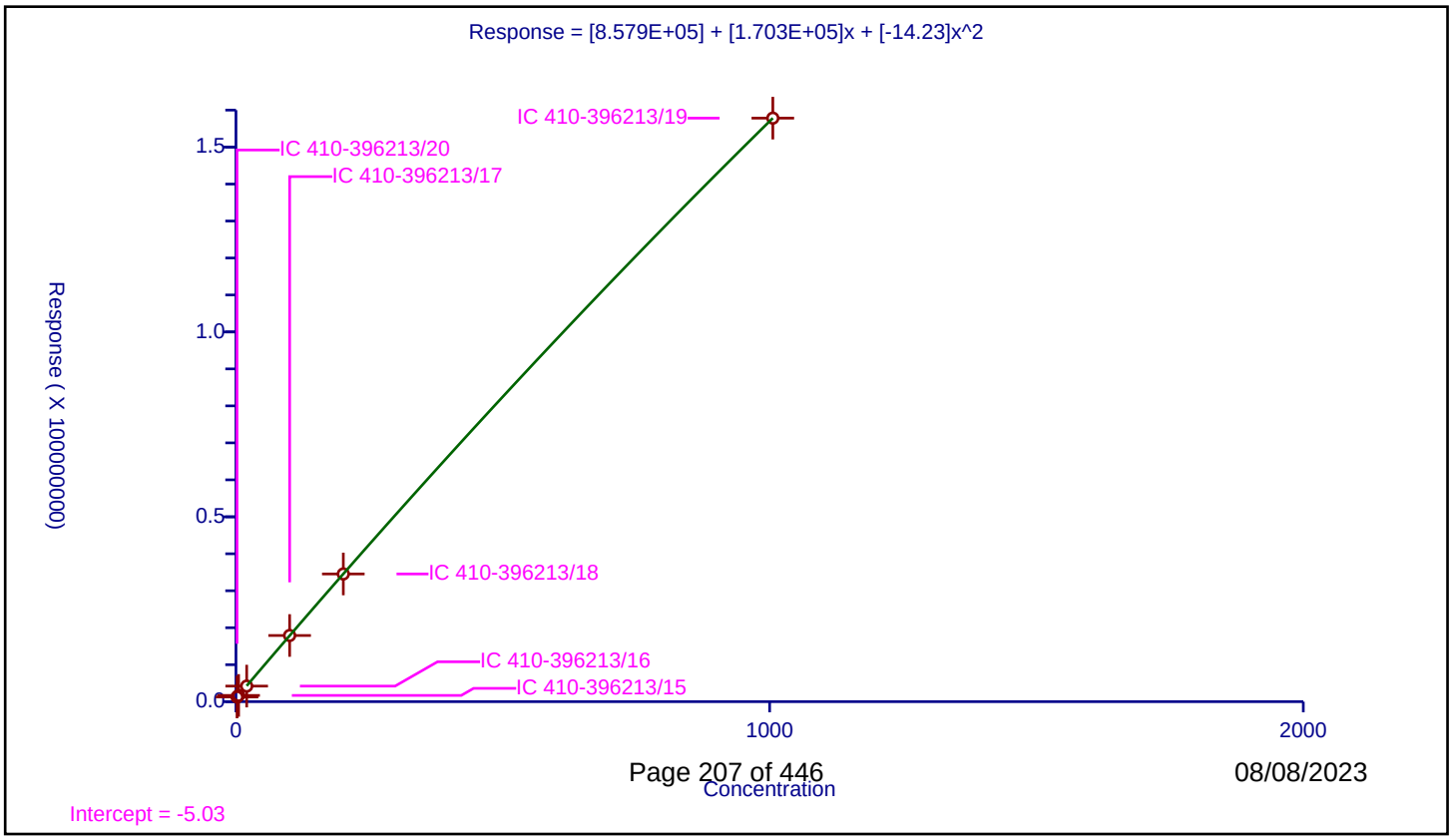
Curve Coefficients

Intercept:	8.579E+05
Slope:	1.703E+05
Second Order:	-14.23

Error Coefficients

Standard Error:	65100
Relative Standard Error:	11.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/20	2.012	1269343.0			630886.182903	Y
2	IC 410-396213/15	5.03	1686606.0			335309.343936	Y
3	IC 410-396213/16	20.12	4210017.0			209245.377734	Y
4	IC 410-396213/17	100.6	17896600.0			177898.60835	Y
5	IC 410-396213/18	201.2	34539112.0			171665.5666	Y
6	IC 410-396213/19	1006.0	157827969.0			156886.649105	Y



08/08/2023

Calibration / Isovaleric acid

Curve Type:	Linear
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

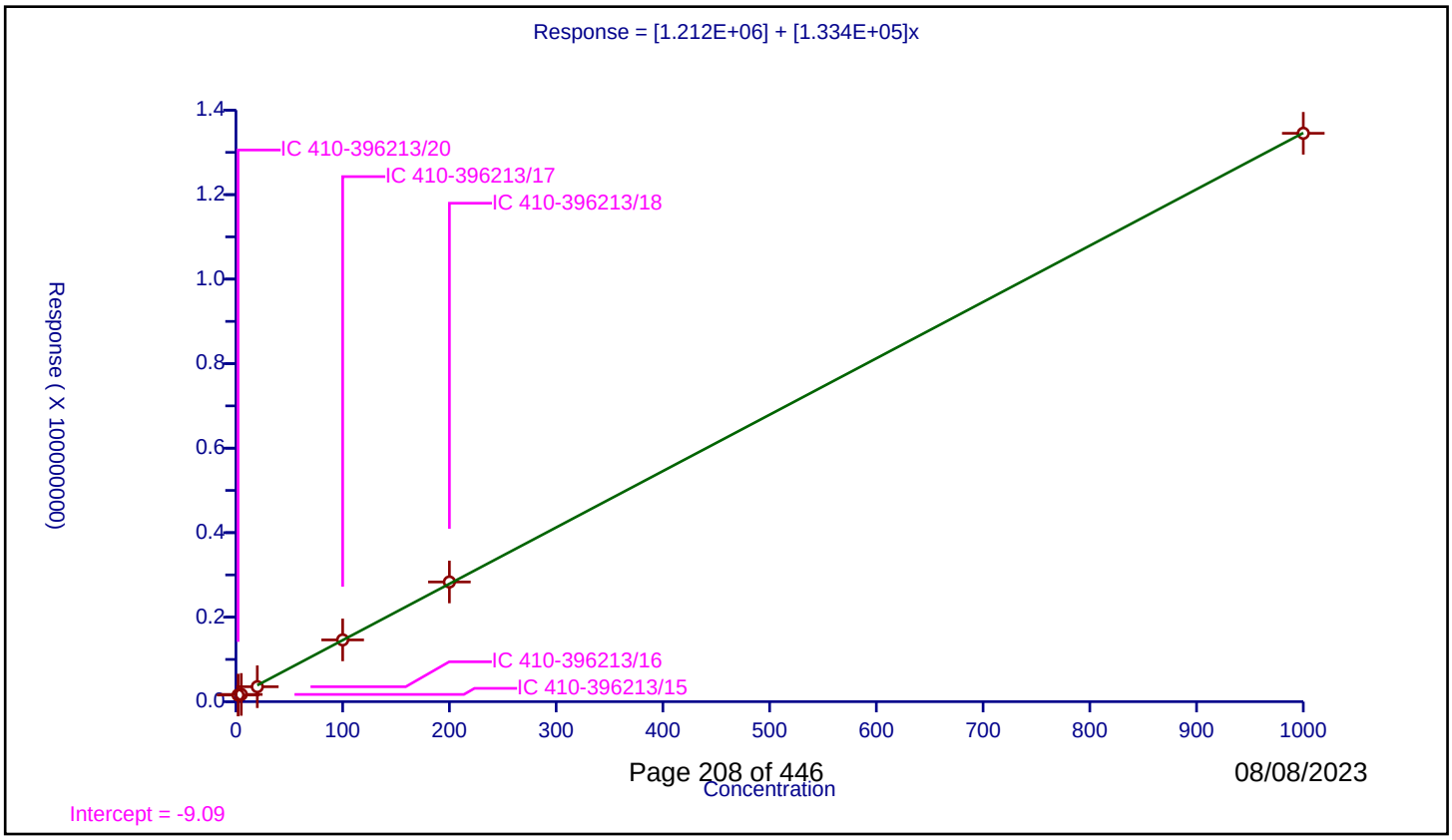
Curve Coefficients

Intercept:	1.212E+06
Slope:	1.334E+05

Error Coefficients

Standard Error:	298000
Relative Standard Error:	22.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/20	2.0	1570346.0			785173.0	Y
2	IC 410-396213/15	5.0	1712333.0			342466.6	Y
3	IC 410-396213/16	20.0	3537617.0			176880.85	Y
4	IC 410-396213/17	100.0	14618940.0			146189.4	Y
5	IC 410-396213/18	200.0	28327530.0			141637.65	Y
6	IC 410-396213/19	1000.0	134517629.0			134517.629	Y



Calibration / Valeric acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

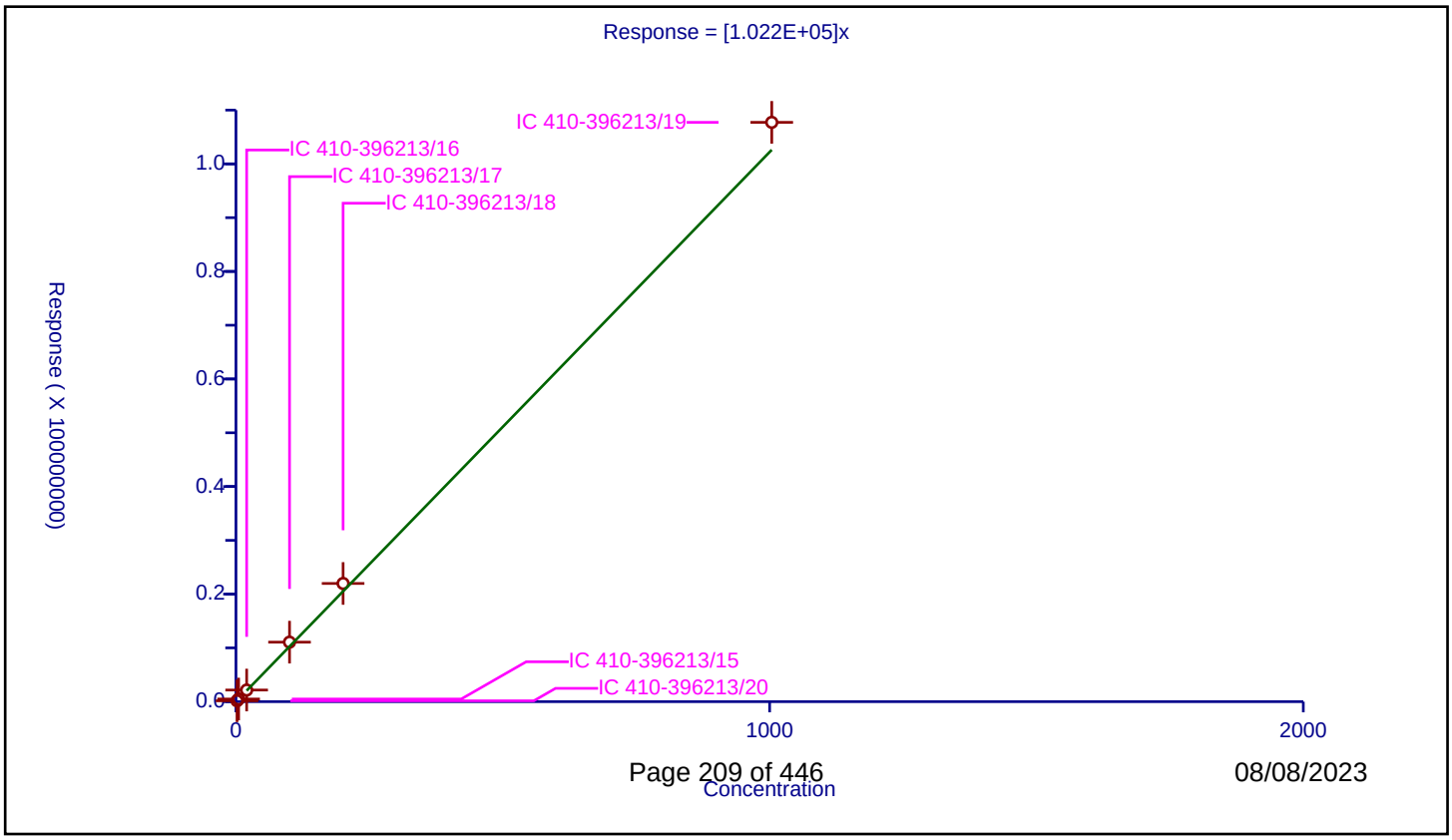
Curve Coefficients

Intercept:	0
Slope:	1.022E+05

Error Coefficients

Standard Error:	2410000
Relative Standard Error:	11.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/20	2.008	160751.0			80055.278884	Y
2	IC 410-396213/15	5.02	494391.0			98484.262948	Y
3	IC 410-396213/16	20.08	2161723.0			107655.527888	Y
4	IC 410-396213/17	100.4	11066941.0			110228.496016	Y
5	IC 410-396213/18	200.8	21983275.0			109478.461155	Y
6	IC 410-396213/19	1004.0	107722246.0			107293.073705	Y



Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136645-1 Analy Batch No.: 396213

SDG No.:

Instrument ID: 10136 GC Column: Supelcosil P ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/13/2023 04:09 Calibration End Date: 07/13/2023 06:13 Calibration ID: 52001

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-396213/22	11ORGC23193001.022.d
Level 2	IC 410-396213/23	11ORGC23193001.023.d
Level 3	ICRT 410-396213/24	11ORGC23193001.024.d
Level 4	IC 410-396213/25	11ORGC23193001.025.d
Level 5	IC 410-396213/26	11ORGC23193001.026.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5						RT WINDOW	AVG RT
Fumaric Acid	10.650	10.642	10.629	10.638	10.646						10.500 - 10.800	10.641

INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136645-1 Analy Batch No.: 396213

SDG No.:

Instrument ID: 10136 GC Column: Supelcosil P ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/13/2023 04:09 Calibration End Date: 07/13/2023 06:13 Calibration ID: 52001

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-396213/22	11ORGC23193001.022.d
Level 2	IC 410-396213/23	11ORGC23193001.023.d
Level 3	ICRT 410-396213/24	11ORGC23193001.024.d
Level 4	IC 410-396213/25	11ORGC23193001.025.d
Level 5	IC 410-396213/26	11ORGC23193001.026.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 3	LVL 4		B	M1	M2								
Fumaric Acid	12948458 10718971	11501616	12857131	15093559	Ave		12623947. 1				13.2		20.0			

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.

INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136645-1 Analy Batch No.: 396213

SDG No.:

Instrument ID: 10136 GC Column: Supelcosil P ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/13/2023 04:09 Calibration End Date: 07/13/2023 06:13 Calibration ID: 52001

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-396213/22	11ORGC23193001.022.d
Level 2	IC 410-396213/23	11ORGC23193001.023.d
Level 3	ICRT 410-396213/24	11ORGC23193001.024.d
Level 4	IC 410-396213/25	11ORGC23193001.025.d
Level 5	IC 410-396213/26	11ORGC23193001.026.d

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
Fumaric Acid	Ave	637103	1131828	6326094	14852968	52740555	0.0492	0.0984	0.492	0.984	4.92

Curve Type Legend

Ave = Average by Height

Report Date: 17-Jul-2023 16:02:59 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.022.d				
Lims ID:	IC ORGS1				
Client ID:					
Sample Type:	IC	Calib Level:	1		
Inject. Date:	13-Jul-2023 04:09:00	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGS1				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub6				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:02:59	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				
First Level Reviewer: UHEW		Date:	13-Jul-2023 12:35:27		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid	10.650	10.650	0.000	637103	0.0492	0.0505	H

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGS1_00017 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 16:02:59 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.022.d

Injection Date: 13-Jul-2023 04:09:00 Instrument ID: 10136

Lims ID: IC ORGS1

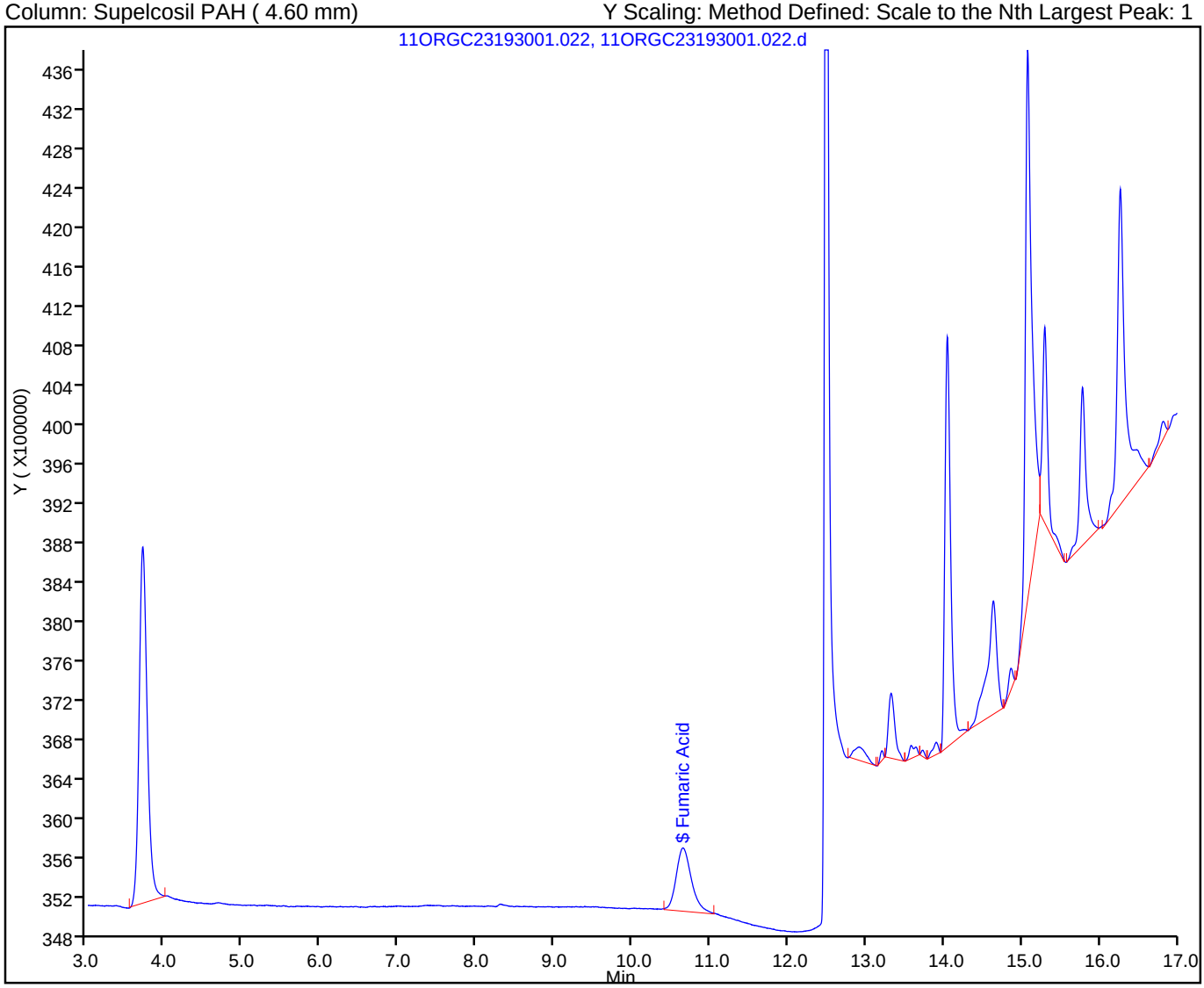
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 22

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:03:01 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.023.d				
Lims ID:	IC ORGS2				
Client ID:					
Sample Type:	IC	Calib Level:	2		
Inject. Date:	13-Jul-2023 04:40:00	ALS Bottle#:	0	Worklist Smp#:	23
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGS2				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub6				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:03:01	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid	10.642	10.650	-0.008	1131828H	0.0984	0.0897	

Reagents:

GCS_ORGS2_00017 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 16:03:01 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.023.d

Injection Date: 13-Jul-2023 04:40:00 Instrument ID: 10136

Lims ID: IC ORGS2

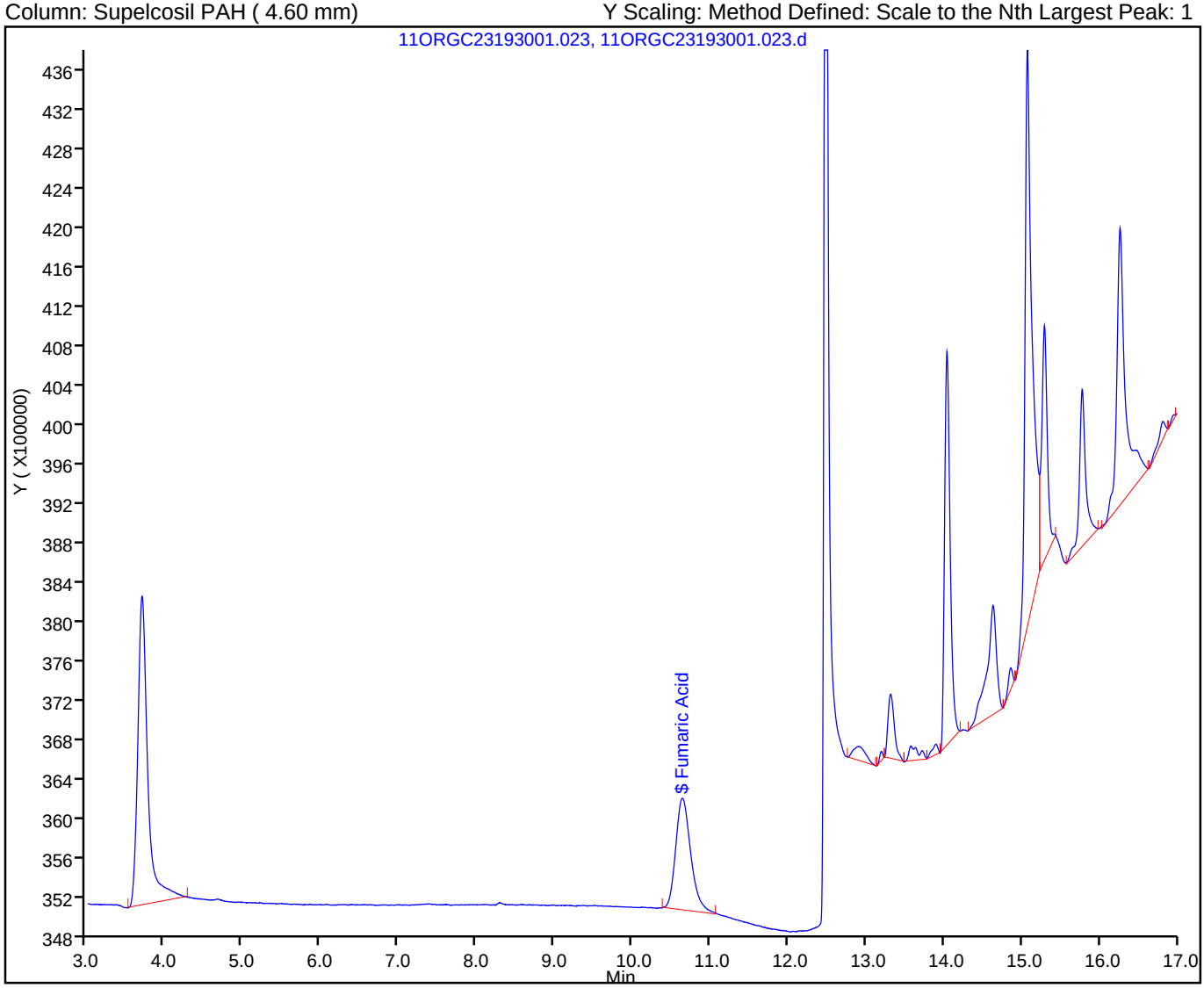
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 23

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:03:02 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.024.d				
Lims ID:	ICRT ORGS3				
Client ID:					
Sample Type:	ICRT	Calib Level:	3		
Inject. Date:	13-Jul-2023 05:11:00	ALS Bottle#:	0	Worklist Smp#:	24
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	ICRT ORGS3				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub6				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:03:02	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				
First Level Reviewer: UHEW		Date:	17-Jul-2023 15:40:45		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid	10.629	10.629	0.000	6326094	H 0.4920	0.5011	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGS3_00047 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 16:03:02 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.024.d

Injection Date: 13-Jul-2023 05:11:00 Instrument ID: 10136

Lims ID: ICRT ORGS3

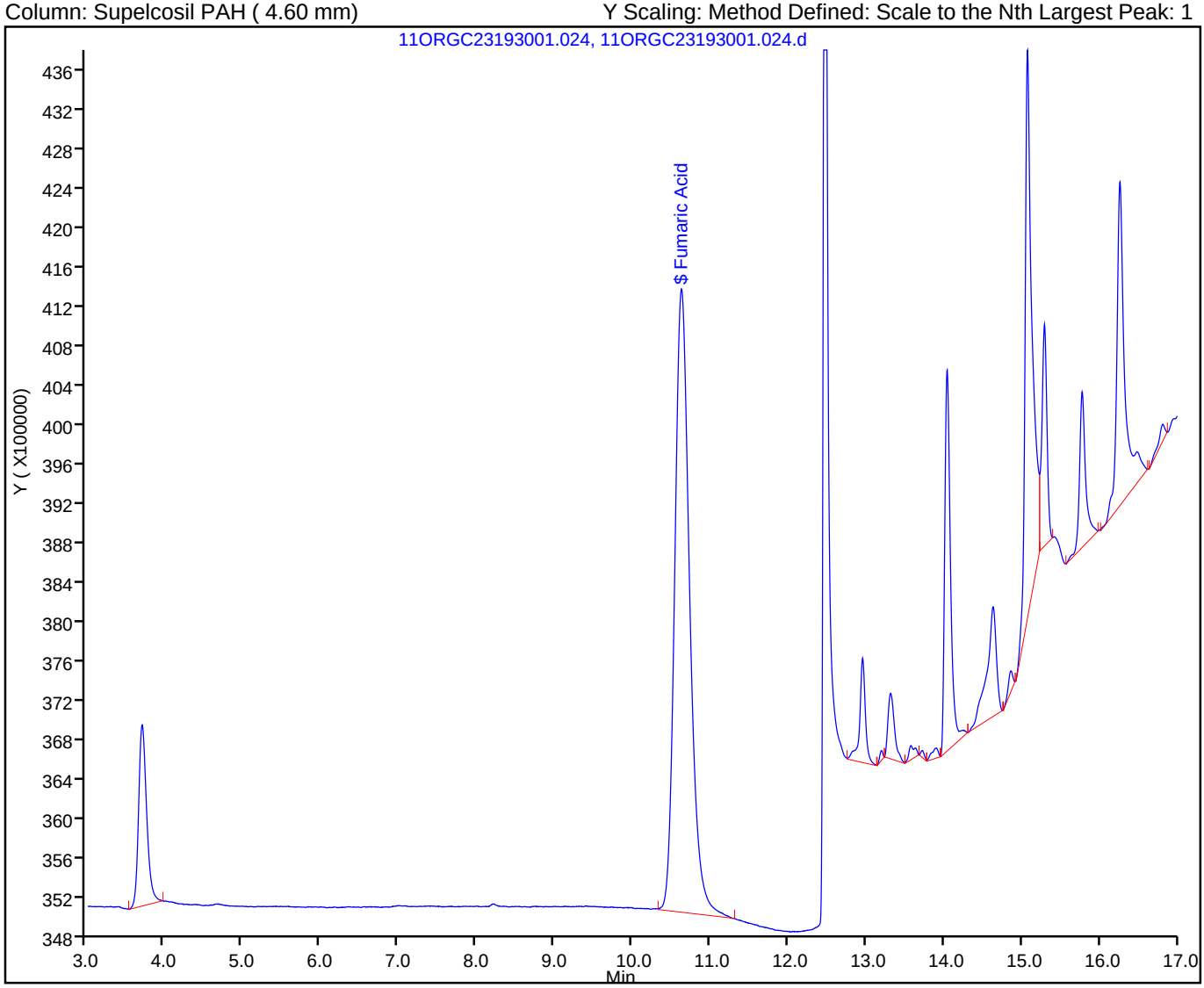
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 24

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:03:03 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.025.d				
Lims ID:	IC ORGS4				
Client ID:					
Sample Type:	IC	Calib Level:	4		
Inject. Date:	13-Jul-2023 05:42:00	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGS4				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub6				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:03:03	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid	10.638	10.629	0.009	14852968	H 0.9841	1.18	

Reagents:

GCS_ORGS4_00019 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 16:03:03 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.025.d

Injection Date: 13-Jul-2023 05:42:00 Instrument ID: 10136

Lims ID: IC ORGS4

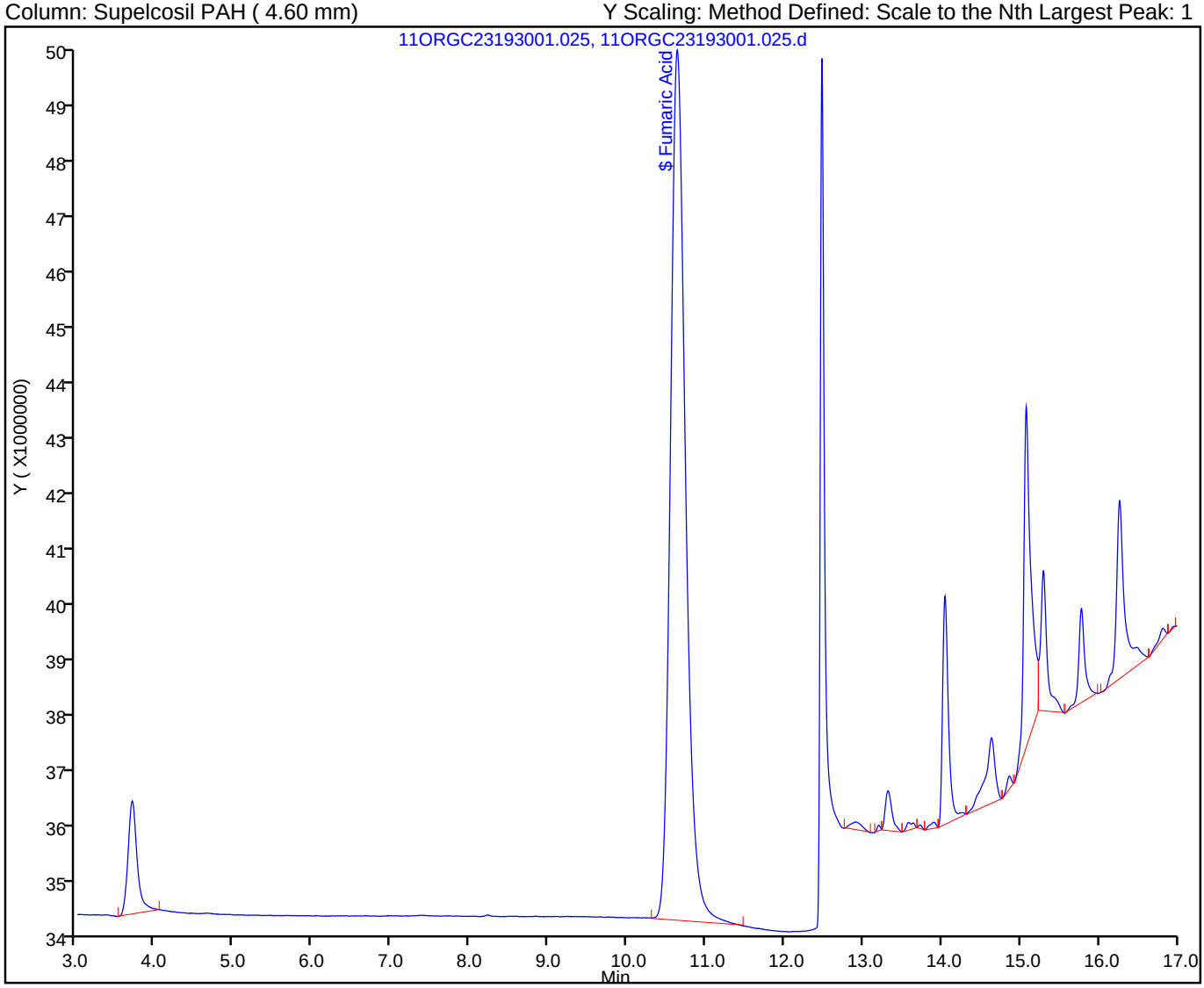
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 25

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:03:05 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Lims ID:	IC ORGS5				
Client ID:					
Sample Type:	IC	Calib Level:	5		
Inject. Date:	13-Jul-2023 06:13:00	ALS Bottle#:	0	Worklist Smp#:	26
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGS5				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub6				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:03:04	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid	10.646	10.629	0.017	52740555	H 4.92	4.18	

Reagents:

GCS_ORGS5_00016 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 16:03:05 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d

Injection Date: 13-Jul-2023 06:13:00 Instrument ID: 10136

Lims ID: IC ORGS5

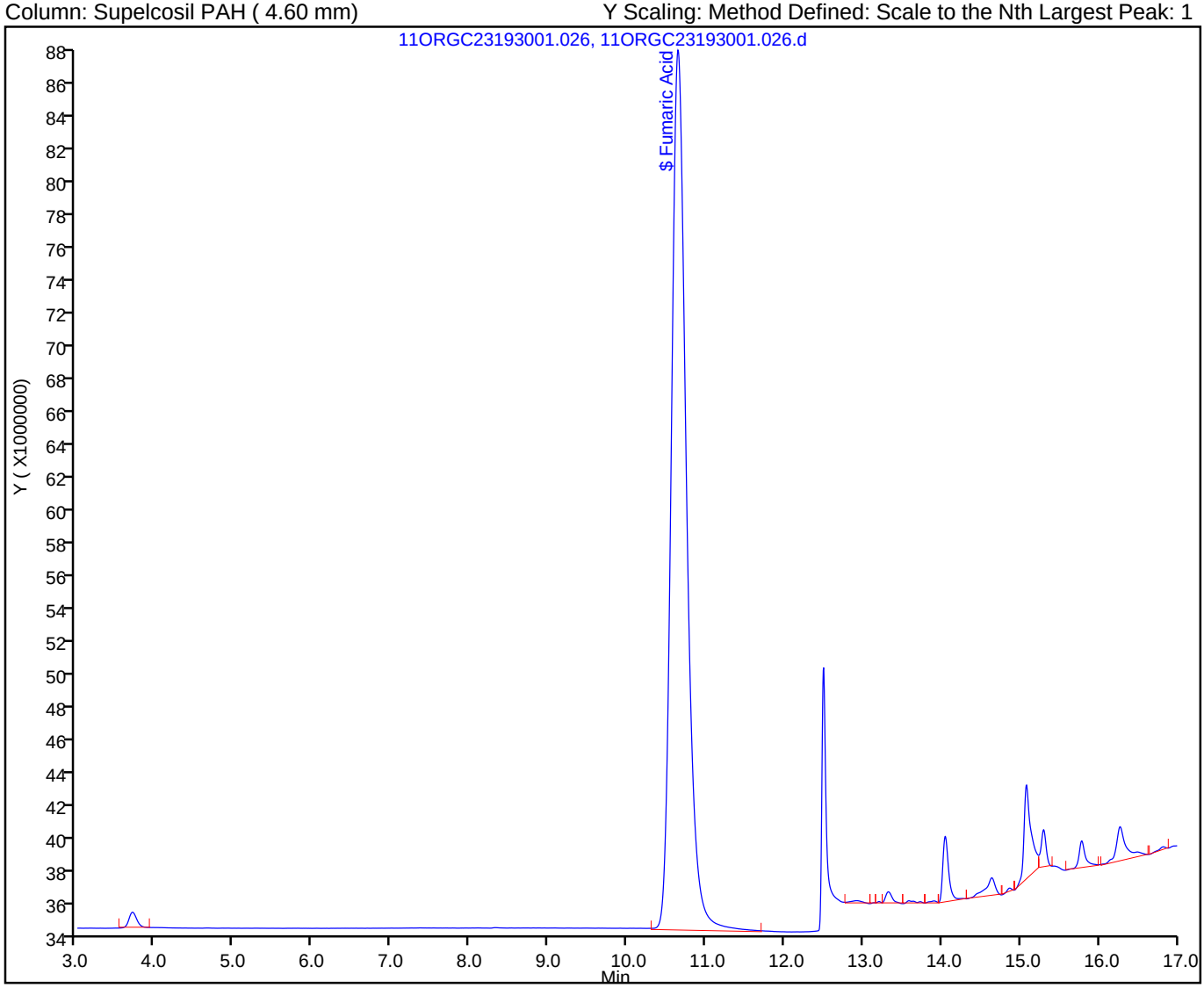
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 26

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Calibration / Fumaric Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

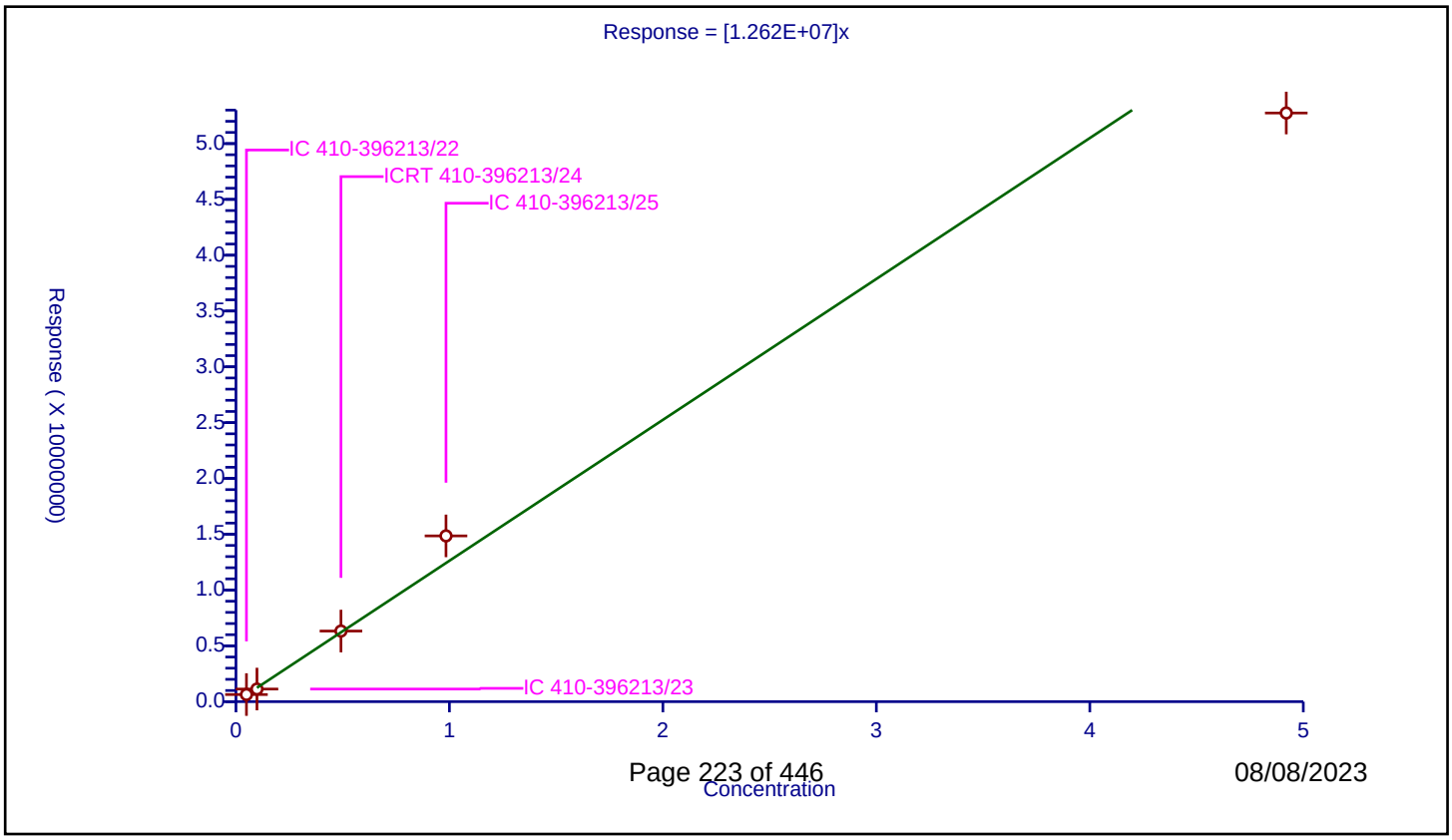
Curve Coefficients

Intercept:	0
Slope:	1.262E+07

Error Coefficients

Standard Error:	4840000
Relative Standard Error:	13.2
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.976

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/22	0.049203	637103.0			12948458.427332	Y
2	IC 410-396213/23	0.098406	1131828.0			11501615.755137	Y
3	ICRT 410-396213/24	0.49203	6326094.0			12857130.662765	Y
4	IC 410-396213/25	0.98406	14852968.0			15093559.335813	Y
5	IC 410-396213/26	4.9203	52740555.0			10718971.404183	Y



INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136645-1 Analy Batch No.: 394255

SDG No.:

Instrument ID: 6854A GC Column: Supelcogel ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/05/2023 19:48 Calibration End Date: 07/06/2023 00:06 Calibration ID: 51929

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-394255/7	48ORGA23186001.007.d
Level 2	IC 410-394255/8	48ORGA23186001.008.d
Level 3	IC 410-394255/9	48ORGA23186001.009.d
Level 4	IC 410-394255/10	48ORGA23186001.010.d
Level 5	IC 410-394255/11	48ORGA23186001.011.d
Level 6	IC 410-394255/12	48ORGA23186001.012.d
Level 7	IC 410-394255/13	48ORGA23186001.013.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7				RT WINDOW	AVG RT
Oxalic Acid	13.882	13.870	13.846	13.854	13.850	13.850	13.850				13.746 - 13.946	13.857
Citric Acid	15.541	15.537	15.509	15.493	15.453	15.417	15.381				15.359 - 15.659	15.476
Pyruvic Acid	16.680	16.672	16.668	16.664	16.660	16.652	16.656				16.568 - 16.768	16.665
Quinic Acid	17.315	17.315	17.347	17.347	17.343	17.339	17.339				17.247 - 17.447	17.335
L-Lactic Acid	19.370	19.366	19.366	19.370	19.366	19.362	19.362				19.266 - 19.466	19.366
Formic-acid	20.417	20.417	20.417	20.421	20.417	20.417	20.417				20.317 - 20.517	20.418
Acetic acid	21.360	21.364	21.368	21.368	21.364	21.360	21.360				21.268 - 21.468	21.363
Propionic acid	23.175	23.395	23.407	23.407	23.395	23.391	23.383				23.307 - 23.507	23.365
Butyric acid	26.429	26.445	26.445	26.441	26.405	26.389	26.377				26.345 - 26.545	26.419

INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136645-1 Analy Batch No.: 394255

SDG No.:

Instrument ID: 6854A GC Column: Supelcogel ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/05/2023 19:48 Calibration End Date: 07/06/2023 00:06 Calibration ID: 51929

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-394255/7	48ORGA23186001.007.d
Level 2	IC 410-394255/8	48ORGA23186001.008.d
Level 3	IC 410-394255/9	48ORGA23186001.009.d
Level 4	IC 410-394255/10	48ORGA23186001.010.d
Level 5	IC 410-394255/11	48ORGA23186001.011.d
Level 6	IC 410-394255/12	48ORGA23186001.012.d
Level 7	IC 410-394255/13	48ORGA23186001.013.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								
Oxalic Acid	6371644 6767221	5944746 6807029	6525739 6944051	6356249	Ave		6530954.40				5.2		20.0			
Citric Acid	469500 487556	470422 466323	484079 439404	482016	Ave		471328.527				3.5		20.0			
Pyruvic Acid	3525975 2843700	3725748 2598738	3201776 2302113	3041897	Ave		3034278.12				16.5		20.0			
Quinic Acid	310607 223903	302315 221427	225536 220148	224052	Ave		246855.531				16.5		20.0			
L-Lactic Acid	277674 283950	292964 281602	287838 281710	283723	Ave		284208.676				1.7		20.0			
Formic-acid	83619 376817	156809 374128	382163 373418	373879	Qua	-2985215.3	391330.940	-15.386427			11.5		30.0	1.0000		0.9900
Acetic acid	22106 217267	106909 215862	218668 215910	215620	Lin	-1093116.1	217562.841				21.3		30.0	1.0000		0.9900
Propionic acid	120069 178310	125552 176822	184317 176526	178103	Ave		162814.141				16.9		20.0			
Butyric acid	33705 139552	72839 138064	143846 137264	139690	Qua	-967824.50	146098.110	-8.014059 8			10.6		30.0	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.

INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envir Job No.: 410-136645-1 Analy Batch No.: 394255

SDG No.:

Instrument ID: 6854A GC Column: Supelcogel ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/05/2023 19:48 Calibration End Date: 07/06/2023 00:06 Calibration ID: 51929

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-394255/7	48ORGA23186001.007.d
Level 2	IC 410-394255/8	48ORGA23186001.008.d
Level 3	IC 410-394255/9	48ORGA23186001.009.d
Level 4	IC 410-394255/10	48ORGA23186001.010.d
Level 5	IC 410-394255/11	48ORGA23186001.011.d
Level 6	IC 410-394255/12	48ORGA23186001.012.d
Level 7	IC 410-394255/13	48ORGA23186001.013.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
Oxalic Acid	Ave	8028272 686148516	14980761 874950483	81898030	160177472	511601924	1.26 101	2.52 126	12.6	25.2	75.6
Citric Acid	Ave	2366282 188021262	4741853 221459368	24349189	48587204	147436956	5.04 403	10.1 504	50.3	101	302
Pyruvic Acid	Ave	4442728 261952749	9388885 290066291	40278346	76655797	214983737	1.26 101	2.52 126	12.6	25.2	75.6
Quinic Acid	Ave	1556143 88748012	3029201 110294149	11385049	22450024	67305156	5.01 401	10.0 501	50.5	100	301
L-Lactic Acid	Ave	1393925 113091344	2941359 141418669	14423544	28485742	85525670	5.02 402	10.0 502	50.1	100	301
Formic-acid	Qua	844550 302295261	3167534 377152663	38407370	75523631	228351146	10.1 808	20.2 1010	101	202	606
Acetic acid	Lin	221499 173035102	2142456 216341762	21917134	43210267	130620944	10.0 802	20.0 1002	100	200	601
Propionic acid	Ave	1212693 142872370	2536160 178290956	18431747	35976731	108055774	10.1 808	20.2 1010	100	202	606
Butyric acid	Qua	339742 111334520	1468425 138361738	14406157	28161575	84400972	10.1 806	20.2 1008	100	202	605

Curve Type Legend

Ave = Average by Height
Lin = Linear by Height
Qua = Quadratic by Height

Report Date: 17-Jul-2023 17:08:01 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.007.d			
Lims ID:	IC ORGA1			
Client ID:				
Sample Type:	IC	Calib Level:	1	
Inject. Date:	05-Jul-2023 19:48:00	ALS Bottle#:	0	Worklist Smp#: 7
Injection Vol:	40.0 ul	Dil. Factor:	1.0000	
Sample Info:	IC ORGA1			
Operator ID:	24470	Instrument ID:	6854A	
Sublist:	chrom-8015_6854AP*sub1			
Method:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\8015_6854AP.m			
Limit Group:	LC - 8015D VFA			
Last Update:	17-Jul-2023 17:08:01	Calib Date:	06-Jul-2023 10:07:00	
Integrator:	Falcon			
Quant Method:	External Standard	Quant By:	Initial Calibration	
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.027.d			
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH	
Process Host:	CTX1676			

First Level Reviewer: UHEW Date: 06-Jul-2023 14:53:32

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid						M
13.882	13.846	0.036	8028272H	1.26	1.23	M
2 Citric Acid						M
15.541	15.509	0.032	2366282H	5.04	5.02	M
4 Pyruvic Acid						M
16.680	16.668	0.012	4442728H	1.26	1.46	M
5 Quinic Acid						M
17.315	17.347	-0.032	1556143H	5.01	6.30	M
7 L-Lactic Acid						M
19.370	19.366	0.004	1393925H	5.02	4.90	M
8 Formic-acid						M
20.417	20.417	0.000	844550H	10.1	9.79	M
9 Acetic acid						M
21.360	21.368	-0.008	221499H	10.0	6.04	M
11 Propionic acid						Ma
23.175	23.407	-0.232	1212693H	10.1	7.45	M
13 n-Butyric Acid						M
26.429	26.445	-0.016	339742H	10.1	8.95	M

QC Flag Legend

Processing Flags

H - Response Measured by Height

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 17-Jul-2023 17:08:01 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Reagents:

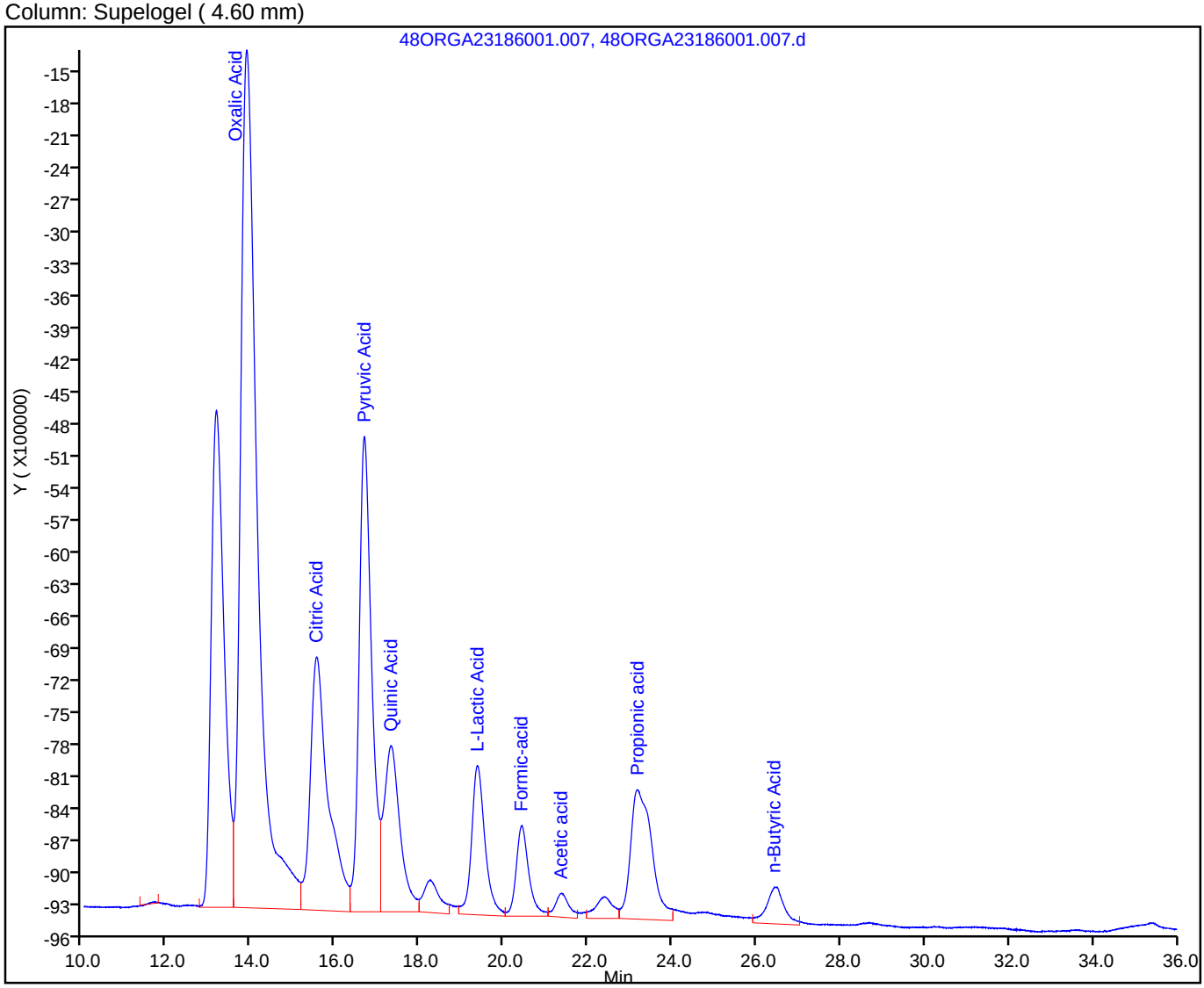
GCS_ORGA1_00011 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 17:08:01 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.007.d				
Injection Date:	05-Jul-2023 19:48:00	Instrument ID:	6854A		
Lims ID:	IC ORGA1				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Report Date: 17-Jul-2023 17:08:01 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

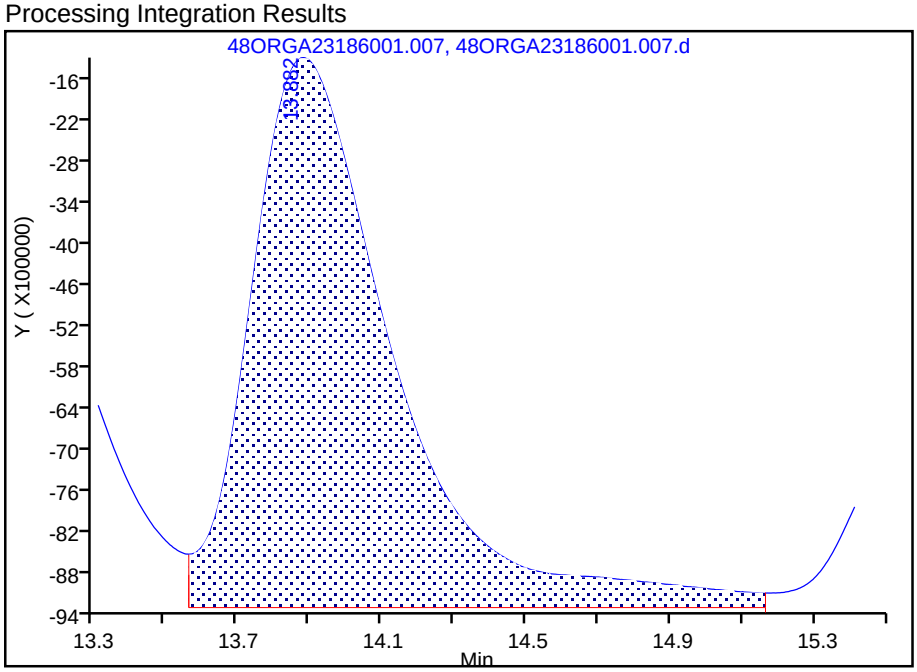
Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.007.d				
Injection Date:	05-Jul-2023 19:48:00	Instrument ID:	6854A		
Lims ID:	IC ORGA1				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		
Column:	Supelogel (4.60 mm)	Detector	SupelcogelH		

1 Oxalic Acid, CAS: 144-62-7

Signal: 1

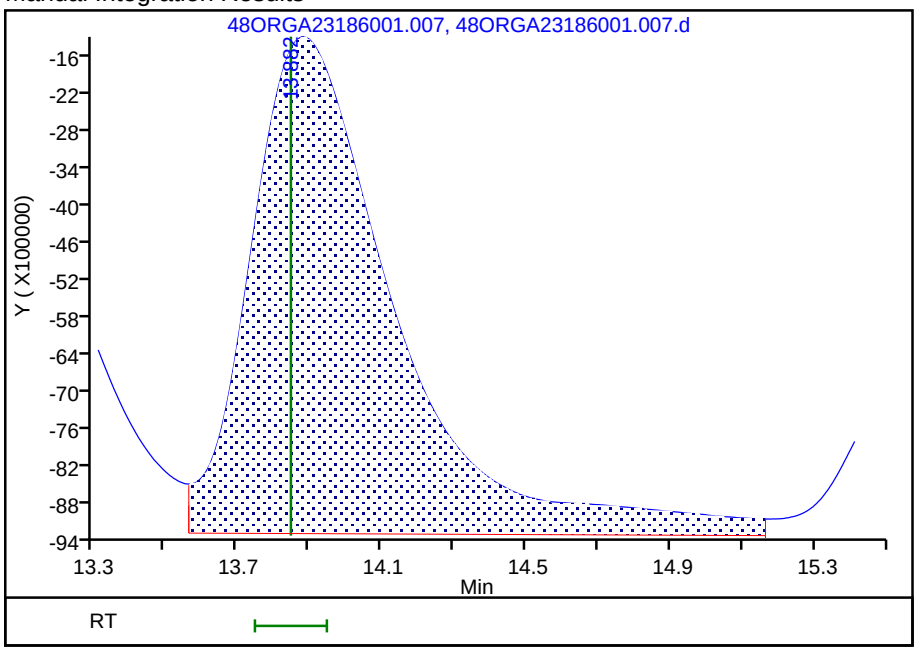
Processing Integration Results

RT: 13.88
Height: 8012554
Amount: 1.227193
Amount Units: ug/ml



Manual Integration Results

RT: 13.88
Height: 8028272
Amount: 1.229265
Amount Units: ug/ml



Reviewer: GM5C, 06-Jul-2023 16:25:32 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 17-Jul-2023 17:08:01 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

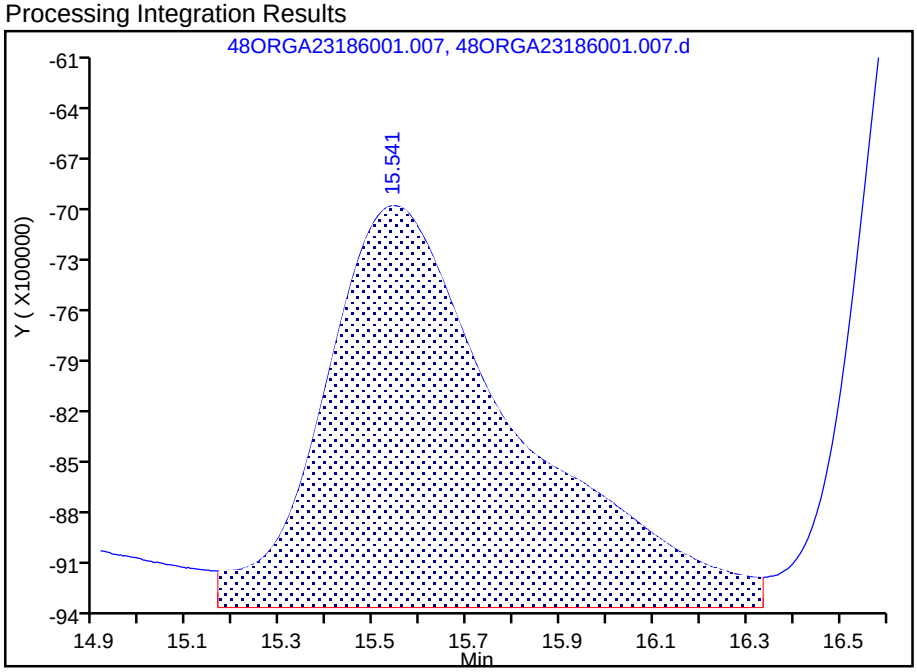
Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.007.d				
Injection Date:	05-Jul-2023 19:48:00	Instrument ID:	6854A		
Lims ID:	IC ORGA1				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		
Column:	Supelogel (4.60 mm)	Detector	SupelcogelH		

2 Citric Acid, CAS: 77-92-9

Signal: 1

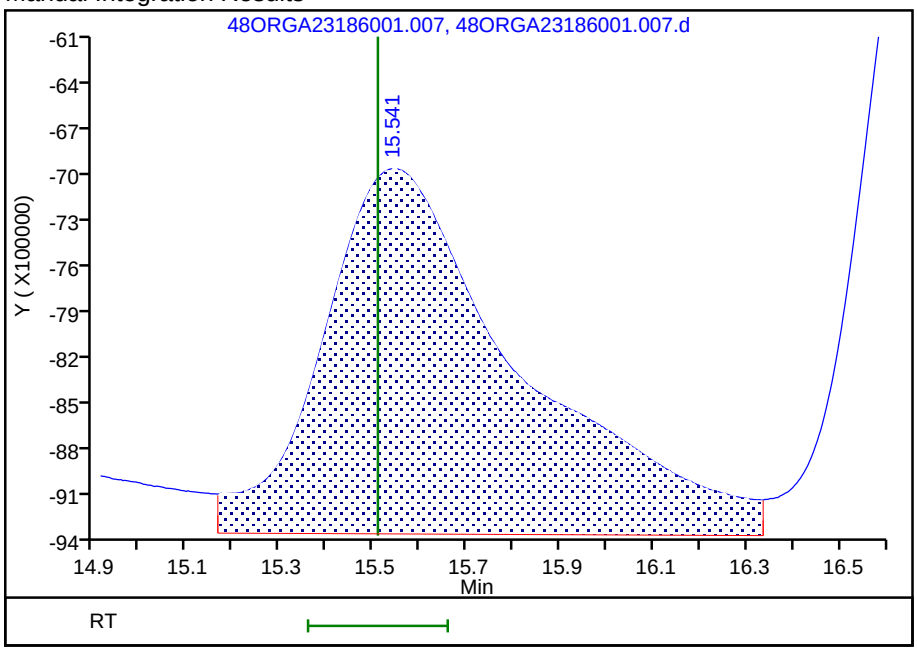
Processing Integration Results

RT: 15.54
Height: 2326186
Amount: 4.977950
Amount Units: ug/ml



Manual Integration Results

RT: 15.54
Height: 2366282
Amount: 5.020451
Amount Units: ug/ml



Reviewer: GM5C, 06-Jul-2023 16:25:32 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 17-Jul-2023 17:08:02 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

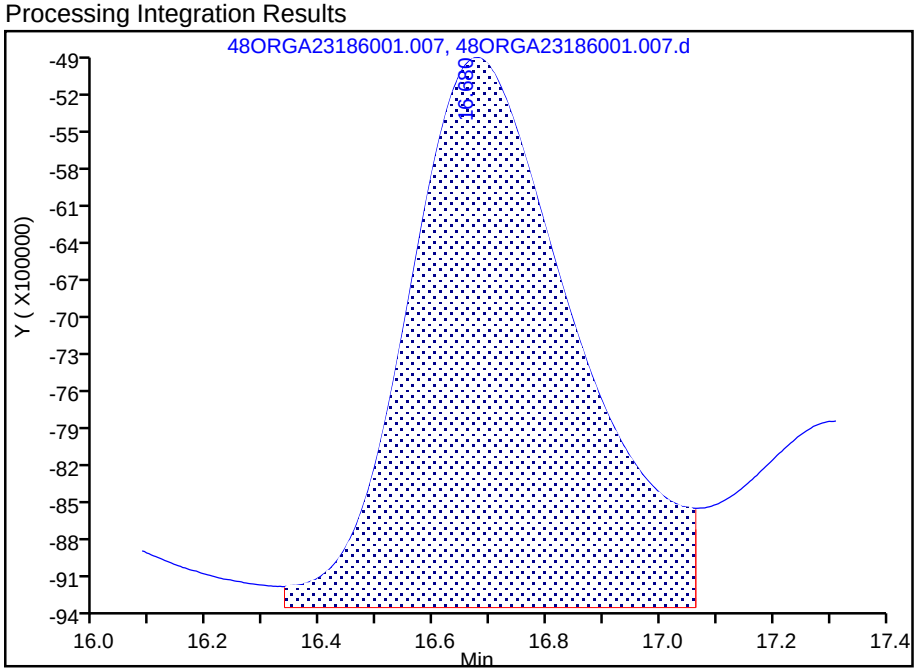
Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.007.d				
Injection Date:	05-Jul-2023 19:48:00	Instrument ID:	6854A		
Lims ID:	IC ORGA1				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		
Column:	Supelogel (4.60 mm)	Detector	SupelcogelH		

4 Pyruvic Acid, CAS: 127-17-3

Signal: 1

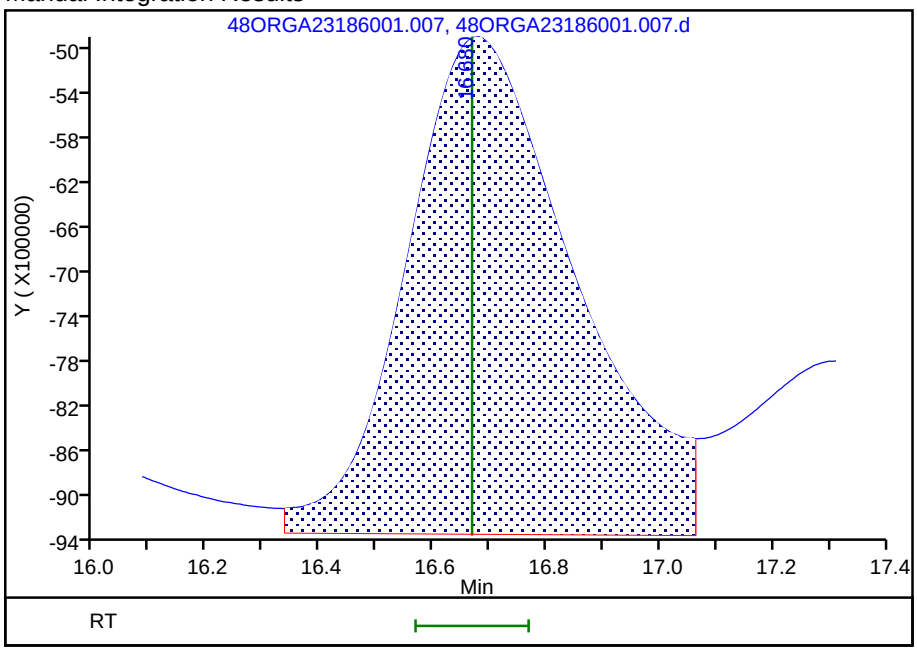
Processing Integration Results

RT: 16.68
Height: 4385890
Amount: 1.808315
Amount Units: ug/ml



Manual Integration Results

RT: 16.68
Height: 4442728
Amount: 1.464180
Amount Units: ug/ml



Reviewer: GM5C, 06-Jul-2023 16:25:32 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 17-Jul-2023 17:08:02 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

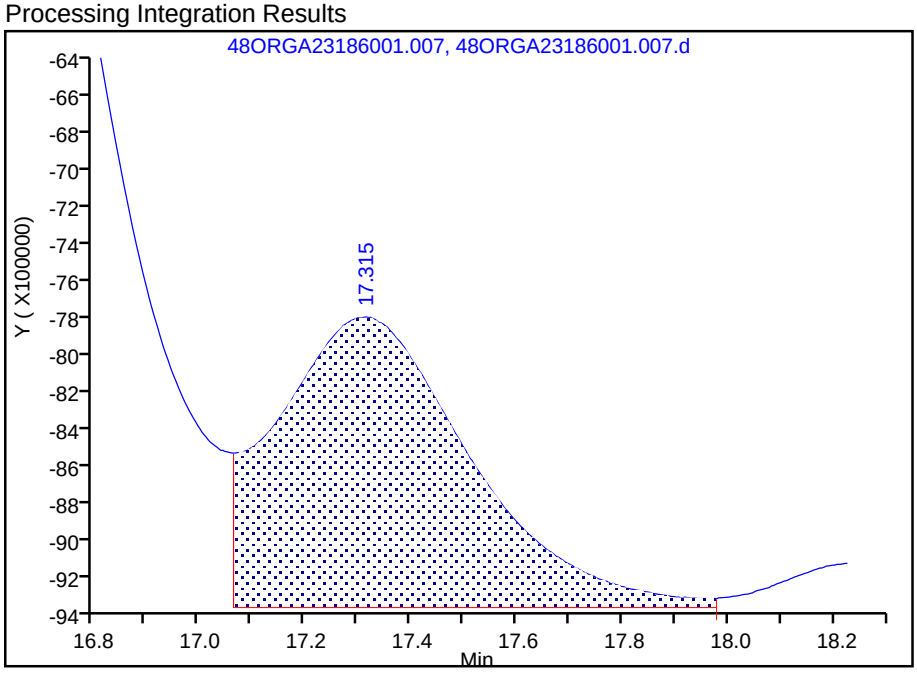
Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.007.d				
Injection Date:	05-Jul-2023 19:48:00	Instrument ID:	6854A		
Lims ID:	IC ORGA1				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		
Column:	Supelogel (4.60 mm)	Detector	SupelcogelH		

5 Quinic Acid, CAS: 77-95-2

Signal: 1

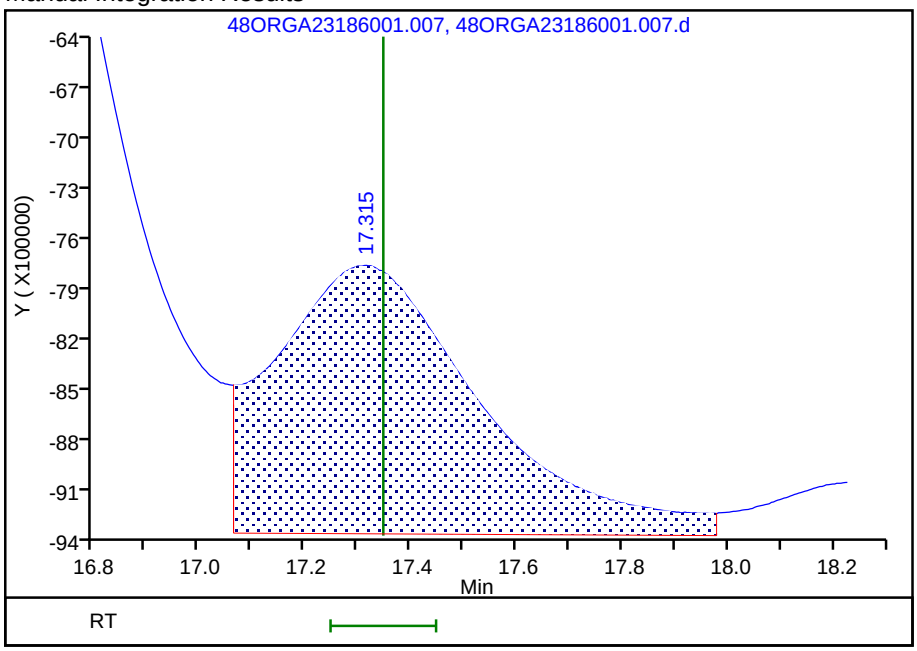
Processing Integration Results

RT: 17.32
Height: 1489965
Amount: 5.996330
Amount Units: ug/ml



Manual Integration Results

RT: 17.32
Height: 1556143
Amount: 6.303861
Amount Units: ug/ml



Reviewer: GM5C, 06-Jul-2023 16:25:32 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 17-Jul-2023 17:08:02 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

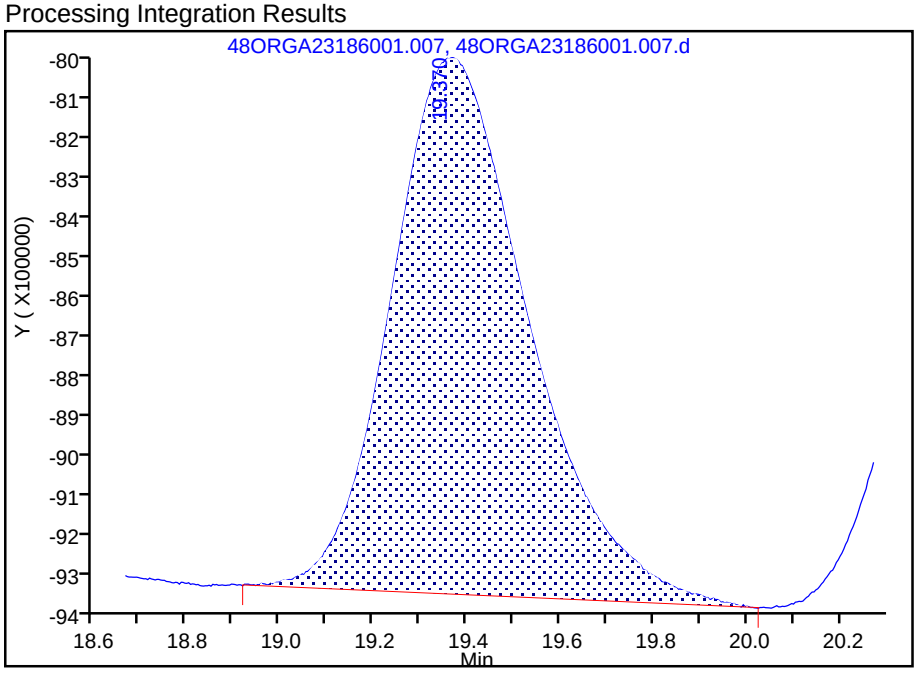
Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.007.d				
Injection Date:	05-Jul-2023 19:48:00	Instrument ID:	6854A		
Lims ID:	IC ORGA1				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		
Column:	Supelogel (4.60 mm)	Detector	SupelcogelH		

7 L-Lactic Acid, CAS: 79-33-4

Signal: 1

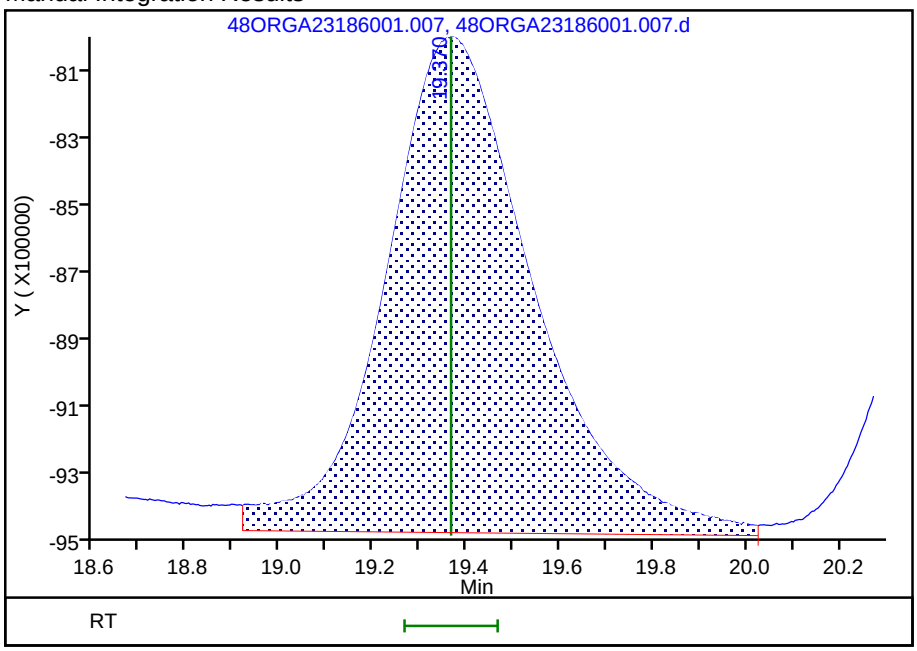
Processing Integration Results

RT: 19.37
Height: 1343288
Amount: 4.753813
Amount Units: ug/ml



Manual Integration Results

RT: 19.37
Height: 1393925
Amount: 4.904583
Amount Units: ug/ml



Reviewer: GM5C, 06-Jul-2023 16:25:32 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 17-Jul-2023 17:08:02 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

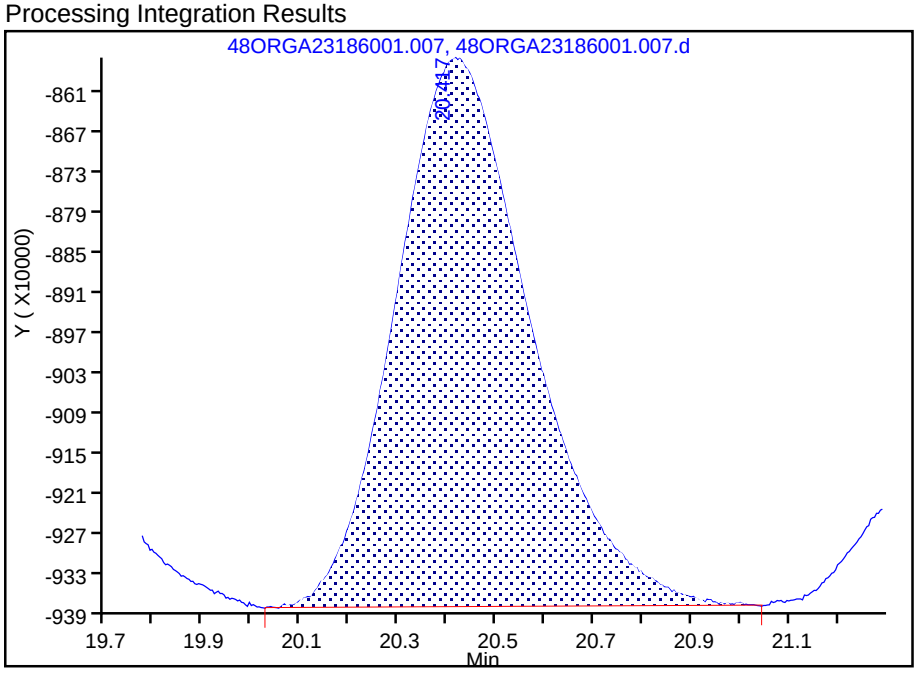
Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.007.d				
Injection Date:	05-Jul-2023 19:48:00	Instrument ID:	6854A		
Lims ID:	IC ORGA1				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		
Column:	Supelogel (4.60 mm)	Detector	SupelcogelH		

8 Formic-acid, CAS: 64-18-6

Signal: 1

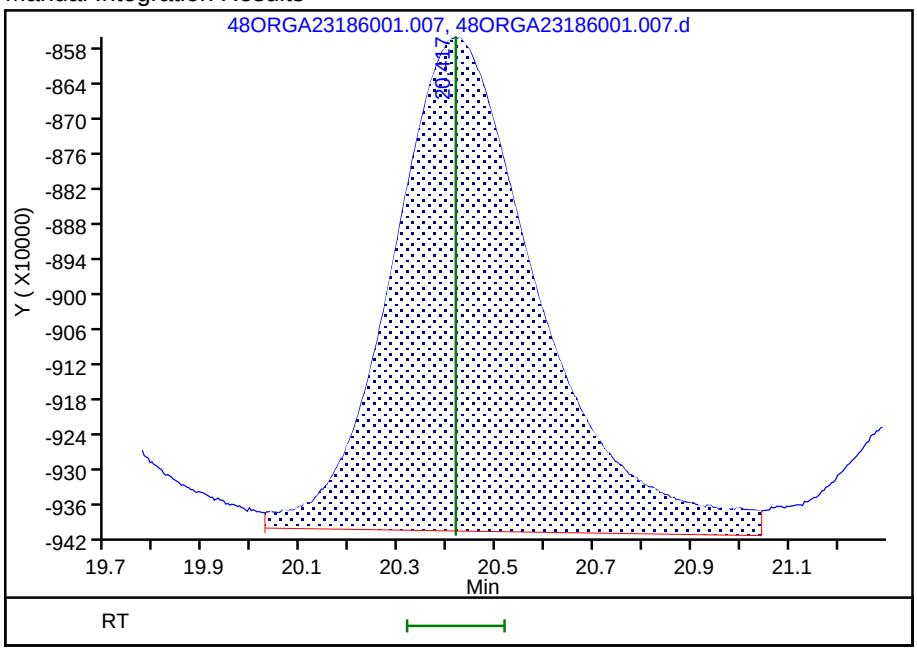
Processing Integration Results

RT: 20.42
Height: 813615
Amount: 7.255164
Amount Units: ug/ml



Manual Integration Results

RT: 20.42
Height: 844550
Amount: 9.790282
Amount Units: ug/ml



Reviewer: GM5C, 06-Jul-2023 16:25:32 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Eurofins Lancaster Laboratories Environment Testing, LLC

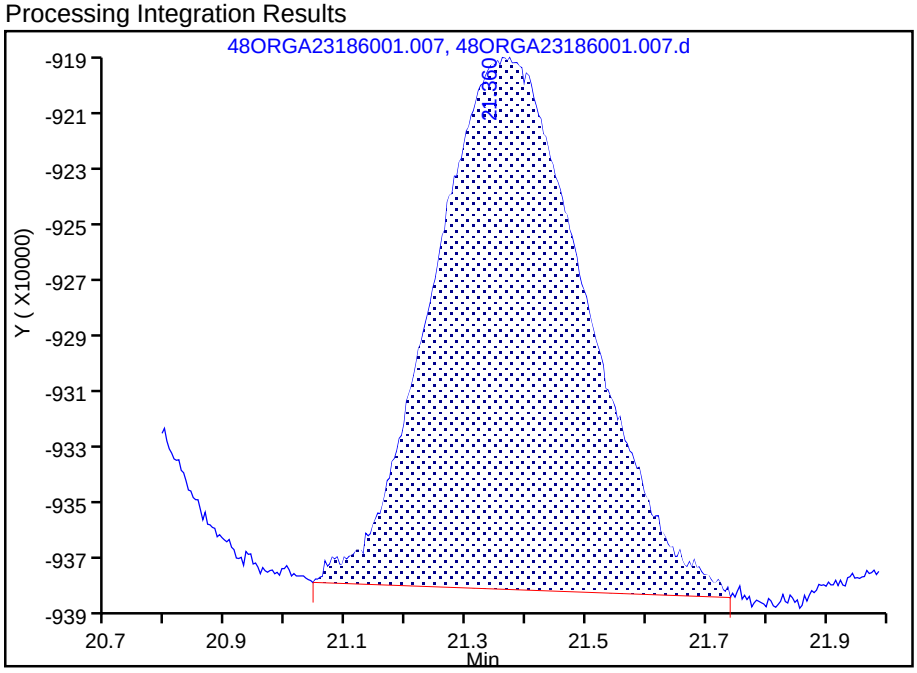
Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.007.d				
Injection Date:	05-Jul-2023 19:48:00	Instrument ID:	6854A		
Lims ID:	IC ORGA1				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		
Column:	Supelogel (4.60 mm)	Detector	SupelcogelH		

9 Acetic acid, CAS: 64-19-7

Signal: 1

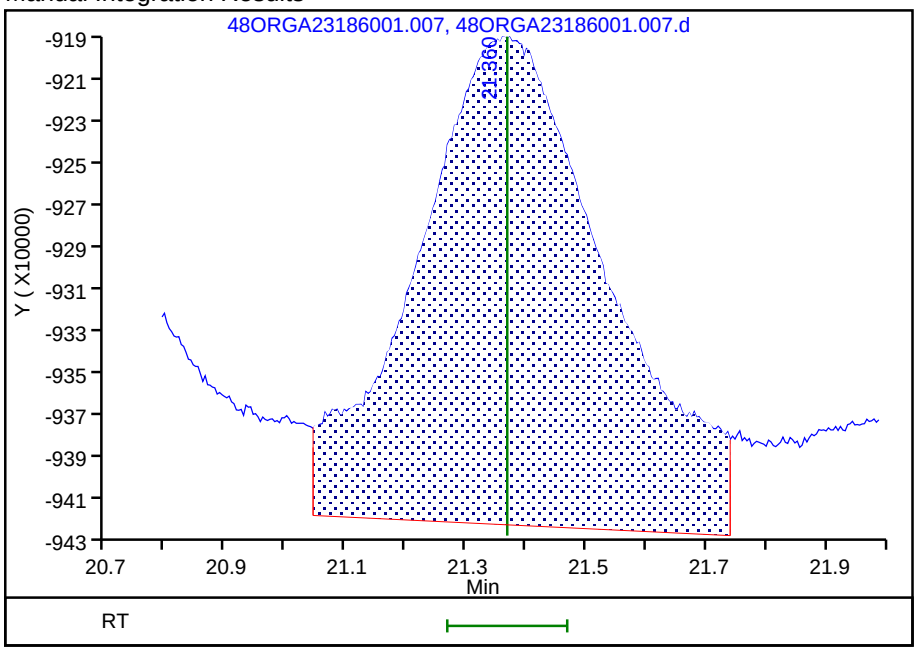
Processing Integration Results

RT: 21.36
Height: 179980
Amount: 6.224409
Amount Units: ug/ml



Manual Integration Results

RT: 21.36
Height: 221499
Amount: 6.042461
Amount Units: ug/ml



Reviewer: GM5C, 06-Jul-2023 16:25:32 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Eurofins Lancaster Laboratories Environment Testing, LLC

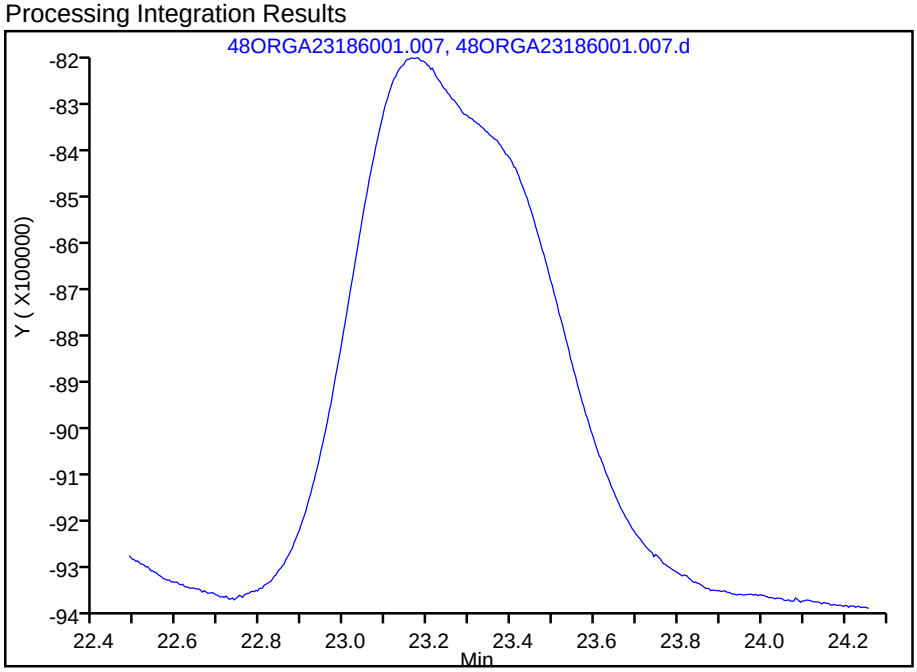
Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.007.d				
Injection Date:	05-Jul-2023 19:48:00	Instrument ID:	6854A		
Lims ID:	IC ORGA1				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		
Column:	Supelogel (4.60 mm)	Detector	SupelcogelH		

11 Propionic acid, CAS: 79-09-4

Signal: 1

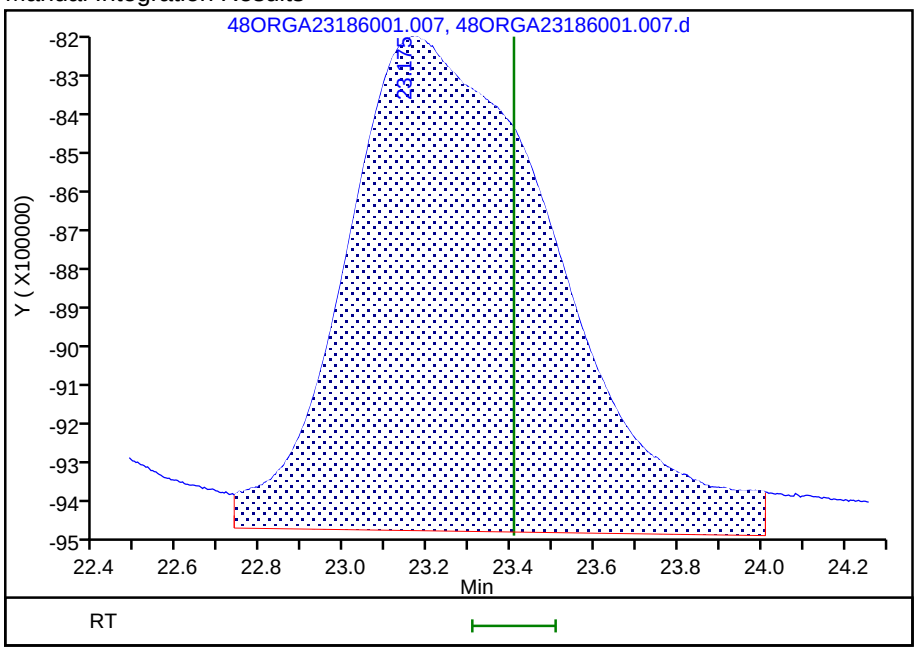
Not Detected
Expected RT: 23.41

Processing Integration Results



Manual Integration Results

RT: 23.18
Height: 1212693
Amount: 7.448327
Amount Units: ug/ml



Reviewer: GM5C, 06-Jul-2023 16:25:32 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 17-Jul-2023 17:08:02 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

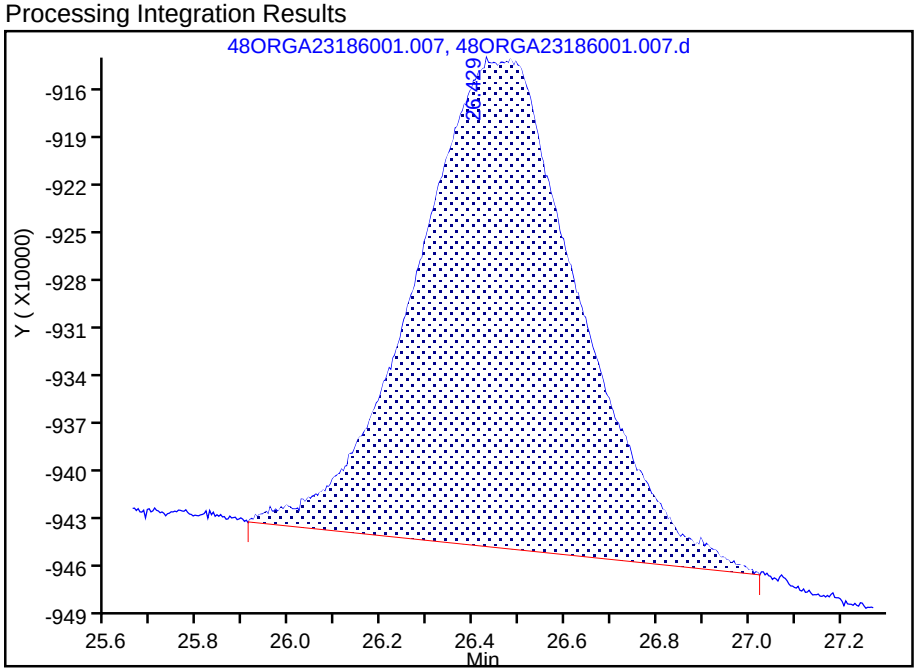
Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.007.d				
Injection Date:	05-Jul-2023 19:48:00	Instrument ID:	6854A		
Lims ID:	IC ORGA1				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		
Column:	Supelogel (4.60 mm)	Detector	SupelcogelH		

13 n-Butyric Acid, CAS: 107-92-6

Signal: 1

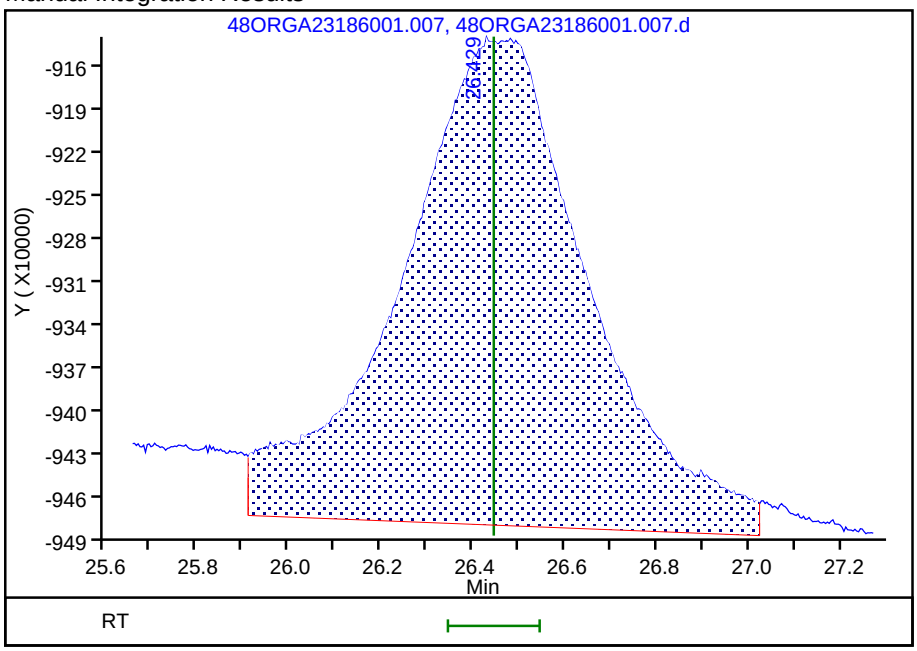
Processing Integration Results

RT: 26.43
Height: 307670
Amount: 5.261006
Amount Units: ug/ml



Manual Integration Results

RT: 26.43
Height: 339742
Amount: 8.954319
Amount Units: ug/ml



Reviewer: GM5C, 06-Jul-2023 16:25:32 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.008.d				
Lims ID:	IC ORGA2				
Client ID:					
Sample Type:	IC	Calib Level:	2		
Inject. Date:	05-Jul-2023 20:31:00	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGA2				
Operator ID:	24470	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub1				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 17:08:03	Calib Date:	06-Jul-2023 10:07:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.027.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1676				
First Level Reviewer: UHEW		Date:	17-Jul-2023 13:56:13		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid						
13.870	13.846	0.024	14980761H	2.52	2.29	
2 Citric Acid						
15.537	15.509	0.028	4741853H	10.1	10.1	
4 Pyruvic Acid						
16.672	16.668	0.004	9388885H	2.52	3.09	
5 Quinic Acid						
17.315	17.347	-0.032	3029201H	10.0	12.3	
7 L-Lactic Acid						
19.366	19.366	0.000	2941359H	10.0	10.3	
8 Formic-acid						
20.417	20.417	0.000	3167534H	20.2	15.7	
9 Acetic acid						
21.364	21.368	-0.004	2142456H	20.0	14.9	
11 Propionic acid						
23.395	23.407	-0.012	2536160H	20.2	15.6	
13 n-Butyric Acid						
26.445	26.445	0.000	1468425H	20.2	16.7	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

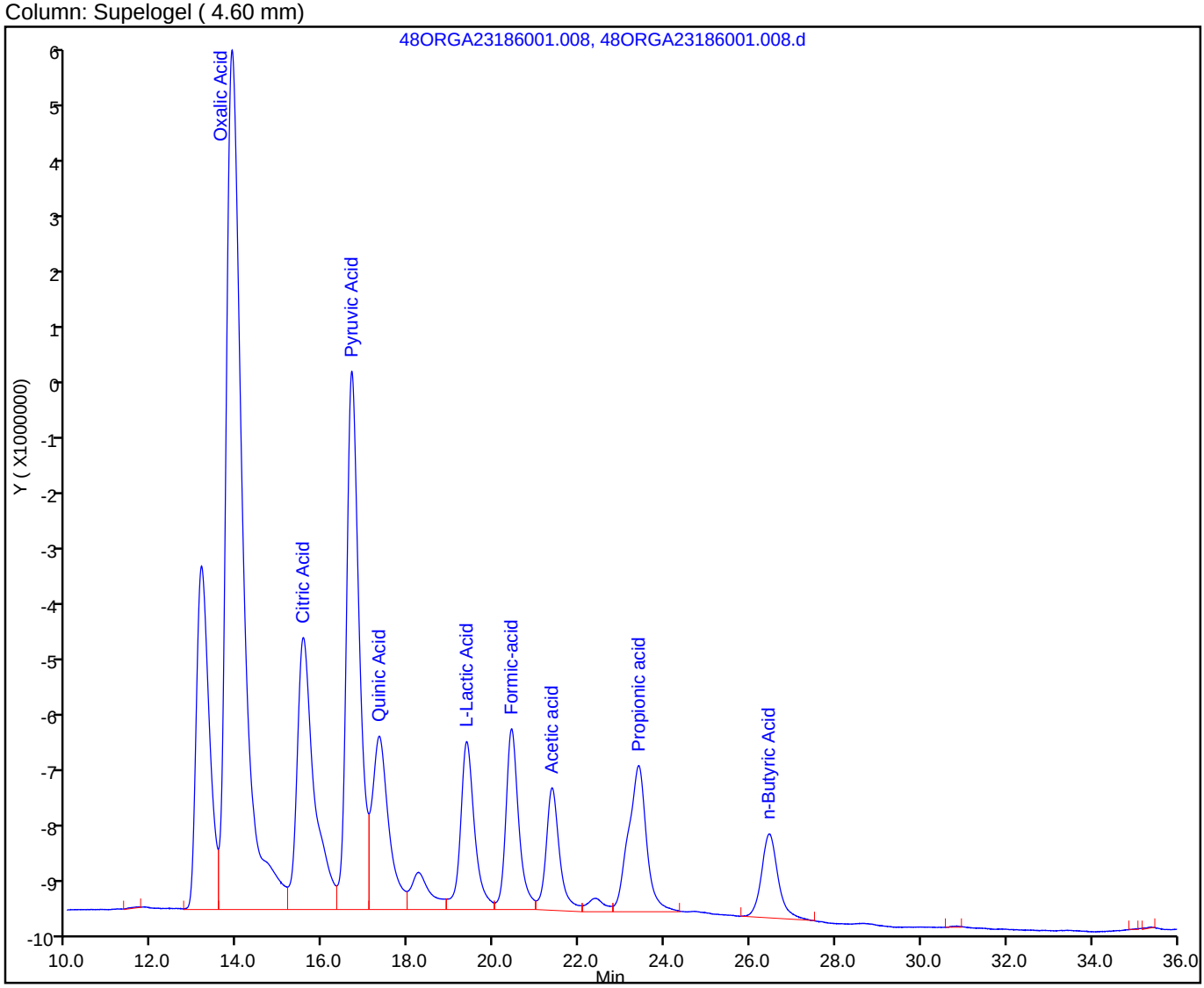
GCS_ORGA2_00010 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 17:08:03 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.008.d				
Injection Date:	05-Jul-2023 20:31:00	Instrument ID:	6854A		
Lims ID:	IC ORGA2				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.009.d				
Lims ID:	IC ORGA3				
Client ID:					
Sample Type:	IC	Calib Level:	3		
Inject. Date:	05-Jul-2023 21:14:00	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGA3				
Operator ID:	24470	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub1				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 17:08:04	Calib Date:	06-Jul-2023 10:07:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.027.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1676				
First Level Reviewer: UHEW		Date:	06-Jul-2023 14:53:05		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid						
13.846	13.846	0.000	81898030H	12.6	12.5	
2 Citric Acid						
15.509	15.509	0.000	24349189H	50.3	51.7	
4 Pyruvic Acid						
16.668	16.668	0.000	40278346H	12.6	13.3	
5 Quinic Acid						
17.347	17.347	0.000	11385049H	50.5	46.1	
7 L-Lactic Acid						
19.366	19.366	0.000	14423544H	50.1	50.7	
8 Formic-acid						
20.417	20.417	0.000	38407370H	100.5	106.2	
9 Acetic acid						
21.368	21.368	0.000	21917134H	100.2	105.8	
11 Propionic acid						
23.407	23.407	0.000	18431747H	100.0	113.2	
13 n-Butyric Acid						
26.445	26.445	0.000	14406157H	100.2	105.8	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

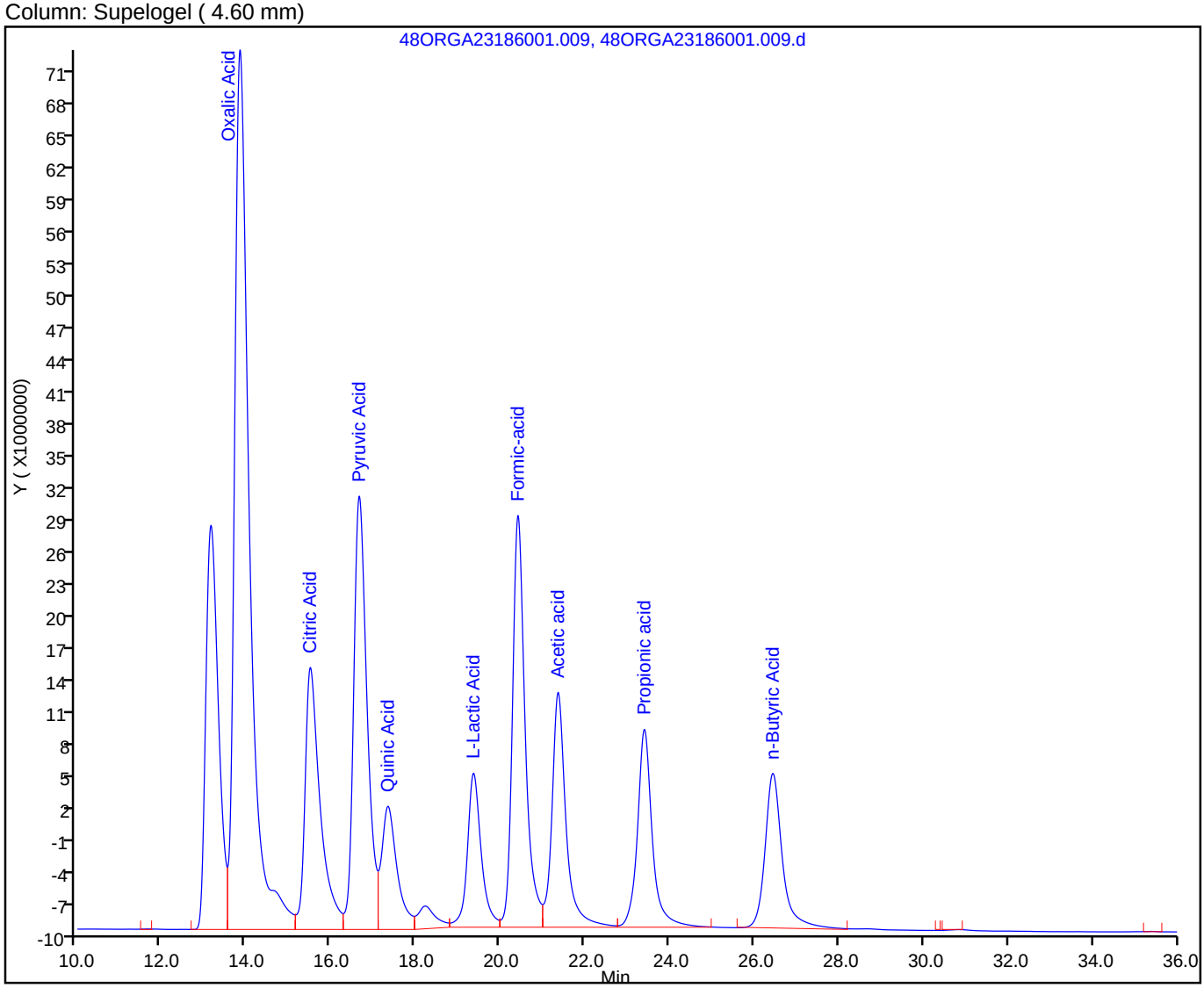
GCS_ORGA3_00026 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 17:08:04 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.009.d				
Injection Date:	05-Jul-2023 21:14:00	Instrument ID:	6854A		
Lims ID:	IC ORGA3				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Report Date: 17-Jul-2023 17:08:06 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.010.d				
Lims ID:	IC ORGA4				
Client ID:					
Sample Type:	IC	Calib Level:	4		
Inject. Date:	05-Jul-2023 21:57:00	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGA4				
Operator ID:	24470	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub1				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 17:08:05	Calib Date:	06-Jul-2023 10:07:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.027.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1676				
First Level Reviewer: UHEW		Date:	06-Jul-2023 15:07:02		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid						
13.854	13.846	0.008	160177472H	25.2	24.5	
2 Citric Acid						
15.493	15.509	-0.016	48587204H	100.8	103.1	
4 Pyruvic Acid						
16.664	16.668	-0.004	76655797H	25.2	25.3	
5 Quinic Acid						
17.347	17.347	0.000	22450024H	100.2	90.9	
7 L-Lactic Acid						
19.370	19.366	0.004	28485742H	100.4	100.2	
8 Formic-acid						
20.421	20.417	0.004	75523631H	202.0	202.2	
9 Acetic acid						
21.368	21.368	0.000	43210267H	200.4	203.6	
11 Propionic acid						
23.407	23.407	0.000	35976731H	202.0	221.0	
13 n-Butyric Acid						
26.441	26.445	-0.004	28161575H	201.6	201.6	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGA4_00009 Amount Added: 1.00 Units: mL

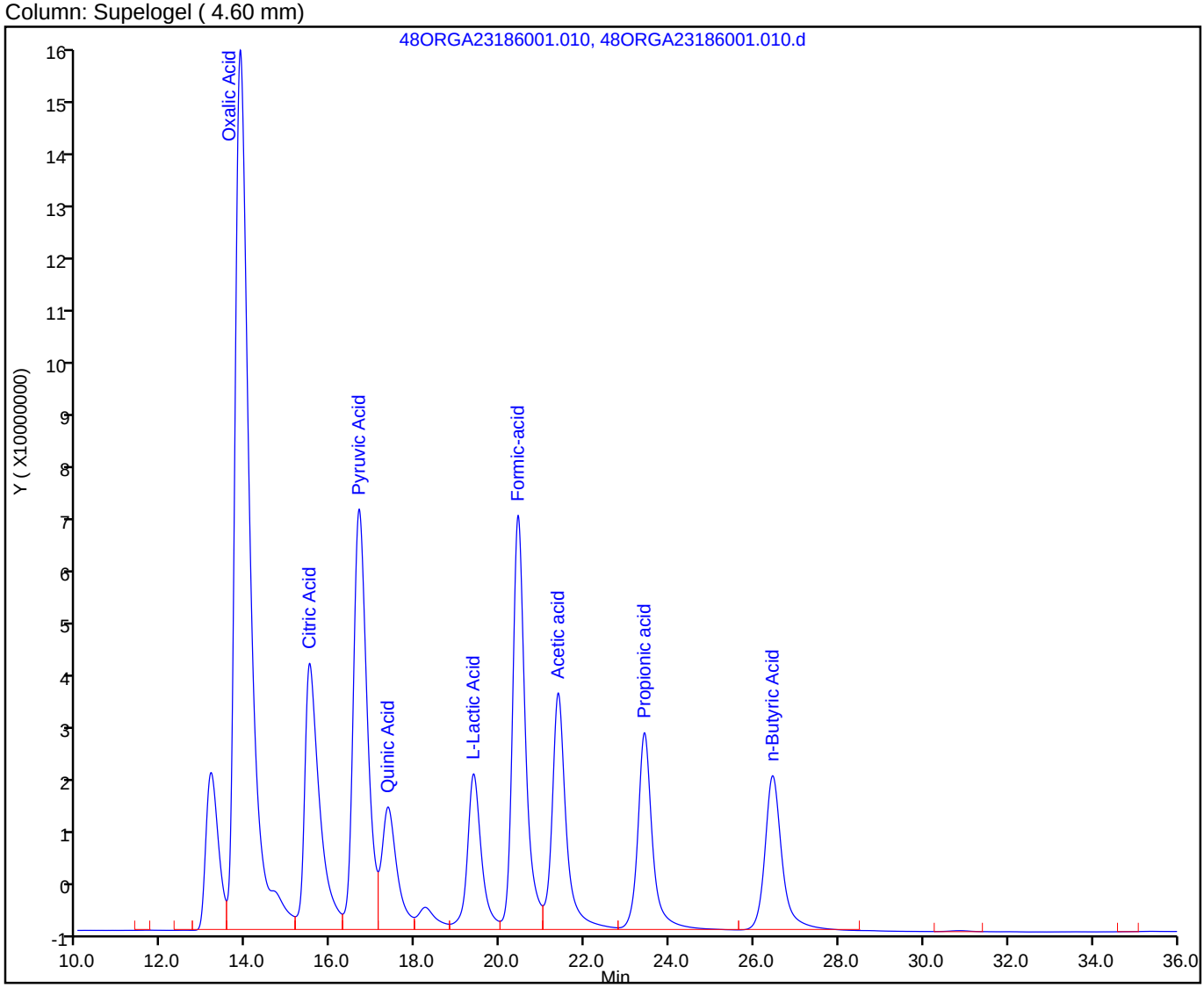
INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 17:08:06 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.010.d				
Injection Date:	05-Jul-2023 21:57:00	Instrument ID:	6854A		
Lims ID:	IC ORGA4				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.011.d				
Lims ID:	IC ORGA80				
Client ID:					
Sample Type:	IC	Calib Level:	5		
Inject. Date:	05-Jul-2023 22:40:00	ALS Bottle#:	0	Worklist Smp#:	11
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGA ox@80ug/L				
Operator ID:	24470	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub1				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 17:08:06	Calib Date:	06-Jul-2023 10:07:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.027.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1676				
First Level Reviewer: UHEW		Date:	06-Jul-2023 14:53:58		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid						
13.850	13.846	0.004	511601924H	75.6	78.3	
2 Citric Acid						
15.453	15.509	-0.056	147436956H	302.4	312.8	
4 Pyruvic Acid						
16.660	16.668	-0.008	214983737H	75.6	70.9	
5 Quinic Acid						
17.343	17.347	-0.004	67305156H	300.6	272.6	
7 L-Lactic Acid						
19.366	19.366	0.000	85525670H	301.2	300.9	
8 Formic-acid						
20.417	20.417	0.000	228351146H	606.0	605.6	
9 Acetic acid						
21.364	21.368	-0.004	130620944H	601.2	605.4	
11 Propionic acid						
23.395	23.407	-0.012	108055774H	606.0	663.7	
13 n-Butyric Acid						
26.405	26.445	-0.040	84400972H	604.8	604.4	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGAox5@8_00004 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 17:08:06 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.011.d

Injection Date: 05-Jul-2023 22:40:00 Instrument ID: 6854A

Lims ID: IC ORGA80

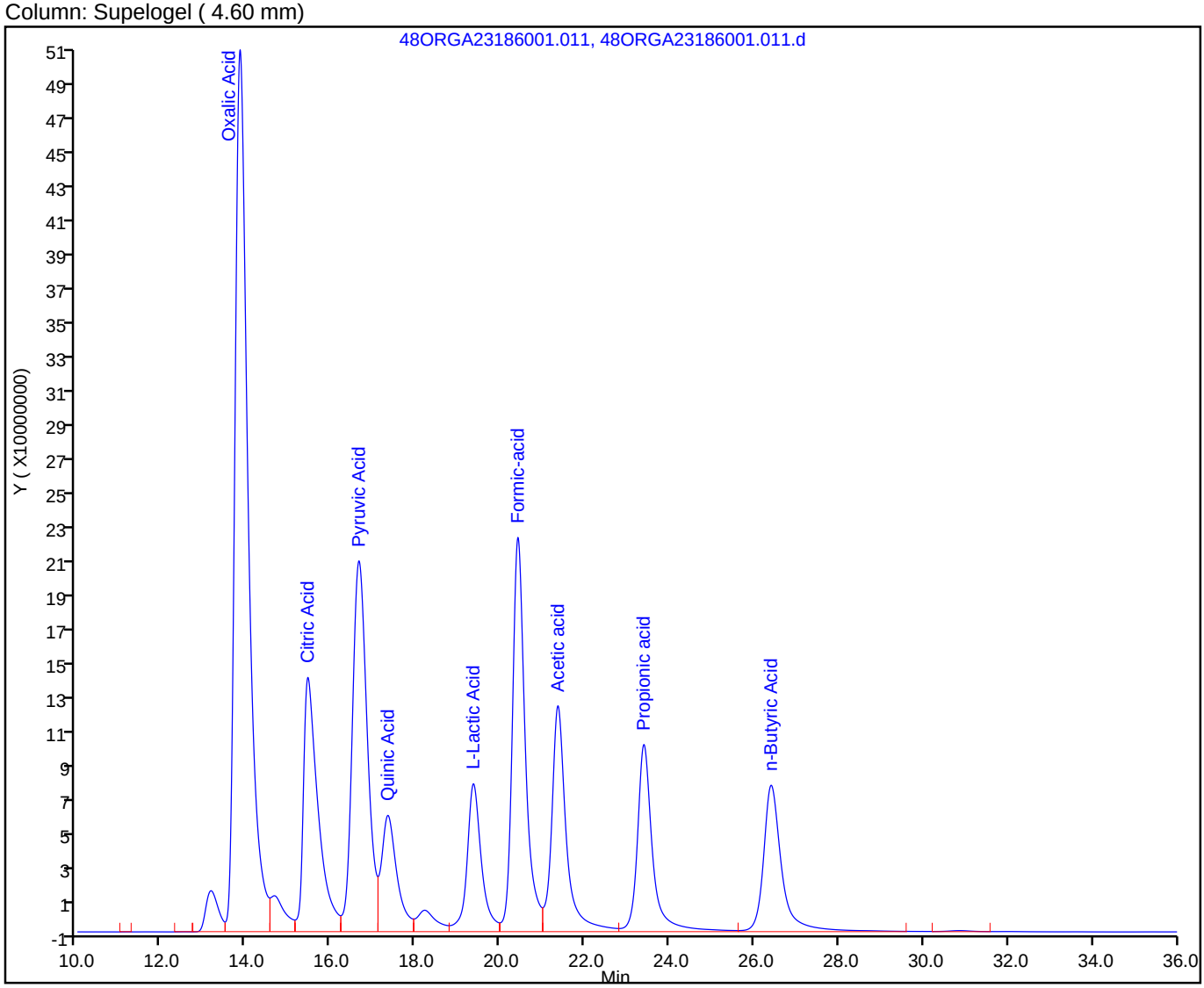
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 11

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Report Date: 17-Jul-2023 17:08:08 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.012.d
Lims ID: IC ORGA100
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 05-Jul-2023 23:23:00 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: IC ORGA ox@100ug/L
Operator ID: 24470 Instrument ID: 6854A
Sublist: chrom-8015_6854AP*sub1

Method: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 17-Jul-2023 17:08:07 Calib Date: 06-Jul-2023 10:07:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.027.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1676

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid						
13.850	13.846	0.004	686148516H	100.8	105.1	
2 Citric Acid						
15.417	15.509	-0.092	188021262H	403.2	398.9	
4 Pyruvic Acid						
16.652	16.668	-0.016	261952749H	100.8	86.3	
5 Quinic Acid						
17.339	17.347	-0.008	88748012H	400.8	359.5	
7 L-Lactic Acid						
19.362	19.366	-0.004	113091344H	401.6	397.9	
8 Formic-acid						
20.417	20.417	0.000	302295261H	808.0	805.6	
9 Acetic acid						
21.360	21.368	-0.008	173035102H	801.6	800.4	
11 Propionic acid						
23.391	23.407	-0.016	142872370H	808.0	877.5	
13 n-Butyric Acid						
26.389	26.445	-0.056	111334520H	806.4	804.1	

Reagents:

GCS_ORGAox5_00002 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 17:08:08 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.012.d

Injection Date: 05-Jul-2023 23:23:00 Instrument ID: 6854A

Lims ID: IC ORGA100

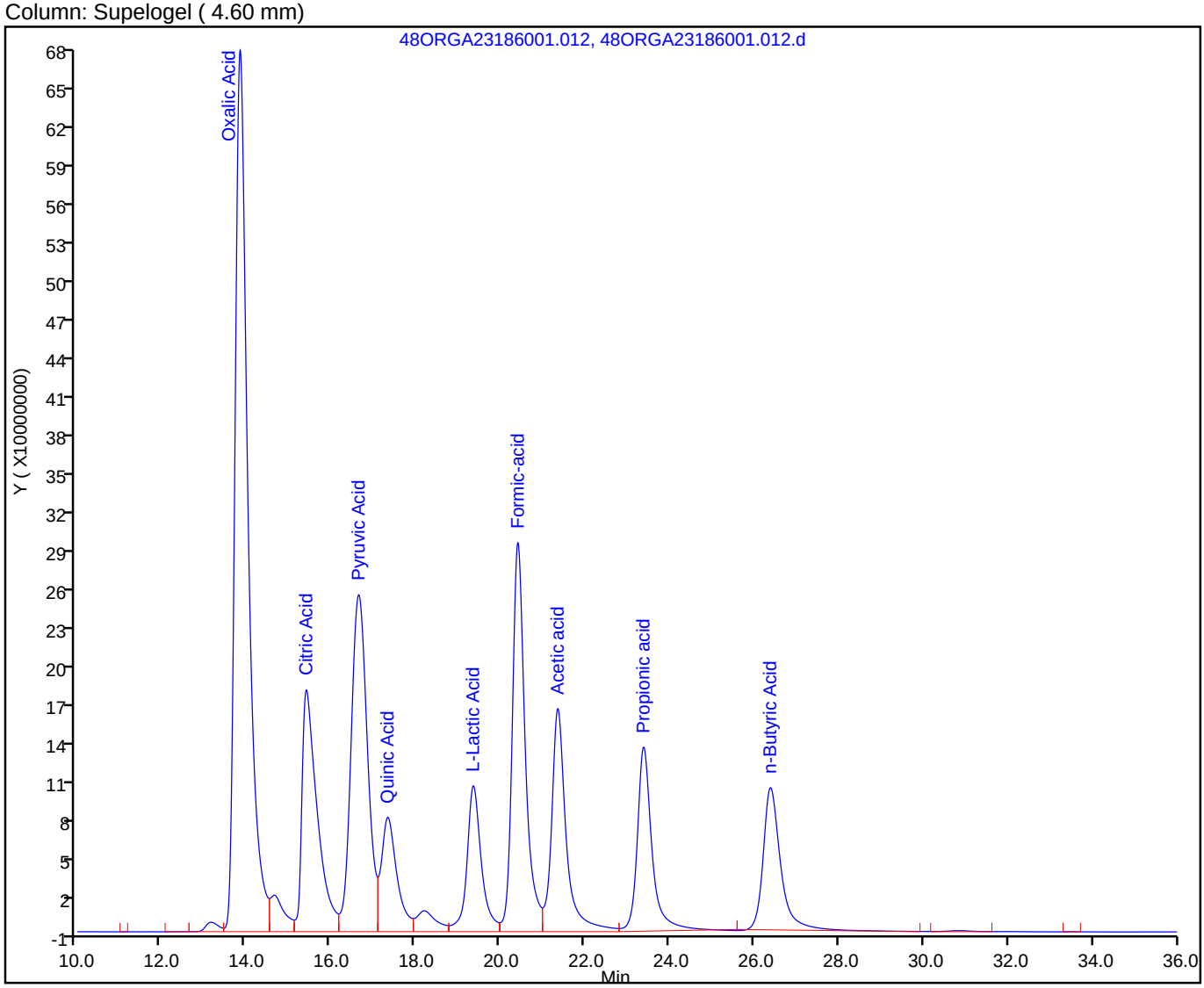
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 12

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Report Date: 17-Jul-2023 17:08:09 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.013.d				
Lims ID:	IC ORGA5				
Client ID:					
Sample Type:	IC	Calib Level:	7		
Inject. Date:	06-Jul-2023 00:06:00	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGA5				
Operator ID:	24470	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub1				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 17:08:09	Calib Date:	06-Jul-2023 10:07:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.027.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1676				

First Level Reviewer: UHEW Date: 12-Jul-2023 18:09:40

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid						
13.850	13.846	0.004	874950483H	126.0	134.0	
2 Citric Acid						
15.381	15.509	-0.128	221459368H	504.0	469.9	
4 Pyruvic Acid						
16.656	16.668	-0.012	290066291H	126.0	95.6	
5 Quinic Acid						
17.339	17.347	-0.008	110294149H	501.0	446.8	
7 L-Lactic Acid						
19.362	19.366	-0.004	141418669H	502.0	497.6	
8 Formic-acid						
20.417	20.417	0.000	377152663H	1010.0	1011.6	
9 Acetic acid						
21.360	21.368	-0.008	216341762H	1002.0	999.4	
11 Propionic acid						
23.383	23.407	-0.024	178290956H	1010.0	1095.1	
13 n-Butyric Acid						
26.377	26.445	-0.068	138361738H	1008.0	1009.6	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGA5_00007 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 17:08:09 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.013.d

Injection Date: 06-Jul-2023 00:06:00 Instrument ID: 6854A

Lims ID: IC ORGA5

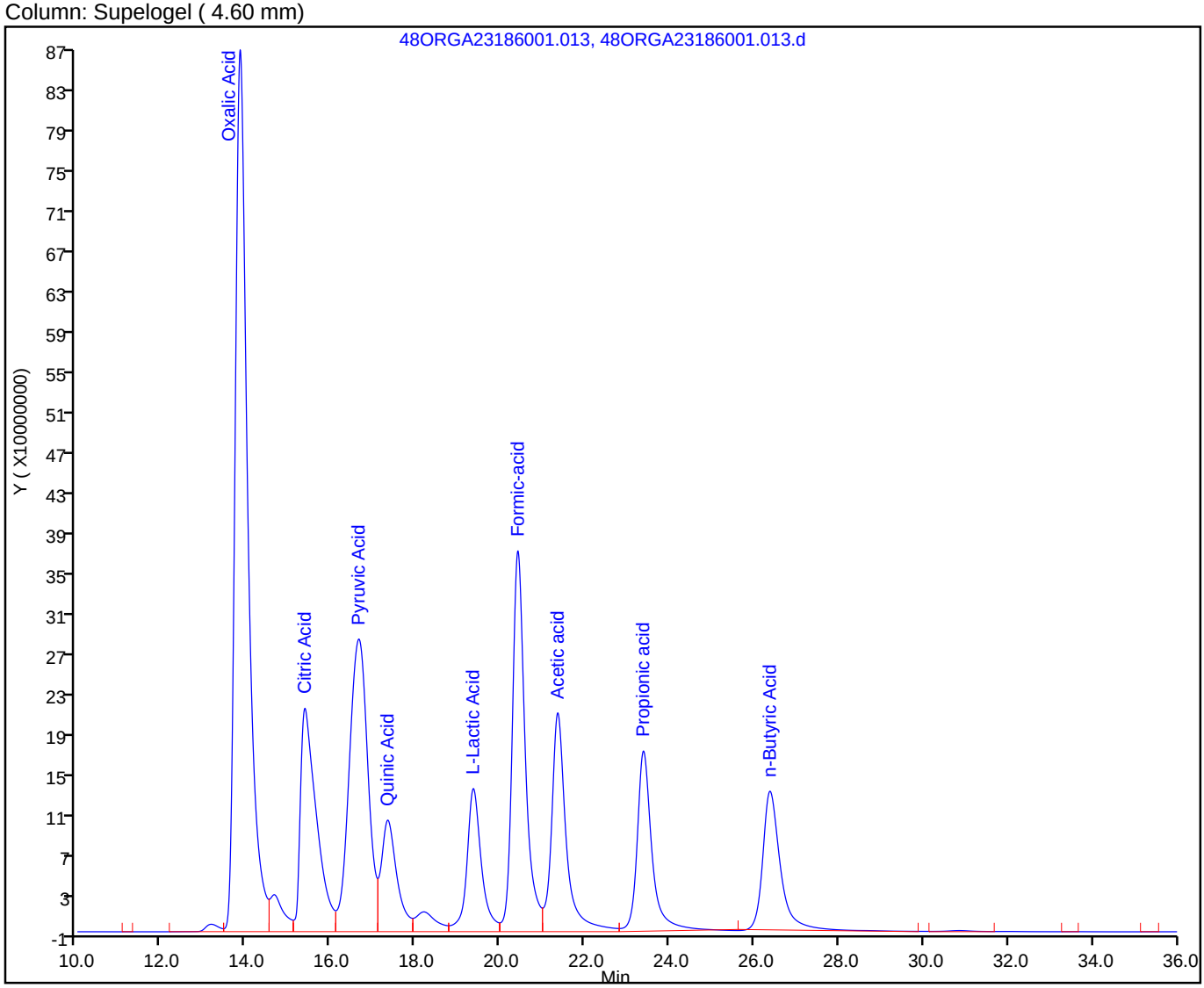
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 13

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Calibration / Oxalic Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

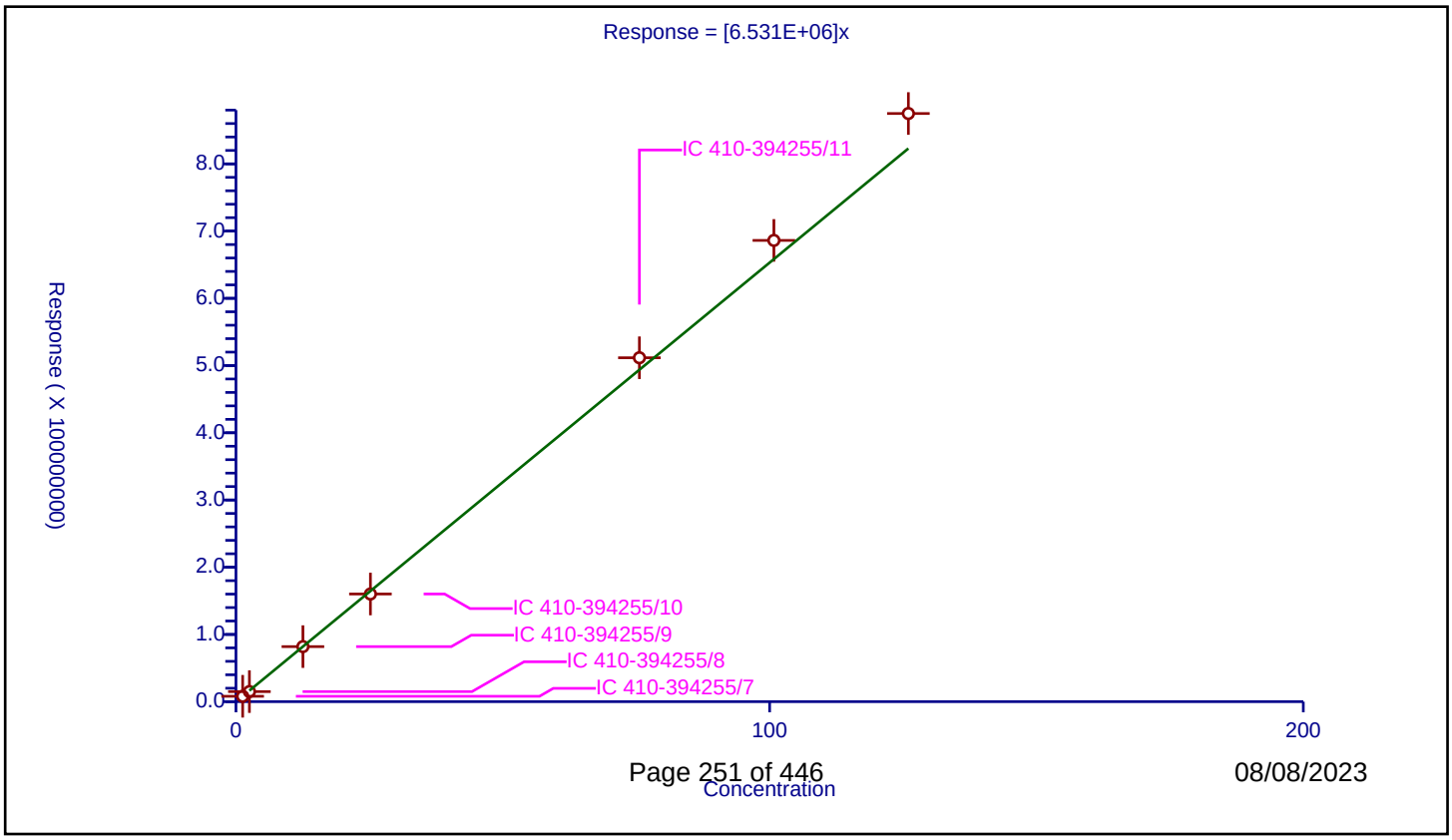
Curve Coefficients

Intercept:	0
Slope:	6.531E+06

Error Coefficients

Standard Error:	25200000
Relative Standard Error:	5.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-394255/7	1.26	8028272.0			6371644.444444	Y
2	IC 410-394255/8	2.52	14980761.0			5944746.428571	Y
3	IC 410-394255/9	12.55	81898030.0			6525739.442231	Y
4	IC 410-394255/10	25.2	160177472.0			6356248.888889	Y
5	IC 410-394255/11	75.6	511601924.0			6767221.216931	Y
6	IC 410-394255/12	100.8	686148516.0			6807028.928571	Y
7	IC 410-394255/13	126.0	874950483.0			6944051.452381	Y



Calibration / Citric Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

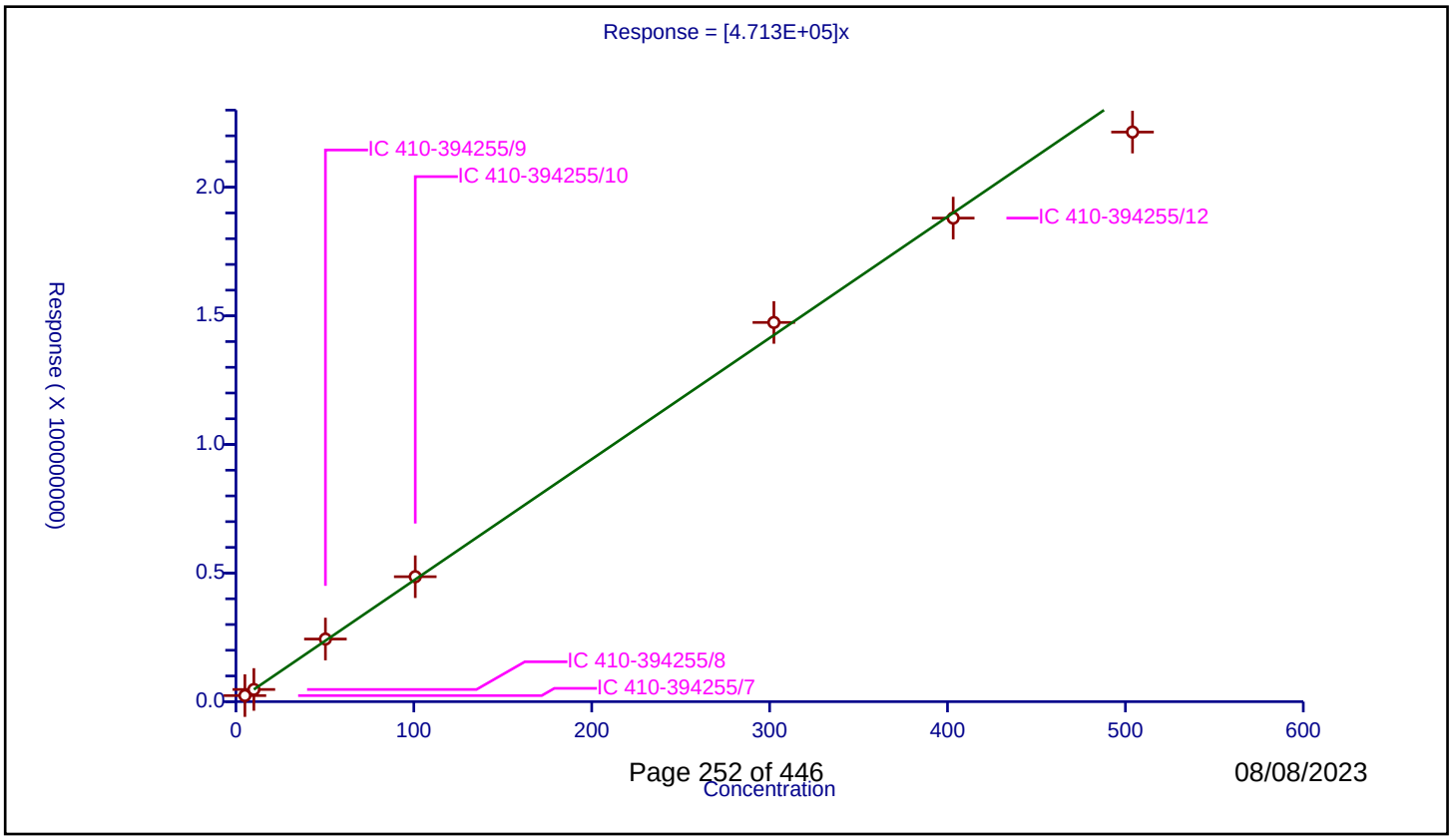
Curve Coefficients

Intercept:	0
Slope:	4.713E+05

Error Coefficients

Standard Error:	6940000
Relative Standard Error:	3.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-394255/7	5.04	2366282.0			469500.396825	Y
2	IC 410-394255/8	10.08	4741853.0			470421.924603	Y
3	IC 410-394255/9	50.3	24349189.0			484079.304175	Y
4	IC 410-394255/10	100.8	48587204.0			482015.912698	Y
5	IC 410-394255/11	302.4	147436956.0			487556.071429	Y
6	IC 410-394255/12	403.2	188021262.0			466322.574405	Y
7	IC 410-394255/13	504.0	221459368.0			439403.507937	Y



Calibration / Pyruvic Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

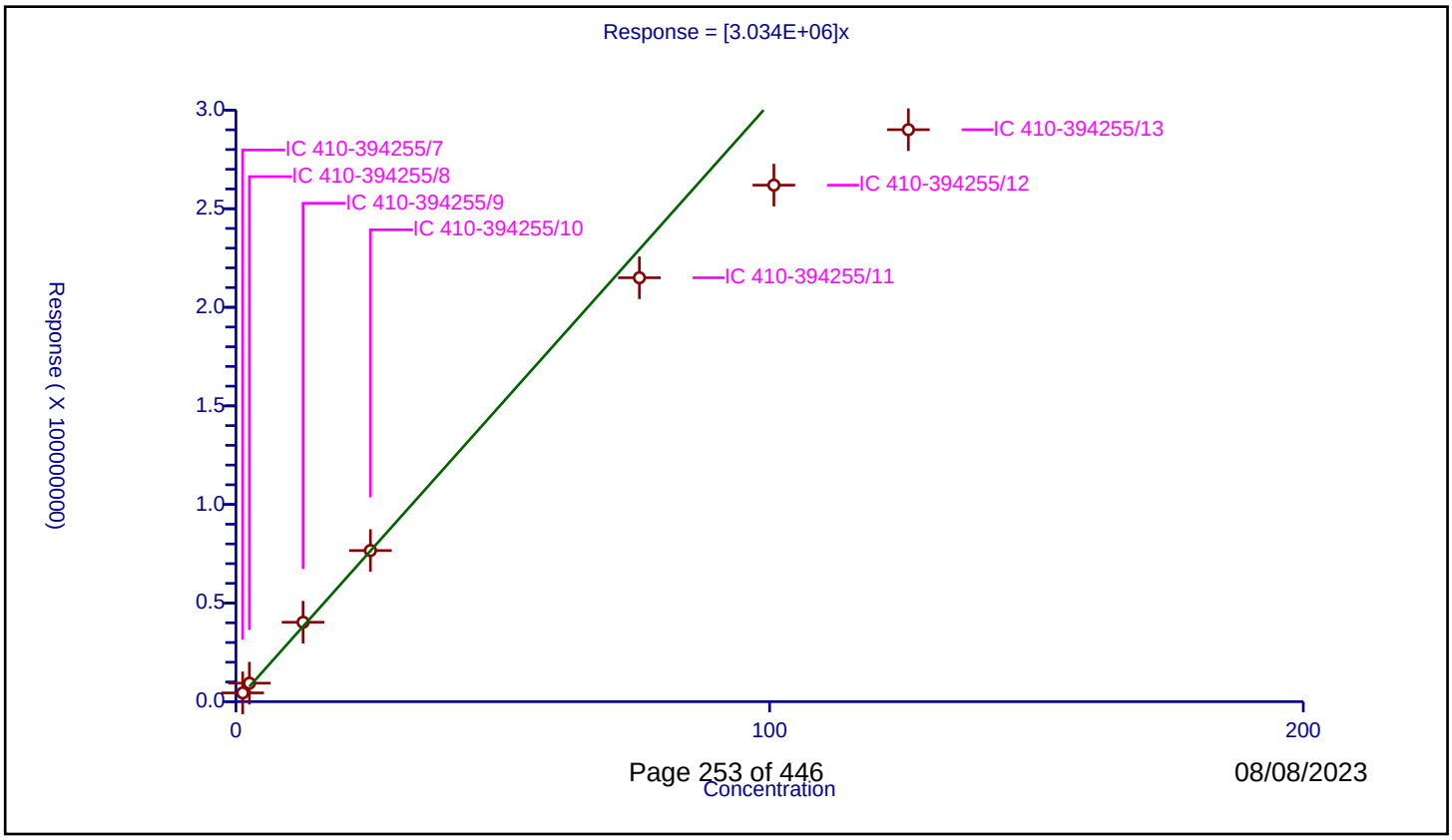
Curve Coefficients

Intercept:	0
Slope:	3.034E+06

Error Coefficients

Standard Error:	42100000
Relative Standard Error:	16.5
Correlation Coefficient:	0.986
Coefficient of Determination (Adjusted):	0.960

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-394255/7	1.26	4442728.0			3525974.603175	Y
2	IC 410-394255/8	2.52	9388885.0			3725748.015873	Y
3	IC 410-394255/9	12.58	40278346.0			3201776.311606	Y
4	IC 410-394255/10	25.2	76655797.0			3041896.706349	Y
5	IC 410-394255/11	75.6	214983737.0			2843700.224868	Y
6	IC 410-394255/12	100.8	261952749.0			2598737.589286	Y
7	IC 410-394255/13	126.0	290066291.0			2302113.420635	Y



Calibration / Quinic Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

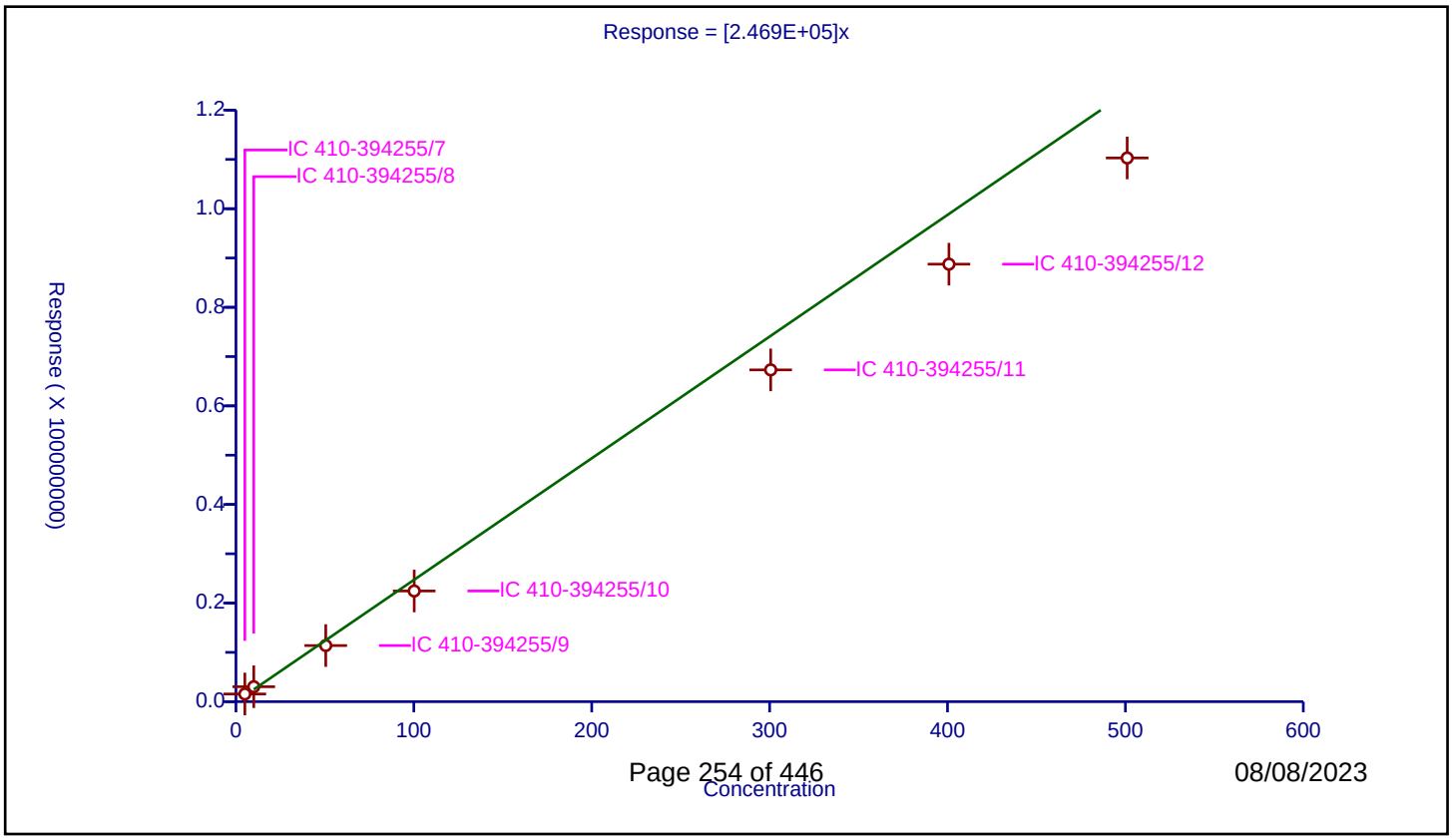
Curve Coefficients

Intercept:	0
Slope:	2.469E+05

Error Coefficients

Standard Error:	7500000
Relative Standard Error:	16.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.958

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-394255/7	5.01	1556143.0			310607.38523	Y
2	IC 410-394255/8	10.02	3029201.0			302315.469062	Y
3	IC 410-394255/9	50.48	11385049.0			225535.835975	Y
4	IC 410-394255/10	100.2	22450024.0			224052.135729	Y
5	IC 410-394255/11	300.6	67305156.0			223902.714571	Y
6	IC 410-394255/12	400.8	88748012.0			221427.175649	Y
7	IC 410-394255/13	501.0	110294149.0			220148.001996	Y



Calibration / L-Lactic Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

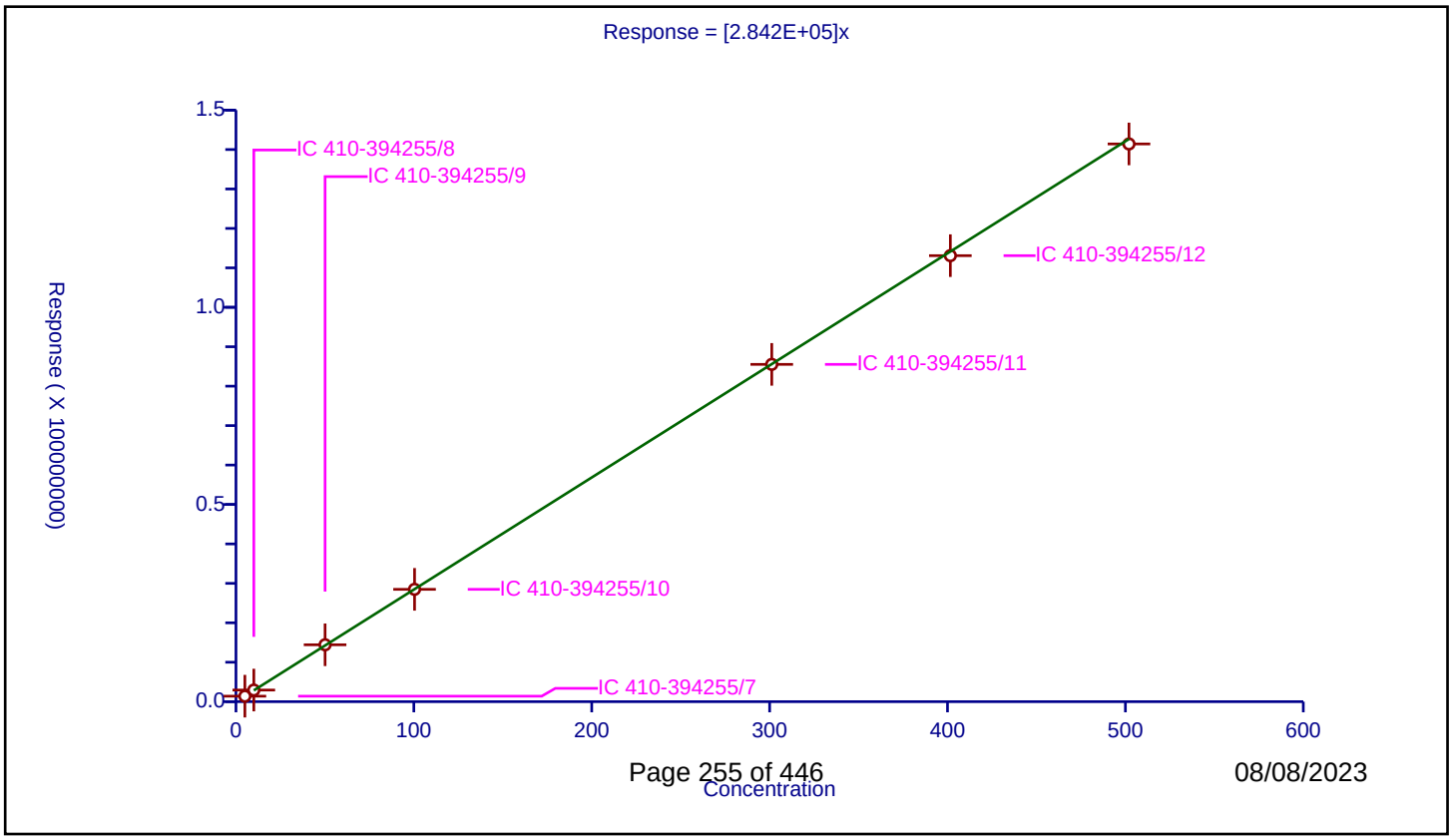
Curve Coefficients

Intercept:	0
Slope:	2.842E+05

Error Coefficients

Standard Error:	673000
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 410-394255/7	5.02	1393925.0			277674.302789	Y
2	IC 410-394255/8	10.04	2941359.0			292964.043825	Y
3	IC 410-394255/9	50.11	14423544.0			287837.637198	Y
4	IC 410-394255/10	100.4	28485742.0			283722.52988	Y
5	IC 410-394255/11	301.2	85525670.0			283949.767596	Y
6	IC 410-394255/12	401.6	113091344.0			281601.952191	Y
7	IC 410-394255/13	502.0	141418669.0			281710.496016	Y



Calibration / Formic-acid

Curve Type:	Quadratic
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

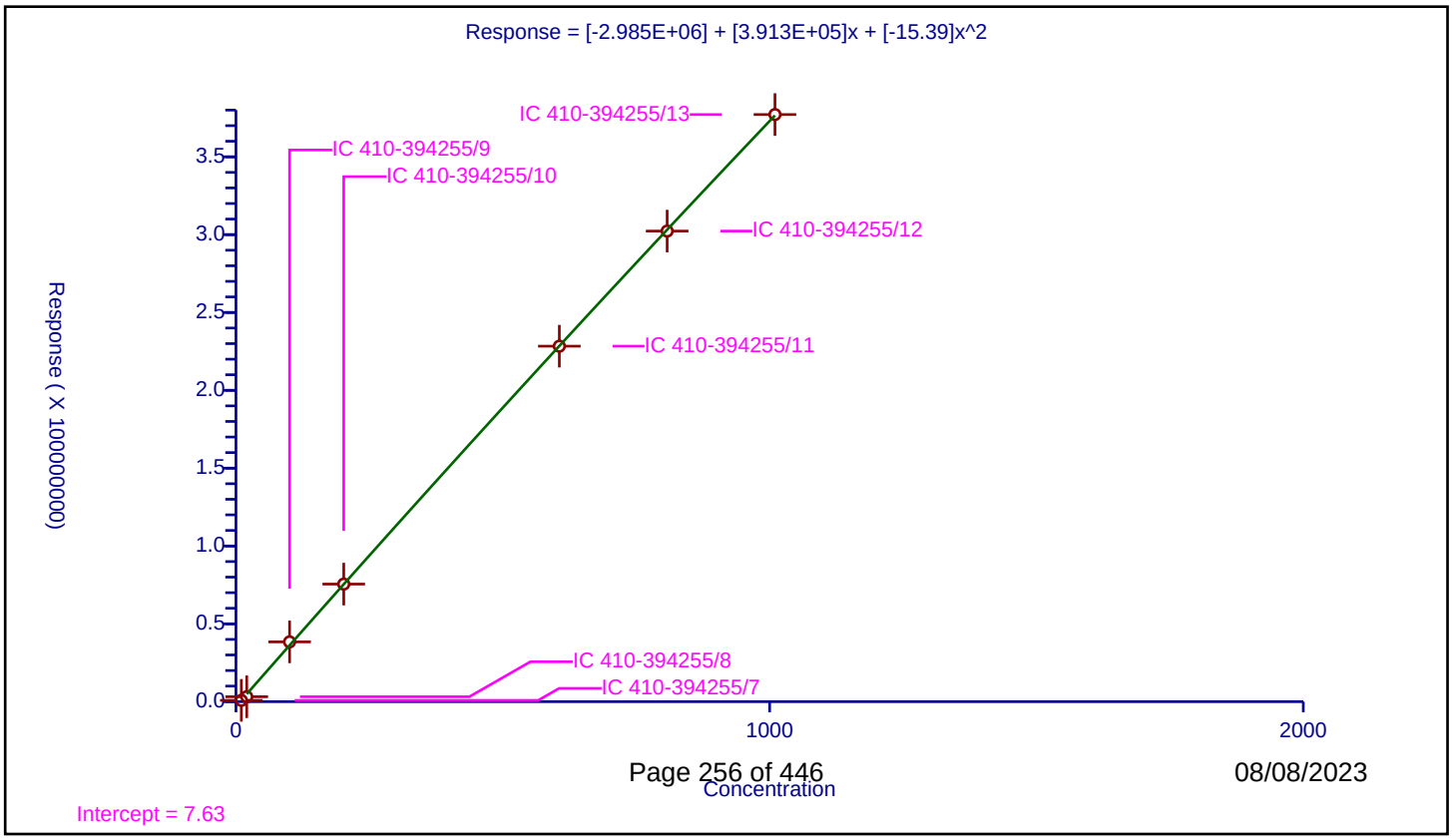
Curve Coefficients

Intercept:	-2.985E+06
Slope:	3.913E+05
Second Order:	-15.39

Error Coefficients

Standard Error:	1510000
Relative Standard Error:	11.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-394255/7	10.1	844550.0			83618.811881	Y
2	IC 410-394255/8	20.2	3167534.0			156808.613861	Y
3	IC 410-394255/9	100.5	38407370.0			382162.885572	Y
4	IC 410-394255/10	202.0	75523631.0			373879.361386	Y
5	IC 410-394255/11	606.0	228351146.0			376817.072607	Y
6	IC 410-394255/12	808.0	302295261.0			374127.798267	Y
7	IC 410-394255/13	1010.0	377152663.0			373418.478218	Y



Calibration / Acetic acid

Curve Type:	Linear
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

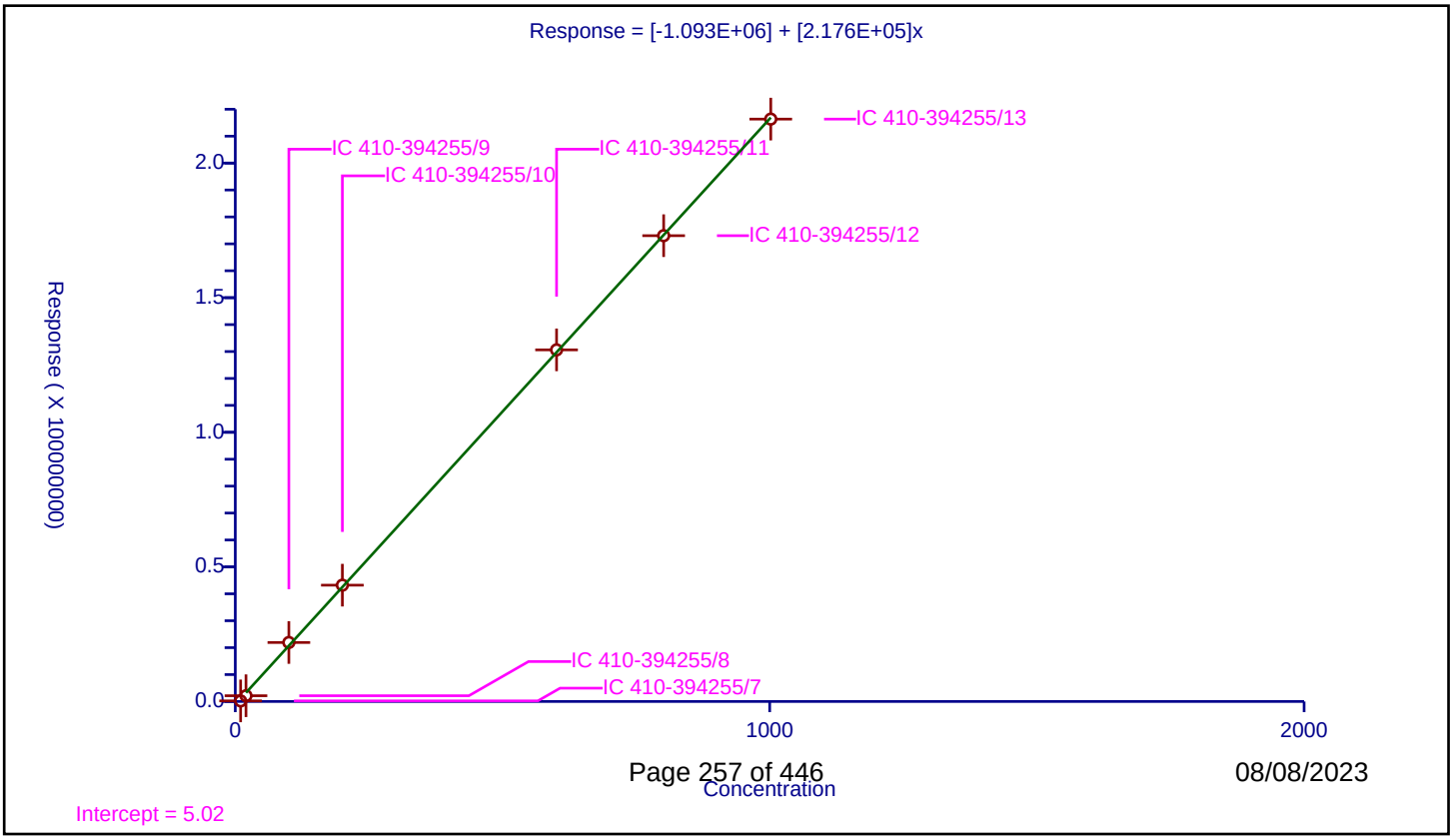
Curve Coefficients

Intercept:	-1.093E+06
Slope:	2.176E+05

Error Coefficients

Standard Error:	1020000
Relative Standard Error:	21.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-394255/7	10.02	221499.0			22105.688623	Y
2	IC 410-394255/8	20.04	2142456.0			106908.982036	Y
3	IC 410-394255/9	100.23	21917134.0			218668.402674	Y
4	IC 410-394255/10	200.4	43210267.0			215620.09481	Y
5	IC 410-394255/11	601.2	130620944.0			217267.039255	Y
6	IC 410-394255/12	801.6	173035102.0			215862.153194	Y
7	IC 410-394255/13	1002.0	216341762.0			215909.942116	Y



Calibration / Propionic acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

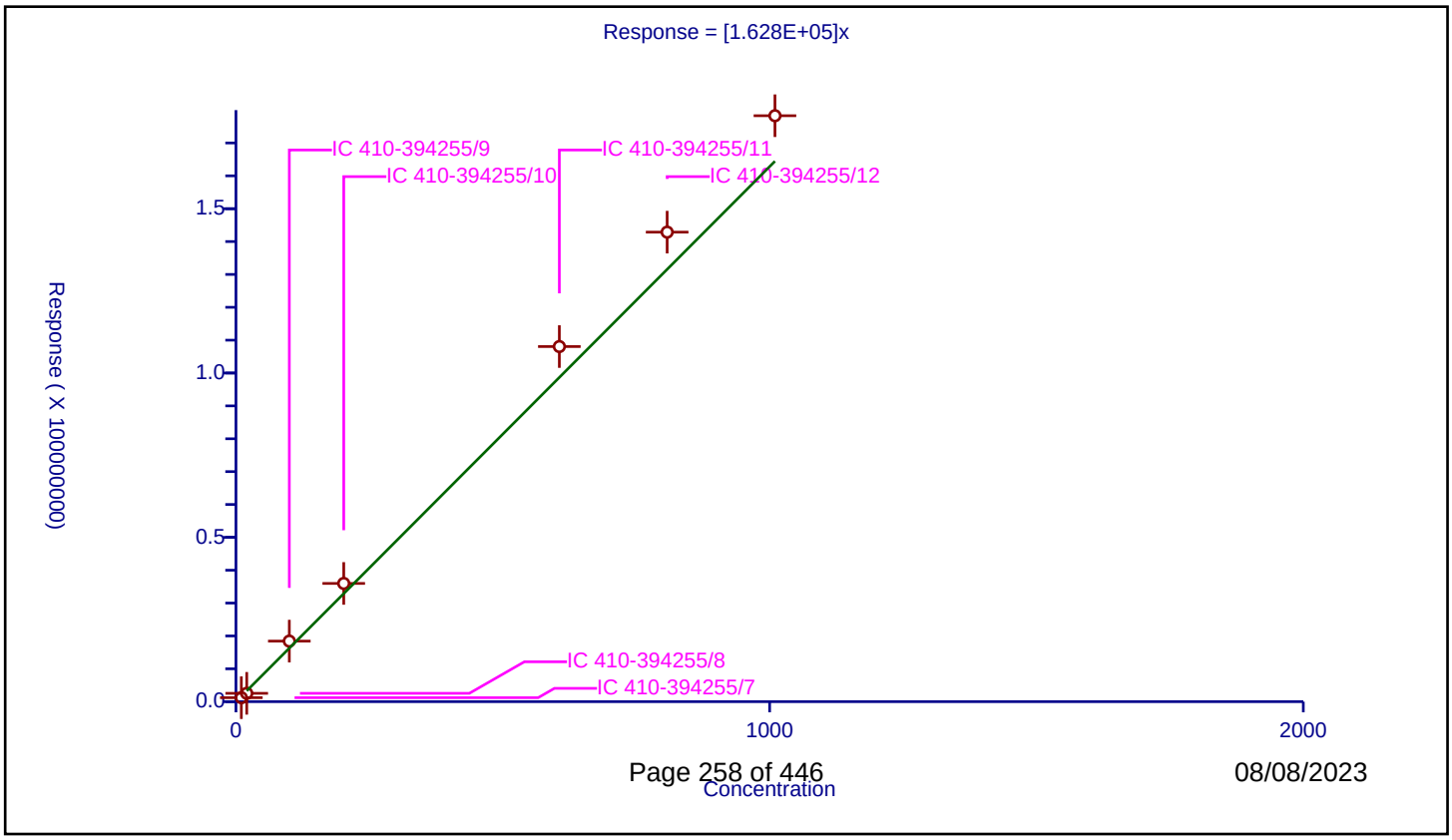
Curve Coefficients

Intercept:	0
Slope:	1.628E+05

Error Coefficients

Standard Error:	8400000
Relative Standard Error:	16.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.970

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-394255/7	10.1	1212693.0			120068.613861	Y
2	IC 410-394255/8	20.2	2536160.0			125552.475248	Y
3	IC 410-394255/9	100.0	18431747.0			184317.47	Y
4	IC 410-394255/10	202.0	35976731.0			178102.628713	Y
5	IC 410-394255/11	606.0	108055774.0			178309.858086	Y
6	IC 410-394255/12	808.0	142872370.0			176822.240099	Y
7	IC 410-394255/13	1010.0	178290956.0			176525.69901	Y



Calibration / n-Butyric Acid

Curve Type:	Quadratic
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

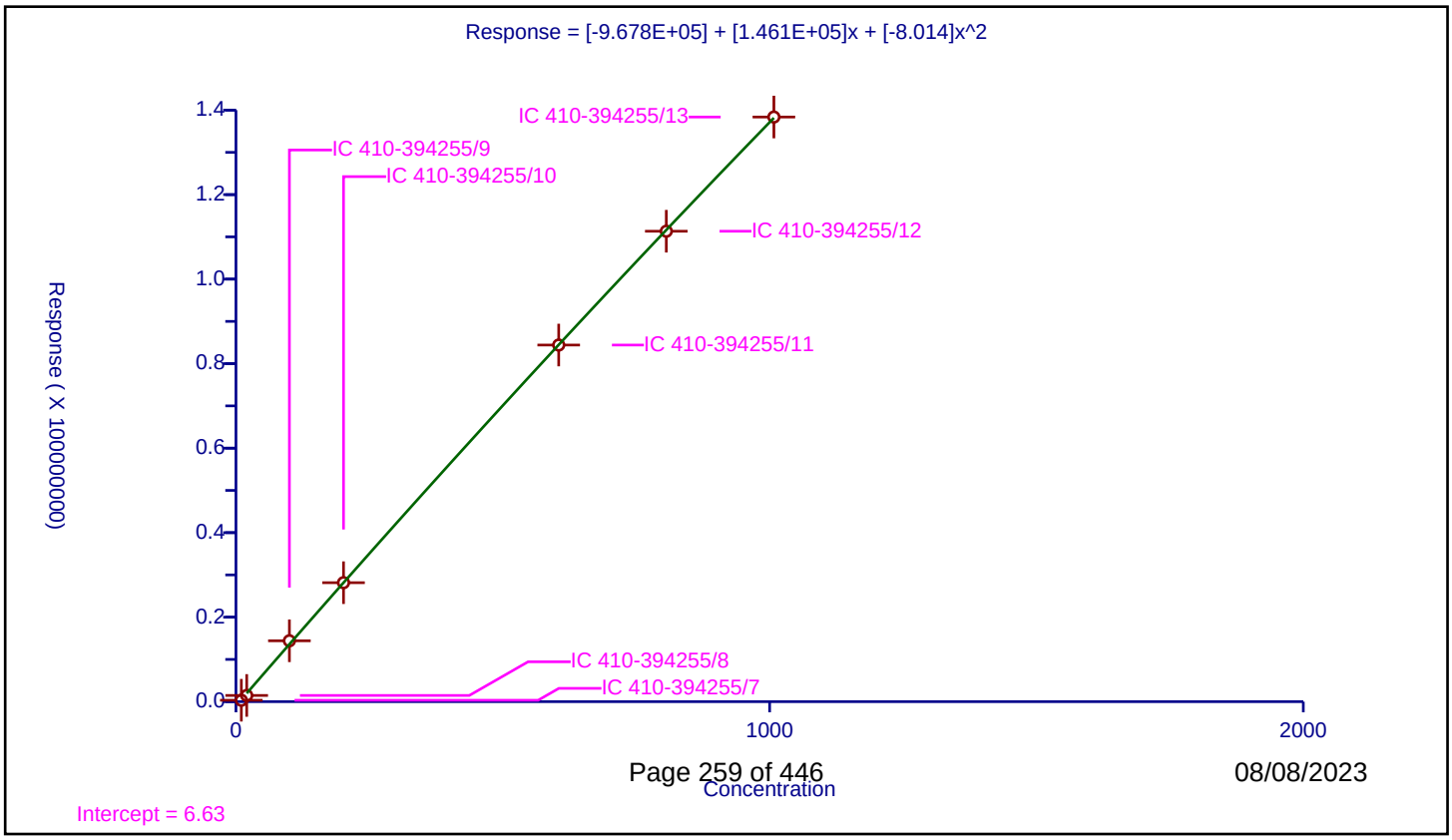
Curve Coefficients

Intercept:	-9.678E+05
Slope:	1.461E+05
Second Order:	-8.014

Error Coefficients

Standard Error:	523000
Relative Standard Error:	10.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-394255/7	10.08	339742.0			33704.563492	Y
2	IC 410-394255/8	20.16	1468425.0			72838.541667	Y
3	IC 410-394255/9	100.15	14406157.0			143845.801298	Y
4	IC 410-394255/10	201.6	28161575.0			139690.352183	Y
5	IC 410-394255/11	604.8	84400972.0			139551.871693	Y
6	IC 410-394255/12	806.4	111334520.0			138063.640873	Y
7	IC 410-394255/13	1008.0	138361738.0			137263.628968	Y



INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136645-1 Analy Batch No.: 394255

SDG No.:

Instrument ID: 6854A GC Column: Supelcogel ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/06/2023 02:14 Calibration End Date: 07/06/2023 05:06 Calibration ID: 51932

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-394255/16	48ORGA23186001.016.d
Level 2	IC 410-394255/17	48ORGA23186001.017.d
Level 3	IC 410-394255/18	48ORGA23186001.018.d
Level 4	IC 410-394255/19	48ORGA23186001.019.d
Level 5	IC 410-394255/20	48ORGA23186001.020.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5						RT WINDOW	AVG RT
Tartaric Acid	16.064	16.064	16.060	16.056	16.012						15.960 - 16.160	16.051
Succinic Acid	19.226	19.234	19.226	19.222	19.218						19.176 - 19.276	19.225
Isobutyric acid	25.034	25.030	25.018	25.010	24.958						24.918 - 25.118	25.010
Isovaleric acid	28.979	28.967	28.935	28.903	28.767						28.715 - 29.155	28.910
Valeric acid	33.627	33.619	33.563	33.520	33.292						33.263 - 33.863	33.524

INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136645-1 Analy Batch No.: 394255

SDG No.:

Instrument ID: 6854A GC Column: Supelcogel ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/06/2023 02:14 Calibration End Date: 07/06/2023 05:06 Calibration ID: 51932

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-394255/16	48ORGA23186001.016.d
Level 2	IC 410-394255/17	48ORGA23186001.017.d
Level 3	IC 410-394255/18	48ORGA23186001.018.d
Level 4	IC 410-394255/19	48ORGA23186001.019.d
Level 5	IC 410-394255/20	48ORGA23186001.020.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 3	LVL 4		B	M1	M2								
Tartaric Acid	672735 509482	668140	661994	654083	Ave		633286.751				11.0		20.0			
Succinic Acid	225381 225378	226293	225294	225569	Ave		225583.126				0.2		20.0			
Isobutyric acid	204000 204695	206434	207821	207246	Ave		206039.175				0.8		20.0			
Isovaleric acid	123540 120967	123231	124899	124360	Ave		123399.436				1.2		20.0			
Valeric acid	85861 83395	87039	88123	87470	Ave		86377.4337				2.2		20.0			

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.

INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136645-1 Analy Batch No.: 394255

SDG No.:

Instrument ID: 6854A GC Column: Supelcogel ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/06/2023 02:14 Calibration End Date: 07/06/2023 05:06 Calibration ID: 51932

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-394255/16	48ORGA23186001.016.d
Level 2	IC 410-394255/17	48ORGA23186001.017.d
Level 3	IC 410-394255/18	48ORGA23186001.018.d
Level 4	IC 410-394255/19	48ORGA23186001.019.d
Level 5	IC 410-394255/20	48ORGA23186001.020.d

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
Tartaric Acid	Ave	1691256	6718817	33285065	65774568	256167352	2.51	10.1	50.3	101	503
Succinic Acid	Ave	566608	2275600	11327798	22683241	113320195	2.51	10.1	50.3	101	503
Isobutyric acid	Ave	1026120	4153445	20906815	41697803	205923634	5.03	20.1	101	201	1006
Isovaleric acid	Ave	617700	2464615	12489883	24872040	120967401	5.00	20.0	100	200	1000
Valeric acid	Ave	431020	1747743	8847539	17563884	83728757	5.02	20.1	100	201	1004

Curve Type Legend

Ave = Average by Height

Report Date: 17-Jul-2023 17:08:10 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.016.d				
Lims ID:	IC ORGB1				
Client ID:					
Sample Type:	IC	Calib Level:	1		
Inject. Date:	06-Jul-2023 02:14:00	ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGB1				
Operator ID:	24470	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub3				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 17:08:09	Calib Date:	06-Jul-2023 10:07:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.027.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1676				
First Level Reviewer: UHEW		Date:	06-Jul-2023 15:02:38		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid						
16.064	16.060	0.004	1691256H	2.51	2.67	
6 Succinic Acid						
19.226	19.226	0.000	566608H	2.51	2.51	
12 Isobutyric acid						
25.034	25.018	0.016	1026120H	5.03	4.98	
14 Isovaleric acid						
28.979	28.935	0.044	617700H	5.00	5.01	
15 Valeric acid						
33.627	33.563	0.064	431020H	5.02	4.99	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGB1_00009 Amount Added: 1.00 Units: mL

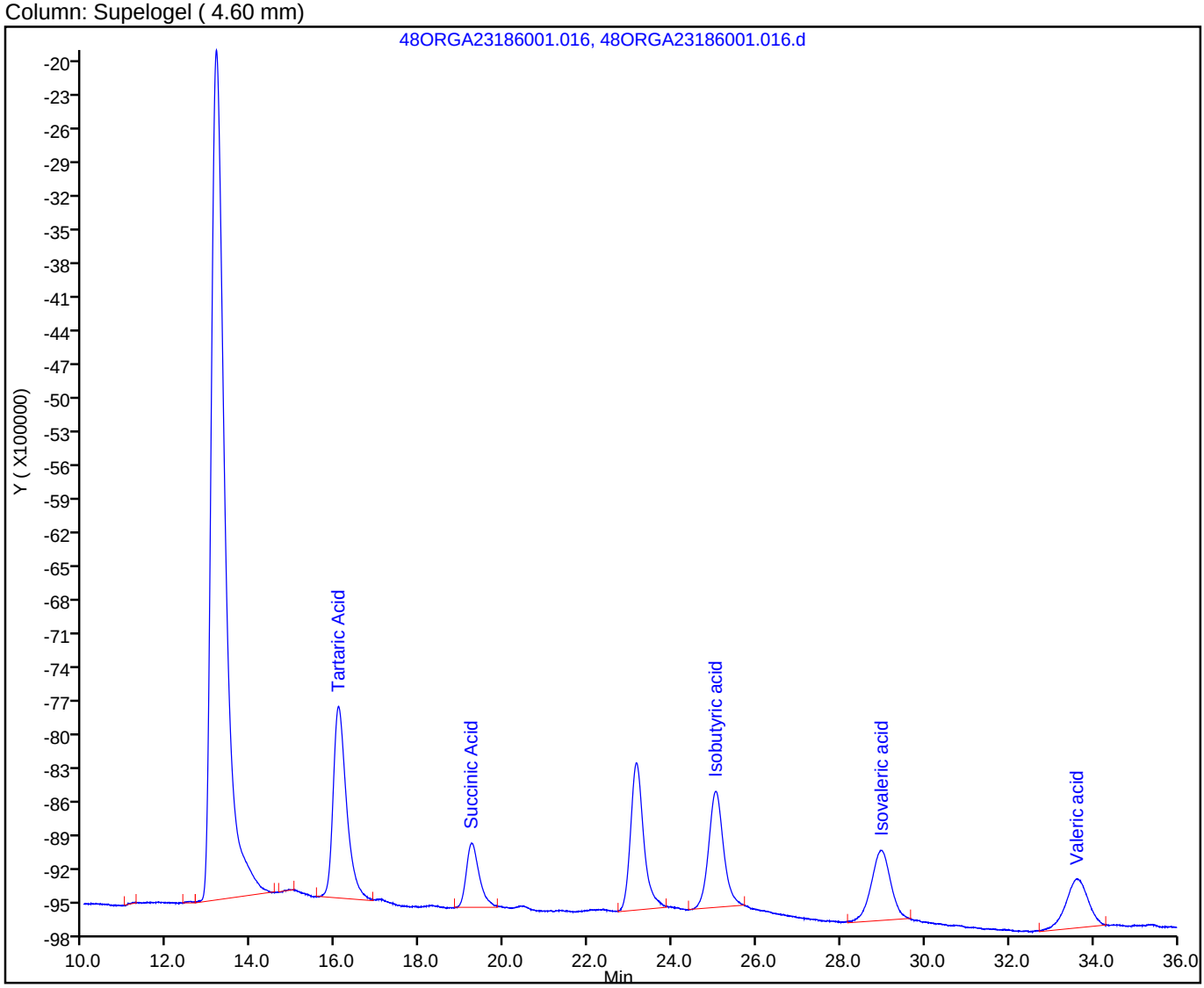
INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 17:08:10 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.016.d				
Injection Date:	06-Jul-2023 02:14:00	Instrument ID:	6854A		
Lims ID:	IC ORGB1				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Report Date: 17-Jul-2023 17:08:10 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.017.d				
Lims ID:	IC ORGB2				
Client ID:					
Sample Type:	IC	Calib Level:	0		
Inject. Date:	06-Jul-2023 02:57:00	ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGB2				
Operator ID:	24470	Instrument ID:	6854A		
Method:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 17:08:10	Calib Date:	06-Jul-2023 10:07:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.027.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1676				
First Level Reviewer: GM5C		Date:	17-Jul-2023 16:09:15		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid						
16.064	16.060	0.004	6718817	10.1	10.6	H
6 Succinic Acid						
19.234	19.226	0.008	2275600	10.1	10.1	H
12 Isobutyric acid						
25.030	25.018	0.012	4153445	20.1	20.2	H
14 Isovaleric acid						
28.967	28.935	0.032	2464615	20.0	20.0	H
15 Valeric acid						
33.619	33.563	0.056	1747743	20.1	20.2	H

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGB2_00009 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 17:08:10 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.017.d

Injection Date: 06-Jul-2023 02:57:00 Instrument ID: 6854A

Lims ID: IC ORGB2

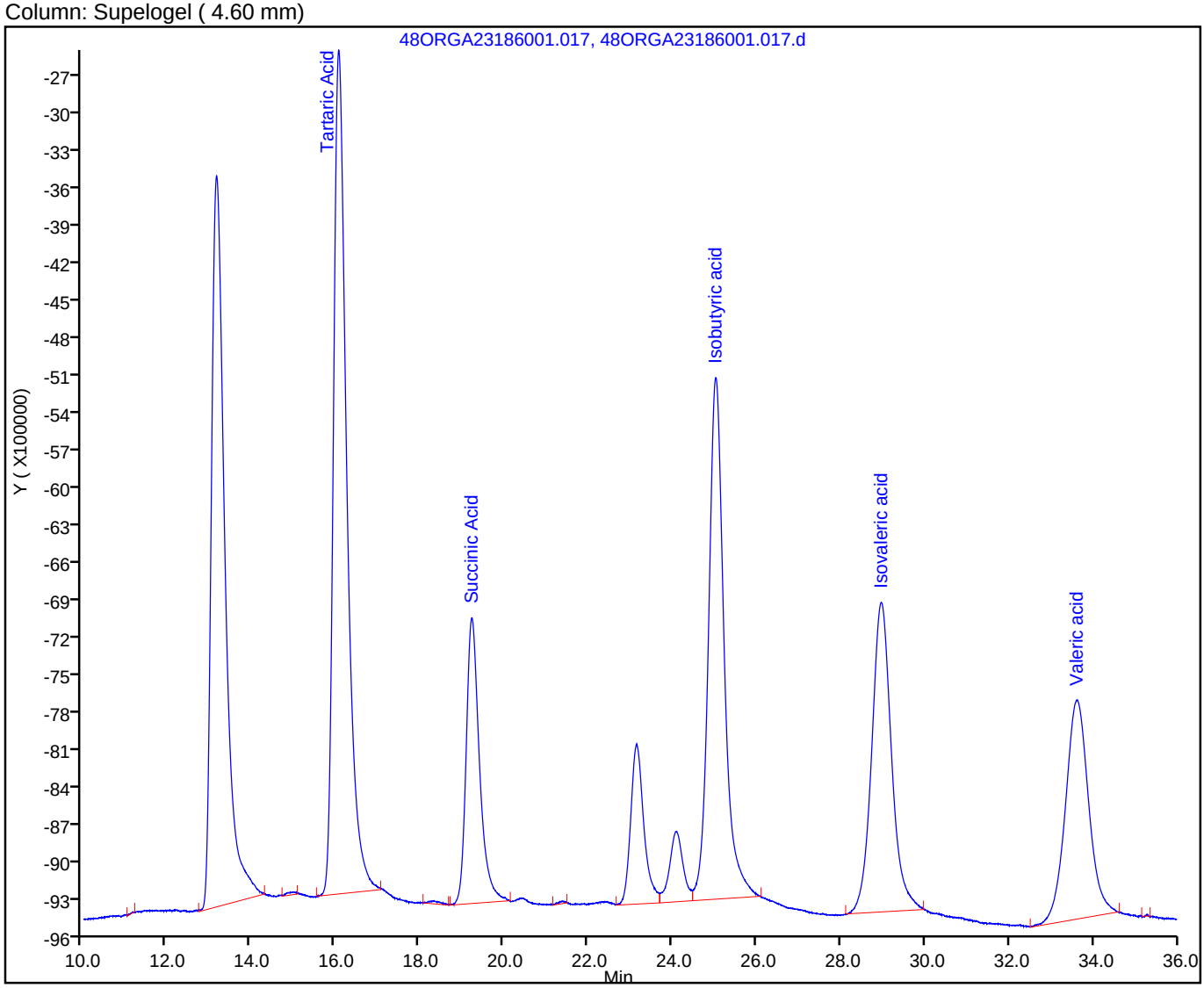
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 17

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Report Date: 17-Jul-2023 17:08:11 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.018.d
Lims ID: IC ORGB3
Client ID:
Sample Type: IC Calib Level: 0
Inject. Date: 06-Jul-2023 03:40:00 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: IC ORGB3
Operator ID: 24470 Instrument ID: 6854A

Method: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 17-Jul-2023 17:08:11 Calib Date: 06-Jul-2023 10:07:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.027.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1676

First Level Reviewer: GM5C Date: 17-Jul-2023 16:24:20

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid						
16.060	16.060	0.000	33285065H	50.3	52.6	
6 Succinic Acid						
19.226	19.226	0.000	11327798H	50.3	50.2	
12 Isobutyric acid						
25.018	25.018	0.000	20906815H	100.6	101.5	
14 Isovaleric acid						
28.935	28.935	0.000	12489883H	100.0	101.2	
15 Valeric acid						
33.563	33.563	0.000	8847539H	100.4	102.4	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGB3_00021 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 17:08:11 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.018.d

Injection Date: 06-Jul-2023 03:40:00 Instrument ID: 6854A

Lims ID: IC ORGB3

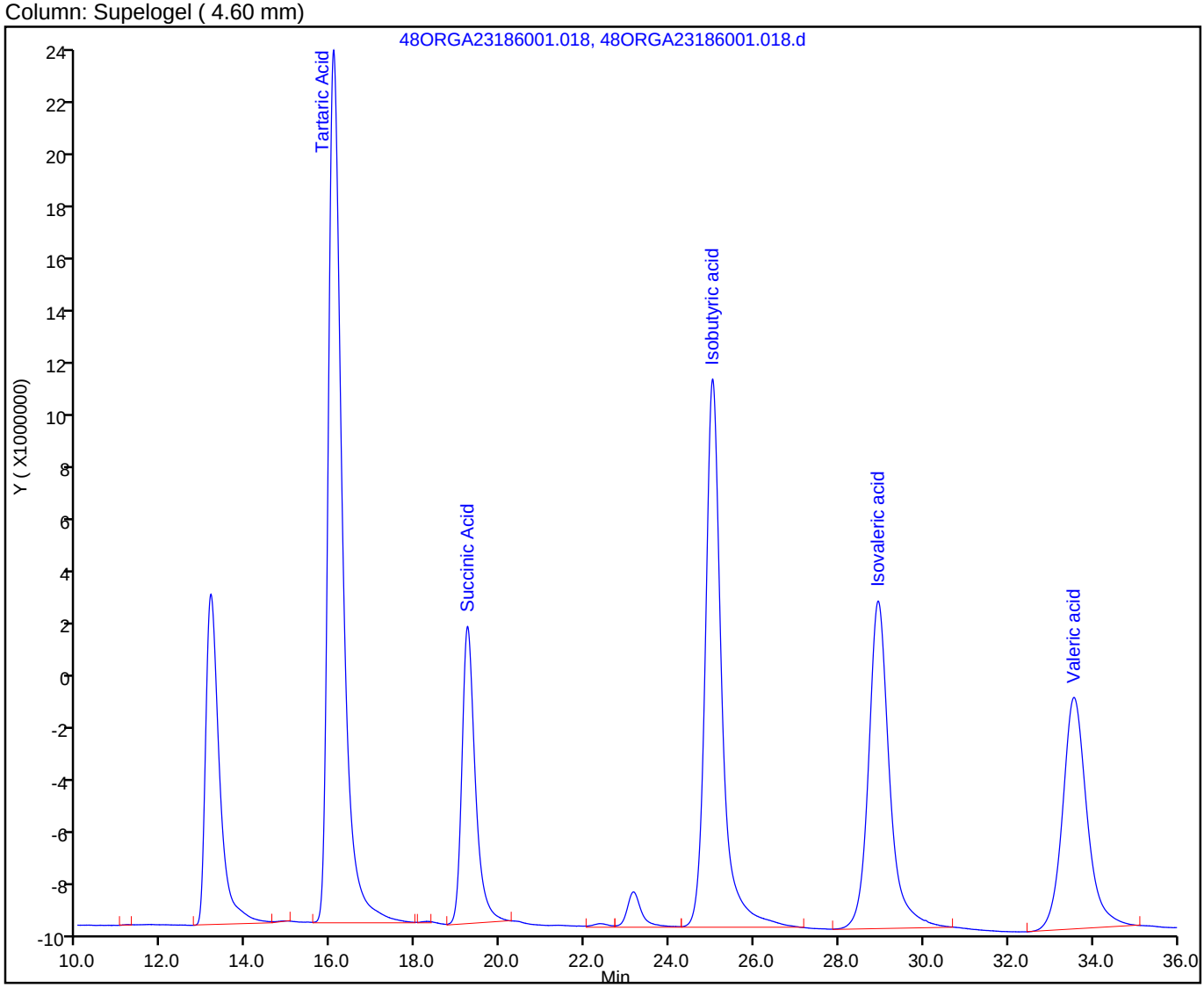
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 18

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Report Date: 17-Jul-2023 17:08:14 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.019.d				
Lims ID:	IC ORGB4				
Client ID:					
Sample Type:	IC	Calib Level:	4		
Inject. Date:	06-Jul-2023 04:23:00	ALS Bottle#:	0	Worklist Smp#:	19
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGB4				
Operator ID:	24470	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub3				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 17:08:13	Calib Date:	06-Jul-2023 10:07:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.027.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1676				
First Level Reviewer: UHEW		Date:	12-Jul-2023 18:08:19		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid						
16.056	16.060	-0.004	65774568H	100.6	103.9	
6 Succinic Acid						
19.222	19.226	-0.004	22683241H	100.6	100.6	
12 Isobutyric acid						
25.010	25.018	-0.008	41697803H	201.2	202.4	
14 Isovaleric acid						
28.903	28.935	-0.032	24872040H	200.0	201.6	
15 Valeric acid						
33.520	33.563	-0.043	17563884H	200.8	203.3	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGB4_00009 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 17:08:14 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.019.d

Injection Date: 06-Jul-2023 04:23:00 Instrument ID: 6854A

Lims ID: IC ORGB4

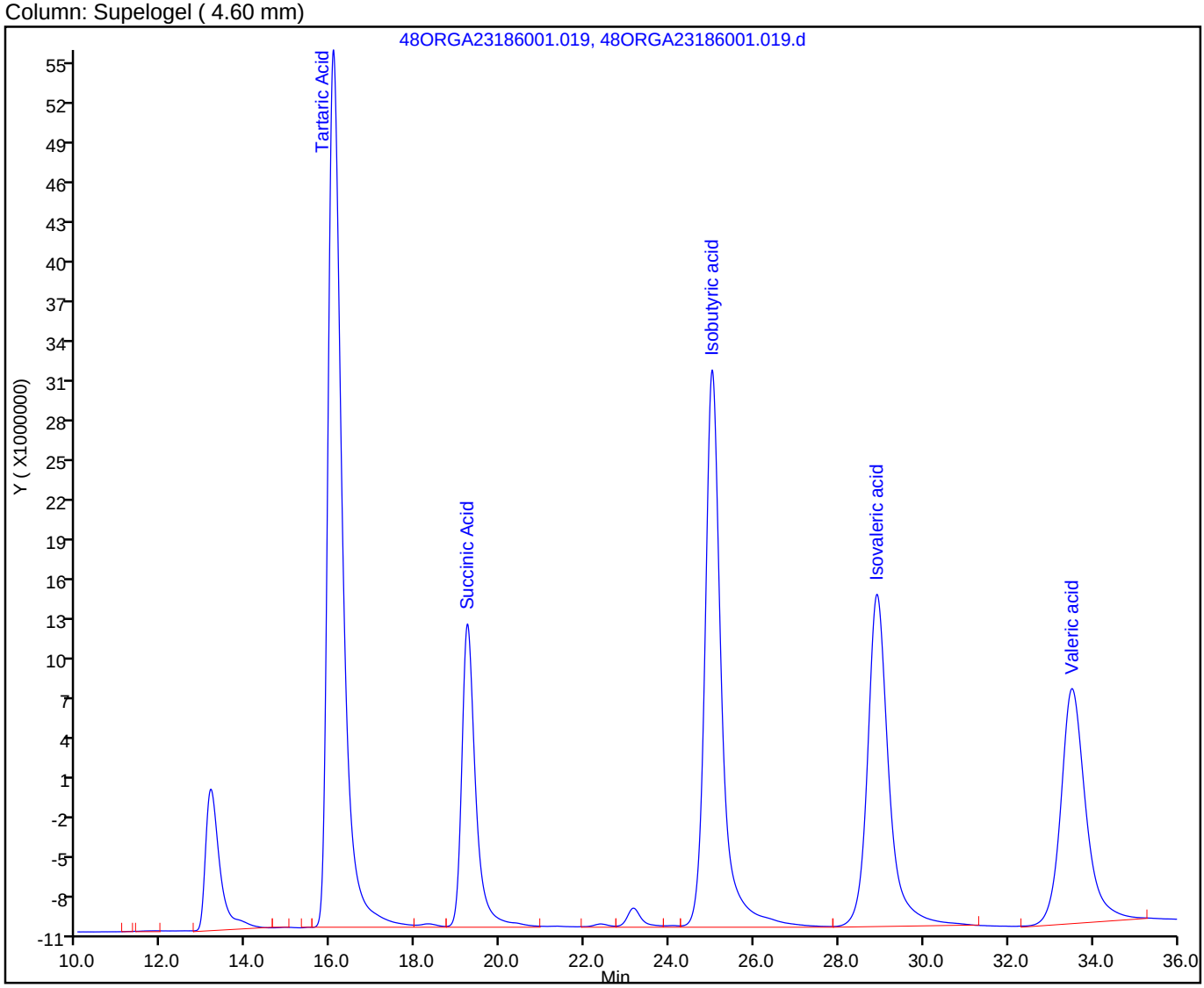
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 19

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Report Date: 17-Jul-2023 17:08:16 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.020.d				
Lims ID:	IC ORGB5				
Client ID:					
Sample Type:	IC	Calib Level:	5		
Inject. Date:	06-Jul-2023 05:06:00	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGB5				
Operator ID:	24470	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub3				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 17:08:16	Calib Date:	06-Jul-2023 10:07:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.027.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1676				
First Level Reviewer: UHEW		Date:	06-Jul-2023 15:03:06		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid						
16.012	16.060	-0.048	256167352H	502.8	404.5	
6 Succinic Acid						
19.218	19.226	-0.008	113320195H	502.8	502.3	
12 Isobutyric acid						
24.958	25.018	-0.060	205923634H	1006.0	999.4	
14 Isovaleric acid						
28.767	28.935	-0.168	120967401H	1000.0	980.3	
15 Valeric acid						
33.292	33.563	-0.271	83728757H	1004.0	969.3	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGB5_00008 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 17:08:16 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.020.d

Injection Date: 06-Jul-2023 05:06:00 Instrument ID: 6854A

Lims ID: IC ORGB5

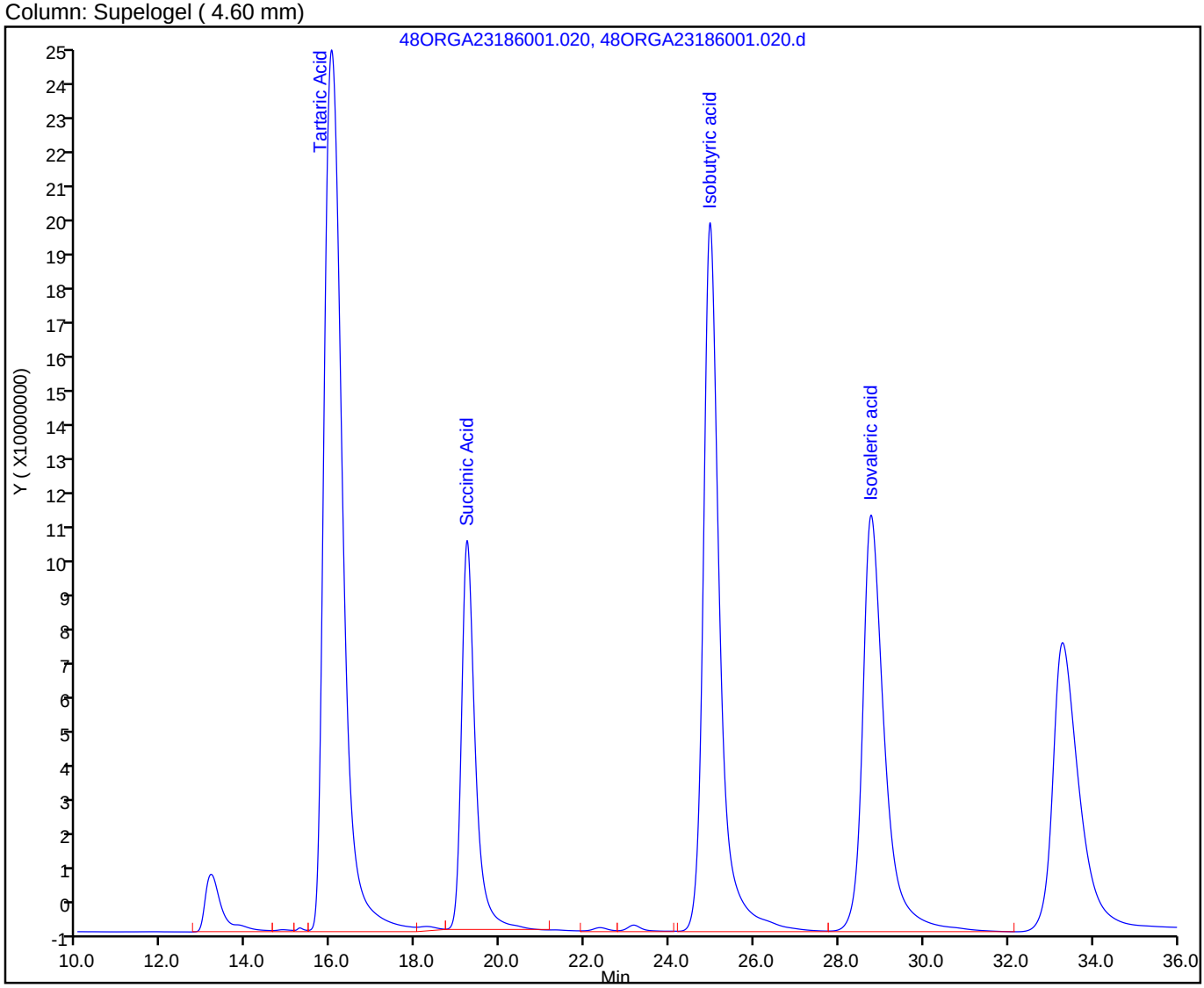
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 20

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Calibration / Tartaric Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

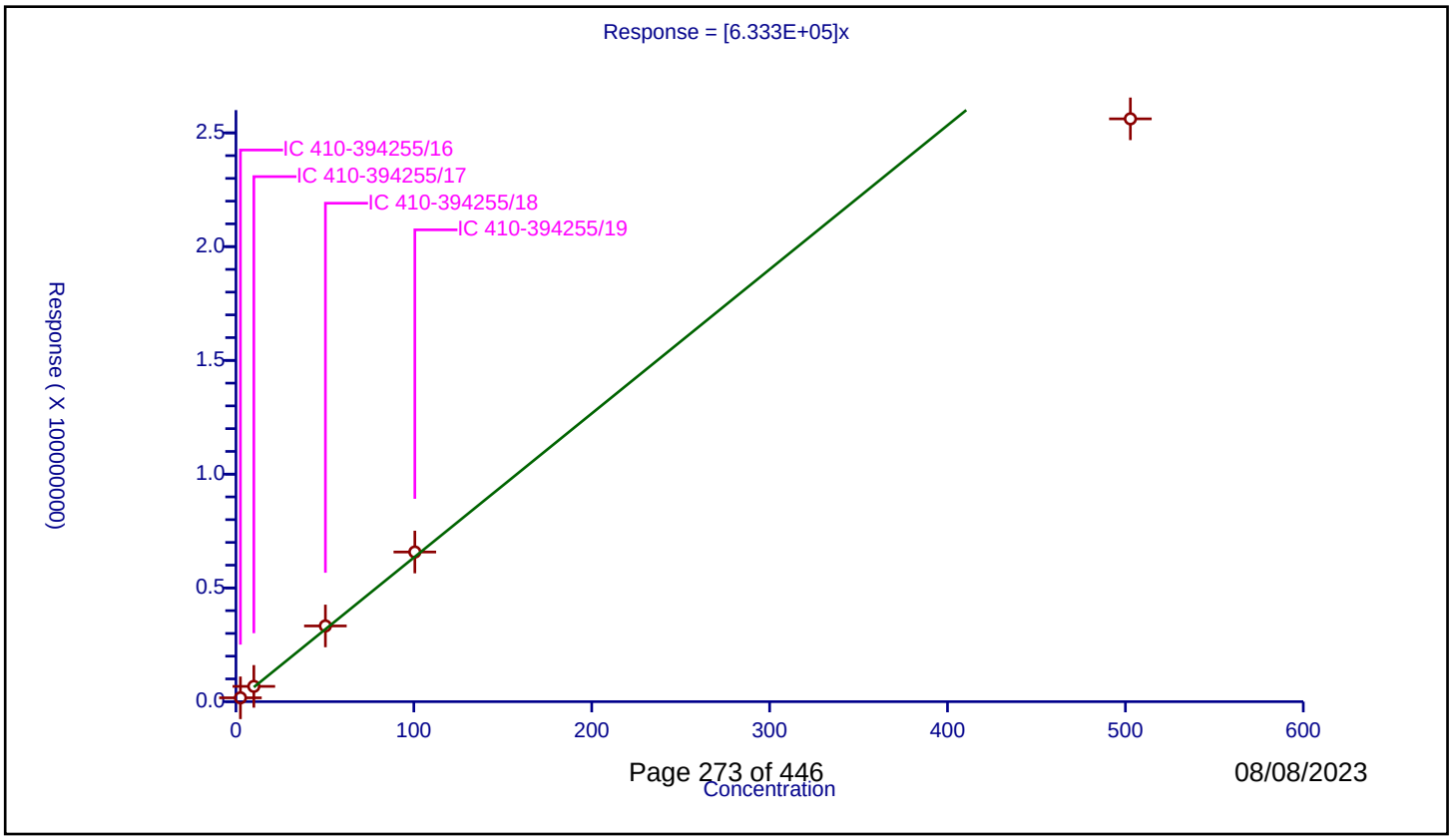
Curve Coefficients

Intercept:	0
Slope:	6.333E+05

Error Coefficients

Standard Error:	31200000
Relative Standard Error:	11.0
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-394255/16	2.514	1691256.0			672735.083532	Y
2	IC 410-394255/17	10.056	6718817.0			668140.115354	Y
3	IC 410-394255/18	50.28	33285065.0			661994.132856	Y
4	IC 410-394255/19	100.56	65774568.0			654082.816229	Y
5	IC 410-394255/20	502.8	256167352.0			509481.607001	Y



Calibration / Succinic Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

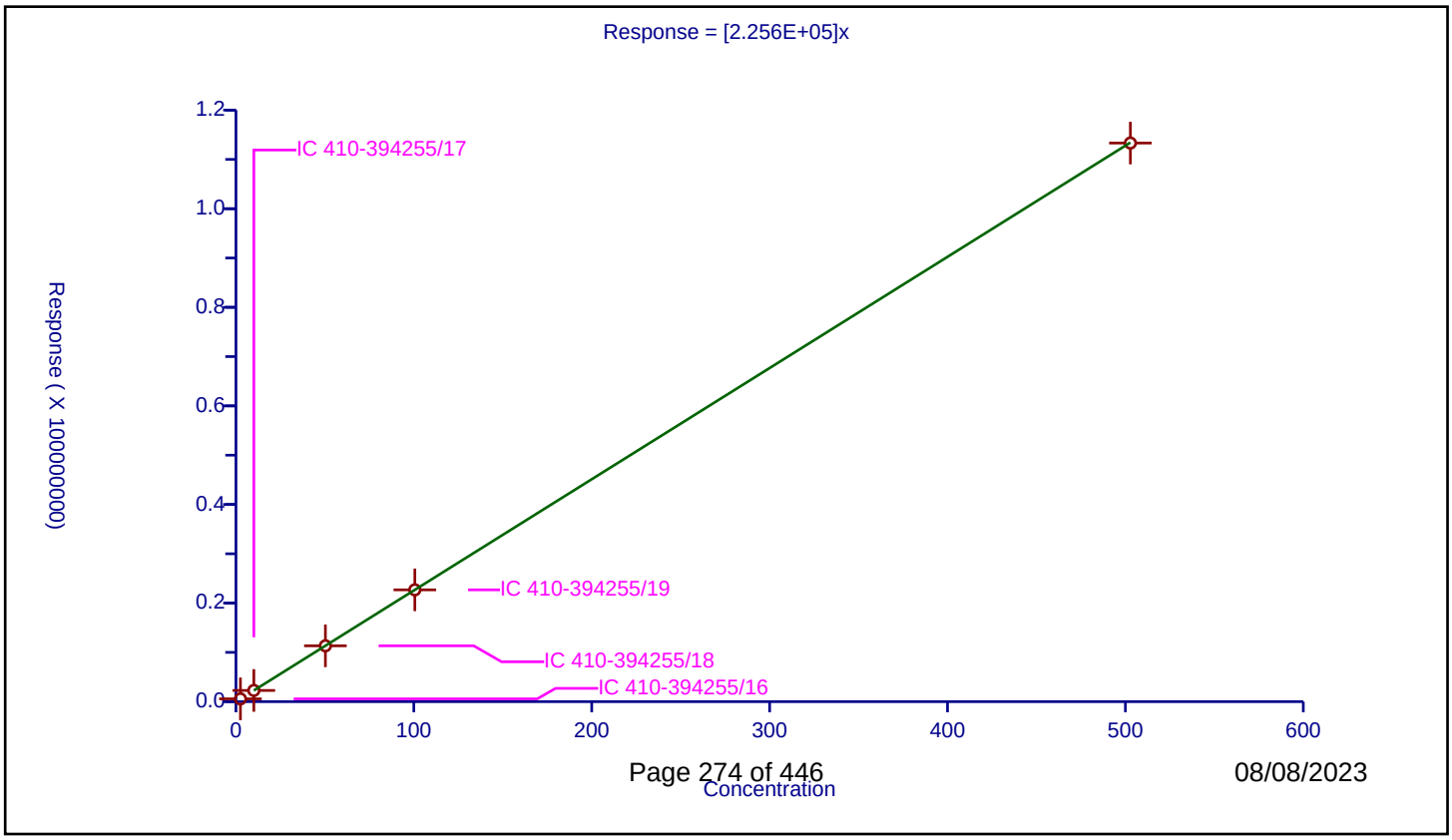
Curve Coefficients

Intercept:	0
Slope:	2.256E+05

Error Coefficients

Standard Error:	52100
Relative Standard Error:	0.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-394255/16	2.514	566608.0			225381.06603	Y
2	IC 410-394255/17	10.056	2275600.0			226292.760541	Y
3	IC 410-394255/18	50.28	11327798.0			225294.311854	Y
4	IC 410-394255/19	100.56	22683241.0			225569.222355	Y
5	IC 410-394255/20	502.8	113320195.0			225378.271679	Y



Calibration / Isobutyric acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

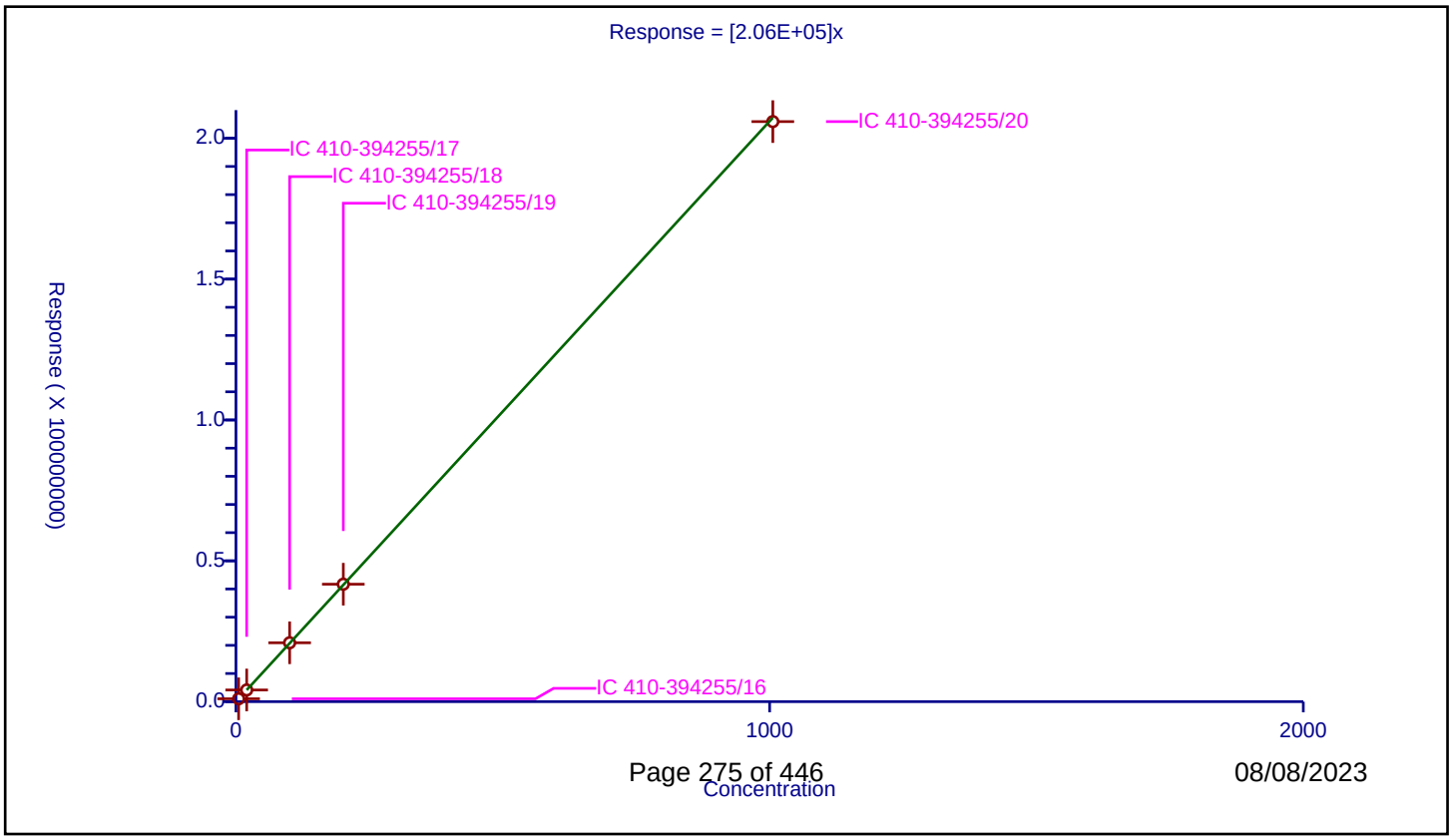
Curve Coefficients

Intercept:	0
Slope:	2.06E+05

Error Coefficients

Standard Error:	693000
Relative Standard Error:	0.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-394255/16	5.03	1026120.0			204000.0	Y
2	IC 410-394255/17	20.12	4153445.0			206433.648111	Y
3	IC 410-394255/18	100.6	20906815.0			207821.222664	Y
4	IC 410-394255/19	201.2	41697803.0			207245.54175	Y
5	IC 410-394255/20	1006.0	205923634.0			204695.461233	Y



Calibration / Isovaleric acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

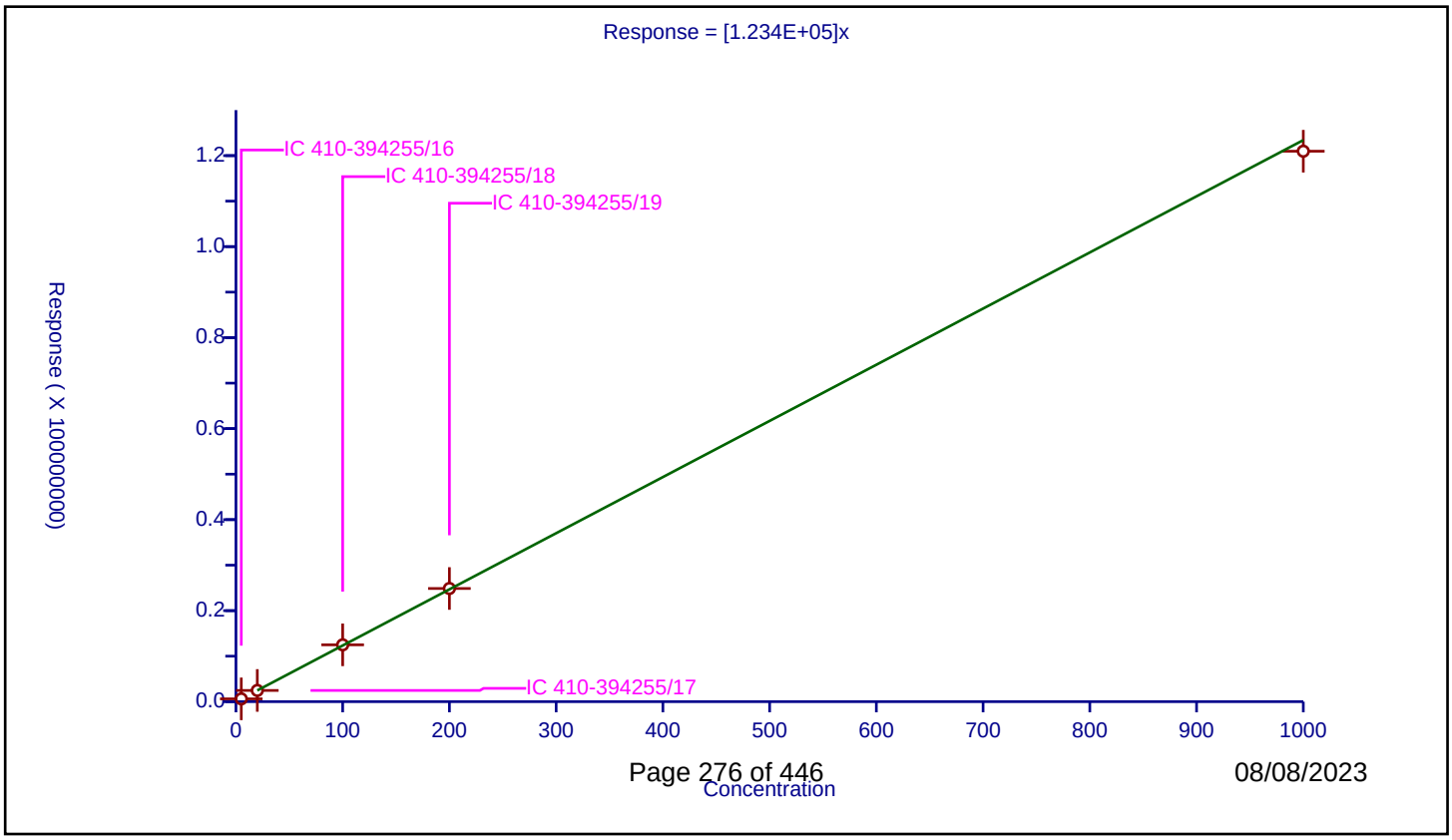
Curve Coefficients

Intercept:	0
Slope:	1.234E+05

Error Coefficients

Standard Error:	1220000
Relative Standard Error:	1.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-394255/16	5.0	617700.0			123540.0	Y
2	IC 410-394255/17	20.0	2464615.0			123230.75	Y
3	IC 410-394255/18	100.0	12489883.0			124898.83	Y
4	IC 410-394255/19	200.0	24872040.0			124360.2	Y
5	IC 410-394255/20	1000.0	120967401.0			120967.401	Y



Calibration / Valeric acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

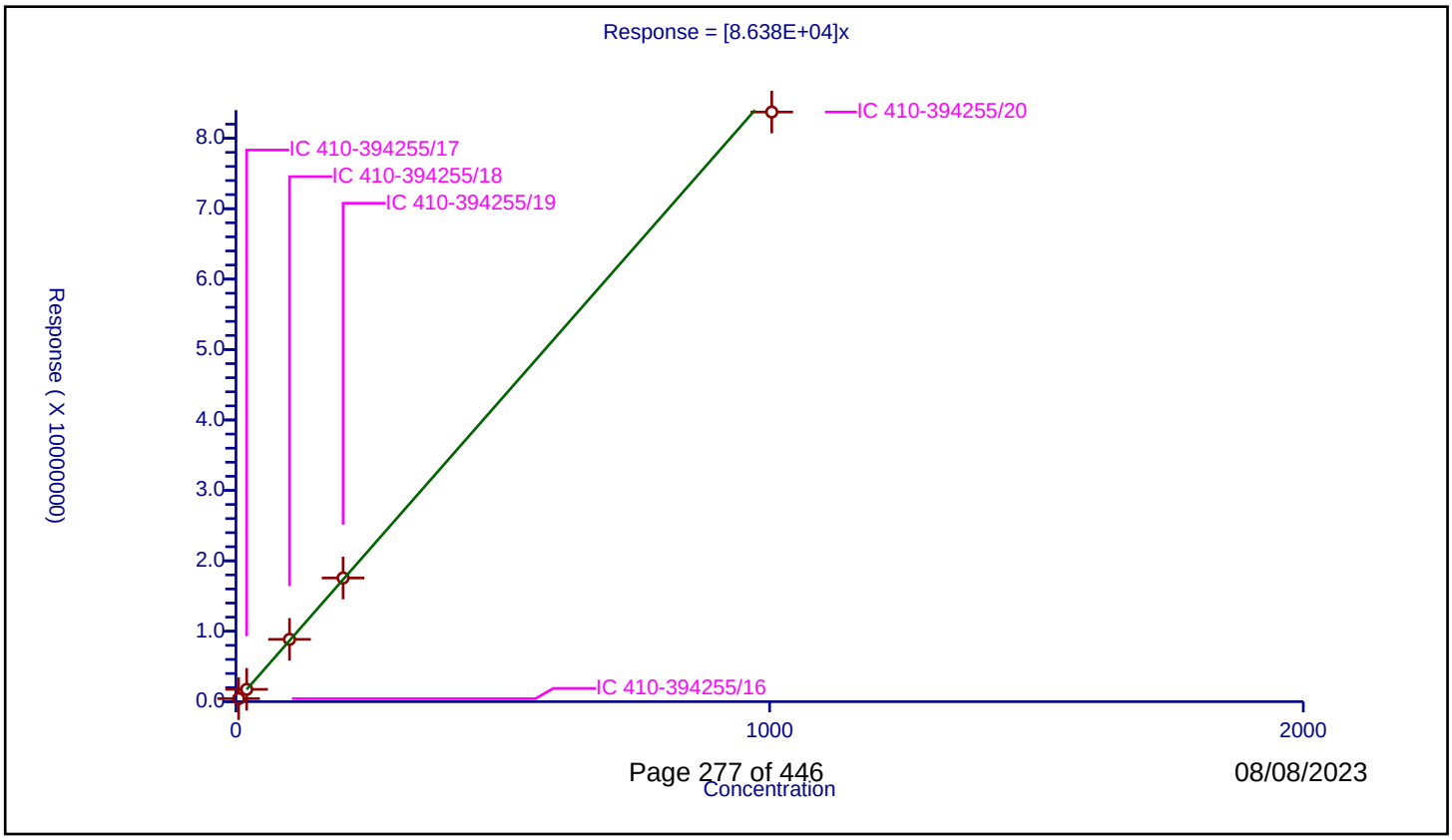
Curve Coefficients

Intercept:	0
Slope:	8.638E+04

Error Coefficients

Standard Error:	1500000
Relative Standard Error:	2.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-394255/16	5.02	431020.0			85860.557769	Y
2	IC 410-394255/17	20.08	1747743.0			87038.994024	Y
3	IC 410-394255/18	100.4	8847539.0			88122.898406	Y
4	IC 410-394255/19	200.8	17563884.0			87469.541833	Y
5	IC 410-394255/20	1004.0	83728757.0			83395.176295	Y



INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136645-1 Analy Batch No.: 401648

SDG No.:

Instrument ID: 6854A GC Column: Supelcogel ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2023 19:59 Calibration End Date: 07/27/2023 22:51 Calibration ID: 52300

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-401648/4	48ORGA23186006.004.d
Level 2	IC 410-401648/5	48ORGA23186006.005.d
Level 3	ICRT 410-401648/6	48ORGA23186006.006.d
Level 4	IC 410-401648/7	48ORGA23186006.007.d
Level 5	IC 410-401648/8	48ORGA23186006.008.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5						RT WINDOW	AVG RT
Fumaric Acid	22.404	22.404	22.400	22.404	22.404						22.220 - 22.580	22.403

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136645-1 Analy Batch No.: 401648

SDG No.:

Instrument ID: 6854A GC Column: Supelcogel ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2023 19:59 Calibration End Date: 07/27/2023 22:51 Calibration ID: 52300

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-401648/4	48ORGA23186006.004.d
Level 2	IC 410-401648/5	48ORGA23186006.005.d
Level 3	ICRT 410-401648/6	48ORGA23186006.006.d
Level 4	IC 410-401648/7	48ORGA23186006.007.d
Level 5	IC 410-401648/8	48ORGA23186006.008.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 3	LVL 4		B	M1	M2								
Fumaric Acid	39420564 39202585	39577678	39217283	39752344	Ave		39434091.1				0.6		20.0			

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.

INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136645-1 Analy Batch No.: 401648

SDG No.:

Instrument ID: 6854A GC Column: Supelcogel ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2023 19:59 Calibration End Date: 07/27/2023 22:51 Calibration ID: 52300

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-401648/4	48ORGA23186006.004.d
Level 2	IC 410-401648/5	48ORGA23186006.005.d
Level 3	ICRT 410-401648/6	48ORGA23186006.006.d
Level 4	IC 410-401648/7	48ORGA23186006.007.d
Level 5	IC 410-401648/8	48ORGA23186006.008.d

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
Fumaric Acid	Ave	1939610	3894681	19296080	39118692	192888481	0.0492	0.0984	0.492	0.984	4.92

Curve Type Legend

Ave = Average by Height

Report Date: 28-Jul-2023 11:26:31 Chrom Revision: 2.3 26-Jul-2023 13:45:38

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.004.d				
Lims ID:	IC ORGS1				
Client ID:					
Sample Type:	IC	Calib Level:	1		
Inject. Date:	27-Jul-2023 19:59:00	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGS1				
Operator ID:	2027	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub4				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	28-Jul-2023 11:26:31	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1611				

First Level Reviewer: GM5C Date: 28-Jul-2023 11:26:17

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid						M
22.404	22.400	0.004	1939610H	0.0492	0.0492	M

QC Flag Legend

Processing Flags

H - Response Measured by Height

Review Flags

M - Manually Integrated

Reagents:

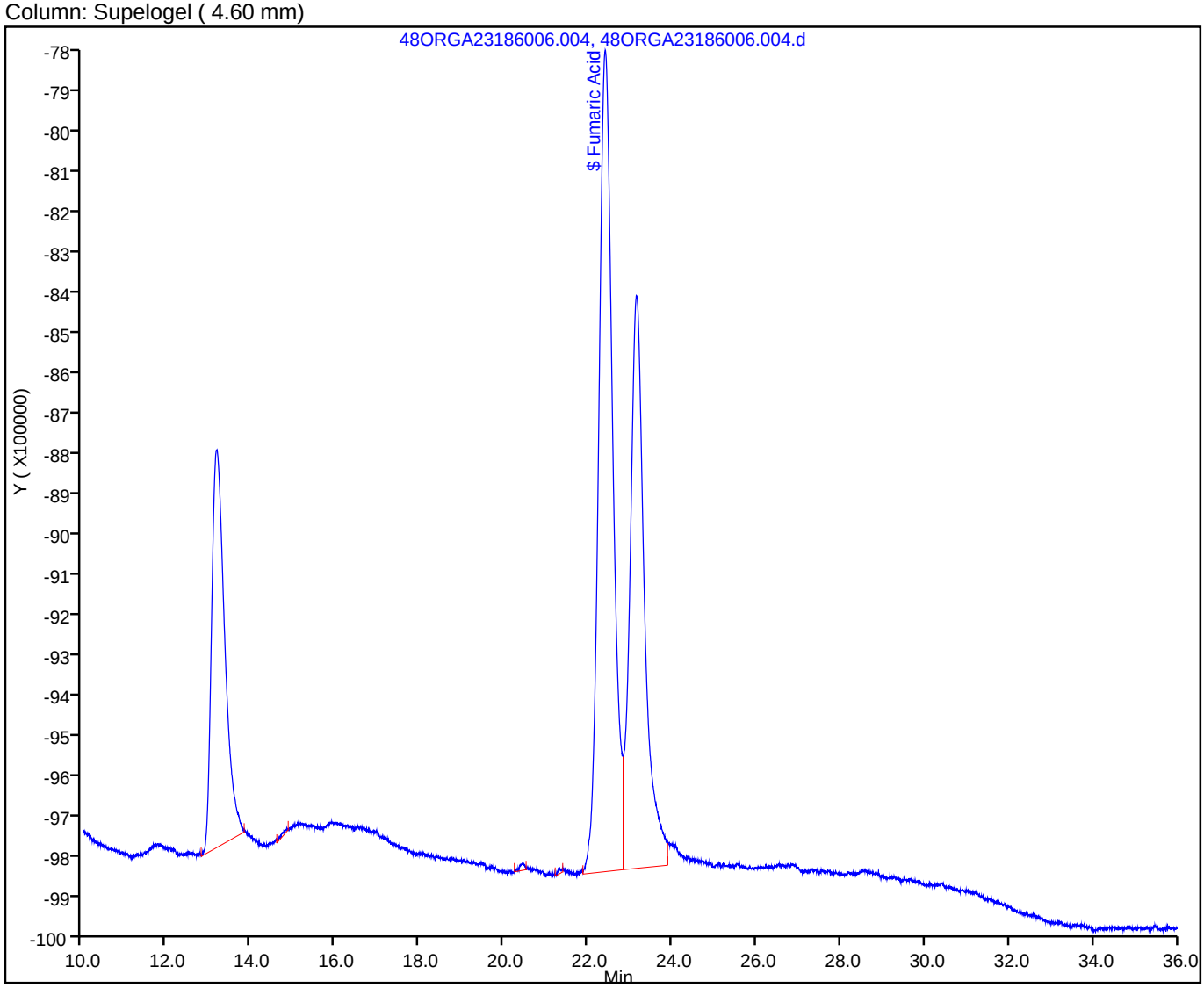
GCS_ORGS1_00018 Amount Added: 1.00 Units: mL

Report Date: 28-Jul-2023 11:26:31 Chrom Revision: 2.3 26-Jul-2023 13:45:38

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.004.d				
Injection Date:	27-Jul-2023 19:59:00	Instrument ID:	6854A		
Lims ID:	IC ORGS1				
Client ID:					
Operator ID:	2027	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Report Date: 28-Jul-2023 11:26:31 Chrom Revision: 2.3 26-Jul-2023 13:45:38

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

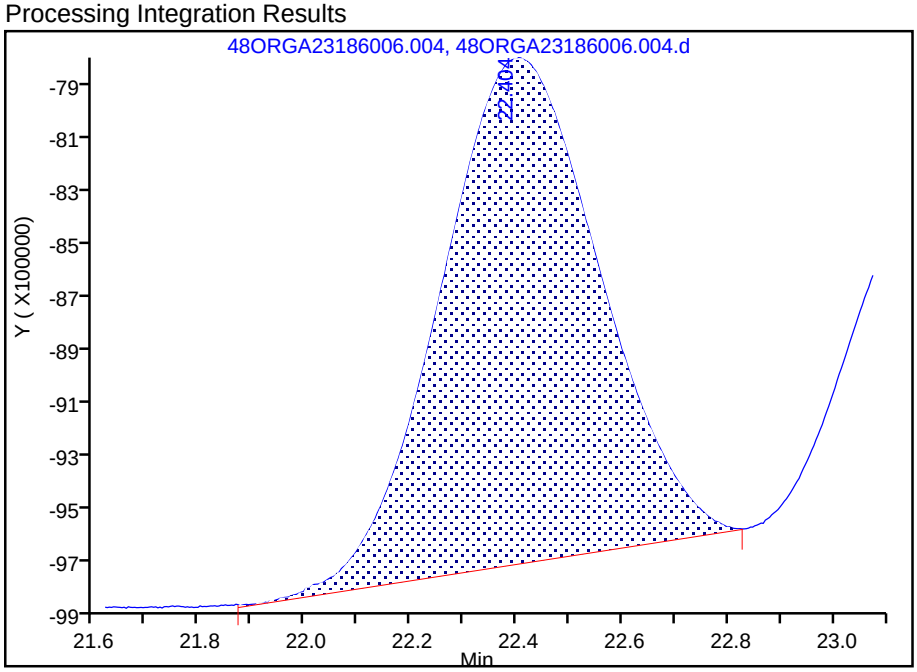
Data File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.004.d				
Injection Date:	27-Jul-2023 19:59:00	Instrument ID:	6854A		
Lims ID:	IC ORGS1				
Client ID:					
Operator ID:	2027	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		
Column:	Supelogel (4.60 mm)	Detector	SupelcogelH		

$ 10 Fumaric Acid, CAS: 110-17-8

Signal: 1

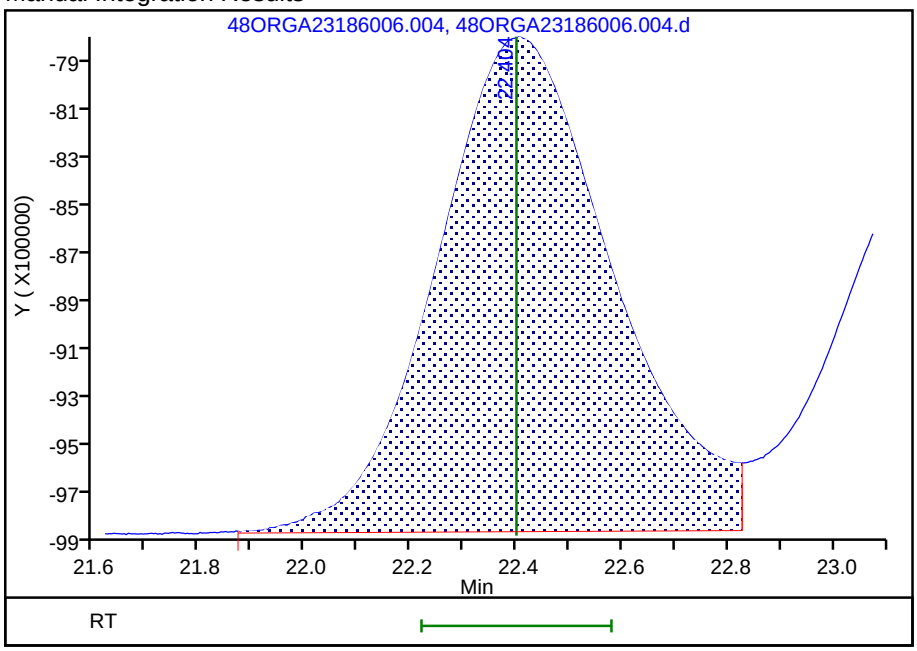
Processing Integration Results

RT: 22.40
Height: 1791540
Amount: 0.046135
Amount Units: ug/ml



Manual Integration Results

RT: 22.40
Height: 1939610
Amount: 0.049186
Amount Units: ug/ml



Reviewer: GM5C, 28-Jul-2023 11:26:11 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 28-Jul-2023 11:26:32 Chrom Revision: 2.3 26-Jul-2023 13:45:38

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.005.d				
Lims ID:	IC ORGS2				
Client ID:					
Sample Type:	IC	Calib Level:	2		
Inject. Date:	27-Jul-2023 20:42:00	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGS2				
Operator ID:	2027	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub4				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	28-Jul-2023 11:26:32	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1611				

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid						
22.404	22.400	0.004	3894681	H 0.0984	0.0988	

Reagents:

GCS_ORGS2_00018 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 28-Jul-2023 11:26:32 Chrom Revision: 2.3 26-Jul-2023 13:45:38

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.005.d

Injection Date: 27-Jul-2023 20:42:00 Instrument ID: 6854A

Lims ID: IC ORGS2

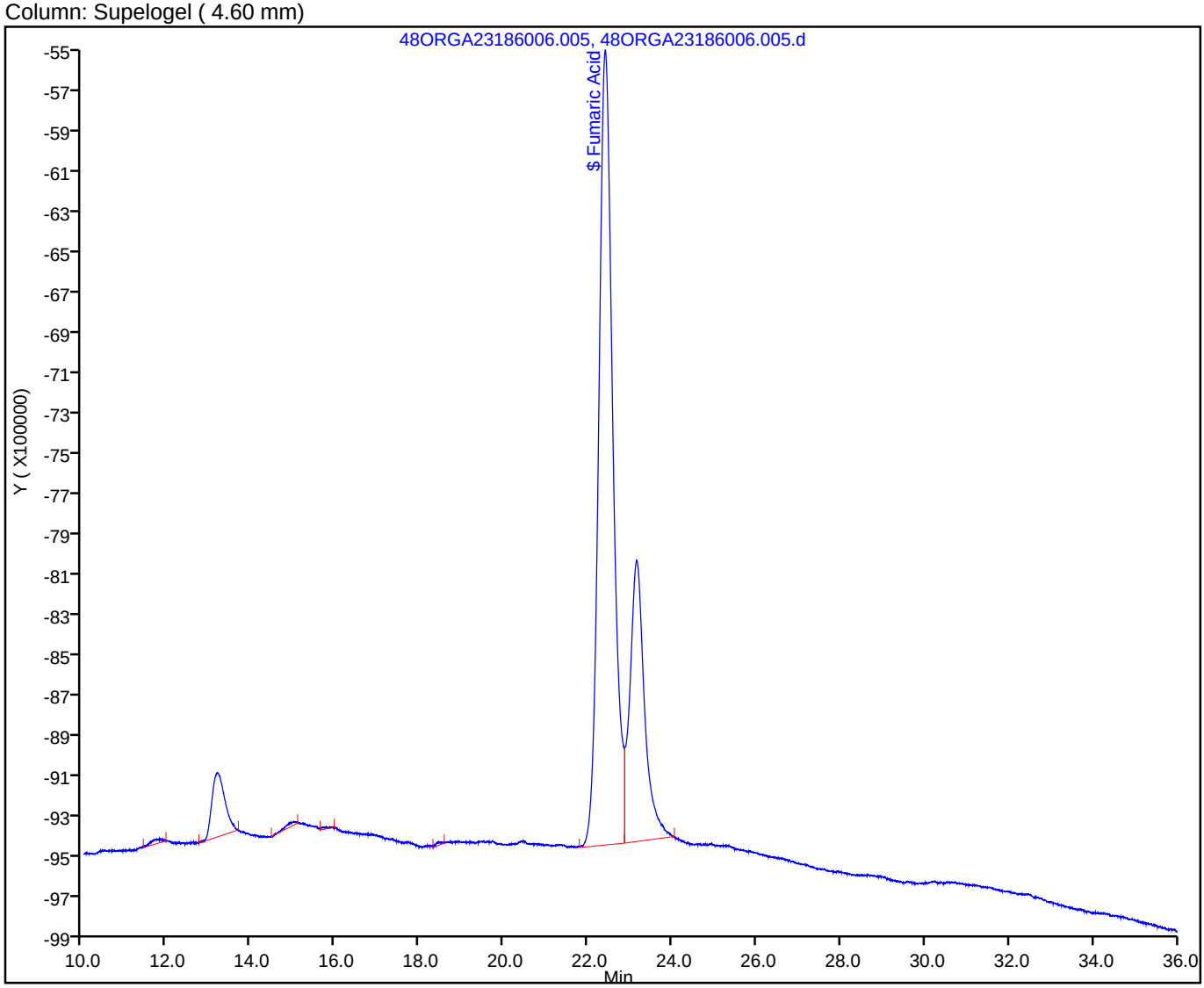
Client ID:

Operator ID: 2027 ALS Bottle#: 0 Worklist Smp#: 5

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Report Date: 28-Jul-2023 11:26:33 Chrom Revision: 2.3 26-Jul-2023 13:45:38

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.006.d				
Lims ID:	ICRT ORGS3				
Client ID:					
Sample Type:	ICRT	Calib Level:	3		
Inject. Date:	27-Jul-2023 21:25:00	ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	ICRT ORGS3				
Operator ID:	2027	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub4				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	28-Jul-2023 11:26:33	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1611				

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid						
22.400	22.400	0.000	19296080H	0.4920	0.4893	

Reagents:

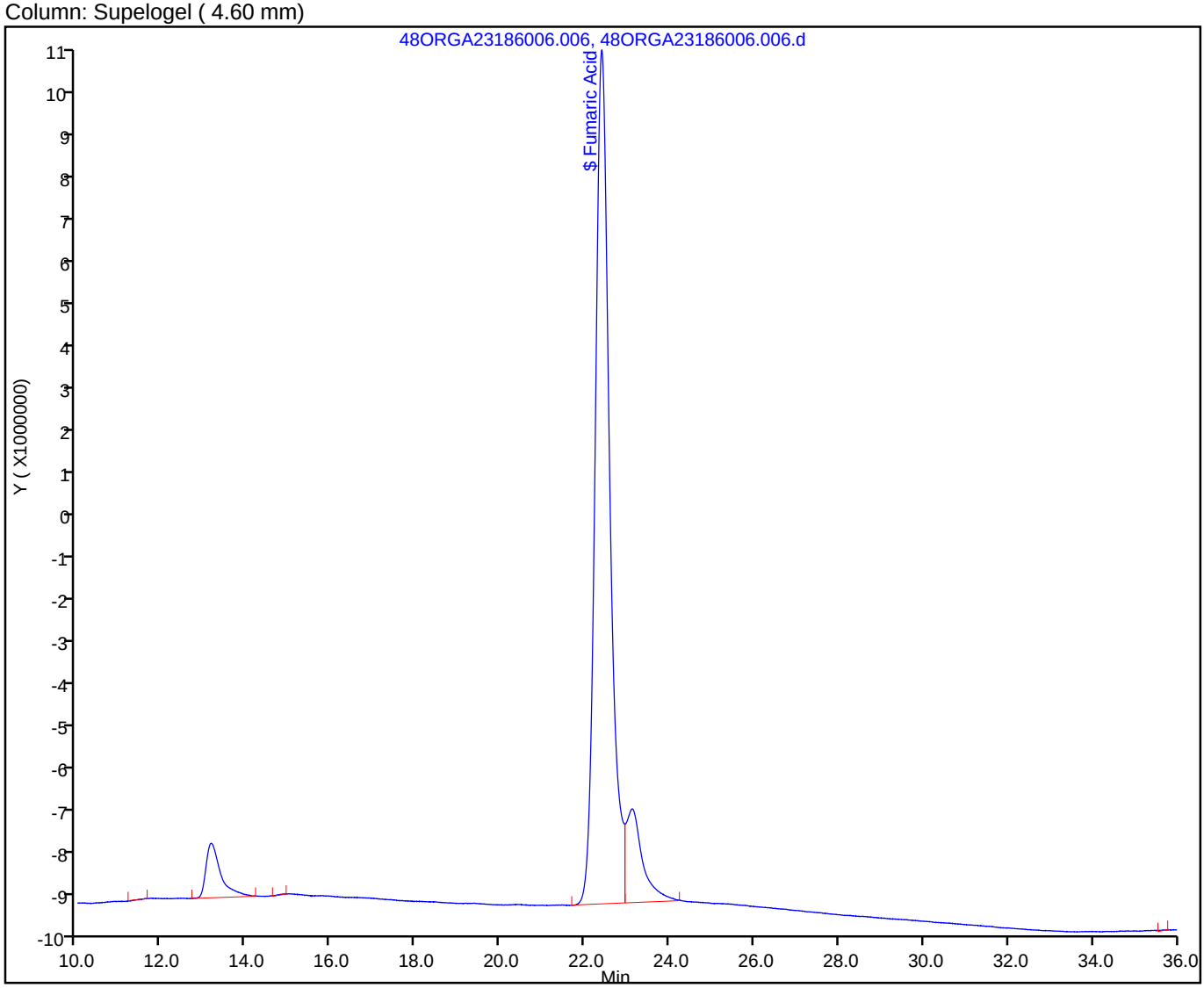
GCS_ORGS3_00049 Amount Added: 1.00 Units: mL

Report Date: 28-Jul-2023 11:26:33 Chrom Revision: 2.3 26-Jul-2023 13:45:38

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.006.d				
Injection Date:	27-Jul-2023 21:25:00	Instrument ID:	6854A		
Lims ID:	ICRT ORGS3				
Client ID:					
Operator ID:	2027	ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Report Date: 28-Jul-2023 11:26:34 Chrom Revision: 2.3 26-Jul-2023 13:45:38

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.007.d
Lims ID: IC ORGS4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 27-Jul-2023 22:08:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: IC ORGS4
Operator ID: 2027 Instrument ID: 6854A
Sublist: chrom-8015_6854AP*sub4

Method: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 28-Jul-2023 11:26:34 Calib Date: 27-Jul-2023 22:51:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1611

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid						
22.404	22.400	0.004	39118692H	0.9841	0.99	

Reagents:

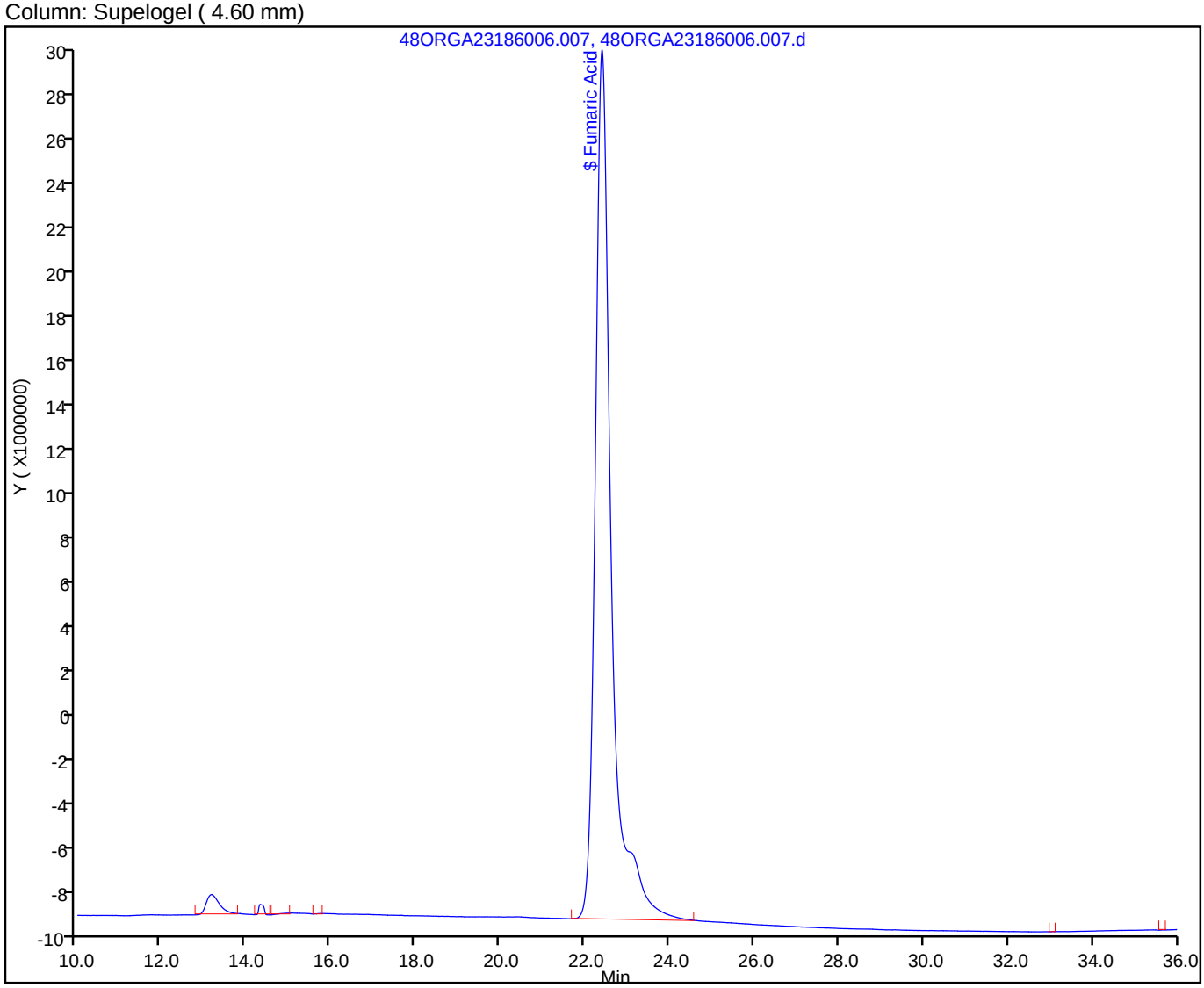
GCS_ORGS4_00020 Amount Added: 1.00 Units: mL

Report Date: 28-Jul-2023 11:26:34 Chrom Revision: 2.3 26-Jul-2023 13:45:38

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.007.d				
Injection Date:	27-Jul-2023 22:08:00	Instrument ID:	6854A		
Lims ID:	IC ORGS4				
Client ID:					
Operator ID:	2027	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Report Date: 28-Jul-2023 11:26:35 Chrom Revision: 2.3 26-Jul-2023 13:45:38

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d
Lims ID: IC ORGS5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 27-Jul-2023 22:51:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: IC ORGS5
Operator ID: 2027 Instrument ID: 6854A
Sublist: chrom-8015_6854AP*sub4

Method: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 28-Jul-2023 11:26:35 Calib Date: 27-Jul-2023 22:51:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1611

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid						
22.404	22.400	0.004	192888481	H 4.92	4.89	

Reagents:

GCS_ORGS5_00017 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 28-Jul-2023 11:26:35 Chrom Revision: 2.3 26-Jul-2023 13:45:38

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d

Injection Date: 27-Jul-2023 22:51:00 Instrument ID: 6854A

Lims ID: IC ORGS5

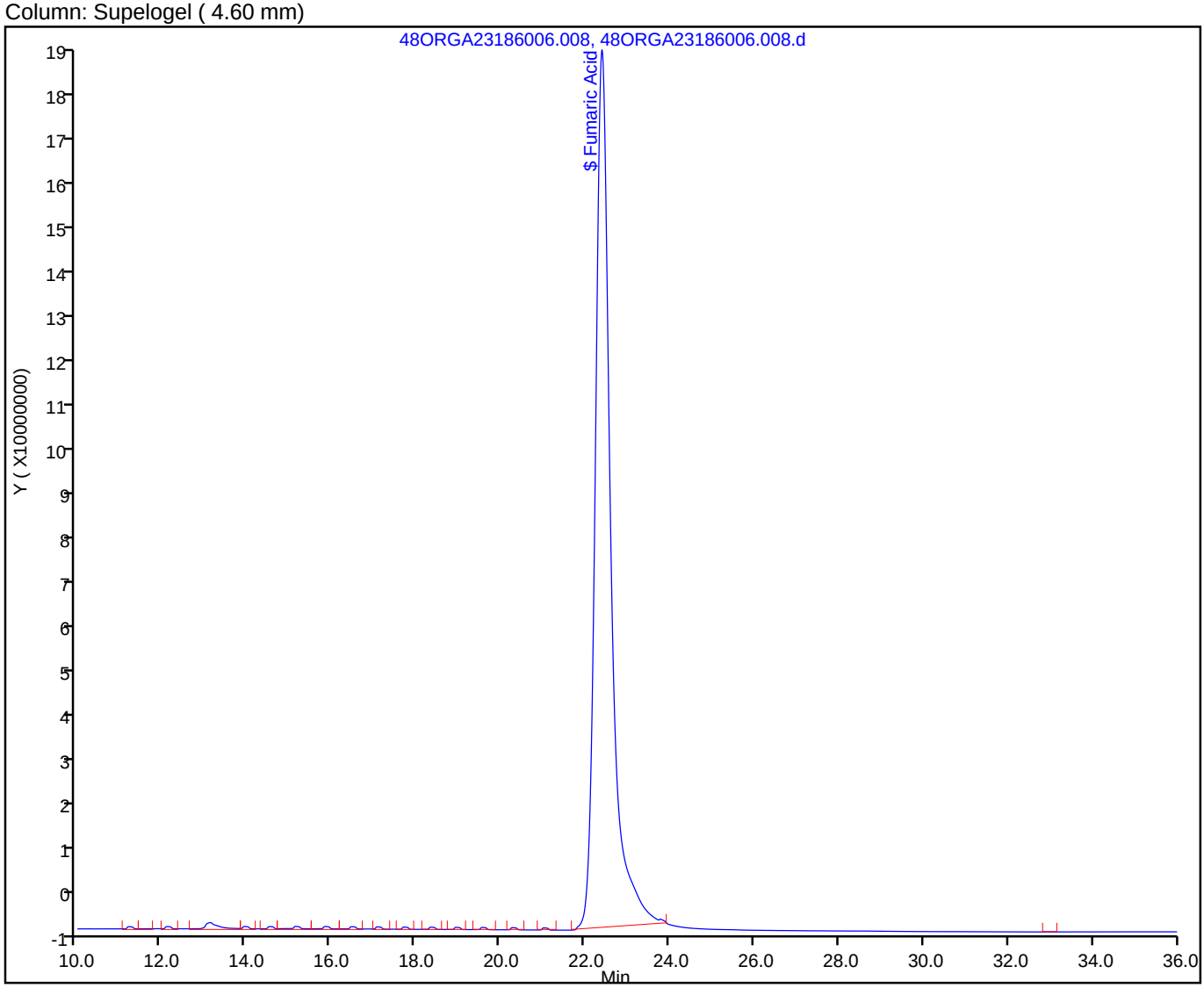
Client ID:

Operator ID: 2027 ALS Bottle#: 0 Worklist Smp#: 8

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Calibration / Fumaric Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

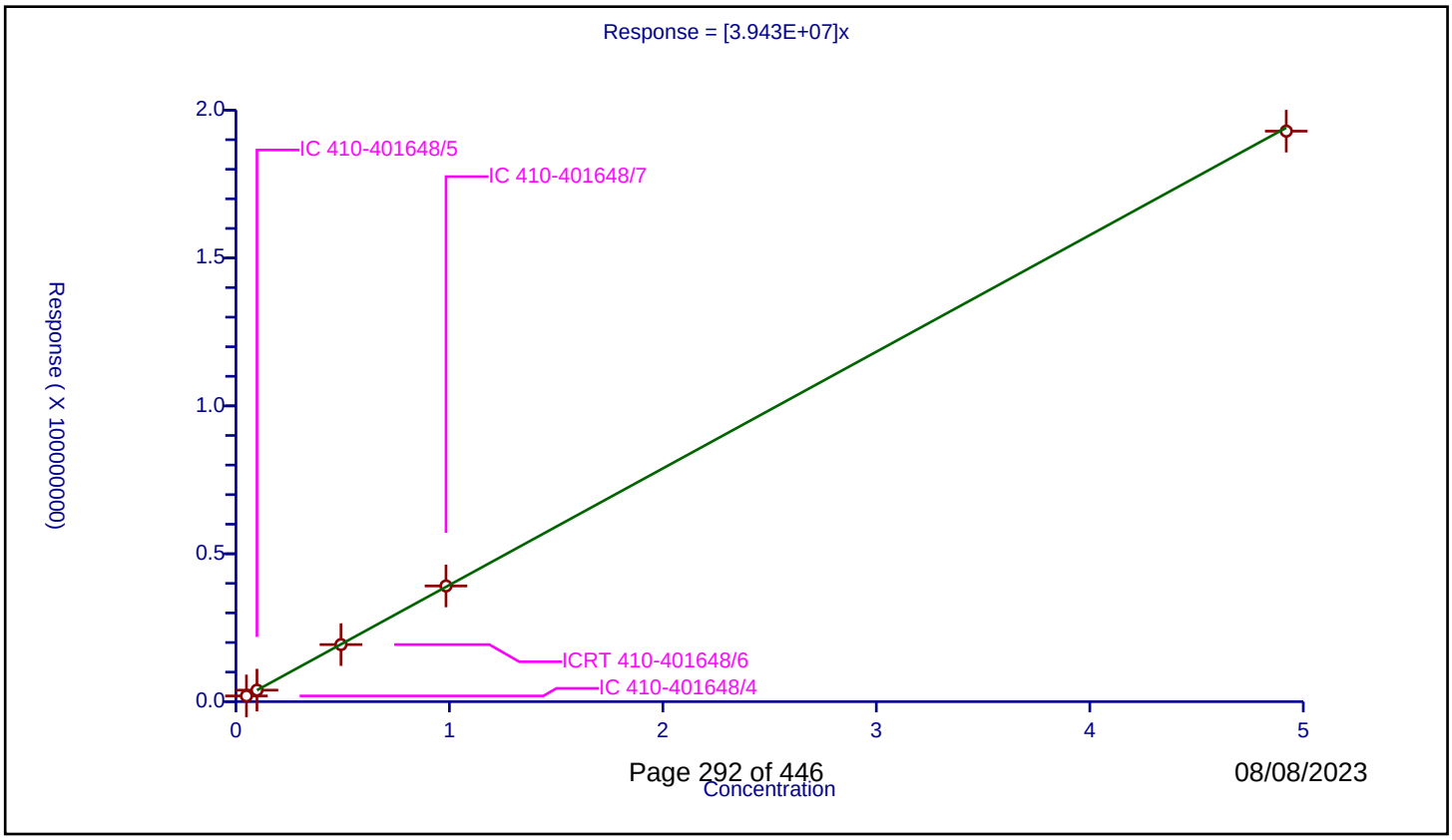
Curve Coefficients

Intercept:	0
Slope:	3.943E+07

Error Coefficients

Standard Error:	593000
Relative Standard Error:	0.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-401648/4	0.049203	1939610.0			39420563.786761	Y
2	IC 410-401648/5	0.098406	3894681.0			39577678.190354	Y
3	ICRT 410-401648/6	0.49203	19296080.0			39217283.498974	Y
4	IC 410-401648/7	0.98406	39118692.0			39752344.369246	Y
5	IC 410-401648/8	4.9203	192888481.0			39202585.411459	Y



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: ICV 410-396213/14 Calibration Date: 07/12/2023 23:59

Instrument ID: 10136 Calib Start Date: 07/12/2023 19:50

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/12/2023 22:57

Lab File ID: 11ORGC23193001.014.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Oxalic Acid	Qua		1027962		9090	12500	-27.2*	20.0
Quinic Acid	Ave	133861	134328		50500	50300	0.3	20.0
Formic-acid	Ave	189118	189654		101000	101000	0.3	20.0
Pyruvic Acid	Ave	598405	591297		12400	12600	-1.2	20.0
L-Lactic Acid	Ave	84337	64690		38700	50400	-23.3*	20.0
Acetic acid	Ave	51969	55197		107000	100000	6.2	20.0
Citric Acid	Ave	115749	125350		54600	50400	8.3	20.0
Propionic acid	Ave	114282	118762		105000	101000	3.9	20.0
Butyric acid	Ave	129640	126312		98200	101000	-2.6	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: ICV 410-396213/14 Calibration Date: 07/12/2023 23:59

Instrument ID: 10136 Calib Start Date: 07/12/2023 19:50

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/12/2023 22:57

Lab File ID: 11ORGC23193001.014.d

Analyte	RT	RT WINDOW	
		FROM	TO
Oxalic Acid	3.73	3.60	3.80
Quinic Acid	4.39	4.28	4.48
Formic-acid	4.67	4.57	4.77
Pyruvic Acid	5.28	5.17	5.37
L-Lactic Acid	6.36	6.25	6.45
Acetic acid	6.97	6.81	7.11
Citric Acid	9.47	9.28	9.58
Propionic acid	12.89	12.79	12.99
Butyric acid	14.57	14.47	14.67

Report Date: 17-Jul-2023 16:04:33 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.014.d
Lims ID: ICV ORGA
Client ID:
Sample Type: ICV
Inject. Date: 12-Jul-2023 23:59:00 ALS Bottle#: 0 Worklist Smp#: 14
Injection Vol: 50.0 ul Dil. Factor: 1.0000
Sample Info: ICV ORGA
Operator ID: 24470 Instrument ID: 10136
Sublist:

Method: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m
Limit Group: LC - 8015D VFA
Last Update: 17-Jul-2023 16:04:14 Calib Date: 13-Jul-2023 06:13:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d

Column 1 : Supelcosil PAH (4.60 mm) Det: UV0
Process Host: CTX1644

First Level Reviewer: UHEW Date: 13-Jul-2023 13:51:51

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid	3.725	3.704	0.021	12849529H	12.5	9.09	M
2 Quinic Acid	4.388	4.383	0.005	6756697H	50.3	50.5	M
4 Formic-acid	4.667	4.667	0.000	19117125H	100.8	101.1	M
5 Pyruvic Acid	5.275	5.271	0.004	7426693H	12.6	12.4	M
6 L-Lactic Acid	6.363	6.354	0.008	3260368H	50.4	38.7	M
7 Acetic acid	6.967	6.963	0.005	5536215H	100.3	106.5	M
8 Citric Acid	9.467	9.433	0.034	6317663H	50.4	54.6	M
11 Propionic acid	12.892	12.892	0.000	11994918H	101.0	105.0	
12 n-Butyric Acid	14.571	14.571	0.000	12732289H	100.8	98.2	

QC Flag Legend

Processing Flags
H - Response Measured by Height
Review Flags
M - Manually Integrated

Reagents:

GCS_ORGAICV_00008 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 16:04:33 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.014.d

Injection Date: 12-Jul-2023 23:59:00 Instrument ID: 10136

Lims ID: ICV ORGA

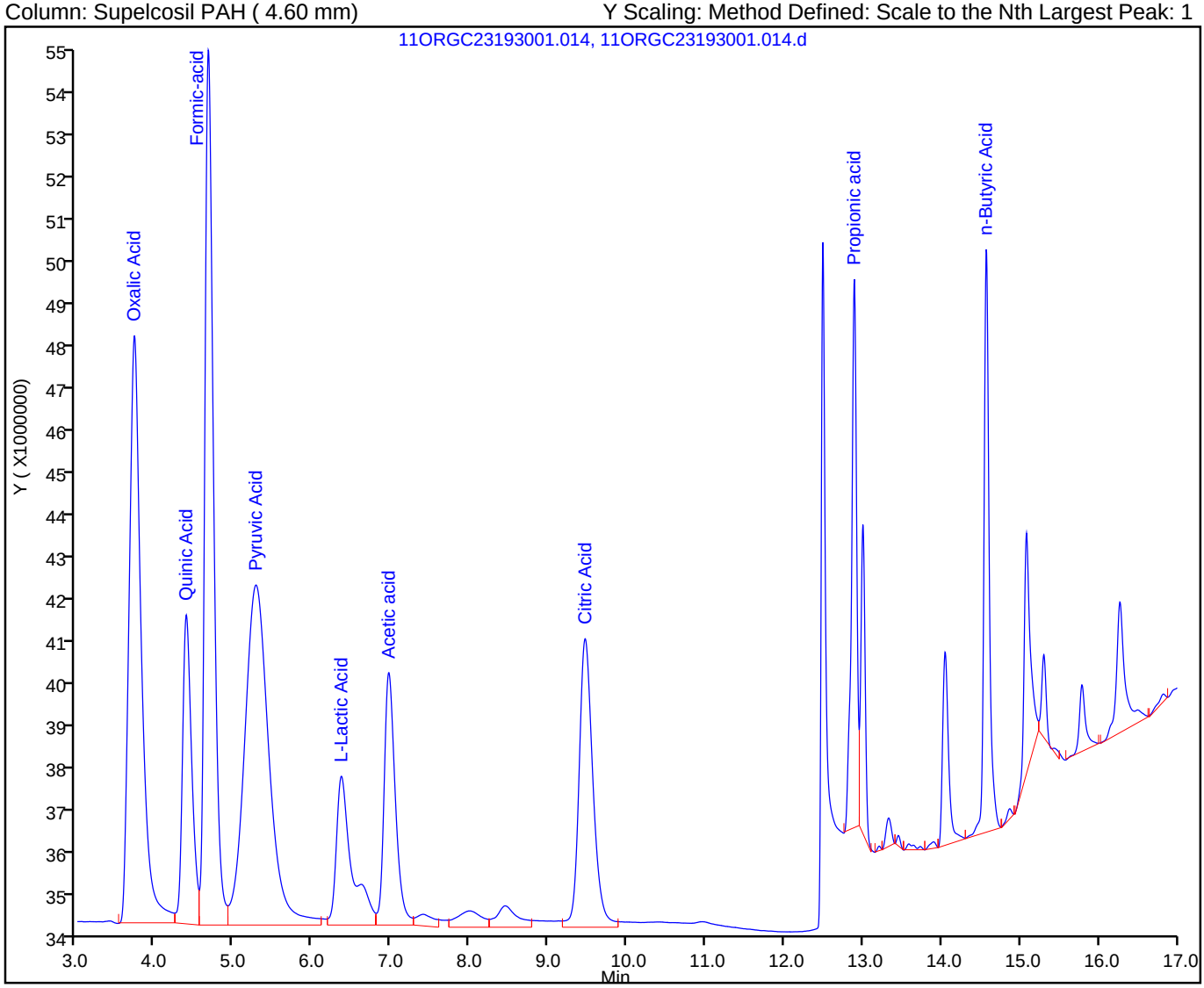
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 14

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:04:33 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

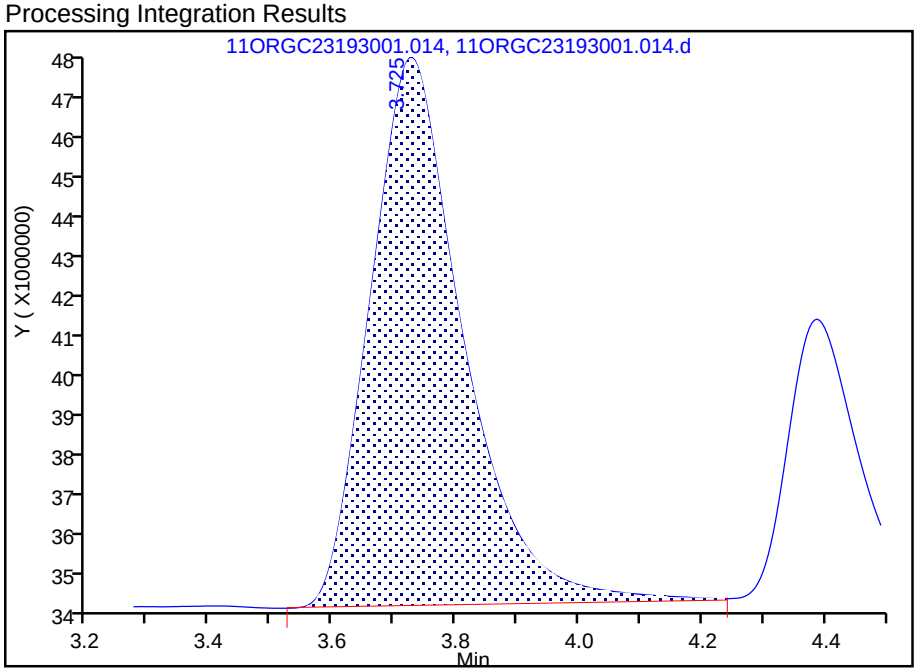
Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.014.d				
Injection Date:	12-Jul-2023 23:59:00	Instrument ID:	10136		
Lims ID:	ICV ORGA				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		
Column:	Supelcosil PAH (4.60 mm)	Detector	UV0		

1 Oxalic Acid, CAS: 144-62-7

Signal: 1

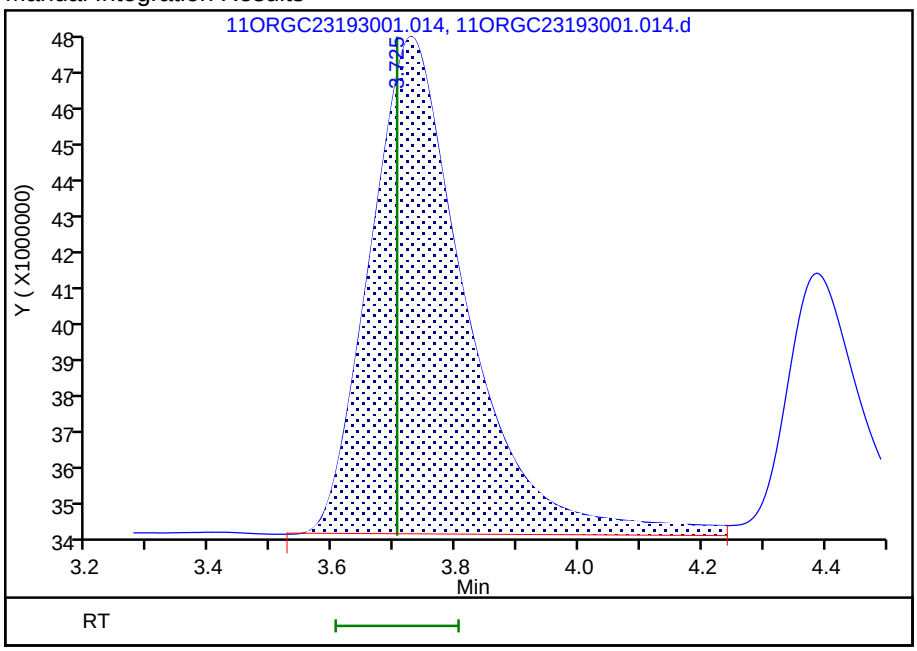
Processing Integration Results

RT: 3.73
Height: 12797572
Amount: 8.248486
Amount Units: ug/ml



Manual Integration Results

RT: 3.73
Height: 12849529
Amount: 9.094949
Amount Units: ug/ml



Reviewer: UHEW, 13-Jul-2023 13:59:54 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 17-Jul-2023 16:04:33 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

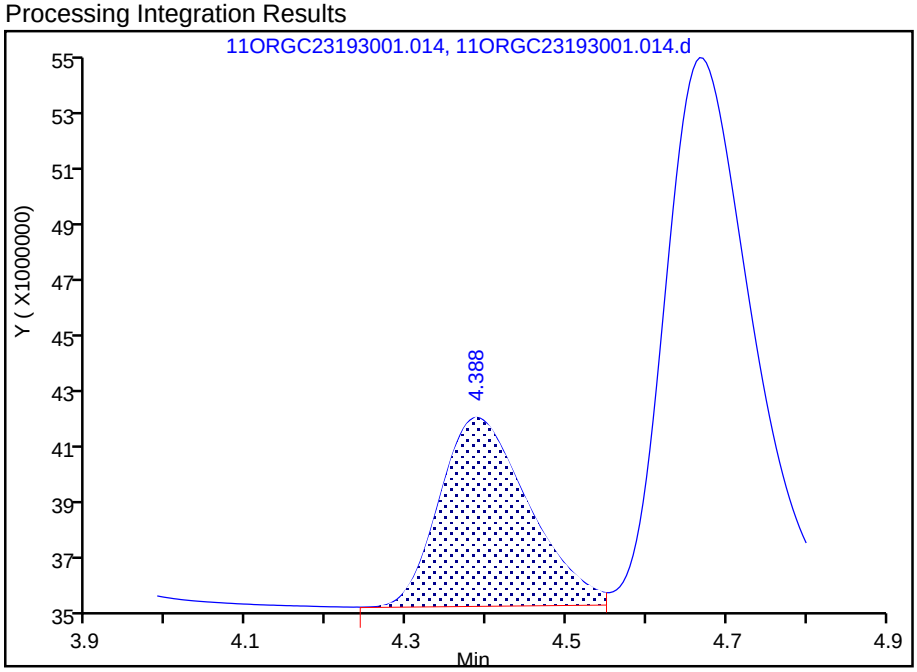
Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.014.d				
Injection Date:	12-Jul-2023 23:59:00	Instrument ID:	10136		
Lims ID:	ICV ORGA				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		
Column:	Supelcosil PAH (4.60 mm)	Detector	UV0		

2 Quinic Acid, CAS: 77-95-2

Signal: 1

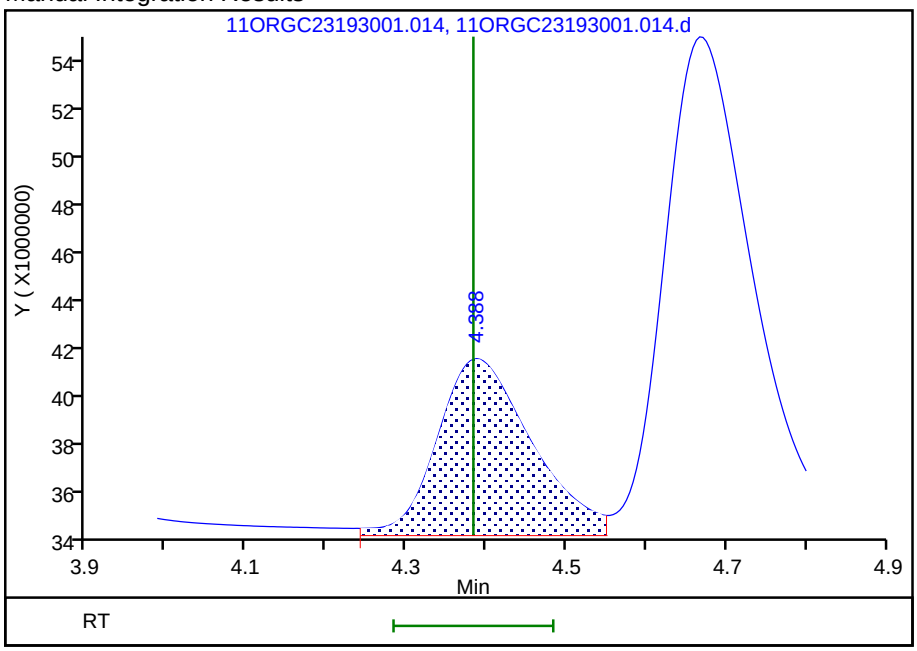
Processing Integration Results

RT: 4.39
Height: 6523334
Amount: 48.387377
Amount Units: ug/ml



Manual Integration Results

RT: 4.39
Height: 6756697
Amount: 50.475415
Amount Units: ug/ml



Reviewer: UHEW, 13-Jul-2023 13:59:54 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 17-Jul-2023 16:04:33 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

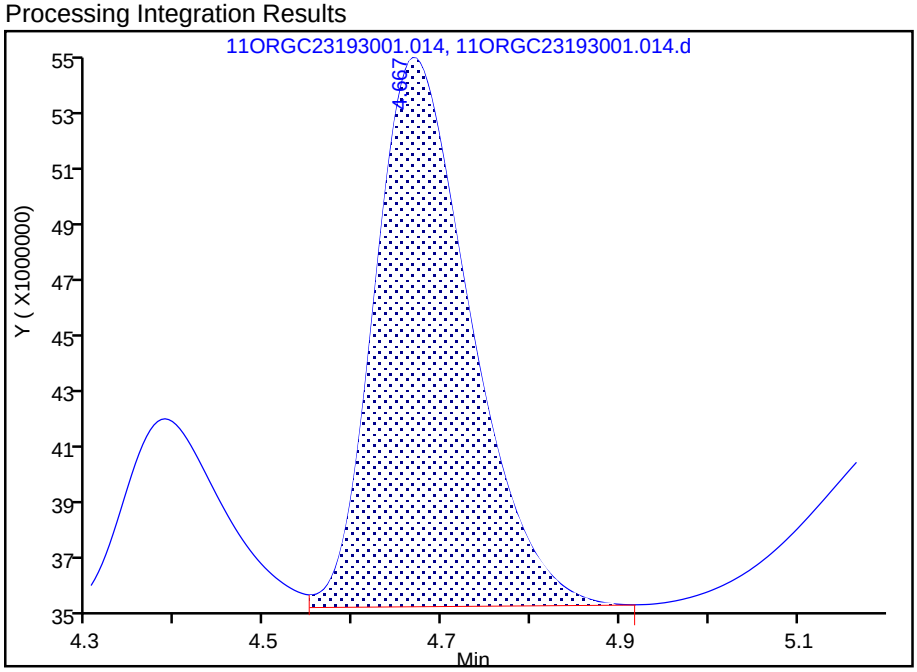
Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.014.d				
Injection Date:	12-Jul-2023 23:59:00	Instrument ID:	10136		
Lims ID:	ICV ORGA				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		
Column:	Supelcosil PAH (4.60 mm)	Detector	UV0		

4 Formic-acid, CAS: 64-18-6

Signal: 1

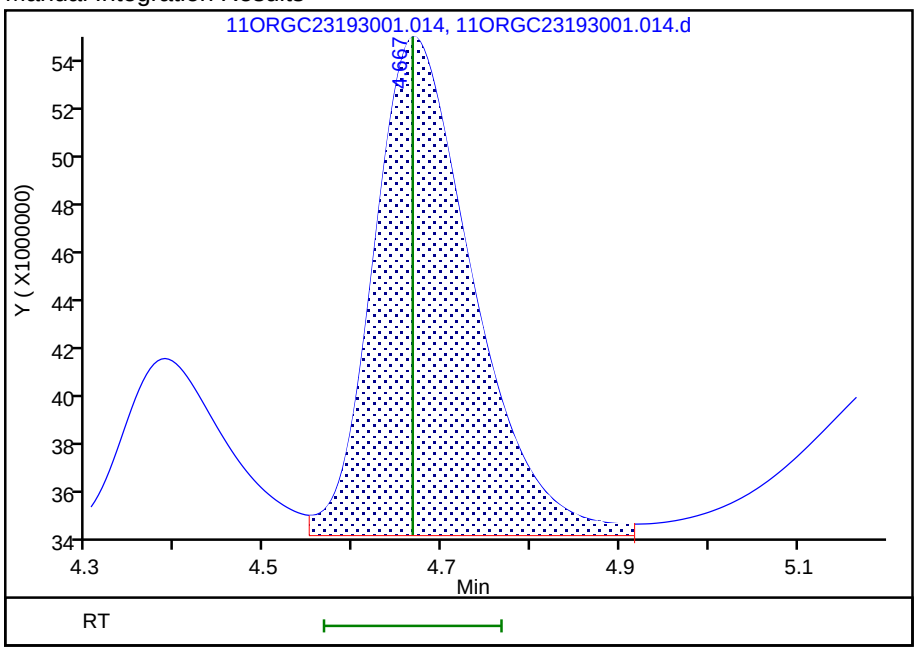
Processing Integration Results

RT: 4.67
Height: 18808286
Amount: 113.0568
Amount Units: ug/ml



Manual Integration Results

RT: 4.67
Height: 19117125
Amount: 101.0857
Amount Units: ug/ml



Reviewer: UHEW, 13-Jul-2023 13:59:54 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Eurofins Lancaster Laboratories Environment Testing, LLC

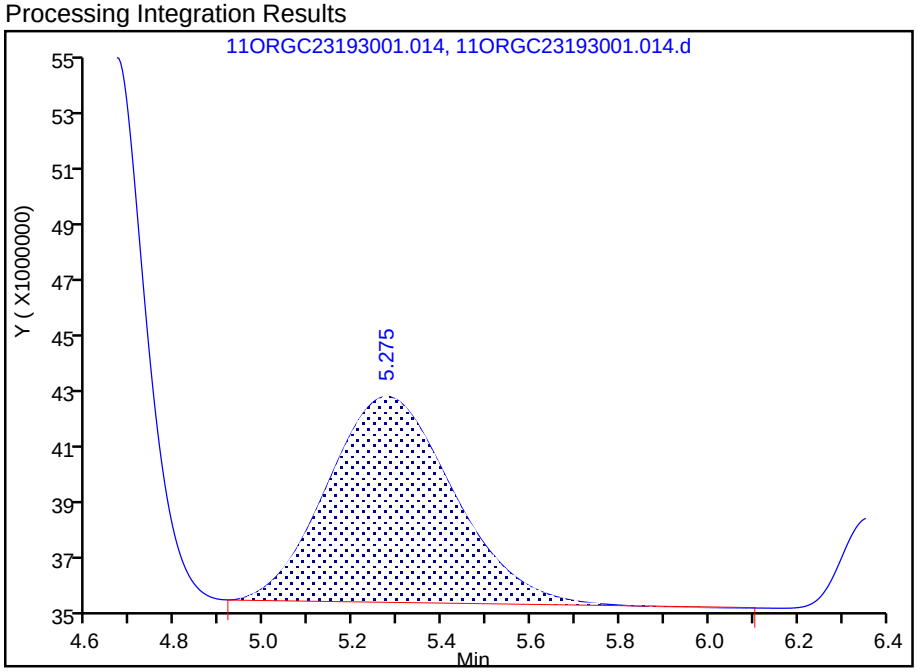
Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.014.d				
Injection Date:	12-Jul-2023 23:59:00	Instrument ID:	10136		
Lims ID:	ICV ORGA				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		
Column:	Supelcosil PAH (4.60 mm)	Detector	UV0		

5 Pyruvic Acid, CAS: 127-17-3

Signal: 1

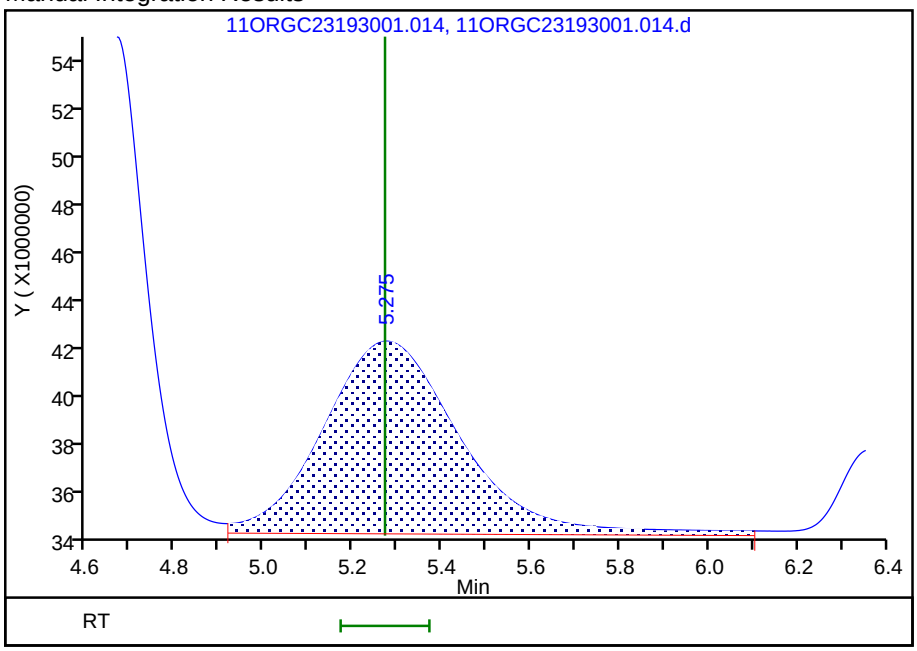
Processing Integration Results

RT: 5.28
Height: 7124069
Amount: 11.905816
Amount Units: ug/ml



Manual Integration Results

RT: 5.28
Height: 7426693
Amount: 12.410806
Amount Units: ug/ml



Reviewer: UHEW, 13-Jul-2023 13:59:54 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Eurofins Lancaster Laboratories Environment Testing, LLC

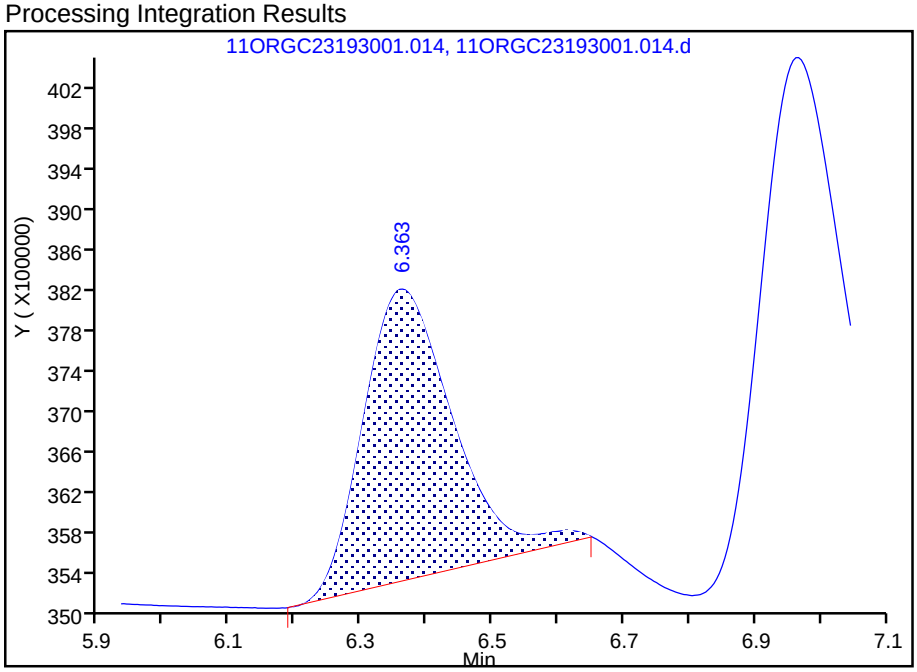
Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.014.d				
Injection Date:	12-Jul-2023 23:59:00	Instrument ID:	10136		
Lims ID:	ICV ORGA				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		
Column:	Supelcosil PAH (4.60 mm)	Detector	UV0		

6 L-Lactic Acid, CAS: 79-33-4

Signal: 1

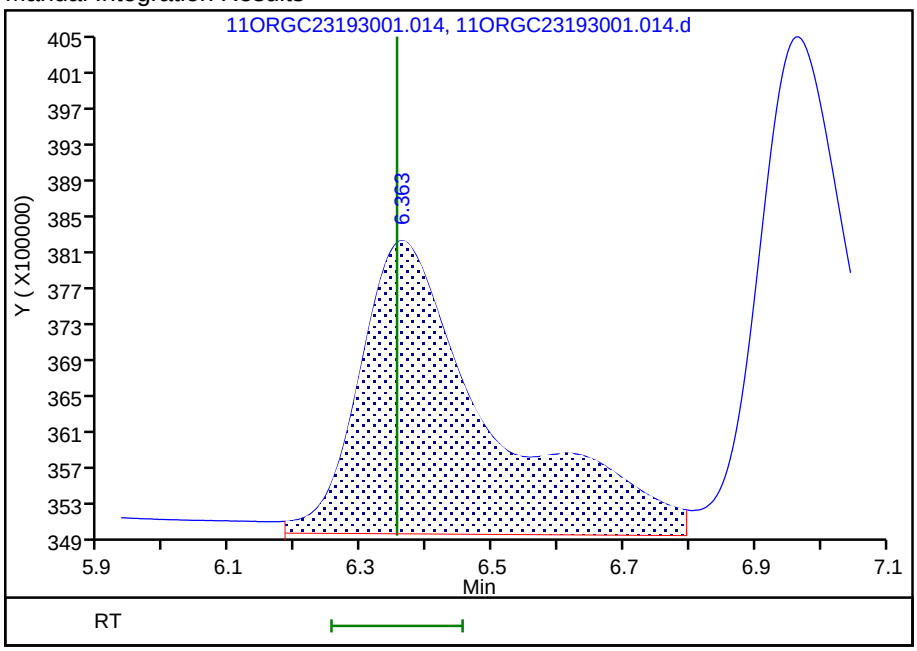
Processing Integration Results

RT: 6.36
Height: 2857836
Amount: 33.886017
Amount Units: ug/ml



Manual Integration Results

RT: 6.36
Height: 3260368
Amount: 38.658931
Amount Units: ug/ml



Reviewer: UHEW, 13-Jul-2023 13:59:54 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 17-Jul-2023 16:04:34 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

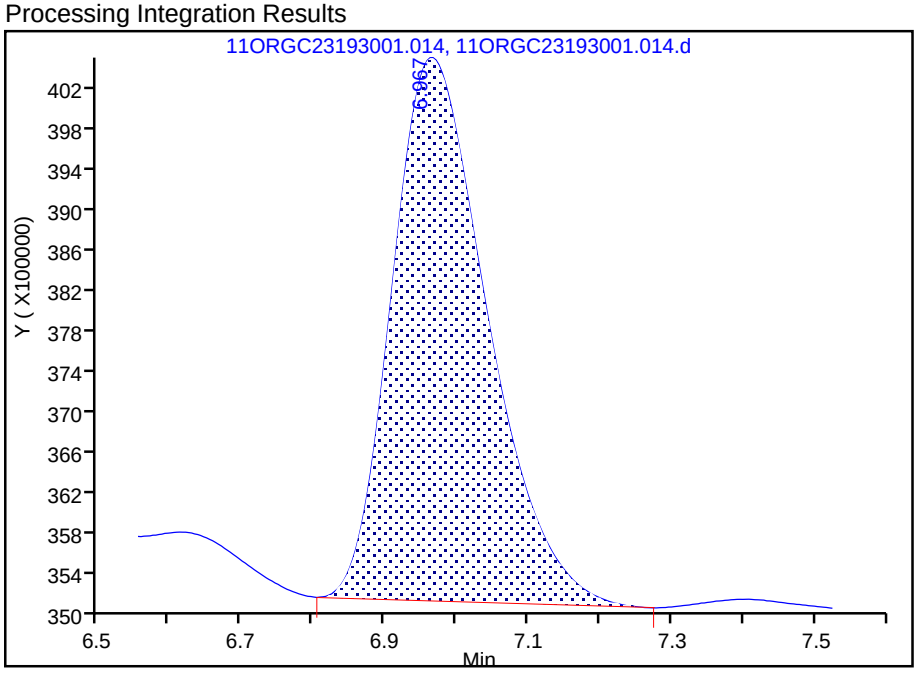
Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.014.d				
Injection Date:	12-Jul-2023 23:59:00	Instrument ID:	10136		
Lims ID:	ICV ORGA				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		
Column:	Supelcosil PAH (4.60 mm)	Detector	UV0		

7 Acetic acid, CAS: 64-19-7

Signal: 1

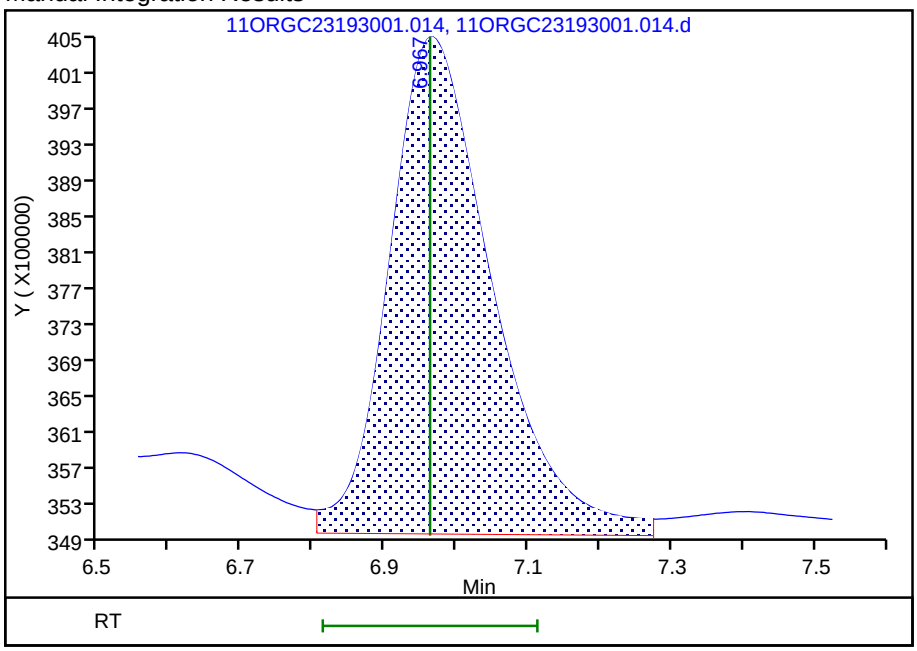
Processing Integration Results

RT: 6.97
Height: 5302911
Amount: 110.7708
Amount Units: ug/ml



Manual Integration Results

RT: 6.97
Height: 5536215
Amount: 106.5283
Amount Units: ug/ml



Reviewer: UHEW, 13-Jul-2023 13:59:54 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 17-Jul-2023 16:04:34 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

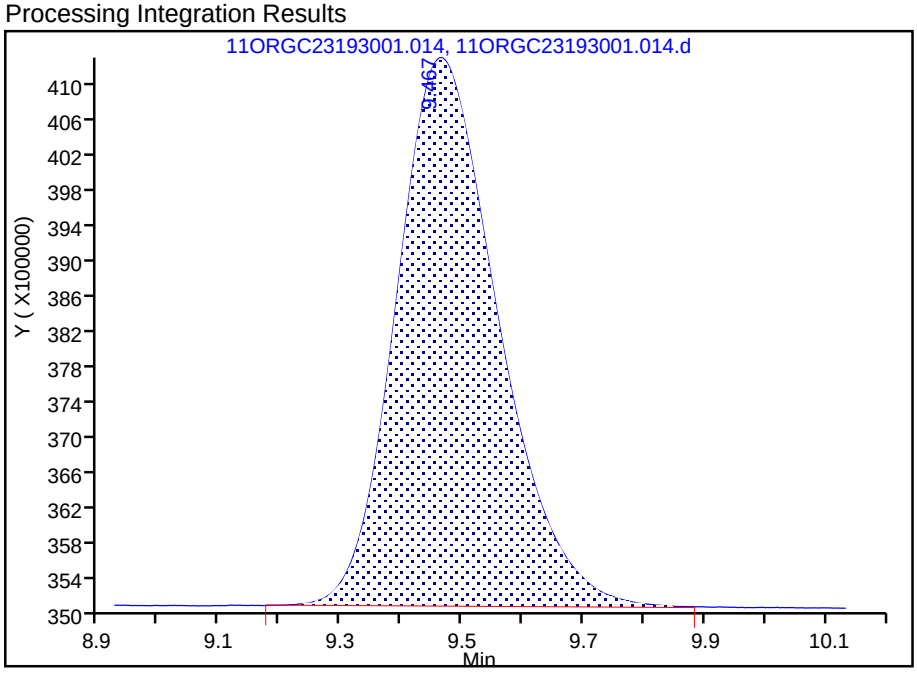
Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.014.d				
Injection Date:	12-Jul-2023 23:59:00	Instrument ID:	10136		
Lims ID:	ICV ORGA				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		
Column:	Supelcosil PAH (4.60 mm)	Detector	UV0		

8 Citric Acid, CAS: 77-92-9

Signal: 1

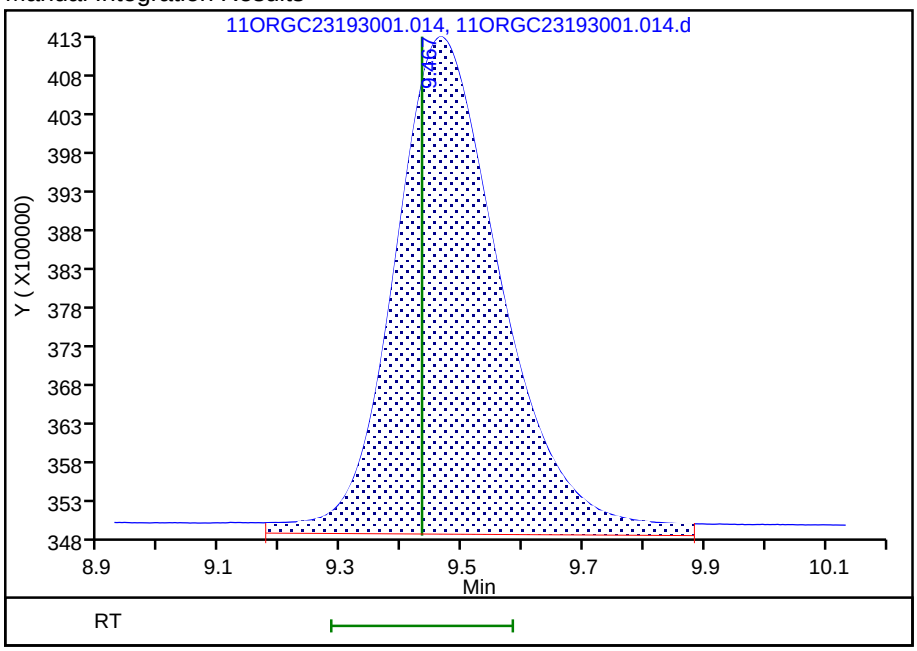
Processing Integration Results

RT: 9.47
Height: 6179284
Amount: 52.990998
Amount Units: ug/ml



Manual Integration Results

RT: 9.47
Height: 6317663
Amount: 54.580557
Amount Units: ug/ml



Reviewer: UHEW, 13-Jul-2023 13:59:54 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: ICV 410-396213/21 Calibration Date: 07/13/2023 03:38

Instrument ID: 10136 Calib Start Date: 07/13/2023 00:31

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/13/2023 03:06

Lab File ID: 11ORGC23193001.021.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tartaric Acid	Ave	305379	316357		51800	50000	3.6	20.0
Succinic Acid	Ave	36778	37315		50700	50000	1.5	20.0
Isobutyric acid	Qua		178036		101000	101000	0.4	20.0
Isovaleric acid	Lin		146581		101000	100000	0.8	20.0
Valeric acid	Ave	102199	113158		111000	100000	10.7	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: ICV 410-396213/21 Calibration Date: 07/13/2023 03:38

Instrument ID: 10136 Calib Start Date: 07/13/2023 00:31

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/13/2023 03:06

Lab File ID: 11ORGC23193001.021.d

Analyte	RT	RT WINDOW	
		FROM	TO
Tartaric Acid	4.35	4.30	4.40
Succinic Acid	10.23	10.05	10.35
Isobutyric acid	14.60	14.58	14.68
Isovaleric acid	15.82	15.66	15.92
Valeric acid	15.98	15.86	16.12

Report Date: 17-Jul-2023 16:04:35 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.021.d
Lims ID: ICV ORGB
Client ID:
Sample Type: ICV
Inject. Date: 13-Jul-2023 03:38:00 ALS Bottle#: 0 Worklist Smp#: 21
Injection Vol: 50.0 ul Dil. Factor: 1.0000
Sample Info: ICV ORGB
Operator ID: 24470 Instrument ID: 10136
Sublist:

Method: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m
Limit Group: LC - 8015D VFA
Last Update: 17-Jul-2023 16:04:14 Calib Date: 13-Jul-2023 06:13:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d

Column 1 : Supelcosil PAH (4.60 mm) Det: UV0
Process Host: CTX1644

First Level Reviewer: UHEW Date: 13-Jul-2023 12:33:39

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid	4.354	4.354	0.000	15817854H	50.0	51.8	
9 Succinic Acid	10.233	10.204	0.029	1865766H	50.0	50.7	
13 Isobutyric acid	14.596	14.629	-0.033	17981657H	101.0	101.4	
14 Isovaleric acid	15.817	15.788	0.029	14716735H	100.4	101.2	
15 Valeric acid	15.983	15.992	-0.009	11361020H	100.4	111.2	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGBICV_00007 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 16:04:35 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.021.d

Injection Date: 13-Jul-2023 03:38:00 Instrument ID: 10136

Lims ID: ICV ORGB

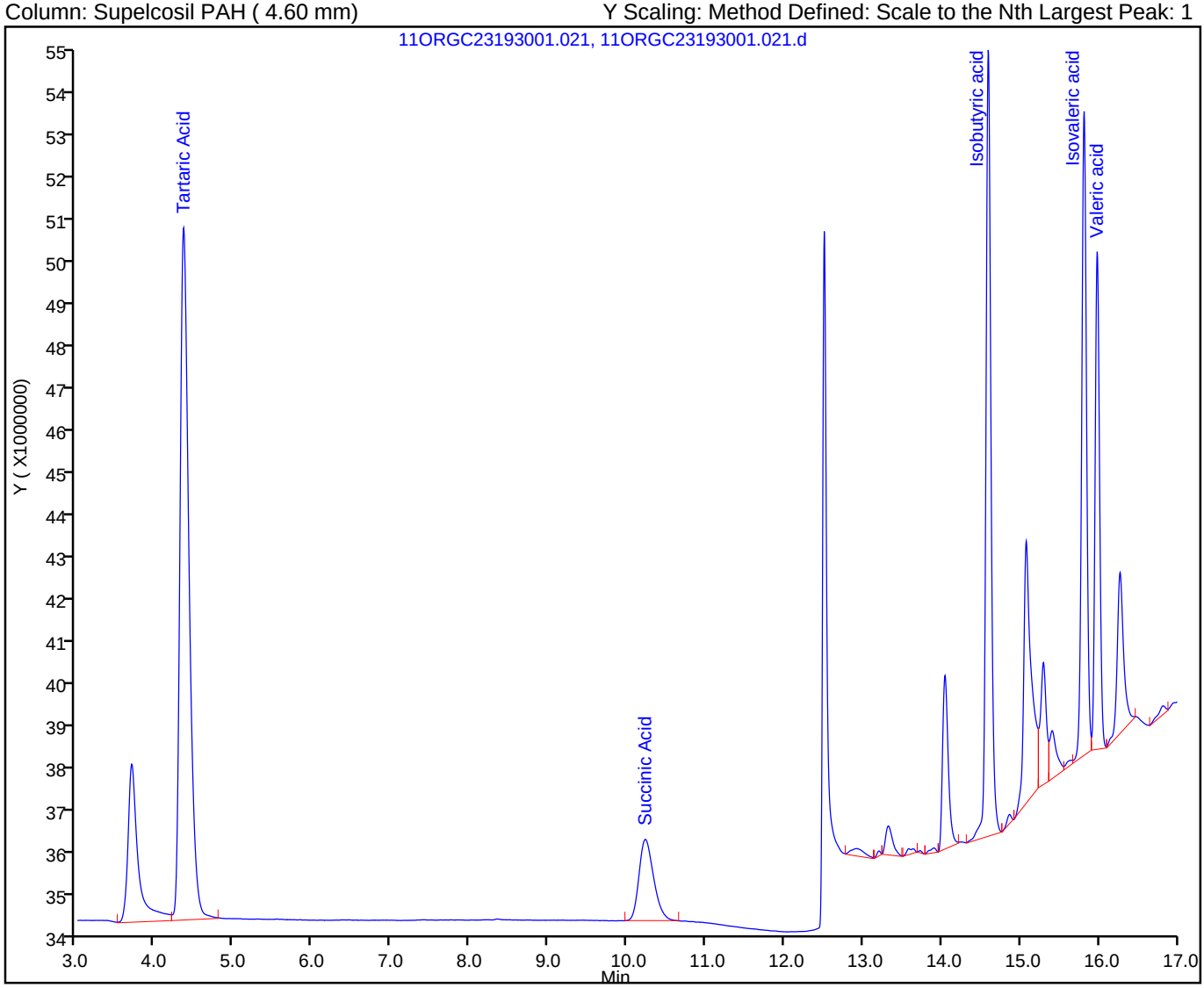
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 21

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCVRT 410-404643/4 Calibration Date: 08/04/2023 15:21

Instrument ID: 10136 Calib Start Date: 07/13/2023 04:09

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/13/2023 06:13

Lab File ID: 11ORGC23193008.004.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fumaric Acid	Ave	12623947	12461106		486	492	-1.3	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCVRT 410-404643/4 Calibration Date: 08/04/2023 15:21

Instrument ID: 10136 Calib Start Date: 07/13/2023 04:09

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/13/2023 06:13

Lab File ID: 11ORGC23193008.004.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fumaric Acid	10.60	10.45	10.75

Report Date: 07-Aug-2023 20:08:27 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.004.d				
Lims ID:	CCVRT ORGS				
Client ID:					
Sample Type:	CCVRT				
Inject. Date:	04-Aug-2023 15:21:00	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCVRT ORGS				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub6				
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:08:27	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				
First Level Reviewer: UHEW		Date:	07-Aug-2023 19:59:31		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid	10.600	10.600	0.000	6131238	H 0.4920	0.4857	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGS3_00049 Amount Added: 1.00 Units: mL

Report Date: 07-Aug-2023 20:08:27 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.004.d

Injection Date: 04-Aug-2023 15:21:00 Instrument ID: 10136

Lims ID: CCVRT ORGS

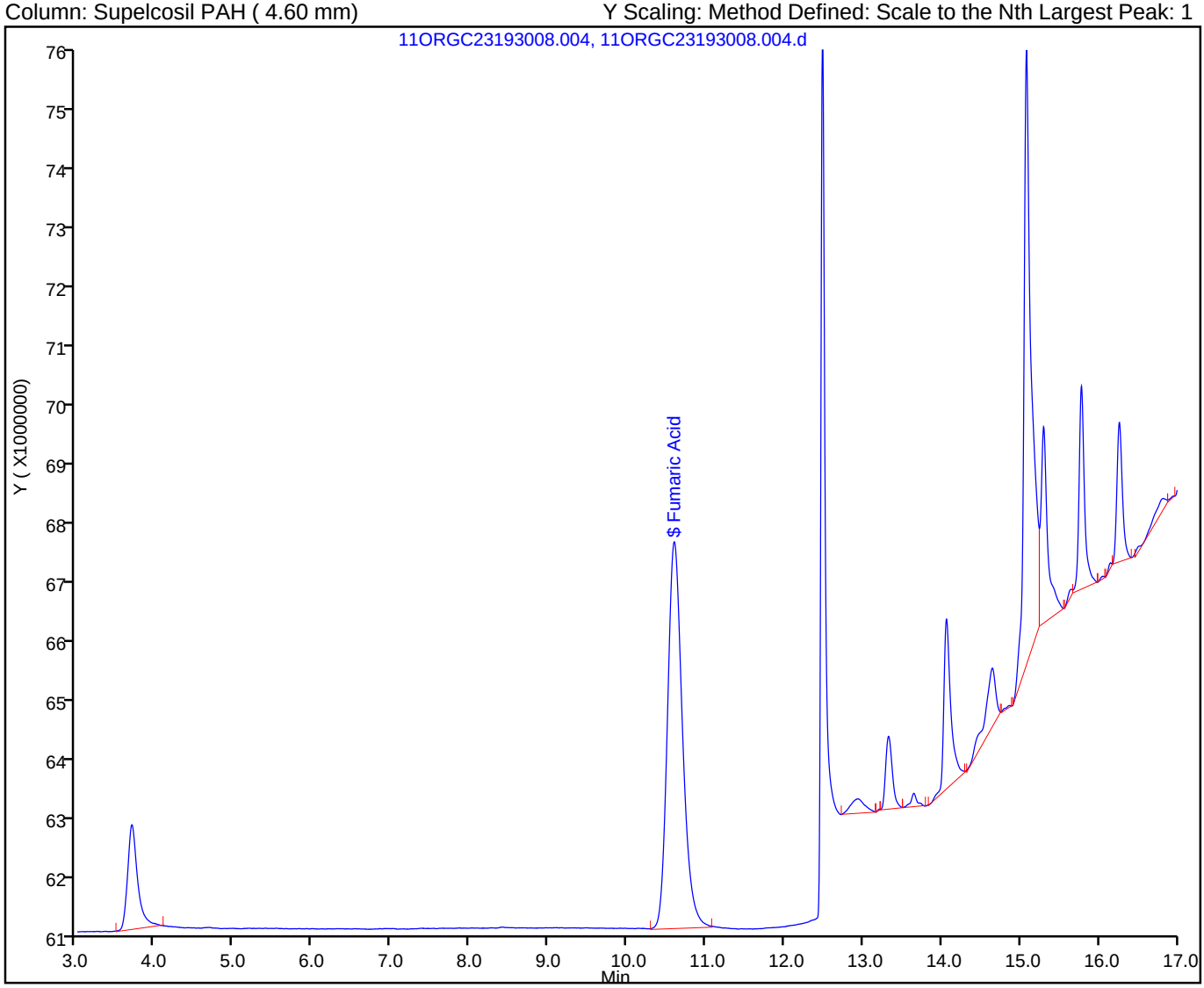
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 4

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404643/5 Calibration Date: 08/04/2023 15:52

Instrument ID: 10136 Calib Start Date: 07/12/2023 19:50

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/12/2023 22:57

Lab File ID: 11ORGC23193008.005.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Oxalic Acid	Qua		996260		8820	12600	-29.7*	20.0
Quinic Acid	Ave	133861	133140		50200	50500	-0.5	20.0
Formic-acid	Ave	189118	188456		100000	101000	-0.4	20.0
Pyruvic Acid	Ave	598405	595632		12500	12600	-0.5	20.0
L-Lactic Acid	Ave	84337	81469		48400	50100	-3.4	20.0
Acetic acid	Ave	51969	54604		105000	100000	5.1	20.0
Citric Acid	Ave	115749	122884		53400	50300	6.2	20.0
Propionic acid	Ave	114282	119859		105000	100000	4.9	20.0
Butyric acid	Ave	129640	128164		99000	100000	-1.1	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404643/5 Calibration Date: 08/04/2023 15:52

Instrument ID: 10136 Calib Start Date: 07/12/2023 19:50

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/12/2023 22:57

Lab File ID: 11ORGC23193008.005.d

Analyte	RT	RT WINDOW	
		FROM	TO
Oxalic Acid	3.73	3.63	3.83
Quinic Acid	4.39	4.29	4.49
Formic-acid	4.67	4.57	4.77
Pyruvic Acid	5.28	5.18	5.38
L-Lactic Acid	6.35	6.25	6.45
Acetic acid	6.95	6.80	7.10
Citric Acid	9.42	9.27	9.57
Propionic acid	12.91	12.81	13.01
Butyric acid	14.58	14.48	14.68

Report Date: 07-Aug-2023 20:08:28 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.005.d				
Lims ID:	CCV ORGA				
Client ID:					
Sample Type:	CCV				
Inject. Date:	04-Aug-2023 15:52:00	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCV ORGA				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub4				
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:08:28	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				
First Level Reviewer: UHEW		Date:	04-Aug-2023 16:50:40		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid	3.725	3.725	0.000	12503061H	12.6	8.82	
2 Quinic Acid	4.392	4.392	0.000	6720930H	50.5	50.2	
4 Formic-acid	4.671	4.671	0.000	18939784H	100.5	100.1	
5 Pyruvic Acid	5.279	5.279	0.000	7493055H	12.6	12.5	
6 L-Lactic Acid	6.354	6.354	0.000	4082416H	50.1	48.4	
7 Acetic acid	6.954	6.954	0.000	5472977H	100.2	105.3	
8 Citric Acid	9.417	9.417	0.000	6181044H	50.3	53.4	
11 Propionic acid	12.913	12.913	0.000	11985850H	100.0	104.9	
12 n-Butyric Acid	14.579	14.579	0.000	12835593H	100.2	99.0	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGA3_00028 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 07-Aug-2023 20:08:28 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.005.d

Injection Date: 04-Aug-2023 15:52:00 Instrument ID: 10136

Lims ID: CCV ORGA

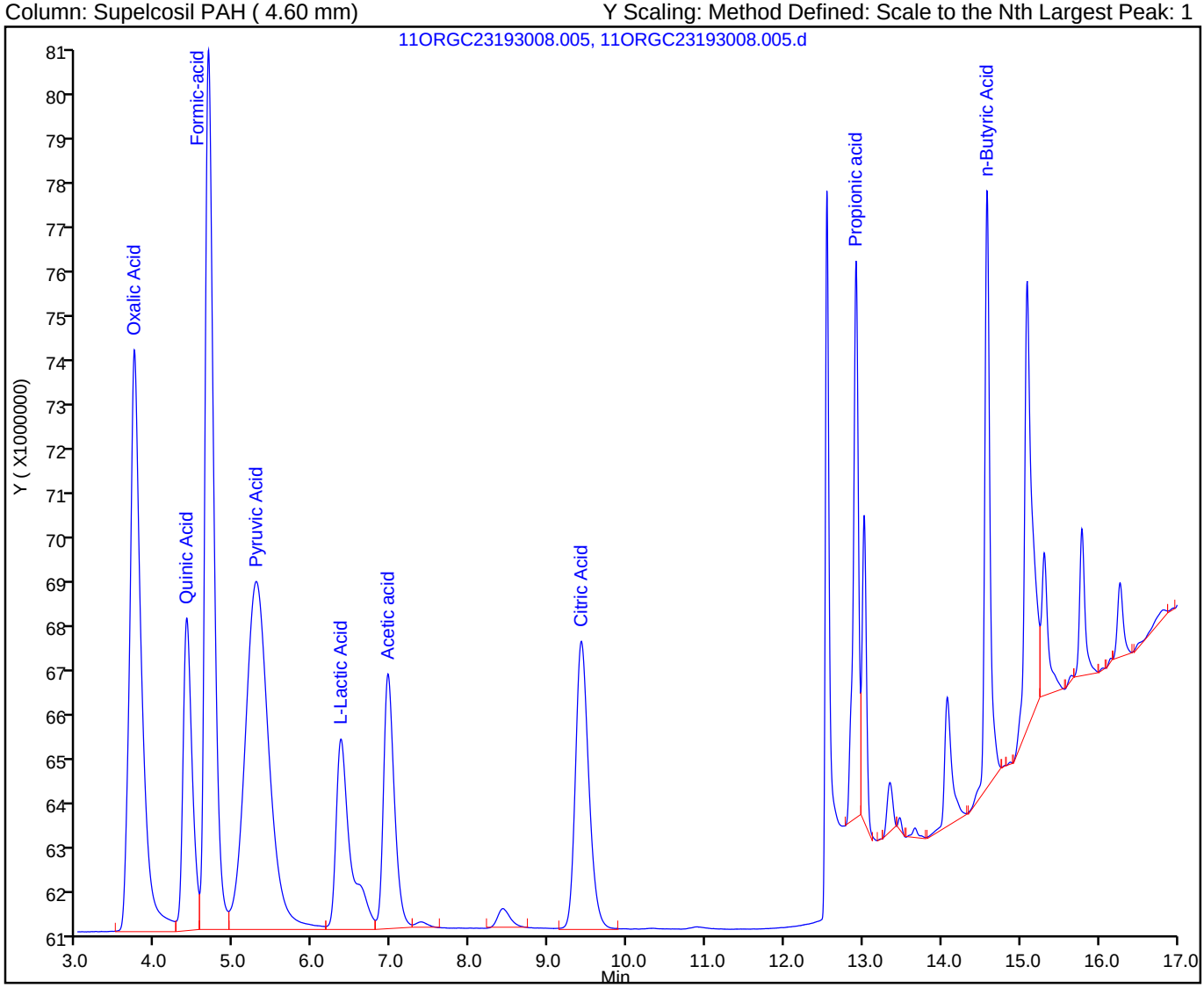
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 5

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404643/17 Calibration Date: 08/04/2023 22:06

Instrument ID: 10136 Calib Start Date: 07/13/2023 04:09

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/13/2023 06:13

Lab File ID: 11ORGC23193008.017.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fumaric Acid	Ave	12623947	12401437		483	492	-1.8	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404643/17 Calibration Date: 08/04/2023 22:06

Instrument ID: 10136 Calib Start Date: 07/13/2023 04:09

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/13/2023 06:13

Lab File ID: 11ORGC23193008.017.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fumaric Acid	10.63	10.45	10.75

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.017.d				
Lims ID:	CCV ORGS				
Client ID:					
Sample Type:	CCV				
Inject. Date:	04-Aug-2023 22:06:00	ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCV ORGS				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub6				
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:08:23	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid	10.625	10.600	0.025	6101879H	0.4920	0.4834	

Reagents:

GCS_ORGS3_00049 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 07-Aug-2023 20:08:24 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.017.d

Injection Date: 04-Aug-2023 22:06:00 Instrument ID: 10136

Lims ID: CCV ORGS

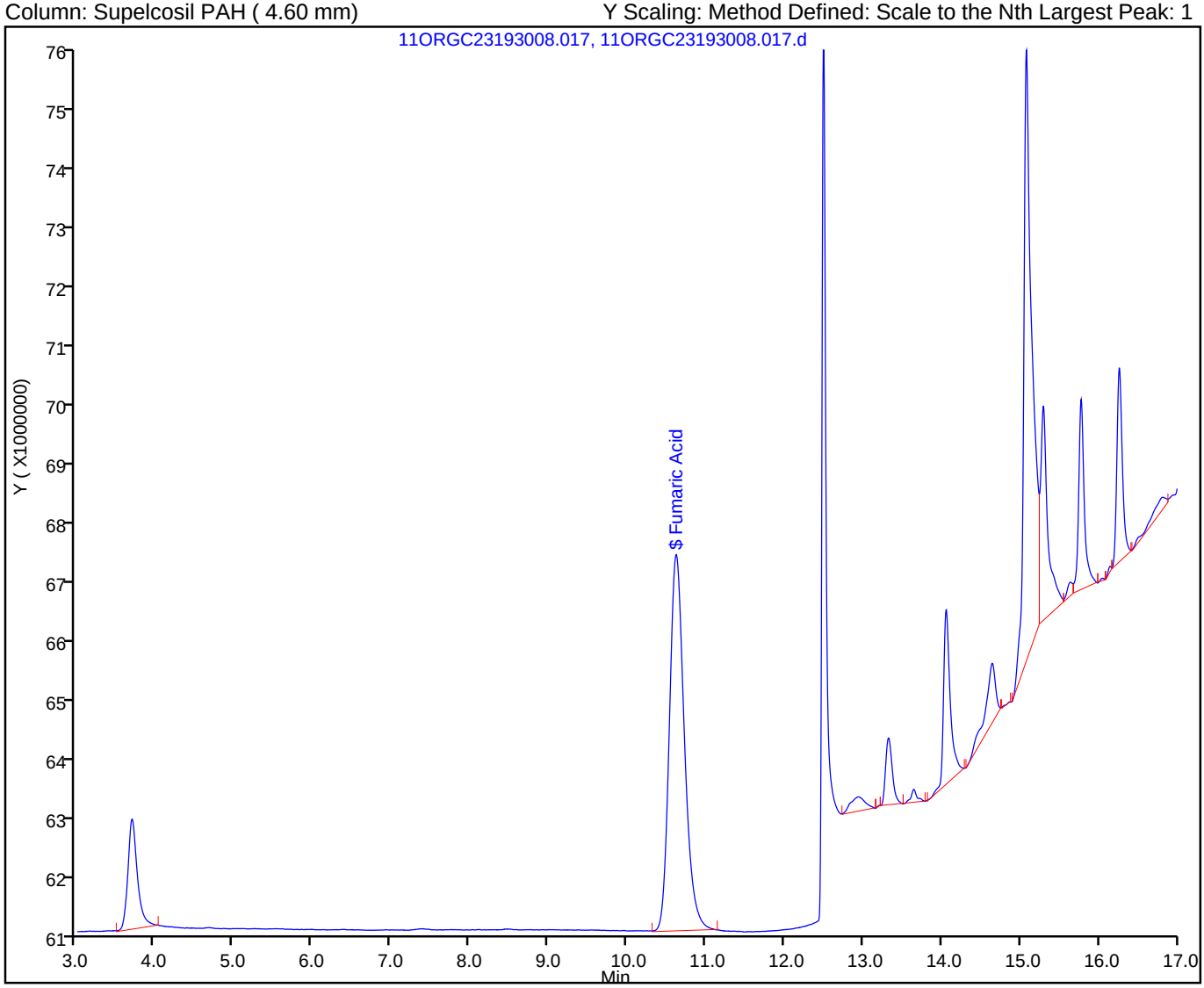
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 17

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404643/18 Calibration Date: 08/04/2023 22:37

Instrument ID: 10136 Calib Start Date: 07/12/2023 19:50

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/12/2023 22:57

Lab File ID: 11ORGC23193008.018.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Oxalic Acid	Qua		1024993		9110	12600	-27.4*	20.0
Quinic Acid	Ave	133861	133061		50200	50500	-0.6	20.0
Formic-acid	Ave	189118	188397		100000	101000	-0.4	20.0
Pyruvic Acid	Ave	598405	594258		12500	12600	-0.7	20.0
L-Lactic Acid	Ave	84337	81490		48400	50100	-3.4	20.0
Acetic acid	Ave	51969	54534		105000	100000	4.9	20.0
Citric Acid	Ave	115749	122526		53200	50300	5.9	20.0
Propionic acid	Ave	114282	119548		105000	100000	4.6	20.0
Butyric acid	Ave	129640	127823		98700	100000	-1.4	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404643/18 Calibration Date: 08/04/2023 22:37

Instrument ID: 10136 Calib Start Date: 07/12/2023 19:50

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/12/2023 22:57

Lab File ID: 11ORGC23193008.018.d

Analyte	RT	RT WINDOW	
		FROM	TO
Oxalic Acid	3.73	3.63	3.83
Quinic Acid	4.39	4.29	4.49
Formic-acid	4.67	4.57	4.77
Pyruvic Acid	5.28	5.18	5.38
L-Lactic Acid	6.35	6.25	6.45
Acetic acid	6.95	6.80	7.10
Citric Acid	9.42	9.27	9.57
Propionic acid	12.91	12.81	13.01
Butyric acid	14.58	14.48	14.68

Report Date: 07-Aug-2023 20:16:01 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.018.d
Lims ID: CCV ORGA
Client ID:
Sample Type: CCV
Inject. Date: 04-Aug-2023 22:37:00 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 50.0 ul Dil. Factor: 1.0000
Sample Info: CCV ORGA
Operator ID: 24470 Instrument ID: 10136
Sublist: chrom-8015_10136*sub4

Method: \\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m
Limit Group: LC - 8015D VFA
Last Update: 07-Aug-2023 20:16:01 Calib Date: 13-Jul-2023 06:13:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d

Column 1 : Supelcosil PAH (4.60 mm) Det: UV0
Process Host: CTX1674

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid	3.725	3.725	0.000	12863658H	12.6	9.11	
2 Quinic Acid	4.392	4.392	0.000	6716930H	50.5	50.2	
4 Formic-acid	4.667	4.671	-0.004	18933850H	100.5	100.1	
5 Pyruvic Acid	5.275	5.279	-0.004	7475760H	12.6	12.5	
6 L-Lactic Acid	6.354	6.354	0.000	4083485H	50.1	48.4	
7 Acetic acid	6.954	6.954	0.000	5465894H	100.2	105.2	
8 Citric Acid	9.421	9.417	0.004	6163052H	50.3	53.2	
11 Propionic acid	12.908	12.913	-0.004	11954791H	100.0	104.6	
12 n-Butyric Acid	14.575	14.579	-0.004	12801484H	100.2	98.7	

Reagents:

GCS_ORGA3_00028 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 07-Aug-2023 20:16:01 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.018.d

Injection Date: 04-Aug-2023 22:37:00 Instrument ID: 10136

Lims ID: CCV ORGA

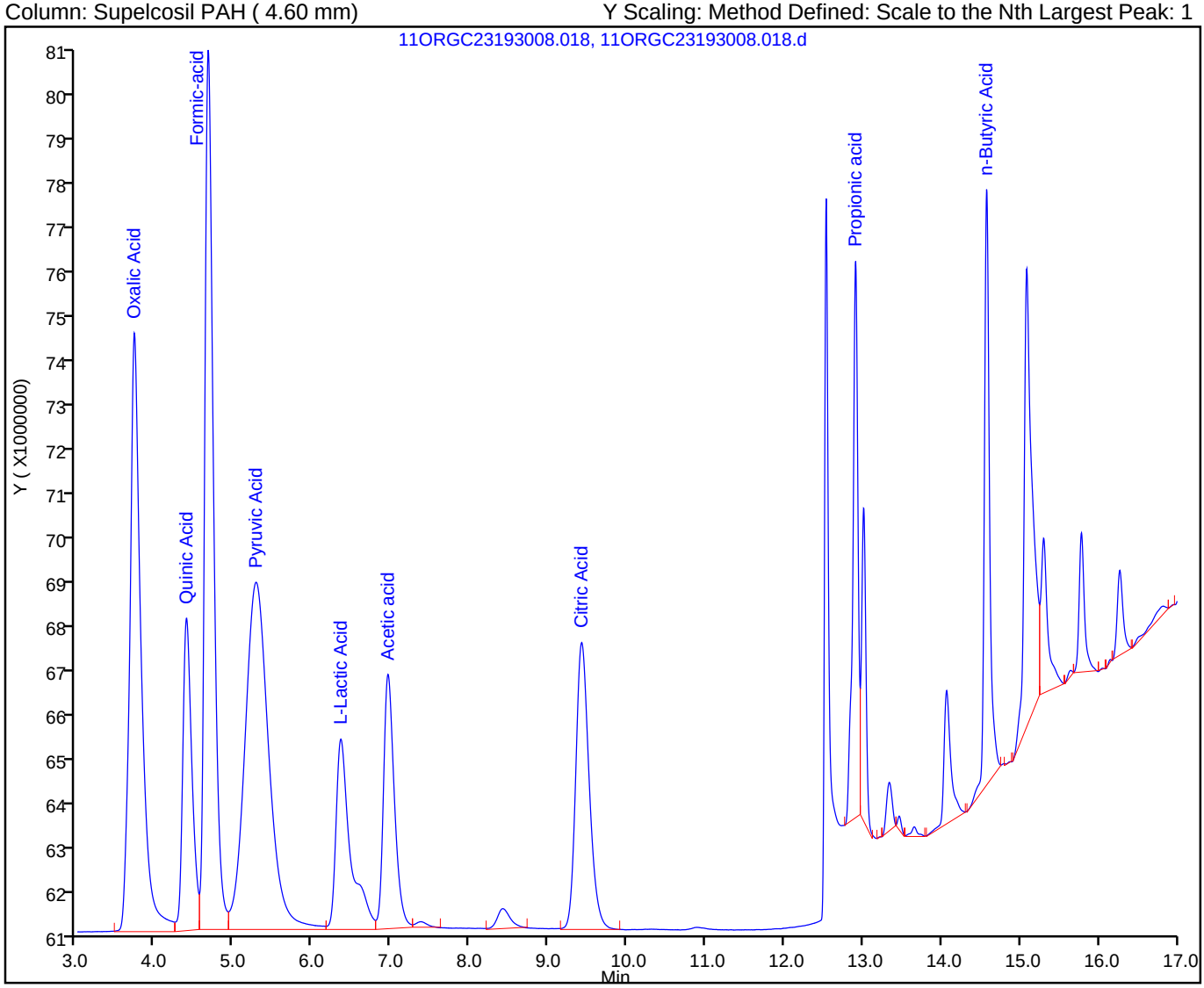
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 18

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404643/29 Calibration Date: 08/05/2023 04:19

Instrument ID: 10136 Calib Start Date: 07/13/2023 04:09

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/13/2023 06:13

Lab File ID: 11ORGC23193008.029.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fumaric Acid	Ave	12623947	12341993		481	492	-2.2	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404643/29 Calibration Date: 08/05/2023 04:19

Instrument ID: 10136 Calib Start Date: 07/13/2023 04:09

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/13/2023 06:13

Lab File ID: 11ORGC23193008.029.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fumaric Acid	10.64	10.45	10.75

Report Date: 07-Aug-2023 20:08:22 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.029.d				
Lims ID:	CCV ORGS				
Client ID:					
Sample Type:	CCV				
Inject. Date:	05-Aug-2023 04:19:00	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCV ORGS				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub6				
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:08:22	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid	10.642	10.600	0.042	6072631H	0.4920	0.4810	

Reagents:

GCS_ORGS3_00049 Amount Added: 1.00 Units: mL

Report Date: 07-Aug-2023 20:08:22 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.029.d

Injection Date: 05-Aug-2023 04:19:00 Instrument ID: 10136

Lims ID: CCV ORGS

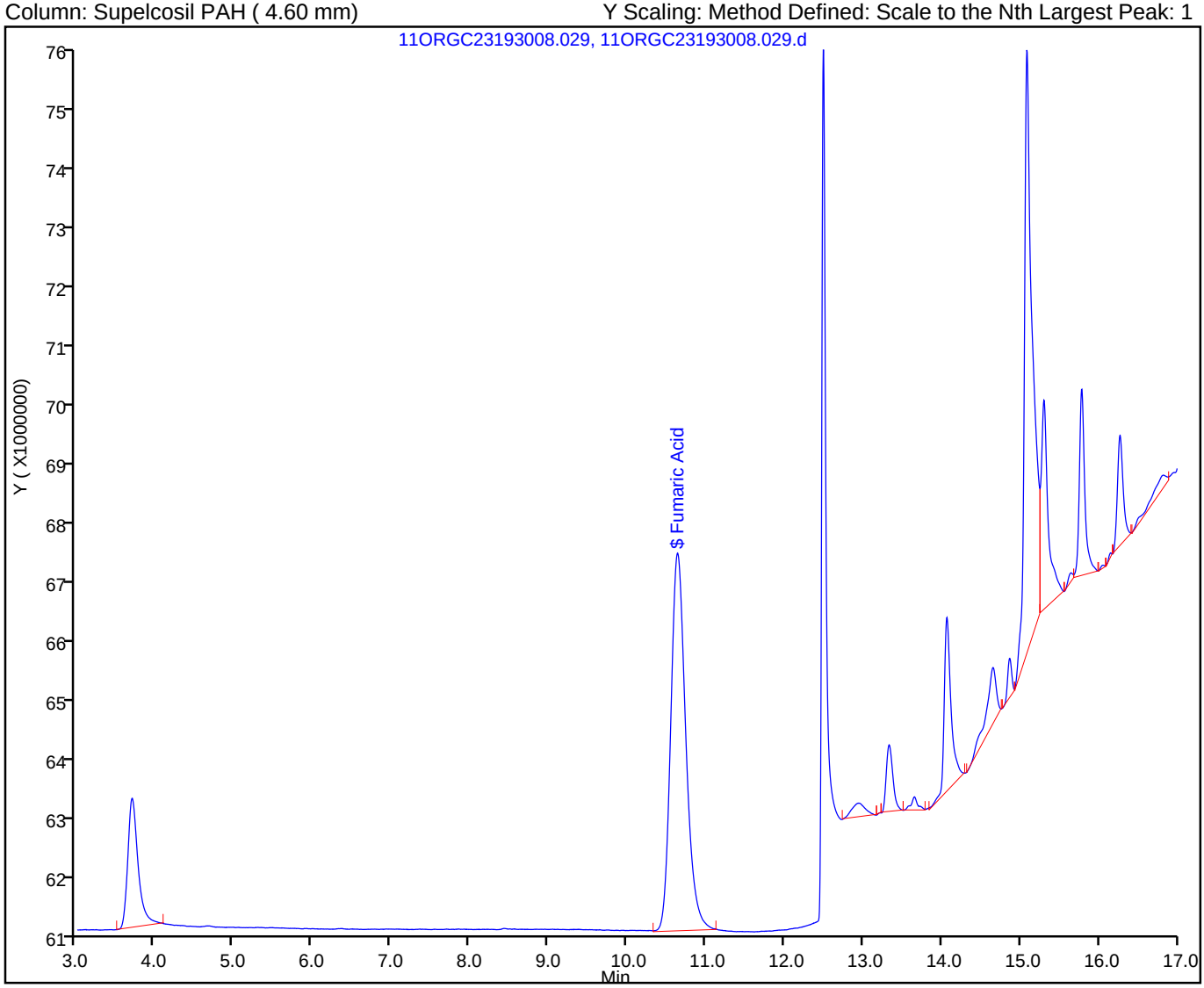
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 29

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404643/30 Calibration Date: 08/05/2023 04:51

Instrument ID: 10136 Calib Start Date: 07/12/2023 19:50

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/12/2023 22:57

Lab File ID: 11ORGC23193008.030.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Oxalic Acid	Qua		1055806		9410	12600	-25.0*	20.0
Quinic Acid	Ave	133861	133197		50200	50500	-0.5	20.0
Formic-acid	Ave	189118	188059		99900	101000	-0.6	20.0
Pyruvic Acid	Ave	598405	589347		12400	12600	-1.5	20.0
L-Lactic Acid	Ave	84337	81368		48300	50100	-3.5	20.0
Acetic acid	Ave	51969	54302		105000	100000	4.5	20.0
Citric Acid	Ave	115749	122129		53100	50300	5.5	20.0
Propionic acid	Ave	114282	118631		104000	100000	3.8	20.0
Butyric acid	Ave	129640	126981		98100	100000	-2.1	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404643/30 Calibration Date: 08/05/2023 04:51

Instrument ID: 10136 Calib Start Date: 07/12/2023 19:50

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/12/2023 22:57

Lab File ID: 11ORGC23193008.030.d

Analyte	RT	RT WINDOW	
		FROM	TO
Oxalic Acid	3.73	3.63	3.83
Quinic Acid	4.40	4.29	4.49
Formic-acid	4.67	4.57	4.77
Pyruvic Acid	5.28	5.18	5.38
L-Lactic Acid	6.36	6.25	6.45
Acetic acid	6.96	6.80	7.10
Citric Acid	9.44	9.27	9.57
Propionic acid	12.89	12.81	13.01
Butyric acid	14.58	14.48	14.68

Report Date: 07-Aug-2023 20:16:06 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.030.d
Lims ID: CCV ORGA
Client ID:
Sample Type: CCV
Inject. Date: 05-Aug-2023 04:51:00 ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 50.0 ul Dil. Factor: 1.0000
Sample Info: CCV ORGB
Operator ID: 24470 Instrument ID: 10136
Sublist: chrom-8015_10136*sub4

Method: \\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m
Limit Group: LC - 8015D VFA
Last Update: 07-Aug-2023 20:16:06 Calib Date: 13-Jul-2023 06:13:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d

Column 1 : Supelcosil PAH (4.60 mm) Det: UV0
Process Host: CTX1674

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid	3.733	3.725	0.008	13250370H	12.6	9.41	
2 Quinic Acid	4.396	4.392	0.004	6723788H	50.5	50.2	
4 Formic-acid	4.671	4.671	0.000	18899912H	100.5	99.9	
5 Pyruvic Acid	5.279	5.279	0.000	7413981H	12.6	12.4	
6 L-Lactic Acid	6.358	6.354	0.004	4077358H	50.1	48.3	
7 Acetic acid	6.963	6.954	0.008	5442667H	100.2	104.7	
8 Citric Acid	9.442	9.417	0.025	6143070H	50.3	53.1	
11 Propionic acid	12.892	12.913	-0.020	11863067H	100.0	103.8	
12 n-Butyric Acid	14.575	14.579	-0.004	12717118H	100.2	98.1	

Reagents:

GCS_ORGA3_00028 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 07-Aug-2023 20:16:06 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.030.d

Injection Date: 05-Aug-2023 04:51:00 Instrument ID: 10136

Lims ID: CCV ORGA

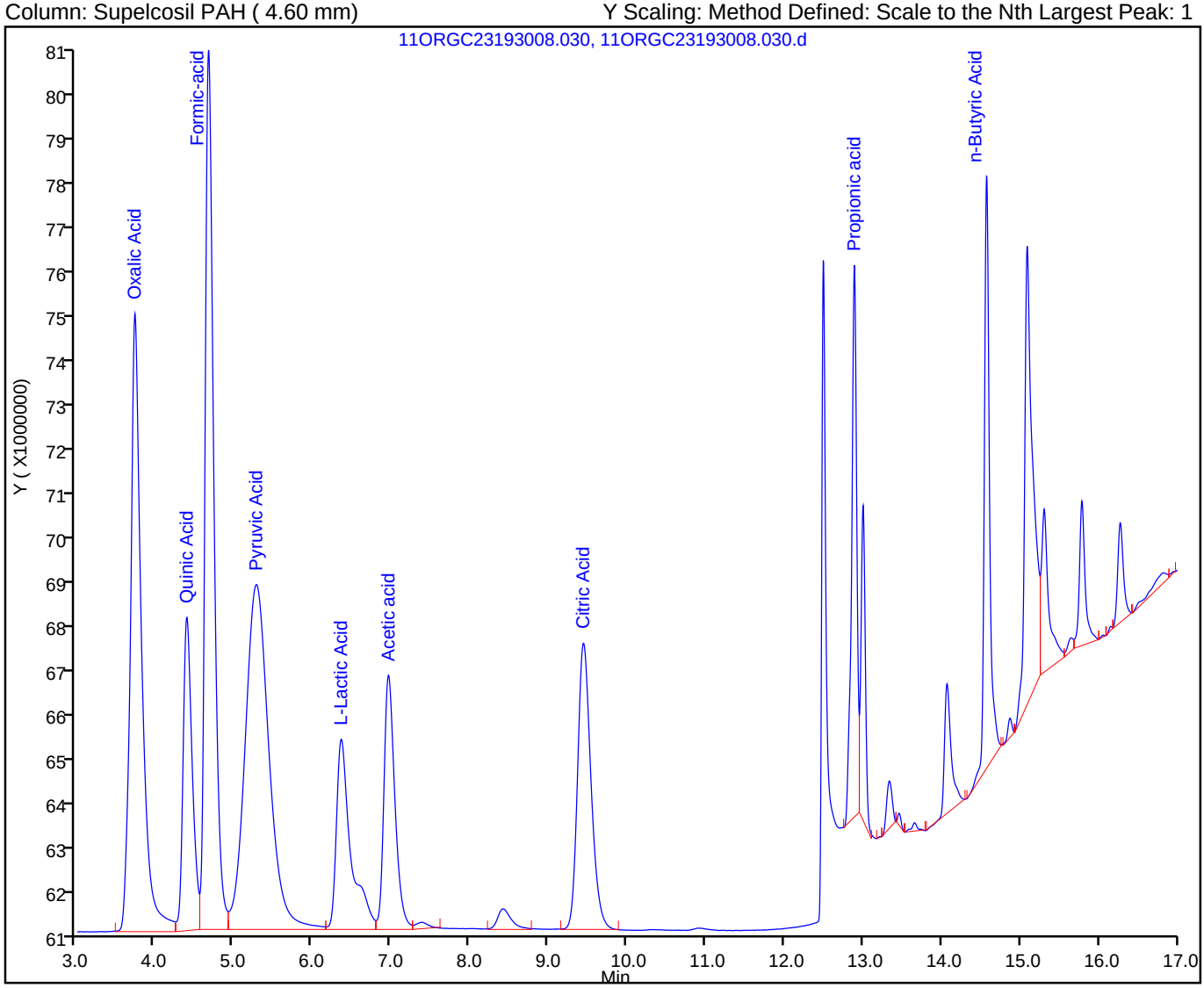
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 30

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: ICV 410-394255/15 Calibration Date: 07/06/2023 01:32

Instrument ID: 6854A Calib Start Date: 07/05/2023 19:48

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 00:06

Lab File ID: 48ORGA23186001.015.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Oxalic Acid	Ave	6530954	6147907		11800	12500	-5.9	20.0
Citric Acid	Ave	471329	469870		50200	50400	-0.3	20.0
Pyruvic Acid	Ave	3034278	3261957		13500	12600	7.5	20.0
Quinic Acid	Ave	246856	224693		45800	50300	-9.0	20.0
L-Lactic Acid	Ave	284209	226586		40200	50400	-20.3*	20.0
Formic-acid	Qua		380129		106000	101000	5.1	20.0
Acetic acid	Lin		215964		105000	100000	4.3	20.0
Propionic acid	Ave	162814	183572		114000	101000	12.7	20.0
Butyric acid	Qua		140865		104000	101000	3.6	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: ICV 410-394255/15 Calibration Date: 07/06/2023 01:32

Instrument ID: 6854A Calib Start Date: 07/05/2023 19:48

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 00:06

Lab File ID: 48ORGA23186001.015.d

Analyte	RT	RT WINDOW	
		FROM	TO
Oxalic Acid	13.86	13.75	13.95
Citric Acid	15.53	15.36	15.66
Pyruvic Acid	16.68	16.57	16.77
Quinic Acid	17.35	17.25	17.45
L-Lactic Acid	19.37	19.27	19.47
Formic-acid	20.42	20.32	20.52
Acetic acid	21.37	21.27	21.47
Propionic acid	23.41	23.31	23.51
Butyric acid	26.45	26.35	26.55

Report Date: 17-Jul-2023 18:55:44 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.015.d				
Lims ID:	ICV ORGA				
Client ID:					
Sample Type:	ICV				
Inject. Date:	06-Jul-2023 01:32:00	ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	ICV ORGA				
Operator ID:	24470	Instrument ID:	6854A		
Sublist:					
Method:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 18:55:32	Calib Date:	06-Jul-2023 10:07:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.027.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1644				

First Level Reviewer: UHEW Date: 12-Jul-2023 18:07:10

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid						
13.858	13.846	0.012	76848835H	12.5	11.8	
2 Citric Acid						
15.529	15.509	0.020	23681443H	50.4	50.2	
4 Pyruvic Acid						
16.676	16.668	0.008	40970176H	12.6	13.5	
5 Quinic Acid						
17.347	17.347	0.000	11302071H	50.3	45.8	
7 L-Lactic Acid						
19.370	19.366	0.004	11419943H	50.4	40.2	
8 Formic-acid						
20.421	20.417	0.004	38317015H	100.8	106.0	
9 Acetic acid						
21.368	21.368	0.000	21661196H	100.3	104.6	
11 Propionic acid						
23.411	23.407	0.004	18540758H	101.0	113.9	
13 n-Butyric Acid						
26.449	26.445	0.004	14199150H	100.8	104.4	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGAICV_00008 Amount Added: 1.00 Units: mL

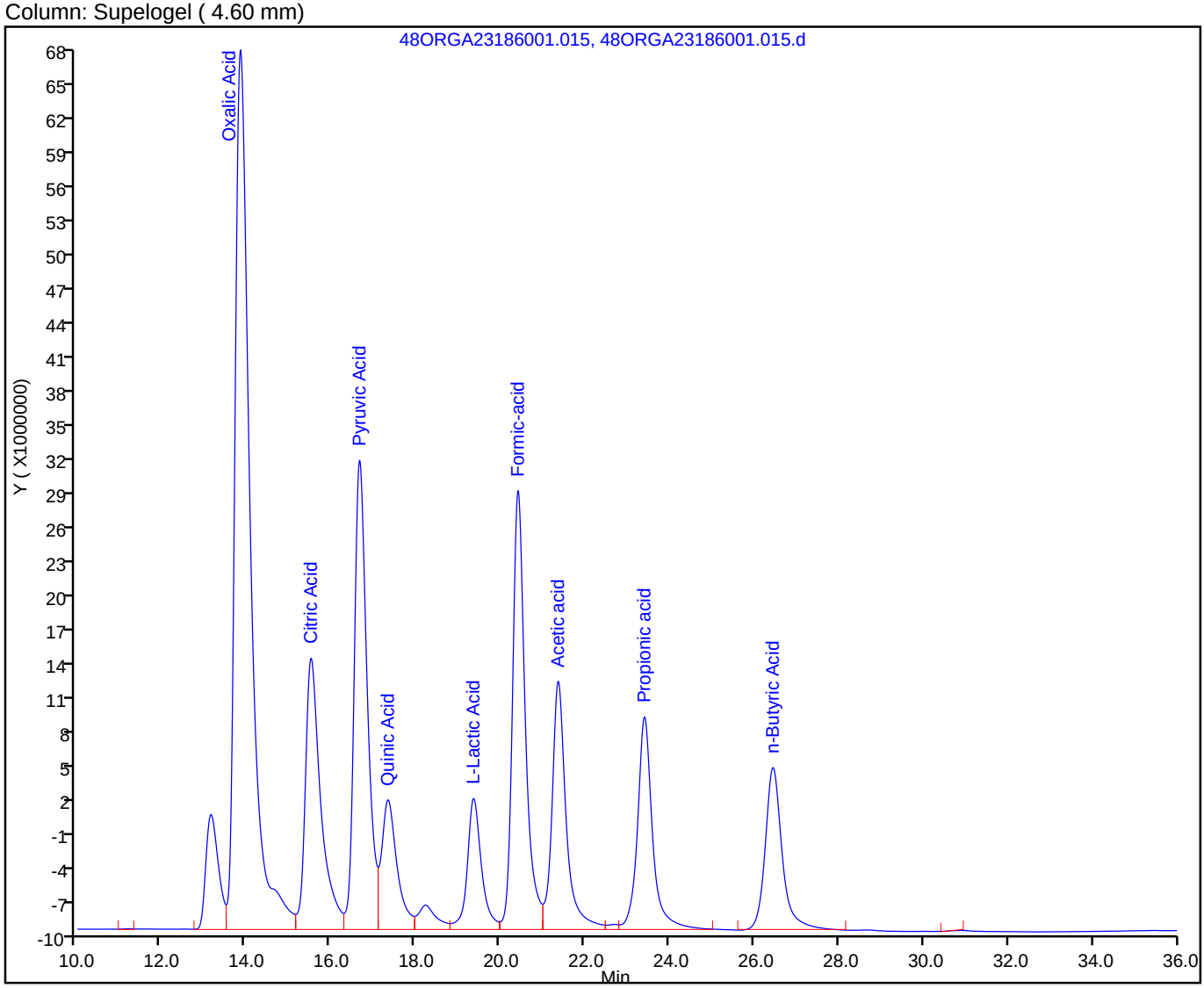
INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 18:55:44 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.015.d				
Injection Date:	06-Jul-2023 01:32:00	Instrument ID:	6854A		
Lims ID:	ICV ORGA				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: ICV 410-394255/22 Calibration Date: 07/06/2023 06:32

Instrument ID: 6854A Calib Start Date: 07/06/2023 02:14

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 05:06

Lab File ID: 48ORGA23186001.022.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tartaric Acid	Ave	633287	669468		52900	50000	5.7	20.0
Succinic Acid	Ave	225583	221389		49100	50000	-1.9	20.0
Isobutyric acid	Ave	206039	205861		101000	101000	-0.0	20.0
Isovaleric acid	Ave	123399	122503		99700	100000	-0.7	20.0
Valeric acid	Ave	86377	88339		103000	100000	2.3	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: ICV 410-394255/22 Calibration Date: 07/06/2023 06:32

Instrument ID: 6854A Calib Start Date: 07/06/2023 02:14

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 05:06

Lab File ID: 48ORGA23186001.022.d

Analyte	RT	RT WINDOW	
		FROM	TO
Tartaric Acid	16.06	15.96	16.16
Succinic Acid	19.22	19.18	19.28
Isobutyric acid	25.01	24.92	25.12
Isovaleric acid	28.93	28.72	29.16
Valeric acid	33.56	33.26	33.86

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.022.d
Lims ID: ICV ORGB
Client ID:
Sample Type: ICV
Inject. Date: 06-Jul-2023 06:32:00 ALS Bottle#: 0 Worklist Smp#: 22
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: ICV ORGB
Operator ID: 24470 Instrument ID: 6854A
Sublist:

Method: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 17-Jul-2023 18:55:32 Calib Date: 06-Jul-2023 10:07:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.027.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1644

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid						
16.056	16.060	-0.004	33473415H	50.0	52.9	
6 Succinic Acid						
19.222	19.226	-0.004	11069438H	50.0	49.1	
12 Isobutyric acid						
25.014	25.018	-0.004	20791961H	101.0	100.9	
14 Isovaleric acid						
28.931	28.935	-0.004	12299338H	100.4	99.7	
15 Valeric acid						
33.555	33.563	-0.008	8869194H	100.4	102.7	

Reagents:

GCS_ORGBICV_00007 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 18:55:41 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.022.d

Injection Date: 06-Jul-2023 06:32:00 Instrument ID: 6854A

Lims ID: ICV ORGB

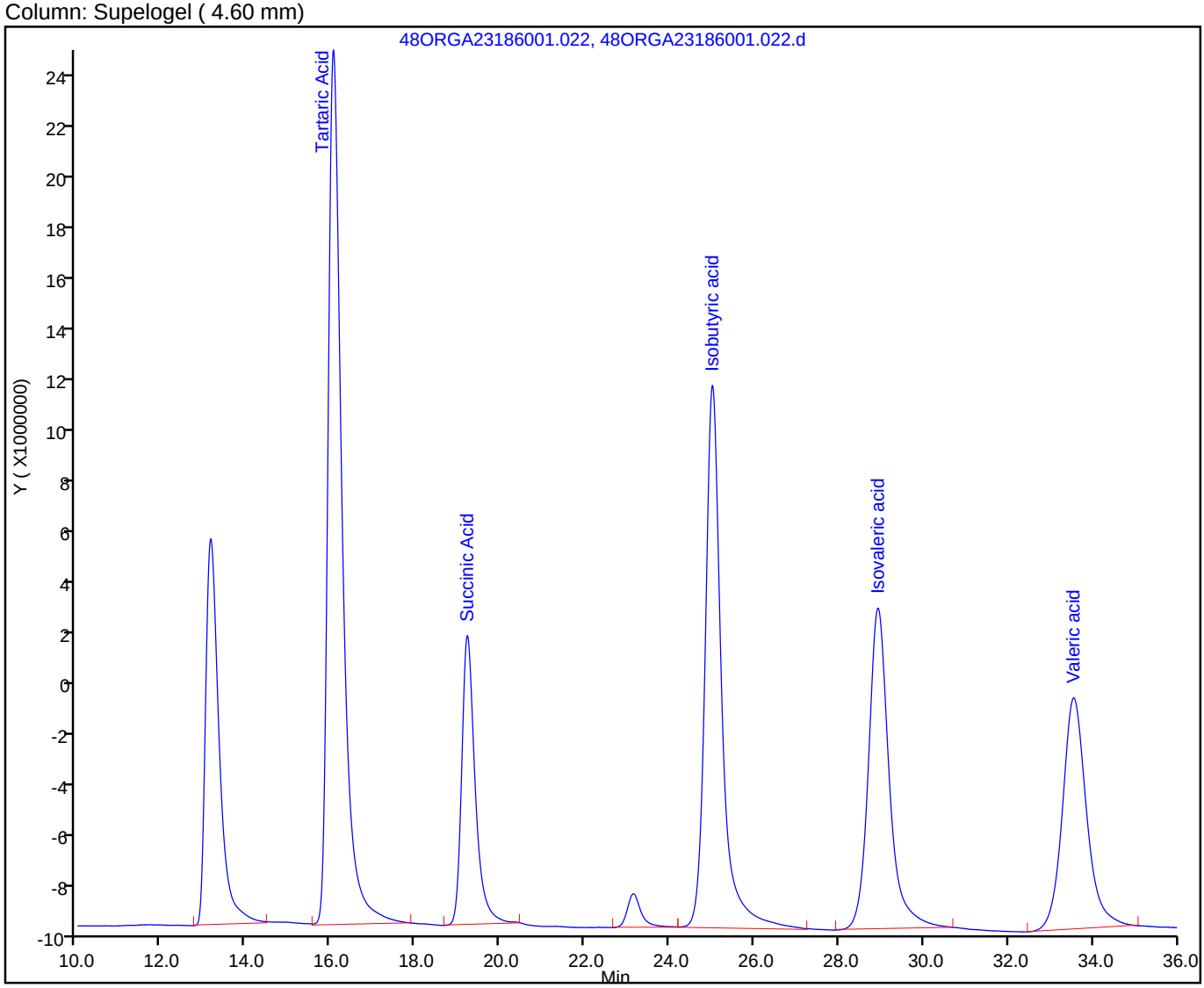
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 22

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCVRT 410-404646/4 Calibration Date: 08/04/2023 16:00

Instrument ID: 6854A Calib Start Date: 07/27/2023 19:59

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/27/2023 22:51

Lab File ID: 48ORGA23186009.004.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fumaric Acid	Ave	39434091	39301311		490	492	-0.3	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCVRT 410-404646/4 Calibration Date: 08/04/2023 16:00

Instrument ID: 6854A Calib Start Date: 07/27/2023 19:59

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/27/2023 22:51

Lab File ID: 48ORGA23186009.004.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fumaric Acid	22.44	22.26	22.62

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.004.d				
Lims ID:	CCVRT ORGS				
Client ID:					
Sample Type:	CCVRT				
Inject. Date:	04-Aug-2023 16:00:00	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCV ORGS				
Operator ID:	2027	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub4				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:06:36	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1674				
First Level Reviewer: UHEW		Date:	04-Aug-2023 16:51:33		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid						
22.436	22.436	0.000	19337424	H 0.4920	0.4904	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGS3_00049 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 07-Aug-2023 20:06:36 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.004.d

Injection Date: 04-Aug-2023 16:00:00 Instrument ID: 6854A

Lims ID: CCVRT ORGS

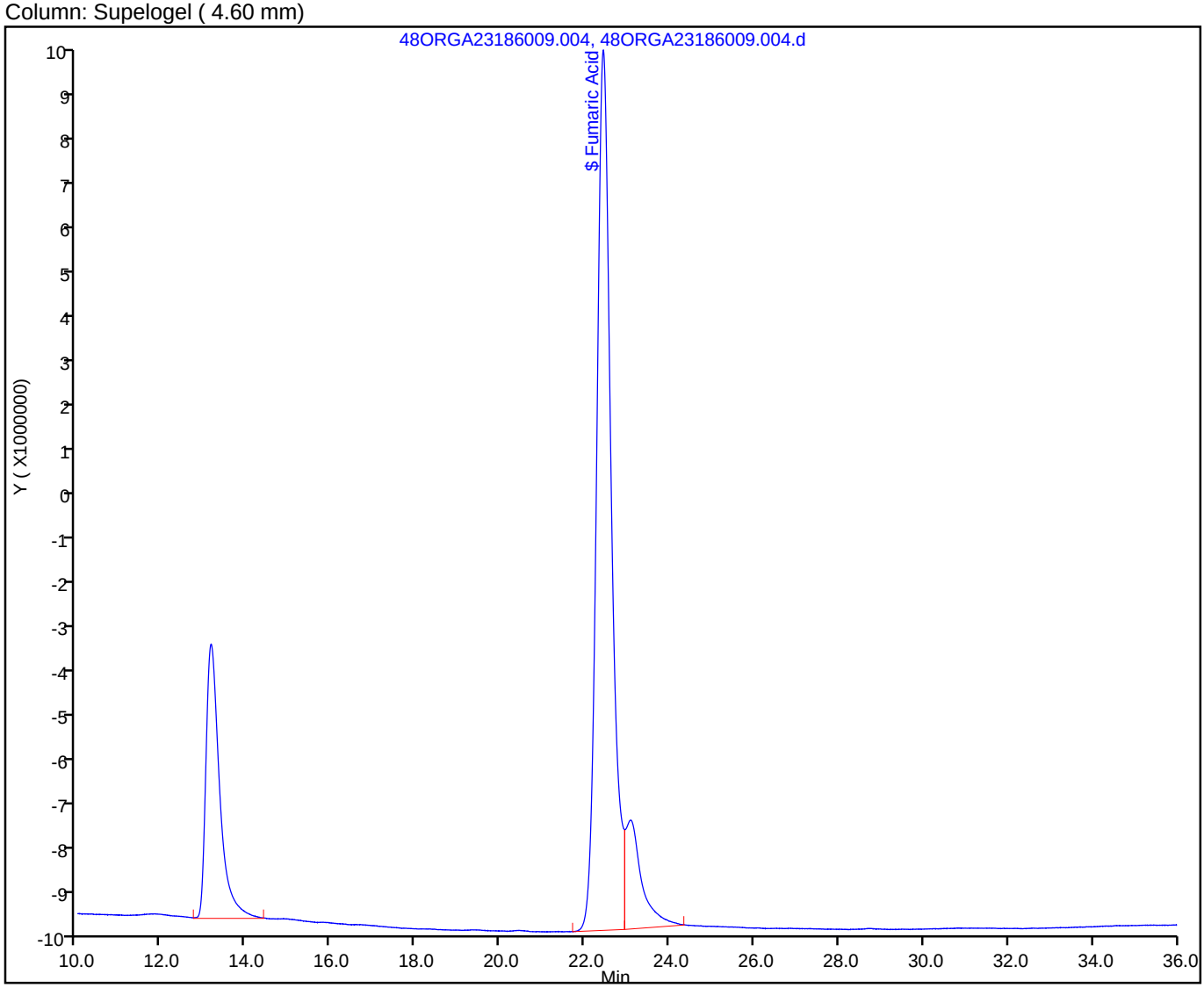
Client ID:

Operator ID: 2027 ALS Bottle#: 0 Worklist Smp#: 4

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404646/5 Calibration Date: 08/04/2023 16:43

Instrument ID: 6854A Calib Start Date: 07/05/2023 19:48

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 00:06

Lab File ID: 48ORGA23186009.005.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Oxalic Acid	Ave	6530954	6300878		12100	12600	-3.5	20.0
Citric Acid	Ave	471329	471454		50300	50300	0.0	20.0
Pyruvic Acid	Ave	3034278	3137768		13000	12600	3.4	20.0
Quinic Acid	Ave	246856	229744		47000	50500	-6.9	20.0
L-Lactic Acid	Ave	284209	284853		50200	50100	0.2	20.0
Formic-acid	Qua		375611		105000	101000	4.0	20.0
Acetic acid	Lin		217289		105000	100000	4.9	20.0
Propionic acid	Ave	162814	181233		111000	100000	11.3	20.0
Butyric acid	Qua		140994		104000	100000	3.7	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404646/5 Calibration Date: 08/04/2023 16:43

Instrument ID: 6854A Calib Start Date: 07/05/2023 19:48

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 00:06

Lab File ID: 48ORGA23186009.005.d

Analyte	RT	RT WINDOW	
		FROM	TO
Oxalic Acid	13.86	13.76	13.96
Citric Acid	15.54	15.39	15.69
Pyruvic Acid	16.68	16.58	16.78
Quinic Acid	17.37	17.27	17.47
L-Lactic Acid	19.39	19.29	19.49
Formic-acid	20.43	20.33	20.53
Acetic acid	21.37	21.27	21.47
Propionic acid	23.42	23.32	23.52
Butyric acid	26.45	26.35	26.55

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.005.d
Lims ID: CCV ORGA
Client ID:
Sample Type: CCV
Inject. Date: 04-Aug-2023 16:43:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: CCV ORGA
Operator ID: 2027 Instrument ID: 6854A
Sublist: chrom-8015_6854AP*sub1

Method: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 07-Aug-2023 20:06:36 Calib Date: 27-Jul-2023 22:51:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1674

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid						
13.862	13.862	0.000	79076016H	12.6	12.1	
2 Citric Acid						
15.541	15.541	0.000	23714140H	50.3	50.3	
4 Pyruvic Acid						
16.684	16.684	0.000	39473126H	12.6	13.0	
5 Quinic Acid						
17.367	17.367	0.000	11597493H	50.5	47.0	
7 L-Lactic Acid						
19.390	19.390	0.000	14273963H	50.1	50.2	
8 Formic-acid						
20.433	20.433	0.000	37748935H	100.5	104.5	
9 Acetic acid						
21.372	21.372	0.000	21778880H	100.2	105.1	
11 Propionic acid						
23.415	23.415	0.000	18123317H	100.0	111.3	
13 n-Butyric Acid						
26.453	26.453	0.000	14120534H	100.2	103.9	

Reagents:

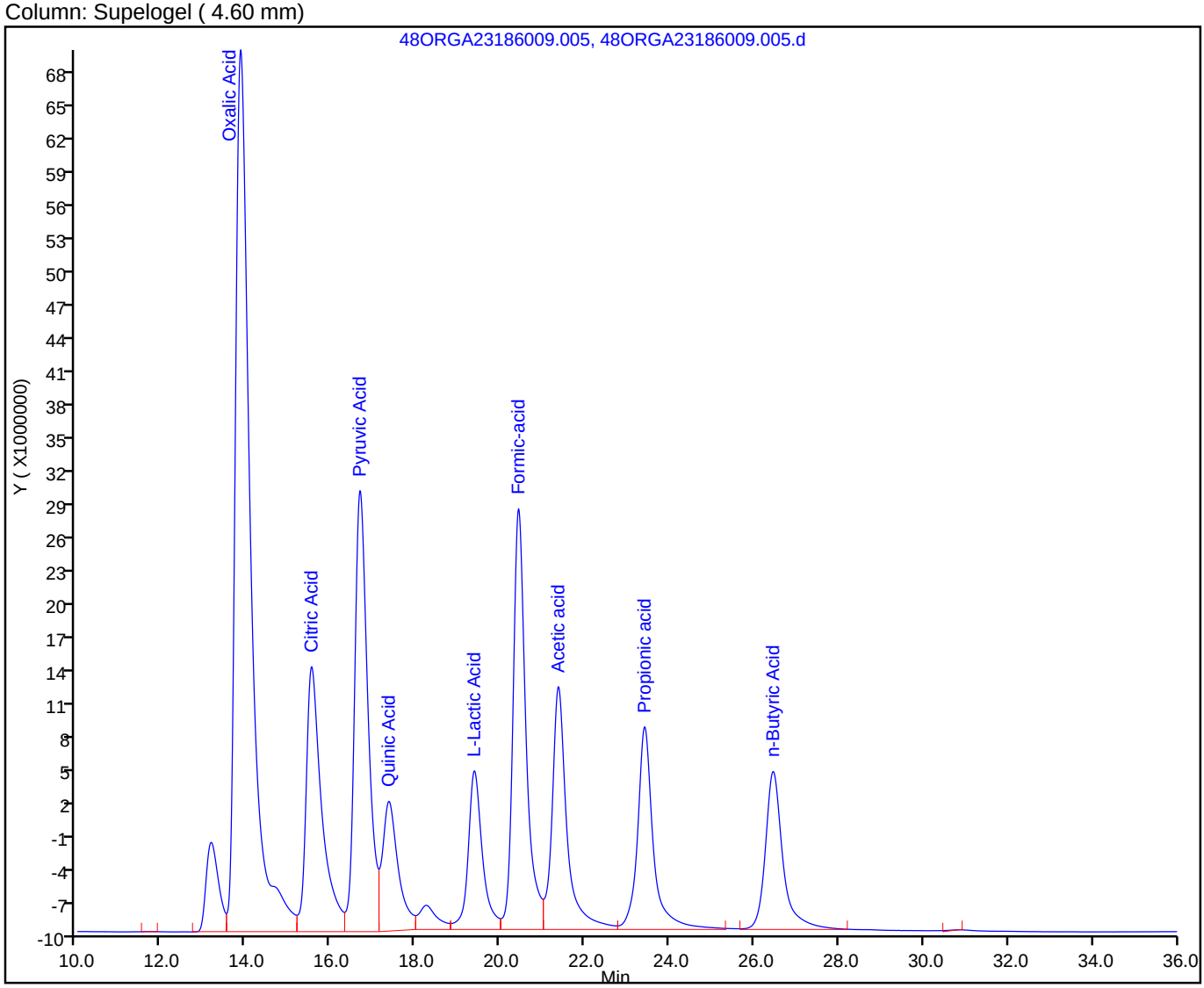
GCS_ORGA3_00028 Amount Added: 1.00 Units: mL

Report Date: 07-Aug-2023 20:06:36 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.005.d				
Injection Date:	04-Aug-2023 16:43:00	Instrument ID:	6854A		
Lims ID:	CCV ORGA				
Client ID:					
Operator ID:	2027	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404646/6 Calibration Date: 08/04/2023 17:26

Instrument ID: 6854A Calib Start Date: 07/06/2023 02:14

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 05:06

Lab File ID: 48ORGA23186009.006.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tartaric Acid	Ave	633287	656809		52100	50300	3.7	20.0
Succinic Acid	Ave	225583	224001		49900	50300	-0.7	20.0
Isobutyric acid	Ave	206039	206045		101000	101000	0.0	20.0
Isovaleric acid	Ave	123399	124028		101000	100000	0.5	20.0
Valeric acid	Ave	86377	87484		102000	100000	1.3	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404646/6 Calibration Date: 08/04/2023 17:26

Instrument ID: 6854A Calib Start Date: 07/06/2023 02:14

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 05:06

Lab File ID: 48ORGA23186009.006.d

Analyte	RT	RT WINDOW	
		FROM	TO
Tartaric Acid	16.09	15.99	16.19
Succinic Acid	19.25	19.20	19.30
Isobutyric acid	25.03	24.93	25.13
Isovaleric acid	28.94	28.72	29.16
Valeric acid	33.59	33.29	33.89

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.006.d
Lims ID: CCV ORGB
Client ID:
Sample Type: CCV
Inject. Date: 04-Aug-2023 17:26:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: CCV ORGB
Operator ID: 2027 Instrument ID: 6854A
Sublist: chrom-8015_6854AP*sub3

Method: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 07-Aug-2023 20:13:50 Calib Date: 27-Jul-2023 22:51:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1674

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid						
16.088	16.088	0.000	33024347H	50.3	52.1	
6 Succinic Acid						
19.250	19.250	0.000	11262781H	50.3	49.9	
12 Isobutyric acid						
25.026	25.026	0.000	20728079H	100.6	100.6	
14 Isovaleric acid						
28.943	28.943	0.000	12402768H	100.0	100.5	
15 Valeric acid						
33.587	33.587	0.000	8783350H	100.4	101.7	

Reagents:

GCS_ORGB3_00022 Amount Added: 1.00 Units: mL

Report Date: 07-Aug-2023 20:13:51 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.006.d

Injection Date: 04-Aug-2023 17:26:00 Instrument ID: 6854A

Lims ID: CCV ORGB

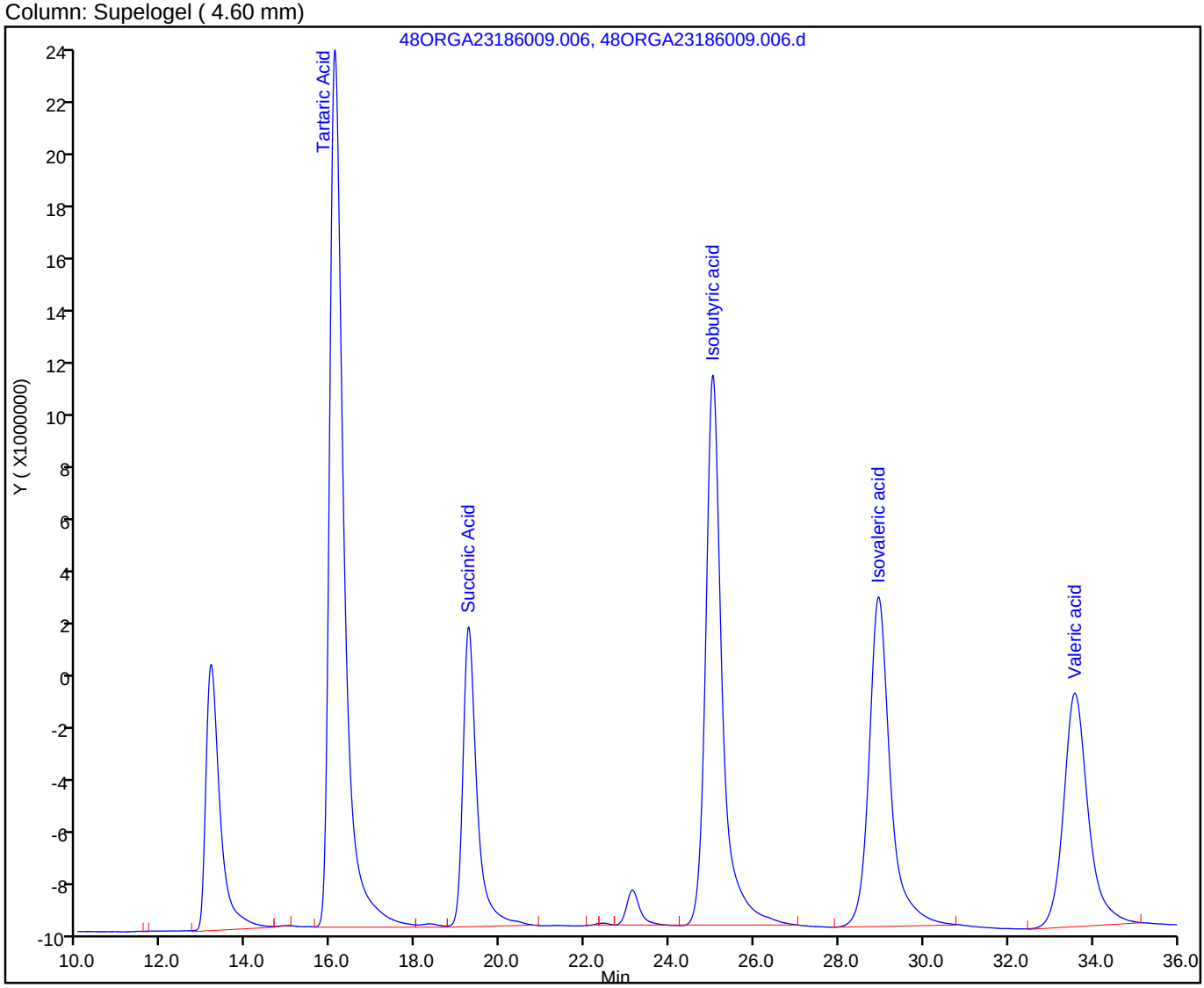
Client ID:

Operator ID: 2027 ALS Bottle#: 0 Worklist Smp#: 6

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404646/17 Calibration Date: 08/05/2023 01:18

Instrument ID: 6854A Calib Start Date: 07/27/2023 19:59

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/27/2023 22:51

Lab File ID: 48ORGA23186009.017.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fumaric Acid	Ave	39434091	42342097		528	492	7.4	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404646/17 Calibration Date: 08/05/2023 01:18

Instrument ID: 6854A Calib Start Date: 07/27/2023 19:59

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/27/2023 22:51

Lab File ID: 48ORGA23186009.017.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fumaric Acid	22.42	22.26	22.62

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.017.d				
Lims ID:	CCV ORGS				
Client ID:					
Sample Type:	CCV				
Inject. Date:	05-Aug-2023 01:18:00	ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCV ORGS				
Operator ID:	2027	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub4				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:06:34	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1674				

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid						
22.424	22.436	-0.012	20833582H	0.4920	0.5283	

Reagents:

GCS_ORGS3_00049 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 07-Aug-2023 20:06:34 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.017.d

Injection Date: 05-Aug-2023 01:18:00 Instrument ID: 6854A

Lims ID: CCV ORGS

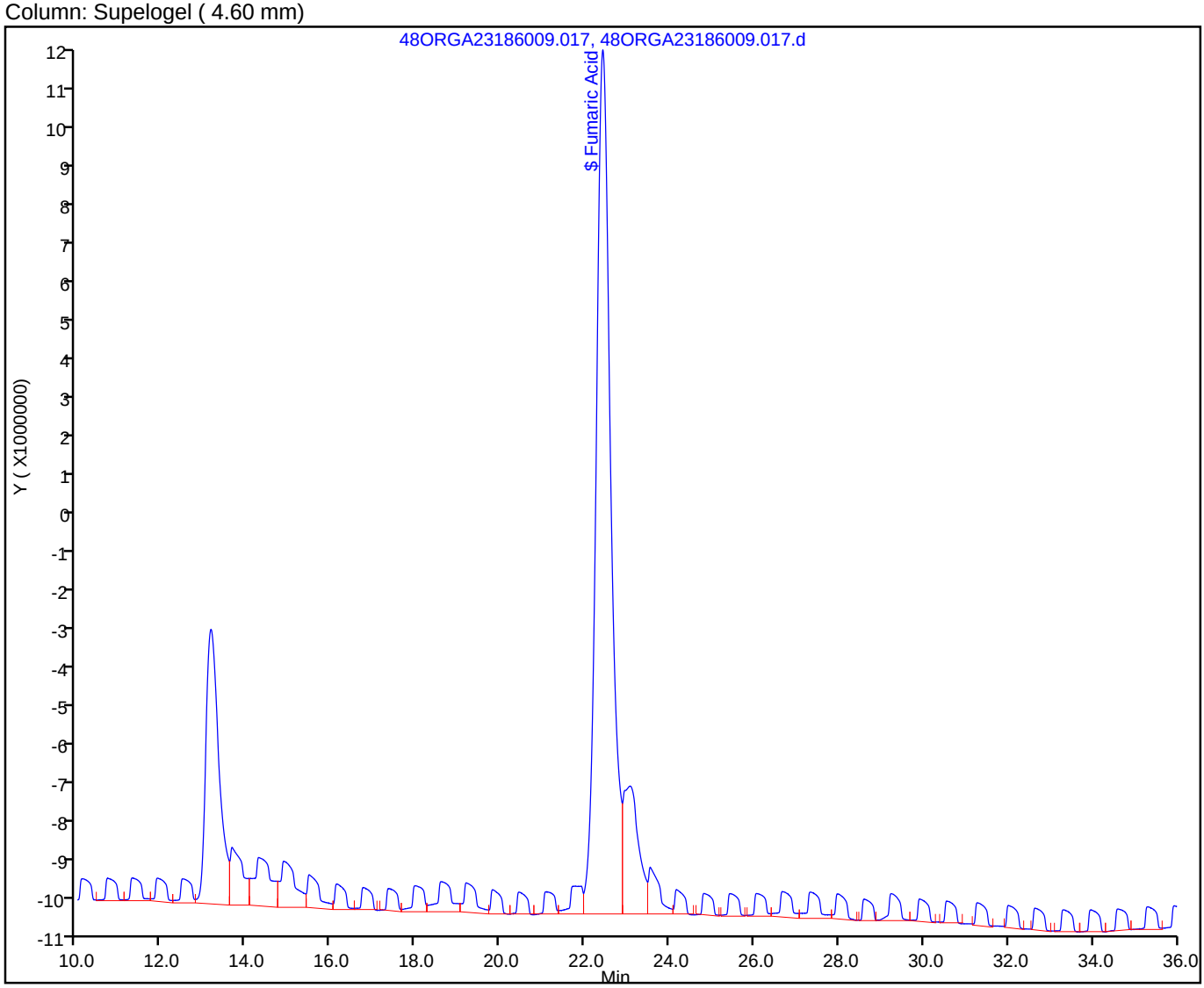
Client ID:

Operator ID: 2027 ALS Bottle#: 0 Worklist Smp#: 17

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404646/18 Calibration Date: 08/05/2023 02:01

Instrument ID: 6854A Calib Start Date: 07/05/2023 19:48

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 00:06

Lab File ID: 48ORGA23186009.018.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Oxalic Acid	Ave	6530954	6248703		12000	12600	-4.3	20.0
Citric Acid	Ave	471329	483023		51500	50300	2.5	20.0
Pyruvic Acid	Ave	3034278	3175622		13200	12600	4.7	20.0
Quinic Acid	Ave	246856	232835		47600	50500	-5.7	20.0
L-Lactic Acid	Ave	284209	293607		51800	50100	3.3	20.0
Formic-acid	Qua		386662		107000	101000	6.8	20.0
Acetic acid	Lin		220168		106000	100000	6.2	20.0
Propionic acid	Ave	162814	182577		112000	100000	12.1	20.0
Butyric acid	Qua		146969		108000	100000	7.8	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404646/18 Calibration Date: 08/05/2023 02:01

Instrument ID: 6854A Calib Start Date: 07/05/2023 19:48

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 00:06

Lab File ID: 48ORGA23186009.018.d

Analyte	RT	RT WINDOW	
		FROM	TO
Oxalic Acid	13.86	13.76	13.96
Citric Acid	15.53	15.39	15.69
Pyruvic Acid	16.68	16.58	16.78
Quinic Acid	17.36	17.27	17.47
L-Lactic Acid	19.38	19.29	19.49
Formic-acid	20.43	20.33	20.53
Acetic acid	21.37	21.27	21.47
Propionic acid	23.41	23.32	23.52
Butyric acid	26.45	26.35	26.55

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.018.d
Lims ID: CCV ORGA
Client ID:
Sample Type: CCV
Inject. Date: 05-Aug-2023 02:01:00 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: CCV ORGA
Operator ID: 2027 Instrument ID: 6854A
Sublist: chrom-8015_6854AP*sub1

Method: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 07-Aug-2023 20:06:34 Calib Date: 27-Jul-2023 22:51:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1674

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid						
13.862	13.862	0.000	78421226H	12.6	12.0	
2 Citric Acid						
15.533	15.541	-0.008	24296058H	50.3	51.5	
4 Pyruvic Acid						
16.680	16.684	-0.004	39949321H	12.6	13.2	
5 Quinic Acid						
17.359	17.367	-0.008	11753528H	50.5	47.6	
7 L-Lactic Acid						
19.382	19.390	-0.008	14712631H	50.1	51.8	
8 Formic-acid						
20.425	20.433	-0.008	38859541H	100.5	107.4	
9 Acetic acid						
21.368	21.372	-0.004	22067444H	100.2	106.5	
11 Propionic acid						
23.411	23.415	-0.004	18257726H	100.0	112.1	
13 n-Butyric Acid						
26.445	26.453	-0.008	14718902H	100.2	108.0	

Reagents:

GCS_ORGA3_00028 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 07-Aug-2023 20:06:34 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.018.d

Injection Date: 05-Aug-2023 02:01:00 Instrument ID: 6854A

Lims ID: CCV ORGA

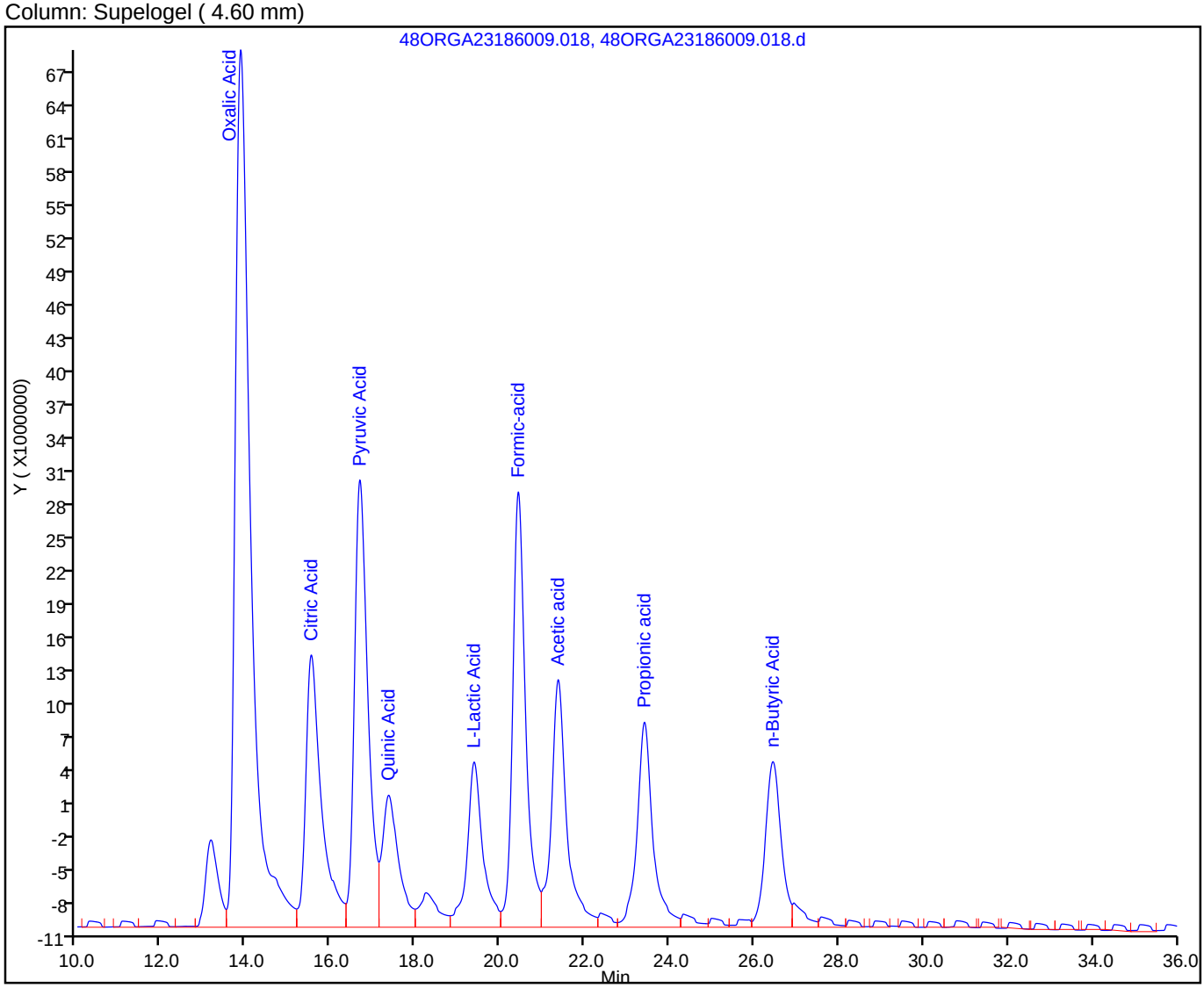
Client ID:

Operator ID: 2027 ALS Bottle#: 0 Worklist Smp#: 18

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404646/19 Calibration Date: 08/05/2023 02:44

Instrument ID: 6854A Calib Start Date: 07/06/2023 02:14

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 05:06

Lab File ID: 48ORGA23186009.019.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tartaric Acid	Ave	633287	658429		52300	50300	4.0	20.0
Succinic Acid	Ave	225583	224667		50100	50300	-0.4	20.0
Isobutyric acid	Ave	206039	207512		101000	101000	0.7	20.0
Isovaleric acid	Ave	123399	124766		101000	100000	1.1	20.0
Valeric acid	Ave	86377	87972		102000	100000	1.8	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404646/19 Calibration Date: 08/05/2023 02:44

Instrument ID: 6854A Calib Start Date: 07/06/2023 02:14

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 05:06

Lab File ID: 48ORGA23186009.019.d

Analyte	RT	RT WINDOW	
		FROM	TO
Tartaric Acid	16.08	15.99	16.19
Succinic Acid	19.25	19.20	19.30
Isobutyric acid	25.02	24.93	25.13
Isovaleric acid	28.94	28.72	29.16
Valeric acid	33.57	33.29	33.89

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.019.d				
Lims ID:	CCV ORGB				
Client ID:					
Sample Type:	CCV				
Inject. Date:	05-Aug-2023 02:44:00	ALS Bottle#:	0	Worklist Smp#:	19
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCV ORGB				
Operator ID:	2027	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub3				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:33:36	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1674				

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid						
16.084	16.088	-0.004	33105789H	50.3	52.3	
6 Succinic Acid						
19.246	19.250	-0.004	11296263H	50.3	50.1	
12 Isobutyric acid						
25.022	25.026	-0.004	20875754H	100.6	101.3	
14 Isovaleric acid						
28.939	28.943	-0.004	12476561H	100.0	101.1	
15 Valeric acid						
33.571	33.587	-0.016	8832395H	100.4	102.3	

Reagents:

GCS_ORGB3_00022 Amount Added: 1.00 Units: mL

Report Date: 07-Aug-2023 20:33:36 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.019.d

Injection Date: 05-Aug-2023 02:44:00 Instrument ID: 6854A

Lims ID: CCV ORGB

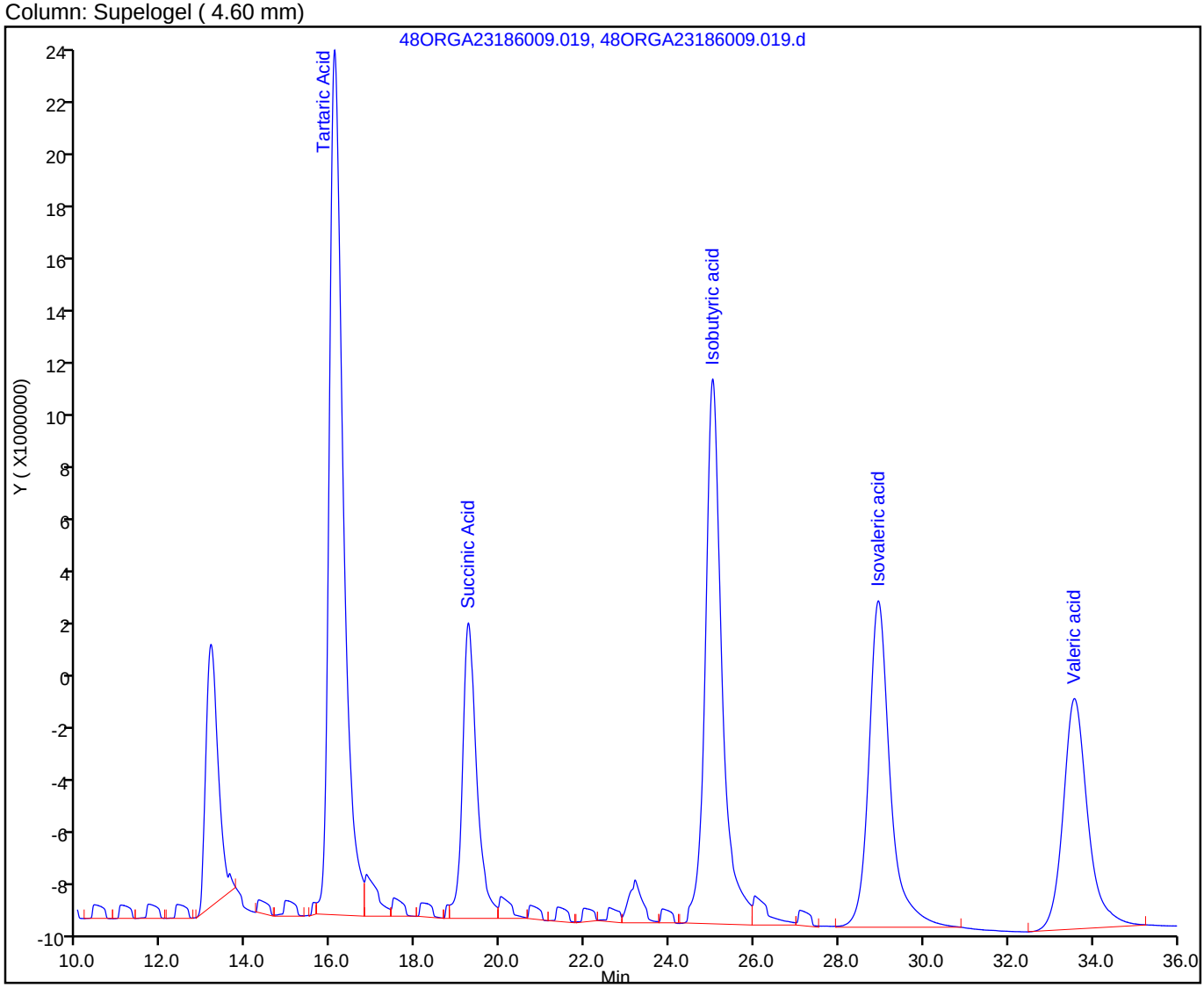
Client ID:

Operator ID: 2027 ALS Bottle#: 0 Worklist Smp#: 19

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404646/30 Calibration Date: 08/05/2023 10:37

Instrument ID: 6854A Calib Start Date: 07/27/2023 19:59

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/27/2023 22:51

Lab File ID: 48ORGA23186009.030.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fumaric Acid	Ave	39434091	40855182		510	492	3.6	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404646/30 Calibration Date: 08/05/2023 10:37

Instrument ID: 6854A Calib Start Date: 07/27/2023 19:59

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/27/2023 22:51

Lab File ID: 48ORGA23186009.030.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fumaric Acid	22.42	22.26	22.62

Report Date: 07-Aug-2023 20:14:09 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.030.d				
Lims ID:	CCV ORGS				
Client ID:					
Sample Type:	CCV				
Inject. Date:	05-Aug-2023 10:37:00	ALS Bottle#:	0	Worklist Smp#:	30
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCV ORGS				
Operator ID:	2027	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub4				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:14:09	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1674				

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid						
22.416	22.436	-0.020	20101975H	0.4920	0.5098	

Reagents:

GCS_ORGS3_00049 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 07-Aug-2023 20:14:09 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.030.d

Injection Date: 05-Aug-2023 10:37:00 Instrument ID: 6854A

Lims ID: CCV ORGS

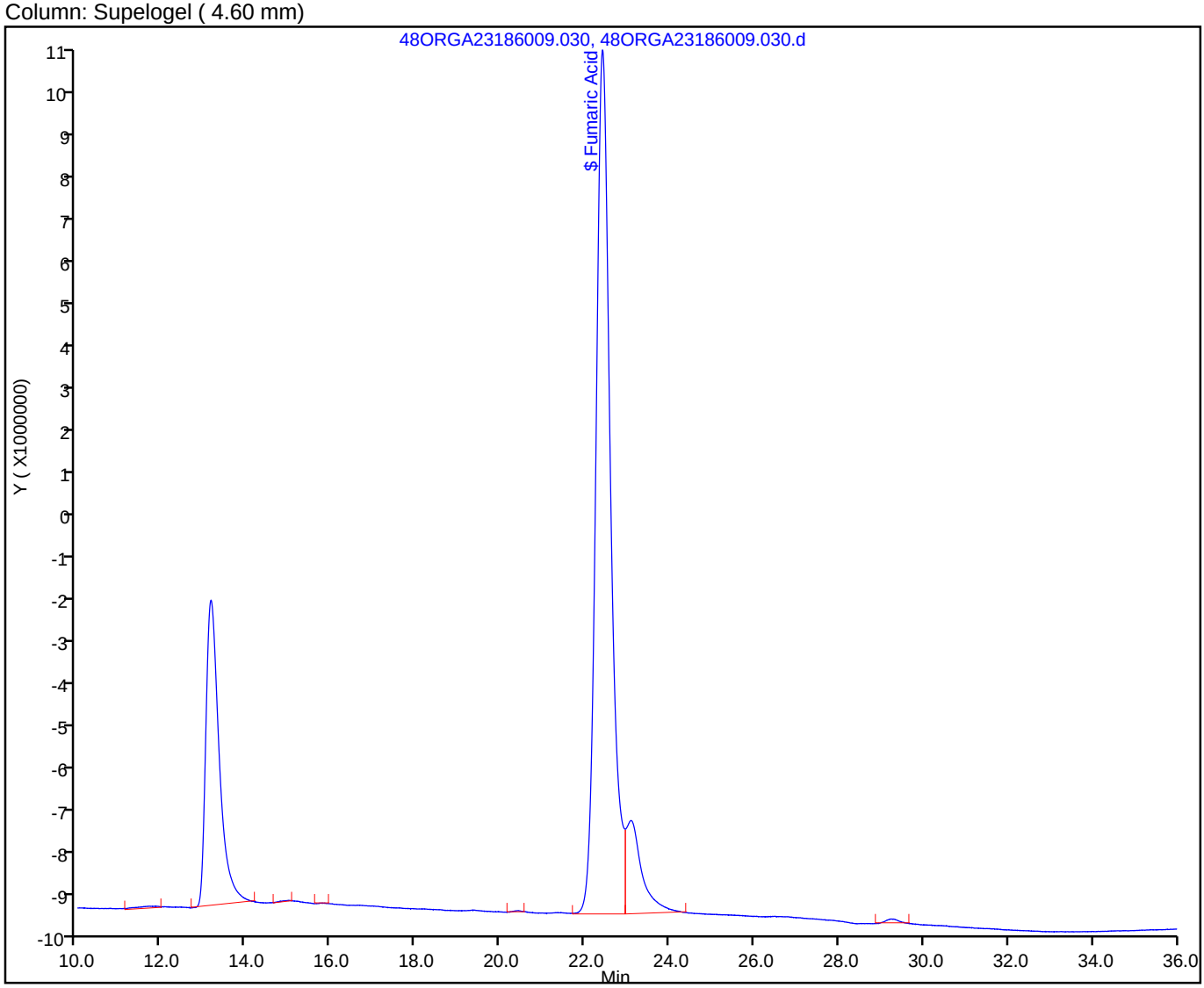
Client ID:

Operator ID: 2027 ALS Bottle#: 0 Worklist Smp#: 30

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404646/31 Calibration Date: 08/05/2023 11:20

Instrument ID: 6854A Calib Start Date: 07/05/2023 19:48

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 00:06

Lab File ID: 48ORGA23186009.031.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Oxalic Acid	Ave	6530954	6249612		12000	12600	-4.3	20.0
Citric Acid	Ave	471329	476165		50800	50300	1.0	20.0
Pyruvic Acid	Ave	3034278	3193889		13200	12600	5.3	20.0
Quinic Acid	Ave	246856	229639		47000	50500	-7.0	20.0
L-Lactic Acid	Ave	284209	285588		50400	50100	0.5	20.0
Formic-acid	Qua		377173		105000	101000	4.4	20.0
Acetic acid	Lin		216932		105000	100000	4.7	20.0
Propionic acid	Ave	162814	181200		111000	100000	11.3	20.0
Butyric acid	Qua		141727		104000	100000	4.2	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404646/31 Calibration Date: 08/05/2023 11:20

Instrument ID: 6854A Calib Start Date: 07/05/2023 19:48

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 00:06

Lab File ID: 48ORGA23186009.031.d

Analyte	RT	RT WINDOW	
		FROM	TO
Oxalic Acid	13.85	13.76	13.96
Citric Acid	15.53	15.39	15.69
Pyruvic Acid	16.67	16.58	16.78
Quinic Acid	17.35	17.27	17.47
L-Lactic Acid	19.37	19.29	19.49
Formic-acid	20.42	20.33	20.53
Acetic acid	21.36	21.27	21.47
Propionic acid	23.40	23.32	23.52
Butyric acid	26.44	26.35	26.55

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.031.d
Lims ID: CCV ORGA
Client ID:
Sample Type: CCV
Inject. Date: 05-Aug-2023 11:20:00 ALS Bottle#: 0 Worklist Smp#: 31
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: CCV ORGA
Operator ID: 2027 Instrument ID: 6854A
Sublist: chrom-8015_6854AP*sub1

Method: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 07-Aug-2023 20:14:09 Calib Date: 27-Jul-2023 22:51:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1674

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid						
13.854	13.862	-0.008	78432625H	12.6	12.0	
2 Citric Acid						
15.525	15.541	-0.016	23951111H	50.3	50.8	
4 Pyruvic Acid						
16.672	16.684	-0.012	40179118H	12.6	13.2	
5 Quinic Acid						
17.351	17.367	-0.016	11592173H	50.5	47.0	
7 L-Lactic Acid						
19.374	19.390	-0.016	14310823H	50.1	50.4	
8 Formic-acid						
20.421	20.433	-0.012	37905905H	100.5	104.9	
9 Acetic acid						
21.364	21.372	-0.008	21743130H	100.2	105.0	
11 Propionic acid						
23.403	23.415	-0.012	18120040H	100.0	111.3	
13 n-Butyric Acid						
26.441	26.453	-0.012	14193968H	100.2	104.4	

Reagents:

GCS_ORGA3_00028 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 07-Aug-2023 20:14:10 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.031.d

Injection Date: 05-Aug-2023 11:20:00 Instrument ID: 6854A

Lims ID: CCV ORGA

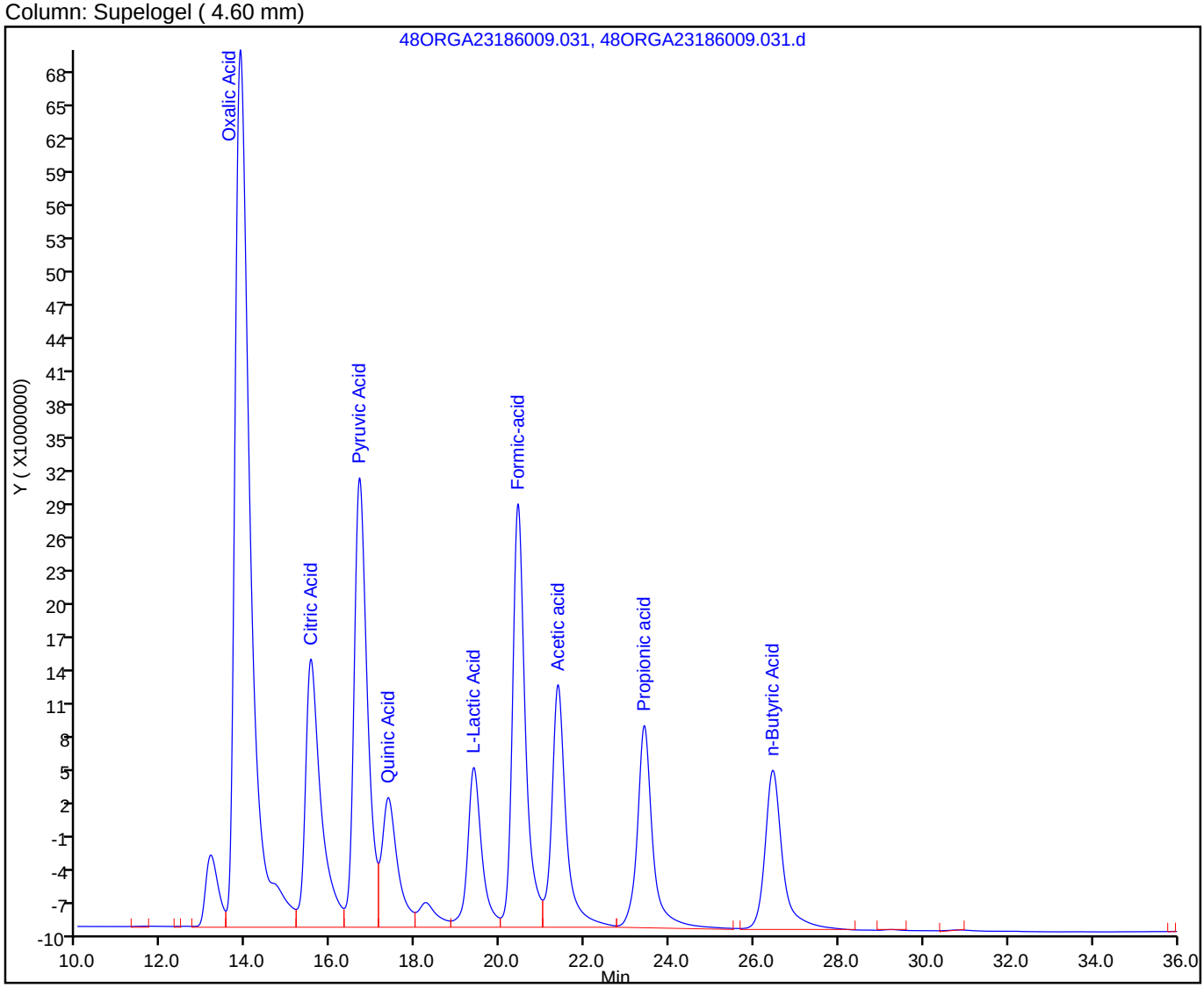
Client ID:

Operator ID: 2027 ALS Bottle#: 0 Worklist Smp#: 31

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404646/32 Calibration Date: 08/05/2023 12:03

Instrument ID: 6854A Calib Start Date: 07/06/2023 02:14

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 05:06

Lab File ID: 48ORGA23186009.032.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tartaric Acid	Ave	633287	660495		52400	50300	4.3	20.0
Succinic Acid	Ave	225583	225337		50200	50300	-0.1	20.0
Isobutyric acid	Ave	206039	207579		101000	101000	0.7	20.0
Isovaleric acid	Ave	123399	125142		101000	100000	1.4	20.0
Valeric acid	Ave	86377	88007		102000	100000	1.9	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404646/32 Calibration Date: 08/05/2023 12:03

Instrument ID: 6854A Calib Start Date: 07/06/2023 02:14

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 05:06

Lab File ID: 48ORGA23186009.032.d

Analyte	RT	RT WINDOW	
		FROM	TO
Tartaric Acid	16.08	15.99	16.19
Succinic Acid	19.24	19.20	19.30
Isobutyric acid	25.02	24.93	25.13
Isovaleric acid	28.94	28.72	29.16
Valeric acid	33.57	33.29	33.89

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.032.d
Lims ID: CCV ORGB
Client ID:
Sample Type: CCV
Inject. Date: 05-Aug-2023 12:03:00 ALS Bottle#: 0 Worklist Smp#: 32
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: CCV ORGB
Operator ID: 2027 Instrument ID: 6854A
Sublist: chrom-8015_6854AP*sub3

Method: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 07-Aug-2023 20:14:10 Calib Date: 27-Jul-2023 22:51:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1674

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid						
16.080	16.088	-0.008	33209709H	50.3	52.4	
6 Succinic Acid						
19.242	19.250	-0.008	11329938H	50.3	50.2	
12 Isobutyric acid						
25.022	25.026	-0.004	20882401H	100.6	101.4	
14 Isovaleric acid						
28.939	28.943	-0.004	12514186H	100.0	101.4	
15 Valeric acid						
33.571	33.587	-0.016	8835923H	100.4	102.3	

Reagents:

GCS_ORGB3_00022 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 07-Aug-2023 20:14:10 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.032.d

Injection Date: 05-Aug-2023 12:03:00 Instrument ID: 6854A

Lims ID: CCV ORGB

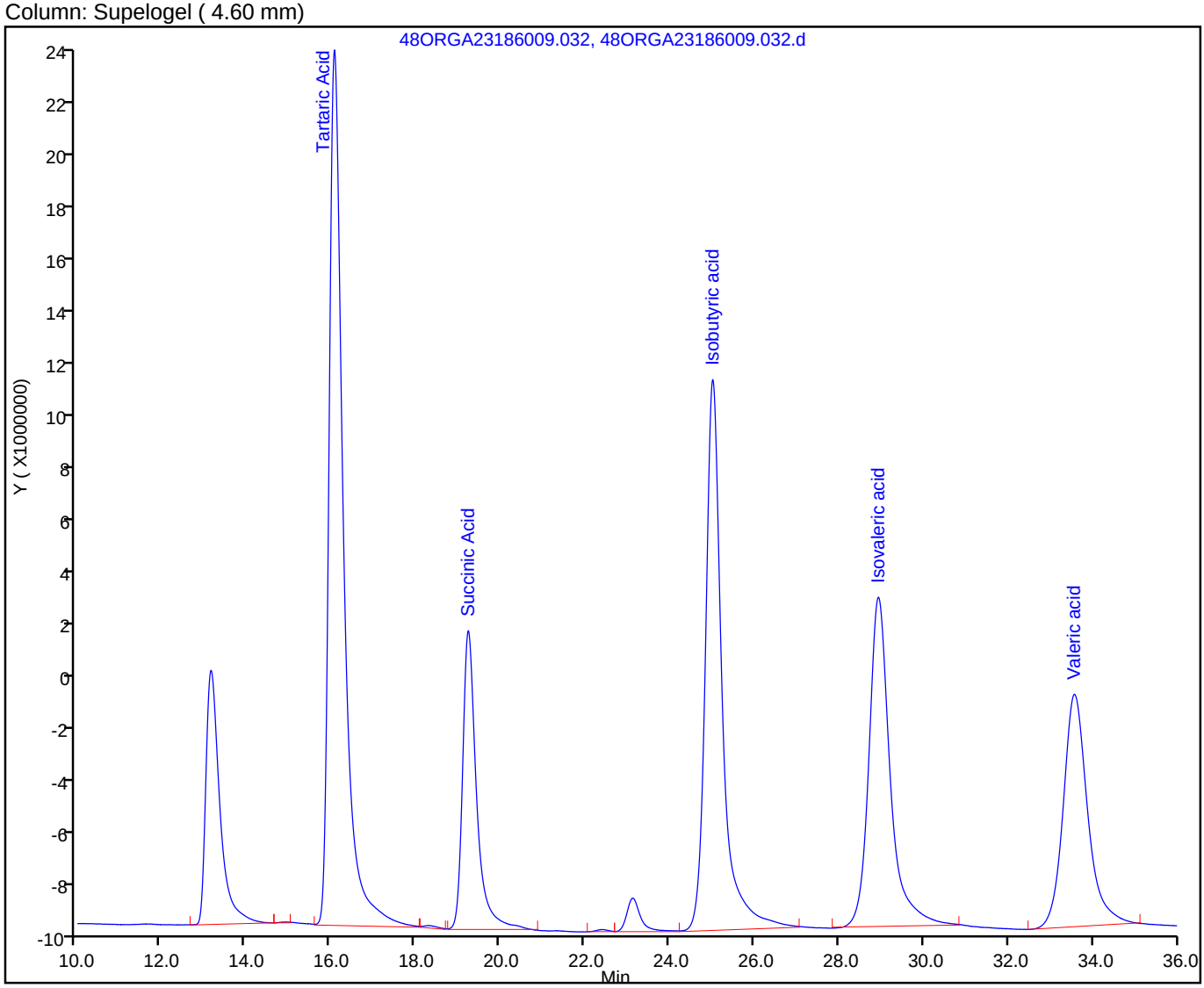
Client ID:

Operator ID: 2027 ALS Bottle#: 0 Worklist Smp#: 32

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404646/41 Calibration Date: 08/05/2023 18:30

Instrument ID: 6854A Calib Start Date: 07/27/2023 19:59

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/27/2023 22:51

Lab File ID: 48ORGA23186009.041.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fumaric Acid	Ave	39434091	36731779		458	492	-6.9	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404646/41 Calibration Date: 08/05/2023 18:30

Instrument ID: 6854A Calib Start Date: 07/27/2023 19:59

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/27/2023 22:51

Lab File ID: 48ORGA23186009.041.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fumaric Acid	22.51	22.26	22.62

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.041.d				
Lims ID:	CCV ORGS				
Client ID:					
Sample Type:	CCV				
Inject. Date:	05-Aug-2023 18:30:00	ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCV ORGS				
Operator ID:	2027	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub4				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:14:35	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1674				
First Level Reviewer: UHEW		Date:	07-Aug-2023 19:59:09		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid						M
22.508	22.436	0.072	18073137H	0.4920	0.4583	M

QC Flag Legend

Processing Flags

H - Response Measured by Height

Review Flags

M - Manually Integrated

Reagents:

GCS_ORGS3_00049 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 07-Aug-2023 20:14:35 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.041.d

Injection Date: 05-Aug-2023 18:30:00 Instrument ID: 6854A

Lims ID: CCV ORGS

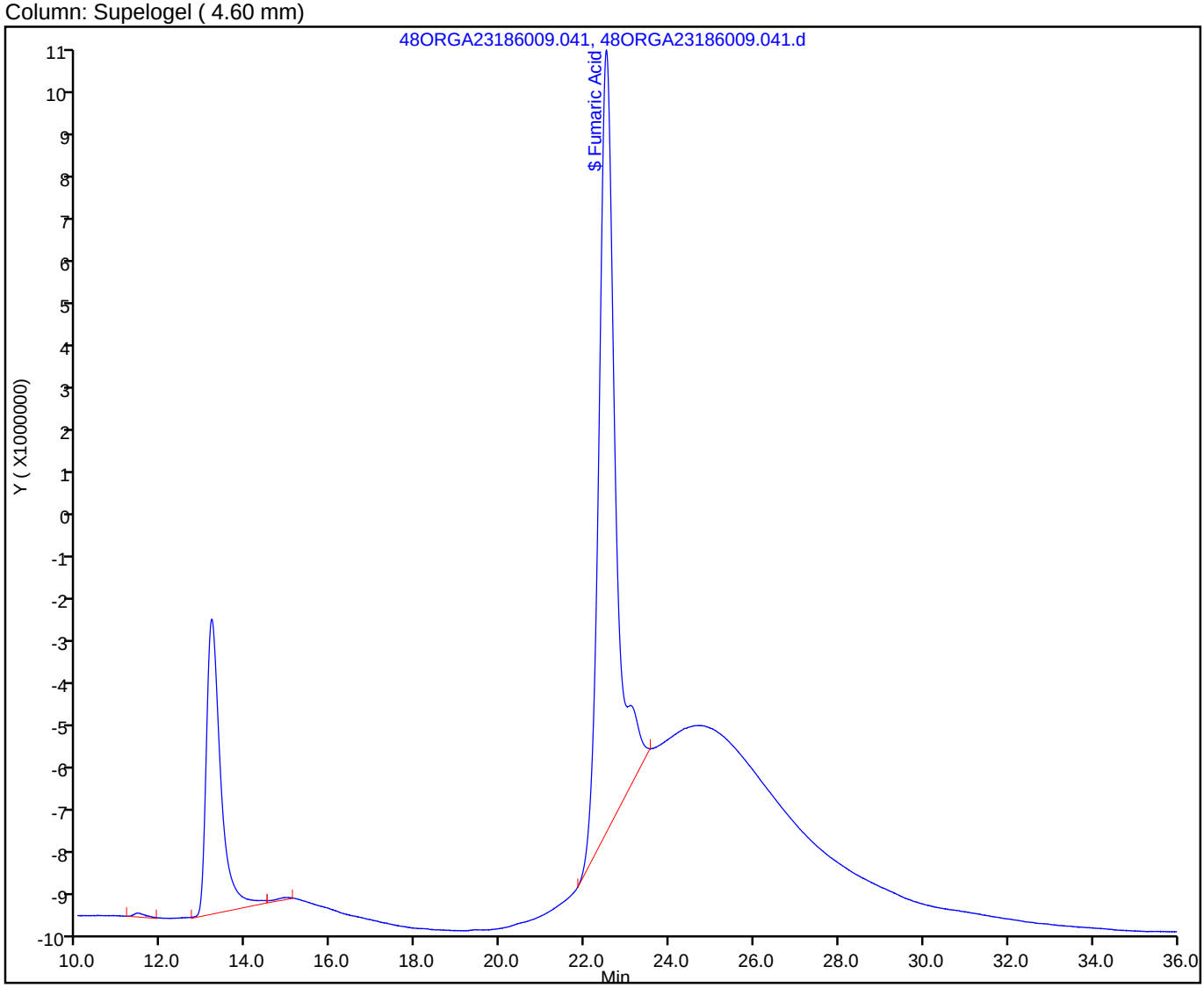
Client ID:

Operator ID: 2027 ALS Bottle#: 0 Worklist Smp#: 41

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Eurofins Lancaster Laboratories Environment Testing, LLC

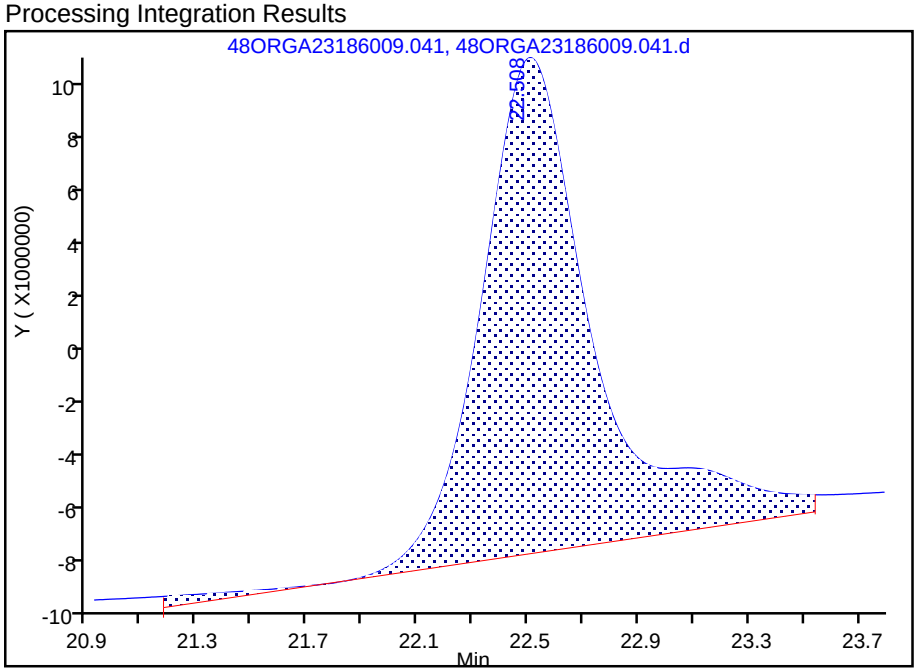
Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.041.d				
Injection Date:	05-Aug-2023 18:30:00	Instrument ID:	6854A		
Lims ID:	CCV ORGS				
Client ID:					
Operator ID:	2027	ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		
Column:	Supelogel (4.60 mm)	Detector	SupelcogelH		

$ 10 Fumaric Acid, CAS: 110-17-8

Signal: 1

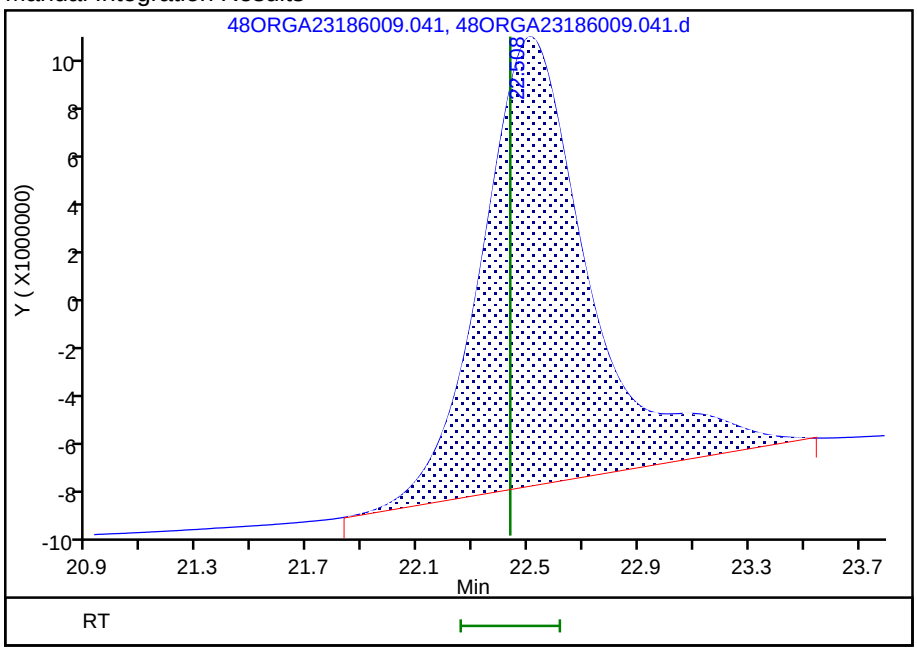
Processing Integration Results

RT: 22.51
Height: 18328714
Amount: 0.464794
Amount Units: ug/ml



Manual Integration Results

RT: 22.51
Height: 18073137
Amount: 0.458313
Amount Units: ug/ml



Reviewer: UHEW, 07-Aug-2023 19:59:05 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Assign Peak

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404646/42 Calibration Date: 08/05/2023 19:13

Instrument ID: 6854A Calib Start Date: 07/05/2023 19:48

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 00:06

Lab File ID: 48ORGA23186009.042.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Oxalic Acid	Ave	6530954	5735909		11000	12600	-12.2	20.0
Citric Acid	Ave	471329	461609		49300	50300	-2.1	20.0
Pyruvic Acid	Ave	3034278	3051441		12700	12600	0.6	20.0
Quinic Acid	Ave	246856	218721		44700	50500	-11.4	20.0
L-Lactic Acid	Ave	284209	269127		47500	50100	-5.3	20.0
Formic-acid	Qua		353453		98800	101000	-1.7	20.0
Acetic acid	Lin		202514		98300	100000	-1.9	20.0
Propionic acid	Ave	162814	166994		103000	100000	2.6	20.0
Butyric acid	Qua		130221		96400	100000	-3.7	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404646/42 Calibration Date: 08/05/2023 19:13

Instrument ID: 6854A Calib Start Date: 07/05/2023 19:48

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 00:06

Lab File ID: 48ORGA23186009.042.d

Analyte	RT	RT WINDOW	
		FROM	TO
Oxalic Acid	13.89	13.76	13.96
Citric Acid	15.57	15.39	15.69
Pyruvic Acid	16.70	16.58	16.78
Quinic Acid	17.40	17.27	17.47
L-Lactic Acid	19.42	19.29	19.49
Formic-acid	20.46	20.33	20.53
Acetic acid	21.40	21.27	21.47
Propionic acid	23.44	23.32	23.52
Butyric acid	26.49	26.35	26.55

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.042.d
Lims ID: CCV ORGA
Client ID:
Sample Type: CCV
Inject. Date: 05-Aug-2023 19:13:00 ALS Bottle#: 0 Worklist Smp#: 42
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: CCV ORGA
Operator ID: 2027 Instrument ID: 6854A
Sublist: chrom-8015_6854AP*sub1

Method: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 07-Aug-2023 20:14:35 Calib Date: 27-Jul-2023 22:51:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1674

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid						
13.886	13.862	0.024	71985664H	12.6	11.0	
2 Citric Acid						
15.565	15.541	0.024	23218923H	50.3	49.3	
4 Pyruvic Acid						
16.704	16.684	0.020	38387123H	12.6	12.7	
5 Quinic Acid						
17.399	17.367	0.032	11041027H	50.5	44.7	
7 L-Lactic Acid						
19.422	19.390	0.032	13485975H	50.1	47.5	
8 Formic-acid						
20.457	20.433	0.024	35522016H	100.5	98.8	
9 Acetic acid						
21.400	21.372	0.028	20297991H	100.2	98.3	
11 Propionic acid						
23.439	23.415	0.024	16699370H	100.0	102.6	
13 n-Butyric Acid						
26.493	26.453	0.040	13041604H	100.2	96.4	

Reagents:

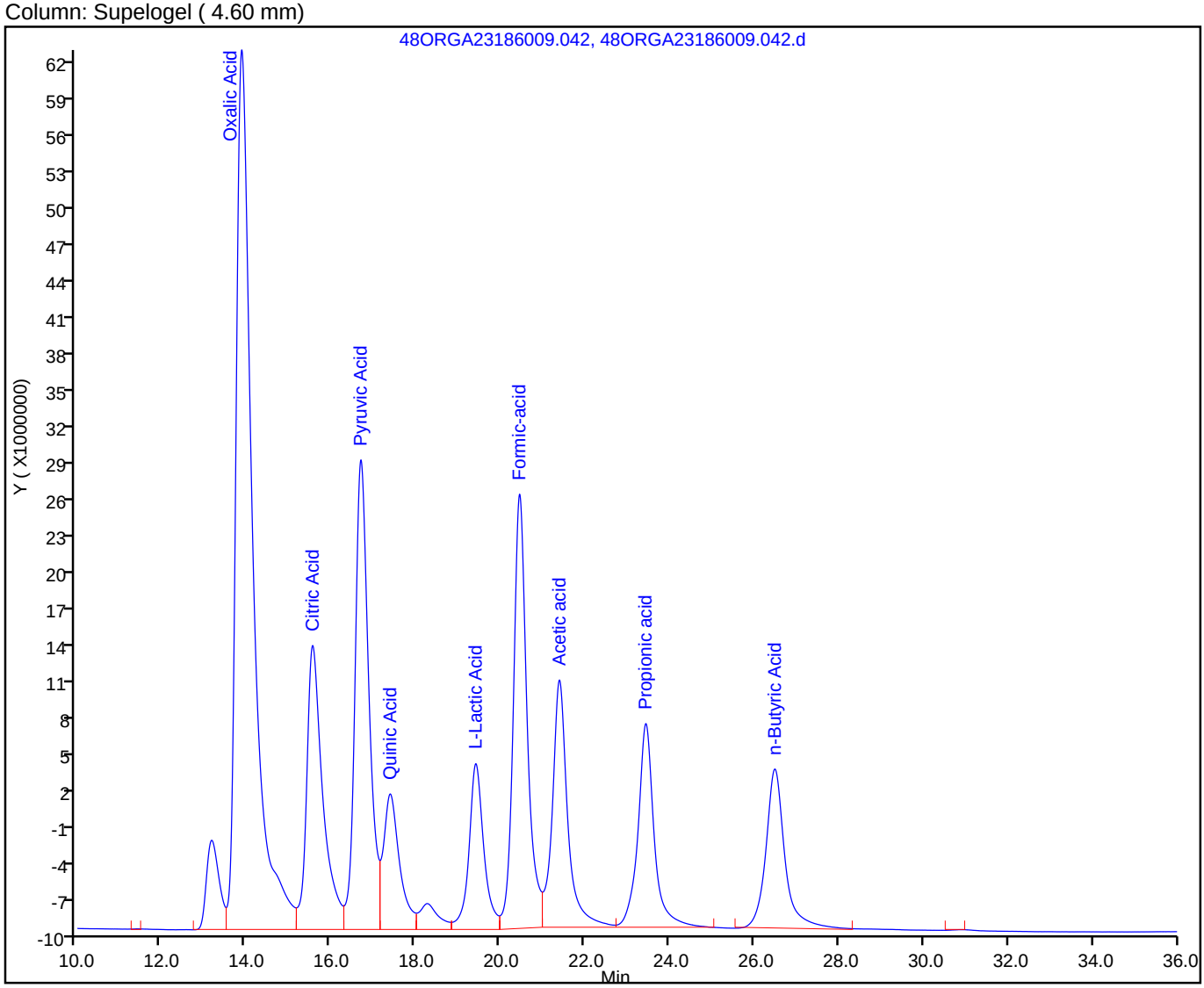
GCS_ORGA3_00028 Amount Added: 1.00 Units: mL

Report Date: 07-Aug-2023 20:14:35 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.042.d				
Injection Date:	05-Aug-2023 19:13:00	Instrument ID:	6854A		
Lims ID:	CCV ORGA				
Client ID:					
Operator ID:	2027	ALS Bottle#:	0	Worklist Smp#:	42
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404646/43 Calibration Date: 08/05/2023 19:56

Instrument ID: 6854A Calib Start Date: 07/06/2023 02:14

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 05:06

Lab File ID: 48ORGA23186009.043.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tartaric Acid	Ave	633287	635635		50500	50300	0.4	20.0
Succinic Acid	Ave	225583	210742		47000	50300	-6.6	20.0
Isobutyric acid	Ave	206039	195664		95500	101000	-5.0	20.0
Isovaleric acid	Ave	123399	117013		94800	100000	-5.2	20.0
Valeric acid	Ave	86377	79667		92600	100000	-7.8	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Lab Sample ID: CCV 410-404646/43 Calibration Date: 08/05/2023 19:56

Instrument ID: 6854A Calib Start Date: 07/06/2023 02:14

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 05:06

Lab File ID: 48ORGA23186009.043.d

Analyte	RT	RT WINDOW	
		FROM	TO
Tartaric Acid	16.14	15.99	16.19
Succinic Acid	19.30	19.20	19.30
Isobutyric acid	25.07	24.93	25.13
Isovaleric acid	29.00	28.72	29.16
Valeric acid	33.66	33.29	33.89

Report Date: 07-Aug-2023 20:14:36 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.043.d				
Lims ID:	CCV ORGB				
Client ID:					
Sample Type:	CCV				
Inject. Date:	05-Aug-2023 19:56:00	ALS Bottle#:	0	Worklist Smp#:	43
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCV ORGB				
Operator ID:	2027	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub3				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:14:36	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1674				
First Level Reviewer: UHEW		Date:	07-Aug-2023 19:59:17		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid						
16.144	16.088	0.056	31959709H	50.3	50.5	
6 Succinic Acid						a
19.302	19.250	0.052	10596098H	50.3	47.0	a
12 Isobutyric acid						
25.074	25.026	0.048	19683771H	100.6	95.5	
14 Isovaleric acid						
29.003	28.943	0.060	11701304H	100.0	94.8	
15 Valeric acid						
33.659	33.587	0.072	7998567H	100.4	92.6	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Review Flags

a - User Assigned ID

Reagents:

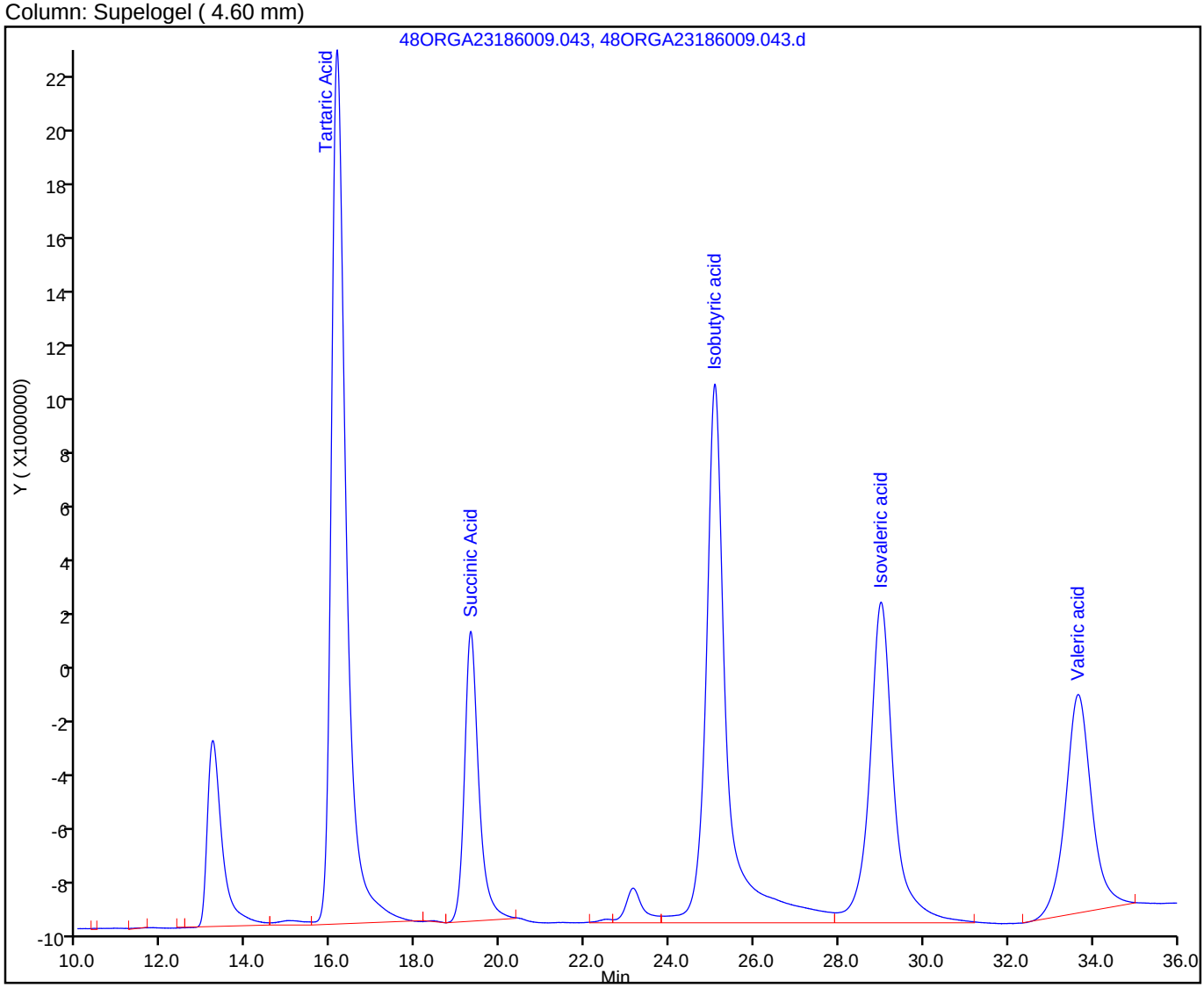
GCS_ORGB3_00022 Amount Added: 1.00 Units: mL

Report Date: 07-Aug-2023 20:14:36 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.043.d				
Injection Date:	05-Aug-2023 19:56:00	Instrument ID:	6854A		
Lims ID:	CCV ORGB				
Client ID:					
Operator ID:	2027	ALS Bottle#:	0	Worklist Smp#:	43
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Eurofins Lancaster Laboratories Environment Testing, LLC

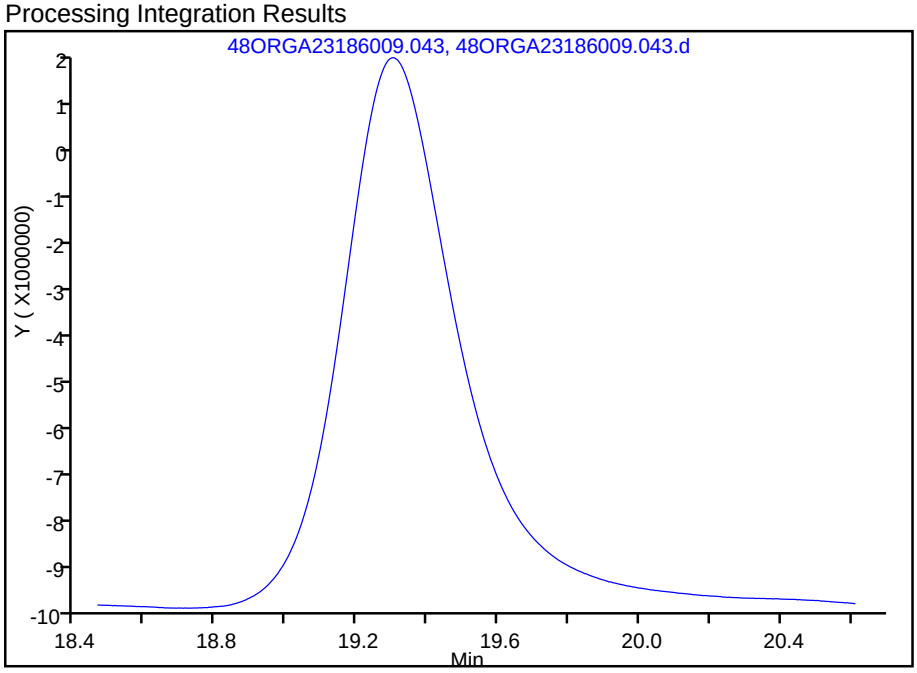
Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.043.d				
Injection Date:	05-Aug-2023 19:56:00	Instrument ID:	6854A		
Lims ID:	CCV ORGB				
Client ID:					
Operator ID:	2027	ALS Bottle#:	0	Worklist Smp#:	43
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		
Column:	Supelogel (4.60 mm)	Detector	SupelcogelH		

6 Succinic Acid, CAS: 110-15-6

Signal: 1

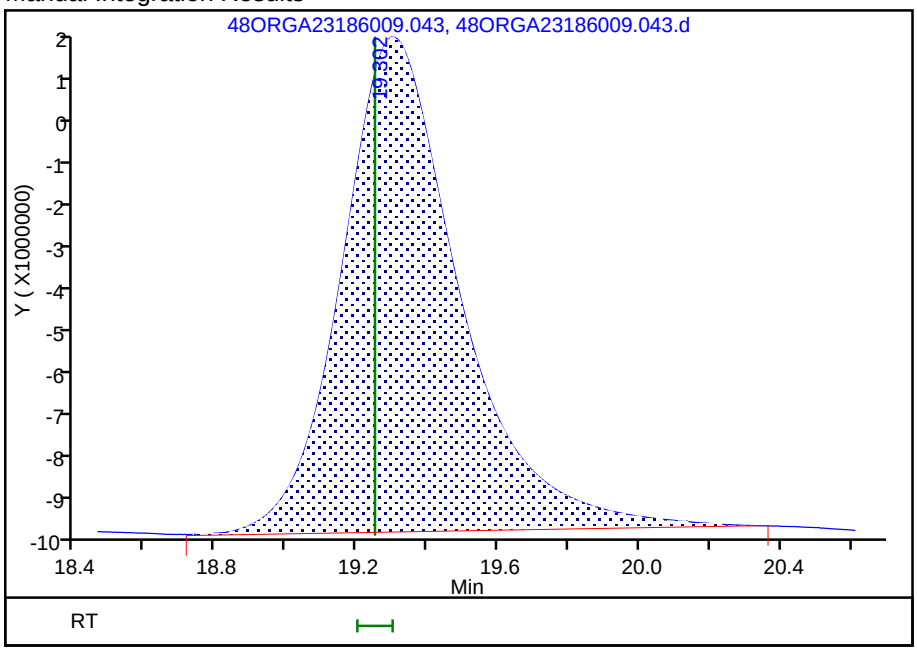
Not Detected
Expected RT: 19.25

Processing Integration Results



Manual Integration Results

RT: 19.30
Height: 10596098
Amount: 46.972033
Amount Units: ug/ml



Reviewer: UHEW, 07-Aug-2023 19:59:14 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136645-1

SDG No.:

Client Sample ID:
Lab Sample ID: MB 410-404256/1-A

Matrix: Water
Lab File ID: 11ORGC23193008.007.d

Analysis Method: 8015D VFA
Date Collected:

Extraction Method: 8015 VFA
Date Extracted: 08/03/2023 17:57

Sample wt/vol: 1(mL)
Date Analyzed: 08/04/2023 16:55

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 50(uL)
GC Column: Supelcosil PAH ID: 4.6(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 404643
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
64-19-7	Acetic acid	ND		10000	3200
64-18-6	Formic-acid	ND		10000	2000
79-09-4	Propionic acid	ND		10000	2000

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-17-8	Fumaric Acid	100		68-139

Report Date: 07-Aug-2023 20:08:29 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.007.d				
Lims ID:	MB 410-404256/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	04-Aug-2023 16:55:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	MB 410-404256/1-A				
Operator ID:	24470	Instrument ID:	10136		
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:08:28	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				

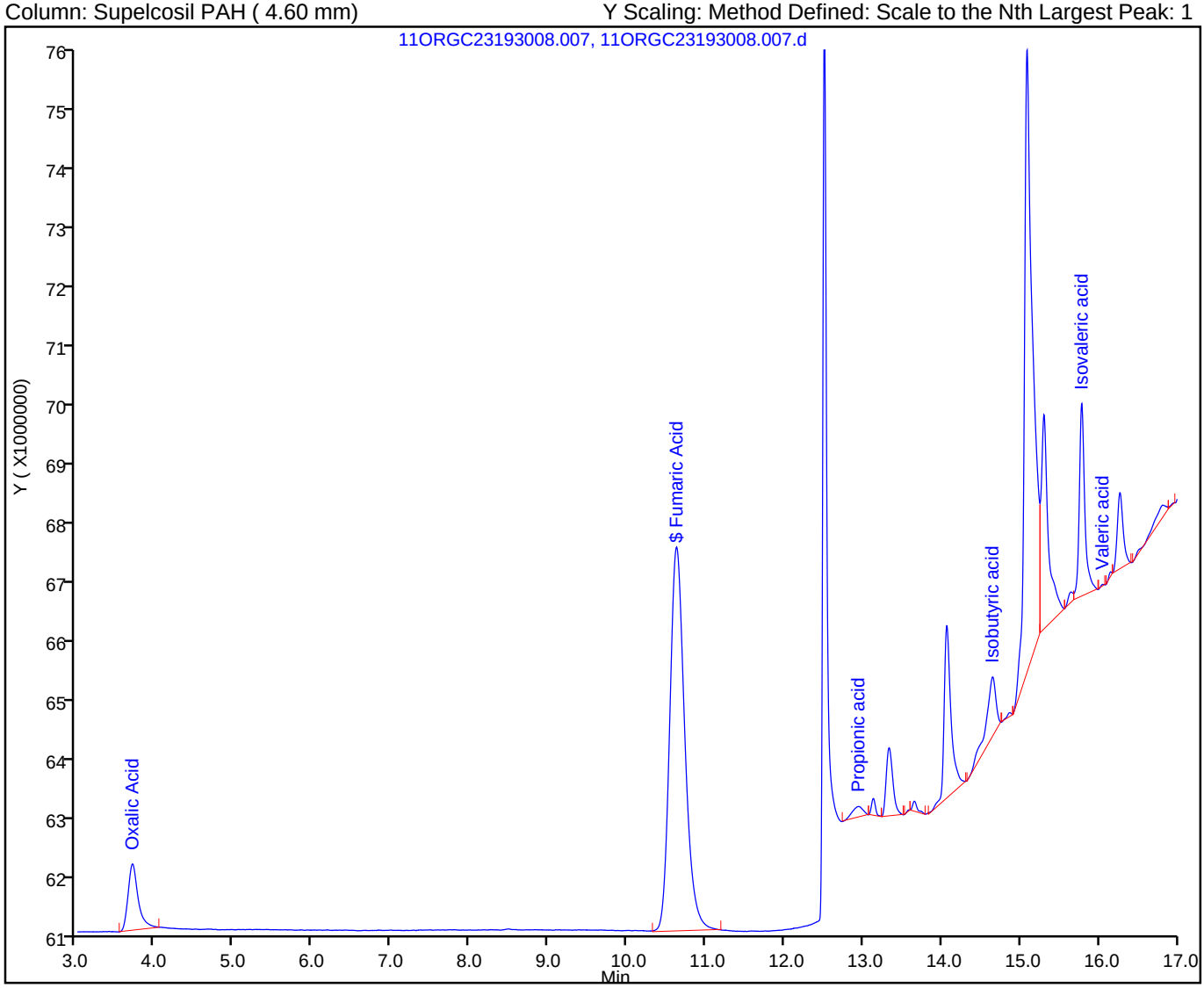
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid	3.704	3.725	-0.021	1079808H		-0.5303	
$ 10 Fumaric Acid	10.629	10.600	0.029	6239061H	0.4920	0.4942	
11 Propionic acid	12.946	12.913	0.034	179141H		1.57	
13 Isobutyric acid	14.650	14.600	0.050	979123H		0.7114	
14 Isovaleric acid	15.788	15.813	-0.024	3132891H		14.4	
15 Valeric acid	16.054	15.983	0.071	34488H		0.3375	

Report Date: 07-Aug-2023 20:08:29 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.007.d				
Injection Date:	04-Aug-2023 16:55:00	Instrument ID:	10136		
Lims ID:	MB 410-404256/1-A				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 07-Aug-2023 20:08:29 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.007.d				
Lims ID:	MB 410-404256/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	04-Aug-2023 16:55:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	MB 410-404256/1-A				
Operator ID:	24470	Instrument ID:	10136		
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:08:28	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 Fumaric Acid	0.4920	0.4942	100.45

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136645-1

SDG No.:

Client Sample ID:
Lab Sample ID: MB 410-404256/1-A

Matrix: Water
Lab File ID: 48ORGA23186009.007.d

Analysis Method: 8015D VFA
Date Collected:

Extraction Method: 8015 VFA
Date Extracted: 08/03/2023 17:57

Sample wt/vol: 1(mL)
Date Analyzed: 08/04/2023 18:09

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 40(uL)
GC Column: Supelcogel ID: 4.6(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 404646
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
64-19-7	Acetic acid	ND		10000	3200
107-92-6	Butyric acid	ND		10000	2000
77-92-9	Citric Acid	ND		5000	1000
64-18-6	Formic-acid	ND		10000	2000
503-74-2	Isovaleric acid	ND		7100	3500
79-33-4	L-Lactic Acid	ND		5000	1000
144-62-7	Oxalic Acid	ND		1300	250
127-17-3	Pyruvic Acid	ND		1300	250
77-95-2	Quinic Acid	ND		5000	2400
110-15-6	Succinic Acid	ND		2500	1000
87-69-4	Tartaric Acid	ND		2500	1000
109-52-4	Valeric acid	ND		5000	2000

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-17-8	Fumaric Acid	102		68-139

Report Date: 07-Aug-2023 20:06:37 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.007.d
Lims ID: MB 410-404256/1-A
Client ID:
Sample Type: MB
Inject. Date: 04-Aug-2023 18:09:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: MB 410-404256/1-A
Operator ID: 2027 Instrument ID: 6854A

Method: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 07-Aug-2023 20:06:37 Calib Date: 27-Jul-2023 22:51:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1674

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	7 L-Lactic Acid						
	19.358	19.390	-0.032	15888H		0.0559	
$	10 Fumaric Acid						
	22.440	22.436	0.004	19777195H	0.4920	0.5015	
	14 Isovaleric acid						
	28.727	28.943	-0.216	21971H		0.1780	
	15 Valeric acid						
	33.623	33.587	0.036	9503H		0.1100	

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 07-Aug-2023 20:06:37 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.007.d

Injection Date: 04-Aug-2023 18:09:00 Instrument ID: 6854A

Lims ID: MB 410-404256/1-A

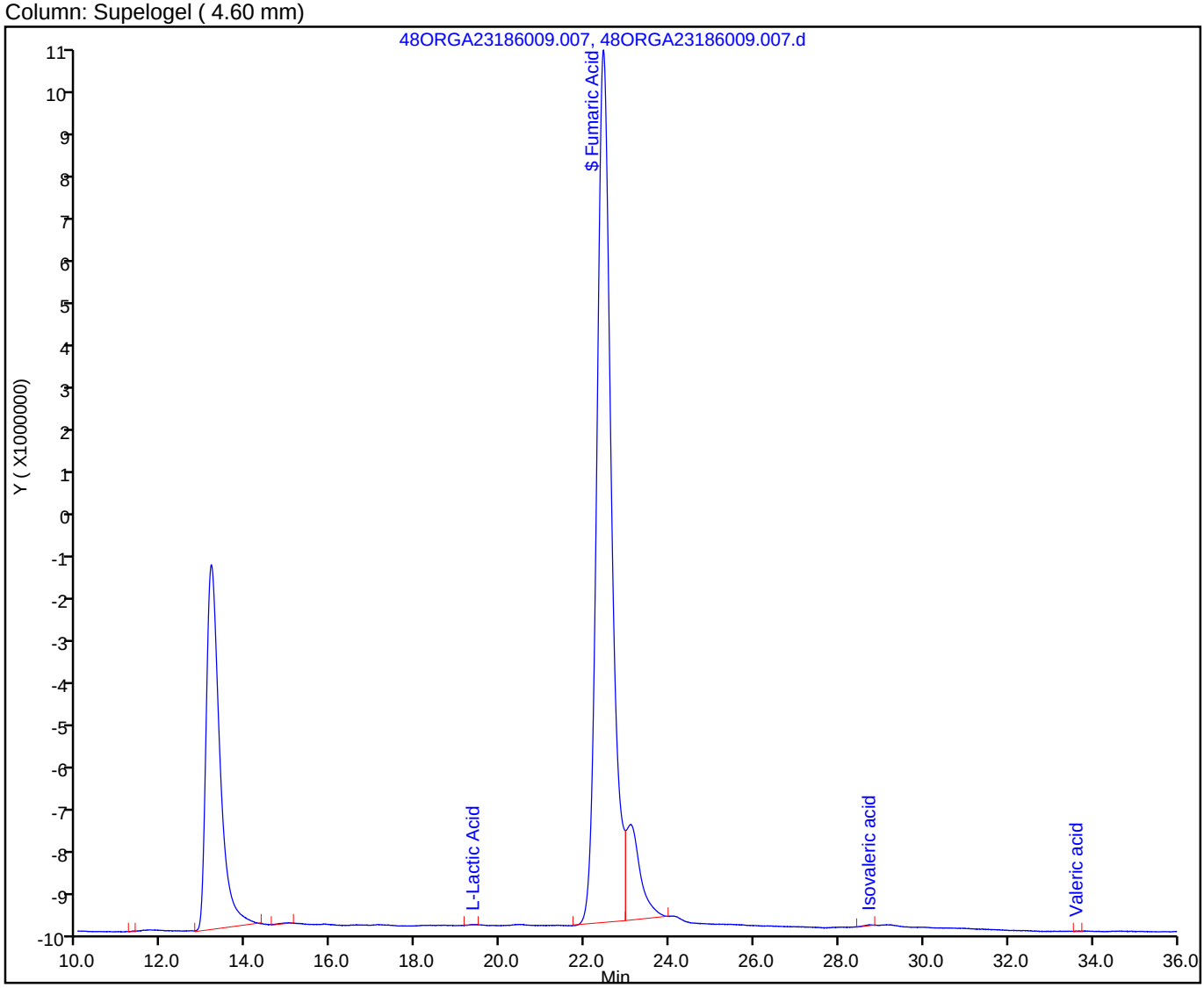
Client ID:

Operator ID: 2027 ALS Bottle#: 0 Worklist Smp#: 7

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Report Date: 07-Aug-2023 20:06:37 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.007.d				
Lims ID:	MB 410-404256/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	04-Aug-2023 18:09:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	MB 410-404256/1-A				
Operator ID:	2027	Instrument ID:	6854A		
Method:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:06:37	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1674				

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 Fumaric Acid	0.4920	0.5015	101.93

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136645-1

SDG No.:

Client Sample ID:
Lab Sample ID: LCS 410-404256/2-A

Matrix: Water
Lab File ID: 11ORGC23193008.008.d

Analysis Method: 8015D VFA
Date Collected:

Extraction Method: 8015 VFA
Date Extracted: 08/03/2023 17:57

Sample wt/vol: 1(mL)
Date Analyzed: 08/04/2023 17:26

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 50(uL)
GC Column: Supelcosil PAH ID: 4.6(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 404643
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
503-74-2	Isovaleric acid	107000		7100	3500
110-15-6	Succinic Acid	49900		2500	1000
87-69-4	Tartaric Acid	51100		2500	1000
109-52-4	Valeric acid	110000		5000	2000

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-17-8	Fumaric Acid	97		68-139

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.008.d
Lims ID: LCS 410-404256/2-A
Client ID:
Sample Type: LCS
Inject. Date: 04-Aug-2023 17:26:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 50.0 ul Dil. Factor: 1.0000
Sample Info: LCS 410-404256/2-A
Operator ID: 24470 Instrument ID: 10136

Method: \\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m
Limit Group: LC - 8015D VFA
Last Update: 07-Aug-2023 20:08:28 Calib Date: 13-Jul-2023 06:13:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d

Column 1 : Supelcosil PAH (4.60 mm) Det: UV0
Process Host: CTX1674

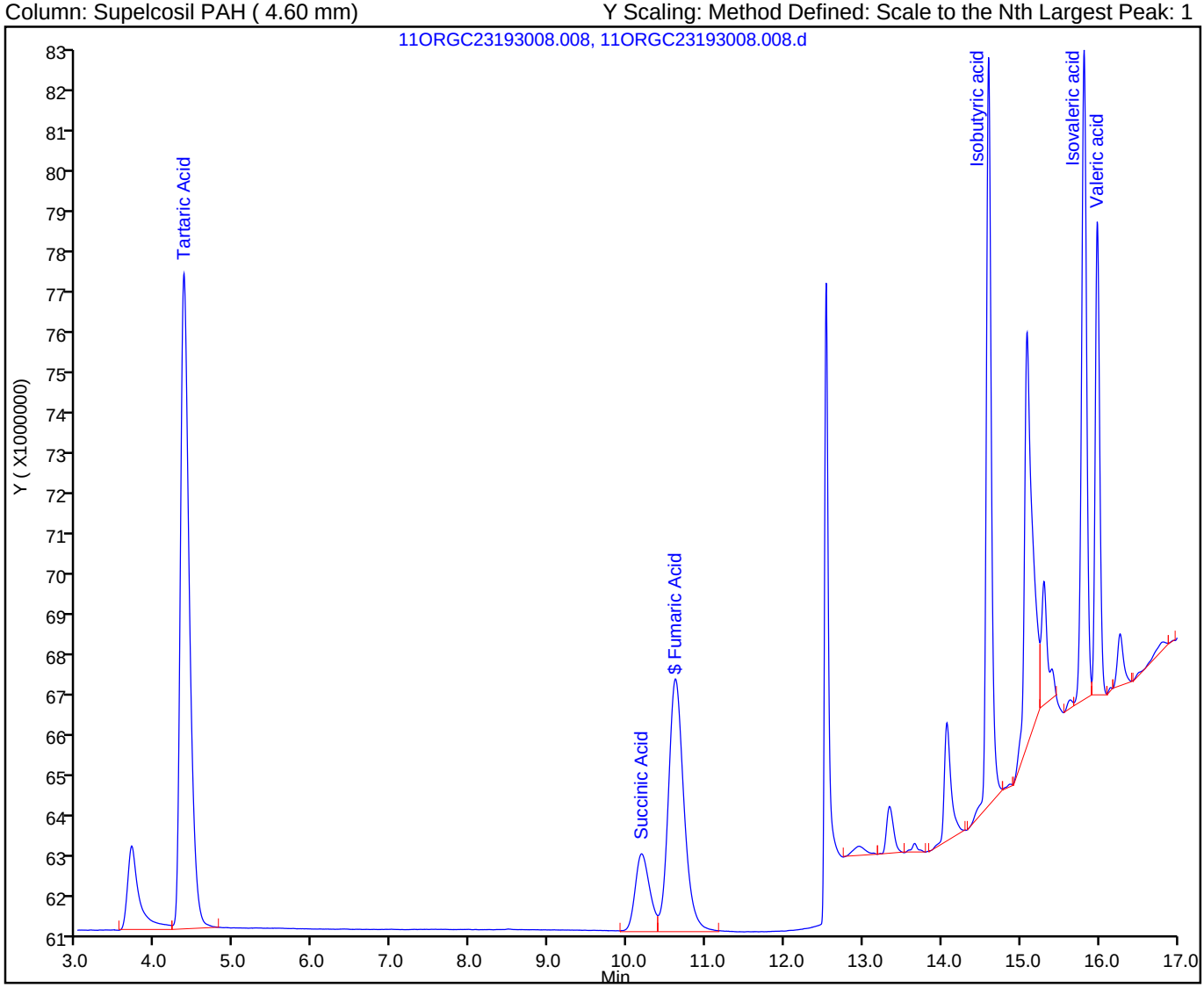
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid	4.358	4.354	0.004	15612314H	50.0	51.1	
9 Succinic Acid	10.183	10.179	0.004	1835669H	50.0	49.9	
$ 10 Fumaric Acid	10.613	10.600	0.012	6005164H	0.4920	0.4757	
13 Isobutyric acid	14.600	14.600	0.000	17833258H	101.0	100.5	
14 Isovaleric acid	15.817	15.813	0.005	15485887H	100.4	107.0	
15 Valeric acid	15.983	15.983	0.000	11266977H	100.4	110.2	

Report Date: 07-Aug-2023 20:08:29 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.008.d				
Injection Date:	04-Aug-2023 17:26:00	Instrument ID:	10136		
Lims ID:	LCS 410-404256/2-A				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 07-Aug-2023 20:08:29 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.008.d				
Lims ID:	LCS 410-404256/2-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	04-Aug-2023 17:26:00	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCS 410-404256/2-A				
Operator ID:	24470	Instrument ID:	10136		
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:08:28	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 Fumaric Acid	0.4920	0.4757	96.68

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136645-1

SDG No.:

Client Sample ID:
Lab Sample ID: LCS 410-404256/2-A

Matrix: Water
Lab File ID: 48ORGA23186009.008.d

Analysis Method: 8015D VFA
Date Collected:

Extraction Method: 8015 VFA
Date Extracted: 08/03/2023 17:57

Sample wt/vol: 1(mL)
Date Analyzed: 08/04/2023 18:52

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 40(uL)
GC Column: Supelcogel ID: 4.6(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 404646
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
503-74-2	Isovaleric acid	98300		7100	3500
110-15-6	Succinic Acid	48100		2500	1000
87-69-4	Tartaric Acid	51400		2500	1000
109-52-4	Valeric acid	101000		5000	2000

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-17-8	Fumaric Acid	103		68-139

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.008.d
Lims ID: LCS 410-404256/2-A
Client ID:
Sample Type: LCS
Inject. Date: 04-Aug-2023 18:52:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: LCS 410-404256/2-A
Operator ID: 2027 Instrument ID: 6854A

Method: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 07-Aug-2023 20:06:37 Calib Date: 27-Jul-2023 22:51:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1674

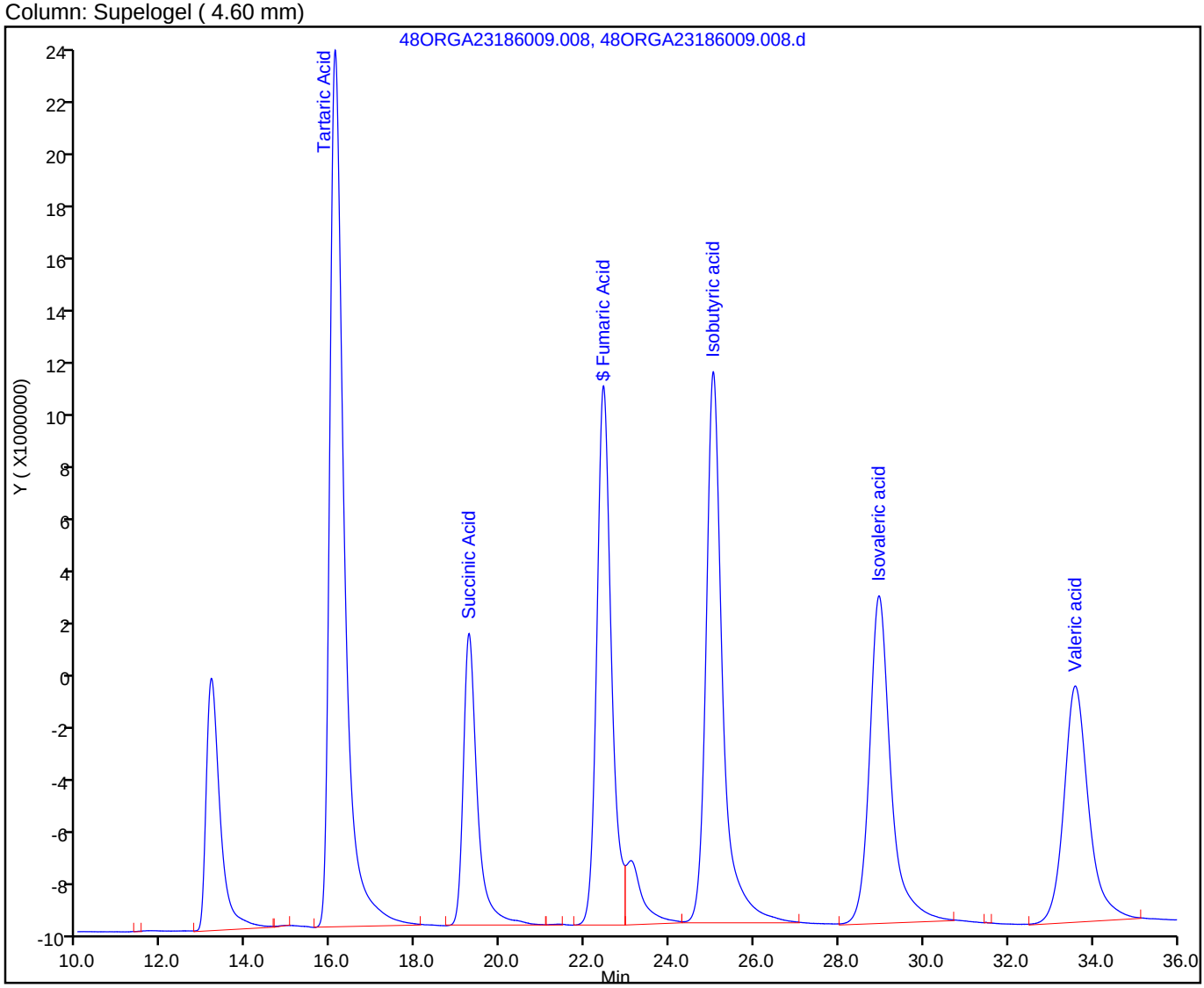
	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	3 Tartaric Acid						
	16.096	16.088	0.008	32560801H	50.0	51.4	
	6 Succinic Acid						
	19.262	19.250	0.012	10847442H	50.0	48.1	
$	10 Fumaric Acid						
	22.440	22.436	0.004	20016203H	0.4920	0.5076	
	12 Isobutyric acid						
	25.034	25.026	0.008	20487543H	101.0	99.4	
	14 Isovaleric acid						
	28.955	28.943	0.012	12134247H	100.4	98.3	
	15 Valeric acid						
	33.595	33.587	0.008	8751239H	100.4	101.3	

Report Date: 07-Aug-2023 20:06:38 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.008.d				
Injection Date:	04-Aug-2023 18:52:00	Instrument ID:	6854A		
Lims ID:	LCS 410-404256/2-A				
Client ID:					
Operator ID:	2027	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Report Date: 07-Aug-2023 20:06:38 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.008.d				
Lims ID:	LCS 410-404256/2-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	04-Aug-2023 18:52:00	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCS 410-404256/2-A				
Operator ID:	2027	Instrument ID:	6854A		
Method:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:06:37	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1674				

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 Fumaric Acid	0.4920	0.5076	103.16

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136645-1

SDG No.:

Client Sample ID:
Lab Sample ID: LCS 410-404256/4-A

Matrix: Water
Lab File ID: 11ORGC23193008.010.d

Analysis Method: 8015D VFA
Date Collected:

Extraction Method: 8015 VFA
Date Extracted: 08/03/2023 17:57

Sample wt/vol: 1(mL)
Date Analyzed: 08/04/2023 18:28

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 50(uL)
GC Column: Supelcosil PAH ID: 4.6(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 404643
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
64-19-7	Acetic acid	102000		10000	3200
64-18-6	Formic-acid	98600		10000	2000
79-09-4	Propionic acid	108000		10000	2000

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-17-8	Fumaric Acid	100		68-139

Report Date: 07-Aug-2023 20:08:30 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.010.d				
Lims ID:	LCS 410-404256/4-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	04-Aug-2023 18:28:00	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCS 410-404256/4-A				
Operator ID:	24470	Instrument ID:	10136		
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:08:28	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				
First Level Reviewer: UHEW		Date:	07-Aug-2023 14:28:57		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid	3.725	3.725	0.000	10508863H	12.6	7.22	
2 Quinic Acid	4.396	4.392	0.004	6492917H	50.3	48.5	
4 Formic-acid	4.671	4.671	0.000	18640754H	100.8	98.6	
5 Pyruvic Acid	5.279	5.279	0.000	7179871H	12.4	12.0	
6 L-Lactic Acid	6.358	6.354	0.004	3058971H	50.2	36.3	M
7 Acetic acid	6.958	6.954	0.004	5307725H	100.8	102.1	
8 Citric Acid	9.425	9.417	0.008	6181447H	50.0	53.4	
$ 10 Fumaric Acid	10.617	10.600	0.017	6231651H	0.4920	0.4936	
11 Propionic acid	12.904	12.913	-0.008	12376542H	101.0	108.3	
12 n-Butyric Acid	14.575	14.579	-0.004	12791325H	101.0	98.7	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Review Flags

M - Manually Integrated

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 07-Aug-2023 20:08:30 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.010.d

Injection Date: 04-Aug-2023 18:28:00 Instrument ID: 10136

Lims ID: LCS 410-404256/4-A

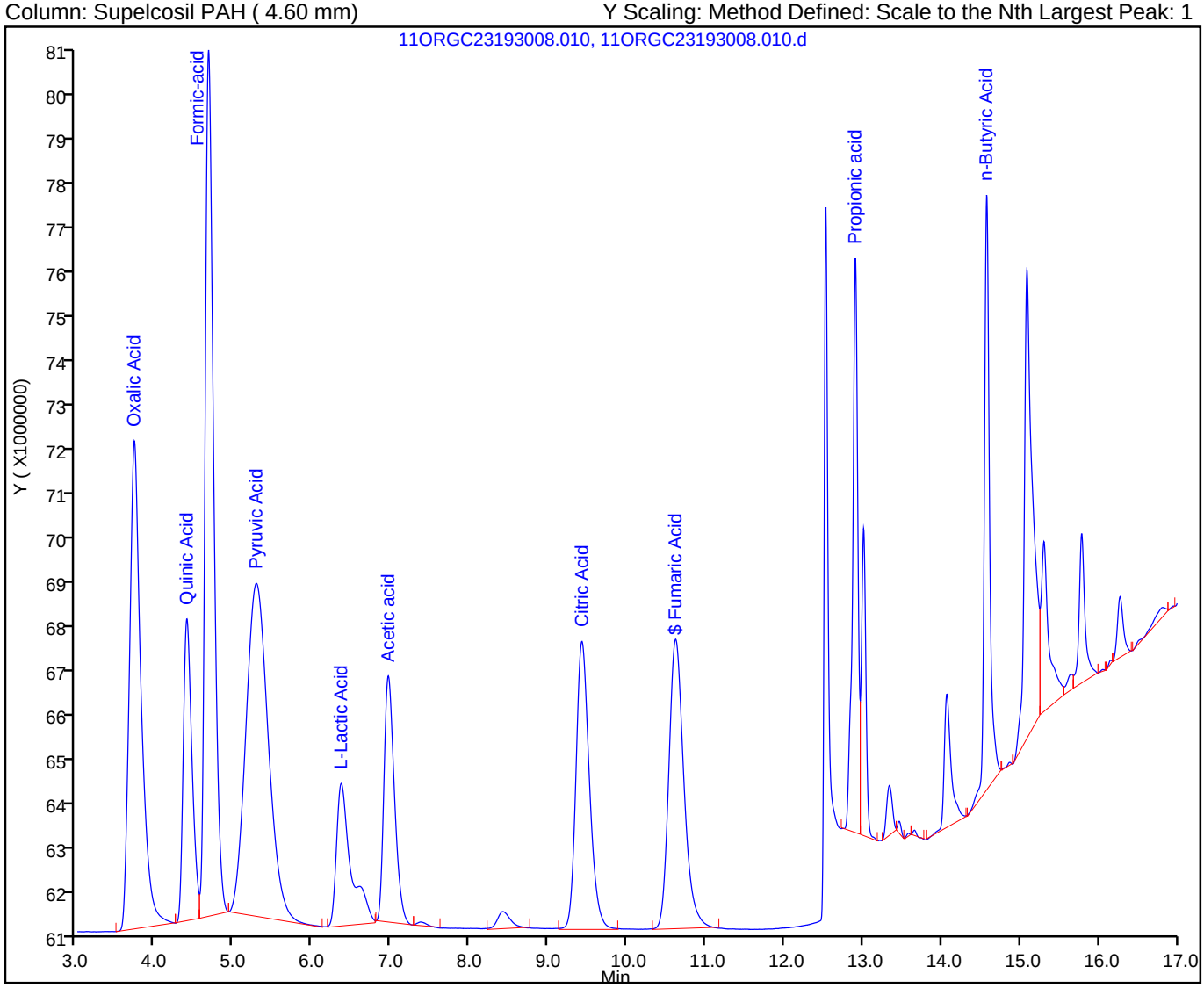
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 10

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 07-Aug-2023 20:08:30 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.010.d				
Lims ID:	LCS 410-404256/4-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	04-Aug-2023 18:28:00	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCS 410-404256/4-A				
Operator ID:	24470	Instrument ID:	10136		
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:08:28	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				

First Level Reviewer: UHEW Date: 07-Aug-2023 14:28:57

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 Fumaric Acid	0.4920	0.4936	100.33

Eurofins Lancaster Laboratories Environment Testing, LLC

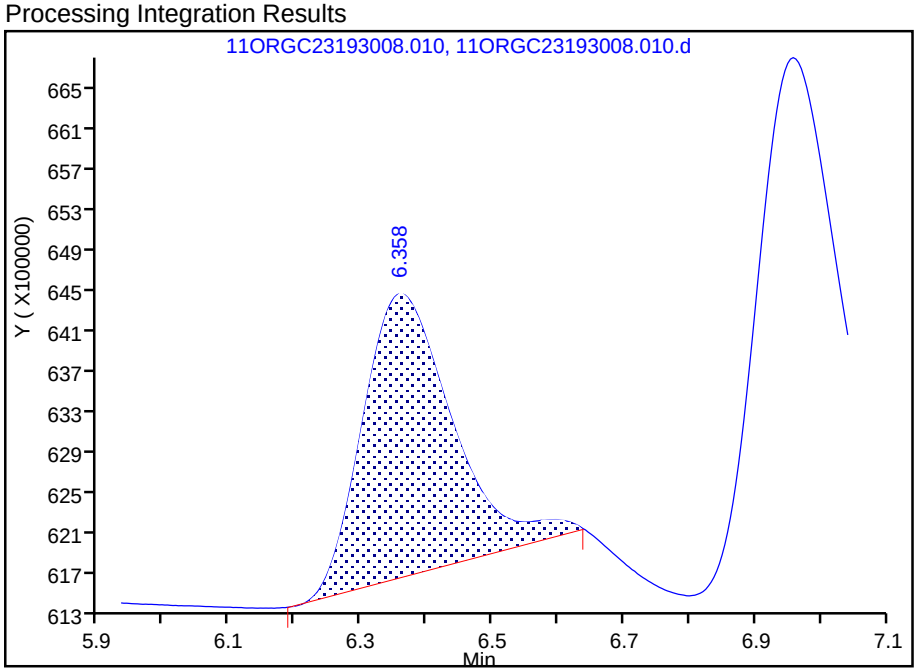
Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.010.d				
Injection Date:	04-Aug-2023 18:28:00	Instrument ID:	10136		
Lims ID:	LCS 410-404256/4-A				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		
Column:	Supelcosil PAH (4.60 mm)	Detector	UV0		

6 L-Lactic Acid, CAS: 79-33-4

Signal: 1

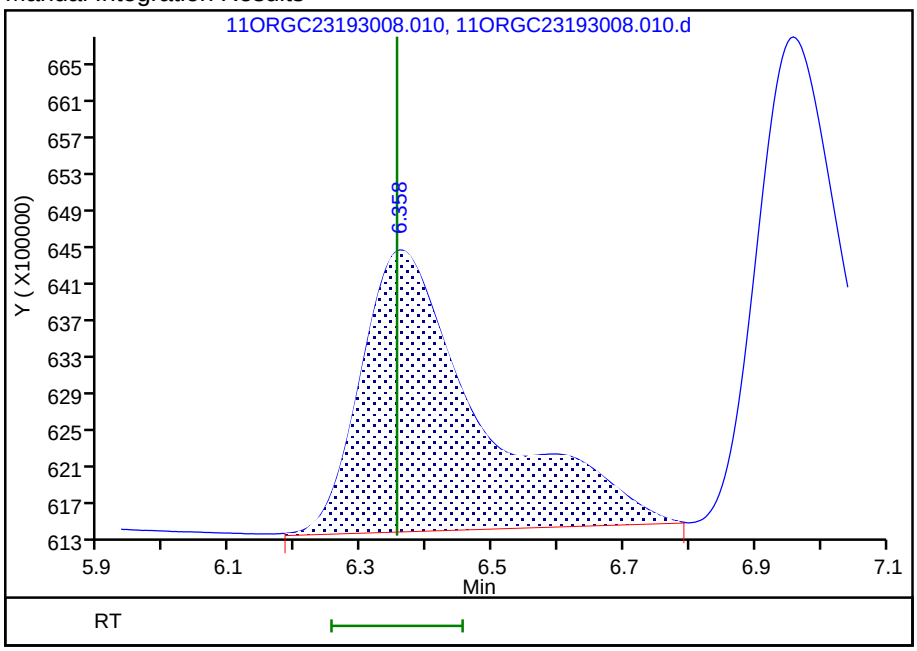
Processing Integration Results

RT: 6.36
Height: 2788990
Amount: 33.069694
Amount Units: ug/ml



Manual Integration Results

RT: 6.36
Height: 3058971
Amount: 36.270920
Amount Units: ug/ml



Reviewer: UHEW, 07-Aug-2023 14:28:55 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Assign Peak

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136645-1

SDG No.:

Client Sample ID:
Lab Sample ID: LCS 410-404256/4-A

Matrix: Water
Lab File ID: 48ORGA23186009.010.d

Analysis Method: 8015D VFA
Date Collected:

Extraction Method: 8015 VFA
Date Extracted: 08/03/2023 17:57

Sample wt/vol: 1(mL)
Date Analyzed: 08/04/2023 20:18

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 40(uL)
GC Column: Supelcogel ID: 4.6(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 404646
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
64-19-7	Acetic acid	104000		10000	3200
107-92-6	Butyric acid	103000		10000	2000
77-92-9	Citric Acid	50200		5000	1000
64-18-6	Formic-acid	105000		10000	2000
79-33-4	L-Lactic Acid	39700		5000	1000
144-62-7	Oxalic Acid	11300		1300	250
127-17-3	Pyruvic Acid	13000		1300	250
77-95-2	Quinic Acid	46800		5000	2400

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-17-8	Fumaric Acid	107		68-139

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.010.d
Lims ID: LCS 410-404256/4-A
Client ID:
Sample Type: LCS
Inject. Date: 04-Aug-2023 20:18:00 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: LCS 410-404256/4-A
Operator ID: 2027 Instrument ID: 6854A

Method: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 07-Aug-2023 20:06:37 Calib Date: 27-Jul-2023 22:51:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1674

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1	Oxalic Acid						
	13.874	13.862	0.012	73915038H	12.6	11.3	
2	Citric Acid						
	15.537	15.541	-0.004	23639569H	50.0	50.2	
4	Pyruvic Acid						
	16.684	16.684	0.000	39579467H	12.4	13.0	
5	Quinic Acid						
	17.363	17.367	-0.004	11555044H	50.3	46.8	
7	L-Lactic Acid						
	19.386	19.390	-0.004	11271512H	50.2	39.7	
8	Formic-acid						
	20.429	20.433	-0.004	37836443H	100.8	104.7	
9	Acetic acid						
	21.372	21.372	0.000	21627799H	100.8	104.4	
$	10 Fumaric Acid						
	22.428	22.436	-0.008	20831560H	0.4920	0.5283	
11	Propionic acid						
	23.411	23.415	-0.004	18819774H	101.0	115.6	
13	n-Butyric Acid						
	26.449	26.453	-0.004	14066442H	101.0	103.5	

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 07-Aug-2023 20:06:39 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.010.d

Injection Date: 04-Aug-2023 20:18:00 Instrument ID: 6854A

Lims ID: LCS 410-404256/4-A

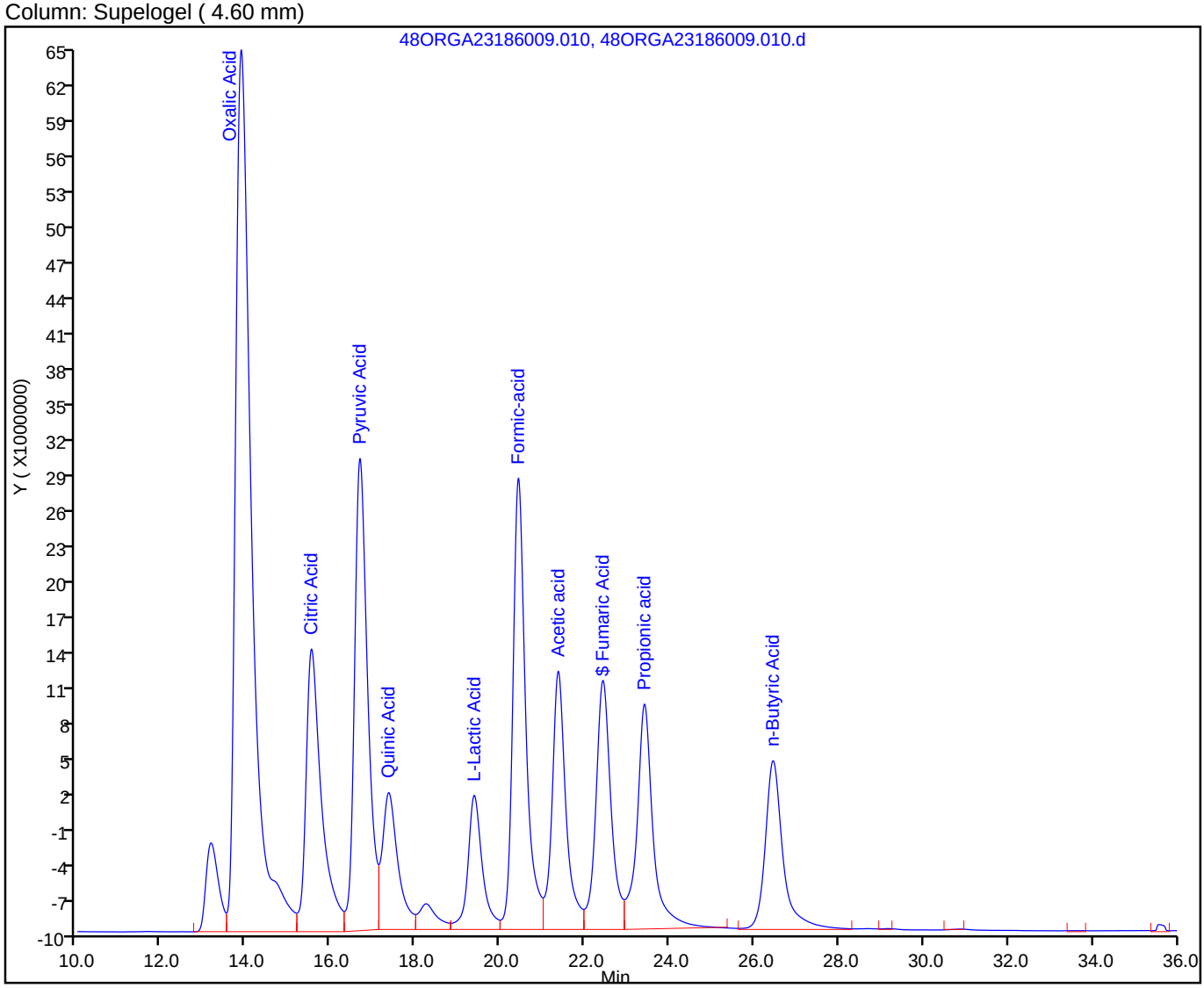
Client ID:

Operator ID: 2027 ALS Bottle#: 0 Worklist Smp#: 10

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Report Date: 07-Aug-2023 20:06:39 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.010.d				
Lims ID:	LCS 410-404256/4-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	04-Aug-2023 20:18:00	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCS 410-404256/4-A				
Operator ID:	2027	Instrument ID:	6854A		
Method:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:06:37	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1674				

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 Fumaric Acid	0.4920	0.5283	107.36

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136645-1

SDG No.:

Client Sample ID:
Lab Sample ID: LCSD 410-404256/3-A

Matrix: Water
Lab File ID: 11ORGC23193008.009.d

Analysis Method: 8015D VFA
Date Collected:

Extraction Method: 8015 VFA
Date Extracted: 08/03/2023 17:57

Sample wt/vol: 1(mL)
Date Analyzed: 08/04/2023 17:57

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 50(uL)
GC Column: Supelcosil PAH ID: 4.6(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 404643
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
503-74-2	Isovaleric acid	108000		7100	3500
110-15-6	Succinic Acid	50900		2500	1000
87-69-4	Tartaric Acid	51800		2500	1000
109-52-4	Valeric acid	112000		5000	2000

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-17-8	Fumaric Acid	100		68-139

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.009.d				
Lims ID:	LCSD 410-404256/3-A				
Client ID:					
Sample Type:	LCSD				
Inject. Date:	04-Aug-2023 17:57:00	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCSD 410-404256/3-A				
Operator ID:	24470	Instrument ID:	10136		
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:08:28	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid	4.358	4.354	0.004	15819281H	50.0	51.8	
9 Succinic Acid	10.183	10.179	0.004	1870380H	50.0	50.9	
$ 10 Fumaric Acid	10.613	10.600	0.012	6201710H	0.4920	0.4913	
13 Isobutyric acid	14.600	14.600	0.000	18121720H	101.0	102.2	
14 Isovaleric acid	15.817	15.813	0.005	15584225H	100.4	107.7	
15 Valeric acid	15.983	15.983	0.000	11419524H	100.4	111.7	

Report Date: 07-Aug-2023 20:08:30 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.009.d

Injection Date: 04-Aug-2023 17:57:00 Instrument ID: 10136

Lims ID: LCSD 410-404256/3-A

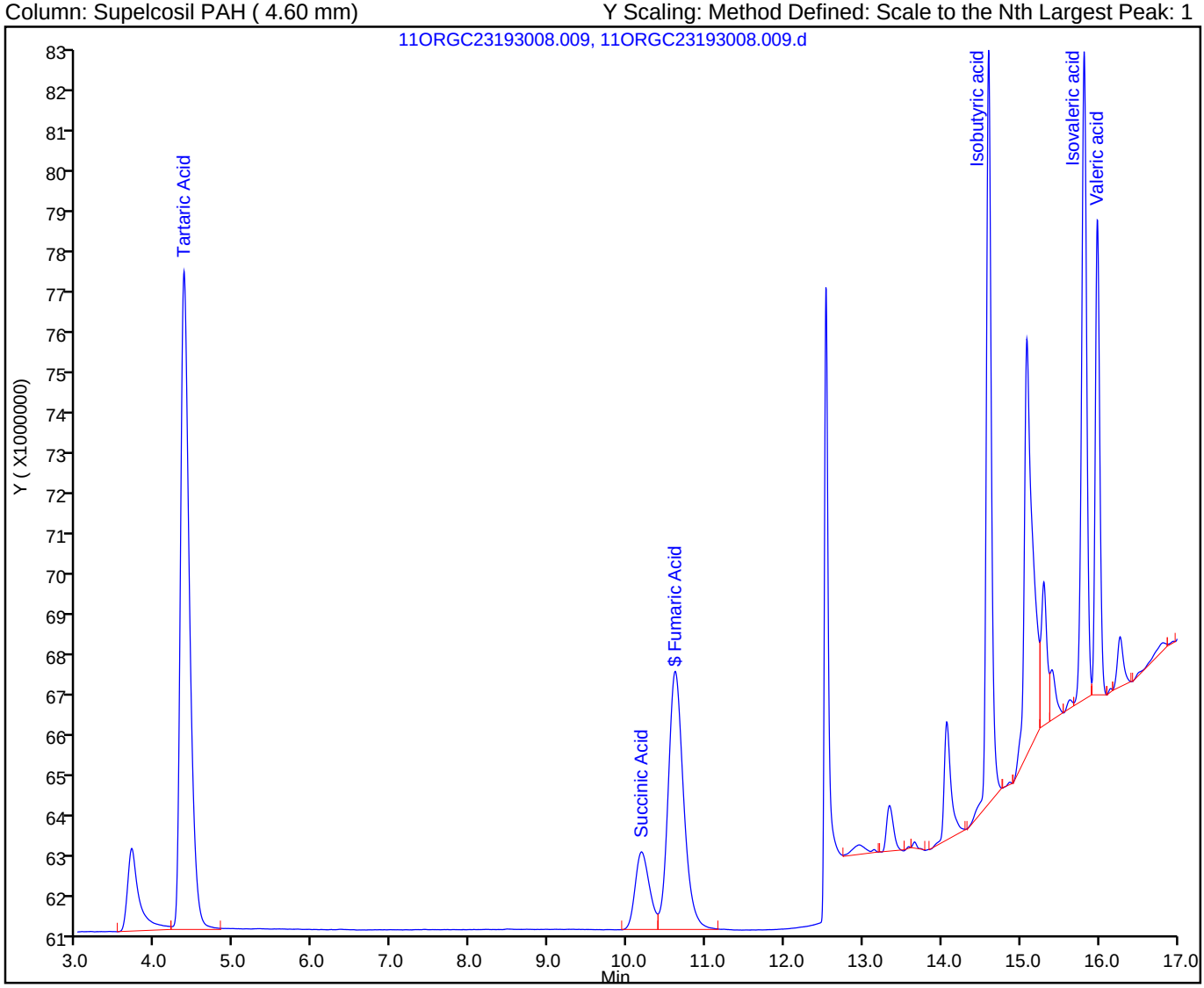
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 9

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 07-Aug-2023 20:08:30 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.009.d				
Lims ID:	LCSD 410-404256/3-A				
Client ID:					
Sample Type:	LCSD				
Inject. Date:	04-Aug-2023 17:57:00	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCSD 410-404256/3-A				
Operator ID:	24470	Instrument ID:	10136		
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:08:28	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 Fumaric Acid	0.4920	0.4913	99.84

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136645-1

SDG No.:

Client Sample ID:
Lab Sample ID: LCSD 410-404256/3-A

Matrix: Water
Lab File ID: 48ORGA23186009.009.d

Analysis Method: 8015D VFA
Date Collected:

Extraction Method: 8015 VFA
Date Extracted: 08/03/2023 17:57

Sample wt/vol: 1(mL)
Date Analyzed: 08/04/2023 19:35

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 40(uL)
GC Column: Supelcogel ID: 4.6(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 404646
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
503-74-2	Isovaleric acid	99800		7100	3500
110-15-6	Succinic Acid	48500		2500	1000
87-69-4	Tartaric Acid	52000		2500	1000
109-52-4	Valeric acid	103000		5000	2000

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-17-8	Fumaric Acid	106		68-139

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.009.d
Lims ID: LCSD 410-404256/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 04-Aug-2023 19:35:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: LCSD 410-404256/3-A
Operator ID: 2027 Instrument ID: 6854A

Method: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 07-Aug-2023 20:06:37 Calib Date: 27-Jul-2023 22:51:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1674

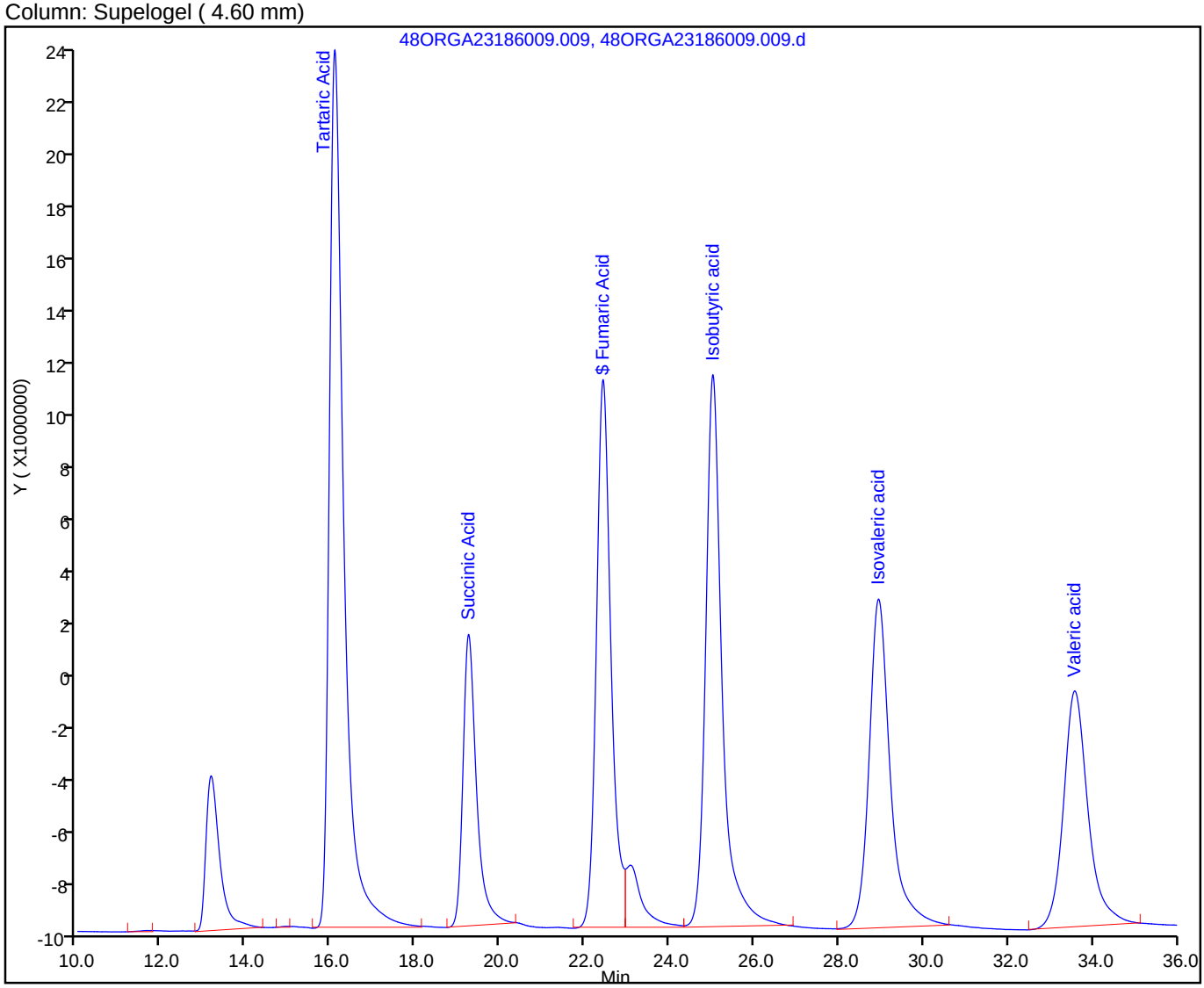
	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	3 Tartaric Acid						
	16.088	16.088	0.000	32938708H	50.0	52.0	
	6 Succinic Acid						
	19.250	19.250	0.000	10937613H	50.0	48.5	
$	10 Fumaric Acid						
	22.428	22.436	-0.008	20574265H	0.4920	0.5217	
	12 Isobutyric acid						
	25.026	25.026	0.000	20715528H	101.0	100.5	
	14 Isovaleric acid						
	28.939	28.943	-0.004	12313195H	100.4	99.8	
	15 Valeric acid						
	33.579	33.587	-0.008	8863114H	100.4	102.6	

Report Date: 07-Aug-2023 20:06:38 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.009.d				
Injection Date:	04-Aug-2023 19:35:00	Instrument ID:	6854A		
Lims ID:	LCSD 410-404256/3-A				
Client ID:					
Operator ID:	2027	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Report Date: 07-Aug-2023 20:06:38 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.009.d				
Lims ID:	LCSD 410-404256/3-A				
Client ID:					
Sample Type:	LCSD				
Inject. Date:	04-Aug-2023 19:35:00	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCSD 410-404256/3-A				
Operator ID:	2027	Instrument ID:	6854A		
Method:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:06:37	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1674				

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 Fumaric Acid	0.4920	0.5217	106.04

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Instrument ID: 10136 Start Date: 07/12/2023 19:50

Analysis Batch Number: 396213 End Date: 07/13/2023 22:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 410-396213/6		07/12/2023 19:50	1	11ORGC23193001.006.d	Supelcosil PAH 4.6(mm)
IC 410-396213/7		07/12/2023 20:21	1	11ORGC23193001.007.d	Supelcosil PAH 4.6(mm)
IC 410-396213/8		07/12/2023 20:53	1	11ORGC23193001.008.d	Supelcosil PAH 4.6(mm)
IC 410-396213/9		07/12/2023 21:24	1	11ORGC23193001.009.d	Supelcosil PAH 4.6(mm)
IC 410-396213/10		07/12/2023 21:55	1	11ORGC23193001.010.d	Supelcosil PAH 4.6(mm)
IC 410-396213/11		07/12/2023 22:26	1	11ORGC23193001.011.d	Supelcosil PAH 4.6(mm)
IC 410-396213/12		07/12/2023 22:57	1	11ORGC23193001.012.d	Supelcosil PAH 4.6(mm)
ICVL 410-396213/13		07/12/2023 23:28	1		Supelcosil PAH 4.6(mm)
ICV 410-396213/14		07/12/2023 23:59	1	11ORGC23193001.014.d	Supelcosil PAH 4.6(mm)
IC 410-396213/15		07/13/2023 00:31	1	11ORGC23193001.015.d	Supelcosil PAH 4.6(mm)
IC 410-396213/16		07/13/2023 01:02	1	11ORGC23193001.016.d	Supelcosil PAH 4.6(mm)
IC 410-396213/17		07/13/2023 01:33	1	11ORGC23193001.017.d	Supelcosil PAH 4.6(mm)
IC 410-396213/18		07/13/2023 02:04	1	11ORGC23193001.018.d	Supelcosil PAH 4.6(mm)
IC 410-396213/19		07/13/2023 02:35	1	11ORGC23193001.019.d	Supelcosil PAH 4.6(mm)
IC 410-396213/20		07/13/2023 03:06	1	11ORGC23193001.020.d	Supelcosil PAH 4.6(mm)
ICV 410-396213/21		07/13/2023 03:38	1	11ORGC23193001.021.d	Supelcosil PAH 4.6(mm)
IC 410-396213/22		07/13/2023 04:09	1	11ORGC23193001.022.d	Supelcosil PAH 4.6(mm)
IC 410-396213/23		07/13/2023 04:40	1	11ORGC23193001.023.d	Supelcosil PAH 4.6(mm)
ICRT 410-396213/24		07/13/2023 05:11	1	11ORGC23193001.024.d	Supelcosil PAH 4.6(mm)
IC 410-396213/25		07/13/2023 05:42	1	11ORGC23193001.025.d	Supelcosil PAH 4.6(mm)
IC 410-396213/26		07/13/2023 06:13	1	11ORGC23193001.026.d	Supelcosil PAH 4.6(mm)
ICVL 410-396213/27		07/13/2023 06:44	1		Supelcosil PAH 4.6(mm)
ZZZZZ		07/13/2023 12:27	1		Supelcosil PAH 4.6(mm)
ZZZZZ		07/13/2023 12:58	1		Supelcosil PAH 4.6(mm)
ZZZZZ		07/13/2023 13:29	1		Supelcosil PAH 4.6(mm)
ZZZZZ		07/13/2023 14:00	1		Supelcosil PAH 4.6(mm)
ZZZZZ		07/13/2023 14:31	1		Supelcosil PAH 4.6(mm)
ZZZZZ		07/13/2023 15:03	1		Supelcosil PAH 4.6(mm)
ZZZZZ		07/13/2023 15:34	1		Supelcosil PAH 4.6(mm)
ZZZZZ		07/13/2023 16:05	1		Supelcosil PAH 4.6(mm)
ZZZZZ		07/13/2023 16:36	1		Supelcosil PAH 4.6(mm)
CCV 410-396213/48		07/13/2023 17:38	1		Supelcosil PAH 4.6(mm)
CCV 410-396213/49		07/13/2023 18:09	1		Supelcosil PAH 4.6(mm)
CCV 410-396213/50		07/13/2023 18:41	1		Supelcosil PAH 4.6(mm)
ZZZZZ		07/13/2023 19:12	1		Supelcosil PAH 4.6(mm)
ZZZZZ		07/13/2023 19:43	1		Supelcosil PAH 4.6(mm)

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Instrument ID: 10136 Start Date: 07/12/2023 19:50

Analysis Batch Number: 396213 End Date: 07/13/2023 22:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		07/13/2023 20:14	1		Supelcosil PAH 4.6(mm)
ZZZZZ		07/13/2023 20:45	1		Supelcosil PAH 4.6(mm)
CCV 410-396213/56		07/13/2023 21:47	1		Supelcosil PAH 4.6(mm)
CCV 410-396213/57		07/13/2023 22:19	1		Supelcosil PAH 4.6(mm)
CCV 410-396213/58		07/13/2023 22:50	1		Supelcosil PAH 4.6(mm)

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Instrument ID: 10136 Start Date: 08/04/2023 15:21

Analysis Batch Number: 404643 End Date: 08/05/2023 05:22

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 410-404643/4		08/04/2023 15:21	1	11ORGC23193008.004.d	Supelcosil PAH 4.6(mm)
CCV 410-404643/5		08/04/2023 15:52	1	11ORGC23193008.005.d	Supelcosil PAH 4.6(mm)
CCV 410-404643/6		08/04/2023 16:23	1		Supelcosil PAH 4.6(mm)
MB 410-404256/1-A		08/04/2023 16:55	1	11ORGC23193008.007.d	Supelcosil PAH 4.6(mm)
LCS 410-404256/2-A		08/04/2023 17:26	1	11ORGC23193008.008.d	Supelcosil PAH 4.6(mm)
LCSD 410-404256/3-A		08/04/2023 17:57	1	11ORGC23193008.009.d	Supelcosil PAH 4.6(mm)
LCS 410-404256/4-A		08/04/2023 18:28	1	11ORGC23193008.010.d	Supelcosil PAH 4.6(mm)
ZZZZZ		08/04/2023 18:59	1		Supelcosil PAH 4.6(mm)
ZZZZZ		08/04/2023 19:30	1		Supelcosil PAH 4.6(mm)
ZZZZZ		08/04/2023 20:01	1		Supelcosil PAH 4.6(mm)
ZZZZZ		08/04/2023 20:32	1		Supelcosil PAH 4.6(mm)
ZZZZZ		08/04/2023 21:04	1		Supelcosil PAH 4.6(mm)
CCV 410-404643/17		08/04/2023 22:06	1	11ORGC23193008.017.d	Supelcosil PAH 4.6(mm)
CCV 410-404643/18		08/04/2023 22:37	1	11ORGC23193008.018.d	Supelcosil PAH 4.6(mm)
CCV 410-404643/19		08/04/2023 23:08	1		Supelcosil PAH 4.6(mm)
ZZZZZ		08/04/2023 23:39	1		Supelcosil PAH 4.6(mm)
ZZZZZ		08/05/2023 00:10	1		Supelcosil PAH 4.6(mm)
ZZZZZ		08/05/2023 00:42	1		Supelcosil PAH 4.6(mm)
410-136645-1	E23-03407-001_MW-11D-072623	08/05/2023 01:13	1	11ORGC23193008.023.d	Supelcosil PAH 4.6(mm)
410-136645-2	E23-03407-002_MW-10D-072623	08/05/2023 01:44	1	11ORGC23193008.024.d	Supelcosil PAH 4.6(mm)
ZZZZZ		08/05/2023 02:15	1		Supelcosil PAH 4.6(mm)
ZZZZZ		08/05/2023 03:17	1		Supelcosil PAH 4.6(mm)
CCV 410-404643/29		08/05/2023 04:19	1	11ORGC23193008.029.d	Supelcosil PAH 4.6(mm)
CCV 410-404643/30		08/05/2023 04:51	1	11ORGC23193008.030.d	Supelcosil PAH 4.6(mm)
CCV 410-404643/31		08/05/2023 05:22	1		Supelcosil PAH 4.6(mm)

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Instrument ID: 6854A Start Date: 07/05/2023 19:48

Analysis Batch Number: 394255 End Date: 07/06/2023 10:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 410-394255/7		07/05/2023 19:48	1	48ORGA23186001.007.d	Supelcogel 4.6(mm)
IC 410-394255/8		07/05/2023 20:31	1	48ORGA23186001.008.d	Supelcogel 4.6(mm)
IC 410-394255/9		07/05/2023 21:14	1	48ORGA23186001.009.d	Supelcogel 4.6(mm)
IC 410-394255/10		07/05/2023 21:57	1	48ORGA23186001.010.d	Supelcogel 4.6(mm)
IC 410-394255/11		07/05/2023 22:40	1	48ORGA23186001.011.d	Supelcogel 4.6(mm)
IC 410-394255/12		07/05/2023 23:23	1	48ORGA23186001.012.d	Supelcogel 4.6(mm)
IC 410-394255/13		07/06/2023 00:06	1	48ORGA23186001.013.d	Supelcogel 4.6(mm)
ICVL 410-394255/14		07/06/2023 00:49	1		Supelcogel 4.6(mm)
ICV 410-394255/15		07/06/2023 01:32	1	48ORGA23186001.015.d	Supelcogel 4.6(mm)
IC 410-394255/16		07/06/2023 02:14	1	48ORGA23186001.016.d	Supelcogel 4.6(mm)
IC 410-394255/17		07/06/2023 02:57	1	48ORGA23186001.017.d	Supelcogel 4.6(mm)
IC 410-394255/18		07/06/2023 03:40	1	48ORGA23186001.018.d	Supelcogel 4.6(mm)
IC 410-394255/19		07/06/2023 04:23	1	48ORGA23186001.019.d	Supelcogel 4.6(mm)
IC 410-394255/20		07/06/2023 05:06	1	48ORGA23186001.020.d	Supelcogel 4.6(mm)
ICVL 410-394255/21		07/06/2023 05:49	1		Supelcogel 4.6(mm)
ICV 410-394255/22		07/06/2023 06:32	1	48ORGA23186001.022.d	Supelcogel 4.6(mm)
IC 410-394255/23		07/06/2023 07:15	1		Supelcogel 4.6(mm)
IC 410-394255/24		07/06/2023 07:58	1		Supelcogel 4.6(mm)
ICRT 410-394255/25		07/06/2023 08:41	1		Supelcogel 4.6(mm)
IC 410-394255/26		07/06/2023 09:24	1		Supelcogel 4.6(mm)
IC 410-394255/27		07/06/2023 10:07	1		Supelcogel 4.6(mm)
ICVL 410-394255/28		07/06/2023 10:50	1		Supelcogel 4.6(mm)

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Instrument ID: 6854A Start Date: 07/27/2023 19:59

Analysis Batch Number: 401648 End Date: 07/29/2023 03:29

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 410-401648/4		07/27/2023 19:59	1	48ORGA23186006.004.d	Supelcogel 4.6(mm)
IC 410-401648/5		07/27/2023 20:42	1	48ORGA23186006.005.d	Supelcogel 4.6(mm)
ICRT 410-401648/6		07/27/2023 21:25	1	48ORGA23186006.006.d	Supelcogel 4.6(mm)
IC 410-401648/7		07/27/2023 22:08	1	48ORGA23186006.007.d	Supelcogel 4.6(mm)
IC 410-401648/8		07/27/2023 22:51	1	48ORGA23186006.008.d	Supelcogel 4.6(mm)
ICVL 410-401648/9		07/27/2023 23:34	1		Supelcogel 4.6(mm)
CCV 410-401648/10		07/28/2023 00:17	1		Supelcogel 4.6(mm)
CCV 410-401648/11		07/28/2023 00:59	1		Supelcogel 4.6(mm)
CCV 410-401648/12		07/28/2023 01:42	1		Supelcogel 4.6(mm)
ZZZZZ		07/28/2023 02:25	1		Supelcogel 4.6(mm)
ZZZZZ		07/28/2023 03:08	1		Supelcogel 4.6(mm)
ZZZZZ		07/28/2023 03:51	1		Supelcogel 4.6(mm)
ZZZZZ		07/28/2023 04:34	1		Supelcogel 4.6(mm)
ZZZZZ		07/28/2023 05:17	10		Supelcogel 4.6(mm)
ZZZZZ		07/28/2023 06:00	10		Supelcogel 4.6(mm)
ZZZZZ		07/28/2023 06:43	10		Supelcogel 4.6(mm)
CCV 410-401648/22		07/28/2023 08:52	1		Supelcogel 4.6(mm)
CCV 410-401648/23		07/28/2023 09:35	1		Supelcogel 4.6(mm)
CCV 410-401648/24		07/28/2023 10:18	1		Supelcogel 4.6(mm)
ZZZZZ		07/28/2023 15:19	1		Supelcogel 4.6(mm)
ZZZZZ		07/28/2023 16:45	1		Supelcogel 4.6(mm)
CCV 410-401648/35		07/28/2023 18:11	1		Supelcogel 4.6(mm)
CCV 410-401648/36		07/28/2023 18:54	1		Supelcogel 4.6(mm)
CCV 410-401648/37		07/28/2023 19:37	1		Supelcogel 4.6(mm)
ZZZZZ		07/28/2023 20:20	1		Supelcogel 4.6(mm)
CCV 410-401648/46		07/29/2023 02:04	1		Supelcogel 4.6(mm)
CCV 410-401648/47		07/29/2023 02:46	1		Supelcogel 4.6(mm)
CCV 410-401648/48		07/29/2023 03:29	1		Supelcogel 4.6(mm)

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136645-1

SDG No.:

Instrument ID: 6854A Start Date: 08/04/2023 16:00

Analysis Batch Number: 404646 End Date: 08/05/2023 19:56

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 410-404646/4		08/04/2023 16:00	1	48ORGA23186009.004.d	Supelcogel 4.6(mm)
CCV 410-404646/5		08/04/2023 16:43	1	48ORGA23186009.005.d	Supelcogel 4.6(mm)
CCV 410-404646/6		08/04/2023 17:26	1	48ORGA23186009.006.d	Supelcogel 4.6(mm)
MB 410-404256/1-A		08/04/2023 18:09	1	48ORGA23186009.007.d	Supelcogel 4.6(mm)
LCS 410-404256/2-A		08/04/2023 18:52	1	48ORGA23186009.008.d	Supelcogel 4.6(mm)
LCSD 410-404256/3-A		08/04/2023 19:35	1	48ORGA23186009.009.d	Supelcogel 4.6(mm)
LCS 410-404256/4-A		08/04/2023 20:18	1	48ORGA23186009.010.d	Supelcogel 4.6(mm)
ZZZZZ		08/04/2023 21:01	1		Supelcogel 4.6(mm)
ZZZZZ		08/04/2023 21:44	1		Supelcogel 4.6(mm)
ZZZZZ		08/04/2023 22:27	1		Supelcogel 4.6(mm)
ZZZZZ		08/04/2023 23:53	1		Supelcogel 4.6(mm)
CCV 410-404646/17		08/05/2023 01:18	1	48ORGA23186009.017.d	Supelcogel 4.6(mm)
CCV 410-404646/18		08/05/2023 02:01	1	48ORGA23186009.018.d	Supelcogel 4.6(mm)
CCV 410-404646/19		08/05/2023 02:44	1	48ORGA23186009.019.d	Supelcogel 4.6(mm)
ZZZZZ		08/05/2023 03:27	1		Supelcogel 4.6(mm)
ZZZZZ		08/05/2023 04:53	1		Supelcogel 4.6(mm)
ZZZZZ		08/05/2023 06:19	1		Supelcogel 4.6(mm)
ZZZZZ		08/05/2023 07:45	1		Supelcogel 4.6(mm)
410-136645-1	E23-03407-001_MW-11D-072623	08/05/2023 09:11	1	48ORGA23186009.028.d	Supelcogel 4.6(mm)
CCV 410-404646/30		08/05/2023 10:37	1	48ORGA23186009.030.d	Supelcogel 4.6(mm)
CCV 410-404646/31		08/05/2023 11:20	1	48ORGA23186009.031.d	Supelcogel 4.6(mm)
CCV 410-404646/32		08/05/2023 12:03	1	48ORGA23186009.032.d	Supelcogel 4.6(mm)
410-136645-2	E23-03407-002_MW-10D-072623	08/05/2023 12:46	1	48ORGA23186009.033.d	Supelcogel 4.6(mm)
ZZZZZ		08/05/2023 14:12	1		Supelcogel 4.6(mm)
ZZZZZ		08/05/2023 17:04	1		Supelcogel 4.6(mm)
CCV 410-404646/41		08/05/2023 18:30	1	48ORGA23186009.041.d	Supelcogel 4.6(mm)
CCV 410-404646/42		08/05/2023 19:13	1	48ORGA23186009.042.d	Supelcogel 4.6(mm)
CCV 410-404646/43		08/05/2023 19:56	1	48ORGA23186009.043.d	Supelcogel 4.6(mm)

INTEGRATED ANALYTICAL LABORATORIES, LLC

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136645-1

SDG No.:

Batch Number: 394255 Batch Start Date: 07/05/23 19:48 Batch Analyst: Williams, Heather E

Batch Method: 8015D VFA Batch End Date: 07/12/23 18:48

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	GCS_ORGA1 00011	GCS_ORGA2 00010	GCS_ORGA3 00026	GCS_ORGA4 00009	GCS_ORGA5 00007
IC 410-394255/7		8015D VFA		1 mL	1 mL				
IC 410-394255/8		8015D VFA		1 mL		1 mL			
IC 410-394255/9		8015D VFA		1 mL			1 mL		
IC 410-394255/10		8015D VFA		1 mL				1 mL	
IC 410-394255/11		8015D VFA		1 mL					
IC 410-394255/12		8015D VFA		1 mL					
IC 410-394255/13		8015D VFA		1 mL					1 mL
ICV 410-394255/15		8015D VFA		1 mL					
IC 410-394255/16		8015D VFA		1 mL					
IC 410-394255/17		8015D VFA		1 mL					
IC 410-394255/18		8015D VFA		1 mL					
IC 410-394255/19		8015D VFA		1 mL					
IC 410-394255/20		8015D VFA		1 mL					
ICV 410-394255/22		8015D VFA		1 mL					

Lab Sample ID	Client Sample ID	Method Chain	Basis	GCS_ORGAICV 00008	GCS_ORGAox5 00002	GCS_ORGAox5@8 00004	GCS_ORGB1 00009	GCS_ORGB2 00009	GCS_ORGB3 00021
IC 410-394255/7		8015D VFA							
IC 410-394255/8		8015D VFA							
IC 410-394255/9		8015D VFA							
IC 410-394255/10		8015D VFA							
IC 410-394255/11		8015D VFA				1 mL			
IC 410-394255/12		8015D VFA			1 mL				
IC 410-394255/13		8015D VFA							

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.

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136645-1

SDG No.:

Batch Number: 394255 Batch Start Date: 07/05/23 19:48 Batch Analyst: Williams, Heather E

Batch Method: 8015D VFA Batch End Date: 07/12/23 18:48

Lab Sample ID	Client Sample ID	Method Chain	Basis	GCS_ORGAICV 00008	GCS_ORGAox5 00002	GCS_ORGAox5@8 00004	GCS_ORGB1 00009	GCS_ORGB2 00009	GCS_ORGB3 00021
ICV 410-394255/15		8015D VFA		1 mL					
IC 410-394255/16		8015D VFA					1 mL		
IC 410-394255/17		8015D VFA						1 mL	
IC 410-394255/18		8015D VFA							1 mL
IC 410-394255/19		8015D VFA							
IC 410-394255/20		8015D VFA							
ICV 410-394255/22		8015D VFA							

Lab Sample ID	Client Sample ID	Method Chain	Basis	GCS_ORGB4 00009	GCS_ORGB5 00008	GCS_ORGBICV 00007			
IC 410-394255/7		8015D VFA							
IC 410-394255/8		8015D VFA							
IC 410-394255/9		8015D VFA							
IC 410-394255/10		8015D VFA							
IC 410-394255/11		8015D VFA							
IC 410-394255/12		8015D VFA							
IC 410-394255/13		8015D VFA							
ICV 410-394255/15		8015D VFA							
IC 410-394255/16		8015D VFA							
IC 410-394255/17		8015D VFA							
IC 410-394255/18		8015D VFA							
IC 410-394255/19		8015D VFA		1 mL					
IC 410-394255/20		8015D VFA			1 mL				

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.

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136645-1

SDG No.:

Batch Number: 394255 Batch Start Date: 07/05/23 19:48 Batch Analyst: Williams, Heather E

Batch Method: 8015D VFA Batch End Date: 07/12/23 18:48

Lab Sample ID	Client Sample ID	Method Chain	Basis	GCS_ORGB4 00009	GCS_ORGB5 00008	GCS_ORGBICV 00007			
ICV 410-394255/22		8015D VFA				1 mL			

Batch Notes	
Phosphoric Acid ID	0.15% H3PO4: 345163-5-5
Vials	Agilent 2 mL clear vials
Vial Lot Number	21116173

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.

INTEGRATED ANALYTICAL LABORATORIES, LLC

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136645-1

SDG No.:

Batch Number: 396213 Batch Start Date: 07/12/23 19:50 Batch Analyst: Williams, Heather E

Batch Method: 8015D VFA Batch End Date: 07/17/23 16:09

Lab Sample ID	Client Sample ID	Method Chain	Basis	GCS_ORGA1 00012	GCS_ORGA2 00010	GCS_ORGA3 00026	GCS_ORGA4 00009	GCS_ORGA5 00008	GCS_ORGAICV 00008
IC 410-396213/6		8015D VFA		1 mL					
IC 410-396213/7		8015D VFA			1 mL				
IC 410-396213/8		8015D VFA				1 mL			
IC 410-396213/9		8015D VFA					1 mL		
IC 410-396213/10		8015D VFA							
IC 410-396213/11		8015D VFA							
IC 410-396213/12		8015D VFA						1 mL	
ICV 410-396213/14		8015D VFA							1 mL
IC 410-396213/15		8015D VFA							
IC 410-396213/16		8015D VFA							
IC 410-396213/17		8015D VFA							
IC 410-396213/18		8015D VFA							
IC 410-396213/19		8015D VFA							
IC 410-396213/20		8015D VFA							
ICV 410-396213/21		8015D VFA							
IC 410-396213/22		8015D VFA							
IC 410-396213/23		8015D VFA							
ICRT 410-396213/24		8015D VFA							
IC 410-396213/25		8015D VFA							
IC 410-396213/26		8015D VFA							

Lab Sample ID	Client Sample ID	Method Chain	Basis	GCS_ORGAox5 00002	GCS_ORGAox5@8 00004	GCS_ORGB1 00009	GCS_ORGB2 00009	GCS_ORGB3 00021	GCS_ORGB4 00009
IC 410-396213/6		8015D VFA							

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.

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136645-1

SDG No.:

Batch Number: 396213 | Batch Start Date: 07/12/23 19:50 | Batch Analyst: Williams, Heather E

Batch Method: 8015D VFA | Batch End Date: 07/17/23 16:09

Lab Sample ID	Client Sample ID	Method Chain	Basis	GCS_ORGAox5 00002	GCS_ORGAox5@8 00004	GCS_ORGB1 00009	GCS_ORGB2 00009	GCS_ORGB3 00021	GCS_ORGB4 00009
IC 410-396213/7		8015D VFA							
IC 410-396213/8		8015D VFA							
IC 410-396213/9		8015D VFA							
IC 410-396213/10		8015D VFA			1 mL				
IC 410-396213/11		8015D VFA		1 mL					
IC 410-396213/12		8015D VFA							
ICV 410-396213/14		8015D VFA							
IC 410-396213/15		8015D VFA				1 mL			
IC 410-396213/16		8015D VFA					1 mL		
IC 410-396213/17		8015D VFA						1 mL	
IC 410-396213/18		8015D VFA							1 mL
IC 410-396213/19		8015D VFA							
IC 410-396213/20		8015D VFA							
ICV 410-396213/21		8015D VFA							
IC 410-396213/22		8015D VFA							
IC 410-396213/23		8015D VFA							
ICRT 410-396213/24		8015D VFA							
IC 410-396213/25		8015D VFA							
IC 410-396213/26		8015D VFA							

Lab Sample ID	Client Sample ID	Method Chain	Basis	GCS_ORGB5 00008	GCS_ORGBICV 00007	GCS_ORGBMDL 00006	GCS_ORGS1 00017	GCS_ORGS2 00017	GCS_ORGS3 00047
IC 410-396213/6		8015D VFA							
IC 410-396213/7		8015D VFA							

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.

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136645-1

SDG No.:

Batch Number: 396213 Batch Start Date: 07/12/23 19:50 Batch Analyst: Williams, Heather E

Batch Method: 8015D VFA Batch End Date: 07/17/23 16:09

Lab Sample ID	Client Sample ID	Method Chain	Basis	GCS_ORGB5 00008	GCS_ORGBICV 00007	GCS_ORGBMDL 00006	GCS_ORGS1 00017	GCS_ORGS2 00017	GCS_ORGS3 00047
IC 410-396213/8		8015D VFA							
IC 410-396213/9		8015D VFA							
IC 410-396213/10		8015D VFA							
IC 410-396213/11		8015D VFA							
IC 410-396213/12		8015D VFA							
ICV 410-396213/14		8015D VFA							
IC 410-396213/15		8015D VFA							
IC 410-396213/16		8015D VFA							
IC 410-396213/17		8015D VFA							
IC 410-396213/18		8015D VFA							
IC 410-396213/19		8015D VFA		1 mL					
IC 410-396213/20		8015D VFA				1 mL			
ICV 410-396213/21		8015D VFA			1 mL				
IC 410-396213/22		8015D VFA					1 mL		
IC 410-396213/23		8015D VFA						1 mL	
ICRT 410-396213/24		8015D VFA							1 mL
IC 410-396213/25		8015D VFA							
IC 410-396213/26		8015D VFA							

Lab Sample ID	Client Sample ID	Method Chain	Basis	GCS_ORGS4 00019	GCS_ORGS5 00016				
IC 410-396213/6		8015D VFA							
IC 410-396213/7		8015D VFA							
IC 410-396213/8		8015D VFA							

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.

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136645-1

SDG No.:

Batch Number: 396213 Batch Start Date: 07/12/23 19:50 Batch Analyst: Williams, Heather E

Batch Method: 8015D VFA Batch End Date: 07/17/23 16:09

Lab Sample ID	Client Sample ID	Method Chain	Basis	GCS_ORGS4 00019	GCS_ORGS5 00016				
IC 410-396213/9		8015D VFA							
IC 410-396213/10		8015D VFA							
IC 410-396213/11		8015D VFA							
IC 410-396213/12		8015D VFA							
ICV 410-396213/14		8015D VFA							
IC 410-396213/15		8015D VFA							
IC 410-396213/16		8015D VFA							
IC 410-396213/17		8015D VFA							
IC 410-396213/18		8015D VFA							
IC 410-396213/19		8015D VFA							
IC 410-396213/20		8015D VFA							
ICV 410-396213/21		8015D VFA							
IC 410-396213/22		8015D VFA							
IC 410-396213/23		8015D VFA							
ICRT 410-396213/24		8015D VFA							
IC 410-396213/25		8015D VFA		1 mL					
IC 410-396213/26		8015D VFA			1 mL				

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.

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136645-1

SDG No.:

Batch Number: 396213 Batch Start Date: 07/12/23 19:50 Batch Analyst: Williams, Heather E

Batch Method: 8015D VFA Batch End Date: 07/17/23 16:09

Batch Notes	
Acetonitrile ID	231484
Phosphoric Acid ID	0.15% H3PO3: 345163-5-5
Pipette/Syringe/Dispenser ID	24-1, 24-3
Pipette Tip Lot ID	K194306G, L203327J
Vials	Agilent 2mL clear GC
Vial Lot Number	21116173

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.

INTEGRATED ANALYTICAL LABORATORIES, LLC

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136645-1

SDG No.:

Batch Number: 401648 | Batch Start Date: 07/27/23 19:59 | Batch Analyst: Donovan, Elizabeth E

Batch Method: 8015D VFA | Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	GCS_ORGS1 00018	GCS_ORGS2 00018	GCS_ORGS3 00049	GCS_ORGS4 00020	GCS_ORGS5 00017
IC 410-401648/4		8015D VFA		1 mL	1 mL				
IC 410-401648/5		8015D VFA		1 mL		1 mL			
ICRT 410-401648/6		8015D VFA		1 mL			1 mL		
IC 410-401648/7		8015D VFA		1 mL				1 mL	
IC 410-401648/8		8015D VFA		1 mL					1 mL

Batch Notes	
Phosphoric Acid ID	0.15% H3PO4: 345163-7-9
Pipette/Syringe/Dispenser ID	24-3 and 24-1
Pipette Tip Lot ID	L204821L (Eppendorf 1000 uL) and J191446N (Eppendorf 100 uL)
Vials	Agilent 2 mL clear vials
Vial Lot Number	21116173
Vial Lot Number (2)	see prep batch
Vial Type used (2)	see prep batch
Diluent ID	0.15% H3PO4
Diluting Solvent ID	345163-7-1

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.

INTEGRATED ANALYTICAL LABORATORIES, LLC

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136645-1

SDG No.:

Batch Number: 404256 Batch Start Date: 08/03/23 17:57 Batch Analyst: Williams, Heather E

Batch Method: 8015 VFA Batch End Date: 08/03/23 18:45

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	Final pH	InitialAmount	FinalAmount	Headspace	GCS_ORGAMS 00004
MB 410-404256/1		8015 VFA, 8015D VFA		2.08 SU	2.08 SU	1 mL	1 mL		
LCS 410-404256/2		8015 VFA, 8015D VFA		2.08 SU	2.08 SU	1 mL	1 mL		
LCSD 410-404256/3		8015 VFA, 8015D VFA		2.08 SU	2.08 SU	1 mL	1 mL		
LCS 410-404256/4		8015 VFA, 8015D VFA		2.08 SU	2.08 SU	1 mL	1 mL		0.1 mL
410-136645-C-1	E23-03407-001_MW -11D-072623	8015 VFA, 8015D VFA	T	8.06 SU	1.89 SU	1 mL	1 mL	no	
410-136645-D-2	E23-03407-002_MW -10D-072623	8015 VFA, 8015D VFA	T	7.34 SU	2.03 SU	1 mL	1 mL	no	

Lab Sample ID	Client Sample ID	Method Chain	Basis	GCS_ORGBMS 00003	GCS_ORGSS 00020	AnalysisComment			
MB 410-404256/1		8015 VFA, 8015D VFA			0.02 mL	0.15% H3PO4			
LCS 410-404256/2		8015 VFA, 8015D VFA		0.1 mL	0.02 mL	0.15% H3PO4			
LCSD 410-404256/3		8015 VFA, 8015D VFA		0.1 mL	0.02 mL	0.15% H3PO4			
LCS 410-404256/4		8015 VFA, 8015D VFA			0.02 mL	0.15% H3PO4			
410-136645-C-1	E23-03407-001_MW -11D-072623	8015 VFA, 8015D VFA	T		0.02 mL	clear, tan sediment			
410-136645-D-2	E23-03407-002_MW -10D-072623	8015 VFA, 8015D VFA	T		0.02 mL	clear, light red sediment			

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.

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136645-1

SDG No.:

Batch Number: 404256 Batch Start Date: 08/03/23 17:57 Batch Analyst: Williams, Heather E

Batch Method: 8015 VFA Batch End Date: 08/03/23 18:45

Batch Notes	
Workbench Area	A-150
Syringe ID	Agilent 10 mL disposable syringe: 20K07C8
Pipette/Syringe/Dispenser ID	Pipettes used to prep samples: 24-3 and 24-1
Filter ID	Agilent PTFE+GF 0.45 um syringe filter: 21095103
pH Meter ID	PH-001
Acid Used for pH Adjustment ID	Phosphoric Acid: 200566
Reagent ID	0.15% H3PO4: 345163-7-6
Pipette Tip Lot ID	L204821L (Eppendorf 1000 uL) and K194306G (Eppendorf 100 uL)
Vial Lot Number	425060
Vial Type Used	Agilent 12mL clear vials
Vial Lot Number (2)	21116173
Vial Type used (2)	Agilent 2 mL clear vials

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

410-136645 Chain of Custody

2425 New ries
aster, PA 17601-2425
D/O3711

CLIENT & PROJECT / REPORTING & BIL

Name: Integrated Analytical Laboratories LLC	Contact:	Kim James	
	Fax #:		
Address:	EMail to:	msimmons@ialonline.com	
273 Franklin Road	Report to:	Melissa Simmons	
Randolph, NJ 07869	Address:		
Telephone #: 973-361-4252			
Project Name: E23-03407	Invoice to:	Brenda Barone	
Project Location (State): NY	Address:		
Project Manager:			
Reference ID#: PO#			

Turnaround Time

Verbal/Fax: 24 hr* 48 hr* 72 hr* 1 wk* 2 wk Other: 2 WEEKS

Hard Copy: 72 hr* 1 wk* 2 wk* 3 wk Other:

*Prior to sample arrival, Lab notification is required.

Report Format: NY CATEGORY B DELIVERABLES

Special Requirements: EDD: EQuIS - EQEDD

Preservative
1 = HCL; 2 = NaOH; 3 = HNO_3
4 = H_2SO_4; 5 = MeOH; 6 = Other

SAMPLE INFORMATION / ANALYTICAL PARAMETERS / PRESERVATIVES

Sample ID	Sample Depth (in Feet)	Sampling Date	Sampling Time	Matrix	# of Containers	Dissolved Gasses (RSK-175)	Volatile Fatty Acid (EPA Method 8015D)												
						1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
E23-03407-001_MW-11D-072623		7/26/23	12:53	Aqueous	5	Run	Run												
E23-03407-002_MW-10D-072623		7/26/23	14:15	Aqueous	5	Run	Run												

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

COOLER TEMP. °C

Concentrations Expected: LOW MED HIGH

Known Hazard: yes no
Describe:

Note:

EMAIL CONFIRMATION REQUIRED

CUSTODY LOG

Signature/Company	Date	Time	Signature/Company
Relinquished by:			Received by:
Relinquished by:			Received by:
Relinquished by:	7/28/23	18:00	Received by: Shawn Wrye

Lab Case #

PAGE: OF

COC (001-002)

Page 441 of 446 amended

08/08/2023

Eurofins Lancaster Laboratories
2425 New Holland Pike, P.O. Box 12425, Lancaster, PA 17601-2425

D/O3711

CLIENT & PROJECT

Name: Integrated Analytical Laboratories LLC	
Address:	
273 Franklin Road	
Randolph, NJ 07869	
Telephone #: 973-361-4252	
Project Name: E23-03407	
Project Location (State): NY	
Project Manager:	
Reference ID#: PO#	

REPORTING & BILLING

Contact:	Kim James
Fax #:	
EMail to:	msimmons@ialonline.com
Report to:	Melissa Simmons
Address:	

Turnaround Time							Report Format
Verbal/Fax							Reduced / Level III
24 hr*	48 hr*	72 hr*	1 wk*	2 wk	Other:	2 WEEKS	
Hard Copy							Special Requirements
72 hr*	1 wk*	2 wk*	3 wk		Other:		EDD: EQuIS - EQEDD
*Prior to sample arrival, Lab notification is required.							

Preservative
1 = HCL, 2 = NaOH, 3 = HNO_3
4 = H_2SO_4, 5= MeOH, 6 = Other

ANALYTICAL PARAMETERS / PRESERVATIVES

SAMPLE INFORMATION

Sample ID	Sample Depth (in Feet)	Sampling Date	Sampling Time	Matrix	# of Containers	Dissolved Gasses (RSK-175)	Volatile Fatty Acid (EPA Method 8015D)	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
E23-03407-001_MW-11D-072623		7/26/23	12:53	Aqueous	5	Run	Run													
E23-03407-002_MW-10D-072623		7/26/23	14:15	Aqueous	5	Run	Run													

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

COOLER TEMP: raw 4.7 cor 4.6 °C

Concentrations Expected: LOW MED HIGH

Known Hazard: yes no
Describe:

Note:

EMAIL CONFIRMATION REQUIRED

CUSTODY LOG

Signature/Company	Date	Time	Signature/Company
Relinquished by:	7/28/23	1130	Received by:
Relinquished by:	28/07/23	1800	Received by:
Relinquished by:	7/28/23	1800	Received by:

COC (001-002)

Lab Case #

PAGE: OF

Eurofins Lancaster Laboratories Environme
2425 New Holland Pike
Lancaster, PA 17601
Phone: 717-656-2300 Fax: 717-656-2681

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: K. SCHUTTE	Lab PM: Gordon, Stephen J	Carrier Tracking No(s):	COC No: 410-93556-26435.13
Client Contact: Emma Romi	Phone:	E-Mail: Stephen.Gordon@et.eurofinsus.com	State of Origin:	Page: Page 13 of 13
Company: Burns & McDonnell	PWSID:			Job #:
Address: 9400 Ward Parkway	Due Date Requested:			
City: Kansas City	TAT Requested (days):			
State, Zip: MO, 64114	Compliance Project: Δ Yes Δ No			
Phone: 816-823-6257(Tel)	PO #: 207599			
Email: elromi@burnsmcd.com	WO #:			
Project Name: One Gas	Project #: 41002385			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270E_SIM - 18 PAHs	6020B, 7470A	8260D - BTEX	335.4 - Cyanide, Total	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D	A	HB		
MMW-1/GW (MMW1/072523)	7-25	~~1585~~ 1130		Water	N		X	X	X	X		
RINSATE-1/072523	7-25	1200		Water	N		X	X	X	X		
MMW-197/GW (MMW-197/072523)	7-25	1405		Water	N		X	X	X	X		
MMW-195/GW (MMW-195/072523)	7-25	1500		Water	N		X	X	X	X		
TRIP BLANK/072523	7-25	1100		Water					X			
				Water								
				Water								
				Water								
				Water								
				Water								

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 7-27 / 1800	Company BMCD	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 7-28-23 1000	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: Pano-7-1.8

Eurofins Lancaster Laboratories Environme
2425 New Holland Pike
Lancaster, PA 17601
Phone: 717-656-2300 Fax: 717-656-2681

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: K. SCHUTTE	Lab PM: Gordon, Stephen J	Carrier Tracking No(s):	COC No: 410-93556-26435.13
Client Contact: Emma Romi	Phone:	E-Mail: Stephen.Gordon@et.eurofinsus.com	State of Origin:	Page: Page 13 of 13
Company: Burns & McDonnell	PWSID:	Analysis Requested		Job #:
Address: 9400 Ward Parkway	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
City: Kansas City	TAT Requested (days):			
State, Zip: MO, 64114	Compliance Project: Δ Yes Δ No			
Phone: 816-823-6257(Tel)	PO #: 207599			
Email: elromi@burnsmcd.com	WO #:			Other:
Project Name: One Gas	Project #: 41002385			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270E_SIM - 16 PAHs	6020B, 7470A	8260D - BTEX	335.4 - Cyanide, Total	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D	A	HB		
MMW-16S/GW (MMW-16S/072623)	7-26-23	0750		Water	N		X	X	X	X		
MMW-16I/GW (MMW-16I/072623)	7-26-23	0840		Water	N		X	X	X	X		
MMW-15S/GW (MMW-15S/072623)	7-26-23	1045		Water	N		X	X	X	X		
MMW-15I/GW (MMW-15I/072623)	7-26-23	1145		Water	N		X	X	X	X		
MMW-18S/GW (MMW-18S/072623)	7-26-23	1600		Water	N		X	X	X	X		
MMW-18I/GW (MMW-18I/072623)	7-26-23	1650		Water	N		X	X	X	X		
MMW-17S/GW (MMW-17S/072623)	7-26-23	1800		Water	N		X	X	X	X		
MMW-17I/GW (MMW-17I/072623)	7-26-23	1850		Water	N		X	X	X	X		
TRIP BLANK/072623	7-26-23	0730		Water					X			
				Water								

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	7-27 / 1000	BMcD			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 7-28-23 1000	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: Raw 0.7-1.8 corr 0.7-1.8

Eurofins Lancaster Laboratories Environme
2425 New Holland Pike
Lancaster, PA 17601
Phone: 717-656-2300 Fax: 717-656-2681

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: K. SCHUTTE	Lab PM: Gordon, Stephen J	Carrier Tracking No(s):	COC No: 410-93556-26435.13
Client Contact: Emma Romi	Phone:	E-Mail: Stephen.Gordon@et.eurofinsus.com	State of Origin:	Page: Page 13 of 13
Company: Burns & McDonnell	PWSID:			Job #:
Address: 9400 Ward Parkway	Due Date Requested:			
City: Kansas City	TAT Requested (days):			
State, Zip: MO, 64114	Compliance Project: Δ Yes Δ No			
Phone: 816-823-6257(Tel)	PO #: 207599			
Email: elromi@burnsmcd.com	WO #:			
Project Name: One Gas	Project #: 41002385			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270E_SIM - 16 PAHs	6020B, 7470A	8260D - BTEX	335.4 - Cyanide, Total	Total Number of containers	Special Instructions/Note:
Preservation Code:							N	D	A	HB		
MMW-13S/GW (MMW-13S/072723)	7-27-23	0700		Water	N		X	X	X	X		
MMW-13I/GW (MMW-13I/072723)	7-27-23	0735		Water	N		X	X	X	X		
MMW-11S/GW (MMW-11S/072723)	7-27-23	0900		Water	N		X	X	X	X		
MMW-11I/GW (MMW-11I/072723)	7-27-23	0950		Water	N		X	X	X	X		
MMW-12I/GW (MMW-12I/072723)	7-27-23	1220		Water	N		X	X	X	X		
MMW-12I/072723 MS	7-27-23	1220		Water	N	X	X	X	X	X		MATRIX SPIKE
MMW-12I/072723 MSD	7-27-23	1220		Water	N	X	X	X	X	X		MATRIX SPIKE DUP.
MMW-12S/072723	7-27-23	1340		Water	N		X	X	X	X		
TRIP BLANK/072723	7-27-23	0630		Water				X	X			
				Water								

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
		7-27/1800	BMcD			
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 7-28-23 1000	Company SMO

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: RAW 0.7 - 1.8 COR 0.7 - 1.8

INTEGRATED ANALYTICAL LABORATORIES, LLC
Login Sample Receipt Checklist

Client: Integrated Analytical Laboratories LLC

Job Number: 410-136645-1

Login Number: 136645

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: Roth, Stephanie

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable (</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

SAMPLE TRACKING

FINALIZED 08/17/2023

IAL Integrated Analytical Laboratories LLC
Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

Chain of Custody Record

Contact Us: 973-361-4252
Web: www.ialonline.com

Customer Information	Reporting Information
Company: EWMA	☐ Check here if same as "Customer Information"
Address: 100 Misty Lane	REPORT TO:
Parsippany NJ	Address:
Telephone #: (973) 560-1400	Same
Project Manager: Cathy Bryant	Attn:
Email Address(es): Cathy.Bryant@ewma.com	INVOICE TO:
Project Name: Swivelier	Address:
Project Location (State): NY	Same
Bottle Order #: 30527	Attn:
☑ "Report to"/"Invoice To" same as above	PO # L-12637
Sampled by: Louis Meyer	Quote # Proj #202530

COMPLETED BY IAL:
____ Field Sampling ____ Equipment Rental

Sample Matrix

DW - Drinking Water	OI - Oil
WW - Waste Water	S - Soil
GW - Groundwater	SED - Sediment
SW - Surface Water	SOL - Solid (specify)
LIQ - Liquid (specify)	SL - Sludge
M - Multiphasic	W - Wipe

****Rush TAT Charge**
24 hr - 100%...
48 hr - 75%....
72 hr - 50%....
96 hr - 35%....
5 day - 25%....
6-9 day - 10%

Deliverables *Surcharge may apply for regulatory

NJ, CT, PA	NY
☐ Results Only (Level I)	☐ ASP Category A
☑ Reduced (Level II/III)	☐ ASP Category B*
☐ Regulatory/ Full* (Level IV)	

EDDs
☐ NJ SRP
☑ NYSDEC EQuIS
☐ lab approved custom EDD
☐ NO EDD REQ'D

Concentrations Expected: Low Med High
Known Hazard: ☐ YES ☐ NO
Describe:

Turn-Around Time (TAT)
Standard (10 business days) Verbal
Rush/date needed (only if pre-approved)** STD
Hard Copy: Standard 3 week Other - call for price

Petroleum Hydrocarbons - Selection is REQUIRED
☐ NJ EPH-DRO - Category 1
☐ NJ EPH-C40 - Category 2
☐ NJ EPH-Fractionated - Cat 2
TAT for PHC, if other than 2 weeks:
☐ CT ETPH
☐ DRO-8015

Regulatory Requirement

New Jersey	New York
☐ GWQS	☑ AWQS (TOGS Table 1)
☐ 2017 SRS/IGW	☐ GWEL (TOGS Table 5)
☐ 2021 SRS/MGW	☐ Part 375-6.8(a) - Unrestricted
☐ Ecological	☐ Part 375-6.8(b) - Restricted
☐ DW	☐ CP-51 Table 2 or 3 (selection required)
☐ SPLP	

Other States / Criteria
☐ Pennsylvania Act 2
☐ CT RCSA 22a-133k1-k3
☐ TSCA PCBs
OTHER Regulatory Requirements - specify in comments

ANALYTICAL PARAMETERS (please note if contingent)

SAMPLE INFORMATION

Client ID	Depth (ft only)	Sampling Date	Sampling Time	Matrix	# containers	IAL #	Dissolved gases	VFAs	TCL VOCs	Sample Specific Notes:
MW-11D-072623		7/26/23	1253	GW	8	1	X	X	X	
MW-10D-072623		7/26/23	1415	GW	8	2	X	X	X	
FB-072623		7/26/23	1430	Liq	2	3			X	
TB-072623		7/26/23	—	Liq	2	4			X	

Samples previously analyzed by IAL? YES / NO

Preservative Code: 1 = None, 2 = HCl, 3 = HNO3, 4 = MeOH, 5 = NaOH, 6 = H2SO4, 7 = Other

Container Code: A = Amber Glass, B = Plastic, C = Vial, D = Glass, E = EnCore, T = Terracore

Preservative (use code)
Container Type (use code)

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time (TAT) will not start until any ambiguities have been resolved. TAT starts the following day if samples rec'd at lab ≥ 5PM. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY IAL'S TERMS & CONDITIONS (found on rear of pink copy).

Carrier (check one):
☐ IAL Courier
☐ Client Courier
☐ FedEx/UPS***
***Tracking #:

Special Instructions/QC Requirements & Comments: Please contact Cathy Bryant w/ any questions

Relinquished by (Signature and Company)	Date	Time	Received by (Signature and Company)	Date	Time
Jim Meyer	7/27/23	1401		7/27/23	1401
	7/27/23	1550		7/27/23	1550

FOR LAB USE ONLY
SDG #: 3407
Cooler Temp: 5 °C

IAL Rev 06/2021

LAB COPIES - WHITE & YELLOW; CLIENT COPY - PINK

Certification IDs: TNI (TNI01284); CT (PH-0699); NJ (14751); NY (11402); PA (68-00773)

E23-03407 Page 590

INTEGRATED ANALYTICAL LABORATORIES, LLC

Jul 31, 2023 @ 10:43

PROJECT INFORMATION

E23-03407: SWIVELIER - 202530

To: Cathy Bryant
EWMA - HQ
Fax:
EMail: Cathy.Bryant@ewma.com

Report To

EWMA - HQ
Lanidex Center
100 Misty Lane
Parsippany, NJ 07054
Attn: Cathy Bryant

Bill To

EWMA - HQ
Lanidex Center
100 Misty Lane
Parsippany, NJ 07054
Attn: Cathy Bryant

Report Format	P.O. #	Received At Lab	PHC Due	Verbal Due	Hardcopy Due
Category B	L-12637	Jul 27, 2023 @ 15:50	NA	Aug 10, 2023	Aug 17, 2023 *

* Any ***Conditional or Hold*** status will delay final hardcopy report sent date.

Diskette Req. EQ EDD

Criteria Requirement: NY TOGS Tbl1 (AWQS)

Lab ID	Client Sample ID	Depth	Sampling Time	Matrix	Unit	Field pH/Temp
03407-001	MW-11D-072623	NA	07/26/23@12:53	Aqueous	ug/L (ppb)	
03407-002	MW-10D-072623	NA	07/26/23@14:15	Aqueous	ug/L (ppb)	
03407-003	FB-072623	NA	07/26/23@14:30	Aqueous	ug/L (ppb)	
03407-004	TB-072623	NA	07/26/23	Aqueous	ug/L (ppb)	

* No Cert = IAL does not hold certification for this test/method

Sample #	Test	Status	Analytical Method	TAT	Holding Time Expires
001	TCL VO + 15	Analyze	8260D	STD/2 WKS	8/9/2023
	Dissolved Gasses (RSK-175) by Eurofins Lancaster Labs, TNI certified	Analyze		STD/2 WKS	7/26/2023
	Volatile Fatty Acid (EPA Method 8015D) by Eurofins Lancaster Laboratories, TNI certified	Analyze		STD/2 WKS	9/4/2023
002	TCL VO + 15	Analyze	8260D	STD/2 WKS	8/9/2023
	Dissolved Gasses (RSK-175) by Eurofins Lancaster Labs, TNI certified	Analyze		STD/2 WKS	7/26/2023
	Volatile Fatty Acid (EPA Method 8015D) by Eurofins Lancaster Laboratories, TNI certified	Analyze		STD/2 WKS	9/4/2023
003	TCL VO + 15	Analyze	8260D	STD/2 WKS	8/9/2023
004	TCL VO + 15	Analyze	8260D	STD/2 WKS	8/9/2023

Project Notes:

273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
www.ialonline.com

IAL is a NELAP accredited lab (TNI01284) and maintains certification in Connecticut (PH-0699), New Jersey (14751), New York (11402), and Pennsylvania (68-00773).

Jul 31, 2023 @ 10:43

PROJECT INFORMATION

E23-03407: SWIVELIER - 202530

NOTE 2 taken by kim on 07/27/2023 05:33
CLIENT WAS INFORMED VIA EMAIL THAT DISSOLVED GASSES AND VOLATILE FATTY ACIDS WILL BE SUBCONTRACTED TO EUROFINS LANCASTER.

NOTE 3 taken by kim on 07/27/2023 05:34
ALSO REQUIRES NYSDEC EQUIS FILES.

NOTE 4 taken by Mark on 07/28/2023 10:57
PER CATHY BRYANT, DELIVERABLES = NY CATEGORY A

REV 1 taken by kim on 07/28/2023 03:11
PER CATHY BRYANT, CHANGE TO NY CAT B DELIVERABLES.

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SAMPLE RECEIPT VERIFICATION

CASE NO: **E 23** **03407** CLIENT: EWMA

COOLER TEMPERATURE: 2° - 6°C: ✓ (See Chain of Custody)

Comments

COC: (COMPLETE) / INCOMPLETE

KEY

✓ = YES/NA

✗ = NO

VOA received: ☐ Encore ☐ IGW - Methanol

(check one) ☐ Terra Core ☐ No Preservative

- ✓ Bottles Intact
- ✓ no-Missing Bottles
- ✓ no-Extra Bottles
- ✓ Sufficient Sample Volume
- ✓ no-headspace/bubbles in VOs
- ✓ Labels intact/correct
- ✗ pH Check[1] (refer to Receipt pH Log)
- ✓ Correct bottles/preservative
- ✓ Sufficient Holding/Prep Time[1]
- ☐ Multiphasic Sample
- ☐ Sample to be Subcontracted
- ✓ **Chain of Custody is Clear**

[1] All samples with "Analyze Immediately" holding times will be analyzed by this laboratory past the holding time. This includes but is not limited to the following tests: pH, Temperature, Free Residual Chlorine, Total Residual Chlorine, Dissolved Oxygen, Sulfite.

ADDITIONAL COMMENTS:

SAMPLE(S) VERIFIED BY: INITIAL [signature] DATE 7/28/23

CORRECTIVE ACTION REQUIRED: **YES** ☐ (SEE BELOW) **NO** ✓

If COC is **NOT** clear, ***STOP*** until you get client to authorize/clarify work.

CLIENT NOTIFIED: YES ☐ Date/ Time: _____ NO ☐

PROJECT CONTACT:

SUBCONTRACTED LAB:

DATE SHIPPED:

ADDITIONAL COMMENTS:

VERIFIED/TAKEN BY: INITIAL [signature] DATE 7.28.23

Rev 2 2/11/2021

Laboratory Custody Chronicle

IAL Case No.
E23-03407

Client EWMA - HQ

Project SWIVELIER - 202530

Received On 7/27/2023@15:50

Department: Volatiles			***Prep. Date***	***Analyst***	***Analysis Date***	***Analyst***
TCL VO + 15	03407-001	Aqueous	n/a	n/a	8/ 1/23	Barbara
"	-002	"	n/a	n/a	8/ 1/23	Barbara
"	-003	"	n/a	n/a	8/ 1/23	Barbara
"	-004	"	n/a	n/a	8/ 1/23	Barbara

Department: Others			***Prep. Date***	***Analyst***	***Analysis Date***	***Analyst***
Dissolved Gasses (RSK-175) by Eurofins Lancaster Labs	-001	Aqueous	7/28/23	Rob	n/a	n/a
"	-002	"	7/28/23	Rob	n/a	n/a
Volatile Fatty Acid (EPA Method 8015D) by Eurofins Lancaster Laboratories	-001	Aqueous	7/28/23	Rob	n/a	n/a
"	-002	"	7/28/23	Rob	n/a	n/a

NOTE: All soil, sediment, sludge, and solid samples are reported on a dry-weight basis.

Integrated Analytical Labs ~ 273 Franklin Road, Randolph, NJ 07869 ~ (973) 361-4252

LAST PAGE OF DOCUMENT

IAL
Integrated Analytical Laboratories LLC

ANALYTICAL DATA REPORT

Environmental Waste Management Associates, LLC.
Lanidex Center
100 Misty Lane
Parsippany, NJ 07054

Project Name: **SWIVELIER - 202530**
IAL Case Number: **E23-03408**

These data have been reviewed and accepted by:

Michael H. Leffin, Ph.D.
Laboratory Director

This report shall not be reproduced, except in its entirety, without the written consent of Integrated Analytical Laboratories, LLC. The test results included in this report relate only to the samples analyzed. The results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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Phone: 973 361 4252

IAL is a NELAP accredited lab (TNI01284) and maintains certification in Connecticut (PH-0699), New Jersey (14751), New York (11402) and Pennsylvania (68-00773).

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Sample Summary

IAL Case No.
E23-03408

Client EWMA - HQ

Project SWIVELIER - 202530

Received On 7/27/2023@15:51

Lab ID	*Client Sample ID*	*Depth Top/Bottom*	*Sampling Time*	*Matrix*	*# of Container*
03408-001	MW-13D-072723	n/a	7/27/2023@12:59	Aqueous	8
03408-002	FB-072723	n/a	7/27/2023@13:10	Aqueous	2

DATA QUALIFIERS AND FLAGS

B	Indicates the analyte found in the associated method blank and in the sample due to potential lab contamination.
C	Indicates analyte is a common laboratory contaminant.
D	Indicates analyte was reported from diluted analysis.
E	Identifies a compound concentration that exceeds the upper level of the calibration range of the instrument
J	Indicates an estimated value either when the concentration in the sample is less than the RL or for qualification of TICs
J1	Indicates an estimated value when ICC or CCV did not meet the criteria.
M	Indicates matrix interference
N	Presumptive evidence of a compound from the use of GC/MS library search.
T	Sample analyzed outside of holding time
X	Indicates samples analyzed for total and dissolved metals differ at ≤20% RPD.
Y	Indicates DO depletion in the BOD blank is >0.20ppm
Z	Indicates internal standard failure. Sample results are either biased high or biased low.
$	Value outside NJDEP DKQP Limits
*	Result outside of QC limits

PROJECT NOTES

- All results for soils, solids, and sludges are reported on a dry-weight basis except where noted
- All test results and QC are compliant with TNI or other applicable state agency requirements/guidance unless otherwise notated in the case narrative and/or project information page.
- The case narrative for this SDG should be consulted to determine any non-conformances.
- Any samples with 15-minute or "analyze immediately" holding times (e.g. pH, Dissolved Oxygen, Sulfite, etc.) which are analyzed in the laboratory are considered out of holding time.
- IAL is a NELAP/TNI certified laboratory (TNI ID# TNI01284). IAL retains certification in Connecticut (PH-0699), New Jersey (14751), New York (11402), and Pennsylvania (68-00773).
- Certification is not required to perform analyses in the following states: AL, CO, DE, GA, HI, ID, IN, KY, MD, MI, MS, MO, MT, NE, NM, SD and TN. IAL can perform all analyses, except Drinking Water, within its scope of capabilities in these states.

ACRONYMS AND ABBREVIATIONS

CFU	Colony Forming Unit	ND	Indicates analyte was analyzed for but not detected at MDL or RL (only if MDL is not used)
CCB	Continuing Calibration Blank		
CCV	Continuing Calibration Verification	NTU	Nephelometric Turbidity Units
DF	Dilution Factor	ppb	Parts per billion. Reported as µg/L or µg/kg
DL	Attached as a suffix to a diluted sample	ppm	Parts per million. Reported as mg/L, µg/mL or mg/kg
DUP	Duplicate	QC	Quality Control
ICB	Initial Calibration Blank	% Rec	Percent Recovery
ICC	Initial Calibration Curve	RL	Reporting Limit. The RL is typically determined by the concentration of the lowest standard in the calibration curve
ICV	Initial Calibration Verification		
kg	kilogram		
L	Liter	RPD	Relative Percent Difference
LCS	Laboratory Control Sample	RSD	Relative Standard Deviation
LCSD	Laboratory Control Sample Duplicate	RT	Retention Time
MDL	Method Detection Limit as determined according to 40 CFR Part 136 Appendix B	SU	Standard Units
		TIC	Tentatively Identified Compound AKA Library Search Compounds
MF	Membrane Filter		
mg	milligram (1000mg = 1g)	TNI	The NELAC (National Environmental Laboratory Accreditation Council) Institute
µg	microgram (1000µg = 1mg)		
ml	milliliter (1000ml = 1L)	TNTC	Too numerous to count
µl	microliter (1000µl = 1ml)	*	When attached to a compound name, indicates this analyte was analyzed by Method SW-846 8270 SIM
µmhos	Conductivity units - resistance expressed in ohms		
MPN	Most Probable Number	^	When attached to a compound name, indicates this analyte was analyzed by Method SW-846 8011 or EPA 504.1
MS	Matrix Spike		
MSD	Matrix Spike Duplicate		
NA	Not applicable	<	Less than; In conjunction with a numerical value, indicates a concentration less than the RL or MDL
NC	Not calculated		

SAMPLE DELIVERY GROUP CASE NARRATIVE
(Conformance / Non-Conformance Summary)

SAMPLE DELIVERY GROUP CASE NARRATIVE

SDG#: E23-03408

Integrated Analytical Laboratories, LLC. received two (2) samples** from EWMA - HQ (IAL SDG# **E23-03408**, Project: SWIVELIER - 202530) on July 27, 2023 for the analysis of :

(2) TCL VO + 15
(1) Dissolved Gasses (RSK-175) by Eurofins Lancaster Labs
(1) Volatile Fatty Acid (EPA Method 8015D) by Eurofins Lancaster Laboratories

**Number of samples listed above may be greater than what is listed on the chain of custody. Any samples that require in-house filtration or splitting will be counted as separate samples.

Samples were received in good condition with documentation in order.
Cooler temperature was acceptable at 4 ± 2 degree C.

Volatiles By SW 8260D | **Batch: 230731-01** | **Matrix: Aqueous**

QC
- Calibration curve met QC criteria.
- Internal standards recovery met QC criteria.
- Surrogate percent recovery met QC criteria.
- Method blank met QC criteria.
- LCS percent recovery met QC criteria.
- MS/MSD RPD met QC criteria.
- MS/MSD percent recovery met QC criteria.

E23-03408
- All samples were received within holding time.
- All samples were analyzed within holding time.

Dilution Summary:

Sample ID	DF(s)	Dilution For
E23-03408-001	50	Target compound(s).
E23-03408-002	1	NA

Subcontracted to Eurofins Lancaster Laboratories, TNI certified*, #TNI02128, NJ certified

Method: RSK-175; 8015D | **Matrix: Aqueous**

QC - All analyses met QC criteria.

E23-03408 - Please see Case Narrative of Subcontracted Report.

Integrated Analytical Laboratories has subcontracted part or all of the results in this report. The laboratory performing the subcontracted work is listed above. These analyses were performed by a NELAP/TNI accredited laboratory, unless otherwise specified. This work was placed with a laboratory accredited for TNI standards for the tests to be performed OR with a laboratory that meets applicable statutory and regulatory requirements for performing the tests and submitting the results of tests performed. Integrated Analytical Laboratories will keep a copy of the subcontractor's report on file.
*TNI, The NELAC Institute, is a nationally recognized laboratory accreditation program. The TNI Standard is intended as an application of ISO/IEC 17025:2005(E), General Requirements for the Competence of Testing and Calibration Laboratories. While individual states and entities offer certification, TNI standards foster the generation of environmental data of known and documented quality through an open, inclusive, and transparent process that is responsive to the needs of the community.

A review of the QA/QC measures for the analysis of the sample(s) contained in this report has been performed by:

Heather Daly
Reviewed by

8/17/2023
Date

DATA OF KNOWN QUALITY CONFORMANCE/NON-CONFORMANCE SUMMARY QUESTIONNAIRE

Laboratory Name: Integrated Analytical Laboratories
Client: Environmental Waste Management Associates, LLC.
Project Location: SWIVELIER - 202530
IAL Project #: E23-03408
IAL Sample ID(s): E23-03408-001 ~ -002
Sampling Date(s): 7/27/2023

List of DKQP Method Used:

TCL VO by 8260D
Dissolved Gasses (RSK-175) by Eurofins Lancaster Laboratories
Volatile Fatty Acid (EPA Method 8015D) by Eurofins Lancaster Laboratories

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information is provided in the case narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "Data of Known Quality."

		YES	NO	N/A
1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the NJDEP Data of Known Quality performance standards?	X		
1A	Were the method specified handling, preservation, and holding time requirements met?	X		
1B	EPH Method: Was the EPH method conducted without significant modifications? (see Section 11.3 of respective DKQ methods)			X
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	X		
3	Were samples received at an appropriate temperature (4±2° C)?	X		
4	Were all QA/QC performance criteria specified in the NJDEP DKQP standards achieved?	X		
5A	Were reporting limits specified or referenced on the chain-of-custody or communicated to the laboratory prior to sample receipt?	X		
5B	Were these reporting limits met?	X		
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the DKQP documents and/or site-specific QAPP?	X		
7	Are project-specific matrix spikes and/or laboratory duplicates included in this data set?		X	

RESULTS SUMMARY REPORT

SUMMARY REPORT
Client: Environmental Waste Management Associates, LLC.
Project: SWIVELIER - 202530
Lab Case No.: E23-03408

	Lab ID:	03408-001			03408-002		
	Client ID:	MW-13D-072723			FB-072723		
	Matrix:	Aqueous			Aqueous		
	Sampled Date	7/27/23			7/27/23		
PARAMETER(Units)		Conc	Q	MDL	Conc	Q	MDL
Volatiles (Units)		*(ug/L)*			*(ug/L)*		
Vinyl chloride		43.0	DJ	17.6	ND		0.352
cis-1,2-Dichloroethene		4080	D	13.9	ND		0.277
Trichloroethene		8270	D	17.4	ND		0.347
Tetrachloroethene		34.5	D	18.3	ND		0.365
1,2-Dichlorobenzene		94.1	D	17.7	ND		0.354
TOTAL VO's:		12500	DJ		ND		
TOTAL TIC's:		ND			ND		
TOTAL VO's & TIC's:		12500	DJ		ND		

ND = Analyzed for but Not Detected at the MDL
J = Indicates an estimated value either when the concentration in the sample is greater than MDL and less than RL, or for qualification of TICs
D = The compound was reported from the Diluted analysis
All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.
+ Subcontracted data for Dissolved Gasses (RSK-175) by Eurofins Lancaster Labs is available in the Subcontracted Reports section.
+ Subcontracted data for Volatile Fatty Acid (EPA Method 8015D) by Eurofins Lancaster Laboratories is available in the Subcontracted Reports section.

ANALYTICAL RESULTS

VOLATILE ORGANICS

Lab ID: E23-03408-001
Client ID: MW-13D-072723
Date Received: 07/27/2023
Date Analyzed: 07/31/2023
Data file: K3863.D 07/31/2023 21:26

GC/MS Column: DB-624
Sample wt/vol: 0.1mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 50

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		50.0	27.6
Chloromethane	ND		25.0	15.5
Vinyl chloride	43.0	DJ	50.0	17.6
Bromomethane	ND		50.0	19.3
Chloroethane	ND		25.0	16.2
Trichlorofluoromethane	ND		50.0	25.2
1,1-Dichloroethene	ND		25.0	18.2
Acetone	ND		100	42.4
Carbon disulfide	ND		50.0	20.2
Methylene chloride	ND		50.0	25.0
trans-1,2-Dichloroethene	ND		25.0	18.6
Methyl tert-butyl ether (MTBE)	ND		25.0	12.3
1,1-Dichloroethane	ND		25.0	14.3
cis-1,2-Dichloroethene	4080	D	25.0	13.9
2-Butanone (MEK)	ND		100	40.1
Bromochloromethane	ND		50.0	19.0
Chloroform	ND		25.0	14.3
1,1,1-Trichloroethane	ND		25.0	19.1
Carbon tetrachloride	ND		25.0	17.5
1,2-Dichloroethane (EDC)	ND		25.0	13.7
Benzene	ND		25.0	13.5
Trichloroethene	8270	D	25.0	17.4
1,2-Dichloropropane	ND		25.0	13.6
Bromodichloromethane	ND		25.0	12.9
cis-1,3-Dichloropropene	ND		50.0	13.2
4-Methyl-2-pentanone (MIBK)	ND		50.0	30.6

VOLATILE ORGANICS

Lab ID: E23-03408-001
Client ID: MW-13D-072723
Date Received: 07/27/2023
Date Analyzed: 07/31/2023
Data file: K3863.D 07/31/2023 21:26

GC/MS Column: DB-624
Sample wt/vol: 0.1mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 50

Compound	Concentration	Q	RL	MDL
Toluene	ND		25.0	15.1
trans-1,3-Dichloropropene	ND		50.0	16.5
1,1,2-Trichloroethane	ND		25.0	15.7
Tetrachloroethene	34.5	D	25.0	18.3
2-Hexanone	ND		50.0	40.9
Dibromochloromethane	ND		25.0	13.2
1,2-Dibromoethane (EDB)	ND		25.0	14.5
Chlorobenzene	ND		25.0	15.2
Ethylbenzene	ND		25.0	15.7
Total Xylenes	ND		50.0	17.3
Styrene	ND		50.0	15.9
Bromoform	ND		25.0	16.4
Isopropylbenzene	ND		50.0	16.6
1,1,2,2-Tetrachloroethane	ND		50.0	14.2
1,3-Dichlorobenzene	ND		25.0	19.3
1,4-Dichlorobenzene	ND		25.0	19.9
1,2-Dichlorobenzene	94.1	D	25.0	17.7
1,2-Dibromo-3-chloropropane	ND		50.0	20.5
1,2,4-Trichlorobenzene	ND		50.0	17.9
1,2,3-Trichlorobenzene	ND		50.0	20.3
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		50.0	26.9
Methyl acetate	ND		25.0	17.3
Cyclohexane	ND		50.0	23.5
Methylcyclohexane	ND		50.0	21.1
1,3-Dichloropropene (cis- and trans-)	ND		50.0	13.2
Total Target Compounds (51):	12500	DJ		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: E23-03408-001
Client ID: MW-13D-072723
Date Received: 07/27/2023
Date Analyzed: 07/31/2023
Date File: K3863.D

GC/MS Column: DB-624
Sample wt/vol: 0.1mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 50
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time

No peaks detected

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

VOLATILE ORGANICS

Lab ID: E23-03408-002
Client ID: FB-072723
Date Received: 07/27/2023
Date Analyzed: 07/31/2023
Data file: K3862.D 07/31/2023 20:57

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.552
Chloromethane	ND		0.500	0.309
Vinyl chloride	ND		1.00	0.352
Bromomethane	ND		1.00	0.386
Chloroethane	ND		0.500	0.324
Trichlorofluoromethane	ND		1.00	0.503
1,1-Dichloroethene	ND		0.500	0.363
Acetone	ND		2.00	0.847
Carbon disulfide	ND		1.00	0.403
Methylene chloride	ND		1.00	0.500
trans-1,2-Dichloroethene	ND		0.500	0.372
Methyl tert-butyl ether (MTBE)	ND		0.500	0.245
1,1-Dichloroethane	ND		0.500	0.285
cis-1,2-Dichloroethene	ND		0.500	0.277
2-Butanone (MEK)	ND		2.00	0.802
Bromochloromethane	ND		1.00	0.379
Chloroform	ND		0.500	0.285
1,1,1-Trichloroethane	ND		0.500	0.381
Carbon tetrachloride	ND		0.500	0.349
1,2-Dichloroethane (EDC)	ND		0.500	0.273
Benzene	ND		0.500	0.270
Trichloroethene	ND		0.500	0.347
1,2-Dichloropropane	ND		0.500	0.272
Bromodichloromethane	ND		0.500	0.258
cis-1,3-Dichloropropene	ND		1.00	0.264
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.611

VOLATILE ORGANICS

Lab ID: E23-03408-002
Client ID: FB-072723
Date Received: 07/27/2023
Date Analyzed: 07/31/2023
Data file: K3862.D 07/31/2023 20:57

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Concentration	Q	RL	MDL
Toluene	ND		0.500	0.302
trans-1,3-Dichloropropene	ND		1.00	0.330
1,1,2-Trichloroethane	ND		0.500	0.313
Tetrachloroethene	ND		0.500	0.365
2-Hexanone	ND		1.00	0.818
Dibromochloromethane	ND		0.500	0.263
1,2-Dibromoethane (EDB)	ND		0.500	0.289
Chlorobenzene	ND		0.500	0.304
Ethylbenzene	ND		0.500	0.313
Total Xylenes	ND		1.00	0.345
Styrene	ND		1.00	0.317
Bromoform	ND		0.500	0.328
Isopropylbenzene	ND		1.00	0.332
1,1,2,2-Tetrachloroethane	ND		1.00	0.284
1,3-Dichlorobenzene	ND		0.500	0.386
1,4-Dichlorobenzene	ND		0.500	0.397
1,2-Dichlorobenzene	ND		0.500	0.354
1,2-Dibromo-3-chloropropane	ND		1.00	0.410
1,2,4-Trichlorobenzene	ND		1.00	0.358
1,2,3-Trichlorobenzene	ND		1.00	0.406
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.538
Methyl acetate	ND		0.500	0.345
Cyclohexane	ND		1.00	0.469
Methylcyclohexane	ND		1.00	0.421
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.264

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: E23-03408-002
Client ID: FB-072723
Date Received: 07/27/2023
Date Analyzed: 07/31/2023
Date File: K3862.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	Column/Septa bleed	0	J	5.16

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

Client Sample Results

Client: Integrated Analytical Laboratories LLC
Project/Site: E23-03408

Job ID: 410-136647-1

Client Sample ID: E23-03408-001_MW-13D-072723
Date Collected: 07/27/23 12:59
Date Received: 07/28/23 18:00

Lab Sample ID: 410-136647-1
Matrix: Water

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane (1C)	18		5.0	1.0	ug/L		08/03/23 10:40	08/03/23 17:54	1
Ethene (1C)	ND		5.0	1.0	ug/L		08/03/23 10:40	08/03/23 17:54	1
Methane (1C)	200		5.0	3.0	ug/L		08/03/23 10:40	08/03/23 17:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Propene (1C)	*50*		*43 - 133*	*08/03/23 10:40*	*08/03/23 17:54*	*1*

Method: SW846 8015D VFA - Volatile Fatty Acids - Direct Aqueous Injection (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid (1C)	ND		10000	3200	ug/L		08/03/23 17:58	08/05/23 14:12	1
Butyric acid (1C)	ND		10000	2000	ug/L		08/03/23 17:58	08/05/23 14:12	1
Citric Acid (1C)	ND		5000	1000	ug/L		08/03/23 17:58	08/05/23 14:12	1
Formic-acid (1C)	ND		10000	2000	ug/L		08/03/23 17:58	08/05/23 14:12	1
Isovaleric acid (1C)	ND		7100	3500	ug/L		08/03/23 17:58	08/05/23 14:12	1
L-Lactic Acid (1C)	ND		5000	1000	ug/L		08/03/23 17:58	08/05/23 14:12	1
Oxalic Acid (1C)	ND		1300	250	ug/L		08/03/23 17:58	08/05/23 14:12	1
Propionic acid (1C)	ND		10000	2000	ug/L		08/03/23 17:58	08/05/23 02:15	1
Pyruvic Acid (1C)	ND		1300	250	ug/L		08/03/23 17:58	08/05/23 14:12	1
Quinic Acid (1C)	ND		5000	2400	ug/L		08/03/23 17:58	08/05/23 14:12	1
Succinic Acid (1C)	ND		2500	1000	ug/L		08/03/23 17:58	08/05/23 14:12	1
Tartaric Acid (1C)	ND		2500	1000	ug/L		08/03/23 17:58	08/05/23 14:12	1
Valeric acid (1C)	ND		5000	2000	ug/L		08/03/23 17:58	08/05/23 14:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fumaric Acid (1C)	*102*		*68 - 139*	*08/03/23 17:58*	*08/05/23 02:15*	*1*
Fumaric Acid (1C)	*108*		*68 - 139*	*08/03/23 17:58*	*08/05/23 14:12*	*1*

VOLATILE ORGANICS

VOLATILE ORGANICS QC SUMMARY

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 07/31/2023

Lab Sample ID	Matrix	File ID	SMC1 #	SMC2 #	SMC3 #
BLKA230731-01	AQUEOUS	K3844.D	103	99	99
E23-03381-001	AQUEOUS	K3845.D	106	99	98
E23-03381-002	AQUEOUS	K3846.D	107	99	98
E23-03381-003	AQUEOUS	K3847.D	108	98	98
E23-03381-004	AQUEOUS	K3848.D	107	96	99
E23-03307-001	AQUEOUS	K3849.D	109	99	100
E23-03307-002	AQUEOUS	K3850.D	108	100	101
LCSA230731-01	AQUEOUS	K3851.D	105	103	105
E23-03388-001MS	AQUEOUS	K3852.D	104	101	102
E23-03307-003	AQUEOUS	K3854.D	108	100	100
E23-03307-004	AQUEOUS	K3855.D	108	99	100
E23-03367-001	AQUEOUS	K3856.D	107	99	97
E23-03367-002	AQUEOUS	K3857.D	94	98	104
E23-03367-003	AQUEOUS	K3858.D	108	99	100
E23-03367-004	AQUEOUS	K3859.D	108	101	103
E23-03388-001	AQUEOUS	K3860.D	111	102	105
E23-03361-001	AQUEOUS	K3861.D	112	101	100
E23-03408-002	AQUEOUS	K3862.D	110	101	103
E23-03408-001	AQUEOUS	K3863.D	114	100	102
E23-03408-001DUP	AQUEOUS	K3864.D	112	102	103

	Concentration	DKQPs	Leachate Aqueous	Soil
SMC1 = 1,2-Dichloroethane-d4	50 ppb	70-130	70-131	51-148
SMC2 = Toluene-d8	50 ppb	70-130	70-130	53-149
SMC3 = Bromofluorobenzene	50 ppb	70-130	70-130	57-147

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
D Surrogate diluted out
M Matrix interference

FORM 2

8260

LCS ACCURACY REPORT

Lab ID: LCSA230731-01
Date Received: NA
Date Analyzed: 07/31/2023
LCS Data file: K3851.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Limits
Dichlorodifluoromethane	50.0	51.6	103		55-148
Chloromethane	50.0	49.3	99		46-136
Vinyl chloride	50.0	50.7	101		64-134
Bromomethane	50.0	53.0	106		62-142
Chloroethane	50.0	52.3	105		80-127
Trichlorofluoromethane	50.0	51.5	103		68-144
Acrolein	150	166.4	111		10-171
1,1-Dichloroethene	50.0	50.5	101		75-134
Acetone	100	107.0	107		48-142
Carbon disulfide	50.0	53.6	107		64-134
Vinyl acetate	50.0	51.9	104		43-151
Methylene chloride	50.0	50.0	100		71-132
Acrylonitrile	150.0	137.8	92		10-223
tert-Butyl alcohol (TBA)	100.0	106.7	107		64-131
trans-1,2-Dichloroethene	50.0	50.8	102		75-126
Methyl tert-butyl ether (MTBE)	50.0	54.1	108		69-133
1,1-Dichloroethane	50.0	53.3	107		79-125
Diisopropyl ether (DIPE)	50.0	52.4	105		79-120
cis-1,2-Dichloroethene	50.0	50.5	101		80-126
2,2-Dichloropropane	50.0	60.6	121		36-160
2-Butanone (MEK)	100	105.9	106		66-130
Bromochloromethane	50.0	50.2	100		66-132
Chloroform	50.0	51.9	104		75-139
1,1,1-Trichloroethane	50.0	59.1	118		68-151
Carbon tetrachloride	50.0	54.6	109		76-140
1,1-Dichloropropene	50.0	51.0	102		80-134
1,2-Dichloroethane (EDC)	50.0	54.6	109		72-139
Benzene	50.0	52.2	104		80-120
Trichloroethene	50.0	53.2	106		74-139
1,2-Dichloropropane	50.0	50.4	101		73-122
Dibromomethane	50.0	51.6	103		78-136
1,4-Dioxane	1500	0	0	*$	52-136
Bromodichloromethane	50.0	55.3	111		74-141
2-Chloroethyl vinyl ether	100	100.9	101		73-122
cis-1,3-Dichloropropene	50.0	53.9	108		73-129
4-Methyl-2-pentanone (MIBK)	100	106.2	106		77-124
Toluene	50.0	51.6	103		78-129
trans-1,3-Dichloropropene	50.0	53.8	108		66-135
1,1,2-Trichloroethane	50.0	51.9	104		78-120
Tetrachloroethene	50.0	52.4	105		65-145
1,3-Dichloropropane	50.0	52.8	106		80-122

LCS ACCURACY REPORT

Lab ID: LCSA230731-01
Date Received: NA
Date Analyzed: 07/31/2023
LCS Data file: K3851.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Limits
2-Hexanone	100	106.1	106		66-134
Dibromochloromethane	50.0	55.5	111		73-140
1,2-Dibromoethane (EDB)	50.0	52.9	106		73-137
Chlorobenzene	50.0	50.6	101		80-120
1,1,1,2-Tetrachloroethane	50.0	52.8	106		79-130
Ethylbenzene	50.0	51.9	104		80-124
m,p-Xylene	100.0	102.3	102		80-129
o-Xylene	50.0	50.4	101		80-128
Styrene	50.0	50.6	101		80-129
Bromoform	50.0	53.4	107		79-123
Isopropylbenzene	50.0	52.3	105		80-137
1,1,2,2-Tetrachloroethane	50.0	48.7	97		52-128
Bromobenzene	50.0	49.0	98		80-124
1,2,3-Trichloropropane	50.0	49.3	99		77-120
n-Propylbenzene	50.0	52.7	105		80-130
2-Chlorotoluene	50.0	51.1	102		76-136
1,3,5-Trimethylbenzene	50.0	50.7	101		76-140
4-Chlorotoluene	50.0	50.9	102		75-135
tert-Butylbenzene	50.0	50.8	102		78-142
1,2,4-Trimethylbenzene	50.0	51.2	102		74-143
sec-Butylbenzene	50.0	51.2	102		80-133
1,3-Dichlorobenzene	50.0	49.7	99		71-129
4-Isopropyltoluene	50.0	51.4	103		79-136
1,4-Dichlorobenzene	50.0	49.1	98		71-131
n-Butylbenzene	50.0	50.3	101		77-122
1,2-Dichlorobenzene	50.0	49.9	100		70-125
1,2-Dibromo-3-chloropropane	50.0	51.7	103		49-126
1,2,4-Trichlorobenzene	50.0	49.6	99		27-132
Hexachlorobutadiene	50.0	50.4	101		18-141
Naphthalene	50.0	49.4	99		38-140
1,2,3-Trichlorobenzene	50.0	48.2	96		47-131
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	51.1	102		68-140
Methyl acetate	50.0	50.1	100		53-124
Cyclohexane	50.0	46.3	93		61-132
Methylcyclohexane	50.0	49.8	100		61-144

Column used to flag recovery and RPD values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits

LCS ACCURACY REPORT

Lab ID: LCSA230731-01
Date Received: NA
Date Analyzed: 07/31/2023
LCS Data file: K3851.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	LCS	MS Conc.	%Rec	#

As per SW-846 8260C, up to 10% of the compounds may be out , but must be within 40-160%
As per NJDEP DKQPs, only the following compounds may be in the 40-160% range:
Acetone; Bromomethane; 2-Butanone (MEK); Carbon disulfide; Chloroethane; Chloromethane
1,2-Dibromo-3-chloropropane; Dichlorodifluoromethane; 1,4-Dioxane; 2-Hexanone
Naphthalene; 4-Methyl-2-pentanone (MIBK); Trichlorofluoromethane

	Leachate Aqueous/Meoh	Soil/Sediment
LCS ACCURACY (%REC)	70-130	70-130

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
NC Not calculable

8260

SAMPLE MS RESULTS SUMMARY

Lab ID: E23-03388-001
Client ID: TPZ-1
Date Received: NA
Date Analyzed: 07/31/2023
Sample Data file: K3860.D
Sample MS Data file: K3852.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Rec. Limits
Dichlorodifluoromethane	50.0	0.00	54.90	110		51-153
Chloromethane	50.0	0.00	52.20	104		61-146
Vinyl chloride	50.0	0.00	54.20	108		66-164
Bromomethane	50.0	0.00	52.00	104		56-159
Chloroethane	50.0	0.00	51.50	103		67-152
Trichlorofluoromethane	50.0	0.00	36.20	72		57-167
Acrolein	150.0	0.00	161.00	107		10-186
1,1-Dichloroethene	50.0	0.00	54.10	108		63-156
Acetone	100.0	0.00	113.90	114		39-168
Carbon disulfide	50.0	0.00	55.60	111		61-144
Vinyl acetate	50.0	0.00	51.50	103		31-152
Methylene chloride	50.0	0.00	47.20	94		66-133
Acrylonitrile	150.0	0.00	133.20	89		59-141
tert-Butyl alcohol (TBA)	100.0	0.00	103.20	103		61-137
trans-1,2-Dichloroethene	50.0	0.00	53.50	107		70-144
Methyl tert-butyl ether (MTBE	50.0	0.00	55.40	111		70-133
1,1-Dichloroethane	50.0	0.00	55.20	110		69-148
Diisopropyl ether (DIPE)	50.0	0.00	53.80	108		69-145
cis-1,2-Dichloroethene	50.0	0.00	53.50	107		70-140
2,2-Dichloropropane	50.0	0.00	60.20	120		37-149
2-Butanone (MEK)	100.0	0.00	110.30	110		65-147
Bromochloromethane	50.0	0.00	52.60	105		70-136
Chloroform	50.0	0.00	54.30	109		70-143
1,1,1-Trichloroethane	50.0	0.00	60.60	121		70-158
Carbon tetrachloride	50.0	0.00	58.00	116		59-174
1,1-Dichloropropene	50.0	0.00	54.80	110		70-148
1,2-Dichloroethane (EDC)	50.0	0.00	55.50	111		70-141
Benzene	50.0	0.00	54.00	108		70-131
Trichloroethene	50.0	0.00	57.20	114		56-160
1,2-Dichloropropane	50.0	0.00	51.90	104		68-134
Dibromomethane	50.0	0.00	52.40	105		70-130
1,4-Dioxane	1500.0	0.00	0.00	0	*$	67-132
Bromodichloromethane	50.0	0.00	56.50	113		70-135
2-Chloroethyl vinyl ether	100.0	0.00	103.80	104		0-132
cis-1,3-Dichloropropene	50.0	0.00	55.30	111		70-131
4-Methyl-2-pentanone (MIBK	100.0	0.00	107.40	107		70-130
Toluene	50.0	0.00	52.90	106		70-130
trans-1,3-Dichloropropene	50.0	0.00	56.90	114		70-130
1,1,2-Trichloroethane	50.0	0.00	52.50	105		70-130
Tetrachloroethene	50.0	0.00	54.10	108		70-133
1,3-Dichloropropane	50.0	0.00	53.30	107		70-130

SAMPLE MS RESULTS SUMMARY

Lab ID: E23-03388-001
Client ID: TPZ-1
Date Received: NA
Date Analyzed: 07/31/2023
Sample Data file: K3860.D
Sample MS Data file: K3852.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Rec. Limits
2-Hexanone	100	0.00	110.20	110		68-144
Dibromochloromethane	50	0.00	56.70	113		70-140
1,2-Dibromoethane (EDB)	50	0.00	54.50	109		63-137
Chlorobenzene	50	0.00	50.90	102		70-130
1,1,1,2-Tetrachloroethane	50	0.00	53.20	106		68-132
Ethylbenzene	50	0.00	53.50	107		70-131
m,p-Xylene	100	0.00	104.60	105		70-136
o-Xylene	50	0.00	51.10	102		70-130
Styrene	50	0.00	52.00	104		70-139
Bromoform	50	0.00	54.80	110		65-138
Isopropylbenzene	50	0.00	53.30	107		70-133
1,1,2,2-Tetrachloroethane	50	0.00	48.10	96		34-147
Bromobenzene	50	0.00	50.00	100		70-132
1,2,3-Trichloropropane	50	0.00	50.50	101		63-130
n-Propylbenzene	50	0.00	53.60	107		70-130
2-Chlorotoluene	50	0.00	53.10	106		70-130
1,3,5-Trimethylbenzene	50	0.00	52.20	104		70-130
4-Chlorotoluene	50	0.00	52.60	105		70-130
tert-Butylbenzene	50	0.00	52.10	104		70-130
1,2,4-Trimethylbenzene	50	0.00	52.10	104		70-130
sec-Butylbenzene	50	0.00	52.50	105		70-130
1,3-Dichlorobenzene	50	0.00	50.80	102		70-130
4-Isopropyltoluene	50	0.00	52.80	106		70-130
1,4-Dichlorobenzene	50	0.00	50.40	101		70-130
n-Butylbenzene	50	0.00	52.40	105		70-130
1,2-Dichlorobenzene	50	0.00	51.40	103		59-132
1,2-Dibromo-3-chloropropane	50	0.00	52.50	105		63-130
1,2,4-Trichlorobenzene	50	0.00	51.20	102		70-130
Hexachlorobutadiene	50	0.00	53.80	108		52-137
Naphthalene	50	0.00	50.20	100		49-151
1,2,3-Trichlorobenzene	50	0.00	50.20	100		59-130
1,1,2-Trichloro-1,2,2-trifluoro	50	0.00	54.10	108		59-156
Methyl acetate	50	0.00	48.10	96		58-134
Cyclohexane	50	0.00	47.10	94		61-151
Methylcyclohexane	50	0.00	51.90	104		63-142

	Leachate Aqueous/Meoh	Soil/Sediment
MS Recovery Limits (DKQP)	70-130	70-130

Column used to flag recovery and RPD values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
NC Not calculable

SAMPLE MS RESULTS SUMMARY

Lab ID: E23-03388-001
Client ID: TPZ-1
Date Received: NA
Date Analyzed: 07/31/2023
Sample Data file: K3860.D
Sample MS Data file: K3852.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Rec. Limits

2-Chloroethyl vinyl ether has zero spike recovery in the MS. This is due to the HCL acid preservation used on the samples. It is a known phenomenon, that this compound decomposes in the presence of acid.

As per SW-846 8260C, up to 10% of the compounds may be out , but may be within 40-160%
As per NJDEP DKQPs, only the following compounds may be in the 40-160% range:
Acetone; Bromomethane; 2-Butanone (MEK); Carbon disulfide; Chloroethane; Chloromethane
1,2-Dibromo-3-chloropropane; Dichlorodifluoromethane; 1,4-Dioxane; 2-Hexanone
Naphthalene; 4-Methyl-2-pentanone (MIBK); Trichlorofluoromethane

	Leachate Aqueous/Meoh	Soil/Sediment
MS Recovery Limits (DKQP)	70-130	70-130

Column used to flag recovery and RPD values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
NC Not calculable

SAMPLE DUPLICATE RESULTS SUMMARY

Lab ID: E23-03408-001
Client ID: MW-13D-072723
Date Received: 07/27/2023
Date Analyzed: 07/31/2023
Sample Data file: K3863.D
Sample Dup Data file: K3864.D

GC/MS Column: DB-624
Sample wt/vol: 0.1mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 50
Dilution Factor: 50

Compound	Sample Conc.	Sample Dup Conc.	% RPD	#	RPD Limits
Dichlorodifluoromethane	0.00	0.00	NC		30
Chloromethane	0.00	0.00	NC		30
Vinyl chloride	0.90	0.80	12		30
Bromomethane	0.00	0.00	NC		30
Chloroethane	0.00	0.00	NC		30
Trichlorofluoromethane	0.00	0.00	NC		30
Acrolein	0.00	0.00	NC		30
1,1-Dichloroethene	0.00	0.00	NC		30
Acetone	0.00	0.00	NC		30
Carbon disulfide	0.00	0.00	NC		30
Vinyl acetate	0.00	0.00	NC		30
Methylene chloride	0.00	0.00	NC		30
Acrylonitrile	0.00	0.00	NC		30
tert-Butyl alcohol (TBA)	0.00	0.00	NC		30
trans-1,2-Dichloroethene	0.00	0.00	NC		30
Methyl tert-butyl ether (MTBE)	0.00	0.00	NC		30
1,1-Dichloroethane	0.00	0.00	NC		30
Diisopropyl ether (DIPE)	0.00	0.00	NC		30
cis-1,2-Dichloroethene	81.50	77.90	5		30
2,2-Dichloropropane	0.00	0.00	NC		30
2-Butanone (MEK)	0.00	0.00	NC		30
Bromochloromethane	0.00	0.00	NC		30
Chloroform	0.00	0.00	NC		29
1,1,1-Trichloroethane	0.00	0.00	NC		29
Carbon tetrachloride	0.00	0.00	NC		30
1,1-Dichloropropene	0.00	0.00	NC		30
1,2-Dichloroethane (EDC)	0.00	0.00	NC		30
Benzene	0.00	0.00	NC		29
Trichloroethene	165.50	164.70	0		27
1,2-Dichloropropane	0.00	0.00	NC		30
Dibromomethane	0.00	0.00	NC		30
1,4-Dioxane	0.00	0.00	NC		30
Bromodichloromethane	0.00	0.00	NC		30
2-Chloroethyl vinyl ether	0.00	0.00	NC		30
cis-1,3-Dichloropropene	0.00	0.00	NC		30
4-Methyl-2-pentanone (MIBK)	0.00	0.00	NC		30
Toluene	0.00	0.00	NC		27
trans-1,3-Dichloropropene	0.00	0.00	NC		30
1,1,2-Trichloroethane	0.00	0.00	NC		30
Tetrachloroethene	0.70	0.70	0		25
1,3-Dichloropropane	0.00	0.00	NC		30

SAMPLE DUPLICATE RESULTS SUMMARY

Lab ID: E23-03408-001
Client ID: MW-13D-072723
Date Received: 07/27/2023
Date Analyzed: 07/31/2023
Sample Data file: K3863.D
Sample Dup Data file: K3864.D

GC/MS Column: DB-624
Sample wt/vol: 0.1mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 50
Dilution Factor: 50

Compound	Sample Conc.	Sample Dup Conc.	% RPD	#	RPD Limits
2-Hexanone	0.00	0.00	NC		30
Dibromochloromethane	0.00	0.00	NC		30
1,2-Dibromoethane (EDB)	0.00	0.00	NC		30
Chlorobenzene	0.00	0.00	NC		29
1,1,1,2-Tetrachloroethane	0.00	0.00	NC		30
Ethylbenzene	0.00	0.00	NC		30
m,p-Xylene	0.00	0.00	NC		30
o-Xylene	0.00	0.00	NC		30
Styrene	0.00	0.00	NC		30
Bromoform	0.00	0.00	NC		30
Isopropylbenzene	0.00	0.00	NC		29
1,1,2,2-Tetrachloroethane	0.00	0.00	NC		30
Bromobenzene	0.00	0.00	NC		30
1,2,3-Trichloropropane	0.00	0.00	NC		30
n-Propylbenzene	0.00	0.00	NC		30
2-Chlorotoluene	0.00	0.00	NC		30
1,3,5-Trimethylbenzene	0.00	0.00	NC		30
4-Chlorotoluene	0.00	0.00	NC		30
tert-Butylbenzene	0.00	0.00	NC		30
1,2,4-Trimethylbenzene	0.00	0.00	NC		30
sec-Butylbenzene	0.00	0.00	NC		30
1,3-Dichlorobenzene	0.00	0.00	NC		30
4-Isopropyltoluene	0.00	0.00	NC		30
1,4-Dichlorobenzene	0.30	0.40	29		32
n-Butylbenzene	0.00	0.00	NC		30
1,2-Dichlorobenzene	1.90	1.90	0		32
1,2-Dibromo-3-chloropropane	0.00	0.00	NC		30
1,2,4-Trichlorobenzene	0.00	0.00	NC		30
Hexachlorobutadiene	0.00	0.00	NC		30
Naphthalene	0.00	0.00	NC		30
1,2,3-Trichlorobenzene	0.00	0.00	NC		30
1,1,2-Trichloro-1,2,2-trifluoroethane	0.00	0.00	NC		30
Methyl acetate	0.00	0.00	NC		30
Cyclohexane	0.00	0.00	NC		29
Methylcyclohexane	0.00	0.00	NC		29

Column used to flag RPD values that did not meet criteria
* Values outside of QC limits
NC Not calculable

VOLATILE METHOD BLANK SUMMARY

Lab File ID: K3844.D

Instrument ID: MSD_K

Date Analyzed: 07/31/2023

Time Analyzed: 12:18

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS & MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
MW-101DD	E23-03381-001	07/31/2023	12:47
MW-5	E23-03381-002	07/31/2023	13:16
MW-6	E23-03381-003	07/31/2023	13:44
FB	E23-03381-004	07/31/2023	14:13
ESP-MW-3DR	E23-03307-001	07/31/2023	14:42
ESP-MW-3D2R	E23-03307-002	07/31/2023	15:10
LCSA230731-01	LCSA230731-01	07/31/2023	15:39
E23-03388-001MS	E23-03388-001MS	07/31/2023	16:08
FB-3	E23-03307-003	07/31/2023	17:06
TB	E23-03307-004	07/31/2023	17:35
MW-2	E23-03367-001	07/31/2023	18:03
MW-8R	E23-03367-002	07/31/2023	18:32
FIELD	E23-03367-003	07/31/2023	19:01
TRIP	E23-03367-004	07/31/2023	19:30
TPZ-1	E23-03388-001	07/31/2023	19:59
MW-1	E23-03361-001	07/31/2023	20:28
FB-072723	E23-03408-002	07/31/2023	20:57
MW-13D-072723	E23-03408-001	07/31/2023	21:26
MW-13D-072723	E23-03408-001DUP	07/31/2023	21:55

FORM 4

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: K3740.D
BFB Injection Date: 07/24/2023
Inst ID: MSD_K
BFB Injection Time: 14:56

m/z	Ion Abudance Criteria	%Relative Abundance		
95	50 - 200% of mass 174	100		
96	5.0 - 9.0% of mass 95	7.0		
173	Less than 2.0% of mass 174	1.8	(1.5	)1
174	50 - 200% of mass 95	81.5		
175	5.0 - 9.0% of mass 174	5.5	(6.8	)1
176	95.0 - 105.0% of mass 174	79.8	(97.9	)1
177	5.0 - 10.0% of mass 176	4.3	(5.4	)2
	1-Value is % mass 174	2-Value is % mass 176		

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ICC100	ICC230724	K3745.D	07/24/2023	17:28
ICC001	ICC230724	K3741.D	07/24/2023	15:33
ICC00.5	ICC230724	K3742.D	07/24/2023	16:01
ICC005	ICC230724	K3743.D	07/24/2023	16:30
ICC020	ICC230724	K3744.D	07/24/2023	16:59
ICC150	ICC230724	K3746.D	07/24/2023	17:56
ICC200	ICC230724	K3747.D	07/24/2023	18:25
ICV100	ICV230724	K3749.D	07/24/2023	19:22

FORM 5

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: K3840.D
BFB Injection Date: 07/31/2023
Inst ID: MSD_K
BFB Injection Time: 10:23

m/z	Ion Abudance Criteria	%Relative Abundance	
95	50 - 200% of mass 174	100	
96	5.0 - 9.0% of mass 95	6.4	
173	Less than 2.0% of mass 174	2.4	(1.6)1
174	50 - 200% of mass 95	65.6	
175	5.0 - 9.0% of mass 174	4.5	(6.8)1
176	95.0 - 105.0% of mass 174	66.2	(100.9)1
177	5.0 - 10.0% of mass 176	5.0	(7.6)2

1-Value is % mass 174
2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
CCV100	CCV230731-01	K3841.D	07/31/2023	10:51
BLKA230731-01	BLKA230731-01	K3844.D	07/31/2023	12:18
MW-101DD	E23-03381-001	K3845.D	07/31/2023	12:47
MW-5	E23-03381-002	K3846.D	07/31/2023	13:16
MW-6	E23-03381-003	K3847.D	07/31/2023	13:44
FB	E23-03381-004	K3848.D	07/31/2023	14:13
ESP-MW-3DR	E23-03307-001	K3849.D	07/31/2023	14:42
ESP-MW-3D2R	E23-03307-002	K3850.D	07/31/2023	15:10
LCSA230731-01	LCSA230731-01	K3851.D	07/31/2023	15:39
E23-03388-001MS	E23-03388-001MS	K3852.D	07/31/2023	16:08
FB-3	E23-03307-003	K3854.D	07/31/2023	17:06
TB	E23-03307-004	K3855.D	07/31/2023	17:35
MW-2	E23-03367-001	K3856.D	07/31/2023	18:03
MW-8R	E23-03367-002	K3857.D	07/31/2023	18:32
FIELD	E23-03367-003	K3858.D	07/31/2023	19:01
TRIP	E23-03367-004	K3859.D	07/31/2023	19:30
TPZ-1	E23-03388-001	K3860.D	07/31/2023	19:59
MW-1	E23-03361-001	K3861.D	07/31/2023	20:28
FB-072723	E23-03408-002	K3862.D	07/31/2023	20:57
MW-13D-072723	E23-03408-001	K3863.D	07/31/2023	21:26

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: K3840.D

Inst ID: MSD_K

BFB Injection Date : 07/31/202

BFB Injection Time: 10:23

m/z	Ion Abudance Criteria	%Relative Abundance
50		24.2
75		50.1
95	50 - 200% of mass 174	100.0
96	5.0 - 9.0% of mass 95	6.4
173	Less than 2.0% of mass 174	2.4 (1.6)1
174	50 - 200% of mass 95	65.6
175	5.0 - 9.0% of mass 174	4.5 (6.8)1
176	95.0 - 105.0% of mass 174	66.2 (100.9)1
177	5.0 - 10.0% of mass 176	5.0 (7.6)2
	1-Value is % mass 174	2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
MW-13D-072723	E23-03408-001DL	K3864.D	07/31/2023	21:55

VOLATILE INTERNAL STANDARD/SURROGATE AREA AND RT SUMMARY

Lab File ID (Standard): K3745.D Date Analyzed: 07/24/2023

Instrument ID: MSD_K Time Analyzed: 17:28

	5ug/L	IS1 AREA #	IS1 RT #	SS1 AREA #	SS1 RT #	SS2 AREA #	SS2 RT #
	12 HOUR STD	112	5.79	288821	6.61	510459	9.95
	UPPER LIMIT	145.6	6.29	375467.3	7.11	663596.7	10.45
	LOWER LIMIT	78.4	5.29	202174.7	6.11	357321.3	9.45
	LAB SAMPLE ID						
01	ICC230724	101	5.79	300225	6.61	513198	9.95
02	ICC230724	101	5.79	282396	6.61	479730	9.95
03	ICC230724	103	5.80	280189	6.61	480430	9.95
04	ICC230724	110	5.79	271970	6.62	476646	9.95
05	ICC230724	110	5.79	319841	6.61	559338	9.95
06	ICC230724	108	5.79	347693	6.61	612638	9.95
07	ICV230724	99	5.79	347405	6.61	605565	9.95
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 = Fluorobenzene
SS1 = Bromofluorobenzene
SS2 = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = +30% of internal standard area
AREA LOWER LIMIT = -30% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.
** CCV not subject to upper limit criteria (Sec 10.3.4, EPA 524.2)

FORM 8

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): K3841.D

Date Analyzed: 07/31/2023

Instrument ID: MSD_K

Time Analyzed: 10:51

	50UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	286027	5.79	478308	6.61	532853	9.95
	UPPER LIMIT	572054	6.29	956616	7.11	1065706	10.45
	LOWER LIMIT	143013.5	5.29	239154	6.11	266426.5	9.45
	LAB SAMPLE ID						
01	BLKA230731-01	271009	5.80	461415	6.61	469921	9.95
02	E23-03381-001	255413	5.80	438681	6.61	446950	9.95
03	E23-03381-002	251245	5.79	434918	6.61	437711	9.95
04	E23-03381-003	246601	5.80	425641	6.62	422970	9.95
05	E23-03381-004	247890	5.80	428852	6.61	420793	9.95
06	E23-03307-001	242188	5.80	421528	6.61	430611	9.95
07	E23-03307-002	245296	5.80	422314	6.61	435886	9.95
08	LCSA230731-01	264082	5.80	452998	6.61	480219	9.95
09	E23-03388-001MS	265734	5.79	463836	6.61	499799	9.95
10	E23-03307-003	257928	5.80	445677	6.61	456369	9.95
11	E23-03307-004	253684	5.80	432595	6.61	443793	9.95
12	E23-03367-001	239426	5.79	414671	6.62	412590	9.95
13	E23-03367-002	297338	5.79	454817	6.61	462280	9.95
14	E23-03367-003	253963	5.79	425895	6.61	432119	9.95
15	E23-03367-004	245912	5.79	418887	6.61	434087	9.95
16	E23-03388-001	237914	5.79	409806	6.62	419248	9.95
17	E23-03361-001	233716	5.79	404006	6.61	421982	9.95
18	E23-03408-002	229599	5.79	394750	6.61	415577	9.95
19	E23-03408-001	223612	5.80	392674	6.61	412033	9.95
20	E23-03408-001DUP	223656	5.79	385278	6.61	404536	9.95
21							
22							

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +200% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM 8

VOLATILE ORGANICS SAMPLE DATA

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3863.D
Acq On : 31 Jul 2023 21:26
Operator : BARBARA
Sample : MW-13D-072723,E23-03408-001,A,0.1mL,100
Misc : EWMA/SWIVELIER,07/27/23,07/27/23,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Jul 20 09:43:02 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

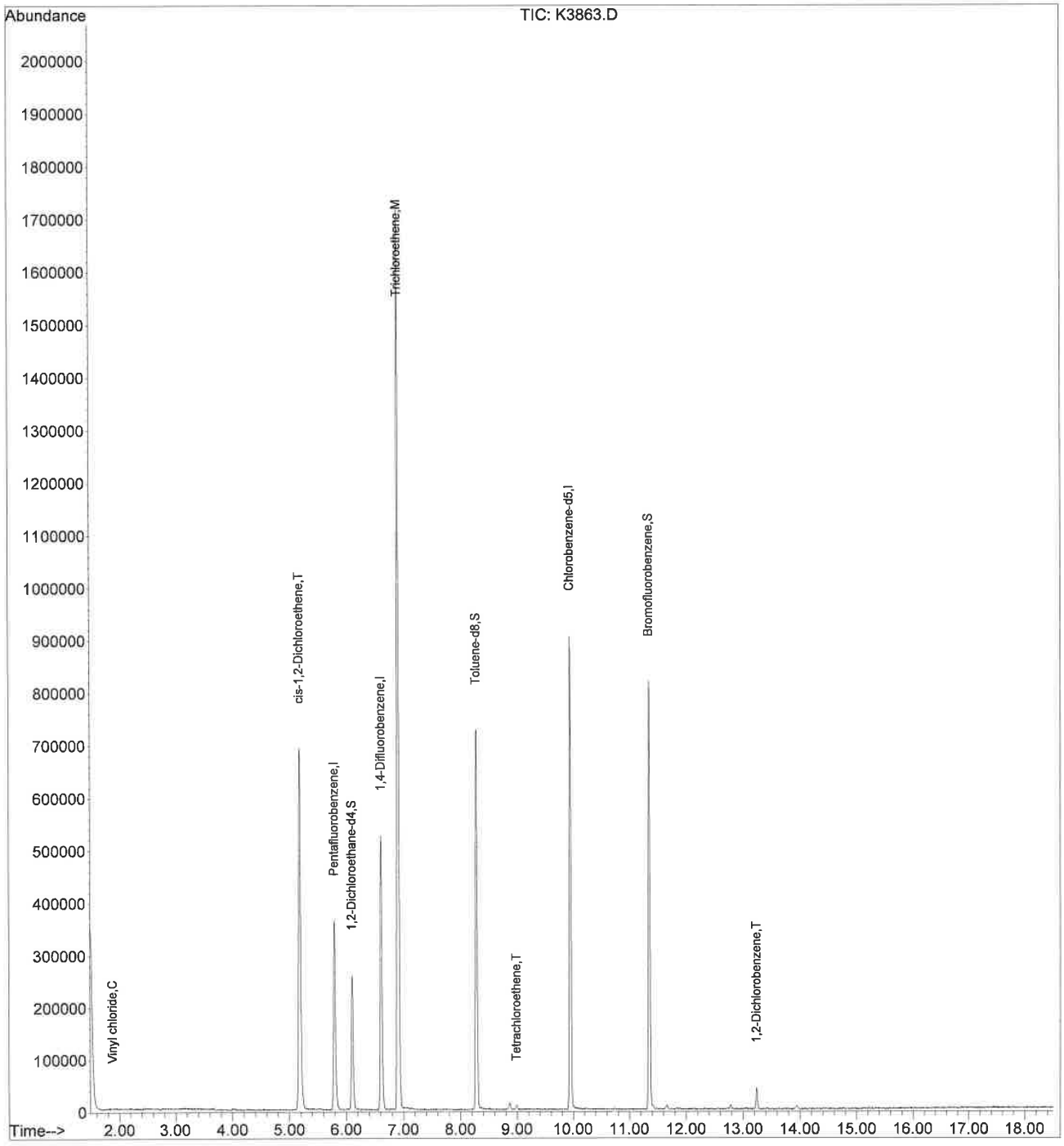
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	5.80	168	223612	50.00	UG		0.00
31) 1,4-Difluorobenzene	6.61	114	392674	50.00	UG		0.00
50) Chlorobenzene-d5	9.95	117	412033	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.10	65	238313	57.08	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 114.16%				
41) Toluene-d8	8.28	98	496689	50.02	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.04%				
59) Bromofluorobenzene	11.35	95	298030	50.94	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.88%				
Target Compounds							Qvalue
4) Vinyl chloride	1.89	62	2488m	0.86	UG		
20) cis-1,2-Dichloroethene	5.18	96	312537	81.54	UG	#	67
33) Trichloroethene	6.91	95	646061	165.48	UG	#	72
45) Tetrachloroethene	8.99	166	2240m	0.69	UG		
74) 1,2-Dichlorobenzene	13.23	146	13661	1.88	UG		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

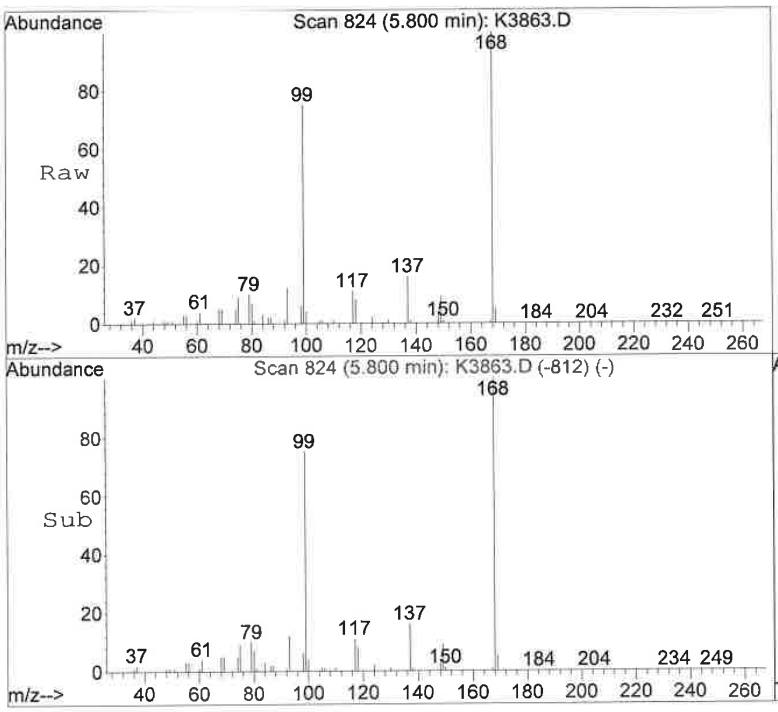
Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3863.D
Acq On : 31 Jul 2023 21:26
Operator : BARBARA
Sample : MW-13D-072723,E23-03408-001,A,0.1mL,100
Misc : EWMA/SWIVELIER,07/27/23,07/27/23,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Jul 20 09:43:02 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

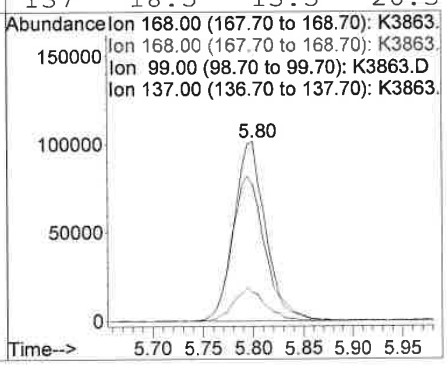


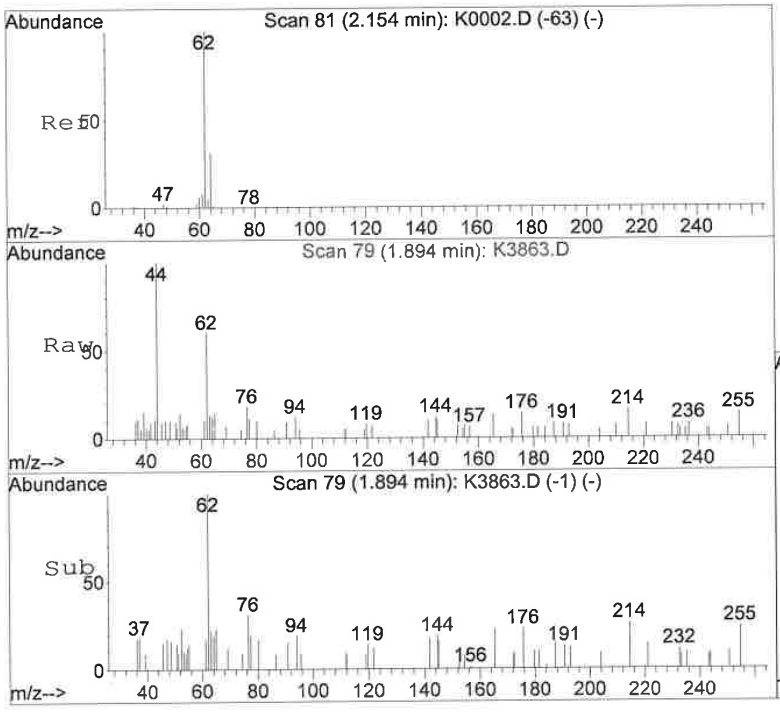
K8230724.M Thu Aug 17 10:22:00 2023 Page: 2



#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 5.80 min Scan# 824
Delta R.T. 0.01 min
Lab File: K3863.D
Acq: 31 Jul 2023 21:26

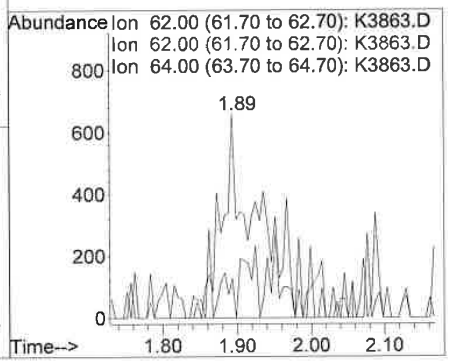
Tgt Ion:168	Resp:	223612	
Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	84.4	53.3	79.9#
137	18.5	13.5	20.3

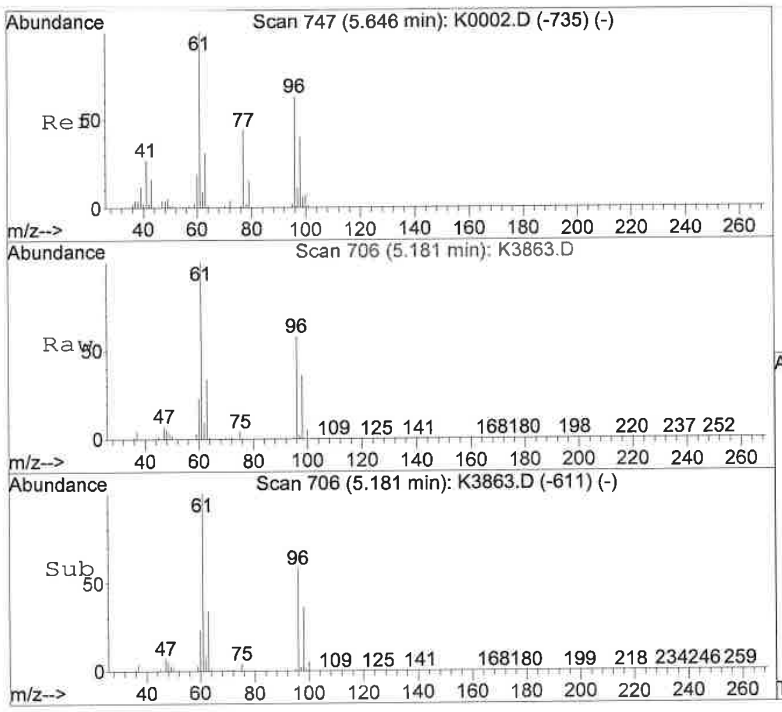




#4
Vinyl chloride
Concen: 0.86 UG m
RT: 1.89 min Scan# 79
Delta R.T. -0.05 min
Lab File: K3863.D
Acq: 31 Jul 2023 21:26

Tgt Ion: 62	Resp:	2488	
Ion	Ratio	Lower	Upper
62	100		
62	30.0	80.0	120.0#
64	0.0	25.5	38.3#

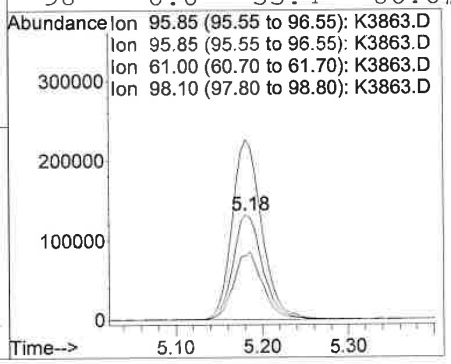


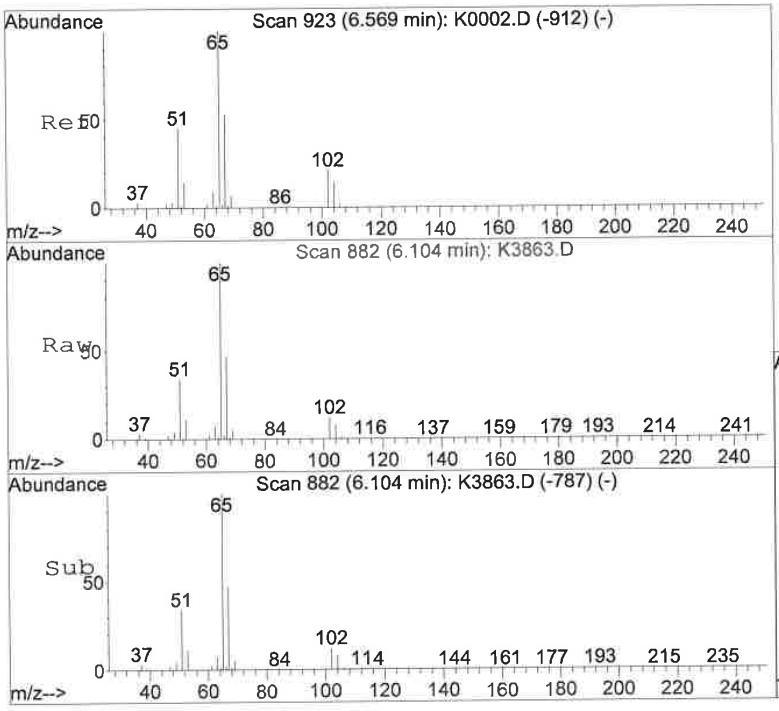


#20
cis-1,2-Dichloroethene
Concen: 81.54 UG
RT: 5.18 min Scan# 706
Delta R.T. -0.00 min
Lab File: K3863.D
Acq: 31 Jul 2023 21:26

Tgt Ion: 96 Resp: 312537

Ion	Ratio	Lower	Upper
96	100		
96	100.0	80.0	120.0
61	172.3	0.0	0.0#
98	0.0	53.4	80.0#

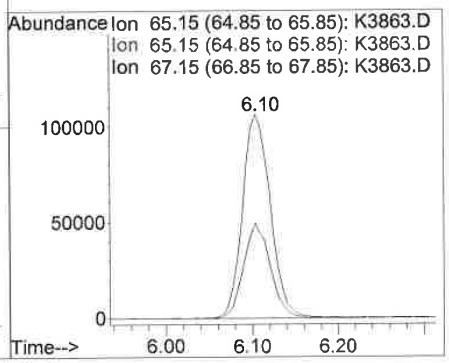


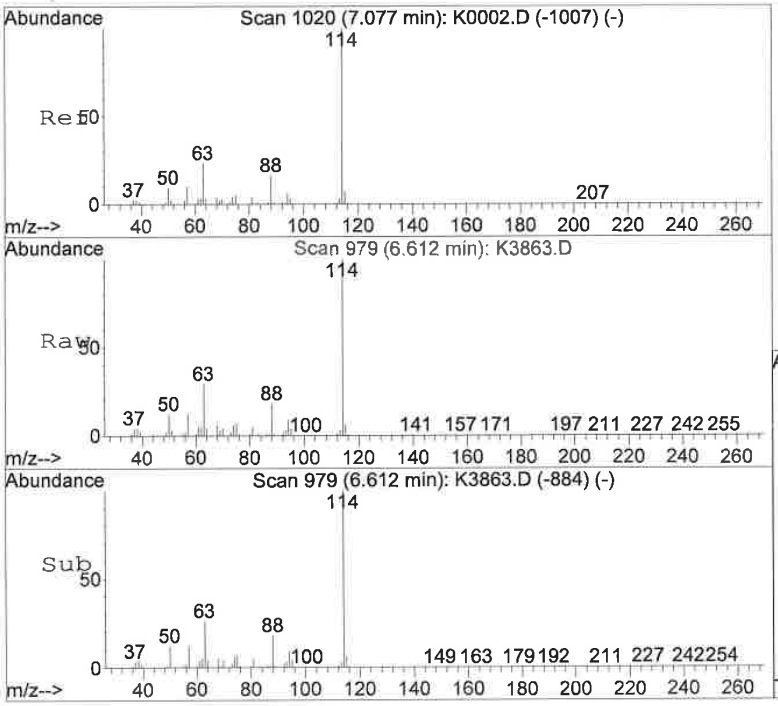


#30
1,2-Dichloroethane-d4
Concen: 57.08 UG
RT: 6.10 min Scan# 882
Delta R.T. -0.00 min
Lab File: K3863.D
Acq: 31 Jul 2023 21:26

Tgt Ion: 65 Resp: 238313

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	44.5	43.5	65.3

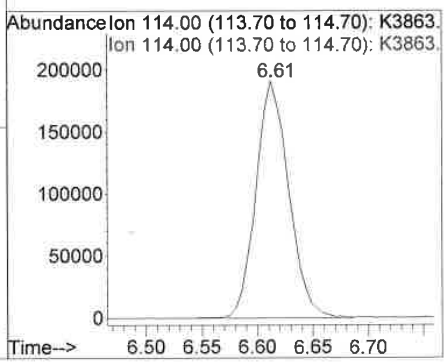


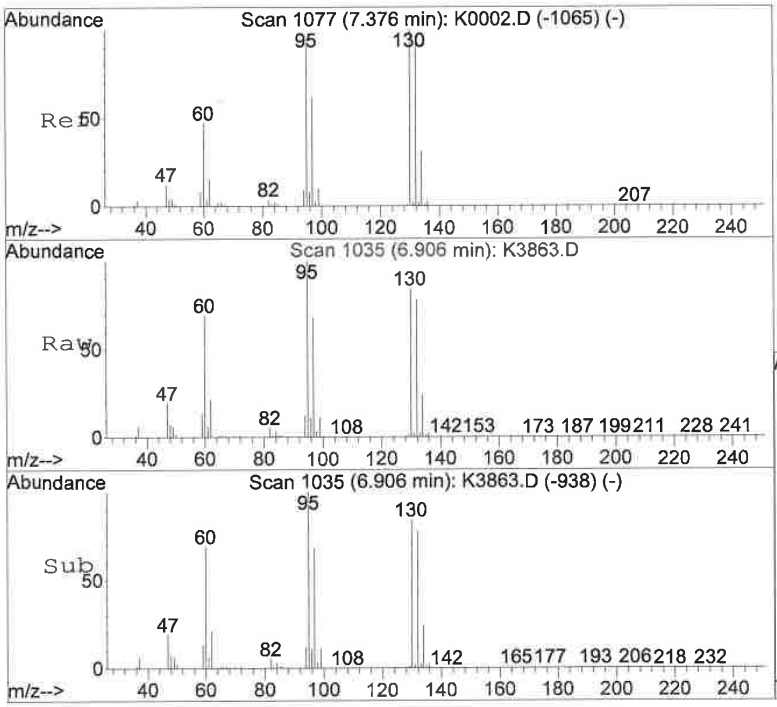


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 6.61 min Scan# 979
Delta R.T. -0.00 min
Lab File: K3863.D
Acq: 31 Jul 2023 21:26

Tgt Ion:114 Resp: 392674

Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

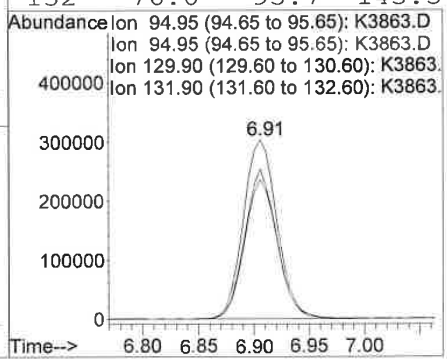


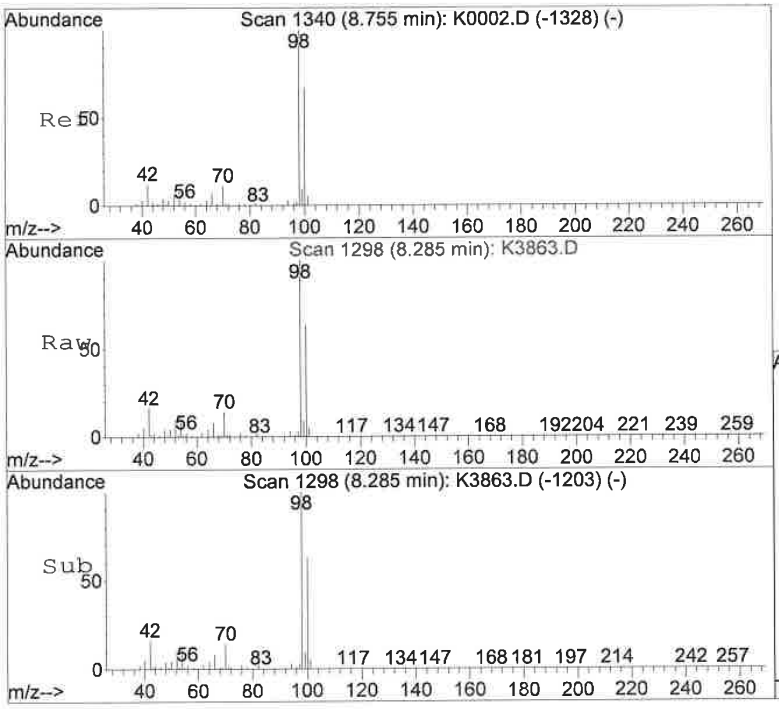


#33
Trichloroethene
Concen: 165.48 UG
RT: 6.91 min Scan# 1035
Delta R.T. 0.01 min
Lab File: K3863.D
Acq: 31 Jul 2023 21:26

Tgt Ion: 95 Resp: 646061

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
130	79.3	99.2	148.8#
132	76.0	95.7	143.5#

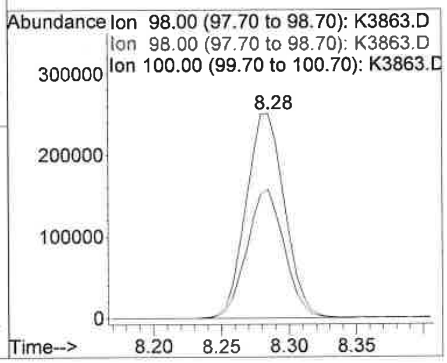


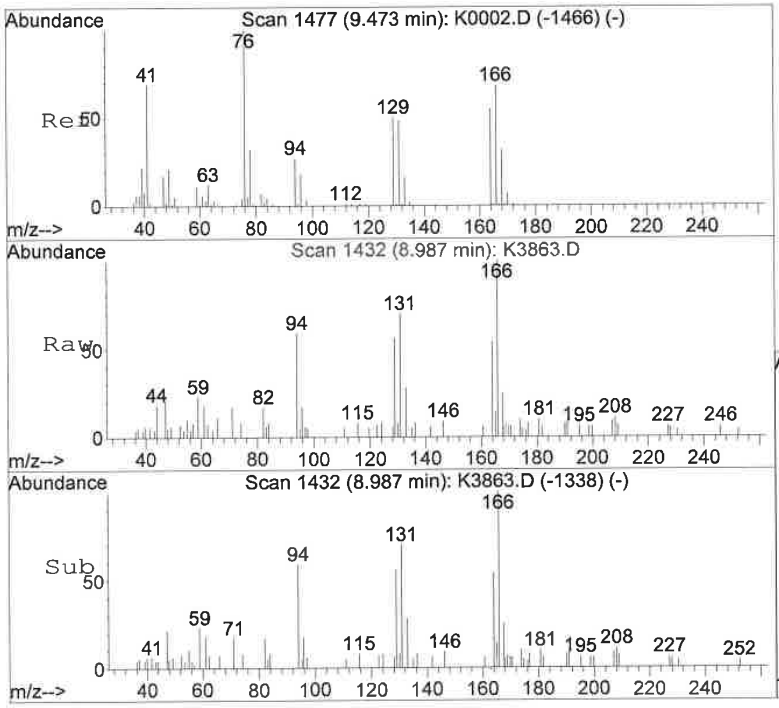


#41
Toluene-d8
Concen: 50.02 UG
RT: 8.28 min Scan# 1298
Delta R.T. -0.00 min
Lab File: K3863.D
Acq: 31 Jul 2023 21:26

Tgt Ion: 98 Resp: 496689

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	61.0	52.0	78.0

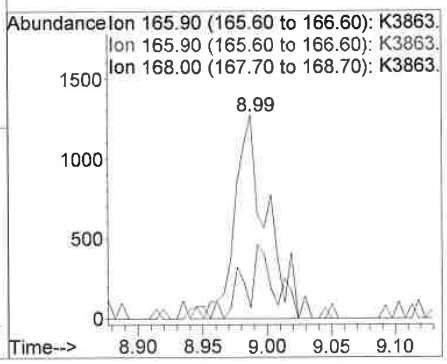


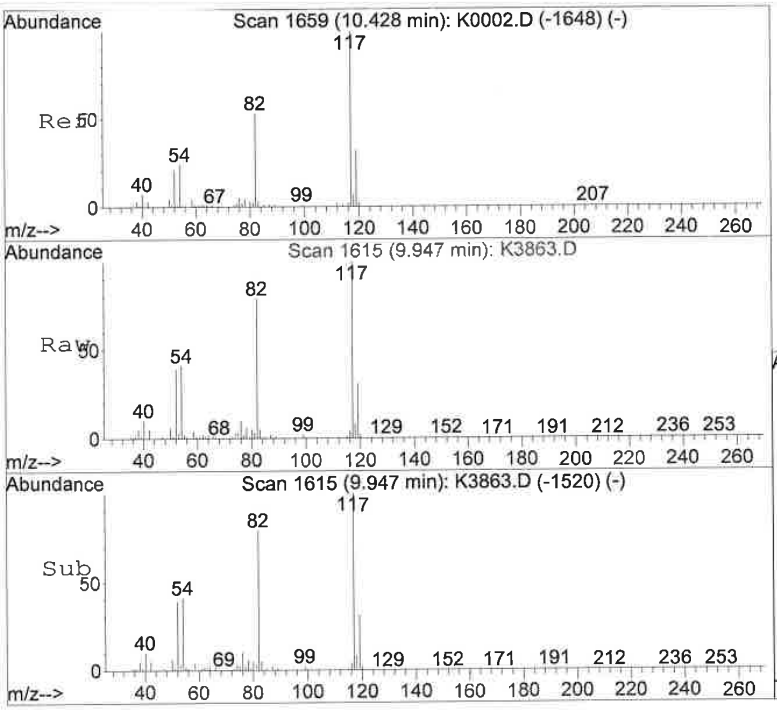


#45
Tetrachloroethene
Concen: 0.69 UG m
RT: 8.99 min Scan# 1432
Delta R.T. -0.01 min
Lab File: K3863.D
Acq: 31 Jul 2023 21:26

Tgt Ion:166 Resp: 2240

Ion	Ratio	Lower	Upper
166	100		
166	1.6	80.0	120.0#
168	0.9	38.2	57.2#

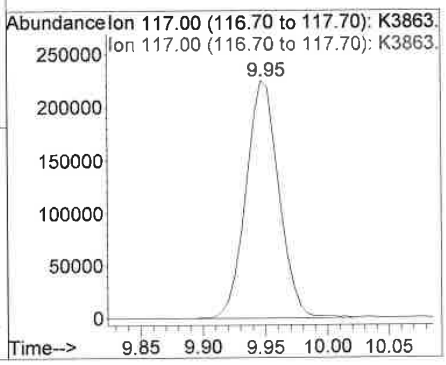


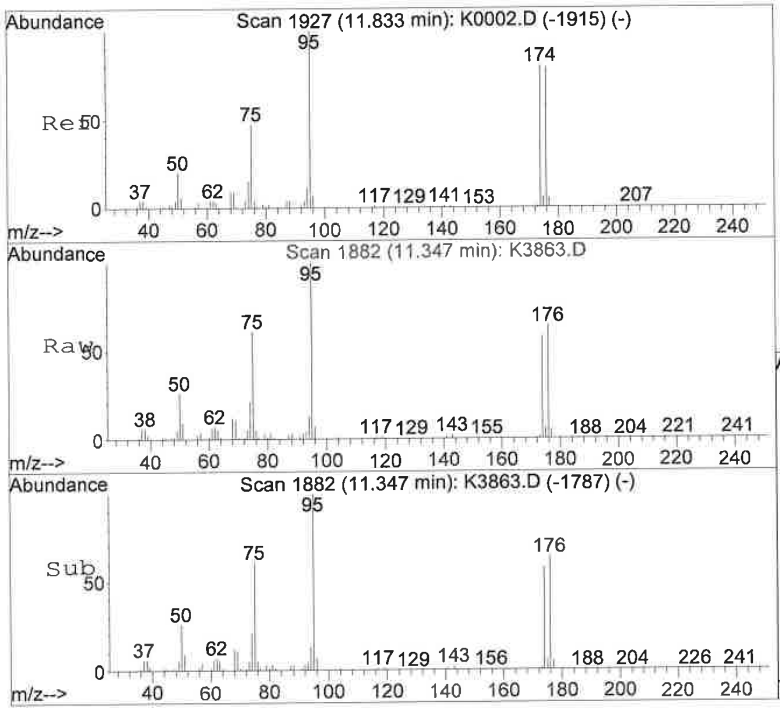


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 9.95 min Scan# 1615
Delta R.T. -0.00 min
Lab File: K3863.D
Acq: 31 Jul 2023 21:26

Tgt Ion:117 Resp: 412033

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0

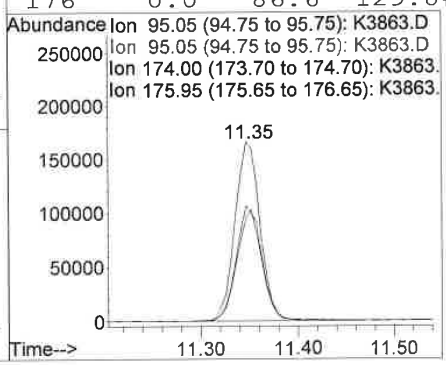


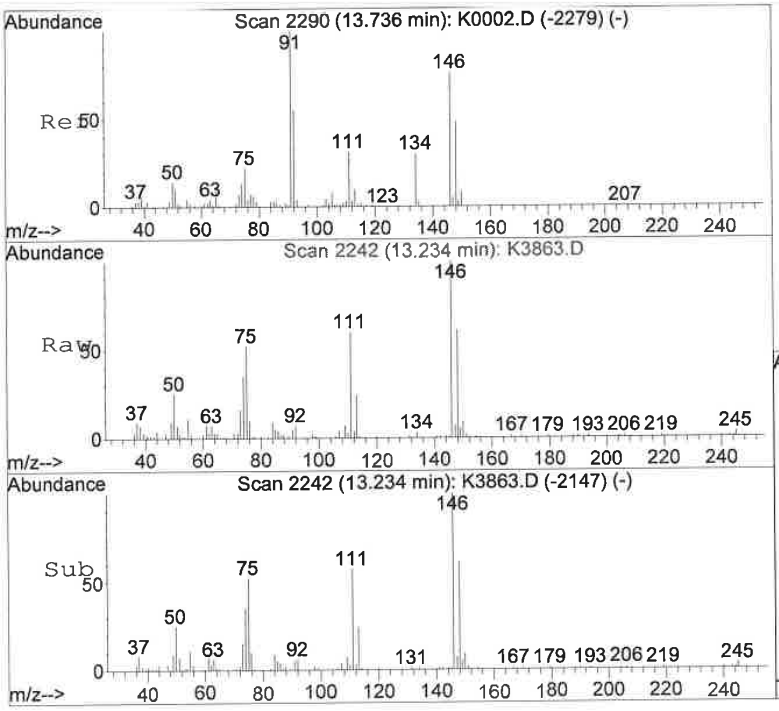


#59
Bromofluorobenzene
Concen: 50.94 UG
RT: 11.35 min Scan# 1882
Delta R.T. -0.00 min
Lab File: K3863.D
Acq: 31 Jul 2023 21:26

Tgt Ion: 95 Resp: 298030

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	0.0	89.0	133.6#
176	0.0	86.6	129.8#

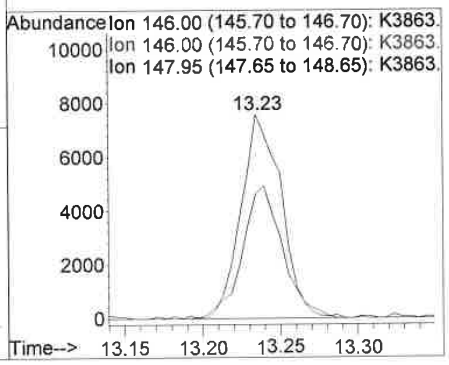




#74
1,2-Dichlorobenzene
Concen: 1.88 UG
RT: 13.23 min Scan# 2242
Delta R.T. -0.00 min
Lab File: K3863.D
Acq: 31 Jul 2023 21:26

Tgt Ion:146 Resp: 13661

Ion	Ratio	Lower	Upper
146	100		
146	100.0	80.0	120.0
148	64.0	50.6	75.8



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3863.D
Acq On : 31 Jul 2023 21:26
Operator : BARBARA
Sample : MW-13D-072723,E23-03408-001,A,0.1mL,100
Misc : EWMA/SWIVELIER,07/27/23,07/27/23,1
ALS Vial : 24 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON
Sampling : 1
Start Thrs: 0.07
Stop Thrs : 0.2

Filtering: 5
Min Area: 1 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\K8230724.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260D

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	5.181	691	706	736	rBV	690137	1702269	47.71%	13.654%
2	5.794	812	823	849	rBV	362876	828735	23.23%	6.647%
3	6.104	869	882	898	rBV2	256413	573410	16.07%	4.599%
4	6.612	966	979	994	rBV2	524919	1111611	31.15%	8.916%
5	6.906	1024	1035	1053	rBV	1720355	3568135	100.00%	28.621%
6	8.285	1286	1298	1310	rBV	725219	1434365	40.20%	11.505%
7	9.947	1604	1615	1640	rBV	903974	1677887	47.02%	13.459%
8	11.347	1871	1882	1903	rBV	817122	1495981	41.93%	11.999%
9	13.234	2235	2242	2253	rVB2	40391	74645	2.09%	0.599%

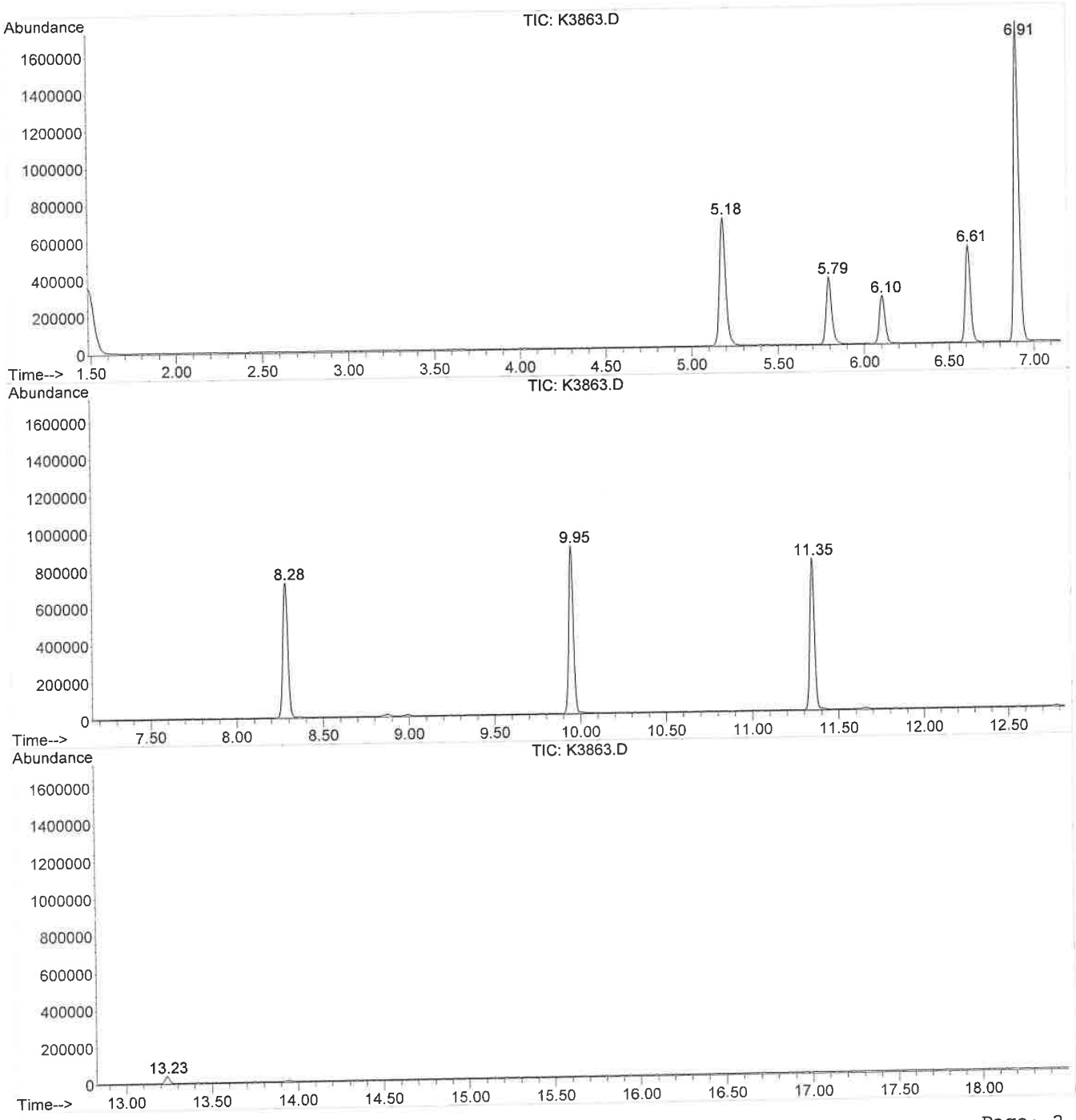
Sum of corrected areas: 12467038

LSC Report - Integrated Chromatogram

```
Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3863.D
Acq On    : 31 Jul 2023  21:26
Operator  : BARBARA
Sample    : MW-13D-072723,E23-03408-001,A,0.1mL,100
Misc      : EWMA/SWIVELIER,07/27/23,07/27/23,1
ALS Vial  : 24   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title  : VOLATILE ORGANICS BY EPA METHOD 8260D

TIC Library   : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P
```



K8230724.M Thu Jul 20 09:40:18 2023 Page: 2

Tentatively Identified Compound (LSC) summary

Data Path : C:\MSDChem\1\DATA\23-07-31\\
Data File : K3863.D
Acq On : 31 Jul 2023 21:266
Operator : BARBARAA
Sample : MW-13D-072723,E23-03408-001,A,0.1mL,1000
Misc : EWMA/SWIVELIER,07/27/23,07/27/23,11
ALS Vial : 24 Sample Multiplier: 11

Quant Method : C:\MSDCHEM\1\METHODS\K8230724.MM
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260DD

TIC Library : C:\DATABASE\NIST05A.LL
TIC Integration Parameters: LSCINT.PP

TIC Top Hit name	RT	EstConc	Units	Response	--Internal Standard--- #	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3862.D
Acq On : 31 Jul 2023 20:57
Operator : BARBARA
Sample : FB-072723,E23-03408-002,A,5mL,100
Misc : EWMA/SWIVELIER,07/27/23,07/27/23,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jul 20 09:38:59 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	5.79	168	229599	50.00	UG	0.00
31) 1,4-Difluorobenzene	6.61	114	394750	50.00	UG	0.00
50) Chlorobenzene-d5	9.95	117	415577	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.10	65	235682	54.98	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 109.96%			
41) Toluene-d8	8.28	98	506568	50.75	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.50%			
59) Bromofluorobenzene	11.35	95	304432	51.59	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.18%			

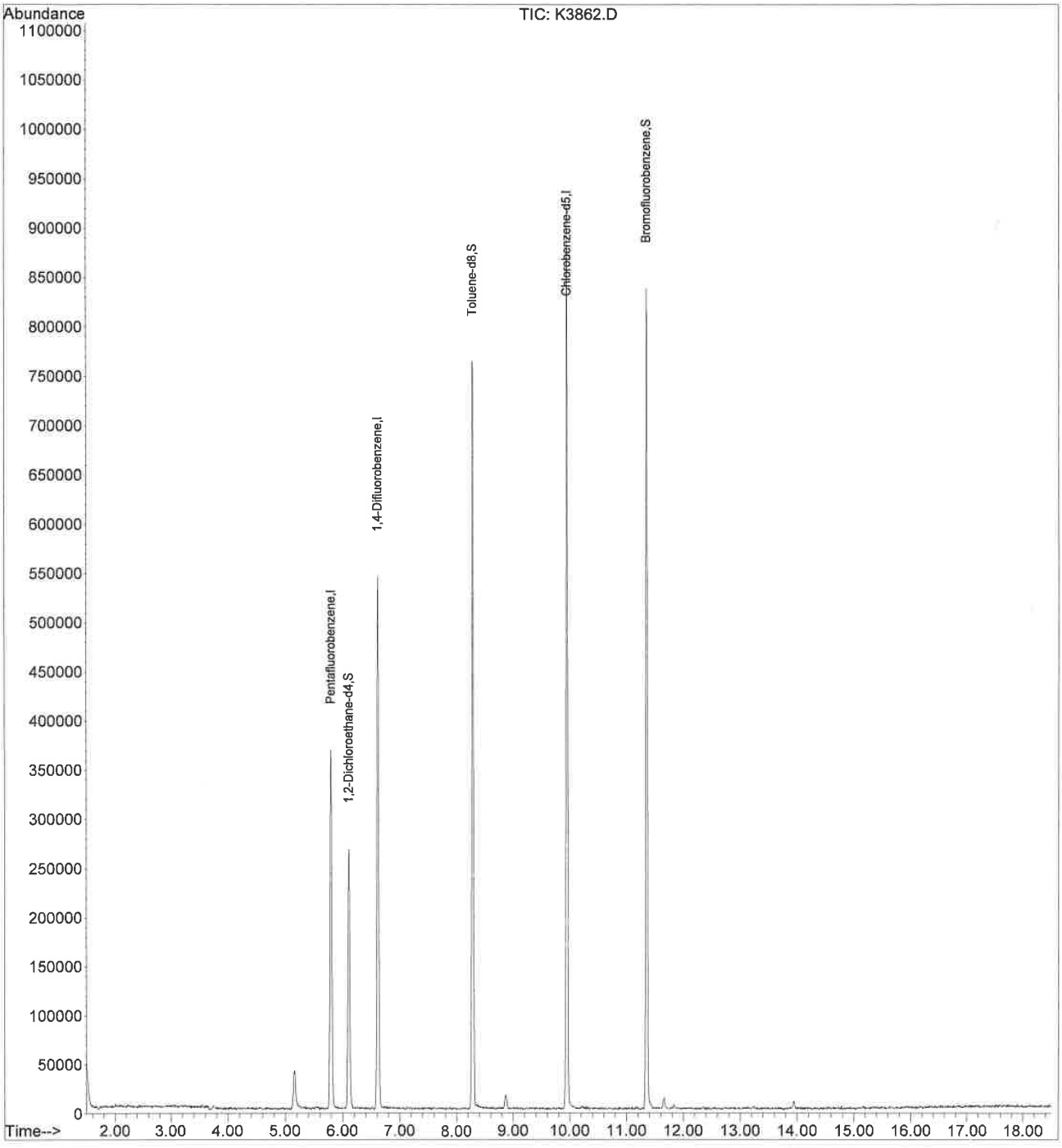
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

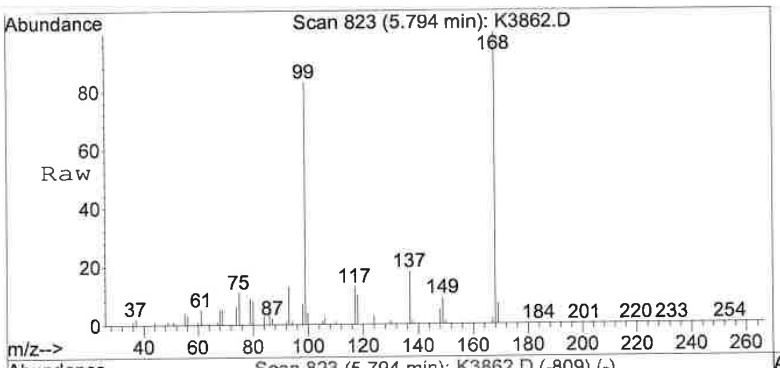
Quantitation Report (QT/LSC Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3862.D
Acq On : 31 Jul 2023 20:57
Operator : BARBARA
Sample : FB-072723,E23-03408-002,A,5mL,100
Misc : EWMA/SWIVELIER,07/27/23,07/27/23,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jul 20 09:38:59 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

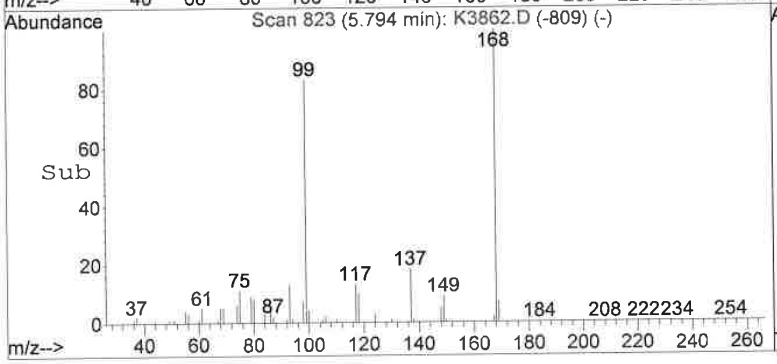


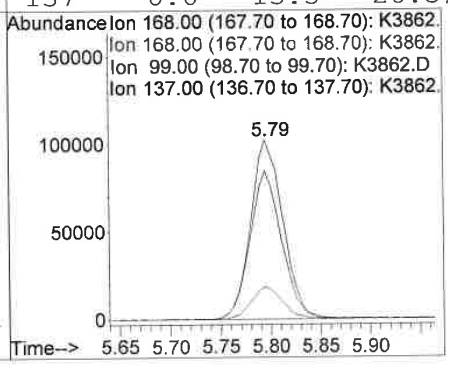
K8230724.M Thu Aug 17 10:21:11 2023 Page: 2

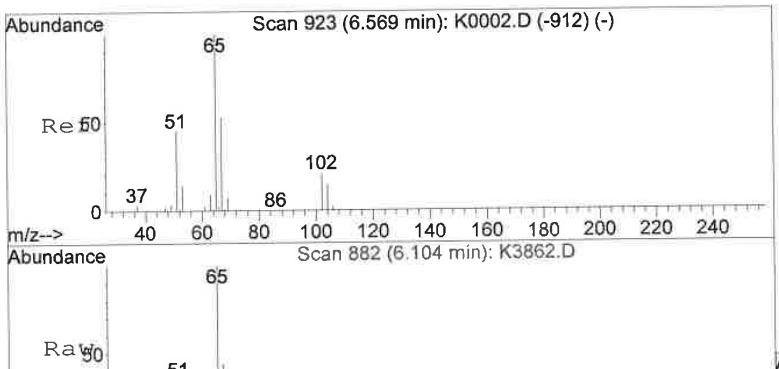


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 5.79 min Scan# 823
Delta R.T. -0.00 min
Lab File: K3862.D
Acq: 31 Jul 2023 20:57

Tgt Ion:168	Resp:	229599	
Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	0.0	53.3	79.9#
137	0.0	13.5	20.3#

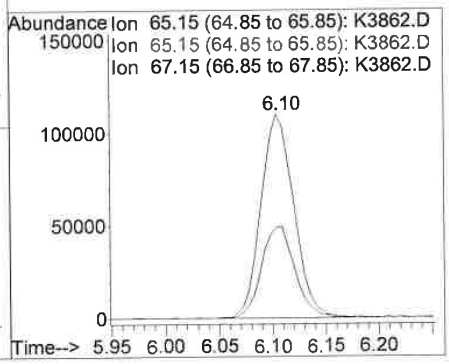


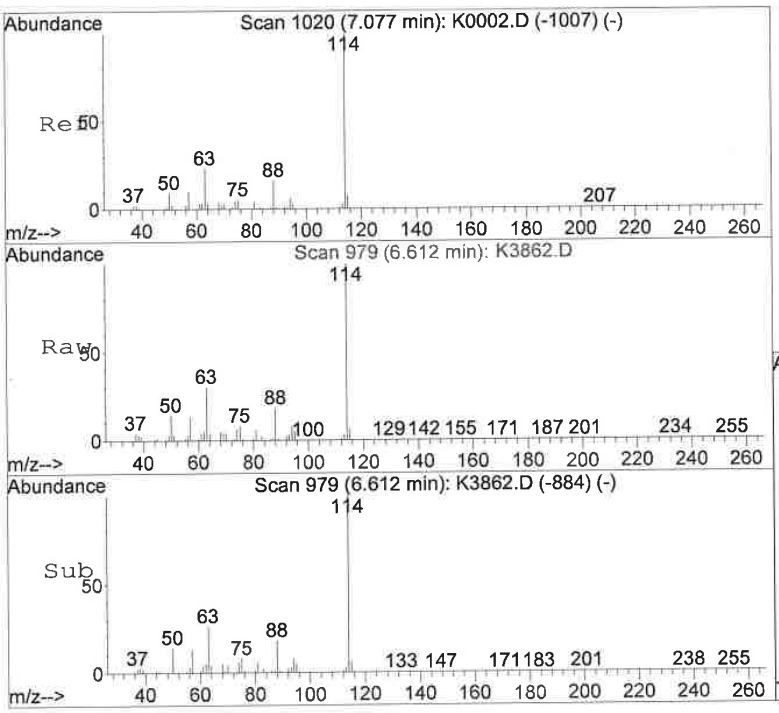




#30
1,2-Dichloroethane-d4
Concen: 54.98 UG
RT: 6.10 min Scan# 882
Delta R.T. -0.00 min
Lab File: K3862.D
Acq: 31 Jul 2023 20:57

Tgt Ion: 65	Resp:	235682	
Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	45.7	43.5	65.3

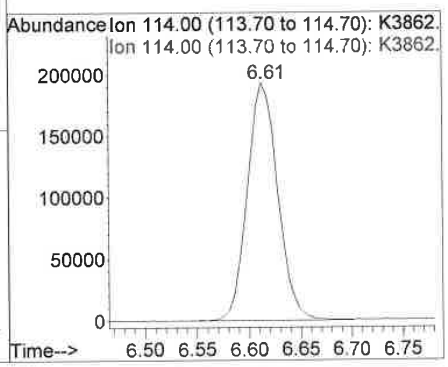


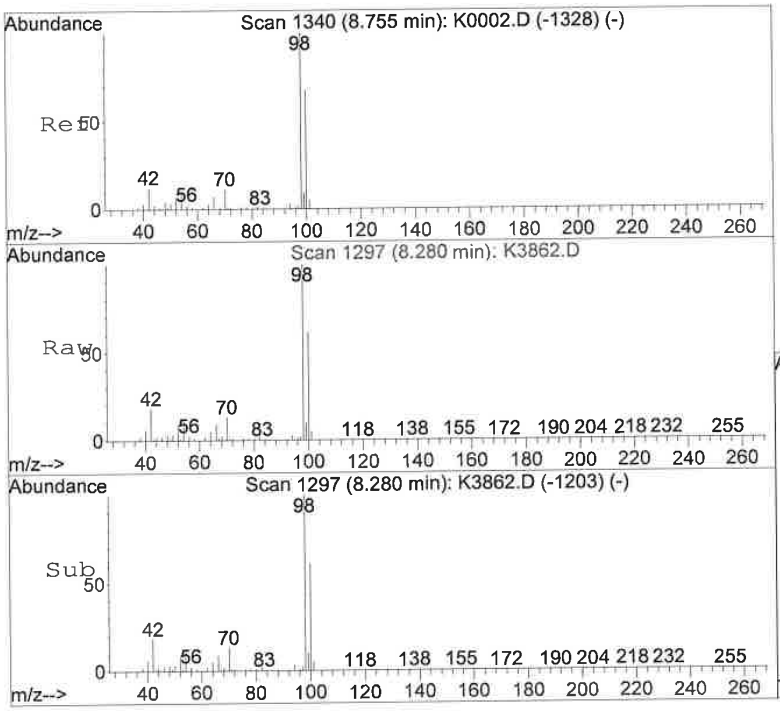


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 6.61 min Scan# 979
Delta R.T. -0.00 min
Lab File: K3862.D
Acq: 31 Jul 2023 20:57

Tgt Ion:114 Resp: 394750

Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

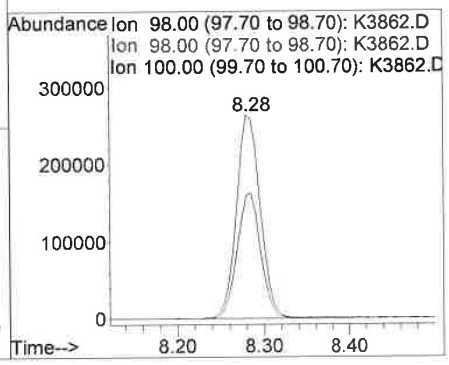


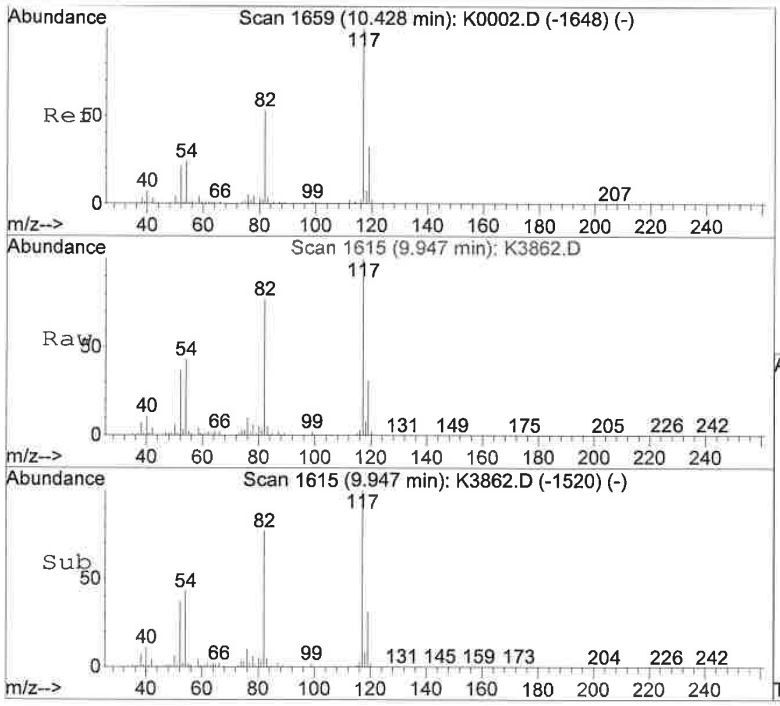


#41
Toluene-d8
Concen: 50.75 UG
RT: 8.28 min Scan# 1297
Delta R.T. -0.01 min
Lab File: K3862.D
Acq: 31 Jul 2023 20:57

Tgt Ion: 98 Resp: 506568

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	60.5	52.0	78.0

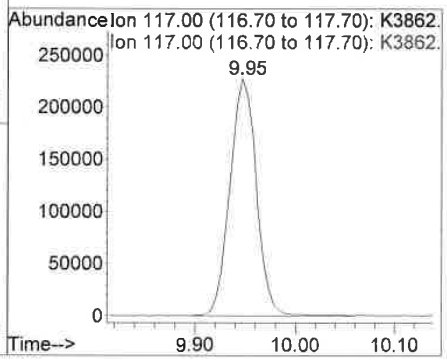


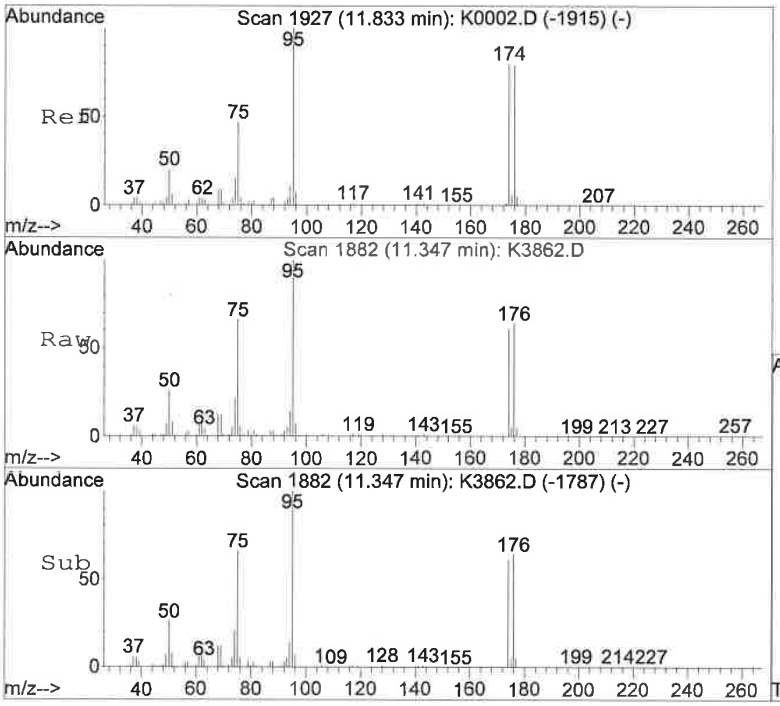


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 9.95 min Scan# 1615
Delta R.T. -0.00 min
Lab File: K3862.D
Acq: 31 Jul 2023 20:57

Tgt Ion:117 Resp: 415577

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0

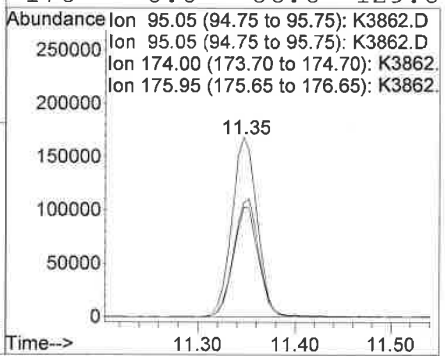




#59
Bromofluorobenzene
Concen: 51.59 UG
RT: 11.35 min Scan# 1882
Delta R.T. -0.00 min
Lab File: K3862.D
Acq: 31 Jul 2023 20:57

Tgt Ion: 95 Resp: 304432

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	0.0	89.0	133.6#
176	0.0	86.6	129.8#



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3862.D
Acq On : 31 Jul 2023 20:57
Operator : BARBARA
Sample : FB-072723,E23-03408-002,A,5mL,100
Misc : EWMA/SWIVELIER,07/27/23,07/27/23,1
ALS Vial : 23 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.07 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\K8230724.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260D

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	5.160	689	702	726	rBV2	40343	130988	7.80%	1.766%
2	5.794	813	823	839	rBV	366504	819670	48.81%	11.053%
3	6.104	871	882	899	rBV2	265147	583499	34.74%	7.869%
4	6.612	966	979	998	rBV	542866	1116013	66.45%	15.050%
5	8.280	1284	1297	1324	rBV	760877	1476889	87.94%	19.916%
6	8.867	1402	1409	1420	rVB3	14252	38149	2.27%	0.514%
7	9.947	1605	1615	1653	rVB	918583	1679444	100.00%	22.648%
8	11.347	1871	1882	1906	rBV	835125	1522932	90.68%	20.537%
9	11.656	1934	1941	1959	rVB10	11658	30708	1.83%	0.414%
10	13.942	2370	2377	2386	rVB3	8021	17286	1.03%	0.233%

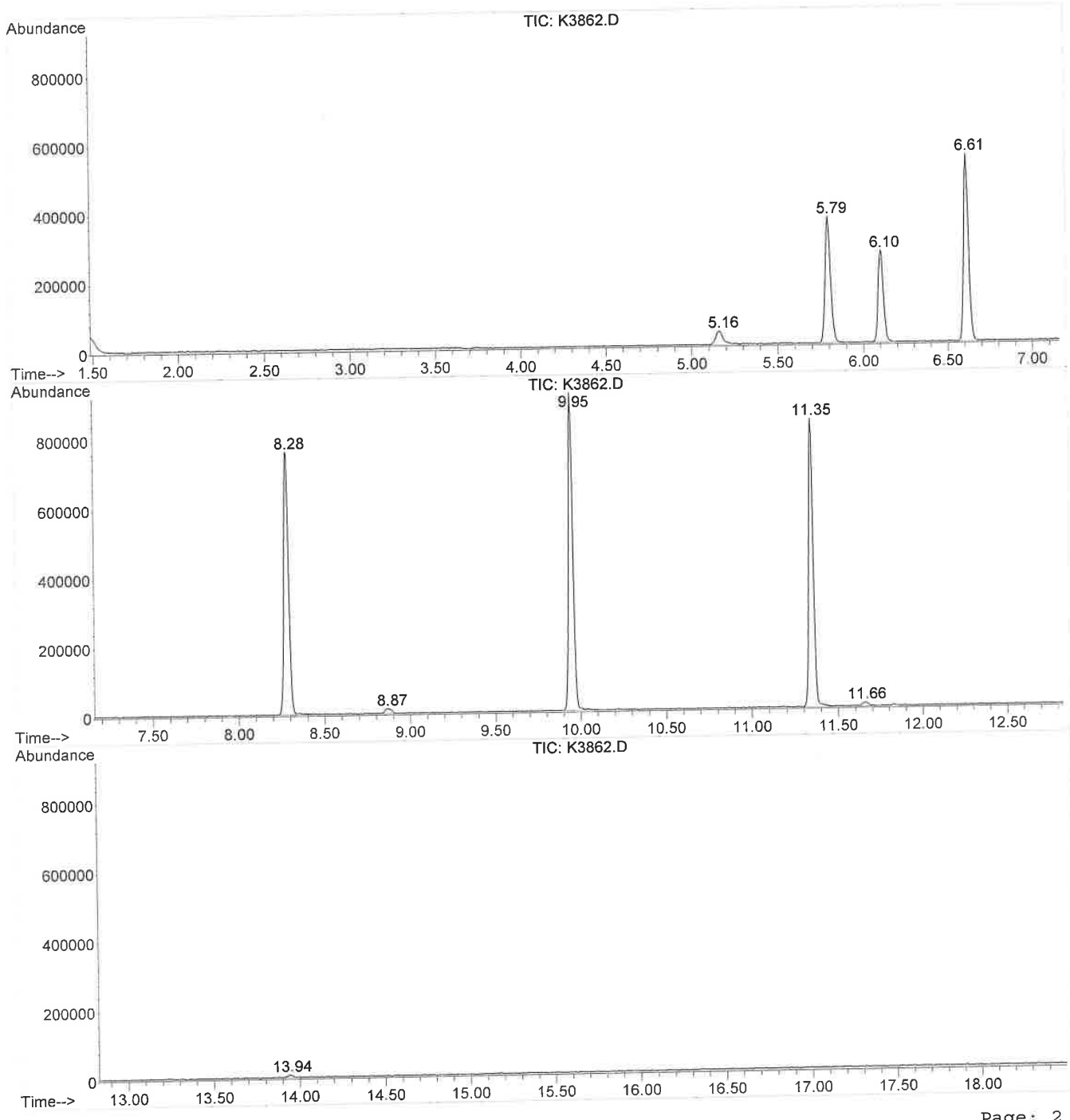
Sum of corrected areas: 7415578

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3862.D
Acq On : 31 Jul 2023 20:57
Operator : BARBARA
Sample : FB-072723,E23-03408-002,A,5mL,100
Misc : EWMA/SWIVELIER,07/27/23,07/27/23,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P



K8230724.M Thu Jul 20 09:39:20 2023

Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3862.D
Acq On : 31 Jul 2023 20:57
Operator : BARBARA
Sample : FB-072723,E23-03408-002,A,5mL,100
Misc : EWMA/SWIVELIER,07/27/23,07/27/23,1
ALS Vial : 23 Sample Multiplier: 1

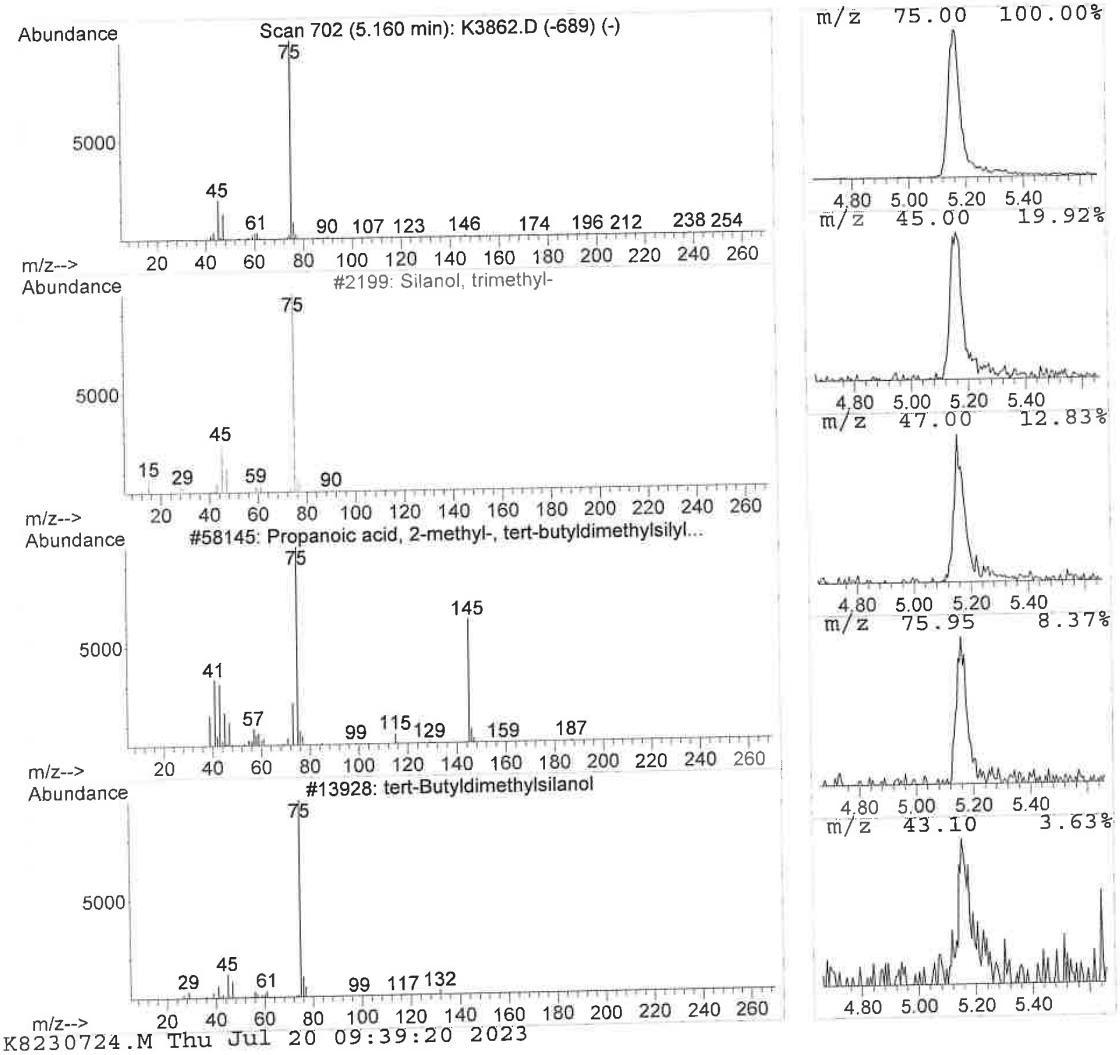
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

****
Peak Number 1 Column/Septa bleed Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.16	7.99 UG	130988	Pentafluorobenzene	5.79

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Silanol, trimethyl-	90	C3H10OSi	001066-40-6	78
2	Propanoic acid, 2-methyl-, tert-...	202	C10H22O2Si	111864-21-2	74
3	tert-Butyldimethylsilanol	132	C6H16OSi	018173-64-3	64
4	Silanol, trimethyl-	90	C3H10OSi	001066-40-6	64
5	Silane, trimethyl(1-methylethoxy)-	132	C6H16OSi	001825-64-5	64



K8230724.M Thu Jul 20 09:39:20 2023

Tentatively Identified Compound (LSC) summary

Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3862.D
Acq On : 31 Jul 2023 20:57
Operator : BARBARA
Sample : FB-072723,E23-03408-002,A,5mL,100
Misc : EWMA/SWIVELIER,07/27/23,07/27/23,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

TIC Top Hit name	RT	EstConc	Units	Response	--Internal Standard--- #	RT	Resp	Conc
Column/Septa bleed					5.16	8.0		
130988 1	5.79	819670	50.0					

VOLATILE ORGANICS STANDARDS

Response Factor Report K_MSD

Method Path : C:\MSDCHEM\1\METHODS\
Method File : K8230724.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260D
Last Update : Wed Jul 26 09:29:59 2023
Response Via : Initial Calibration

Calibration Files
0.5 =K3742.D 1.0 =K3741.D 5.0 =K3743.D
20. =K3744.D 100 =K3745.D 150 =K3746.D 200 =K3747.D

		Compound	0.5	1.0	5.0	20.	100	150	200	Avg	%RSD
1)	I	Pentafluorobenzene	ISTD								
2)	T	Dichlorodifluorom		0.566	0.694	0.668	0.690	0.683	0.673	0.662	7.30
3)	P	Chloromethane	0.934	0.777	0.755	0.822	0.790	0.843	0.822	0.821	7.12
4)	C	Vinyl chloride		0.554	0.626	0.657	0.675	0.688	0.681	0.647	7.81
5)	T	Bromomethane		0.394	0.387	0.404	0.381	0.378	0.394	0.389	2.46
6)	T	Chloroethane	0.453	0.411	0.411	0.415	0.407	0.404	0.407	0.415	4.13
7)	T	Trichlorofluorome		0.970	1.157	1.118	1.082	1.048	1.028	1.067	6.22
8)	T	Acrolein	0.016	0.015	0.018	0.012	0.014	0.014	0.014	0.015	13.20
9)	MC	1,1-Dichloroethen	0.623	0.506	0.579	0.538	0.516	0.543	0.524	0.547	7.51
10)	T	Acetone		0.664	0.798	0.743	0.722	0.646	0.543	0.686	12.97
11)	T	Carbon disulfide		1.435	1.725	1.928	1.971	2.024	2.050	1.855	12.72
12)	T	Vinyl acetate		1.384	1.423	1.450	1.416	1.360	1.297	1.388	3.94
13)	T	Methylene chlorid		0.789	0.857	0.831	0.756	0.728	0.726	0.781	6.97
14)	T	Acrylonitrile	0.847	0.657	0.766	0.720	0.714	0.730	0.665	0.729	8.84
15)	T	tert-Butyl alcoho		0.218	0.247	0.255	0.261	0.232	0.176	0.232	13.55
16)	T	trans-1,2-Dichlor	0.742	0.669	0.810	0.828	0.794	0.773	0.763	0.768	6.85
17)	T	Methyl tert-butyl	3.080	2.685	3.151	3.240	3.286	3.192	3.112	3.107	6.41
18)	P	1,1-Dichloroethan	1.643	1.402	1.716	1.805	1.794	1.788	1.778	1.704	8.50
19)	T	Diisopropyl ether	3.401	3.301	3.618	3.950	3.960	3.841	3.740	3.687	7.06
20)	T	cis-1,2-Dichloroe	0.964	0.714	0.844	0.880	0.878	0.864	0.855	0.857	8.64
21)	T	2,2-Dichloropropa		0.726	0.867	0.893	0.822	0.738	0.699	0.791	10.22
22)	T	2-Butanone (MEK)		1.166	1.185	1.261	1.275	1.211	1.148	1.208	4.26
23)	T	Bromochloromethan		0.319	0.377	0.376	0.379	0.367	0.364	0.364	6.26
24)	T	Tetrahydrofuran								0.000	-1.00
25)	C	Chloroform	1.784	1.522	1.609	1.703	1.684	1.641	1.617	1.651	5.02
26)	T	1,1,1-Trichloroet	1.056	1.129	1.326	1.441	1.457	1.099	1.401	1.273	13.60
27)	T	Carbon tetrachlor	1.061	0.872	1.054	1.115	1.167	1.132	1.129	1.076	9.13
28)	T	1,1-Dichloroprope	1.295	0.950	1.235	1.229	1.212	1.193	1.194	1.187	9.25
29)	T	1,2-Dichloroethan	1.585	1.779	1.742	1.822	1.789	1.719	1.637	1.725	4.98
30)	S	1,2-Dichloroethan	0.941	0.948	0.932	0.975	0.945	0.903	0.890	0.933	3.08
31)	I	1,4-Difluorobenzene	ISTD								
32)	M	Benzene	1.794	1.565	1.901	1.987	1.904	1.889	1.870	1.844	7.36
33)	M	Trichloroethene	0.445	0.447	0.548	0.513	0.513	0.511	0.502	0.497	7.61
34)	C	1,2-Dichloropropa	0.600	0.587	0.569	0.592	0.580	0.575	0.562	0.581	2.30
35)	T	Dibromomethane	0.390	0.348	0.352	0.342	0.347	0.339	0.330	0.350	5.46
36)	T	1,4-Dioxane								0.000	-1.00
37)	T	Bromodichloromeeth	0.700	0.664	0.684	0.764	0.780	0.776	0.755	0.732	6.55
38)	T	2-Chloroethyl vin	0.300	0.294	0.285	0.296	0.290	0.288	0.281	0.290	2.30
39)	T	cis-1,3-Dichlorop		0.805	0.805	0.917	0.917	0.911	0.887	0.874	6.21
40)	T	4-Methyl-2-pentan	1.034	1.280	1.170	1.233	1.246	1.217	1.128	1.187	7.07
41)	S	Toluene-d8	1.263	1.274	1.255	1.273	1.263	1.276	1.247	1.264	0.83
42)	MC	Toluene	1.169	1.089	1.197	1.233	1.234	1.212	1.196	1.190	4.19
43)	T	trans-1,3-Dichlor		0.828	0.858	0.939	0.977	0.962	0.930	0.916	6.50
44)	T	1,1,2-Trichloroet	0.392	0.453	0.395	0.430	0.437	0.426	0.410	0.420	5.38
45)	T	Tetrachloroethene	0.343	0.375	0.478	0.427	0.430	0.428	0.412	0.413	10.50
46)	T	1,3-Dichloropropa	0.863	0.875	0.908	0.919	0.937	0.917	0.883	0.900	2.98
47)	T	2-Hexanone	0.899	1.117	1.003	1.025	1.042	1.004	0.935	1.003	7.08
48)	T	Dibromochlorometh	0.343	0.430	0.398	0.454	0.506	0.505	0.479	0.445	13.41
49)	T	1,2-Dibromoethane	0.436	0.489	0.490	0.514	0.526	0.515	0.493	0.495	5.96
50)	I	Chlorobenzene-d5	ISTD								
51)	MP	Chlorobenzene	1.167	1.226	1.305	1.278	1.244	1.233	1.232	1.241	3.49

52)	T	1,1,1,2-Tetrachlo	0.388	0.377	0.386	0.420	0.427	0.418	0.415	0.405	4.98
53)	C	Ethylbenzene	2.095	1.900	2.330	2.364	2.304	2.283	2.274	2.222	7.45
54)	T	m,p-Xylene	0.749	0.688	0.860	0.851	0.824	0.816	0.815	0.800	7.63
55)	T	o-Xylene	0.819	0.753	0.867	0.860	0.838	0.831	0.822	0.827	4.54
56)	T	Styrene		1.290	1.353	1.438	1.432	1.414	1.406	1.389	4.09
57)	P	Bromoform	0.275	0.288	0.270	0.321	0.367	0.373	0.364	0.323	14.14
58)	T	Isopropylbenzene		1.795	2.162	2.259	2.228	2.214	2.165	2.137	8.03
59)	S	Bromofluorobenzen	0.696	0.705	0.696	0.725	0.718	0.722	0.708	0.710	1.69
60)	P	1,1,2,2-Tetrachlo		0.922	0.845	0.888	0.870	0.850	0.826	0.867	3.99
61)	T	Bromobenzene	0.541	0.506	0.525	0.520	0.504	0.495	0.485	0.511	3.78
62)	T	1,2,3-Trichloropr	0.740	0.882	0.778	0.770	0.761	0.750	0.722	0.772	6.75
63)	T	n-Propylbenzene	2.317	2.376	2.736	2.770	2.725	2.700	2.632	2.608	7.06
64)	T	2-Chlorotoluene	1.552	1.574	1.758	1.743	1.733	1.703	1.688	1.679	4.93
65)	T	1,3,5-Trimethylbe		1.764	1.906	1.989	1.948	1.908	1.864	1.897	4.08
66)	T	4-Chlorotoluene	1.870	1.840	2.159	2.095	2.071	2.034	1.995	2.009	5.83
67)	T	tert-Butylbenzene		1.336	1.495	1.493	1.512	1.477	1.426	1.456	4.52
68)	T	1,2,4-Trimethylbe		1.823	1.930	2.005	1.972	1.930	1.884	1.924	3.35
69)	T	sec-Butylbenzene		1.979	2.312	2.382	2.386	2.345	2.268	2.278	6.73
70)	T	1,3-Dichlorobenze	0.842	0.923	0.929	0.934	0.932	0.901	0.886	0.907	3.72
71)	T	4-Isopropyltoluen		1.577	1.832	1.933	1.917	1.885	1.818	1.827	7.15
72)	T	1,4-Dichlorobenze	0.894	0.946	0.951	0.966	0.935	0.922	0.904	0.931	2.75
73)	T	n-Butylbenzene			1.905	1.947	1.918	1.876	1.812	1.892	2.72
74)	T	1,2-Dichlorobenze	0.772	0.891	0.956	0.938	0.895	0.871	0.846	0.882	6.92
75)	T	1,2-Dibromo-3-chl		0.287	0.245	0.281	0.291	0.282	0.263	0.275	6.35
76)	T	1,2,4-Trichlorobe		0.779	0.739	0.732	0.744	0.728	0.699	0.737	3.53
77)	T	Hexachlorobutadie			0.302	0.295	0.287	0.272	0.270	0.285	5.02
78)	T	Naphthalene		2.182	2.389	2.437	2.379	2.349	2.250	2.331	4.13
79)	T	1,2,3-Trichlorobe		0.746	0.743	0.766	0.733	0.730	0.699	0.736	3.00
80)	T	1,1,2-Trichloro-1		0.324	0.334	0.326	0.289	0.303	0.312	0.315	5.26
81)	T	Methyl acetate	0.894	0.807	0.811	0.808	0.752	0.739	0.723	0.791	7.39
82)	T	Cyclohexane		0.980	1.267	1.037	0.930	0.952	0.980	1.024	12.11
83)	T	Methylcyclohexane		0.696	0.811	0.817	0.763	0.764	0.796	0.775	5.80

(#) = Out of Range ### Number of calibration levels exceeded format ###

K8230724.M Fri Jul 28 14:18:29 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3741.D
Acq On : 24 Jul 2023 15:33
Operator : BARBARA
Sample : ICC001,ICC230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 25 09:37:06 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Tue Jul 25 09:30:32 2023
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	5.79	168	300225	50.00	UG		0.00
31) 1,4-Difluorobenzene	6.61	114	513198	50.00	UG		0.00
50) Chlorobenzene-d5	9.95	117	514858	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.10	65	284532	51.03	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.06%				
41) Toluene-d8	8.28	98	653752	50.09	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.18%				
59) Bromofluorobenzene	11.35	95	362825	50.53	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.06%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.62	85	3398m	0.84	UG		
3) Chloromethane	1.79	50	4667m	0.90	UG		
4) Vinyl chloride	1.91	62	3327m	0.81	UG		
5) Bromomethane	2.23	94	2367m	1.00	UG		
6) Chloroethane	2.32	64	2465	0.93	UG		78
7) Trichlorofluoromethane	2.59	101	5827	0.90	UG		88
8) Acrolein	2.99	56	1753	19.24	UG	#	63
9) 1,1-Dichloroethene	3.17	96	3036	0.89	UG		80
10) Acetone	3.18	43	7976	1.94	UG		78
11) Carbon disulfide	3.44	76	8617	0.70	UG		80
12) Vinyl acetate	3.60	43	8308	0.96	UG	#	100
13) Methylene chloride	3.74	84	4740	0.95	UG		88
14) Acrylonitrile	3.98	53	78935	20.23	UG	#	100
15) tert-Butyl alcohol (TBA)	3.87	59	2620	1.81	UG		77
16) trans-1,2-Dichloroethene	4.02	96	4016	0.85	UG		89
17) Methyl tert-butyl ether (M	4.05	73	16124	0.85	UG		100
18) 1,1-Dichloroethane	4.51	63	8417	0.81	UG	#	85
19) Diisopropyl ether (DIPE)	4.63	45	19818	0.88	UG	#	100
20) cis-1,2-Dichloroethene	5.19	96	4289	0.81	UG	#	98
21) 2,2-Dichloropropane	5.19	77	4360	0.89	UG	#	94
22) 2-Butanone (MEK)	5.22	43	14005	1.91	UG		89
23) Bromochloromethane	5.44	128	1914	0.84	UG	#	1
25) Chloroform	5.55	83	9139	0.91	UG		99
26) 1,1,1-Trichloroethane	5.76	97	6777	0.89	UG		88
27) Carbon tetrachloride	5.95	117	5237	0.80	UG		87
28) 1,1-Dichloropropene	5.95	75	5707	0.76	UG	#	74
29) 1,2-Dichloroethane (EDC)	6.19	62	10680	1.06	UG	#	98
32) Benzene	6.18	78	16058	0.84	UG		99
33) Trichloroethene	6.90	95	4586	0.89	UG		89
34) 1,2-Dichloropropane	7.15	63	6026	1.02	UG	#	99
35) Dibromomethane	7.28	93	3572	1.02	UG	#	87
37) Bromodichloromethane	7.46	83	6820	0.92	UG	#	68
38) 2-Chloroethyl vinyl ether	7.15	63	6026	2.04	UG	#	100
39) cis-1,3-Dichloropropene	7.97	75	8261	0.94	UG	#	95
40) 4-Methyl-2-pentanone (MIBK	8.16	43	26270	2.15	UG		99
42) Toluene	8.36	92	11181	0.91	UG		92
43) trans-1,3-Dichloropropene	8.60	75	8499	0.92	UG	#	87

44) 1,1,2-Trichloroethane	8.81	83	4654	1.10 UG		96
45) Tetrachloroethene	8.99	166	3848	0.89 UG		96
46) 1,3-Dichloropropane	9.01	76	8984	1.00 UG		98
47) 2-Hexanone	9.11	43	22920	2.28 UG		99
48) Dibromochloromethane	9.27	129	4417	0.97 UG		98
49) 1,2-Dibromoethane (EDB)	9.40	107	5015	0.99 UG		100
51) Chlorobenzene	9.98	112	12629	1.01 UG		100
52) 1,1,1,2-Tetrachloroethane	10.08	131	3878	0.95 UG	#	92
53) Ethylbenzene	10.12	91	19567	0.86 UG		99
54) m,p-Xylene	10.26	106	14172	1.70 UG		93
55) o-Xylene	10.73	106	7750	0.91 UG	#	76
56) Styrene	10.74	104	13287	0.96 UG		90
57) Bromoform	10.95	173	2965	0.91 UG	#	96
58) Isopropylbenzene	11.18	105	18486	0.83 UG		98
60) 1,1,2,2-Tetrachloroethane	11.51	83	9497	1.12 UG	#	98
61) Bromobenzene	11.53	156	5209	1.02 UG	#	99
62) 1,2,3-Trichloropropane	11.57	75	9081	1.22 UG		98
63) n-Propylbenzene	11.68	91	24471	0.91 UG	#	97
64) 2-Chlorotoluene	11.77	91	16205	0.95 UG	#	91
65) 1,3,5-Trimethylbenzene	11.89	105	18168	0.95 UG		90
66) 4-Chlorotoluene	11.90	91	18947	0.93 UG	#	92
67) tert-Butylbenzene	12.29	119	13760	0.92 UG		90
68) 1,2,4-Trimethylbenzene	12.35	105	18767	0.95 UG	#	94
69) sec-Butylbenzene	12.55	105	20375	0.85 UG		99
70) 1,3-Dichlorobenzene	12.67	146	9500	1.03 UG		99
71) 4-Isopropyltoluene	12.74	119	16237	0.85 UG		100
72) 1,4-Dichlorobenzene	12.79	146	9740	1.03 UG		98
73) n-Butylbenzene	13.24	91	17099	0.88 UG	#	96
74) 1,2-Dichlorobenzene	13.24	146	9178	1.01 UG		99
75) 1,2-Dibromo-3-chloropropan	14.19	75	2952	1.12 UG		88
76) 1,2,4-Trichlorobenzene	15.15	180	8023	1.10 UG		100
77) Hexachlorobutadiene	15.35	225	3556	1.21 UG		100
78) Naphthalene	15.40	128	22467	0.94 UG		100
79) 1,2,3-Trichlorobenzene	15.67	180	7678	1.05 UG		99
80) 1,1,2-Trichloro-1,2,2-trif	3.18	101	3335	1.04 UG		88
81) Methyl acetate	3.60	43	8308	1.02 UG	#	78
82) Cyclohexane	5.81	56	10091	0.96 UG		84
83) Methylcyclohexane	7.14	83	7167	0.87 UG		88

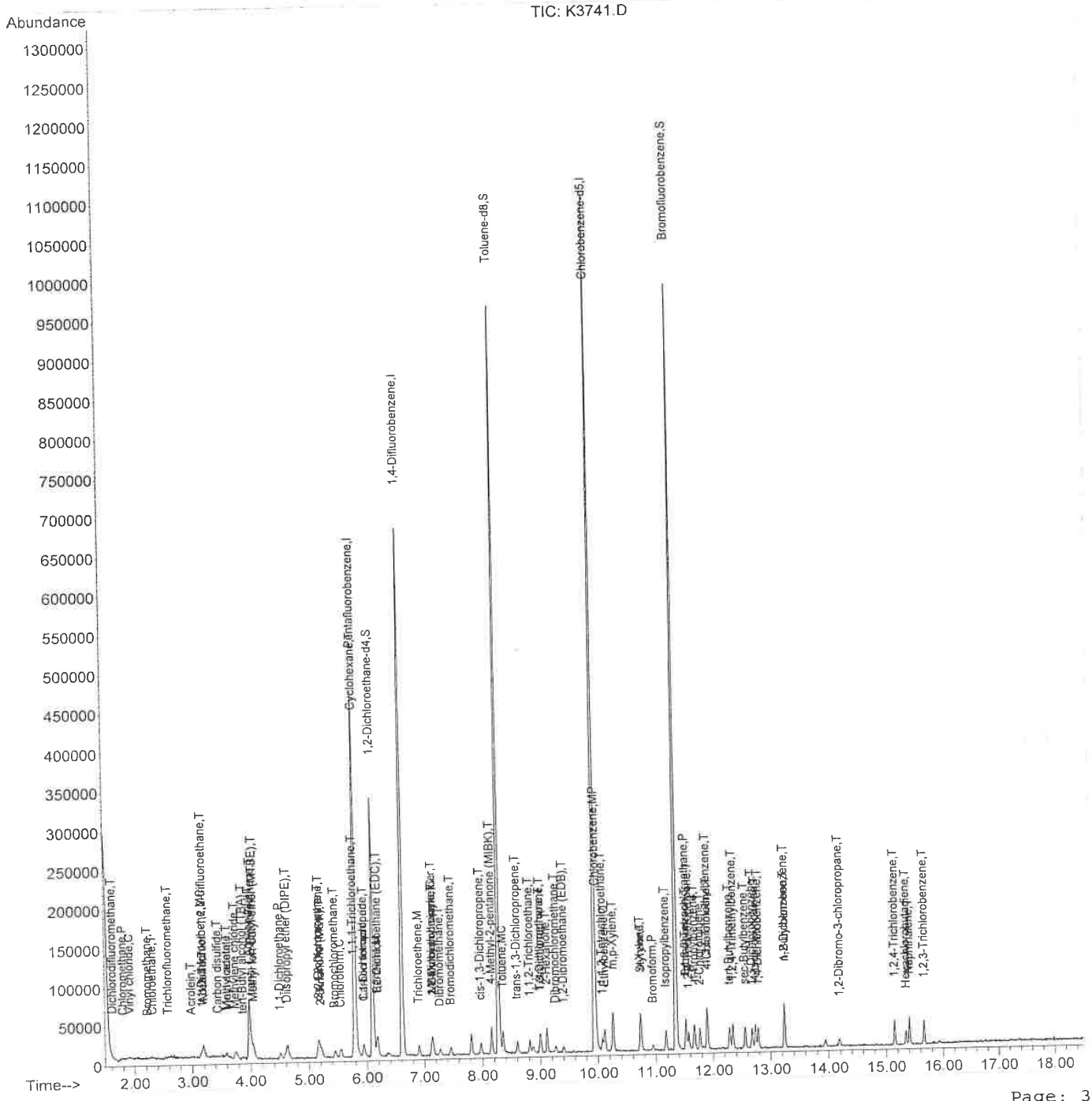
(#) = qualifier out of range (m) = manual integration (+) = signals summed

K8230724.M Mon Aug 14 10:36:37 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3741.D
Acq On : 24 Jul 2023 15:33
Operator : BARBARA
Sample : ICC001,ICC230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 25 09:37:06 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Tue Jul 25 09:30:32 2023
Response via : Initial Calibration



K8230724.M Mon Aug 14 10:36:37 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3742.D
Acq On : 24 Jul 2023 16:01
Operator : BARBARA
Sample : ICC00.5,ICC230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 25 09:39:05 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Tue Jul 25 09:25:59 2023
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	5.79	168	282396	50.00	UG		0.00
31) 1,4-Difluorobenzene	6.61	114	479730	50.00	UG		0.00
50) Chlorobenzene-d5	9.95	117	481082	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.10	65	265798	51.11	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.22%				
41) Toluene-d8	8.28	98	606073	49.28	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.56%				
59) Bromofluorobenzene	11.35	95	334601	50.73	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.46%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.61	85	1631m	0.43	UG		
3) Chloromethane	1.82	50	2638m	0.54	UG		
4) Vinyl chloride	1.95	62	1792m	0.46	UG		
5) Bromomethane	2.29	94	1171m	0.53	UG		
6) Chloroethane	2.29	64	1280	0.50	UG		89
7) Trichlorofluoromethane	2.64	101	2593	0.43	UG		93
8) Acrolein	2.98	56	884	10.20	UG		90
9) 1,1-Dichloroethene	3.17	96	1760	0.56	UG		88
10) Acetone	3.19	43	3559	0.92	UG		98
11) Carbon disulfide	3.44	76	5101	0.44	UG		88
12) Vinyl acetate	3.59	43	4302	0.53	UG	#	100
13) Methylene chloride	3.73	84	2301	0.49	UG		95
14) Acrylonitrile	6.10	53	47837	11.23	UG		90
15) tert-Butyl alcohol (TBA)	3.88	59	2198	1.62	UG		98
16) trans-1,2-Dichloroethene	4.02	96	2095	0.45	UG		88
17) Methyl tert-butyl ether (M	4.04	73	8699	0.48	UG		100
18) 1,1-Dichloroethane	4.50	63	4641	0.47	UG	#	97
19) Diisopropyl ether (DIPE)	4.63	45	9603	0.43	UG	#	100
20) cis-1,2-Dichloroethene	5.18	96	2721	0.53	UG	#	93
21) 2,2-Dichloropropane	5.19	77	2959	0.64	UG		90
22) 2-Butanone (MEK)	5.23	43	7153	1.04	UG		98
23) Bromochloromethane	5.46	128	1125	0.52	UG		90
25) Chloroform	5.56	83	5038	0.52	UG		98
26) 1,1,1-Trichloroethane	5.76	97	2982	0.40	UG		89
27) Carbon tetrachloride	5.94	117	2995	0.49	UG		87
28) 1,1-Dichloropropene	5.95	75	3657	0.52	UG	#	90
29) 1,2-Dichloroethane (EDC)	6.19	62	4475	0.46	UG	#	98
32) Benzene	6.17	78	8607	0.47	UG		99
33) Trichloroethene	6.90	95	2136	0.43	UG	#	39
34) 1,2-Dichloropropane	7.16	63	2879	0.51	UG	#	100
35) Dibromomethane	7.27	93	1870	0.58	UG	#	70
37) Bromodichloromethane	7.46	83	3359	0.47	UG	#	98
38) 2-Chloroethyl vinyl ether	7.16	63	2879	1.03	UG	#	100
39) cis-1,3-Dichloropropene	7.98	75	3527	0.43	UG		88
40) 4-Methyl-2-pentanone (MIBK	8.16	43	9924	0.83	UG		88
42) Toluene	8.36	92	5607	0.48	UG		93
43) trans-1,3-Dichloropropene	8.60	75	4024	0.46	UG		88

44) 1,1,2-Trichloroethane	8.81	83	1880	0.46 UG	#	52
45) Tetrachloroethene	8.99	166	1646	0.39 UG		96
46) 1,3-Dichloropropane	9.00	76	4138	0.48 UG		98
47) 2-Hexanone	9.11	43	8627	0.87 UG		99
48) Dibromochloromethane	9.27	129	1646	0.37 UG		98
49) 1,2-Dibromoethane (EDB)	9.40	107	2094	0.42 UG		92
51) Chlorobenzene	9.98	112	5614	0.48 UG		99
52) 1,1,1,2-Tetrachloroethane	10.08	131	1868	0.49 UG	#	99
53) Ethylbenzene	10.13	91	10081	0.48 UG	#	97
54) m,p-Xylene	10.26	106	7206	0.92 UG	#	100
55) o-Xylene	10.73	106	3939	0.50 UG		91
56) Styrene	10.74	104	6363	0.49 UG	#	80
57) Bromoform	10.95	173	1324	0.43 UG		77
58) Isopropylbenzene	11.18	105	8195	0.40 UG		98
60) 1,1,2,2-Tetrachloroethane	11.53	83	4018	0.51 UG		96
61) Bromobenzene	11.53	156	2605	0.56 UG	#	52
62) 1,2,3-Trichloropropane	11.58	75	3561	0.50 UG	#	89
63) n-Propylbenzene	11.67	91	11146	0.45 UG		78
64) 2-Chlorotoluene	11.77	91	7468	0.47 UG	#	91
65) 1,3,5-Trimethylbenzene	11.89	105	7804	0.44 UG		97
66) 4-Chlorotoluene	11.91	91	8997	0.48 UG	#	95
67) tert-Butylbenzene	12.29	119	5576	0.40 UG	#	100
68) 1,2,4-Trimethylbenzene	12.34	105	7838	0.42 UG		97
69) sec-Butylbenzene	12.55	105	9179	0.41 UG		98
70) 1,3-Dichlorobenzene	12.67	146	4049	0.47 UG		87
71) 4-Isopropyltoluene	12.74	119	7134	0.40 UG		98
72) 1,4-Dichlorobenzene	12.78	146	4303	0.48 UG		99
73) n-Butylbenzene	13.24	91	7733	0.42 UG	#	86
74) 1,2-Dichlorobenzene	13.23	146	3716	0.43 UG		96
75) 1,2-Dibromo-3-chloropropan	14.18	75	1220	0.49 UG	#	19
76) 1,2,4-Trichlorobenzene	15.14	180	3519	0.52 UG		95
77) Hexachlorobutadiene	15.35	225	1613	0.59 UG		100
78) Naphthalene	15.41	128	9103	0.41 UG		100
79) 1,2,3-Trichlorobenzene	15.66	180	3688	0.54 UG		91
80) 1,1,2-Trichloro-1,2,2-trif	3.19	101	1394	0.46 UG		88
81) Methyl acetate	3.59	43	4302	0.58 UG	#	52
82) Cyclohexane	5.80	56	4328	0.44 UG		77
83) Methylcyclohexane	7.13	83	3533	0.46 UG	#	72

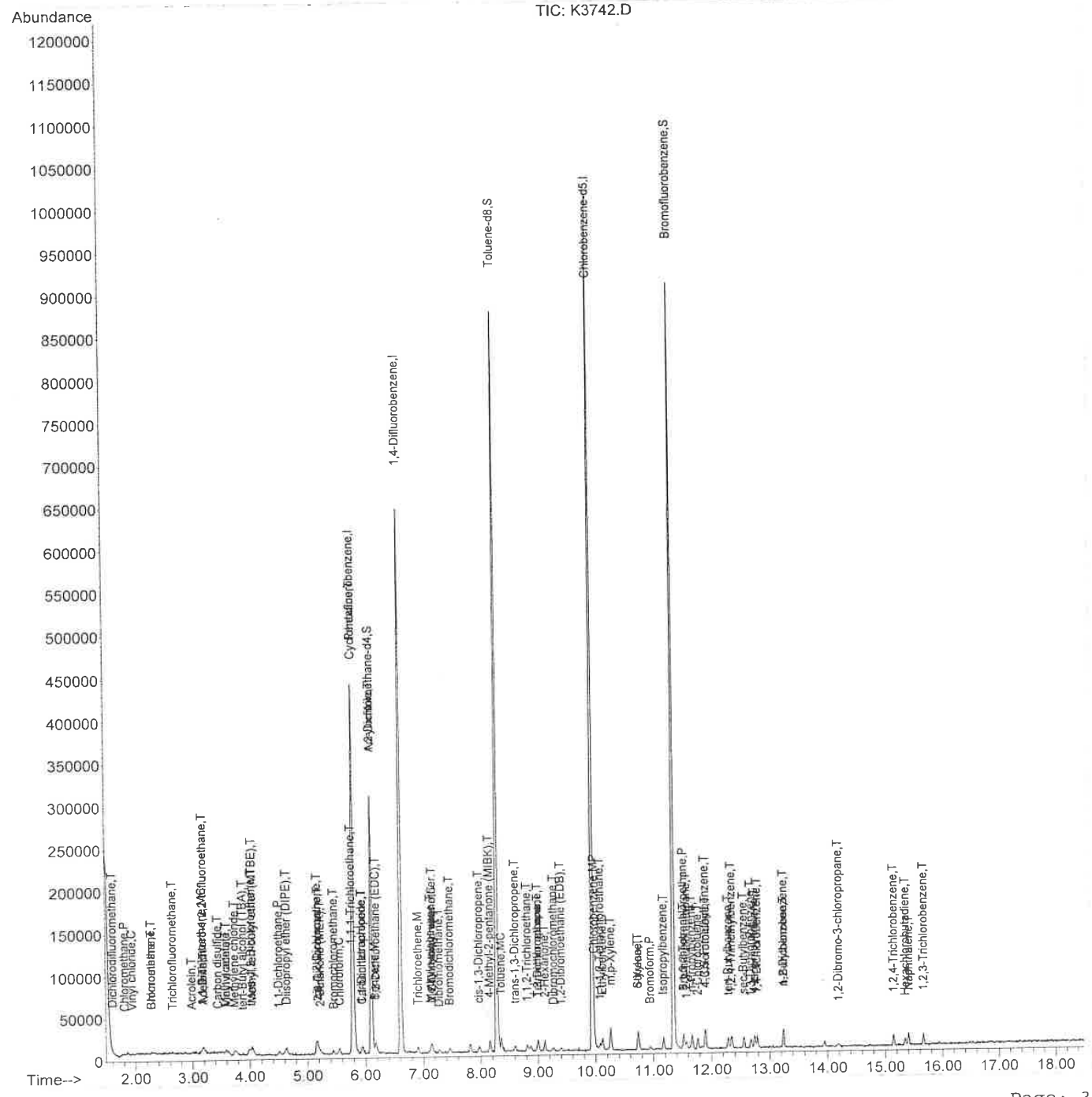
(#) = qualifier out of range (m) = manual integration (+) = signals summed

K8230724.M Mon Aug 14 10:41:05 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3742.D
Acq On : 24 Jul 2023 16:01
Operator : BARBARA
Sample : ICC00.5,ICC230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 25 09:39:05 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Tue Jul 25 09:25:59 2023
Response via : Initial Calibration



K8230724.M Mon Aug 14 10:41:05 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3743.D
Acq On : 24 Jul 2023 16:30
Operator : BARBARA
Sample : ICC005,ICC230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 25 09:25:42 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Tue Jul 25 09:24:28 2023
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	5.80	168	280189	50.00	UG		0.00
31) 1,4-Difluorobenzene	6.61	114	480430	50.00	UG		0.00
50) Chlorobenzene-d5	9.95	117	491292	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.11	65	261061	51.06	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.12%				
41) Toluene-d8	8.28	98	602997	48.57	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.14%				
59) Bromofluorobenzene	11.35	95	342022	51.71	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.42%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.62	85	19458	5.08	UG	#	65
3) Chloromethane	1.80	50	21150	4.15	UG	#	94
4) Vinyl chloride	1.91	62	17546m	4.39	UG		
5) Bromomethane	2.25	94	10848m	4.94	UG		
6) Chloroethane	2.31	64	11528	4.36	UG		99
7) Trichlorofluoromethane	2.64	101	32408	5.46	UG		84
8) Acrolein	3.00	56	10180	117.26	UG		89
9) 1,1-Dichloroethene	3.16	96	16209	5.15	UG	#	44
10) Acetone	3.19	43	44732	11.96	UG		98
11) Carbon disulfide	3.45	76	48332	4.08	UG		100
12) Vinyl acetate	3.60	43	39859	4.84	UG	#	100
13) Methylene chloride	3.76	84	24004	4.96	UG		97
14) Acrylonitrile	3.98	53	429421	100.31	UG	#	100
15) tert-Butyl alcohol (TBA)	3.88	59	13863	10.46	UG	#	100
16) trans-1,2-Dichloroethene	4.02	96	22685	4.89	UG	#	100
17) Methyl tert-butyl ether (M	4.05	73	88293	4.85	UG		100
18) 1,1-Dichloroethane	4.51	63	48091	4.79	UG	#	99
19) Diisopropyl ether (DIPE)	4.64	45	101366	4.53	UG	#	100
20) cis-1,2-Dichloroethene	5.19	96	23654	4.61	UG	#	99
21) 2,2-Dichloropropane	5.19	77	24302	5.25	UG	#	96
22) 2-Butanone (MEK)	5.21	43	66409	9.57	UG	#	96
23) Bromochloromethane	5.45	128	10562	4.90	UG	#	17
25) Chloroform	5.55	83	45089	4.68	UG		100
26) 1,1,1-Trichloroethane	5.76	97	37142	5.04	UG	#	84
27) Carbon tetrachloride	5.96	117	29533	4.84	UG		97
28) 1,1-Dichloropropene	5.95	75	34593	4.98	UG	#	63
29) 1,2-Dichloroethane (EDC)	6.19	62	48806	5.14	UG	#	98
32) Benzene	6.18	78	91329	5.02	UG		99
33) Trichloroethene	6.91	95	26350	5.38	UG	#	48
34) 1,2-Dichloropropane	7.15	63	27353	4.79	UG	#	99
35) Dibromomethane	7.28	93	16908	5.35	UG	#	61
37) Bromodichloromethane	7.47	83	32842	4.63	UG	#	99
38) 2-Chloroethyl vinyl ether	7.15	63	27353	9.71	UG	#	100
39) cis-1,3-Dichloropropene	7.97	75	38685	4.66	UG	#	97
40) 4-Methyl-2-pentanone (MIBK	8.16	43	112374	9.45	UG		99
42) Toluene	8.36	92	57502	4.96	UG		98
43) trans-1,3-Dichloropropene	8.60	75	41201	4.78	UG	#	87

44) 1,1,2-Trichloroethane	8.81	83	18966	4.64 UG		96
45) Tetrachloroethene	8.99	166	22977	5.64 UG		99
46) 1,3-Dichloropropane	9.01	76	43600	5.11 UG		99
47) 2-Hexanone	9.12	43	96388	9.79 UG		97
48) Dibromochloromethane	9.27	129	19111	4.24 UG		99
49) 1,2-Dibromoethane (EDB)	9.40	107	23529	4.74 UG		98
51) Chlorobenzene	9.98	112	64093	5.59 UG		99
52) 1,1,1,2-Tetrachloroethane	10.08	131	18972	4.95 UG	#	99
53) Ethylbenzene	10.12	91	114495	5.48 UG		98
54) m,p-Xylene	10.26	106	84499	10.83 UG	#	100
55) o-Xylene	10.73	106	42618	5.39 UG	#	80
56) Styrene	10.75	104	66487	5.11 UG	#	90
57) Bromoform	10.95	173	13269	4.32 UG	#	98
58) Isopropylbenzene	11.17	105	106204	5.14 UG		98
60) 1,1,2,2-Tetrachloroethane	11.52	83	41520	5.27 UG		98
61) Bromobenzene	11.53	156	25794	5.64 UG	#	99
62) 1,2,3-Trichloropropane	11.57	75	38231	5.40 UG	#	89
63) n-Propylbenzene	11.67	91	134413	5.46 UG	#	89
64) 2-Chlorotoluene	11.77	91	86350	5.53 UG	#	91
65) 1,3,5-Trimethylbenzene	11.89	105	93643	5.27 UG	#	94
66) 4-Chlorotoluene	11.90	91	106067	5.78 UG	#	91
67) tert-Butylbenzene	12.29	119	73436	5.28 UG	#	100
68) 1,2,4-Trimethylbenzene	12.34	105	94796	5.18 UG		95
69) sec-Butylbenzene	12.56	105	113588	5.12 UG		99
70) 1,3-Dichlorobenzene	12.68	146	45628	5.29 UG		99
71) 4-Isopropyltoluene	12.74	119	89999	5.03 UG		99
72) 1,4-Dichlorobenzene	12.79	146	46704	5.28 UG		99
73) n-Butylbenzene	13.24	91	93611	5.28 UG	#	95
74) 1,2-Dichlorobenzene	13.24	146	46980	5.51 UG		99
75) 1,2-Dibromo-3-chloropropan	14.18	75	12026	4.85 UG	#	65
76) 1,2,4-Trichlorobenzene	15.15	180	36292	5.41 UG		99
77) Hexachlorobutadiene	15.35	225	14850	5.64 UG		100
78) Naphthalene	15.41	128	117389	5.24 UG		100
79) 1,2,3-Trichlorobenzene	15.66	180	36501	5.45 UG		97
80) 1,1,2-Trichloro-1,2,2-trif	3.19	101	16409	5.42 UG	#	79
81) Methyl acetate	3.60	43	39859	5.30 UG	#	77
82) Cyclohexane	5.83	56	62244	6.38 UG	#	65
83) Methylcyclohexane	7.14	83	39864	5.14 UG	#	39

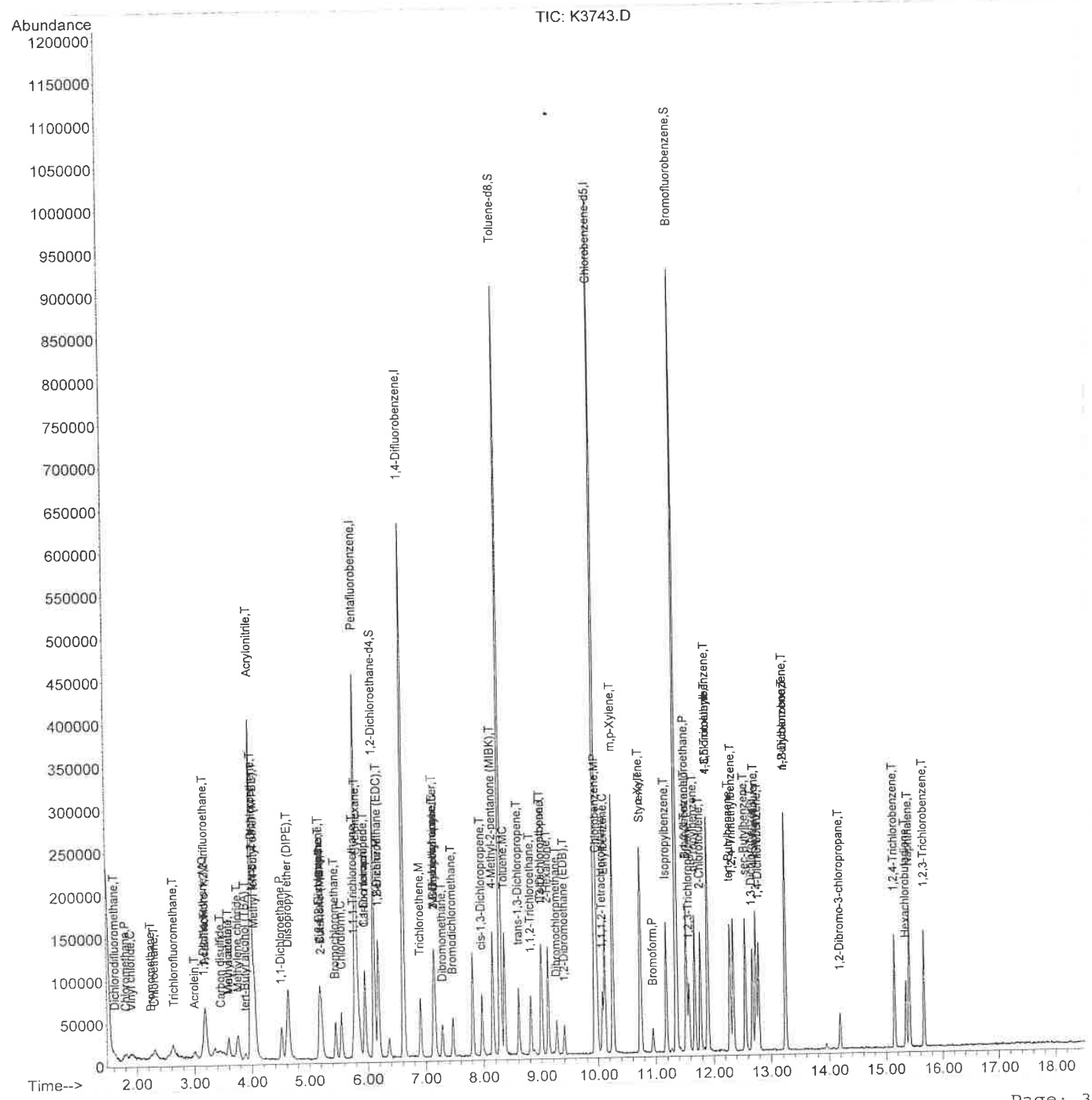
(#) = qualifier out of range (m) = manual integration (+) = signals summed

K8230724.M Mon Aug 14 10:45:38 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3743.D
Acq On : 24 Jul 2023 16:30
Operator : BARBARA
Sample : ICC005,ICC230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 25 09:25:42 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Tue Jul 25 09:24:28 2023
Response via : Initial Calibration



K8230724.M Mon Aug 14 10:45:30 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3744.D
Acq On : 24 Jul 2023 16:59
Operator : BARBARA
Sample : ICC020,ICC230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 25 09:24:09 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Tue Jul 25 09:23:38 2023
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	5.79	168	271970	50.00	UG		0.00
31) 1,4-Difluorobenzene	6.62	114	476646	50.00	UG		0.00
50) Chlorobenzene-d5	9.95	117	487908	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.10	65	265255	54.07	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 108.14%				
41) Toluene-d8	8.28	98	606638	48.88	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.76%				
59) Bromofluorobenzene	11.35	95	353740	55.19	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 110.38%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.61	85	72715	19.52	UG	#	58
3) Chloromethane	1.79	50	89442	17.60	UG		98
4) Vinyl chloride	1.90	62	71441	17.90	UG		100
5) Bromomethane	2.26	94	43912	20.69	UG	#	45
6) Chloroethane	2.31	64	45114	17.08	UG		99
7) Trichlorofluoromethane	2.64	101	121582m	21.45	UG		
8) Acrolein	2.99	56	13138	147.84	UG	#	98
9) 1,1-Dichloroethene	3.16	96	58512	18.93	UG	#	43
10) Acetone	3.19	43	161727	45.45	UG	#	97
11) Carbon disulfide	3.44	76	209782	17.90	UG		100
12) Vinyl acetate	3.59	43	157746	19.44	UG	#	100
13) Methylene chloride	3.75	84	90419	18.90	UG		99
14) Acrylonitrile	3.98	53	783170	183.01	UG	#	100
15) tert-Butyl alcohol (TBA)	3.89	59	55413	44.46	UG	#	100
16) trans-1,2-Dichloroethene	4.02	96	90109	19.92	UG	#	100
17) Methyl tert-butyl ether (M	4.04	73	352507	19.90	UG		100
18) 1,1-Dichloroethane	4.51	63	196404	20.01	UG	#	86
19) Diisopropyl ether (DIPE)	4.63	45	429741	19.55	UG	#	100
20) cis-1,2-Dichloroethene	5.18	96	95763	19.00	UG	#	67
21) 2,2-Dichloropropane	5.18	77	97177	21.67	UG	#	87
22) 2-Butanone (MEK)	5.21	43	274357	40.41	UG	#	95
23) Bromochloromethane	5.45	128	40949	18.98	UG	#	44
25) Chloroform	5.55	83	185292	19.86	UG		100
26) 1,1,1-Trichloroethane	5.75	97	156785	22.20	UG	#	84
27) Carbon tetrachloride	5.95	117	121285	20.56	UG		98
28) 1,1-Dichloropropene	5.95	75	133680	19.78	UG	#	73
29) 1,2-Dichloroethane (EDC)	6.19	62	198252	21.84	UG	#	85
32) Benzene	6.18	78	378855	21.07	UG		100
33) Trichloroethene	6.91	95	97819	20.34	UG	#	74
34) 1,2-Dichloropropane	7.15	63	112906	20.00	UG	#	99
35) Dibromomethane	7.28	93	65242	21.04	UG	#	67
37) Bromodichloromethane	7.46	83	145699	20.99	UG	#	97
38) 2-Chloroethyl vinyl ether	7.15	63	112906	40.49	UG	#	100
39) cis-1,3-Dichloropropene	7.97	75	174759	21.37	UG	#	96
40) 4-Methyl-2-pentanone (MIBK	8.16	43	470302	40.15	UG		99
42) Toluene	8.36	92	235082	20.57	UG		98
43) trans-1,3-Dichloropropene	8.60	75	179046	21.31	UG	#	87

44) 1,1,2-Trichloroethane	8.81	83	82035	20.31 UG		95
45) Tetrachloroethene	8.99	166	81445	20.38 UG		100
46) 1,3-Dichloropropane	9.01	76	175124	20.87 UG		99
47) 2-Hexanone	9.11	43	390714	40.45 UG		99
48) Dibromochloromethane	9.27	129	86642	19.41 UG		99
49) 1,2-Dibromoethane (EDB)	9.40	107	97962	19.86 UG		99
51) Chlorobenzene	9.98	112	249386	22.59 UG		99
52) 1,1,1,2-Tetrachloroethane	10.08	131	81929	21.86 UG	#	100
53) Ethylbenzene	10.12	91	461348	23.05 UG		98
54) m,p-Xylene	10.26	106	332265	43.75 UG	#	100
55) o-Xylene	10.73	106	167755	21.81 UG	#	17
56) Styrene	10.74	104	280577	22.29 UG	#	80
57) Bromoform	10.95	173	62600	21.08 UG	#	98
58) Isopropylbenzene	11.18	105	440865	22.08 UG		98
60) 1,1,2,2-Tetrachloroethane	11.52	83	173280	22.96 UG		98
61) Bromobenzene	11.52	156	101529	23.22 UG	#	99
62) 1,2,3-Trichloropropane	11.57	75	150220	21.85 UG		99
63) n-Propylbenzene	11.67	91	540560	22.94 UG	#	97
64) 2-Chlorotoluene	11.77	91	340205	22.73 UG	#	92
65) 1,3,5-Trimethylbenzene	11.89	105	388170	22.69 UG	#	94
66) 4-Chlorotoluene	11.90	91	408821	23.42 UG	#	81
67) tert-Butylbenzene	12.29	119	291301	21.68 UG	#	100
68) 1,2,4-Trimethylbenzene	12.34	105	391214	22.24 UG	#	95
69) sec-Butylbenzene	12.55	105	464838	21.85 UG	#	98
70) 1,3-Dichlorobenzene	12.68	146	182314	21.85 UG		99
71) 4-Isopropyltoluene	12.74	119	377191	21.87 UG		99
72) 1,4-Dichlorobenzene	12.78	146	188442	22.09 UG		99
73) n-Butylbenzene	13.24	91	380070	22.90 UG	#	95
74) 1,2-Dichlorobenzene	13.24	146	183052	22.17 UG		99
75) 1,2-Dibromo-3-chloropropan	14.19	75	54777	23.37 UG	#	19
76) 1,2,4-Trichlorobenzene	15.15	180	142848	22.14 UG		98
77) Hexachlorobutadiene	15.35	225	57611	23.76 UG		100
78) Naphthalene	15.40	128	475697	21.88 UG		100
79) 1,2,3-Trichlorobenzene	15.66	180	149416	23.53 UG		100
80) 1,1,2-Trichloro-1,2,2-trif	3.19	101	63658	21.75 UG		93
81) Methyl acetate	3.59	43	157746	21.51 UG	#	75
82) Cyclohexane	5.83	56	202438	21.23 UG	#	70
83) Methylcyclohexane	7.13	83	159539	21.28 UG	#	41

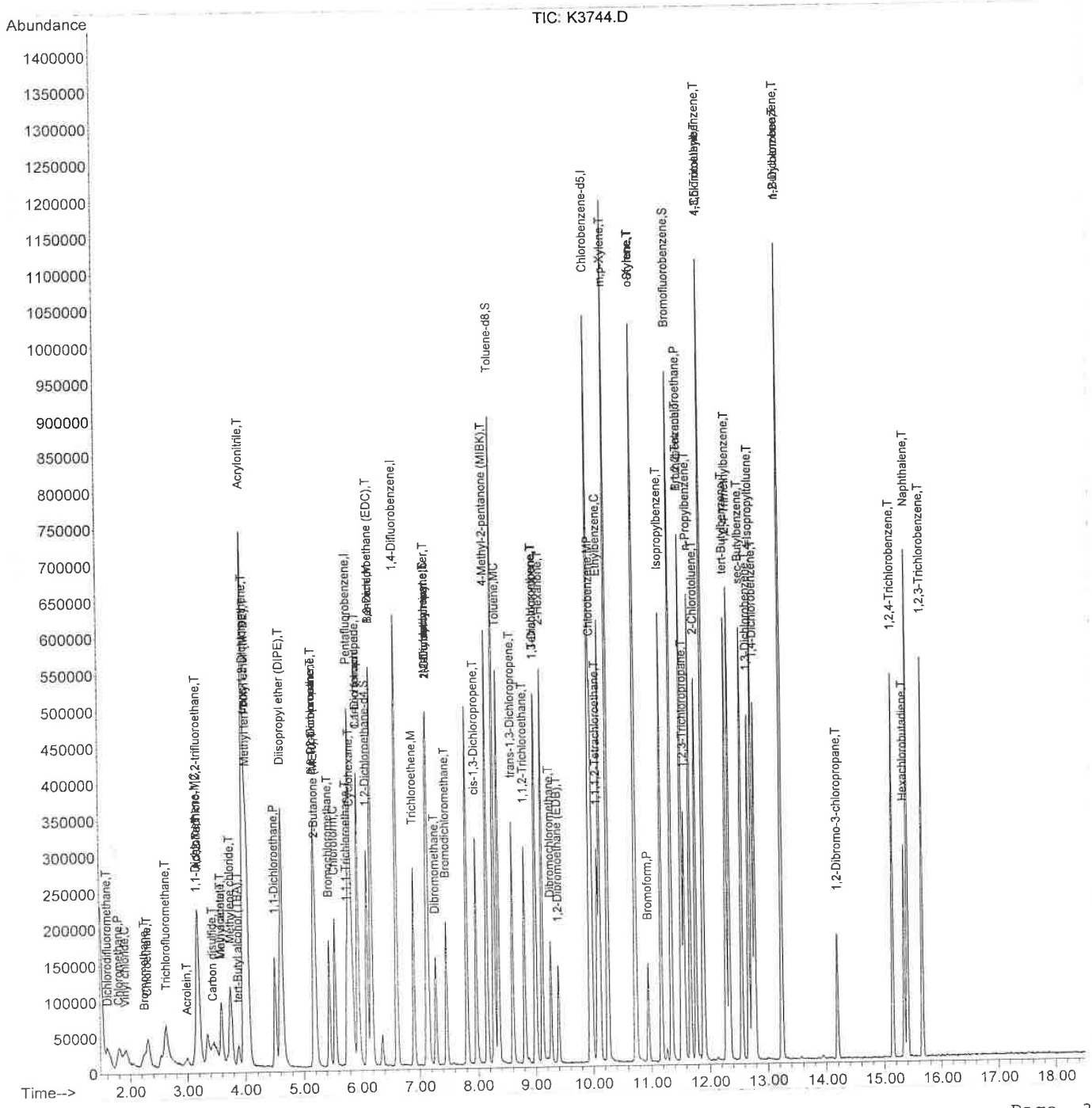
(#) = qualifier out of range (m) = manual integration (+) = signals summed

K8230724.M Mon Aug 14 10:50:58 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3744.D
Acq On : 24 Jul 2023 16:59
Operator : BARBARA
Sample : ICC020,ICC230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 25 09:24:09 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Tue Jul 25 09:23:38 2023
Response via : Initial Calibration



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K8230724.M Mon Aug 14 10:50:59 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3745.D
Acq On : 24 Jul 2023 17:28
Operator : BARBARA
Sample : ICC100,ICC230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 25 09:22:05 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Tue Jul 25 09:21:32 2023
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	5.79	168	288821	50.00	UG		0.00
31) 1,4-Difluorobenzene	6.61	114	510459	50.00	UG		0.00
50) Chlorobenzene-d5	9.95	117	544263	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.10	65	273015	53.10	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.20%				
41) Toluene-d8	8.28	98	644586	47.94	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.88%				
59) Bromofluorobenzene	11.35	95	390717	55.84	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 111.68%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.60	85	398664	99.69	UG	#	58
3) Chloromethane	1.80	50	456584	81.62	UG		98
4) Vinyl chloride	1.89	62	389752	88.69	UG		99
5) Bromomethane	2.25	94	219866	95.99	UG	#	45
6) Chloroethane	2.30	64	235077	81.59	UG		99
7) Trichlorofluoromethane	2.60	101	624946m	112.15	UG		
8) Acrolein	2.99	56	24136	254.60	UG	#	63
9) 1,1-Dichloroethene	3.17	96	297858	88.94	UG	#	39
10) Acetone	3.18	43	833660	230.51	UG	#	97
11) Carbon disulfide	3.44	76	1138397	88.74	UG		100
12) Vinyl acetate	3.59	43	818057	94.33	UG	#	100
13) Methylene chloride	3.74	84	436521	84.02	UG		99
14) Acrylonitrile	3.98	53	1237555	270.77	UG	#	100
15) tert-Butyl alcohol (TBA)	3.89	59	301821	245.23	UG	#	100
16) trans-1,2-Dichloroethene	4.01	96	458734	94.13	UG	#	100
17) Methyl tert-butyl ether (M	4.04	73	1898394	100.40	UG		100
18) 1,1-Dichloroethane	4.50	63	1036290	97.87	UG	#	83
19) Diisopropyl ether (DIPE)	4.63	45	2287661	96.42	UG	#	100
20) cis-1,2-Dichloroethene	5.18	96	507154	93.01	UG	#	67
21) 2,2-Dichloropropane	5.18	77	474885	99.88	UG	#	96
22) 2-Butanone (MEK)	5.21	43	1473289	206.03	UG	#	96
23) Bromochloromethane	5.44	128	218661	92.82	UG	#	12
25) Chloroform	5.55	83	972744	97.68	UG		100
26) 1,1,1-Trichloroethane	5.76	97	841550	112.68	UG	#	84
27) Carbon tetrachloride	5.95	117	673841	107.15	UG		100
28) 1,1-Dichloropropene	5.95	75	700347	96.41	UG	#	86
29) 1,2-Dichloroethane (EDC)	6.19	62	1033192	108.11	UG	#	98
32) Benzene	6.18	78	1943979	99.71	UG		100
33) Trichloroethene	6.91	95	524197	101.55	UG	#	73
34) 1,2-Dichloropropane	7.15	63	592598	97.15	UG	#	99
35) Dibromomethane	7.28	93	354198	107.27	UG	#	90
37) Bromodichloromethane	7.46	83	796649	107.77	UG	#	98
38) 2-Chloroethyl vinyl ether	7.15	63	592598	196.64	UG	#	100
39) cis-1,3-Dichloropropene	7.97	75	936260	106.36	UG	#	96
40) 4-Methyl-2-pentanone (MIBK	8.16	43	2543986	203.79	UG		100
42) Toluene	8.36	92	1260153	102.72	UG		98
43) trans-1,3-Dichloropropene	8.60	75	996927	111.74	UG	#	96

44) 1,1,2-Trichloroethane	8.81	83	445850	103.37 UG		95
45) Tetrachloroethene	8.99	166	439033	102.42 UG		100
46) 1,3-Dichloropropane	9.01	76	956230	106.94 UG		99
47) 2-Hexanone	9.12	43	2126611	206.27 UG		98
48) Dibromochloromethane	9.27	129	516816	107.87 UG		100
49) 1,2-Dibromoethane (EDB)	9.40	107	537193	100.62 UG		99
51) Chlorobenzene	9.98	112	1354296	112.02 UG		99
52) 1,1,1,2-Tetrachloroethane	10.08	131	465306	112.81 UG	#	99
53) Ethylbenzene	10.12	91	2507736	115.06 UG		98
54) m,p-Xylene	10.26	106	1794387	213.09 UG	#	100
55) o-Xylene	10.73	106	912257	107.21 UG	#	17
56) Styrene	10.74	104	1558338	112.36 UG	#	80
57) Bromoform	10.95	173	399249	123.97 UG	#	98
58) Isopropylbenzene	11.18	105	2425615	110.97 UG	#	97
60) 1,1,2,2-Tetrachloroethane	11.53	83	946837	115.66 UG		98
61) Bromobenzene	11.53	156	549029	115.58 UG	#	100
62) 1,2,3-Trichloropropane	11.57	75	828363	111.29 UG		99
63) n-Propylbenzene	11.68	91	2966498	115.95 UG	#	97
64) 2-Chlorotoluene	11.77	91	1886584	116.20 UG	#	91
65) 1,3,5-Trimethylbenzene	11.89	105	2120796	113.81 UG	#	94
66) 4-Chlorotoluene	11.90	91	2254003	119.68 UG	#	92
67) tert-Butylbenzene	12.29	119	1645483	112.15 UG	#	100
68) 1,2,4-Trimethylbenzene	12.35	105	2146802	112.17 UG	#	94
69) sec-Butylbenzene	12.56	105	2597169	112.12 UG	#	98
70) 1,3-Dichlorobenzene	12.68	146	1014620	110.78 UG		99
71) 4-Isopropyltoluene	12.74	119	2086474	111.09 UG		99
72) 1,4-Dichlorobenzene	12.78	146	1017390	108.66 UG		99
73) n-Butylbenzene	13.24	91	2088119	118.56 UG	#	95
74) 1,2-Dichlorobenzene	13.24	146	974612	107.35 UG		100
75) 1,2-Dibromo-3-chloropropan	14.19	75	316929	127.35 UG	#	19
76) 1,2,4-Trichlorobenzene	15.15	180	809885	116.29 UG		99
77) Hexachlorobutadiene	15.35	225	312094	122.96 UG		100
78) Naphthalene	15.41	128	2589692	108.12 UG		100
79) 1,2,3-Trichlorobenzene	15.66	180	797849	116.67 UG		98
80) 1,1,2-Trichloro-1,2,2-trif	3.18	101	315124	97.04 UG		92
81) Methyl acetate	3.59	43	818057	101.98 UG	#	77
82) Cyclohexane	5.83	56	1012725	94.70 UG	#	71
83) Methylcyclohexane	7.13	83	830417	100.14 UG	#	62

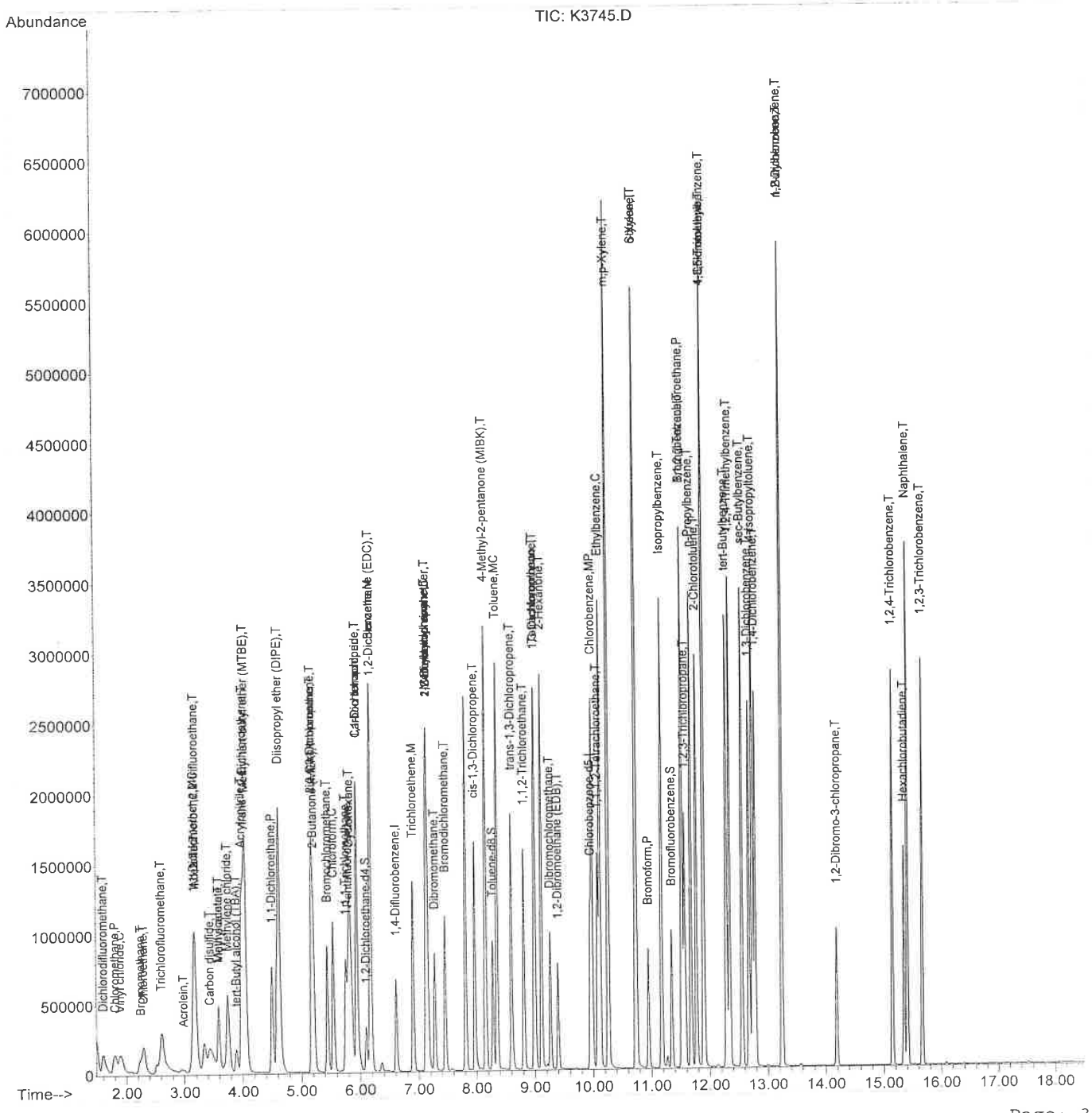
(#) = qualifier out of range (m) = manual integration (+) = signals summed

K8230724.M Mon Aug 14 10:52:05 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3745.D
Acq On : 24 Jul 2023 17:28
Operator : BARBARA
Sample : ICC100,ICC230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 25 09:22:05 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Tue Jul 25 09:21:32 2023
Response via : Initial Calibration



K8230724.M Mon Aug 14 10:52:06 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3746.D
Acq On : 24 Jul 2023 17:56
Operator : BARBARA
Sample : ICC150,ICC230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 25 09:22:45 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Tue Jul 25 09:22:18 2023
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	5.79	168	319841	50.00	UG		0.00
31) 1,4-Difluorobenzene	6.61	114	559338	50.00	UG		0.00
50) Chlorobenzene-d5	9.95	117	588810	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.10	65	288955	50.08	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.16%				
41) Toluene-d8	8.28	98	713545	48.99	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.98%				
59) Bromofluorobenzene	11.35	95	425166	54.97	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 109.94%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.59	85	655406	149.60	UG	#	57
3) Chloromethane	1.80	50	808431	135.28	UG		98
4) Vinyl chloride	1.89	62	660262	140.67	UG		99
5) Bromomethane	2.25	94	362529	145.23	UG	#	45
6) Chloroethane	2.31	64	387234	124.66	UG		99
7) Trichlorofluoromethane	2.59	101	1005737m	162.69	UG		
8) Acrolein	3.00	56	35155	336.11	UG	#	96
9) 1,1-Dichloroethene	3.17	96	520783	143.27	UG	#	43
10) Acetone	3.19	43	1239201	296.10	UG		98
11) Carbon disulfide	3.45	76	1941832	140.90	UG		100
12) Vinyl acetate	3.59	43	1305410	136.79	UG	#	100
13) Methylene chloride	3.75	84	698393	124.11	UG		99
14) Acrylonitrile	3.98	53	1868793	371.34	UG	#	100
15) tert-Butyl alcohol (TBA)	3.90	59	444591	303.32	UG	#	100
16) trans-1,2-Dichloroethene	4.01	96	741458	139.39	UG	#	100
17) Methyl tert-butyl ether (M	4.05	73	3062713	147.02	UG		100
18) 1,1-Dichloroethane	4.50	63	1715299	148.62	UG	#	97
19) Diisopropyl ether (DIPE)	4.63	45	3685477	142.57	UG	#	100
20) cis-1,2-Dichloroethene	5.18	96	828696	139.85	UG	#	67
21) 2,2-Dichloropropane	5.18	77	708068	134.24	UG	#	96
22) 2-Butanone (MEK)	5.22	43	2323356	291.01	UG	#	96
23) Bromochloromethane	5.45	128	352294	138.89	UG	#	12
25) Chloroform	5.55	83	1574232	143.47	UG		100
26) 1,1,1-Trichloroethane	5.76	97	1054164	126.92	UG	#	84
27) Carbon tetrachloride	5.95	117	1086186	156.56	UG		100
28) 1,1-Dichloropropene	5.94	75	1145055	144.06	UG	#	74
29) 1,2-Dichloroethane (EDC)	6.19	62	1649163	154.46	UG	#	98
32) Benzene	6.18	78	3170098	150.22	UG		100
33) Trichloroethene	6.91	95	856711	151.79	UG	#	74
34) 1,2-Dichloropropane	7.15	63	965100	145.71	UG	#	99
35) Dibromomethane	7.28	93	569684	156.58	UG	#	91
37) Bromodichloromethane	7.46	83	1302860	159.97	UG	#	98
38) 2-Chloroethyl vinyl ether	7.15	63	965100	294.96	UG	#	100
39) cis-1,3-Dichloropropene	7.98	75	1528044	159.24	UG	#	96
40) 4-Methyl-2-pentanone (MIBK	8.16	43	4085846	297.21	UG		100
42) Toluene	8.36	92	2032942	151.61	UG		98
43) trans-1,3-Dichloropropene	8.60	75	1615003	163.82	UG	#	96

44) 1,1,2-Trichloroethane	8.81	83	714444	150.74 UG		95
45) Tetrachloroethene	8.99	166	717758	153.05 UG		100
46) 1,3-Dichloropropane	9.01	76	1538824	156.28 UG		99
47) 2-Hexanone	9.12	43	3368272	297.17 UG		99
48) Dibromochloromethane	9.27	129	847127	161.70 UG		100
49) 1,2-Dibromoethane (EDB)	9.40	107	864023	149.27 UG		98
51) Chlorobenzene	9.98	112	2178329	163.52 UG		99
52) 1,1,1,2-Tetrachloroethane	10.08	131	738527	163.29 UG	#	52
53) Ethylbenzene	10.12	91	4032531	166.92 UG		98
54) m,p-Xylene	10.26	106	2881783	314.39 UG	#	100
55) o-Xylene	10.73	106	1468462	158.19 UG	#	17
56) Styrene	10.74	104	2497532	164.44 UG	#	80
57) Bromoform	10.95	173	659507	184.04 UG	#	78
58) Isopropylbenzene	11.18	105	3911387	162.35 UG	#	97
60) 1,1,2,2-Tetrachloroethane	11.52	83	1501058	164.80 UG		98
61) Bromobenzene	11.53	156	874215	165.70 UG	#	99
62) 1,2,3-Trichloropropane	11.57	75	1323978	159.55 UG		99
63) n-Propylbenzene	11.68	91	4768518	167.70 UG	#	97
64) 2-Chlorotoluene	11.77	91	3008769	166.57 UG	#	91
65) 1,3,5-Trimethylbenzene	11.89	105	3371102	163.27 UG	#	73
66) 4-Chlorotoluene	11.90	91	3592146	170.50 UG	#	92
67) tert-Butylbenzene	12.29	119	2608443	160.85 UG	#	100
68) 1,2,4-Trimethylbenzene	12.35	105	3409002	160.61 UG	#	95
69) sec-Butylbenzene	12.56	105	4141397	161.30 UG	#	98
70) 1,3-Dichlorobenzene	12.68	146	1592218	158.14 UG		99
71) 4-Isopropyltoluene	12.74	119	3329481	159.97 UG		99
72) 1,4-Dichlorobenzene	12.79	146	1629086	158.21 UG		100
73) n-Butylbenzene	13.24	91	3314241	165.45 UG	#	86
74) 1,2-Dichlorobenzene	13.24	146	1538667	154.41 UG		100
75) 1,2-Dibromo-3-chloropropan	14.19	75	498018	176.08 UG	#	19
76) 1,2,4-Trichlorobenzene	15.15	180	1286535	165.26 UG		99
77) Hexachlorobutadiene	15.35	225	480006	164.06 UG		100
78) Naphthalene	15.41	128	4148624	158.12 UG		100
79) 1,2,3-Trichlorobenzene	15.67	180	1289677	168.32 UG		99
80) 1,1,2-Trichloro-1,2,2-trif	3.19	101	535261	151.57 UG		93
81) Methyl acetate	3.59	43	1305410	147.47 UG	#	78
82) Cyclohexane	5.82	56	1681173	146.07 UG	#	70
83) Methylcyclohexane	7.13	83	1350211	149.20 UG	#	41

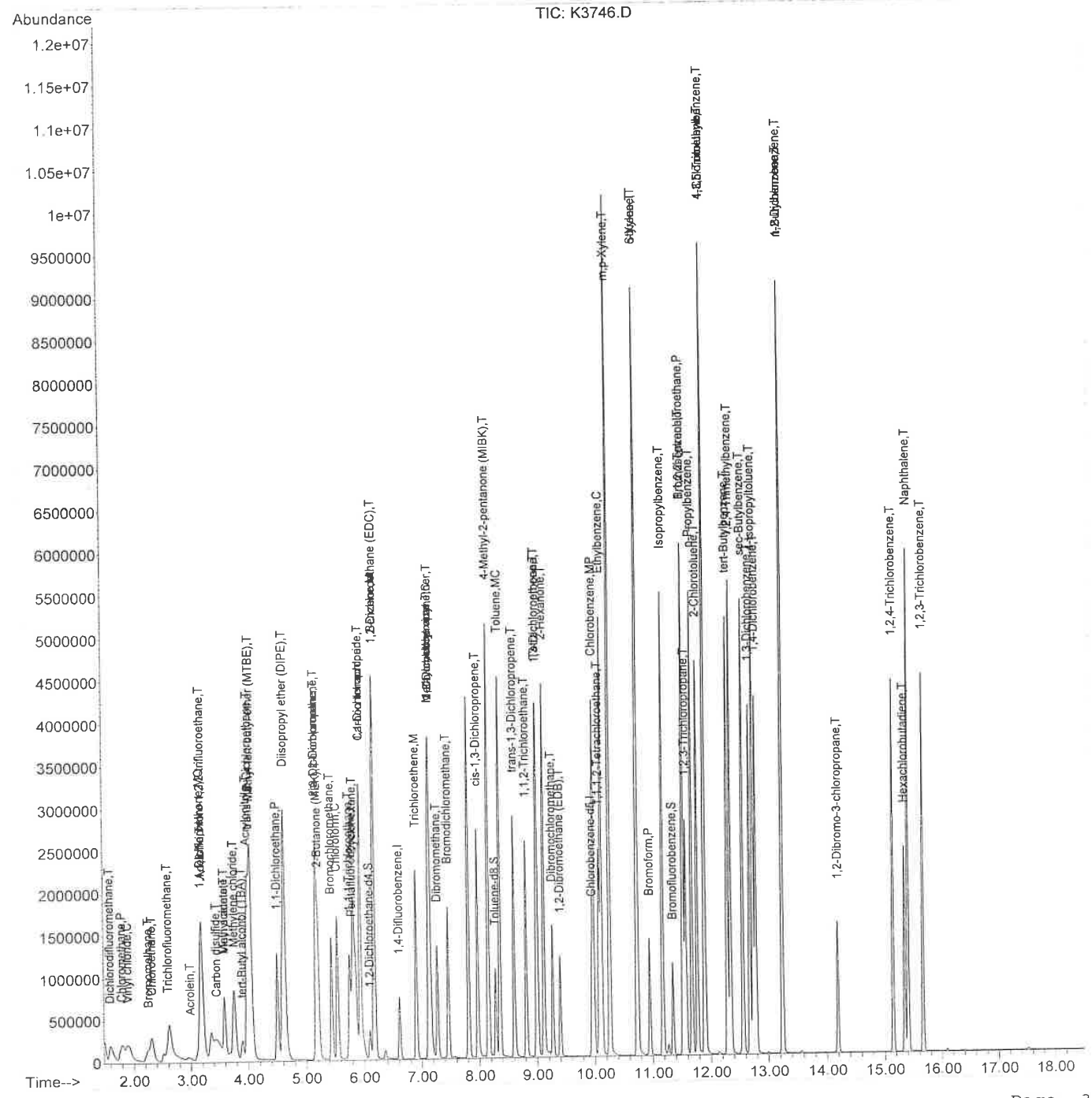
(#) = qualifier out of range (m) = manual integration (+) = signals summed

K8230724.M Mon Aug 14 11:41:17 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3746.D
Acq On : 24 Jul 2023 17:56
Operator : BARBARA
Sample : ICC150,ICC230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 25 09:22:45 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Tue Jul 25 09:22:18 2023
Response via : Initial Calibration



K8230724.M Mon Aug 14 11:41:18 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3747.D
Acq On : 24 Jul 2023 18:25
Operator : BARBARA
Sample : ICC200,ICC230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 25 09:23:20 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Tue Jul 25 09:22:52 2023
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	5.79	168	347693	50.00	UG		0.00
31) 1,4-Difluorobenzene	6.61	114	612638	50.00	UG		0.00
50) Chlorobenzene-d5	9.95	117	623434	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.10	65	309343	49.32	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.64%				
41) Toluene-d8	8.28	98	764190	47.91	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.82%				
59) Bromofluorobenzene	11.35	95	441572	53.92	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 107.84%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.59	85	935965	196.52	UG	#	58
3) Chloromethane	1.79	50	1143727	176.06	UG		98
4) Vinyl chloride	1.88	62	947082	185.61	UG		99
5) Bromomethane	2.22	94	547296	201.68	UG	#	83
6) Chloroethane	2.29	64	565380	167.43	UG		99
7) Trichlorofluoromethane	2.60	101	1429665m	204.96	UG		
8) Acrolein	2.99	56	47707	419.93	UG	#	63
9) 1,1-Dichloroethene	3.15	96	729134	184.52	UG	#	43
10) Acetone	3.19	43	1511575	332.25	UG		98
11) Carbon disulfide	3.43	76	2851096	190.30	UG		100
12) Vinyl acetate	3.59	43	1803338	173.83	UG	#	100
13) Methylene chloride	3.73	84	1009324	165.00	UG		99
14) Acrylonitrile	3.98	53	2310705	422.37	UG	#	100
15) tert-Butyl alcohol (TBA)	3.90	59	489921	307.47	UG	#	100
16) trans-1,2-Dichloroethene	4.01	96	1060465	183.39	UG	#	100
17) Methyl tert-butyl ether (M	4.05	73	4328763	191.15	UG		100
18) 1,1-Dichloroethane	4.50	63	2472364	197.06	UG	#	97
19) Diisopropyl ether (DIPE)	4.63	45	5201427	185.09	UG	#	100
20) cis-1,2-Dichloroethene	5.18	96	1189247	184.61	UG	#	99
21) 2,2-Dichloropropane	5.18	77	972477	169.60	UG	#	87
22) 2-Butanone (MEK)	5.22	43	3192424	367.83	UG	#	96
23) Bromochloromethane	5.45	128	505967	183.49	UG	#	44
25) Chloroform	5.55	83	2248228	188.49	UG		100
26) 1,1,1-Trichloroethane	5.75	97	1948927	215.85	UG	#	84
27) Carbon tetrachloride	5.95	117	1570298	208.20	UG		100
28) 1,1-Dichloropropene	5.94	75	1660231	192.15	UG	#	74
29) 1,2-Dichloroethane (EDC)	6.19	62	2276348	196.12	UG		98
32) Benzene	6.17	78	4582623	198.26	UG		100
33) Trichloroethene	6.91	95	1231045	199.13	UG	#	74
34) 1,2-Dichloropropane	7.15	63	1376785	189.78	UG	#	99
35) Dibromomethane	7.28	93	807689	202.69	UG	#	91
37) Bromodichloromethane	7.46	83	1849986	207.39	UG	#	98
38) 2-Chloroethyl vinyl ether	7.15	63	1376785	384.17	UG	#	100
39) cis-1,3-Dichloropropene	7.98	75	2174843	206.92	UG	#	96
40) 4-Methyl-2-pentanone (MIBK	8.16	43	5529589	367.24	UG		99
42) Toluene	8.36	92	2931490	199.60	UG		98
43) trans-1,3-Dichloropropene	8.60	75	2279468	211.10	UG	#	96

44) 1,1,2-Trichloroethane	8.81	83	1003544	193.31 UG		95
45) Tetrachloroethene	8.99	166	1010096	196.64 UG		100
46) 1,3-Dichloropropane	9.01	76	2164977	200.75 UG		99
47) 2-Hexanone	9.12	43	4580691	368.97 UG		99
48) Dibromochloromethane	9.27	129	1173445	204.50 UG		100
49) 1,2-Dibromoethane (EDB)	9.40	107	1207752	190.51 UG		99
51) Chlorobenzene	9.98	112	3073055	217.87 UG		99
52) 1,1,1,2-Tetrachloroethane	10.08	131	1035420	216.22 UG	#	100
53) Ethylbenzene	10.12	91	5670071	221.67 UG		97
54) m,p-Xylene	10.27	106	4063364	418.68 UG	#	100
55) o-Xylene	10.73	106	2048756	208.44 UG	#	17
56) Styrene	10.75	104	3507057	218.09 UG	#	91
57) Bromoform	10.95	173	908909	239.55 UG	#	98
58) Isopropylbenzene	11.18	105	5399026	211.65 UG	#	97
60) 1,1,2,2-Tetrachloroethane	11.53	83	2058998	213.50 UG		98
61) Bromobenzene	11.53	156	1208524	216.34 UG	#	100
62) 1,2,3-Trichloropropane	11.57	75	1800126	204.89 UG		99
63) n-Propylbenzene	11.68	91	6563250	217.99 UG	#	97
64) 2-Chlorotoluene	11.77	91	4210118	220.14 UG	#	91
65) 1,3,5-Trimethylbenzene	11.89	105	4647448	212.59 UG	#	94
66) 4-Chlorotoluene	11.90	91	4975413	223.04 UG	#	92
67) tert-Butylbenzene	12.29	119	3555195	207.06 UG	#	100
68) 1,2,4-Trimethylbenzene	12.35	105	4697768	209.04 UG	#	94
69) sec-Butylbenzene	12.56	105	5654604	208.00 UG	#	91
70) 1,3-Dichlorobenzene	12.68	146	2209348	207.24 UG		99
71) 4-Isopropyltoluene	12.74	119	4534796	205.78 UG		99
72) 1,4-Dichlorobenzene	12.79	146	2255039	206.84 UG		100
73) n-Butylbenzene	13.24	91	4519001	213.06 UG	#	95
74) 1,2-Dichlorobenzene	13.24	146	2110447	200.03 UG		100
75) 1,2-Dibromo-3-chloropropan	14.19	75	657028	219.40 UG	#	19
76) 1,2,4-Trichlorobenzene	15.15	180	1742647	211.42 UG		99
77) Hexachlorobutadiene	15.35	225	672230	217.00 UG		100
78) Naphthalene	15.41	128	5609803	201.94 UG		100
79) 1,2,3-Trichlorobenzene	15.67	180	1742871	214.83 UG		98
80) 1,1,2-Trichloro-1,2,2-trif	3.17	101	777558	207.96 UG		93
81) Methyl acetate	3.59	43	1803338	192.41 UG	#	78
82) Cyclohexane	5.83	56	2445017	200.64 UG	#	70
83) Methylcyclohexane	7.13	83	1985650	207.24 UG	#	41

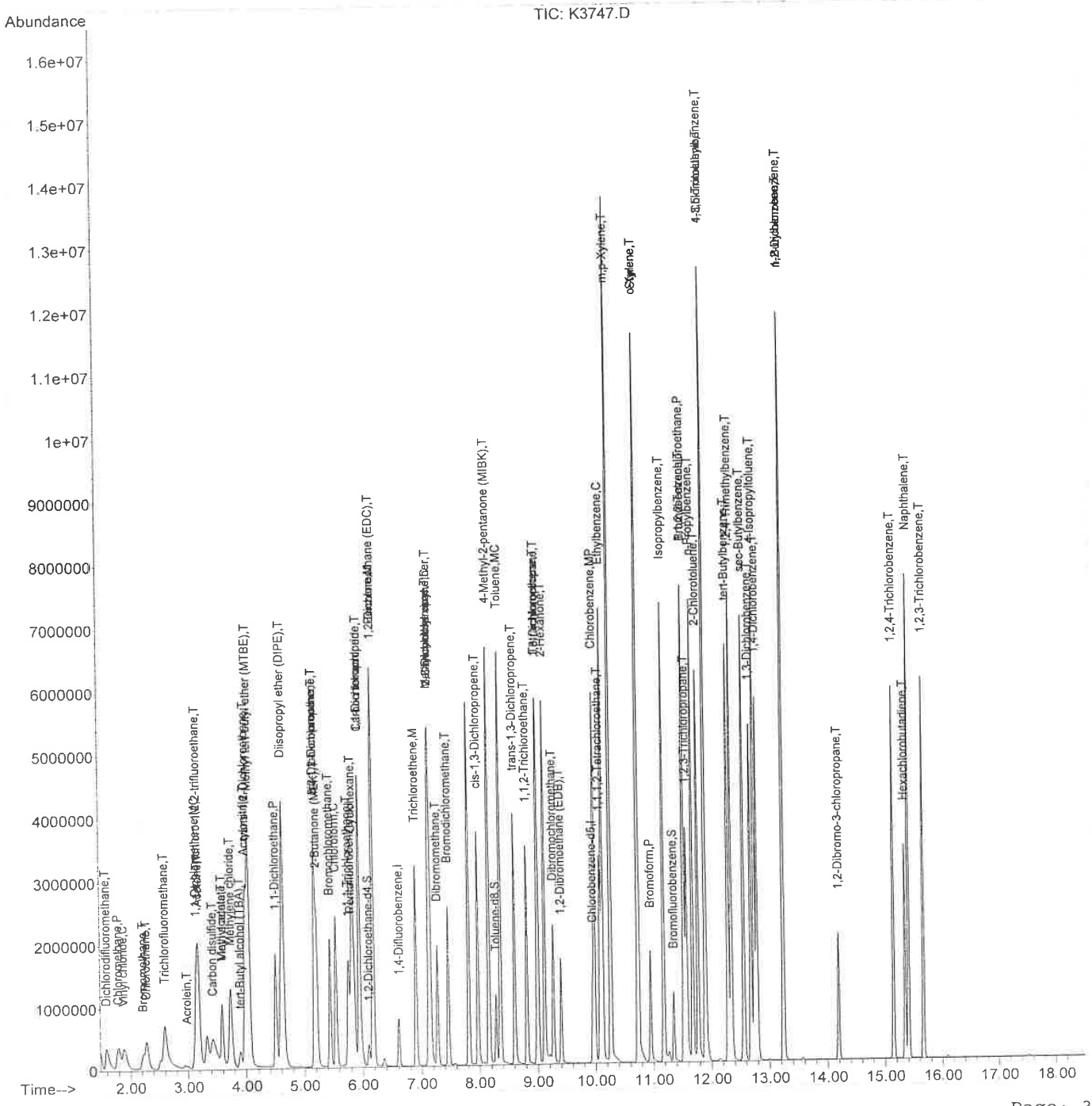
(#) = qualifier out of range (m) = manual integration (+) = signals summed

K8230724.M Mon Aug 14 11:42:44 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3747.D
Acq On : 24 Jul 2023 18:25
Operator : BARBARA
Sample : ICC200,ICC230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 25 09:23:20 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Tue Jul 25 09:22:52 2023
Response via : Initial Calibration



K8230724.M Mon Aug 14 11:42:45 2023

Evaluate Continuing Calibration Report

Data Path : C:\MSDCHEM\1\DATA\23-07-24\
Data File : K3749.D
Acq On : 24 Jul 2023 19:22
Operator : BARBARA
Sample : ICV100,ICV230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 26 11:03:26 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	120	0.00
2	T	Dichlorodifluoromethane	0.662	0.674	-1.8	117	-0.01
3	P	Chloromethane	0.821	0.844	-2.8	128	-0.02
4	C	Vinyl chloride	0.647	0.674	-4.2	120	-0.05
5	T	Bromomethane	0.389	0.374	3.9	118	-0.04
6	T	Chloroethane	0.415	0.399	3.9	118	0.03
7	T	Trichlorofluoromethane	1.067	1.011	5.2	112	-0.03
8	T	Acrolein	0.015	0.017	-13.3	144	0.02
9	MC	1,1-Dichloroethene	0.547	0.539	1.5	126	0.01
10	T	Acetone	0.686	0.645	6.0	108	0.00
11	T	Carbon disulfide	1.855	2.040	-10.0	124	0.00
12	T	Vinyl acetate	1.388	1.337	3.7	114	0.00
13	T	Methylene chloride	0.781	0.765	2.0	122	0.03
15	T	tert-Butyl alcohol (TBA)	0.232	0.249	-7.3	115	0.01
16	T	trans-1,2-Dichloroethene	0.768	0.769	-0.1	116	-0.01
17	T	Methyl tert-butyl ether (MT	3.107	3.125	-0.6	114	0.00
18	P	1,1-Dichloroethane	1.704	1.792	-5.2	120	0.00
19	T	Diisopropyl ether (DIPE)	3.687	3.821	-3.6	116	0.00
20	T	cis-1,2-Dichloroethene	0.857	0.873	-1.9	120	0.00
21	T	2,2-Dichloropropane	0.791	0.691	12.6	101	-0.01
22	T	2-Butanone (MEK)	1.208	1.206	0.2	114	-0.02
23	T	Bromochloromethane	0.364	0.368	-1.1	117	-0.02
24	T	Tetrahydrofuran	0.000	0.000	0.0	0#	-4.87#
25	C	Chloroform	1.651	1.638	0.8	117	-0.01
26	T	1,1,1-Trichloroethane	1.273	1.372	-7.8	113	0.00
27	T	Carbon tetrachloride	1.076	1.114	-3.5	115	0.01
28	T	1,1-Dichloropropene	1.187	1.212	-2.1	120	0.00
29	T	1,2-Dichloroethane (EDC)	1.725	1.674	3.0	113	0.00
30	S	1,2-Dichloroethane-d4	0.933	0.885	5.1	113	0.00
31	I	1,4-Difluorobenzene	1.000	1.000	0.0	119	0.00
32	M	Benzene	1.844	1.943	-5.4	121	0.00
33	M	Trichloroethene	0.497	0.517	-4.0	119	0.01
34	C	1,2-Dichloropropane	0.581	0.591	-1.7	121	0.00
35	T	Dibromomethane	0.350	0.340	2.9	116	0.00
36	T	1,4-Dioxane	0.000	0.000	0.0	0#	-0.02
37	T	Bromodichloromethane	0.732	0.768	-4.9	117	0.00
38	T	2-Chloroethyl vinyl ether	0.290	0.295	-1.7	121	0.00
39	T	cis-1,3-Dichloropropene	0.874	0.911	-4.2	118	0.00
40	T	4-Methyl-2-pentanone (MIBK)	1.187	1.203	-1.3	115	0.00
41	S	Toluene-d8	1.264	1.259	0.4	118	0.00
42	MC	Toluene	1.190	1.229	-3.3	118	0.00
43	T	trans-1,3-Dichloropropene	0.916	0.936	-2.2	114	0.00
44	T	1,1,2-Trichloroethane	0.420	0.428	-1.9	116	0.00
45	T	Tetrachloroethene	0.413	0.430	-4.1	119	0.00
46	T	1,3-Dichloropropane	0.900	0.918	-2.0	116	0.00

47	T	2-Hexanone	1.003	1.004	-0.1	114	0.00
48	T	Dibromochloromethane	0.445	0.483	-8.5	113	0.00
49	T	1,2-Dibromoethane (EDB)	0.495	0.516	-4.2	116	0.00
50	I	Chlorobenzene-d5	1.000	1.000	0.0	117	0.00
51	MP	Chlorobenzene	1.241	1.244	-0.2	117	0.00
52	T	1,1,1,2-Tetrachloroethane	0.405	0.415	-2.5	114	0.00
53	C	Ethylbenzene	2.222	2.295	-3.3	116	0.00
54	T	m,p-Xylene	0.800	0.817	-2.1	116	0.00
55	T	o-Xylene	0.827	0.836	-1.1	117	0.00
56	T	Styrene	1.389	1.424	-2.5	116	0.00
57	P	Bromoform	0.323	0.358	-10.8	114	0.00
58	T	Isopropylbenzene	2.137	2.214	-3.6	116	0.00
59	S	Bromofluorobenzene	0.710	0.704	0.8	115	0.00
60	P	1,1,2,2-Tetrachloroethane	0.867	0.851	1.8	114	0.00
61	T	Bromobenzene	0.511	0.496	2.9	115	0.00
62	T	1,2,3-Trichloropropane	0.772	0.743	3.8	114	0.00
63	T	n-Propylbenzene	2.608	2.714	-4.1	116	0.00
64	T	2-Chlorotoluene	1.679	1.711	-1.9	115	0.00
65	T	1,3,5-Trimethylbenzene	1.897	1.888	0.5	113	0.00
66	T	4-Chlorotoluene	2.009	2.025	-0.8	114	0.00
67	T	tert-Butylbenzene	1.456	1.491	-2.4	115	0.00
68	T	1,2,4-Trimethylbenzene	1.924	1.926	-0.1	114	0.00
69	T	sec-Butylbenzene	2.278	2.350	-3.2	115	0.00
70	T	1,3-Dichlorobenzene	0.907	0.906	0.1	114	0.00
71	T	4-Isopropyltoluene	1.827	1.877	-2.7	114	0.00
72	T	1,4-Dichlorobenzene	0.931	0.923	0.9	115	0.01
73	T	n-Butylbenzene	1.892	1.884	0.4	115	0.00
74	T	1,2-Dichlorobenzene	0.882	0.878	0.5	115	0.00
75	T	1,2-Dibromo-3-chloropropane	0.275	0.275	0.0	111	0.00
76	T	1,2,4-Trichlorobenzene	0.737	0.725	1.6	114	0.02
77	T	Hexachlorobutadiene	0.285	0.283	0.7	115	0.00
78	T	Naphthalene	2.331	2.328	0.1	114	0.00
79	T	1,2,3-Trichlorobenzene	0.736	0.715	2.9	114	0.00
80	T	1,1,2-Trichloro-1,2,2-trifl	0.315	0.309	1.9	125	0.00
81	T	Methyl acetate	0.791	0.730	7.7	114	0.00
82	T	Cyclohexane	1.024	0.982	4.1	123	0.02
83	T	Methylcyclohexane	0.775	0.808	-4.3	124	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

K8230724.M Fri Jul 28 14:19:56 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3749.D
Acq On : 24 Jul 2023 19:22
Operator : BARBARA
Sample : ICV100,ICV230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 26 11:03:26 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	5.79	168	347405	50.00	UG	0.00
31) 1,4-Difluorobenzene	6.61	114	605565	50.00	UG	0.00
50) Chlorobenzene-d5	9.95	117	636179	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.10	65	307356	47.39	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 94.78%			
41) Toluene-d8	8.28	98	762109	49.77	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.54%			
59) Bromofluorobenzene	11.35	95	448108	49.61	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.22%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.59	85	468241	101.72	UG	# 58
3) Chloromethane	1.80	50	586090	102.80	UG	98
4) Vinyl chloride	1.89	62	468538m	104.26	UG	
5) Bromomethane	2.25	94	259902	96.04	UG	# 84
6) Chloroethane	2.32	64	277465	96.16	UG	99
7) Trichlorofluoromethane	2.61	101	702777	94.78	UG	85
8) Acrolein	3.00	56	34754	343.67	UG	# 99
9) 1,1-Dichloroethene	3.18	96	374186	98.48	UG	# 45
10) Acetone	3.19	43	896692	188.10	UG	98
11) Carbon disulfide	3.43	76	1417238	109.93	UG	100
12) Vinyl acetate	3.59	43	928994	96.31	UG	# 100
13) Methylene chloride	3.76	84	531461	97.93	UG	97
14) Acrylonitrile	5.82	53	137529	27.17	UG	85
15) tert-Butyl alcohol (TBA)	3.89	59	346012	215.07	UG	# 100
16) trans-1,2-Dichloroethene	4.01	96	534424	100.11	UG	# 100
17) Methyl tert-butyl ether (M	4.04	73	2171307	100.58	UG	100
18) 1,1-Dichloroethane	4.50	63	1244964	105.17	UG	# 83
19) Diisopropyl ether (DIPE)	4.63	45	2654570	103.62	UG	# 100
20) cis-1,2-Dichloroethene	5.18	96	606320	101.82	UG	# 98
21) 2,2-Dichloropropane	5.18	77	480090	87.35	UG	# 96
22) 2-Butanone (MEK)	5.21	43	1676056	199.75	UG	# 96
23) Bromochloromethane	5.45	128	255366	101.08	UG	# 44
25) Chloroform	5.55	83	1137988	99.18	UG	100
26) 1,1,1-Trichloroethane	5.76	97	953101	107.79	UG	# 84
27) Carbon tetrachloride	5.95	117	774223	103.60	UG	100
28) 1,1-Dichloropropene	5.95	75	842348	102.14	UG	# 74
29) 1,2-Dichloroethane (EDC)	6.19	62	1162955	97.06	UG	# 98
32) Benzene	6.18	78	2353740	105.37	UG	100
33) Trichloroethene	6.91	95	625999	103.97	UG	# 74
34) 1,2-Dichloropropane	7.15	63	715263	101.67	UG	# 99
35) Dibromomethane	7.28	93	412087	97.29	UG	# 91
37) Bromodichloromethane	7.46	83	930734	104.98	UG	# 98
38) 2-Chloroethyl vinyl ether	7.15	63	715263	203.34	UG	# 100
39) cis-1,3-Dichloropropene	7.98	75	1103860	104.32	UG	# 96
40) 4-Methyl-2-pentanone (MIBK	8.16	43	2914693	202.76	UG	99
42) Toluene	8.36	92	1489073	103.32	UG	99
43) trans-1,3-Dichloropropene	8.60	75	1133653	102.23	UG	# 96

44) 1,1,2-Trichloroethane	8.81	83	518371	101.82 UG		95
45) Tetrachloroethene	8.99	166	520889	104.05 UG		100
46) 1,3-Dichloropropane	9.01	76	1112347	102.03 UG		99
47) 2-Hexanone	9.12	43	2431431	200.09 UG		99
48) Dibromochloromethane	9.27	129	585515	108.62 UG		100
49) 1,2-Dibromoethane (EDB)	9.40	107	625483	104.40 UG		98
51) Chlorobenzene	9.98	112	1582569	100.24 UG		99
52) 1,1,1,2-Tetrachloroethane	10.08	131	528409	102.67 UG	#	52
53) Ethylbenzene	10.12	91	2920665	103.33 UG		98
54) m,p-Xylene	10.26	106	2079825	204.22 UG	#	100
55) o-Xylene	10.73	106	1063451	101.06 UG	#	17
56) Styrene	10.74	104	1811652	102.52 UG	#	80
57) Bromoform	10.95	173	455307	110.91 UG	#	78
58) Isopropylbenzene	11.18	105	2817158	103.60 UG	#	97
60) 1,1,2,2-Tetrachloroethane	11.52	83	1083062	98.21 UG		98
61) Bromobenzene	11.53	156	630492	96.99 UG	#	100
62) 1,2,3-Trichloropropane	11.57	75	945304	96.27 UG		99
63) n-Propylbenzene	11.68	91	3452774	104.05 UG	#	97
64) 2-Chlorotoluene	11.77	91	2176509	101.89 UG	#	91
65) 1,3,5-Trimethylbenzene	11.89	105	2401924	99.53 UG	#	94
66) 4-Chlorotoluene	11.90	91	2575948	100.77 UG	#	92
67) tert-Butylbenzene	12.29	119	1897630	102.41 UG	#	100
68) 1,2,4-Trimethylbenzene	12.35	105	2450919	100.13 UG	#	94
69) sec-Butylbenzene	12.56	105	2990012	103.14 UG	#	98
70) 1,3-Dichlorobenzene	12.68	146	1153022	99.95 UG		99
71) 4-Isopropyltoluene	12.74	119	2387918	102.73 UG		99
72) 1,4-Dichlorobenzene	12.79	146	1174222	99.12 UG		100
73) n-Butylbenzene	13.24	91	2397310	99.59 UG	#	86
74) 1,2-Dichlorobenzene	13.24	146	1117182	99.61 UG		100
75) 1,2-Dibromo-3-chloropropan	14.19	75	350284	100.19 UG	#	65
76) 1,2,4-Trichlorobenzene	15.15	180	922616	98.41 UG		99
77) Hexachlorobutadiene	15.35	225	360354	99.34 UG		100
78) Naphthalene	15.41	128	2961902	99.87 UG		100
79) 1,2,3-Trichlorobenzene	15.66	180	909554	97.12 UG		99
80) 1,1,2-Trichloro-1,2,2-trif	3.19	101	393040	98.15 UG		92
81) Methyl acetate	3.59	43	928994	92.35 UG	#	78
82) Cyclohexane	5.83	56	1249702	95.87 UG	#	71
83) Methylcyclohexane	7.13	83	1028226	104.31 UG	#	66

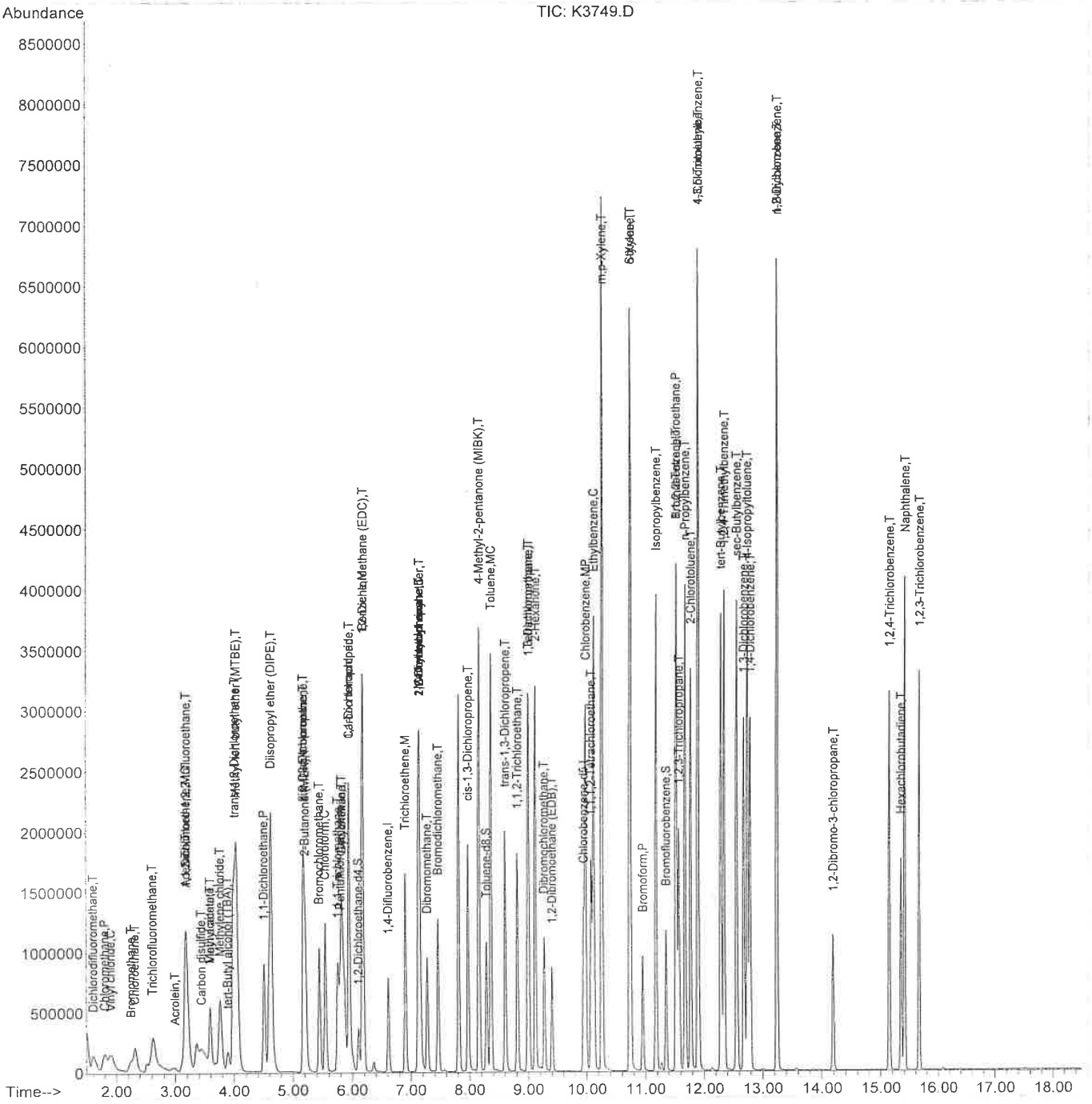
(#) = qualifier out of range (m) = manual integration (+) = signals summed

K8230724.M Mon Aug 14 11:45:17 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3749.D
Acq On : 24 Jul 2023 19:22
Operator : BARBARA
Sample : ICV100,ICV230724,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 26 11:03:26 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration



K8230724.M Mon Aug 14 11:45:17 2023 Page: 3

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3841.D
Acq On : 31 Jul 2023 10:51
Operator : BARBARA
Sample : CCV100,CCV230731-01,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 01 11:59:08 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	99	0.00
2	T	Dichlorodifluoromethane	0.662	0.643	2.9	92	0.00
3	P	Chloromethane	0.821	0.698	15.0	87	-0.01
4	C	Vinyl chloride	0.647	0.600	7.3	88	-0.05
5	T	Bromomethane	0.389	0.357	8.2	93	-0.04
6	T	Chloroethane	0.415	0.392	5.5	95	0.02
7	T	Trichlorofluoromethane	1.067	1.047	1.9	96	-0.05
8	T	Acrolein	0.015	0.013	13.3	89	0.01
9	MC	1,1-Dichloroethene	0.547	0.509	6.9	98	0.00
10	T	Acetone	0.686	0.695	-1.3	95	0.00
11	T	Carbon disulfide	1.855	1.921	-3.6	97	-0.02
12	T	Vinyl acetate	1.388	1.353	2.5	95	0.00
13	T	Methylene chloride	0.781	0.712	8.8	93	0.00
15	T	tert-Butyl alcohol (TBA)	0.232	0.242	-4.3	92	0.00
16	T	trans-1,2-Dichloroethene	0.768	0.756	1.6	94	0.00
17	T	Methyl tert-butyl ether (MT	3.107	3.181	-2.4	96	0.00
18	P	1,1-Dichloroethane	1.704	1.720	-0.9	95	0.00
19	T	Diisopropyl ether (DIPE)	3.687	3.680	0.2	92	0.00
20	T	cis-1,2-Dichloroethene	0.857	0.829	3.3	93	0.00
21	T	2,2-Dichloropropane	0.791	0.901	-13.9	109	-0.01
22	T	2-Butanone (MEK)	1.208	1.202	0.5	93	-0.02
23	T	Bromochloromethane	0.364	0.351	3.6	92	-0.02
24	T	Tetrahydrofuran	0.000	0.000	0.0	0#	-4.87#
25	C	Chloroform	1.651	1.628	1.4	96	-0.02
26	T	1,1,1-Trichloroethane	1.273	1.452	-14.1	99	-0.01
27	T	Carbon tetrachloride	1.076	1.150	-6.9	98	0.01
28	T	1,1-Dichloropropene	1.187	1.161	2.2	95	-0.01
29	T	1,2-Dichloroethane (EDC)	1.725	1.756	-1.8	97	0.00
30	S	1,2-Dichloroethane-d4	0.933	0.941	-0.9	99	0.00
31	I	1,4-Difluorobenzene	1.000	1.000	0.0	94	0.00
32	M	Benzene	1.844	1.904	-3.3	94	0.00
33	M	Trichloroethene	0.497	0.524	-5.4	96	0.00
34	C	1,2-Dichloropropane	0.581	0.576	0.9	93	-0.01
35	T	Dibromomethane	0.350	0.352	-0.6	95	0.00
36	T	1,4-Dioxane	0.000	0.000	0.0	0#	-0.05
37	T	Bromodichloromethane	0.732	0.811	-10.8	97	0.00
38	T	2-Chloroethyl vinyl ether	0.290	0.288	0.7	93	-0.01
39	T	cis-1,3-Dichloropropene	0.874	0.920	-5.3	94	0.00
40	T	4-Methyl-2-pentanone (MIBK)	1.187	1.225	-3.2	92	0.00
41	S	Toluene-d8	1.264	1.320	-4.4	98	0.00
42	MC	Toluene	1.190	1.231	-3.4	93	0.00
43	T	trans-1,3-Dichloropropene	0.916	1.002	-9.4	96	0.00
44	T	1,1,2-Trichloroethane	0.420	0.426	-1.4	91	0.00
45	T	Tetrachloroethene	0.413	0.435	-5.3	95	0.00
46	T	1,3-Dichloropropane	0.900	0.913	-1.4	91	0.00

47 T	2-Hexanone	1.003	1.047	-4.4	94	0.00
48 T	Dibromochloromethane	0.445	0.512	-15.1	95	0.00
49 T	1,2-Dibromoethane (EDB)	0.495	0.527	-6.5	94	0.00
50 I	Chlorobenzene-d5	1.000	1.000	0.0	98	0.00
51 MP	Chlorobenzene	1.241	1.166	6.0	92	0.00
52 T	1,1,1,2-Tetrachloroethane	0.405	0.410	-1.2	94	0.00
53 C	Ethylbenzene	2.222	2.188	1.5	93	0.00
54 T	m,p-Xylene	0.800	0.775	3.1	92	0.00
55 T	o-Xylene	0.827	0.793	4.1	93	0.00
56 T	Styrene	1.389	1.348	3.0	92	0.00
57 P	Bromoform	0.323	0.354	-9.6	94	0.00
58 T	Isopropylbenzene	2.137	2.126	0.5	93	0.00
59 S	Bromofluorobenzene	0.710	0.733	-3.2	100	0.00
60 P	1,1,2,2-Tetrachloroethane	0.867	0.800	7.7	90	0.00
61 T	Bromobenzene	0.511	0.476	6.8	92	0.00
62 T	1,2,3-Trichloropropane	0.772	0.729	5.6	94	0.00
63 T	n-Propylbenzene	2.608	2.596	0.5	93	0.00
64 T	2-Chlorotoluene	1.679	1.662	1.0	94	0.00
65 T	1,3,5-Trimethylbenzene	1.897	1.866	1.6	94	0.00
66 T	4-Chlorotoluene	2.009	1.970	1.9	93	-0.01
67 T	tert-Butylbenzene	1.456	1.436	1.4	93	0.00
68 T	1,2,4-Trimethylbenzene	1.924	1.881	2.2	93	0.00
69 T	sec-Butylbenzene	2.278	2.251	1.2	92	0.00
70 T	1,3-Dichlorobenzene	0.907	0.855	5.7	90	0.00
71 T	4-Isopropyltoluene	1.827	1.835	-0.4	94	0.00
72 T	1,4-Dichlorobenzene	0.931	0.883	5.2	92	0.00
73 T	n-Butylbenzene	1.892	1.845	2.5	94	0.00
74 T	1,2-Dichlorobenzene	0.882	0.842	4.5	92	0.00
75 T	1,2-Dibromo-3-chloropropane	0.275	0.278	-1.1	93	0.00
76 T	1,2,4-Trichlorobenzene	0.737	0.691	6.2	91	0.01
77 T	Hexachlorobutadiene	0.285	0.265	7.0	90	0.00
78 T	Naphthalene	2.331	2.186	6.2	90	0.00
79 T	1,2,3-Trichlorobenzene	0.736	0.663	9.9	89	0.00
80 T	1,1,2-Trichloro-1,2,2-trifl	0.315	0.291	7.6	98	-0.01
81 T	Methyl acetate	0.791	0.726	8.2	95	0.00
82 T	Cyclohexane	1.024	0.882	13.9	93	0.02
83 T	Methylcyclohexane	0.775	0.733	5.4	94	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

K8230724.M Tue Aug 01 11:59:12 2023

Quantitation Report (Not Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3841.D
Acq On : 31 Jul 2023 10:51
Operator : BARBARA
Sample : CCV100,CCV230731-01,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 01 11:59:08 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	5.79	168	286027	50.00	UG		0.00
31) 1,4-Difluorobenzene	6.61	114	478308	50.00	UG		0.00
50) Chlorobenzene-d5	9.95	117	532853	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.10	65	269124	50.40	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.80%				
41) Toluene-d8	8.28	98	631176	52.18	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.36%				
59) Bromofluorobenzene	11.35	95	390473	51.61	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.22%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.60	85	367738	97.03	UG	#	58
3) Chloromethane	1.80	50	399023	85.01	UG		98
4) Vinyl chloride	1.90	62	343354	92.80	UG	#	86
5) Bromomethane	2.24	94	204007	91.56	UG	#	84
6) Chloroethane	2.31	64	224392	94.46	UG		99
7) Trichlorofluoromethane	2.59	101	598913	98.11	UG	#	93
8) Acrolein	2.99	56	21588	259.29	UG	#	99
9) 1,1-Dichloroethene	3.17	96	291041	93.04	UG	#	43
10) Acetone	3.19	43	795014	202.56	UG	#	86
11) Carbon disulfide	3.42	76	1099145	103.55	UG		100
12) Vinyl acetate	3.59	43	774184	97.48	UG	#	100
13) Methylene chloride	3.74	84	407224	91.14	UG		100
14) Acrylonitrile	6.10	53	28252	6.78	UG	#	100
15) tert-Butyl alcohol (TBA)	3.88	59	276625	208.84	UG	#	100
16) trans-1,2-Dichloroethene	4.02	96	432261	98.35	UG	#	100
17) Methyl tert-butyl ether (M	4.04	73	1819864	102.39	UG		100
18) 1,1-Dichloroethane	4.51	63	983951	100.95	UG	#	98
19) Diisopropyl ether (DIPE)	4.63	45	2104947	99.79	UG	#	100
20) cis-1,2-Dichloroethene	5.18	96	474123	96.71	UG	#	99
21) 2,2-Dichloropropane	5.18	77	515461	113.91	UG	#	95
22) 2-Butanone (MEK)	5.21	43	1375503	199.11	UG	#	87
23) Bromochloromethane	5.45	128	201014	96.64	UG	#	44
25) Chloroform	5.54	83	931134	98.57	UG		100
26) 1,1,1-Trichloroethane	5.75	97	830448	114.07	UG	#	93
27) Carbon tetrachloride	5.95	117	658024	106.94	UG		99
28) 1,1-Dichloropropene	5.94	75	664398	97.85	UG	#	86
29) 1,2-Dichloroethane (EDC)	6.19	62	1004694	101.84	UG	#	98
32) Benzene	6.17	78	1821053	103.22	UG		100
33) Trichloroethene	6.90	95	501262	105.40	UG	#	73
34) 1,2-Dichloropropane	7.15	63	550784	99.12	UG	#	99
35) Dibromomethane	7.28	93	336479	100.58	UG	#	90
37) Bromodichloromethane	7.46	83	775548	110.75	UG	#	68
38) 2-Chloroethyl vinyl ether	7.15	63	550784	198.24	UG	#	100
39) cis-1,3-Dichloropropene	7.97	75	880249	105.33	UG	#	96
40) 4-Methyl-2-pentanone (MIBK	8.15	43	2343514	206.40	UG		100
42) Toluene	8.36	92	1177326	103.42	UG		97
43) trans-1,3-Dichloropropene	8.60	75	958187	109.39	UG	#	95
44) 1,1,2-Trichloroethane	8.81	83	407301	101.29	UG		95
45) Tetrachloroethene	8.99	166	416568	105.35	UG		100
46) 1,3-Dichloropropane	9.00	76	873194	101.40	UG		99
47) 2-Hexanone	9.11	43	2002924	208.68	UG		98

Quantitation Report (Not Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3841.D
Acq On : 31 Jul 2023 10:51
Operator : BARBARA
Sample : CCV100,CCV230731-01,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 01 11:59:08 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

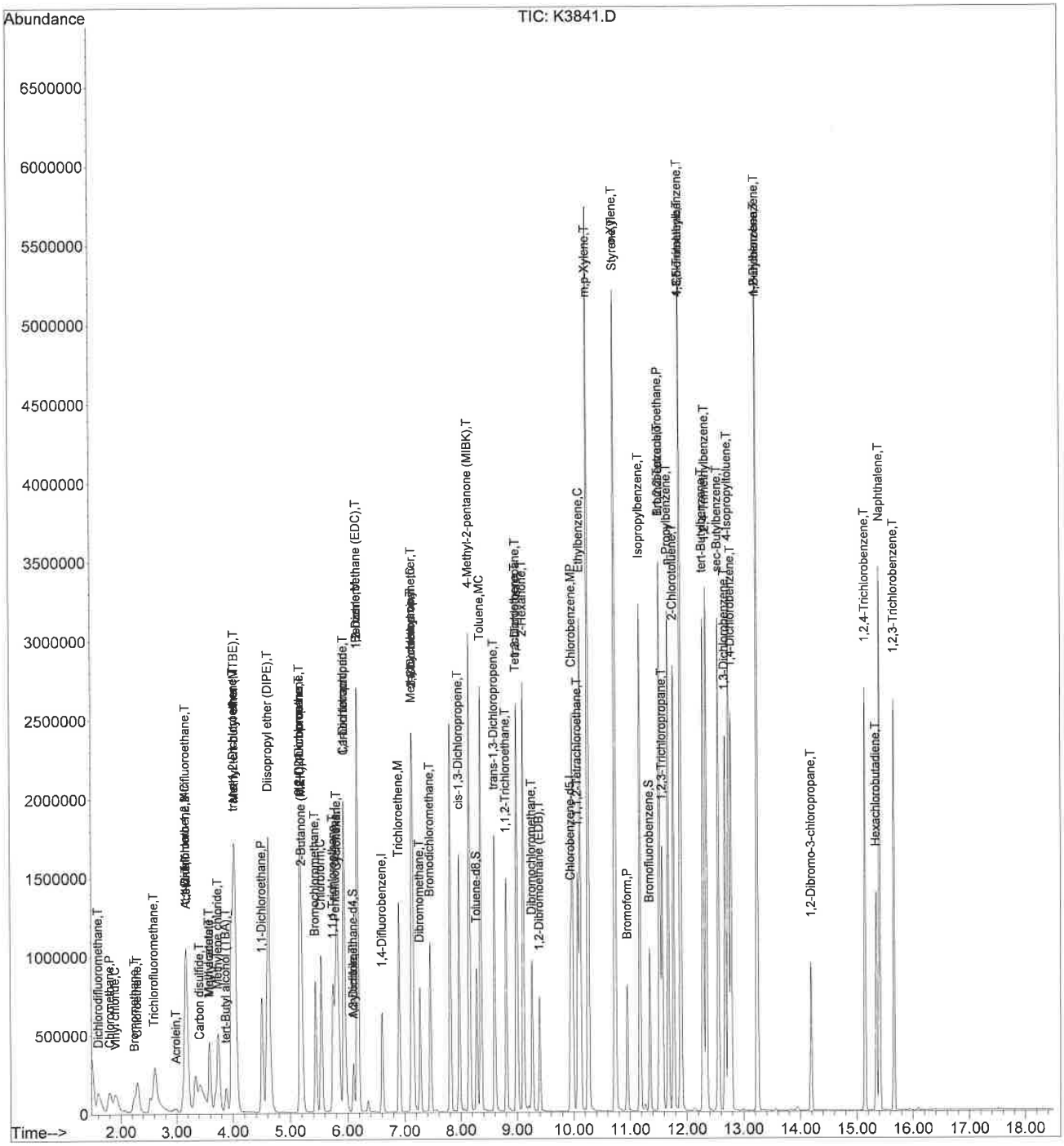
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
48) Dibromochloromethane	9.27	129	489829	115.04	UG		100
49) 1,2-Dibromoethane (EDB)	9.40	107	503953	106.50	UG		98
51) Chlorobenzene	9.98	112	1243033	94.00	UG		99
52) 1,1,1,2-Tetrachloroethane	10.08	131	436446	101.24	UG	#	100
53) Ethylbenzene	10.12	91	2331840	98.50	UG		98
54) m,p-Xylene	10.26	106	1651378	193.59	UG	#	100
55) o-Xylene	10.73	106	845534	95.93	UG	#	17
56) Styrene	10.74	104	1436520	97.05	UG	#	90
57) Bromoform	10.95	173	376736	109.56	UG	#	78
58) Isopropylbenzene	11.17	105	2265680	99.47	UG	#	97
60) 1,1,2,2-Tetrachloroethane	11.52	83	852148	92.25	UG		98
61) Bromobenzene	11.53	156	507038	93.12	UG	#	99
62) 1,2,3-Trichloropropane	11.57	75	776475	94.41	UG		100
63) n-Propylbenzene	11.67	91	2766524	99.54	UG	#	89
64) 2-Chlorotoluene	11.77	91	1771294	99.00	UG	#	91
65) 1,3,5-Trimethylbenzene	11.89	105	1989084	98.41	UG	#	94
66) 4-Chlorotoluene	11.90	91	2099018	98.04	UG	#	92
67) tert-Butylbenzene	12.29	119	1530881	98.64	UG	#	100
68) 1,2,4-Trimethylbenzene	12.34	105	2004082	97.75	UG	#	94
69) sec-Butylbenzene	12.56	105	2398464	98.78	UG	#	98
70) 1,3-Dichlorobenzene	12.68	146	910901	94.27	UG		98
71) 4-Isopropyltoluene	12.74	119	1955410	100.43	UG		99
72) 1,4-Dichlorobenzene	12.78	146	940741	94.81	UG		100
73) n-Butylbenzene	13.24	91	1966477	97.53	UG	#	95
74) 1,2-Dichlorobenzene	13.24	146	897408	95.53	UG		100
75) 1,2-Dibromo-3-chloropropan	14.19	75	296039	101.09	UG	#	63
76) 1,2,4-Trichlorobenzene	15.15	180	736883	93.84	UG		99
77) Hexachlorobutadiene	15.35	225	282398	92.95	UG		100
78) Naphthalene	15.40	128	2329343	93.77	UG		100
79) 1,2,3-Trichlorobenzene	15.66	180	706523	90.07	UG		98
80) 1,1,2-Trichloro-1,2,2-trif	3.18	101	310236	92.50	UG		94
81) Methyl acetate	3.59	43	774184	91.88	UG	#	77
82) Cyclohexane	5.83	56	939575	86.06	UG	#	72
83) Methylcyclohexane	7.13	83	781102	94.61	UG	#	61

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3841.D
Acq On : 31 Jul 2023 10:51
Operator : BARBARA
Sample : CCV100,CCV230731-01,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 01 11:59:08 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration



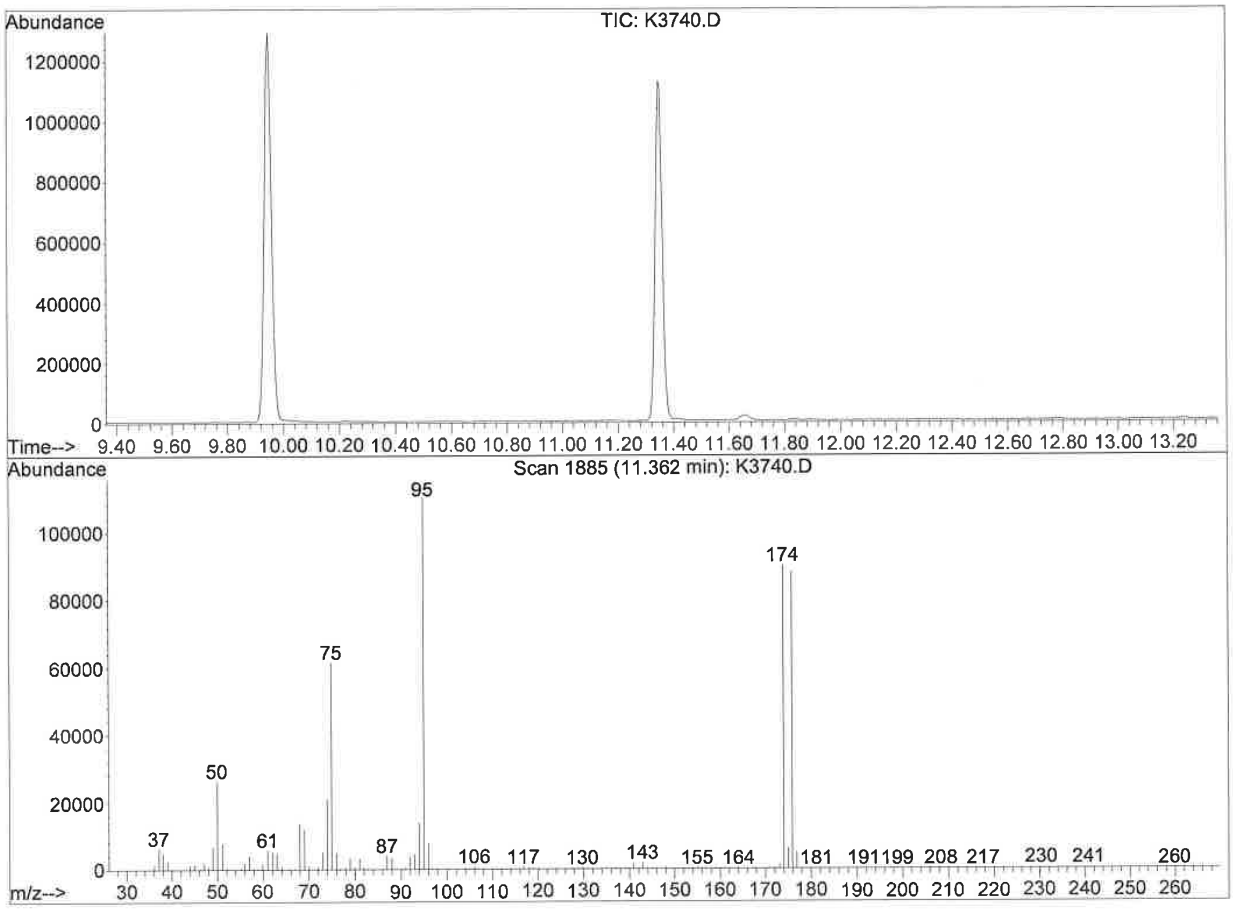
VOLATILE ORGANICS RAW QC DATA

BFB

Data Path : C:\MSDChem\1\DATA\23-07-24\
Data File : K3740.D
Acq On : 24 Jul 2023 14:56
Operator : BARBARA
Sample : BFBA230724-01,BFBA230724-01,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 1 Sample Multiplier: 1

Integration File: LSCINT.P

Method : C:\MSDCHEM\1\METHODS\K8230817.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260D
Last Update : Thu Aug 17 11:40:17 2023



Spectrum Information: Scan 1885

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.8	26280	PASS
75	95	30	60	55.7	61472	PASS
95	95	100	100	100.0	110400	PASS
96	95	5	9	7.0	7684	PASS
173	174	0.00	2	1.5	1332	PASS
174	95	50	110	81.5	89992	PASS
175	174	5	9	6.8	6080	PASS
176	174	95	101	97.9	88096	PASS
177	176	5	9	5.4	4798	PASS

Scan 1885 (11.362 min): K3740.D
BFBA230724-01,BFBA230724-01,A,5mL,100

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	1413	49.00	6653	62.10	5078	75.00	61472
37.10	6234	50.00	26280	63.00	4957	76.00	4966
38.00	4731	51.10	7695	64.10	825	76.80	302
39.10	2336	52.10	449	65.60	66	77.90	501
39.90	90	55.20	376	67.00	268	78.90	3398
43.20	100	56.00	1940	68.00	13678	79.90	650
43.90	1329	57.00	4077	69.00	11943	81.00	3227
45.00	1392	58.00	178	70.00	1036	81.80	609
46.20	175	58.70	229	72.00	786	82.80	168
47.10	1862	59.90	1549	73.00	5172	87.00	3984
48.00	766	61.00	5731	74.00	20832	88.00	3427

Scan 1885 (11.362 min): K3740.D
BFBA230724-01,BFBA230724-01,A,5mL,100

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
89.10	71	103.90	243	116.80	673	131.00	275
90.20	157	104.70	413	117.90	374	133.80	157
91.00	455	106.00	813	118.90	321	135.00	269
92.00	3734	106.90	199	120.40	208	136.70	192
93.00	4598	110.10	75	123.00	64	137.50	165
94.00	13855	110.90	111	124.50	128	138.00	69
95.00	110400	112.00	126	125.80	55	139.00	163
96.00	7684	112.90	91	127.70	242	139.90	116
97.00	51	114.20	113	128.60	57	140.90	1506
100.00	58	115.00	184	129.10	83	142.00	200
100.70	92	115.90	364	129.80	407	142.90	1823

Scan 1885 (11.362 min): K3740.D
BFBA230724-01,BFBA230724-01,A,5mL,100

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
143.80	290	156.90	145	171.80	241	197.40	67
145.00	138	159.00	202	173.10	1332	198.80	63
146.00	145	159.70	84	174.00	89992	205.90	87
148.00	350	160.50	119	175.00	6080	208.40	109
149.70	89	161.30	138	175.90	88096	216.30	91
150.50	75	162.60	103	176.90	4798	217.60	110
151.70	59	163.40	123	177.90	175	220.30	50
153.10	187	164.10	238	181.20	109	230.40	151
154.00	97	167.20	163	184.80	91	231.40	65
155.00	314	167.90	140	190.10	58	234.80	135
155.90	92	170.80	254	191.50	163	240.80	58

Scan 1885 (11.362 min): K3740.D
BFBA230724-01,BFBA230724-01,A,5mL,100

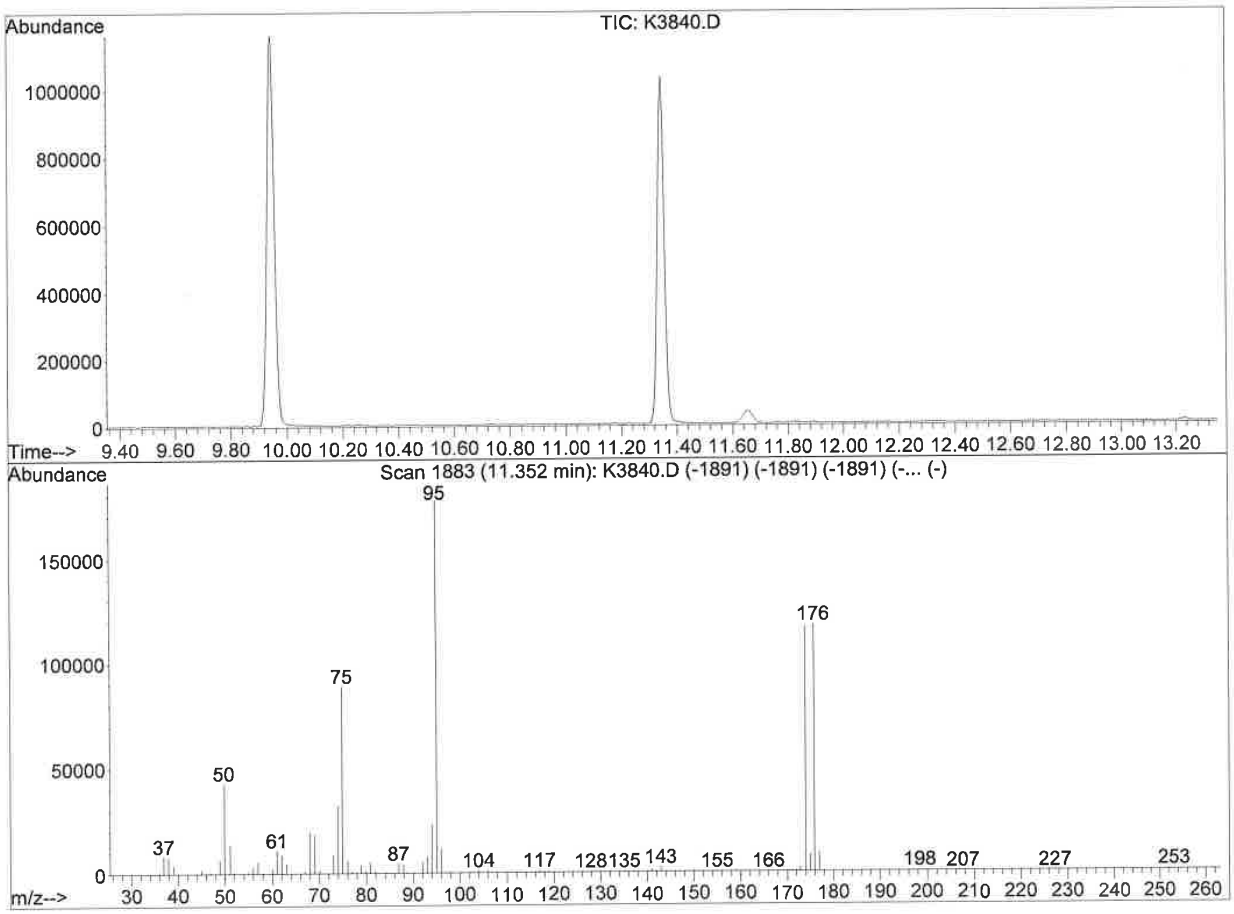
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
259.90	58						

BFB

Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3840.D
Acq On : 31 Jul 2023 10:23
Operator : BARBARA
Sample : BFBA230731-01,BFBA230731-01,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 1 Sample Multiplier: 1

Integration File: LSCINT.P

Method : C:\MSDCHEM\1\METHODS\K8230724.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260D
Last Update : Wed Jul 26 09:29:59 2023



Spectrum Information: Scan 1883

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.2	43017	PASS
75	95	30	60	50.1	88978	PASS
95	95	100	100	100.0	177520	PASS
96	95	5	9	6.4	11442	PASS
173	174	0.00	2	1.6	1909	PASS
174	95	50	110	65.6	116522	PASS
175	174	5	9	6.8	7894	PASS
176	174	95	101	100.9	117560	PASS
177	176	5	9	7.6	8962	PASS

Scan 1883 (11.352 min): K3840.D (-1891) (-1891) (-1891) (-...
BFBA230731-01,BFBA230731-01,A,5mL,100
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.30	173	51.10	13896	65.00	60	78.00	453
35.90	951	51.90	681	66.90	777	78.90	3700
36.90	8299	54.90	649	68.00	19557	79.90	1321
37.90	7607	56.00	3080	69.00	18589	80.80	5170
39.00	3913	57.00	5568	70.10	1557	81.90	941
41.20	53	58.10	268	71.90	157	83.40	55
45.00	1850	59.30	77	73.00	8728	84.20	89
46.20	153	60.00	2166	74.00	32331	84.50	100
47.00	448	61.00	10931	74.90	88978	85.80	151
48.90	6589	62.00	8706	76.00	6191	86.90	4538
49.90	43017	63.00	4638	77.00	1021	87.90	4007

Scan 1883 (11.352 min): K3840.D (-1891) (-1891) (-1891) (-...
BFBA230731-01,BFBA230731-01,A,5mL,100
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
88.70	297	107.00	104	125.20	129	137.10	180
92.00	5257	108.40	62	126.10	72	138.60	106
93.00	7778	112.90	336	127.90	439	140.10	170
94.00	23094	114.90	136	128.80	207	140.90	1264
95.00	177520	116.10	609	129.90	410	141.90	370
96.00	11442	116.90	1105	130.80	443	142.90	2327
97.00	216	117.80	636	131.90	98	144.10	302
102.90	247	118.80	838	133.40	58	145.00	151
104.00	1041	120.10	73	135.10	462	145.80	141
105.90	923	123.00	132	135.80	97	146.90	195
106.70	121	124.00	212	136.80	179	148.80	58

Scan 1883 (11.352 min): K3840.D (-1891) (-1891) (-1891) (-...
BFBA230731-01,BFBA230731-01,A,5mL,100
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
149.40	94	168.70	105	177.90	199		
149.90	482	169.20	239	198.40	55		
150.50	96	169.90	313	206.00	78		
151.70	74	170.60	269	206.90	101		
153.10	77	171.20	232	207.60	133		
153.80	143	172.00	437	209.00	55		
155.00	407	172.80	1909	227.30	73		
157.90	352	174.00	116522	247.60	51		
159.00	370	175.00	7894	253.20	118		
164.00	55	175.90	117560				
166.00	129	176.90	8962				

VOLATILE ORGANICS

Lab ID: BLKA230731-01
Client ID: BLKA230731-01
Date Received: NA
Date Analyzed: 07/31/2023
Data file: K3844.D 07/31/2023 12:18

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.552
Chloromethane	ND		0.500	0.309
Vinyl chloride	ND		1.00	0.352
Bromomethane	ND		1.00	0.386
Chloroethane	ND		0.500	0.324
Trichlorofluoromethane	ND		1.00	0.503
1,1-Dichloroethene	ND		0.500	0.363
Acetone	ND		2.00	0.847
Carbon disulfide	ND		1.00	0.403
Methylene chloride	ND		1.00	0.500
trans-1,2-Dichloroethene	ND		0.500	0.372
Methyl tert-butyl ether (MTBE)	ND		0.500	0.245
1,1-Dichloroethane	ND		0.500	0.285
cis-1,2-Dichloroethene	ND		0.500	0.277
2-Butanone (MEK)	ND		2.00	0.802
Bromochloromethane	ND		1.00	0.379
Chloroform	ND		0.500	0.285
1,1,1-Trichloroethane	ND		0.500	0.381
Carbon tetrachloride	ND		0.500	0.349
1,2-Dichloroethane (EDC)	ND		0.500	0.273
Benzene	ND		0.500	0.270
Trichloroethene	ND		0.500	0.347
1,2-Dichloropropane	ND		0.500	0.272
Bromodichloromethane	ND		0.500	0.258
cis-1,3-Dichloropropene	ND		1.00	0.264
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.611

VOLATILE ORGANICS

Lab ID: BLKA230731-01
Client ID: BLKA230731-01
Date Received: NA
Date Analyzed: 07/31/2023
Data file: K3844.D 07/31/2023 12:18

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Concentration	Q	RL	MDL
Toluene	ND		0.500	0.302
trans-1,3-Dichloropropene	ND		1.00	0.330
1,1,2-Trichloroethane	ND		0.500	0.313
Tetrachloroethene	ND		0.500	0.365
2-Hexanone	ND		1.00	0.818
Dibromochloromethane	ND		0.500	0.263
1,2-Dibromoethane (EDB)	ND		0.500	0.289
Chlorobenzene	ND		0.500	0.304
Ethylbenzene	ND		0.500	0.313
Total Xylenes	ND		1.00	0.345
Styrene	ND		1.00	0.317
Bromoform	ND		0.500	0.328
Isopropylbenzene	ND		1.00	0.332
1,1,2,2-Tetrachloroethane	ND		1.00	0.284
1,3-Dichlorobenzene	ND		0.500	0.386
1,4-Dichlorobenzene	ND		0.500	0.397
1,2-Dichlorobenzene	ND		0.500	0.354
1,2-Dibromo-3-chloropropane	ND		1.00	0.410
1,2,4-Trichlorobenzene	ND		1.00	0.358
1,2,3-Trichlorobenzene	ND		1.00	0.406
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.538
Methyl acetate	ND		0.500	0.345
Cyclohexane	ND		1.00	0.469
Methylcyclohexane	ND		1.00	0.421
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.264

Total Target Compounds (51): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: BLKA230731-01
Client ID: BLKA230731-01
Date Received: NA
Date Analyzed: 07/31/2023
Date File: K3844.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	Column/Septa bleed	0	J	5.16

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3844.D
Acq On : 31 Jul 2023 12:18
Operator : BARBARA
Sample : BLKA230731-01,BLKA230731-01,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 01 12:00:08 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	5.80	168	271009	50.00	UG	0.00
31) 1,4-Difluorobenzene	6.61	114	461415	50.00	UG	0.00
50) Chlorobenzene-d5	9.95	117	469921	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.10	65	260212	51.43	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.86%			
41) Toluene-d8	8.28	98	576391	49.40	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.80%			
59) Bromofluorobenzene	11.35	95	329327	49.36	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.72%			

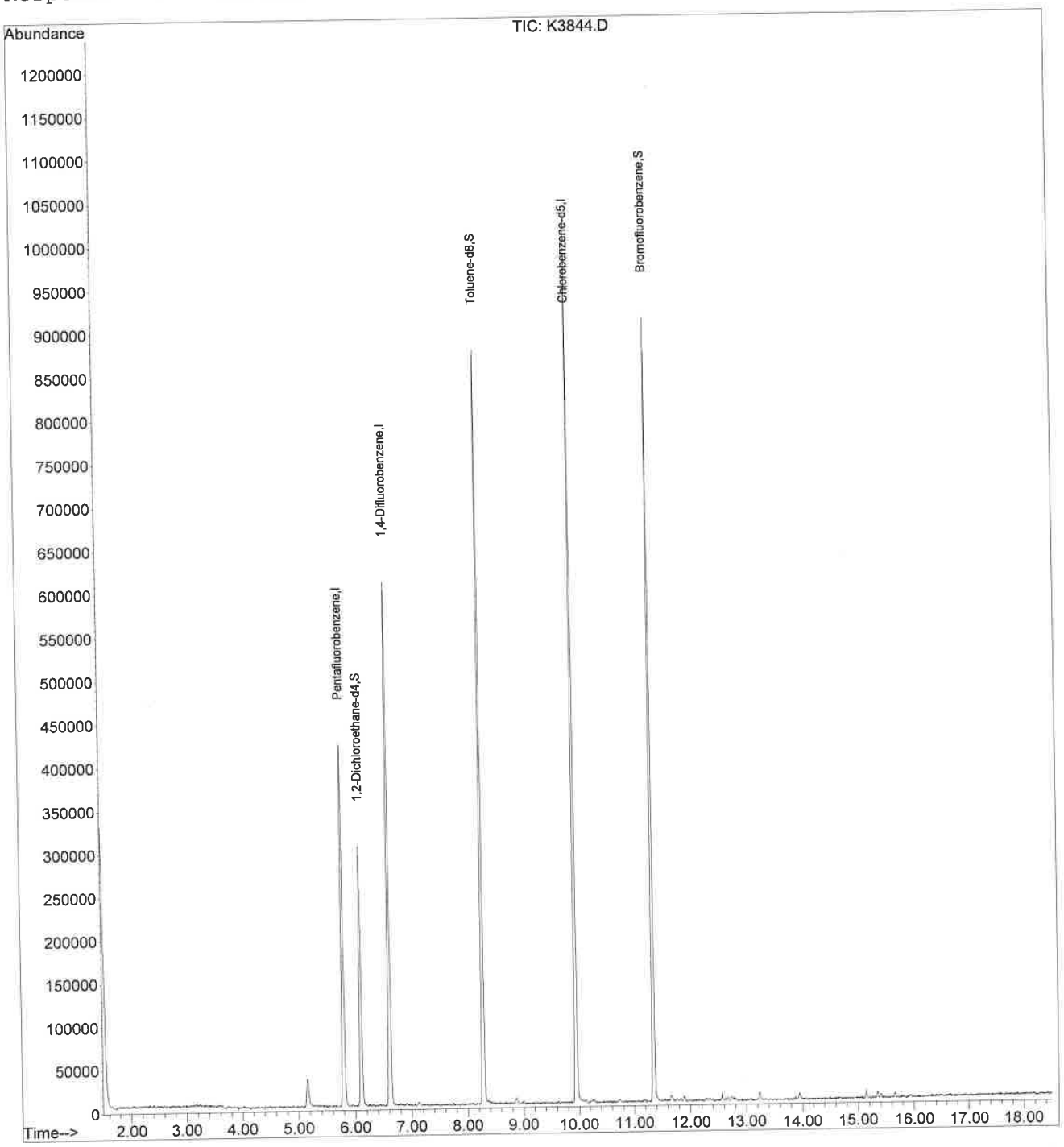
Target Compounds	Qvalue

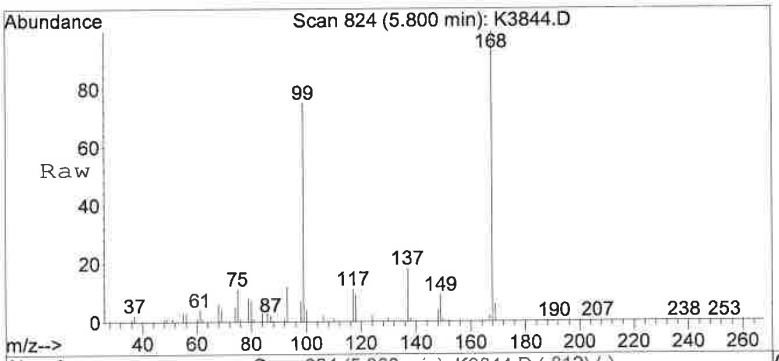
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3844.D
Acq On : 31 Jul 2023 12:18
Operator : BARBARA
Sample : BLKA230731-01,BLKA230731-01,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 01 12:00:08 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

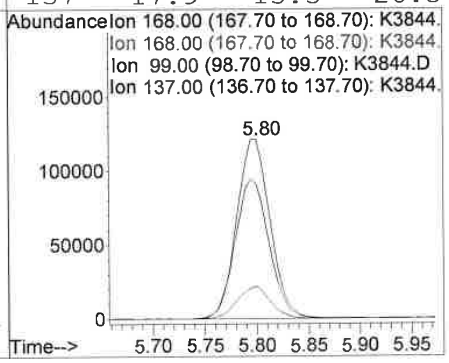


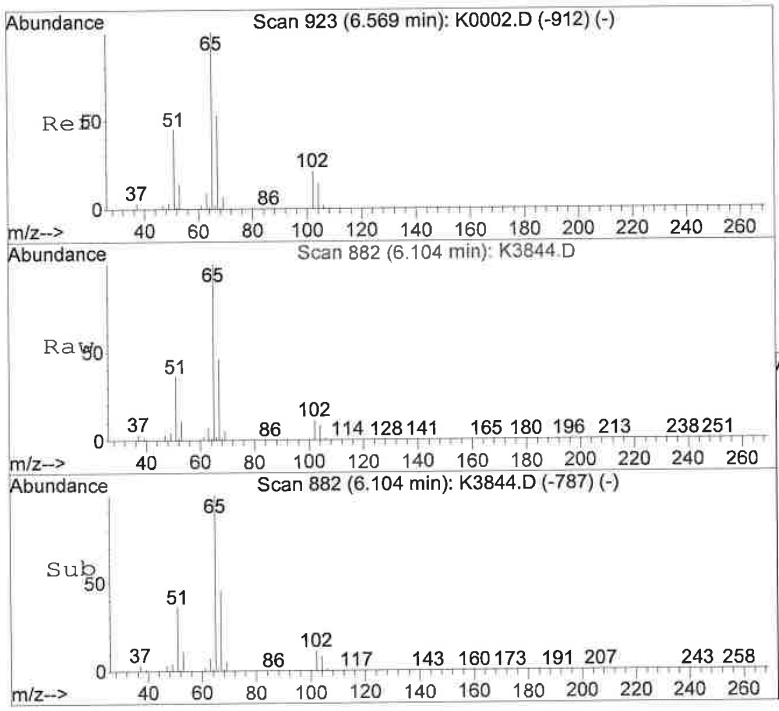


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 5.80 min Scan# 824
Delta R.T. 0.01 min
Lab File: K3844.D
Acq: 31 Jul 2023 12:18

Tgt Ion:168 Resp: 271009

Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	79.4	53.3	79.9
137	17.9	13.5	20.3

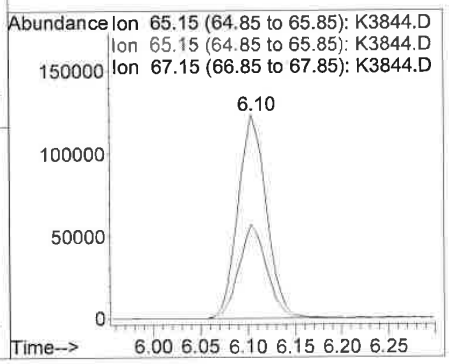


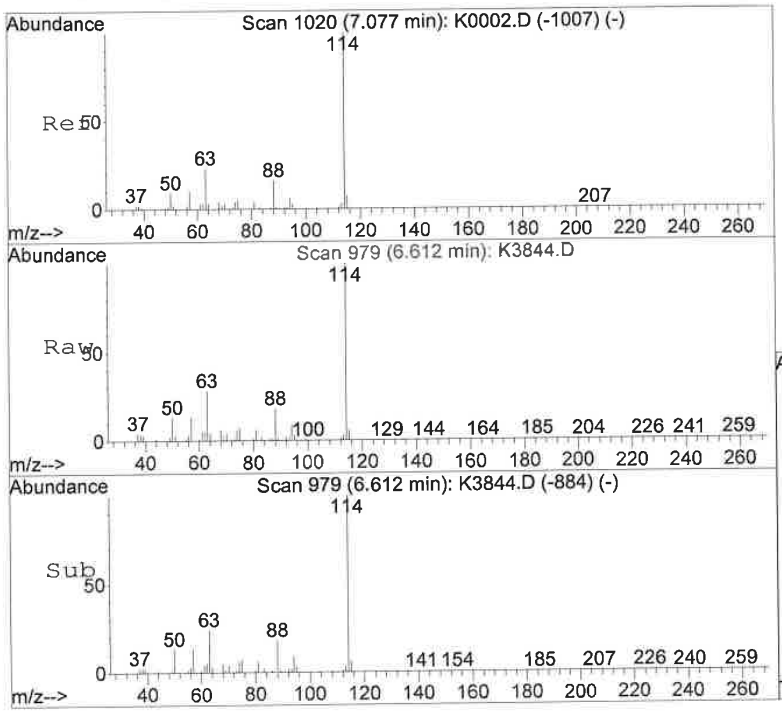


#30
1,2-Dichloroethane-d4
Concen: 51.43 UG
RT: 6.10 min Scan# 882
Delta R.T. -0.00 min
Lab File: K3844.D
Acq: 31 Jul 2023 12:18

Tgt Ion: 65 Resp: 260212

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	45.1	43.5	65.3

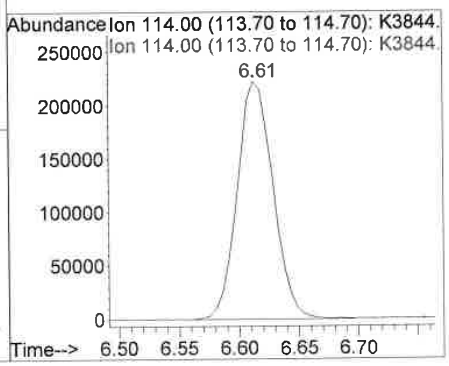


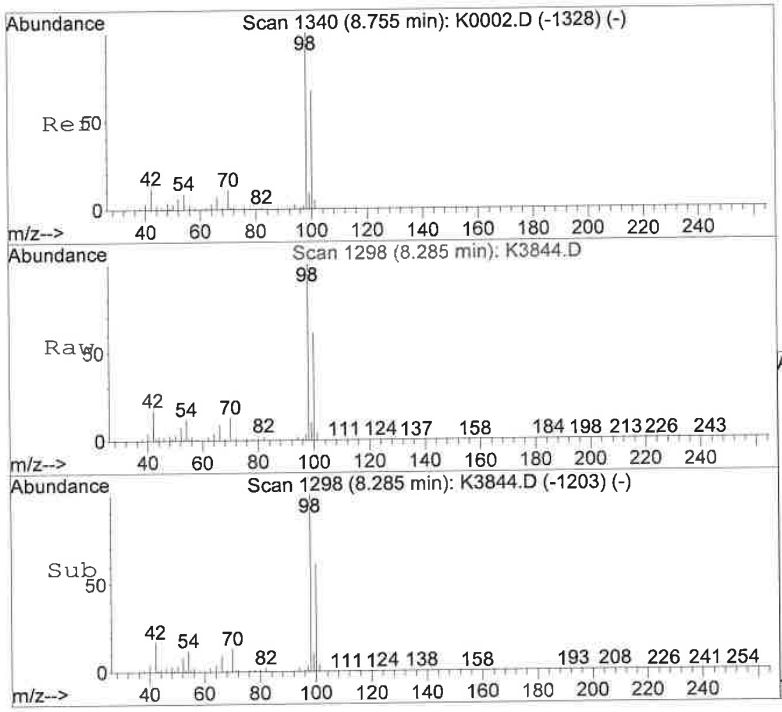


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 6.61 min Scan# 979
Delta R.T. -0.00 min
Lab File: K3844.D
Acq: 31 Jul 2023 12:18

Tgt Ion:114 Resp: 461415

Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

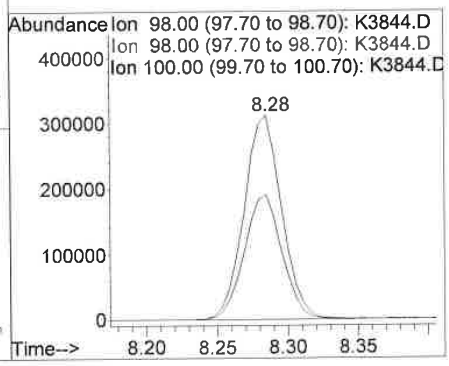


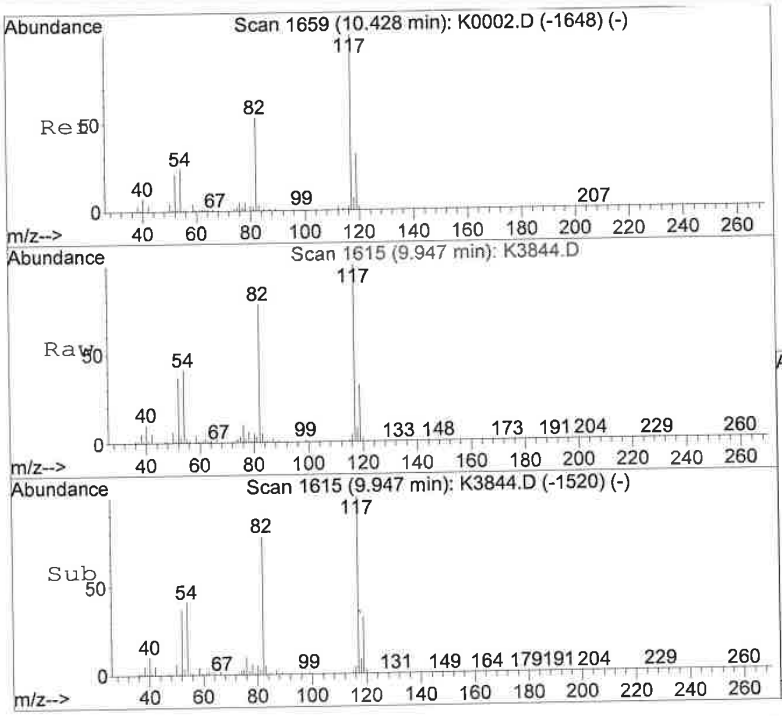


#41
Toluene-d8
Concen: 49.40 UG
RT: 8.28 min Scan# 1298
Delta R.T. -0.00 min
Lab File: K3844.D
Acq: 31 Jul 2023 12:18

Tgt Ion: 98 Resp: 576391

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	61.6	52.0	78.0

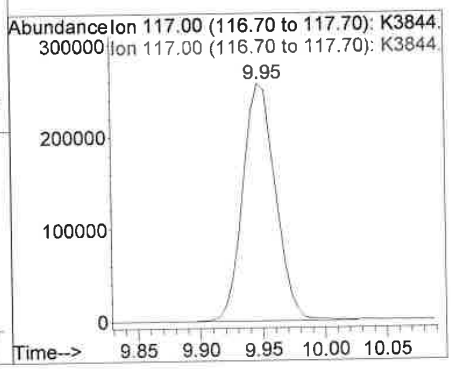


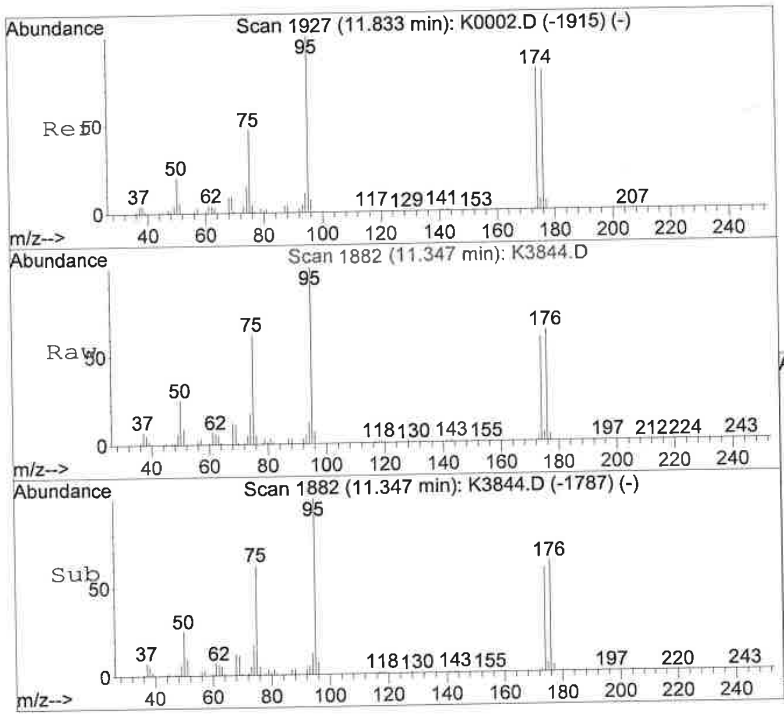


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 9.95 min Scan# 1615
Delta R.T. -0.00 min
Lab File: K3844.D
Acq: 31 Jul 2023 12:18

Tgt Ion:117 Resp: 469921

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0

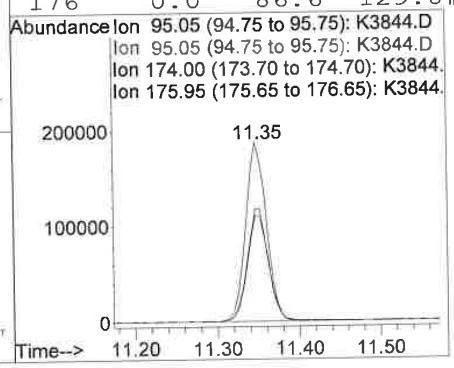




#59
Bromofluorobenzene
Concen: 49.36 UG
RT: 11.35 min Scan# 1882
Delta R.T. -0.00 min
Lab File: K3844.D
Acq: 31 Jul 2023 12:18

Tgt Ion: 95 Resp: 329327

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	0.0	89.0	133.6#
176	0.0	86.6	129.8#



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3844.D
Acq On : 31 Jul 2023 12:18
Operator : BARBARA
Sample : BLKA230731-01,BLKA230731-01,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 5 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON
Sampling : 1
Start Thrs: 0.07
Stop Thrs : 0.2

Filtering: 5
Min Area: 1 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\K8230724.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260D

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	5.160	690	702	720	rBV3	33326	99285	5.34%	1.220%
2	5.794	811	823	848	rBV2	419702	955801	51.40%	11.745%
3	6.104	871	882	898	rBV	301704	648306	34.87%	7.967%
4	6.612	968	979	996	rBV	605823	1273823	68.51%	15.654%
5	8.285	1286	1298	1319	rBV	871965	1656919	89.11%	20.361%
6	8.872	1399	1410	1419	rVB4	7584	19462	1.05%	0.239%
7	9.947	1603	1615	1644	rBV	1027987	1859412	100.00%	22.850%
8	11.347	1871	1882	1912	rBV	906566	1604637	86.30%	19.719%
9	13.234	2235	2242	2253	rVB5	9010	19978	1.07%	0.246%

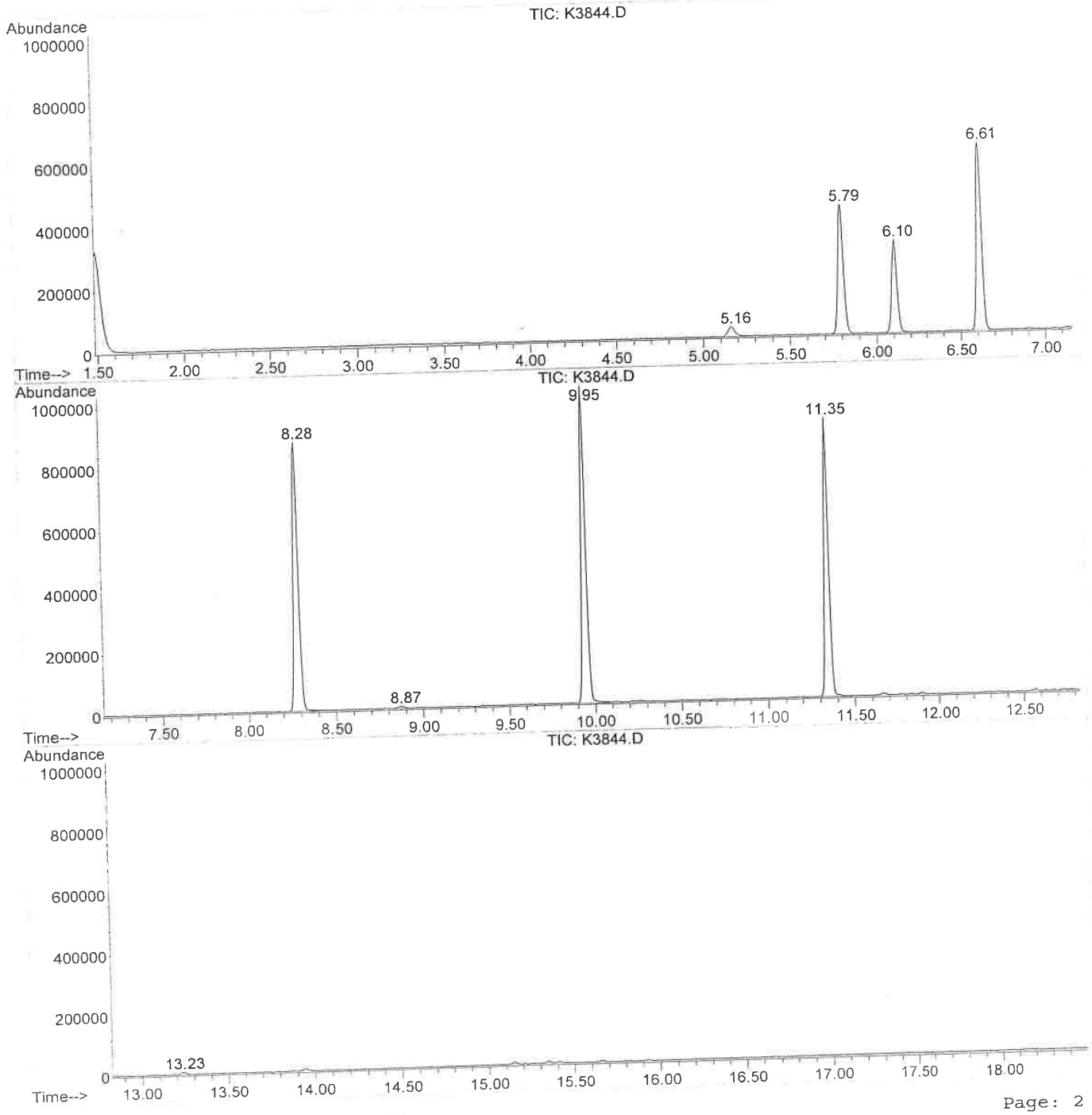
Sum of corrected areas: 8137623

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3844.D
Acq On : 31 Jul 2023 12:18
Operator : BARBARA
Sample : BLKA230731-01,BLKA230731-01,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P



K8230724.M Tue Aug 01 12:00:28 2023

Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3844.D
Acq On : 31 Jul 2023 12:18
Operator : BARBARA
Sample : BLKA230731-01,BLKA230731-01,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D

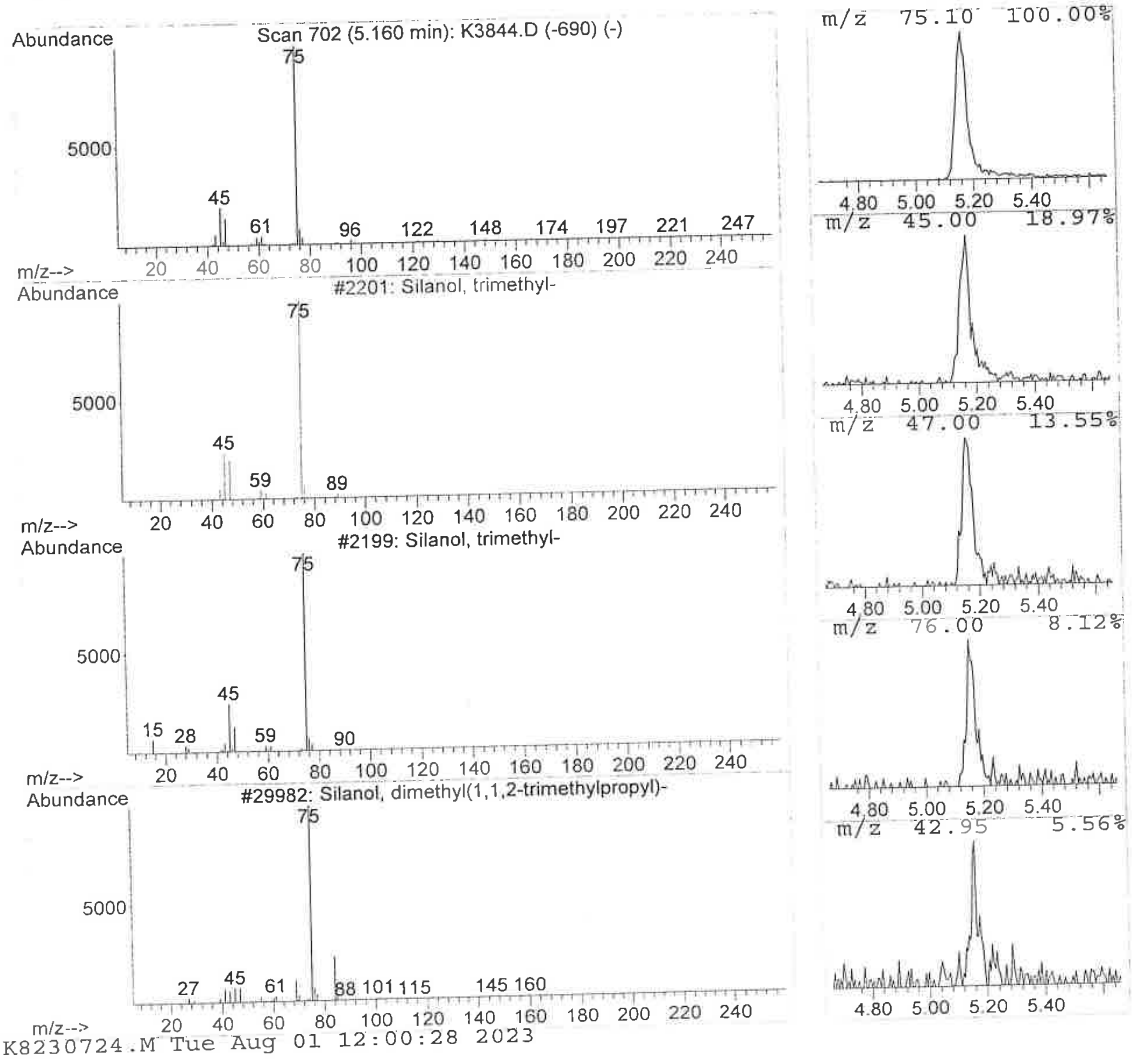
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

****

Peak Number 1 Column/Septa bleed Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.16	5.19 UG	99285	Pentafluorobenzene	5.80

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Silanol, trimethyl-	90	C3H10OSi	001066-40-6	90
2	Silanol, trimethyl-	90	C3H10OSi	001066-40-6	90
3	Silanol, dimethyl(1,1,2-trimethy...	160	C8H20OSi	055644-10-5	78
4	Acetic acid, trimethylsilyl ester	132	C5H12O2Si	018147-36-9	78
5	Propanoic acid, 2-methyl-, tert-...	202	C10H22O2Si	111864-21-2	64



K8230724.M Tue Aug 01 12:00:28 2023

Tentatively Identified Compound (LSC) summary

Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3844.D
Acq On : 31 Jul 2023 12:18
Operator : BARBARA
Sample : BLKA230731-01,BLKA230731-01,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

TIC Top Hit name	RT	EstConc	Units	Response	--Internal Standard--- #	RT	Resp	Conc
					5.16		5.2	
Column/Septa bleed								
99285 1	5.80	955801	50.0					

Quantitation Report (Not Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3851.D
Acq On : 31 Jul 2023 15:39
Operator : BARBARA
Sample : LCSA230731-01,LCSA230731-01,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 01 12:01:07 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	5.80	168	264082	50.00	UG		0.00
31) 1,4-Difluorobenzene	6.61	114	452998	50.00	UG		0.00
50) Chlorobenzene-d5	9.95	117	480219	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.10	65	258591	52.45	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.90%				
41) Toluene-d8	8.28	98	590121	51.51	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.02%				
59) Bromofluorobenzene	11.35	95	358698	52.61	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.22%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.61	85	180368	51.55	UG	#	58
3) Chloromethane	1.79	50	213490	49.26	UG		98
4) Vinyl chloride	1.90	62	173159	50.69	UG	#	95
5) Bromomethane	2.27	94	109062	53.02	UG	#	45
6) Chloroethane	2.31	64	114710	52.30	UG		99
7) Trichlorofluoromethane	2.61	101	290320	51.51	UG		99
8) Acrolein	3.00	56	12790	166.38	UG	#	63
9) 1,1-Dichloroethene	3.16	96	145903	50.52	UG	#	40
10) Acetone	3.19	43	387569	106.96	UG		97
11) Carbon disulfide	3.45	76	525148	53.59	UG		100
12) Vinyl acetate	3.59	43	380465	51.89	UG	#	100
13) Methylene chloride	3.75	84	206218	49.99	UG		99
14) Acrylonitrile	6.11	53	28160	7.32	UG	#	100
15) tert-Butyl alcohol (TBA)	3.89	59	130538	106.74	UG	#	100
16) trans-1,2-Dichloroethene	4.02	96	206105	50.79	UG	#	100
17) Methyl tert-butyl ether (M	4.05	73	887810	54.10	UG		100
18) 1,1-Dichloroethane	4.51	63	479642	53.30	UG	#	83
19) Diisopropyl ether (DIPE)	4.63	45	1019682	52.36	UG	#	100
20) cis-1,2-Dichloroethene	5.18	96	228735	50.53	UG	#	99
21) 2,2-Dichloropropane	5.19	77	253188	60.60	UG	#	96
22) 2-Butanone (MEK)	5.21	43	675287	105.87	UG	#	96
23) Bromochloromethane	5.45	128	96401	50.20	UG	#	44
25) Chloroform	5.55	83	452429	51.87	UG		100
26) 1,1,1-Trichloroethane	5.76	97	396981	59.06	UG	#	93
27) Carbon tetrachloride	5.95	117	309937	54.56	UG		100
28) 1,1-Dichloropropene	5.95	75	319757	51.01	UG	#	73
29) 1,2-Dichloroethane (EDC)	6.19	62	497404	54.61	UG	#	98
32) Benzene	6.18	78	872326	52.21	UG		100
33) Trichloroethene	6.91	95	239548	53.19	UG	#	74
34) 1,2-Dichloropropane	7.15	63	265395	50.43	UG	#	99
35) Dibromomethane	7.27	93	163557	51.62	UG	#	37
37) Bromodichloromethane	7.46	83	366674	55.29	UG	#	98
38) 2-Chloroethyl vinyl ether	7.15	63	265395	100.86	UG	#	100
39) cis-1,3-Dichloropropene	7.97	75	426494	53.88	UG	#	96
40) 4-Methyl-2-pentanone (MIBK	8.16	43	1141895	106.19	UG		100
42) Toluene	8.36	92	556225	51.59	UG		98
43) trans-1,3-Dichloropropene	8.60	75	446239	53.79	UG	#	95
44) 1,1,2-Trichloroethane	8.81	83	197741	51.92	UG		96
45) Tetrachloroethene	8.99	166	196383	52.44	UG		100
46) 1,3-Dichloropropane	9.01	76	430337	52.77	UG		99
47) 2-Hexanone	9.11	43	964766	106.13	UG		99

Quantitation Report (Not Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3851.D
Acq On : 31 Jul 2023 15:39
Operator : BARBARA
Sample : LCSA230731-01,LCSA230731-01,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 01 12:01:07 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

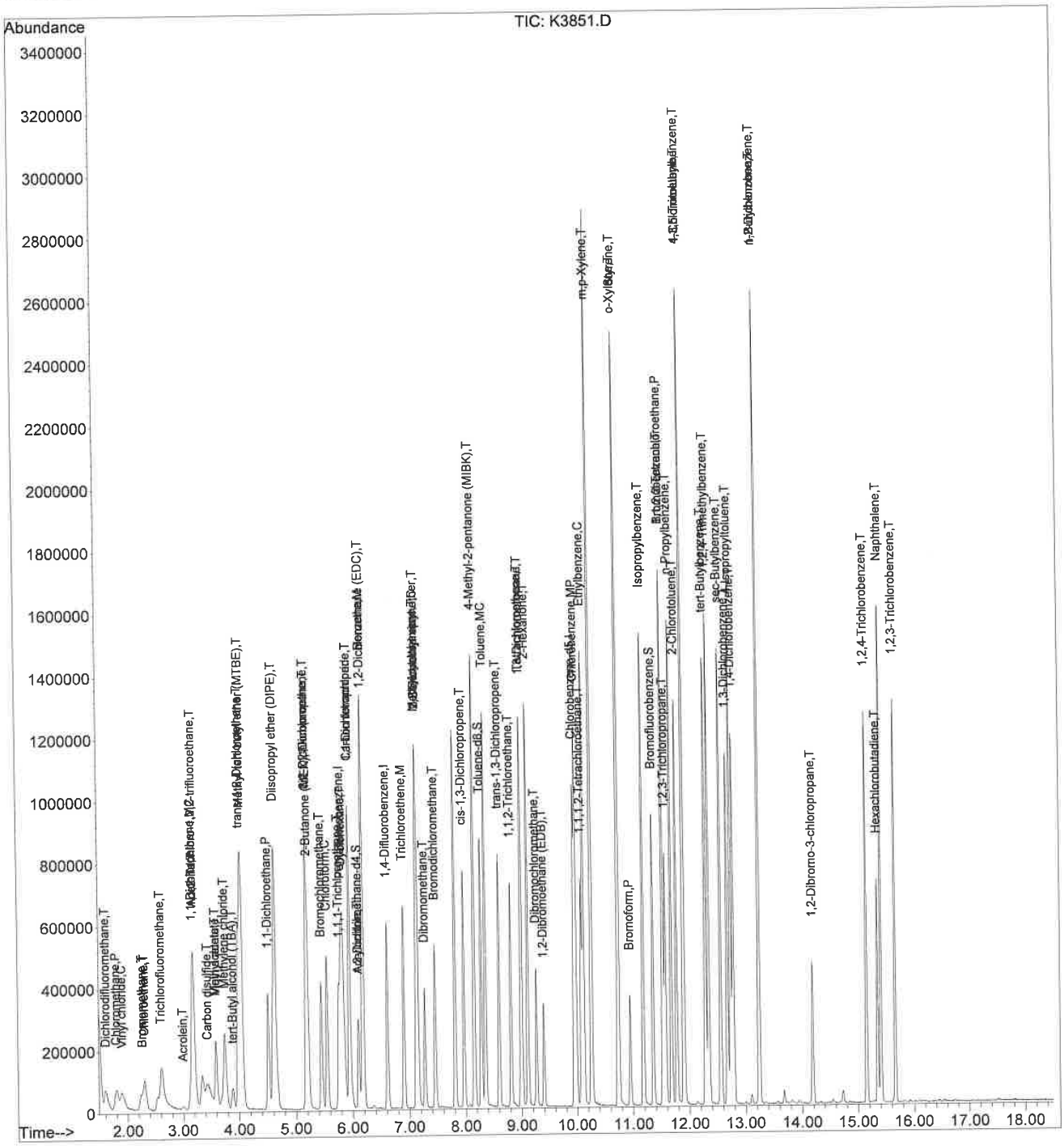
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
48) Dibromochloromethane	9.27	129	223593	55.45	UG		100
49) 1,2-Dibromoethane (EDB)	9.40	107	237202	52.93	UG		98
51) Chlorobenzene	9.98	112	603376	50.63	UG		99
52) 1,1,1,2-Tetrachloroethane	10.08	131	205292	52.84	UG	#	52
53) Ethylbenzene	10.12	91	1107332	51.90	UG		98
54) m,p-Xylene	10.26	106	786410	102.30	UG	#	100
55) o-Xylene	10.73	106	400132	50.37	UG	#	17
56) Styrene	10.74	104	675454	50.64	UG	#	80
57) Bromoform	10.95	173	165426	53.38	UG	#	98
58) Isopropylbenzene	11.18	105	1072530	52.25	UG	#	87
60) 1,1,2,2-Tetrachloroethane	11.52	83	405085	48.66	UG		98
61) Bromobenzene	11.53	156	240460	49.00	UG	#	99
62) 1,2,3-Trichloropropane	11.57	75	365220	49.27	UG		99
63) n-Propylbenzene	11.67	91	1319182	52.67	UG	#	89
64) 2-Chlorotoluene	11.77	91	824514	51.14	UG	#	91
65) 1,3,5-Trimethylbenzene	11.89	105	923624	50.70	UG	#	94
66) 4-Chlorotoluene	11.90	91	981303	50.86	UG	#	92
67) tert-Butylbenzene	12.29	119	710562	50.80	UG	#	100
68) 1,2,4-Trimethylbenzene	12.34	105	946639	51.23	UG	#	75
69) sec-Butylbenzene	12.56	105	1120393	51.20	UG	#	98
70) 1,3-Dichlorobenzene	12.68	146	432585	49.68	UG		99
71) 4-Isopropyltoluene	12.74	119	902297	51.42	UG		99
72) 1,4-Dichlorobenzene	12.79	146	439305	49.12	UG		99
73) n-Butylbenzene	13.24	91	913479	50.27	UG	#	95
74) 1,2-Dichlorobenzene	13.24	146	422186	49.87	UG		100
75) 1,2-Dibromo-3-chloropropan	14.19	75	136521	51.73	UG	#	63
76) 1,2,4-Trichlorobenzene	15.15	180	350823	49.57	UG		100
77) Hexachlorobutadiene	15.35	225	138099	50.43	UG		100
78) Naphthalene	15.41	128	1105261	49.37	UG		100
79) 1,2,3-Trichlorobenzene	15.66	180	340598	48.18	UG		99
80) 1,1,2-Trichloro-1,2,2-trif	3.19	101	154515	51.12	UG		94
81) Methyl acetate	3.59	43	380465	50.10	UG	#	78
82) Cyclohexane	5.83	56	455188	46.26	UG	#	71
83) Methylcyclohexane	7.13	83	370503	49.79	UG	#	60

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3851.D
Acq On : 31 Jul 2023 15:39
Operator : BARBARA
Sample : LCSA230731-01,LCSA230731-01,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 01 12:01:07 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3852.D
Acq On : 31 Jul 2023 16:08
Operator : BARBARA
Sample : E23-03388-001MS,E23-03388-001MS,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 01 12:01:13 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	5.79	168	265734	50.00	UG		0.00
31) 1,4-Difluorobenzene	6.61	114	463836	50.00	UG		0.00
50) Chlorobenzene-d5	9.95	117	499799	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.10	65	257261	51.85	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.70%				
41) Toluene-d8	8.28	98	594610	50.69	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.38%				
59) Bromofluorobenzene	11.35	95	360647	50.82	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.64%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.61	85	193269	54.89	UG	#	58
3) Chloromethane	1.80	50	227637	52.20	UG		98
4) Vinyl chloride	1.91	62	186241	54.18	UG		99
5) Bromomethane	2.26	94	107690	52.02	UG	#	45
6) Chloroethane	2.32	64	113694	51.51	UG		99
7) Trichlorofluoromethane	2.61	101	205161	36.17	UG	#	90
8) Acrolein	3.00	56	12437	160.79	UG	#	96
9) 1,1-Dichloroethene	3.17	96	157171	54.08	UG	#	43
10) Acetone	3.18	43	415116	113.85	UG	#	97
11) Carbon disulfide	3.46	76	548184	55.59	UG		100
12) Vinyl acetate	3.59	43	380289	51.54	UG	#	100
13) Methylene chloride	3.75	84	196095	47.24	UG		100
14) Acrylonitrile	6.10	53	28524	7.37	UG	#	100
15) tert-Butyl alcohol (TBA)	3.89	59	126967	103.17	UG	#	100
16) trans-1,2-Dichloroethene	4.02	96	218384	53.48	UG	#	100
17) Methyl tert-butyl ether (M	4.05	73	913931	55.35	UG		100
18) 1,1-Dichloroethane	4.51	63	500188	55.24	UG	#	97
19) Diisopropyl ether (DIPE)	4.63	45	1054744	53.82	UG	#	100
20) cis-1,2-Dichloroethene	5.18	96	243631	53.49	UG	#	99
21) 2,2-Dichloropropane	5.18	77	253218	60.23	UG	#	96
22) 2-Butanone (MEK)	5.21	43	707801	110.28	UG	#	95
23) Bromochloromethane	5.45	128	101586	52.57	UG	#	44
25) Chloroform	5.55	83	476147	54.25	UG		100
26) 1,1,1-Trichloroethane	5.76	97	409969	60.61	UG	#	84
27) Carbon tetrachloride	5.95	117	331584	58.00	UG		99
28) 1,1-Dichloropropene	5.95	75	345735	54.81	UG	#	73
29) 1,2-Dichloroethane (EDC)	6.19	62	508610	55.49	UG		99
32) Benzene	6.18	78	923804	54.00	UG		100
33) Trichloroethene	6.91	95	263979	57.24	UG	#	72
34) 1,2-Dichloropropane	7.15	63	279757	51.92	UG	#	99
35) Dibromomethane	7.28	93	170028	52.41	UG	#	90
37) Bromodichloromethane	7.46	83	383818	56.52	UG	#	98
38) 2-Chloroethyl vinyl ether	7.15	63	279757	103.83	UG	#	100
39) cis-1,3-Dichloropropene	7.97	75	447920	55.27	UG	#	95
40) 4-Methyl-2-pentanone (MIBK	8.16	43	1183044	107.44	UG		99
42) Toluene	8.36	92	583524	52.86	UG		99
43) trans-1,3-Dichloropropene	8.60	75	483485	56.92	UG	#	95
44) 1,1,2-Trichloroethane	8.81	83	204881	52.54	UG	#	52
45) Tetrachloroethene	8.99	166	207543	54.13	UG		99
46) 1,3-Dichloropropane	9.01	76	444643	53.25	UG		99
47) 2-Hexanone	9.11	43	1025547	110.18	UG		98

Quantitation Report (Not Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3852.D
Acq On : 31 Jul 2023 16:08
Operator : BARBARA
Sample : E23-03388-001MS,E23-03388-001MS,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 01 12:01:13 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

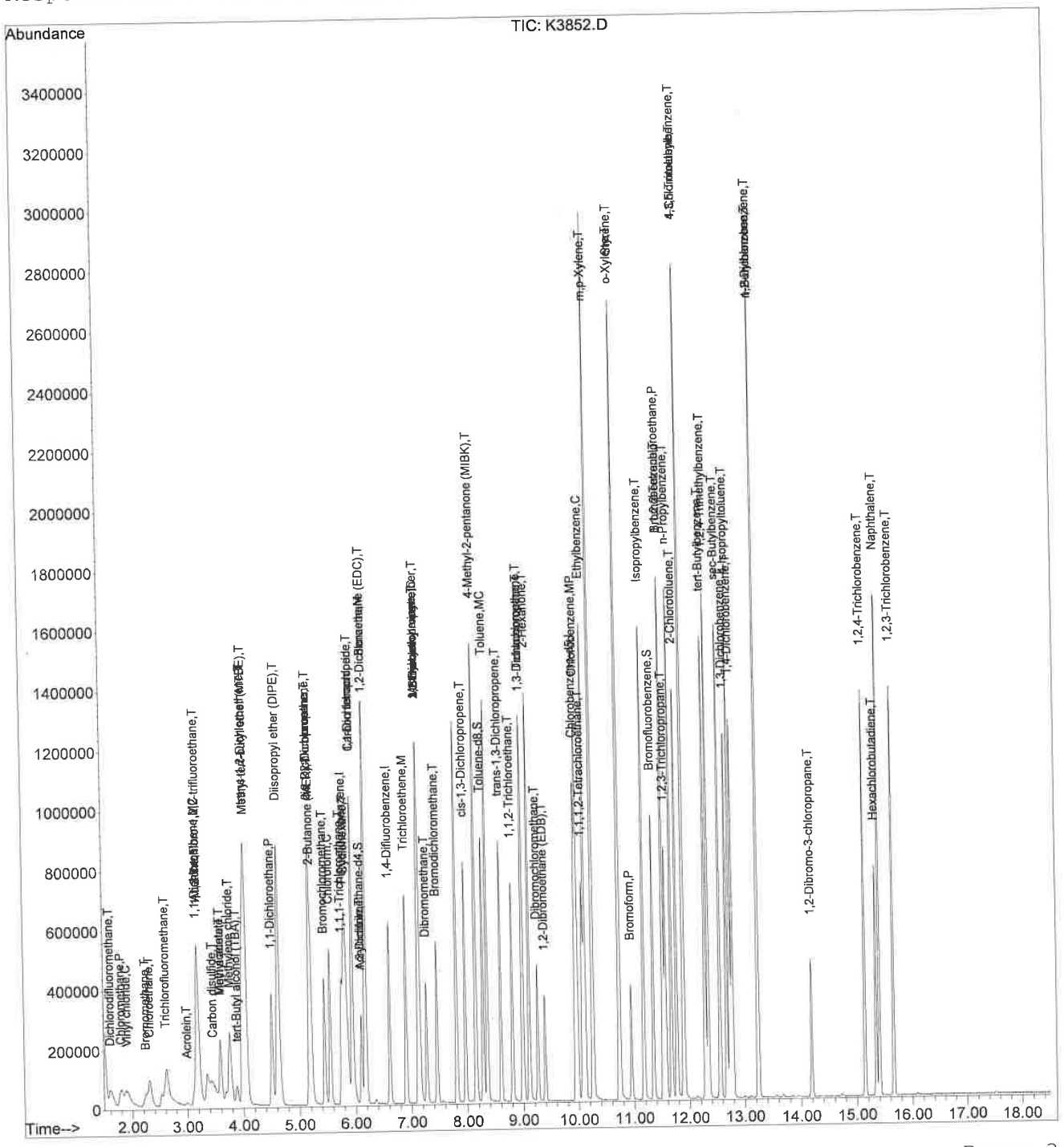
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
48) Dibromochloromethane	9.27	129	234113	56.70	UG		100
49) 1,2-Dibromoethane (EDB)	9.40	107	249960	54.47	UG		98
51) Chlorobenzene	9.98	112	631789	50.94	UG		99
52) 1,1,1,2-Tetrachloroethane	10.08	131	215279	53.24	UG	#	99
53) Ethylbenzene	10.12	91	1187653	53.48	UG		98
54) m,p-Xylene	10.26	106	837031	104.62	UG	#	100
55) o-Xylene	10.73	106	422692	51.13	UG	#	74
56) Styrene	10.74	104	721730	51.99	UG	#	80
57) Bromoform	10.95	173	176703	54.79	UG	#	78
58) Isopropylbenzene	11.18	105	1138710	53.30	UG	#	97
60) 1,1,2,2-Tetrachloroethane	11.52	83	416821	48.11	UG		97
61) Bromobenzene	11.53	156	255563	50.04	UG	#	99
62) 1,2,3-Trichloropropane	11.57	75	389382	50.47	UG		99
63) n-Propylbenzene	11.67	91	1398077	53.63	UG	#	97
64) 2-Chlorotoluene	11.77	91	891307	53.11	UG	#	91
65) 1,3,5-Trimethylbenzene	11.89	105	990366	52.24	UG	#	94
66) 4-Chlorotoluene	11.90	91	1056076	52.59	UG	#	92
67) tert-Butylbenzene	12.29	119	758599	52.11	UG	#	100
68) 1,2,4-Trimethylbenzene	12.34	105	1001946	52.10	UG	#	94
69) sec-Butylbenzene	12.56	105	1196448	52.53	UG	#	98
70) 1,3-Dichlorobenzene	12.68	146	460575	50.82	UG		99
71) 4-Isopropyltoluene	12.74	119	963943	52.78	UG		99
72) 1,4-Dichlorobenzene	12.79	146	469451	50.44	UG		100
73) n-Butylbenzene	13.24	91	990491	52.38	UG	#	95
74) 1,2-Dichlorobenzene	13.24	146	453164	51.43	UG		100
75) 1,2-Dibromo-3-chloropropan	14.19	75	144226	52.51	UG	#	63
76) 1,2,4-Trichlorobenzene	15.15	180	376775	51.16	UG		100
77) Hexachlorobutadiene	15.35	225	153429	53.84	UG		100
78) Naphthalene	15.41	128	1170170	50.22	UG		100
79) 1,2,3-Trichlorobenzene	15.66	180	369653	50.24	UG		99
80) 1,1,2-Trichloro-1,2,2-trif	3.19	101	170050	54.05	UG		92
81) Methyl acetate	3.59	43	380289	48.12	UG	#	78
82) Cyclohexane	5.83	56	481938	47.06	UG	#	71
83) Methylcyclohexane	7.13	83	401747	51.88	UG	#	61

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3852.D
Acq On : 31 Jul 2023 16:08
Operator : BARBARA
Sample : E23-03388-001MS,E23-03388-001MS,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 01 12:01:13 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration



K8230724.M Thu Aug 17 10:53:40 2023

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3864.D
Acq On : 31 Jul 2023 21:55
Operator : BARBARA
Sample : MW-13D-072723,E23-03408-001DUP,A,0.1mL,100
Misc : EWMA/SWIVELIER,07/27/23,07/27/23,1
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Aug 01 14:25:17 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration

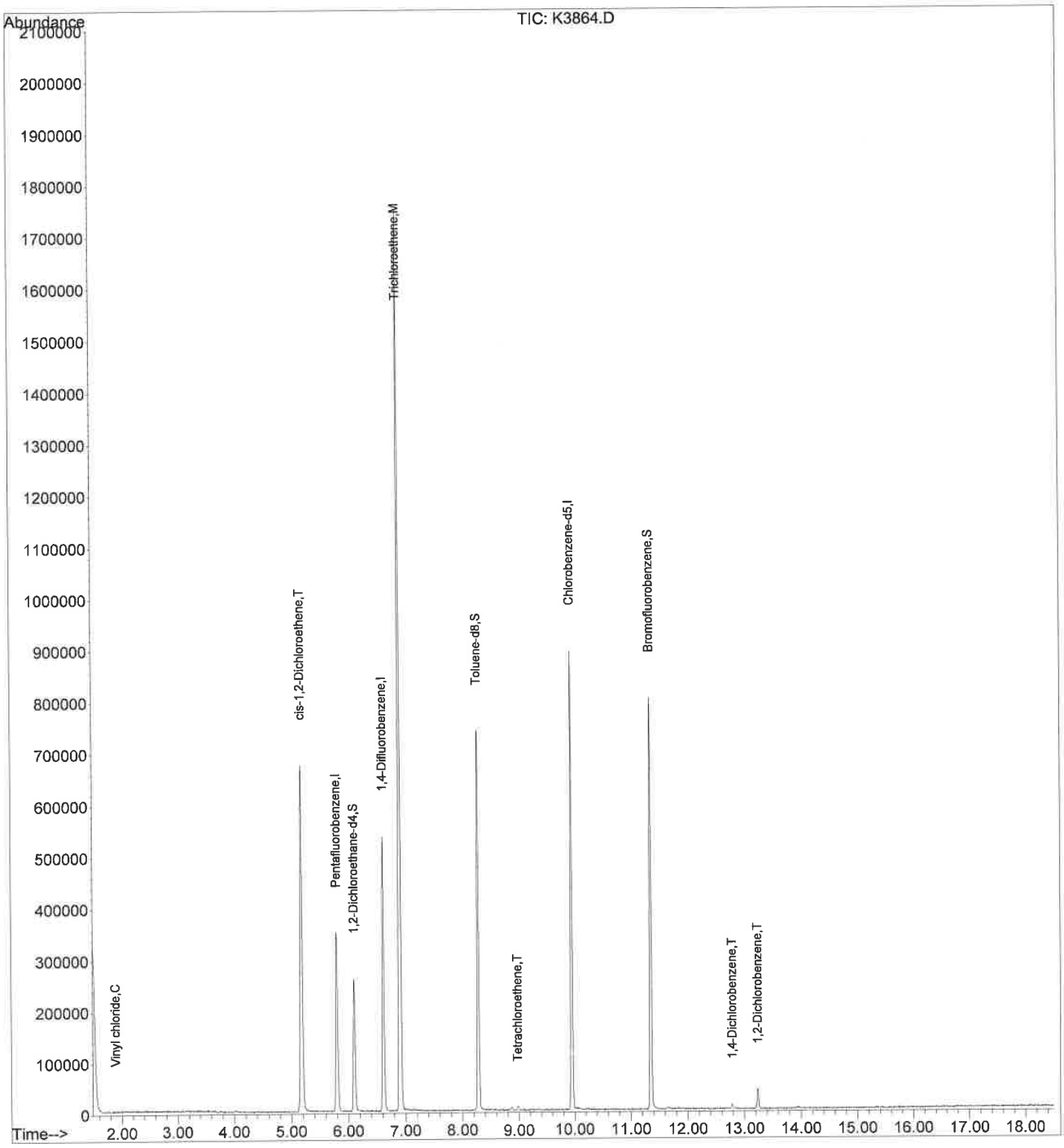
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	5.79	168	223656	50.00	UG		0.00
31) 1,4-Difluorobenzene	6.61	114	385278	50.00	UG		0.00
50) Chlorobenzene-d5	9.95	117	404536	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.11	65	233187	55.85	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 111.70%				
41) Toluene-d8	8.28	98	497325	51.04	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.08%				
59) Bromofluorobenzene	11.35	95	295361	51.42	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.84%				
Target Compounds							Qvalue
4) Vinyl chloride	1.89	62	2198m	0.76	UG		
20) cis-1,2-Dichloroethene	5.18	96	298536	77.88	UG	#	99
33) Trichloroethene	6.91	95	630749	164.66	UG	#	72
45) Tetrachloroethene	8.99	166	2195	0.69	UG		96
72) 1,4-Dichlorobenzene	12.78	146	2836	0.38	UG		99
74) 1,2-Dichlorobenzene	13.24	146	13521	1.90	UG		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\23-07-31\
Data File : K3864.D
Acq On : 31 Jul 2023 21:55
Operator : BARBARA
Sample : MW-13D-072723,E23-03408-001DUP,A,0.1mL,100
Misc : EWMA/SWIVELIER,07/27/23,07/27/23,1
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Aug 01 14:25:17 2023
Quant Method : C:\MSDCHEM\1\METHODS\K8230724.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260D
QLast Update : Wed Jul 26 09:29:59 2023
Response via : Initial Calibration



K8230724.M Thu Aug 17 10:54:49 2023 Page: 2

VOLATILE ORGANICS RUN LOGS
STANDARD PREP LOGS

LABORATORY CHRONICLE - GC/MS VOA (Aq)

DATE: 7/24/2023
INSTRUMENT: MSD-K

BFB_VOK
8260D

METHOD: 8260D
INITIAL CALIBRATION: K072423
ANALYST: Barbara Berberian

BATCH ID: 230724-01

STANDARD	Lot #	Exp. Date	CONC.
BFB	L3186	09/28/23	25 ug/ml
ISTD/SURR (4100)	N/A	08/29/23	50 ug/ml
ISTD/SURR (4560)	L3187	10/12/23	250 ug/ml
Primary Mix	L3183	09/06/23	40 ug/ml
Primary Ac/Ac	L3189	10/21/23	1000 ug/ml
1,4-Dioxane	NA	NA	10000 ug/ml
Secondary Mix	L3182	09/03/23	40 ug/ml
Secondary Ac/Ac	L3185	09/19/23	1000 ug/ml
Secondary 1,4-Dioxane	NA	NA	1000 ug/ml
MeOH	L151278	06/01/26	
Reagent Water	VOA1	na	

#	File	Case #	Samp #	Vol (ml)	% Moist	Test	Method	Vial #	?	Status
1	K3740	BFBA230724-01	BFBA230724-01	5	100	2ul BFB Std direct inject	8260D			2:56
2	K3741	ICC001	ICC230724	5	100		8260D			OK
3	K3742	ICC00.5	ICC230724	5	100		8260D			OK
4	K3743	ICC005	ICC230724	5	100		8260D			OK
5	K3744	ICC020	ICC230724	5	100		8260D			OK
6	K3745	ICC100	ICC230724	5	100		8260D			OK
7	K3746	ICC150	ICC230724	5	100		8260D			OK
8	K3747	ICC200	ICC230724	5	100		8260D			OK
9	K3748	RB		5	100		8260D			
10	K3749	ICV100	ICV230724	5	100		8260D			OK

LABORATORY CHRONICLE - GC/MS VOA (Aq)

DATE: 7/31/2023
INSTRUMENT: MSD-K

BFB_VOK
8260D

METHOD: 8260D
INITIAL CALIBRATION: K072423
ANALYST: Barbara Berberian

BATCH ID: 230731-01/-02

STANDARD	Lot #	Exp. Date	CONC.
BFB	L3186	09/28/23	25 ug/ml
ISTD/SURR (4100)	N/A	08/29/23	50 ug/ml
ISTD/SURR (4560)	L3187	10/12/23	250 ug/ml
Primary Mix	L3183	09/06/23	40 ug/ml
Primary Ac/Ac	L3189	10/21/23	1000 ug/ml
1,4-Dioxane	NA	NA	10000 ug/ml
Secondary Mix	L3182	09/02/23	40 ug/ml
Secondary Ac/Ac	L3185	09/19/23	1000 ug/ml
Secondary 1,4-Dioxane	NA	NA	1000 ug/ml
MeOH	L151278	06/01/26	
Reagent Water	VOA1	na	

#	File	Case #	Samp #	Vol (ml)	% Moist	Test	Method	Vial #	?	Status
1	K3840	BFBA23073101	BFBA23073101	5	100	2ul BFB Std direct inject	8260D			10:23
2	K3841	CCV100	CCV230731-01	5	100		8260D			OK
3	K3842	RB		5	100		8260D			
4	K3843	RB		5	100		8260D			
5	K3844	BLKA230731-01	BLKA230731-01	5	100		8260D			OK
6	K3845	3381	1	5	100	TCL VO + 15	8260D	2	YES	OK
7	K3846	3381	2	5	100	TCL VO + 15	8260D	2	YES	OK
8	K3847	3381	3	5	100	TCL VO + 15	8260D	2	YES	OK
9	K3848	3381	4	5	100	TCL VO + 15	8260D	2	YES	OK
10	K3849	3307	1	5	100	BTEX	8260D	2	YES	OK
11	K3850	3307	2	5	100	BTEX	8260D	2	YES	OK
12	K3851	LCSA230731-01		5	100		8260D			OK
13	K3852	3388	1MS	5	100		8260D			OK
14	K3853	RB		5	100		8260D			
15	K3854	3307	3	5	100	BTEX	8260D	2	YES	OK
16	K3855	3307	4	5	100	TCL VO	8260D	2	YES	OK
17	K3856	3367	1	5	100	Special VO	8260D	2	YES	OK
18	K3857	3367	2	5	100	Special VO	8260D	2	YES	OK
19	K3858	3367	3	5	100	Special VO	8260D	2	YES	OK
20	K3859	3367	4	5	100	Special VO	8260D	2	YES	OK
21	K3860	3388	1	5	100	Oil # 2 (VOA) + 15; Special	8260D	2	YES	OK
22	K3861	3361	1	5	100	Oil # 2 (VOA) + 15; Special	8260D	2	YES	OK
	K3862	3408	1	5	100	TCL VO + 15	8260D	2	YES	OK
	K3863	3408	2	5	100	TCL VO + 15	8260D	2	YES	OK
	K3864	3408	2DUP	5	100	TCL VO + 15	8260D	3	YES	OK

L3179 IS/surrogate @ 50 ug/ml for Certain on 8260
05/22/23
08/22/23 100 ul of IS./LS1432 @ 2500 ug/ml
100 surr./LS1433
into 5 ml of MeOH lot# (22080306)

L3180 Primary/Working Std for 524.2 @ 20 ppm
RS
5/18/23 0.1 ml of DWM-588-1
opened 5/18/23 @ 2000 ppm
into 10 mls MeOH
RA 123-13
exp.'es 8/18/23

L3181 Primary REV 4 for 524.2 @ 2000 ppm
RS
5/18/23 1 ml of DWM-592-1
opened 5/18/23 @ 2000 ppm
into 10 mls MeOH
RA 123-13
exp.'es 8/18/23

L3182 Secondary mix @ 100 ug/ml
06/02/23 0.4 ml of MTBE/TBA/DIPE @ 500/1000/5000 ppm
9/2/23 L3146 exp 11/24/23

exp. 1/4/24
1ml of ECS-A-524/8260 Main Mix 2000 ppm
ECS-A-033 lot# AA2012204002 rec. 12/28/22, exp.
1ml of ECS-A-053 volatiles gases mix @ 2000 p
lot# ~~2204~~ 220418C, rec. 12/28/22 exp. 5/10/2
2ml of M-8260-ADD-10x lot# 223041108-
received 6/02/23 exp. 10/8/23
into 50ml of
MeOH
(lot# 22030

L3183 [redacted]
06/06/23
9/06/23 2ml of DMH-588-1, lot# 000672.6330 received
3/20/23, exp. 02/28/26
4ml of ECS-A-040 2-chloroethyl vinyl ether
lot# NA.221205024A, received 12/28/22, e
0.8ml of TBA
0.8ml DIPE @ exp.
4ml of ECS-A-043 8260 ketones mix @ 2000 p
lot# ~~EP220902001~~, ~~rec. 12/28/22~~
NA230307020, rec. 3/20/23, exp. 03/06/24
2ml of ECS-A-044 volatiles add #1 @ 2000 ppm
lot# NA230308006, rec. 3/20/23, exp. 03/01/24
2ml of VOA-IACNJ-1 @ 2000 ppm received 12/23/2
lot# NA221221005 exp. 12/20/25, into
100ml of MeOH
(lot# 22030263)

L3184 IS/surrogate @ 30 ug/ml for Centurion 624.1

06/07/23 60 ml of I.S. LS1432 exp. 2/22/24 into
09/07/23 60 ml Surrogate LS1433

5 ml of MeOH lot # (2203026S)

L3185 Secondary Ac/Acrylonitrile

06/19/23 1 ml of Acrolein/Acrylonitrile Cat 4687

8/18/23 rec. 10/21/21, exp. 09/30/25, into 10 ml of MeOH lot # 2203026S

L3186 BFB tuning 25 ppm

6/28/23 0.5 ml of EQ-A-017 lot # MP220302
exp. 3/2/25 received 3/30/22 and

8/28/23 0.5 MeOH (lot # 2203026S

L3187 Edco IS/Surr for Acrolein @ 25 ppm

1 ml of LS1432 @ 25 ppm Edco I.S.
7/12/23 1 ml of LS1433 @ 25 ppm Edco Surr
both exp 2/22/24

into 10 mls MeOH RA
1.24.13

exp 10/12/23

SUBCONTRACTED DATA
EUROFINS LANCASTER

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Melissa Simmons
Integrated Analytical Laboratories LLC
273 Franklin Road
Randolph NJ 07869

Generated 8/8/2023 4:13 AM

JOB DESCRIPTION

E23-03408

JOB NUMBER

410-136647-1

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster PA 17601

See page two for job notes and contact information.

my EOL

Eurofins Lancaster Laboratories Environment Testing, LLC

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.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Marrissa Williams

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Designee for
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717 556-7246

Eurofins Lancaster Laboratories Environment Testing, LLC

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.
· QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
· Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
· Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Marrissa Williams

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Receipt

The sample was received on 7/28/2023 6:00 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.6°C

GC VOA

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

HPLC/IC

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

Sample Summary

Client: Integrated Analytical Laboratories LLC
Project/Site: E23-03408

Job ID: 410-136647-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-136647-1	E23-03408-001_MW-13D-072723	Water	07/27/23 12:59	07/28/23 18:00

Detection Summary

Client: Integrated Analytical Laboratories LLC
Project/Site: E23-03408

Job ID: 410-136647-1

Client Sample ID: E23-03408-001_MW-13D-072723

Lab Sample ID: 410-136647-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethane (1C)	18		5.0	1.0	ug/L	1		RSK-175	Total/NA
Methane (1C)	200		5.0	3.0	ug/L	1		RSK-175	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Integrated Analytical Laboratories LLC
Job ID: 410-136647-1
Project/Site: E23-03408

Method	Method Description	Protocol	Laboratory
RSK-175	Dissolved Gases (GC)	RSK	ELLE
8015D VFA	Volatile Fatty Acids - Direct Aqueous Injection (HPLC)	SW846	ELLE
8015 VFA	Volatile Fatty Acids - Water Prep	SW846	ELLE
RSK-175	Dissolved Gases Prep	RSK	ELLE

Protocol References:

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique , RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Client: Integrated Analytical Laboratories LLC
Project/Site: E23-03408

Job ID: 410-136647-1

Client Sample ID: E23-03408-001_MW-13D-072723
Date Collected: 07/27/23 12:59
Date Received: 07/28/23 18:00

Lab Sample ID: 410-136647-1
Matrix: Water

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane (1C)	**18**		5.0	1.0	ug/L		08/03/23 10:40	08/03/23 17:54	1
Ethene (1C)	ND		5.0	1.0	ug/L		08/03/23 10:40	08/03/23 17:54	1
Methane (1C)	**200**		5.0	3.0	ug/L		08/03/23 10:40	08/03/23 17:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Propene (1C)	*50*		*43 - 133*	*08/03/23 10:40*	*08/03/23 17:54*	*1*

Method: SW846 8015D VFA - Volatile Fatty Acids - Direct Aqueous Injection (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid (1C)	ND		10000	3200	ug/L		08/03/23 17:58	08/05/23 14:12	1
Butyric acid (1C)	ND		10000	2000	ug/L		08/03/23 17:58	08/05/23 14:12	1
Citric Acid (1C)	ND		5000	1000	ug/L		08/03/23 17:58	08/05/23 14:12	1
Formic-acid (1C)	ND		10000	2000	ug/L		08/03/23 17:58	08/05/23 14:12	1
Isovaleric acid (1C)	ND		7100	3500	ug/L		08/03/23 17:58	08/05/23 14:12	1
L-Lactic Acid (1C)	ND		5000	1000	ug/L		08/03/23 17:58	08/05/23 14:12	1
Oxalic Acid (1C)	ND		1300	250	ug/L		08/03/23 17:58	08/05/23 14:12	1
Propionic acid (1C)	ND		10000	2000	ug/L		08/03/23 17:58	08/05/23 02:15	1
Pyruvic Acid (1C)	ND		1300	250	ug/L		08/03/23 17:58	08/05/23 14:12	1
Quinic Acid (1C)	ND		5000	2400	ug/L		08/03/23 17:58	08/05/23 14:12	1
Succinic Acid (1C)	ND		2500	1000	ug/L		08/03/23 17:58	08/05/23 14:12	1
Tartaric Acid (1C)	ND		2500	1000	ug/L		08/03/23 17:58	08/05/23 14:12	1
Valeric acid (1C)	ND		5000	2000	ug/L		08/03/23 17:58	08/05/23 14:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fumaric Acid (1C)	*102*		*68 - 139*	*08/03/23 17:58*	*08/05/23 02:15*	*1*
Fumaric Acid (1C)	*108*		*68 - 139*	*08/03/23 17:58*	*08/05/23 14:12*	*1*

Surrogate Summary

Client: Integrated Analytical Laboratories LLC
Project/Site: E23-03408

Job ID: 410-136647-1

Method: RSK-175 - Dissolved Gases (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)								
Lab Sample ID	Client Sample ID	Propene1 (43-133)								
410-136647-1	E23-03408-001_MW-13D-072723	50								
LCS 410-404151/2-A	Lab Control Sample	95								
LCSD 410-404151/3-A	Lab Control Sample Dup	95								
MB 410-404151/1-A	Method Blank	95								

Surrogate Legend

Propene = Propene

Method: 8015D VFA - Volatile Fatty Acids - Direct Aqueous Injection (HPLC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)								
Lab Sample ID	Client Sample ID	FumAcd1 (68-139)								
410-136647-1	E23-03408-001_MW-13D-072723	102								
410-136647-1	E23-03408-001_MW-13D-072723	108								
LCS 410-404256/2-A	Lab Control Sample	97								
LCS 410-404256/2-A	Lab Control Sample	103								
LCS 410-404256/4-A	Lab Control Sample	100								
LCS 410-404256/4-A	Lab Control Sample	107								
LCSD 410-404256/3-A	Lab Control Sample Dup	100								
LCSD 410-404256/3-A	Lab Control Sample Dup	106								
MB 410-404256/1-A	Method Blank	100								
MB 410-404256/1-A	Method Blank	102								

Surrogate Legend

FumAcd = Fumaric Acid

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 410-404151/1-A
Matrix: Water
Analysis Batch: 403952

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 404151

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane (1C)	ND		5.0	1.0	ug/L		08/03/23 10:40	08/03/23 11:19	1
Ethene (1C)	ND		5.0	1.0	ug/L		08/03/23 10:40	08/03/23 11:19	1
Methane (1C)	ND		5.0	3.0	ug/L		08/03/23 10:40	08/03/23 11:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Propene (1C)	*95*		*43 - 133*	*08/03/23 10:40*	*08/03/23 11:19*	*1*

Lab Sample ID: LCS 410-404151/2-A
Matrix: Water
Analysis Batch: 403952

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 404151

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethane (1C)	61.7	56.9		ug/L		92	85 - 115
Ethene (1C)	58.3	54.0		ug/L		93	83 - 115
Methane (1C)	59.8	56.7		ug/L		95	85 - 115

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Propene (1C)	*95*		*43 - 133*

Lab Sample ID: LCSD 410-404151/3-A
Matrix: Water
Analysis Batch: 403952

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 404151

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethane (1C)	61.7	56.4		ug/L		91	85 - 115	1	20
Ethene (1C)	58.3	53.6		ug/L		92	83 - 115	1	20
Methane (1C)	59.8	56.0		ug/L		94	85 - 115	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Propene (1C)	*95*		*43 - 133*

Method: 8015D VFA - Volatile Fatty Acids - Direct Aqueous Injection (HPLC)

Lab Sample ID: MB 410-404256/1-A
Matrix: Water
Analysis Batch: 404643

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 404256

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Propionic acid (1C)	ND		10000	2000	ug/L		08/03/23 17:57	08/04/23 16:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fumaric Acid (1C)	*100*		*68 - 139*	*08/03/23 17:57*	*08/04/23 16:55*	*1*

Method: 8015D VFA - Volatile Fatty Acids - Direct Aqueous Injection (HPLC) (Continued)

Lab Sample ID: MB 410-404256/1-A
Matrix: Water
Analysis Batch: 404646

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 404256

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid (1C)	ND		10000	3200	ug/L		08/03/23 17:57	08/04/23 18:09	1
Butyric acid (1C)	ND		10000	2000	ug/L		08/03/23 17:57	08/04/23 18:09	1
Citric Acid (1C)	ND		5000	1000	ug/L		08/03/23 17:57	08/04/23 18:09	1
Formic-acid (1C)	ND		10000	2000	ug/L		08/03/23 17:57	08/04/23 18:09	1
Isovaleric acid (1C)	ND		7100	3500	ug/L		08/03/23 17:57	08/04/23 18:09	1
L-Lactic Acid (1C)	ND		5000	1000	ug/L		08/03/23 17:57	08/04/23 18:09	1
Oxalic Acid (1C)	ND		1300	250	ug/L		08/03/23 17:57	08/04/23 18:09	1
Pyruvic Acid (1C)	ND		1300	250	ug/L		08/03/23 17:57	08/04/23 18:09	1
Quinic Acid (1C)	ND		5000	2400	ug/L		08/03/23 17:57	08/04/23 18:09	1
Succinic Acid (1C)	ND		2500	1000	ug/L		08/03/23 17:57	08/04/23 18:09	1
Tartaric Acid (1C)	ND		2500	1000	ug/L		08/03/23 17:57	08/04/23 18:09	1
Valeric acid (1C)	ND		5000	2000	ug/L		08/03/23 17:57	08/04/23 18:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fumaric Acid (1C)	*102*		*68 - 139*	*08/03/23 17:57*	*08/04/23 18:09*	*1*

Lab Sample ID: LCS 410-404256/2-A
Matrix: Water
Analysis Batch: 404643

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 404256

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Isovaleric acid (1C)	100000	107000		ug/L		107	70 - 115
Succinic Acid (1C)	50000	49900		ug/L		100	65 - 142
Tartaric Acid (1C)	50000	51100		ug/L		102	75 - 115
Valeric acid (1C)	100000	110000		ug/L		110	57 - 126

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Fumaric Acid (1C)	*97*		*68 - 139*

Lab Sample ID: LCS 410-404256/2-A
Matrix: Water
Analysis Batch: 404646

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 404256

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Isovaleric acid (1C)	100000	98300		ug/L		98	70 - 115
Succinic Acid (1C)	50000	48100		ug/L		96	65 - 142
Tartaric Acid (1C)	50000	51400		ug/L		103	75 - 115
Valeric acid (1C)	100000	101000		ug/L		101	57 - 126

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Fumaric Acid (1C)	*103*		*68 - 139*

Lab Sample ID: LCS 410-404256/4-A
Matrix: Water
Analysis Batch: 404643

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 404256

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Propionic acid (1C)	101000	108000		ug/L		107	42 - 145

Method: 8015D VFA - Volatile Fatty Acids - Direct Aqueous Injection (HPLC) (Continued)

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Fumaric Acid (1C)	*100*		*68 - 139*

Lab Sample ID: LCS 410-404256/4-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 404646 — **Prep Batch: 404256**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Acetic acid (1C)			101000	104000		ug/L		104	77 - 123		
Butyric acid (1C)			101000	103000		ug/L		102	73 - 134		
Citric Acid (1C)			50000	50200		ug/L		100	77 - 123		
Formic-acid (1C)			101000	105000		ug/L		104	73 - 129		
L-Lactic Acid (1C)			50200	39700		ug/L		79	71 - 115		
Oxalic Acid (1C)			12600	11300		ug/L		90	59 - 138		
Pyruvic Acid (1C)			12400	13000		ug/L		105	74 - 115		
Quinic Acid (1C)			50300	46800		ug/L		93	85 - 115		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Fumaric Acid (1C)	*107*		*68 - 139*

Lab Sample ID: LCSD 410-404256/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 404643 — **Prep Batch: 404256**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Isovaleric acid (1C)			100000	108000		ug/L		107	70 - 115	1	30
Succinic Acid (1C)			50000	50900		ug/L		102	65 - 142	2	30
Tartaric Acid (1C)			50000	51800		ug/L		104	75 - 115	1	30
Valeric acid (1C)			100000	112000		ug/L		111	57 - 126	1	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Fumaric Acid (1C)	*100*		*68 - 139*

Lab Sample ID: LCSD 410-404256/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 404646 — **Prep Batch: 404256**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Isovaleric acid (1C)			100000	99800		ug/L		99	70 - 115	1	30
Succinic Acid (1C)			50000	48500		ug/L		97	65 - 142	1	30
Tartaric Acid (1C)			50000	52000		ug/L		104	75 - 115	1	30
Valeric acid (1C)			100000	103000		ug/L		102	57 - 126	1	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Fumaric Acid (1C)	*106*		*68 - 139*

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

Client: Integrated Analytical Laboratories LLC
Project/Site: E23-03408

Job ID: 410-136647-1

GC VOA

Analysis Batch: 403952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136647-1	E23-03408-001_MW-13D-072723	Total/NA	Water	RSK-175	404151
MB 410-404151/1-A	Method Blank	Total/NA	Water	RSK-175	404151
LCS 410-404151/2-A	Lab Control Sample	Total/NA	Water	RSK-175	404151
LCSD 410-404151/3-A	Lab Control Sample Dup	Total/NA	Water	RSK-175	404151

Prep Batch: 404151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136647-1	E23-03408-001_MW-13D-072723	Total/NA	Water	RSK-175	
MB 410-404151/1-A	Method Blank	Total/NA	Water	RSK-175	
LCS 410-404151/2-A	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 410-404151/3-A	Lab Control Sample Dup	Total/NA	Water	RSK-175	

HPLC/IC

Prep Batch: 404256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136647-1	E23-03408-001_MW-13D-072723	Total/NA	Water	8015 VFA	
MB 410-404256/1-A	Method Blank	Total/NA	Water	8015 VFA	
LCS 410-404256/2-A	Lab Control Sample	Total/NA	Water	8015 VFA	
LCS 410-404256/4-A	Lab Control Sample	Total/NA	Water	8015 VFA	
LCSD 410-404256/3-A	Lab Control Sample Dup	Total/NA	Water	8015 VFA	

Analysis Batch: 404643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136647-1	E23-03408-001_MW-13D-072723	Total/NA	Water	8015D VFA	404256
MB 410-404256/1-A	Method Blank	Total/NA	Water	8015D VFA	404256
LCS 410-404256/2-A	Lab Control Sample	Total/NA	Water	8015D VFA	404256
LCS 410-404256/4-A	Lab Control Sample	Total/NA	Water	8015D VFA	404256
LCSD 410-404256/3-A	Lab Control Sample Dup	Total/NA	Water	8015D VFA	404256

Analysis Batch: 404646

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136647-1	E23-03408-001_MW-13D-072723	Total/NA	Water	8015D VFA	404256
MB 410-404256/1-A	Method Blank	Total/NA	Water	8015D VFA	404256
LCS 410-404256/2-A	Lab Control Sample	Total/NA	Water	8015D VFA	404256
LCS 410-404256/4-A	Lab Control Sample	Total/NA	Water	8015D VFA	404256
LCSD 410-404256/3-A	Lab Control Sample Dup	Total/NA	Water	8015D VFA	404256

Lab Chronicle

Client: Integrated Analytical Laboratories LLC
Job ID: 410-136647-1
Project/Site: E23-03408

Client Sample ID: E23-03408-001_MW-13D-072723
Lab Sample ID: 410-136647-1

Date Collected: 07/27/23 12:59
Matrix: Water
Date Received: 07/28/23 18:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	RSK-175			404151	HQR6	ELLE	08/03/23 10:40
Total/NA	Analysis	RSK-175		1	403952	LXF2	ELLE	08/03/23 17:54
Total/NA	Prep	8015 VFA			404256	UHEW	ELLE	08/03/23 17:58
Total/NA	Analysis	8015D VFA		1	404643	UHEW	ELLE	08/05/23 02:15
Total/NA	Prep	8015 VFA			404256	UHEW	ELLE	08/03/23 17:58
Total/NA	Analysis	8015D VFA		1	404646	UHEW	ELLE	08/05/23 14:12

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Client: Integrated Analytical Laboratories LLC
Job ID: 410-136647-1
Project/Site: E23-03408

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10670	04-01-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015D VFA	8015 VFA	Water	Acetic acid (1C)
8015D VFA	8015 VFA	Water	Butyric acid (1C)
8015D VFA	8015 VFA	Water	Citric Acid (1C)
8015D VFA	8015 VFA	Water	Formic-acid (1C)
8015D VFA	8015 VFA	Water	Isovaleric acid (1C)
8015D VFA	8015 VFA	Water	L-Lactic Acid (1C)
8015D VFA	8015 VFA	Water	Oxalic Acid (1C)
8015D VFA	8015 VFA	Water	Propionic acid (1C)
8015D VFA	8015 VFA	Water	Pyruvic Acid (1C)
8015D VFA	8015 VFA	Water	Quinic Acid (1C)
8015D VFA	8015 VFA	Water	Succinic Acid (1C)
8015D VFA	8015 VFA	Water	Tartaric Acid (1C)
8015D VFA	8015 VFA	Water	Valeric acid (1C)

Method RSK-175

Dissolved Gases (GC) by Method RSK_175

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-136647-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): HP Plot ID: 0.53 (mm)

Client Sample ID	Lab Sample ID	Propene1 #
E23-03408-001_MW-1 3D-072723	410-136647-1	50
	MB 410-404151/1-A	95
	LCS 410-404151/2-A	95
	LCSD 410-404151/3-A	95

	QC LIMITS
Propene = Propene	43-133

Column to be used to flag recovery values

FORM II RSK-175

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136647-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 312023_08_3.0007.d

Lab ID: LCS 410-404151/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethane	61.7	56.9	92	85-115	
Ethene	58.3	54.0	93	83-115	
Methane	59.8	56.7	95	85-115	

Column to be used to flag recovery and RPD values

FORM III RSK-175

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136647-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 312023_08_3.0008.d

Lab ID: LCSD 410-404151/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethane	61.7	56.4	91	1	20	85-115	
Ethene	58.3	53.6	92	1	20	83-115	
Methane	59.8	56.0	94	1	20	85-115	

Column to be used to flag recovery and RPD values

FORM III RSK-175

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136647-1

SDG No.:

Lab Sample ID: MB 410-404151/1-A

Matrix: Water Date Extracted: 08/03/2023 10:40

Lab File ID:(1) 312023_08_3.0006.d Lab File ID:(2)

Date Analyzed:(1) 08/03/2023 11:19 Date Analyzed:(2)

Instrument ID:(1) 19506 Instrument ID:(2)

GC Column:(1) HP Plot ID: 0.53(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 410-404151/2-A	08/03/2023 11:35	
	LCSD 410-404151/3-A	08/03/2023 11:50	
E23-03408-001_MW-13D-072723	410-136647-1	08/03/2023 17:54	

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136647-1

SDG No.:

Sample No.: ICRT 410-395069/5 Date Analyzed: 07/10/2023 11:02

Instrument ID: 19506 GC Column: HP Plot ID: 0.53(mm)

Lab File ID (Standard): 312023_07_10.0005.d Heated Purge: (Y/N) N

Calibration ID: 51805

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				Propene		
				RT #		
INITIAL CALIBRATION SURROGATE				2.51		
UPPER LIMIT				2.54		
LOWER LIMIT				2.48		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
ICRT 410-395069/5		07/10/2023 11:02	312023_07_10.0005.d	2.51		
ICV 410-395069/12		07/10/2023 12:49	312023_07_10.0012.d	2.52		
CCVRT 410-403952/2		08/03/2023 10:07	312023_08_3.0002.d	2.49		

Propene = Propene

Propene RT Limit = ± 0.03 minutes of surrogate RT

Column used to flag values outside QC limits

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136647-1

SDG No.:

Sample No.: CCVRT 410-403952/2 Date Analyzed: 08/03/2023 10:07

Instrument ID: 19506 GC Column: HP Plot ID: 0.53(mm)

Lab File ID (Standard): 312023_08_3.0002.d Heated Purge: (Y/N) N

Calibration ID: 51805

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				Propene		
				RT #		
CONTINUING CALIBRATION SURROGATE				2.49		
UPPER LIMIT				2.52		
LOWER LIMIT				2.46		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 410-403952/2		08/03/2023 10:07	312023_08_3.0002.d	2.49		
410-136647-1	E23-03408-001_MW-13D-072723	08/03/2023 17:54	312023_08_3.0029.d	2.52		

Propene = Propene

Propene RT Limit = ± 0.03 minutes of surrogate RT

Column used to flag values outside QC limits

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136647-1

SDG No.:

Client Sample ID: E23-03408-001_MW-13D-072723
Lab Sample ID: 410-136647-1

Matrix: Water
Lab File ID: 312023_08_3.0029.d

Analysis Method: RSK-175
Date Collected: 07/27/2023 12:59

Sample wt/vol: 5(mL)
Date Analyzed: 08/03/2023 17:54

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: HP Plot ID: 0.53(mm)

Purge Volume:
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 403952
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-84-0	Ethane	18		5.0	1.0
74-85-1	Ethene	ND		5.0	1.0
74-82-8	Methane	200		5.0	3.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
115-07-1	Propene	50		43-133

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0029.d				
Lims ID:	410-136647-A-1-A				
Client ID:	E23-03408-001_MW-13D-072723				
Sample Type:	Client				
Inject. Date:	03-Aug-2023 17:54:00	ALS Bottle#:	0	Worklist Smp#:	29
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:					
Misc. Info.:	410-0090521-029				
Operator ID:		Instrument ID:	19506		
Method:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\RSK_19506A.m				
Limit Group:	GCV - RSK175				
Last Update:	04-Aug-2023 04:08:10	Calib Date:	10-Jul-2023 11:48:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d				
Column 1 :	HP Plot (0.53 mm)		Det: AFID0		
Process Host:	CTX1668				
First Level Reviewer: LXF2		Date:	04-Aug-2023 04:06:01		

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
	1 Methane	0.743	0.743	0.000	335102668H	195.8	M
	2 Ethane	0.880	0.880	0.000	26357060H	18.2	M
	3 Ethylene	1.143	1.133	0.010	692362H	0.4391	
$	5 Propene	2.523	2.493	0.030	29439613H	10.1	a

QC Flag Legend

Processing Flags

H - Response Measured by Height

Review Flags

M - Manually Integrated

a - User Assigned ID

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 04-Aug-2023 04:08:20 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0029.d

Injection Date: 03-Aug-2023 17:54:00 Instrument ID: 19506

Lims ID: 410-136647-A-1-A Lab Sample ID: 410-136647-1

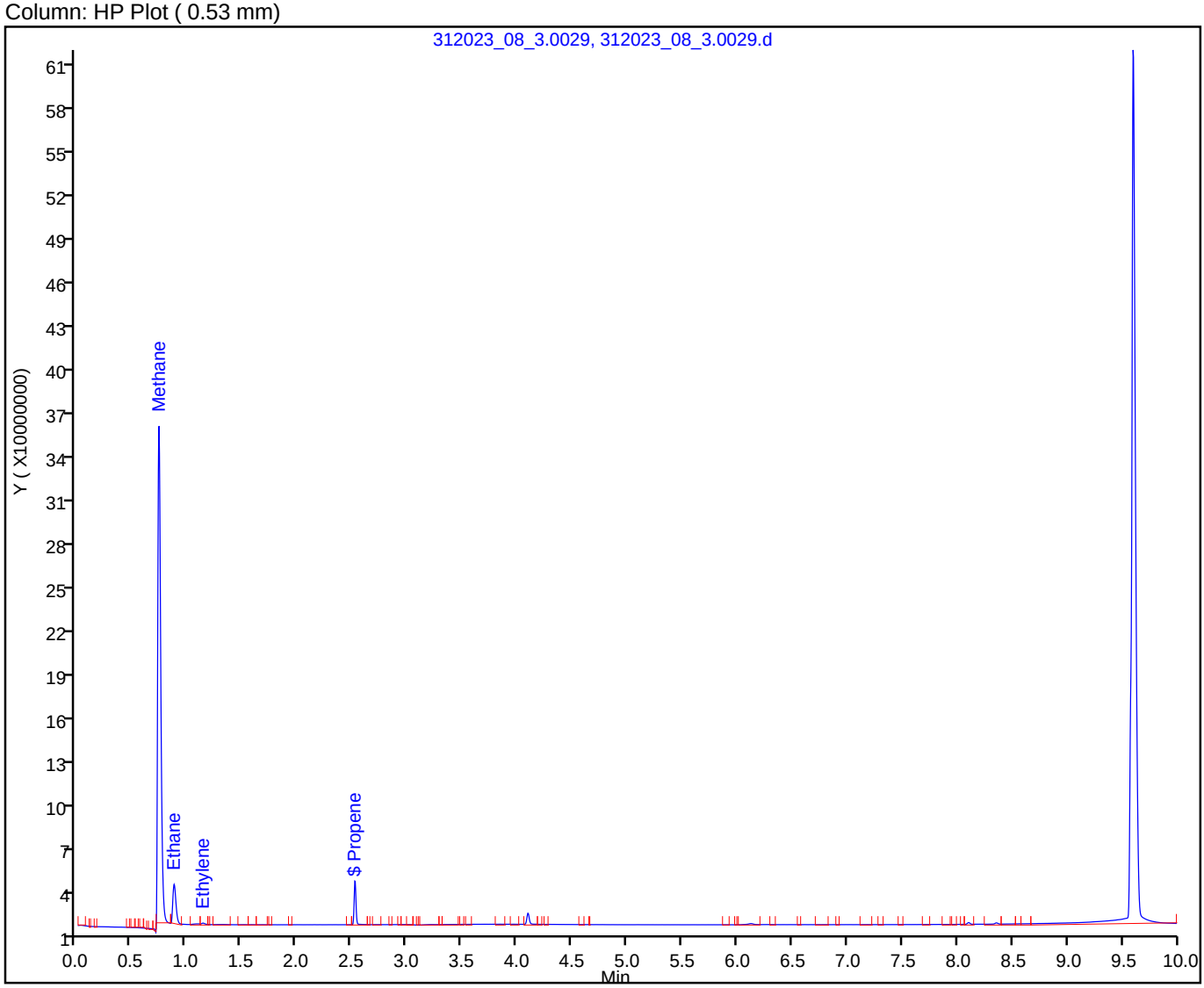
Client ID: E23-03408-001_MW-13D-072723

Operator ID: ALS Bottle#: 0 Worklist Smp#: 29

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Report Date: 04-Aug-2023 04:08:20 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0029.d				
Lims ID:	410-136647-A-1-A				
Client ID:	E23-03408-001_MW-13D-072723				
Sample Type:	Client				
Inject. Date:	03-Aug-2023 17:54:00	ALS Bottle#:	0	Worklist Smp#:	29
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:					
Misc. Info.:	410-0090521-029				
Operator ID:		Instrument ID:	19506		
Method:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\RSK_19506A.m				
Limit Group:	GCV - RSK175				
Last Update:	04-Aug-2023 04:08:10	Calib Date:	10-Jul-2023 11:48:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d				
Column 1 :	HP Plot (0.53 mm)		Det: AFID0		
Process Host:	CTX1668				
First Level Reviewer: LXF2		Date:	04-Aug-2023 04:06:01		

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Propene	20.2	10.1	50.00

Eurofins Lancaster Laboratories Environment Testing, LLC

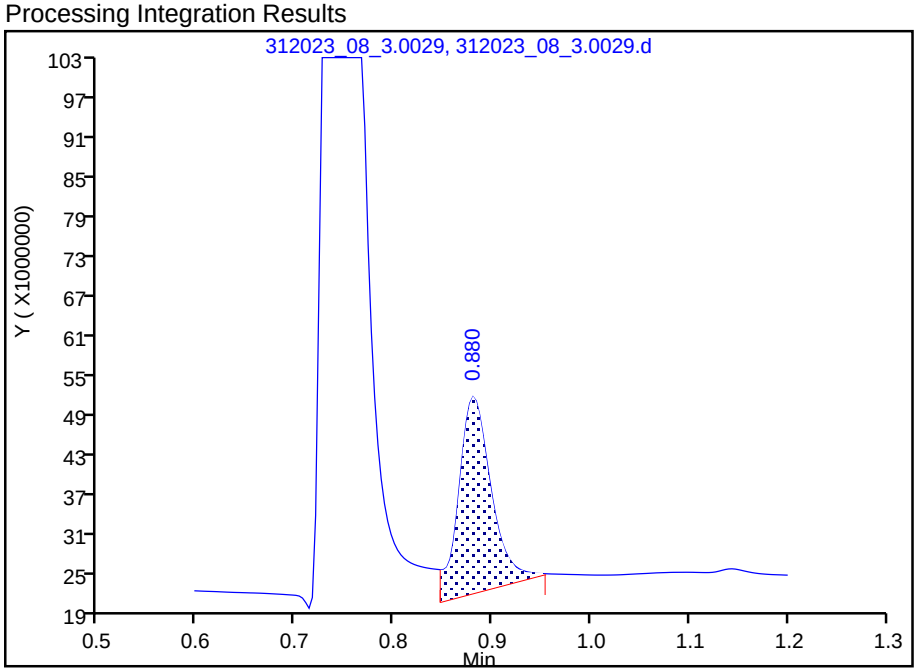
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0029.d				
Injection Date:	03-Aug-2023 17:54:00	Instrument ID:	19506		
Lims ID:	410-136647-A-1-A	Lab Sample ID:	410-136647-1		
Client ID:	E23-03408-001_MW-13D-072723				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	29
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

2 Ethane, CAS: 74-84-0

Signal: 1

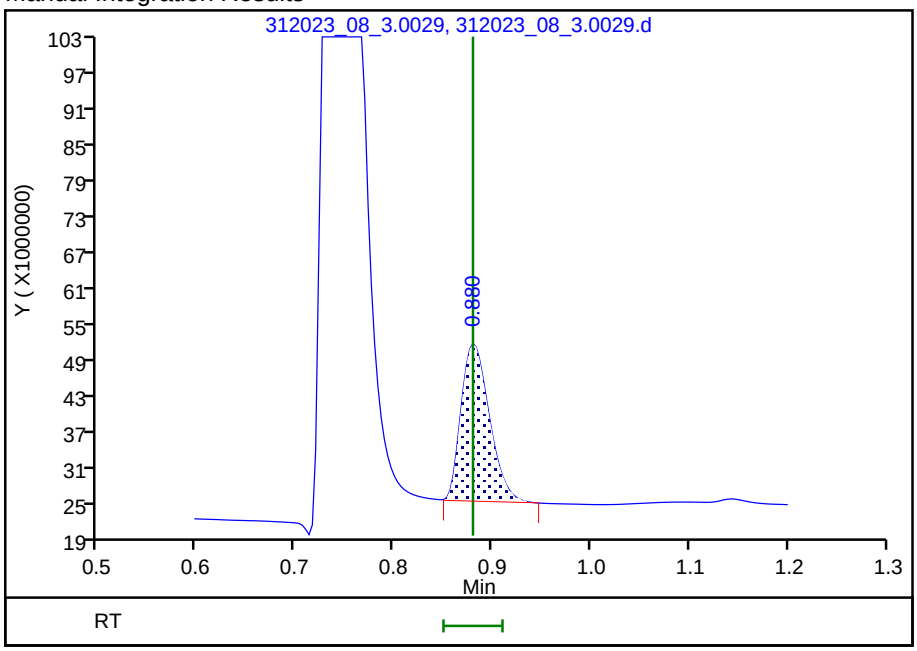
Processing Integration Results

RT: 0.88
Height: 30831390
Amount: 21.267515
Amount Units: ug/l



Manual Integration Results

RT: 0.88
Height: 26357060
Amount: 18.181119
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 04:07:55 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Lancaster Laboratories Environment Testing, LLC

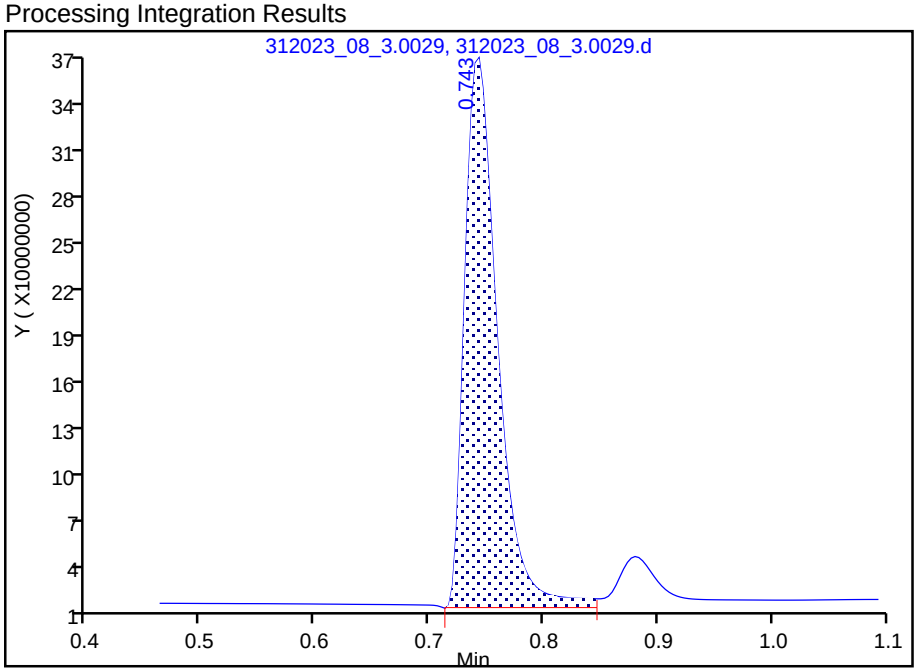
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0029.d				
Injection Date:	03-Aug-2023 17:54:00	Instrument ID:	19506		
Lims ID:	410-136647-A-1-A	Lab Sample ID:	410-136647-1		
Client ID:	E23-03408-001_MW-13D-072723				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	29
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

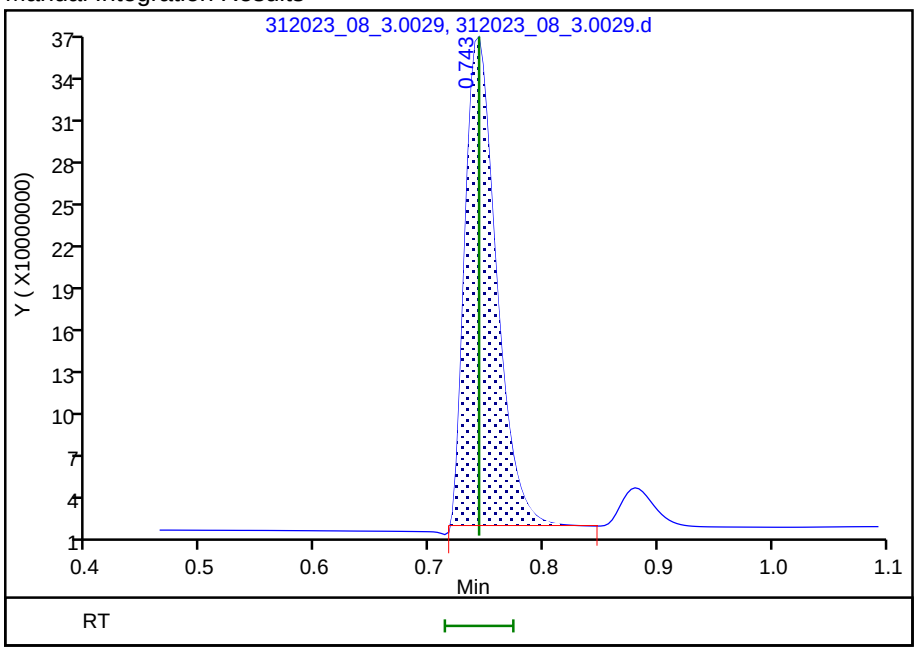
Processing Integration Results

RT: 0.74
Height: 340691494
Amount: 199.0541
Amount Units: ug/l



Manual Integration Results

RT: 0.74
Height: 335102668
Amount: 195.7887
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 04:08:06 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Instrument noise

Eurofins Lancaster Laboratories Environment Testing, LLC

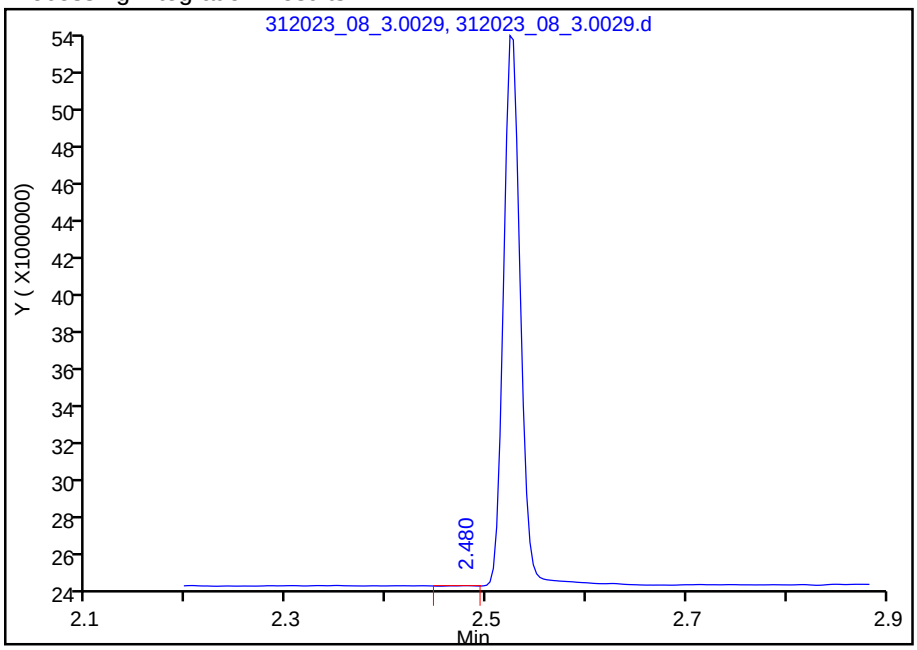
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0029.d				
Injection Date:	03-Aug-2023 17:54:00	Instrument ID:	19506		
Lims ID:	410-136647-A-1-A	Lab Sample ID:	410-136647-1		
Client ID:	E23-03408-001_MW-13D-072723				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	29
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

$ 5 Propene, CAS: 115-07-1

Signal: 1

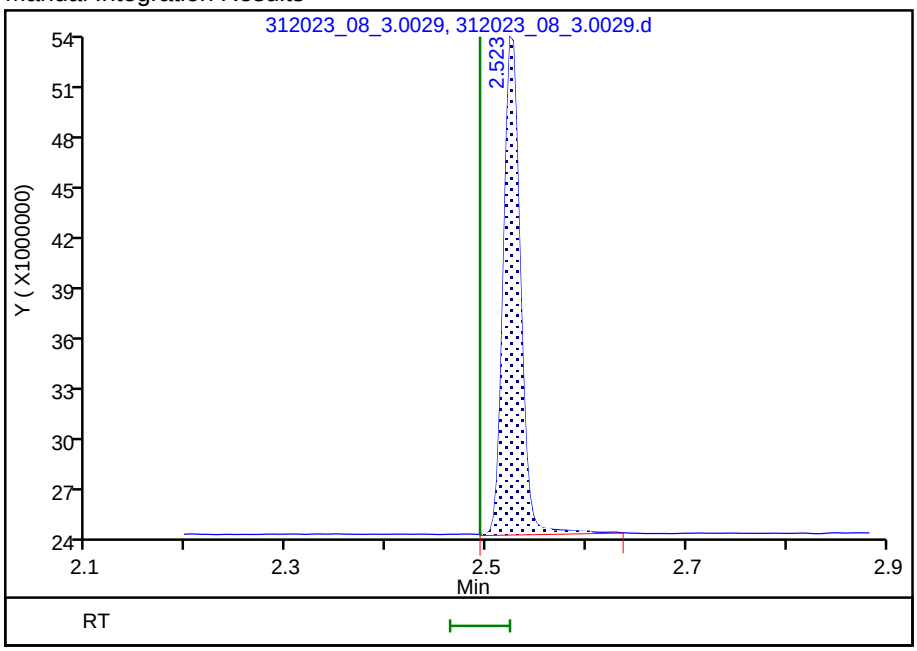
Processing Integration Results

RT: 2.48
Height: 21503
Amount: 0.007362
Amount Units: ug/l



Manual Integration Results

RT: 2.52
Height: 29439613
Amount: 10.079461
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 04:06:00 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136647-1 Analy Batch No.: 395069

SDG No.:

Instrument ID: 19506 GC Column: HP Plot ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 10:31 Calibration End Date: 07/10/2023 11:48 Calibration ID: 51805

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-395069/3	312023_07_10.0003.d
Level 2	IC 410-395069/4	312023_07_10.0004.d
Level 3	ICRT 410-395069/5	312023_07_10.0005.d
Level 4	IC 410-395069/6	312023_07_10.0006.d
Level 5	IC 410-395069/7	312023_07_10.0007.d
Level 6	IC 410-395069/8	312023_07_10.0008.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
Methane	0.753	0.750	0.747	0.747	0.747	0.747					0.717 - 0.777	0.749
Ethane	0.887	0.887	0.887	0.887	0.887	0.887					0.857 - 0.917	0.887
Ethene	1.147	1.147	1.147	1.147	1.147	1.143					1.117 - 1.177	1.146
Propane	1.597	1.597	1.597	1.597	1.597	1.593					1.567 - 1.627	1.596
Isobutane	2.843	2.843	2.843	2.843	2.840	2.833					2.813 - 2.873	2.841
n-Butane	2.977	2.977	2.977	2.977	2.977	2.970					2.927 - 3.027	2.976
Acetylene	3.130	3.130	3.123	3.120	3.117	+++++					3.070 - 3.170	3.124
Propene	2.513	2.513	2.513	2.513	2.513	2.513					2.483 - 2.543	2.513

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136647-1 Analy Batch No.: 395069

SDG No.:

Instrument ID: 19506 GC Column: HP Plot ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 10:31 Calibration End Date: 07/10/2023 11:48 Calibration ID: 51805

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-395069/3	312023_07_10.0003.d
Level 2	IC 410-395069/4	312023_07_10.0004.d
Level 3	ICRT 410-395069/5	312023_07_10.0005.d
Level 4	IC 410-395069/6	312023_07_10.0006.d
Level 5	IC 410-395069/7	312023_07_10.0007.d
Level 6	IC 410-395069/8	312023_07_10.0008.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 4		B	M1	M2								
Methane	1620217 1724723	1669274 1644315	1819958	1790828	Ave		1711552.46				4.7		20.0			
Ethane	1397949 1437980	1449676 1397042	1521880	1493637	Ave		1449694.05				3.5		20.0			
Ethene	1487652 1566898	1590680 1524261	1664662	1627016	Ave		1576861.28				4.1		20.0			
Propane	1729844 1772582	1790754 1806907	1870662	1835271	Ave		1801003.10				2.7		20.0			
Isobutane	2386881 2418184	2493977 2361227	2604777	2526564	Ave		2465268.35				3.8		20.0			
n-Butane	2124483 2253124	2248516 2342605	2406498	2369806	Ave		2290838.73				4.5		20.0			
Acetylene	2138770 1506256	2116285 +++++	1931124	1719543	Ave		1882395.48				14.3		20.0			
Propene	2912944 2834168	2970692 2674692	3108727	3023294	Ave		2920752.83				5.2		20.0			

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.

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136647-1 Analy Batch No.: 395069

SDG No.:

Instrument ID: 19506 GC Column: HP Plot ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/10/2023 10:31 Calibration End Date: 07/10/2023 11:48 Calibration ID: 51805

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-395069/3	312023_07_10.0003.d
Level 2	IC 410-395069/4	312023_07_10.0004.d
Level 3	ICRT 410-395069/5	312023_07_10.0005.d
Level 4	IC 410-395069/6	312023_07_10.0006.d
Level 5	IC 410-395069/7	312023_07_10.0007.d
Level 6	IC 410-395069/8	312023_07_10.0008.d

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
		LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Methane	Ave	8068679 818868913	24938956	108760667	178366469	257673649	4.98 498	14.9	59.8	99.6	149
Ethane	Ave	7185458 718079358	22354009	93869540	153545912	221736579	5.14 514	15.4	61.7	103	154
Ethene	Ave	7229989 740790614	23192115	97083060	158145942	228453680	4.86 486	14.6	58.3	97.2	146
Propane	Ave	8995190 939591421	27935760	116729285	190868152	276522736	5.20 520	15.6	62.4	104	156
Isobutane	Ave	12387912 1225476894	38831218	162225538	262257366	376511192	5.19 519	15.6	62.3	104	156
n-Butane	Ave	10856110 1197071246	34469750	147566441	242194144	345403973	5.11 511	15.3	61.3	102	153
Acetylene	Ave	9282262 +++++	27554030	100572916	149256351	196114478	4.34 +++++	13.0	52.1	86.8	130
Propene	Ave	4893746 449348241	14972289	62671931	101582671	142842078	1.68 168	5.04	20.2	33.6	50.4

Curve Type Legend

Ave = Average by Height

Report Date: 11-Jul-2023 04:35:12 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0003.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 10-Jul-2023 10:31:00 ALS Bottle#: 0 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 410-0088528-003
Operator ID: Instrument ID: 19506
Sublist: chrom-RSK_19506A*sub2

Method: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\RSK_19506A.m
Limit Group: GCV - RSK175
Last Update: 11-Jul-2023 04:35:12 Calib Date: 10-Jul-2023 11:48:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Column 1 : HP Plot (0.53 mm) Det: AFID0
Process Host: CTX1629

First Level Reviewer: LXF2 Date: 11-Jul-2023 04:31:43

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	1 Methane	0.753	0.747	0.006	8068679H	4.98	4.71	M
	2 Ethane	0.887	0.887	0.000	7185458H	5.14	4.96	
	3 Ethylene	1.147	1.147	0.000	7229989H	4.86	4.59	
	4 Propane	1.597	1.597	0.000	8995190H	5.20	4.99	M
$	5 Propene	2.513	2.513	0.000	4893746H	1.68	1.68	
	8 Propane, 2-methyl	2.843	2.843	0.000	12387912H	5.19	5.02	M
	6 Butane	2.977	2.977	0.000	10856110H	5.11	4.74	M
	7 Acetylene	3.130	3.120	0.010	9282262H	4.34	4.93	M

QC Flag Legend

Processing Flags
H - Response Measured by Height
Review Flags
M - Manually Integrated

Reagents:

EPH_HSSSS_00011 Amount Added: 5.00 Units: uL
EPH_HSSMS_00011 Amount Added: 5.00 Units: uL

Report Date: 11-Jul-2023 04:35:12 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0003.d

Injection Date: 10-Jul-2023 10:31:00 Instrument ID: 19506

Lims ID: IC

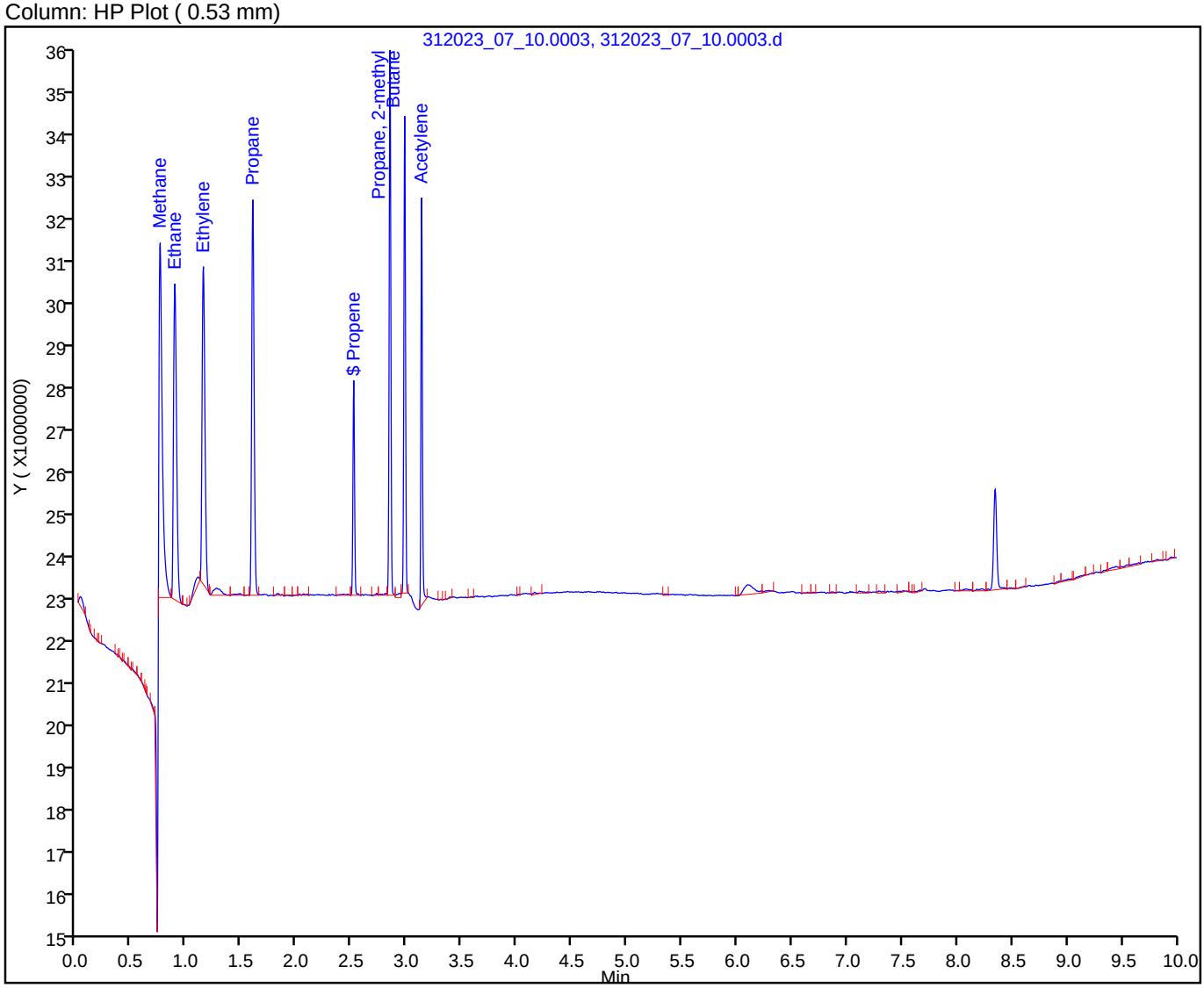
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 3

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Report Date: 11-Jul-2023 04:35:12 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

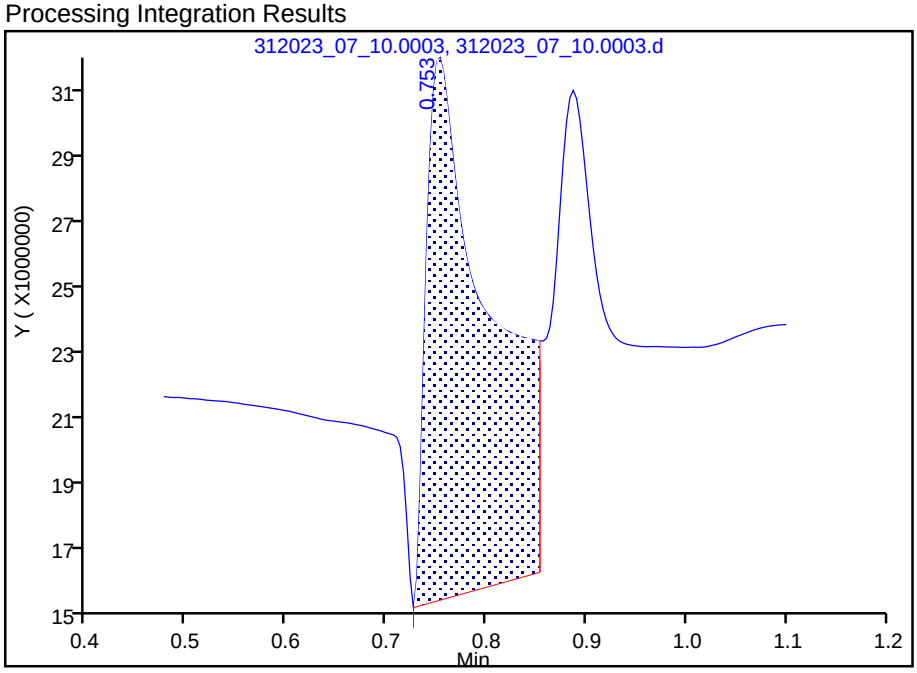
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0003.d				
Injection Date:	10-Jul-2023 10:31:00	Instrument ID:	19506		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	3
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

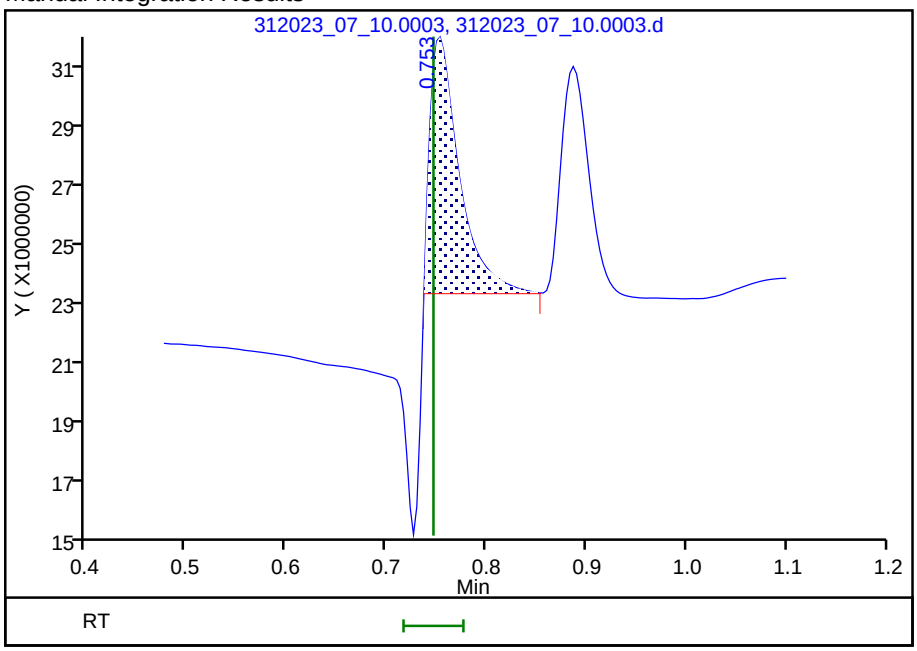
Processing Integration Results

RT: 0.75
Height: 15455403
Amount: 3.159020
Amount Units: ug/l



Manual Integration Results

RT: 0.75
Height: 8068679
Amount: 4.714246
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:31:10 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Eurofins Lancaster Laboratories Environment Testing, LLC

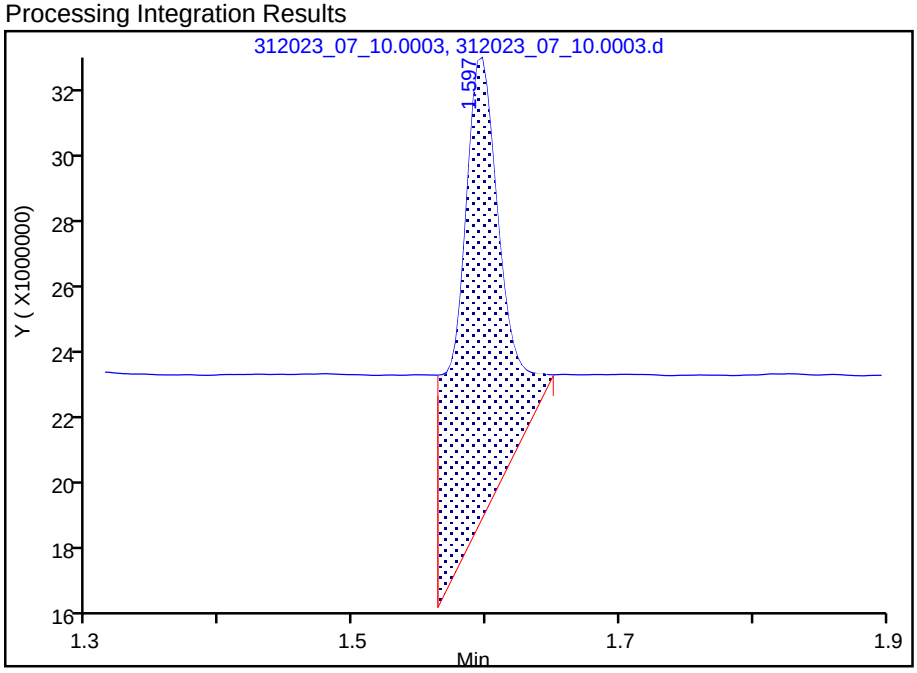
Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0003.d
Injection Date: 10-Jul-2023 10:31:00 Instrument ID: 19506
Lims ID: IC
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: RSK_19506A Limit Group: GCV - RSK175
Column: HP Plot (0.53 mm) Detector AFID0

4 Propane, CAS: 74-98-6

Signal: 1

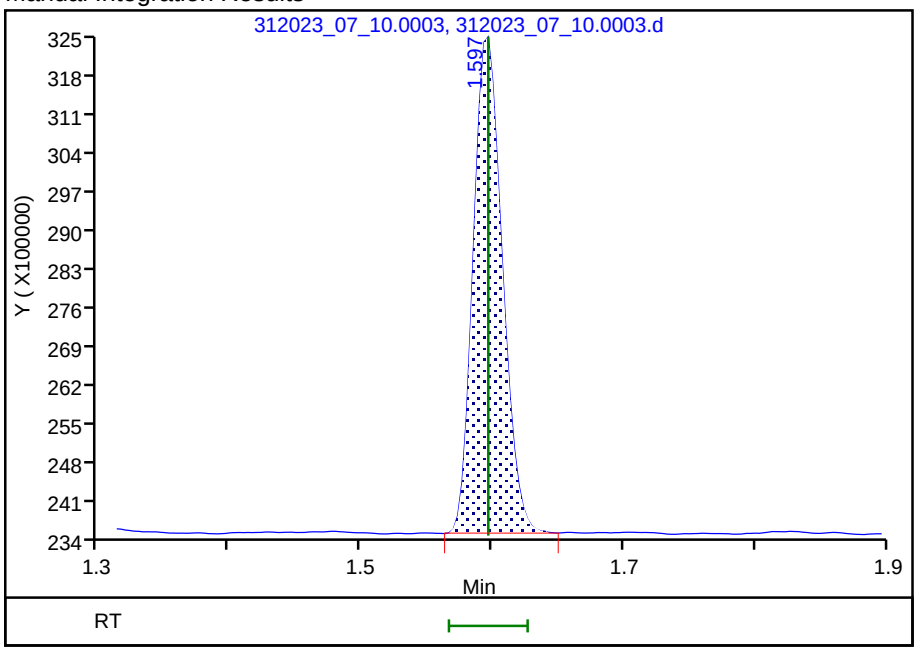
Processing Integration Results

RT: 1.60
Height: 9432935
Amount: 5.197114
Amount Units: ug/l



Manual Integration Results

RT: 1.60
Height: 8995190
Amount: 4.994544
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:31:02 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:35:12 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

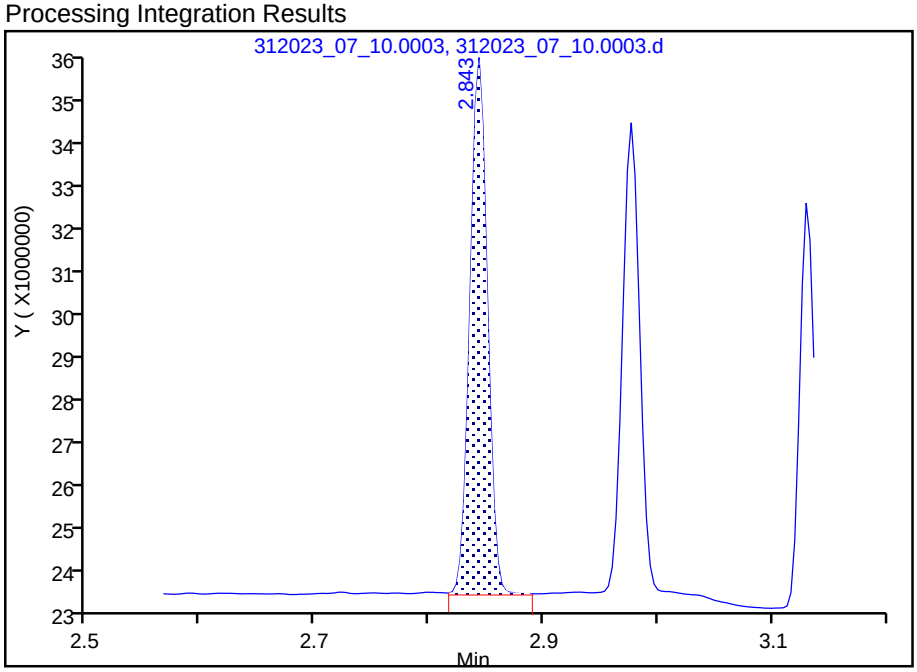
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0003.d				
Injection Date:	10-Jul-2023 10:31:00	Instrument ID:	19506		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	3
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

8 Propane, 2-methyl, CAS: 75-28-5

Signal: 1

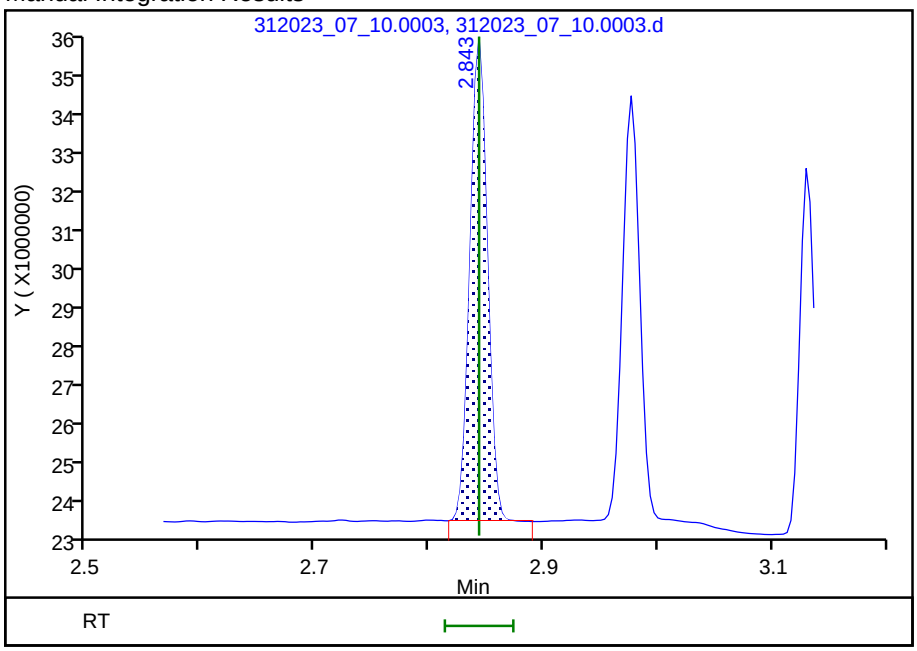
Processing Integration Results

RT: 2.84
Height: 12428383
Amount: 5.038735
Amount Units: ug/l



Manual Integration Results

RT: 2.84
Height: 12387912
Amount: 5.024975
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:31:21 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:35:12 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

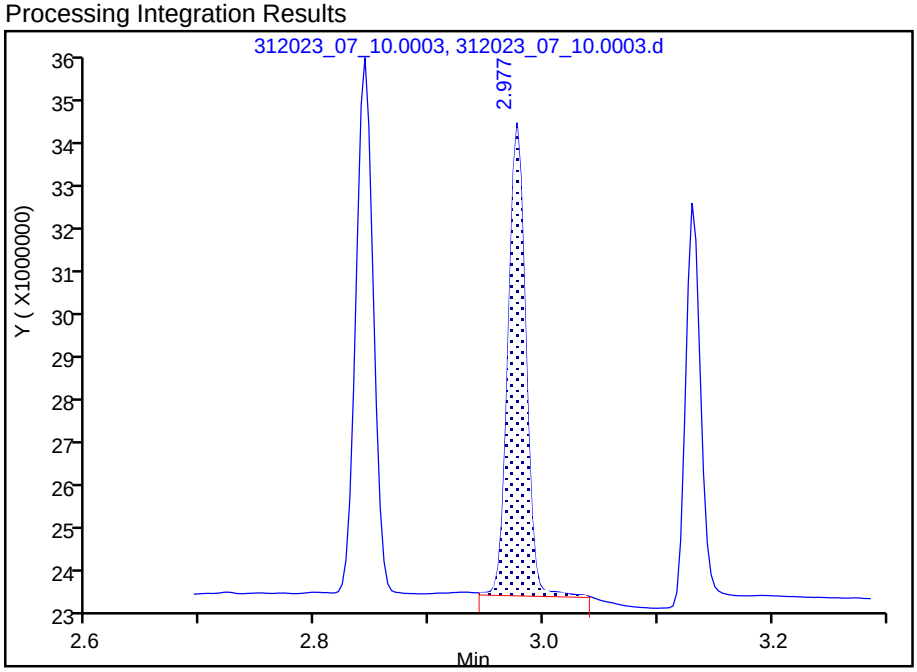
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0003.d				
Injection Date:	10-Jul-2023 10:31:00	Instrument ID:	19506		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	3
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

6 Butane, CAS: 106-97-8

Signal: 1

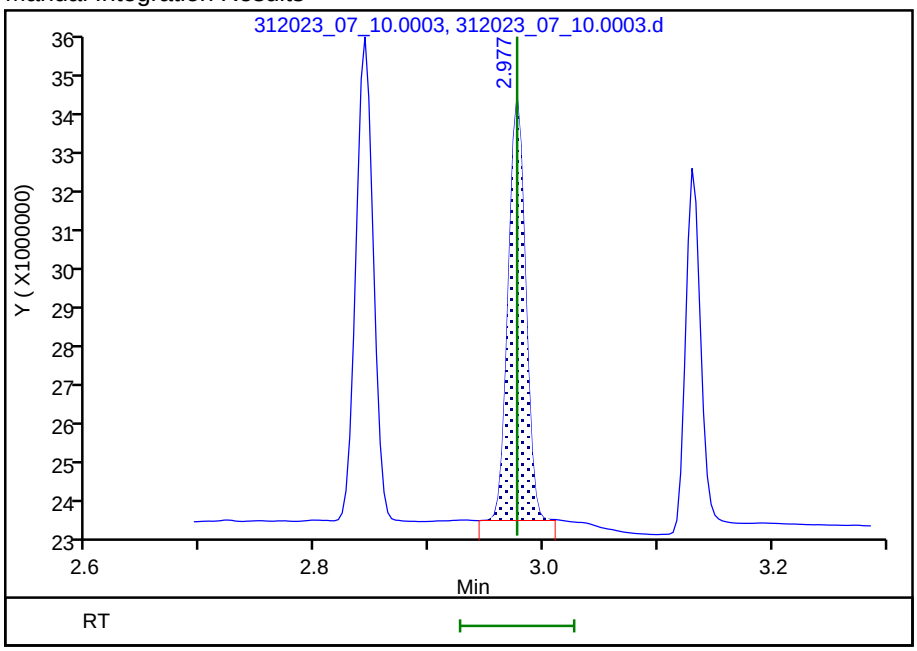
Processing Integration Results

RT: 2.98
Height: 10936944
Amount: 4.768220
Amount Units: ug/l



Manual Integration Results

RT: 2.98
Height: 10856110
Amount: 4.738924
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:31:51 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:35:12 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

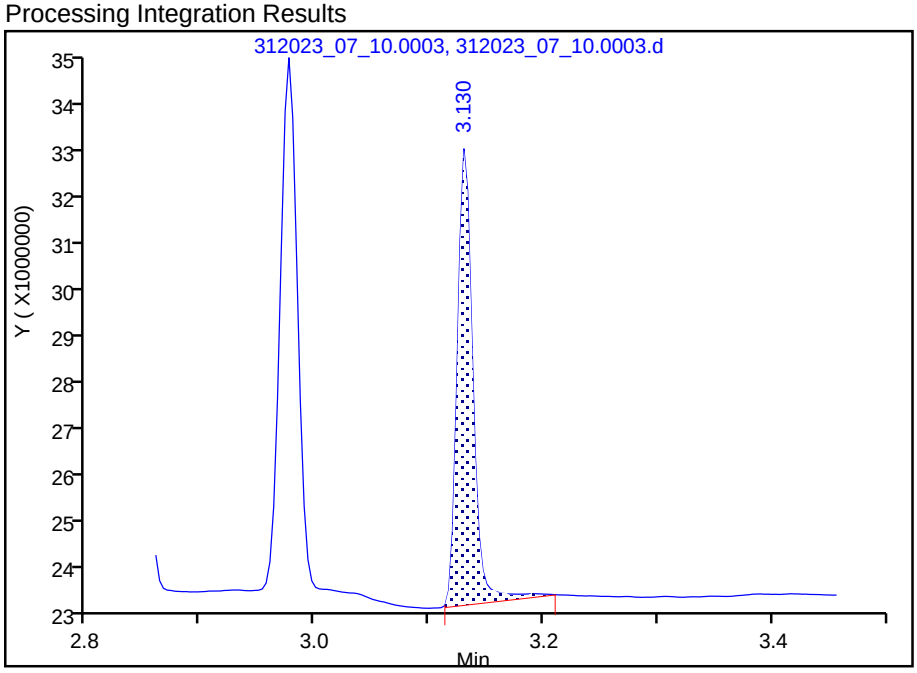
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0003.d				
Injection Date:	10-Jul-2023 10:31:00	Instrument ID:	19506		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	3
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

7 Acetylene, CAS: 74-86-2

Signal: 1

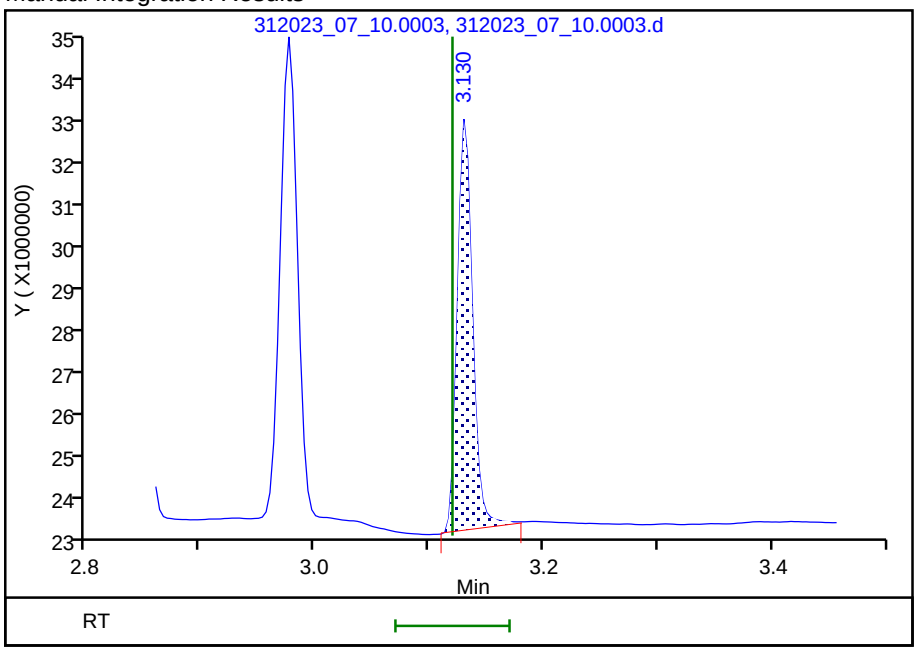
Processing Integration Results

RT: 3.13
Height: 9309507
Amount: 4.942267
Amount Units: ug/l



Manual Integration Results

RT: 3.13
Height: 9282262
Amount: 4.931090
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:31:37 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:35:13 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0004.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 10-Jul-2023 10:46:00 ALS Bottle#: 0 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 410-0088528-004
Operator ID: Instrument ID: 19506
Sublist: chrom-RSK_19506A*sub2

Method: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\RSK_19506A.m
Limit Group: GCV - RSK175
Last Update: 11-Jul-2023 04:35:13 Calib Date: 10-Jul-2023 11:48:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Column 1 : HP Plot (0.53 mm) Det: AFID0
Process Host: CTX1629

First Level Reviewer: LXF2 Date: 11-Jul-2023 04:30:46

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	1 Methane	0.750	0.747	0.003	24938956H	14.9	14.6	M
	2 Ethane	0.887	0.887	0.000	22354009H	15.4	15.4	
	3 Ethylene	1.147	1.147	0.000	23192115H	14.6	14.7	M
	4 Propane	1.597	1.597	0.000	27935760H	15.6	15.5	
$	5 Propene	2.513	2.513	0.000	14972289H	5.04	5.13	
	8 Propane, 2-methyl	2.843	2.843	0.000	38831218H	15.6	15.8	
	6 Butane	2.977	2.977	0.000	34469750H	15.3	15.0	M
	7 Acetylene	3.130	3.120	0.010	27554030H	13.0	14.6	

QC Flag Legend

Processing Flags
H - Response Measured by Height
Review Flags
M - Manually Integrated

Reagents:

EPH_HSSSS_00011 Amount Added: 15.00 Units: uL
EPH_HSSMS_00011 Amount Added: 15.00 Units: uL

Report Date: 11-Jul-2023 04:35:13 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0004.d

Injection Date: 10-Jul-2023 10:46:00 Instrument ID: 19506

Lims ID: IC

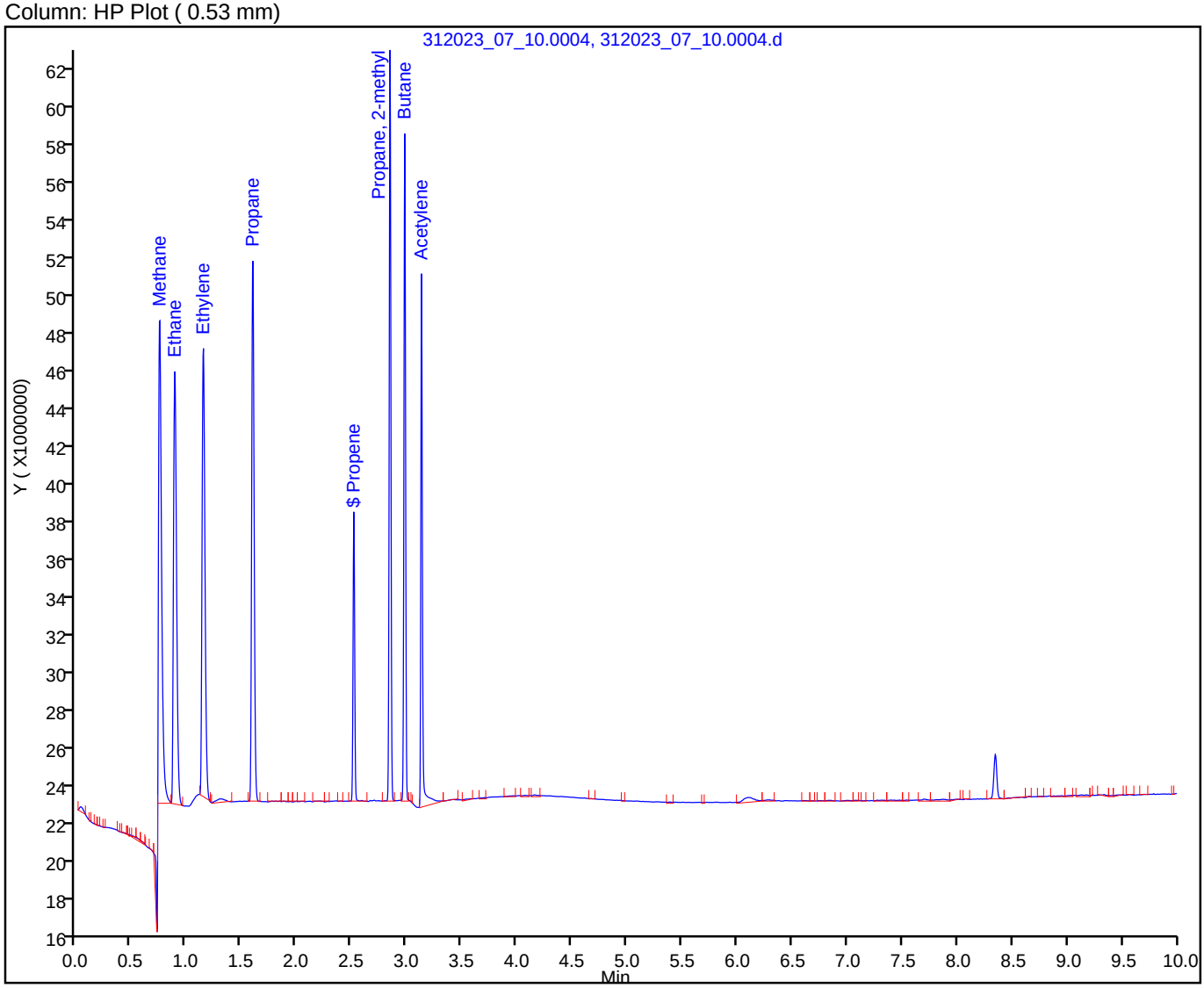
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 4

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Report Date: 11-Jul-2023 04:35:13 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

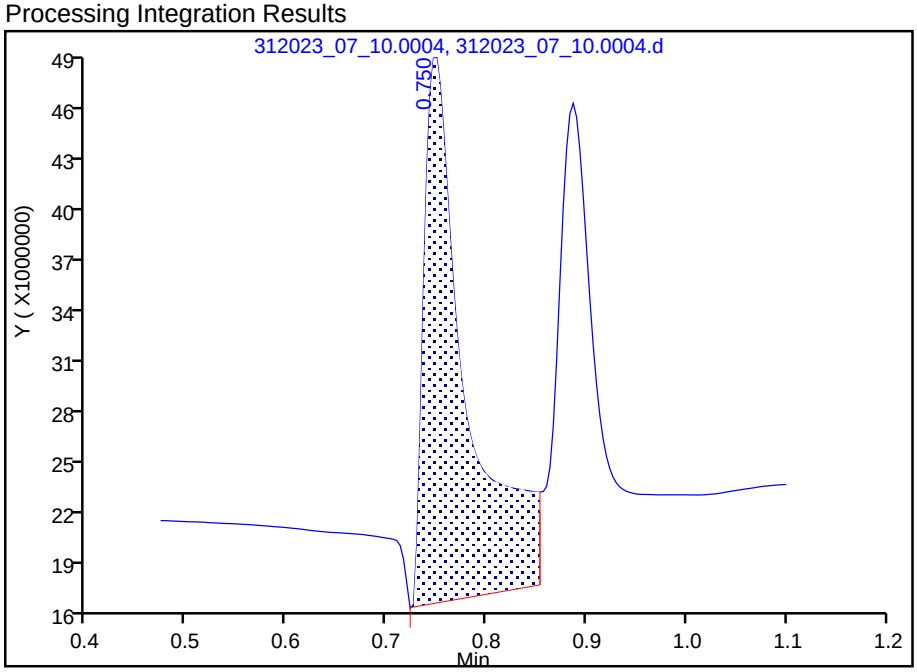
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0004.d				
Injection Date:	10-Jul-2023 10:46:00	Instrument ID:	19506		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

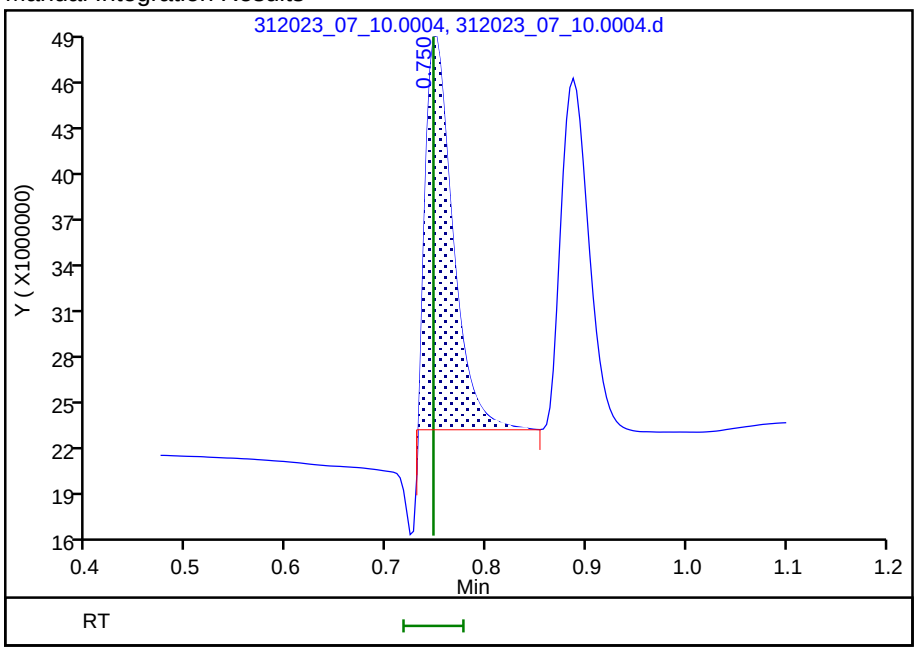
Processing Integration Results

RT: 0.75
Height: 31339351
Amount: 14.420449
Amount Units: ug/l



Manual Integration Results

RT: 0.75
Height: 24938956
Amount: 14.570956
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:30:44 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:35:13 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

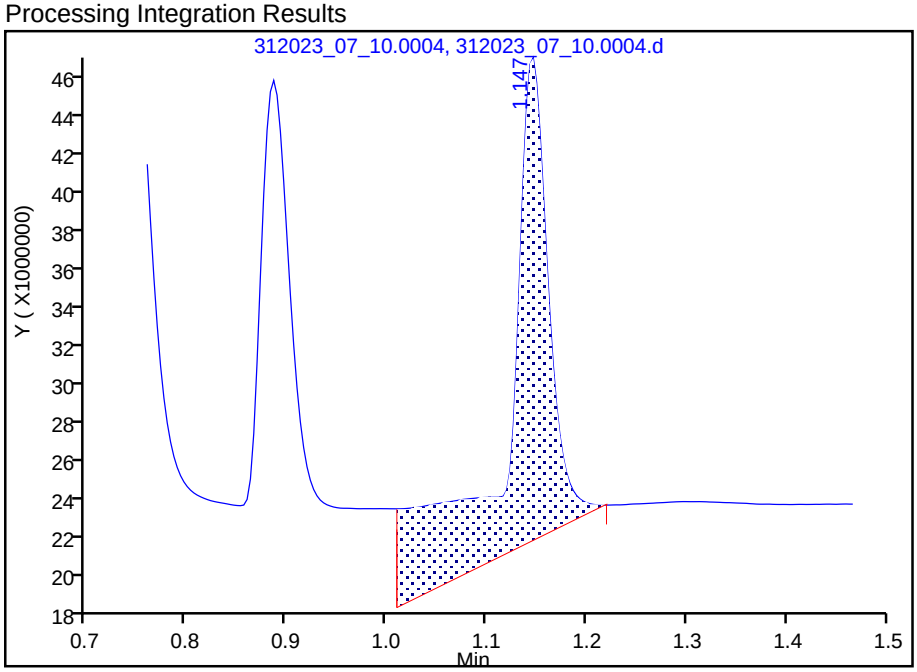
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0004.d				
Injection Date:	10-Jul-2023 10:46:00	Instrument ID:	19506		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

3 Ethylene, CAS: 74-85-1

Signal: 1

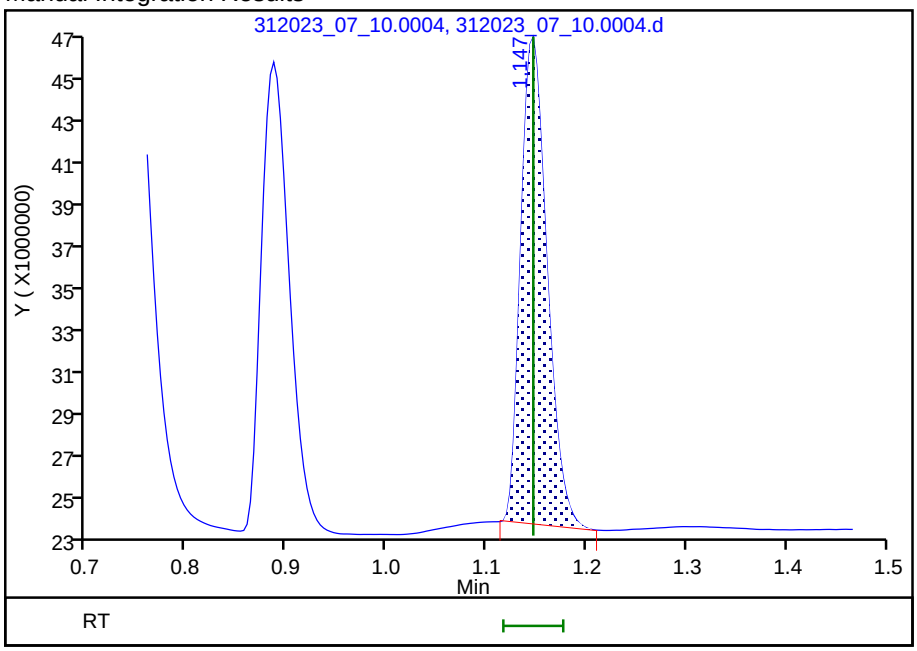
Processing Integration Results

RT: 1.15
Height: 25984316
Amount: 16.137409
Amount Units: ug/l



Manual Integration Results

RT: 1.15
Height: 23192115
Amount: 14.707771
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:30:17 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:35:13 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

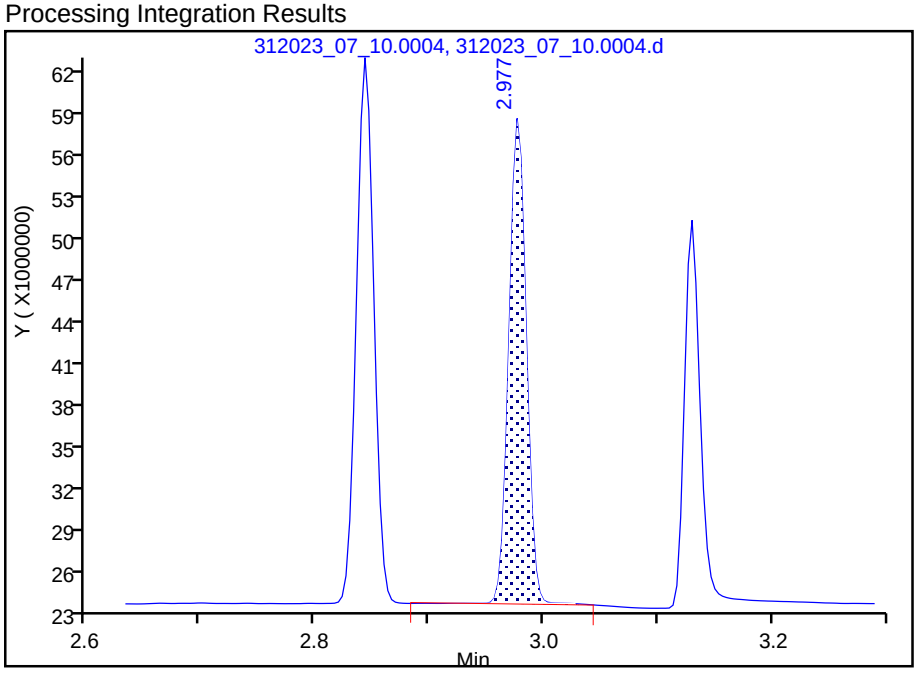
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0004.d				
Injection Date:	10-Jul-2023 10:46:00	Instrument ID:	19506		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

6 Butane, CAS: 106-97-8

Signal: 1

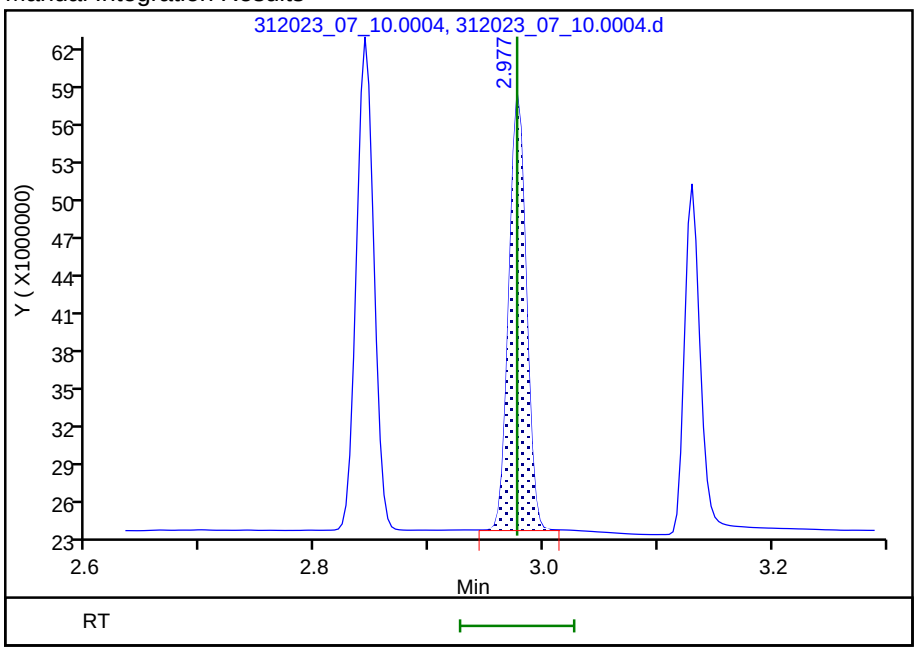
Processing Integration Results

RT: 2.98
Height: 34559899
Amount: 15.060771
Amount Units: ug/l



Manual Integration Results

RT: 2.98
Height: 34469750
Amount: 15.046782
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:30:24 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:35:14 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0005.d
Lims ID: ICRT
Client ID:
Sample Type: ICRT Calib Level: 3
Inject. Date: 10-Jul-2023 11:02:00 ALS Bottle#: 0 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 410-0088528-005
Operator ID: Instrument ID: 19506
Sublist: chrom-RSK_19506A*sub2

Method: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\RSK_19506A.m
Limit Group: GCV - RSK175
Last Update: 11-Jul-2023 04:35:14 Calib Date: 10-Jul-2023 11:48:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Column 1 : HP Plot (0.53 mm) Det: AFID0
Process Host: CTX1629

First Level Reviewer: LXF2 Date: 11-Jul-2023 04:30:00

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	1 Methane	0.747	0.747	0.000	108760667H	59.8	63.5	M
	2 Ethane	0.887	0.887	0.000	93869540H	61.7	64.8	
	3 Ethylene	1.147	1.147	0.000	97083060H	58.3	61.6	M
	4 Propane	1.597	1.597	0.000	116729285H	62.4	64.8	
$	5 Propene	2.513	2.513	0.000	62671931H	20.2	21.5	
	8 Propane, 2-methyl	2.843	2.843	0.000	162225538H	62.3	65.8	
	6 Butane	2.977	2.977	0.000	147566441H	61.3	64.4	M
	7 Acetylene	3.123	3.123	0.000	100572916H	52.1	53.4	

QC Flag Legend

Processing Flags
H - Response Measured by Height
Review Flags
M - Manually Integrated

Reagents:

EPH_HSSSS_00011 Amount Added: 60.00 Units: uL
EPH_HSSMS_00011 Amount Added: 60.00 Units: uL

Report Date: 11-Jul-2023 04:35:14 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0005.d

Injection Date: 10-Jul-2023 11:02:00 Instrument ID: 19506

Lims ID: ICRT

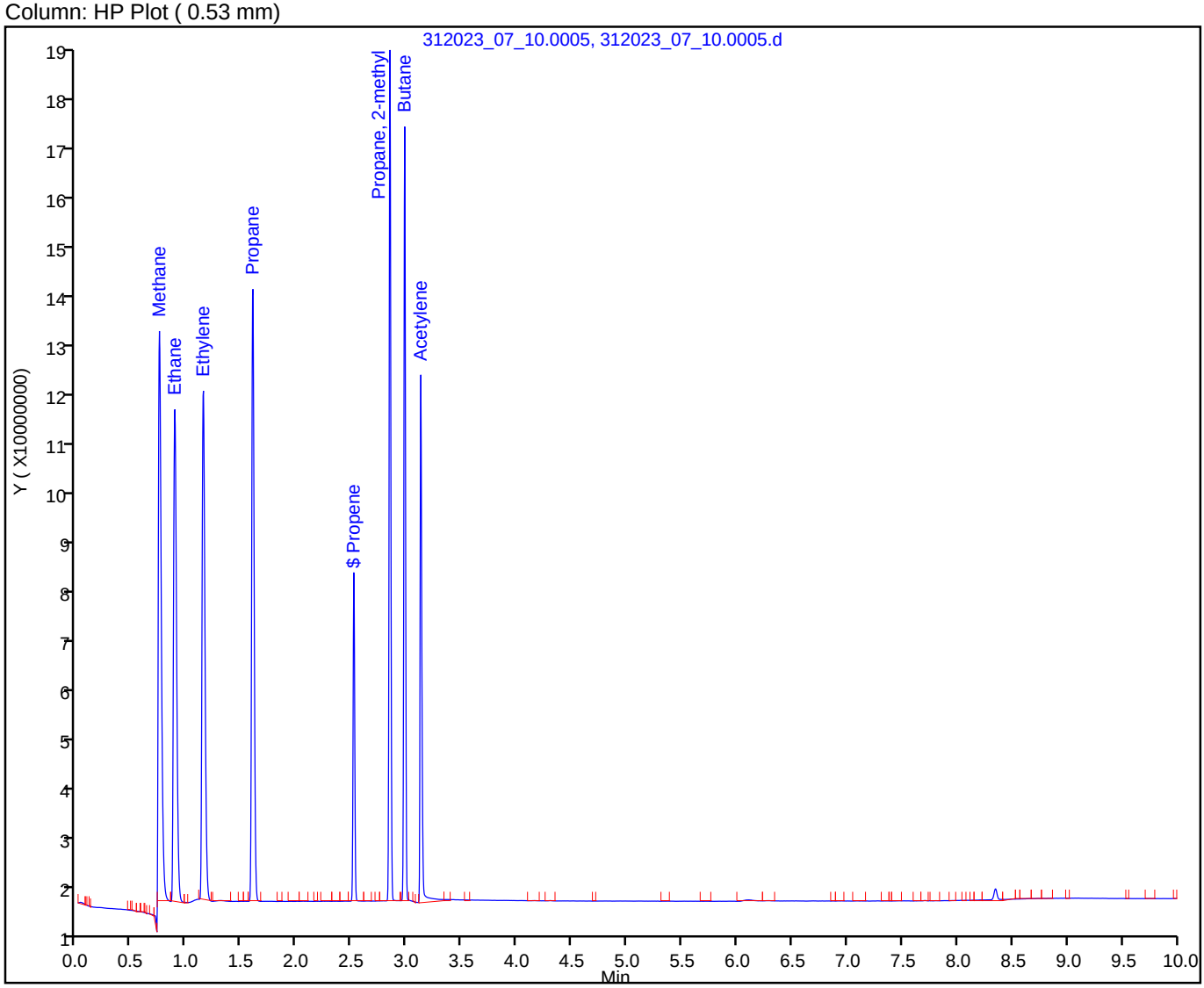
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 5

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Report Date: 11-Jul-2023 04:35:14 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

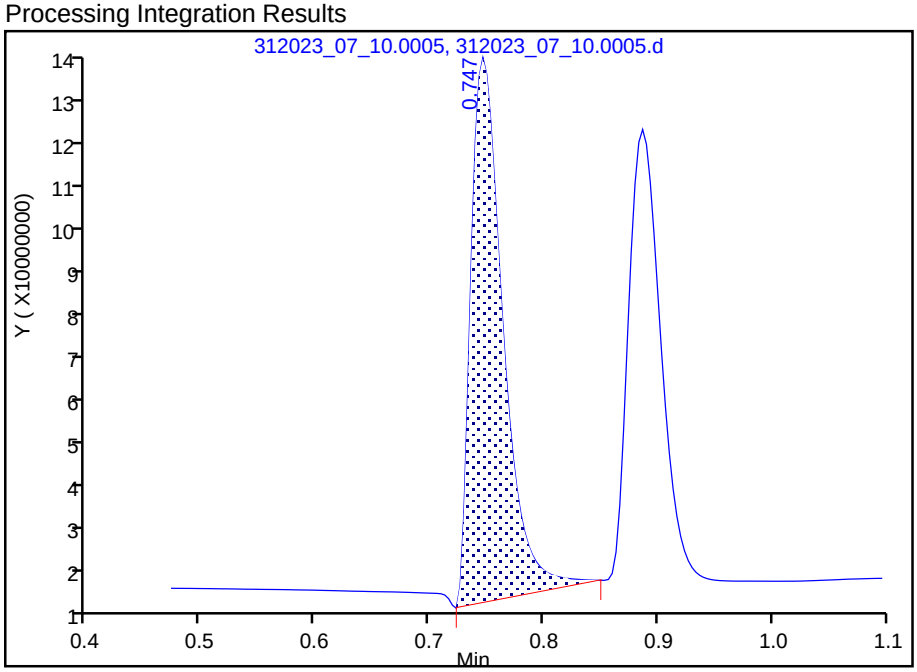
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0005.d				
Injection Date:	10-Jul-2023 11:02:00	Instrument ID:	19506		
Lims ID:	ICRT				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

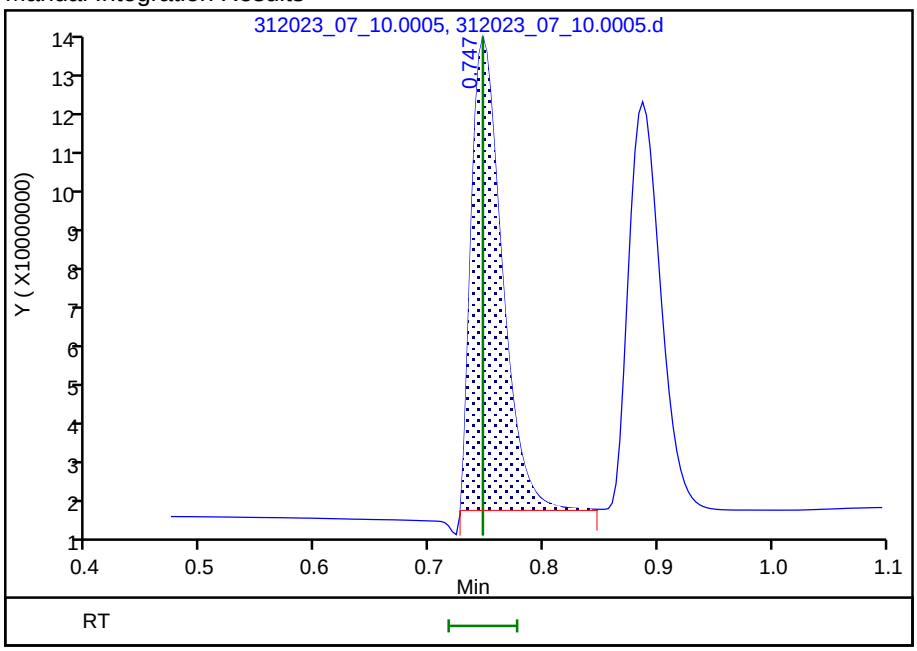
Processing Integration Results

RT: 0.75
Height: 113502842
Amount: 61.011017
Amount Units: ug/l



Manual Integration Results

RT: 0.75
Height: 108760667
Amount: 63.545039
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:29:56 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Eurofins Lancaster Laboratories Environment Testing, LLC

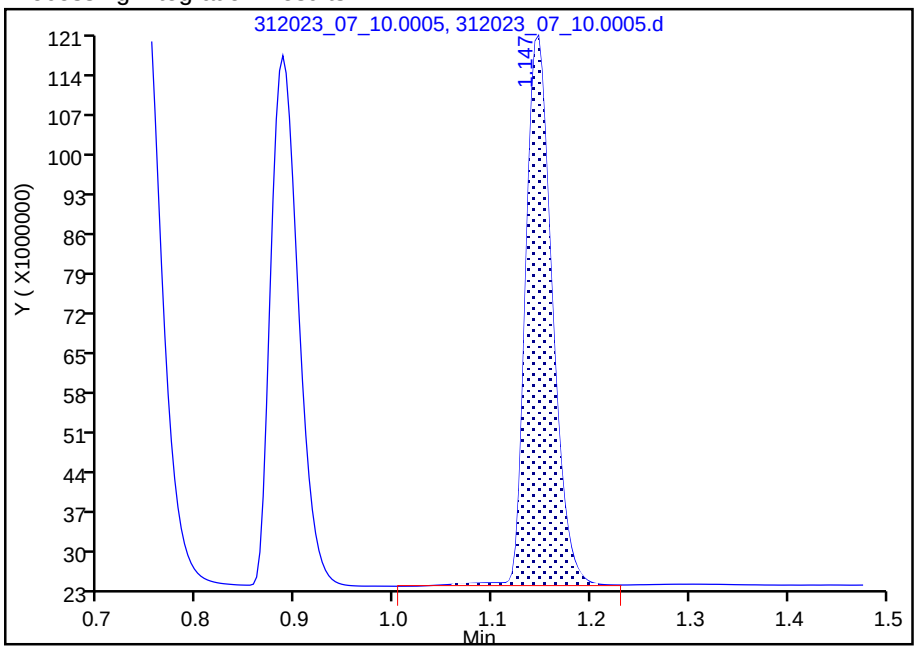
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0005.d				
Injection Date:	10-Jul-2023 11:02:00	Instrument ID:	19506		
Lims ID:	ICRT				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

3 Ethylene, CAS: 74-85-1

Signal: 1

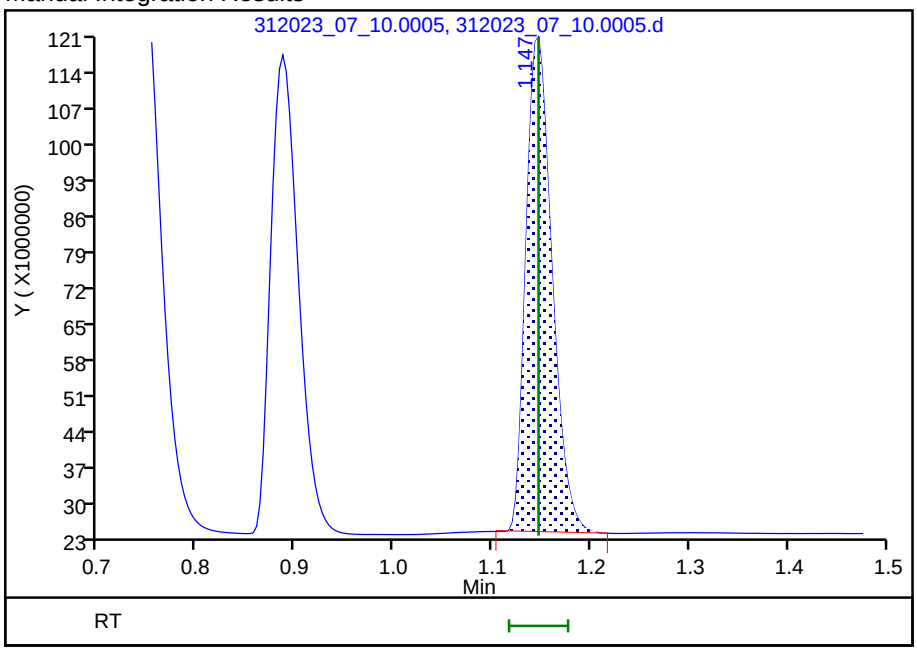
Processing Integration Results

RT: 1.15
Height: 97484876
Amount: 60.499274
Amount Units: ug/l



Manual Integration Results

RT: 1.15
Height: 97083060
Amount: 61.567280
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:29:41 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:35:14 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

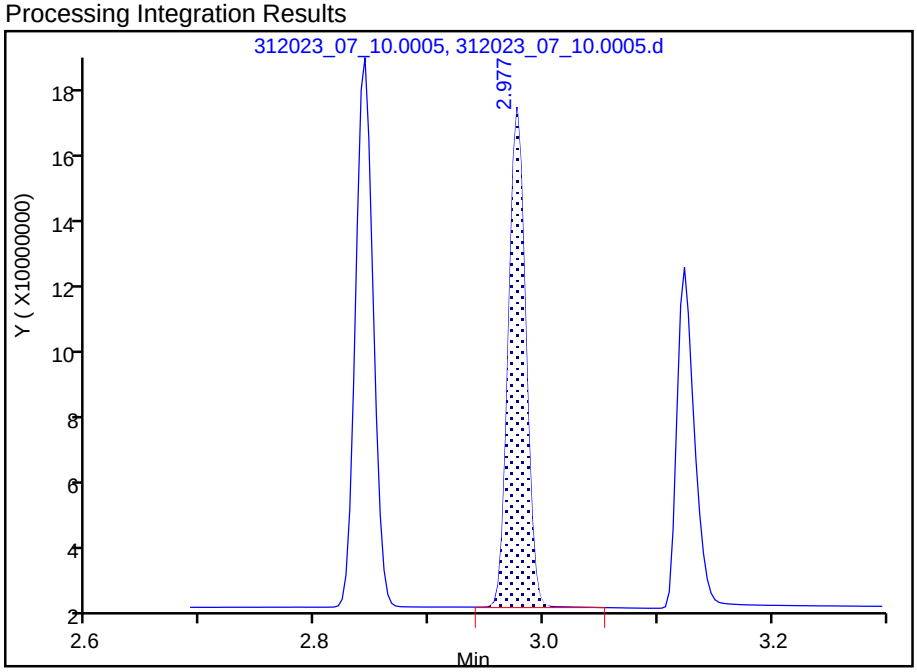
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0005.d				
Injection Date:	10-Jul-2023 11:02:00	Instrument ID:	19506		
Lims ID:	ICRT				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

6 Butane, CAS: 106-97-8

Signal: 1

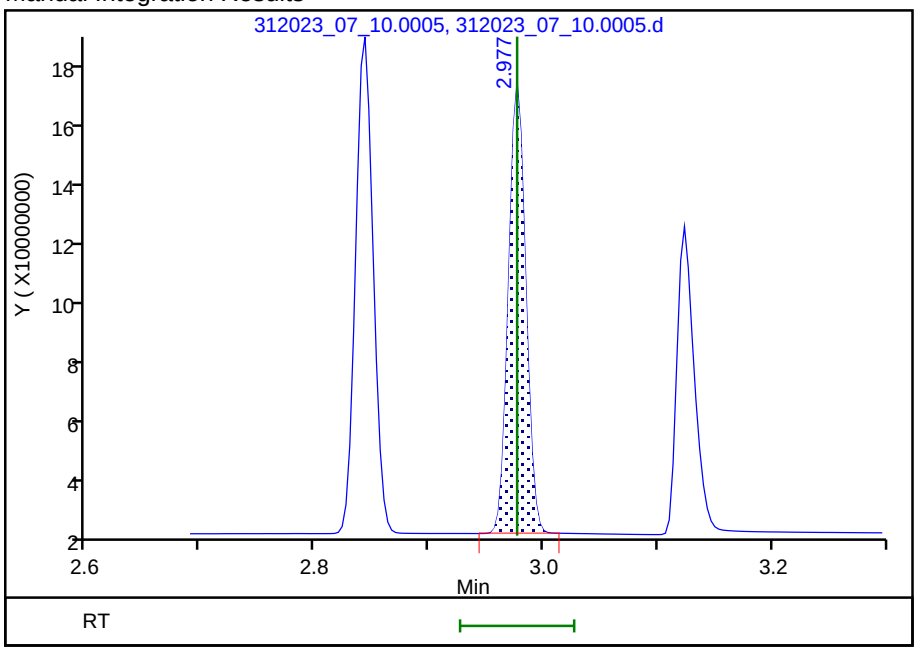
Processing Integration Results

RT: 2.98
Height: 147655181
Amount: 64.447852
Amount Units: ug/l



Manual Integration Results

RT: 2.98
Height: 147566441
Amount: 64.415901
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:32:15 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:35:15 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0006.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 10-Jul-2023 11:17:00 ALS Bottle#: 0 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 410-0088528-006
Operator ID: Instrument ID: 19506
Sublist: chrom-RSK_19506A*sub2

Method: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\RSK_19506A.m
Limit Group: GCV - RSK175
Last Update: 11-Jul-2023 04:35:15 Calib Date: 10-Jul-2023 11:48:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Column 1 : HP Plot (0.53 mm) Det: AFID0
Process Host: CTX1629

First Level Reviewer: LXF2 Date: 11-Jul-2023 04:32:40

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	1 Methane	0.747	0.747	0.000	178366469H	99.6	104.2	M
	2 Ethane	0.887	0.887	0.000	153545912H	102.8	105.9	
	3 Ethylene	1.147	1.147	0.000	158145942H	97.2	100.3	M
	4 Propane	1.597	1.597	0.000	190868152H	104.0	106.0	
$	5 Propene	2.513	2.513	0.000	101582671H	33.6	34.8	
	8 Propane, 2-methyl	2.843	2.843	0.000	262257366H	103.8	106.4	
	6 Butane	2.977	2.977	0.000	242194144H	102.2	105.7	
	7 Acetylene	3.120	3.120	0.000	149256351H	86.8	79.3	

QC Flag Legend

Processing Flags
H - Response Measured by Height
Review Flags
M - Manually Integrated

Reagents:

EPH_HSSSS_00011 Amount Added: 100.00 Units: uL
EPH_HSSMS_00011 Amount Added: 100.00 Units: uL

Report Date: 11-Jul-2023 04:35:15 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0006.d

Injection Date: 10-Jul-2023 11:17:00 Instrument ID: 19506

Lims ID: IC

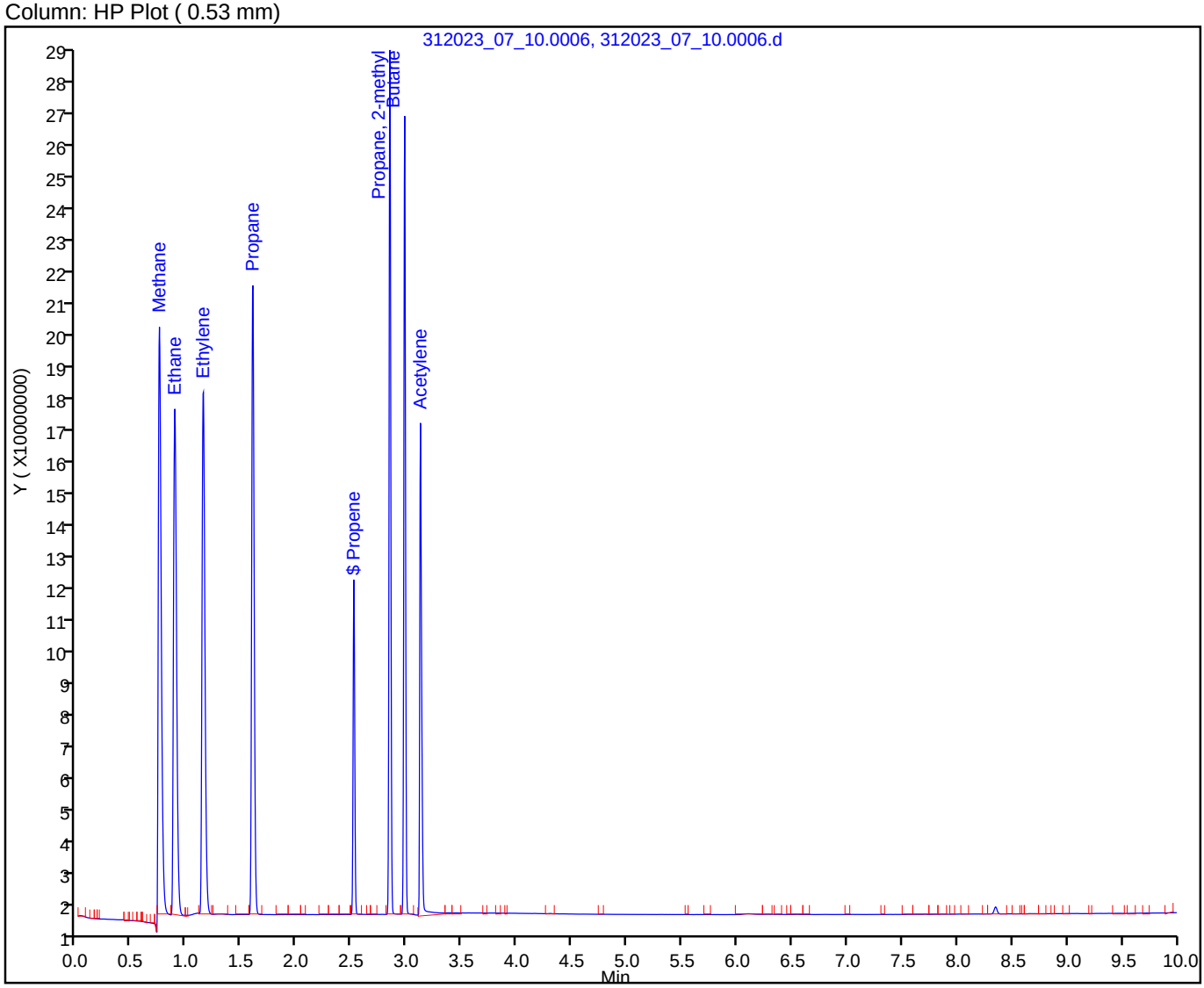
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 6

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Report Date: 11-Jul-2023 04:35:15 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

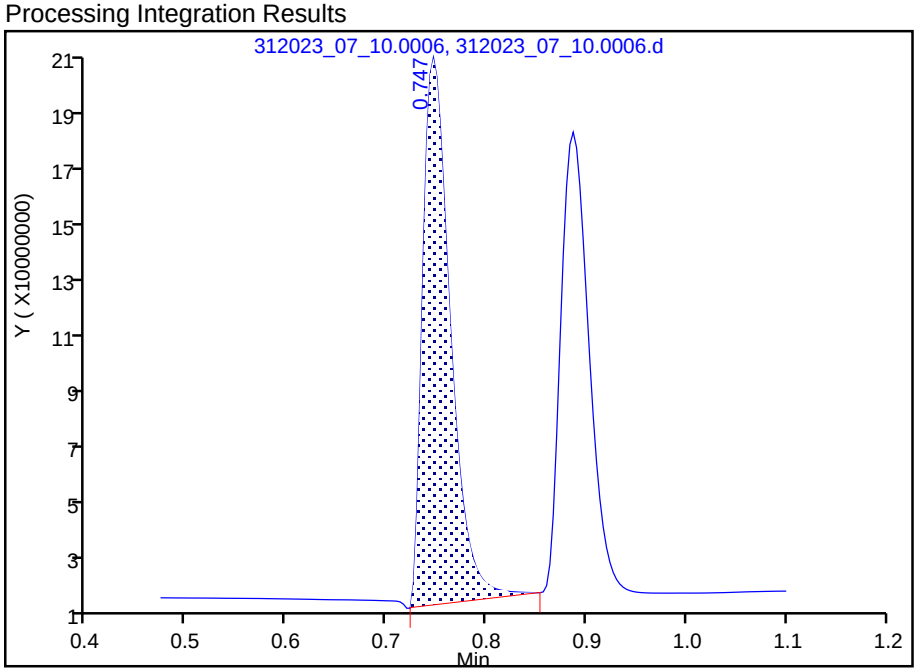
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0006.d				
Injection Date:	10-Jul-2023 11:17:00	Instrument ID:	19506		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

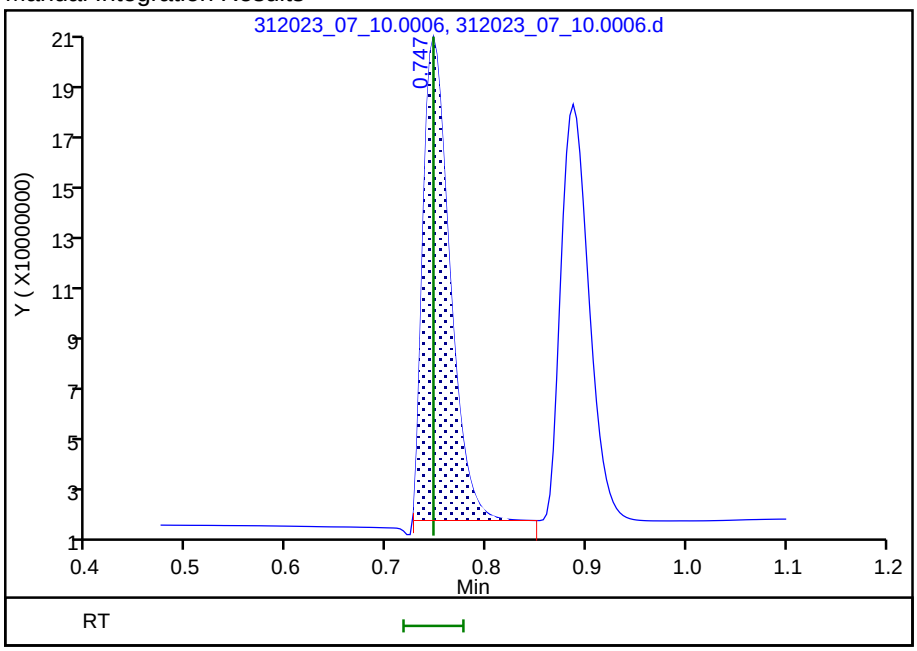
Processing Integration Results

RT: 0.75
Height: 182616859
Amount: 105.8953
Amount Units: ug/l



Manual Integration Results

RT: 0.75
Height: 178366469
Amount: 104.2133
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:32:35 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:35:16 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

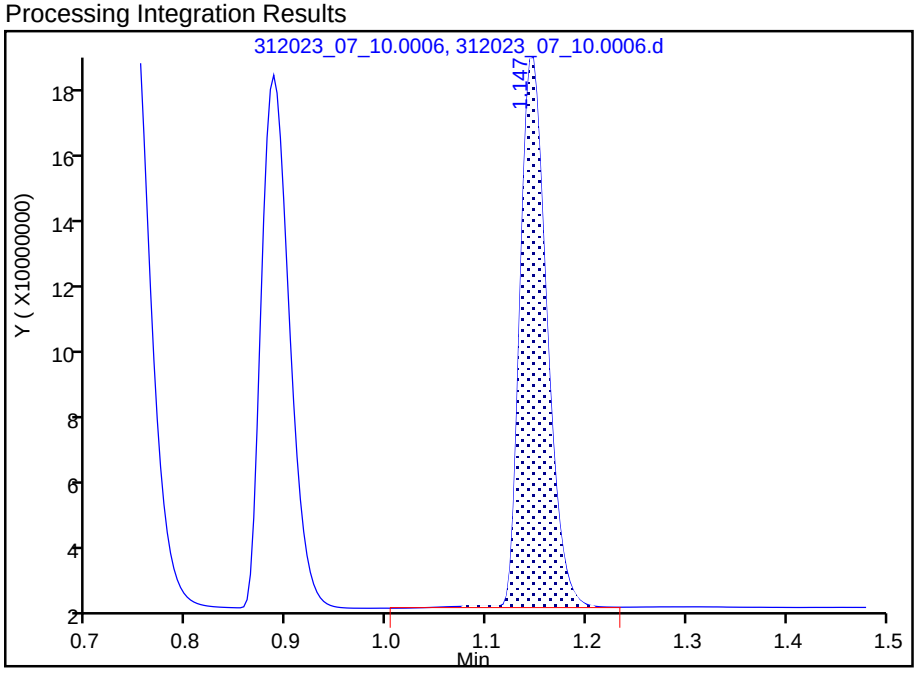
Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0006.d
Injection Date: 10-Jul-2023 11:17:00 Instrument ID: 19506
Lims ID: IC
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: RSK_19506A Limit Group: GCV - RSK175
Column: HP Plot (0.53 mm) Detector AFID0

3 Ethylene, CAS: 74-85-1

Signal: 1

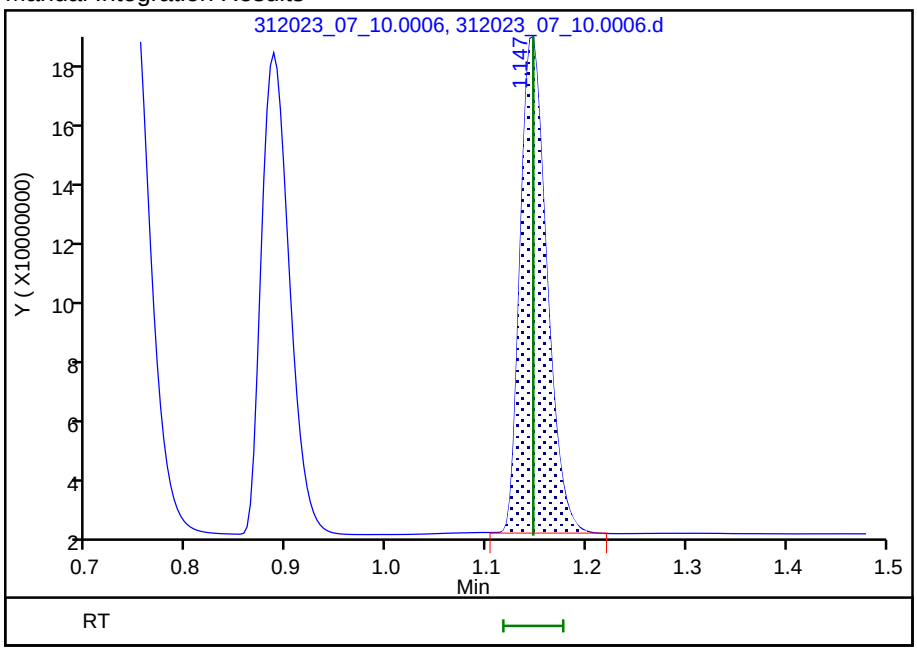
Processing Integration Results

RT: 1.15
Height: 158571623
Amount: 100.4716
Amount Units: ug/l



Manual Integration Results

RT: 1.15
Height: 158145942
Amount: 100.2916
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:32:25 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:35:17 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0007.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 10-Jul-2023 11:32:00 ALS Bottle#: 0 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 410-0088528-007
Operator ID: Instrument ID: 19506
Sublist: chrom-RSK_19506A*sub2

Method: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\RSK_19506A.m
Limit Group: GCV - RSK175
Last Update: 11-Jul-2023 04:35:17 Calib Date: 10-Jul-2023 11:48:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Column 1 : HP Plot (0.53 mm) Det: AFID0
Process Host: CTX1629

First Level Reviewer: LXF2 Date: 11-Jul-2023 04:33:12

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response		Cal Amt ug/l	OnCol Amt ug/l	Flags
	1 Methane	0.747	0.747	0.000	257673649	H	149.4	150.5	M
	2 Ethane	0.887	0.887	0.000	221736579	H	154.2	153.0	
	3 Ethylene	1.147	1.147	0.000	228453680	H	145.8	144.9	M
	4 Propane	1.597	1.597	0.000	276522736	H	156.0	153.5	
$	5 Propene	2.513	2.513	0.000	142842078	H	50.4	48.9	
	8 Propane, 2-methyl	2.840	2.843	-0.003	376511192	H	155.7	152.7	
	6 Butane	2.977	2.977	0.000	345403973	H	153.3	150.8	
	7 Acetylene	3.117	3.120	-0.003	196114478	H	130.2	104.2	

QC Flag Legend

Processing Flags
H - Response Measured by Height
Review Flags
M - Manually Integrated

Reagents:

EPH_HSSSS_00011 Amount Added: 150.00 Units: uL
EPH_HSSMS_00011 Amount Added: 150.00 Units: uL

Report Date: 11-Jul-2023 04:35:17 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0007.d

Injection Date: 10-Jul-2023 11:32:00 Instrument ID: 19506

Lims ID: IC

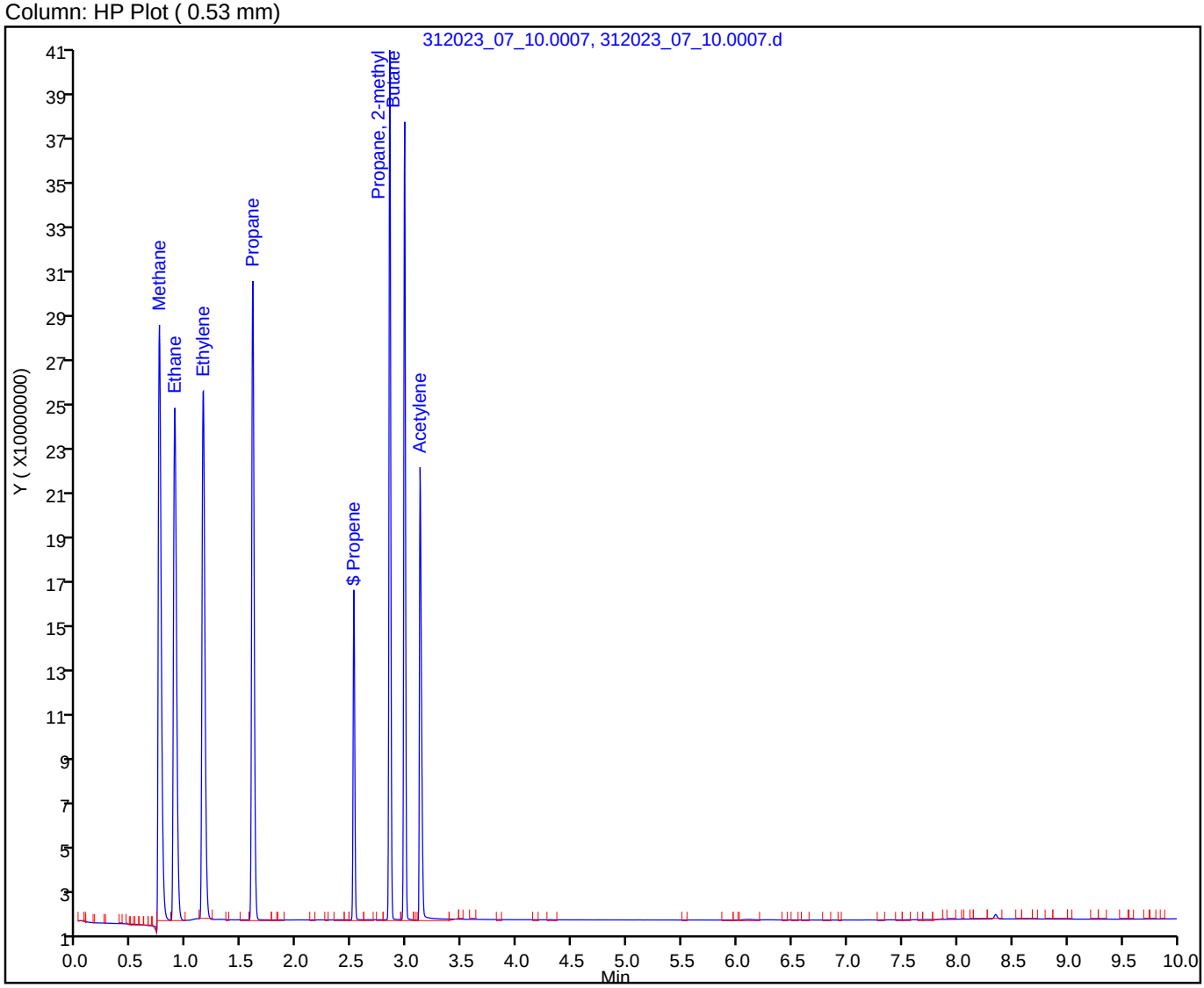
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 7

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Report Date: 11-Jul-2023 04:35:17 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

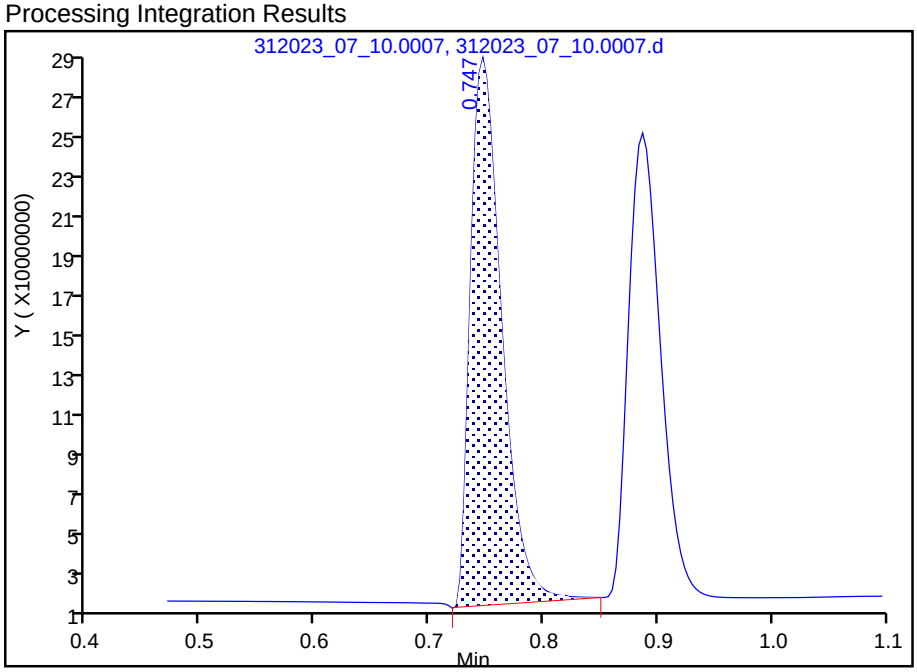
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0007.d				
Injection Date:	10-Jul-2023 11:32:00	Instrument ID:	19506		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

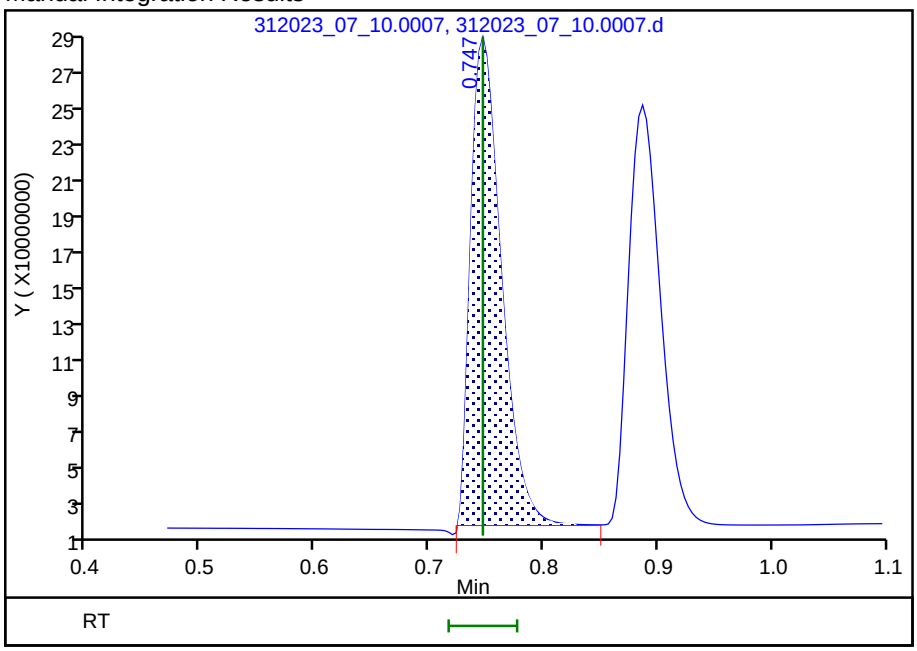
Processing Integration Results

RT: 0.75
Height: 261756913
Amount: 152.4155
Amount Units: ug/l



Manual Integration Results

RT: 0.75
Height: 257673649
Amount: 150.5497
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:33:10 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:35:17 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

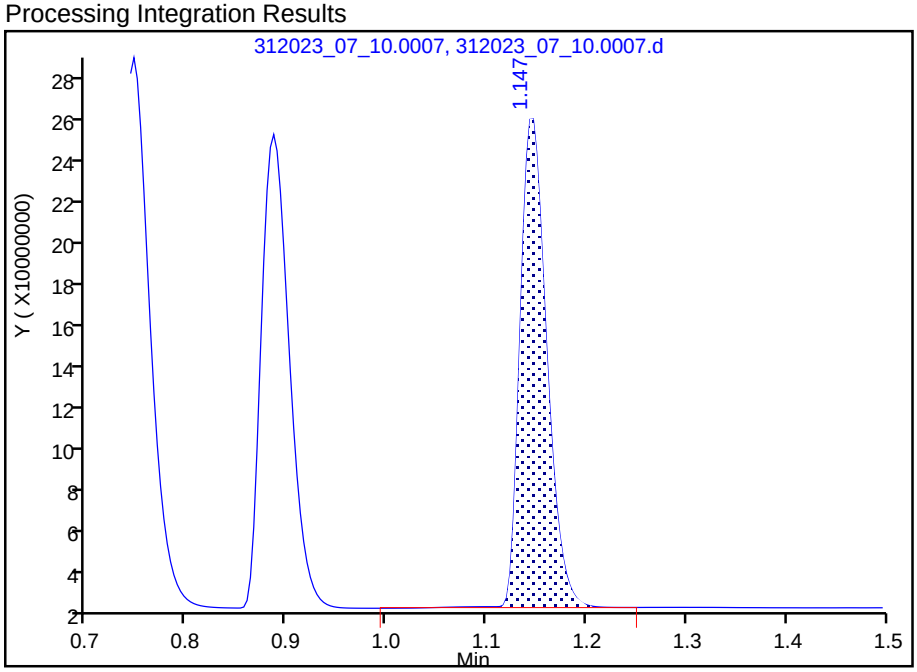
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0007.d				
Injection Date:	10-Jul-2023 11:32:00	Instrument ID:	19506		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

3 Ethylene, CAS: 74-85-1

Signal: 1

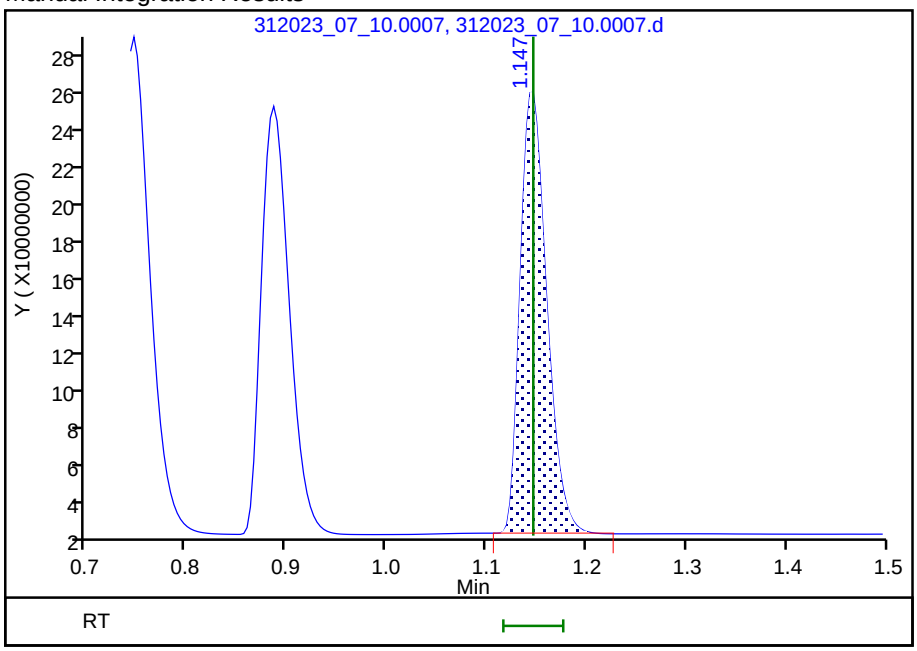
Processing Integration Results

RT: 1.15
Height: 228845570
Amount: 145.0645
Amount Units: ug/l



Manual Integration Results

RT: 1.15
Height: 228453680
Amount: 144.8787
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:32:48 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:35:18 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 10-Jul-2023 11:48:00 ALS Bottle#: 0 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 410-0088528-008
Operator ID: Instrument ID: 19506
Sublist: chrom-RSK_19506A*sub2

Method: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\RSK_19506A.m
Limit Group: GCV - RSK175
Last Update: 11-Jul-2023 04:35:18 Calib Date: 10-Jul-2023 11:48:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Column 1 : HP Plot (0.53 mm) Det: AFID0
Process Host: CTX1629

First Level Reviewer: LXF2 Date: 11-Jul-2023 02:56:25

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	1 Methane	0.747	0.747	0.000	818868913H	498.0	478.4	M
	2 Ethane	0.887	0.887	0.000	718079358H	514.0	495.3	
	3 Ethylene	1.143	1.147	-0.004	740790614H	486.0	469.8	M
	4 Propane	1.593	1.597	-0.004	939591421H	520.0	521.7	
$	5 Propene	2.513	2.513	0.000	449348241H	168.0	153.8	
	8 Propane, 2-methyl	2.833	2.843	-0.010	1225476894H	519.0	497.1	
	6 Butane	2.970	2.977	-0.007	1197071246H	511.0	522.5	
	7 Acetylene	3.100	3.120	-0.020	529150167H	434.0	281.1	

QC Flag Legend

Processing Flags
H - Response Measured by Height
Review Flags
M - Manually Integrated

Reagents:

EPH_HSSSS_00011 Amount Added: 500.00 Units: uL
EPH_HSSMS_00011 Amount Added: 500.00 Units: uL

Report Date: 11-Jul-2023 04:35:18 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Injection Date: 10-Jul-2023 11:48:00 Instrument ID: 19506

Lims ID: IC

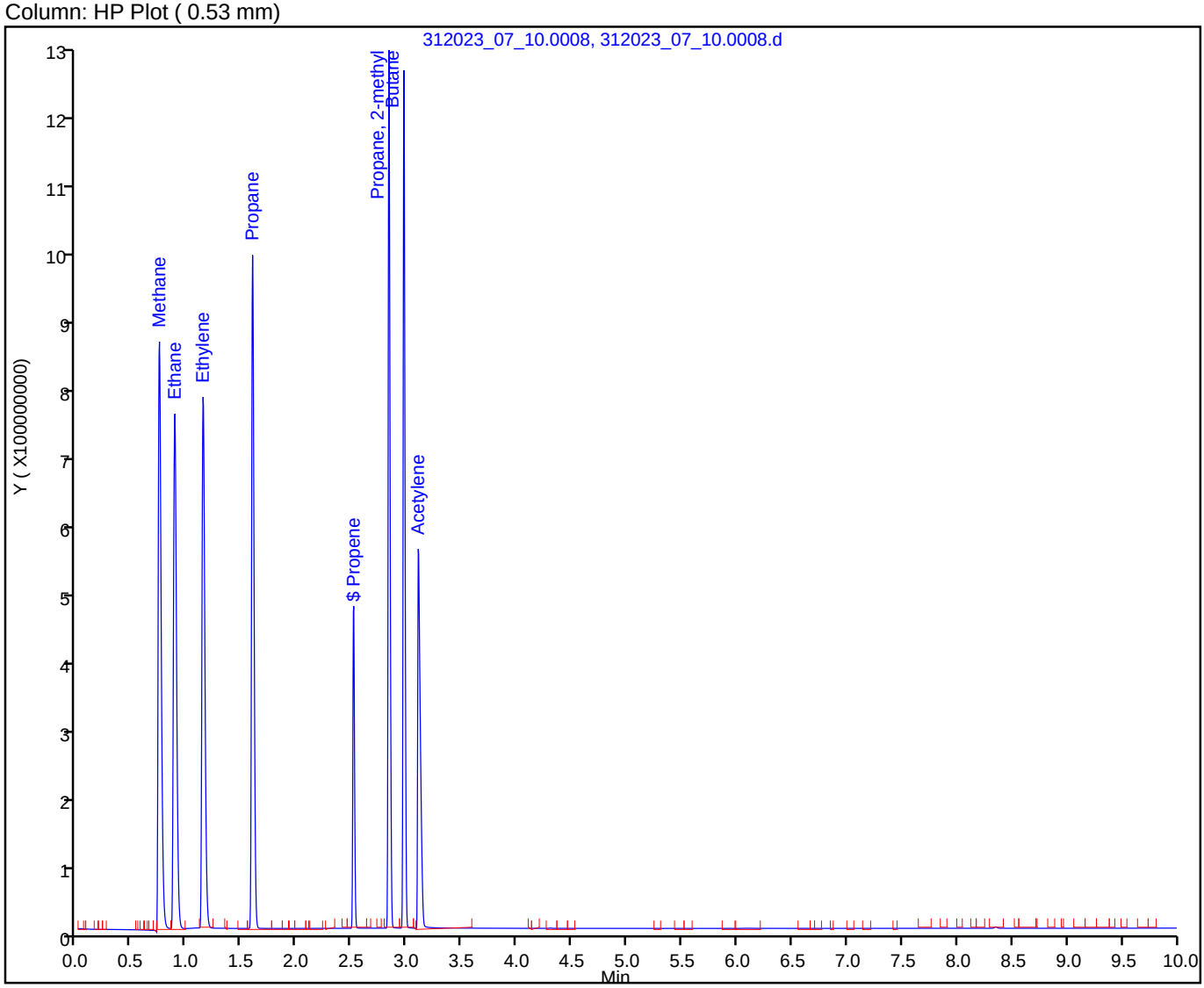
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 8

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Report Date: 11-Jul-2023 04:35:18 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

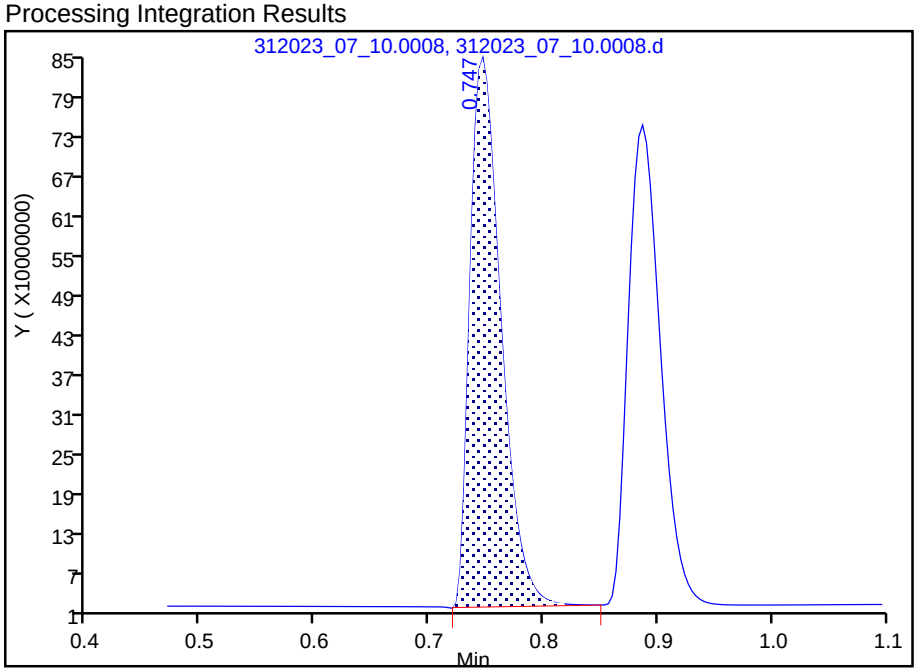
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d				
Injection Date:	10-Jul-2023 11:48:00	Instrument ID:	19506		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	8
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

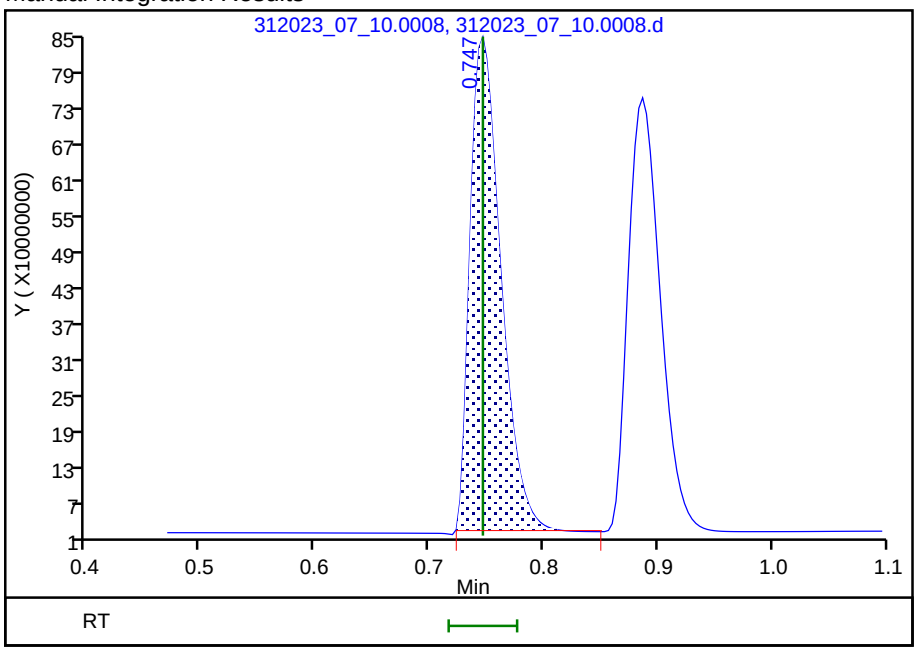
Processing Integration Results

RT: 0.75
Height: 822703332
Amount: 480.3165
Amount Units: ug/l



Manual Integration Results

RT: 0.75
Height: 818868913
Amount: 478.4364
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:33:45 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:35:18 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

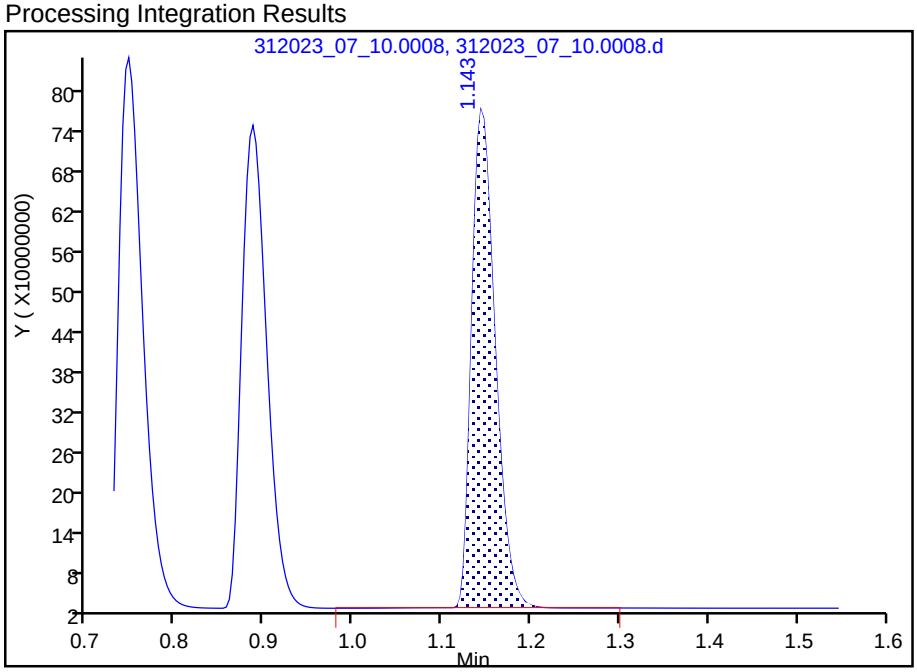
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d				
Injection Date:	10-Jul-2023 11:48:00	Instrument ID:	19506		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	8
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

3 Ethylene, CAS: 74-85-1

Signal: 1

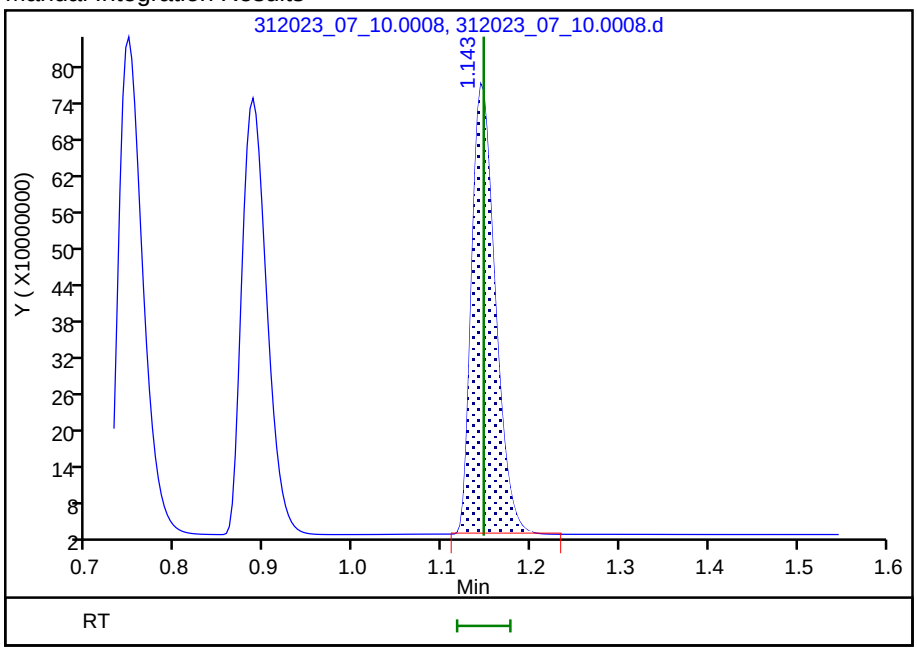
Processing Integration Results

RT: 1.14
Height: 741472823
Amount: 470.1510
Amount Units: ug/l



Manual Integration Results

RT: 1.14
Height: 740790614
Amount: 469.7881
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:33:21 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Calibration / Methane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

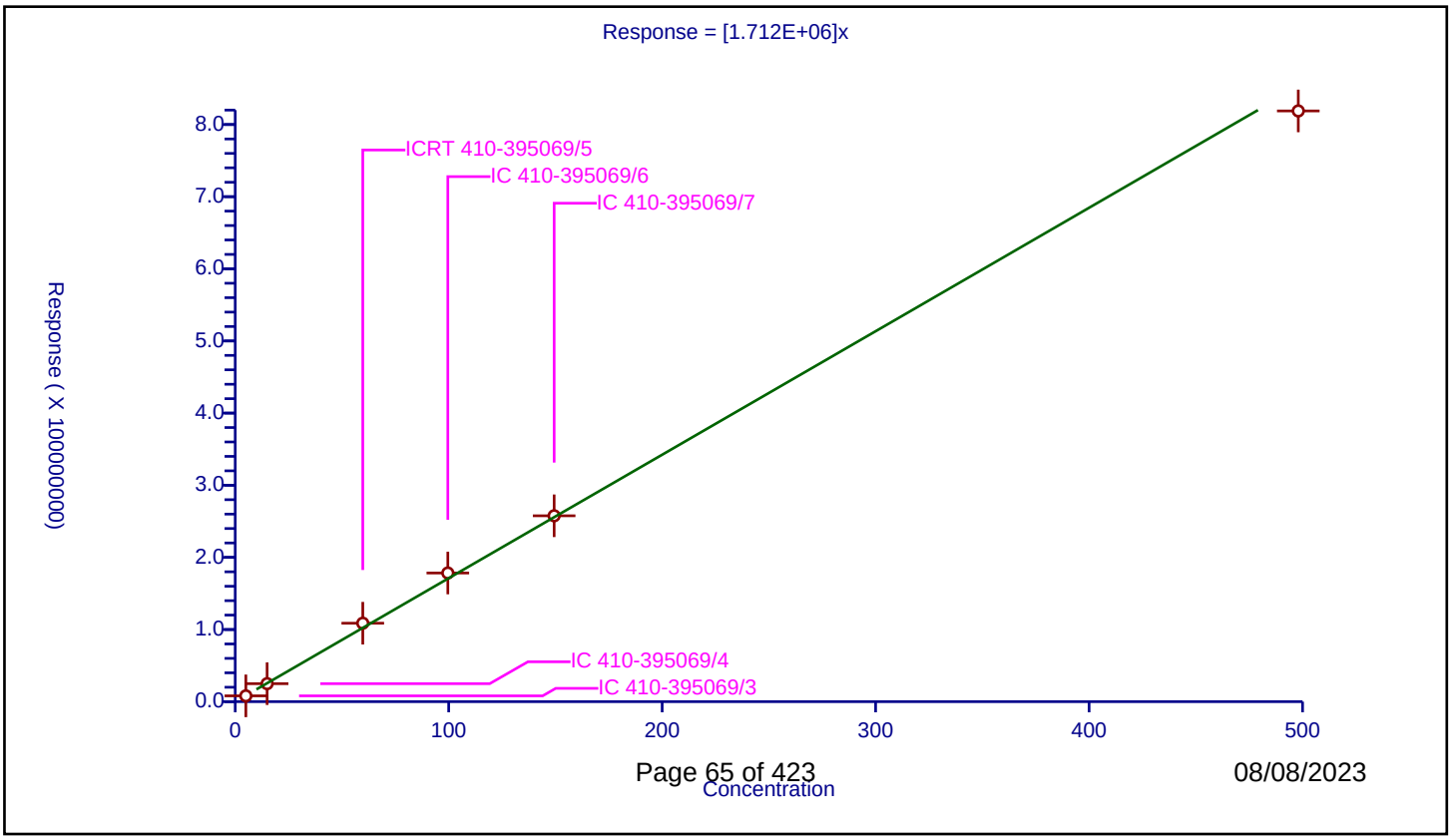
Curve Coefficients

Intercept:	0
Slope:	1.712E+06

Error Coefficients

Standard Error:	15700000
Relative Standard Error:	4.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-395069/3	4.98	8068679.0			1620216.666667	Y
2	IC 410-395069/4	14.94	24938956.0			1669274.16332	Y
3	ICRT 410-395069/5	59.76	108760667.0			1819957.613788	Y
4	IC 410-395069/6	99.6	178366469.0			1790828.002008	Y
5	IC 410-395069/7	149.4	257673649.0			1724723.219545	Y
6	IC 410-395069/8	498.0	818868913.0			1644315.086345	Y



Calibration / Ethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

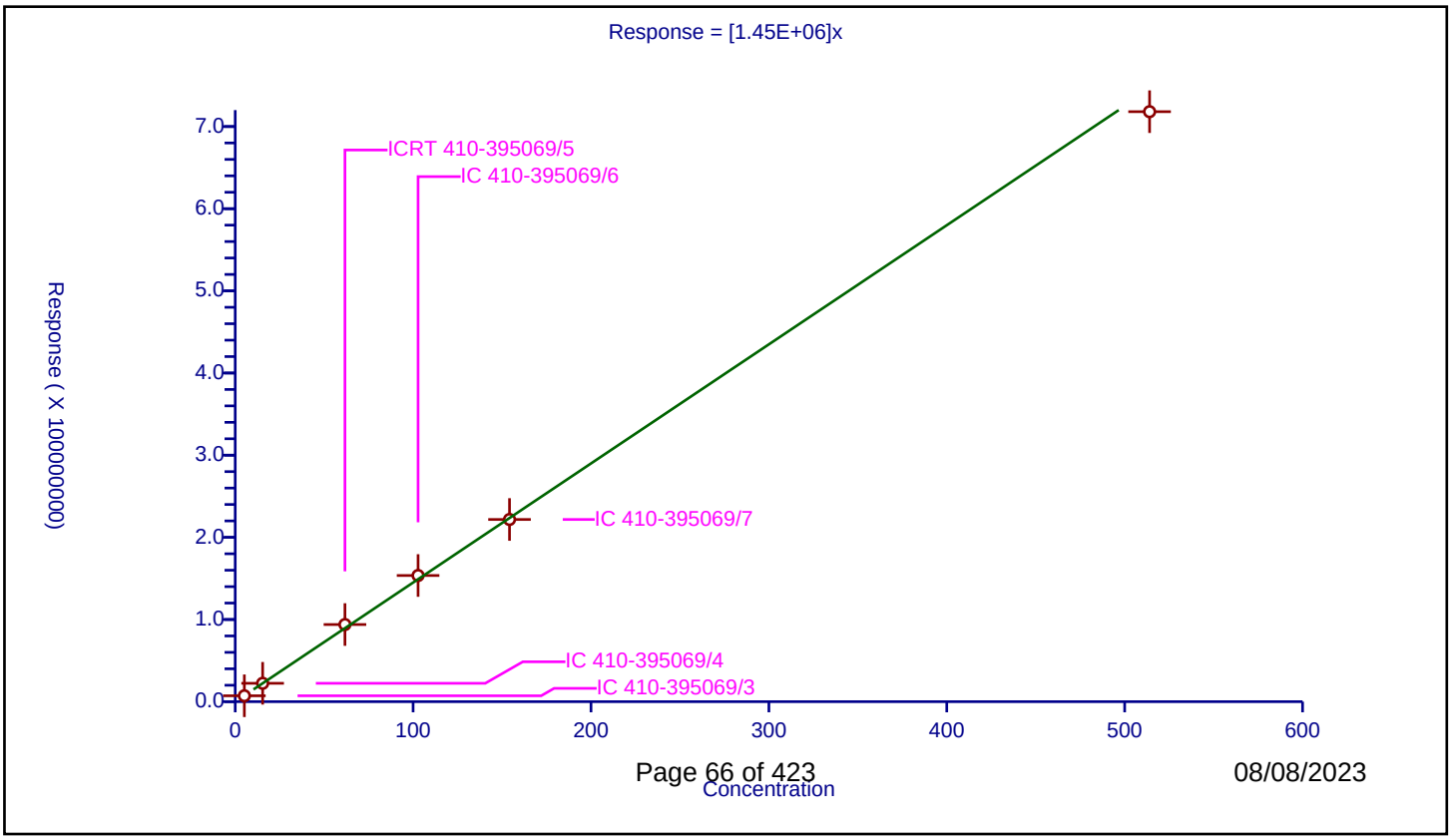
Curve Coefficients

Intercept:	0
Slope:	1.45E+06

Error Coefficients

Standard Error:	12500000
Relative Standard Error:	3.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-395069/3	5.14	7185458.0			1397949.027237	Y
2	IC 410-395069/4	15.42	22354009.0			1449676.329442	Y
3	ICRT 410-395069/5	61.68	93869540.0			1521879.701686	Y
4	IC 410-395069/6	102.8	153545912.0			1493637.276265	Y
5	IC 410-395069/7	154.2	221736579.0			1437980.40856	Y
6	IC 410-395069/8	514.0	718079358.0			1397041.552529	Y



Calibration / Ethylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

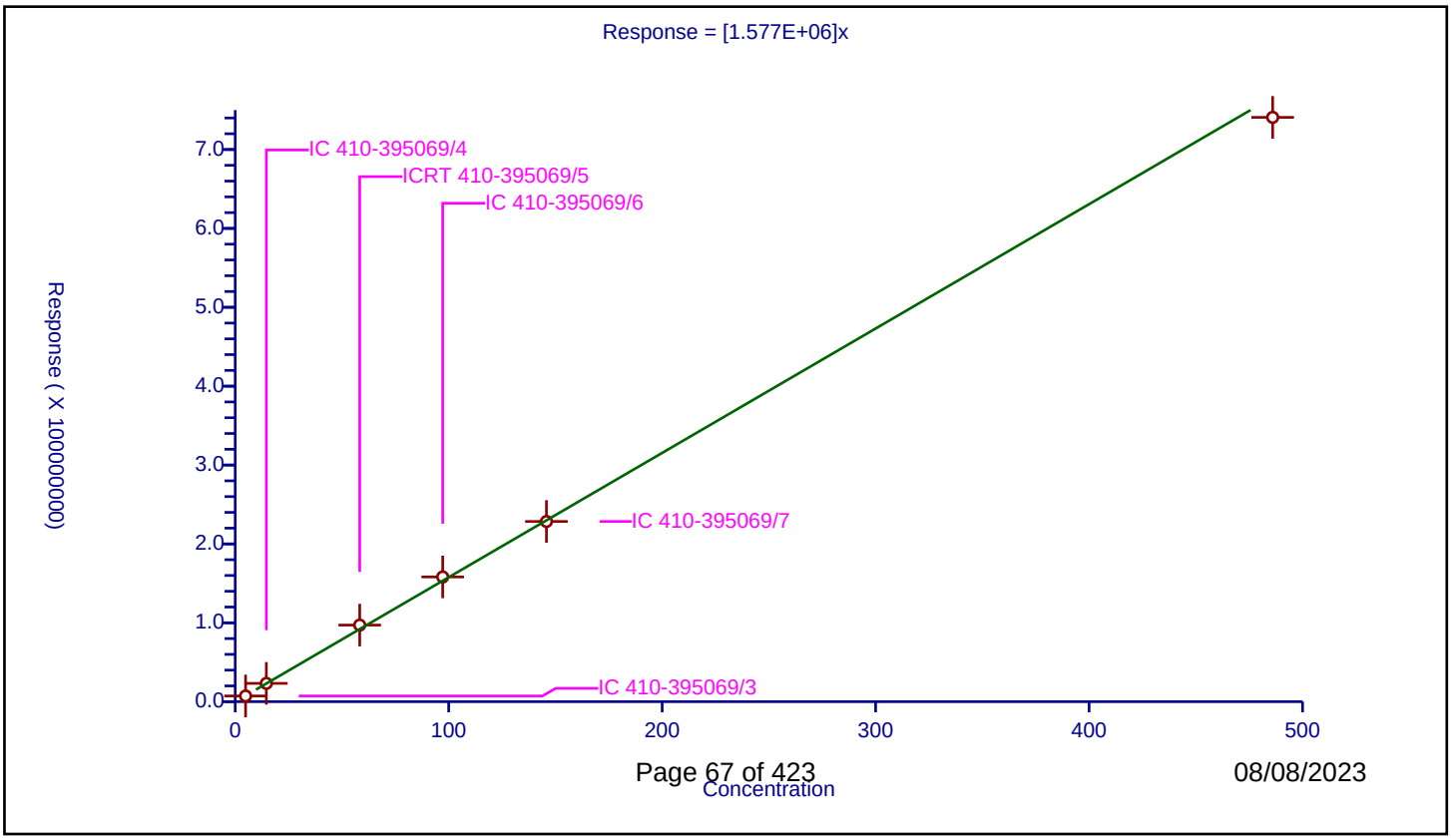
Curve Coefficients

Intercept:	0
Slope:	1.577E+06

Error Coefficients

Standard Error:	11900000
Relative Standard Error:	4.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-395069/3	4.86	7229989.0			1487652.057613	Y
2	IC 410-395069/4	14.58	23192115.0			1590680.041152	Y
3	ICRT 410-395069/5	58.32	97083060.0			1664661.522634	Y
4	IC 410-395069/6	97.2	158145942.0			1627015.864198	Y
5	IC 410-395069/7	145.8	228453680.0			1566897.668038	Y
6	IC 410-395069/8	486.0	740790614.0			1524260.522634	Y



Calibration / Propane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

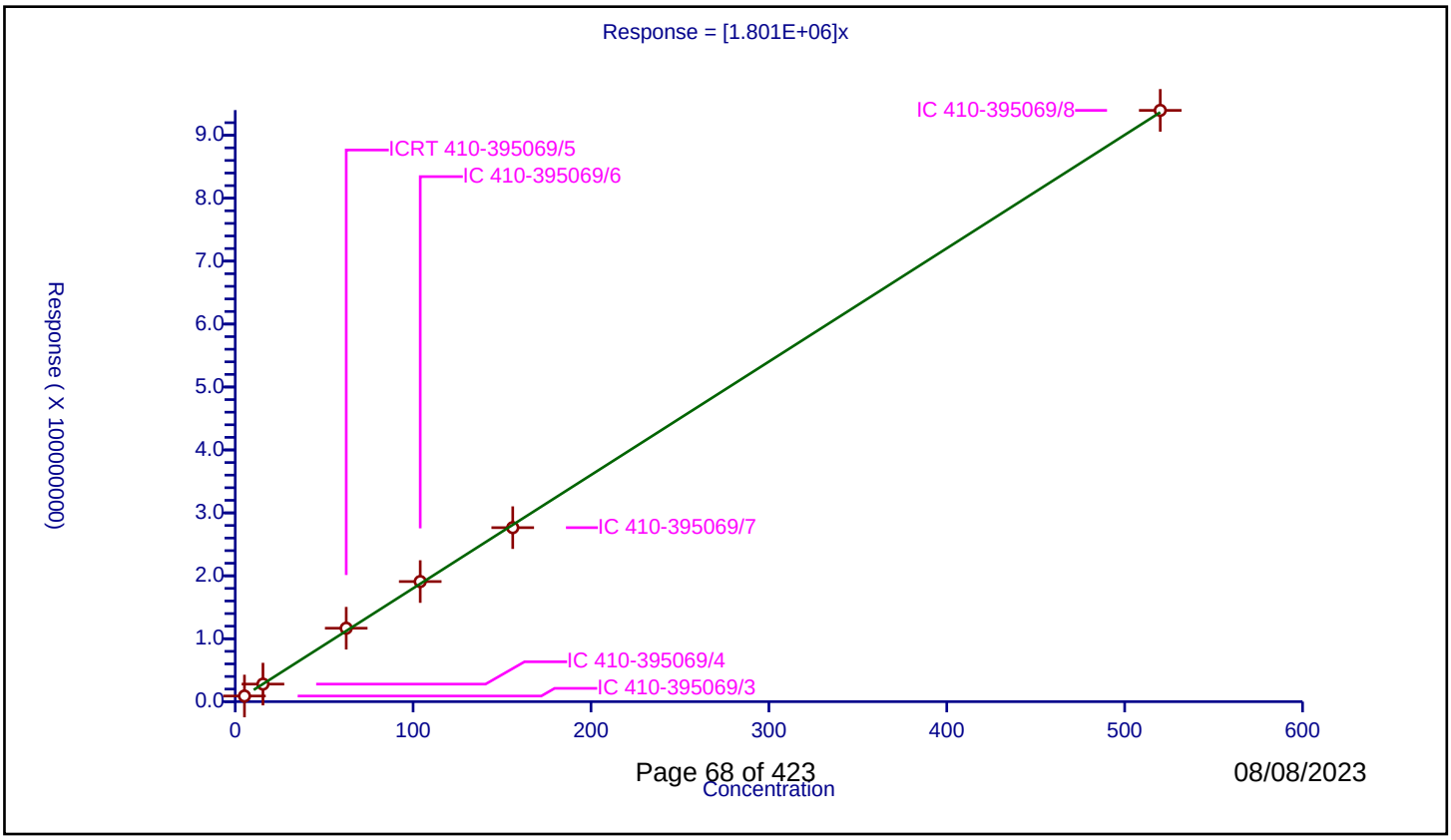
Curve Coefficients

Intercept:	0
Slope:	1.801E+06

Error Coefficients

Standard Error:	3490000
Relative Standard Error:	2.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-395069/3	5.2	8995190.0			1729844.230769	Y
2	IC 410-395069/4	15.6	27935760.0			1790753.846154	Y
3	ICRT 410-395069/5	62.4	116729285.0			1870661.61859	Y
4	IC 410-395069/6	104.0	190868152.0			1835270.692308	Y
5	IC 410-395069/7	156.0	276522736.0			1772581.641026	Y
6	IC 410-395069/8	520.0	939591421.0			1806906.578846	Y



Calibration / Propene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

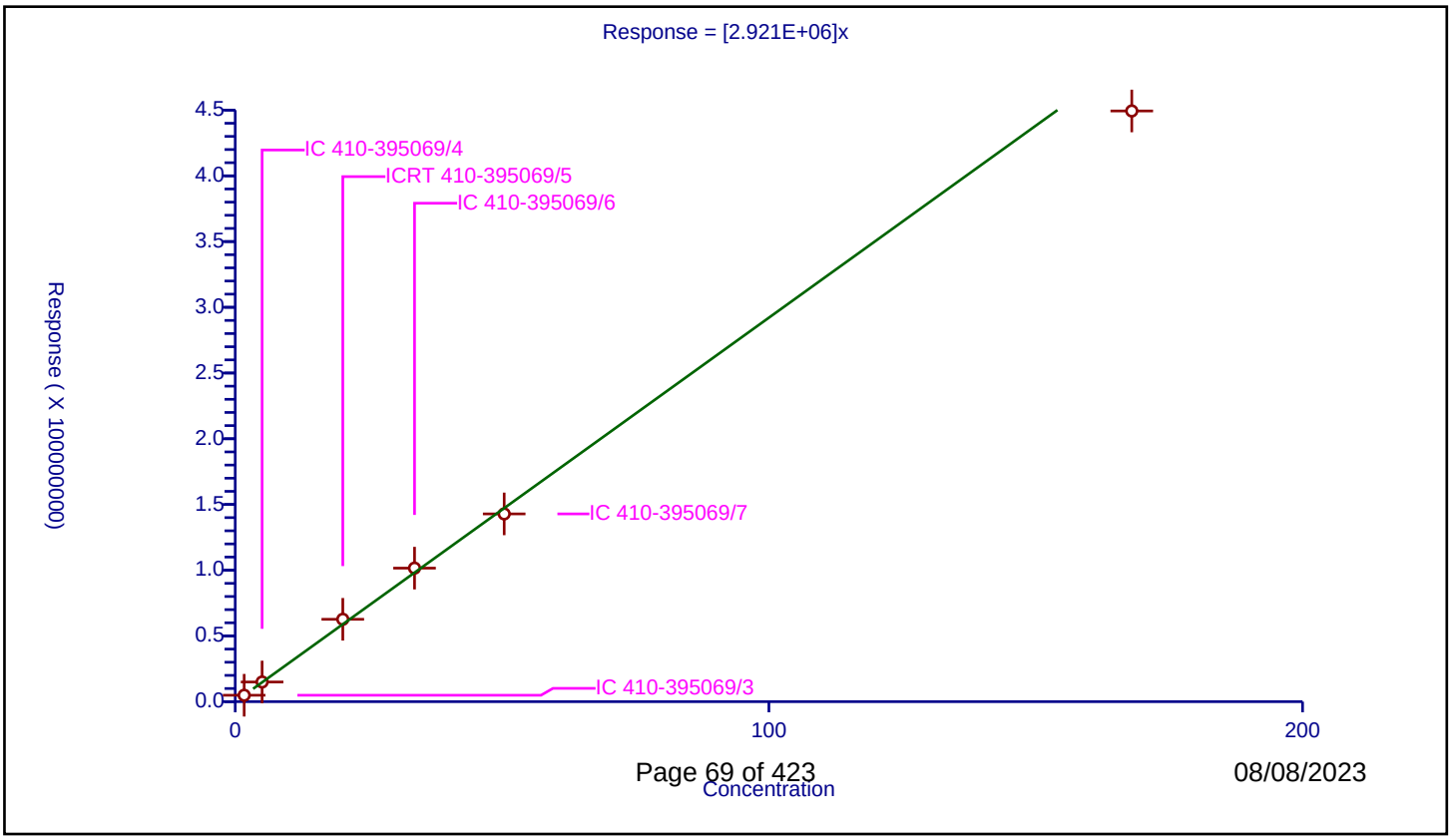
Curve Coefficients

Intercept:	0
Slope:	2.921E+06

Error Coefficients

Standard Error:	18700000
Relative Standard Error:	5.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-395069/3	1.68	4893746.0			2912944.047619	Y
2	IC 410-395069/4	5.04	14972289.0			2970692.261905	Y
3	ICRT 410-395069/5	20.16	62671931.0			3108726.736111	Y
4	IC 410-395069/6	33.6	101582671.0			3023293.779762	Y
5	IC 410-395069/7	50.4	142842078.0			2834168.214286	Y
6	IC 410-395069/8	168.0	449348241.0			2674691.910714	Y



Calibration / Propane, 2-methyl

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

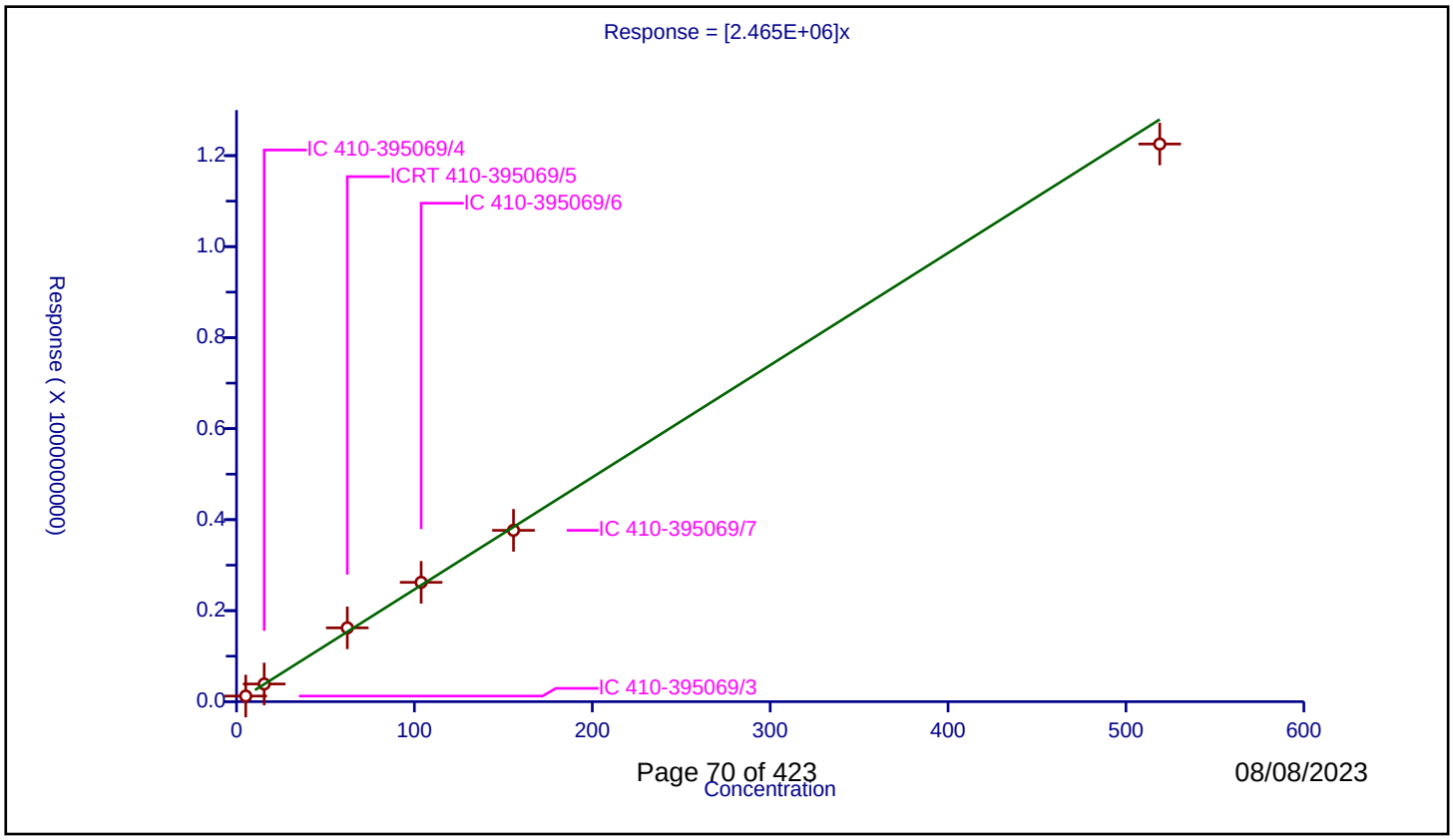
Curve Coefficients

Intercept:	0
Slope:	2.465E+06

Error Coefficients

Standard Error:	24800000
Relative Standard Error:	3.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-395069/3	5.19	12387912.0			2386880.924855	Y
2	IC 410-395069/4	15.57	38831218.0			2493976.750161	Y
3	ICRT 410-395069/5	62.28	162225538.0			2604777.424534	Y
4	IC 410-395069/6	103.8	262257366.0			2526564.219653	Y
5	IC 410-395069/7	155.7	376511192.0			2418183.635196	Y
6	IC 410-395069/8	519.0	1225476894.0			2361227.156069	Y



Calibration / Butane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

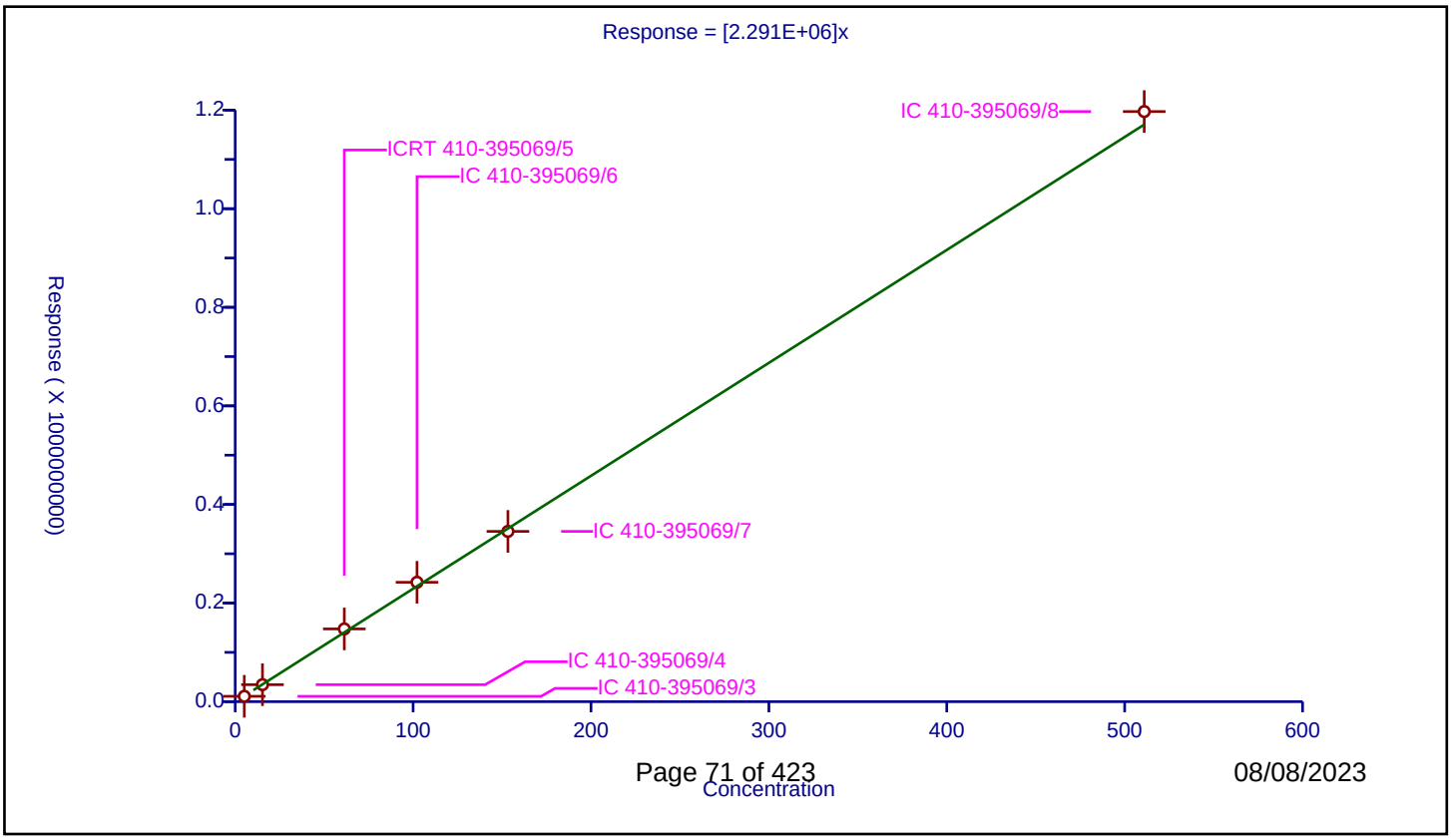
Curve Coefficients

Intercept:	0
Slope:	2.291E+06

Error Coefficients

Standard Error:	13000000
Relative Standard Error:	4.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-395069/3	5.11	10856110.0			2124483.365949	Y
2	IC 410-395069/4	15.33	34469750.0			2248515.981735	Y
3	ICRT 410-395069/5	61.32	147566441.0			2406497.733203	Y
4	IC 410-395069/6	102.2	242194144.0			2369805.714286	Y
5	IC 410-395069/7	153.3	345403973.0			2253124.416177	Y
6	IC 410-395069/8	511.0	1197071246.0			2342605.178082	Y



Calibration / Acetylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

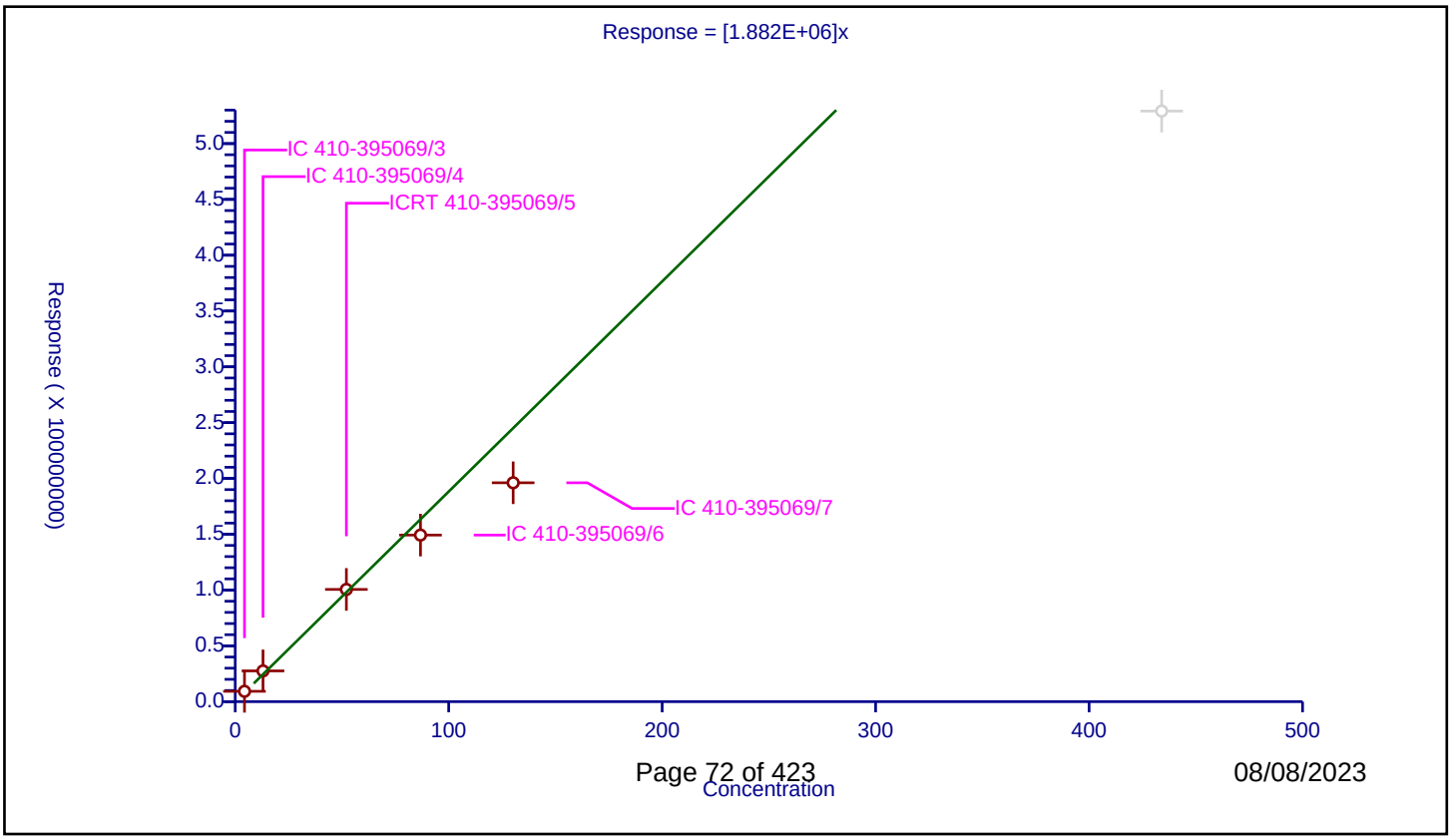
Curve Coefficients

Intercept:	0
Slope:	1.882E+06

Error Coefficients

Standard Error:	25600000
Relative Standard Error:	14.3
Correlation Coefficient:	0.985
Coefficient of Determination (Adjusted):	0.968

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-395069/3	4.34	9282262.0			2138770.046083	Y
2	IC 410-395069/4	13.02	27554030.0			2116284.946237	Y
3	ICRT 410-395069/5	52.08	100572916.0			1931123.579109	Y
4	IC 410-395069/6	86.8	149256351.0			1719543.214286	Y
5	IC 410-395069/7	130.2	196114478.0			1506255.591398	Y
6	IC 410-395069/8	434.0	529150167.0			1219240.016129	N



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: ICV 410-395069/12 Calibration Date: 07/10/2023 12:49

Instrument ID: 19506 Calib Start Date: 07/10/2023 10:31

GC Column: HP Plot ID: 0.53(mm) Calib End Date: 07/10/2023 11:48

Lab File ID: 312023_07_10.0012.d Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	1711552	1758423		62.2	60.6	2.7	15.0
Ethane	Ave	1449694	1538224		63.4	59.7	6.1	15.0
Ethene	Ave	1576861	1633575		63.5	61.3	3.6	15.0
Propane	Ave	1801003	1949135		66.3	61.3	8.2	15.0
Isobutane	Ave	2465268	2968837		72.9	60.6	20.4*	15.0
n-Butane	Ave	2290839	2830758		74.8	60.6	23.6*	15.0
Acetylene	Ave	1882395	1807525		49.8	51.8	-4.0	15.0
Propene	Ave	2920753	3054728		21.1	20.2	4.6	15.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: ICV 410-395069/12 Calibration Date: 07/10/2023 12:49

Instrument ID: 19506 Calib Start Date: 07/10/2023 10:31

GC Column: HP Plot ID: 0.53(mm) Calib End Date: 07/10/2023 11:48

Lab File ID: 312023_07_10.0012.d Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.75	0.72	0.78
Ethane	0.89	0.86	0.92
Ethene	1.15	1.12	1.18
Propane	1.60	1.57	1.63
Isobutane	2.85	2.81	2.87
n-Butane	2.98	2.93	3.03
Acetylene	3.13	3.07	3.17
Propene	2.52	2.48	2.54

Report Date: 11-Jul-2023 04:38:49 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0012.d				
Lims ID:	icv				
Client ID:					
Sample Type:	ICV				
Inject. Date:	10-Jul-2023 12:49:00	ALS Bottle#:	0	Worklist Smp#:	12
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:					
Misc. Info.:	410-0088528-012				
Operator ID:		Instrument ID:	19506		
Sublist:					
Method:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\RSK_19506A.m				
Limit Group:	GCV - RSK175				
Last Update:	11-Jul-2023 04:38:48	Calib Date:	10-Jul-2023 11:48:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d				
Column 1 :	HP Plot (0.53 mm)		Det: AFID0		
Process Host:	CTX1629				
First Level Reviewer: LXF2		Date:	11-Jul-2023 04:38:08		

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	1 Methane	0.747	0.747	0.000	106482668H	60.6	62.2	M
	2 Ethane	0.887	0.887	0.000	91841666H	59.7	63.4	
	3 Ethylene	1.147	1.147	0.000	100111844H	61.3	63.5	M
	4 Propane	1.597	1.597	0.000	119450576H	61.3	66.3	
$	5 Propene	2.520	2.513	0.007	61583319H	20.2	21.1	
	8 Propane, 2-methyl	2.847	2.843	0.004	179780198H	60.6	72.9	
	6 Butane	2.980	2.977	0.003	171418741H	60.6	74.8	
	7 Acetylene	3.133	3.120	0.013	93662795H	51.8	49.8	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Review Flags

M - Manually Integrated

Reagents:

EPH_HSSMS_00008	Amount Added:	60.00	Units: uL
EPH_HSSSS_00011	Amount Added:	60.00	Units: uL

Report Date: 11-Jul-2023 04:38:49 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0012.d

Injection Date: 10-Jul-2023 12:49:00 Instrument ID: 19506

Lims ID: icv

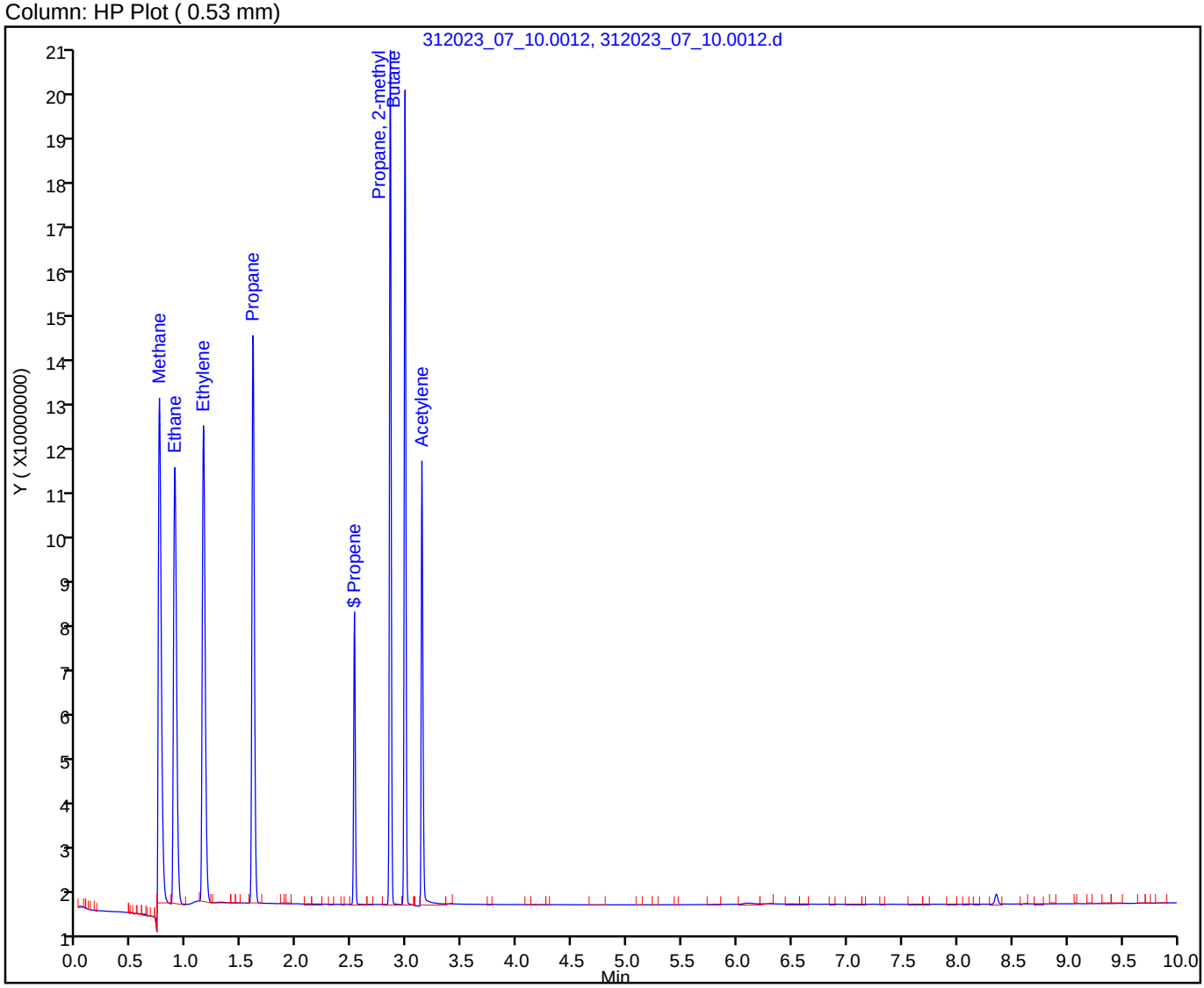
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 12

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Report Date: 11-Jul-2023 04:38:49 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

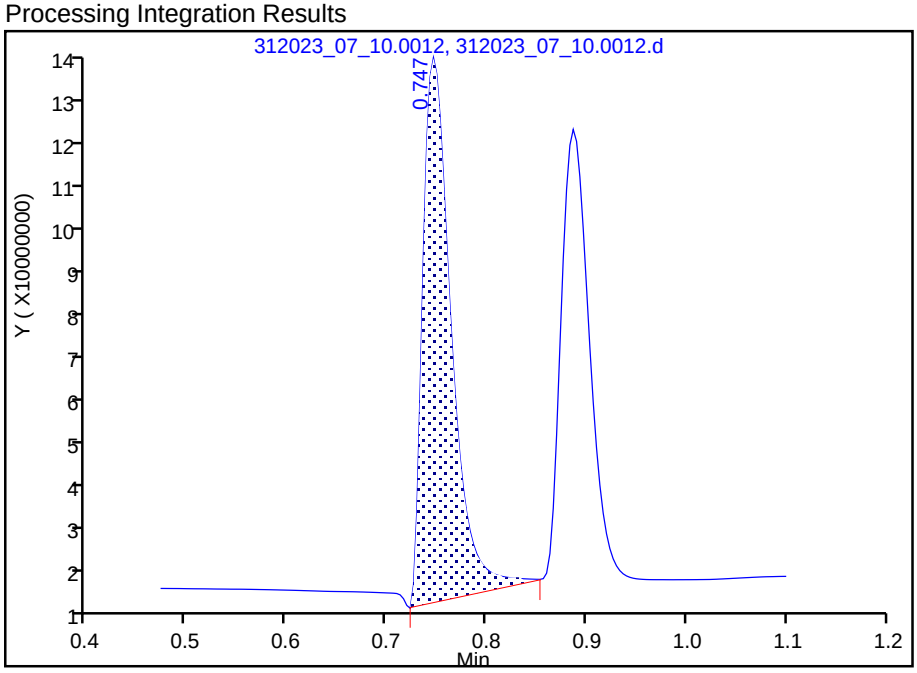
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0012.d				
Injection Date:	10-Jul-2023 12:49:00	Instrument ID:	19506		
Lims ID:	icv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	12
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

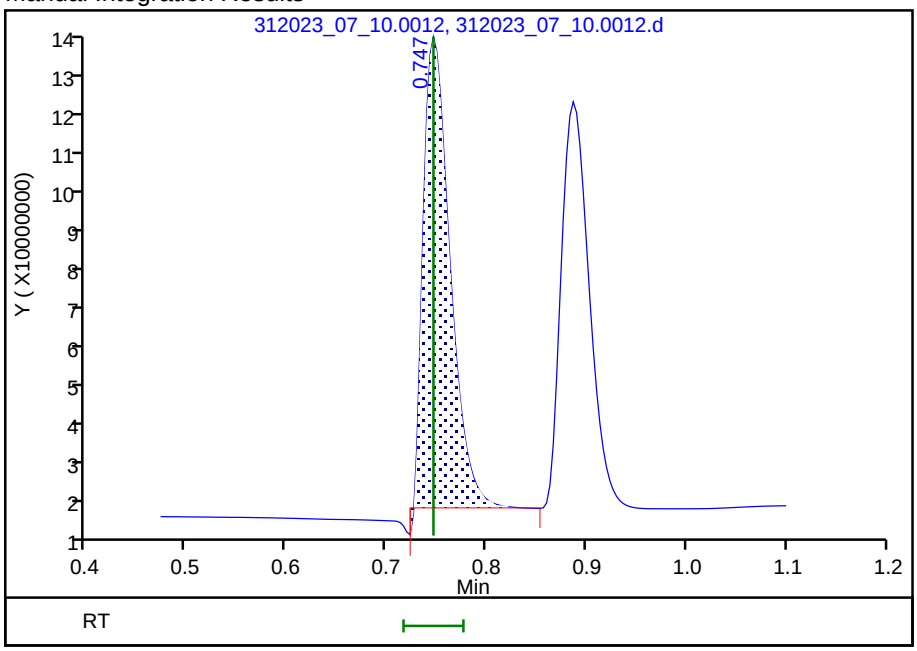
Processing Integration Results

RT: 0.75
Height: 111316732
Amount: 65.038458
Amount Units: ug/l



Manual Integration Results

RT: 0.75
Height: 106482668
Amount: 62.214084
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:37:57 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Report Date: 11-Jul-2023 04:38:49 Chrom Revision: 2.3 06-Jul-2023 17:41:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

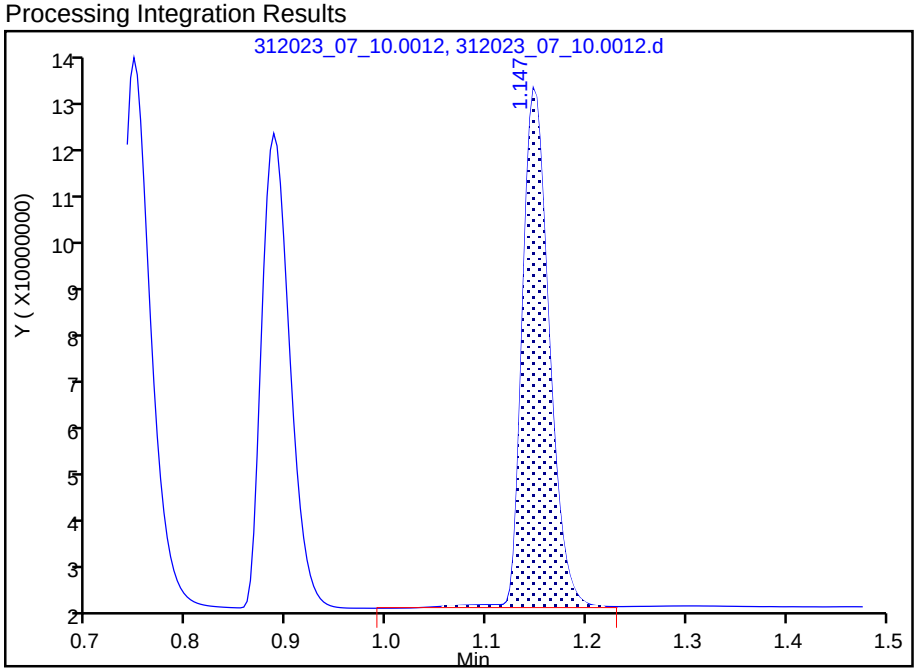
Data File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0012.d				
Injection Date:	10-Jul-2023 12:49:00	Instrument ID:	19506		
Lims ID:	icv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	12
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

3 Ethylene, CAS: 74-85-1

Signal: 1

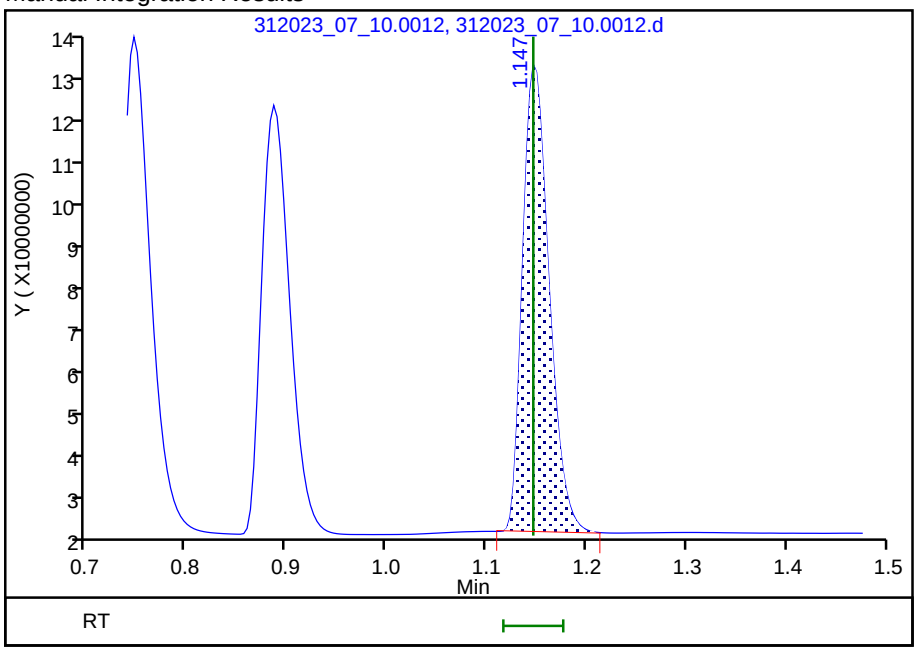
Processing Integration Results

RT: 1.15
Height: 100613521
Amount: 63.806197
Amount Units: ug/l



Manual Integration Results

RT: 1.15
Height: 100111844
Amount: 63.488048
Amount Units: ug/l



Reviewer: LXF2, 11-Jul-2023 04:38:06 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Peak not integrated

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCVRT 410-403952/2 Calibration Date: 08/03/2023 10:07

Instrument ID: 19506 Calib Start Date: 07/10/2023 10:31

GC Column: HP Plot ID: 0.53(mm) Calib End Date: 07/10/2023 11:48

Lab File ID: 312023_08_3.0002.d Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	1711552	1668399		58.3	59.8	-2.5	15.0
Ethane	Ave	1449694	1358727		57.8	61.7	-6.3	15.0
Ethene	Ave	1576861	1491227		55.2	58.3	-5.4	15.0
Propane	Ave	1801003	1643108		56.9	62.4	-8.8	15.0
Isobutane	Ave	2465268	2274770		57.5	62.3	-7.7	15.0
n-Butane	Ave	2290839	2126529		56.9	61.3	-7.2	15.0
Acetylene	Ave	1882395	1728298		47.8	52.1	-8.2	15.0
Propene	Ave	2920753	2817588		19.4	20.2	-3.5	15.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCVRT 410-403952/2 Calibration Date: 08/03/2023 10:07

Instrument ID: 19506 Calib Start Date: 07/10/2023 10:31

GC Column: HP Plot ID: 0.53(mm) Calib End Date: 07/10/2023 11:48

Lab File ID: 312023_08_3.0002.d Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.74	0.71	0.77
Ethane	0.88	0.85	0.91
Ethene	1.13	1.10	1.16
Propane	1.58	1.55	1.61
Isobutane	2.83	2.80	2.86
n-Butane	2.96	2.91	3.01
Acetylene	3.10	3.05	3.15
Propene	2.49	2.46	2.52

Report Date: 04-Aug-2023 03:40:31 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0002.d
Lims ID: ccvrt
Client ID:
Sample Type: CCVRT
Inject. Date: 03-Aug-2023 10:07:00 ALS Bottle#: 0 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 410-0090521-002
Operator ID: Instrument ID: 19506
Sublist: chrom-RSK_19506A*sub2

Method: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\RSK_19506A.m
Limit Group: GCV - RSK175
Last Update: 04-Aug-2023 03:40:31 Calib Date: 10-Jul-2023 11:48:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Column 1 : HP Plot (0.53 mm) Det: AFID0
Process Host: CTX1668

First Level Reviewer: LXF2 Date: 04-Aug-2023 03:37:25

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	1 Methane	0.743	0.743	0.000	99703509H	59.8	58.3	M
	2 Ethane	0.880	0.880	0.000	83806290H	61.7	57.8	
	3 Ethylene	1.133	1.133	0.000	86968382H	58.3	55.2	M
	4 Propane	1.580	1.580	0.000	102529914H	62.4	56.9	
$	5 Propene	2.493	2.493	0.000	56802575H	20.2	19.4	
	8 Propane, 2-methyl	2.827	2.827	0.000	141672647H	62.3	57.5	
	6 Butane	2.960	2.960	0.000	130398788H	61.3	56.9	
	7 Acetylene	3.100	3.100	0.000	90009772H	52.1	47.8	

QC Flag Legend

Processing Flags
H - Response Measured by Height
Review Flags
M - Manually Integrated

Reagents:

EPH_HSSSS_00011 Amount Added: 60.00 Units: uL
EPH_HSSMS_00011 Amount Added: 60.00 Units: uL

Report Date: 04-Aug-2023 03:40:31 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0002.d

Injection Date: 03-Aug-2023 10:07:00 Instrument ID: 19506

Lims ID: ccvrt

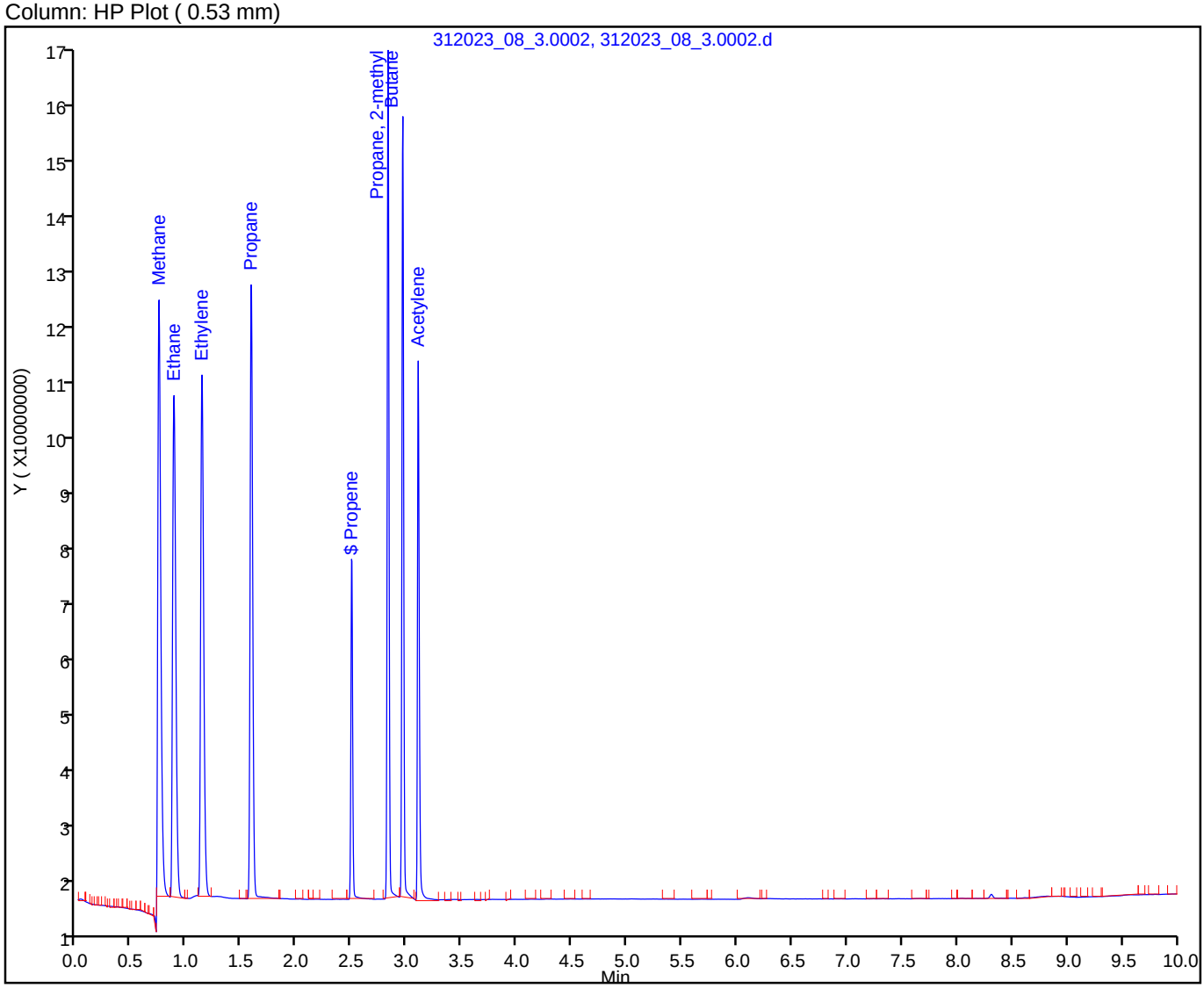
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 2

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Eurofins Lancaster Laboratories Environment Testing, LLC

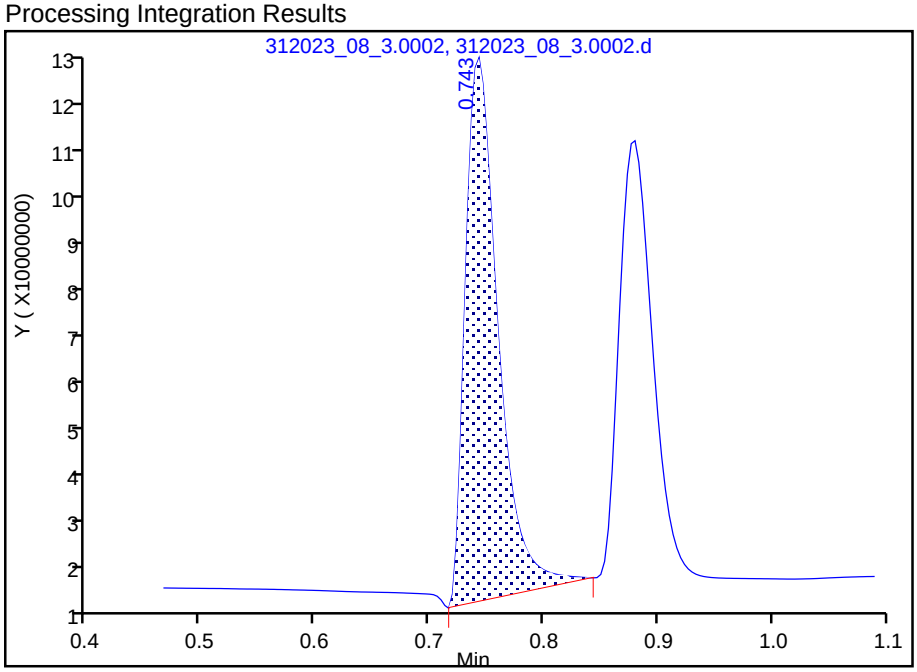
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0002.d				
Injection Date:	03-Aug-2023 10:07:00	Instrument ID:	19506		
Lims ID:	ccvrt				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	2
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

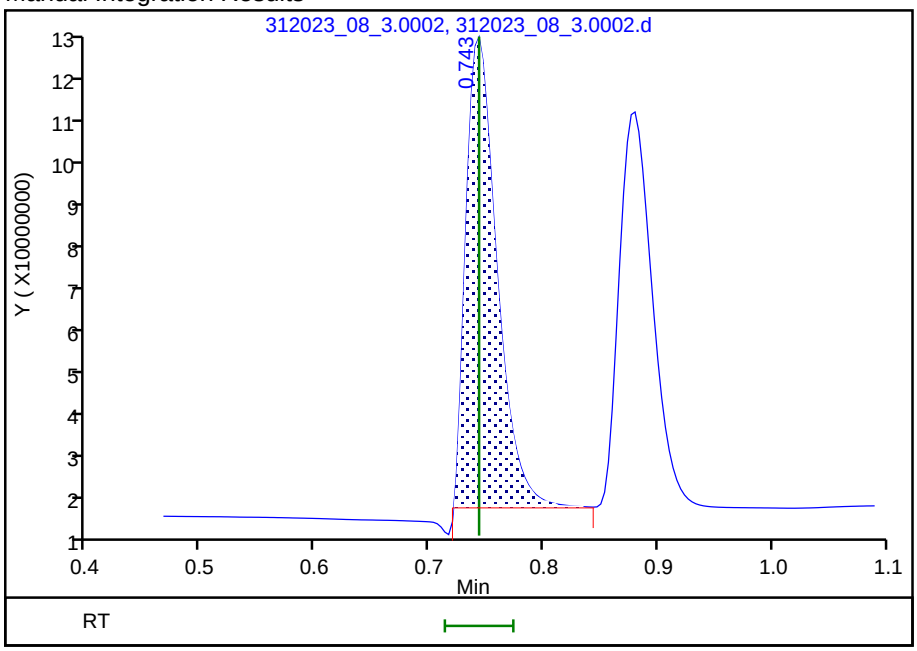
Processing Integration Results

RT: 0.74
Height: 104296306
Amount: 60.936669
Amount Units: ug/l



Manual Integration Results

RT: 0.74
Height: 99703509
Amount: 58.253259
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:38:11 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Instrument noise

Report Date: 04-Aug-2023 03:40:31 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

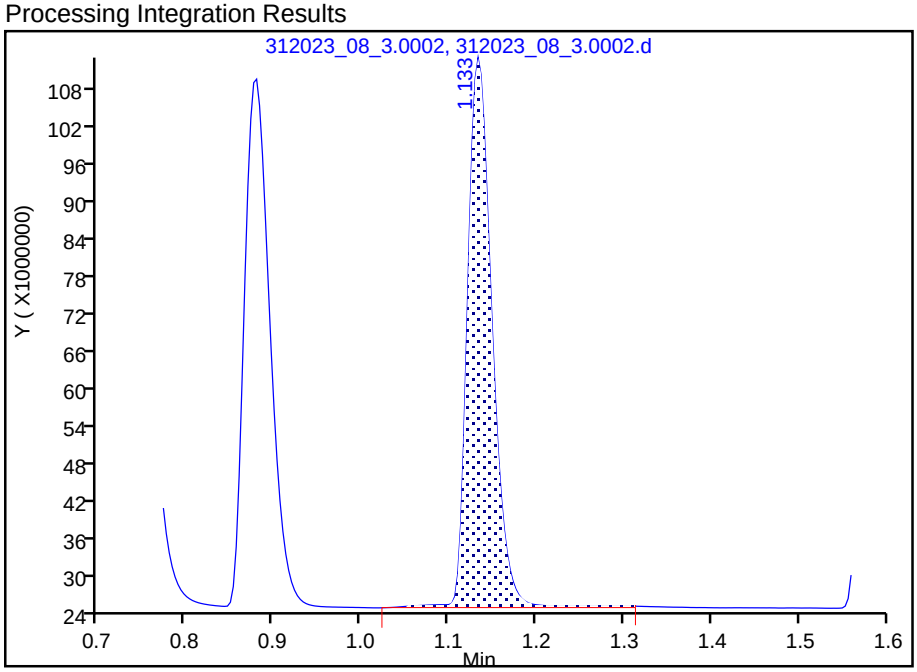
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0002.d				
Injection Date:	03-Aug-2023 10:07:00	Instrument ID:	19506		
Lims ID:	ccvrt				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	2
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

3 Ethylene, CAS: 74-85-1

Signal: 1

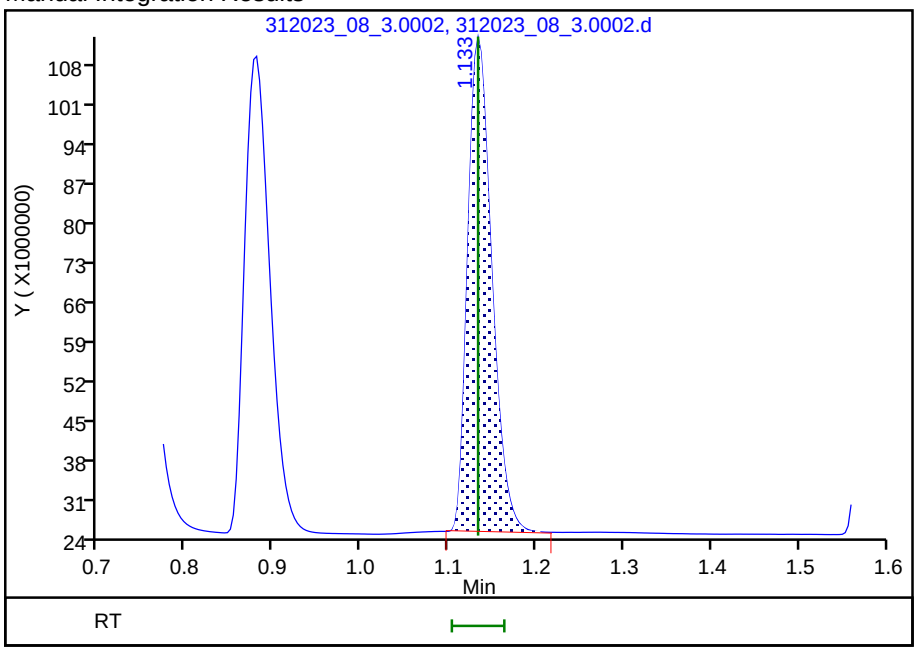
Processing Integration Results

RT: 1.13
Height: 87404596
Amount: 55.429477
Amount Units: ug/l



Manual Integration Results

RT: 1.13
Height: 86968382
Amount: 55.152843
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:37:54 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Instrument noise

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-403952/9 Calibration Date: 08/03/2023 12:05

Instrument ID: 19506 Calib Start Date: 07/10/2023 10:31

GC Column: HP Plot ID: 0.53(mm) Calib End Date: 07/10/2023 11:48

Lab File ID: 312023_08_3.0009.d Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	1711552	1586209		55.4	59.8	-7.3	15.0
Ethane	Ave	1449694	1337961		56.9	61.7	-7.7	15.0
Ethene	Ave	1576861	1446529		53.5	58.3	-8.3	15.0
Propane	Ave	1801003	1713764		59.4	62.4	-4.8	15.0
Isobutane	Ave	2465268	2497493		63.1	62.3	1.3	15.0
n-Butane	Ave	2290839	2389286		64.0	61.3	4.3	15.0
Acetylene	Ave	1882395	1677752		46.4	52.1	-10.9	15.0
Propene	Ave	2920753	2688693		18.6	20.2	-7.9	15.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-403952/9 Calibration Date: 08/03/2023 12:05

Instrument ID: 19506 Calib Start Date: 07/10/2023 10:31

GC Column: HP Plot ID: 0.53(mm) Calib End Date: 07/10/2023 11:48

Lab File ID: 312023_08_3.0009.d Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.74	0.71	0.77
Ethane	0.88	0.85	0.91
Ethene	1.14	1.10	1.16
Propane	1.59	1.55	1.61
Isobutane	2.83	2.80	2.86
n-Butane	2.97	2.91	3.01
Acetylene	3.12	3.05	3.15
Propene	2.51	2.46	2.52

Report Date: 04-Aug-2023 03:40:26 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0009.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 03-Aug-2023 12:05:00 ALS Bottle#: 0 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 410-0090521-009
Operator ID: Instrument ID: 19506
Sublist: chrom-RSK_19506A*sub2

Method: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\RSK_19506A.m
Limit Group: GCV - RSK175
Last Update: 04-Aug-2023 03:40:26 Calib Date: 10-Jul-2023 11:48:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Column 1 : HP Plot (0.53 mm) Det: AFID0
Process Host: CTX1668

First Level Reviewer: LXF2 Date: 04-Aug-2023 03:40:21

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	1 Methane	0.743	0.743	0.000	94791860H	59.8	55.4	M
	2 Ethane	0.880	0.880	0.000	82525414H	61.7	56.9	
	3 Ethylene	1.137	1.133	0.004	84361573H	58.3	53.5	M
	4 Propane	1.587	1.580	0.007	106938877H	62.4	59.4	
$	5 Propene	2.507	2.493	0.014	54204058H	20.2	18.6	
	8 Propane, 2-methyl	2.833	2.827	0.006	155543860H	62.3	63.1	
	6 Butane	2.967	2.960	0.007	146511038H	61.3	64.0	
	7 Acetylene	3.120	3.100	0.020	87377339H	52.1	46.4	

QC Flag Legend

Processing Flags
H - Response Measured by Height
Review Flags
M - Manually Integrated

Reagents:

EPH_HSSSS_00011 Amount Added: 60.00 Units: uL
EPH_HSSMS_00011 Amount Added: 60.00 Units: uL

Report Date: 04-Aug-2023 03:40:26 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0009.d

Injection Date: 03-Aug-2023 12:05:00 Instrument ID: 19506

Lims ID: ccv

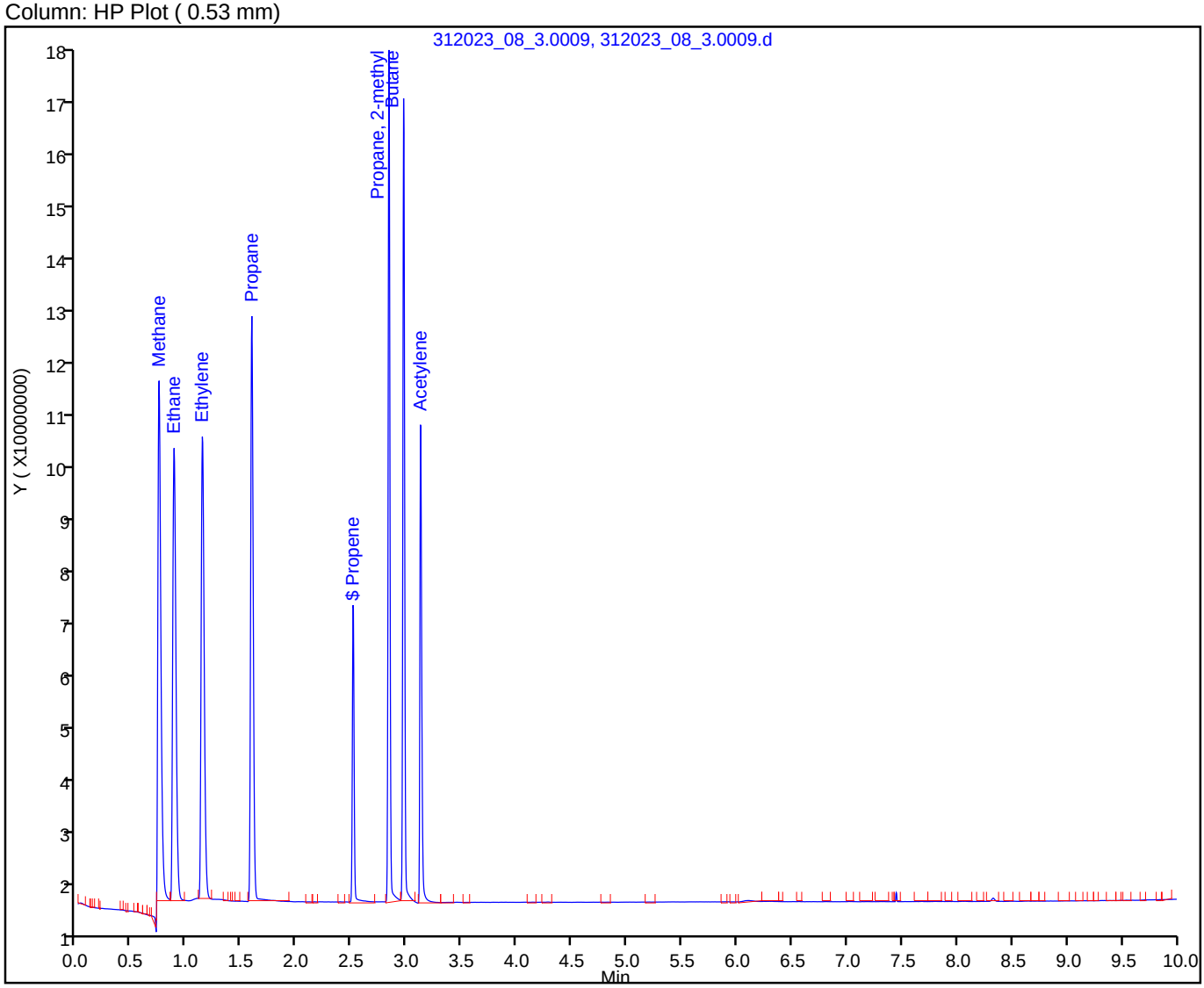
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 9

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Eurofins Lancaster Laboratories Environment Testing, LLC

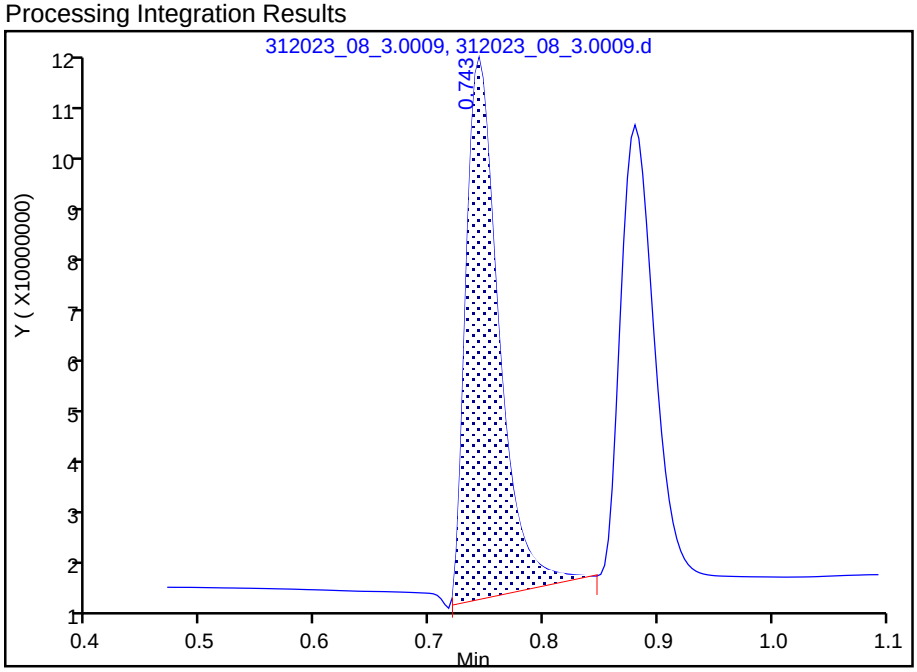
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0009.d				
Injection Date:	03-Aug-2023 12:05:00	Instrument ID:	19506		
Lims ID:	ccv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	9
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

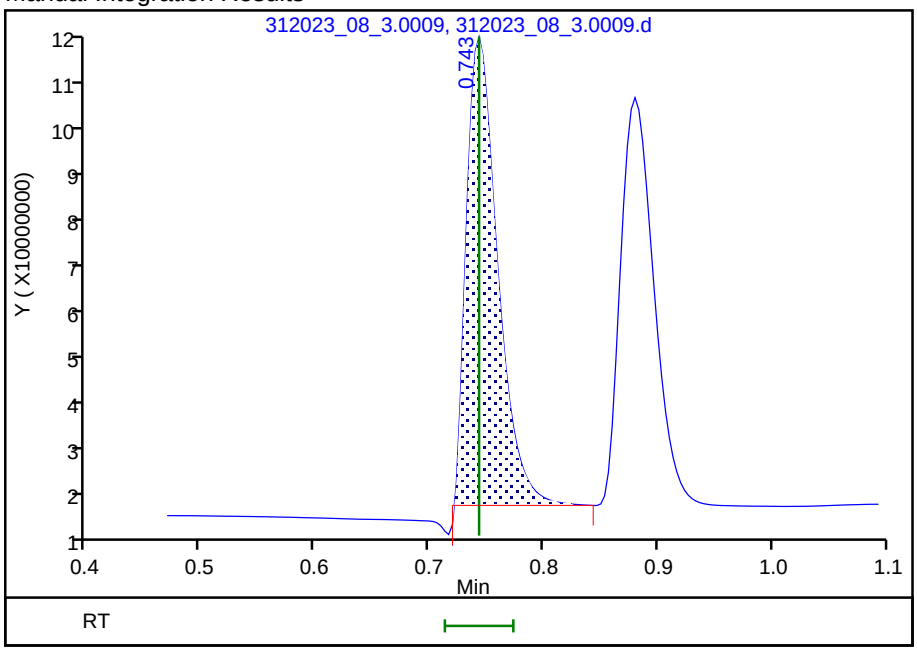
Processing Integration Results

RT: 0.74
Height: 99044229
Amount: 57.868065
Amount Units: ug/l



Manual Integration Results

RT: 0.74
Height: 94791860
Amount: 55.383555
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:40:18 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Instrument noise

Eurofins Lancaster Laboratories Environment Testing, LLC

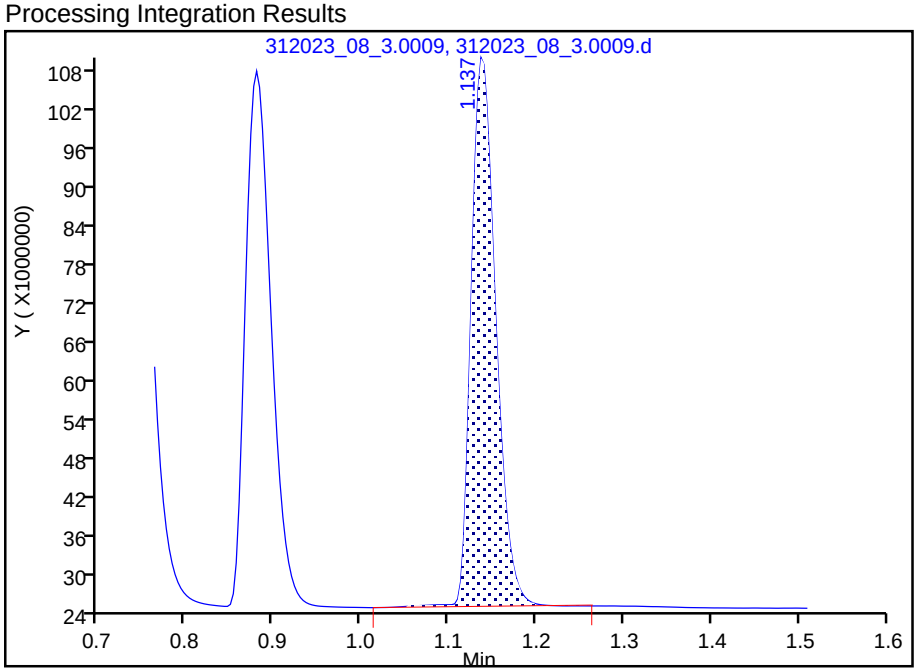
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0009.d				
Injection Date:	03-Aug-2023 12:05:00	Instrument ID:	19506		
Lims ID:	ccv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	9
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

3 Ethylene, CAS: 74-85-1

Signal: 1

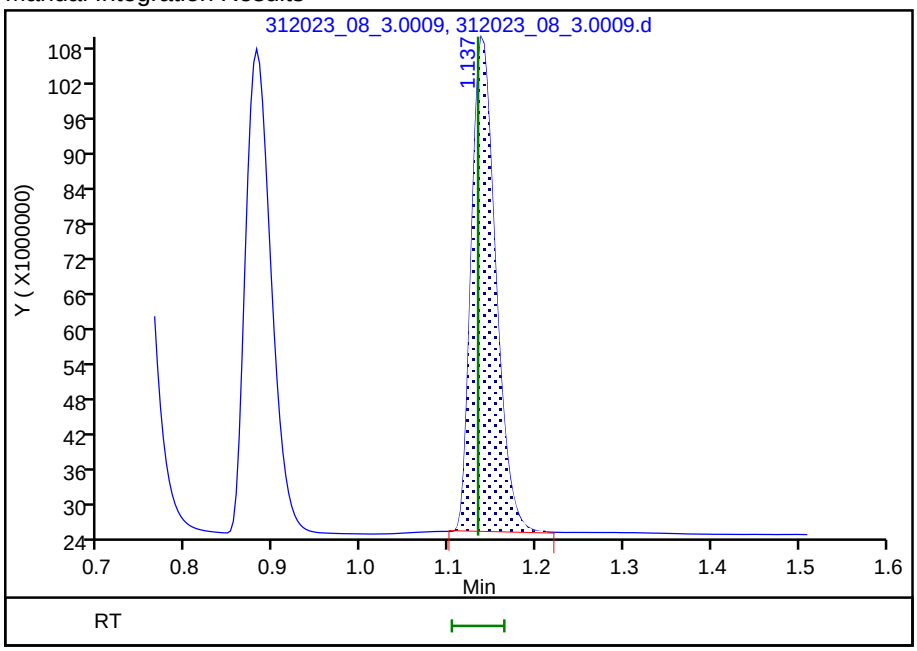
Processing Integration Results

RT: 1.14
Height: 84634605
Amount: 53.672828
Amount Units: ug/l



Manual Integration Results

RT: 1.14
Height: 84361573
Amount: 53.499679
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:40:04 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Instrument noise

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-403952/20 Calibration Date: 08/03/2023 15:34

Instrument ID: 19506 Calib Start Date: 07/10/2023 10:31

GC Column: HP Plot ID: 0.53(mm) Calib End Date: 07/10/2023 11:48

Lab File ID: 312023_08_3.0020.d Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	1711552	1628038		56.8	59.8	-4.9	15.0
Ethane	Ave	1449694	1377341		58.6	61.7	-5.0	15.0
Ethene	Ave	1576861	1493134		55.2	58.3	-5.3	15.0
Propane	Ave	1801003	1783032		61.8	62.4	-1.0	15.0
Isobutane	Ave	2465268	2612616		66.0	62.3	6.0	15.0
n-Butane	Ave	2290839	2539437		68.0	61.3	10.9	15.0
Acetylene	Ave	1882395	1662992		46.0	52.1	-11.7	15.0
Propene	Ave	2920753	2644427		18.3	20.2	-9.5	15.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-403952/20 Calibration Date: 08/03/2023 15:34

Instrument ID: 19506 Calib Start Date: 07/10/2023 10:31

GC Column: HP Plot ID: 0.53(mm) Calib End Date: 07/10/2023 11:48

Lab File ID: 312023_08_3.0020.d Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.74	0.71	0.77
Ethane	0.88	0.85	0.91
Ethene	1.14	1.10	1.16
Propane	1.59	1.55	1.61
Isobutane	2.84	2.80	2.86
n-Butane	2.98	2.91	3.01
Acetylene	3.14	3.05	3.15
Propene	2.52	2.46	2.52

Report Date: 04-Aug-2023 03:44:43 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0020.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 03-Aug-2023 15:34:00 ALS Bottle#: 0 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 410-0090521-020
Operator ID: Instrument ID: 19506
Sublist: chrom-RSK_19506A*sub2

Method: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\RSK_19506A.m
Limit Group: GCV - RSK175
Last Update: 04-Aug-2023 03:44:43 Calib Date: 10-Jul-2023 11:48:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Column 1 : HP Plot (0.53 mm) Det: AFID0
Process Host: CTX1668

First Level Reviewer: LXF2 Date: 04-Aug-2023 03:41:05

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	1 Methane	0.743	0.743	0.000	97291577H	59.8	56.8	M
	2 Ethane	0.880	0.880	0.000	84954401H	61.7	58.6	
	3 Ethylene	1.143	1.133	0.010	87079567H	58.3	55.2	M
	4 Propane	1.593	1.580	0.013	111261189H	62.4	61.8	
$	5 Propene	2.523	2.493	0.030	53311641H	20.2	18.3	a
	8 Propane, 2-methyl	2.843	2.827	0.016	162713731H	62.3	66.0	
	6 Butane	2.977	2.960	0.017	155718251H	61.3	68.0	
	7 Acetylene	3.143	3.100	0.043	86608649H	52.1	46.0	

QC Flag Legend

Processing Flags
H - Response Measured by Height
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

EPH_HSSSS_00011 Amount Added: 60.00 Units: uL
EPH_HSSMS_00011 Amount Added: 60.00 Units: uL

Report Date: 04-Aug-2023 03:44:43 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0020.d

Injection Date: 03-Aug-2023 15:34:00 Instrument ID: 19506

Lims ID: ccv

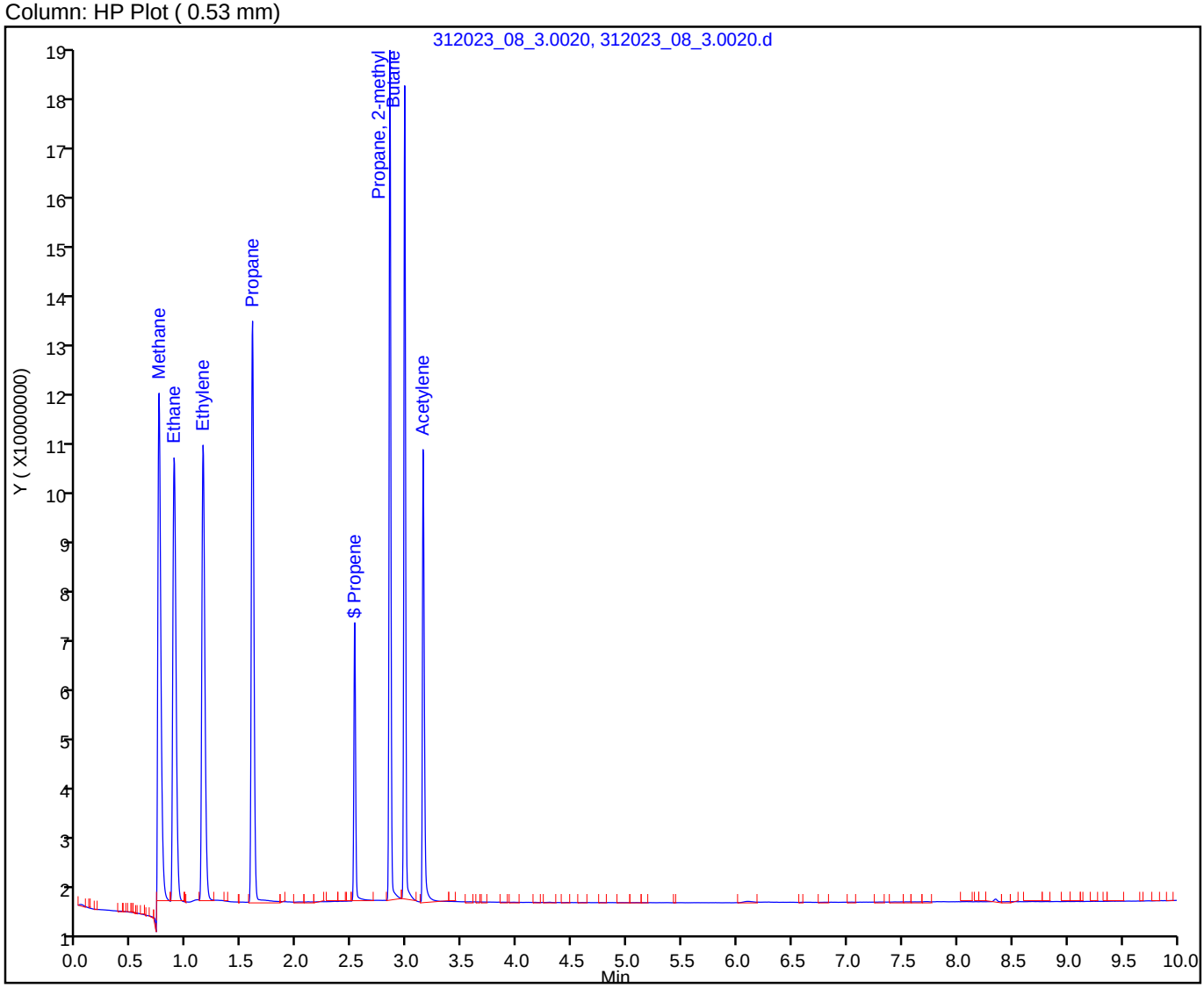
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 20

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Eurofins Lancaster Laboratories Environment Testing, LLC

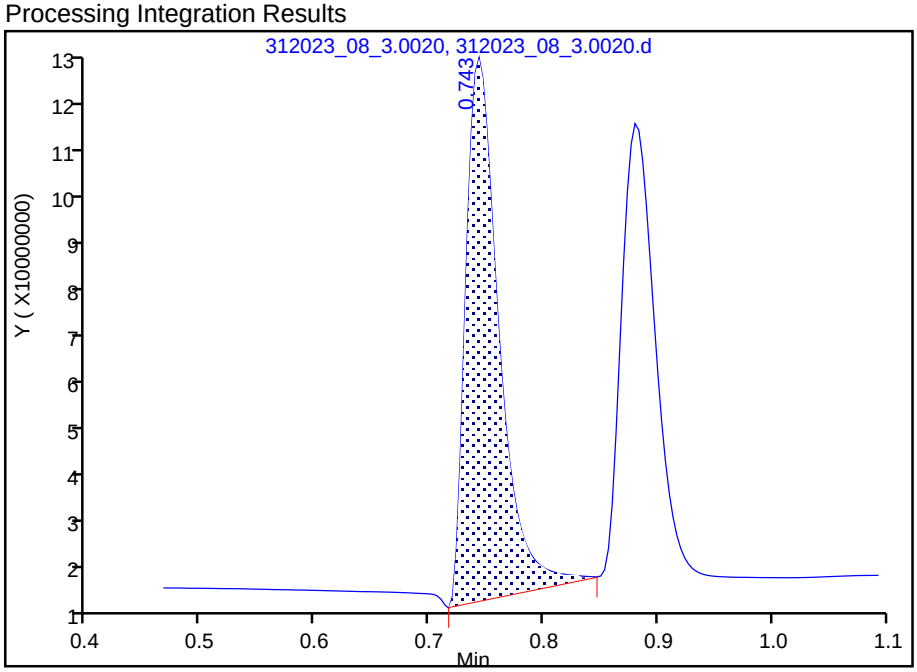
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0020.d				
Injection Date:	03-Aug-2023 15:34:00	Instrument ID:	19506		
Lims ID:	ccv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

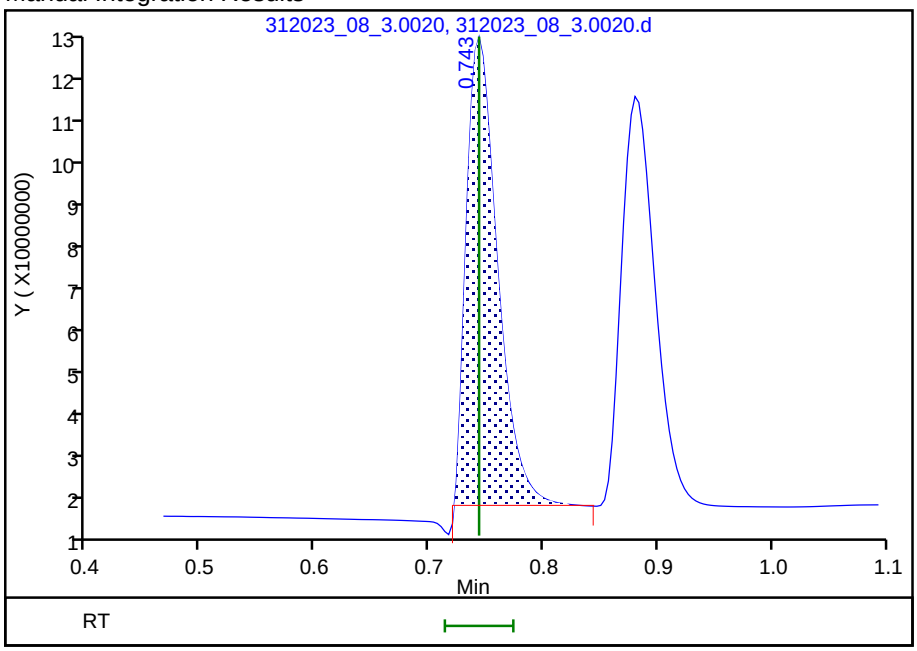
Processing Integration Results

RT: 0.74
Height: 101958912
Amount: 59.571012
Amount Units: ug/l



Manual Integration Results

RT: 0.74
Height: 97291577
Amount: 56.844052
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:44:05 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Instrument noise

Eurofins Lancaster Laboratories Environment Testing, LLC

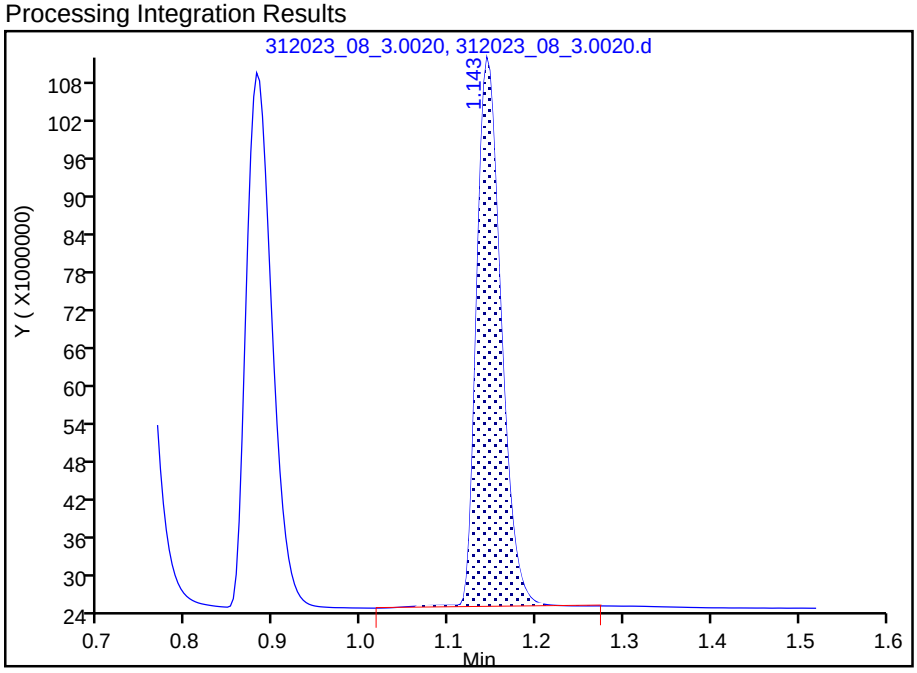
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0020.d				
Injection Date:	03-Aug-2023 15:34:00	Instrument ID:	19506		
Lims ID:	ccv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

3 Ethylene, CAS: 74-85-1

Signal: 1

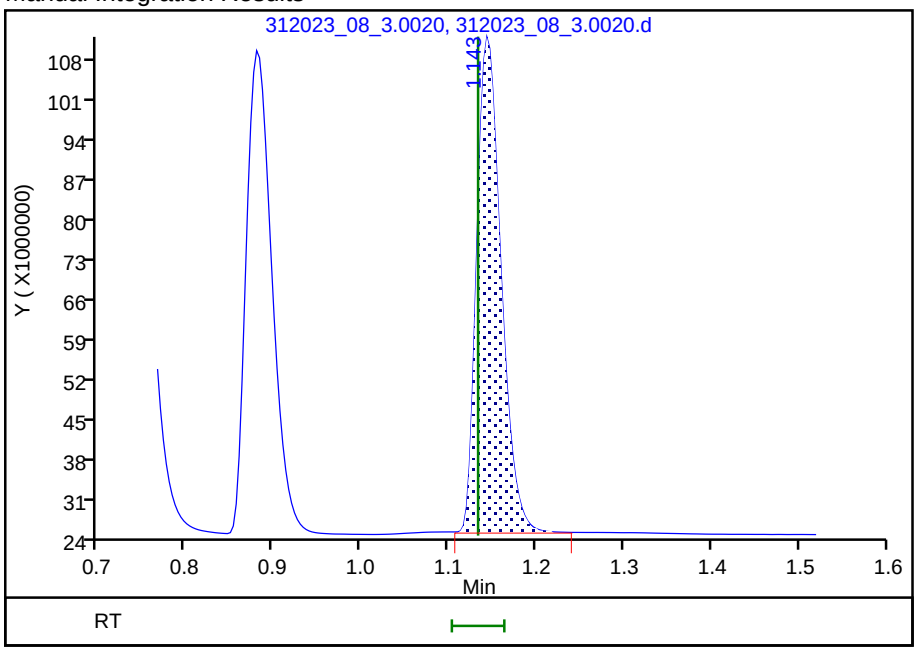
Processing Integration Results

RT: 1.14
Height: 87331300
Amount: 55.382995
Amount Units: ug/l



Manual Integration Results

RT: 1.14
Height: 87079567
Amount: 55.223353
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:42:54 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Instrument noise

Report Date: 04-Aug-2023 03:44:43 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

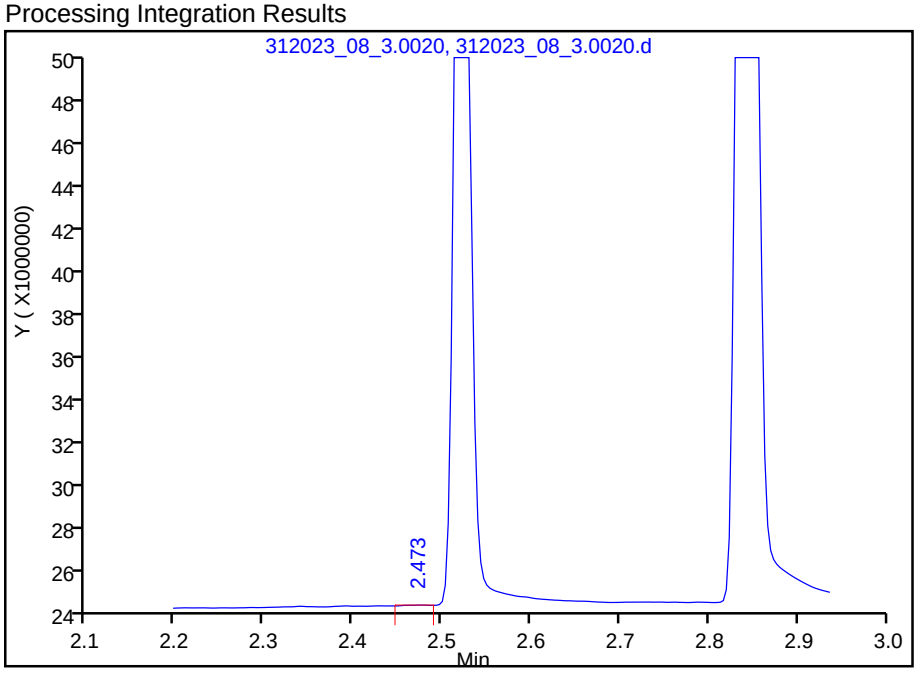
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0020.d				
Injection Date:	03-Aug-2023 15:34:00	Instrument ID:	19506		
Lims ID:	ccv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

$ 5 Propene, CAS: 115-07-1

Signal: 1

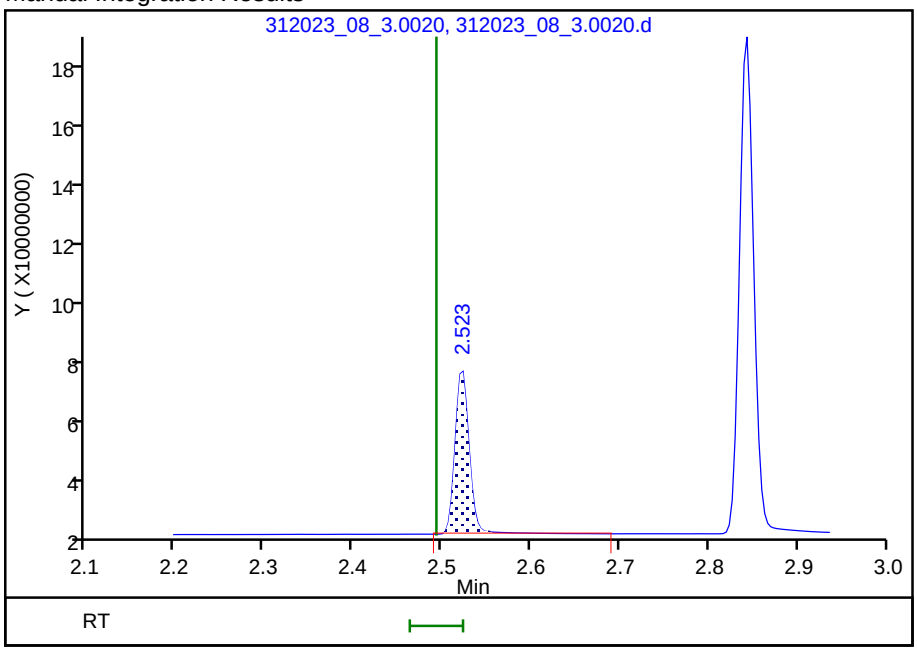
Processing Integration Results

RT: 2.47
Height: 23269
Amount: 0.007967
Amount Units: ug/l



Manual Integration Results

RT: 2.52
Height: 53311641
Amount: 18.252705
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:40:58 -04:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-403952/31 Calibration Date: 08/03/2023 18:25

Instrument ID: 19506 Calib Start Date: 07/10/2023 10:31

GC Column: HP Plot ID: 0.53(mm) Calib End Date: 07/10/2023 11:48

Lab File ID: 312023_08_3.0031.d Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	1711552	1624699		56.7	59.8	-5.1	15.0
Ethane	Ave	1449694	1364301		58.0	61.7	-5.9	15.0
Ethene	Ave	1576861	1479007		54.7	58.3	-6.2	15.0
Propane	Ave	1801003	1754432		60.8	62.4	-2.6	15.0
Isobutane	Ave	2465268	2523030		63.7	62.3	2.3	15.0
n-Butane	Ave	2290839	2433445		65.1	61.3	6.2	15.0
Acetylene	Ave	1882395	1726168		47.8	52.1	-8.3	15.0
Propene	Ave	2920753	2662606		18.4	20.2	-8.8	15.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-403952/31 Calibration Date: 08/03/2023 18:25

Instrument ID: 19506 Calib Start Date: 07/10/2023 10:31

GC Column: HP Plot ID: 0.53(mm) Calib End Date: 07/10/2023 11:48

Lab File ID: 312023_08_3.0031.d Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.74	0.71	0.77
Ethane	0.88	0.85	0.91
Ethene	1.15	1.10	1.16
Propane	1.59	1.55	1.61
Isobutane	2.84	2.80	2.86
n-Butane	2.98	2.91	3.01
Acetylene	3.15	3.05	3.15
Propene	2.53	2.46	2.52

Report Date: 04-Aug-2023 04:27:36 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0031.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 03-Aug-2023 18:25:00 ALS Bottle#: 0 Worklist Smp#: 31
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 410-0090521-031
Operator ID: Instrument ID: 19506
Sublist: chrom-RSK_19506A*sub2

Method: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\RSK_19506A.m
Limit Group: GCV - RSK175
Last Update: 04-Aug-2023 04:27:36 Calib Date: 10-Jul-2023 11:48:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Column 1 : HP Plot (0.53 mm) Det: AFID0
Process Host: CTX1668

First Level Reviewer: LXF2 Date: 04-Aug-2023 04:27:28

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	1 Methane	0.743	0.743	0.000	97091999H	59.8	56.7	M
	2 Ethane	0.880	0.880	0.000	84150099H	61.7	58.0	
	3 Ethylene	1.147	1.133	0.014	86255662H	58.3	54.7	M
	4 Propane	1.593	1.580	0.013	109476561H	62.4	60.8	
$	5 Propene	2.527	2.493	0.034	53678143H	20.2	18.4	a
	8 Propane, 2-methyl	2.843	2.827	0.016	157134323H	62.3	63.7	
	6 Butane	2.980	2.960	0.020	149218832H	61.3	65.1	
	7 Acetylene	3.150	3.100	0.050	89898826H	52.1	47.8	a

QC Flag Legend

Processing Flags
H - Response Measured by Height
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

EPH_HSSSS_00011 Amount Added: 60.00 Units: uL
EPH_HSSMS_00011 Amount Added: 60.00 Units: uL

Report Date: 04-Aug-2023 04:27:36 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0031.d

Injection Date: 03-Aug-2023 18:25:00 Instrument ID: 19506

Lims ID: ccv

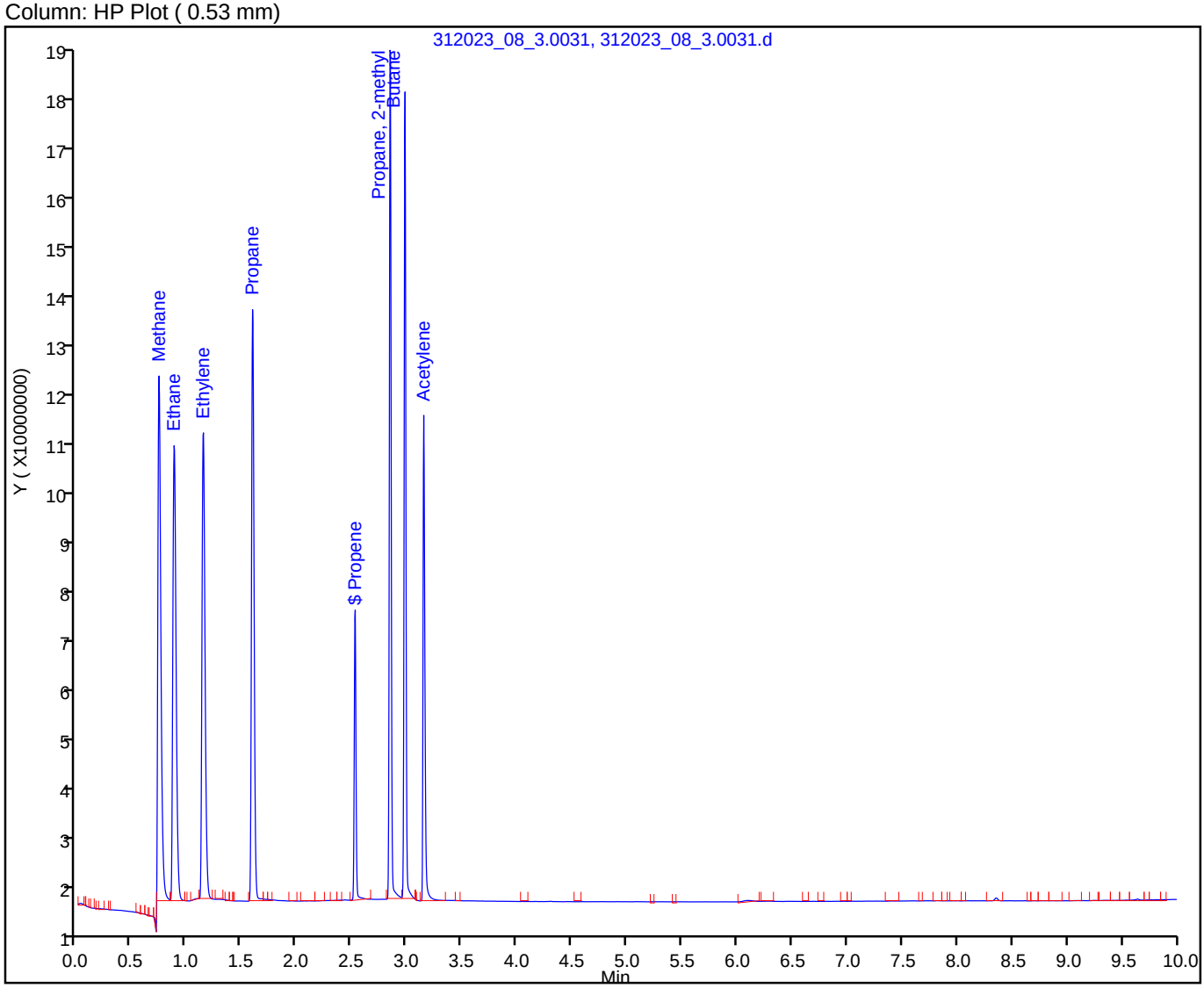
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 31

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Report Date: 04-Aug-2023 04:27:36 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

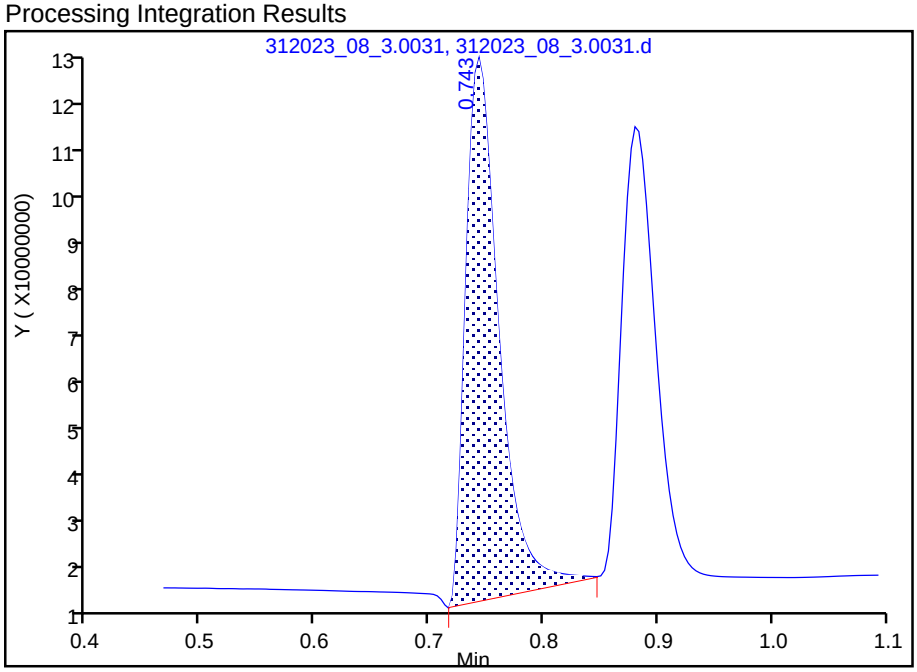
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0031.d				
Injection Date:	03-Aug-2023 18:25:00	Instrument ID:	19506		
Lims ID:	ccv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	31
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

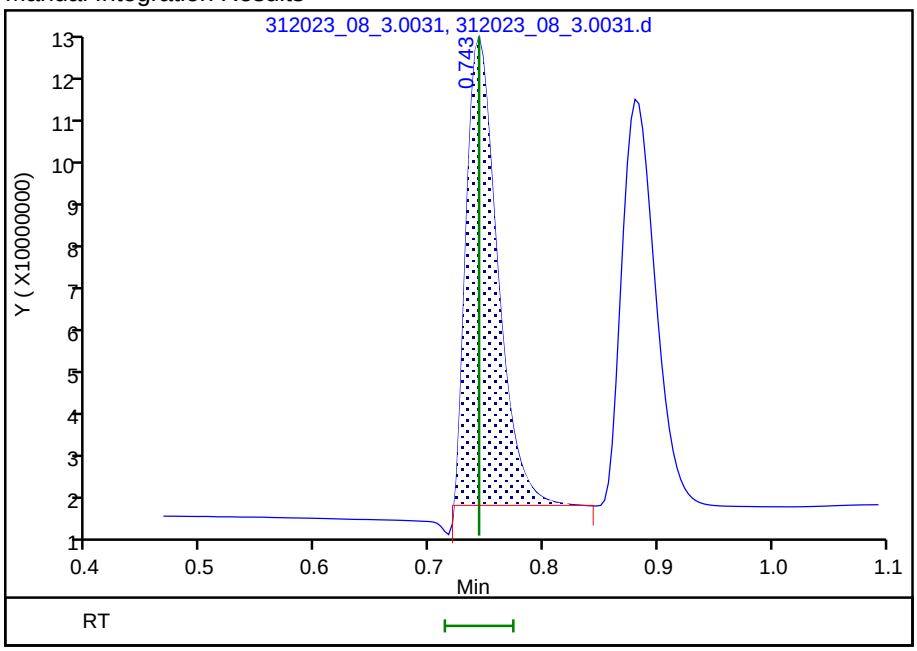
Processing Integration Results

RT: 0.74
Height: 101746799
Amount: 59.447082
Amount Units: ug/l



Manual Integration Results

RT: 0.74
Height: 97091999
Amount: 56.727446
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:44:22 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Instrument noise

Eurofins Lancaster Laboratories Environment Testing, LLC

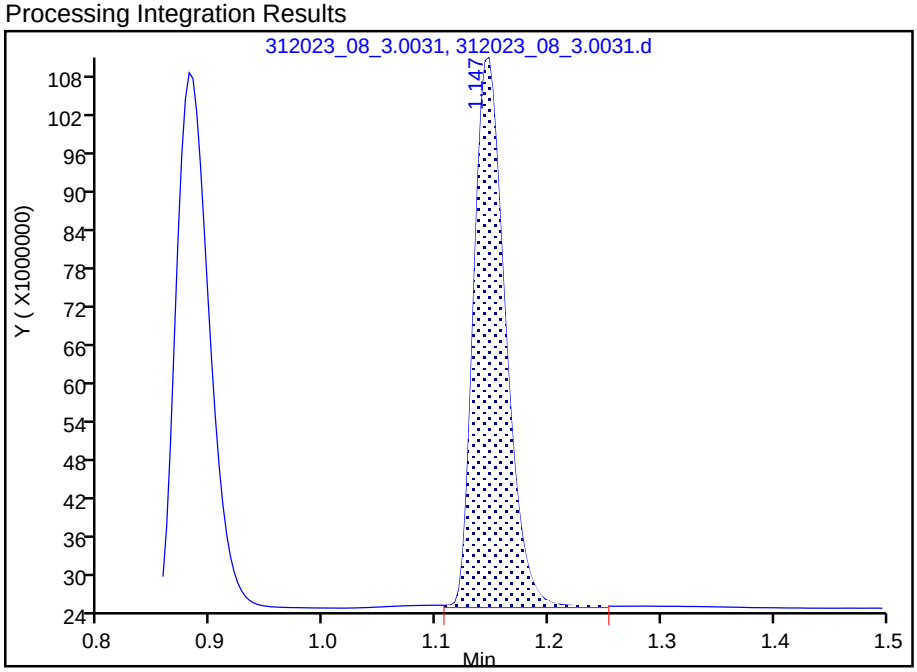
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0031.d				
Injection Date:	03-Aug-2023 18:25:00	Instrument ID:	19506		
Lims ID:	ccv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	31
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

3 Ethylene, CAS: 74-85-1

Signal: 1

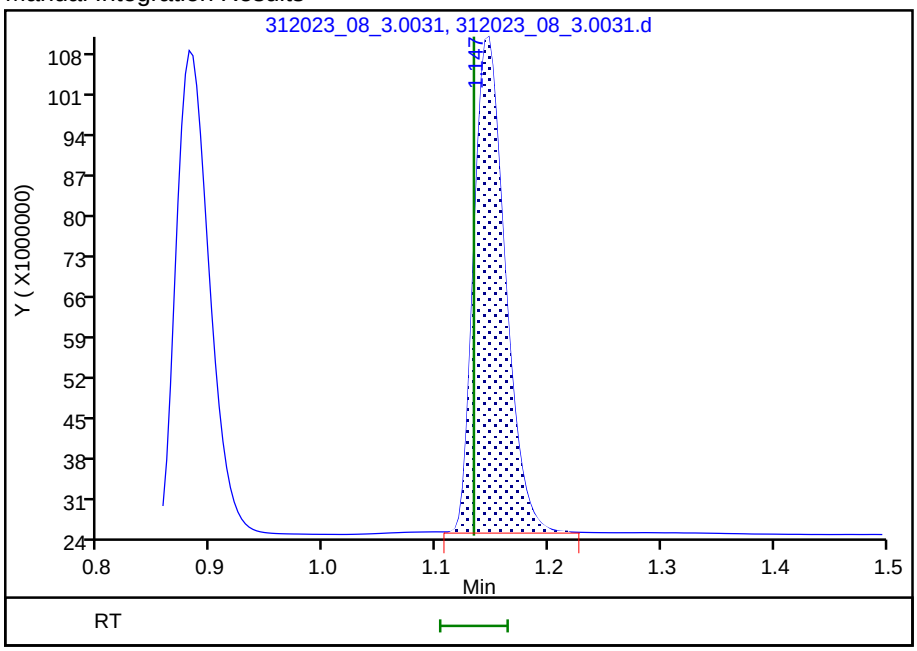
Processing Integration Results

RT: 1.15
Height: 86571831
Amount: 54.901361
Amount Units: ug/l



Manual Integration Results

RT: 1.15
Height: 86255662
Amount: 54.700856
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:43:05 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Instrument noise

Report Date: 04-Aug-2023 04:27:36 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

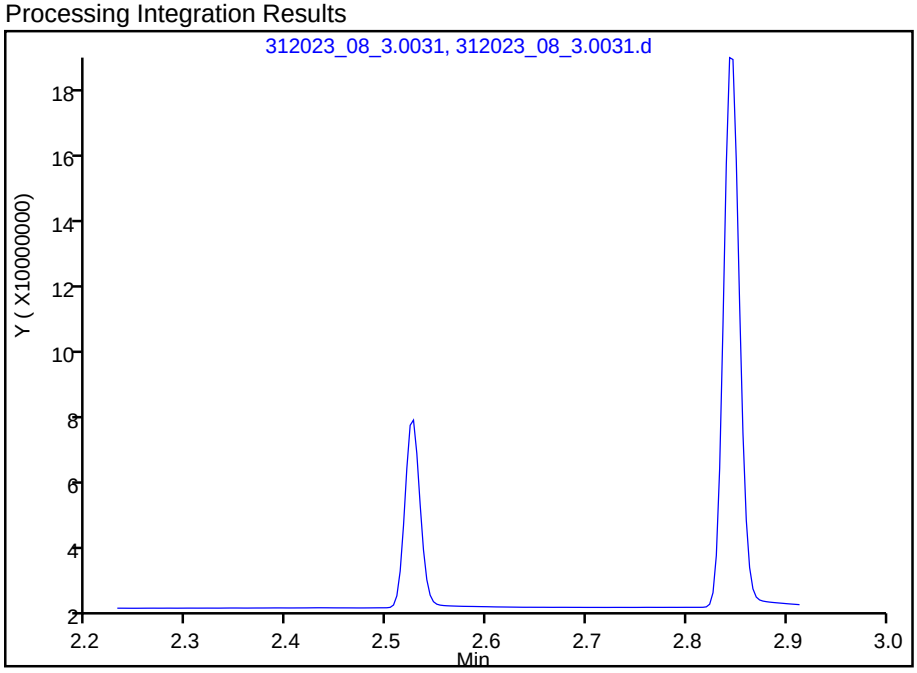
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0031.d				
Injection Date:	03-Aug-2023 18:25:00	Instrument ID:	19506		
Lims ID:	ccv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	31
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

$ 5 Propene, CAS: 115-07-1

Signal: 1

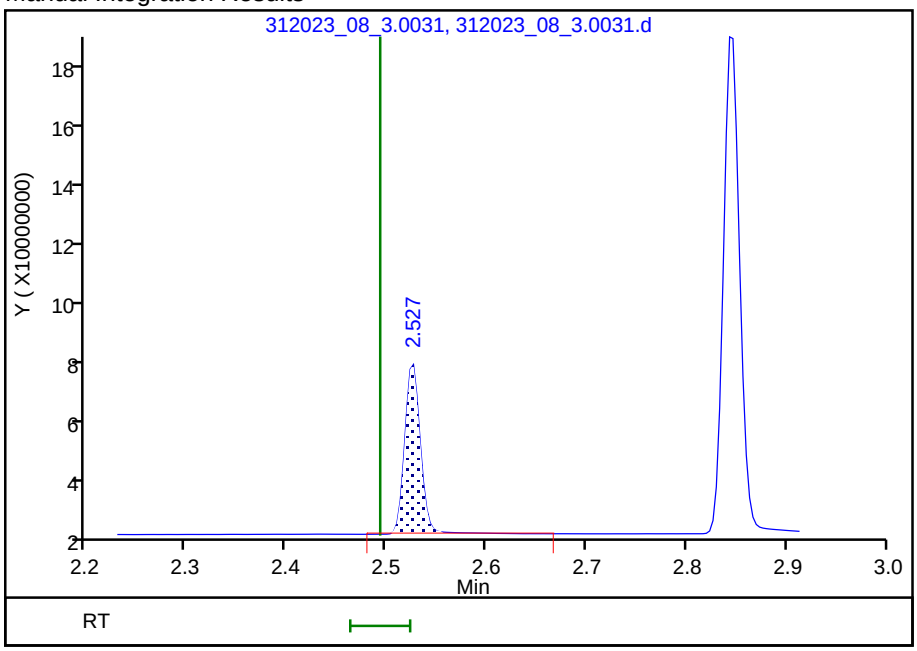
Processing Integration Results

Not Detected
Expected RT: 2.49



Manual Integration Results

RT: 2.53
Height: 53678143
Amount: 18.378187
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:41:09 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Eurofins Lancaster Laboratories Environment Testing, LLC

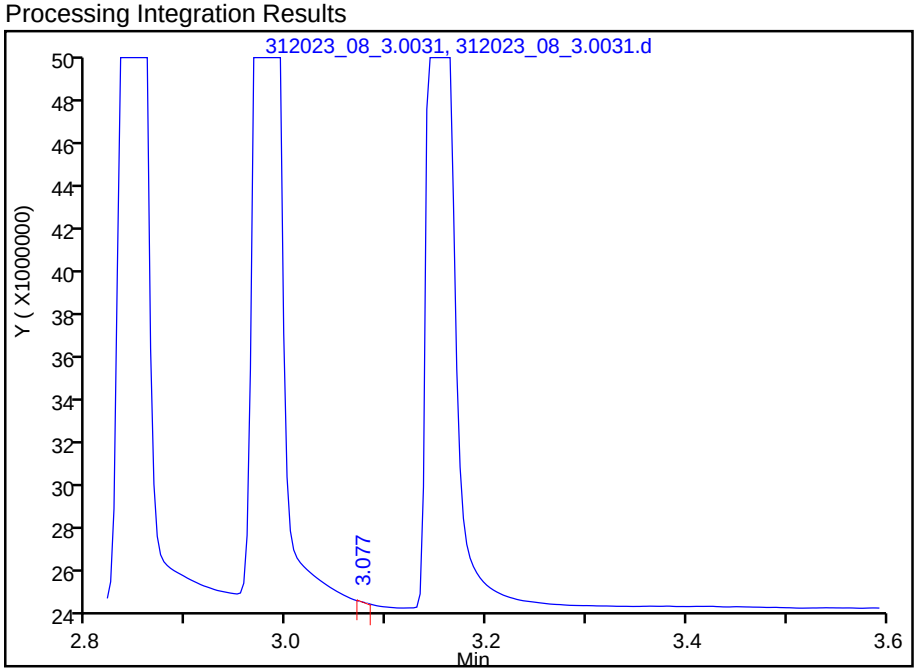
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0031.d				
Injection Date:	03-Aug-2023 18:25:00	Instrument ID:	19506		
Lims ID:	ccv				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	31
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

7 Acetylene, CAS: 74-86-2

Signal: 1

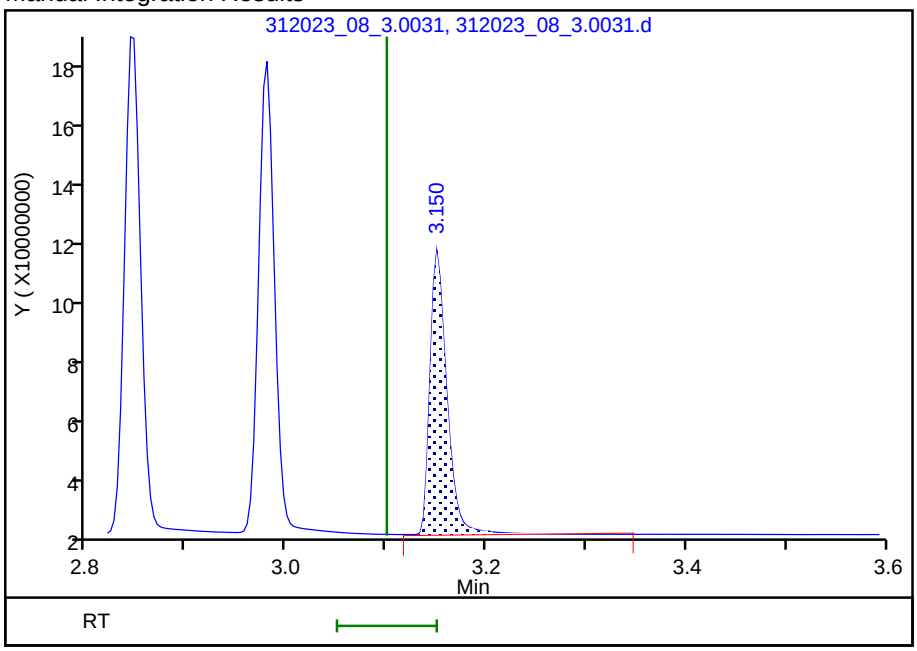
Processing Integration Results

RT: 3.08
Height: 4492
Amount: 0.002386
Amount Units: ug/l



Manual Integration Results

RT: 3.15
Height: 89898826
Amount: 47.757672
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 04:27:26 -04:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136647-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 410-404151/1-A

Matrix: Water Lab File ID: 312023_08_3.0006.d

Analysis Method: RSK-175 Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 08/03/2023 11:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: HP Plot ID: 0.53(mm)

Purge Volume: Heated Purge: (Y/N) N pH:

% Moisture: % Solids: Level: (low/med) Low

Analysis Batch No.: 403952 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-84-0	Ethane	ND		5.0	1.0
74-85-1	Ethene	ND		5.0	1.0
74-82-8	Methane	ND		5.0	3.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
115-07-1	Propene	95		43-133

Report Date: 04-Aug-2023 03:40:28 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0006.d
Lims ID: MB 410-404151/1-A
Client ID:
Sample Type: MB
Inject. Date: 03-Aug-2023 11:19:00 ALS Bottle#: 0 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 410-0090521-006
Operator ID: Instrument ID: 19506

Method: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\RSK_19506A.m
Limit Group: GCV - RSK175
Last Update: 04-Aug-2023 03:40:26 Calib Date: 10-Jul-2023 11:48:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Column 1 : HP Plot (0.53 mm) Det: AFID0
Process Host: CTX1668

First Level Reviewer: LXF2 Date: 04-Aug-2023 03:39:23

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	1 Methane	0.763	0.743	0.020	2158459H		1.26	M
	2 Ethane		0.880				ND	
	3 Ethylene		1.133				ND	
	4 Propane	1.583	1.580	0.003	54604H		0.0303	
$	5 Propene	2.503	2.493	0.010	55698627H	20.2	19.1	
	8 Propane, 2-methyl		2.827				ND	
	6 Butane		2.960				ND	
	7 Acetylene	3.097	3.100	-0.003	5665H		0.003009	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Review Flags

M - Manually Integrated

Report Date: 04-Aug-2023 03:40:28 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0006.d

Injection Date: 03-Aug-2023 11:19:00 Instrument ID: 19506

Lims ID: MB 410-404151/1-A

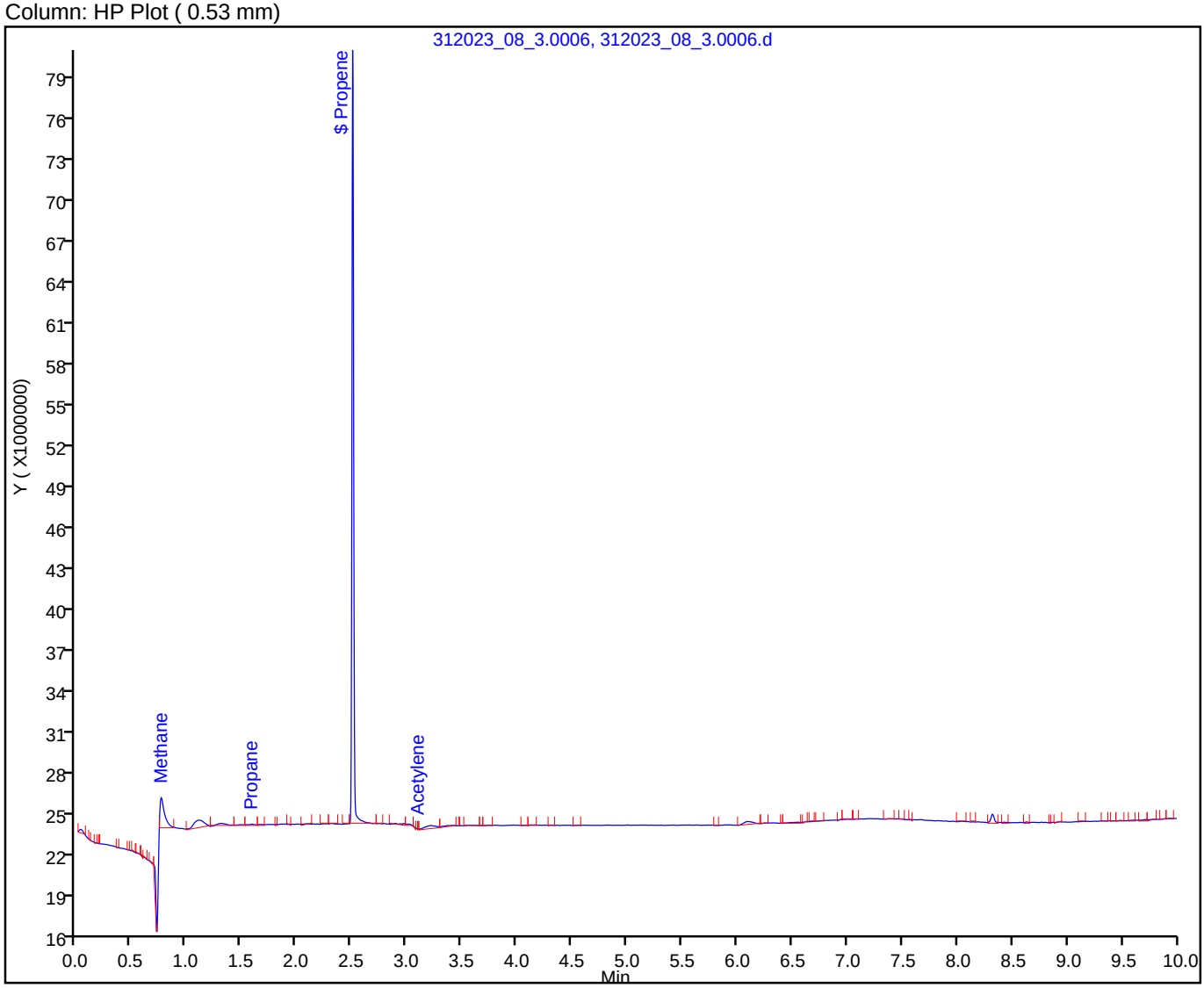
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 6

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Report Date: 04-Aug-2023 03:40:28 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0006.d				
Lims ID:	MB 410-404151/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	03-Aug-2023 11:19:00	ALS Bottle#:	0	Worklist Smp#:	6
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:					
Misc. Info.:	410-0090521-006				
Operator ID:		Instrument ID:	19506		
Method:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\RSK_19506A.m				
Limit Group:	GCV - RSK175				
Last Update:	04-Aug-2023 03:40:26	Calib Date:	10-Jul-2023 11:48:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d				
Column 1 :	HP Plot (0.53 mm)		Det: AFID0		
Process Host:	CTX1668				
First Level Reviewer: LXF2		Date:	04-Aug-2023 03:39:23		

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Propene	20.2	19.1	94.59

Eurofins Lancaster Laboratories Environment Testing, LLC

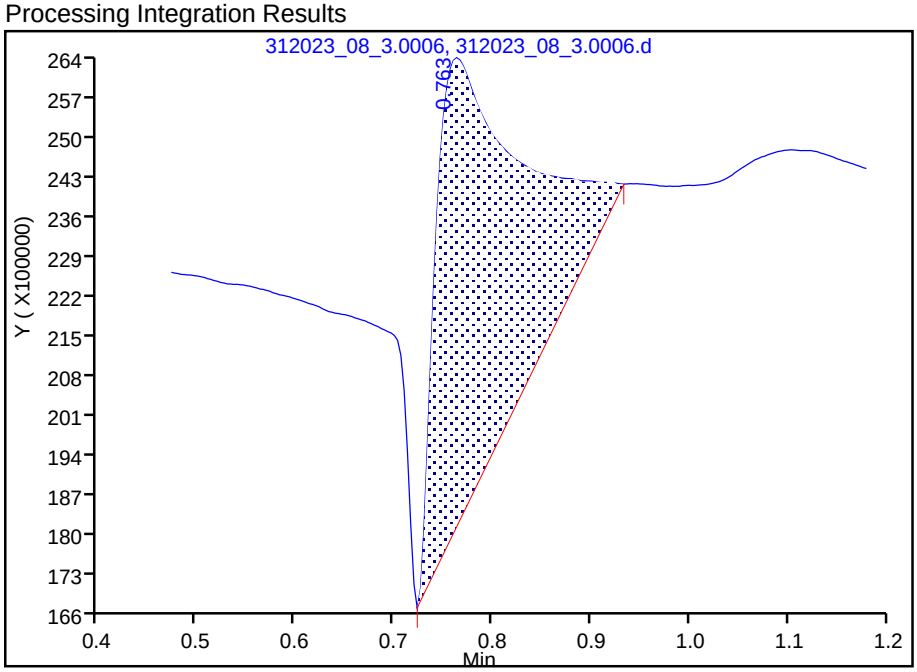
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0006.d				
Injection Date:	03-Aug-2023 11:19:00	Instrument ID:	19506		
Lims ID:	MB 410-404151/1-A				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

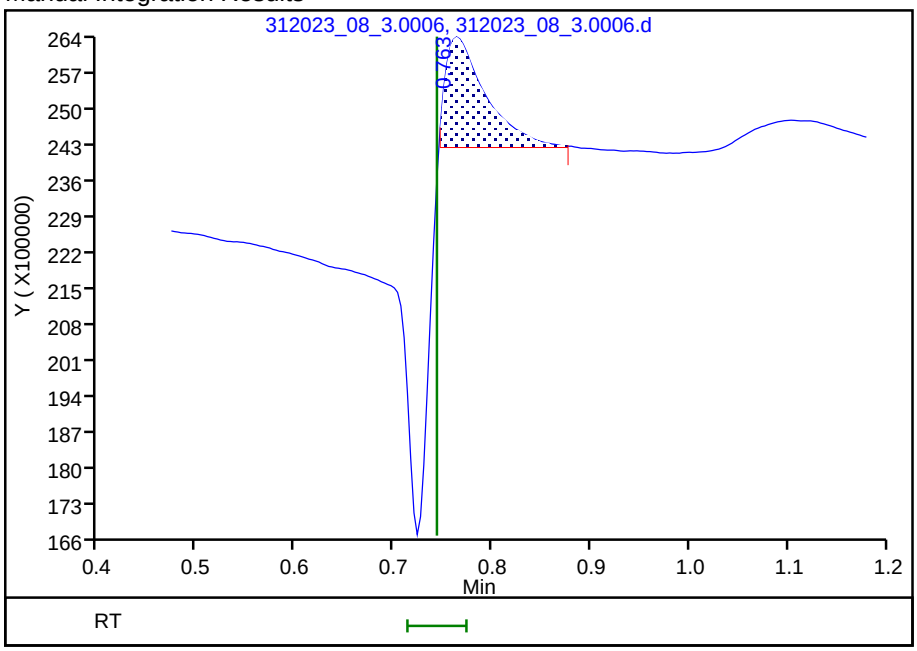
Processing Integration Results

RT: 0.76
Height: 8244206
Amount: 4.816800
Amount Units: ug/l



Manual Integration Results

RT: 0.76
Height: 2158459
Amount: 1.261112
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:39:20 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Instrument noise

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136647-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 410-404151/2-A

Matrix: Water Lab File ID: 312023_08_3.0007.d

Analysis Method: RSK-175 Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 08/03/2023 11:35

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: HP Plot ID: 0.53(mm)

Purge Volume: Heated Purge: (Y/N) N pH:

% Moisture: % Solids: Level: (low/med) Low

Analysis Batch No.: 403952 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-84-0	Ethane	56.9		5.0	1.0
74-85-1	Ethene	54.0		5.0	1.0
74-82-8	Methane	56.7		5.0	3.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
115-07-1	Propene	95		43-133

Report Date: 04-Aug-2023 03:40:28 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0007.d
Lims ID: LCS 410-404151/2-A
Client ID:
Sample Type: LCS
Inject. Date: 03-Aug-2023 11:35:00 ALS Bottle#: 0 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 410-0090521-007
Operator ID: Instrument ID: 19506

Method: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\RSK_19506A.m
Limit Group: GCV - RSK175
Last Update: 04-Aug-2023 03:40:26 Calib Date: 10-Jul-2023 11:48:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Column 1 : HP Plot (0.53 mm) Det: AFID0
Process Host: CTX1668

First Level Reviewer: LXF2 Date: 04-Aug-2023 03:39:41

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	1 Methane	0.743	0.743	0.000	97001650H	59.8	56.7	M
	2 Ethane	0.880	0.880	0.000	82511805H	61.7	56.9	
	3 Ethylene	1.137	1.133	0.004	85172160H	58.3	54.0	M
	4 Propane	1.583	1.580	0.003	102069483H	62.4	56.7	
$	5 Propene	2.507	2.493	0.014	55745463H	20.2	19.1	
	8 Propane, 2-methyl	2.833	2.827	0.006	143205457H	62.3	58.1	
	6 Butane	2.967	2.960	0.007	131907172H	61.3	57.6	
	7 Acetylene	3.117	3.100	0.017	88610730H	52.1	47.1	

QC Flag Legend

Processing Flags
H - Response Measured by Height
Review Flags
M - Manually Integrated

Report Date: 04-Aug-2023 03:40:28 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0007.d

Injection Date: 03-Aug-2023 11:35:00 Instrument ID: 19506

Lims ID: LCS 410-404151/2-A

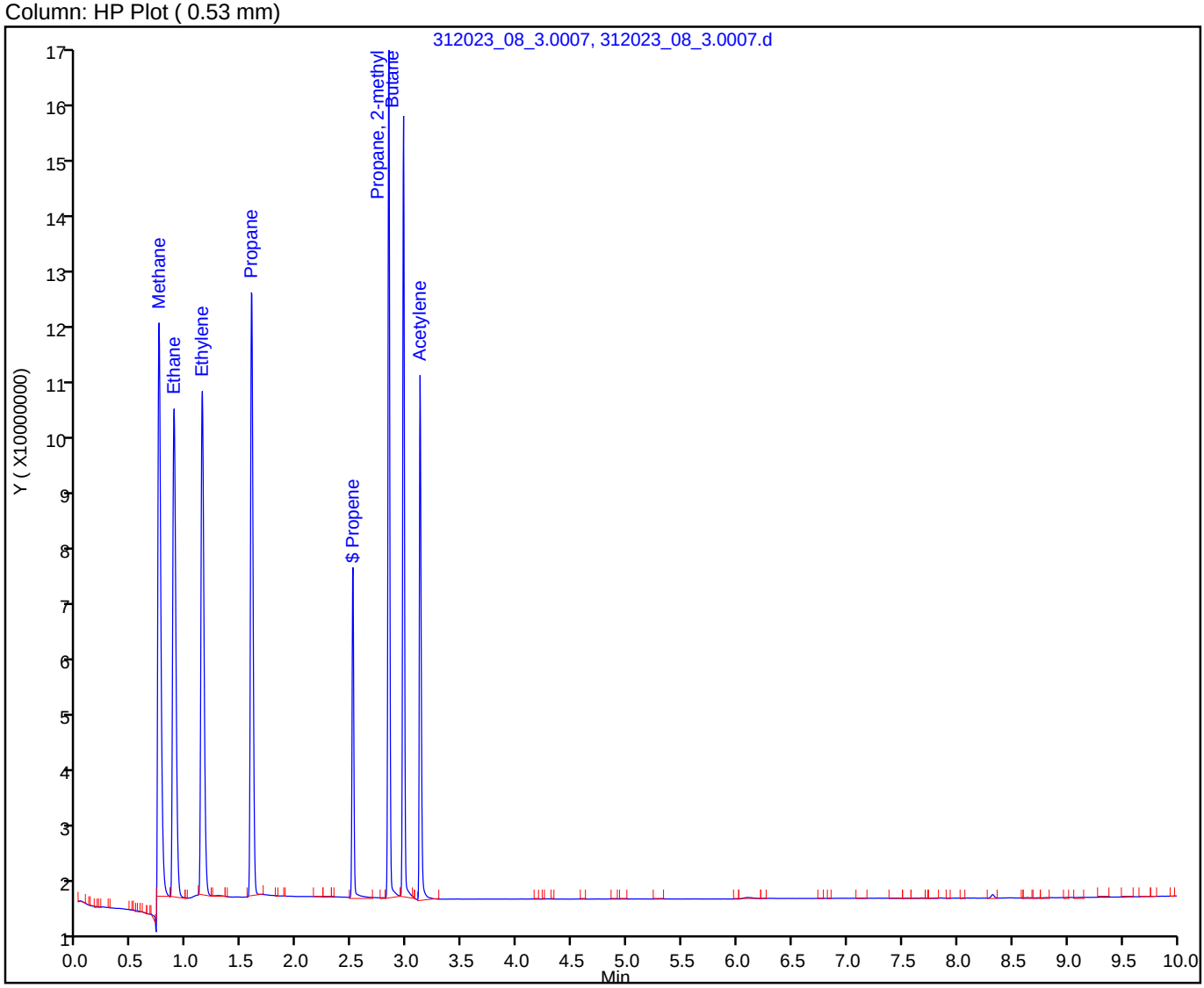
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 7

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Report Date: 04-Aug-2023 03:40:28 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0007.d				
Lims ID:	LCS 410-404151/2-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	03-Aug-2023 11:35:00	ALS Bottle#:	0	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:					
Misc. Info.:	410-0090521-007				
Operator ID:		Instrument ID:	19506		
Method:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\RSK_19506A.m				
Limit Group:	GCV - RSK175				
Last Update:	04-Aug-2023 03:40:26	Calib Date:	10-Jul-2023 11:48:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d				
Column 1 :	HP Plot (0.53 mm)		Det: AFID0		
Process Host:	CTX1668				
First Level Reviewer: LXF2		Date:	04-Aug-2023 03:39:41		

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Propene	20.2	19.1	94.67

Eurofins Lancaster Laboratories Environment Testing, LLC

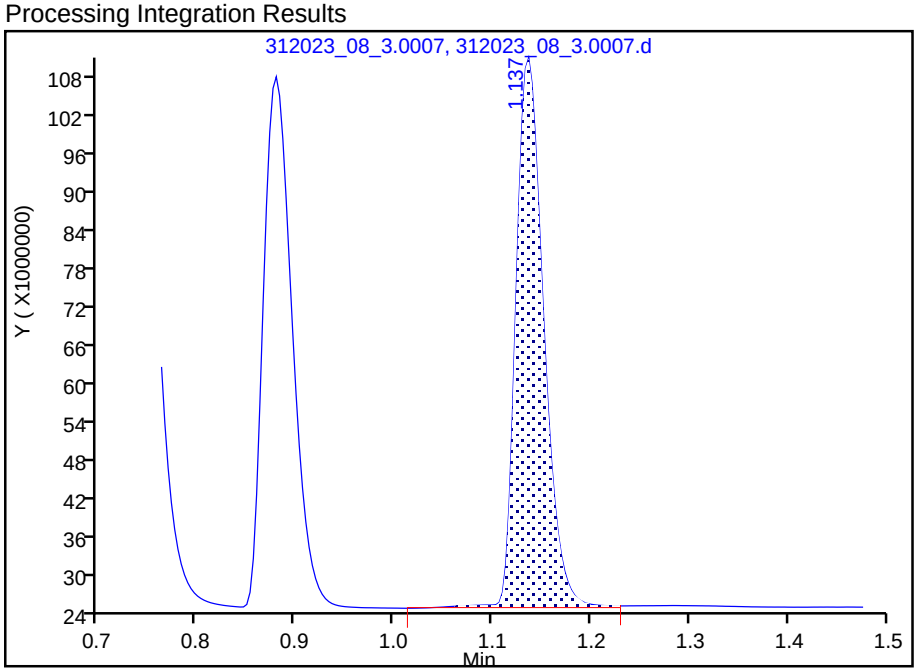
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0007.d				
Injection Date:	03-Aug-2023 11:35:00	Instrument ID:	19506		
Lims ID:	LCS 410-404151/2-A				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

3 Ethylene, CAS: 74-85-1

Signal: 1

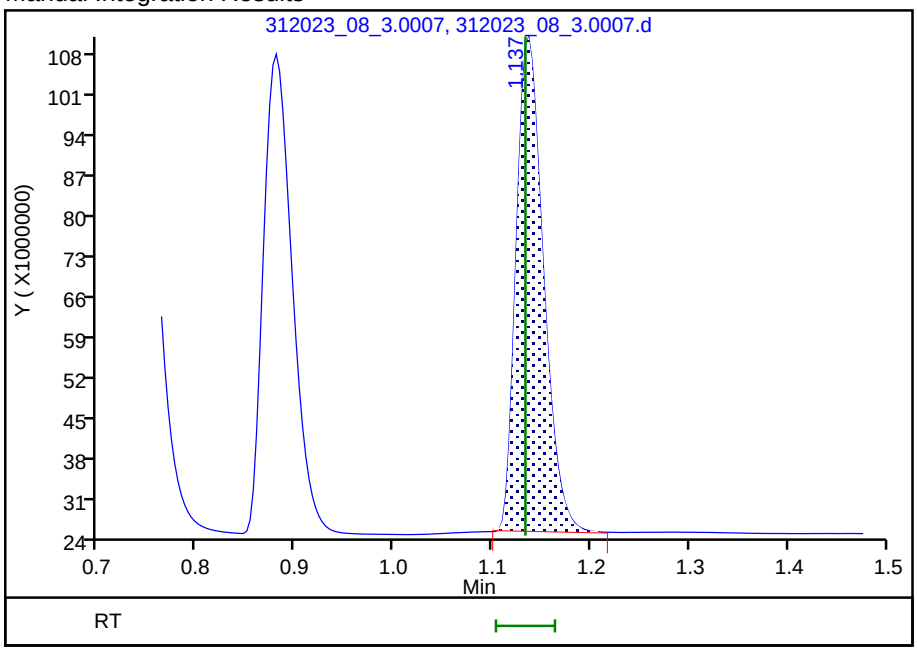
Processing Integration Results

RT: 1.14
Height: 85579262
Amount: 54.271903
Amount Units: ug/l



Manual Integration Results

RT: 1.14
Height: 85172160
Amount: 54.013730
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:39:30 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Instrument noise

Report Date: 04-Aug-2023 03:40:28 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

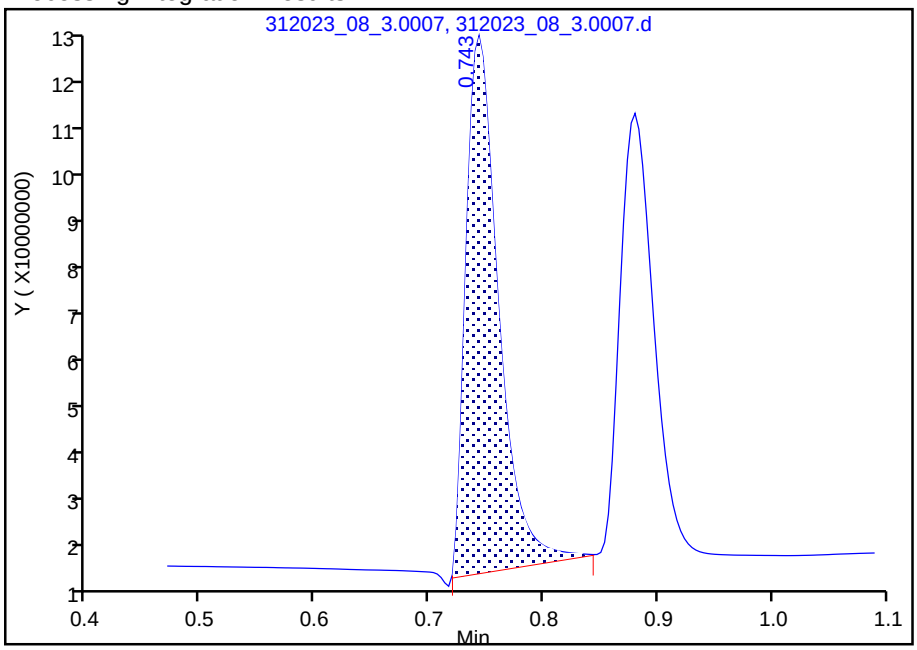
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0007.d				
Injection Date:	03-Aug-2023 11:35:00	Instrument ID:	19506		
Lims ID:	LCS 410-404151/2-A				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

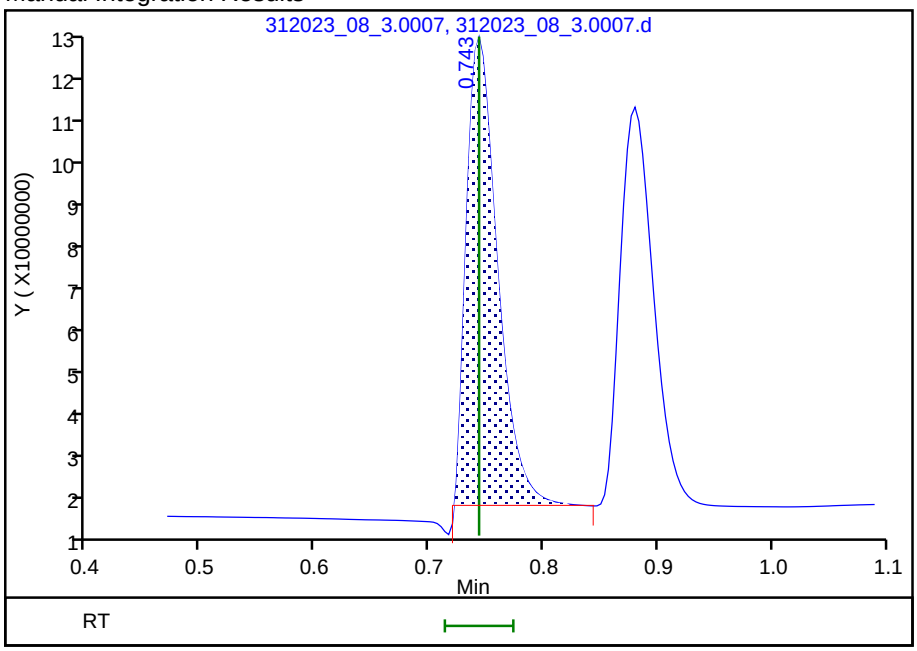
Processing Integration Results

RT: 0.74
Height: 100478688
Amount: 58.706169
Amount Units: ug/l



Manual Integration Results

RT: 0.74
Height: 97001650
Amount: 56.674658
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:39:39 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Instrument noise

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136647-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 410-404151/3-A

Matrix: Water Lab File ID: 312023_08_3.0008.d

Analysis Method: RSK-175 Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 08/03/2023 11:50

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: HP Plot ID: 0.53(mm)

Purge Volume: Heated Purge: (Y/N) N pH:

% Moisture: % Solids: Level: (low/med) Low

Analysis Batch No.: 403952 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-84-0	Ethane	56.4		5.0	1.0
74-85-1	Ethene	53.6		5.0	1.0
74-82-8	Methane	56.0		5.0	3.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
115-07-1	Propene	95		43-133

Report Date: 04-Aug-2023 03:40:27 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0008.d
Lims ID: LCSD 410-404151/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 03-Aug-2023 11:50:00 ALS Bottle#: 0 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: 410-0090521-008
Operator ID: Instrument ID: 19506

Method: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\RSK_19506A.m
Limit Group: GCV - RSK175
Last Update: 04-Aug-2023 03:40:26 Calib Date: 10-Jul-2023 11:48:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d

Column 1 : HP Plot (0.53 mm) Det: AFID0
Process Host: CTX1668

First Level Reviewer: LXF2 Date: 04-Aug-2023 03:39:57

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	1 Methane	0.743	0.743	0.000	95767515H	59.8	56.0	M
	2 Ethane	0.880	0.880	0.000	81790804H	61.7	56.4	
	3 Ethylene	1.137	1.133	0.004	84447413H	58.3	53.6	M
	4 Propane	1.587	1.580	0.007	102527313H	62.4	56.9	
$	5 Propene	2.507	2.493	0.014	55806621H	20.2	19.1	
	8 Propane, 2-methyl	2.833	2.827	0.006	145983612H	62.3	59.2	
	6 Butane	2.967	2.960	0.007	134948343H	61.3	58.9	
	7 Acetylene	3.120	3.100	0.020	87643106H	52.1	46.6	

QC Flag Legend

Processing Flags
H - Response Measured by Height
Review Flags
M - Manually Integrated

Report Date: 04-Aug-2023 03:40:27 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0008.d

Injection Date: 03-Aug-2023 11:50:00 Instrument ID: 19506

Lims ID: LCSD 410-404151/3-A

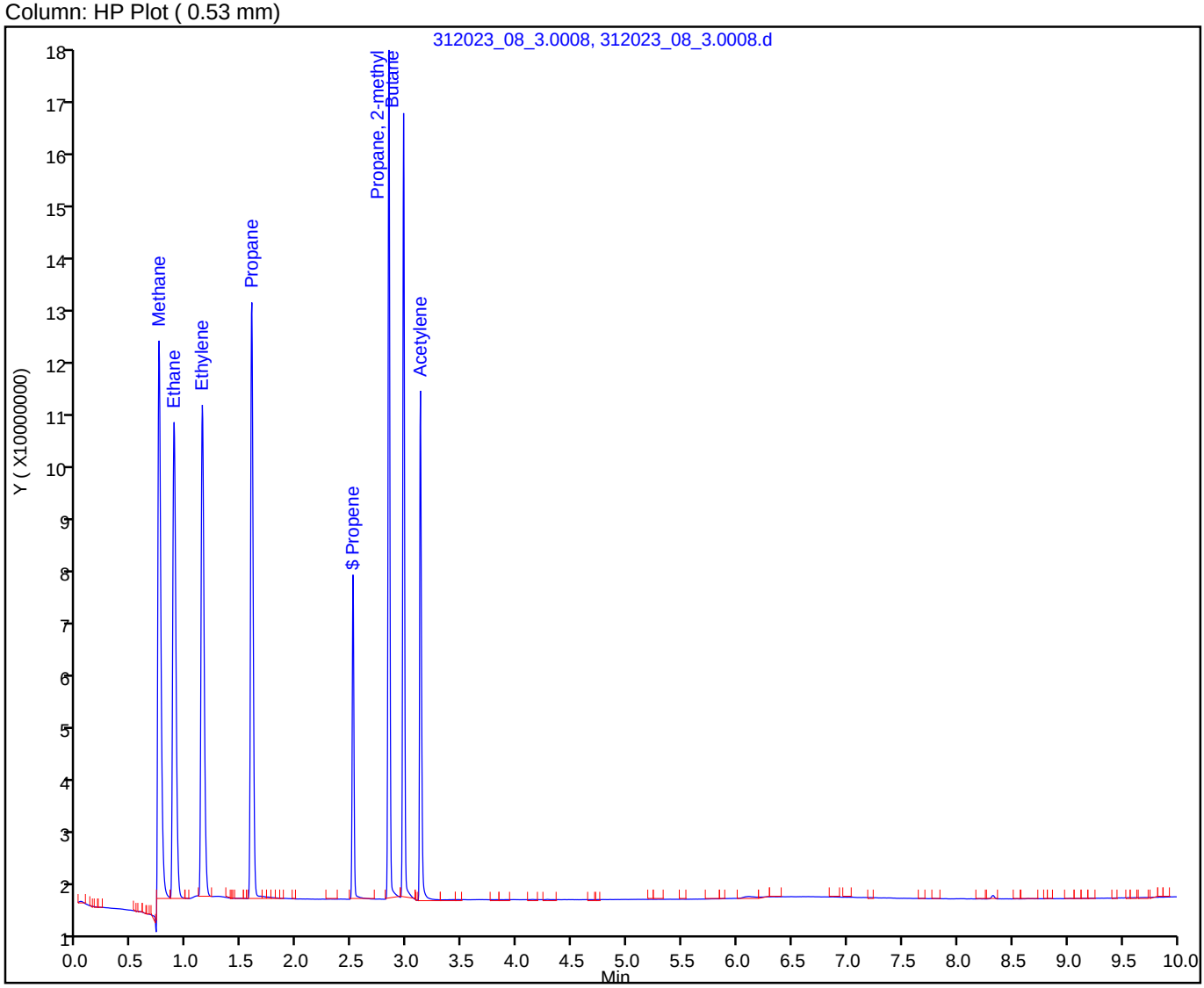
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 8

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: RSK_19506A Limit Group: GCV - RSK175

Column: HP Plot (0.53 mm)



Report Date: 04-Aug-2023 03:40:27 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0008.d				
Lims ID:	LCSD 410-404151/3-A				
Client ID:					
Sample Type:	LCSD				
Inject. Date:	03-Aug-2023 11:50:00	ALS Bottle#:	0	Worklist Smp#:	8
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:					
Misc. Info.:	410-0090521-008				
Operator ID:		Instrument ID:	19506		
Method:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\RSK_19506A.m				
Limit Group:	GCV - RSK175				
Last Update:	04-Aug-2023 03:40:26	Calib Date:	10-Jul-2023 11:48:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19506\20230710-88528.b\312023_07_10.0008.d				
Column 1 :	HP Plot (0.53 mm)		Det: AFID0		
Process Host:	CTX1668				
First Level Reviewer: LXF2		Date:	04-Aug-2023 03:39:57		

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Propene	20.2	19.1	94.78

Report Date: 04-Aug-2023 03:40:27 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

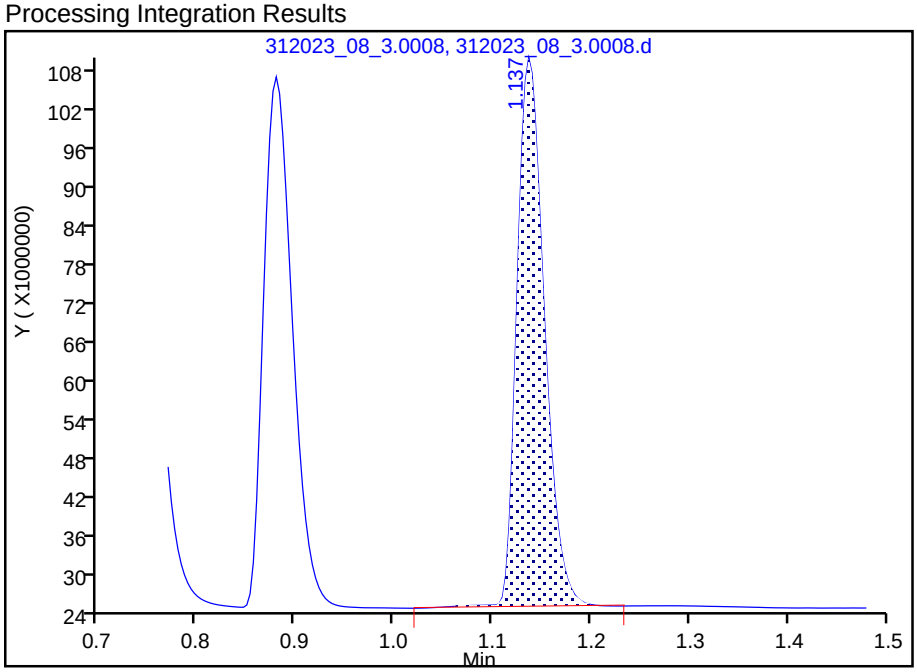
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0008.d				
Injection Date:	03-Aug-2023 11:50:00	Instrument ID:	19506		
Lims ID:	LCSD 410-404151/3-A				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	8
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

3 Ethylene, CAS: 74-85-1

Signal: 1

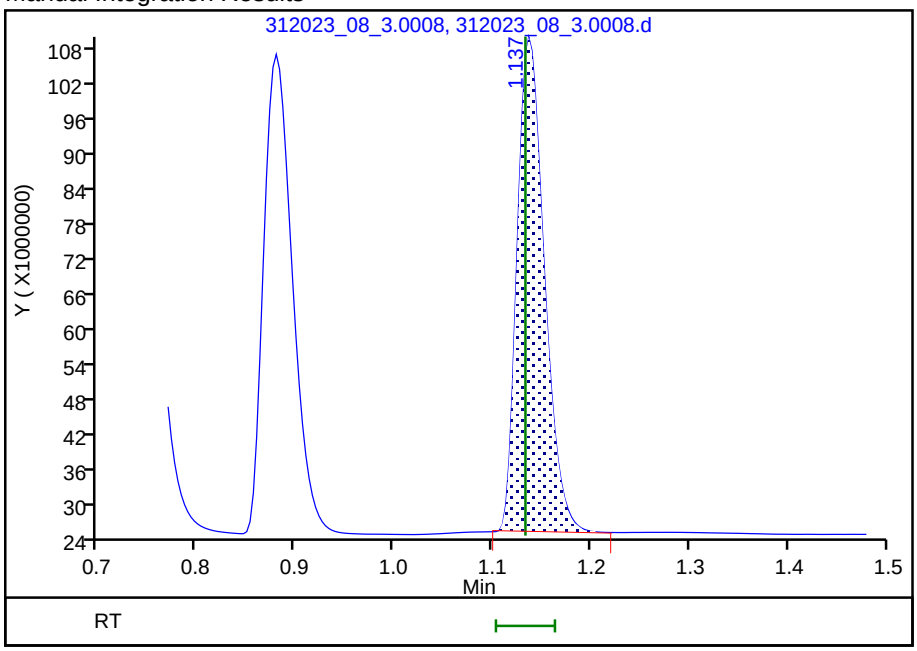
Processing Integration Results

RT: 1.14
Height: 84698507
Amount: 53.713353
Amount Units: ug/l



Manual Integration Results

RT: 1.14
Height: 84447413
Amount: 53.554117
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:39:49 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Instrument noise

Eurofins Lancaster Laboratories Environment Testing, LLC

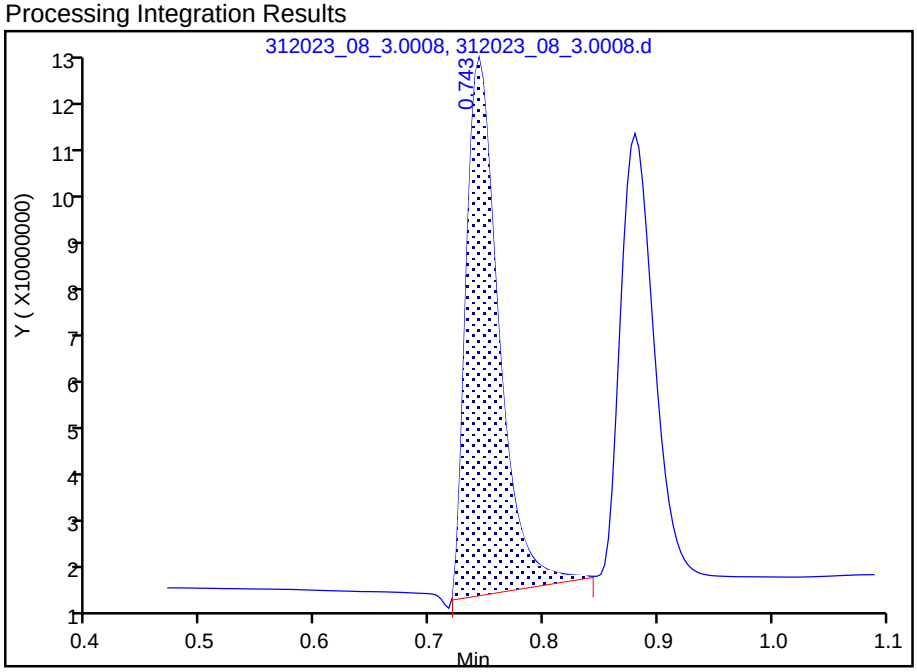
Data File:	\\chromfs\Lancaster\ChromData\19506\20230803-90521.b\312023_08_3.0008.d				
Injection Date:	03-Aug-2023 11:50:00	Instrument ID:	19506		
Lims ID:	LCSD 410-404151/3-A				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	8
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	RSK_19506A	Limit Group:	GCV - RSK175		
Column:	HP Plot (0.53 mm)	Detector	AFID0		

1 Methane, CAS: 74-82-8

Signal: 1

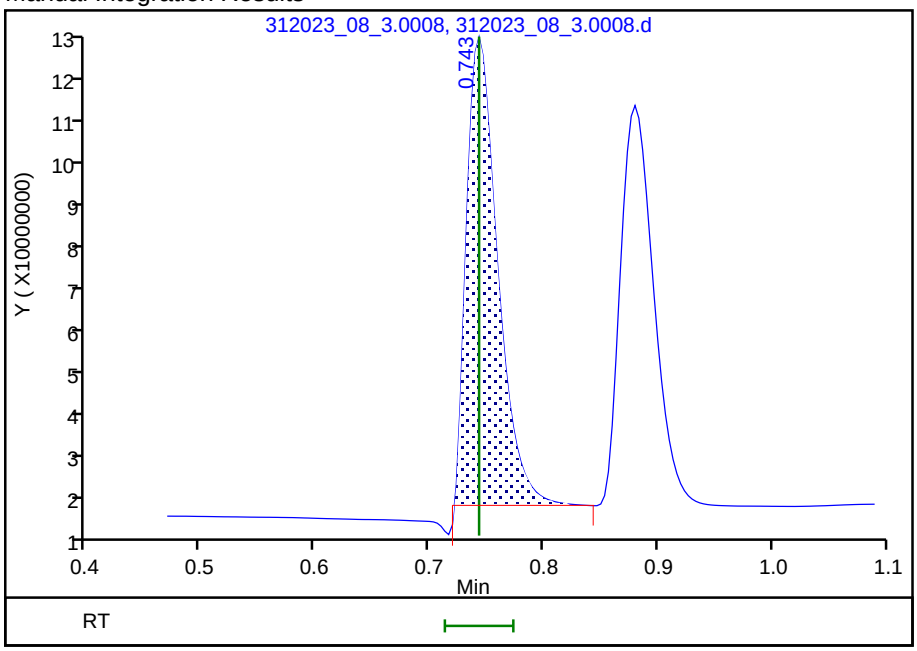
Processing Integration Results

RT: 0.74
Height: 99196203
Amount: 57.956858
Amount Units: ug/l



Manual Integration Results

RT: 0.74
Height: 95767515
Amount: 55.953596
Amount Units: ug/l



Reviewer: LXF2, 04-Aug-2023 03:39:56 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Instrument noise

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Instrument ID: 19506 Start Date: 07/10/2023 10:15

Analysis Batch Number: 395069 End Date: 07/10/2023 12:49

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
PIBLK 410-395069/2		07/10/2023 10:15	1		HP Plot 0.53(mm)
IC 410-395069/3		07/10/2023 10:31	1	312023_07_10.0003.d	HP Plot 0.53(mm)
IC 410-395069/4		07/10/2023 10:46	1	312023_07_10.0004.d	HP Plot 0.53(mm)
ICRT 410-395069/5		07/10/2023 11:02	1	312023_07_10.0005.d	HP Plot 0.53(mm)
IC 410-395069/6		07/10/2023 11:17	1	312023_07_10.0006.d	HP Plot 0.53(mm)
IC 410-395069/7		07/10/2023 11:32	1	312023_07_10.0007.d	HP Plot 0.53(mm)
IC 410-395069/8		07/10/2023 11:48	1	312023_07_10.0008.d	HP Plot 0.53(mm)
PIBLK 410-395069/9		07/10/2023 12:03	1		HP Plot 0.53(mm)
ICVL 410-395069/10		07/10/2023 12:19	1		HP Plot 0.53(mm)
ICVL 410-395069/11		07/10/2023 12:34	1		HP Plot 0.53(mm)
ICV 410-395069/12		07/10/2023 12:49	1	312023_07_10.0012.d	HP Plot 0.53(mm)

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Instrument ID: 19506 Start Date: 08/03/2023 10:07

Analysis Batch Number: 403952 End Date: 08/03/2023 22:39

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 410-403952/2		08/03/2023 10:07	1	312023_08_3.0002.d	HP Plot 0.53(mm)
ICVL 410-403952/3		08/03/2023 10:33	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 10:48	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 11:04	1		HP Plot 0.53(mm)
MB 410-404151/1-A		08/03/2023 11:19	1	312023_08_3.0006.d	HP Plot 0.53(mm)
LCS 410-404151/2-A		08/03/2023 11:35	1	312023_08_3.0007.d	HP Plot 0.53(mm)
LCSD 410-404151/3-A		08/03/2023 11:50	1	312023_08_3.0008.d	HP Plot 0.53(mm)
CCV 410-403952/9		08/03/2023 12:05	1	312023_08_3.0009.d	HP Plot 0.53(mm)
ZZZZZ		08/03/2023 12:59	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 13:14	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 13:30	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 13:45	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 14:01	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 14:16	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 14:32	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 14:47	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 15:03	1		HP Plot 0.53(mm)
CCV 410-403952/20		08/03/2023 15:34	1	312023_08_3.0020.d	HP Plot 0.53(mm)
ZZZZZ		08/03/2023 15:49	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 16:05	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 16:20	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 16:36	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 16:51	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 17:07	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 17:23	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 17:38	1		HP Plot 0.53(mm)
410-136647-1	E23-03408-001_MW-13D-072723	08/03/2023 17:54	1	312023_08_3.0029.d	HP Plot 0.53(mm)
CCV 410-403952/31		08/03/2023 18:25	1	312023_08_3.0031.d	HP Plot 0.53(mm)
ZZZZZ		08/03/2023 18:40	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 19:01	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 19:16	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 19:32	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 19:47	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 20:03	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 20:19	1		HP Plot 0.53(mm)
CCV 410-403952/40		08/03/2023 20:50	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 21:05	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 21:21	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 21:37	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 21:52	1		HP Plot 0.53(mm)
ZZZZZ		08/03/2023 22:08	1		HP Plot 0.53(mm)

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Instrument ID: 19506 Start Date: 08/03/2023 10:07

Analysis Batch Number: 403952 End Date: 08/03/2023 22:39

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 410-403952/47		08/03/2023 22:39	1		HP Plot 0.53(mm)

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136647-1

SDG No.:

Batch Number: 395069 Batch Start Date: 07/10/23 10:15 Batch Analyst: Kennedy, Johanna C

Batch Method: RSK-175 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	EPH_HSSMS 00008	EPH_HSSMS 00011	EPH_HSSSS 00011	
IC 410-395069/3		RSK-175		5 mL	5 mL		5 uL	5 uL	
IC 410-395069/4		RSK-175		5 mL	5 mL		15 uL	15 uL	
ICRT 410-395069/5		RSK-175		5 mL	5 mL		60 uL	60 uL	
IC 410-395069/6		RSK-175		5 mL	5 mL		100 uL	100 uL	
IC 410-395069/7		RSK-175		5 mL	5 mL		150 uL	150 uL	
IC 410-395069/8		RSK-175		5 mL	5 mL		500 uL	500 uL	
ICV 410-395069/12		RSK-175		5 mL	5 mL	60 uL		60 uL	

Batch Notes	
Henry Law Calculation Spreadsheet	yes

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.

INTEGRATED ANALYTICAL LABORATORIES, LLC

GC VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136647-1

SDG No.:

Batch Number: 404151 | Batch Start Date: 08/03/23 10:40 | Batch Analyst: Omorogbe, Malachi

Batch Method: RSK-175 | Batch End Date: 08/03/23 15:12

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	Headspace	EPH_HSSMS 00011	EPH_HSSSS 00011
MB 410-404151/1		RSK-175, RSK-175			5 mL	5 mL			60 uL
LCS 410-404151/2		RSK-175, RSK-175			5 mL	5 mL		60 uL	60 uL
LCSD 410-404151/3		RSK-175, RSK-175			5 mL	5 mL		60 uL	60 uL
410-136647-A-1	E23-03408-001_MW-13D-072723	RSK-175, RSK-175	T	<2 SU	5 mL	5 mL	No		60 uL

Batch Notes	
Pipette/Syringe/Dispenser ID	7105
pH Indicator ID	10BDH0431

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.

Method 8015D VFA

Volatile Fatty Acids-Direct Aqueous Injection(HPLC) by Method 8015D

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-136647-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Supelcosil P ID: 4.6 (mm)

Client Sample ID	Lab Sample ID	FumAcd1 #
E23-03408-001_MW-1 3D-072723	410-136647-1	102
E23-03408-001_MW-1 3D-072723	410-136647-1	108
	MB 410-404256/1-A	100
	MB 410-404256/1-A	102
	LCS 410-404256/2-A	97
	LCS 410-404256/2-A	103
	LCS 410-404256/4-A	100
	LCS 410-404256/4-A	107
	LCSD 410-404256/3-A	100
	LCSD 410-404256/3-A	106

	QC LIMITS
FumAcd = Fumaric Acid	68-139

Column to be used to flag recovery values

FORM II 8015D VFA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136647-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 11ORGC23193008.008.d

Lab ID: LCS 410-404256/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Isovaleric acid	100000	107000	107	70-115	
Succinic Acid	50000	49900	100	65-142	
Tartaric Acid	50000	51100	102	75-115	
Valeric acid	100000	110000	110	57-126	

Column to be used to flag recovery and RPD values

FORM III 8015D VFA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136647-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 48ORGA23186009.008.d

Lab ID: LCS 410-404256/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Isovaleric acid	100000	98300	98	70-115	
Succinic Acid	50000	48100	96	65-142	
Tartaric Acid	50000	51400	103	75-115	
Valeric acid	100000	101000	101	57-126	

Column to be used to flag recovery and RPD values

FORM III 8015D VFA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136647-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 11ORGC23193008.010.d

Lab ID: LCS 410-404256/4-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Propionic acid	101000	108000	107	42-145	

Column to be used to flag recovery and RPD values

FORM III 8015D VFA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136647-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 48ORGA23186009.010.d

Lab ID: LCS 410-404256/4-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetic acid	101000	104000	104	77-123	
Butyric acid	101000	103000	102	73-134	
Citric Acid	50000	50200	100	77-123	
Formic-acid	101000	105000	104	73-129	
L-Lactic Acid	50200	39700	79	71-115	
Oxalic Acid	12600	11300	90	59-138	
Pyruvic Acid	12400	13000	105	74-115	
Quinic Acid	50300	46800	93	85-115	

Column to be used to flag recovery and RPD values

FORM III 8015D VFA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136647-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 11ORGC23193008.009.d

Lab ID: LCSD 410-404256/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Isovaleric acid	100000	108000	107	1	30	70-115	
Succinic Acid	50000	50900	102	2	30	65-142	
Tartaric Acid	50000	51800	104	1	30	75-115	
Valeric acid	100000	112000	111	1	30	57-126	

Column to be used to flag recovery and RPD values

FORM III 8015D VFA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136647-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 48ORGA23186009.009.d

Lab ID: LCSD 410-404256/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Isovaleric acid	100000	99800	99	1	30	70-115	
Succinic Acid	50000	48500	97	1	30	65-142	
Tartaric Acid	50000	52000	104	1	30	75-115	
Valeric acid	100000	103000	102	1	30	57-126	

Column to be used to flag recovery and RPD values

FORM III 8015D VFA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136647-1

SDG No.:

Lab Sample ID: MB 410-404256/1-A

Matrix: Water Date Extracted: 08/03/2023 17:57

Lab File ID:(1) 11ORGC23193008.007.d Lab File ID:(2)

Date Analyzed:(1) 08/04/2023 16:55 Date Analyzed:(2)

Instrument ID:(1) 10136 Instrument ID:(2)

GC Column:(1) Supelcosil PA ID: 4.6(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 410-404256/2-A	08/04/2023 17:26	
	LCSD 410-404256/3-A	08/04/2023 17:57	
	LCS 410-404256/4-A	08/04/2023 18:28	
E23-03408-001_MW-13D-072723	410-136647-1	08/05/2023 02:15	

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136647-1

SDG No.:

Lab Sample ID: MB 410-404256/1-A

Matrix: Water Date Extracted: 08/03/2023 17:57

Lab File ID:(1) 48ORGA23186009.007.d Lab File ID:(2)

Date Analyzed:(1) 08/04/2023 18:09 Date Analyzed:(2)

Instrument ID:(1) 6854A Instrument ID:(2)

GC Column:(1) Supelcogel ID: 4.6(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 410-404256/2-A	08/04/2023 18:52	
	LCSD 410-404256/3-A	08/04/2023 19:35	
	LCS 410-404256/4-A	08/04/2023 20:18	
E23-03408-001_MW-13D-072723	410-136647-1	08/05/2023 14:12	

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136647-1

SDG No.:

Client Sample ID: E23-03408-001_MW-13D-072723
Lab Sample ID: 410-136647-1

Matrix: Water
Lab File ID: 11ORGC23193008.025.d

Analysis Method: 8015D VFA
Date Collected: 07/27/2023 12:59

Extraction Method: 8015 VFA
Date Extracted: 08/03/2023 17:58

Sample wt/vol: 1(mL)
Date Analyzed: 08/05/2023 02:15

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 50(uL)
GC Column: Supelcosil PAH ID: 4.6(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 404643
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-09-4	Propionic acid	ND		10000	2000

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-17-8	Fumaric Acid	102		68-139

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.025.d				
Lims ID:	410-136647-C-1-A				
Client ID:	E23-03408-001_MW-13D-072723				
Sample Type:	Client				
Inject. Date:	05-Aug-2023 02:15:00	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	410-136647-C-1-A				
Operator ID:	24470	Instrument ID:	10136		
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:08:24	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
	1 Oxalic Acid	3.746	3.725	0.021	16191065H	11.7	
$	10 Fumaric Acid	10.633	10.600	0.033	6328715H	0.5013	
	11 Propionic acid	12.950	12.913	0.038	158602H	1.39	
	12 n-Butyric Acid	14.654	14.579	0.075	1024923H	7.91	
	14 Isovaleric acid	15.788	15.813	-0.024	3106729H	14.2	
	15 Valeric acid	16.054	15.983	0.071	43413H	0.4248	

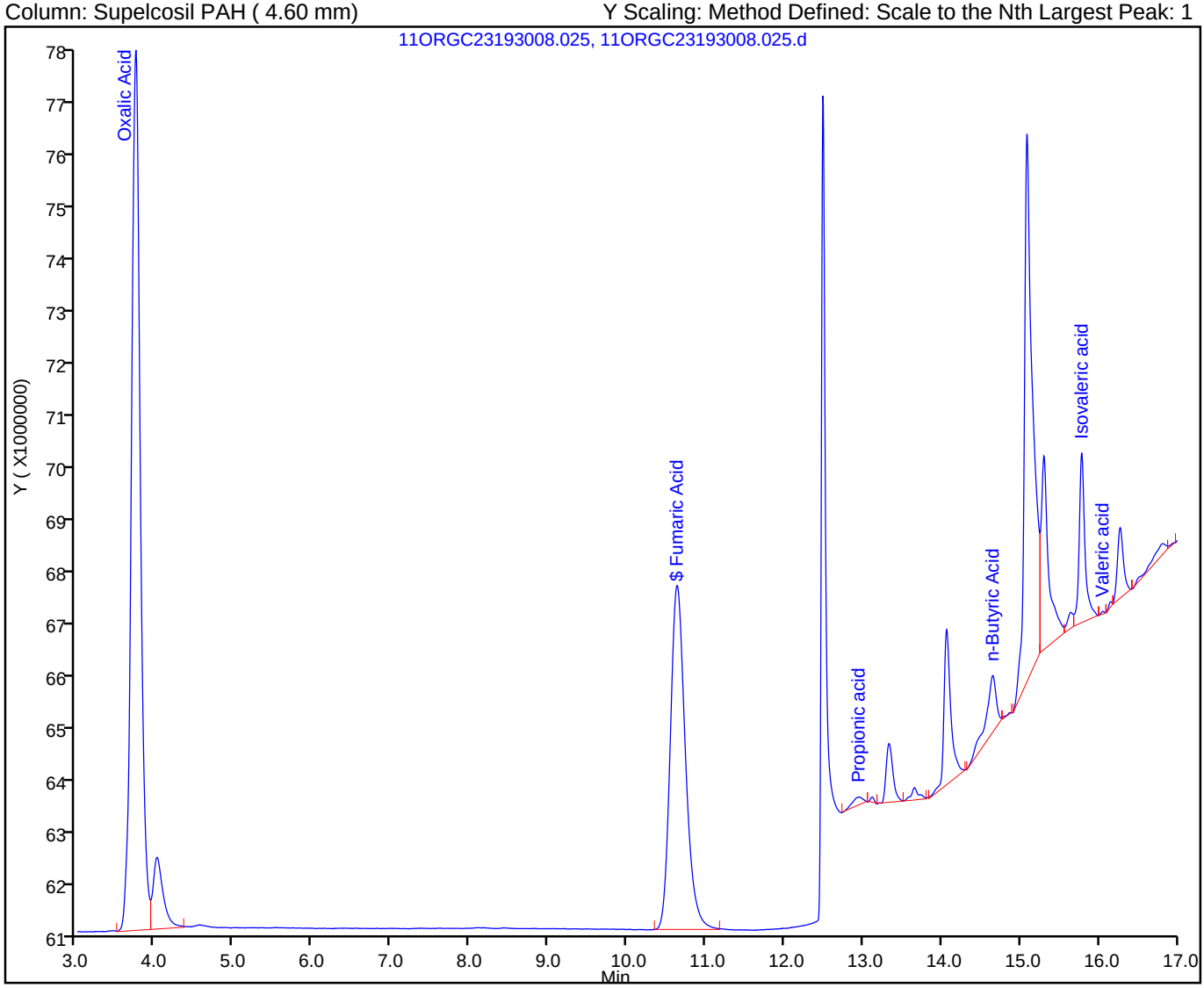
INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 07-Aug-2023 20:08:27 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.025.d				
Injection Date:	05-Aug-2023 02:15:00	Instrument ID:	10136		
Lims ID:	410-136647-C-1-A	Lab Sample ID:	410-136647-1		
Client ID:	E23-03408-001_MW-13D-072723				
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Lancaster Laboratories Environment Testing, LLC
Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.025.d				
Lims ID:	410-136647-C-1-A				
Client ID:	E23-03408-001_MW-13D-072723				
Sample Type:	Client				
Inject. Date:	05-Aug-2023 02:15:00	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	410-136647-C-1-A				
Operator ID:	24470	Instrument ID:	10136		
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:08:24	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 Fumaric Acid	0.4920	0.5013	101.89

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC | Job No.: 410-136647-1

SDG No.:

Client Sample ID: E23-03408-001_MW-13D-072723 | Lab Sample ID: 410-136647-1

Matrix: Water | Lab File ID: 48ORGA23186009.035.d

Analysis Method: 8015D VFA | Date Collected: 07/27/2023 12:59

Extraction Method: 8015 VFA | Date Extracted: 08/03/2023 17:58

Sample wt/vol: 1(mL) | Date Analyzed: 08/05/2023 14:12

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 40(uL) | GC Column: Supelcogel ID: 4.6(mm)

% Moisture: % Solids: | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 404646 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
64-19-7	Acetic acid	ND		10000	3200
107-92-6	Butyric acid	ND		10000	2000
77-92-9	Citric Acid	ND		5000	1000
64-18-6	Formic-acid	ND		10000	2000
503-74-2	Isovaleric acid	ND		7100	3500
79-33-4	L-Lactic Acid	ND		5000	1000
144-62-7	Oxalic Acid	ND		1300	250
127-17-3	Pyruvic Acid	ND		1300	250
77-95-2	Quinic Acid	ND		5000	2400
110-15-6	Succinic Acid	ND		2500	1000
87-69-4	Tartaric Acid	ND		2500	1000
109-52-4	Valeric acid	ND		5000	2000

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-17-8	Fumaric Acid	108		68-139

Report Date: 07-Aug-2023 20:06:43 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.035.d				
Lims ID:	410-136647-C-1-A				
Client ID:	E23-03408-001_MW-13D-072723				
Sample Type:	Client				
Inject. Date:	05-Aug-2023 14:12:00	ALS Bottle#:	0	Worklist Smp#:	35
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	410-136647-C-1-A				
Operator ID:	2027	Instrument ID:	6854A		
Method:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:06:37	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1674				

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid					
22.420	22.436	-0.016	20860574H	0.5290	

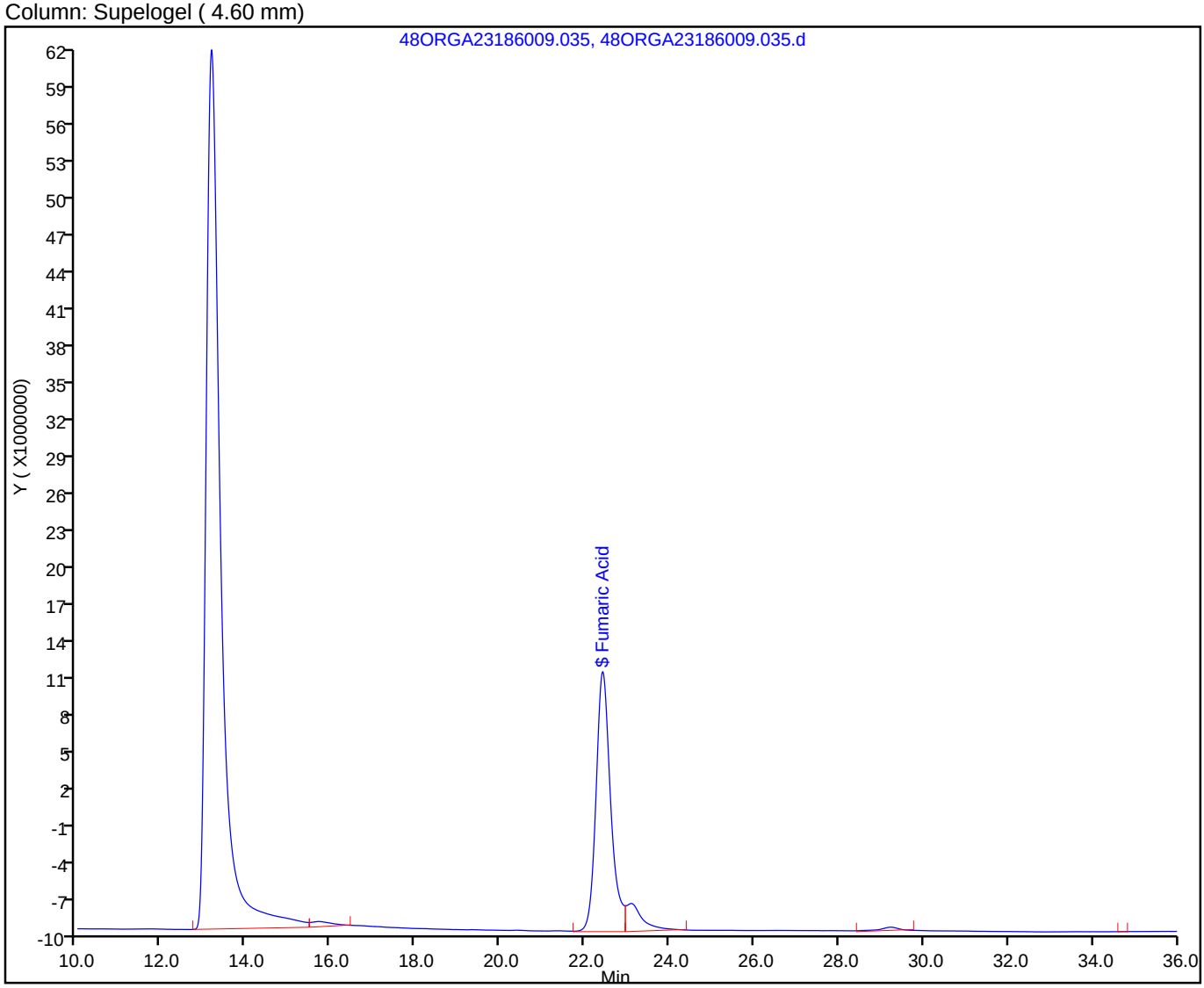
INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 07-Aug-2023 20:06:43 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.035.d				
Injection Date:	05-Aug-2023 14:12:00	Instrument ID:	6854A		
Lims ID:	410-136647-C-1-A	Lab Sample ID:	410-136647-1		
Client ID:	E23-03408-001_MW-13D-072723				
Operator ID:	2027	ALS Bottle#:	0	Worklist Smp#:	35
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Eurofins Lancaster Laboratories Environment Testing, LLC
Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.035.d				
Lims ID:	410-136647-C-1-A				
Client ID:	E23-03408-001_MW-13D-072723				
Sample Type:	Client				
Inject. Date:	05-Aug-2023 14:12:00	ALS Bottle#:	0	Worklist Smp#:	35
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	410-136647-C-1-A				
Operator ID:	2027	Instrument ID:	6854A		
Method:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:06:37	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1674				

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 Fumaric Acid	0.4920	0.5290	107.51

INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136647-1 Analy Batch No.: 396213

SDG No.:

Instrument ID: 10136 GC Column: Supelcosil P ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/12/2023 19:50 Calibration End Date: 07/12/2023 22:57 Calibration ID: 51995

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-396213/6	11ORGC23193001.006.d
Level 2	IC 410-396213/7	11ORGC23193001.007.d
Level 3	IC 410-396213/8	11ORGC23193001.008.d
Level 4	IC 410-396213/9	11ORGC23193001.009.d
Level 5	IC 410-396213/10	11ORGC23193001.010.d
Level 6	IC 410-396213/11	11ORGC23193001.011.d
Level 7	IC 410-396213/12	11ORGC23193001.012.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7				RT WINDOW	AVG RT
Oxalic Acid	3.704	+++++	3.704	3.696	3.688	3.679	3.679				3.604 - 3.804	3.692
Quinic Acid	4.388	+++++	4.383	4.379	4.375	4.375	4.383				4.288 - 4.488	4.381
Formic-acid	4.671	+++++	4.667	4.663	4.650	4.650	4.654				4.571 - 4.771	4.659
Pyruvic Acid	5.279	+++++	5.271	5.263	5.250	5.246	5.254				5.179 - 5.379	5.261
L-Lactic Acid	6.371	+++++	6.354	6.346	6.317	6.308	6.317				6.271 - 6.471	6.336
Acetic acid	6.971	+++++	6.963	6.946	6.896	6.879	6.879				6.821 - 7.121	6.922
Citric Acid	9.458	+++++	9.433	9.413	9.308	9.288	9.300				9.308 - 9.608	9.367
Propionic acid	12.896	+++++	12.892	12.883	12.850	12.842	12.850				12.796 - 12.996	12.869
Butyric acid	14.583	+++++	14.571	14.563	14.550	14.546	14.550				14.483 - 14.683	14.561

INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136647-1 Analy Batch No.: 396213

SDG No.:

Instrument ID: 10136 GC Column: Supelcosil P ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/12/2023 19:50 Calibration End Date: 07/12/2023 22:57 Calibration ID: 51995

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-396213/6	11ORGC23193001.006.d
Level 2	IC 410-396213/7	11ORGC23193001.007.d
Level 3	IC 410-396213/8	11ORGC23193001.008.d
Level 4	IC 410-396213/9	11ORGC23193001.009.d
Level 5	IC 410-396213/10	11ORGC23193001.010.d
Level 6	IC 410-396213/11	11ORGC23193001.011.d
Level 7	IC 410-396213/12	11ORGC23193001.012.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								
Oxalic Acid	2483175 1462789	+++++ 1565690	1568414 1613382	1225901	Qua	1712297.05	1194508.37	3303.25990			10.9		30.0	0.9990		0.9900
Quinic Acid	141357 134267	+++++ 133942	133791 131158	128652	Ave		133861.147				3.2		20.0			
Formic-acid	191328 190000	+++++ 189023	191274 187904	185179	Ave		189117.989				1.2		20.0			
Pyruvic Acid	548715 623138	+++++ 622155	597729 616461	582234	Ave		598405.390				4.9		20.0			
L-Lactic Acid	65693 91487	+++++ 92528	83487 93061	79765	Ave		84336.734 9				12.6		20.0			
Acetic acid	54702 51529	+++++ 49785	55209 48018	52574	Ave		51969.438 1				5.4		20.0			
Citric Acid	125255 113011	+++++ 108062	124492 103160	120516	Ave		115749.331				7.9		20.0			
Propionic acid	119666 110921	+++++ 110606	120049 109124	115324	Ave		114281.904				4.2		20.0			
Butyric acid	180912 117217	+++++ 114705	129493 112630	122883	Ave		129639.839				19.9		20.0			

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.

INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136647-1 Analy Batch No.: 396213

SDG No.:

Instrument ID: 10136 GC Column: Supelcosil P ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/12/2023 19:50 Calibration End Date: 07/12/2023 22:57 Calibration ID: 51995

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-396213/6	11ORGC23193001.006.d
Level 2	IC 410-396213/7	11ORGC23193001.007.d
Level 3	IC 410-396213/8	11ORGC23193001.008.d
Level 4	IC 410-396213/9	11ORGC23193001.009.d
Level 5	IC 410-396213/10	11ORGC23193001.010.d
Level 6	IC 410-396213/11	11ORGC23193001.011.d
Level 7	IC 410-396213/12	11ORGC23193001.012.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
Oxalic Acid	Qua	3116385 157821566	+++++ 202479476	19683593	30892698	110586839	1.26 101	+++++ 126	12.6	25.2	75.6
Quinic Acid	Ave	713570 53684003	+++++ 66208656	6753753	12890908	40360705	5.05 401	+++++ 505	50.5	100	301
Formic-acid	Ave	1922850 152730712	+++++ 188843418	19222999	37406090	115140140	10.1 808	+++++ 1005	101	202	606
Pyruvic Acid	Ave	690284 62713236	+++++ 77550759	7519427	14672302	47109246	1.26 101	+++++ 126	12.6	25.2	75.6
L-Lactic Acid	Ave	329188 37159296	+++++ 46632977	4183521	8008372	27555757	5.01 402	+++++ 501	50.1	100	301
Acetic acid	Ave	548276 39907449	+++++ 48128051	5533638	10535924	30979007	10.0 802	+++++ 1002	100	200	601
Citric Acid	Ave	630031 43570613	+++++ 51889504	6261971	12147990	34174524	5.03 403	+++++ 503	50.3	101	302
Propionic acid	Ave	1196664 89369890	+++++ 109123707	12004938	23295480	67218416	10.0 808	+++++ 1000	100	202	606
Butyric acid	Ave	1811837 92497779	+++++ 112798500	12968681	24773217	70892823	10.0 806	+++++ 1002	100	202	605

Curve Type Legend

Ave = Average by Height
Qua = Quadratic by Height

Report Date: 17-Jul-2023 16:02:42 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.006.d				
Lims ID:	IC ORGA1				
Client ID:					
Sample Type:	IC	Calib Level:	1		
Inject. Date:	12-Jul-2023 19:50:00	ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGA1				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub4				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:02:42	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				
First Level Reviewer: UHEW		Date:	13-Jul-2023 00:05:46		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid	3.704	3.704	0.000	3116385H	1.26	1.17	
2 Quinic Acid	4.388	4.388	0.000	713570H	5.05	5.33	
4 Formic-acid	4.671	4.671	0.000	1922850H	10.1	10.2	
5 Pyruvic Acid	5.279	5.279	0.000	690284H	1.26	1.15	
6 L-Lactic Acid	6.371	6.371	0.000	329188H	5.01	3.90	
7 Acetic acid	6.971	6.971	0.000	548276H	10.0	10.5	
8 Citric Acid	9.458	9.458	0.000	630031H	5.03	5.44	
11 Propionic acid	12.896	12.896	0.000	1196664H	10.0	10.5	
12 n-Butyric Acid	14.583	14.583	0.000	1811837H	10.0	14.0	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

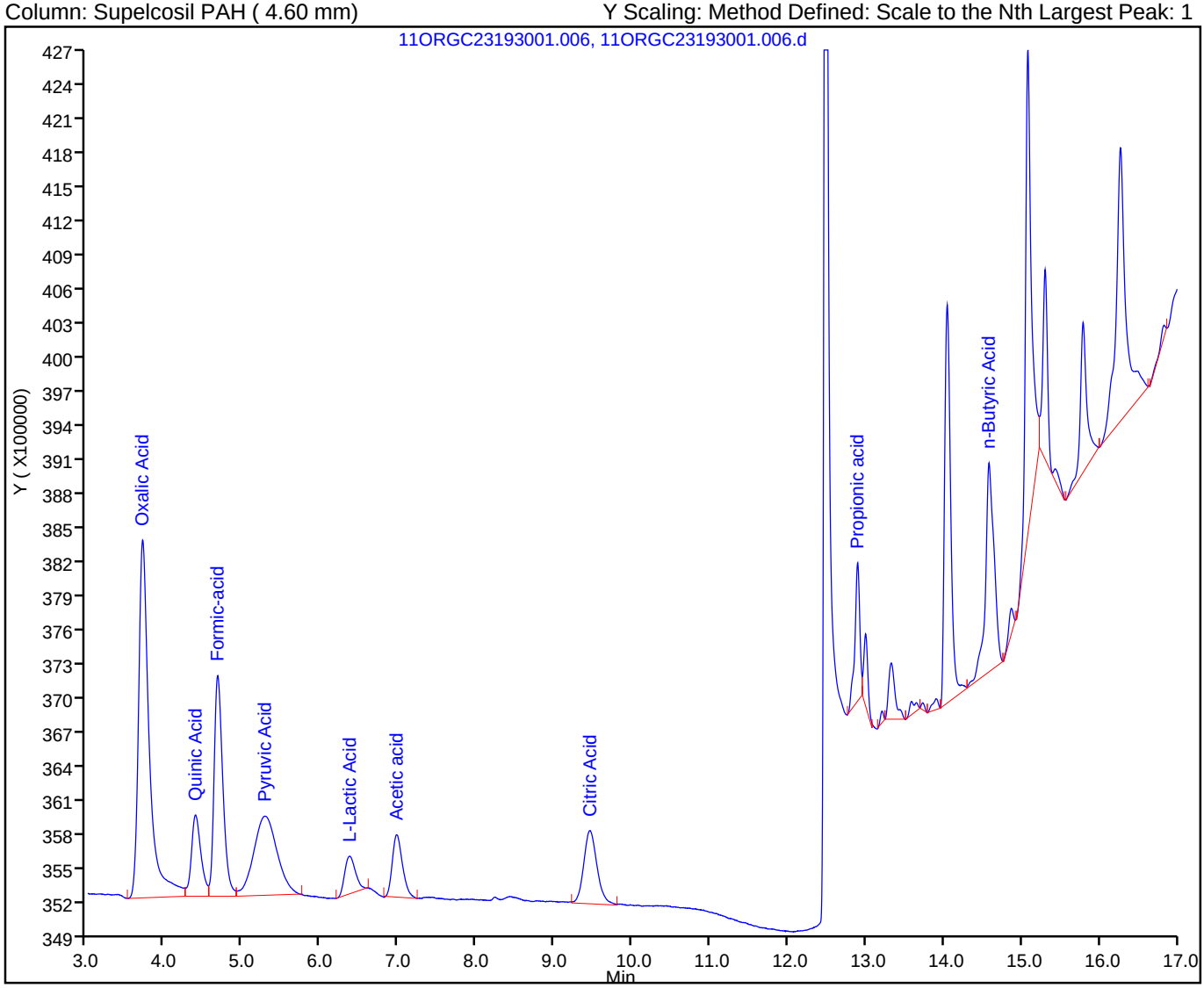
GCS_ORGA1_00012 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 16:02:42 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.006.d				
Injection Date:	12-Jul-2023 19:50:00	Instrument ID:	10136		
Lims ID:	IC ORGA1				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:02:43 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.007.d				
Lims ID:	IC ORGA2				
Client ID:					
Sample Type:	IC	Calib Level:	2		
Inject. Date:	12-Jul-2023 20:21:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGA2				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub4				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:02:43	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid	3.713	3.704	0.008	2371794H	2.52	0.5513	
2 Quinic Acid	4.383	4.388	-0.005	1408177H	10.0	10.5	
4 Formic-acid	4.667	4.671	-0.004	602397H	20.2	3.19	
5 Pyruvic Acid	5.275	5.279	-0.004	1507336H	2.52	2.52	
6 L-Lactic Acid	6.358	6.371	-0.013	674369H	10.0	8.00	
7 Acetic acid	6.963	6.971	-0.009	93076H	20.0	1.79	
8 Citric Acid	9.446	9.458	-0.012	1227487H	10.1	10.6	
11 Propionic acid	12.892	12.896	-0.004	964211H	20.2	8.44	
12 n-Butyric Acid	14.625	14.583	0.042	1165211H	20.2	8.99	

Reagents:

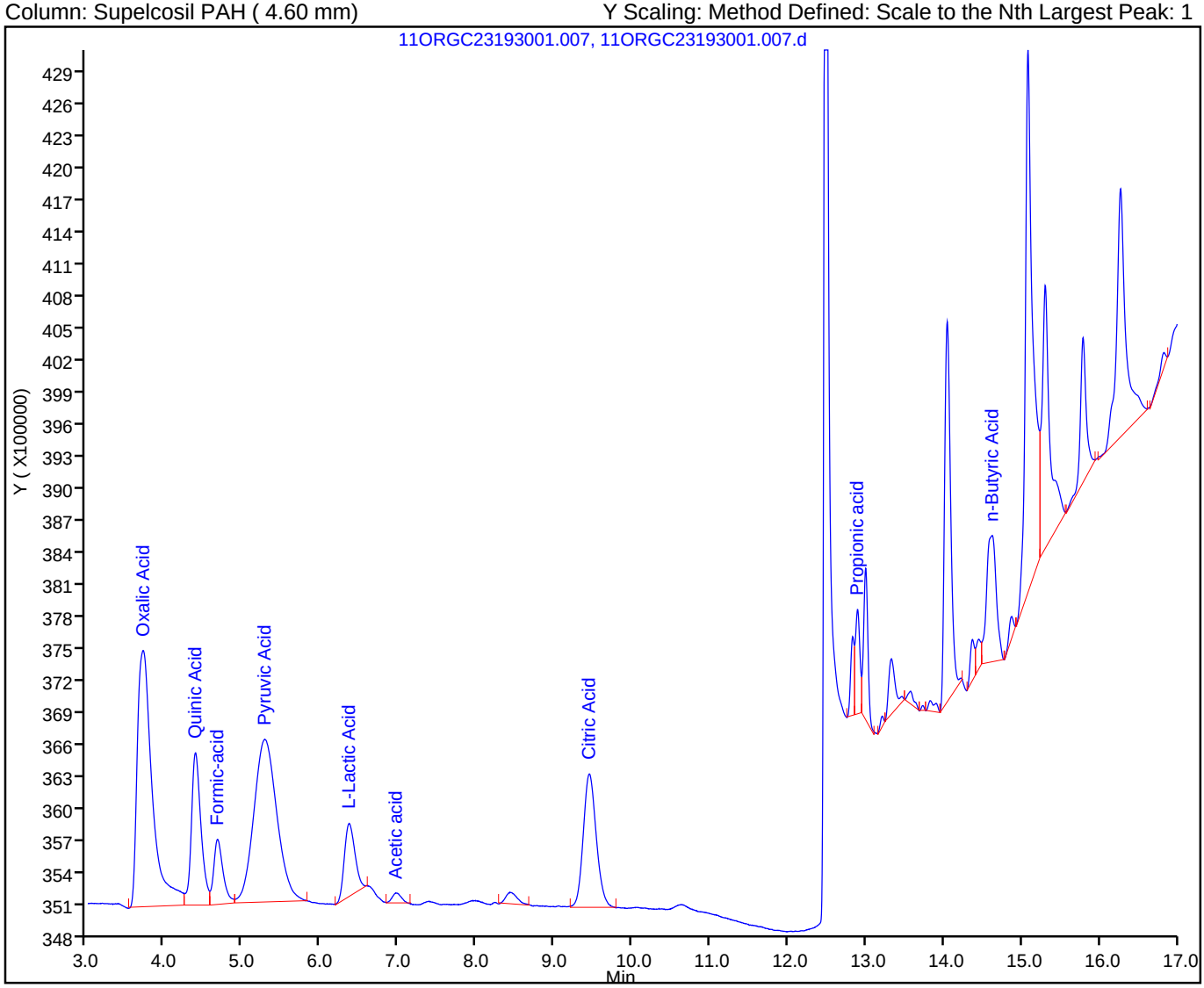
GCS_ORGA2_00010 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 16:02:43 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.007.d				
Injection Date:	12-Jul-2023 20:21:00	Instrument ID:	10136		
Lims ID:	IC ORGA2				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:04:15 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.008.d				
Lims ID:	IC ORGA3				
Client ID:					
Sample Type:	IC	Calib Level:	3		
Inject. Date:	12-Jul-2023 20:53:00	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGA3				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub4				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:04:14	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				
First Level Reviewer: UHEW		Date:	17-Jul-2023 16:04:14		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid	3.704	3.704	0.000	19683593H	12.6	14.5	
2 Quinic Acid	4.383	4.383	0.000	6753753H	50.5	50.5	
4 Formic-acid	4.667	4.667	0.000	19222999H	100.5	101.6	
5 Pyruvic Acid	5.271	5.271	0.000	7519427H	12.6	12.6	
6 L-Lactic Acid	6.354	6.354	0.000	4183521H	50.1	49.6	
7 Acetic acid	6.963	6.963	0.000	5533638H	100.2	106.5	
8 Citric Acid	9.433	9.433	0.000	6261971H	50.3	54.1	
11 Propionic acid	12.892	12.892	0.000	12004938H	100.0	105.0	
12 n-Butyric Acid	14.571	14.571	0.000	12968681H	100.2	100.0	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGA3_00026 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 16:04:15 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.008.d

Injection Date: 12-Jul-2023 20:53:00 Instrument ID: 10136

Lims ID: IC ORGA3

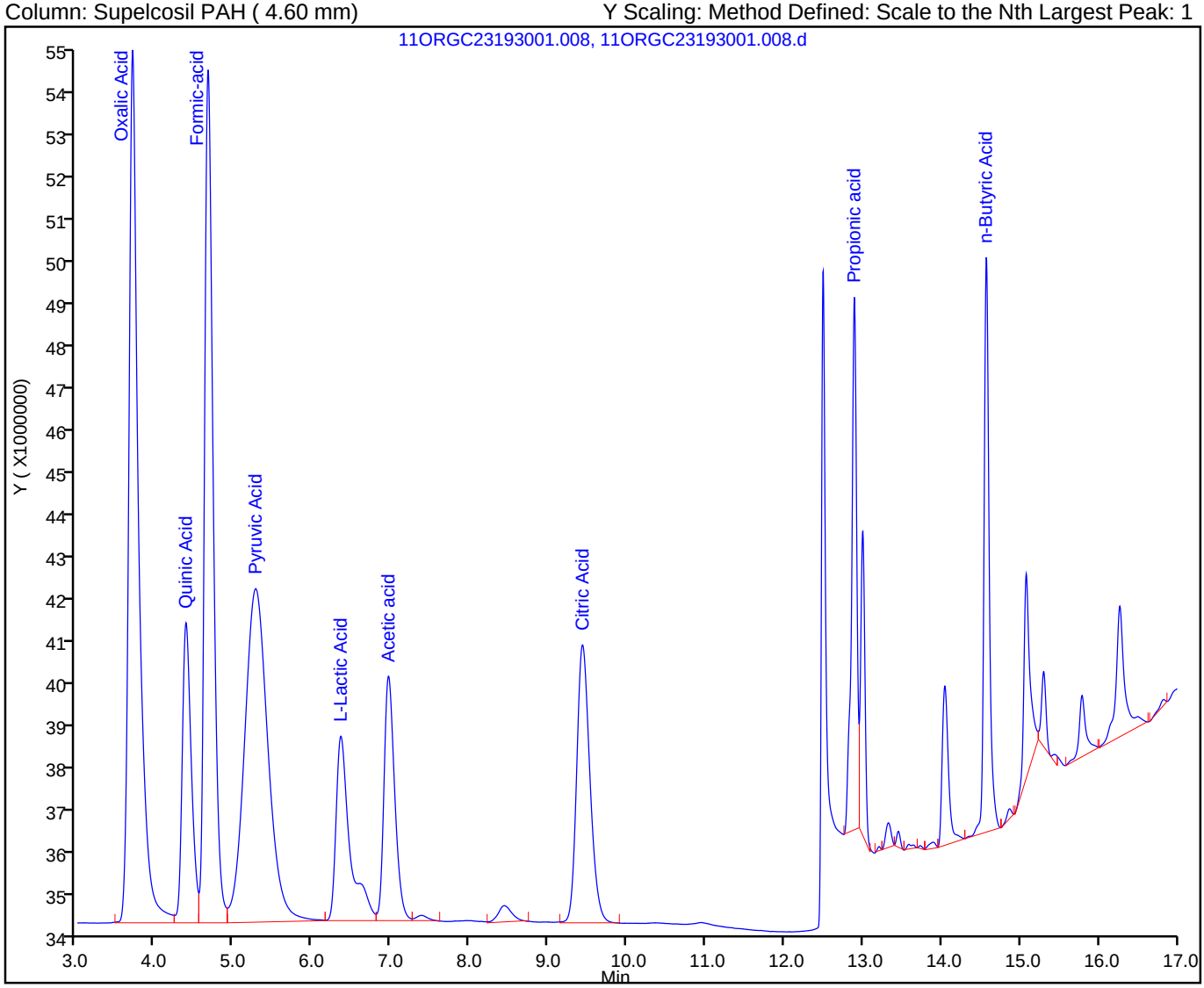
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 8

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:02:44 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.009.d				
Lims ID:	IC ORGA4				
Client ID:					
Sample Type:	IC	Calib Level:	4		
Inject. Date:	12-Jul-2023 21:24:00	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGA4				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub4				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:02:44	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid	3.696	3.704	-0.008	30892698H	25.2	23.0	
2 Quinic Acid	4.379	4.388	-0.009	12890908H	100.2	96.3	
4 Formic-acid	4.663	4.671	-0.009	37406090H	202.0	197.8	
5 Pyruvic Acid	5.263	5.279	-0.017	14672302H	25.2	24.5	
6 L-Lactic Acid	6.346	6.371	-0.025	8008372H	100.4	95.0	
7 Acetic acid	6.946	6.971	-0.025	10535924H	200.4	202.7	
8 Citric Acid	9.413	9.458	-0.046	12147990H	100.8	105.0	
11 Propionic acid	12.883	12.896	-0.013	23295480H	202.0	203.8	
12 n-Butyric Acid	14.563	14.583	-0.021	24773217H	201.6	191.1	

Reagents:

GCS_ORGA4_00009 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 16:02:44 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.009.d

Injection Date: 12-Jul-2023 21:24:00 Instrument ID: 10136

Lims ID: IC ORGA4

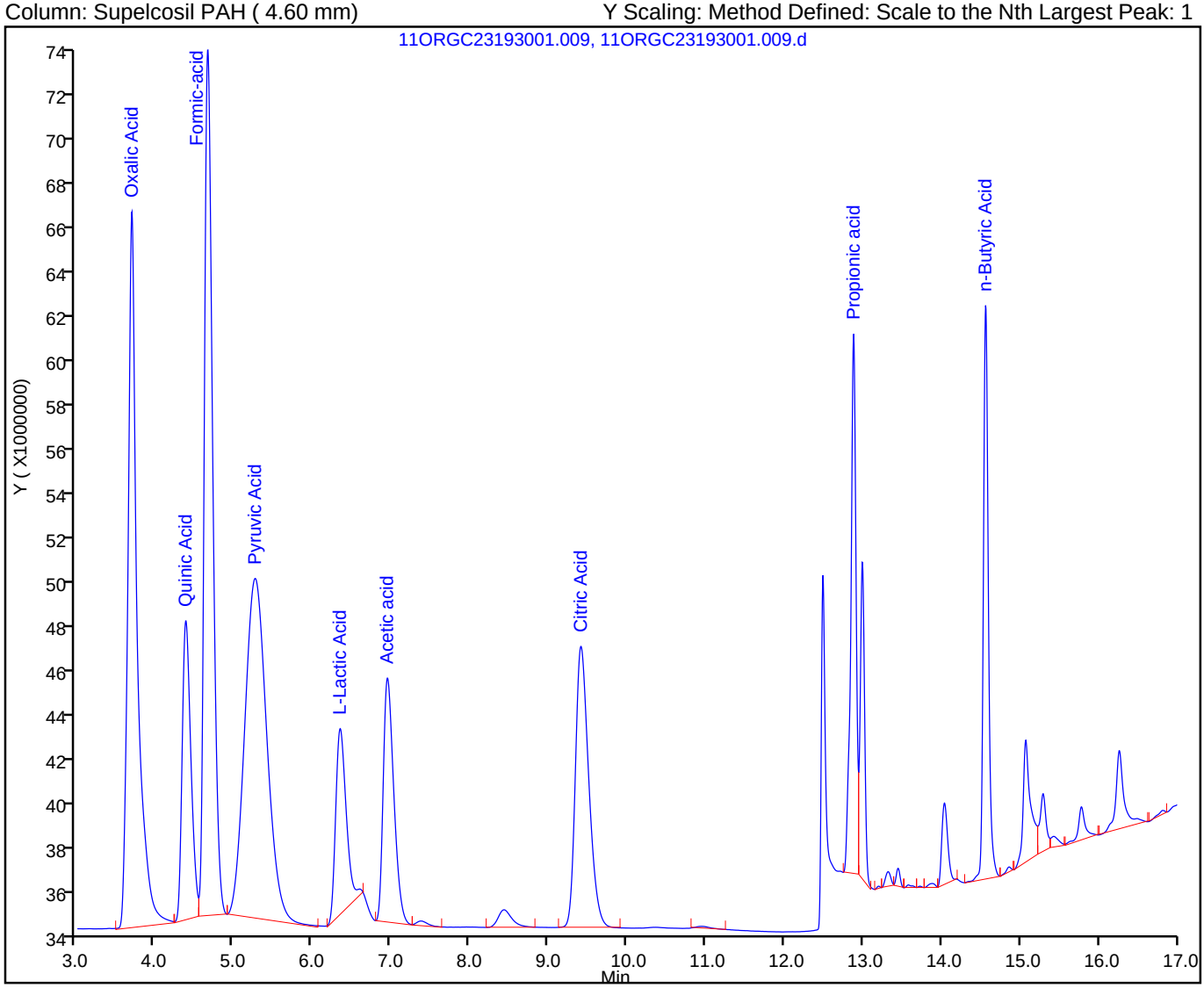
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 9

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:02:46 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.010.d				
Lims ID:	IC ORGA 80				
Client ID:					
Sample Type:	IC	Calib Level:	5		
Inject. Date:	12-Jul-2023 21:55:00	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGA @80				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub4				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:02:45	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid	3.688	3.704	-0.016	110586839H	75.6	75.4	
2 Quinic Acid	4.375	4.388	-0.013	40360705H	300.6	301.5	
4 Formic-acid	4.650	4.671	-0.021	115140140H	606.0	608.8	
5 Pyruvic Acid	5.250	5.279	-0.029	47109246H	75.6	78.7	
6 L-Lactic Acid	6.317	6.371	-0.054	27555757H	301.2	326.7	
7 Acetic acid	6.896	6.971	-0.075	30979007H	601.2	596.1	
8 Citric Acid	9.308	9.458	-0.150	34174524H	302.4	295.2	
11 Propionic acid	12.850	12.896	-0.046	67218416H	606.0	588.2	
12 n-Butyric Acid	14.550	14.583	-0.033	70892823H	604.8	546.8	

Reagents:

GCS_ORGAox5@8_00004 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 16:02:46 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.010.d

Injection Date: 12-Jul-2023 21:55:00 Instrument ID: 10136

Lims ID: IC ORGA 80

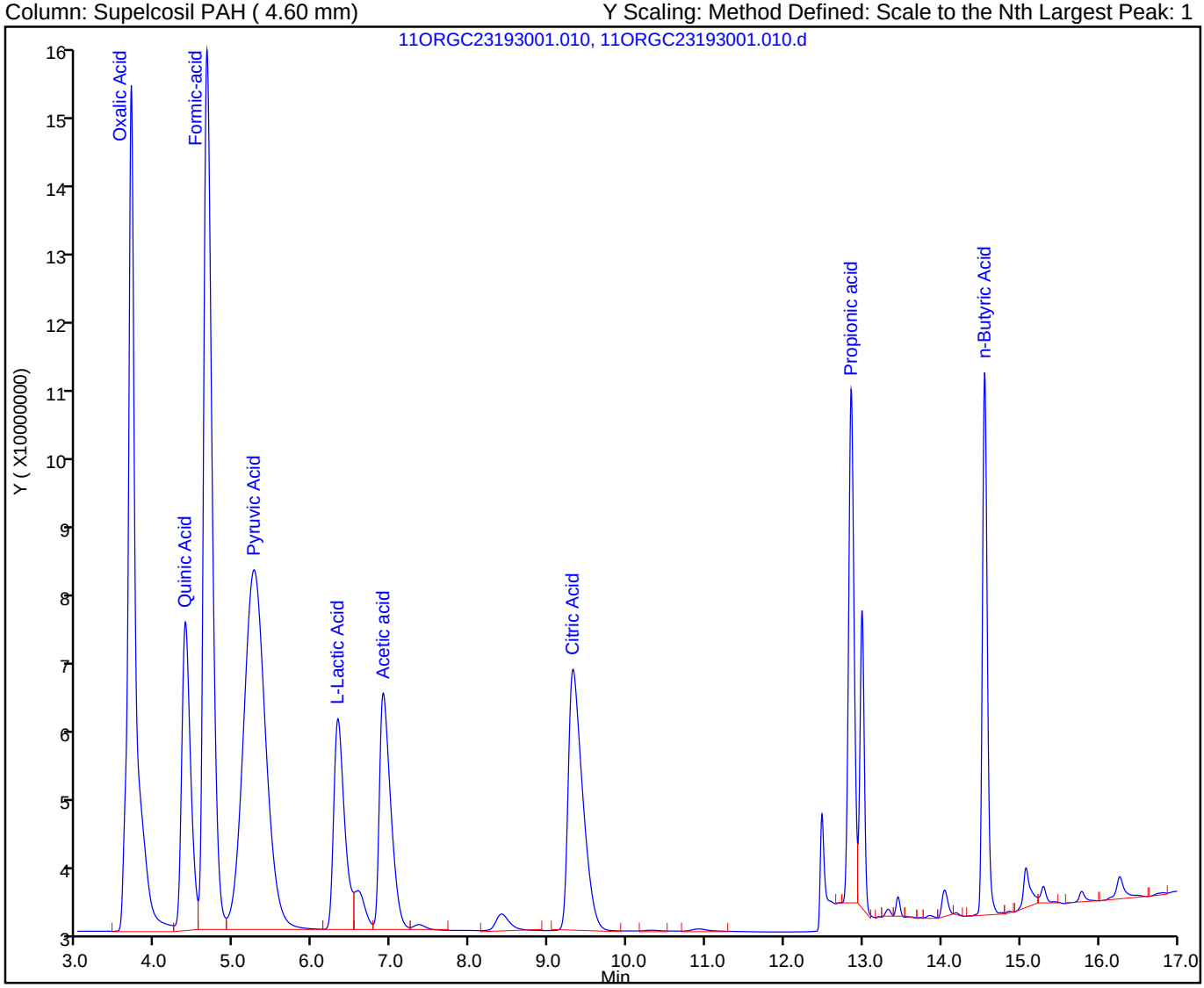
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 10

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:02:47 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.011.d				
Lims ID:	IC ORGA 100				
Client ID:					
Sample Type:	IC	Calib Level:	6		
Inject. Date:	12-Jul-2023 22:26:00	ALS Bottle#:	0	Worklist Smp#:	11
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGA @ 100				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub4				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:02:47	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid	3.679	3.704	-0.025	157821566H	100.8	101.9	
2 Quinic Acid	4.375	4.388	-0.013	53684003H	400.8	401.0	
4 Formic-acid	4.650	4.671	-0.021	152730712H	808.0	807.6	
5 Pyruvic Acid	5.246	5.279	-0.033	62713236H	100.8	104.8	
6 L-Lactic Acid	6.308	6.371	-0.063	37159296H	401.6	440.6	
7 Acetic acid	6.879	6.971	-0.092	39907449H	801.6	767.9	
8 Citric Acid	9.288	9.458	-0.170	43570613H	403.2	376.4	
11 Propionic acid	12.842	12.896	-0.054	89369890H	808.0	782.0	
12 n-Butyric Acid	14.546	14.583	-0.037	92497779H	806.4	713.5	

Reagents:

GCS_ORGAox5_00002 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 16:02:47 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.011.d

Injection Date: 12-Jul-2023 22:26:00 Instrument ID: 10136

Lims ID: IC ORGA 100

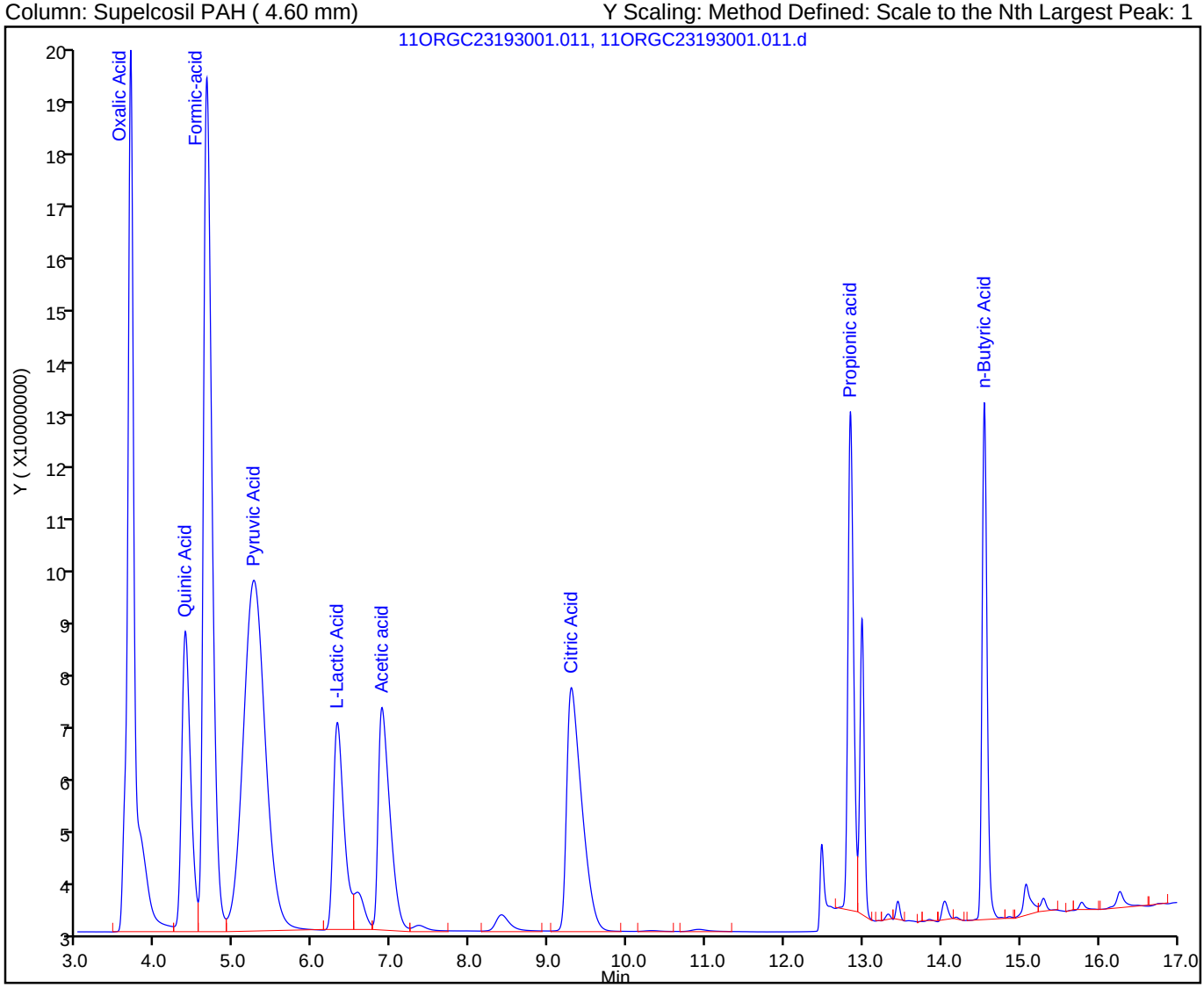
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 11

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:02:49 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.012.d				
Lims ID:	IC ORGA5				
Client ID:					
Sample Type:	IC	Calib Level:	7		
Inject. Date:	12-Jul-2023 22:57:00	ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGA5				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub4				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:02:49	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				
First Level Reviewer: UHEW		Date:	13-Jul-2023 13:57:10		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid	3.679	3.704	-0.025	202479476H	125.5	124.9	
2 Quinic Acid	4.383	4.388	-0.005	66208656H	504.8	494.6	
4 Formic-acid	4.654	4.671	-0.017	188843418H	1005.0	998.5	
5 Pyruvic Acid	5.254	5.279	-0.025	77550759H	125.8	129.6	
6 L-Lactic Acid	6.317	6.371	-0.054	46632977H	501.1	552.9	
7 Acetic acid	6.879	6.971	-0.092	48128051H	1002.3	926.1	
8 Citric Acid	9.300	9.458	-0.158	51889504H	503.0	448.3	
11 Propionic acid	12.850	12.896	-0.046	109123707H	1000.0	954.9	
12 n-Butyric Acid	14.550	14.583	-0.033	112798500H	1001.5	870.1	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGA5_00008 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 16:02:49 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.012.d

Injection Date: 12-Jul-2023 22:57:00 Instrument ID: 10136

Lims ID: IC ORGA5

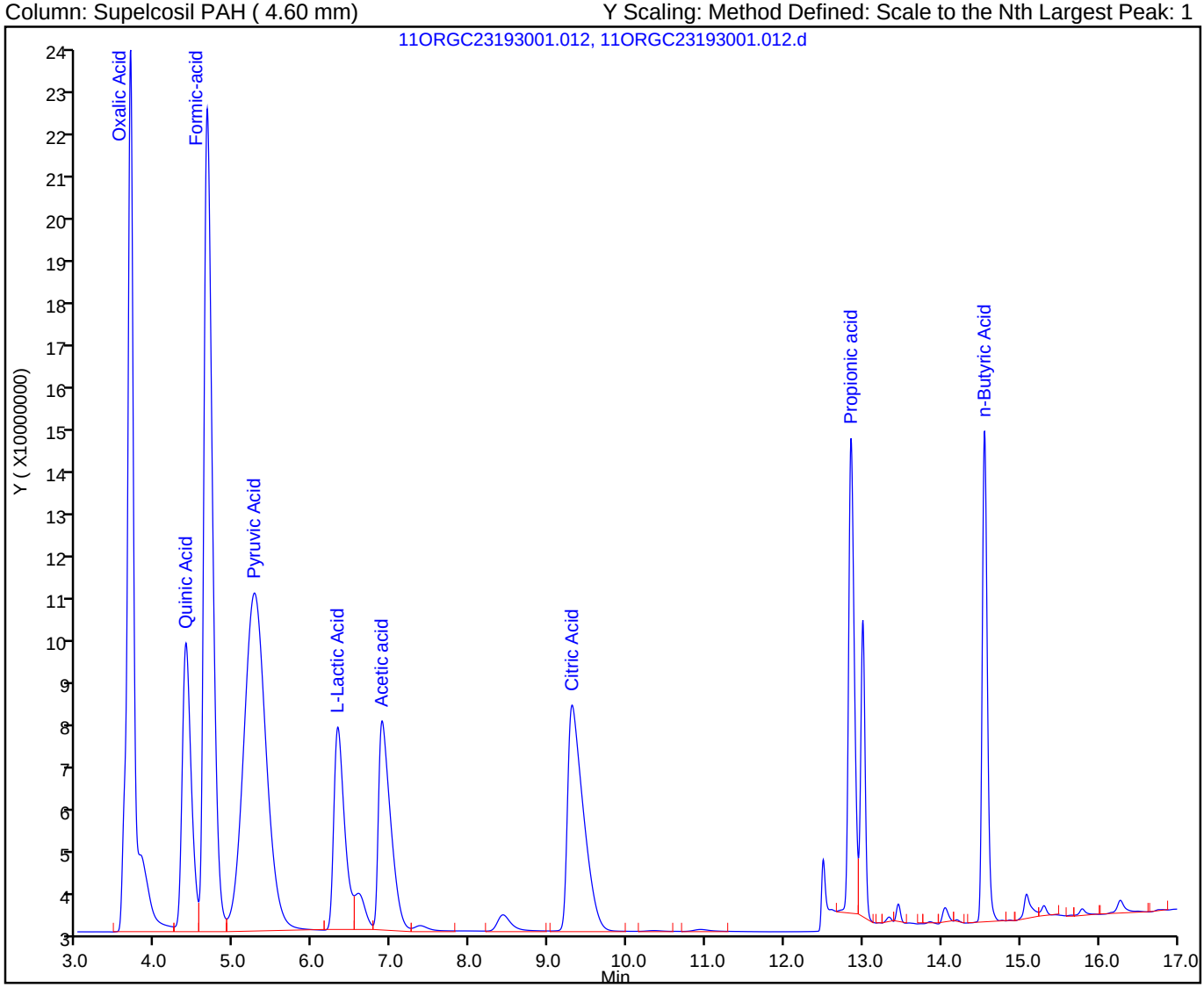
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 12

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Calibration / Oxalic Acid

Curve Type:	Quadratic
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

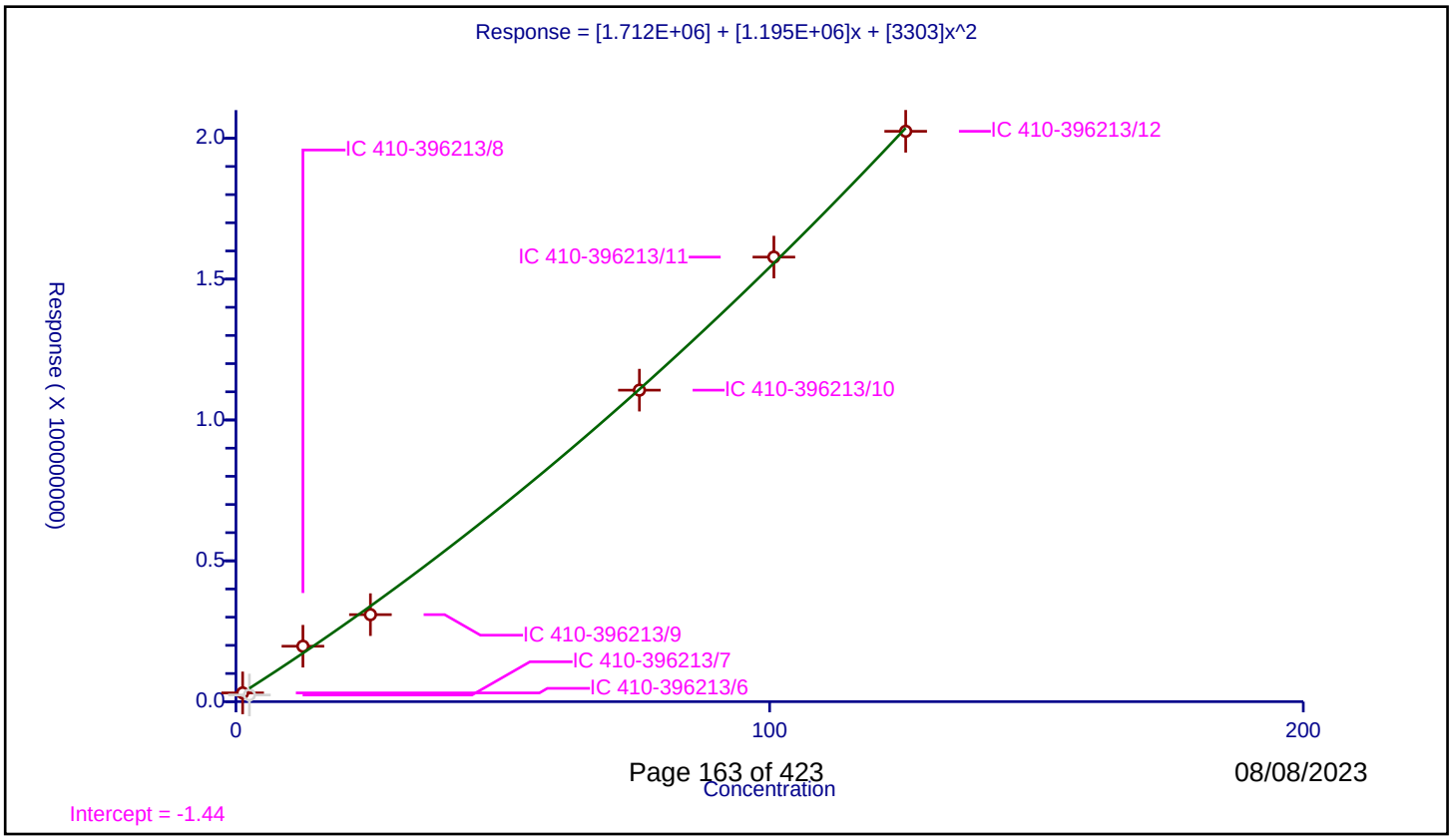
Curve Coefficients

Intercept:	1.712E+06
Slope:	1.195E+06
Second Order:	3303

Error Coefficients

Standard Error:	2660000
Relative Standard Error:	10.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/6	1.255	3116385.0			2483175.298805	Y
2	IC 410-396213/7	2.52	2371794.0			941188.095238	N
3	IC 410-396213/8	12.55	19683593.0			1568413.784861	Y
4	IC 410-396213/9	25.2	30892698.0			1225900.714286	Y
5	IC 410-396213/10	75.6	110586839.0			1462788.875661	Y
6	IC 410-396213/11	100.8	157821566.0			1565690.138889	Y
7	IC 410-396213/12	125.5	202479476.0			1613382.278884	Y



Calibration / Quinic Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

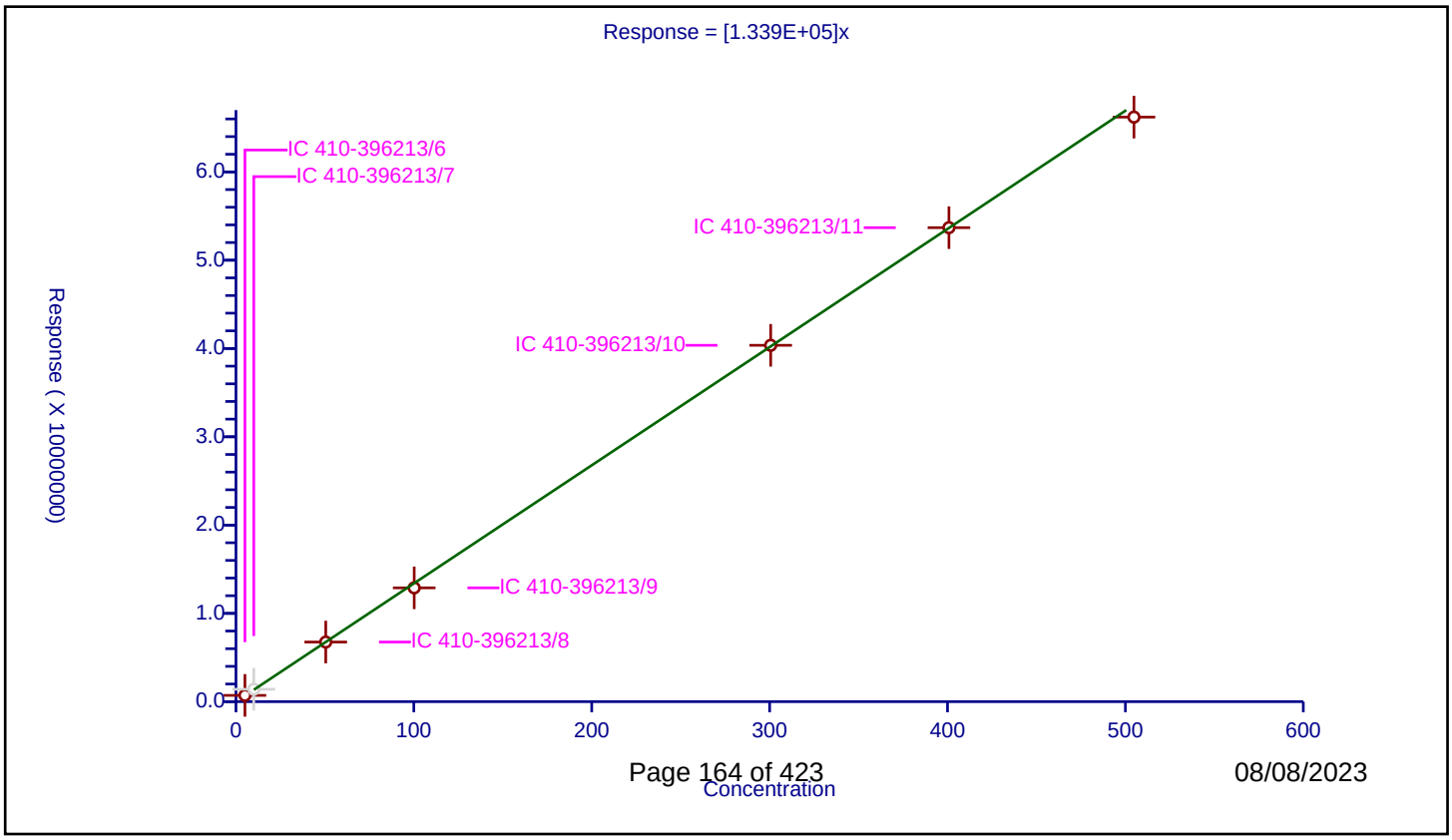
Curve Coefficients

Intercept:	0
Slope:	1.339E+05

Error Coefficients

Standard Error:	656000
Relative Standard Error:	3.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/6	5.048	713570.0			141356.973059	Y
2	IC 410-396213/7	10.02	1408177.0			140536.626747	N
3	IC 410-396213/8	50.48	6753753.0			133790.669572	Y
4	IC 410-396213/9	100.2	12890908.0			128651.776447	Y
5	IC 410-396213/10	300.6	40360705.0			134267.149035	Y
6	IC 410-396213/11	400.8	53684003.0			133942.123253	Y
7	IC 410-396213/12	504.8	66208656.0			131158.193344	Y



Calibration / Formic-acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

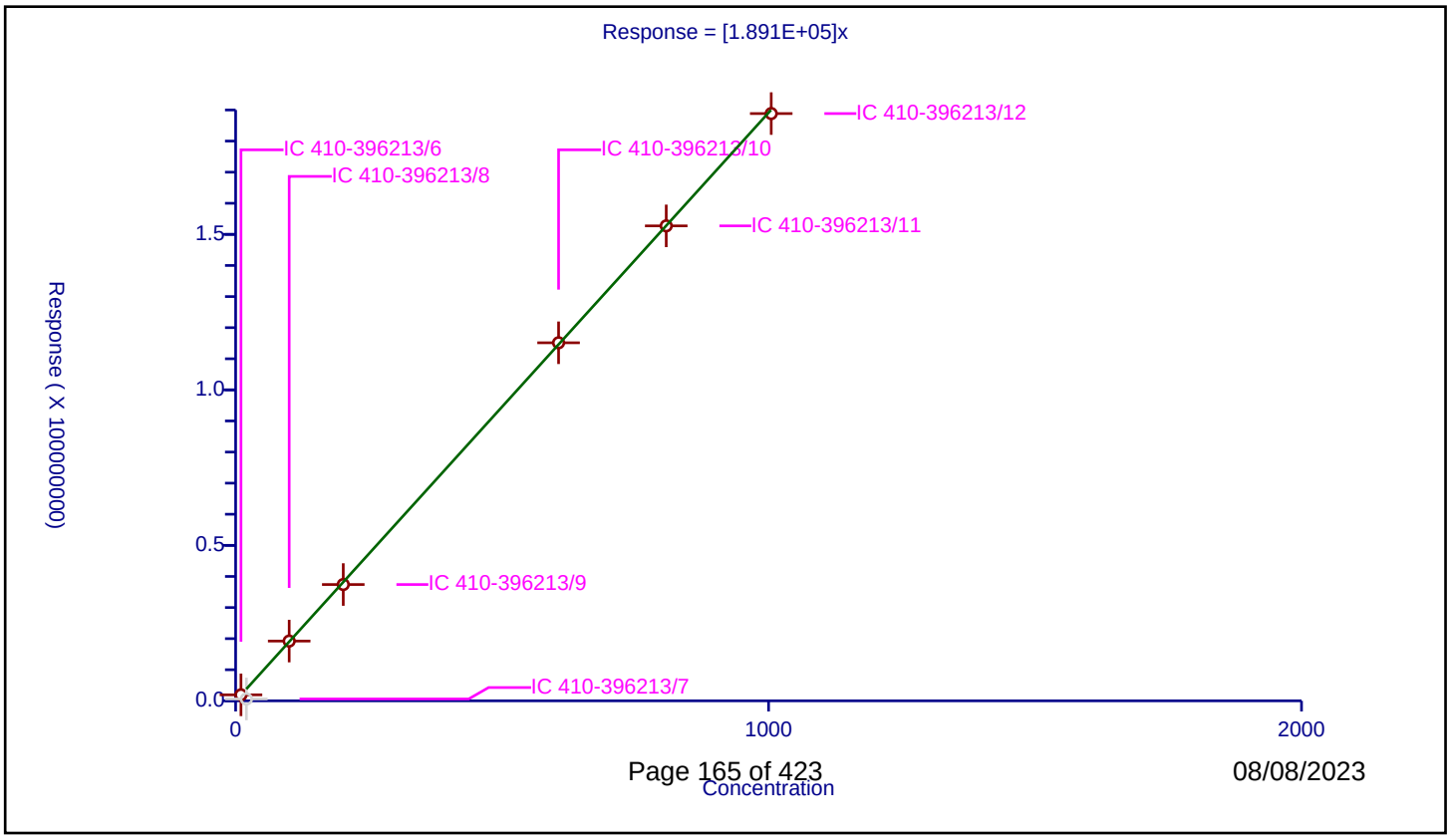
Curve Coefficients

Intercept:	0
Slope:	1.891E+05

Error Coefficients

Standard Error:	702000
Relative Standard Error:	1.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/6	10.05	1922850.0			191328.358209	Y
2	IC 410-396213/7	20.2	602397.0			29821.633663	N
3	IC 410-396213/8	100.5	19222999.0			191273.621891	Y
4	IC 410-396213/9	202.0	37406090.0			185178.663366	Y
5	IC 410-396213/10	606.0	115140140.0			190000.231023	Y
6	IC 410-396213/11	808.0	152730712.0			189023.158416	Y
7	IC 410-396213/12	1005.0	188843418.0			187903.898507	Y



Calibration / Pyruvic Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

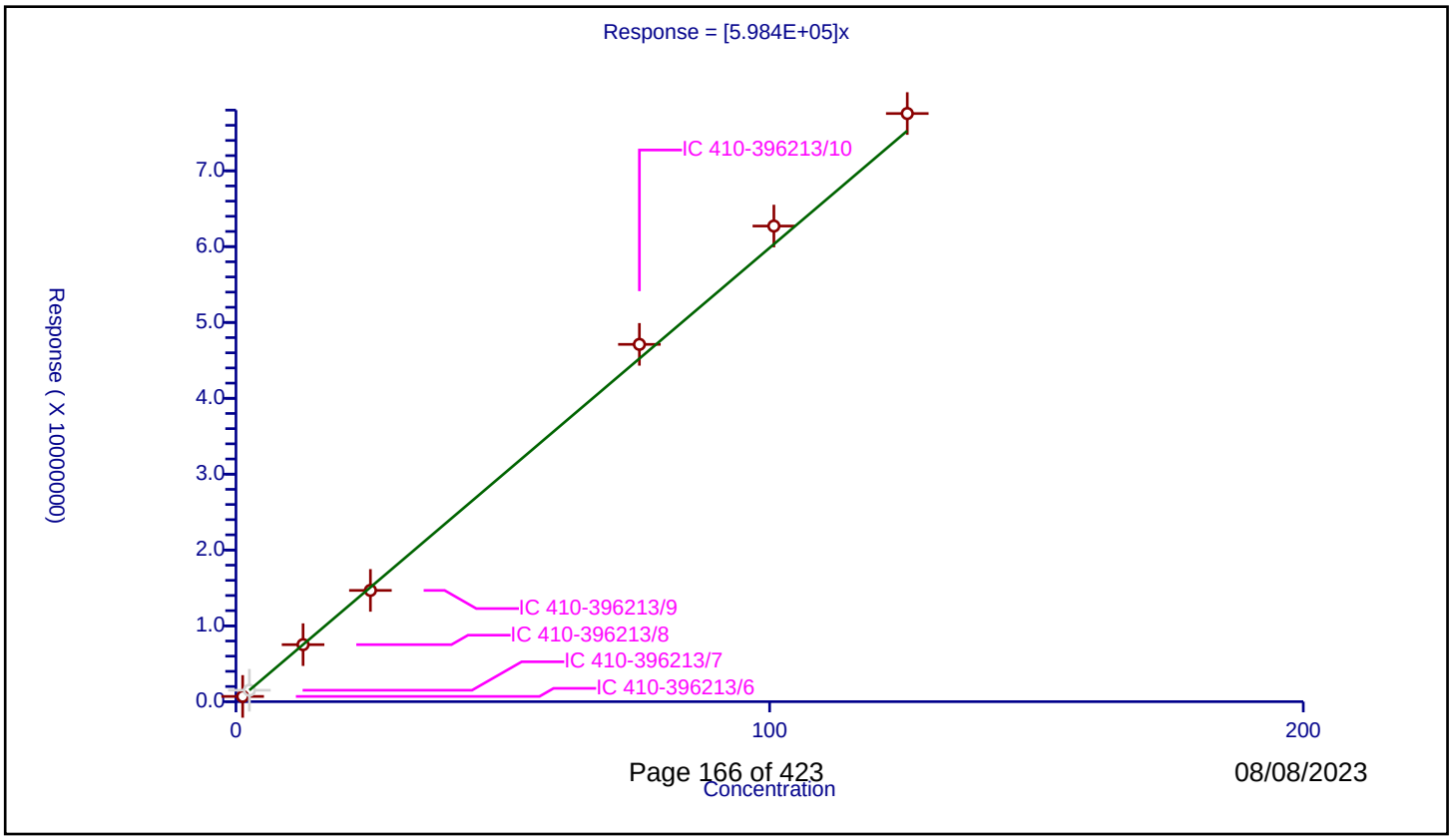
Curve Coefficients

Intercept:	0
Slope:	5.984E+05

Error Coefficients

Standard Error:	1710000
Relative Standard Error:	4.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/6	1.258	690284.0			548715.421304	Y
2	IC 410-396213/7	2.52	1507336.0			598149.206349	N
3	IC 410-396213/8	12.58	7519427.0			597728.696343	Y
4	IC 410-396213/9	25.2	14672302.0			582234.206349	Y
5	IC 410-396213/10	75.6	47109246.0			623138.174603	Y
6	IC 410-396213/11	100.8	62713236.0			622155.119048	Y
7	IC 410-396213/12	125.8	77550759.0			616460.72337	Y



Calibration / L-Lactic Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

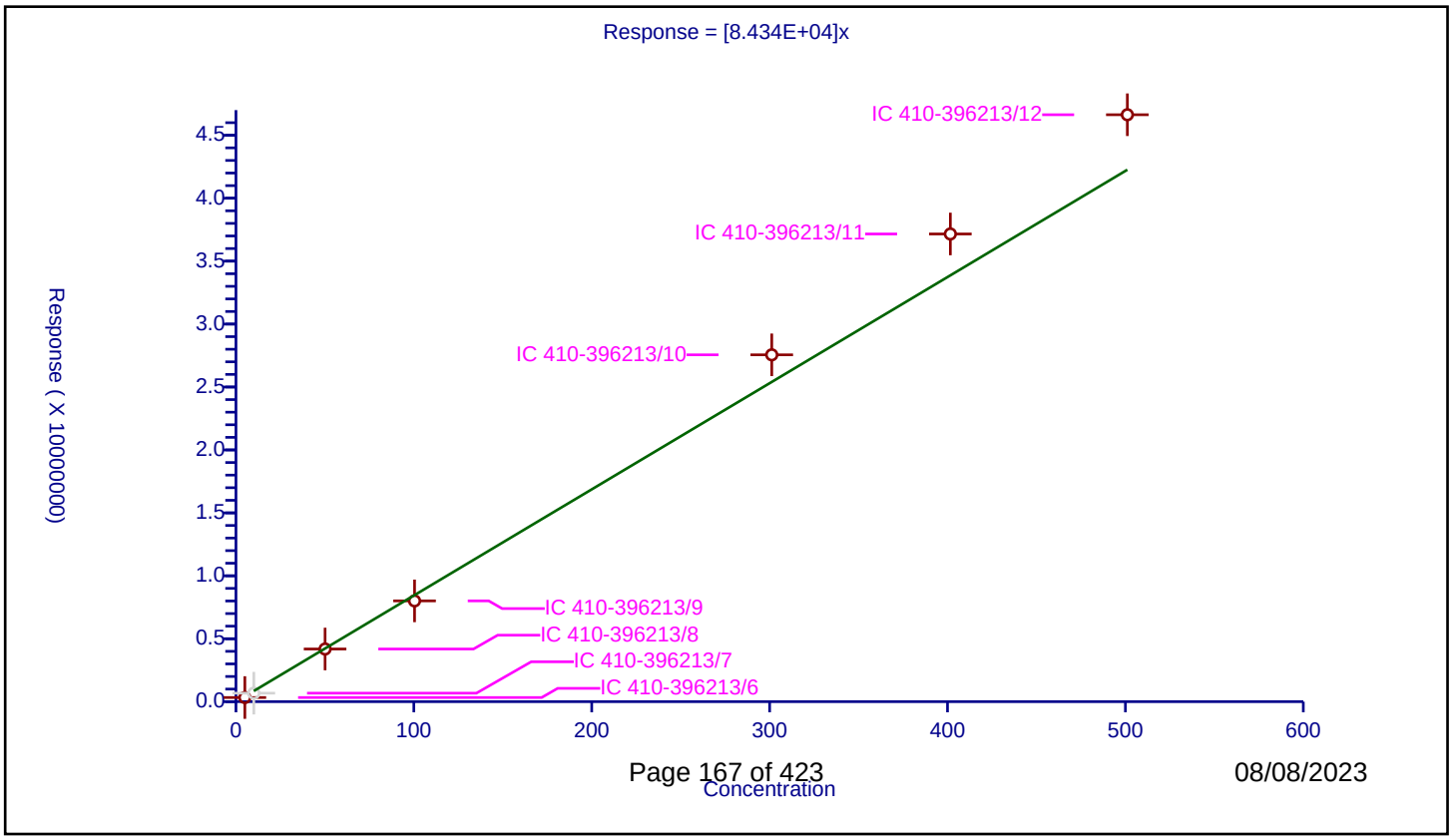
Curve Coefficients

Intercept:	0
Slope:	8.434E+04

Error Coefficients

Standard Error:	2640000
Relative Standard Error:	12.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/6	5.011	329188.0			65693.075234	Y
2	IC 410-396213/7	10.04	674369.0			67168.227092	N
3	IC 410-396213/8	50.11	4183521.0			83486.749152	Y
4	IC 410-396213/9	100.4	8008372.0			79764.661355	Y
5	IC 410-396213/10	301.2	27555757.0			91486.577025	Y
6	IC 410-396213/11	401.6	37159296.0			92528.12749	Y
7	IC 410-396213/12	501.1	46632977.0			93061.219318	Y



Calibration / Acetic acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

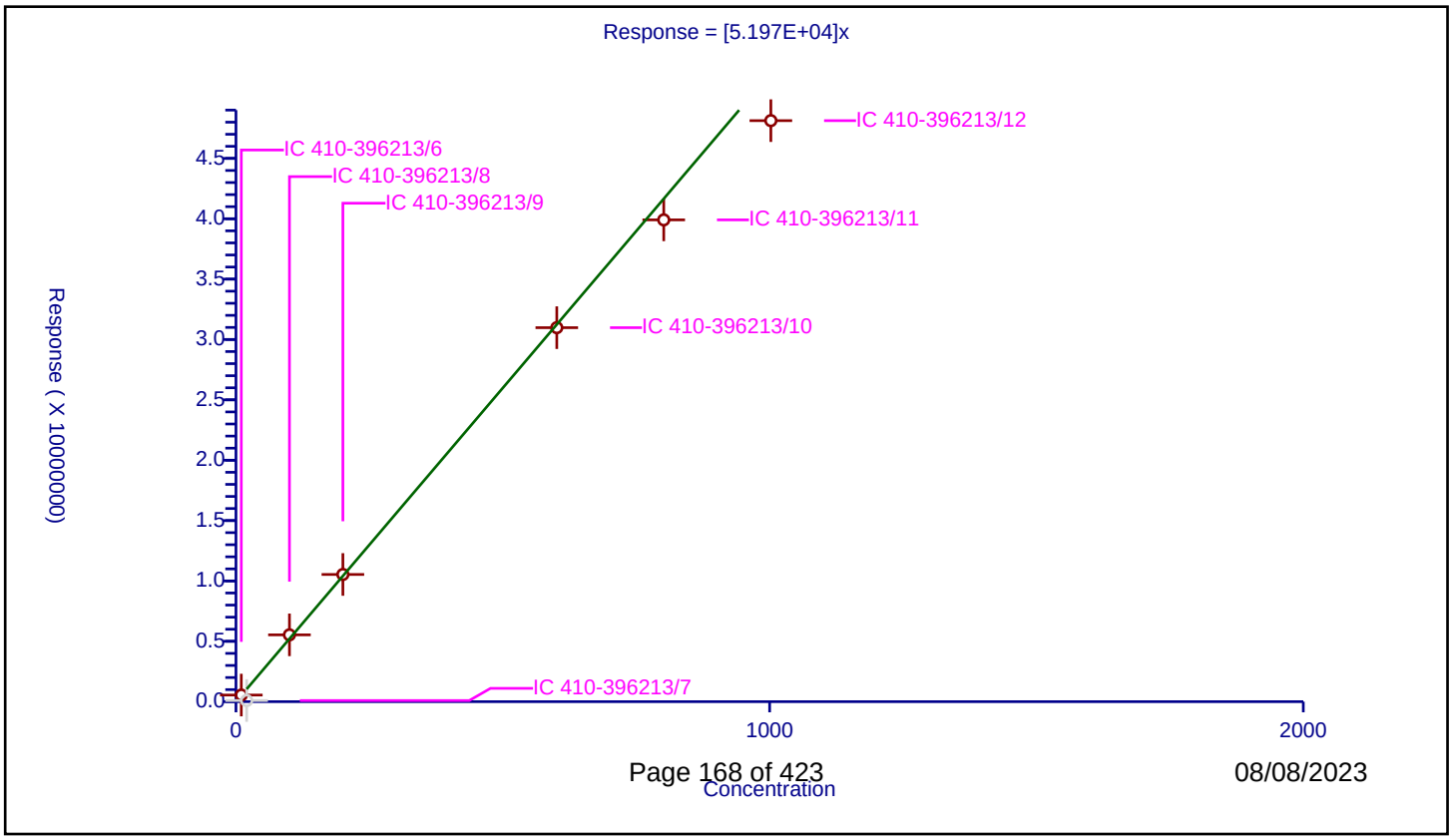
Curve Coefficients

Intercept:	0
Slope:	5.197E+04

Error Coefficients

Standard Error:	1950000
Relative Standard Error:	5.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/6	10.023	548276.0			54701.785892	Y
2	IC 410-396213/7	20.04	93076.0			4644.510978	N
3	IC 410-396213/8	100.23	5533638.0			55209.398384	Y
4	IC 410-396213/9	200.4	10535924.0			52574.471058	Y
5	IC 410-396213/10	601.2	30979007.0			51528.621091	Y
6	IC 410-396213/11	801.6	39907449.0			49784.741766	Y
7	IC 410-396213/12	1002.3	48128051.0			48017.610496	Y



Calibration / Citric Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

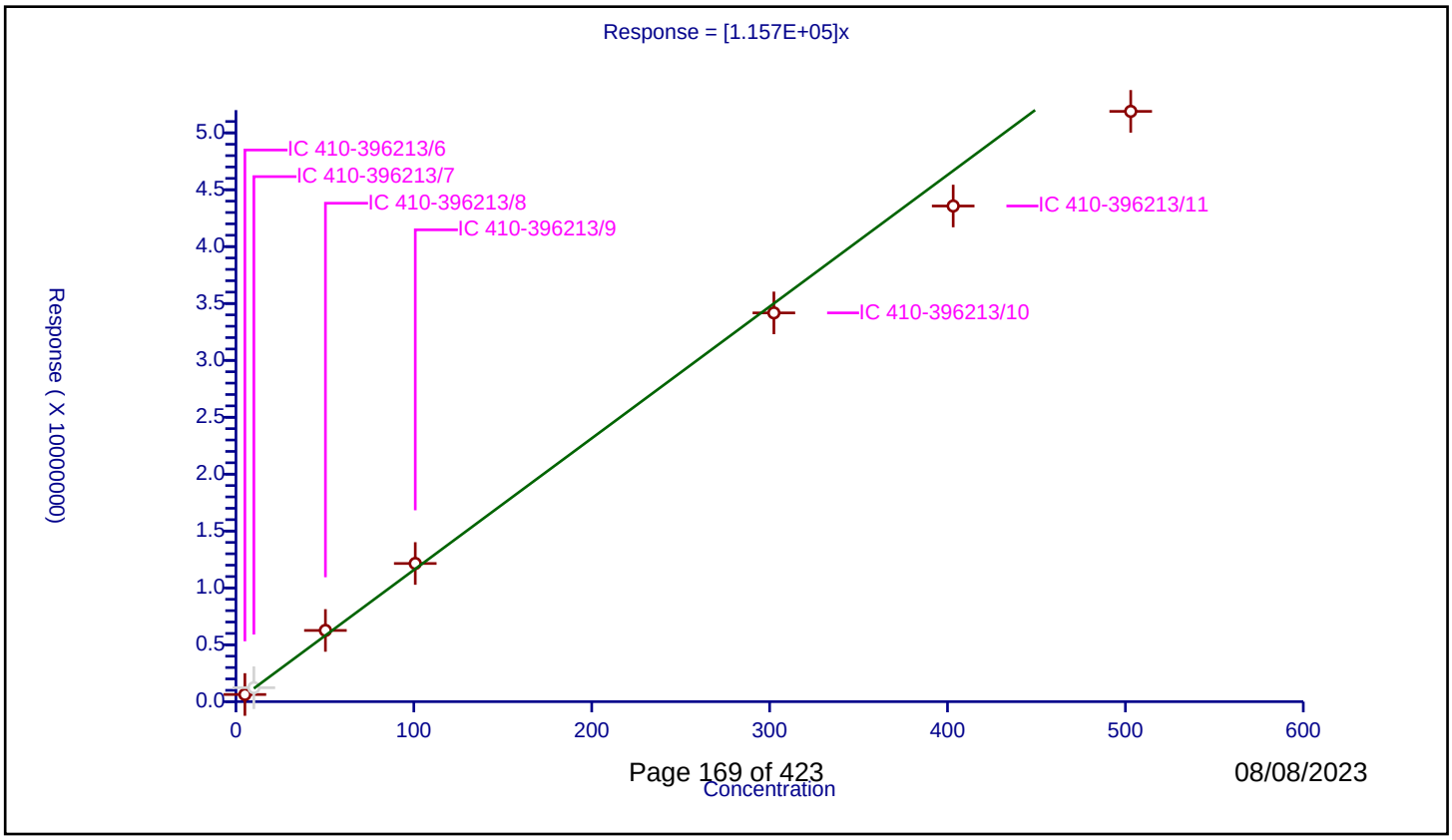
Curve Coefficients

Intercept:	0
Slope:	1.157E+05

Error Coefficients

Standard Error:	3190000
Relative Standard Error:	7.9
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/6	5.03	630031.0			125254.671968	Y
2	IC 410-396213/7	10.08	1227487.0			121774.503968	N
3	IC 410-396213/8	50.3	6261971.0			124492.465209	Y
4	IC 410-396213/9	100.8	12147990.0			120515.77381	Y
5	IC 410-396213/10	302.4	34174524.0			113010.992063	Y
6	IC 410-396213/11	403.2	43570613.0			108062.03621	Y
7	IC 410-396213/12	503.0	51889504.0			103160.047714	Y



Calibration / Propionic acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

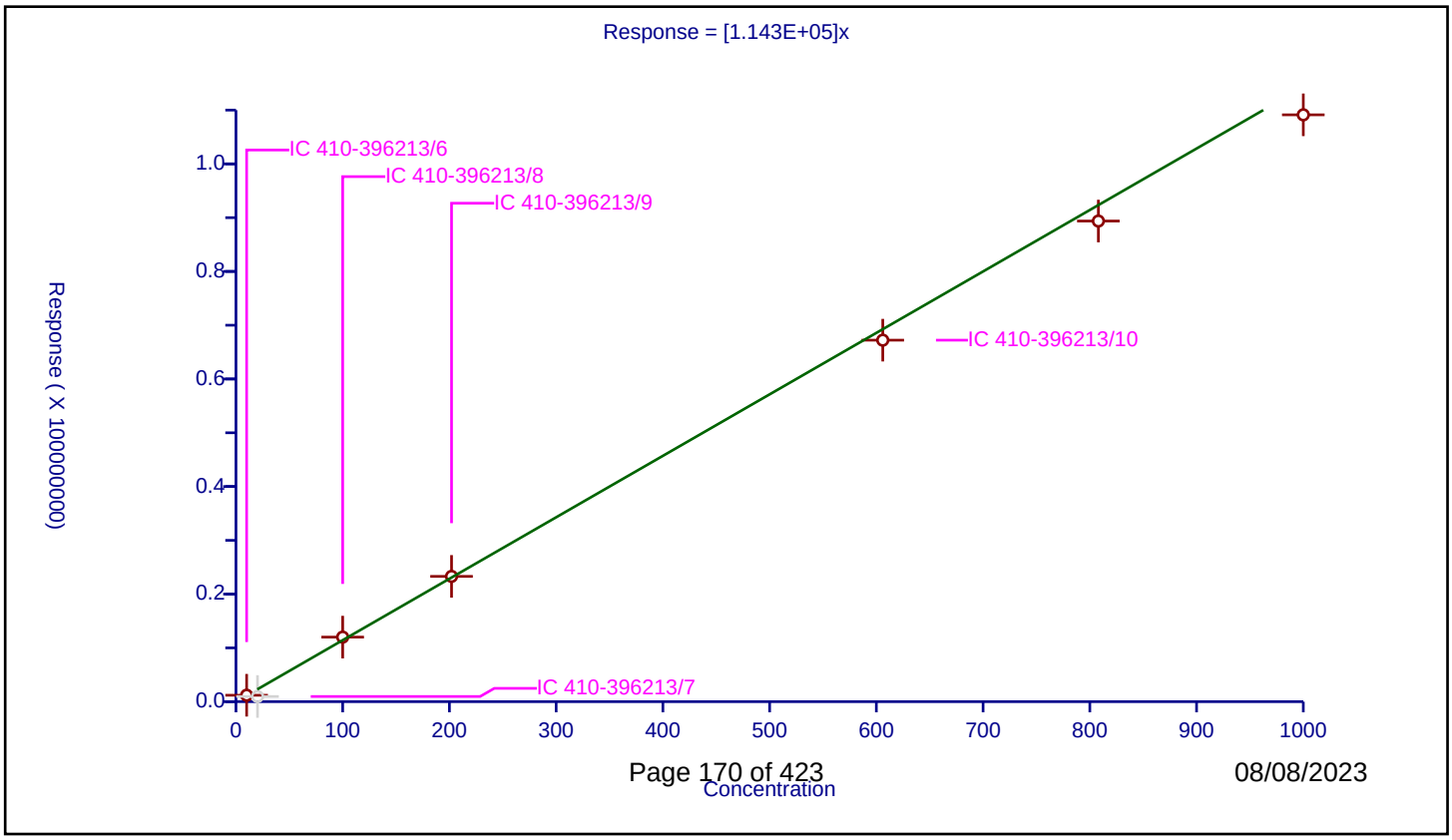
Curve Coefficients

Intercept:	0
Slope:	1.143E+05

Error Coefficients

Standard Error:	2830000
Relative Standard Error:	4.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/6	10.0	1196664.0			119666.4	Y
2	IC 410-396213/7	20.2	964211.0			47733.217822	N
3	IC 410-396213/8	100.0	12004938.0			120049.38	Y
4	IC 410-396213/9	202.0	23295480.0			115324.158416	Y
5	IC 410-396213/10	606.0	67218416.0			110921.478548	Y
6	IC 410-396213/11	808.0	89369890.0			110606.299505	Y
7	IC 410-396213/12	1000.0	109123707.0			109123.707	Y



Calibration / n-Butyric Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

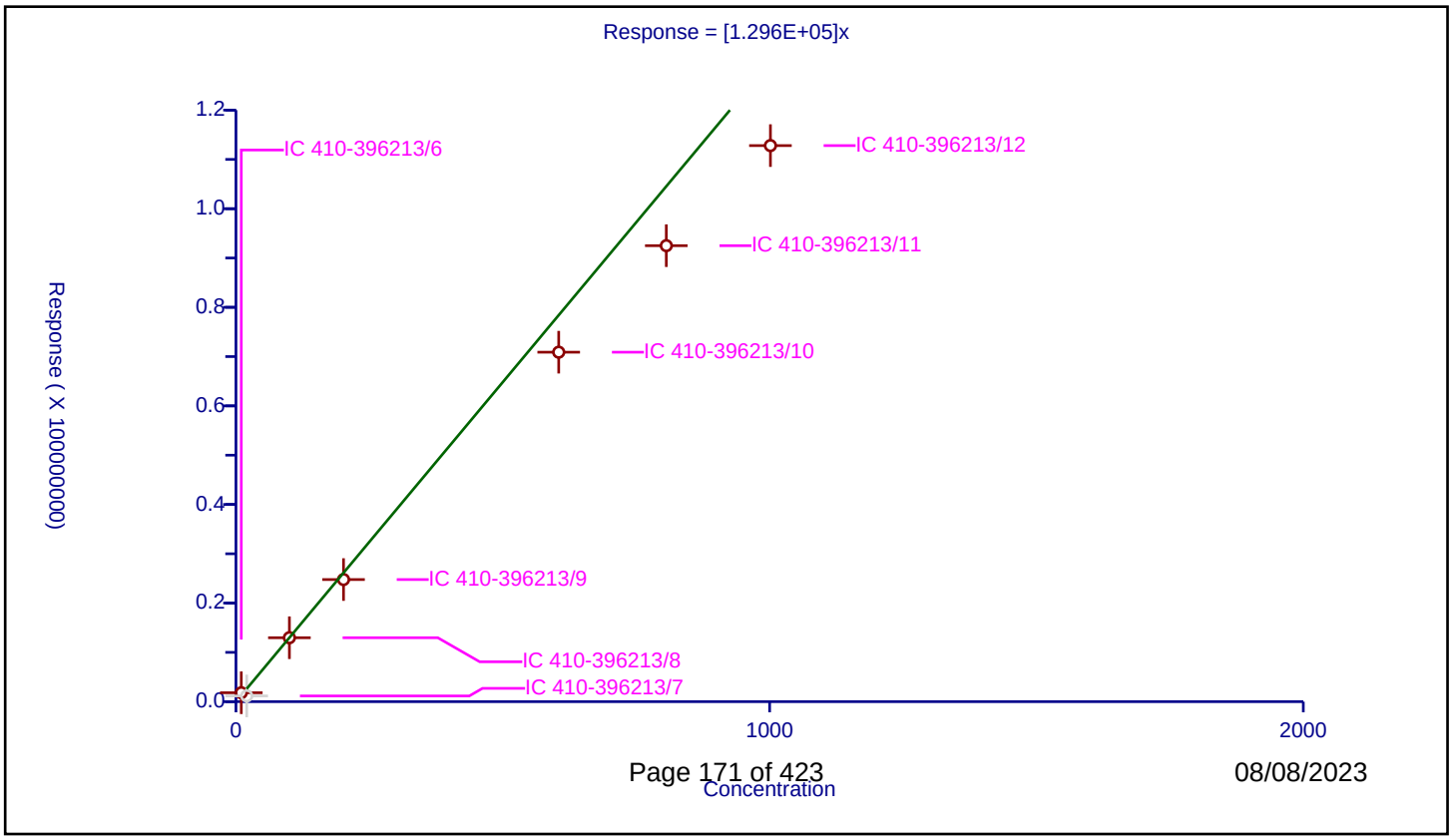
Curve Coefficients

Intercept:	0
Slope:	1.296E+05

Error Coefficients

Standard Error:	9940000
Relative Standard Error:	19.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.947

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/6	10.015	1811837.0			180912.331503	Y
2	IC 410-396213/7	20.16	1165211.0			57798.164683	N
3	IC 410-396213/8	100.15	12968681.0			129492.571143	Y
4	IC 410-396213/9	201.6	24773217.0			122883.020833	Y
5	IC 410-396213/10	604.8	70892823.0			117216.969246	Y
6	IC 410-396213/11	806.4	92497779.0			114704.587054	Y
7	IC 410-396213/12	1001.5	112798500.0			112629.555667	Y



INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136647-1 Analy Batch No.: 396213

SDG No.:

Instrument ID: 10136 GC Column: Supelcosil P ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/13/2023 00:31 Calibration End Date: 07/13/2023 03:06 Calibration ID: 51998

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-396213/20	11ORGC23193001.020.d
Level 2	IC 410-396213/15	11ORGC23193001.015.d
Level 3	IC 410-396213/16	11ORGC23193001.016.d
Level 4	IC 410-396213/17	11ORGC23193001.017.d
Level 5	IC 410-396213/18	11ORGC23193001.018.d
Level 6	IC 410-396213/19	11ORGC23193001.019.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
Tartaric Acid	4.354	4.350	4.350	4.350	4.354	4.350					4.304 - 4.404	4.351
Succinic Acid	10.204	10.238	10.229	10.217	10.204	10.050					10.054 - 10.354	10.190
Isobutyric acid	14.629	14.608	14.600	14.596	14.592	14.563					14.579 - 14.679	14.598
Isovaleric acid	15.788	15.796	15.813	15.817	15.813	15.792					15.658 - 15.918	15.803
Valeric acid	15.992	15.988	15.983	15.983	15.979	15.963					15.862 - 16.122	15.981

INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136647-1 Analy Batch No.: 396213

SDG No.:

Instrument ID: 10136 GC Column: Supelcosil P ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/13/2023 00:31 Calibration End Date: 07/13/2023 03:06 Calibration ID: 51998

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-396213/20	11ORGC23193001.020.d
Level 2	IC 410-396213/15	11ORGC23193001.015.d
Level 3	IC 410-396213/16	11ORGC23193001.016.d
Level 4	IC 410-396213/17	11ORGC23193001.017.d
Level 5	IC 410-396213/18	11ORGC23193001.018.d
Level 6	IC 410-396213/19	11ORGC23193001.019.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 4		B	M1	M2								
Tartaric Acid	306859 312118	306847 279019	314938	312495	Ave		305379.356				4.4		20.0			
Succinic Acid	37886 37856	35827 32703	38583	37815	Ave		36778.3250				6.0		20.0			
Isobutyric acid	630886 171666	335309 156887	209245	177899	Qua	857938.591	170349.494	-14.230538			11.8		30.0	1.0000		0.9900
Isovaleric acid	785173 141638	342467 134518	176881	146189	Lin	1212182.35	133392.088				22.2		30.0	1.0000		0.9900
Valeric acid	80055 109478	98484 107293	107656	110228	Ave		102199.183				11.4		20.0			

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.

INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136647-1 Analy Batch No.: 396213

SDG No.:

Instrument ID: 10136 GC Column: Supelcosil P ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/13/2023 00:31 Calibration End Date: 07/13/2023 03:06 Calibration ID: 51998

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-396213/20	11ORGC23193001.020.d
Level 2	IC 410-396213/15	11ORGC23193001.015.d
Level 3	IC 410-396213/16	11ORGC23193001.016.d
Level 4	IC 410-396213/17	11ORGC23193001.017.d
Level 5	IC 410-396213/18	11ORGC23193001.018.d
Level 6	IC 410-396213/19	11ORGC23193001.019.d

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Tartaric Acid	Ave	308577 140290655	771414	3167020	15712264	31386569	1.01 503	2.51	10.1	50.3	101
Succinic Acid	Ave	38098 16442906	90069	387995	1901354	3806771	1.01 503	2.51	10.1	50.3	101
Isobutyric acid	Qua	1269343 157827969	1686606	4210017	17896600	34539112	2.01 1006	5.03	20.1	101	201
Isovaleric acid	Lin	1570346 134517629	1712333	3537617	14618940	28327530	2.00 1000	5.00	20.0	100	200
Valeric acid	Ave	160751 107722246	494391	2161723	11066941	21983275	2.01 1004	5.02	20.1	100	201

Curve Type Legend

Ave = Average by Height
Lin = Linear by Height
Qua = Quadratic by Height

Report Date: 17-Jul-2023 16:02:51 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.015.d				
Lims ID:	IC ORGB1				
Client ID:					
Sample Type:	IC	Calib Level:	2		
Inject. Date:	13-Jul-2023 00:31:00	ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGB1				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub5				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:02:50	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				
First Level Reviewer: UHEW		Date:	13-Jul-2023 12:35:10		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid	4.350	4.354	-0.004	771414H	2.51	2.53	
9 Succinic Acid	10.238	10.204	0.034	90069H	2.51	2.45	
13 Isobutyric acid	14.608	14.629	-0.021	1686606H	5.03	4.87	
14 Isovaleric acid	15.796	15.788	0.008	1712333H	5.00	3.75	
15 Valeric acid	15.988	15.992	-0.005	494391H	5.02	4.84	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

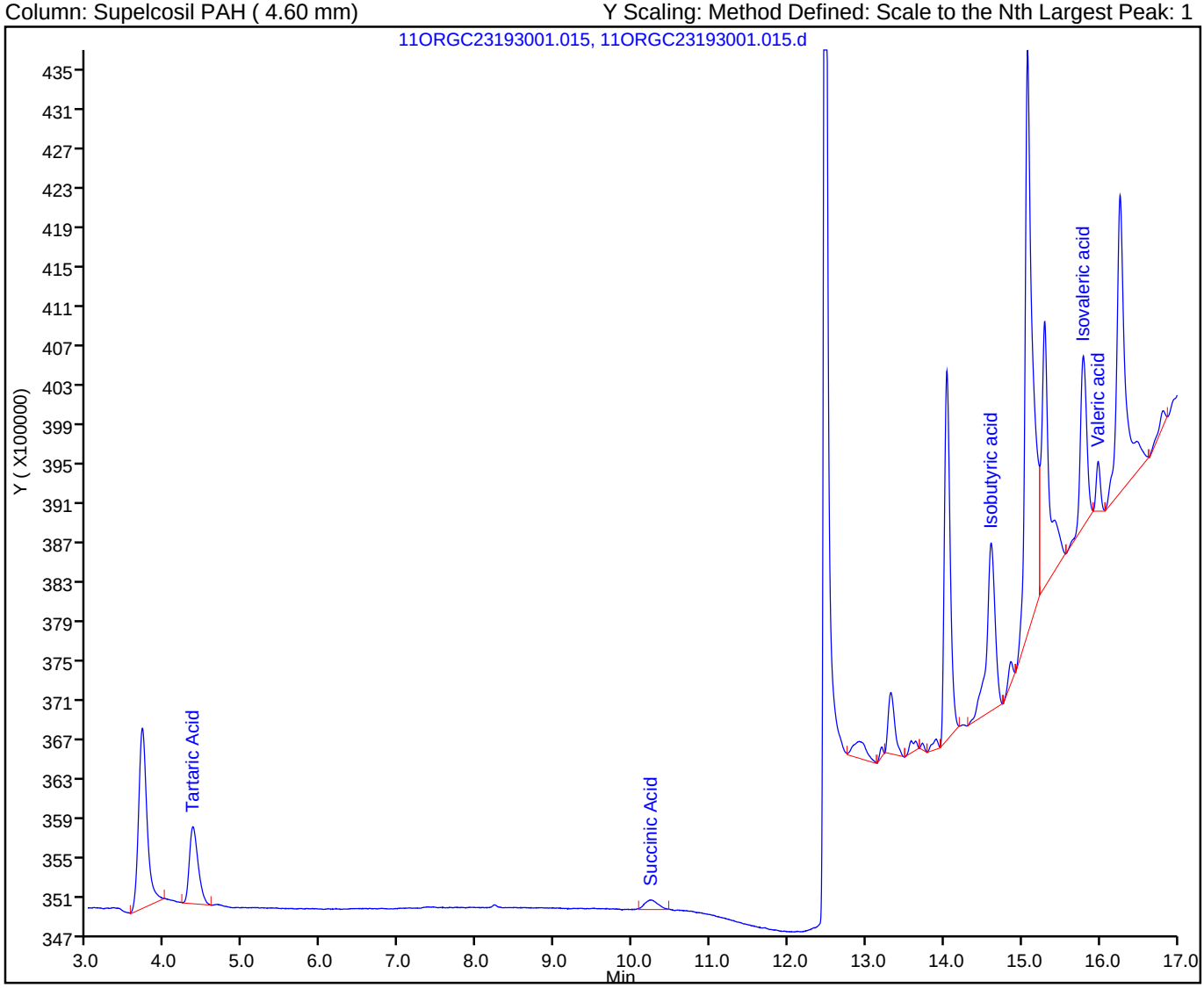
GCS_ORGB1_00009 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 16:02:51 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.015.d				
Injection Date:	13-Jul-2023 00:31:00	Instrument ID:	10136		
Lims ID:	IC ORGB1				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:02:52 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.016.d				
Lims ID:	IC ORGB2				
Client ID:					
Sample Type:	IC	Calib Level:	3		
Inject. Date:	13-Jul-2023 01:02:00	ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGB2				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub5				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:02:52	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid	4.350	4.354	-0.004	3167020H	10.1	10.4	
9 Succinic Acid	10.229	10.204	0.025	387995H	10.1	10.5	
13 Isobutyric acid	14.600	14.629	-0.029	4210017H	20.1	19.7	
14 Isovaleric acid	15.813	15.788	0.024	3537617H	20.0	17.4	
15 Valeric acid	15.983	15.992	-0.009	2161723H	20.1	21.2	

Reagents:

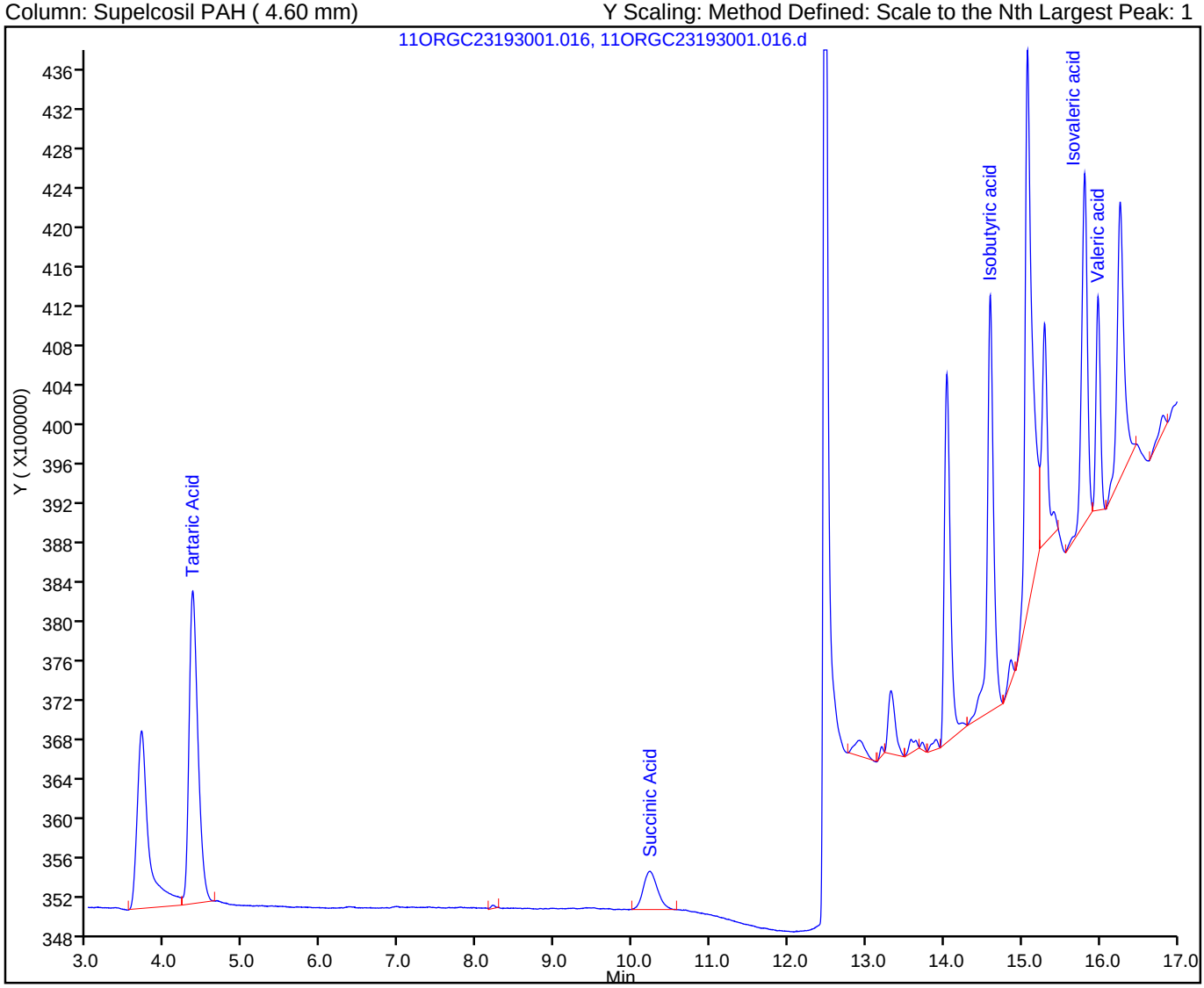
GCS_ORGB2_00009 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 16:02:52 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.016.d				
Injection Date:	13-Jul-2023 01:02:00	Instrument ID:	10136		
Lims ID:	IC ORGB2				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:02:54 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.017.d				
Lims ID:	IC ORGB3				
Client ID:					
Sample Type:	IC	Calib Level:	4		
Inject. Date:	13-Jul-2023 01:33:00	ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGB3				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub5				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:02:53	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				
First Level Reviewer: UHEW		Date:	13-Jul-2023 14:06:05		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid	4.350	4.350	0.000	15712264H	50.3	51.5	
9 Succinic Acid	10.217	10.217	0.000	1901354H	50.3	51.7	
13 Isobutyric acid	14.596	14.596	0.000	17896600H	100.6	100.9	
14 Isovaleric acid	15.817	15.817	0.000	14618940H	100.0	100.5	
15 Valeric acid	15.983	15.983	0.000	11066941H	100.4	108.3	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGB3_00021 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 16:02:54 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.017.d

Injection Date: 13-Jul-2023 01:33:00 Instrument ID: 10136

Lims ID: IC ORGB3

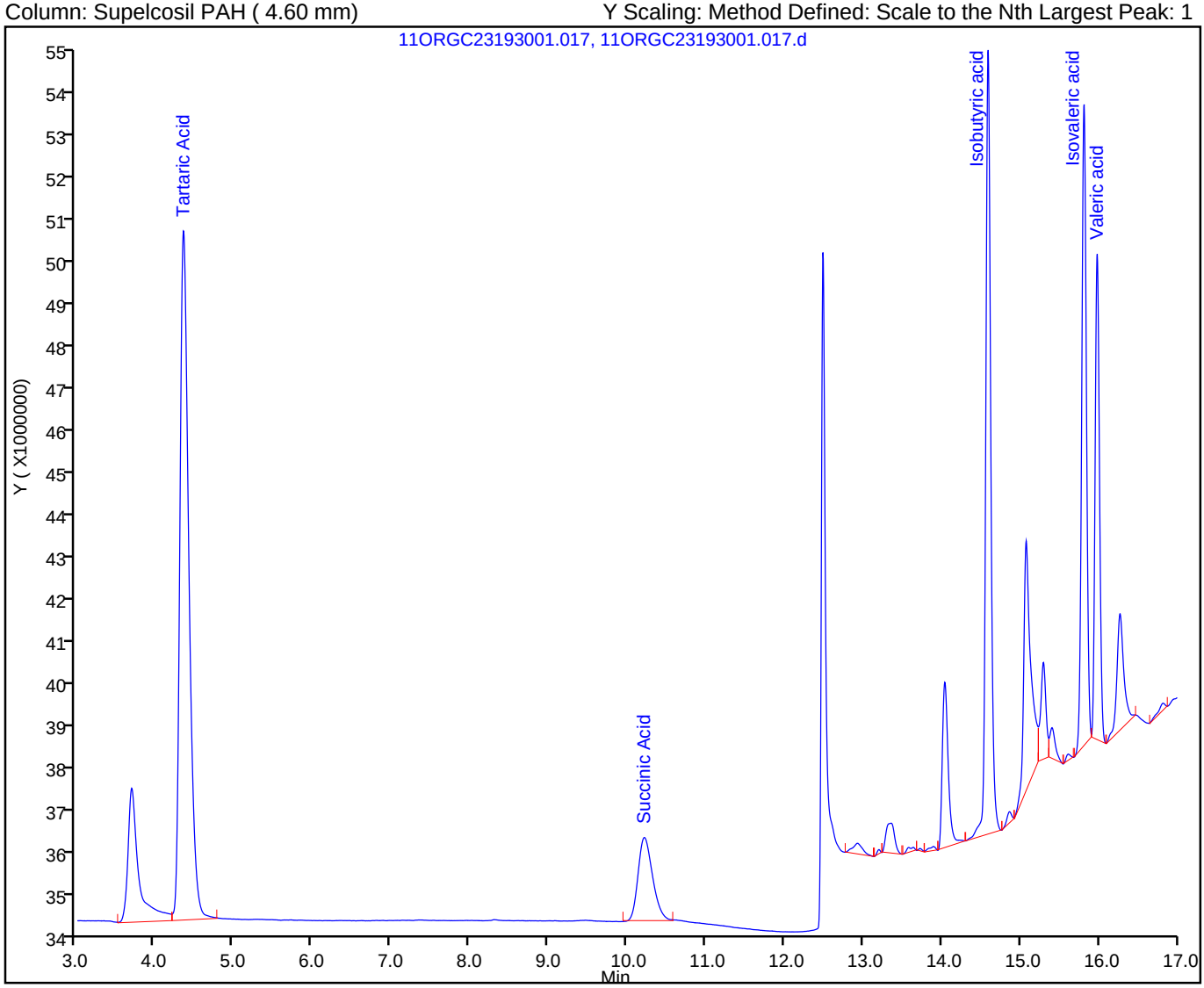
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 17

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:02:56 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.018.d				
Lims ID:	IC ORGB4				
Client ID:					
Sample Type:	IC	Calib Level:	5		
Inject. Date:	13-Jul-2023 02:04:00	ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGB4				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub5				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:02:55	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid	4.354	4.350	0.004	31386569H	100.6	102.8	
9 Succinic Acid	10.204	10.217	-0.013	3806771H	100.6	103.5	
13 Isobutyric acid	14.592	14.596	-0.004	34539112H	201.2	201.1	
14 Isovaleric acid	15.813	15.817	-0.005	28327530H	200.0	203.3	
15 Valeric acid	15.979	15.983	-0.004	21983275H	200.8	215.1	

Reagents:

GCS_ORGB4_00009 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 16:02:56 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.018.d

Injection Date: 13-Jul-2023 02:04:00 Instrument ID: 10136

Lims ID: IC ORGB4

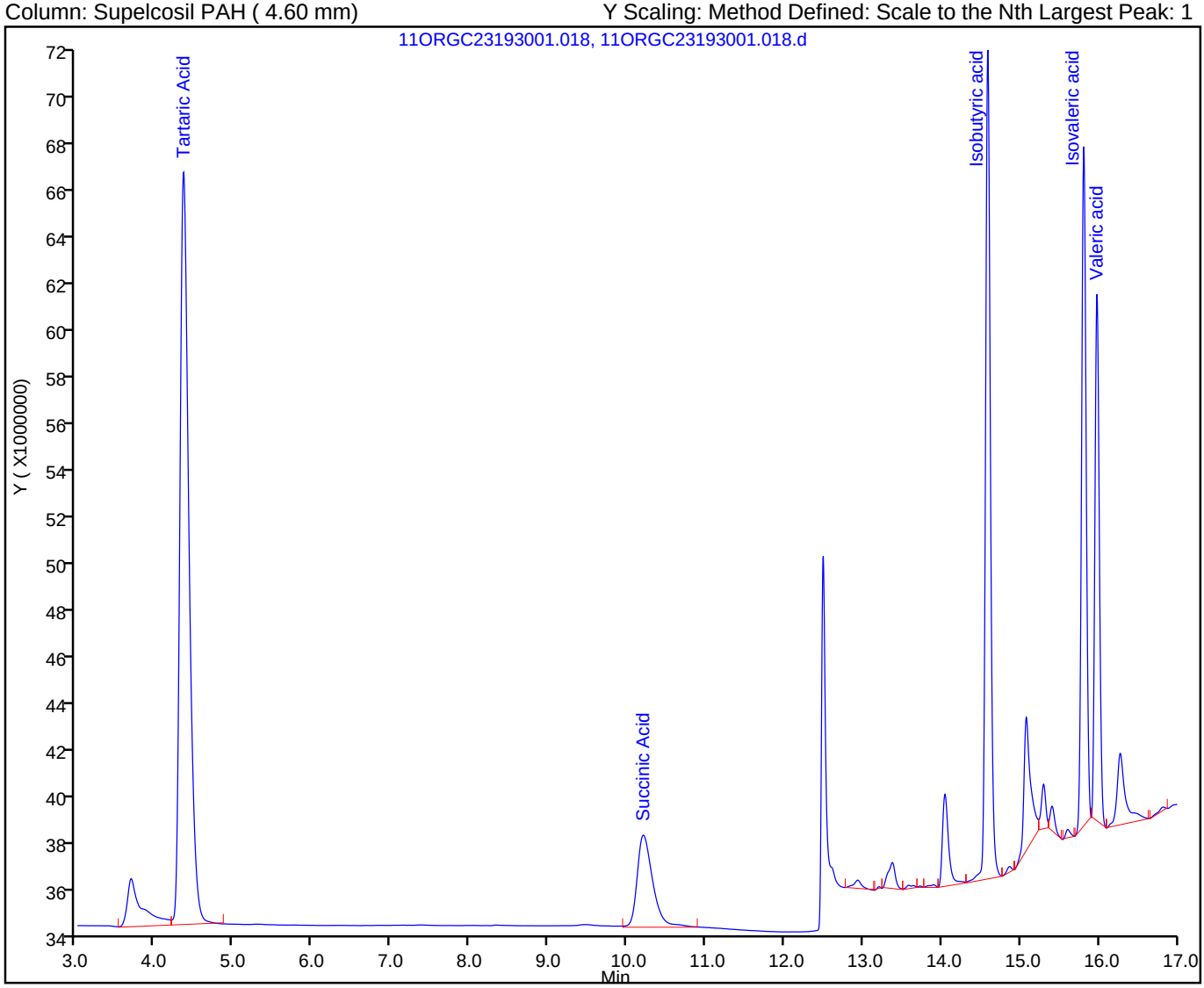
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 18

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:02:57 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.019.d				
Lims ID:	IC ORGB5				
Client ID:					
Sample Type:	IC	Calib Level:	6		
Inject. Date:	13-Jul-2023 02:35:00	ALS Bottle#:	0	Worklist Smp#:	19
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGB5				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub5				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:02:57	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				
First Level Reviewer: UHEW		Date:	13-Jul-2023 12:32:42		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid	4.350	4.350	0.000	140290655H	502.8	459.4	
9 Succinic Acid	10.050	10.217	-0.167	16442906H	502.8	447.1	a
13 Isobutyric acid	14.563	14.596	-0.034	157827969H	1006.0	1006.0	
14 Isovaleric acid	15.792	15.817	-0.025	134517629H	1000.0	999.4	
15 Valeric acid	15.963	15.983	-0.021	107722246H	1004.0	1054.0	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Review Flags

a - User Assigned ID

Reagents:

GCS_ORGB5_00008 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 16:02:57 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.019.d

Injection Date: 13-Jul-2023 02:35:00 Instrument ID: 10136

Lims ID: IC ORGB5

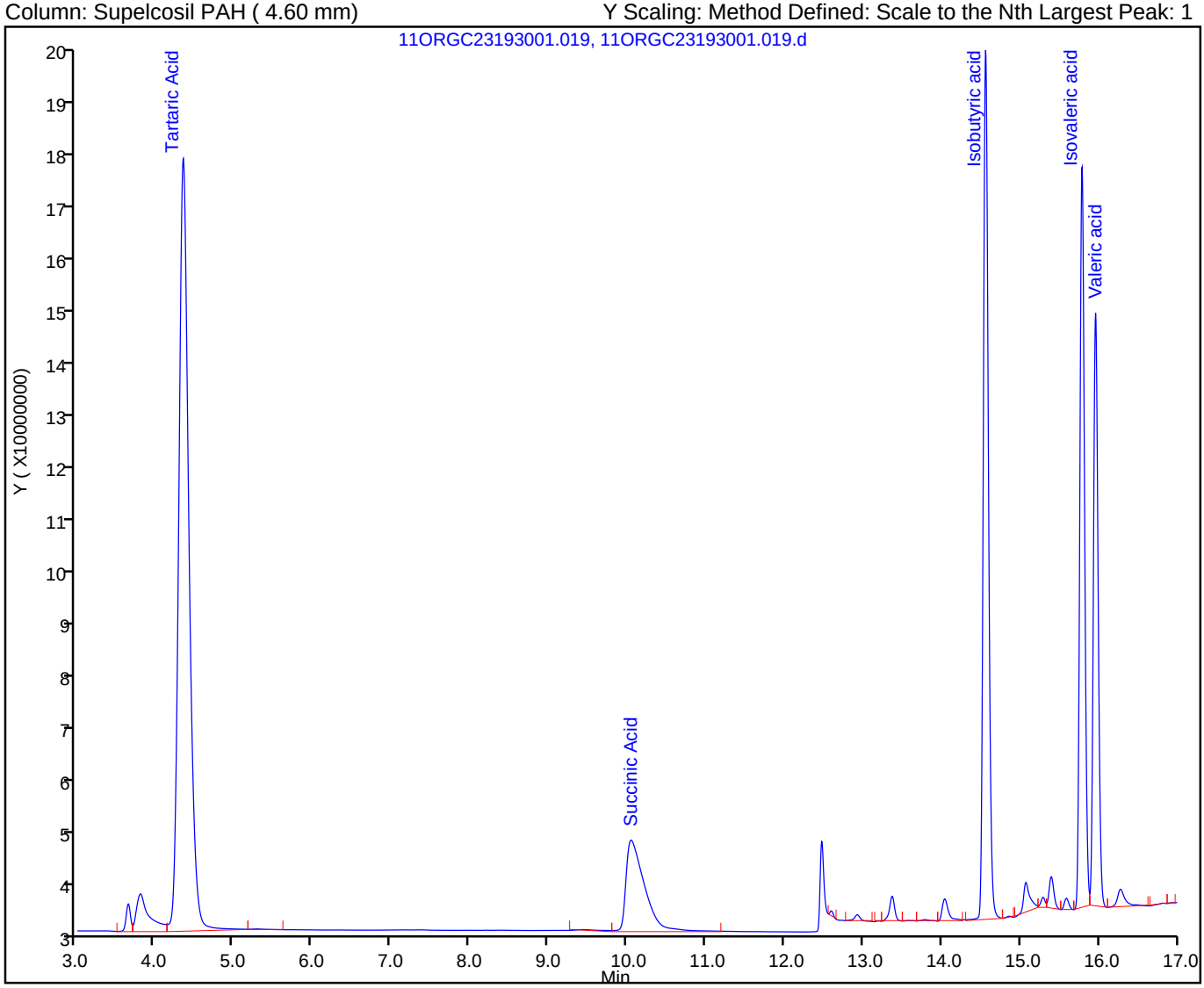
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 19

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:02:57 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

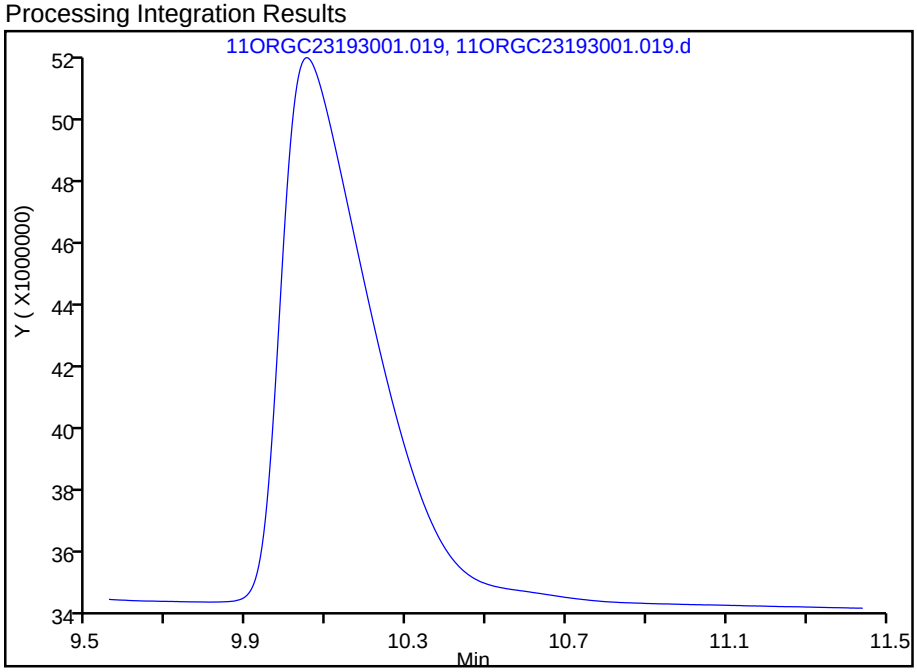
Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.019.d				
Injection Date:	13-Jul-2023 02:35:00	Instrument ID:	10136		
Lims ID:	IC ORGB5				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	19
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		
Column:	Supelcosil PAH (4.60 mm)	Detector	UV0		

9 Succinic Acid, CAS: 110-15-6

Signal: 1

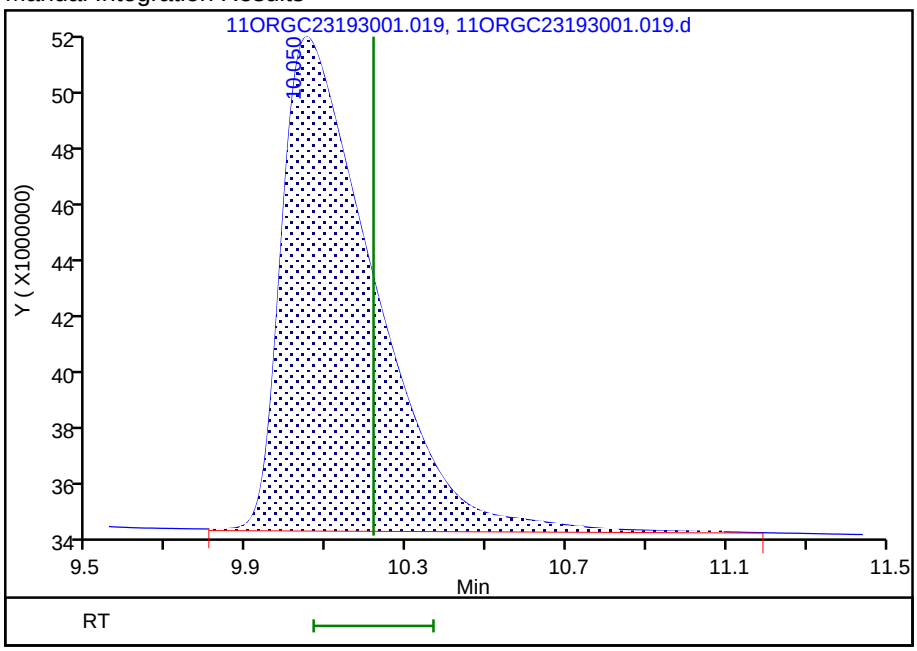
Not Detected
Expected RT: 10.22

Processing Integration Results



Manual Integration Results

RT: 10.05
Height: 16442906
Amount: 447.0814
Amount Units: ug/ml



Reviewer: UHEW, 13-Jul-2023 14:16:21 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Report Date: 17-Jul-2023 16:02:58 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.020.d				
Lims ID:	IC ORGBMDL				
Client ID:					
Sample Type:	IC	Calib Level:	1		
Inject. Date:	13-Jul-2023 03:06:00	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	ICVL ORGB				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub5				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:02:58	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				
First Level Reviewer: UHEW		Date:	13-Jul-2023 12:33:06		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid	4.354	4.354	0.000	308577H	1.01	1.01	
9 Succinic Acid	10.204	10.204	0.000	38098H	1.01	1.04	Ma
13 Isobutyric acid	14.629	14.629	0.000	1269343H	2.01	2.42	
14 Isovaleric acid	15.788	15.788	0.000	1570346H	2.00	2.69	
15 Valeric acid	15.992	15.992	0.000	160751H	2.01	1.57	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

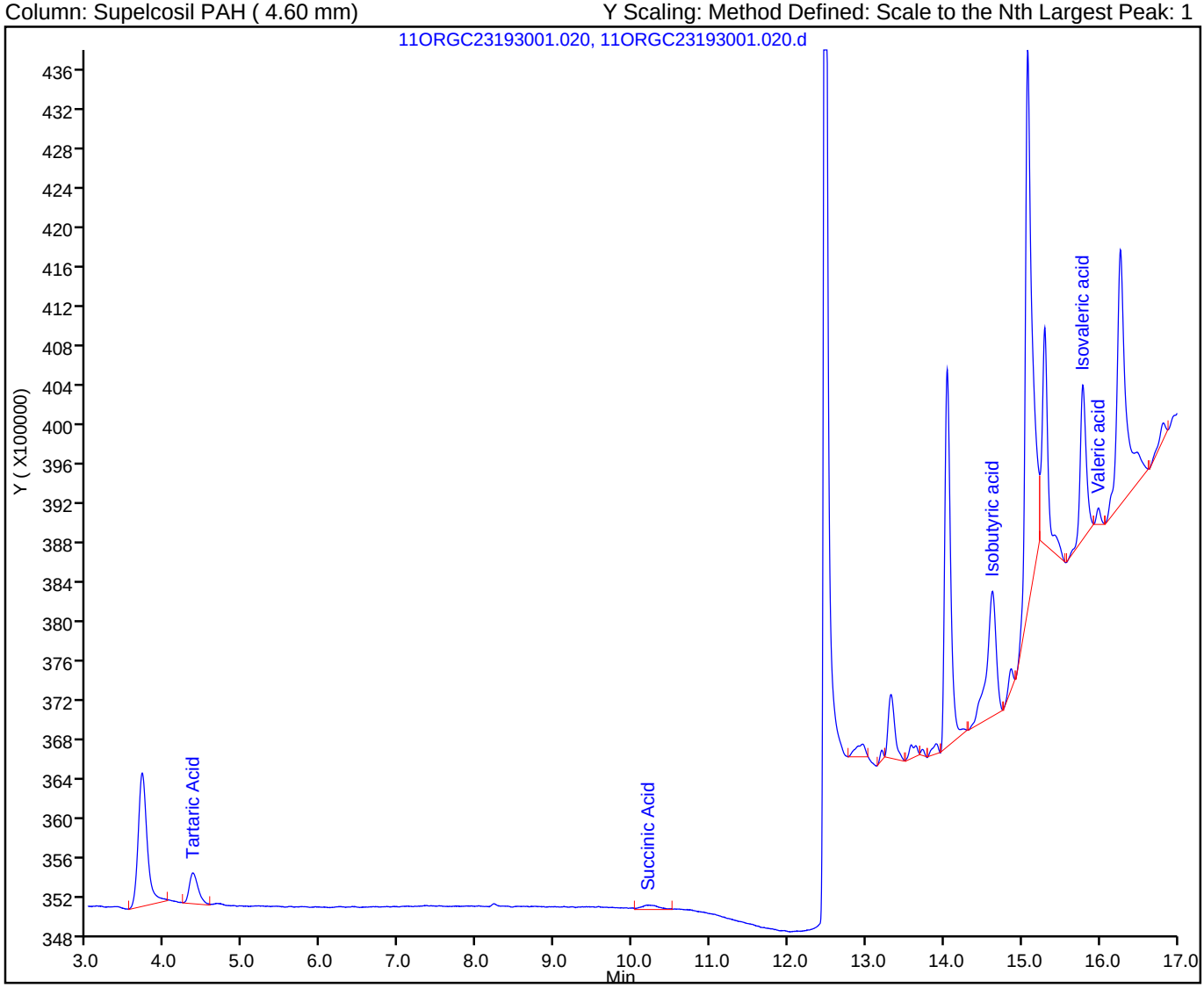
GCS_ORGBMDL_00006 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 16:02:58 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.020.d				
Injection Date:	13-Jul-2023 03:06:00	Instrument ID:	10136		
Lims ID:	IC ORGBMDL				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:02:58 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

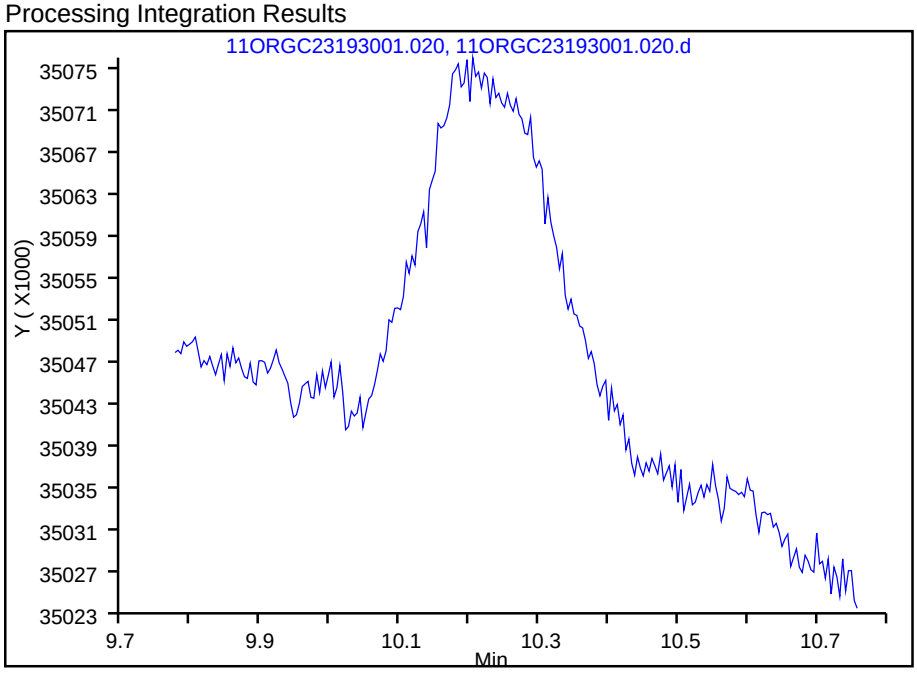
Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.020.d				
Injection Date:	13-Jul-2023 03:06:00	Instrument ID:	10136		
Lims ID:	IC ORGBMDL				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		
Column:	Supelcosil PAH (4.60 mm)	Detector	UV0		

9 Succinic Acid, CAS: 110-15-6

Signal: 1

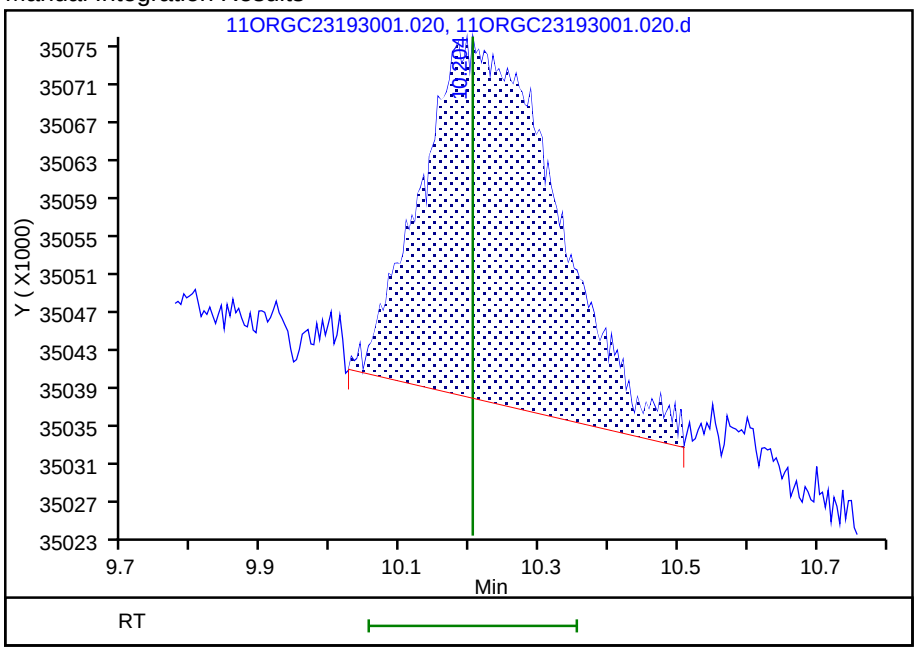
Not Detected
Expected RT: 10.20

Processing Integration Results



Manual Integration Results

RT: 10.20
Height: 38098
Amount: 1.035882
Amount Units: ug/ml



Reviewer: UHEW, 13-Jul-2023 14:06:26 -04:00:00 (UTC)
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Calibration / Tartaric Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

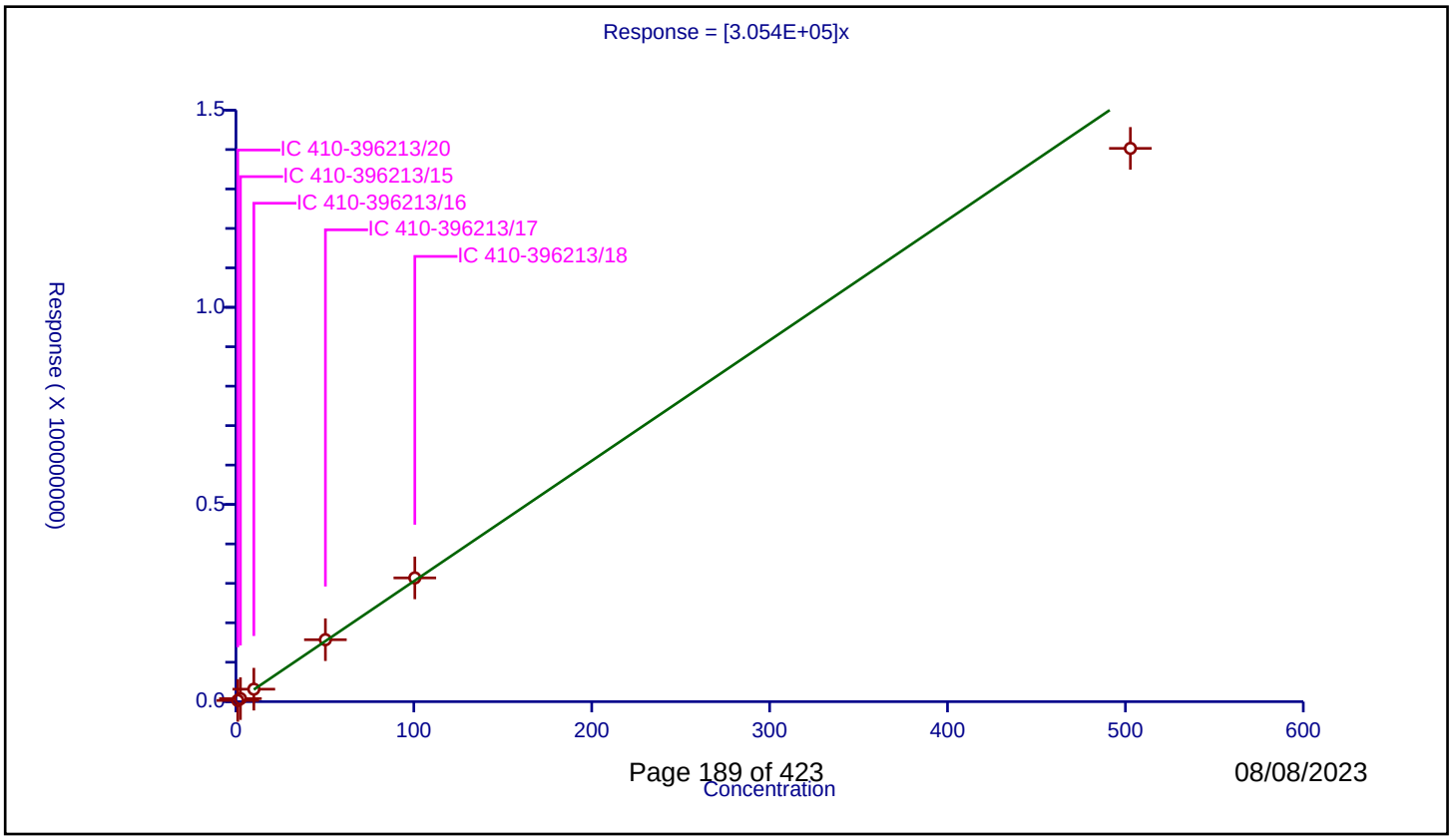
Curve Coefficients

Intercept:	0
Slope:	3.054E+05

Error Coefficients

Standard Error:	5940000
Relative Standard Error:	4.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/20	1.0056	308577.0			306858.591885	Y
2	IC 410-396213/15	2.514	771414.0			306847.25537	Y
3	IC 410-396213/16	10.056	3167020.0			314938.345267	Y
4	IC 410-396213/17	50.28	15712264.0			312495.306285	Y
5	IC 410-396213/18	100.56	31386569.0			312117.830151	Y
6	IC 410-396213/19	502.8	140290655.0			279018.804694	Y



Calibration / Succinic Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

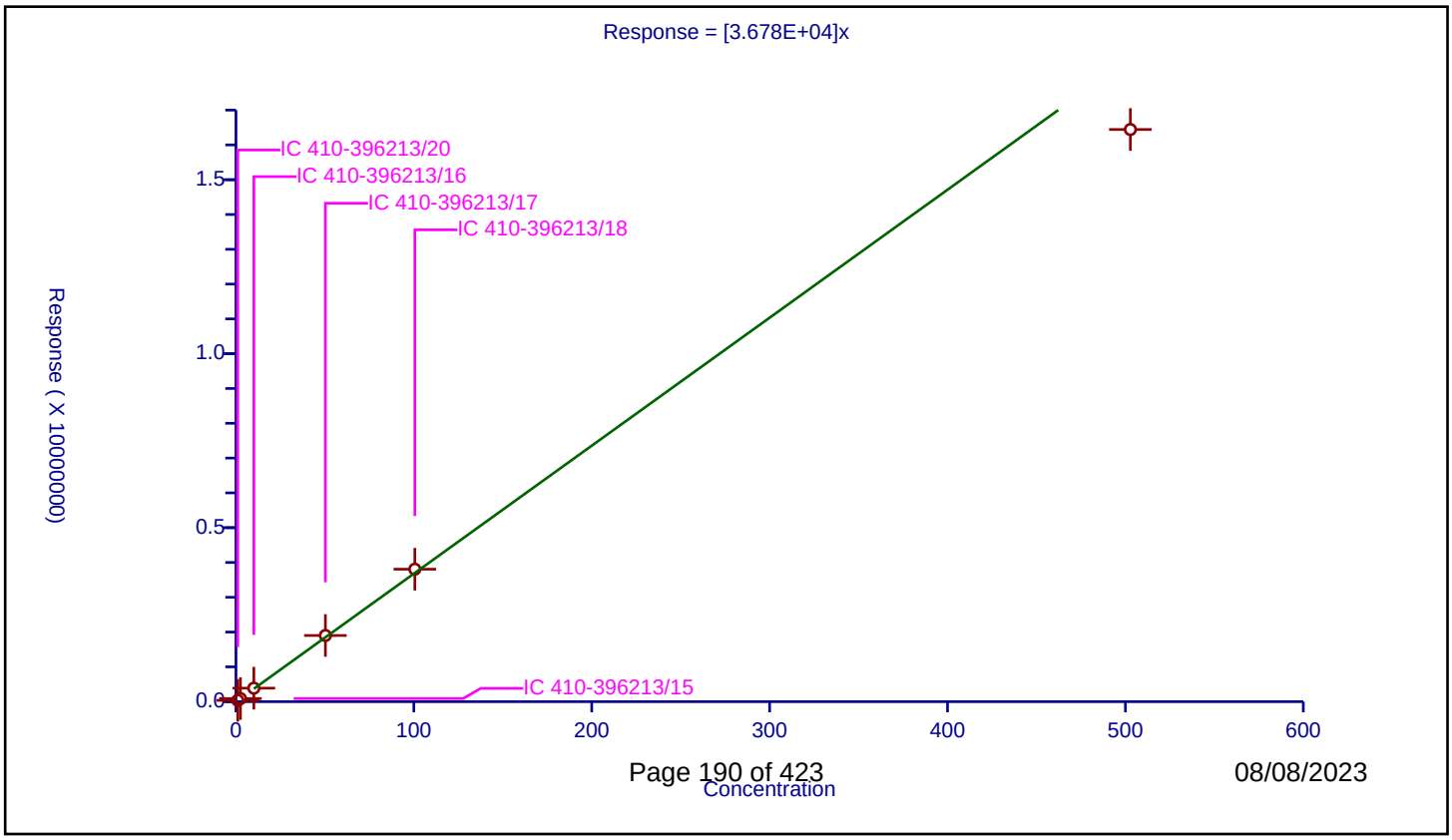
Curve Coefficients

Intercept:	0
Slope:	3.678E+04

Error Coefficients

Standard Error:	918000
Relative Standard Error:	6.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/20	1.0056	38098.0			37885.8393	Y
2	IC 410-396213/15	2.514	90069.0			35826.968974	Y
3	IC 410-396213/16	10.056	387995.0			38583.432776	Y
4	IC 410-396213/17	50.28	1901354.0			37815.31424	Y
5	IC 410-396213/18	100.56	3806771.0			37855.717979	Y
6	IC 410-396213/19	502.8	16442906.0			32702.677009	Y



Calibration / Isobutyric acid

Curve Type:	Quadratic
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

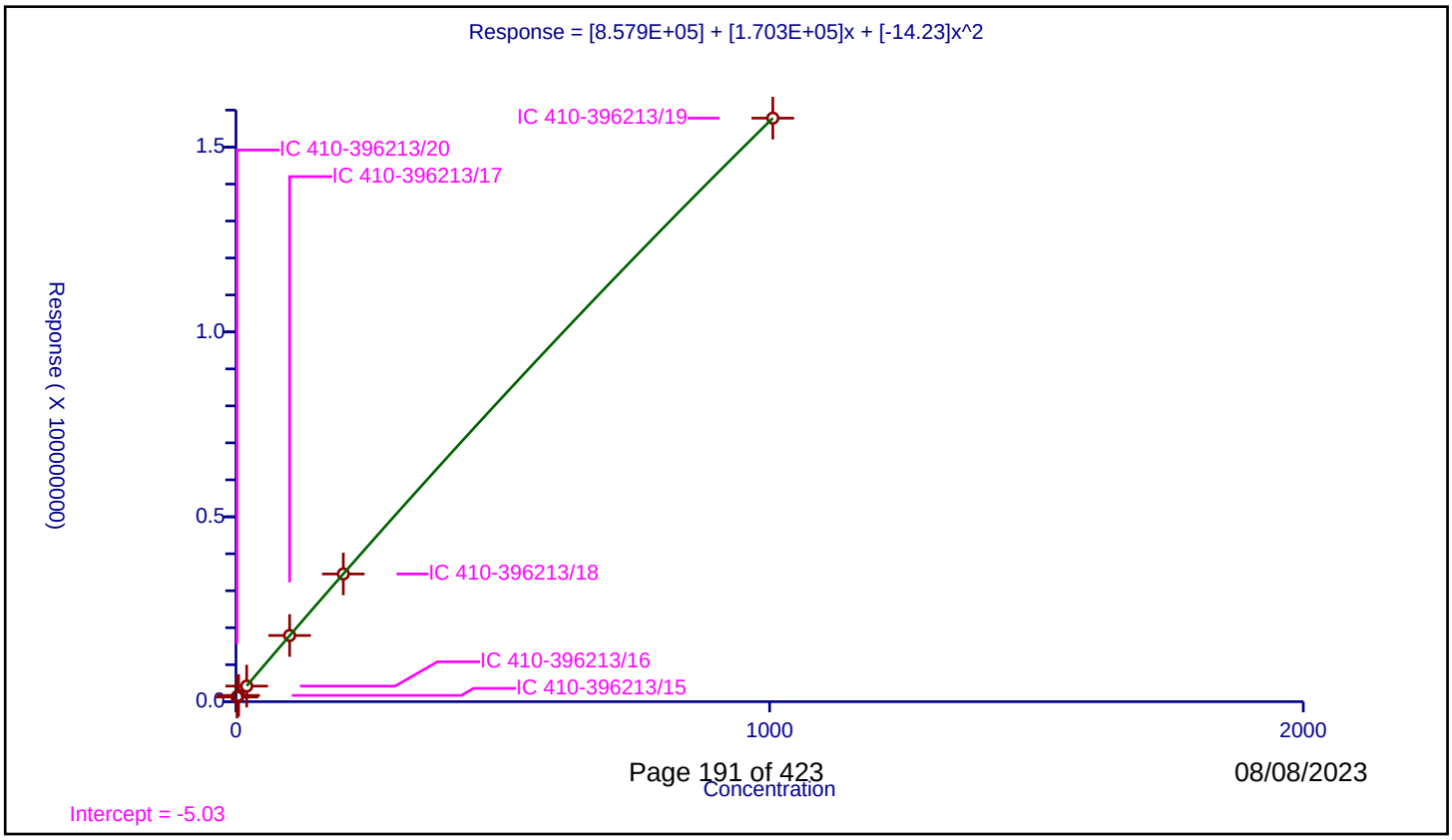
Curve Coefficients

Intercept:	8.579E+05
Slope:	1.703E+05
Second Order:	-14.23

Error Coefficients

Standard Error:	65100
Relative Standard Error:	11.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/20	2.012	1269343.0			630886.182903	Y
2	IC 410-396213/15	5.03	1686606.0			335309.343936	Y
3	IC 410-396213/16	20.12	4210017.0			209245.377734	Y
4	IC 410-396213/17	100.6	17896600.0			177898.60835	Y
5	IC 410-396213/18	201.2	34539112.0			171665.5666	Y
6	IC 410-396213/19	1006.0	157827969.0			156886.649105	Y



Calibration / Isovaleric acid

Curve Type:	Linear
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

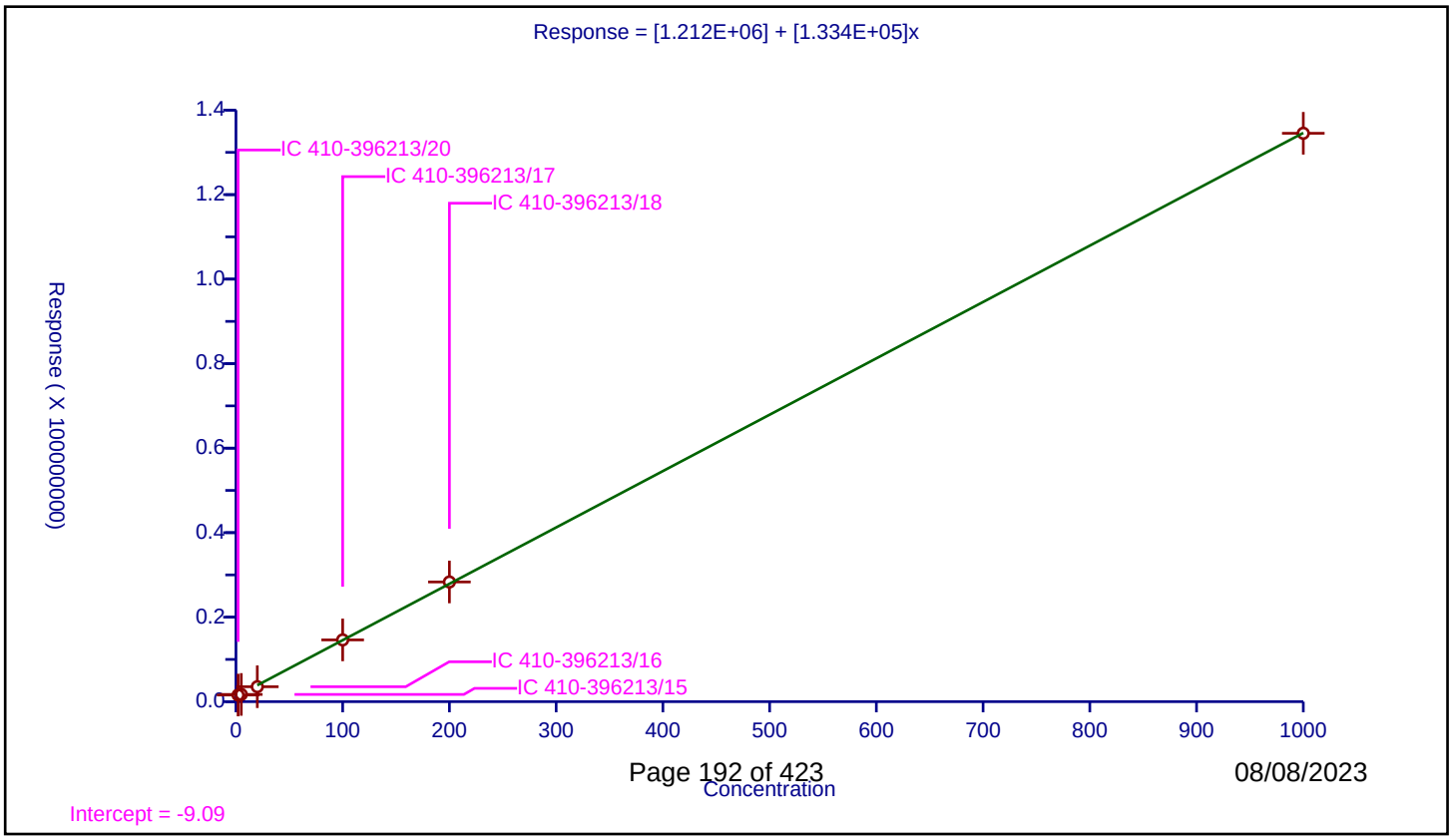
Curve Coefficients

Intercept:	1.212E+06
Slope:	1.334E+05

Error Coefficients

Standard Error:	298000
Relative Standard Error:	22.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/20	2.0	1570346.0			785173.0	Y
2	IC 410-396213/15	5.0	1712333.0			342466.6	Y
3	IC 410-396213/16	20.0	3537617.0			176880.85	Y
4	IC 410-396213/17	100.0	14618940.0			146189.4	Y
5	IC 410-396213/18	200.0	28327530.0			141637.65	Y
6	IC 410-396213/19	1000.0	134517629.0			134517.629	Y



Calibration / Valeric acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

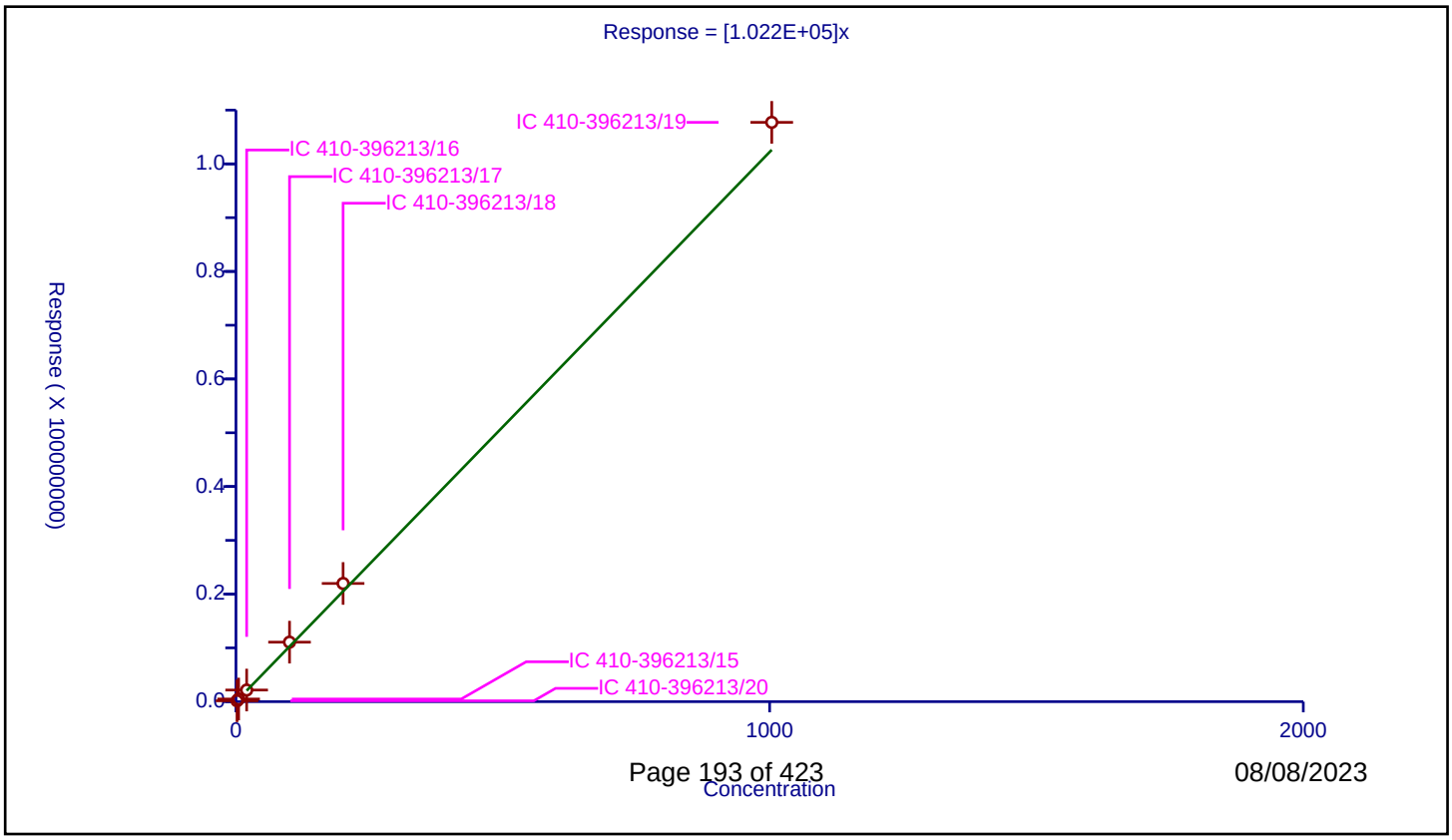
Curve Coefficients

Intercept:	0
Slope:	1.022E+05

Error Coefficients

Standard Error:	2410000
Relative Standard Error:	11.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/20	2.008	160751.0			80055.278884	Y
2	IC 410-396213/15	5.02	494391.0			98484.262948	Y
3	IC 410-396213/16	20.08	2161723.0			107655.527888	Y
4	IC 410-396213/17	100.4	11066941.0			110228.496016	Y
5	IC 410-396213/18	200.8	21983275.0			109478.461155	Y
6	IC 410-396213/19	1004.0	107722246.0			107293.073705	Y



INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136647-1 Analy Batch No.: 396213

SDG No.:

Instrument ID: 10136 GC Column: Supelcosil P ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/13/2023 04:09 Calibration End Date: 07/13/2023 06:13 Calibration ID: 52001

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-396213/22	11ORGC23193001.022.d
Level 2	IC 410-396213/23	11ORGC23193001.023.d
Level 3	ICRT 410-396213/24	11ORGC23193001.024.d
Level 4	IC 410-396213/25	11ORGC23193001.025.d
Level 5	IC 410-396213/26	11ORGC23193001.026.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5						RT WINDOW	AVG RT
Fumaric Acid	10.650	10.642	10.629	10.638	10.646						10.500 - 10.800	10.641

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136647-1 Analy Batch No.: 396213

SDG No.:

Instrument ID: 10136 GC Column: Supelcosil P ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/13/2023 04:09 Calibration End Date: 07/13/2023 06:13 Calibration ID: 52001

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-396213/22	11ORGC23193001.022.d
Level 2	IC 410-396213/23	11ORGC23193001.023.d
Level 3	ICRT 410-396213/24	11ORGC23193001.024.d
Level 4	IC 410-396213/25	11ORGC23193001.025.d
Level 5	IC 410-396213/26	11ORGC23193001.026.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 3	LVL 4		B	M1	M2								
Fumaric Acid	12948458 10718971	11501616	12857131	15093559	Ave		12623947. 1				13.2		20.0			

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.

INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136647-1 Analy Batch No.: 396213

SDG No.:

Instrument ID: 10136 GC Column: Supelcosil P ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/13/2023 04:09 Calibration End Date: 07/13/2023 06:13 Calibration ID: 52001

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-396213/22	11ORGC23193001.022.d
Level 2	IC 410-396213/23	11ORGC23193001.023.d
Level 3	ICRT 410-396213/24	11ORGC23193001.024.d
Level 4	IC 410-396213/25	11ORGC23193001.025.d
Level 5	IC 410-396213/26	11ORGC23193001.026.d

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
Fumaric Acid	Ave	637103	1131828	6326094	14852968	52740555	0.0492	0.0984	0.492	0.984	4.92

Curve Type Legend

Ave = Average by Height

Report Date: 17-Jul-2023 16:02:59 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.022.d				
Lims ID:	IC ORGS1				
Client ID:					
Sample Type:	IC	Calib Level:	1		
Inject. Date:	13-Jul-2023 04:09:00	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGS1				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub6				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:02:59	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				
First Level Reviewer: UHEW		Date:	13-Jul-2023 12:35:27		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid	10.650	10.650	0.000	637103	0.0492	0.0505	H

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGS1_00017 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 16:02:59 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.022.d

Injection Date: 13-Jul-2023 04:09:00 Instrument ID: 10136

Lims ID: IC ORGS1

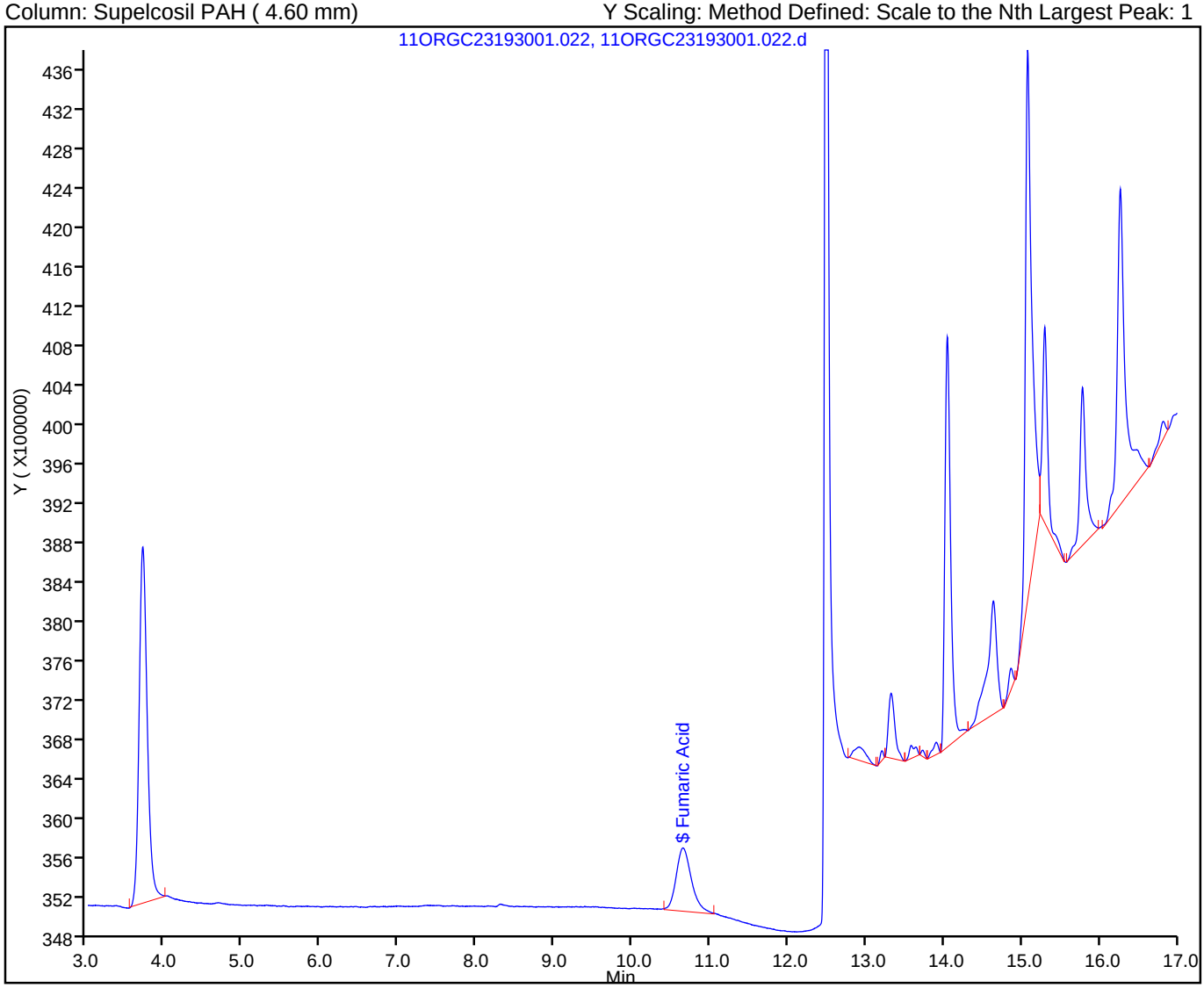
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 22

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:03:01 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.023.d				
Lims ID:	IC ORGS2				
Client ID:					
Sample Type:	IC	Calib Level:	2		
Inject. Date:	13-Jul-2023 04:40:00	ALS Bottle#:	0	Worklist Smp#:	23
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGS2				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub6				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:03:01	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid	10.642	10.650	-0.008	1131828H	0.0984	0.0897	

Reagents:

GCS_ORGS2_00017 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 16:03:01 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.023.d

Injection Date: 13-Jul-2023 04:40:00 Instrument ID: 10136

Lims ID: IC ORGS2

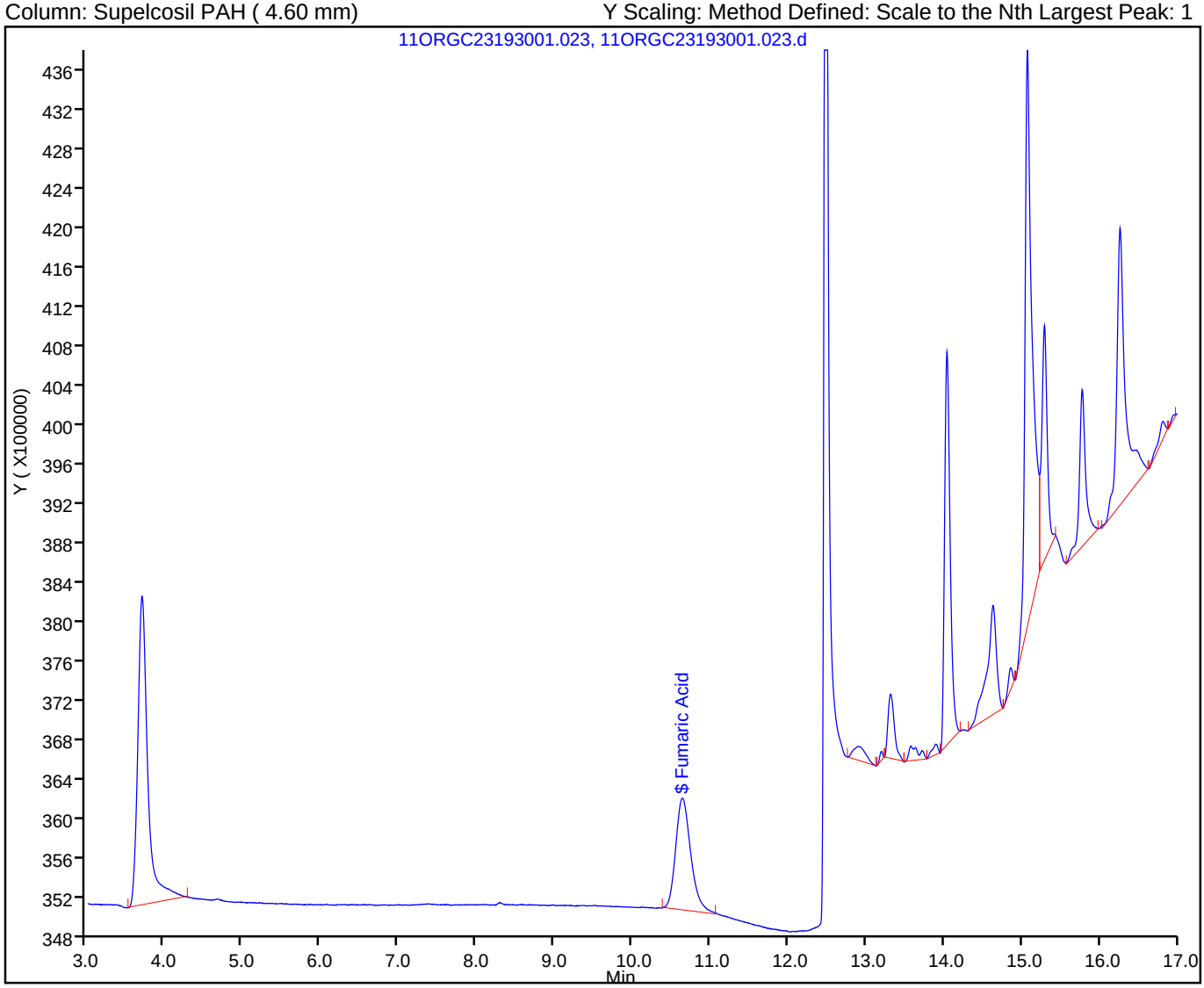
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 23

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:03:02 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.024.d				
Lims ID:	ICRT ORGS3				
Client ID:					
Sample Type:	ICRT	Calib Level:	3		
Inject. Date:	13-Jul-2023 05:11:00	ALS Bottle#:	0	Worklist Smp#:	24
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	ICRT ORGS3				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub6				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:03:02	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				
First Level Reviewer: UHEW		Date:	17-Jul-2023 15:40:45		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid	10.629	10.629	0.000	6326094	H 0.4920	0.5011	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGS3_00047 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 16:03:02 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.024.d

Injection Date: 13-Jul-2023 05:11:00 Instrument ID: 10136

Lims ID: ICRT ORGS3

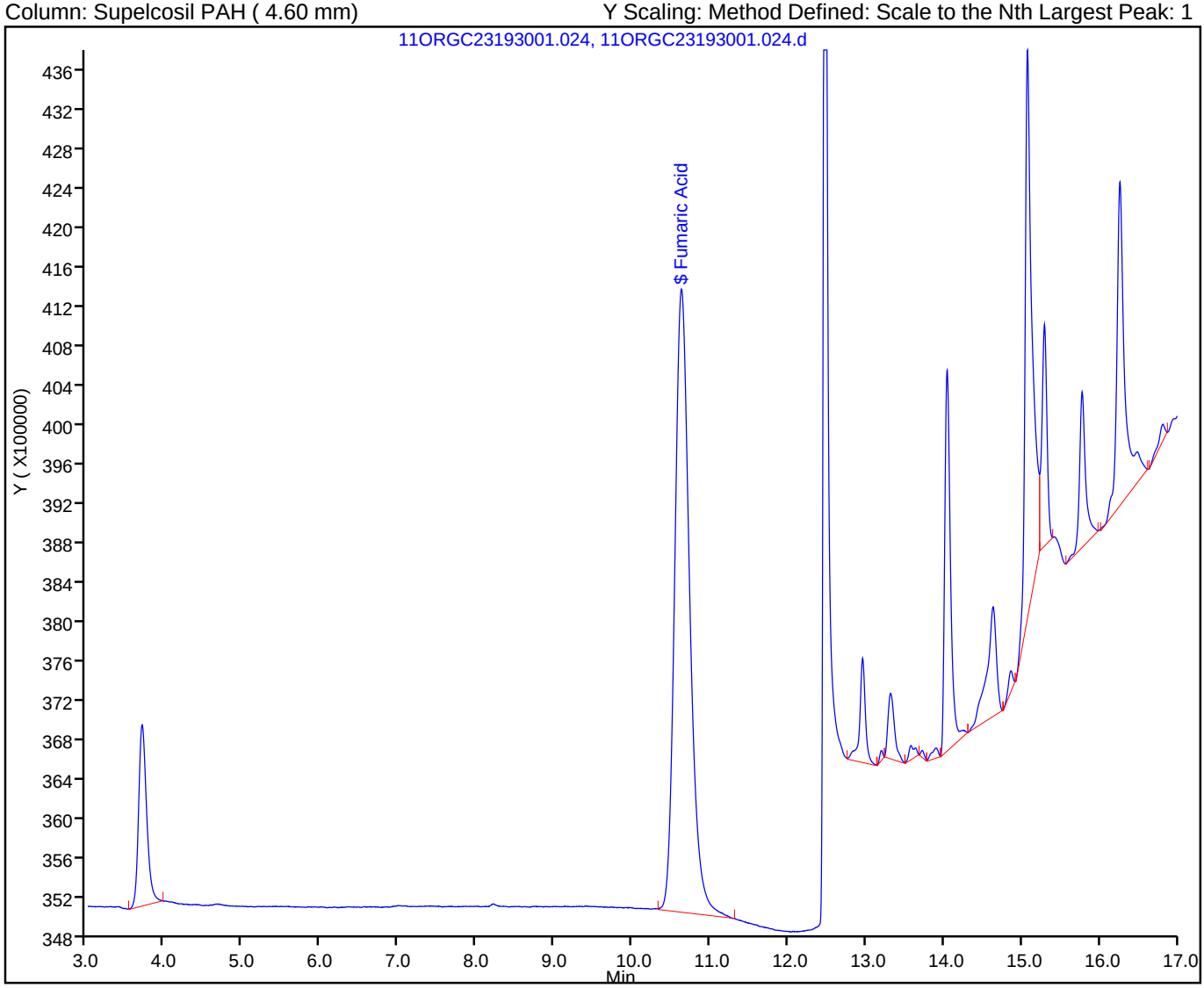
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 24

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:03:03 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.025.d				
Lims ID:	IC ORGS4				
Client ID:					
Sample Type:	IC	Calib Level:	4		
Inject. Date:	13-Jul-2023 05:42:00	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGS4				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub6				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:03:03	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid	10.638	10.629	0.009	14852968	H 0.9841	1.18	

Reagents:

GCS_ORGS4_00019 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 16:03:03 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.025.d

Injection Date: 13-Jul-2023 05:42:00 Instrument ID: 10136

Lims ID: IC ORGS4

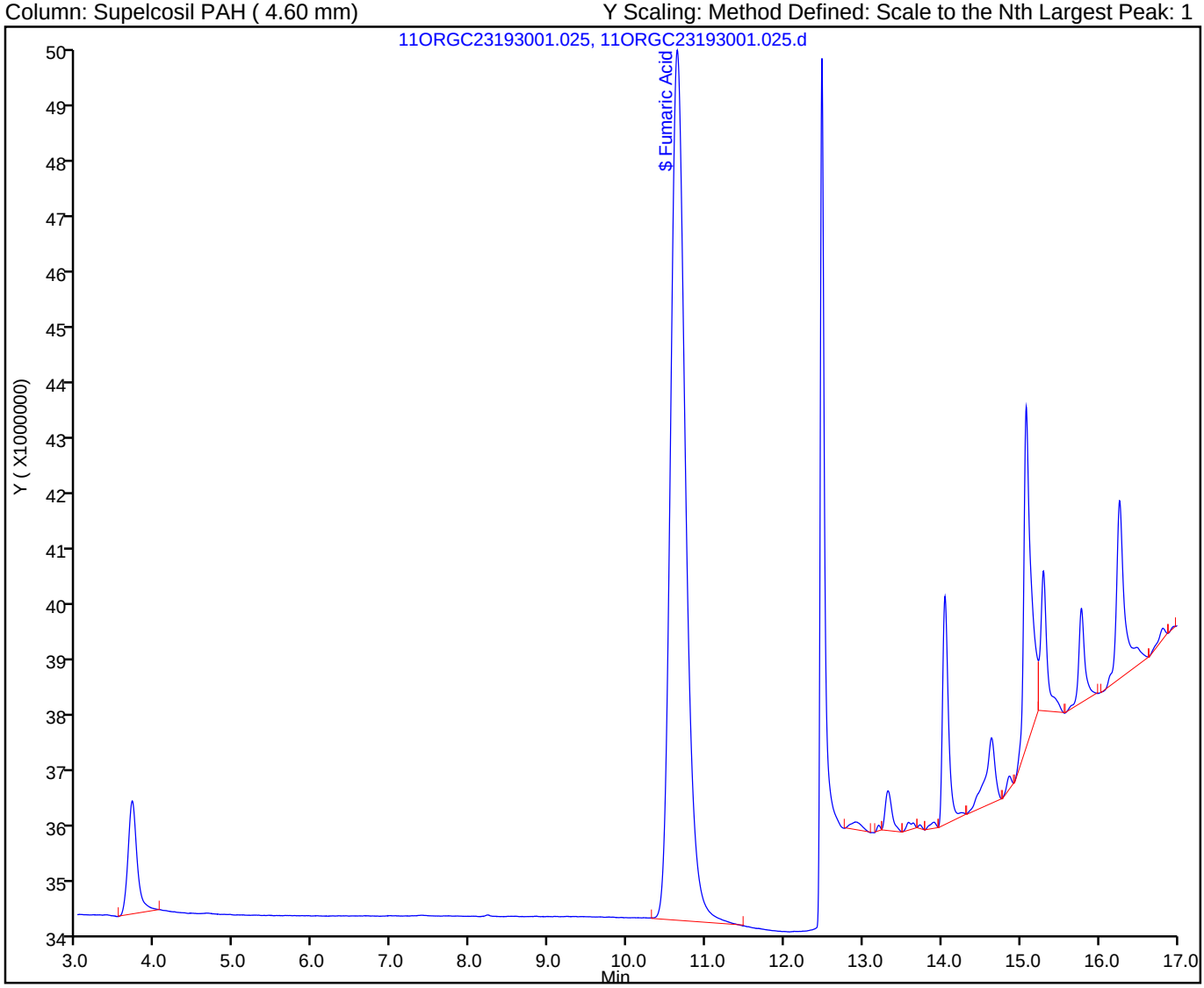
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 25

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:03:05 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Lims ID:	IC ORGS5				
Client ID:					
Sample Type:	IC	Calib Level:	5		
Inject. Date:	13-Jul-2023 06:13:00	ALS Bottle#:	0	Worklist Smp#:	26
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGS5				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub6				
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:03:04	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid	10.646	10.629	0.017	52740555	H 4.92	4.18	

Reagents:

GCS_ORGS5_00016 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 16:03:05 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d

Injection Date: 13-Jul-2023 06:13:00 Instrument ID: 10136

Lims ID: IC ORGS5

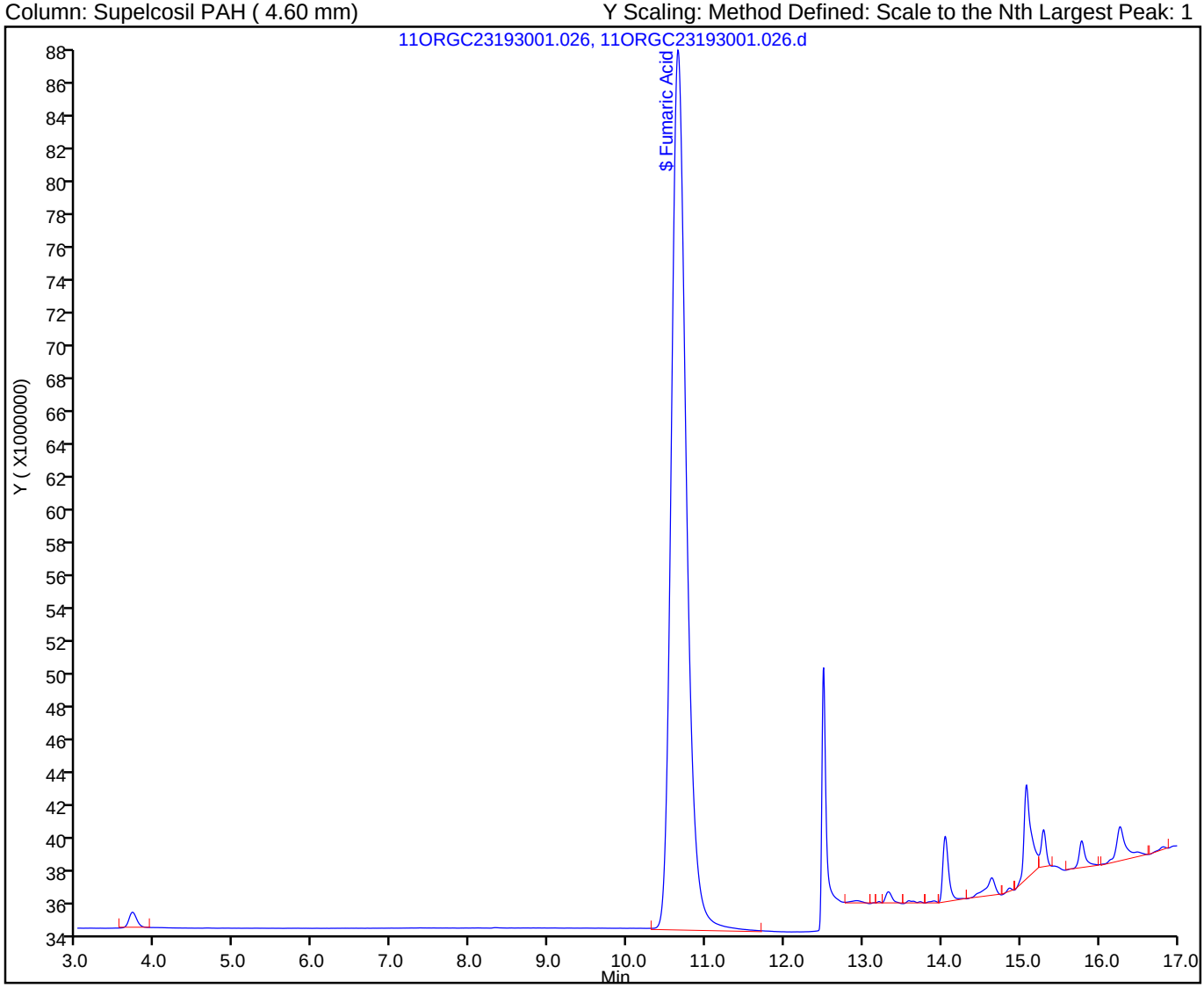
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 26

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Calibration / Fumaric Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

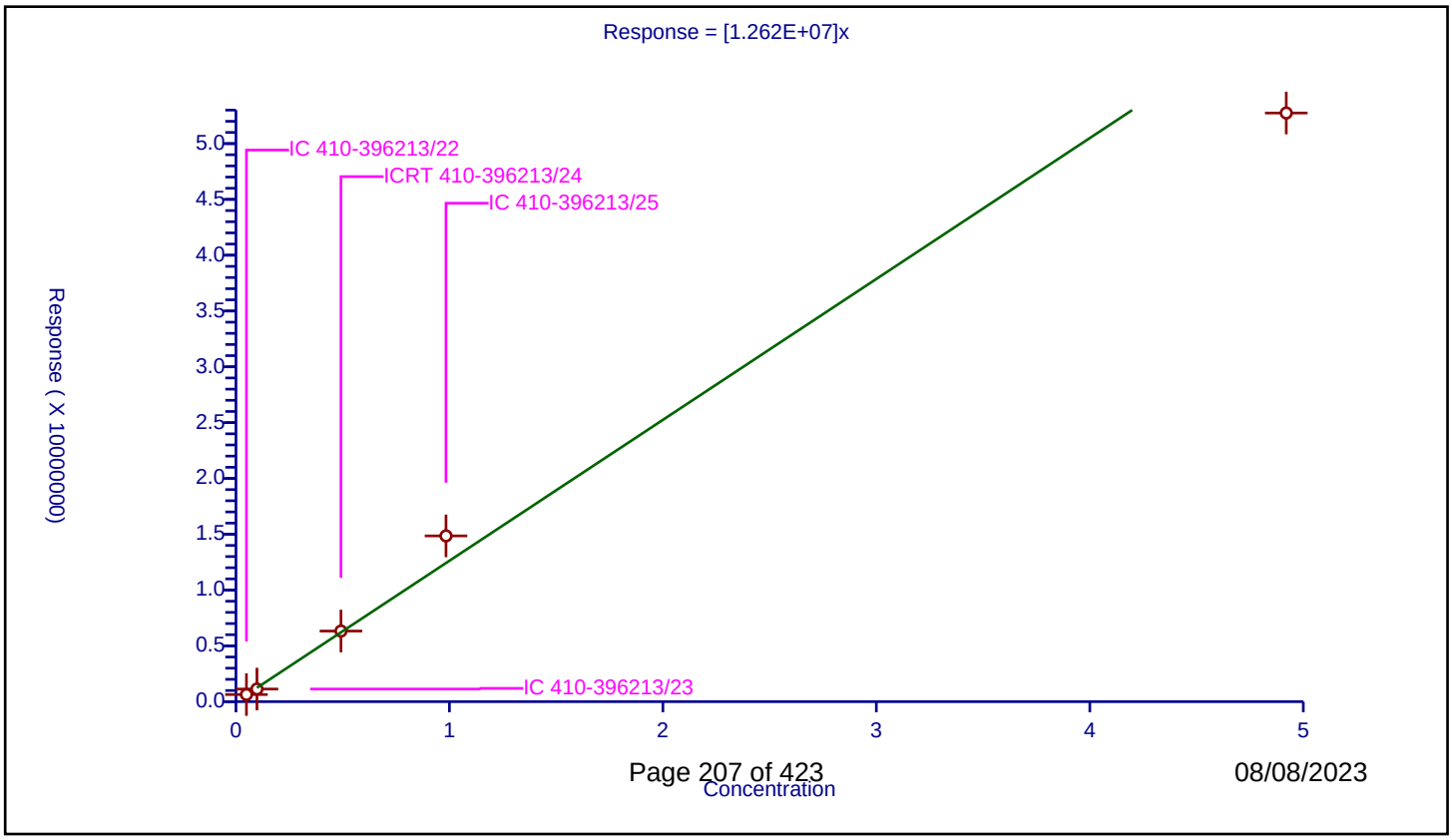
Curve Coefficients

Intercept:	0
Slope:	1.262E+07

Error Coefficients

Standard Error:	4840000
Relative Standard Error:	13.2
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.976

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-396213/22	0.049203	637103.0			12948458.427332	Y
2	IC 410-396213/23	0.098406	1131828.0			11501615.755137	Y
3	ICRT 410-396213/24	0.49203	6326094.0			12857130.662765	Y
4	IC 410-396213/25	0.98406	14852968.0			15093559.335813	Y
5	IC 410-396213/26	4.9203	52740555.0			10718971.404183	Y



INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136647-1 Analy Batch No.: 394255

SDG No.:

Instrument ID: 6854A GC Column: Supelcogel ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/05/2023 19:48 Calibration End Date: 07/06/2023 00:06 Calibration ID: 51929

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-394255/7	48ORGA23186001.007.d
Level 2	IC 410-394255/8	48ORGA23186001.008.d
Level 3	IC 410-394255/9	48ORGA23186001.009.d
Level 4	IC 410-394255/10	48ORGA23186001.010.d
Level 5	IC 410-394255/11	48ORGA23186001.011.d
Level 6	IC 410-394255/12	48ORGA23186001.012.d
Level 7	IC 410-394255/13	48ORGA23186001.013.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7				RT WINDOW	AVG RT
Oxalic Acid	13.882	13.870	13.846	13.854	13.850	13.850	13.850				13.746 - 13.946	13.857
Citric Acid	15.541	15.537	15.509	15.493	15.453	15.417	15.381				15.359 - 15.659	15.476
Pyruvic Acid	16.680	16.672	16.668	16.664	16.660	16.652	16.656				16.568 - 16.768	16.665
Quinic Acid	17.315	17.315	17.347	17.347	17.343	17.339	17.339				17.247 - 17.447	17.335
L-Lactic Acid	19.370	19.366	19.366	19.370	19.366	19.362	19.362				19.266 - 19.466	19.366
Formic-acid	20.417	20.417	20.417	20.421	20.417	20.417	20.417				20.317 - 20.517	20.418
Acetic acid	21.360	21.364	21.368	21.368	21.364	21.360	21.360				21.268 - 21.468	21.363
Propionic acid	23.175	23.395	23.407	23.407	23.395	23.391	23.383				23.307 - 23.507	23.365
Butyric acid	26.429	26.445	26.445	26.441	26.405	26.389	26.377				26.345 - 26.545	26.419

INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136647-1 Analy Batch No.: 394255

SDG No.:

Instrument ID: 6854A GC Column: Supelcogel ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/05/2023 19:48 Calibration End Date: 07/06/2023 00:06 Calibration ID: 51929

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-394255/7	48ORGA23186001.007.d
Level 2	IC 410-394255/8	48ORGA23186001.008.d
Level 3	IC 410-394255/9	48ORGA23186001.009.d
Level 4	IC 410-394255/10	48ORGA23186001.010.d
Level 5	IC 410-394255/11	48ORGA23186001.011.d
Level 6	IC 410-394255/12	48ORGA23186001.012.d
Level 7	IC 410-394255/13	48ORGA23186001.013.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								
Oxalic Acid	6371644 6767221	5944746 6807029	6525739 6944051	6356249	Ave		6530954.40				5.2		20.0			
Citric Acid	469500 487556	470422 466323	484079 439404	482016	Ave		471328.527				3.5		20.0			
Pyruvic Acid	3525975 2843700	3725748 2598738	3201776 2302113	3041897	Ave		3034278.12				16.5		20.0			
Quinic Acid	310607 223903	302315 221427	225536 220148	224052	Ave		246855.531				16.5		20.0			
L-Lactic Acid	277674 283950	292964 281602	287838 281710	283723	Ave		284208.676				1.7		20.0			
Formic-acid	83619 376817	156809 374128	382163 373418	373879	Qua	-2985215.3	391330.940	-15.386427			11.5		30.0	1.0000		0.9900
Acetic acid	22106 217267	106909 215862	218668 215910	215620	Lin	-1093116.1	217562.841				21.3		30.0	1.0000		0.9900
Propionic acid	120069 178310	125552 176822	184317 176526	178103	Ave		162814.141				16.9		20.0			
Butyric acid	33705 139552	72839 138064	143846 137264	139690	Qua	-967824.50	146098.110	-8.014059 8			10.6		30.0	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.

INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envir Job No.: 410-136647-1 Analy Batch No.: 394255

SDG No.:

Instrument ID: 6854A GC Column: Supelcogel ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/05/2023 19:48 Calibration End Date: 07/06/2023 00:06 Calibration ID: 51929

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-394255/7	48ORGA23186001.007.d
Level 2	IC 410-394255/8	48ORGA23186001.008.d
Level 3	IC 410-394255/9	48ORGA23186001.009.d
Level 4	IC 410-394255/10	48ORGA23186001.010.d
Level 5	IC 410-394255/11	48ORGA23186001.011.d
Level 6	IC 410-394255/12	48ORGA23186001.012.d
Level 7	IC 410-394255/13	48ORGA23186001.013.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
Oxalic Acid	Ave	8028272 686148516	14980761 874950483	81898030	160177472	511601924	1.26 101	2.52 126	12.6	25.2	75.6
Citric Acid	Ave	2366282 188021262	4741853 221459368	24349189	48587204	147436956	5.04 403	10.1 504	50.3	101	302
Pyruvic Acid	Ave	4442728 261952749	9388885 290066291	40278346	76655797	214983737	1.26 101	2.52 126	12.6	25.2	75.6
Quinic Acid	Ave	1556143 88748012	3029201 110294149	11385049	22450024	67305156	5.01 401	10.0 501	50.5	100	301
L-Lactic Acid	Ave	1393925 113091344	2941359 141418669	14423544	28485742	85525670	5.02 402	10.0 502	50.1	100	301
Formic-acid	Qua	844550 302295261	3167534 377152663	38407370	75523631	228351146	10.1 808	20.2 1010	101	202	606
Acetic acid	Lin	221499 173035102	2142456 216341762	21917134	43210267	130620944	10.0 802	20.0 1002	100	200	601
Propionic acid	Ave	1212693 142872370	2536160 178290956	18431747	35976731	108055774	10.1 808	20.2 1010	100	202	606
Butyric acid	Qua	339742 111334520	1468425 138361738	14406157	28161575	84400972	10.1 806	20.2 1008	100	202	605

Curve Type Legend

Ave = Average by Height
Lin = Linear by Height
Qua = Quadratic by Height

Report Date: 17-Jul-2023 17:08:01 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.007.d			
Lims ID:	IC ORGA1			
Client ID:				
Sample Type:	IC	Calib Level:	1	
Inject. Date:	05-Jul-2023 19:48:00	ALS Bottle#:	0	Worklist Smp#: 7
Injection Vol:	40.0 ul	Dil. Factor:	1.0000	
Sample Info:	IC ORGA1			
Operator ID:	24470	Instrument ID:	6854A	
Sublist:	chrom-8015_6854AP*sub1			
Method:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\8015_6854AP.m			
Limit Group:	LC - 8015D VFA			
Last Update:	17-Jul-2023 17:08:01	Calib Date:	06-Jul-2023 10:07:00	
Integrator:	Falcon			
Quant Method:	External Standard	Quant By:	Initial Calibration	
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.027.d			
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH	
Process Host:	CTX1676			

First Level Reviewer: UHEW Date: 06-Jul-2023 14:53:32

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid						M
13.882	13.846	0.036	8028272H	1.26	1.23	M
2 Citric Acid						M
15.541	15.509	0.032	2366282H	5.04	5.02	M
4 Pyruvic Acid						M
16.680	16.668	0.012	4442728H	1.26	1.46	M
5 Quinic Acid						M
17.315	17.347	-0.032	1556143H	5.01	6.30	M
7 L-Lactic Acid						M
19.370	19.366	0.004	1393925H	5.02	4.90	M
8 Formic-acid						M
20.417	20.417	0.000	844550H	10.1	9.79	M
9 Acetic acid						M
21.360	21.368	-0.008	221499H	10.0	6.04	M
11 Propionic acid						Ma
23.175	23.407	-0.232	1212693H	10.1	7.45	M
13 n-Butyric Acid						M
26.429	26.445	-0.016	339742H	10.1	8.95	M

QC Flag Legend

Processing Flags

H - Response Measured by Height

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 17-Jul-2023 17:08:01 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Reagents:

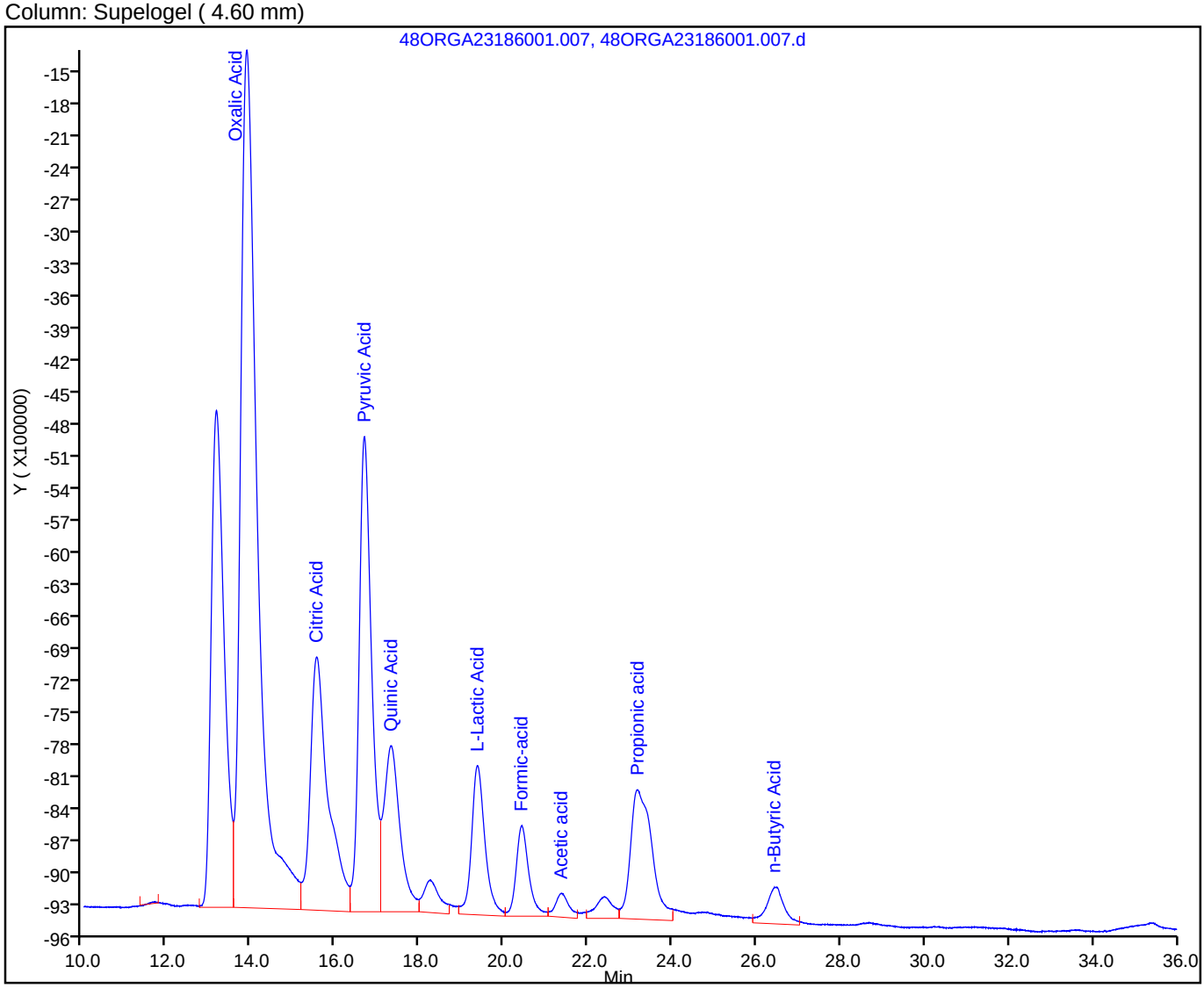
GCS_ORGA1_00011 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 17:08:01 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.007.d				
Injection Date:	05-Jul-2023 19:48:00	Instrument ID:	6854A		
Lims ID:	IC ORGA1				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Eurofins Lancaster Laboratories Environment Testing, LLC

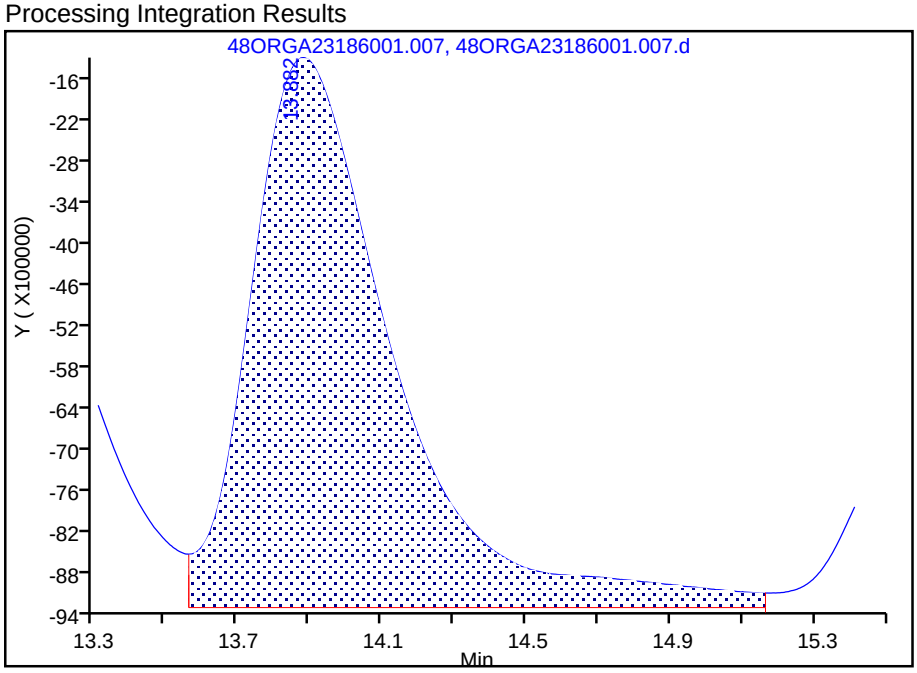
Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.007.d				
Injection Date:	05-Jul-2023 19:48:00	Instrument ID:	6854A		
Lims ID:	IC ORGA1				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		
Column:	Supelogel (4.60 mm)	Detector	SupelcogelH		

1 Oxalic Acid, CAS: 144-62-7

Signal: 1

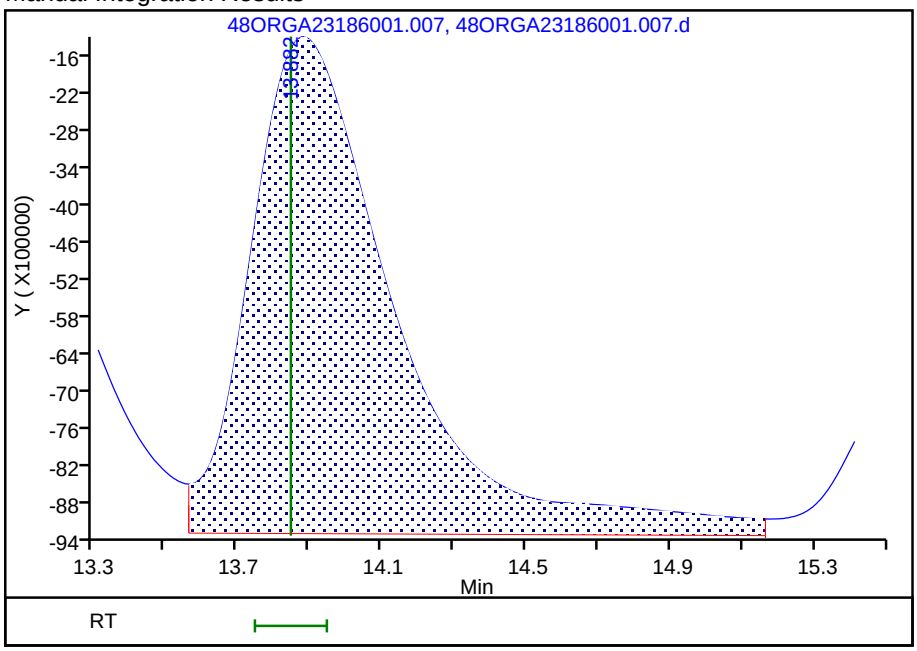
Processing Integration Results

RT: 13.88
Height: 8012554
Amount: 1.227193
Amount Units: ug/ml



Manual Integration Results

RT: 13.88
Height: 8028272
Amount: 1.229265
Amount Units: ug/ml



Reviewer: GM5C, 06-Jul-2023 16:25:32 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 17-Jul-2023 17:08:01 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

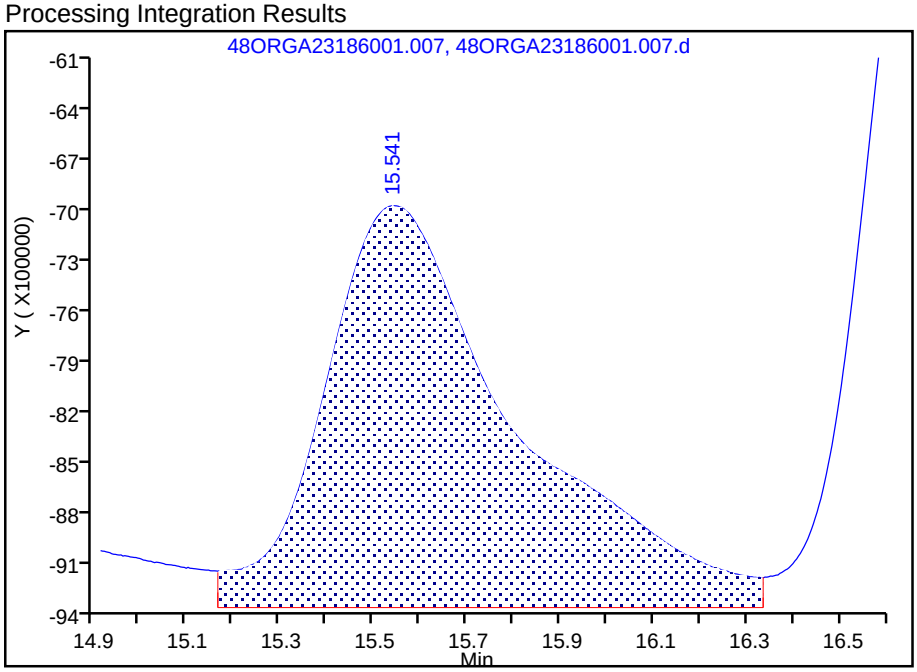
Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.007.d				
Injection Date:	05-Jul-2023 19:48:00	Instrument ID:	6854A		
Lims ID:	IC ORGA1				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		
Column:	Supelogel (4.60 mm)	Detector	SupelcogelH		

2 Citric Acid, CAS: 77-92-9

Signal: 1

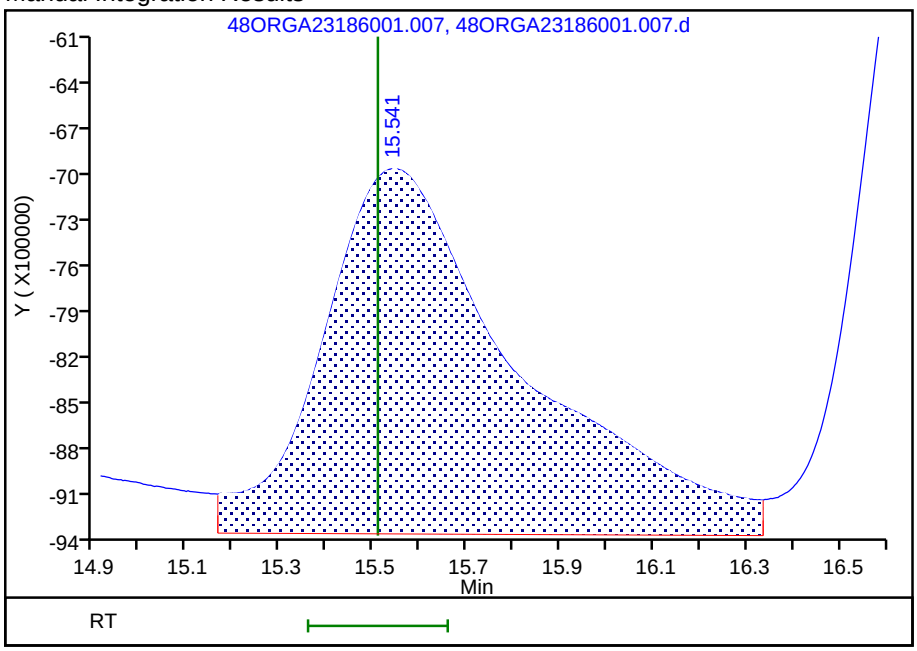
Processing Integration Results

RT: 15.54
Height: 2326186
Amount: 4.977950
Amount Units: ug/ml



Manual Integration Results

RT: 15.54
Height: 2366282
Amount: 5.020451
Amount Units: ug/ml



Reviewer: GM5C, 06-Jul-2023 16:25:32 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 17-Jul-2023 17:08:02 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

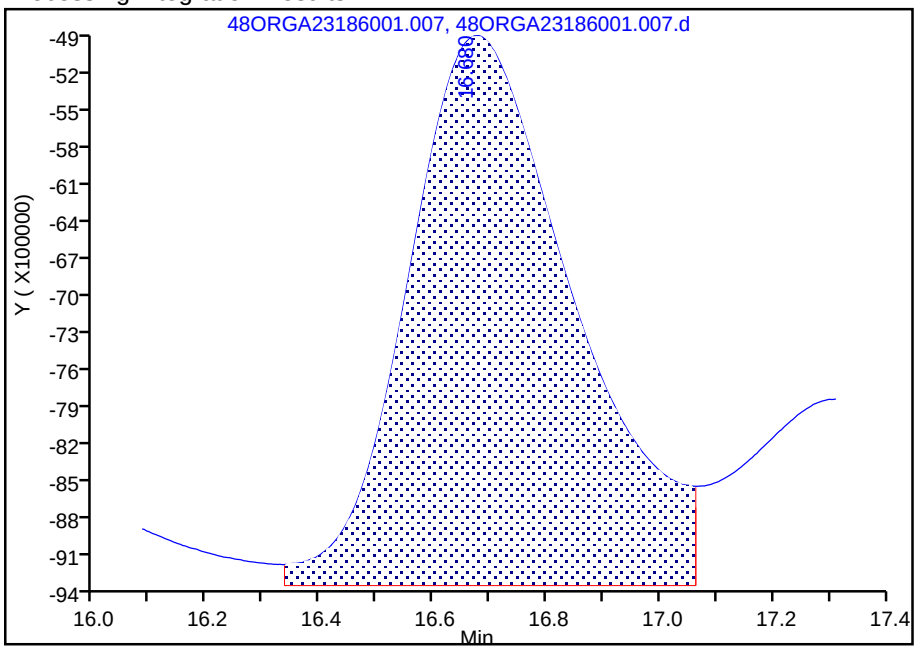
Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.007.d				
Injection Date:	05-Jul-2023 19:48:00	Instrument ID:	6854A		
Lims ID:	IC ORGA1				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		
Column:	Supelogel (4.60 mm)	Detector	SupelcogelH		

4 Pyruvic Acid, CAS: 127-17-3

Signal: 1

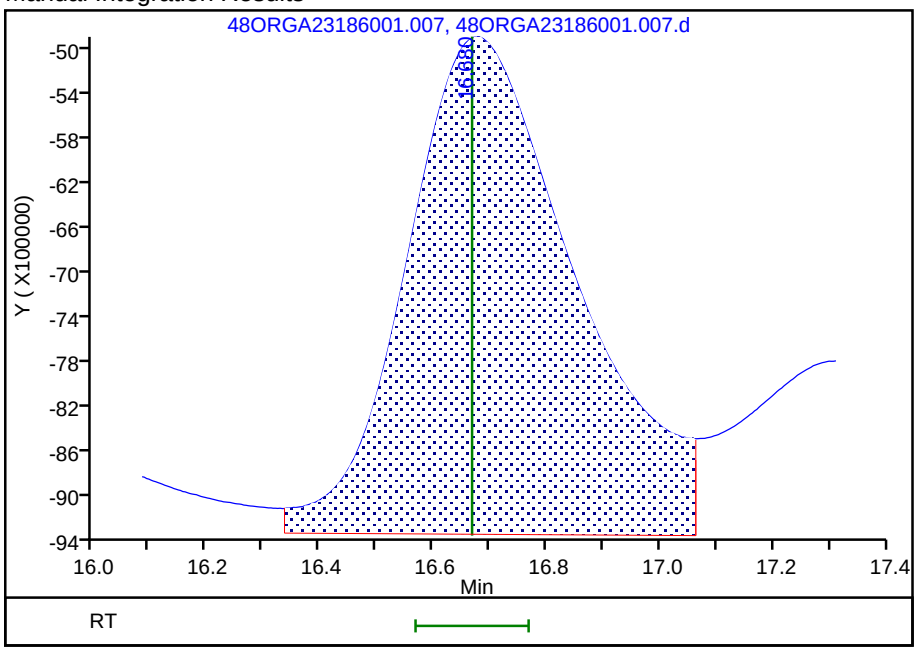
Processing Integration Results

RT: 16.68
Height: 4385890
Amount: 1.808315
Amount Units: ug/ml



Manual Integration Results

RT: 16.68
Height: 4442728
Amount: 1.464180
Amount Units: ug/ml



Reviewer: GM5C, 06-Jul-2023 16:25:32 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 17-Jul-2023 17:08:02 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

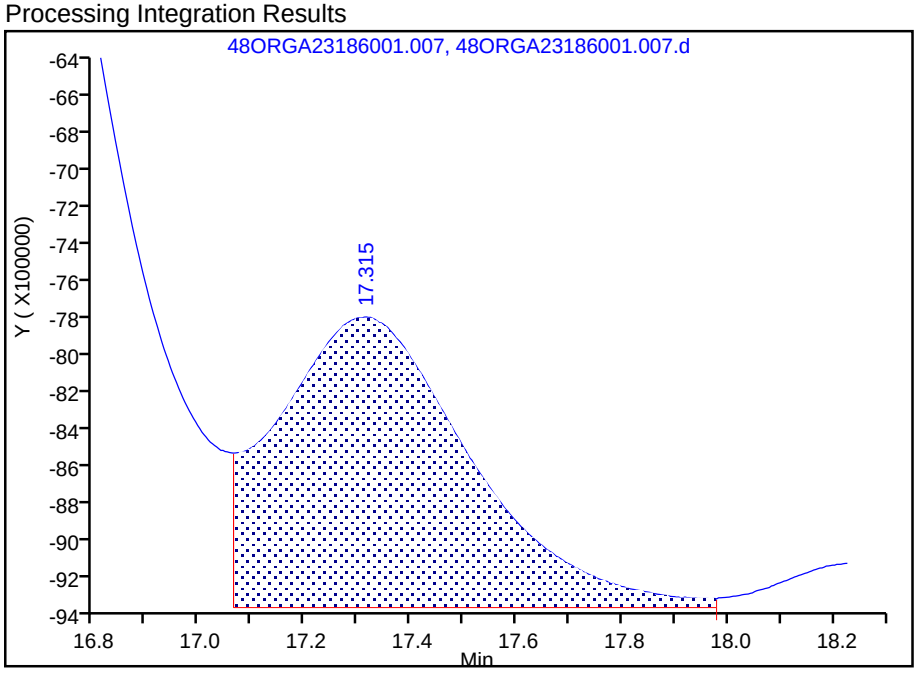
Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.007.d				
Injection Date:	05-Jul-2023 19:48:00	Instrument ID:	6854A		
Lims ID:	IC ORGA1				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		
Column:	Supelogel (4.60 mm)	Detector	SupelcogelH		

5 Quinic Acid, CAS: 77-95-2

Signal: 1

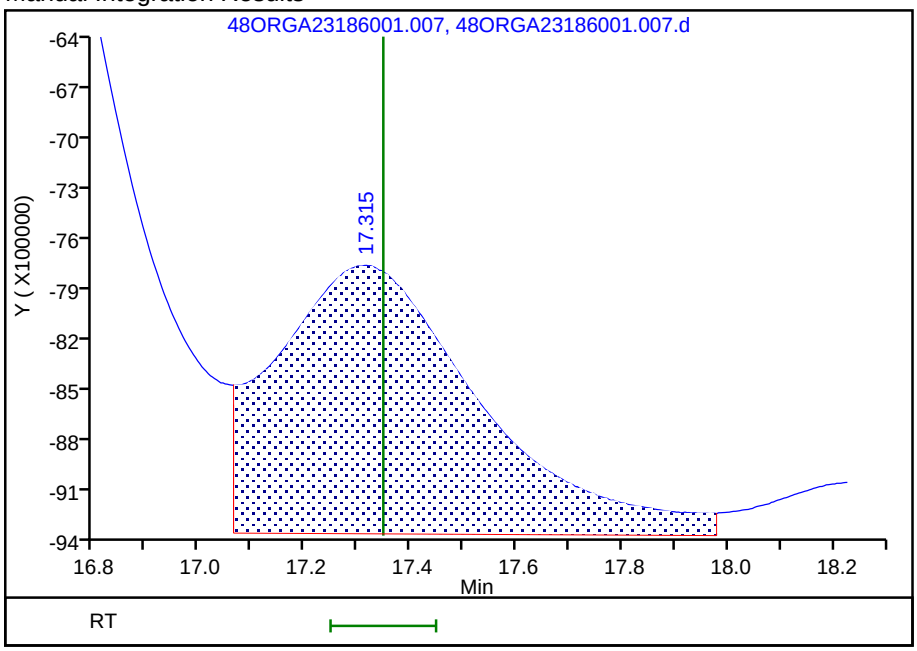
Processing Integration Results

RT: 17.32
Height: 1489965
Amount: 5.996330
Amount Units: ug/ml



Manual Integration Results

RT: 17.32
Height: 1556143
Amount: 6.303861
Amount Units: ug/ml



Reviewer: GM5C, 06-Jul-2023 16:25:32 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 17-Jul-2023 17:08:02 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

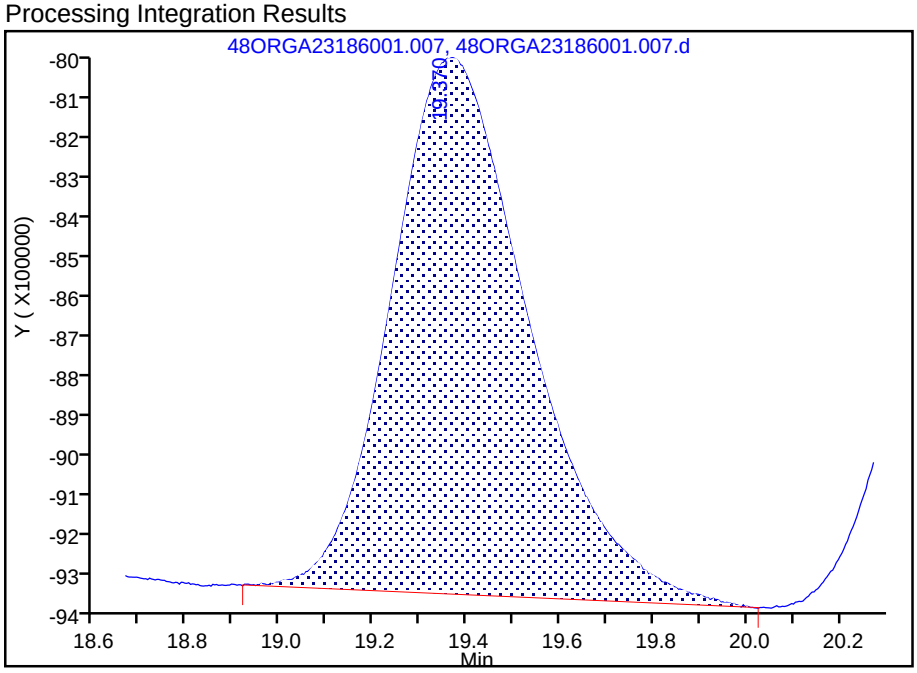
Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.007.d				
Injection Date:	05-Jul-2023 19:48:00	Instrument ID:	6854A		
Lims ID:	IC ORGA1				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		
Column:	Supelogel (4.60 mm)	Detector	SupelcogelH		

7 L-Lactic Acid, CAS: 79-33-4

Signal: 1

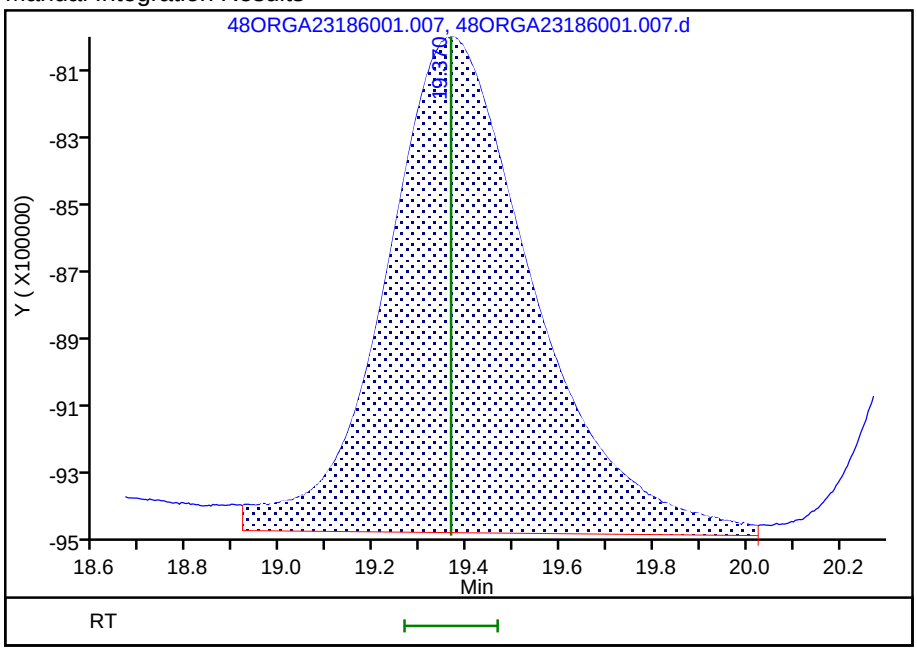
Processing Integration Results

RT: 19.37
Height: 1343288
Amount: 4.753813
Amount Units: ug/ml



Manual Integration Results

RT: 19.37
Height: 1393925
Amount: 4.904583
Amount Units: ug/ml



Reviewer: GM5C, 06-Jul-2023 16:25:32 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 17-Jul-2023 17:08:02 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

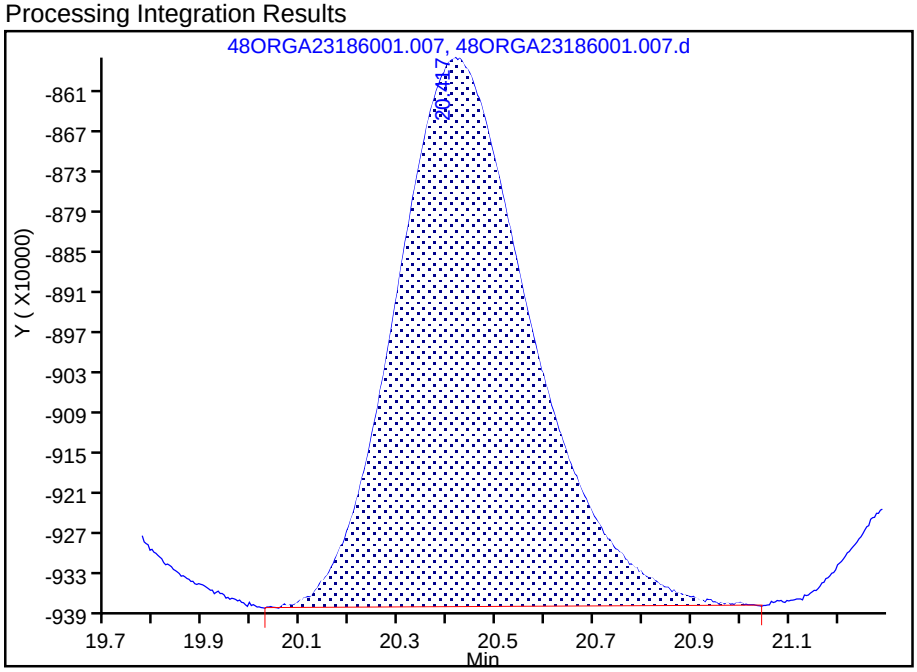
Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.007.d				
Injection Date:	05-Jul-2023 19:48:00	Instrument ID:	6854A		
Lims ID:	IC ORGA1				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		
Column:	Supelogel (4.60 mm)	Detector	SupelcogelH		

8 Formic-acid, CAS: 64-18-6

Signal: 1

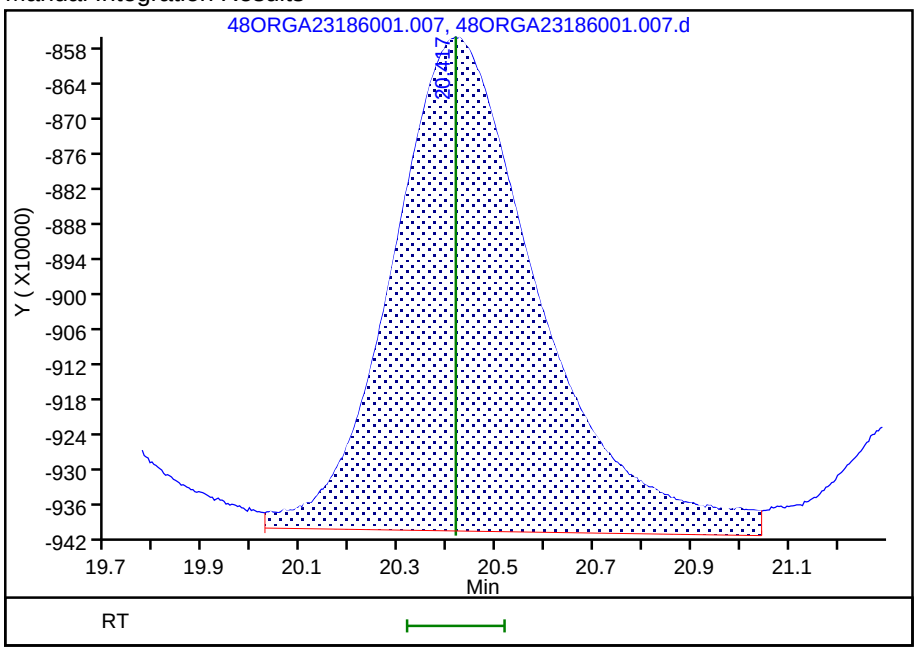
Processing Integration Results

RT: 20.42
Height: 813615
Amount: 7.255164
Amount Units: ug/ml



Manual Integration Results

RT: 20.42
Height: 844550
Amount: 9.790282
Amount Units: ug/ml



Reviewer: GM5C, 06-Jul-2023 16:25:32 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 17-Jul-2023 17:08:02 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

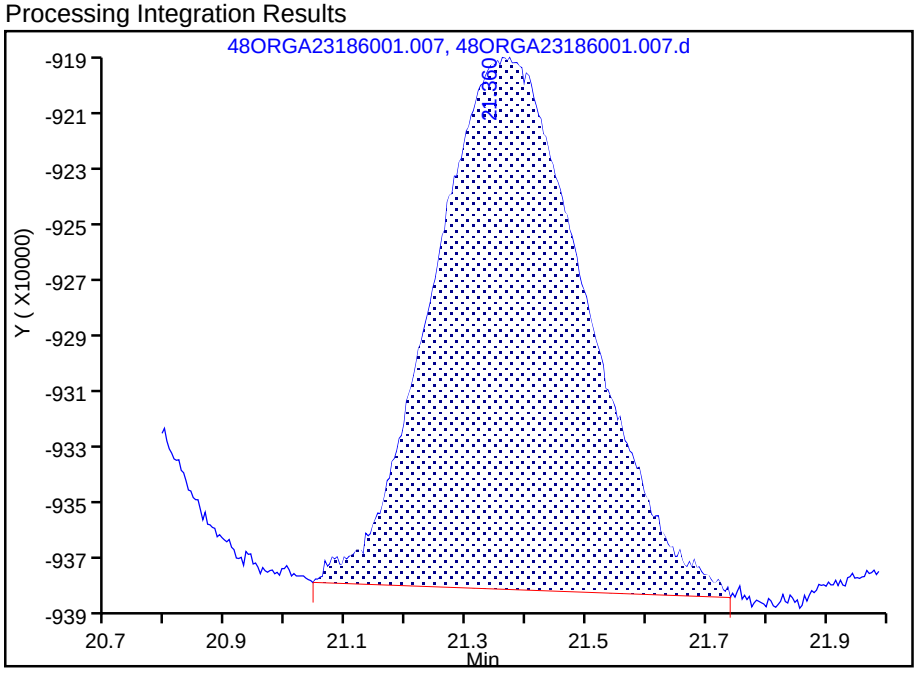
Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.007.d				
Injection Date:	05-Jul-2023 19:48:00	Instrument ID:	6854A		
Lims ID:	IC ORGA1				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		
Column:	Supelogel (4.60 mm)	Detector	SupelcogelH		

9 Acetic acid, CAS: 64-19-7

Signal: 1

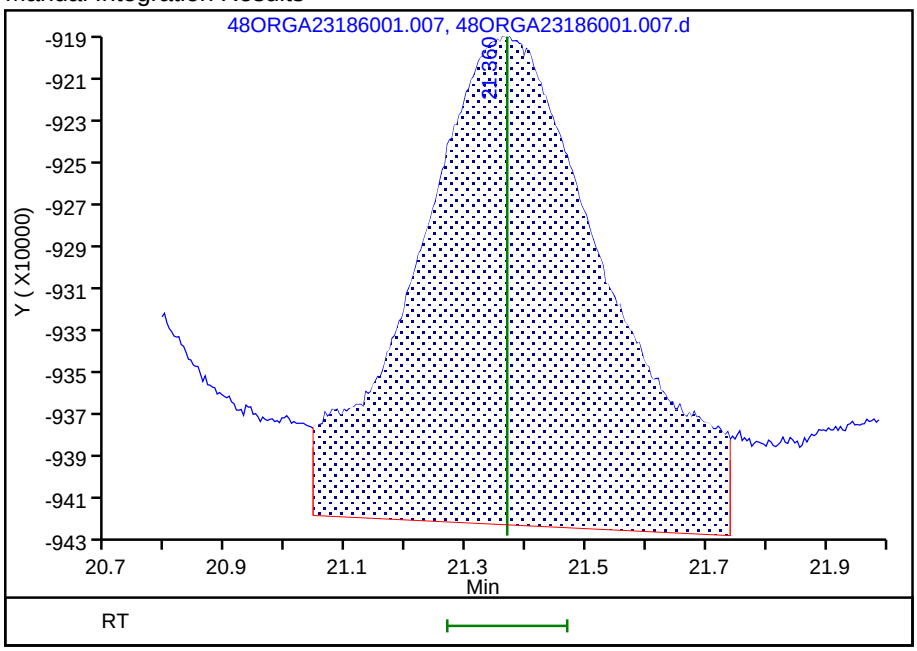
Processing Integration Results

RT: 21.36
Height: 179980
Amount: 6.224409
Amount Units: ug/ml



Manual Integration Results

RT: 21.36
Height: 221499
Amount: 6.042461
Amount Units: ug/ml



Reviewer: GM5C, 06-Jul-2023 16:25:32 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 17-Jul-2023 17:08:02 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

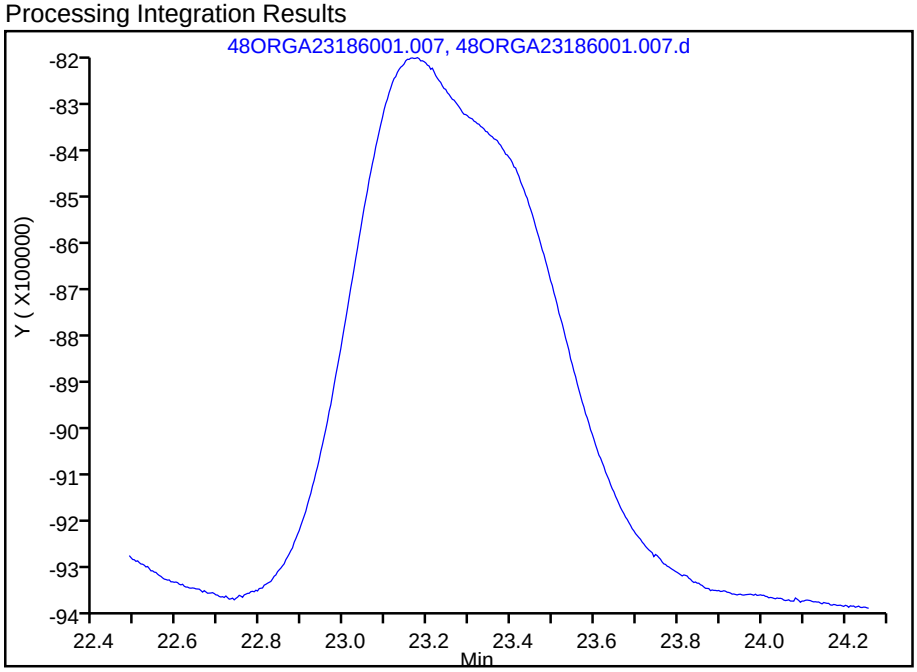
Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.007.d				
Injection Date:	05-Jul-2023 19:48:00	Instrument ID:	6854A		
Lims ID:	IC ORGA1				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		
Column:	Supelogel (4.60 mm)	Detector	SupelcogelH		

11 Propionic acid, CAS: 79-09-4

Signal: 1

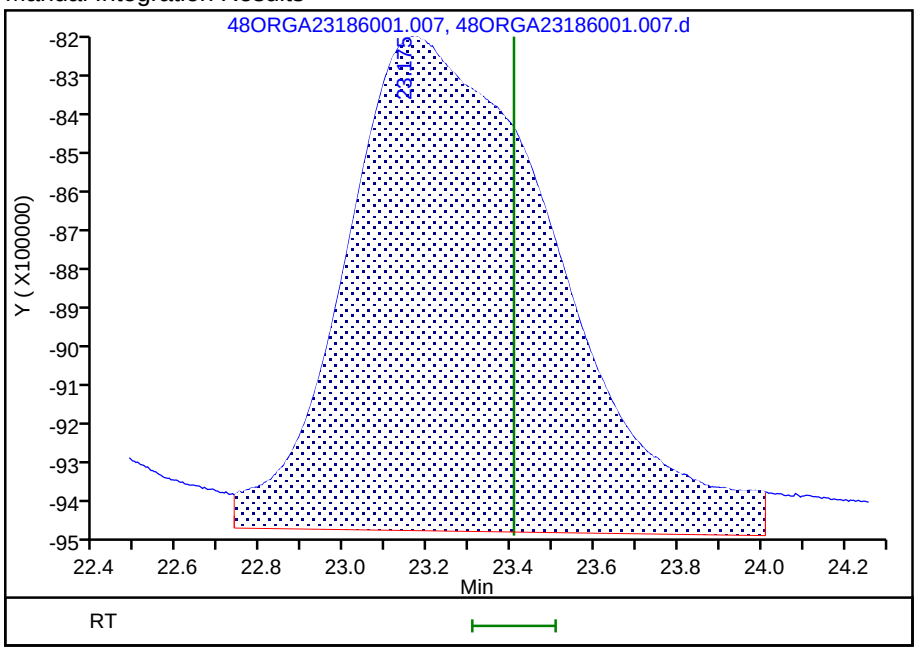
Not Detected
Expected RT: 23.41

Processing Integration Results



Manual Integration Results

RT: 23.18
Height: 1212693
Amount: 7.448327
Amount Units: ug/ml



Reviewer: GM5C, 06-Jul-2023 16:25:32 -04:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 17-Jul-2023 17:08:02 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

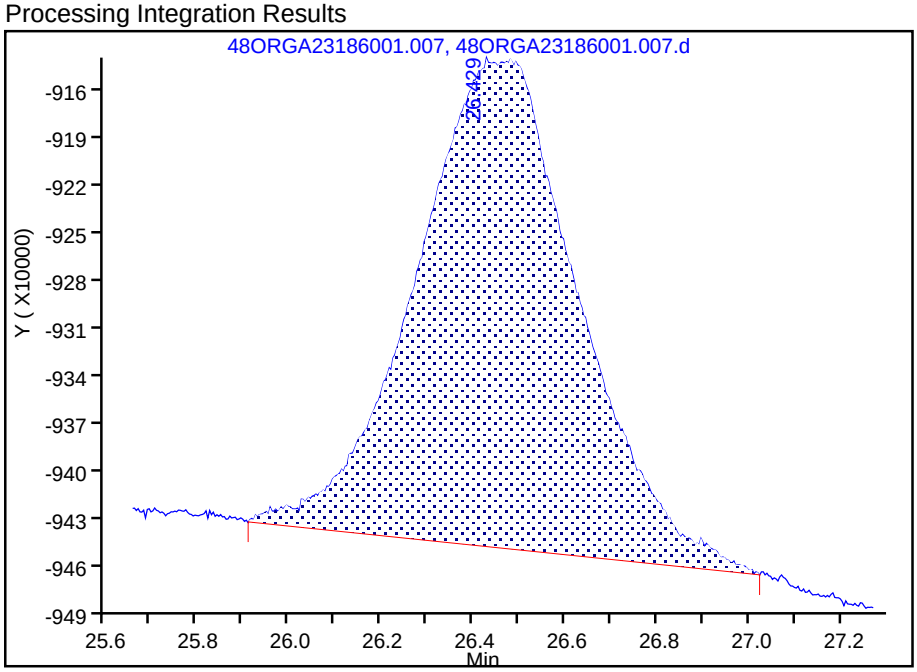
Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.007.d				
Injection Date:	05-Jul-2023 19:48:00	Instrument ID:	6854A		
Lims ID:	IC ORGA1				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		
Column:	Supelogel (4.60 mm)	Detector	SupelcogelH		

13 n-Butyric Acid, CAS: 107-92-6

Signal: 1

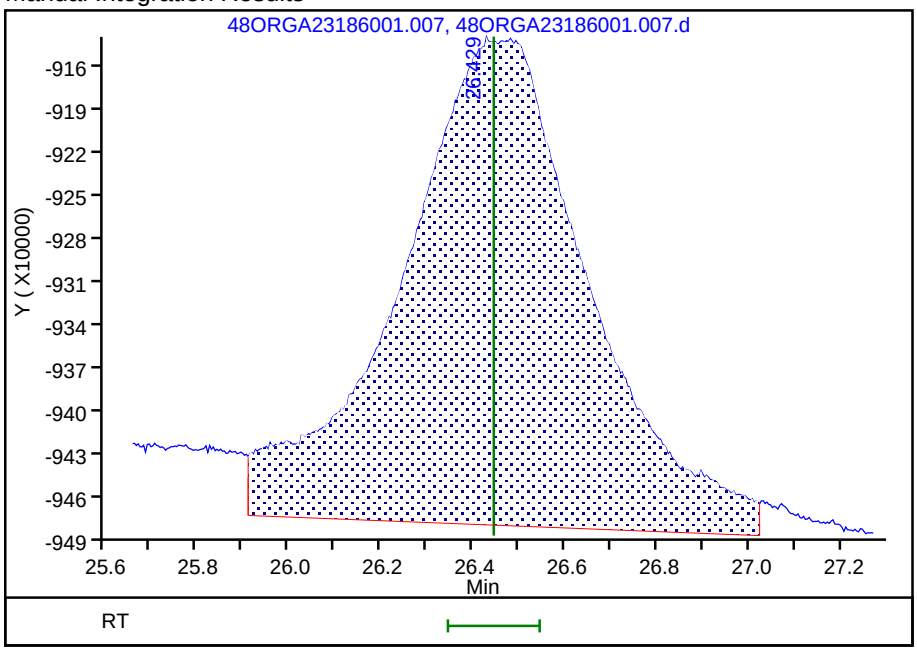
Processing Integration Results

RT: 26.43
Height: 307670
Amount: 5.261006
Amount Units: ug/ml



Manual Integration Results

RT: 26.43
Height: 339742
Amount: 8.954319
Amount Units: ug/ml



Reviewer: GM5C, 06-Jul-2023 16:25:32 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 17-Jul-2023 17:08:03 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.008.d				
Lims ID:	IC ORGA2				
Client ID:					
Sample Type:	IC	Calib Level:	2		
Inject. Date:	05-Jul-2023 20:31:00	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGA2				
Operator ID:	24470	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub1				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 17:08:03	Calib Date:	06-Jul-2023 10:07:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.027.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1676				

First Level Reviewer: UHEW Date: 17-Jul-2023 13:56:13

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid						
13.870	13.846	0.024	14980761H	2.52	2.29	
2 Citric Acid						
15.537	15.509	0.028	4741853H	10.1	10.1	
4 Pyruvic Acid						
16.672	16.668	0.004	9388885H	2.52	3.09	
5 Quinic Acid						
17.315	17.347	-0.032	3029201H	10.0	12.3	
7 L-Lactic Acid						
19.366	19.366	0.000	2941359H	10.0	10.3	
8 Formic-acid						
20.417	20.417	0.000	3167534H	20.2	15.7	
9 Acetic acid						
21.364	21.368	-0.004	2142456H	20.0	14.9	
11 Propionic acid						
23.395	23.407	-0.012	2536160H	20.2	15.6	
13 n-Butyric Acid						
26.445	26.445	0.000	1468425H	20.2	16.7	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

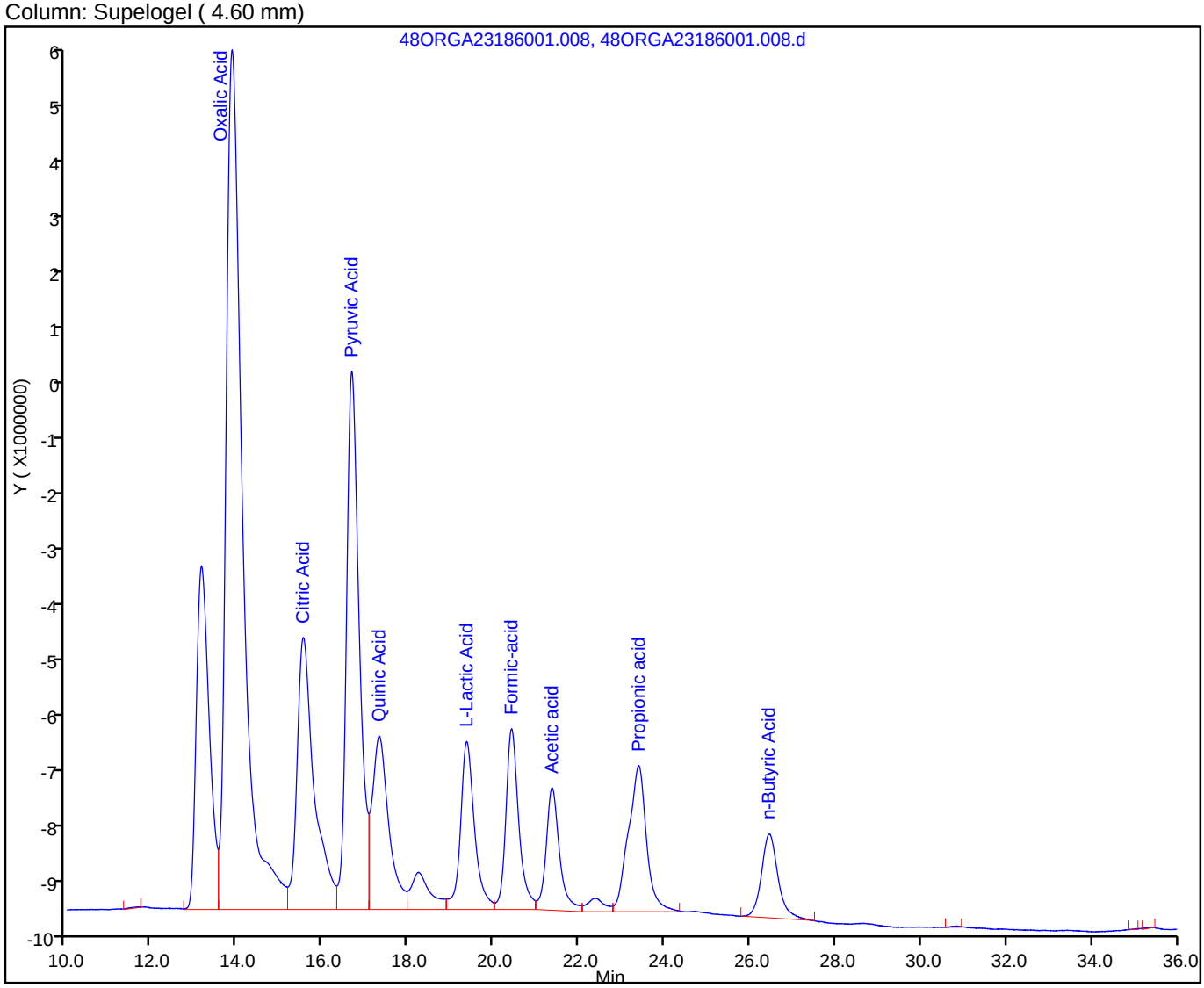
GCS_ORGA2_00010 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 17:08:03 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.008.d				
Injection Date:	05-Jul-2023 20:31:00	Instrument ID:	6854A		
Lims ID:	IC ORGA2				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Report Date: 17-Jul-2023 17:08:04 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.009.d
Lims ID: IC ORGA3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 05-Jul-2023 21:14:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: IC ORGA3
Operator ID: 24470 Instrument ID: 6854A
Sublist: chrom-8015_6854AP*sub1

Method: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 17-Jul-2023 17:08:04 Calib Date: 06-Jul-2023 10:07:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.027.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1676

First Level Reviewer: UHEW Date: 06-Jul-2023 14:53:05

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid						
13.846	13.846	0.000	81898030H	12.6	12.5	
2 Citric Acid						
15.509	15.509	0.000	24349189H	50.3	51.7	
4 Pyruvic Acid						
16.668	16.668	0.000	40278346H	12.6	13.3	
5 Quinic Acid						
17.347	17.347	0.000	11385049H	50.5	46.1	
7 L-Lactic Acid						
19.366	19.366	0.000	14423544H	50.1	50.7	
8 Formic-acid						
20.417	20.417	0.000	38407370H	100.5	106.2	
9 Acetic acid						
21.368	21.368	0.000	21917134H	100.2	105.8	
11 Propionic acid						
23.407	23.407	0.000	18431747H	100.0	113.2	
13 n-Butyric Acid						
26.445	26.445	0.000	14406157H	100.2	105.8	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

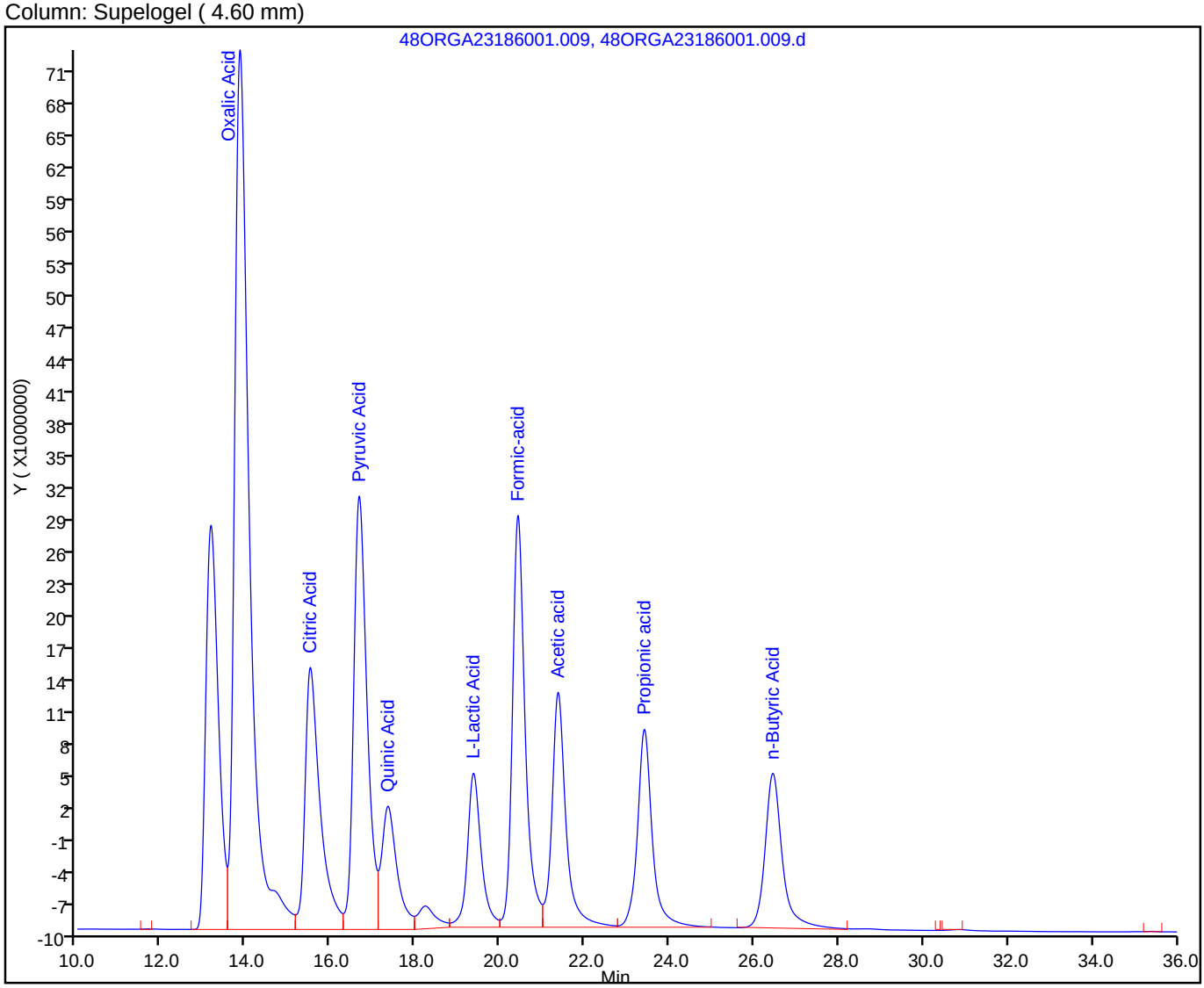
GCS_ORGA3_00026 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 17:08:04 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.009.d				
Injection Date:	05-Jul-2023 21:14:00	Instrument ID:	6854A		
Lims ID:	IC ORGA3				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Report Date: 17-Jul-2023 17:08:06 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.010.d				
Lims ID:	IC ORGA4				
Client ID:					
Sample Type:	IC	Calib Level:	4		
Inject. Date:	05-Jul-2023 21:57:00	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGA4				
Operator ID:	24470	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub1				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 17:08:05	Calib Date:	06-Jul-2023 10:07:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.027.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1676				
First Level Reviewer: UHEW		Date:	06-Jul-2023 15:07:02		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid						
13.854	13.846	0.008	160177472H	25.2	24.5	
2 Citric Acid						
15.493	15.509	-0.016	48587204H	100.8	103.1	
4 Pyruvic Acid						
16.664	16.668	-0.004	76655797H	25.2	25.3	
5 Quinic Acid						
17.347	17.347	0.000	22450024H	100.2	90.9	
7 L-Lactic Acid						
19.370	19.366	0.004	28485742H	100.4	100.2	
8 Formic-acid						
20.421	20.417	0.004	75523631H	202.0	202.2	
9 Acetic acid						
21.368	21.368	0.000	43210267H	200.4	203.6	
11 Propionic acid						
23.407	23.407	0.000	35976731H	202.0	221.0	
13 n-Butyric Acid						
26.441	26.445	-0.004	28161575H	201.6	201.6	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

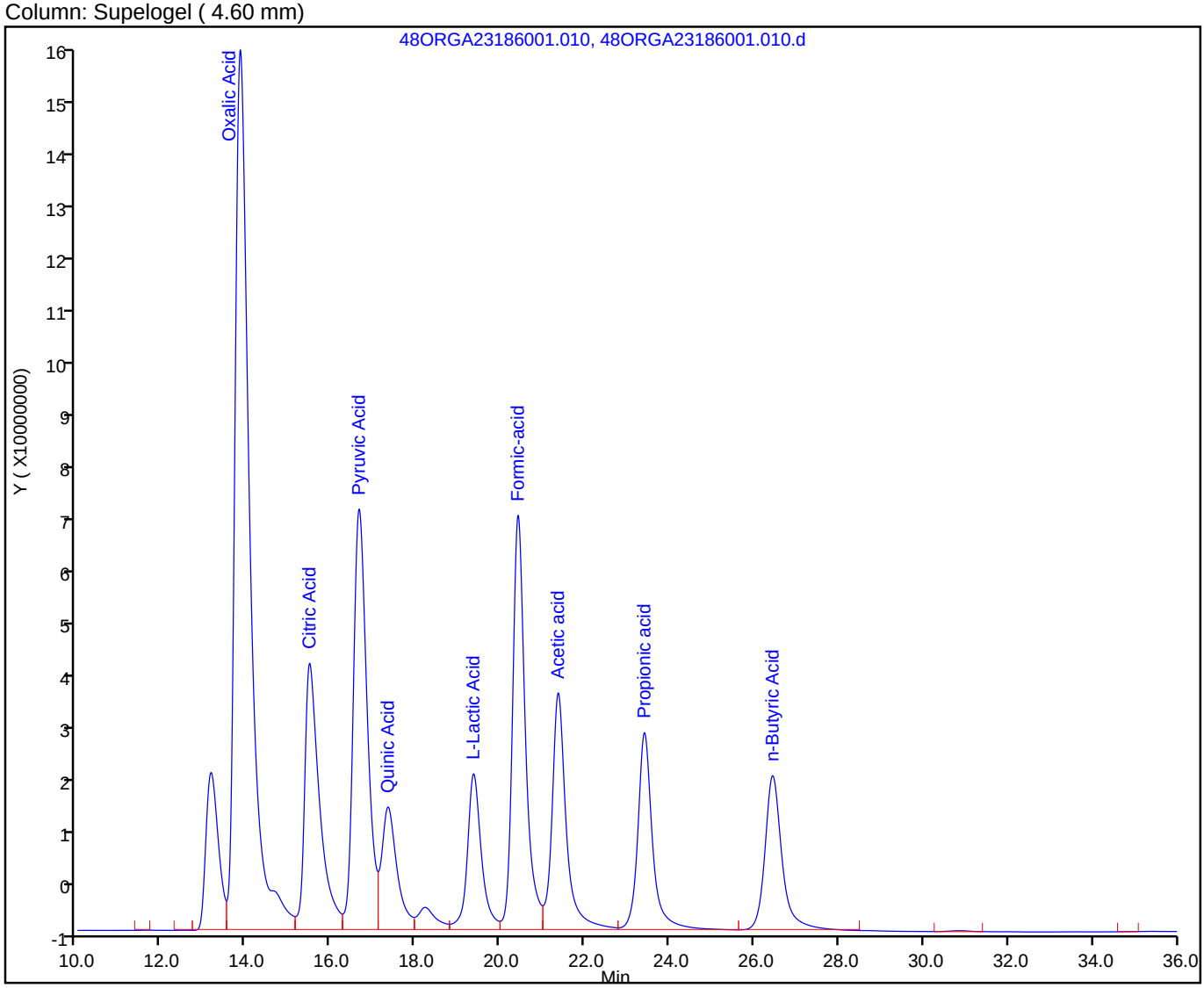
GCS_ORGA4_00009 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 17:08:06 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.010.d				
Injection Date:	05-Jul-2023 21:57:00	Instrument ID:	6854A		
Lims ID:	IC ORGA4				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Report Date: 17-Jul-2023 17:08:06 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.011.d
Lims ID: IC ORGA80
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 05-Jul-2023 22:40:00 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: IC ORGA ox@80ug/L
Operator ID: 24470 Instrument ID: 6854A
Sublist: chrom-8015_6854AP*sub1

Method: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 17-Jul-2023 17:08:06 Calib Date: 06-Jul-2023 10:07:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.027.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1676

First Level Reviewer: UHEW Date: 06-Jul-2023 14:53:58

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid						
13.850	13.846	0.004	511601924H	75.6	78.3	
2 Citric Acid						
15.453	15.509	-0.056	147436956H	302.4	312.8	
4 Pyruvic Acid						
16.660	16.668	-0.008	214983737H	75.6	70.9	
5 Quinic Acid						
17.343	17.347	-0.004	67305156H	300.6	272.6	
7 L-Lactic Acid						
19.366	19.366	0.000	85525670H	301.2	300.9	
8 Formic-acid						
20.417	20.417	0.000	228351146H	606.0	605.6	
9 Acetic acid						
21.364	21.368	-0.004	130620944H	601.2	605.4	
11 Propionic acid						
23.395	23.407	-0.012	108055774H	606.0	663.7	
13 n-Butyric Acid						
26.405	26.445	-0.040	84400972H	604.8	604.4	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

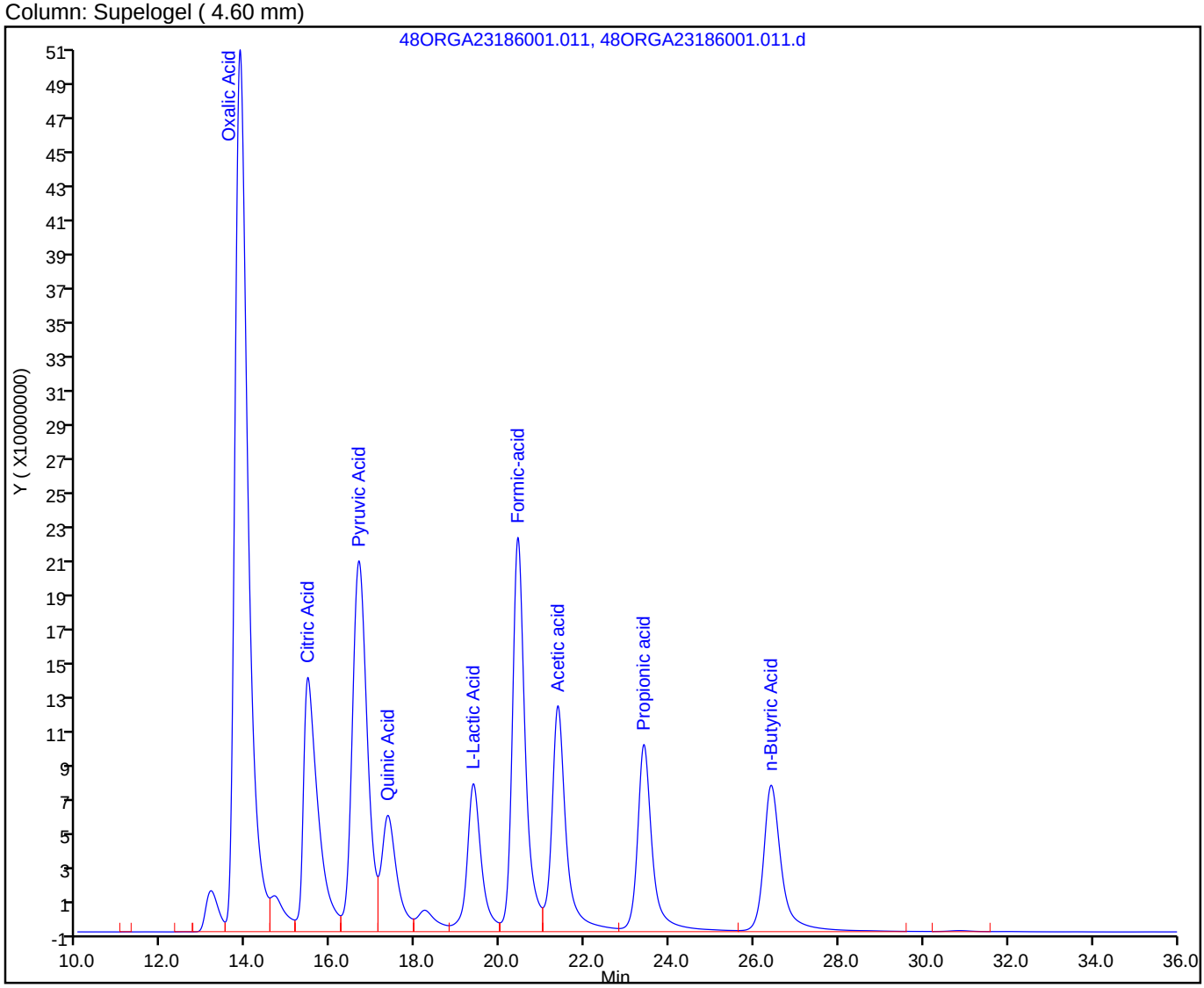
GCS_ORGAox5@8_00004 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 17:08:06 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.011.d				
Injection Date:	05-Jul-2023 22:40:00	Instrument ID:	6854A		
Lims ID:	IC ORGA80				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	11
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Report Date: 17-Jul-2023 17:08:08 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.012.d
Lims ID: IC ORGA100
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 05-Jul-2023 23:23:00 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: IC ORGA ox@100ug/L
Operator ID: 24470 Instrument ID: 6854A
Sublist: chrom-8015_6854AP*sub1

Method: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 17-Jul-2023 17:08:07 Calib Date: 06-Jul-2023 10:07:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.027.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1676

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid						
13.850	13.846	0.004	686148516H	100.8	105.1	
2 Citric Acid						
15.417	15.509	-0.092	188021262H	403.2	398.9	
4 Pyruvic Acid						
16.652	16.668	-0.016	261952749H	100.8	86.3	
5 Quinic Acid						
17.339	17.347	-0.008	88748012H	400.8	359.5	
7 L-Lactic Acid						
19.362	19.366	-0.004	113091344H	401.6	397.9	
8 Formic-acid						
20.417	20.417	0.000	302295261H	808.0	805.6	
9 Acetic acid						
21.360	21.368	-0.008	173035102H	801.6	800.4	
11 Propionic acid						
23.391	23.407	-0.016	142872370H	808.0	877.5	
13 n-Butyric Acid						
26.389	26.445	-0.056	111334520H	806.4	804.1	

Reagents:

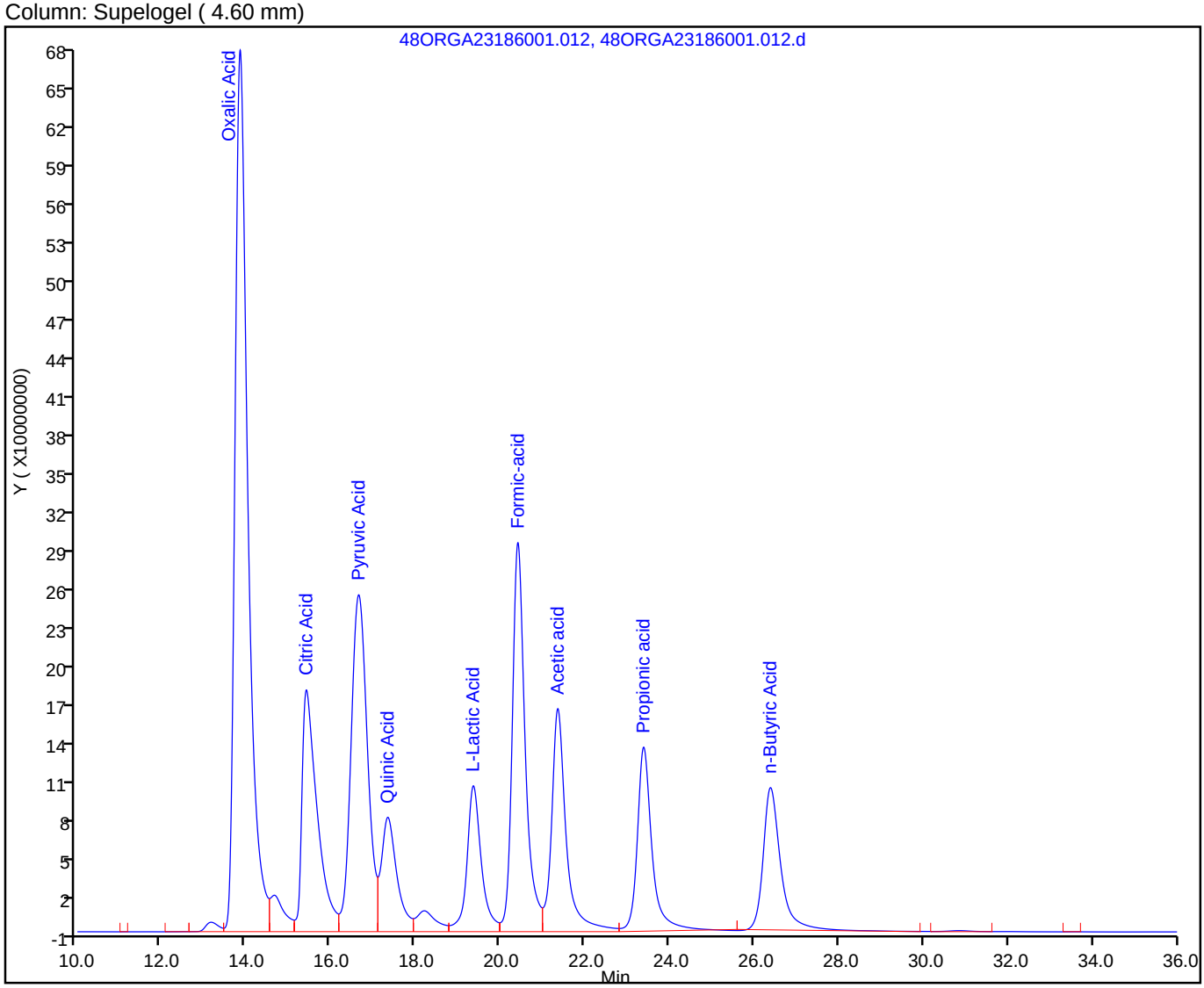
GCS_ORGAox5_00002 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 17:08:08 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.012.d				
Injection Date:	05-Jul-2023 23:23:00	Instrument ID:	6854A		
Lims ID:	IC ORGA100				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Report Date: 17-Jul-2023 17:08:09 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.013.d				
Lims ID:	IC ORGA5				
Client ID:					
Sample Type:	IC	Calib Level:	7		
Inject. Date:	06-Jul-2023 00:06:00	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGA5				
Operator ID:	24470	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub1				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 17:08:09	Calib Date:	06-Jul-2023 10:07:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.027.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1676				
First Level Reviewer: UHEW		Date:	12-Jul-2023 18:09:40		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid						
13.850	13.846	0.004	874950483H	126.0	134.0	
2 Citric Acid						
15.381	15.509	-0.128	221459368H	504.0	469.9	
4 Pyruvic Acid						
16.656	16.668	-0.012	290066291H	126.0	95.6	
5 Quinic Acid						
17.339	17.347	-0.008	110294149H	501.0	446.8	
7 L-Lactic Acid						
19.362	19.366	-0.004	141418669H	502.0	497.6	
8 Formic-acid						
20.417	20.417	0.000	377152663H	1010.0	1011.6	
9 Acetic acid						
21.360	21.368	-0.008	216341762H	1002.0	999.4	
11 Propionic acid						
23.383	23.407	-0.024	178290956H	1010.0	1095.1	
13 n-Butyric Acid						
26.377	26.445	-0.068	138361738H	1008.0	1009.6	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

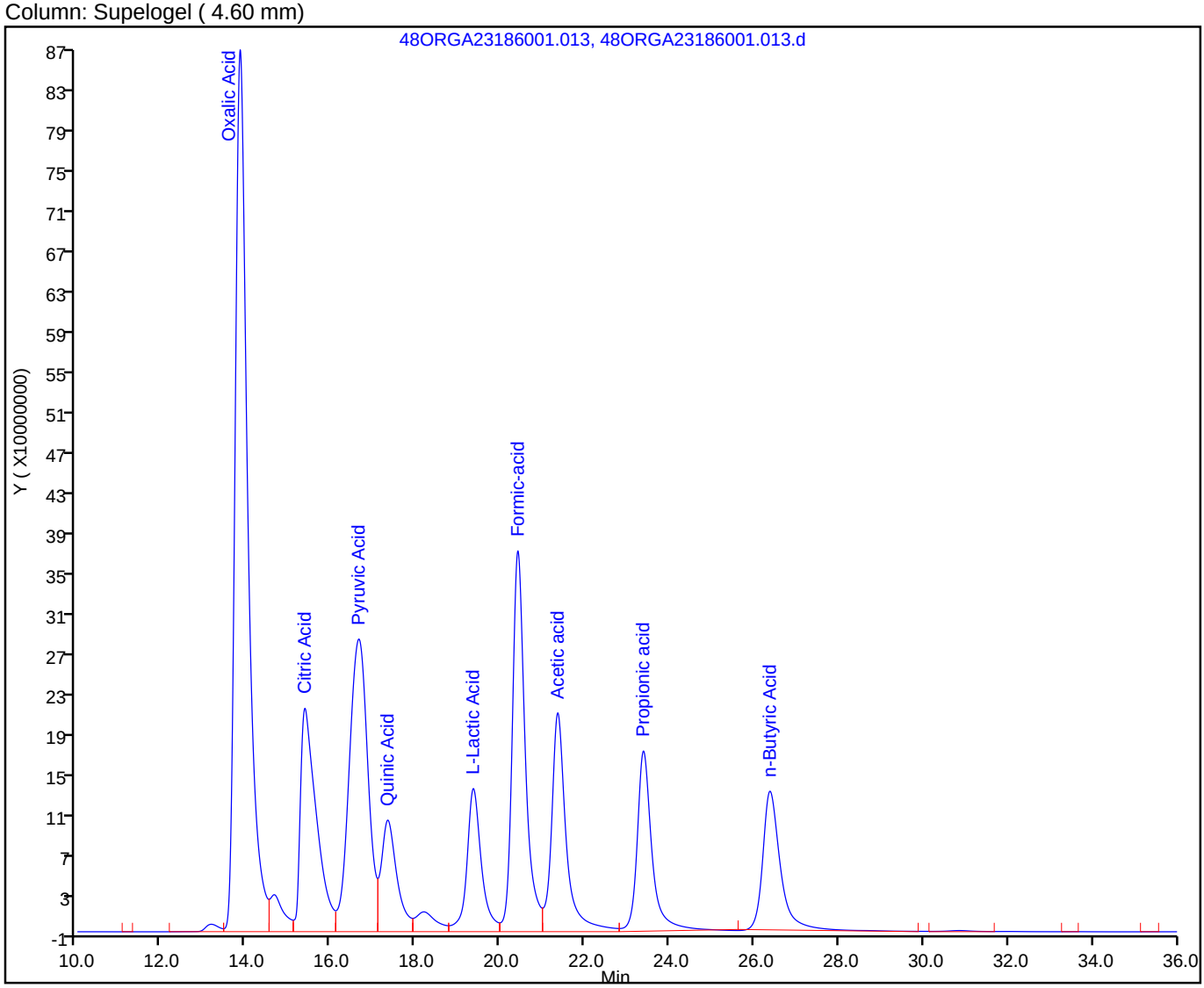
GCS_ORGA5_00007 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 17:08:09 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.013.d				
Injection Date:	06-Jul-2023 00:06:00	Instrument ID:	6854A		
Lims ID:	IC ORGA5				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Calibration / Oxalic Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

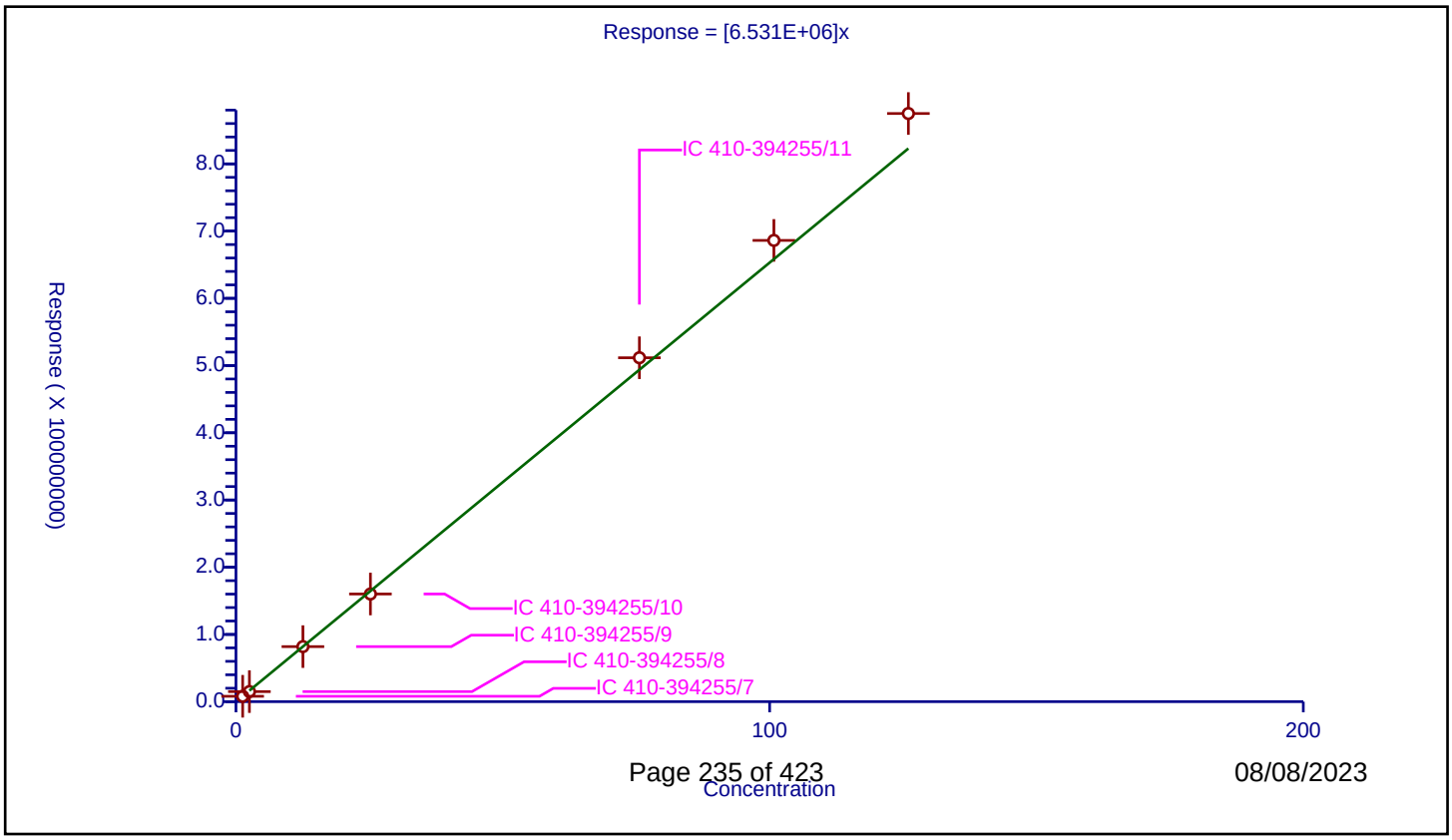
Curve Coefficients

Intercept:	0
Slope:	6.531E+06

Error Coefficients

Standard Error:	25200000
Relative Standard Error:	5.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-394255/7	1.26	8028272.0			6371644.444444	Y
2	IC 410-394255/8	2.52	14980761.0			5944746.428571	Y
3	IC 410-394255/9	12.55	81898030.0			6525739.442231	Y
4	IC 410-394255/10	25.2	160177472.0			6356248.888889	Y
5	IC 410-394255/11	75.6	511601924.0			6767221.216931	Y
6	IC 410-394255/12	100.8	686148516.0			6807028.928571	Y
7	IC 410-394255/13	126.0	874950483.0			6944051.452381	Y



Calibration / Citric Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

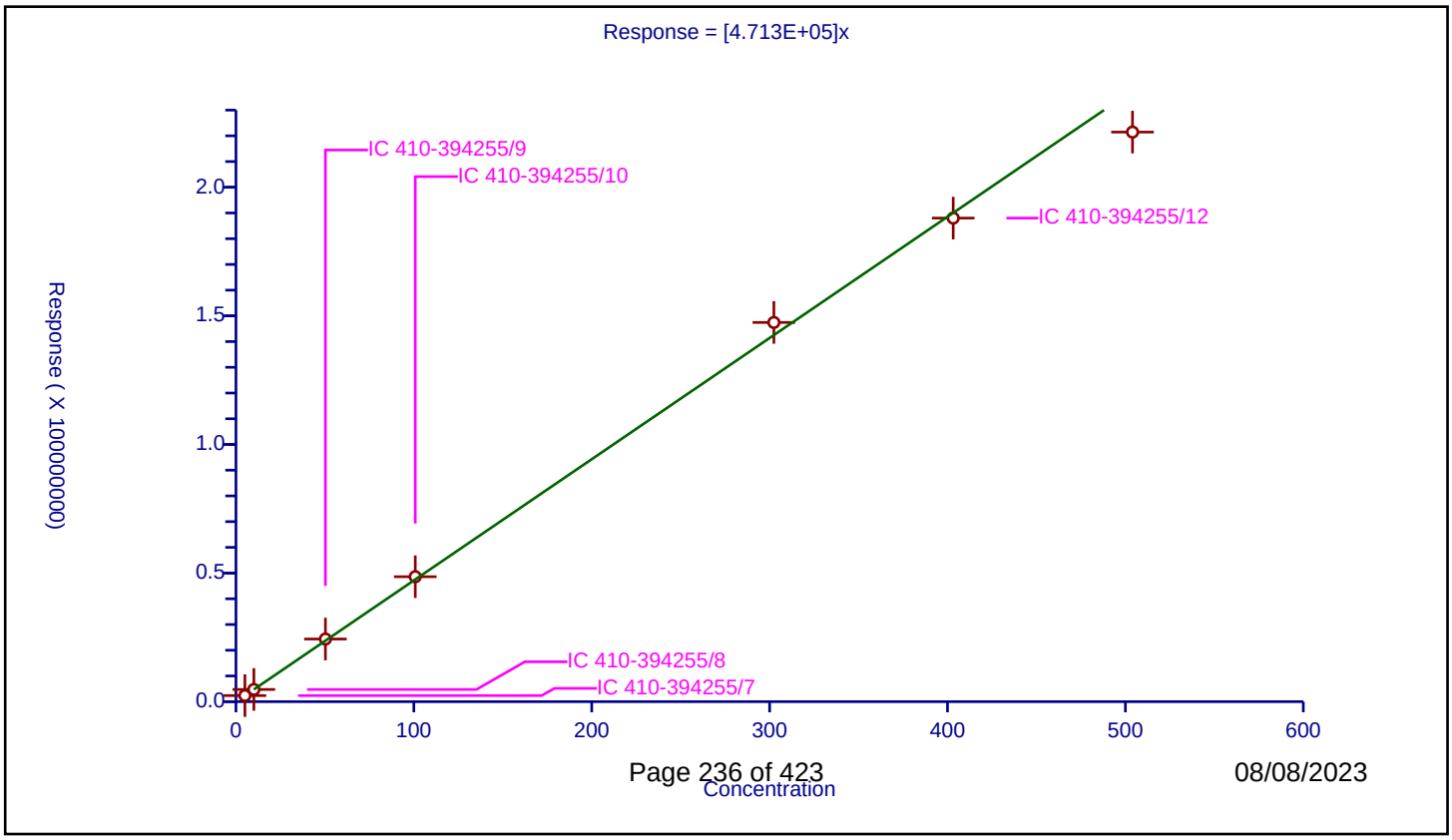
Curve Coefficients

Intercept:	0
Slope:	4.713E+05

Error Coefficients

Standard Error:	6940000
Relative Standard Error:	3.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-394255/7	5.04	2366282.0			469500.396825	Y
2	IC 410-394255/8	10.08	4741853.0			470421.924603	Y
3	IC 410-394255/9	50.3	24349189.0			484079.304175	Y
4	IC 410-394255/10	100.8	48587204.0			482015.912698	Y
5	IC 410-394255/11	302.4	147436956.0			487556.071429	Y
6	IC 410-394255/12	403.2	188021262.0			466322.574405	Y
7	IC 410-394255/13	504.0	221459368.0			439403.507937	Y



Calibration / Pyruvic Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

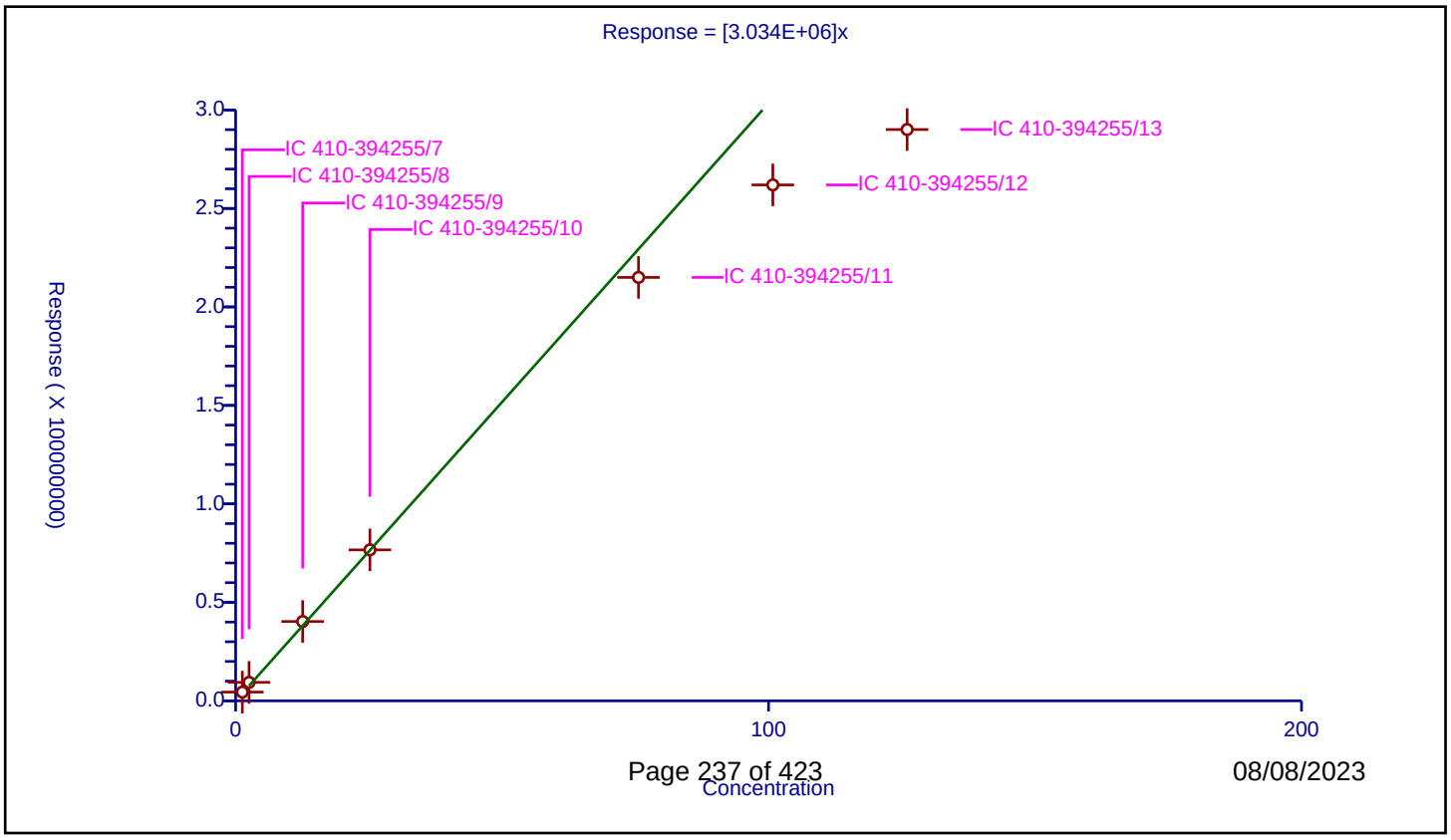
Curve Coefficients

Intercept:	0
Slope:	3.034E+06

Error Coefficients

Standard Error:	42100000
Relative Standard Error:	16.5
Correlation Coefficient:	0.986
Coefficient of Determination (Adjusted):	0.960

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-394255/7	1.26	4442728.0			3525974.603175	Y
2	IC 410-394255/8	2.52	9388885.0			3725748.015873	Y
3	IC 410-394255/9	12.58	40278346.0			3201776.311606	Y
4	IC 410-394255/10	25.2	76655797.0			3041896.706349	Y
5	IC 410-394255/11	75.6	214983737.0			2843700.224868	Y
6	IC 410-394255/12	100.8	261952749.0			2598737.589286	Y
7	IC 410-394255/13	126.0	290066291.0			2302113.420635	Y



Calibration / Quinic Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

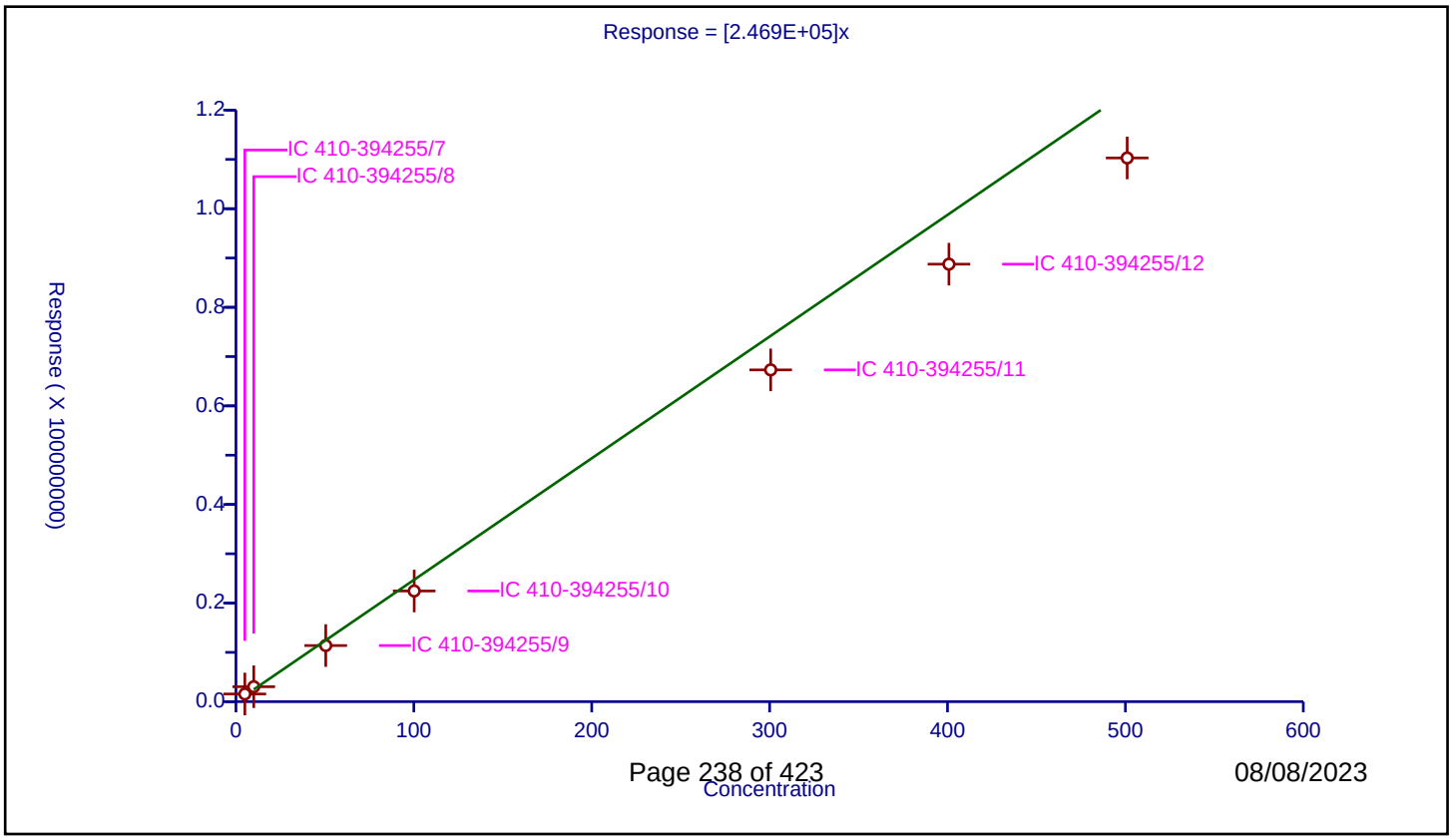
Curve Coefficients

Intercept:	0
Slope:	2.469E+05

Error Coefficients

Standard Error:	7500000
Relative Standard Error:	16.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.958

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-394255/7	5.01	1556143.0			310607.38523	Y
2	IC 410-394255/8	10.02	3029201.0			302315.469062	Y
3	IC 410-394255/9	50.48	11385049.0			225535.835975	Y
4	IC 410-394255/10	100.2	22450024.0			224052.135729	Y
5	IC 410-394255/11	300.6	67305156.0			223902.714571	Y
6	IC 410-394255/12	400.8	88748012.0			221427.175649	Y
7	IC 410-394255/13	501.0	110294149.0			220148.001996	Y



Calibration / L-Lactic Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

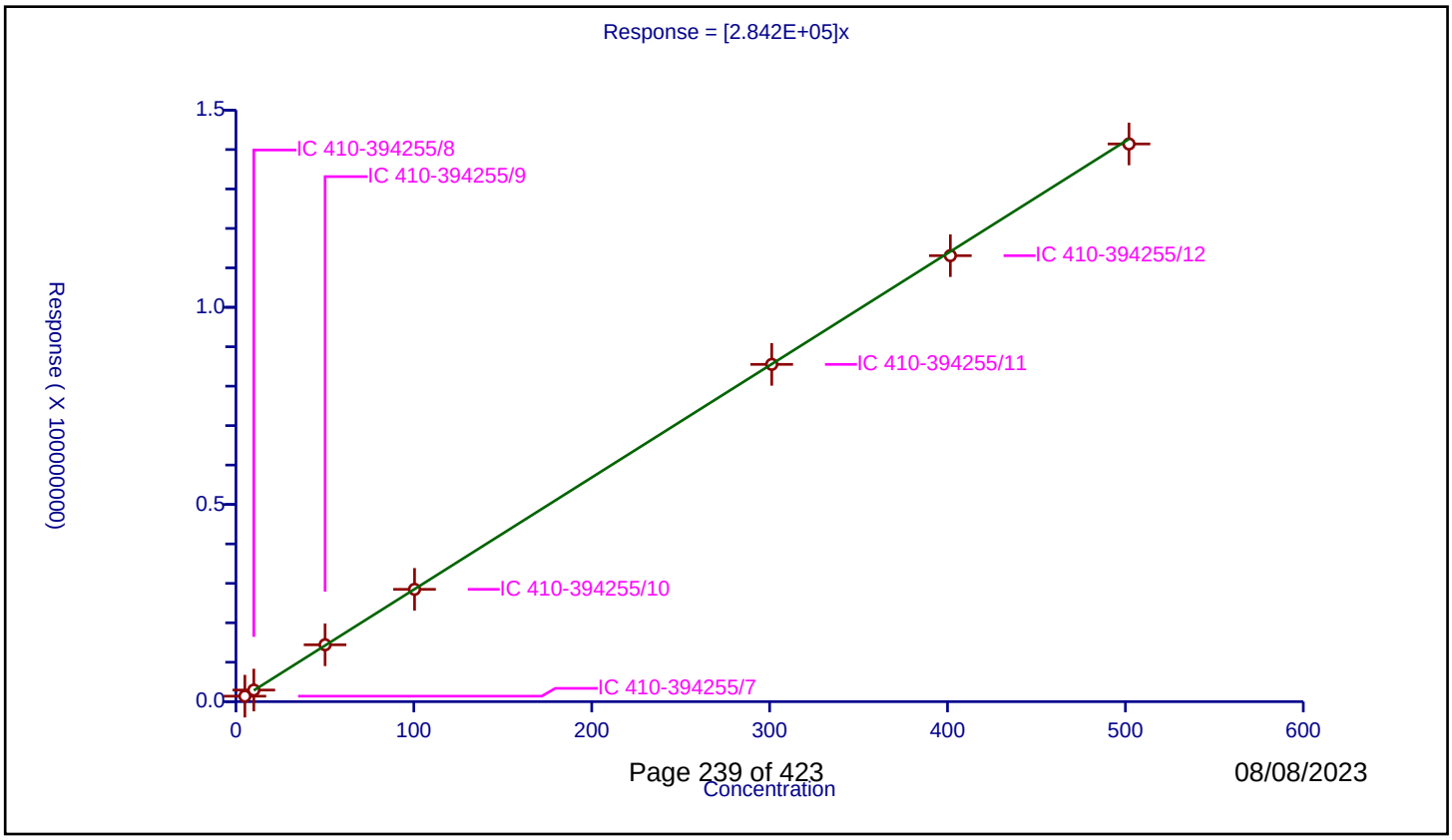
Curve Coefficients

Intercept:	0
Slope:	2.842E+05

Error Coefficients

Standard Error:	673000
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 410-394255/7	5.02	1393925.0			277674.302789	Y
2	IC 410-394255/8	10.04	2941359.0			292964.043825	Y
3	IC 410-394255/9	50.11	14423544.0			287837.637198	Y
4	IC 410-394255/10	100.4	28485742.0			283722.52988	Y
5	IC 410-394255/11	301.2	85525670.0			283949.767596	Y
6	IC 410-394255/12	401.6	113091344.0			281601.952191	Y
7	IC 410-394255/13	502.0	141418669.0			281710.496016	Y



Calibration / Formic-acid

Curve Type:	Quadratic
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

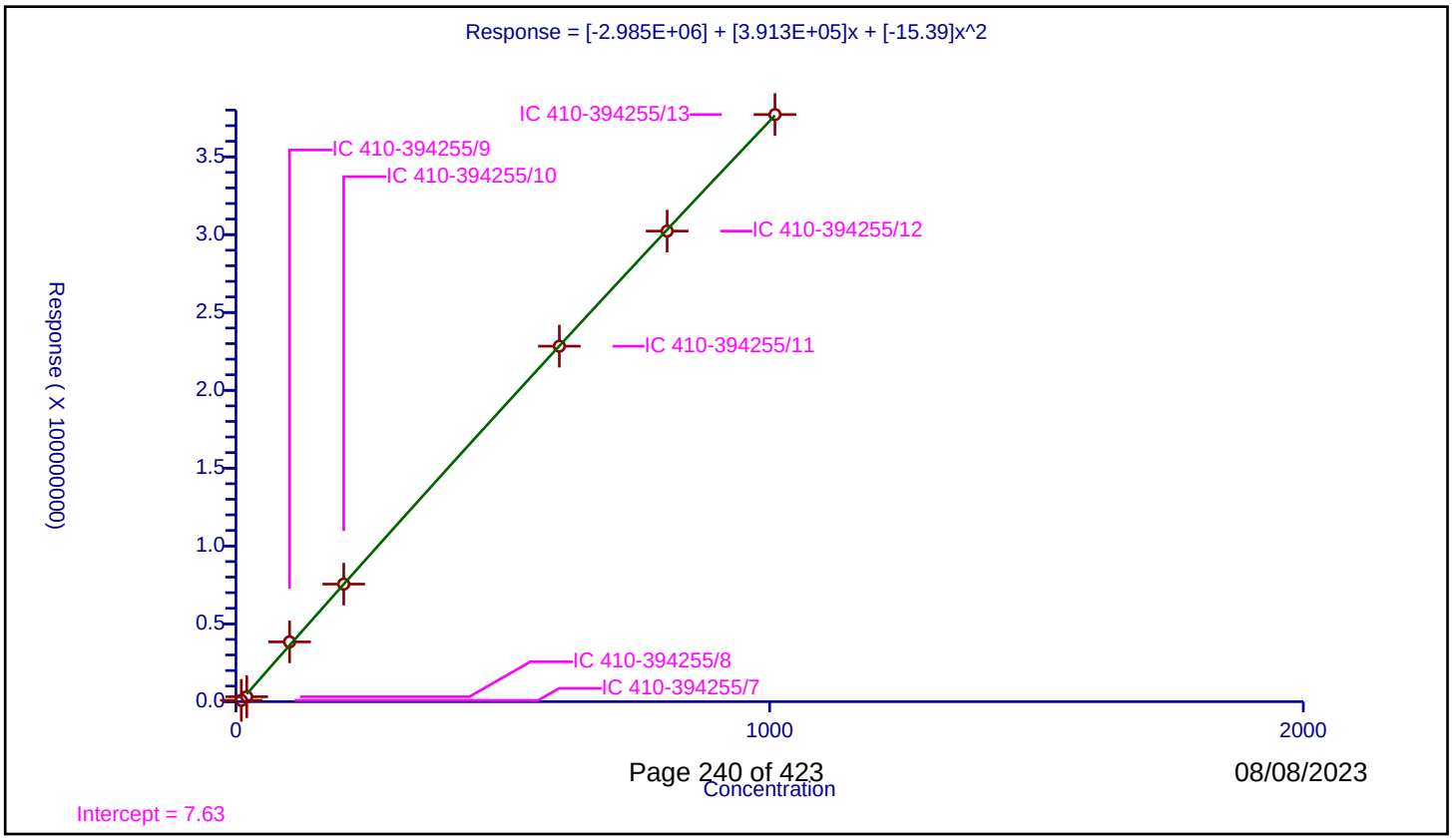
Curve Coefficients

Intercept:	-2.985E+06
Slope:	3.913E+05
Second Order:	-15.39

Error Coefficients

Standard Error:	1510000
Relative Standard Error:	11.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-394255/7	10.1	844550.0			83618.811881	Y
2	IC 410-394255/8	20.2	3167534.0			156808.613861	Y
3	IC 410-394255/9	100.5	38407370.0			382162.885572	Y
4	IC 410-394255/10	202.0	75523631.0			373879.361386	Y
5	IC 410-394255/11	606.0	228351146.0			376817.072607	Y
6	IC 410-394255/12	808.0	302295261.0			374127.798267	Y
7	IC 410-394255/13	1010.0	377152663.0			373418.478218	Y



Calibration / Acetic acid

Curve Type:	Linear
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

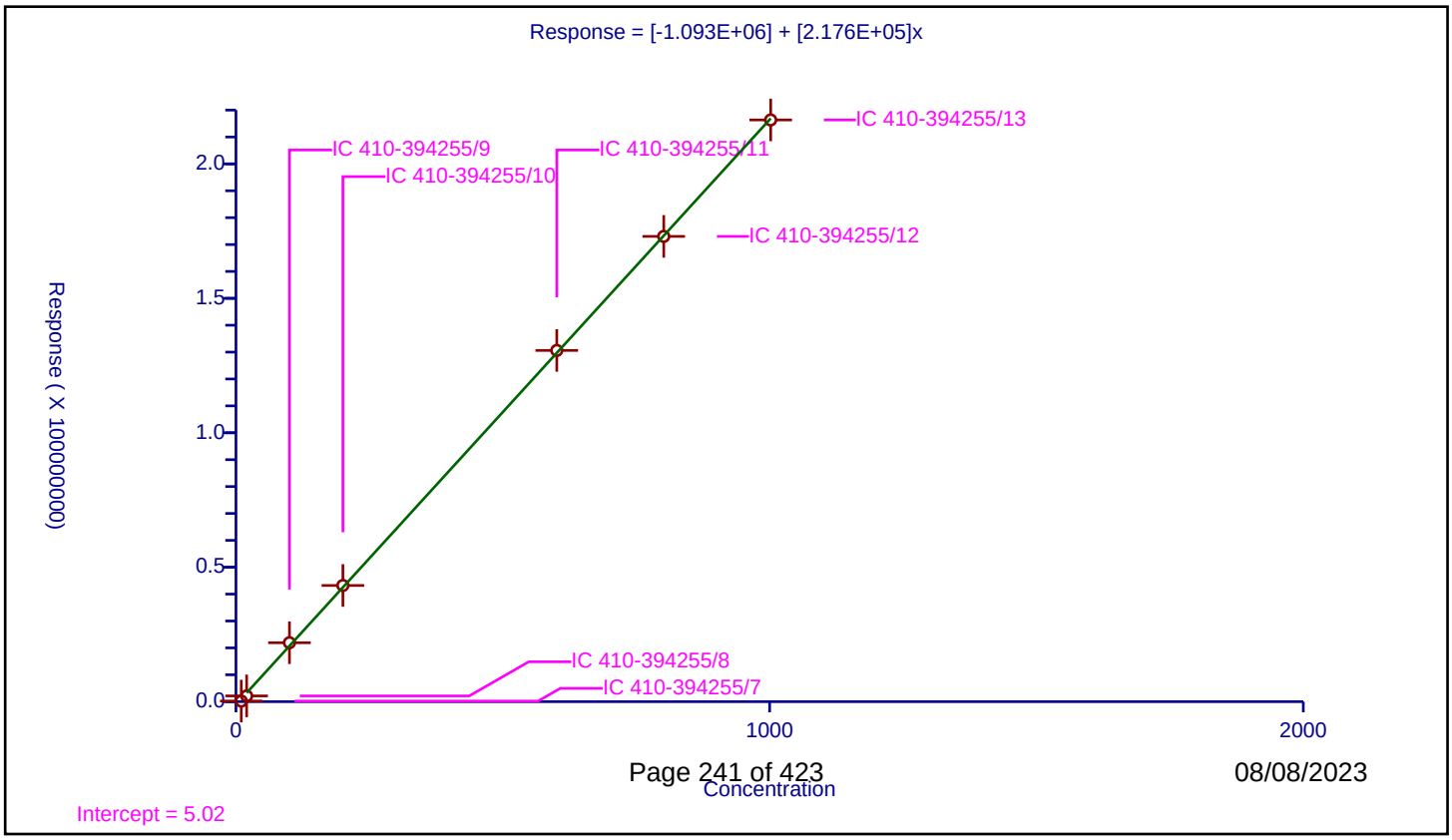
Curve Coefficients

Intercept:	-1.093E+06
Slope:	2.176E+05

Error Coefficients

Standard Error:	1020000
Relative Standard Error:	21.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-394255/7	10.02	221499.0			22105.688623	Y
2	IC 410-394255/8	20.04	2142456.0			106908.982036	Y
3	IC 410-394255/9	100.23	21917134.0			218668.402674	Y
4	IC 410-394255/10	200.4	43210267.0			215620.09481	Y
5	IC 410-394255/11	601.2	130620944.0			217267.039255	Y
6	IC 410-394255/12	801.6	173035102.0			215862.153194	Y
7	IC 410-394255/13	1002.0	216341762.0			215909.942116	Y



Calibration / Propionic acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

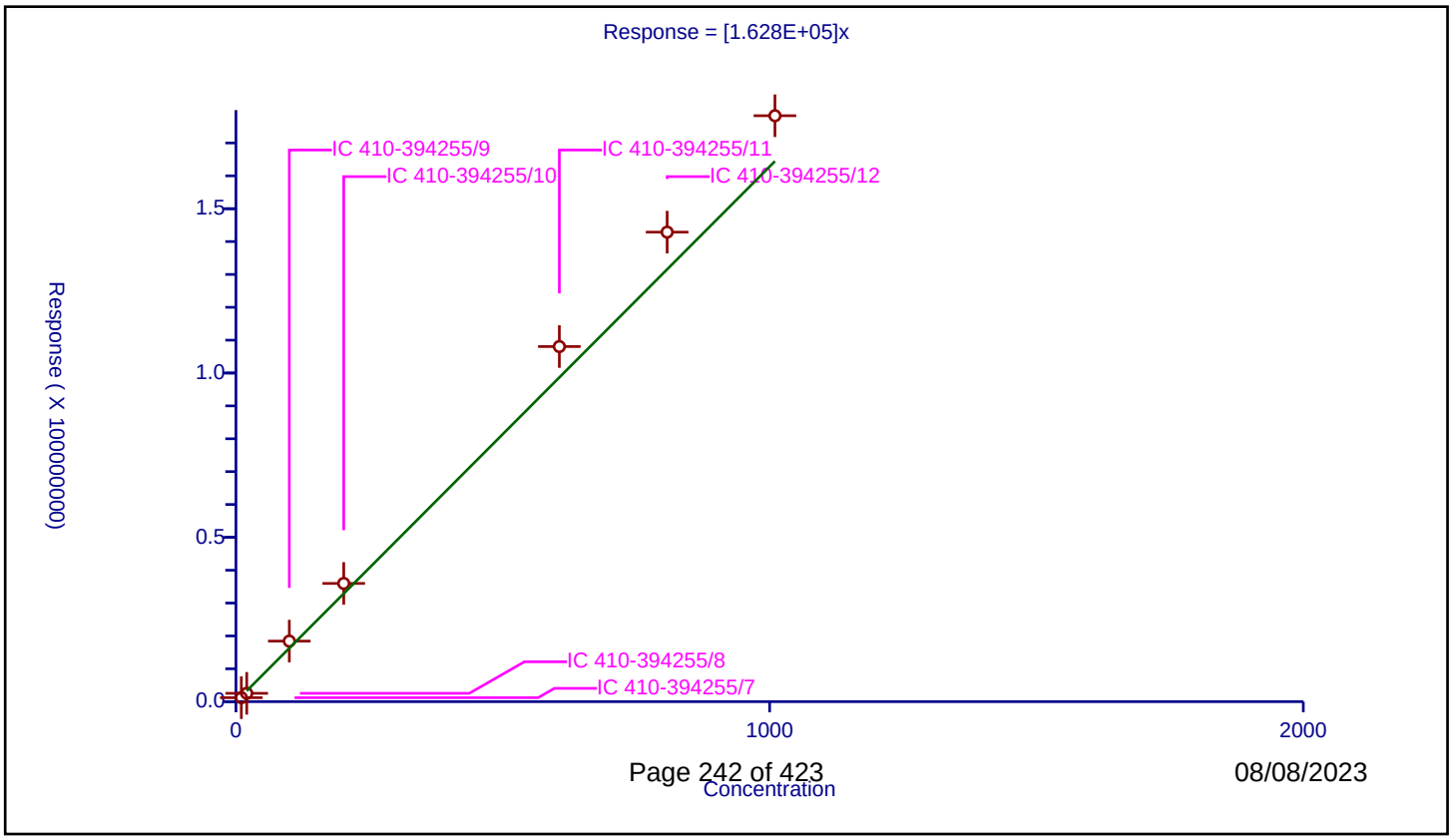
Curve Coefficients

Intercept:	0
Slope:	1.628E+05

Error Coefficients

Standard Error:	8400000
Relative Standard Error:	16.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.970

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-394255/7	10.1	1212693.0			120068.613861	Y
2	IC 410-394255/8	20.2	2536160.0			125552.475248	Y
3	IC 410-394255/9	100.0	18431747.0			184317.47	Y
4	IC 410-394255/10	202.0	35976731.0			178102.628713	Y
5	IC 410-394255/11	606.0	108055774.0			178309.858086	Y
6	IC 410-394255/12	808.0	142872370.0			176822.240099	Y
7	IC 410-394255/13	1010.0	178290956.0			176525.69901	Y



Calibration / n-Butyric Acid

Curve Type:	Quadratic
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

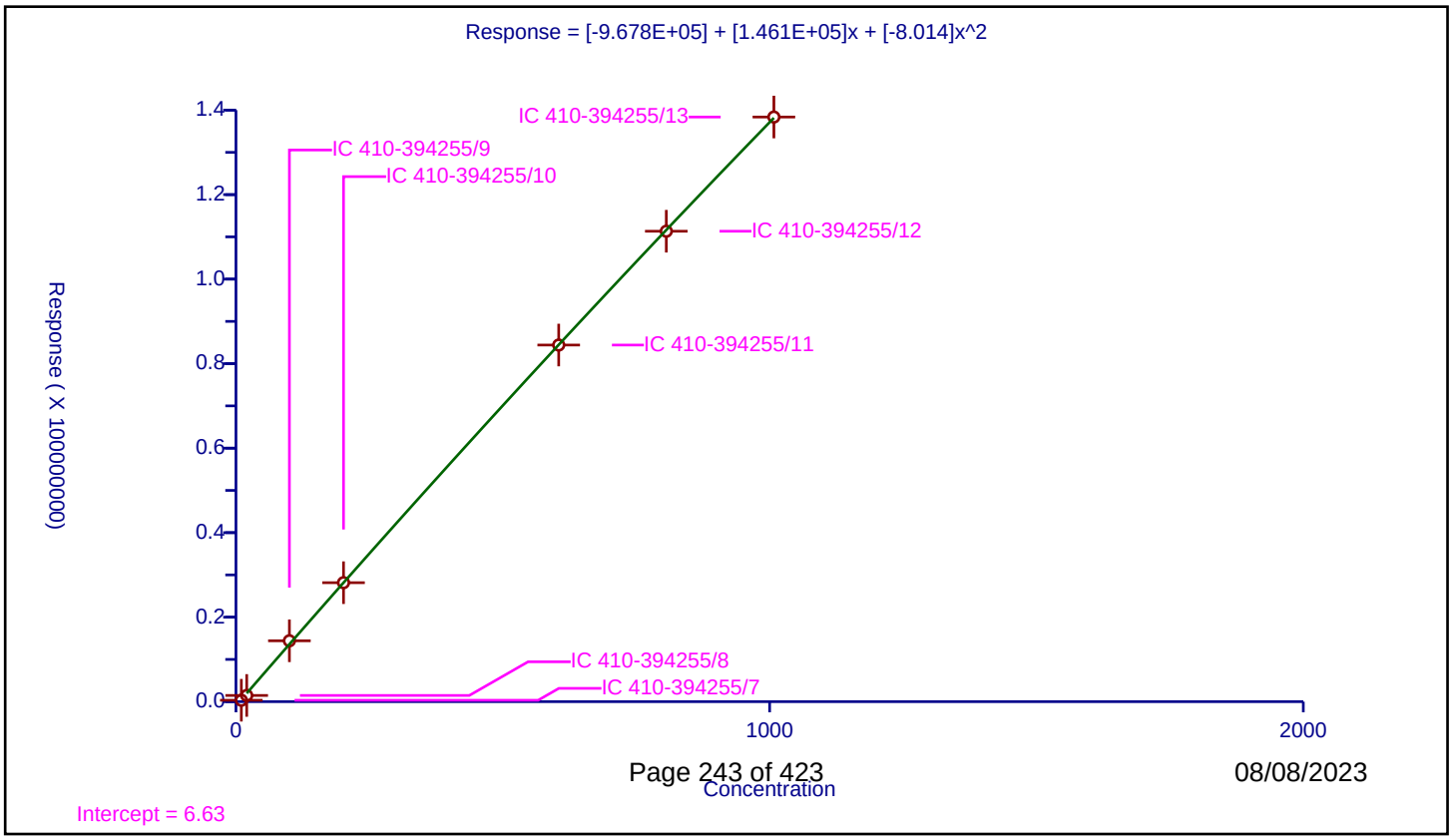
Curve Coefficients

Intercept:	-9.678E+05
Slope:	1.461E+05
Second Order:	-8.014

Error Coefficients

Standard Error:	523000
Relative Standard Error:	10.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-394255/7	10.08	339742.0			33704.563492	Y
2	IC 410-394255/8	20.16	1468425.0			72838.541667	Y
3	IC 410-394255/9	100.15	14406157.0			143845.801298	Y
4	IC 410-394255/10	201.6	28161575.0			139690.352183	Y
5	IC 410-394255/11	604.8	84400972.0			139551.871693	Y
6	IC 410-394255/12	806.4	111334520.0			138063.640873	Y
7	IC 410-394255/13	1008.0	138361738.0			137263.628968	Y



INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136647-1 Analy Batch No.: 394255

SDG No.:

Instrument ID: 6854A GC Column: Supelcogel ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/06/2023 02:14 Calibration End Date: 07/06/2023 05:06 Calibration ID: 51932

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-394255/16	48ORGA23186001.016.d
Level 2	IC 410-394255/17	48ORGA23186001.017.d
Level 3	IC 410-394255/18	48ORGA23186001.018.d
Level 4	IC 410-394255/19	48ORGA23186001.019.d
Level 5	IC 410-394255/20	48ORGA23186001.020.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5						RT WINDOW	AVG RT
Tartaric Acid	16.064	16.064	16.060	16.056	16.012						15.960 - 16.160	16.051
Succinic Acid	19.226	19.234	19.226	19.222	19.218						19.176 - 19.276	19.225
Isobutyric acid	25.034	25.030	25.018	25.010	24.958						24.918 - 25.118	25.010
Isovaleric acid	28.979	28.967	28.935	28.903	28.767						28.715 - 29.155	28.910
Valeric acid	33.627	33.619	33.563	33.520	33.292						33.263 - 33.863	33.524

INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136647-1 Analy Batch No.: 394255

SDG No.:

Instrument ID: 6854A GC Column: Supelcogel ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/06/2023 02:14 Calibration End Date: 07/06/2023 05:06 Calibration ID: 51932

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-394255/16	48ORGA23186001.016.d
Level 2	IC 410-394255/17	48ORGA23186001.017.d
Level 3	IC 410-394255/18	48ORGA23186001.018.d
Level 4	IC 410-394255/19	48ORGA23186001.019.d
Level 5	IC 410-394255/20	48ORGA23186001.020.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 3	LVL 4		B	M1	M2								
Tartaric Acid	672735 509482	668140	661994	654083	Ave		633286.751				11.0		20.0			
Succinic Acid	225381 225378	226293	225294	225569	Ave		225583.126				0.2		20.0			
Isobutyric acid	204000 204695	206434	207821	207246	Ave		206039.175				0.8		20.0			
Isovaleric acid	123540 120967	123231	124899	124360	Ave		123399.436				1.2		20.0			
Valeric acid	85861 83395	87039	88123	87470	Ave		86377.4337				2.2		20.0			

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.

INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136647-1 Analy Batch No.: 394255

SDG No.:

Instrument ID: 6854A GC Column: Supelcogel ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/06/2023 02:14 Calibration End Date: 07/06/2023 05:06 Calibration ID: 51932

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-394255/16	48ORGA23186001.016.d
Level 2	IC 410-394255/17	48ORGA23186001.017.d
Level 3	IC 410-394255/18	48ORGA23186001.018.d
Level 4	IC 410-394255/19	48ORGA23186001.019.d
Level 5	IC 410-394255/20	48ORGA23186001.020.d

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
Tartaric Acid	Ave	1691256	6718817	33285065	65774568	256167352	2.51	10.1	50.3	101	503
Succinic Acid	Ave	566608	2275600	11327798	22683241	113320195	2.51	10.1	50.3	101	503
Isobutyric acid	Ave	1026120	4153445	20906815	41697803	205923634	5.03	20.1	101	201	1006
Isovaleric acid	Ave	617700	2464615	12489883	24872040	120967401	5.00	20.0	100	200	1000
Valeric acid	Ave	431020	1747743	8847539	17563884	83728757	5.02	20.1	100	201	1004

Curve Type Legend

Ave = Average by Height

Report Date: 17-Jul-2023 17:08:10 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.016.d				
Lims ID:	IC ORGB1				
Client ID:					
Sample Type:	IC	Calib Level:	1		
Inject. Date:	06-Jul-2023 02:14:00	ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGB1				
Operator ID:	24470	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub3				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 17:08:09	Calib Date:	06-Jul-2023 10:07:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.027.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1676				
First Level Reviewer: UHEW		Date:	06-Jul-2023 15:02:38		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid						
16.064	16.060	0.004	1691256H	2.51	2.67	
6 Succinic Acid						
19.226	19.226	0.000	566608H	2.51	2.51	
12 Isobutyric acid						
25.034	25.018	0.016	1026120H	5.03	4.98	
14 Isovaleric acid						
28.979	28.935	0.044	617700H	5.00	5.01	
15 Valeric acid						
33.627	33.563	0.064	431020H	5.02	4.99	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGB1_00009 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 17:08:10 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.016.d

Injection Date: 06-Jul-2023 02:14:00 Instrument ID: 6854A

Lims ID: IC ORGB1

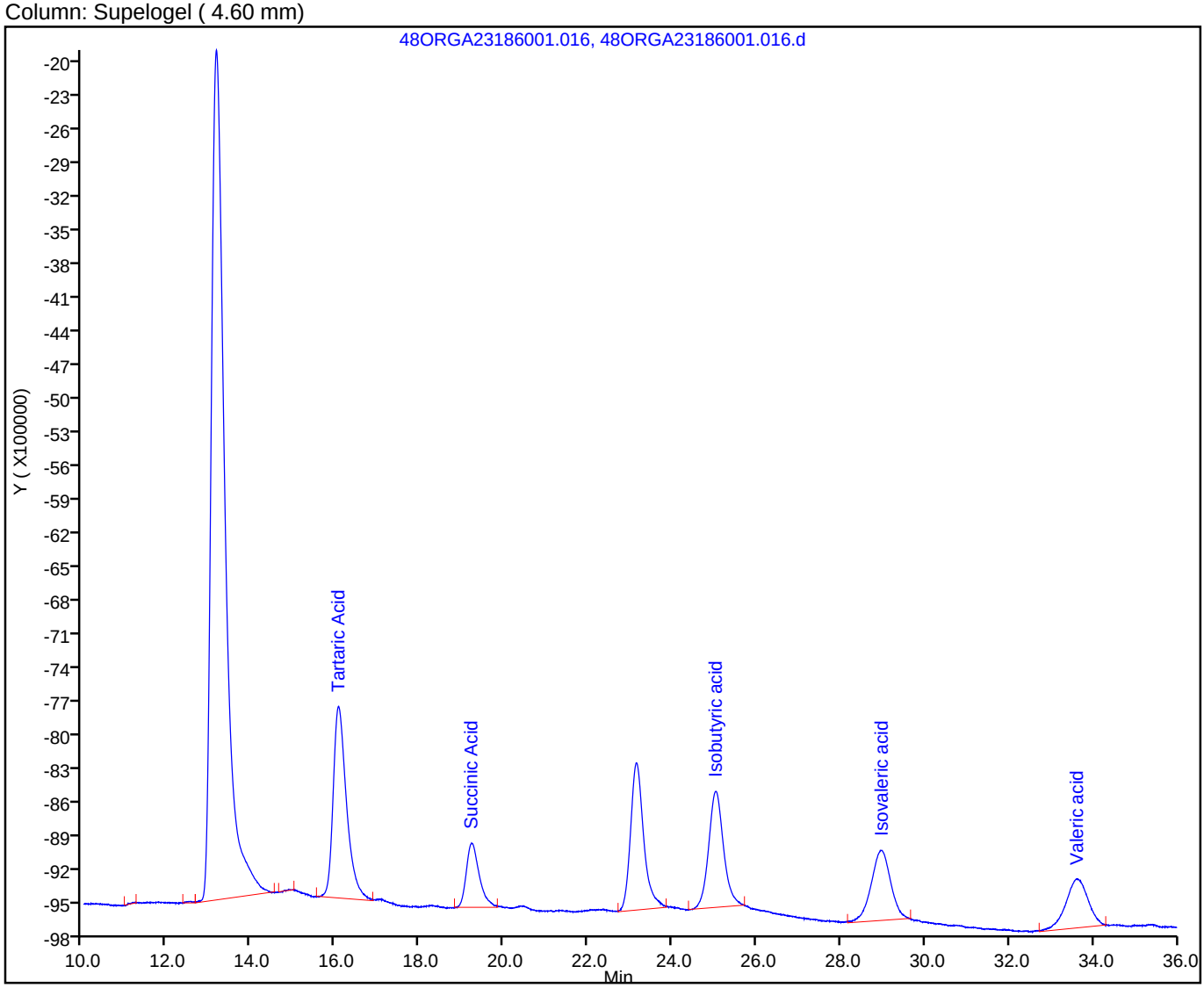
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 16

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Report Date: 17-Jul-2023 17:08:10 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.017.d
Lims ID: IC ORGB2
Client ID:
Sample Type: IC Calib Level: 0
Inject. Date: 06-Jul-2023 02:57:00 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: IC ORGB2
Operator ID: 24470 Instrument ID: 6854A

Method: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 17-Jul-2023 17:08:10 Calib Date: 06-Jul-2023 10:07:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.027.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1676

First Level Reviewer: GM5C Date: 17-Jul-2023 16:09:15

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid						
16.064	16.060	0.004	6718817	10.1	10.6	H
6 Succinic Acid						
19.234	19.226	0.008	2275600	10.1	10.1	H
12 Isobutyric acid						
25.030	25.018	0.012	4153445	20.1	20.2	H
14 Isovaleric acid						
28.967	28.935	0.032	2464615	20.0	20.0	H
15 Valeric acid						
33.619	33.563	0.056	1747743	20.1	20.2	H

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGB2_00009 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 17:08:10 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.017.d

Injection Date: 06-Jul-2023 02:57:00 Instrument ID: 6854A

Lims ID: IC ORGB2

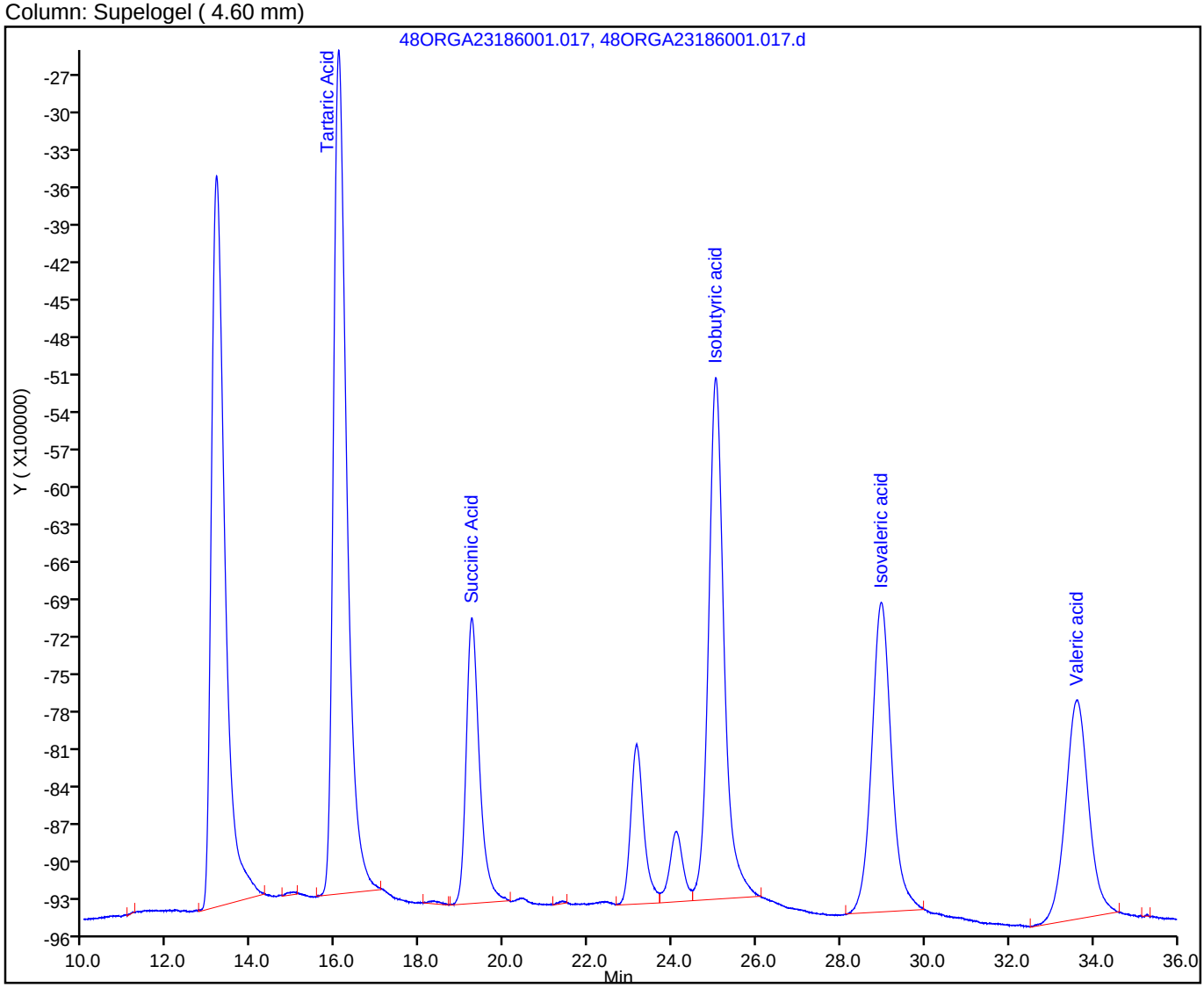
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 17

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Report Date: 17-Jul-2023 17:08:11 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.018.d
Lims ID: IC ORGB3
Client ID:
Sample Type: IC Calib Level: 0
Inject. Date: 06-Jul-2023 03:40:00 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: IC ORGB3
Operator ID: 24470 Instrument ID: 6854A

Method: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 17-Jul-2023 17:08:11 Calib Date: 06-Jul-2023 10:07:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.027.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1676

First Level Reviewer: GM5C Date: 17-Jul-2023 16:24:20

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid						
16.060	16.060	0.000	33285065H	50.3	52.6	
6 Succinic Acid						
19.226	19.226	0.000	11327798H	50.3	50.2	
12 Isobutyric acid						
25.018	25.018	0.000	20906815H	100.6	101.5	
14 Isovaleric acid						
28.935	28.935	0.000	12489883H	100.0	101.2	
15 Valeric acid						
33.563	33.563	0.000	8847539H	100.4	102.4	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

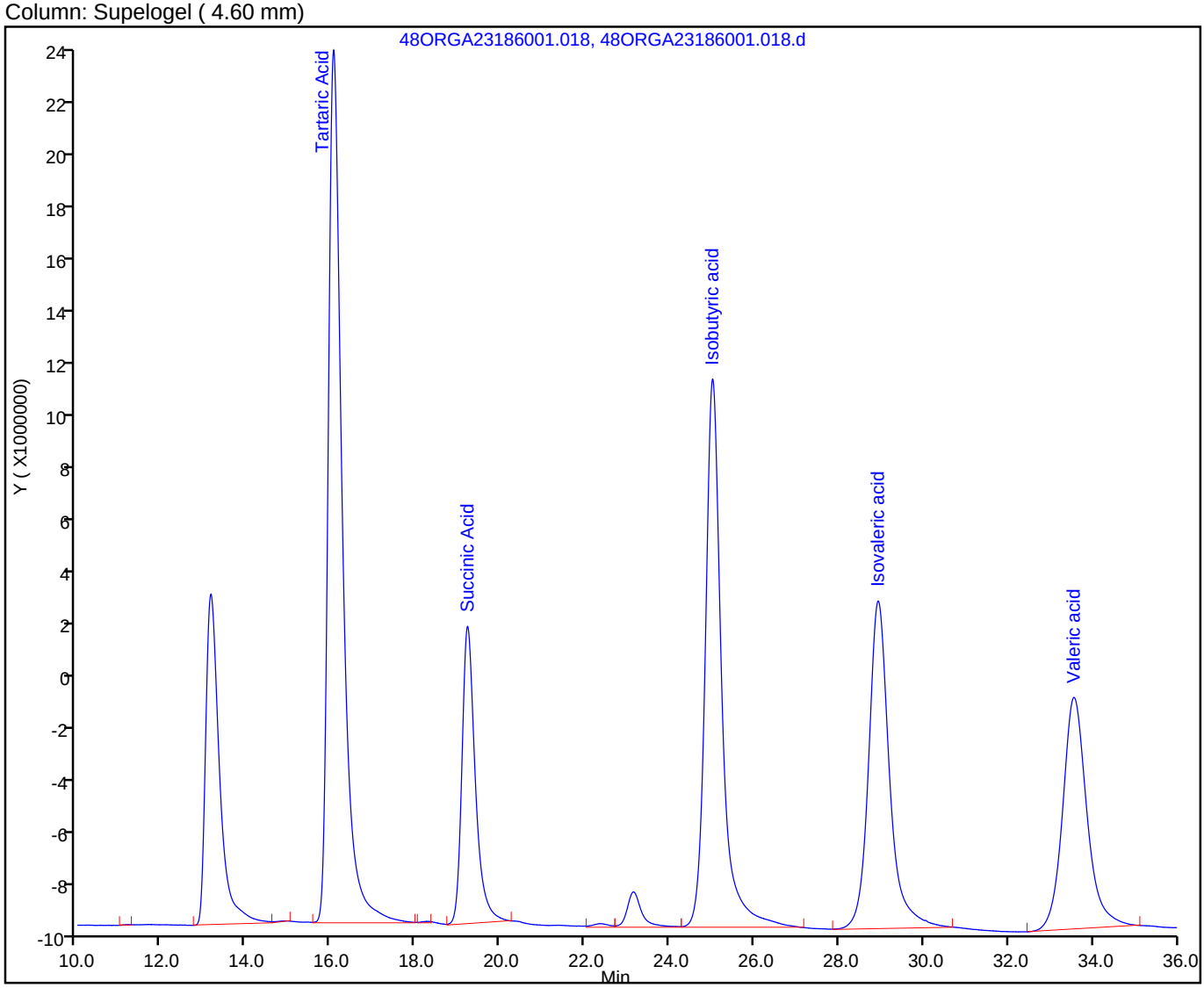
GCS_ORGB3_00021 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 17:08:11 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.018.d				
Injection Date:	06-Jul-2023 03:40:00	Instrument ID:	6854A		
Lims ID:	IC ORGB3				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Report Date: 17-Jul-2023 17:08:14 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.019.d				
Lims ID:	IC ORGB4				
Client ID:					
Sample Type:	IC	Calib Level:	4		
Inject. Date:	06-Jul-2023 04:23:00	ALS Bottle#:	0	Worklist Smp#:	19
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGB4				
Operator ID:	24470	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub3				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 17:08:13	Calib Date:	06-Jul-2023 10:07:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.027.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1676				
First Level Reviewer: UHEW		Date:	12-Jul-2023 18:08:19		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid						
16.056	16.060	-0.004	65774568H	100.6	103.9	
6 Succinic Acid						
19.222	19.226	-0.004	22683241H	100.6	100.6	
12 Isobutyric acid						
25.010	25.018	-0.008	41697803H	201.2	202.4	
14 Isovaleric acid						
28.903	28.935	-0.032	24872040H	200.0	201.6	
15 Valeric acid						
33.520	33.563	-0.043	17563884H	200.8	203.3	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGB4_00009 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 17:08:14 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.019.d

Injection Date: 06-Jul-2023 04:23:00 Instrument ID: 6854A

Lims ID: IC ORGB4

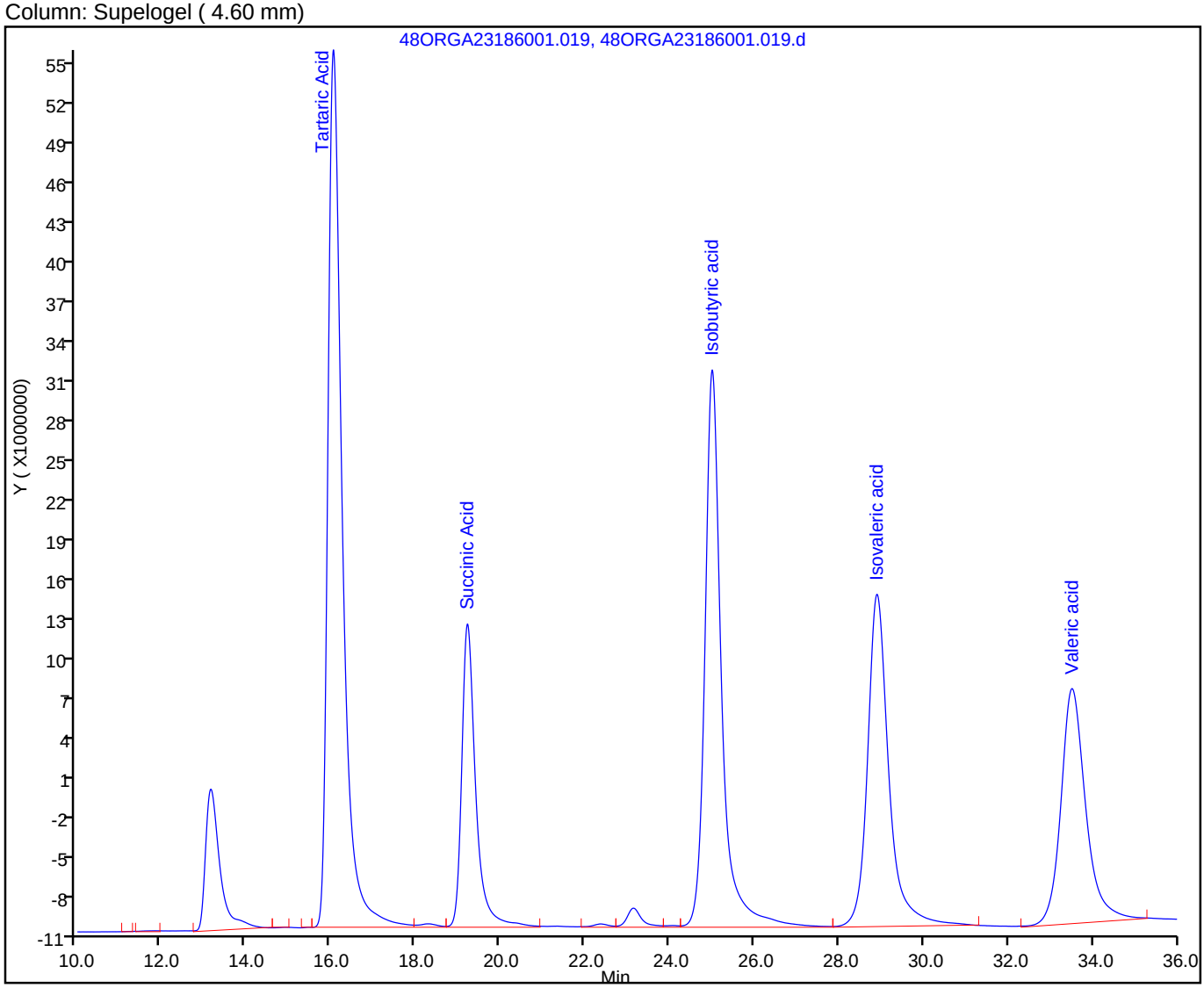
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 19

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Report Date: 17-Jul-2023 17:08:16 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.020.d				
Lims ID:	IC ORGB5				
Client ID:					
Sample Type:	IC	Calib Level:	5		
Inject. Date:	06-Jul-2023 05:06:00	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGB5				
Operator ID:	24470	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub3				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 17:08:16	Calib Date:	06-Jul-2023 10:07:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.027.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1676				
First Level Reviewer: UHEW		Date:	06-Jul-2023 15:03:06		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid						
16.012	16.060	-0.048	256167352H	502.8	404.5	
6 Succinic Acid						
19.218	19.226	-0.008	113320195H	502.8	502.3	
12 Isobutyric acid						
24.958	25.018	-0.060	205923634H	1006.0	999.4	
14 Isovaleric acid						
28.767	28.935	-0.168	120967401H	1000.0	980.3	
15 Valeric acid						
33.292	33.563	-0.271	83728757H	1004.0	969.3	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

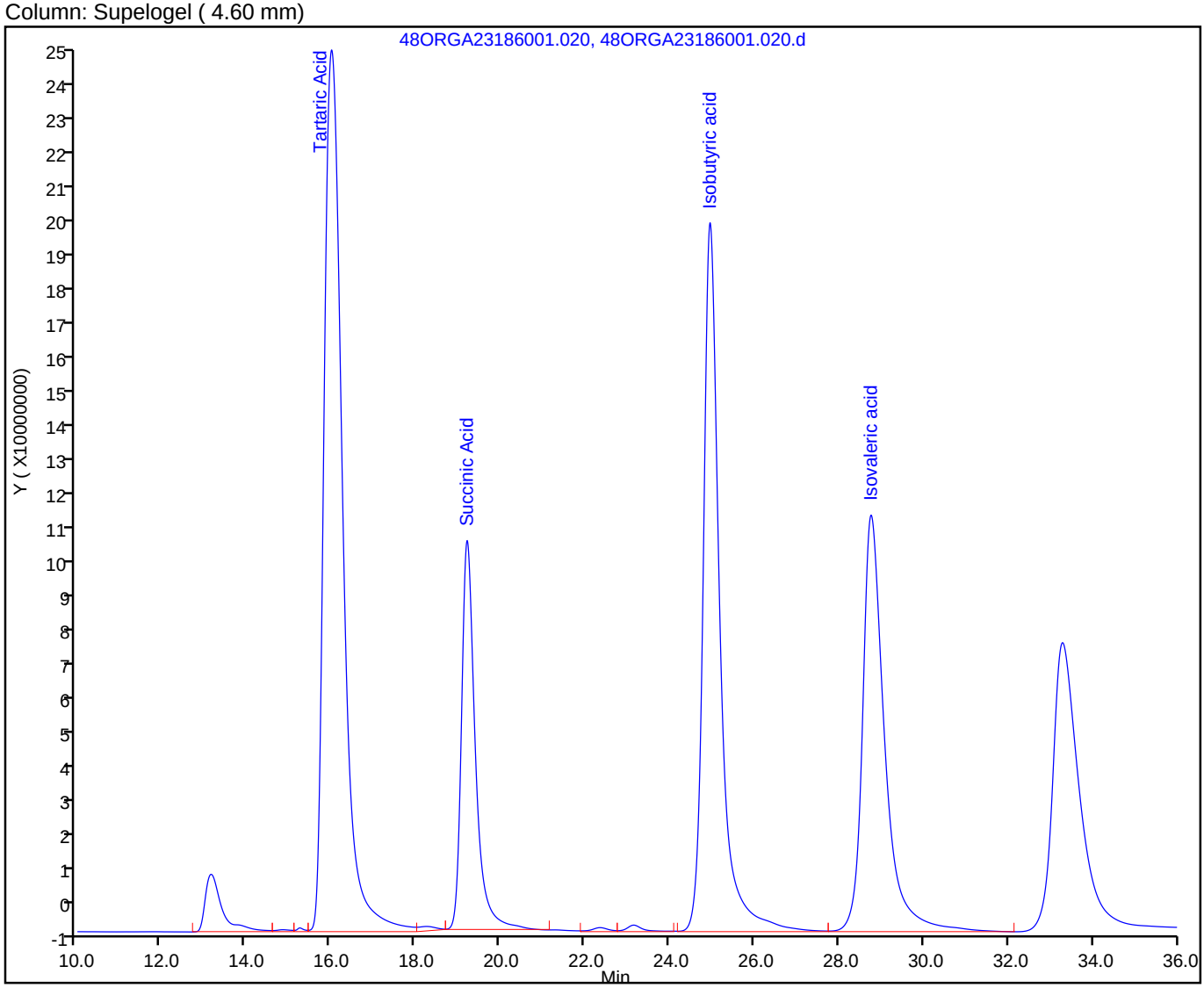
GCS_ORGB5_00008 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 17:08:16 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.020.d				
Injection Date:	06-Jul-2023 05:06:00	Instrument ID:	6854A		
Lims ID:	IC ORGB5				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Calibration / Tartaric Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

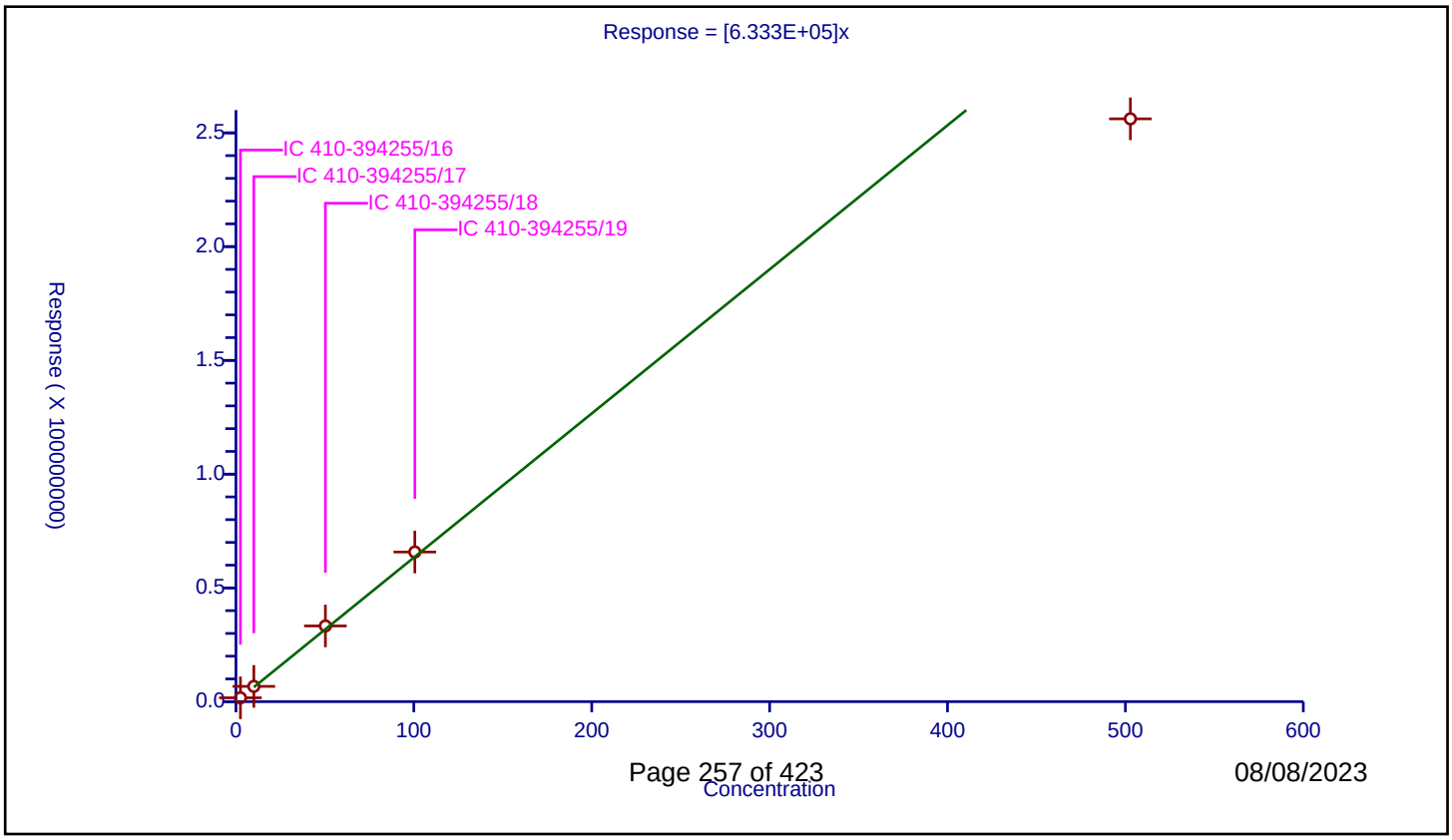
Curve Coefficients

Intercept:	0
Slope:	6.333E+05

Error Coefficients

Standard Error:	31200000
Relative Standard Error:	11.0
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-394255/16	2.514	1691256.0			672735.083532	Y
2	IC 410-394255/17	10.056	6718817.0			668140.115354	Y
3	IC 410-394255/18	50.28	33285065.0			661994.132856	Y
4	IC 410-394255/19	100.56	65774568.0			654082.816229	Y
5	IC 410-394255/20	502.8	256167352.0			509481.607001	Y



Calibration / Succinic Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

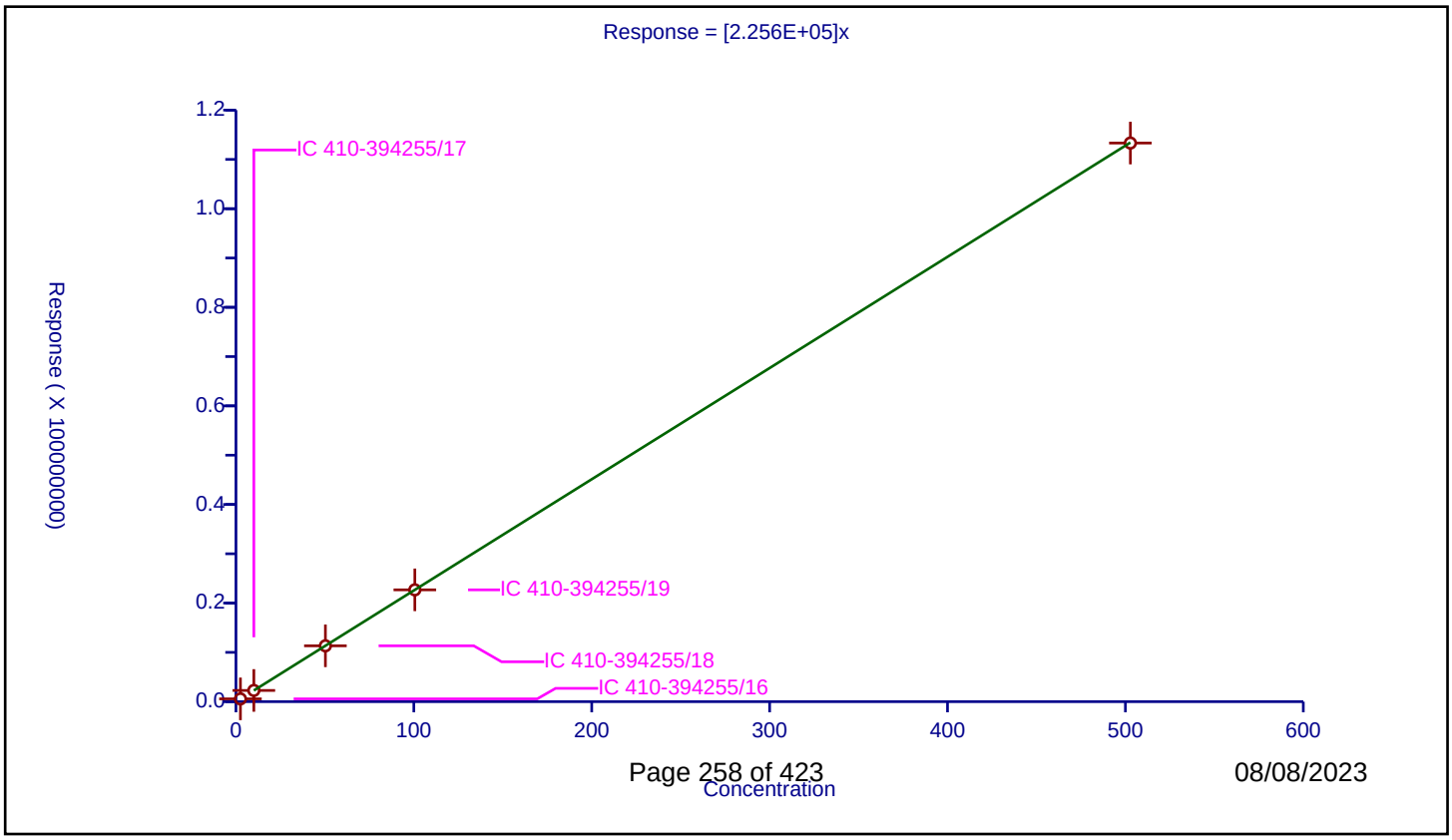
Curve Coefficients

Intercept:	0
Slope:	2.256E+05

Error Coefficients

Standard Error:	52100
Relative Standard Error:	0.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-394255/16	2.514	566608.0			225381.06603	Y
2	IC 410-394255/17	10.056	2275600.0			226292.760541	Y
3	IC 410-394255/18	50.28	11327798.0			225294.311854	Y
4	IC 410-394255/19	100.56	22683241.0			225569.222355	Y
5	IC 410-394255/20	502.8	113320195.0			225378.271679	Y



Calibration / Isobutyric acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

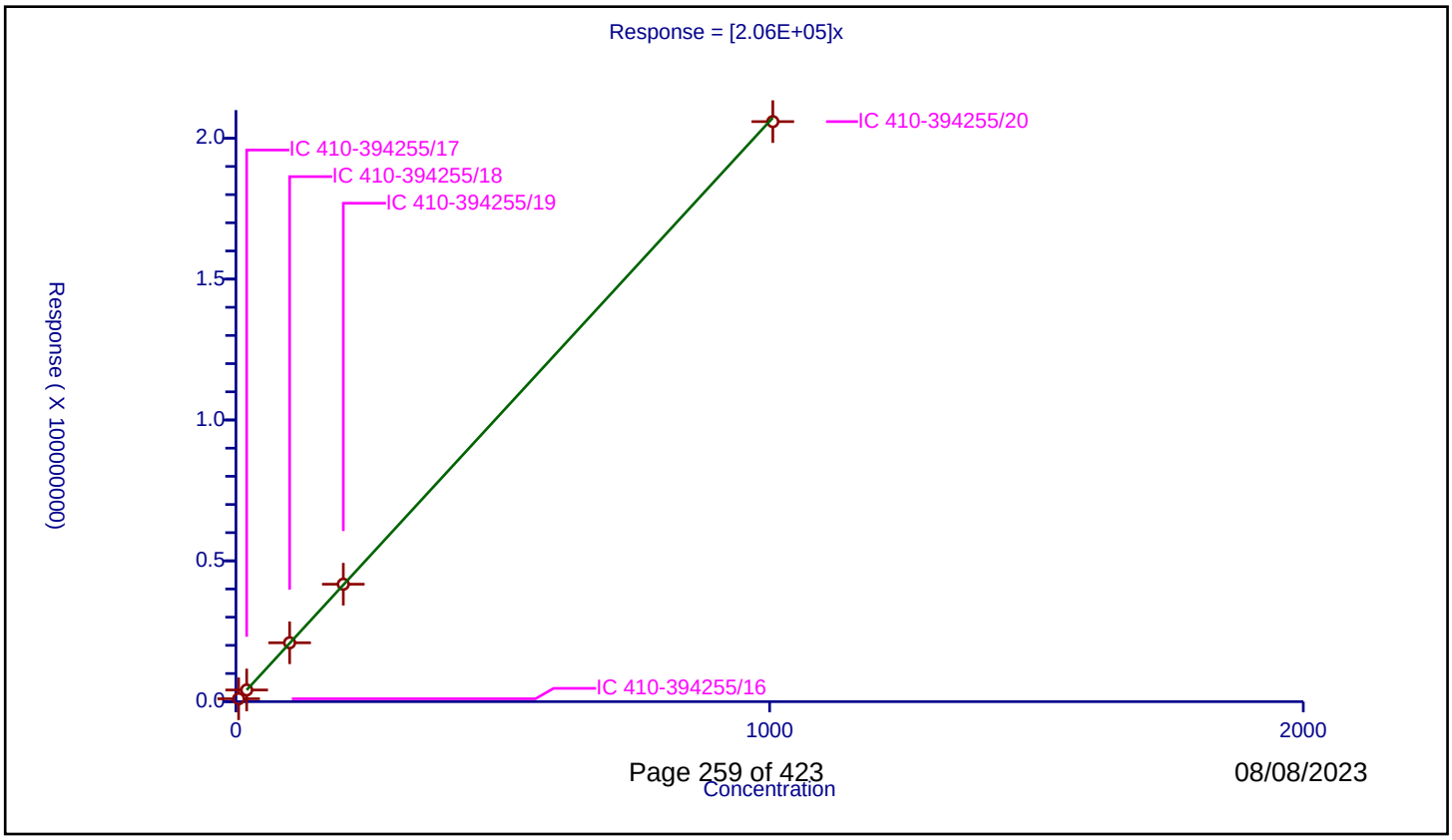
Curve Coefficients

Intercept:	0
Slope:	2.06E+05

Error Coefficients

Standard Error:	693000
Relative Standard Error:	0.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-394255/16	5.03	1026120.0			204000.0	Y
2	IC 410-394255/17	20.12	4153445.0			206433.648111	Y
3	IC 410-394255/18	100.6	20906815.0			207821.222664	Y
4	IC 410-394255/19	201.2	41697803.0			207245.54175	Y
5	IC 410-394255/20	1006.0	205923634.0			204695.461233	Y



Calibration / Isovaleric acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

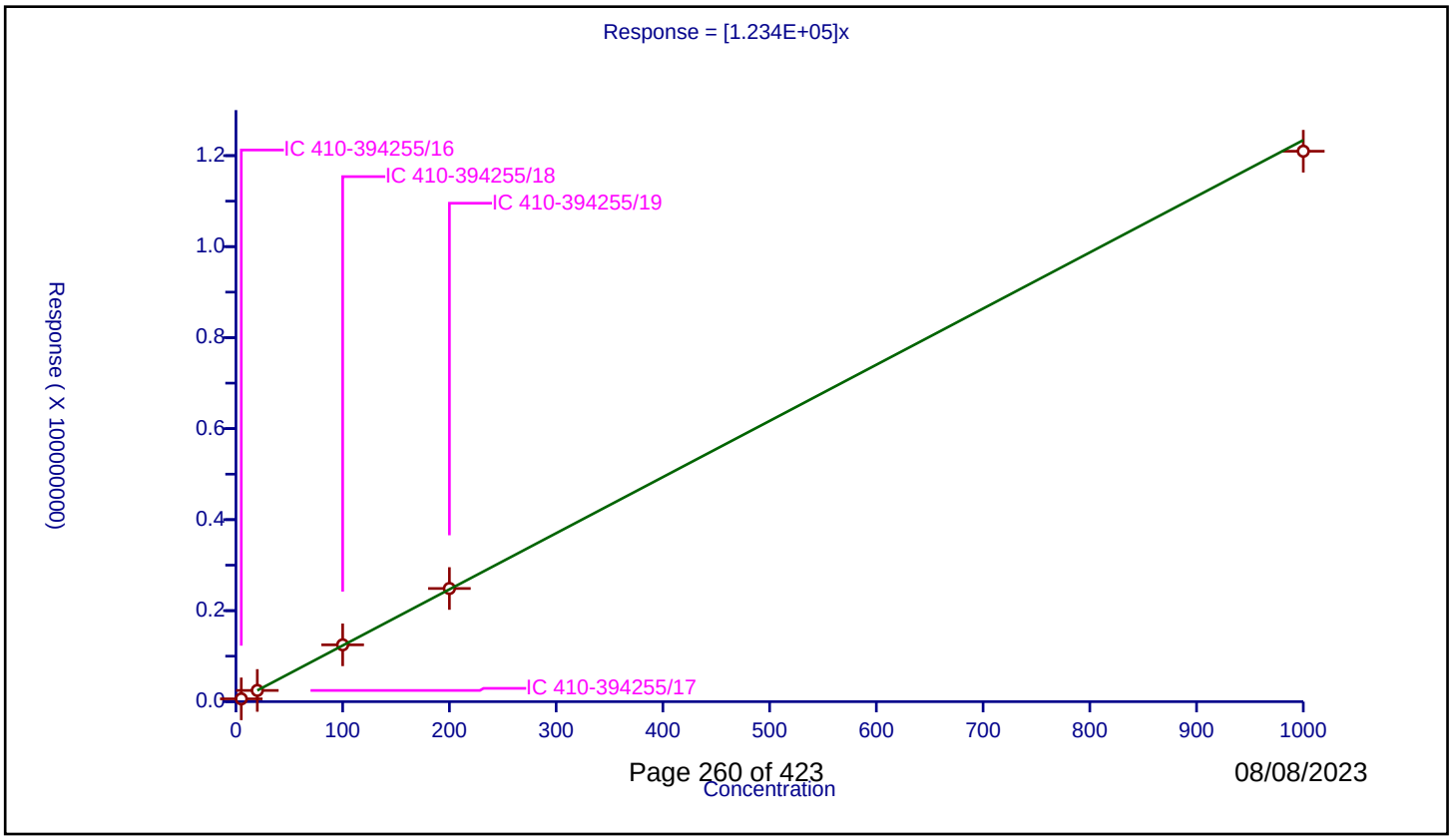
Curve Coefficients

Intercept:	0
Slope:	1.234E+05

Error Coefficients

Standard Error:	1220000
Relative Standard Error:	1.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-394255/16	5.0	617700.0			123540.0	Y
2	IC 410-394255/17	20.0	2464615.0			123230.75	Y
3	IC 410-394255/18	100.0	12489883.0			124898.83	Y
4	IC 410-394255/19	200.0	24872040.0			124360.2	Y
5	IC 410-394255/20	1000.0	120967401.0			120967.401	Y



Calibration / Valeric acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

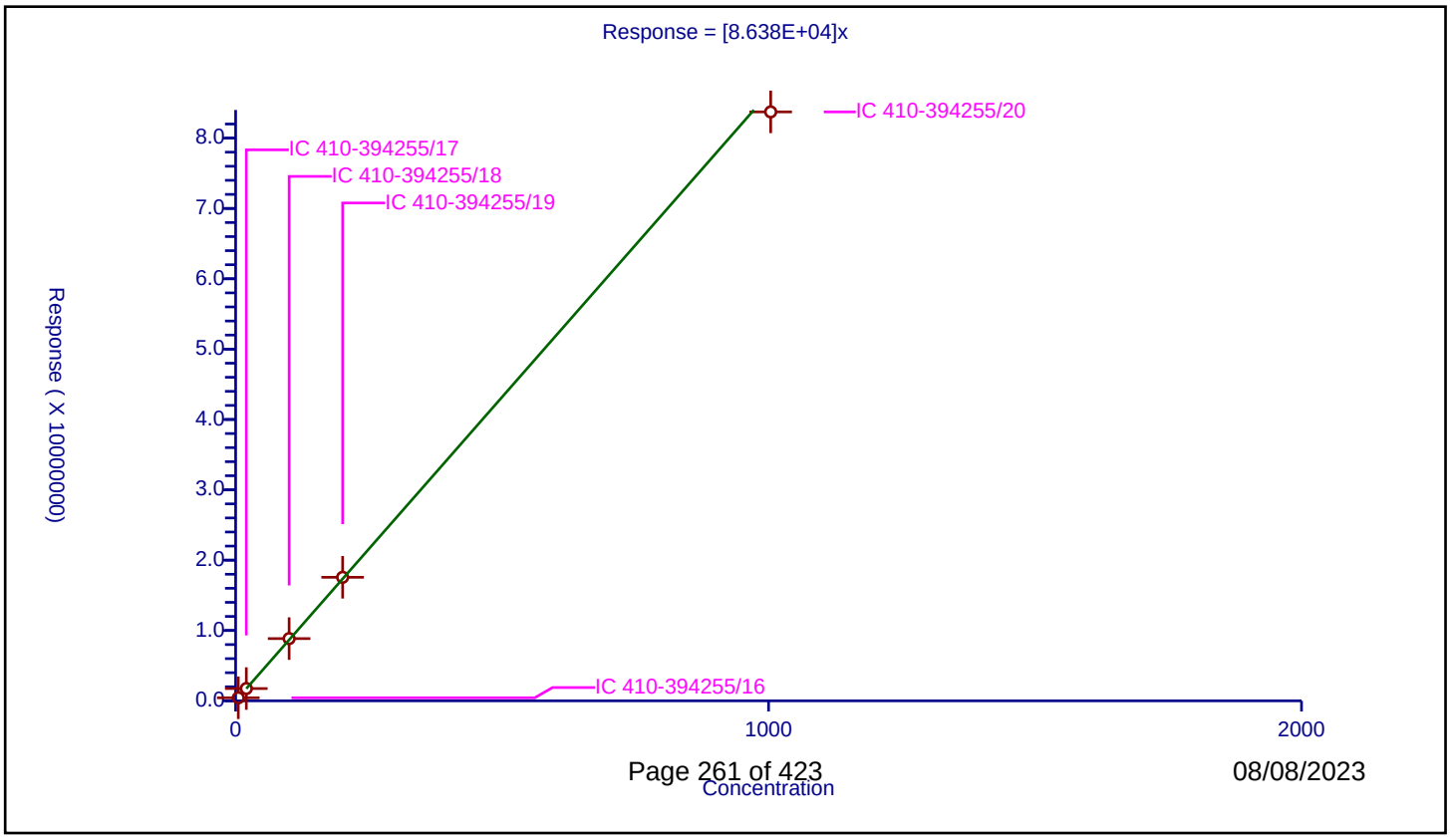
Curve Coefficients

Intercept:	0
Slope:	8.638E+04

Error Coefficients

Standard Error:	1500000
Relative Standard Error:	2.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-394255/16	5.02	431020.0			85860.557769	Y
2	IC 410-394255/17	20.08	1747743.0			87038.994024	Y
3	IC 410-394255/18	100.4	8847539.0			88122.898406	Y
4	IC 410-394255/19	200.8	17563884.0			87469.541833	Y
5	IC 410-394255/20	1004.0	83728757.0			83395.176295	Y



INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136647-1 Analy Batch No.: 401648

SDG No.:

Instrument ID: 6854A GC Column: Supelcogel ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2023 19:59 Calibration End Date: 07/27/2023 22:51 Calibration ID: 52300

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-401648/4	48ORGA23186006.004.d
Level 2	IC 410-401648/5	48ORGA23186006.005.d
Level 3	ICRT 410-401648/6	48ORGA23186006.006.d
Level 4	IC 410-401648/7	48ORGA23186006.007.d
Level 5	IC 410-401648/8	48ORGA23186006.008.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5						RT WINDOW	AVG RT
Fumaric Acid	22.404	22.404	22.400	22.404	22.404						22.220 - 22.580	22.403

INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136647-1 Analy Batch No.: 401648

SDG No.:

Instrument ID: 6854A GC Column: Supelcogel ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2023 19:59 Calibration End Date: 07/27/2023 22:51 Calibration ID: 52300

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-401648/4	48ORGA23186006.004.d
Level 2	IC 410-401648/5	48ORGA23186006.005.d
Level 3	ICRT 410-401648/6	48ORGA23186006.006.d
Level 4	IC 410-401648/7	48ORGA23186006.007.d
Level 5	IC 410-401648/8	48ORGA23186006.008.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 3	LVL 4		B	M1	M2								
Fumaric Acid	39420564 39202585	39577678	39217283	39752344	Ave		39434091.1				0.6		20.0			

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.

INTEGRATED ANALYTICAL LABORATORIES, LLC

FORM VI

HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA

RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136647-1 Analy Batch No.: 401648

SDG No.:

Instrument ID: 6854A GC Column: Supelcogel ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2023 19:59 Calibration End Date: 07/27/2023 22:51 Calibration ID: 52300

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-401648/4	48ORGA23186006.004.d
Level 2	IC 410-401648/5	48ORGA23186006.005.d
Level 3	ICRT 410-401648/6	48ORGA23186006.006.d
Level 4	IC 410-401648/7	48ORGA23186006.007.d
Level 5	IC 410-401648/8	48ORGA23186006.008.d

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
Fumaric Acid	Ave	1939610	3894681	19296080	39118692	192888481	0.0492	0.0984	0.492	0.984	4.92

Curve Type Legend

Ave = Average by Height

Report Date: 28-Jul-2023 11:26:31 Chrom Revision: 2.3 26-Jul-2023 13:45:38

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.004.d				
Lims ID:	IC ORGS1				
Client ID:					
Sample Type:	IC	Calib Level:	1		
Inject. Date:	27-Jul-2023 19:59:00	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGS1				
Operator ID:	2027	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub4				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	28-Jul-2023 11:26:31	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1611				

First Level Reviewer: GM5C Date: 28-Jul-2023 11:26:17

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid						M
22.404	22.400	0.004	1939610H	0.0492	0.0492	M

QC Flag Legend

Processing Flags

H - Response Measured by Height

Review Flags

M - Manually Integrated

Reagents:

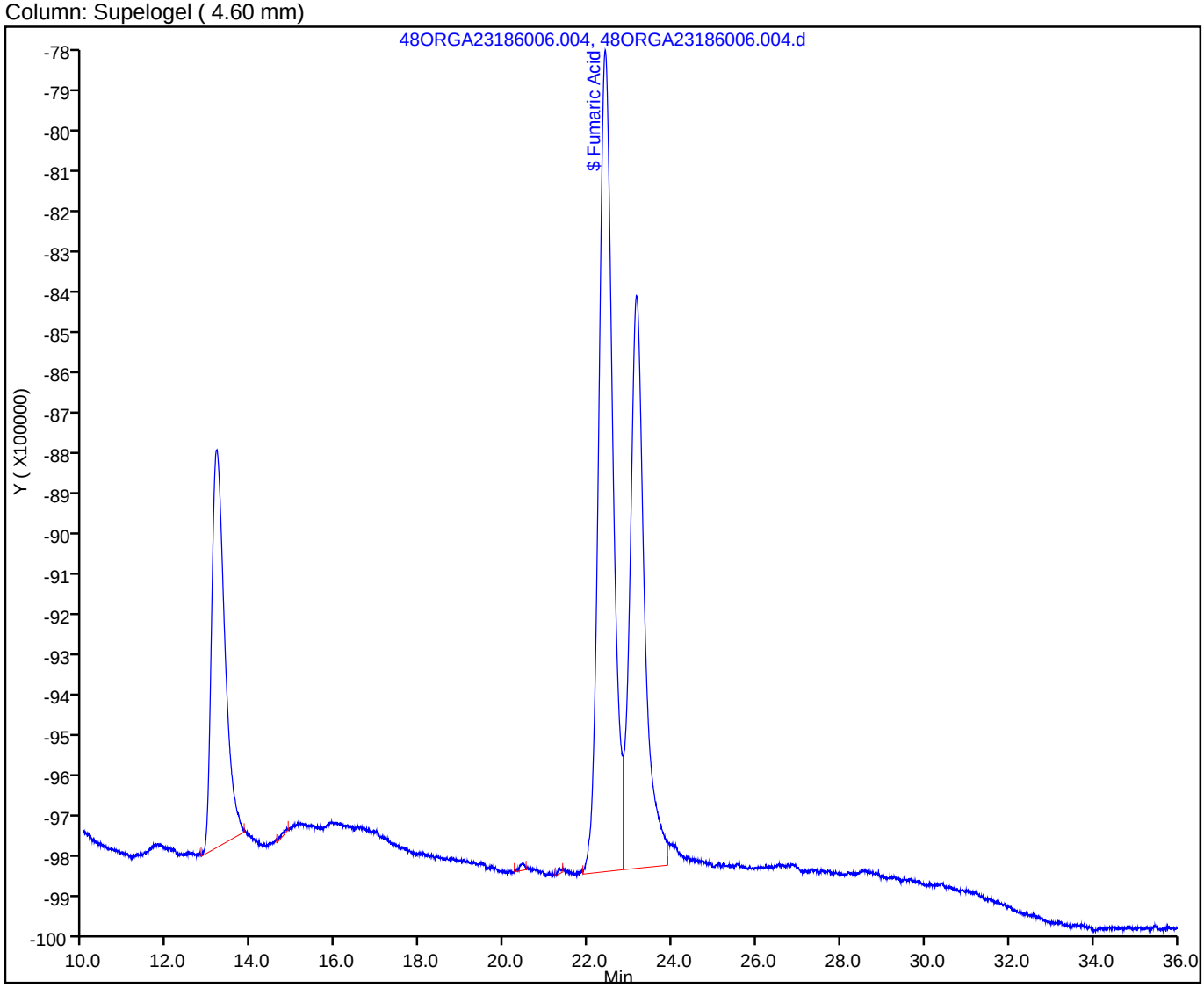
GCS_ORGS1_00018 Amount Added: 1.00 Units: mL

Report Date: 28-Jul-2023 11:26:31 Chrom Revision: 2.3 26-Jul-2023 13:45:38

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.004.d				
Injection Date:	27-Jul-2023 19:59:00	Instrument ID:	6854A		
Lims ID:	IC ORGS1				
Client ID:					
Operator ID:	2027	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Report Date: 28-Jul-2023 11:26:31 Chrom Revision: 2.3 26-Jul-2023 13:45:38

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

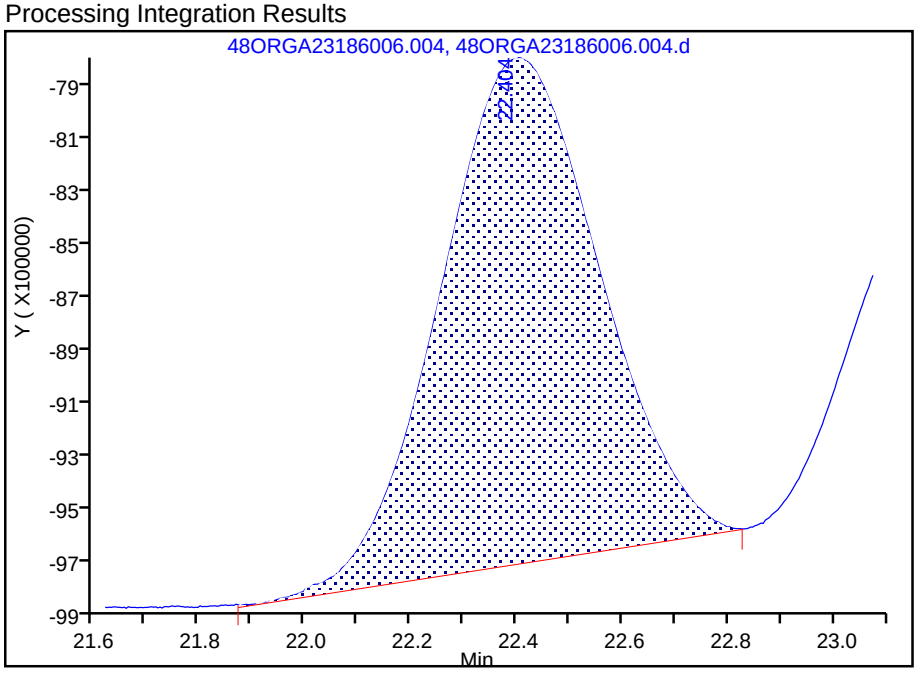
Data File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.004.d				
Injection Date:	27-Jul-2023 19:59:00	Instrument ID:	6854A		
Lims ID:	IC ORGS1				
Client ID:					
Operator ID:	2027	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		
Column:	Supelogel (4.60 mm)	Detector	SupelcogelH		

$ 10 Fumaric Acid, CAS: 110-17-8

Signal: 1

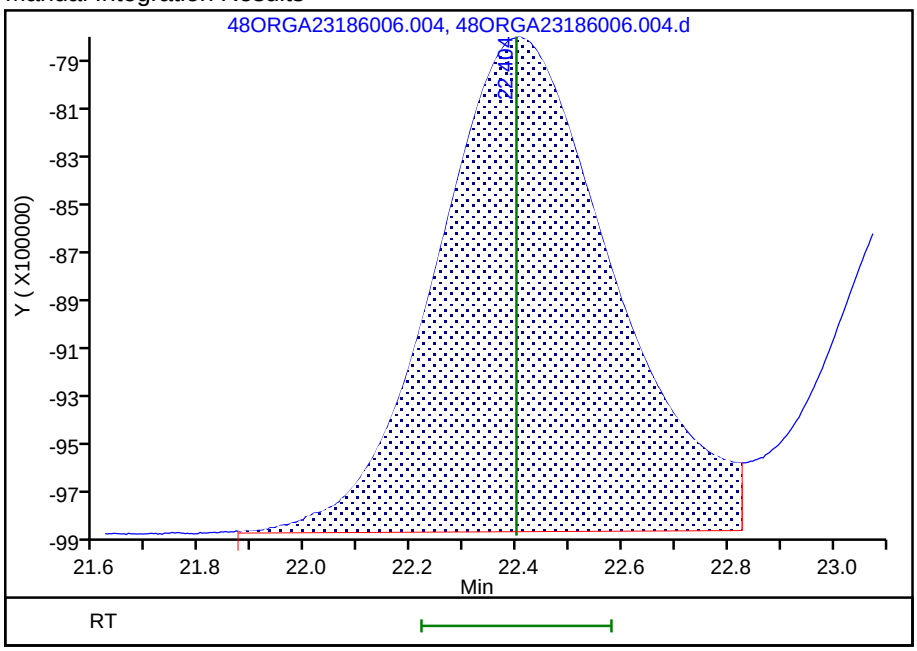
Processing Integration Results

RT: 22.40
Height: 1791540
Amount: 0.046135
Amount Units: ug/ml



Manual Integration Results

RT: 22.40
Height: 1939610
Amount: 0.049186
Amount Units: ug/ml



Reviewer: GM5C, 28-Jul-2023 11:26:11 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 28-Jul-2023 11:26:32 Chrom Revision: 2.3 26-Jul-2023 13:45:38

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.005.d				
Lims ID:	IC ORGS2				
Client ID:					
Sample Type:	IC	Calib Level:	2		
Inject. Date:	27-Jul-2023 20:42:00	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGS2				
Operator ID:	2027	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub4				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	28-Jul-2023 11:26:32	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1611				

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid						
22.404	22.400	0.004	3894681H	0.0984	0.0988	

Reagents:

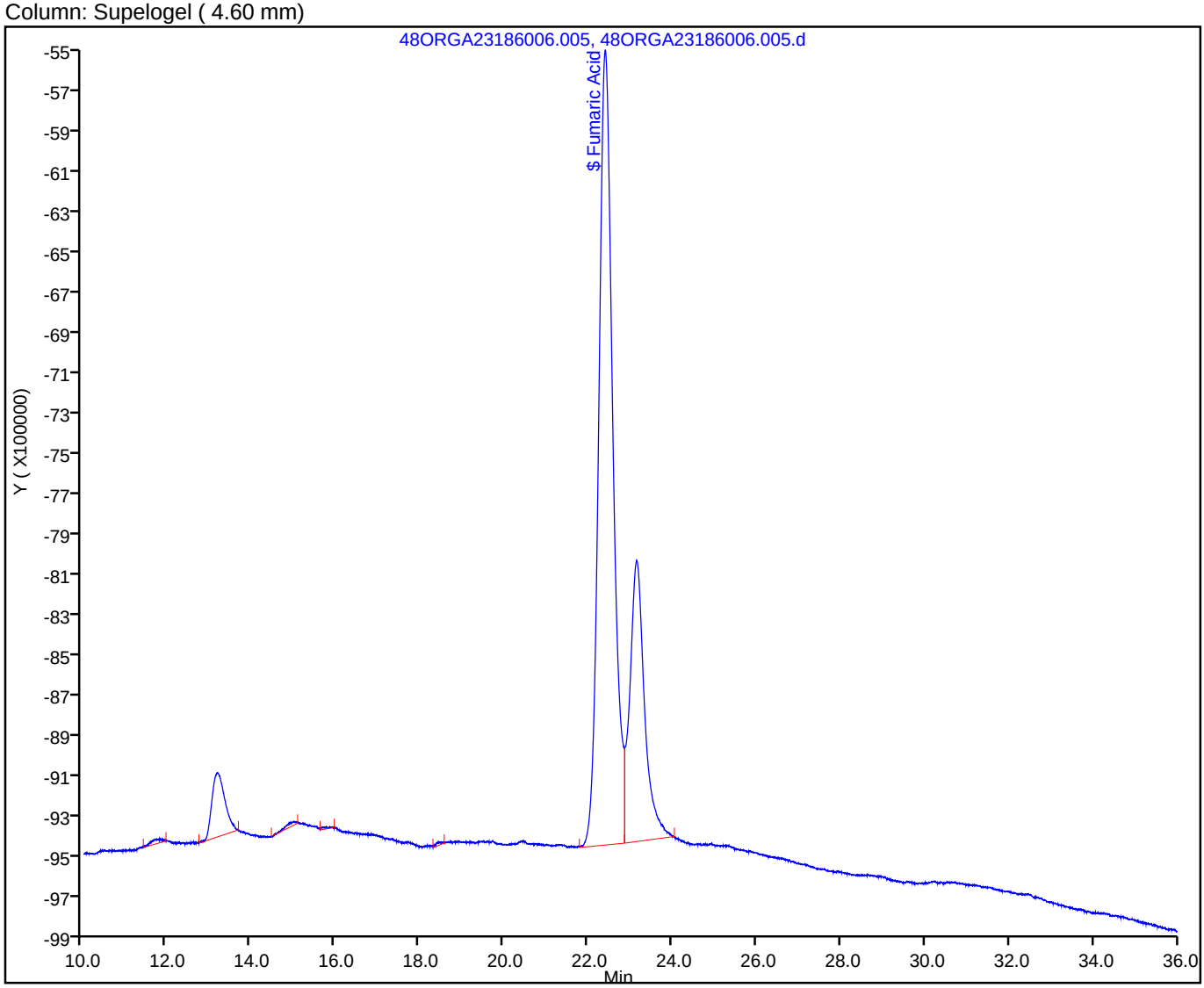
GCS_ORGS2_00018 Amount Added: 1.00 Units: mL

Report Date: 28-Jul-2023 11:26:32 Chrom Revision: 2.3 26-Jul-2023 13:45:38

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.005.d				
Injection Date:	27-Jul-2023 20:42:00	Instrument ID:	6854A		
Lims ID:	IC ORGS2				
Client ID:					
Operator ID:	2027	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Report Date: 28-Jul-2023 11:26:33 Chrom Revision: 2.3 26-Jul-2023 13:45:38

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.006.d				
Lims ID:	ICRT ORGS3				
Client ID:					
Sample Type:	ICRT	Calib Level:	3		
Inject. Date:	27-Jul-2023 21:25:00	ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	ICRT ORGS3				
Operator ID:	2027	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub4				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	28-Jul-2023 11:26:33	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1611				

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid						
22.400	22.400	0.000	19296080H	0.4920	0.4893	

Reagents:

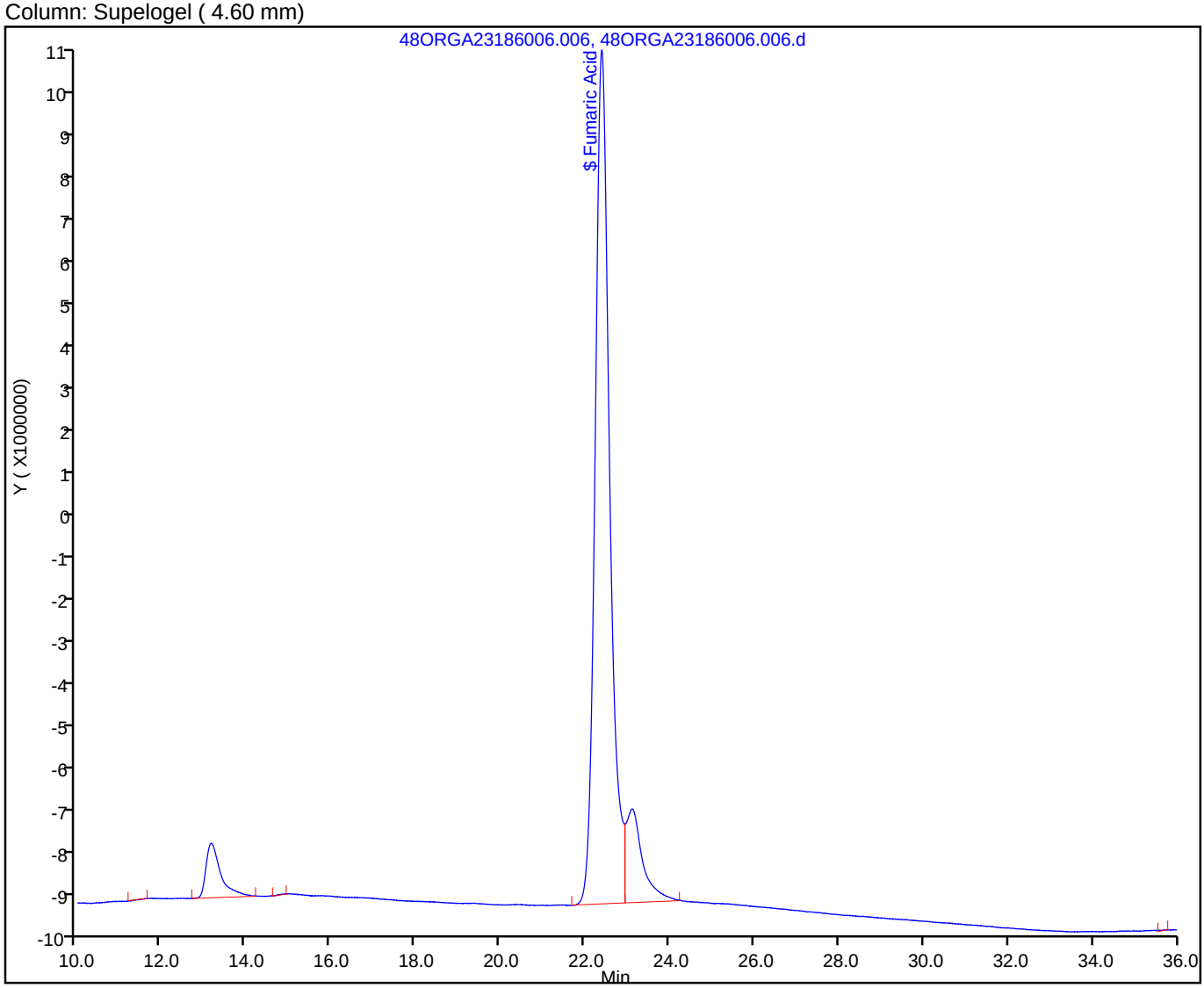
GCS_ORGS3_00049 Amount Added: 1.00 Units: mL

Report Date: 28-Jul-2023 11:26:33 Chrom Revision: 2.3 26-Jul-2023 13:45:38

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.006.d				
Injection Date:	27-Jul-2023 21:25:00	Instrument ID:	6854A		
Lims ID:	ICRT ORGS3				
Client ID:					
Operator ID:	2027	ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Report Date: 28-Jul-2023 11:26:34 Chrom Revision: 2.3 26-Jul-2023 13:45:38

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.007.d				
Lims ID:	IC ORGS4				
Client ID:					
Sample Type:	IC	Calib Level:	4		
Inject. Date:	27-Jul-2023 22:08:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC ORGS4				
Operator ID:	2027	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub4				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	28-Jul-2023 11:26:34	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1611				

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid						
22.404	22.400	0.004	39118692H	0.9841	0.99	

Reagents:

GCS_ORGS4_00020 Amount Added: 1.00 Units: mL

Report Date: 28-Jul-2023 11:26:34 Chrom Revision: 2.3 26-Jul-2023 13:45:38

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.007.d

Injection Date: 27-Jul-2023 22:08:00 Instrument ID: 6854A

Lims ID: IC ORGS4

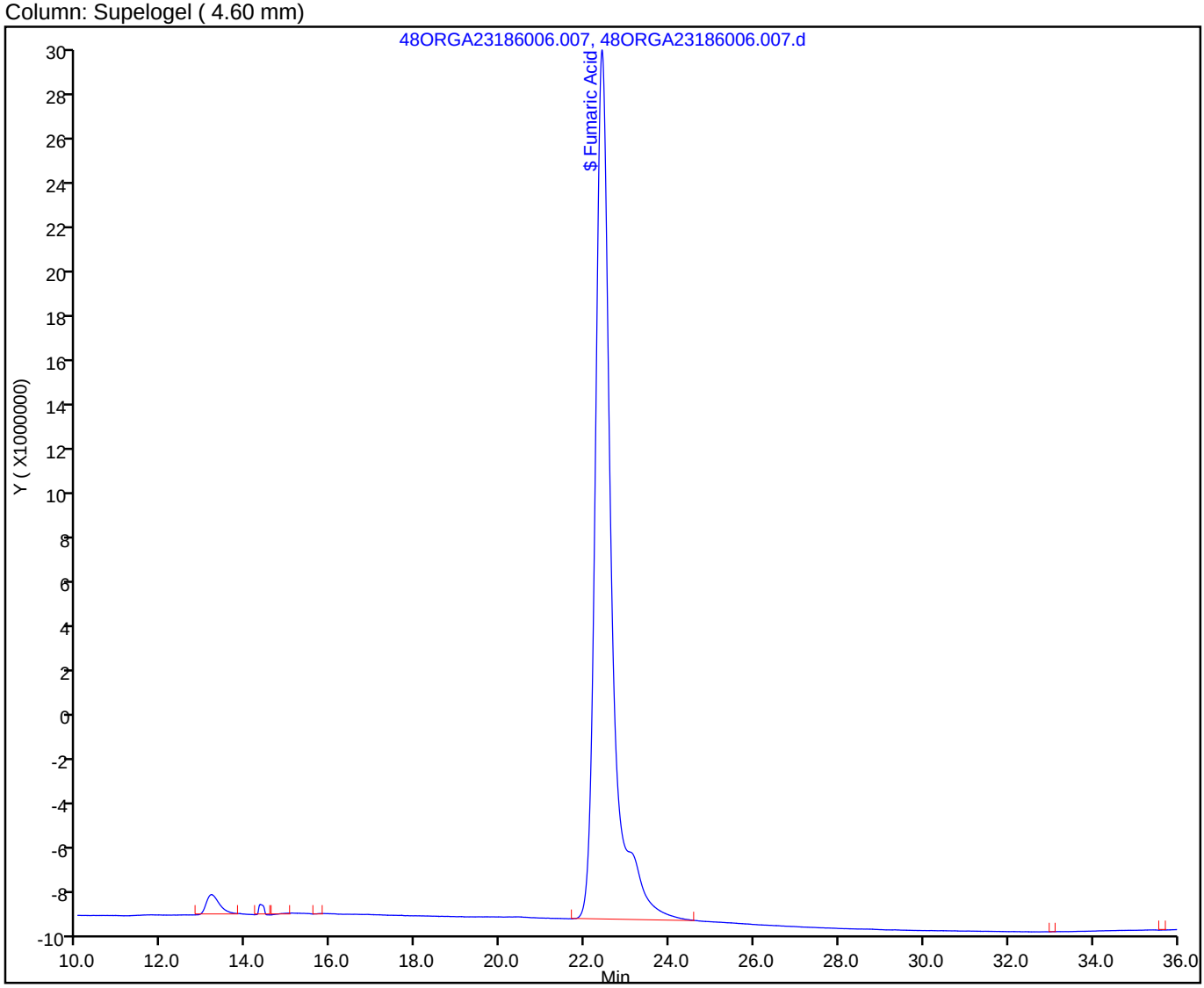
Client ID:

Operator ID: 2027 ALS Bottle#: 0 Worklist Smp#: 7

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Report Date: 28-Jul-2023 11:26:35 Chrom Revision: 2.3 26-Jul-2023 13:45:38

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d
Lims ID: IC ORGS5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 27-Jul-2023 22:51:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: IC ORGS5
Operator ID: 2027 Instrument ID: 6854A
Sublist: chrom-8015_6854AP*sub4

Method: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 28-Jul-2023 11:26:35 Calib Date: 27-Jul-2023 22:51:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1611

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid						
22.404	22.400	0.004	192888481	H 4.92	4.89	

Reagents:

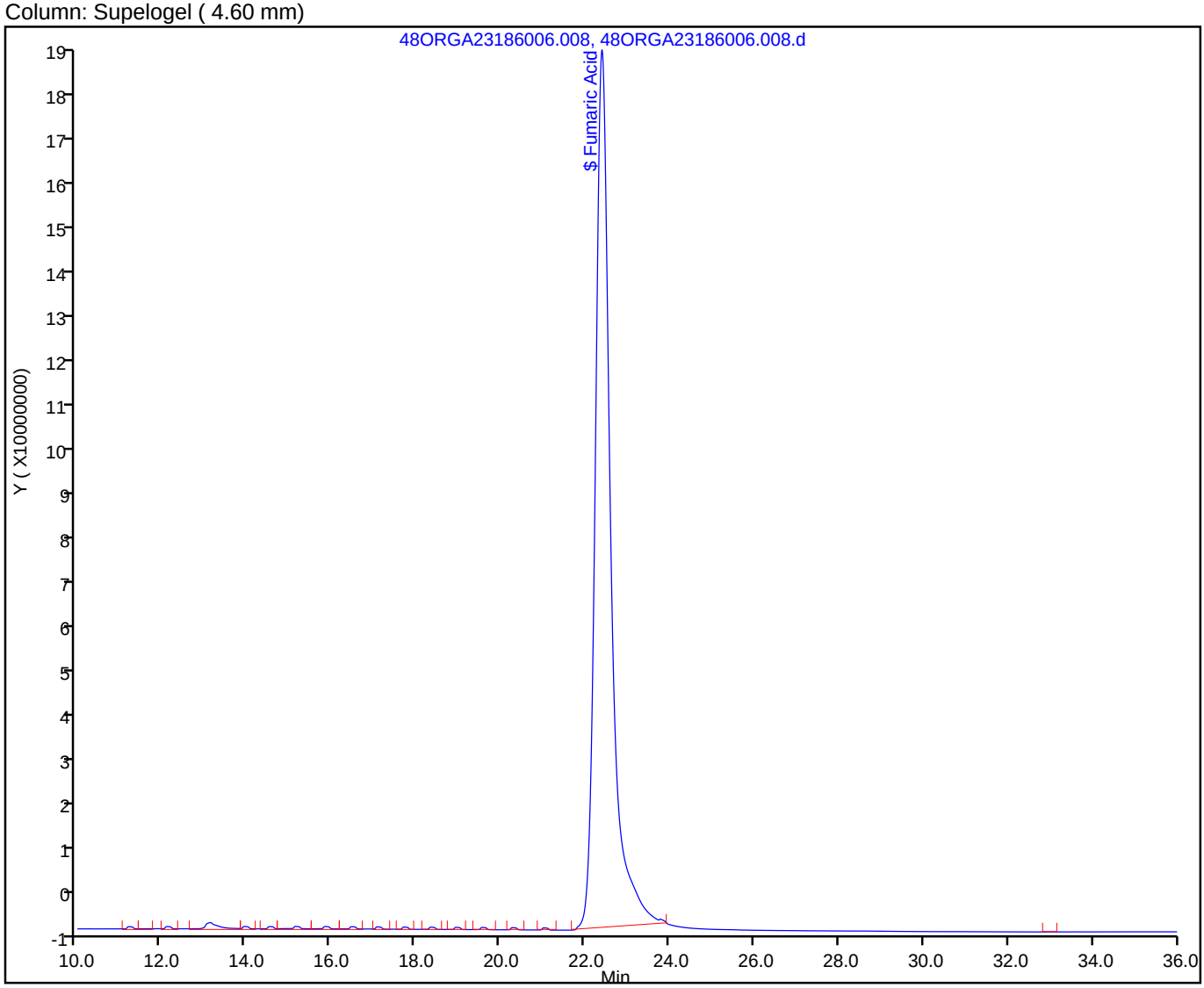
GCS_ORGS5_00017 Amount Added: 1.00 Units: mL

Report Date: 28-Jul-2023 11:26:35 Chrom Revision: 2.3 26-Jul-2023 13:45:38

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Injection Date:	27-Jul-2023 22:51:00	Instrument ID:	6854A		
Lims ID:	IC ORGS5				
Client ID:					
Operator ID:	2027	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Calibration / Fumaric Acid

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	HEIGHT
RF Rounding:	0

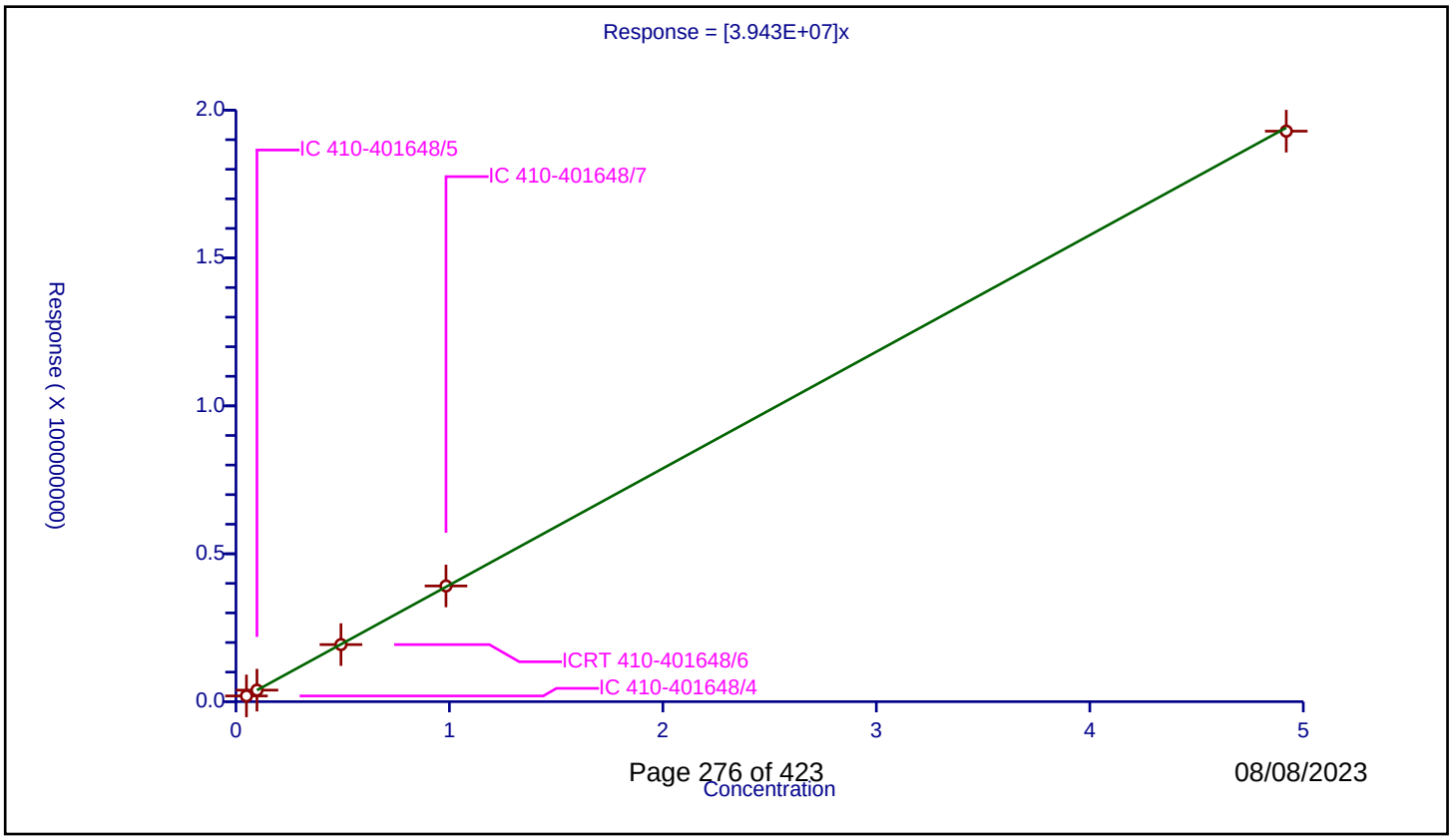
Curve Coefficients

Intercept:	0
Slope:	3.943E+07

Error Coefficients

Standard Error:	593000
Relative Standard Error:	0.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 410-401648/4	0.049203	1939610.0			39420563.786761	Y
2	IC 410-401648/5	0.098406	3894681.0			39577678.190354	Y
3	ICRT 410-401648/6	0.49203	19296080.0			39217283.498974	Y
4	IC 410-401648/7	0.98406	39118692.0			39752344.369246	Y
5	IC 410-401648/8	4.9203	192888481.0			39202585.411459	Y



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: ICV 410-396213/14 Calibration Date: 07/12/2023 23:59

Instrument ID: 10136 Calib Start Date: 07/12/2023 19:50

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/12/2023 22:57

Lab File ID: 11ORGC23193001.014.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Oxalic Acid	Qua		1027962		9090	12500	-27.2*	20.0
Quinic Acid	Ave	133861	134328		50500	50300	0.3	20.0
Formic-acid	Ave	189118	189654		101000	101000	0.3	20.0
Pyruvic Acid	Ave	598405	591297		12400	12600	-1.2	20.0
L-Lactic Acid	Ave	84337	64690		38700	50400	-23.3*	20.0
Acetic acid	Ave	51969	55197		107000	100000	6.2	20.0
Citric Acid	Ave	115749	125350		54600	50400	8.3	20.0
Propionic acid	Ave	114282	118762		105000	101000	3.9	20.0
Butyric acid	Ave	129640	126312		98200	101000	-2.6	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: ICV 410-396213/14 Calibration Date: 07/12/2023 23:59

Instrument ID: 10136 Calib Start Date: 07/12/2023 19:50

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/12/2023 22:57

Lab File ID: 11ORGC23193001.014.d

Analyte	RT	RT WINDOW	
		FROM	TO
Oxalic Acid	3.73	3.60	3.80
Quinic Acid	4.39	4.28	4.48
Formic-acid	4.67	4.57	4.77
Pyruvic Acid	5.28	5.17	5.37
L-Lactic Acid	6.36	6.25	6.45
Acetic acid	6.97	6.81	7.11
Citric Acid	9.47	9.28	9.58
Propionic acid	12.89	12.79	12.99
Butyric acid	14.57	14.47	14.67

Report Date: 17-Jul-2023 16:04:33 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.014.d				
Lims ID:	ICV ORGA				
Client ID:					
Sample Type:	ICV				
Inject. Date:	12-Jul-2023 23:59:00	ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	ICV ORGA				
Operator ID:	24470	Instrument ID:	10136		
Sublist:					
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:04:14	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				
First Level Reviewer: UHEW		Date:	13-Jul-2023 13:51:51		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid	3.725	3.704	0.021	12849529H	12.5	9.09	M
2 Quinic Acid	4.388	4.383	0.005	6756697H	50.3	50.5	M
4 Formic-acid	4.667	4.667	0.000	19117125H	100.8	101.1	M
5 Pyruvic Acid	5.275	5.271	0.004	7426693H	12.6	12.4	M
6 L-Lactic Acid	6.363	6.354	0.008	3260368H	50.4	38.7	M
7 Acetic acid	6.967	6.963	0.005	5536215H	100.3	106.5	M
8 Citric Acid	9.467	9.433	0.034	6317663H	50.4	54.6	M
11 Propionic acid	12.892	12.892	0.000	11994918H	101.0	105.0	
12 n-Butyric Acid	14.571	14.571	0.000	12732289H	100.8	98.2	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Review Flags

M - Manually Integrated

Reagents:

GCS_ORGAICV_00008 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 16:04:33 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.014.d

Injection Date: 12-Jul-2023 23:59:00 Instrument ID: 10136

Lims ID: ICV ORGA

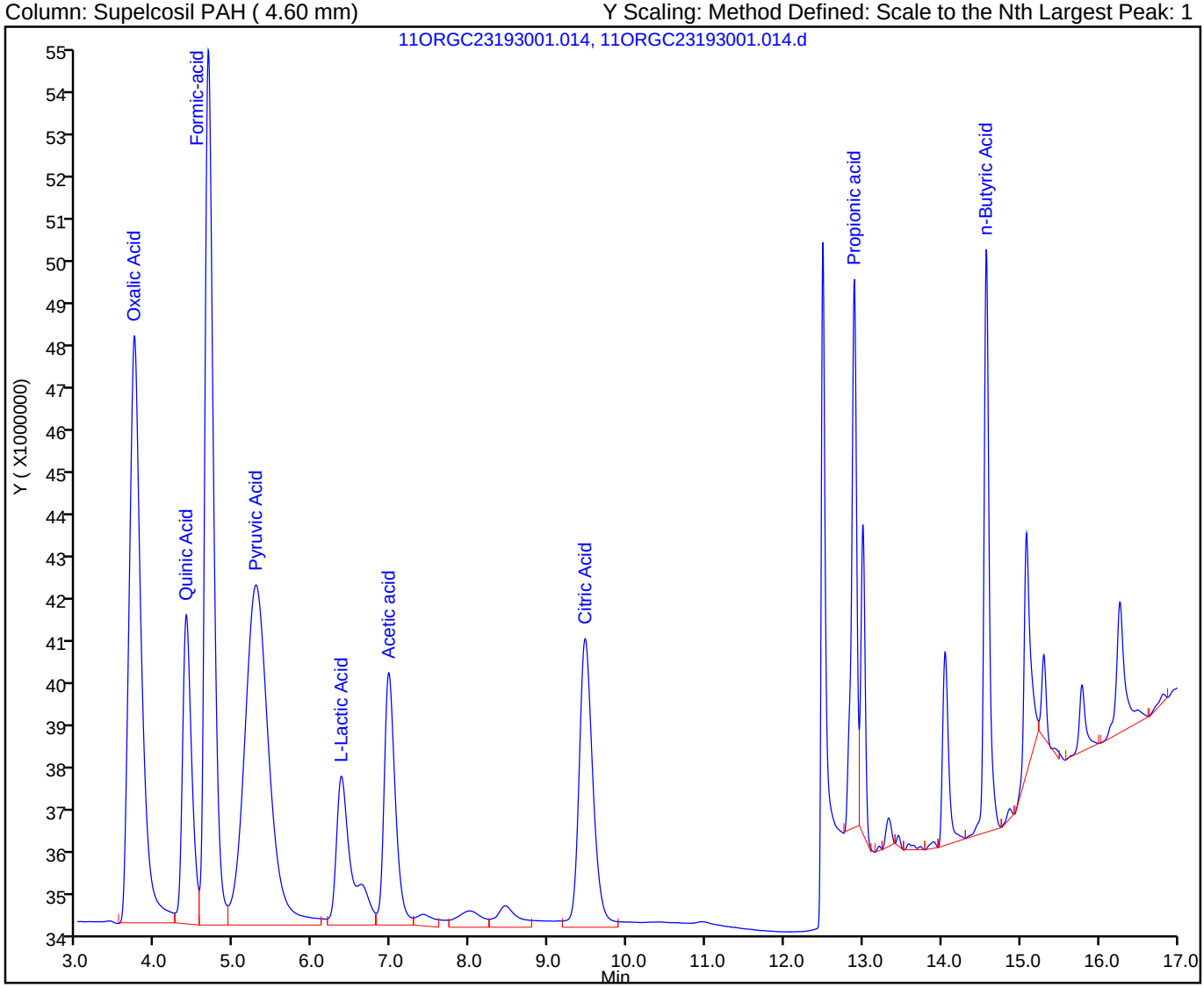
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 14

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 17-Jul-2023 16:04:33 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

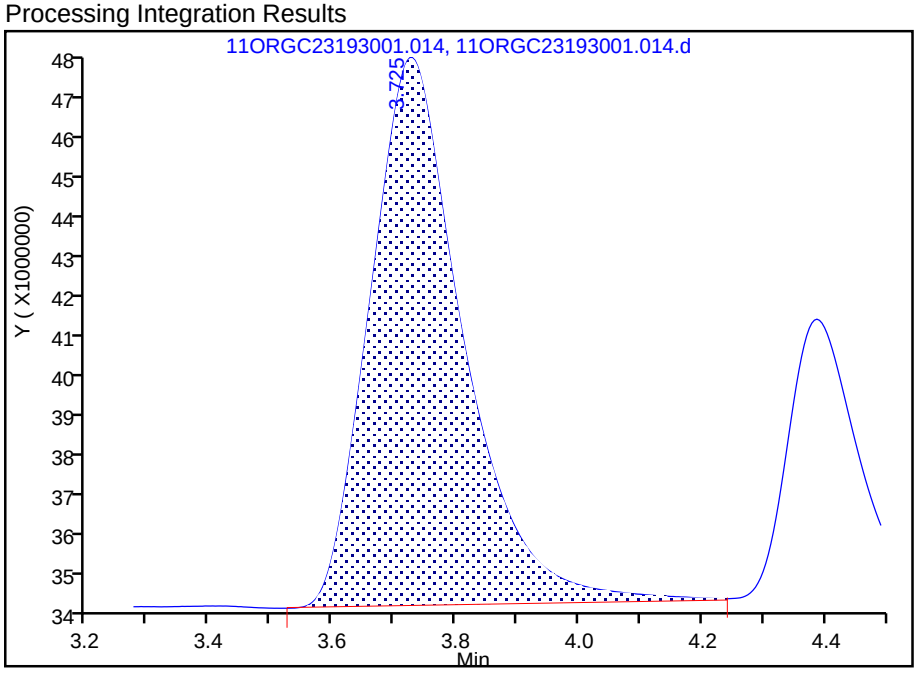
Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.014.d				
Injection Date:	12-Jul-2023 23:59:00	Instrument ID:	10136		
Lims ID:	ICV ORGA				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		
Column:	Supelcosil PAH (4.60 mm)	Detector	UV0		

1 Oxalic Acid, CAS: 144-62-7

Signal: 1

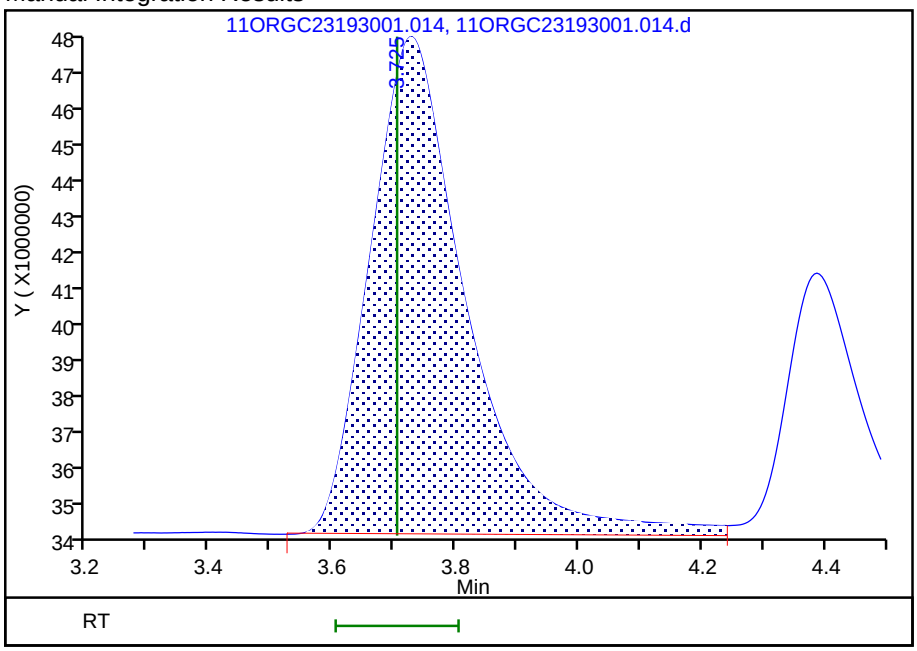
Processing Integration Results

RT: 3.73
Height: 12797572
Amount: 8.248486
Amount Units: ug/ml



Manual Integration Results

RT: 3.73
Height: 12849529
Amount: 9.094949
Amount Units: ug/ml



Reviewer: UHEW, 13-Jul-2023 13:59:54 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 17-Jul-2023 16:04:33 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

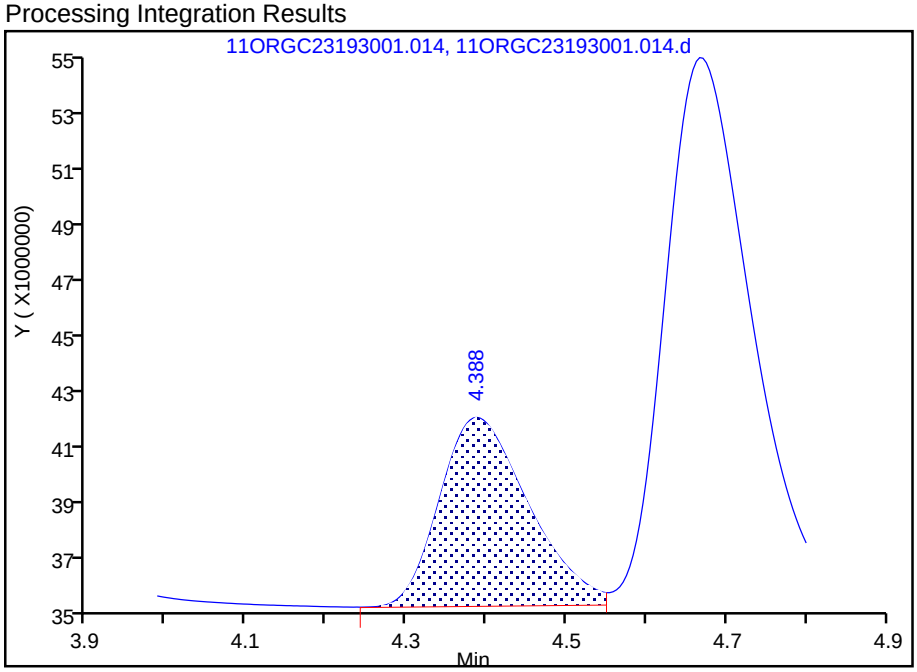
Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.014.d				
Injection Date:	12-Jul-2023 23:59:00	Instrument ID:	10136		
Lims ID:	ICV ORGA				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		
Column:	Supelcosil PAH (4.60 mm)	Detector	UV0		

2 Quinic Acid, CAS: 77-95-2

Signal: 1

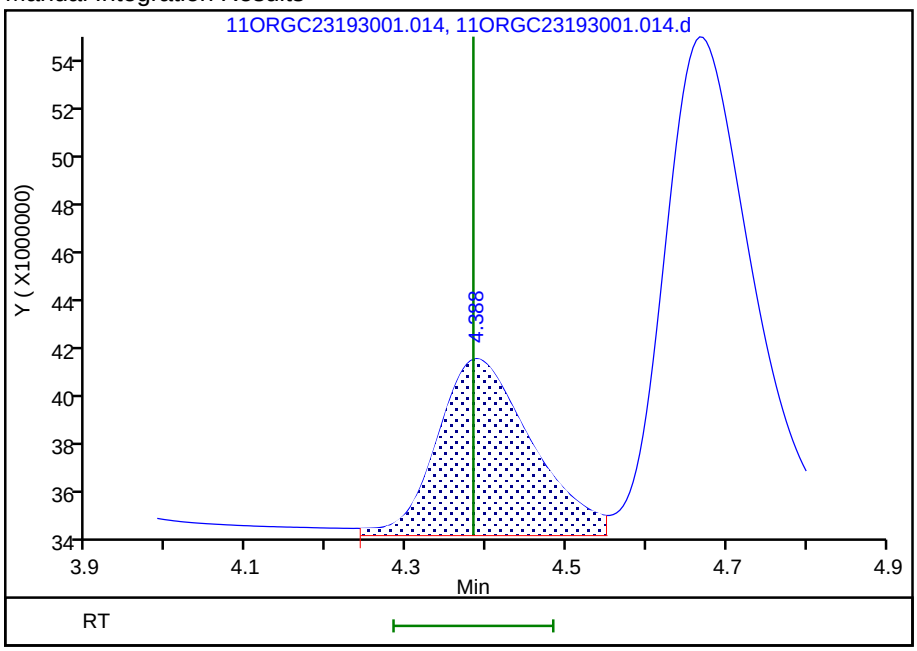
Processing Integration Results

RT: 4.39
Height: 6523334
Amount: 48.387377
Amount Units: ug/ml



Manual Integration Results

RT: 4.39
Height: 6756697
Amount: 50.475415
Amount Units: ug/ml



Reviewer: UHEW, 13-Jul-2023 13:59:54 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 17-Jul-2023 16:04:33 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

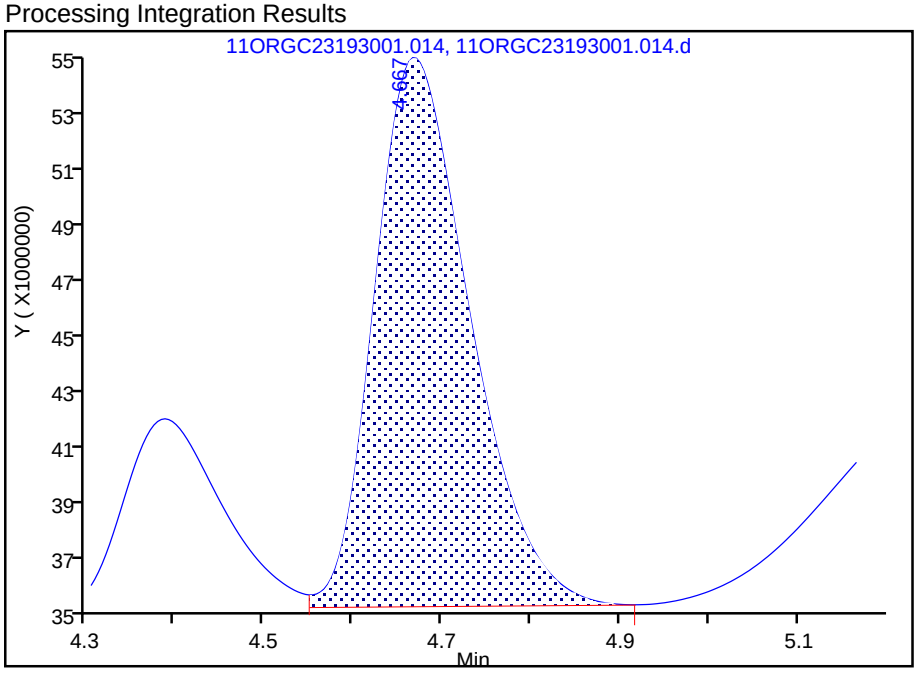
Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.014.d				
Injection Date:	12-Jul-2023 23:59:00	Instrument ID:	10136		
Lims ID:	ICV ORGA				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		
Column:	Supelcosil PAH (4.60 mm)	Detector	UV0		

4 Formic-acid, CAS: 64-18-6

Signal: 1

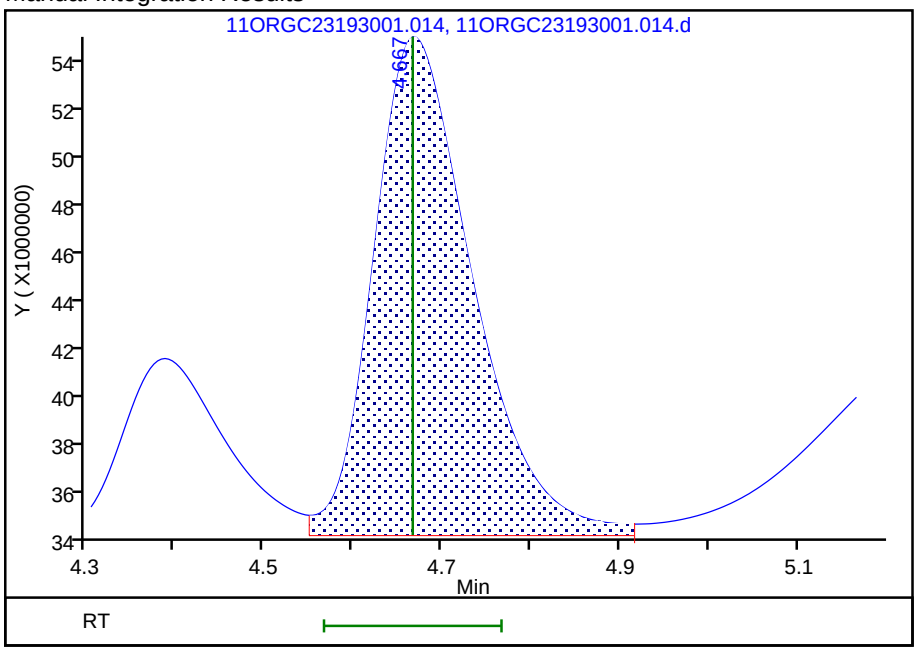
Processing Integration Results

RT: 4.67
Height: 18808286
Amount: 113.0568
Amount Units: ug/ml



Manual Integration Results

RT: 4.67
Height: 19117125
Amount: 101.0857
Amount Units: ug/ml



Reviewer: UHEW, 13-Jul-2023 13:59:54 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 17-Jul-2023 16:04:33 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

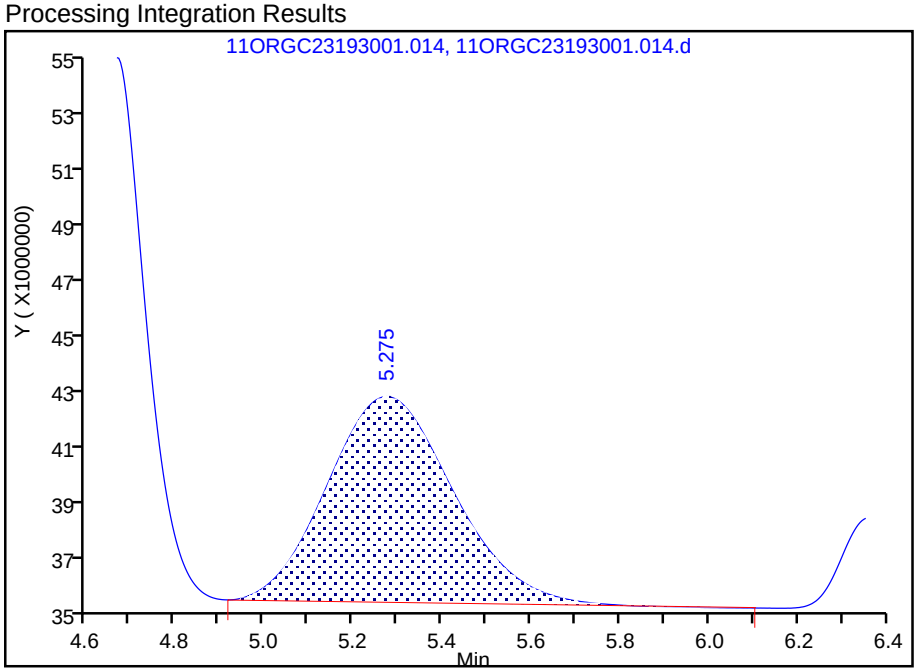
Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.014.d				
Injection Date:	12-Jul-2023 23:59:00	Instrument ID:	10136		
Lims ID:	ICV ORGA				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		
Column:	Supelcosil PAH (4.60 mm)	Detector	UV0		

5 Pyruvic Acid, CAS: 127-17-3

Signal: 1

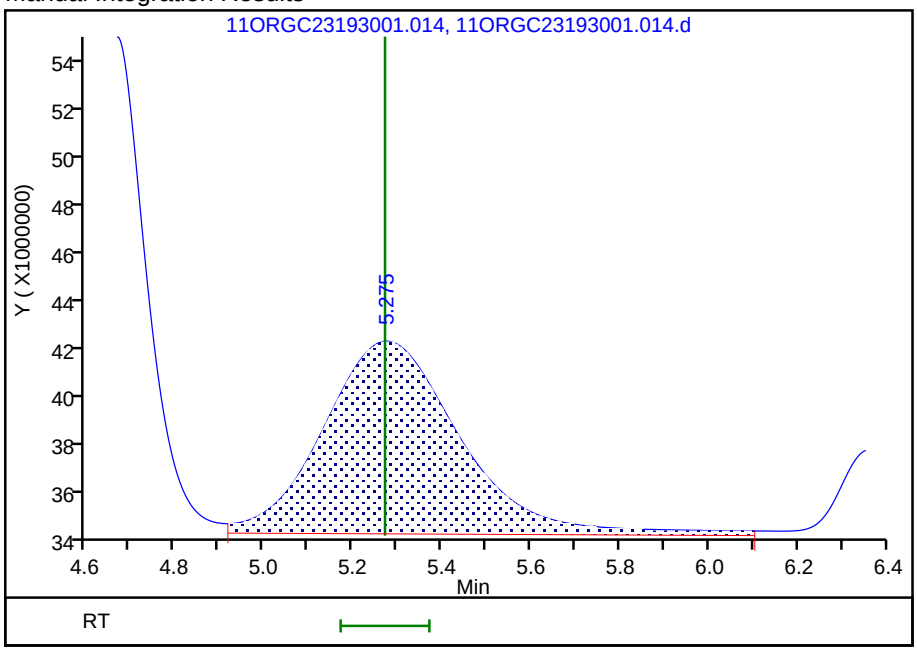
Processing Integration Results

RT: 5.28
Height: 7124069
Amount: 11.905816
Amount Units: ug/ml



Manual Integration Results

RT: 5.28
Height: 7426693
Amount: 12.410806
Amount Units: ug/ml



Reviewer: UHEW, 13-Jul-2023 13:59:54 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 17-Jul-2023 16:04:34 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

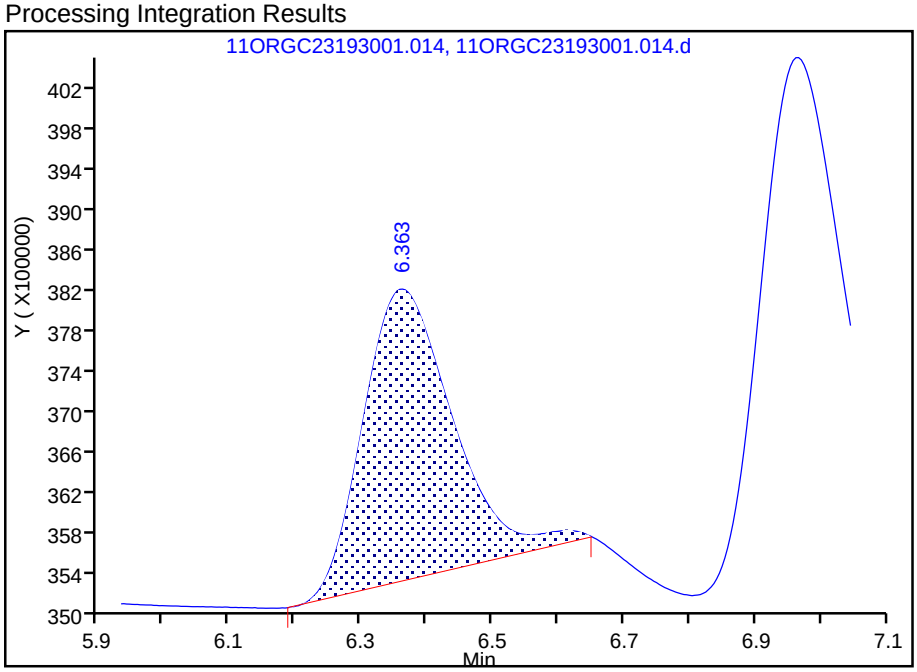
Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.014.d				
Injection Date:	12-Jul-2023 23:59:00	Instrument ID:	10136		
Lims ID:	ICV ORGA				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		
Column:	Supelcosil PAH (4.60 mm)	Detector	UV0		

6 L-Lactic Acid, CAS: 79-33-4

Signal: 1

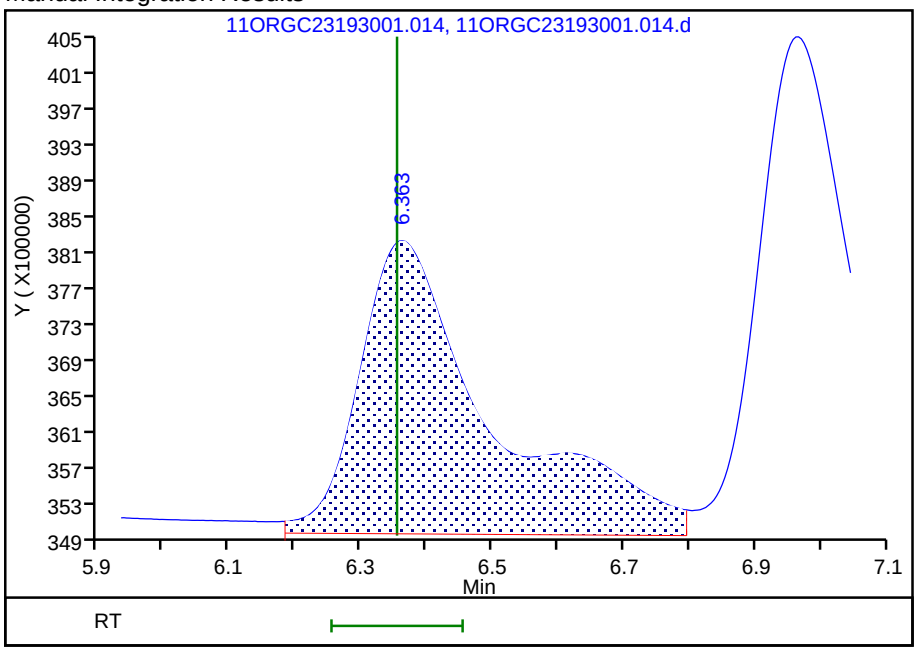
Processing Integration Results

RT: 6.36
Height: 2857836
Amount: 33.886017
Amount Units: ug/ml



Manual Integration Results

RT: 6.36
Height: 3260368
Amount: 38.658931
Amount Units: ug/ml



Reviewer: UHEW, 13-Jul-2023 13:59:54 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 17-Jul-2023 16:04:34 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

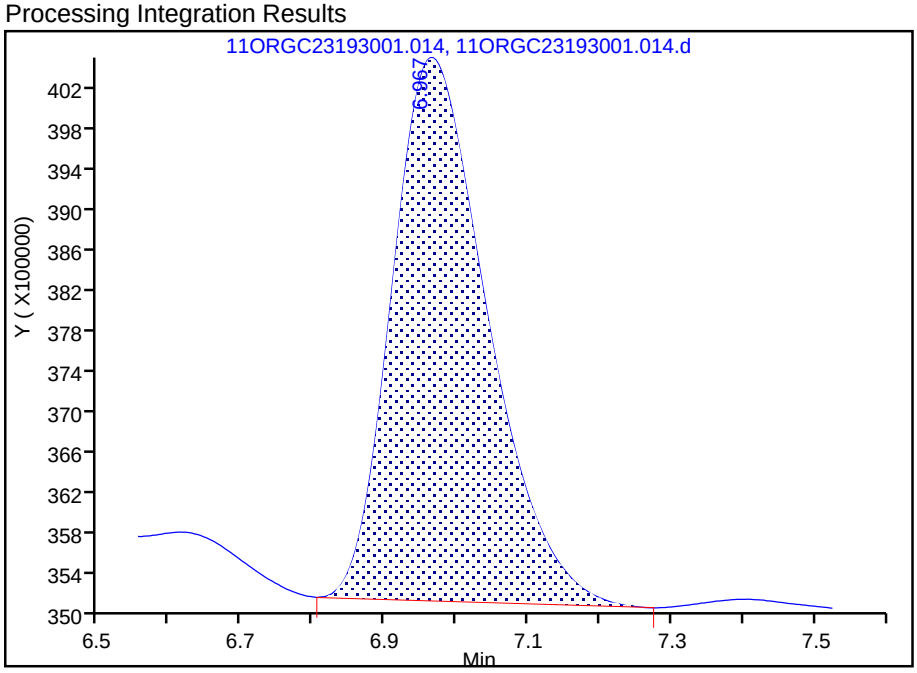
Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.014.d				
Injection Date:	12-Jul-2023 23:59:00	Instrument ID:	10136		
Lims ID:	ICV ORGA				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		
Column:	Supelcosil PAH (4.60 mm)	Detector	UV0		

7 Acetic acid, CAS: 64-19-7

Signal: 1

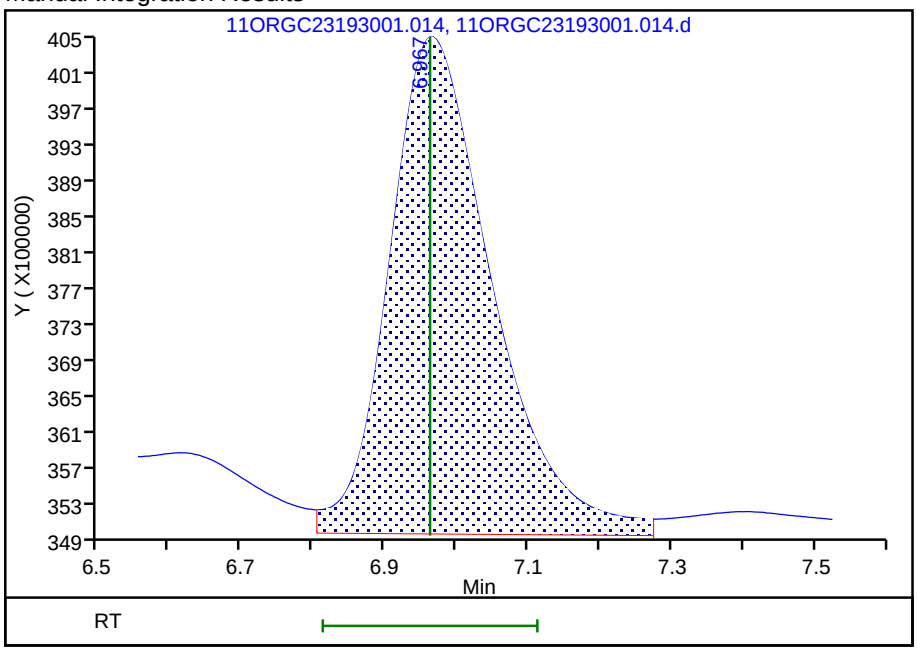
Processing Integration Results

RT: 6.97
Height: 5302911
Amount: 110.7708
Amount Units: ug/ml



Manual Integration Results

RT: 6.97
Height: 5536215
Amount: 106.5283
Amount Units: ug/ml



Reviewer: UHEW, 13-Jul-2023 13:59:54 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 17-Jul-2023 16:04:34 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

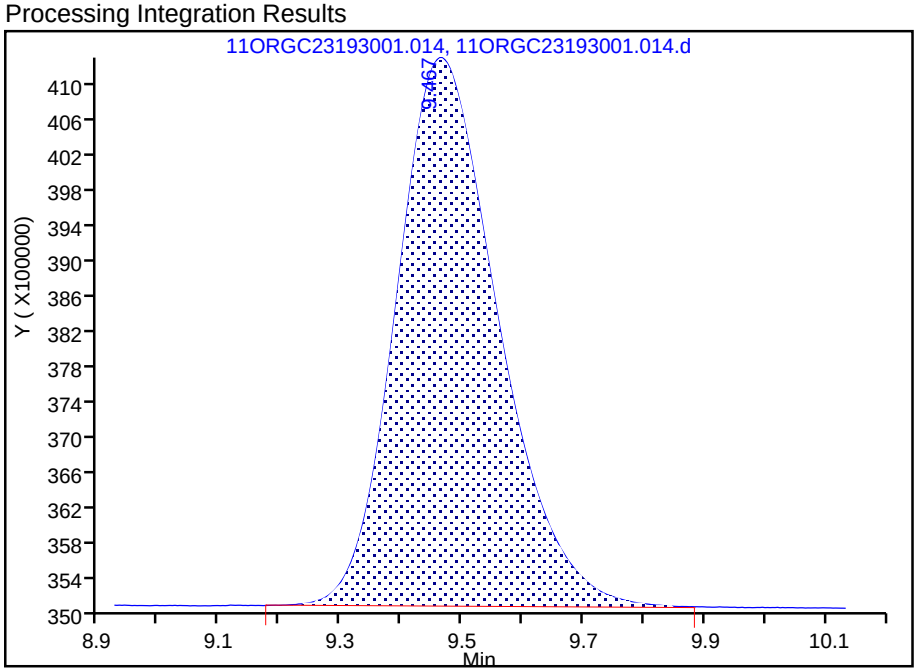
Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.014.d				
Injection Date:	12-Jul-2023 23:59:00	Instrument ID:	10136		
Lims ID:	ICV ORGA				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		
Column:	Supelcosil PAH (4.60 mm)	Detector	UV0		

8 Citric Acid, CAS: 77-92-9

Signal: 1

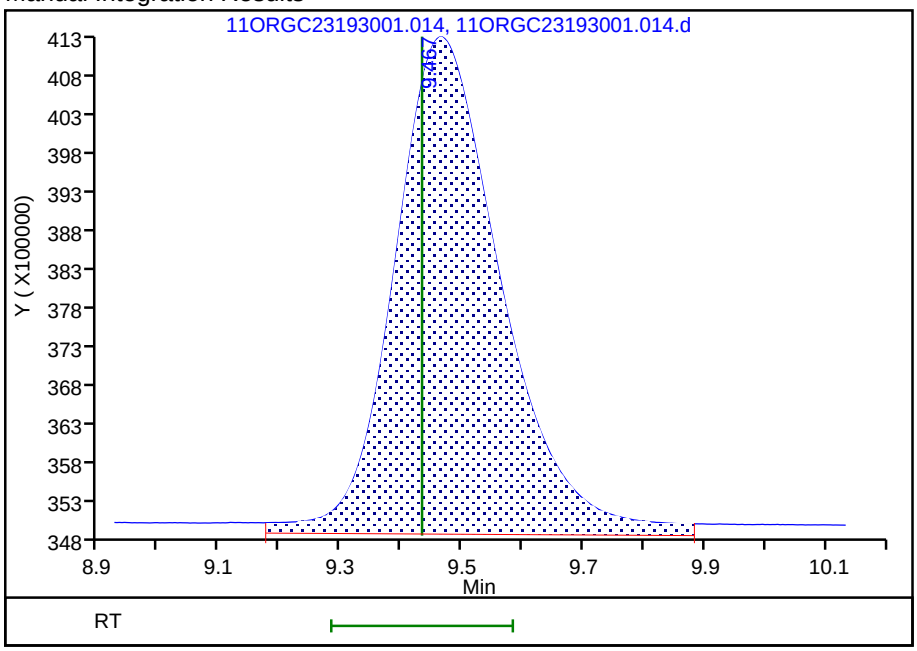
Processing Integration Results

RT: 9.47
Height: 6179284
Amount: 52.990998
Amount Units: ug/ml



Manual Integration Results

RT: 9.47
Height: 6317663
Amount: 54.580557
Amount Units: ug/ml



Reviewer: UHEW, 13-Jul-2023 13:59:54 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: ICV 410-396213/21 Calibration Date: 07/13/2023 03:38

Instrument ID: 10136 Calib Start Date: 07/13/2023 00:31

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/13/2023 03:06

Lab File ID: 11ORGC23193001.021.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tartaric Acid	Ave	305379	316357		51800	50000	3.6	20.0
Succinic Acid	Ave	36778	37315		50700	50000	1.5	20.0
Isobutyric acid	Qua		178036		101000	101000	0.4	20.0
Isovaleric acid	Lin		146581		101000	100000	0.8	20.0
Valeric acid	Ave	102199	113158		111000	100000	10.7	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: ICV 410-396213/21 Calibration Date: 07/13/2023 03:38

Instrument ID: 10136 Calib Start Date: 07/13/2023 00:31

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/13/2023 03:06

Lab File ID: 11ORGC23193001.021.d

Analyte	RT	RT WINDOW	
		FROM	TO
Tartaric Acid	4.35	4.30	4.40
Succinic Acid	10.23	10.05	10.35
Isobutyric acid	14.60	14.58	14.68
Isovaleric acid	15.82	15.66	15.92
Valeric acid	15.98	15.86	16.12

Report Date: 17-Jul-2023 16:04:35 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.021.d				
Lims ID:	ICV ORGB				
Client ID:					
Sample Type:	ICV				
Inject. Date:	13-Jul-2023 03:38:00	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	ICV ORGB				
Operator ID:	24470	Instrument ID:	10136		
Sublist:					
Method:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 16:04:14	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1644				
First Level Reviewer: UHEW		Date:	13-Jul-2023 12:33:39		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid	4.354	4.354	0.000	15817854H	50.0	51.8	
9 Succinic Acid	10.233	10.204	0.029	1865766H	50.0	50.7	
13 Isobutyric acid	14.596	14.629	-0.033	17981657H	101.0	101.4	
14 Isovaleric acid	15.817	15.788	0.029	14716735H	100.4	101.2	
15 Valeric acid	15.983	15.992	-0.009	11361020H	100.4	111.2	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGBICV_00007 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 16:04:35 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.021.d

Injection Date: 13-Jul-2023 03:38:00 Instrument ID: 10136

Lims ID: ICV ORGB

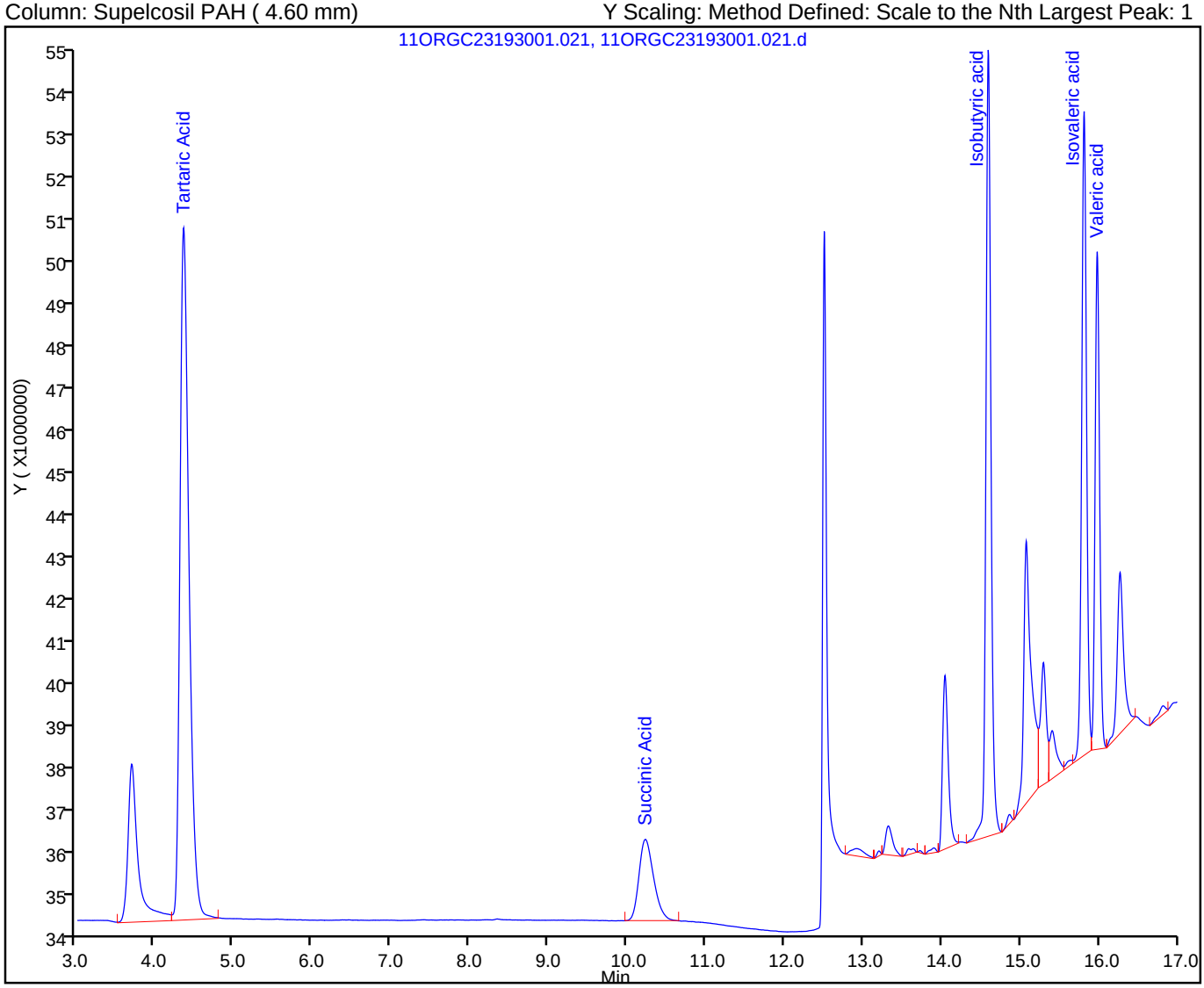
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 21

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCVRT 410-404643/4 Calibration Date: 08/04/2023 15:21

Instrument ID: 10136 Calib Start Date: 07/13/2023 04:09

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/13/2023 06:13

Lab File ID: 11ORGC23193008.004.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fumaric Acid	Ave	12623947	12461106		486	492	-1.3	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCVRT 410-404643/4 Calibration Date: 08/04/2023 15:21

Instrument ID: 10136 Calib Start Date: 07/13/2023 04:09

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/13/2023 06:13

Lab File ID: 11ORGC23193008.004.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fumaric Acid	10.60	10.45	10.75

Report Date: 07-Aug-2023 20:08:27 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.004.d				
Lims ID:	CCVRT ORGS				
Client ID:					
Sample Type:	CCVRT				
Inject. Date:	04-Aug-2023 15:21:00	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCVRT ORGS				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub6				
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:08:27	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				
First Level Reviewer: UHEW		Date:	07-Aug-2023 19:59:31		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid	10.600	10.600	0.000	6131238	H 0.4920	0.4857	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGS3_00049 Amount Added: 1.00 Units: mL

Report Date: 07-Aug-2023 20:08:27 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.004.d

Injection Date: 04-Aug-2023 15:21:00 Instrument ID: 10136

Lims ID: CCVRT ORGS

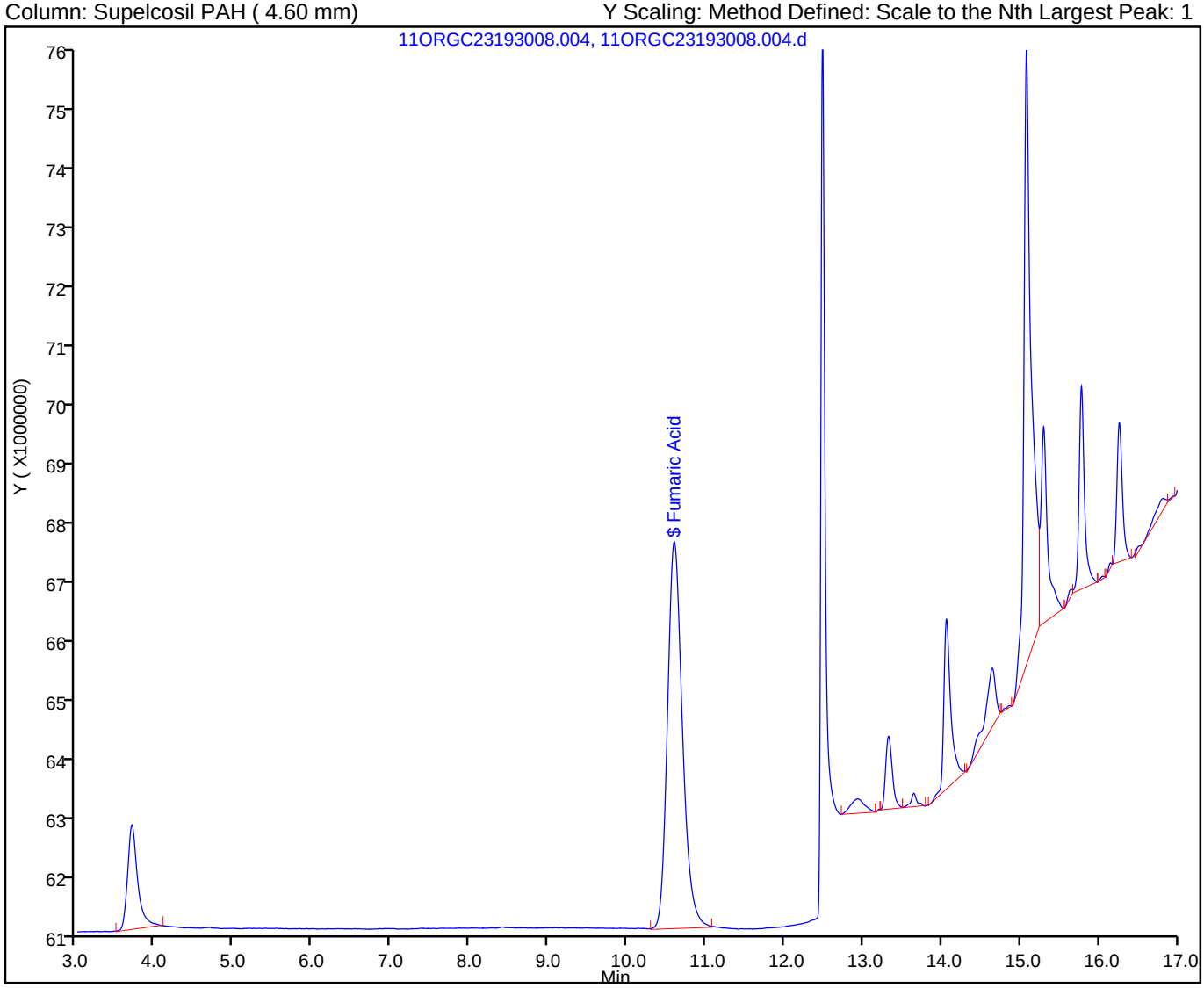
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 4

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404643/5 Calibration Date: 08/04/2023 15:52

Instrument ID: 10136 Calib Start Date: 07/12/2023 19:50

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/12/2023 22:57

Lab File ID: 11ORGC23193008.005.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Oxalic Acid	Qua		996260		8820	12600	-29.7*	20.0
Quinic Acid	Ave	133861	133140		50200	50500	-0.5	20.0
Formic-acid	Ave	189118	188456		100000	101000	-0.4	20.0
Pyruvic Acid	Ave	598405	595632		12500	12600	-0.5	20.0
L-Lactic Acid	Ave	84337	81469		48400	50100	-3.4	20.0
Acetic acid	Ave	51969	54604		105000	100000	5.1	20.0
Citric Acid	Ave	115749	122884		53400	50300	6.2	20.0
Propionic acid	Ave	114282	119859		105000	100000	4.9	20.0
Butyric acid	Ave	129640	128164		99000	100000	-1.1	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404643/5 Calibration Date: 08/04/2023 15:52

Instrument ID: 10136 Calib Start Date: 07/12/2023 19:50

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/12/2023 22:57

Lab File ID: 11ORGC23193008.005.d

Analyte	RT	RT WINDOW	
		FROM	TO
Oxalic Acid	3.73	3.63	3.83
Quinic Acid	4.39	4.29	4.49
Formic-acid	4.67	4.57	4.77
Pyruvic Acid	5.28	5.18	5.38
L-Lactic Acid	6.35	6.25	6.45
Acetic acid	6.95	6.80	7.10
Citric Acid	9.42	9.27	9.57
Propionic acid	12.91	12.81	13.01
Butyric acid	14.58	14.48	14.68

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.005.d				
Lims ID:	CCV ORGA				
Client ID:					
Sample Type:	CCV				
Inject. Date:	04-Aug-2023 15:52:00	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCV ORGA				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub4				
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:08:28	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				
First Level Reviewer: UHEW		Date:	04-Aug-2023 16:50:40		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid	3.725	3.725	0.000	12503061H	12.6	8.82	
2 Quinic Acid	4.392	4.392	0.000	6720930H	50.5	50.2	
4 Formic-acid	4.671	4.671	0.000	18939784H	100.5	100.1	
5 Pyruvic Acid	5.279	5.279	0.000	7493055H	12.6	12.5	
6 L-Lactic Acid	6.354	6.354	0.000	4082416H	50.1	48.4	
7 Acetic acid	6.954	6.954	0.000	5472977H	100.2	105.3	
8 Citric Acid	9.417	9.417	0.000	6181044H	50.3	53.4	
11 Propionic acid	12.913	12.913	0.000	11985850H	100.0	104.9	
12 n-Butyric Acid	14.579	14.579	0.000	12835593H	100.2	99.0	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

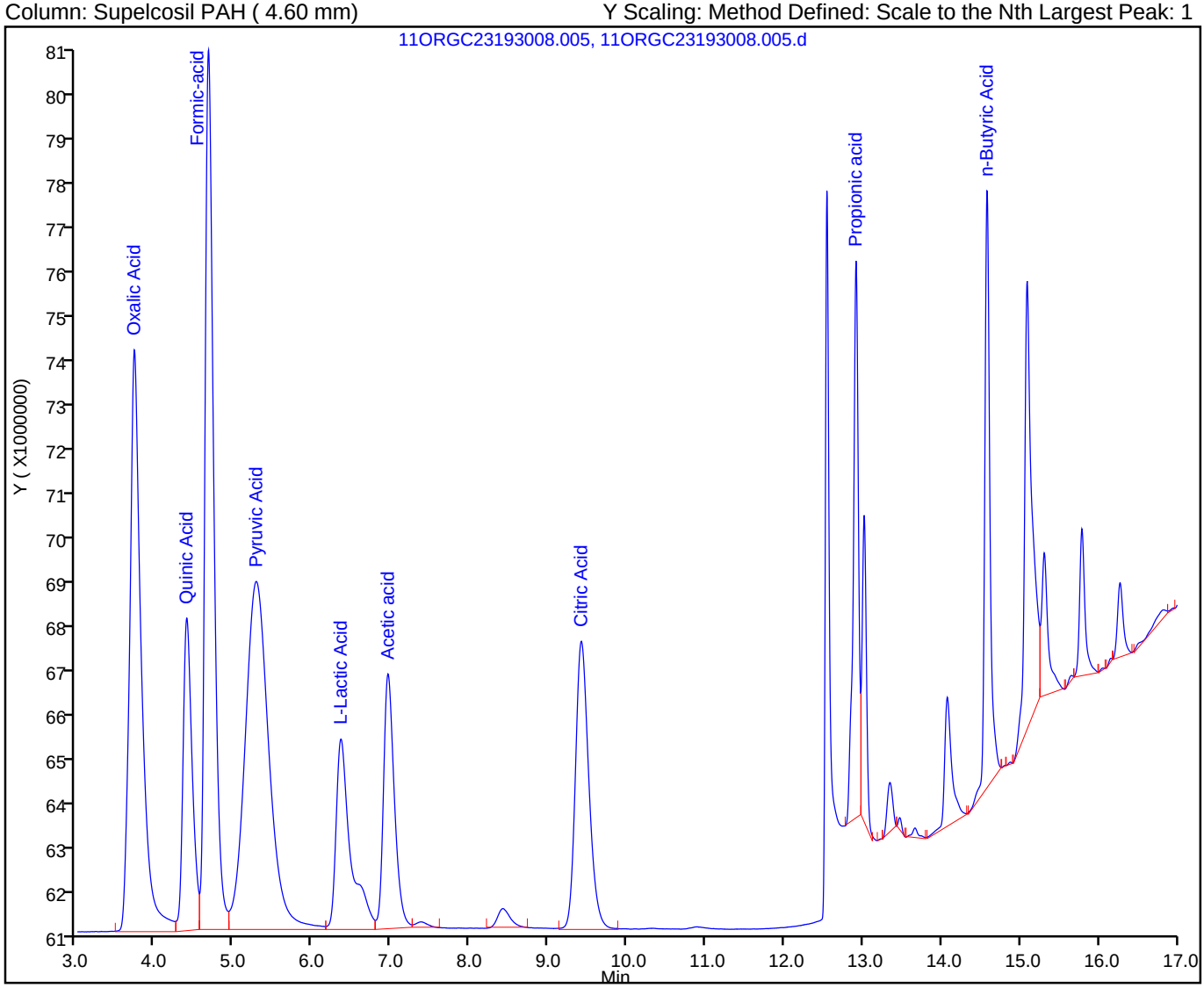
GCS_ORGA3_00028 Amount Added: 1.00 Units: mL

Report Date: 07-Aug-2023 20:08:28 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.005.d				
Injection Date:	04-Aug-2023 15:52:00	Instrument ID:	10136		
Lims ID:	CCV ORGA				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404643/17 Calibration Date: 08/04/2023 22:06

Instrument ID: 10136 Calib Start Date: 07/13/2023 04:09

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/13/2023 06:13

Lab File ID: 11ORGC23193008.017.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fumaric Acid	Ave	12623947	12401437		483	492	-1.8	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404643/17 Calibration Date: 08/04/2023 22:06

Instrument ID: 10136 Calib Start Date: 07/13/2023 04:09

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/13/2023 06:13

Lab File ID: 11ORGC23193008.017.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fumaric Acid	10.63	10.45	10.75

Report Date: 07-Aug-2023 20:08:23 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.017.d				
Lims ID:	CCV ORGS				
Client ID:					
Sample Type:	CCV				
Inject. Date:	04-Aug-2023 22:06:00	ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCV ORGS				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub6				
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:08:23	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid	10.625	10.600	0.025	6101879H	0.4920	0.4834	

Reagents:

GCS_ORGS3_00049 Amount Added: 1.00 Units: mL

Report Date: 07-Aug-2023 20:08:24 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.017.d

Injection Date: 04-Aug-2023 22:06:00 Instrument ID: 10136

Lims ID: CCV ORGS

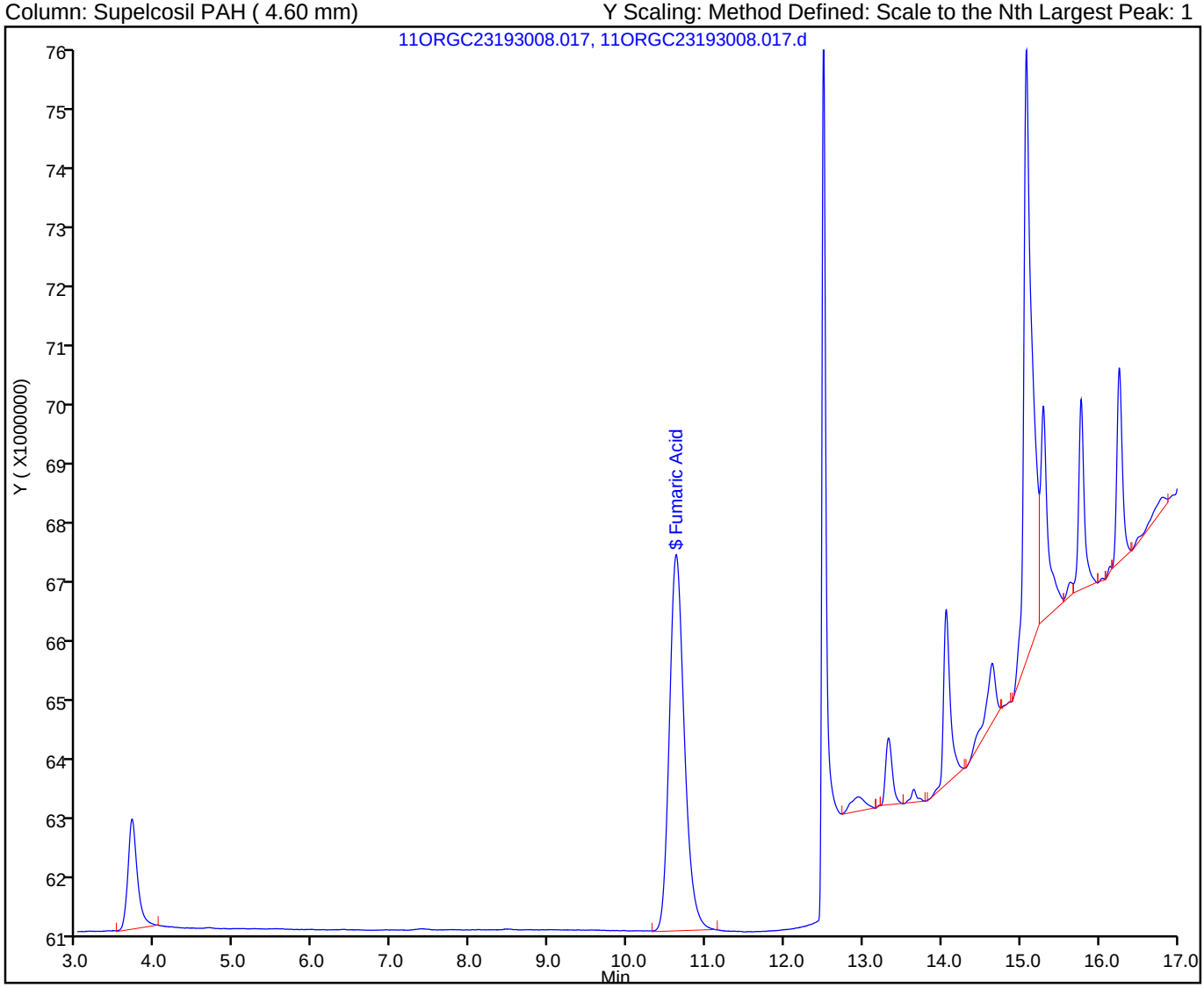
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 17

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404643/18 Calibration Date: 08/04/2023 22:37

Instrument ID: 10136 Calib Start Date: 07/12/2023 19:50

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/12/2023 22:57

Lab File ID: 11ORGC23193008.018.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Oxalic Acid	Qua		1024993		9110	12600	-27.4*	20.0
Quinic Acid	Ave	133861	133061		50200	50500	-0.6	20.0
Formic-acid	Ave	189118	188397		100000	101000	-0.4	20.0
Pyruvic Acid	Ave	598405	594258		12500	12600	-0.7	20.0
L-Lactic Acid	Ave	84337	81490		48400	50100	-3.4	20.0
Acetic acid	Ave	51969	54534		105000	100000	4.9	20.0
Citric Acid	Ave	115749	122526		53200	50300	5.9	20.0
Propionic acid	Ave	114282	119548		105000	100000	4.6	20.0
Butyric acid	Ave	129640	127823		98700	100000	-1.4	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404643/18 Calibration Date: 08/04/2023 22:37

Instrument ID: 10136 Calib Start Date: 07/12/2023 19:50

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/12/2023 22:57

Lab File ID: 11ORGC23193008.018.d

Analyte	RT	RT WINDOW	
		FROM	TO
Oxalic Acid	3.73	3.63	3.83
Quinic Acid	4.39	4.29	4.49
Formic-acid	4.67	4.57	4.77
Pyruvic Acid	5.28	5.18	5.38
L-Lactic Acid	6.35	6.25	6.45
Acetic acid	6.95	6.80	7.10
Citric Acid	9.42	9.27	9.57
Propionic acid	12.91	12.81	13.01
Butyric acid	14.58	14.48	14.68

Report Date: 07-Aug-2023 20:16:01 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.018.d
Lims ID: CCV ORGA
Client ID:
Sample Type: CCV
Inject. Date: 04-Aug-2023 22:37:00 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 50.0 ul Dil. Factor: 1.0000
Sample Info: CCV ORGA
Operator ID: 24470 Instrument ID: 10136
Sublist: chrom-8015_10136*sub4

Method: \\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m
Limit Group: LC - 8015D VFA
Last Update: 07-Aug-2023 20:16:01 Calib Date: 13-Jul-2023 06:13:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d

Column 1 : Supelcosil PAH (4.60 mm) Det: UV0
Process Host: CTX1674

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid	3.725	3.725	0.000	12863658H	12.6	9.11	
2 Quinic Acid	4.392	4.392	0.000	6716930H	50.5	50.2	
4 Formic-acid	4.667	4.671	-0.004	18933850H	100.5	100.1	
5 Pyruvic Acid	5.275	5.279	-0.004	7475760H	12.6	12.5	
6 L-Lactic Acid	6.354	6.354	0.000	4083485H	50.1	48.4	
7 Acetic acid	6.954	6.954	0.000	5465894H	100.2	105.2	
8 Citric Acid	9.421	9.417	0.004	6163052H	50.3	53.2	
11 Propionic acid	12.908	12.913	-0.004	11954791H	100.0	104.6	
12 n-Butyric Acid	14.575	14.579	-0.004	12801484H	100.2	98.7	

Reagents:

GCS_ORGA3_00028 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 07-Aug-2023 20:16:01 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.018.d

Injection Date: 04-Aug-2023 22:37:00 Instrument ID: 10136

Lims ID: CCV ORGA

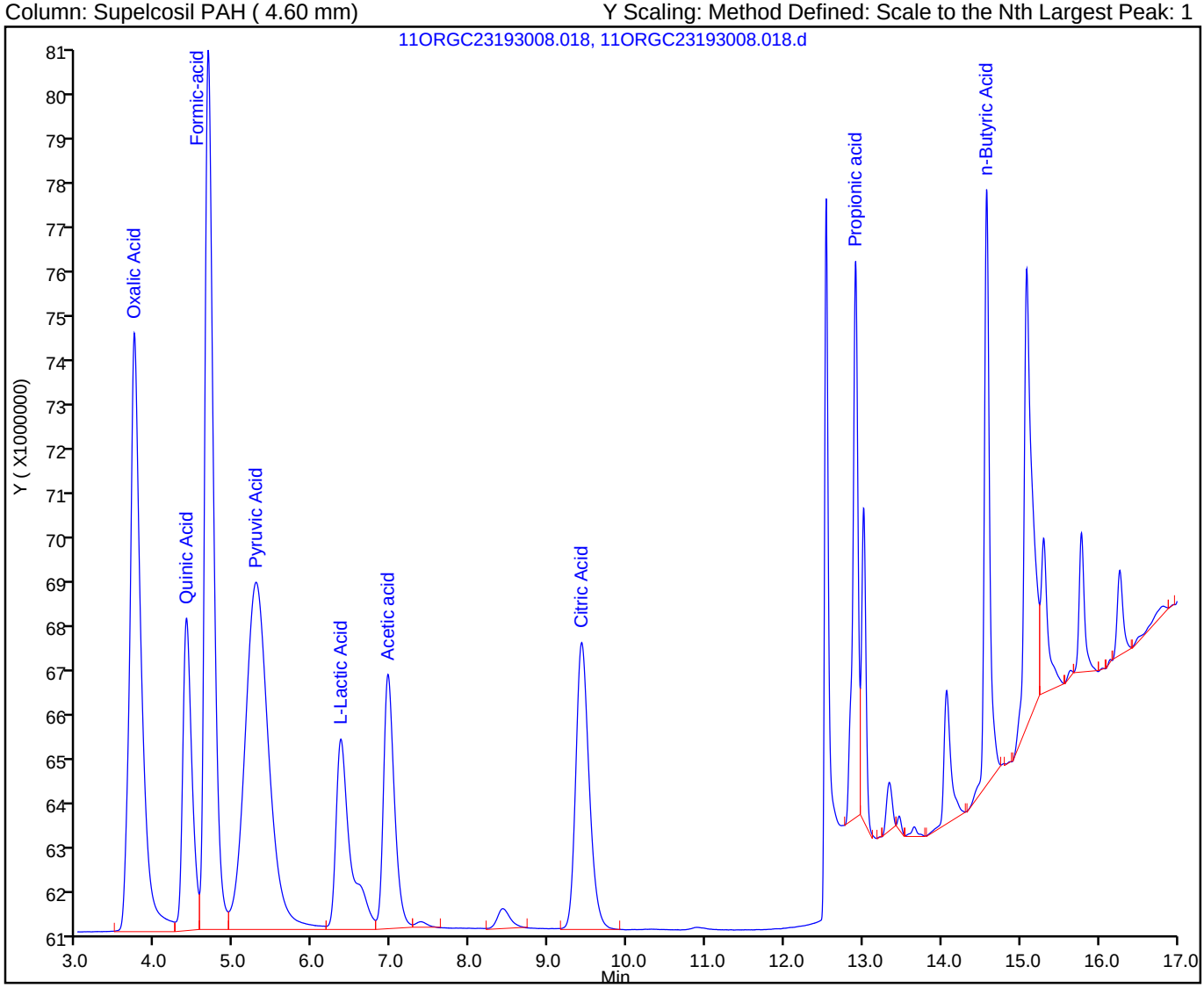
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 18

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404643/29 Calibration Date: 08/05/2023 04:19

Instrument ID: 10136 Calib Start Date: 07/13/2023 04:09

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/13/2023 06:13

Lab File ID: 11ORGC23193008.029.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fumaric Acid	Ave	12623947	12341993		481	492	-2.2	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404643/29 Calibration Date: 08/05/2023 04:19

Instrument ID: 10136 Calib Start Date: 07/13/2023 04:09

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/13/2023 06:13

Lab File ID: 11ORGC23193008.029.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fumaric Acid	10.64	10.45	10.75

Report Date: 07-Aug-2023 20:08:22 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.029.d				
Lims ID:	CCV ORGS				
Client ID:					
Sample Type:	CCV				
Inject. Date:	05-Aug-2023 04:19:00	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCV ORGS				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub6				
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:08:22	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid	10.642	10.600	0.042	6072631H	0.4920	0.4810	

Reagents:

GCS_ORGS3_00049 Amount Added: 1.00 Units: mL

Report Date: 07-Aug-2023 20:08:22 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.029.d

Injection Date: 05-Aug-2023 04:19:00 Instrument ID: 10136

Lims ID: CCV ORGS

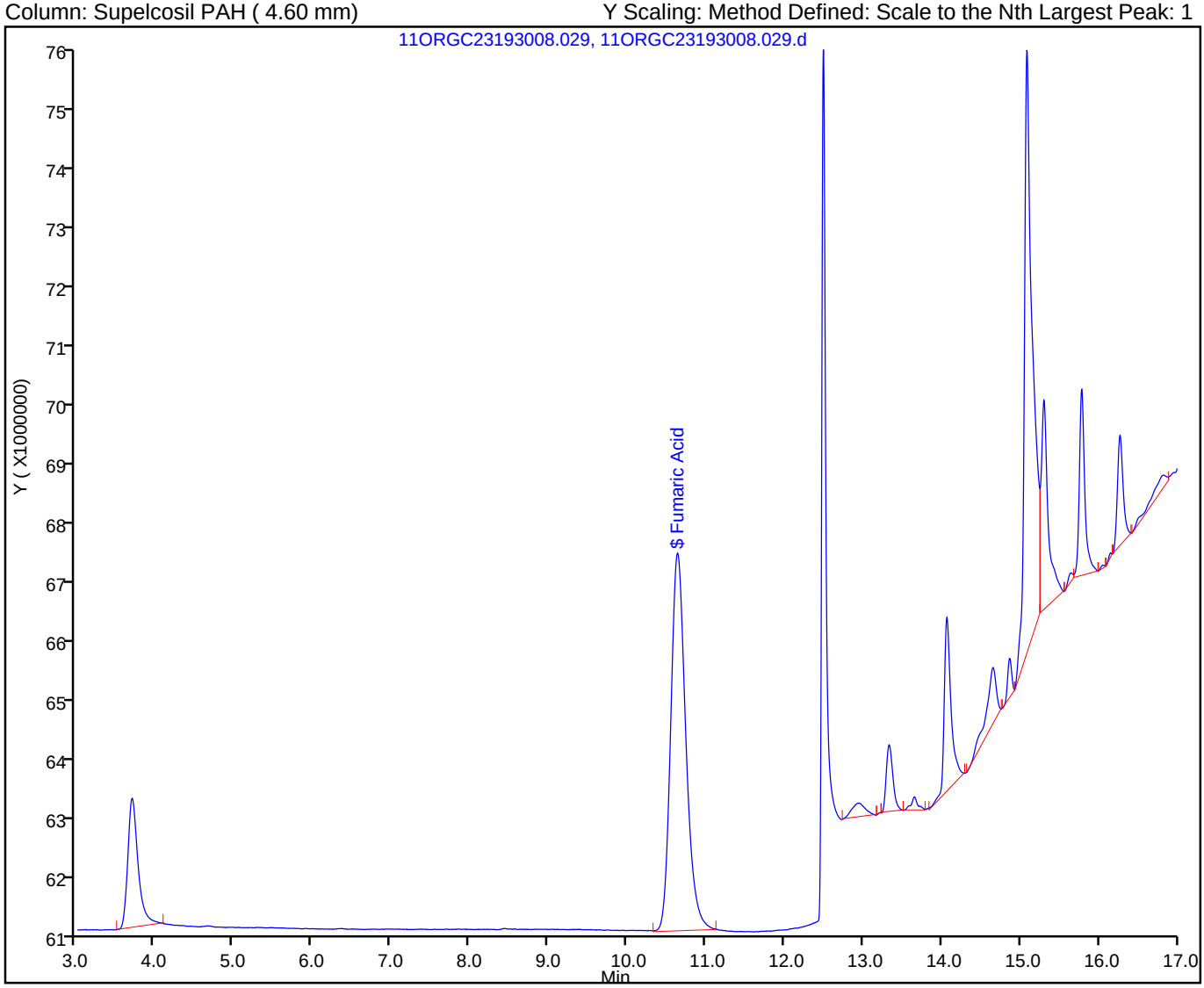
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 29

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404643/30 Calibration Date: 08/05/2023 04:51

Instrument ID: 10136 Calib Start Date: 07/12/2023 19:50

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/12/2023 22:57

Lab File ID: 11ORGC23193008.030.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Oxalic Acid	Qua		1055806		9410	12600	-25.0*	20.0
Quinic Acid	Ave	133861	133197		50200	50500	-0.5	20.0
Formic-acid	Ave	189118	188059		99900	101000	-0.6	20.0
Pyruvic Acid	Ave	598405	589347		12400	12600	-1.5	20.0
L-Lactic Acid	Ave	84337	81368		48300	50100	-3.5	20.0
Acetic acid	Ave	51969	54302		105000	100000	4.5	20.0
Citric Acid	Ave	115749	122129		53100	50300	5.5	20.0
Propionic acid	Ave	114282	118631		104000	100000	3.8	20.0
Butyric acid	Ave	129640	126981		98100	100000	-2.1	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404643/30 Calibration Date: 08/05/2023 04:51

Instrument ID: 10136 Calib Start Date: 07/12/2023 19:50

GC Column: Supelcosil PAH ID: 4.60(mm) Calib End Date: 07/12/2023 22:57

Lab File ID: 11ORGC23193008.030.d

Analyte	RT	RT WINDOW	
		FROM	TO
Oxalic Acid	3.73	3.63	3.83
Quinic Acid	4.40	4.29	4.49
Formic-acid	4.67	4.57	4.77
Pyruvic Acid	5.28	5.18	5.38
L-Lactic Acid	6.36	6.25	6.45
Acetic acid	6.96	6.80	7.10
Citric Acid	9.44	9.27	9.57
Propionic acid	12.89	12.81	13.01
Butyric acid	14.58	14.48	14.68

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.030.d				
Lims ID:	CCV ORGA				
Client ID:					
Sample Type:	CCV				
Inject. Date:	05-Aug-2023 04:51:00	ALS Bottle#:	0	Worklist Smp#:	30
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCV ORGB				
Operator ID:	24470	Instrument ID:	10136		
Sublist:	chrom-8015_10136*sub4				
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:16:06	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid	3.733	3.725	0.008	13250370H	12.6	9.41	
2 Quinic Acid	4.396	4.392	0.004	6723788H	50.5	50.2	
4 Formic-acid	4.671	4.671	0.000	18899912H	100.5	99.9	
5 Pyruvic Acid	5.279	5.279	0.000	7413981H	12.6	12.4	
6 L-Lactic Acid	6.358	6.354	0.004	4077358H	50.1	48.3	
7 Acetic acid	6.963	6.954	0.008	5442667H	100.2	104.7	
8 Citric Acid	9.442	9.417	0.025	6143070H	50.3	53.1	
11 Propionic acid	12.892	12.913	-0.020	11863067H	100.0	103.8	
12 n-Butyric Acid	14.575	14.579	-0.004	12717118H	100.2	98.1	

Reagents:

GCS_ORGA3_00028 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 07-Aug-2023 20:16:06 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.030.d

Injection Date: 05-Aug-2023 04:51:00 Instrument ID: 10136

Lims ID: CCV ORGA

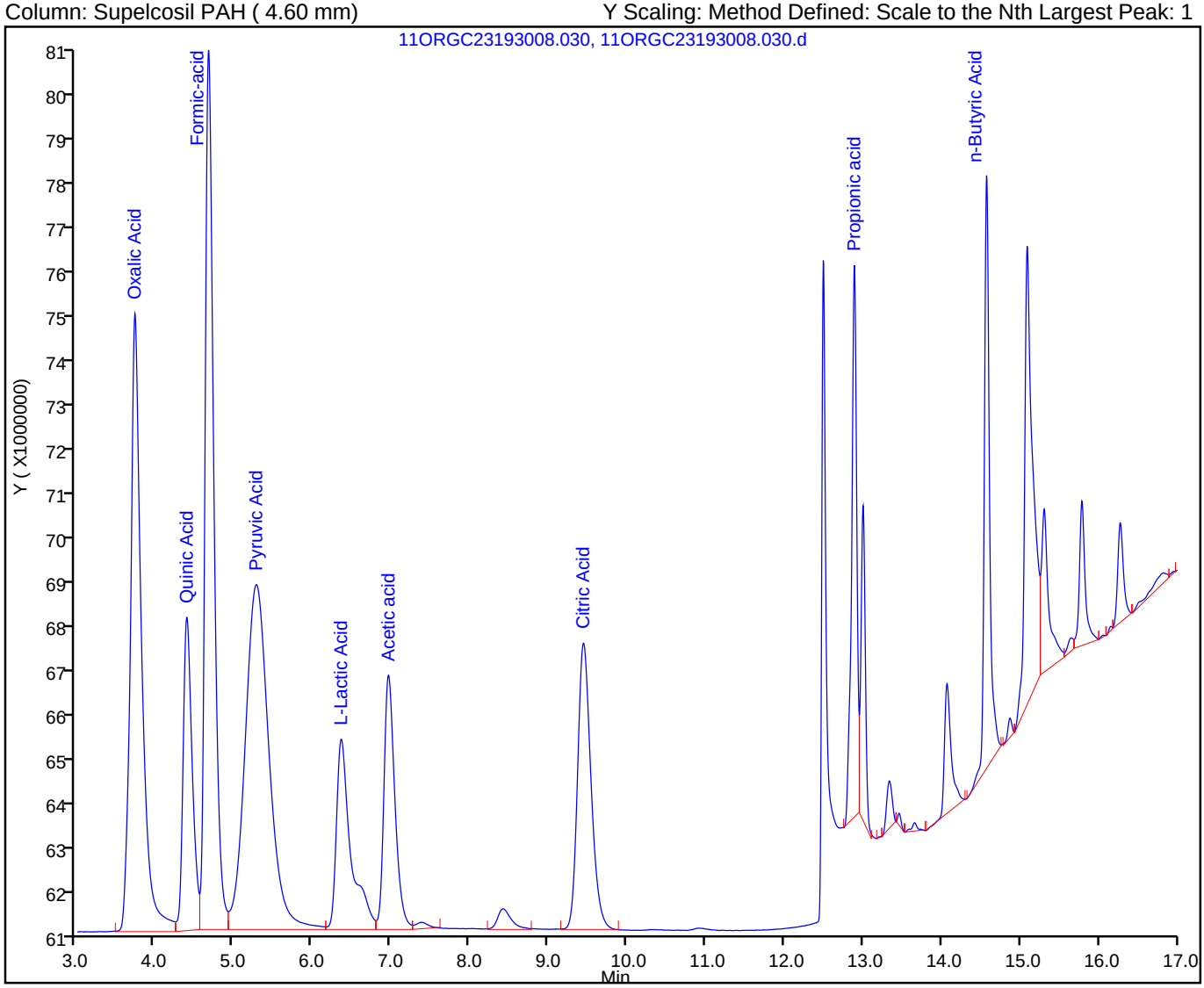
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 30

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: ICV 410-394255/15 Calibration Date: 07/06/2023 01:32

Instrument ID: 6854A Calib Start Date: 07/05/2023 19:48

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 00:06

Lab File ID: 48ORGA23186001.015.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Oxalic Acid	Ave	6530954	6147907		11800	12500	-5.9	20.0
Citric Acid	Ave	471329	469870		50200	50400	-0.3	20.0
Pyruvic Acid	Ave	3034278	3261957		13500	12600	7.5	20.0
Quinic Acid	Ave	246856	224693		45800	50300	-9.0	20.0
L-Lactic Acid	Ave	284209	226586		40200	50400	-20.3*	20.0
Formic-acid	Qua		380129		106000	101000	5.1	20.0
Acetic acid	Lin		215964		105000	100000	4.3	20.0
Propionic acid	Ave	162814	183572		114000	101000	12.7	20.0
Butyric acid	Qua		140865		104000	101000	3.6	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: ICV 410-394255/15 Calibration Date: 07/06/2023 01:32

Instrument ID: 6854A Calib Start Date: 07/05/2023 19:48

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 00:06

Lab File ID: 48ORGA23186001.015.d

Analyte	RT	RT WINDOW	
		FROM	TO
Oxalic Acid	13.86	13.75	13.95
Citric Acid	15.53	15.36	15.66
Pyruvic Acid	16.68	16.57	16.77
Quinic Acid	17.35	17.25	17.45
L-Lactic Acid	19.37	19.27	19.47
Formic-acid	20.42	20.32	20.52
Acetic acid	21.37	21.27	21.47
Propionic acid	23.41	23.31	23.51
Butyric acid	26.45	26.35	26.55

Report Date: 17-Jul-2023 18:55:44 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.015.d				
Lims ID:	ICV ORGA				
Client ID:					
Sample Type:	ICV				
Inject. Date:	06-Jul-2023 01:32:00	ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	ICV ORGA				
Operator ID:	24470	Instrument ID:	6854A		
Sublist:					
Method:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	17-Jul-2023 18:55:32	Calib Date:	06-Jul-2023 10:07:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.027.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1644				
First Level Reviewer: UHEW		Date:	12-Jul-2023 18:07:10		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid						
13.858	13.846	0.012	76848835H	12.5	11.8	
2 Citric Acid						
15.529	15.509	0.020	23681443H	50.4	50.2	
4 Pyruvic Acid						
16.676	16.668	0.008	40970176H	12.6	13.5	
5 Quinic Acid						
17.347	17.347	0.000	11302071H	50.3	45.8	
7 L-Lactic Acid						
19.370	19.366	0.004	11419943H	50.4	40.2	
8 Formic-acid						
20.421	20.417	0.004	38317015H	100.8	106.0	
9 Acetic acid						
21.368	21.368	0.000	21661196H	100.3	104.6	
11 Propionic acid						
23.411	23.407	0.004	18540758H	101.0	113.9	
13 n-Butyric Acid						
26.449	26.445	0.004	14199150H	100.8	104.4	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

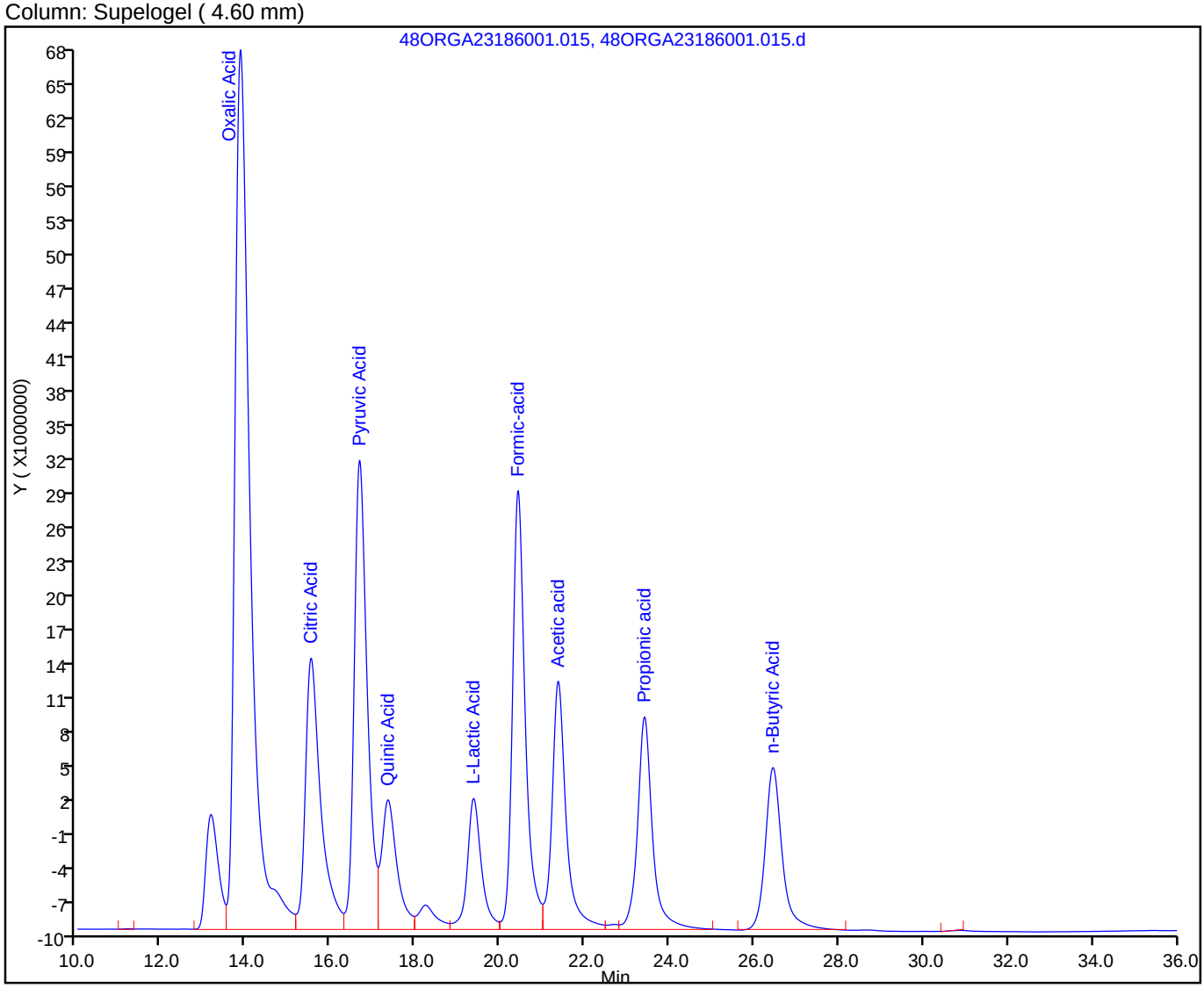
GCS_ORGAICV_00008 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2023 18:55:44 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.015.d				
Injection Date:	06-Jul-2023 01:32:00	Instrument ID:	6854A		
Lims ID:	ICV ORGA				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: ICV 410-394255/22 Calibration Date: 07/06/2023 06:32

Instrument ID: 6854A Calib Start Date: 07/06/2023 02:14

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 05:06

Lab File ID: 48ORGA23186001.022.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tartaric Acid	Ave	633287	669468		52900	50000	5.7	20.0
Succinic Acid	Ave	225583	221389		49100	50000	-1.9	20.0
Isobutyric acid	Ave	206039	205861		101000	101000	-0.0	20.0
Isovaleric acid	Ave	123399	122503		99700	100000	-0.7	20.0
Valeric acid	Ave	86377	88339		103000	100000	2.3	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: ICV 410-394255/22 Calibration Date: 07/06/2023 06:32

Instrument ID: 6854A Calib Start Date: 07/06/2023 02:14

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 05:06

Lab File ID: 48ORGA23186001.022.d

Analyte	RT	RT WINDOW	
		FROM	TO
Tartaric Acid	16.06	15.96	16.16
Succinic Acid	19.22	19.18	19.28
Isobutyric acid	25.01	24.92	25.12
Isovaleric acid	28.93	28.72	29.16
Valeric acid	33.56	33.26	33.86

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.022.d
Lims ID: ICV ORGB
Client ID:
Sample Type: ICV
Inject. Date: 06-Jul-2023 06:32:00 ALS Bottle#: 0 Worklist Smp#: 22
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: ICV ORGB
Operator ID: 24470 Instrument ID: 6854A
Sublist:

Method: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 17-Jul-2023 18:55:32 Calib Date: 06-Jul-2023 10:07:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.027.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1644

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid						
16.056	16.060	-0.004	33473415H	50.0	52.9	
6 Succinic Acid						
19.222	19.226	-0.004	11069438H	50.0	49.1	
12 Isobutyric acid						
25.014	25.018	-0.004	20791961H	101.0	100.9	
14 Isovaleric acid						
28.931	28.935	-0.004	12299338H	100.4	99.7	
15 Valeric acid						
33.555	33.563	-0.008	8869194H	100.4	102.7	

Reagents:

GCS_ORGBICV_00007 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 17-Jul-2023 18:55:41 Chrom Revision: 2.3 11-Jul-2023 11:49:10

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230706-88350.b\48ORGA23186001.022.d

Injection Date: 06-Jul-2023 06:32:00 Instrument ID: 6854A

Lims ID: ICV ORGB

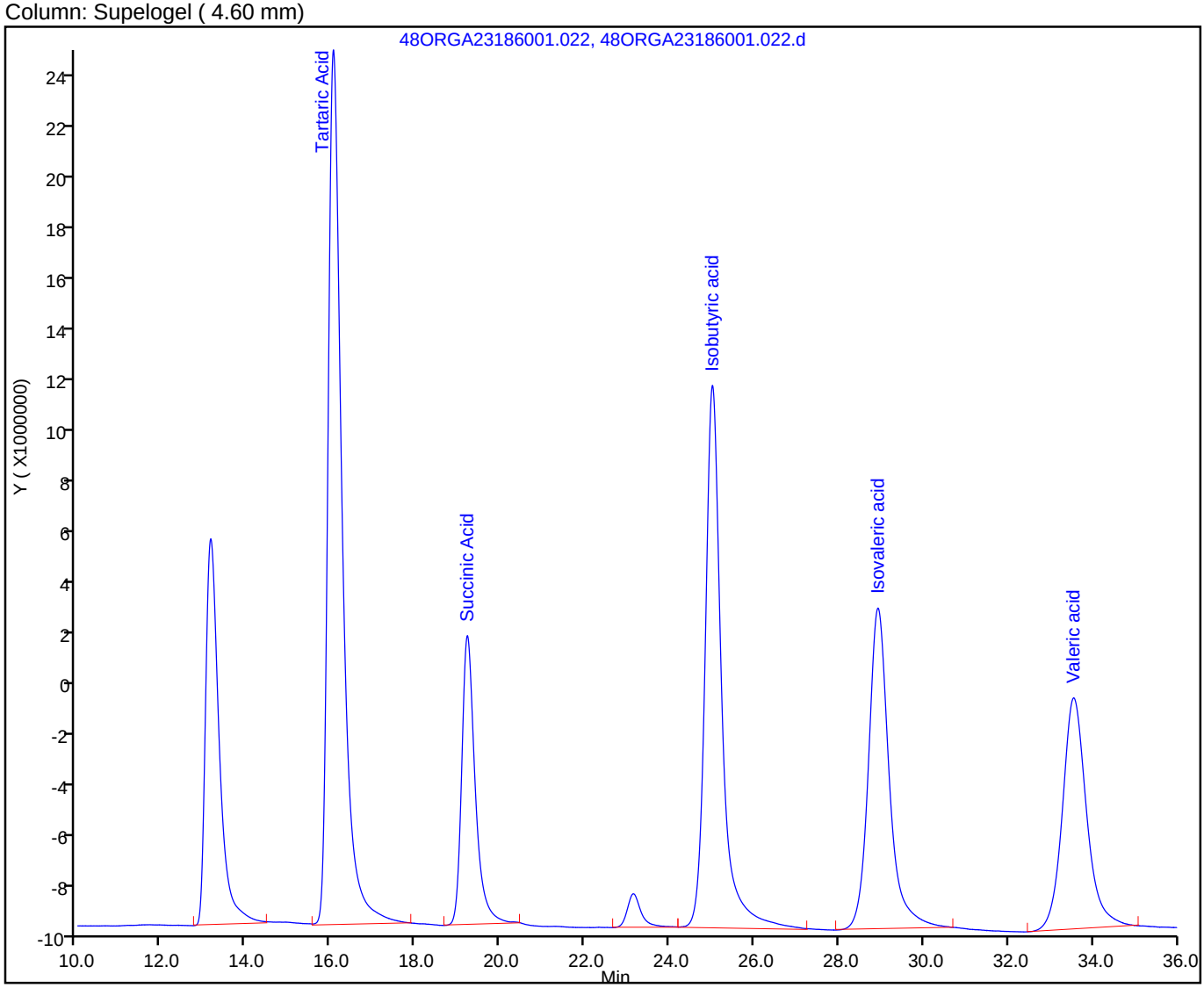
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 22

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCVRT 410-404646/4 Calibration Date: 08/04/2023 16:00

Instrument ID: 6854A Calib Start Date: 07/27/2023 19:59

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/27/2023 22:51

Lab File ID: 48ORGA23186009.004.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fumaric Acid	Ave	39434091	39301311		490	492	-0.3	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCVRT 410-404646/4 Calibration Date: 08/04/2023 16:00

Instrument ID: 6854A Calib Start Date: 07/27/2023 19:59

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/27/2023 22:51

Lab File ID: 48ORGA23186009.004.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fumaric Acid	22.44	22.26	22.62

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.004.d				
Lims ID:	CCVRT ORGS				
Client ID:					
Sample Type:	CCVRT				
Inject. Date:	04-Aug-2023 16:00:00	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCV ORGS				
Operator ID:	2027	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub4				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:06:36	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1674				
First Level Reviewer: UHEW		Date:	04-Aug-2023 16:51:33		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid						
22.436	22.436	0.000	19337424	H 0.4920	0.4904	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Reagents:

GCS_ORGS3_00049 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 07-Aug-2023 20:06:36 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.004.d

Injection Date: 04-Aug-2023 16:00:00 Instrument ID: 6854A

Lims ID: CCVRT ORGS

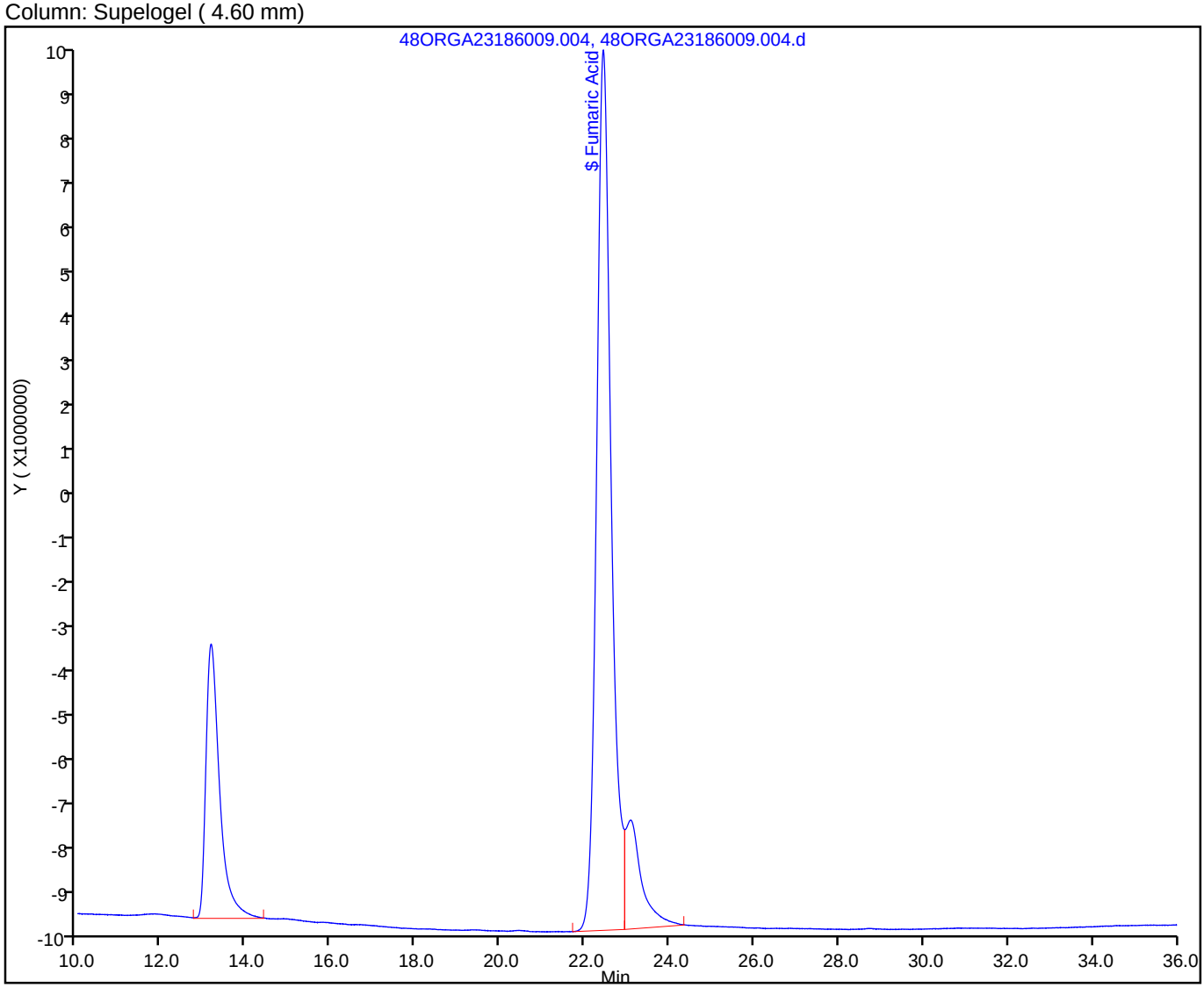
Client ID:

Operator ID: 2027 ALS Bottle#: 0 Worklist Smp#: 4

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404646/5 Calibration Date: 08/04/2023 16:43

Instrument ID: 6854A Calib Start Date: 07/05/2023 19:48

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 00:06

Lab File ID: 48ORGA23186009.005.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Oxalic Acid	Ave	6530954	6300878		12100	12600	-3.5	20.0
Citric Acid	Ave	471329	471454		50300	50300	0.0	20.0
Pyruvic Acid	Ave	3034278	3137768		13000	12600	3.4	20.0
Quinic Acid	Ave	246856	229744		47000	50500	-6.9	20.0
L-Lactic Acid	Ave	284209	284853		50200	50100	0.2	20.0
Formic-acid	Qua		375611		105000	101000	4.0	20.0
Acetic acid	Lin		217289		105000	100000	4.9	20.0
Propionic acid	Ave	162814	181233		111000	100000	11.3	20.0
Butyric acid	Qua		140994		104000	100000	3.7	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404646/5 Calibration Date: 08/04/2023 16:43

Instrument ID: 6854A Calib Start Date: 07/05/2023 19:48

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 00:06

Lab File ID: 48ORGA23186009.005.d

Analyte	RT	RT WINDOW	
		FROM	TO
Oxalic Acid	13.86	13.76	13.96
Citric Acid	15.54	15.39	15.69
Pyruvic Acid	16.68	16.58	16.78
Quinic Acid	17.37	17.27	17.47
L-Lactic Acid	19.39	19.29	19.49
Formic-acid	20.43	20.33	20.53
Acetic acid	21.37	21.27	21.47
Propionic acid	23.42	23.32	23.52
Butyric acid	26.45	26.35	26.55

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.005.d
Lims ID: CCV ORGA
Client ID:
Sample Type: CCV
Inject. Date: 04-Aug-2023 16:43:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: CCV ORGA
Operator ID: 2027 Instrument ID: 6854A
Sublist: chrom-8015_6854AP*sub1

Method: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 07-Aug-2023 20:06:36 Calib Date: 27-Jul-2023 22:51:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1674

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid						
13.862	13.862	0.000	79076016H	12.6	12.1	
2 Citric Acid						
15.541	15.541	0.000	23714140H	50.3	50.3	
4 Pyruvic Acid						
16.684	16.684	0.000	39473126H	12.6	13.0	
5 Quinic Acid						
17.367	17.367	0.000	11597493H	50.5	47.0	
7 L-Lactic Acid						
19.390	19.390	0.000	14273963H	50.1	50.2	
8 Formic-acid						
20.433	20.433	0.000	37748935H	100.5	104.5	
9 Acetic acid						
21.372	21.372	0.000	21778880H	100.2	105.1	
11 Propionic acid						
23.415	23.415	0.000	18123317H	100.0	111.3	
13 n-Butyric Acid						
26.453	26.453	0.000	14120534H	100.2	103.9	

Reagents:

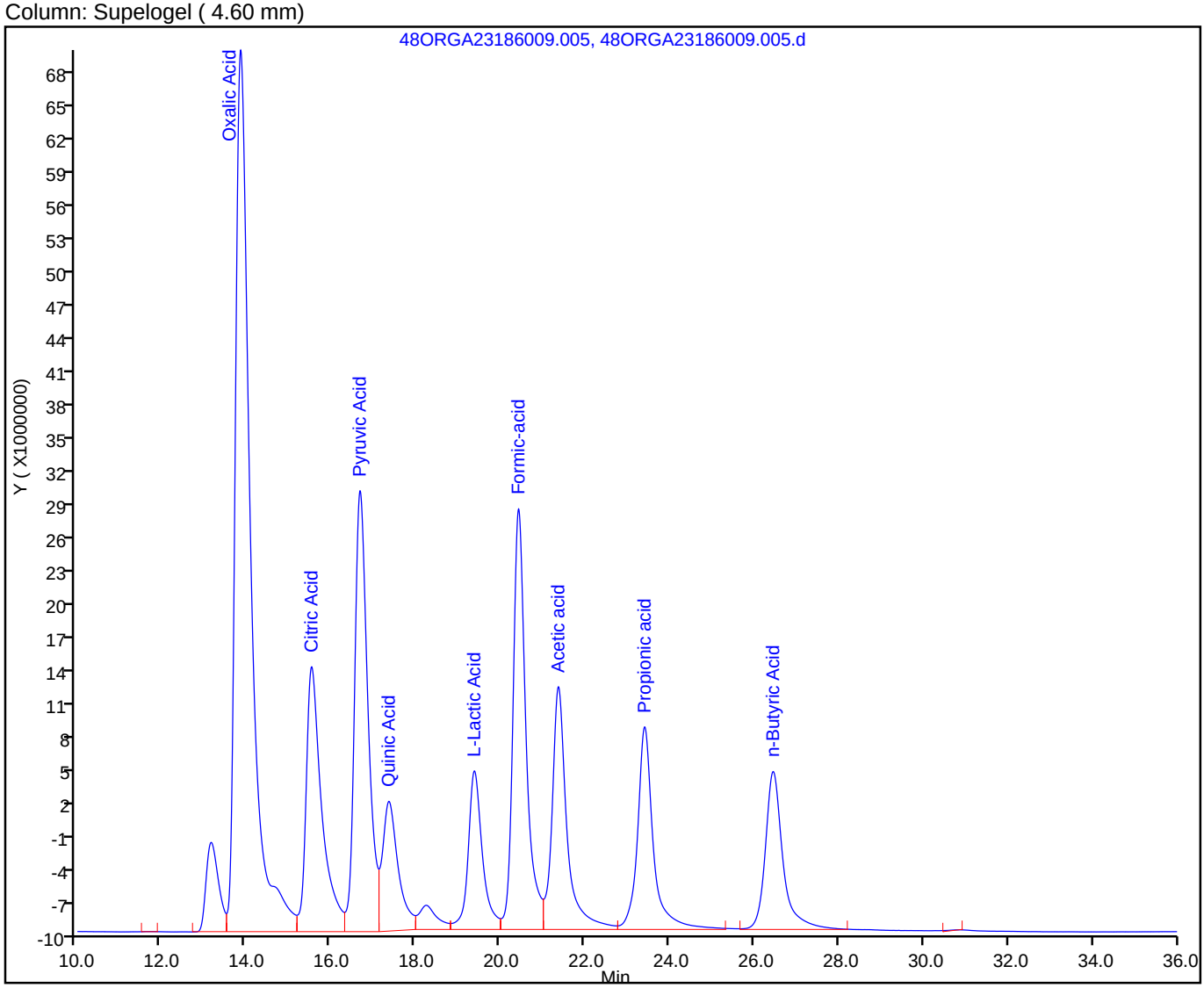
GCS_ORGA3_00028 Amount Added: 1.00 Units: mL

Report Date: 07-Aug-2023 20:06:36 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.005.d				
Injection Date:	04-Aug-2023 16:43:00	Instrument ID:	6854A		
Lims ID:	CCV ORGA				
Client ID:					
Operator ID:	2027	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404646/6 Calibration Date: 08/04/2023 17:26

Instrument ID: 6854A Calib Start Date: 07/06/2023 02:14

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 05:06

Lab File ID: 48ORGA23186009.006.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tartaric Acid	Ave	633287	656809		52100	50300	3.7	20.0
Succinic Acid	Ave	225583	224001		49900	50300	-0.7	20.0
Isobutyric acid	Ave	206039	206045		101000	101000	0.0	20.0
Isovaleric acid	Ave	123399	124028		101000	100000	0.5	20.0
Valeric acid	Ave	86377	87484		102000	100000	1.3	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404646/6 Calibration Date: 08/04/2023 17:26

Instrument ID: 6854A Calib Start Date: 07/06/2023 02:14

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 05:06

Lab File ID: 48ORGA23186009.006.d

Analyte	RT	RT WINDOW	
		FROM	TO
Tartaric Acid	16.09	15.99	16.19
Succinic Acid	19.25	19.20	19.30
Isobutyric acid	25.03	24.93	25.13
Isovaleric acid	28.94	28.72	29.16
Valeric acid	33.59	33.29	33.89

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.006.d
Lims ID: CCV ORGB
Client ID:
Sample Type: CCV
Inject. Date: 04-Aug-2023 17:26:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: CCV ORGB
Operator ID: 2027 Instrument ID: 6854A
Sublist: chrom-8015_6854AP*sub3

Method: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 07-Aug-2023 20:13:50 Calib Date: 27-Jul-2023 22:51:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1674

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid						
16.088	16.088	0.000	33024347H	50.3	52.1	
6 Succinic Acid						
19.250	19.250	0.000	11262781H	50.3	49.9	
12 Isobutyric acid						
25.026	25.026	0.000	20728079H	100.6	100.6	
14 Isovaleric acid						
28.943	28.943	0.000	12402768H	100.0	100.5	
15 Valeric acid						
33.587	33.587	0.000	8783350H	100.4	101.7	

Reagents:

GCS_ORGB3_00022 Amount Added: 1.00 Units: mL

Report Date: 07-Aug-2023 20:13:51 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.006.d

Injection Date: 04-Aug-2023 17:26:00 Instrument ID: 6854A

Lims ID: CCV ORGB

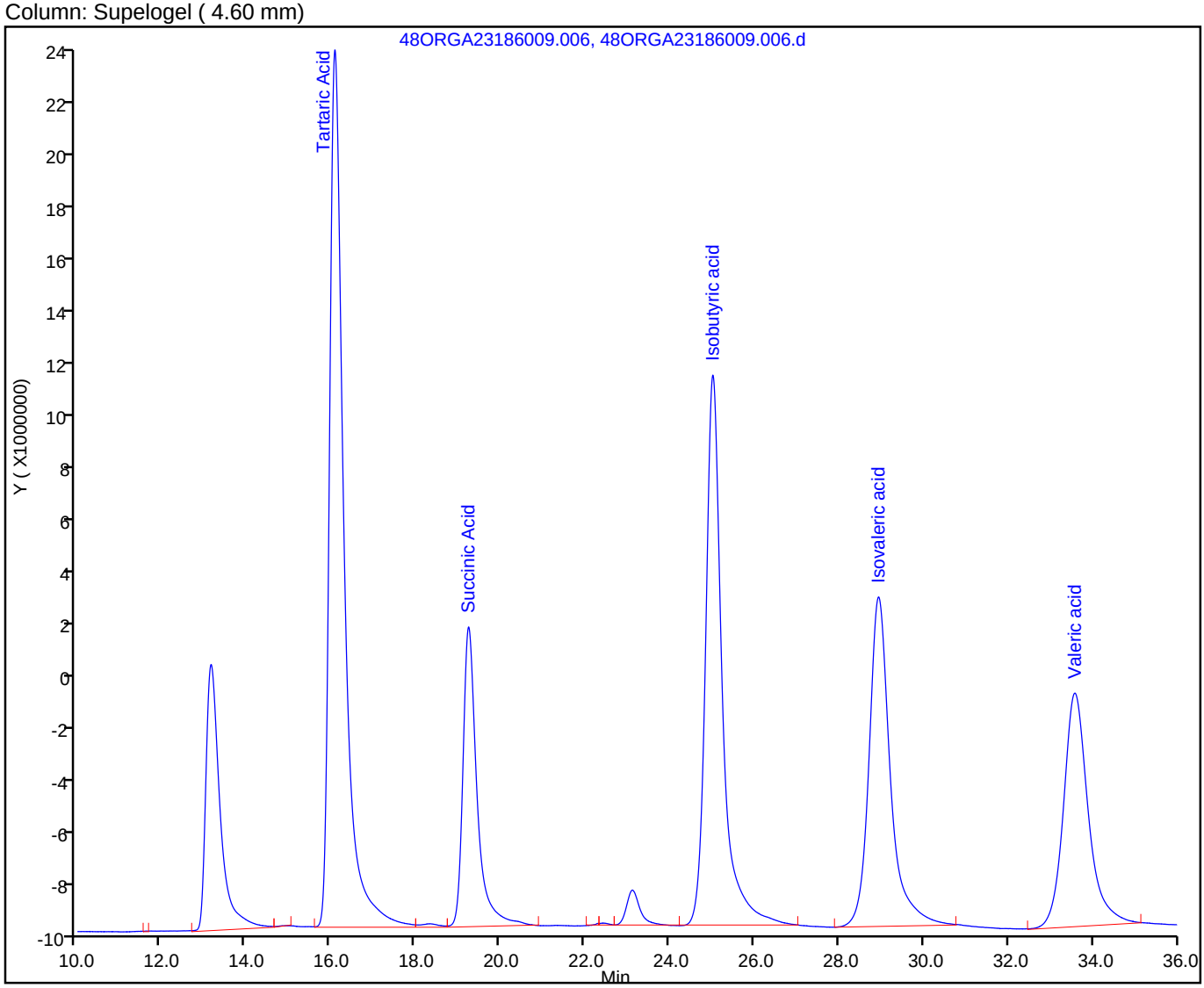
Client ID:

Operator ID: 2027 ALS Bottle#: 0 Worklist Smp#: 6

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404646/17 Calibration Date: 08/05/2023 01:18

Instrument ID: 6854A Calib Start Date: 07/27/2023 19:59

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/27/2023 22:51

Lab File ID: 48ORGA23186009.017.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fumaric Acid	Ave	39434091	42342097		528	492	7.4	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404646/17 Calibration Date: 08/05/2023 01:18

Instrument ID: 6854A Calib Start Date: 07/27/2023 19:59

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/27/2023 22:51

Lab File ID: 48ORGA23186009.017.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fumaric Acid	22.42	22.26	22.62

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.017.d				
Lims ID:	CCV ORGS				
Client ID:					
Sample Type:	CCV				
Inject. Date:	05-Aug-2023 01:18:00	ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCV ORGS				
Operator ID:	2027	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub4				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:06:34	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1674				

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid						
22.424	22.436	-0.012	20833582H	0.4920	0.5283	

Reagents:

GCS_ORGS3_00049 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 07-Aug-2023 20:06:34 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.017.d

Injection Date: 05-Aug-2023 01:18:00 Instrument ID: 6854A

Lims ID: CCV ORGS

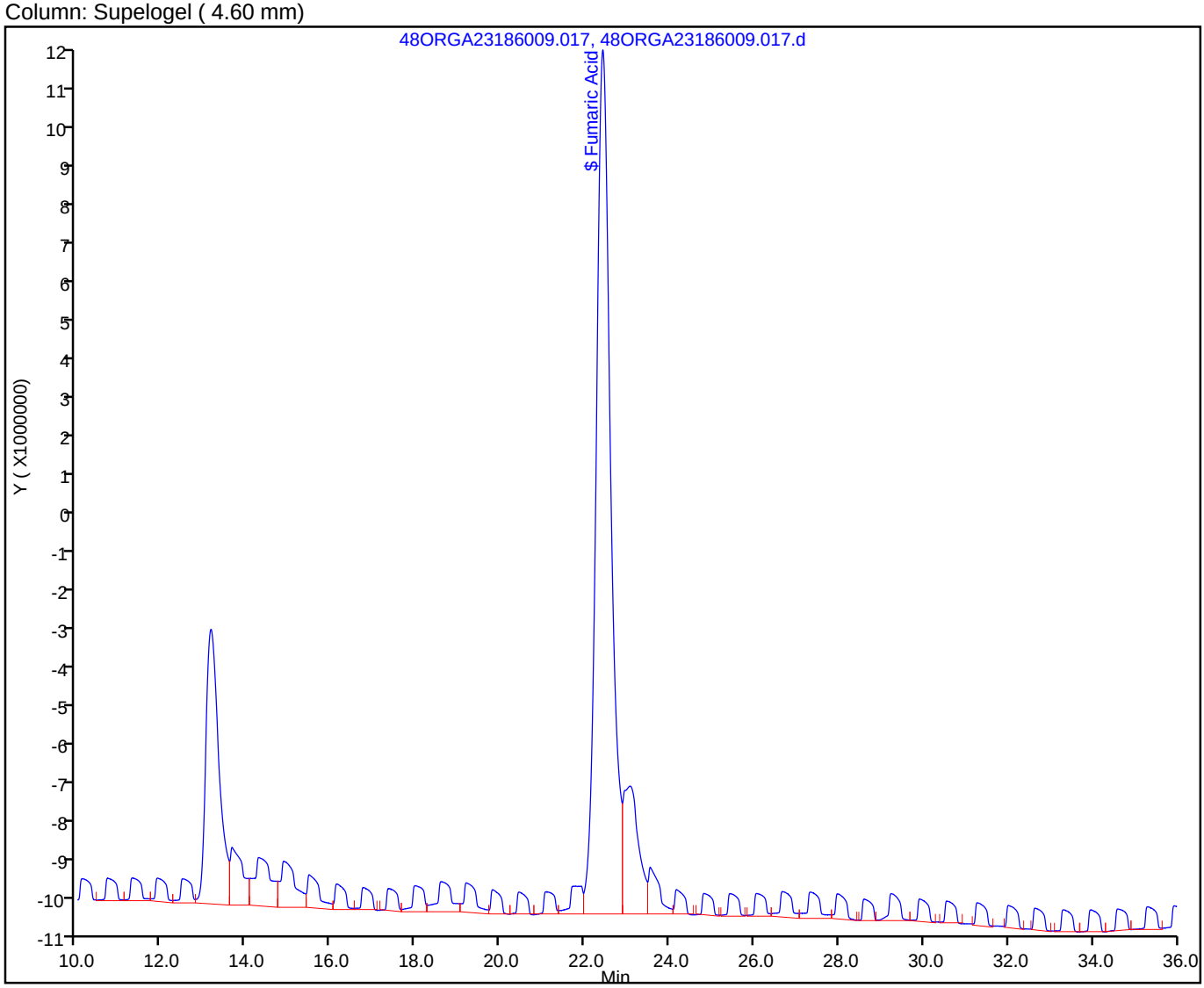
Client ID:

Operator ID: 2027 ALS Bottle#: 0 Worklist Smp#: 17

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404646/18 Calibration Date: 08/05/2023 02:01

Instrument ID: 6854A Calib Start Date: 07/05/2023 19:48

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 00:06

Lab File ID: 48ORGA23186009.018.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Oxalic Acid	Ave	6530954	6248703		12000	12600	-4.3	20.0
Citric Acid	Ave	471329	483023		51500	50300	2.5	20.0
Pyruvic Acid	Ave	3034278	3175622		13200	12600	4.7	20.0
Quinic Acid	Ave	246856	232835		47600	50500	-5.7	20.0
L-Lactic Acid	Ave	284209	293607		51800	50100	3.3	20.0
Formic-acid	Qua		386662		107000	101000	6.8	20.0
Acetic acid	Lin		220168		106000	100000	6.2	20.0
Propionic acid	Ave	162814	182577		112000	100000	12.1	20.0
Butyric acid	Qua		146969		108000	100000	7.8	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404646/18 Calibration Date: 08/05/2023 02:01

Instrument ID: 6854A Calib Start Date: 07/05/2023 19:48

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 00:06

Lab File ID: 48ORGA23186009.018.d

Analyte	RT	RT WINDOW	
		FROM	TO
Oxalic Acid	13.86	13.76	13.96
Citric Acid	15.53	15.39	15.69
Pyruvic Acid	16.68	16.58	16.78
Quinic Acid	17.36	17.27	17.47
L-Lactic Acid	19.38	19.29	19.49
Formic-acid	20.43	20.33	20.53
Acetic acid	21.37	21.27	21.47
Propionic acid	23.41	23.32	23.52
Butyric acid	26.45	26.35	26.55

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.018.d
Lims ID: CCV ORGA
Client ID:
Sample Type: CCV
Inject. Date: 05-Aug-2023 02:01:00 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: CCV ORGA
Operator ID: 2027 Instrument ID: 6854A
Sublist: chrom-8015_6854AP*sub1

Method: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 07-Aug-2023 20:06:34 Calib Date: 27-Jul-2023 22:51:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1674

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid						
13.862	13.862	0.000	78421226H	12.6	12.0	
2 Citric Acid						
15.533	15.541	-0.008	24296058H	50.3	51.5	
4 Pyruvic Acid						
16.680	16.684	-0.004	39949321H	12.6	13.2	
5 Quinic Acid						
17.359	17.367	-0.008	11753528H	50.5	47.6	
7 L-Lactic Acid						
19.382	19.390	-0.008	14712631H	50.1	51.8	
8 Formic-acid						
20.425	20.433	-0.008	38859541H	100.5	107.4	
9 Acetic acid						
21.368	21.372	-0.004	22067444H	100.2	106.5	
11 Propionic acid						
23.411	23.415	-0.004	18257726H	100.0	112.1	
13 n-Butyric Acid						
26.445	26.453	-0.008	14718902H	100.2	108.0	

Reagents:

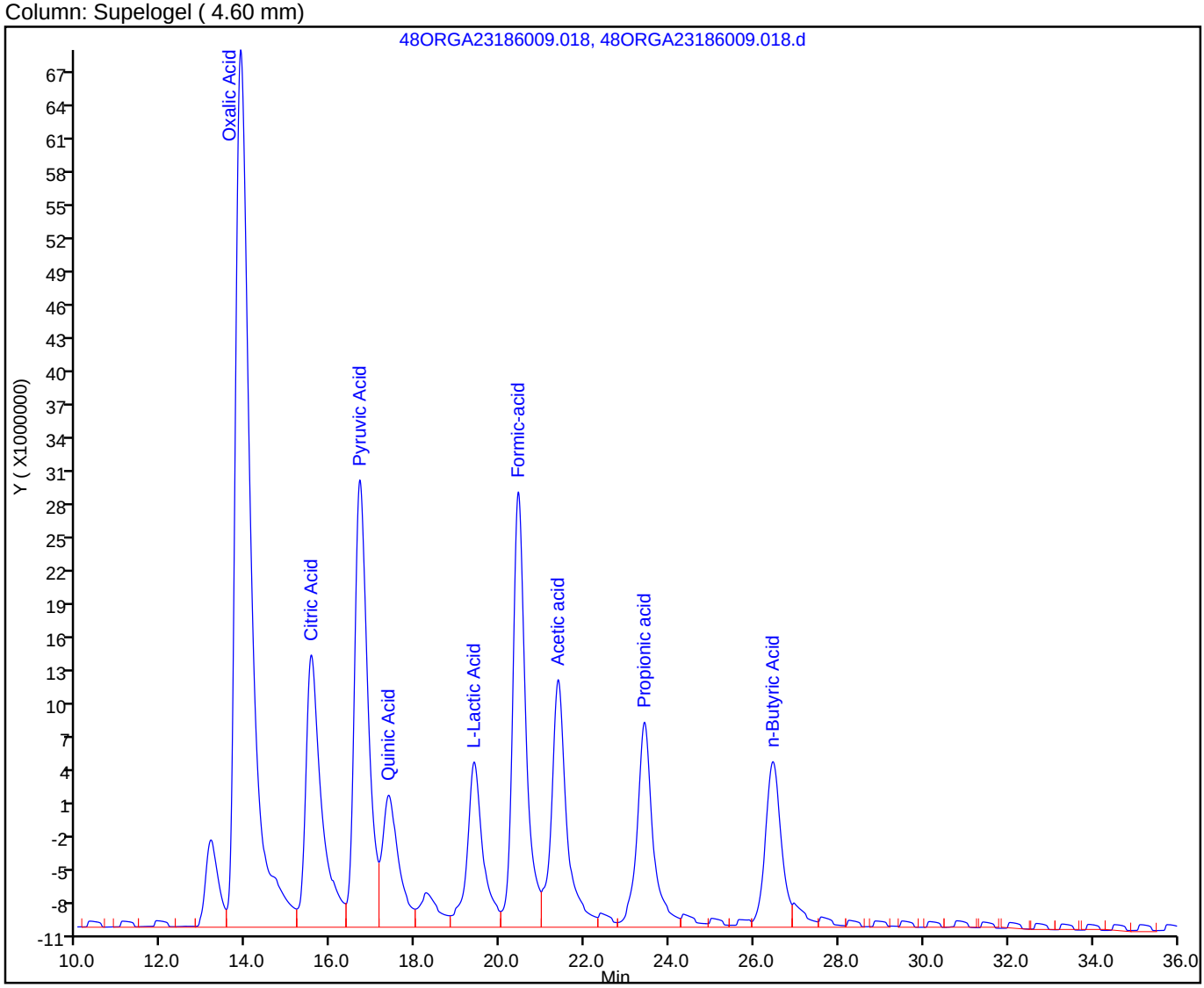
GCS_ORGA3_00028 Amount Added: 1.00 Units: mL

Report Date: 07-Aug-2023 20:06:34 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.018.d				
Injection Date:	05-Aug-2023 02:01:00	Instrument ID:	6854A		
Lims ID:	CCV ORGA				
Client ID:					
Operator ID:	2027	ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404646/30 Calibration Date: 08/05/2023 10:37

Instrument ID: 6854A Calib Start Date: 07/27/2023 19:59

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/27/2023 22:51

Lab File ID: 48ORGA23186009.030.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fumaric Acid	Ave	39434091	40855182		510	492	3.6	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404646/30 Calibration Date: 08/05/2023 10:37

Instrument ID: 6854A Calib Start Date: 07/27/2023 19:59

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/27/2023 22:51

Lab File ID: 48ORGA23186009.030.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fumaric Acid	22.42	22.26	22.62

Report Date: 07-Aug-2023 20:14:09 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.030.d				
Lims ID:	CCV ORGS				
Client ID:					
Sample Type:	CCV				
Inject. Date:	05-Aug-2023 10:37:00	ALS Bottle#:	0	Worklist Smp#:	30
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCV ORGS				
Operator ID:	2027	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub4				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:14:09	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1674				

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid						
22.416	22.436	-0.020	20101975H	0.4920	0.5098	

Reagents:

GCS_ORGS3_00049 Amount Added: 1.00 Units: mL

Report Date: 07-Aug-2023 20:14:09 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.030.d

Injection Date: 05-Aug-2023 10:37:00 Instrument ID: 6854A

Lims ID: CCV ORGS

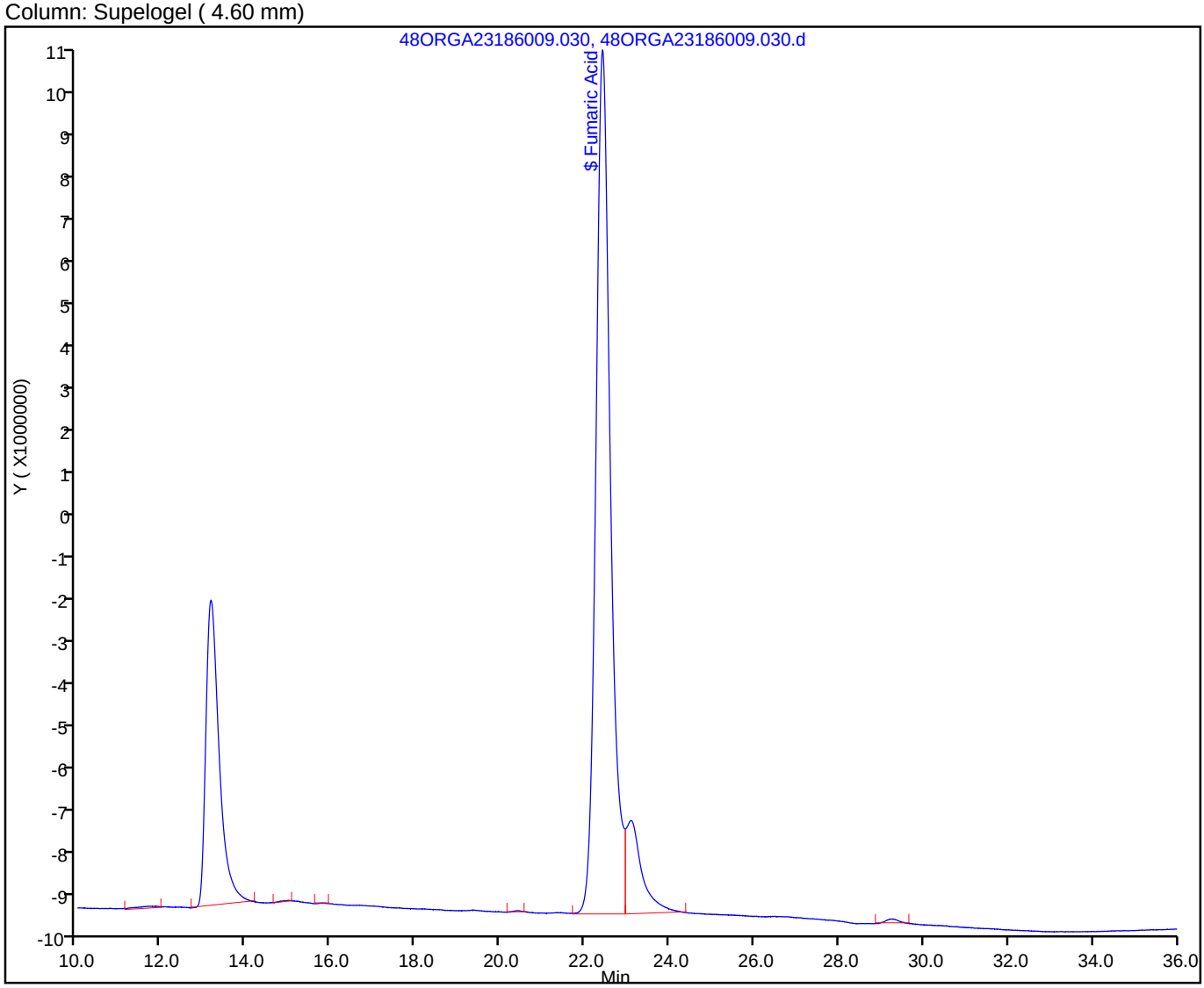
Client ID:

Operator ID: 2027 ALS Bottle#: 0 Worklist Smp#: 30

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404646/31 Calibration Date: 08/05/2023 11:20

Instrument ID: 6854A Calib Start Date: 07/05/2023 19:48

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 00:06

Lab File ID: 48ORGA23186009.031.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Oxalic Acid	Ave	6530954	6249612		12000	12600	-4.3	20.0
Citric Acid	Ave	471329	476165		50800	50300	1.0	20.0
Pyruvic Acid	Ave	3034278	3193889		13200	12600	5.3	20.0
Quinic Acid	Ave	246856	229639		47000	50500	-7.0	20.0
L-Lactic Acid	Ave	284209	285588		50400	50100	0.5	20.0
Formic-acid	Qua		377173		105000	101000	4.4	20.0
Acetic acid	Lin		216932		105000	100000	4.7	20.0
Propionic acid	Ave	162814	181200		111000	100000	11.3	20.0
Butyric acid	Qua		141727		104000	100000	4.2	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404646/31 Calibration Date: 08/05/2023 11:20

Instrument ID: 6854A Calib Start Date: 07/05/2023 19:48

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 00:06

Lab File ID: 48ORGA23186009.031.d

Analyte	RT	RT WINDOW	
		FROM	TO
Oxalic Acid	13.85	13.76	13.96
Citric Acid	15.53	15.39	15.69
Pyruvic Acid	16.67	16.58	16.78
Quinic Acid	17.35	17.27	17.47
L-Lactic Acid	19.37	19.29	19.49
Formic-acid	20.42	20.33	20.53
Acetic acid	21.36	21.27	21.47
Propionic acid	23.40	23.32	23.52
Butyric acid	26.44	26.35	26.55

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.031.d
Lims ID: CCV ORGA
Client ID:
Sample Type: CCV
Inject. Date: 05-Aug-2023 11:20:00 ALS Bottle#: 0 Worklist Smp#: 31
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: CCV ORGA
Operator ID: 2027 Instrument ID: 6854A
Sublist: chrom-8015_6854AP*sub1

Method: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 07-Aug-2023 20:14:09 Calib Date: 27-Jul-2023 22:51:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1674

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid						
13.854	13.862	-0.008	78432625H	12.6	12.0	
2 Citric Acid						
15.525	15.541	-0.016	23951111H	50.3	50.8	
4 Pyruvic Acid						
16.672	16.684	-0.012	40179118H	12.6	13.2	
5 Quinic Acid						
17.351	17.367	-0.016	11592173H	50.5	47.0	
7 L-Lactic Acid						
19.374	19.390	-0.016	14310823H	50.1	50.4	
8 Formic-acid						
20.421	20.433	-0.012	37905905H	100.5	104.9	
9 Acetic acid						
21.364	21.372	-0.008	21743130H	100.2	105.0	
11 Propionic acid						
23.403	23.415	-0.012	18120040H	100.0	111.3	
13 n-Butyric Acid						
26.441	26.453	-0.012	14193968H	100.2	104.4	

Reagents:

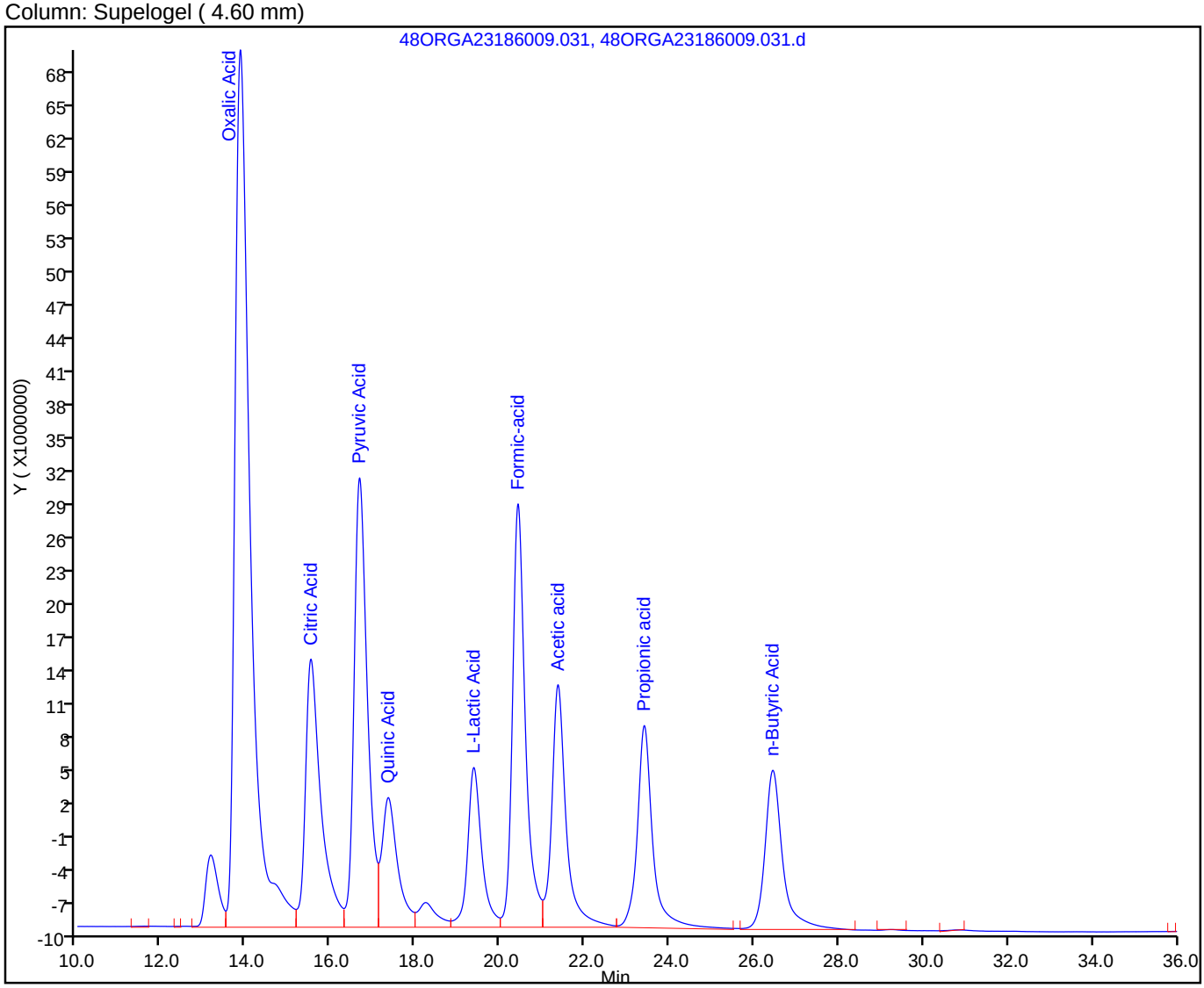
GCS_ORGA3_00028 Amount Added: 1.00 Units: mL

Report Date: 07-Aug-2023 20:14:10 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.031.d				
Injection Date:	05-Aug-2023 11:20:00	Instrument ID:	6854A		
Lims ID:	CCV ORGA				
Client ID:					
Operator ID:	2027	ALS Bottle#:	0	Worklist Smp#:	31
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404646/32 Calibration Date: 08/05/2023 12:03

Instrument ID: 6854A Calib Start Date: 07/06/2023 02:14

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 05:06

Lab File ID: 48ORGA23186009.032.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tartaric Acid	Ave	633287	660495		52400	50300	4.3	20.0
Succinic Acid	Ave	225583	225337		50200	50300	-0.1	20.0
Isobutyric acid	Ave	206039	207579		101000	101000	0.7	20.0
Isovaleric acid	Ave	123399	125142		101000	100000	1.4	20.0
Valeric acid	Ave	86377	88007		102000	100000	1.9	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404646/32 Calibration Date: 08/05/2023 12:03

Instrument ID: 6854A Calib Start Date: 07/06/2023 02:14

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 05:06

Lab File ID: 48ORGA23186009.032.d

Analyte	RT	RT WINDOW	
		FROM	TO
Tartaric Acid	16.08	15.99	16.19
Succinic Acid	19.24	19.20	19.30
Isobutyric acid	25.02	24.93	25.13
Isovaleric acid	28.94	28.72	29.16
Valeric acid	33.57	33.29	33.89

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.032.d				
Lims ID:	CCV ORGB				
Client ID:					
Sample Type:	CCV				
Inject. Date:	05-Aug-2023 12:03:00	ALS Bottle#:	0	Worklist Smp#:	32
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCV ORGB				
Operator ID:	2027	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub3				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:14:10	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1674				

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid						
16.080	16.088	-0.008	33209709H	50.3	52.4	
6 Succinic Acid						
19.242	19.250	-0.008	11329938H	50.3	50.2	
12 Isobutyric acid						
25.022	25.026	-0.004	20882401H	100.6	101.4	
14 Isovaleric acid						
28.939	28.943	-0.004	12514186H	100.0	101.4	
15 Valeric acid						
33.571	33.587	-0.016	8835923H	100.4	102.3	

Reagents:

GCS_ORGB3_00022 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 07-Aug-2023 20:14:10 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.032.d

Injection Date: 05-Aug-2023 12:03:00 Instrument ID: 6854A

Lims ID: CCV ORGB

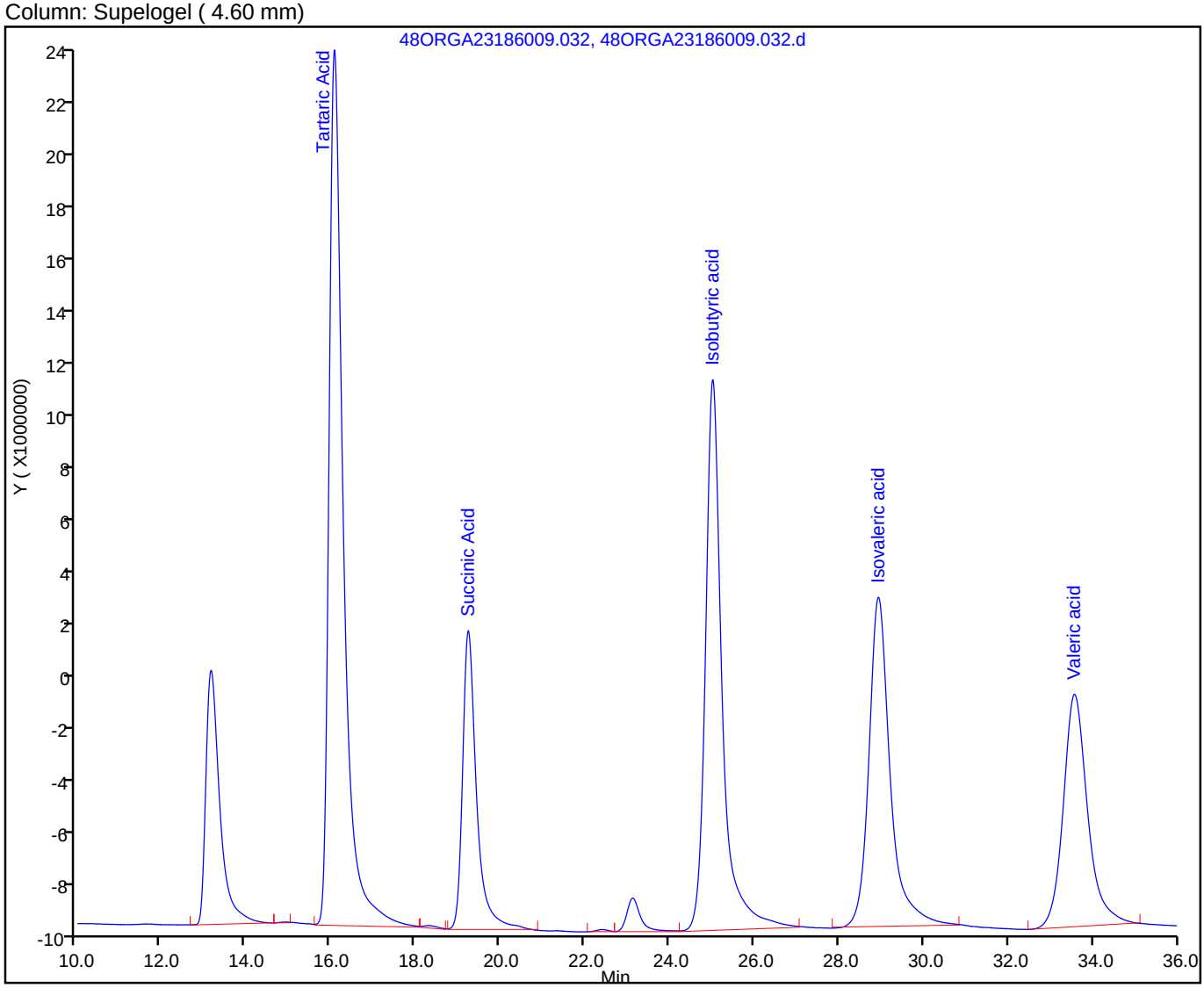
Client ID:

Operator ID: 2027 ALS Bottle#: 0 Worklist Smp#: 32

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404646/41 Calibration Date: 08/05/2023 18:30

Instrument ID: 6854A Calib Start Date: 07/27/2023 19:59

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/27/2023 22:51

Lab File ID: 48ORGA23186009.041.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fumaric Acid	Ave	39434091	36731779		458	492	-6.9	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404646/41 Calibration Date: 08/05/2023 18:30

Instrument ID: 6854A Calib Start Date: 07/27/2023 19:59

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/27/2023 22:51

Lab File ID: 48ORGA23186009.041.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fumaric Acid	22.51	22.26	22.62

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.041.d				
Lims ID:	CCV ORGS				
Client ID:					
Sample Type:	CCV				
Inject. Date:	05-Aug-2023 18:30:00	ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCV ORGS				
Operator ID:	2027	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub4				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:14:35	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1674				
First Level Reviewer: UHEW		Date:	07-Aug-2023 19:59:09		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 10 Fumaric Acid						M
22.508	22.436	0.072	18073137H	0.4920	0.4583	M

QC Flag Legend

Processing Flags

H - Response Measured by Height

Review Flags

M - Manually Integrated

Reagents:

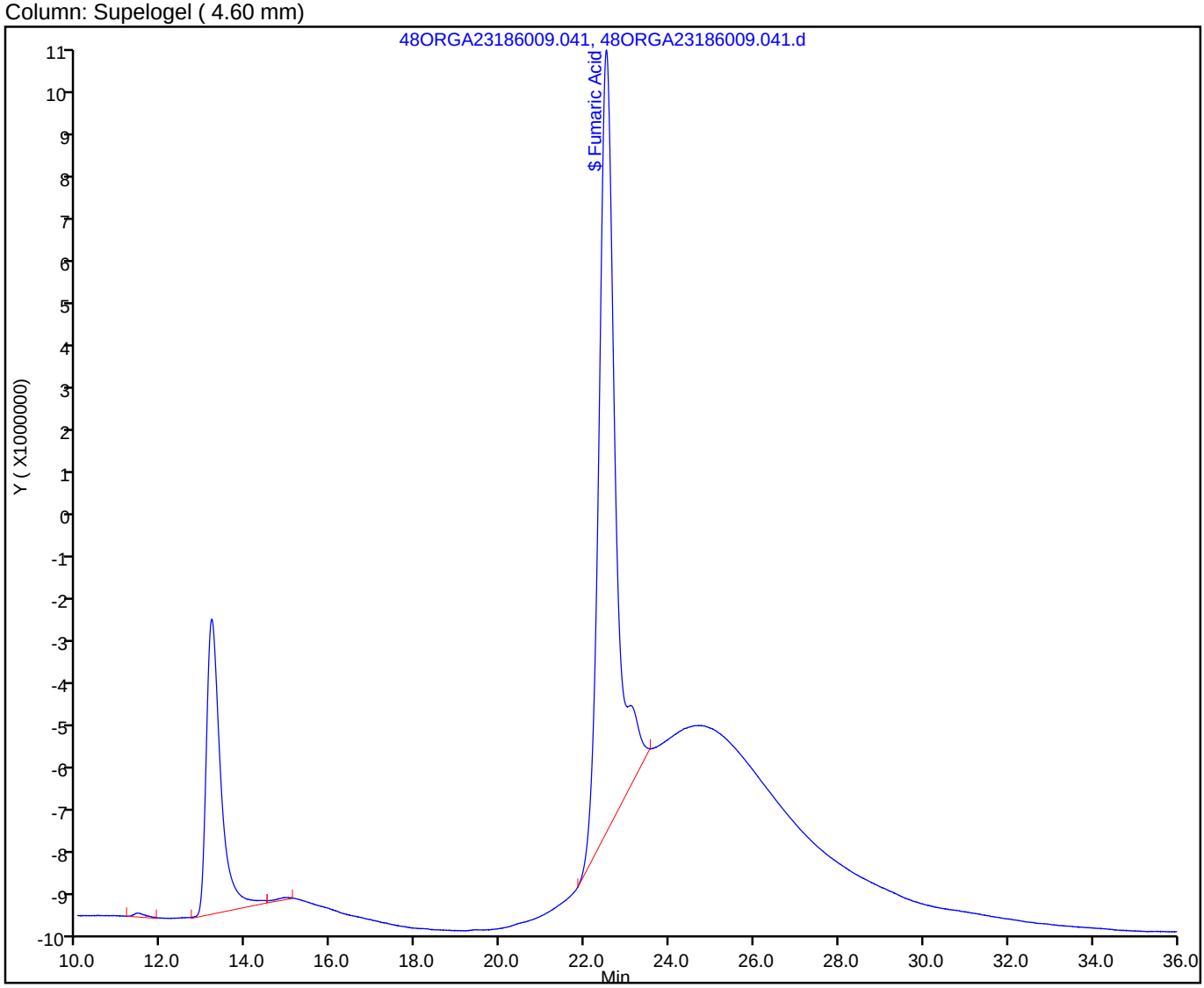
GCS_ORGS3_00049 Amount Added: 1.00 Units: mL

Report Date: 07-Aug-2023 20:14:35 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.041.d				
Injection Date:	05-Aug-2023 18:30:00	Instrument ID:	6854A		
Lims ID:	CCV ORGS				
Client ID:					
Operator ID:	2027	ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Eurofins Lancaster Laboratories Environment Testing, LLC

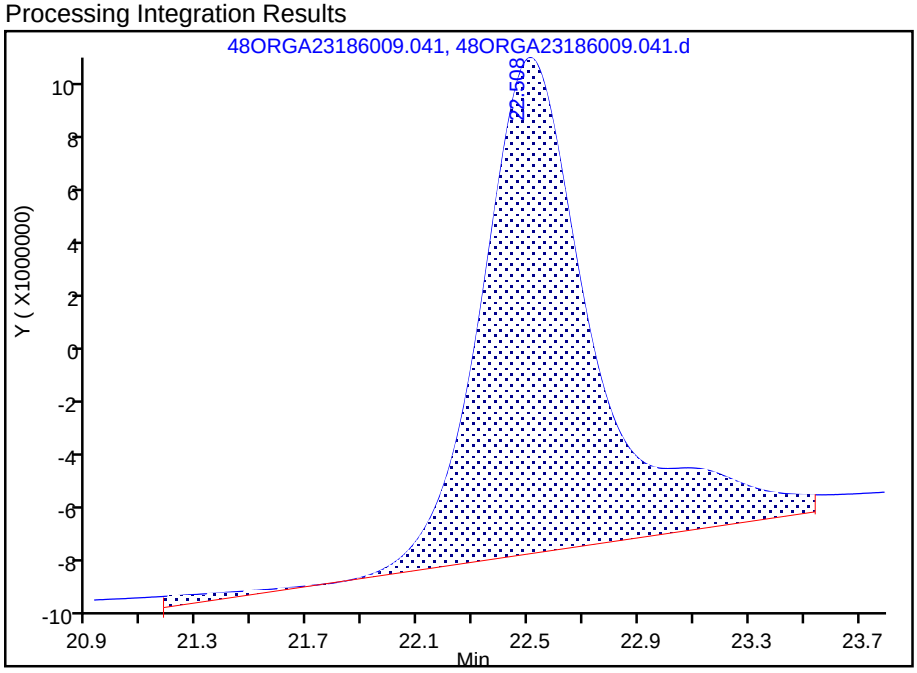
Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.041.d				
Injection Date:	05-Aug-2023 18:30:00	Instrument ID:	6854A		
Lims ID:	CCV ORGS				
Client ID:					
Operator ID:	2027	ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		
Column:	Supelogel (4.60 mm)	Detector	SupelcogelH		

$ 10 Fumaric Acid, CAS: 110-17-8

Signal: 1

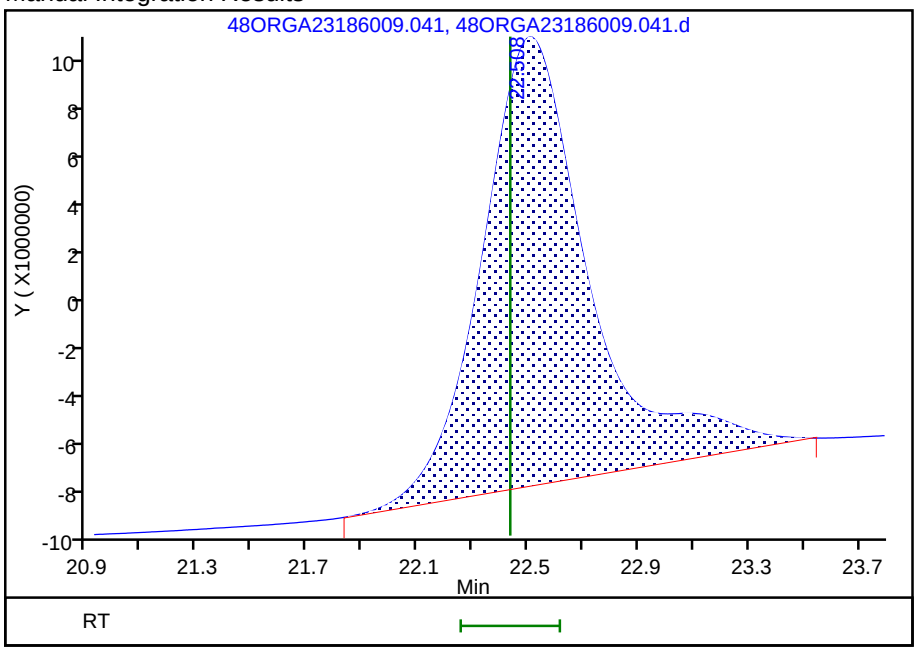
Processing Integration Results

RT: 22.51
Height: 18328714
Amount: 0.464794
Amount Units: ug/ml



Manual Integration Results

RT: 22.51
Height: 18073137
Amount: 0.458313
Amount Units: ug/ml



Reviewer: UHEW, 07-Aug-2023 19:59:05 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Assign Peak

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404646/42 Calibration Date: 08/05/2023 19:13

Instrument ID: 6854A Calib Start Date: 07/05/2023 19:48

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 00:06

Lab File ID: 48ORGA23186009.042.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Oxalic Acid	Ave	6530954	5735909		11000	12600	-12.2	20.0
Citric Acid	Ave	471329	461609		49300	50300	-2.1	20.0
Pyruvic Acid	Ave	3034278	3051441		12700	12600	0.6	20.0
Quinic Acid	Ave	246856	218721		44700	50500	-11.4	20.0
L-Lactic Acid	Ave	284209	269127		47500	50100	-5.3	20.0
Formic-acid	Qua		353453		98800	101000	-1.7	20.0
Acetic acid	Lin		202514		98300	100000	-1.9	20.0
Propionic acid	Ave	162814	166994		103000	100000	2.6	20.0
Butyric acid	Qua		130221		96400	100000	-3.7	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404646/42 Calibration Date: 08/05/2023 19:13

Instrument ID: 6854A Calib Start Date: 07/05/2023 19:48

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 00:06

Lab File ID: 48ORGA23186009.042.d

Analyte	RT	RT WINDOW	
		FROM	TO
Oxalic Acid	13.89	13.76	13.96
Citric Acid	15.57	15.39	15.69
Pyruvic Acid	16.70	16.58	16.78
Quinic Acid	17.40	17.27	17.47
L-Lactic Acid	19.42	19.29	19.49
Formic-acid	20.46	20.33	20.53
Acetic acid	21.40	21.27	21.47
Propionic acid	23.44	23.32	23.52
Butyric acid	26.49	26.35	26.55

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.042.d
Lims ID: CCV ORGA
Client ID:
Sample Type: CCV
Inject. Date: 05-Aug-2023 19:13:00 ALS Bottle#: 0 Worklist Smp#: 42
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: CCV ORGA
Operator ID: 2027 Instrument ID: 6854A
Sublist: chrom-8015_6854AP*sub1

Method: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 07-Aug-2023 20:14:35 Calib Date: 27-Jul-2023 22:51:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1674

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid						
13.886	13.862	0.024	71985664H	12.6	11.0	
2 Citric Acid						
15.565	15.541	0.024	23218923H	50.3	49.3	
4 Pyruvic Acid						
16.704	16.684	0.020	38387123H	12.6	12.7	
5 Quinic Acid						
17.399	17.367	0.032	11041027H	50.5	44.7	
7 L-Lactic Acid						
19.422	19.390	0.032	13485975H	50.1	47.5	
8 Formic-acid						
20.457	20.433	0.024	35522016H	100.5	98.8	
9 Acetic acid						
21.400	21.372	0.028	20297991H	100.2	98.3	
11 Propionic acid						
23.439	23.415	0.024	16699370H	100.0	102.6	
13 n-Butyric Acid						
26.493	26.453	0.040	13041604H	100.2	96.4	

Reagents:

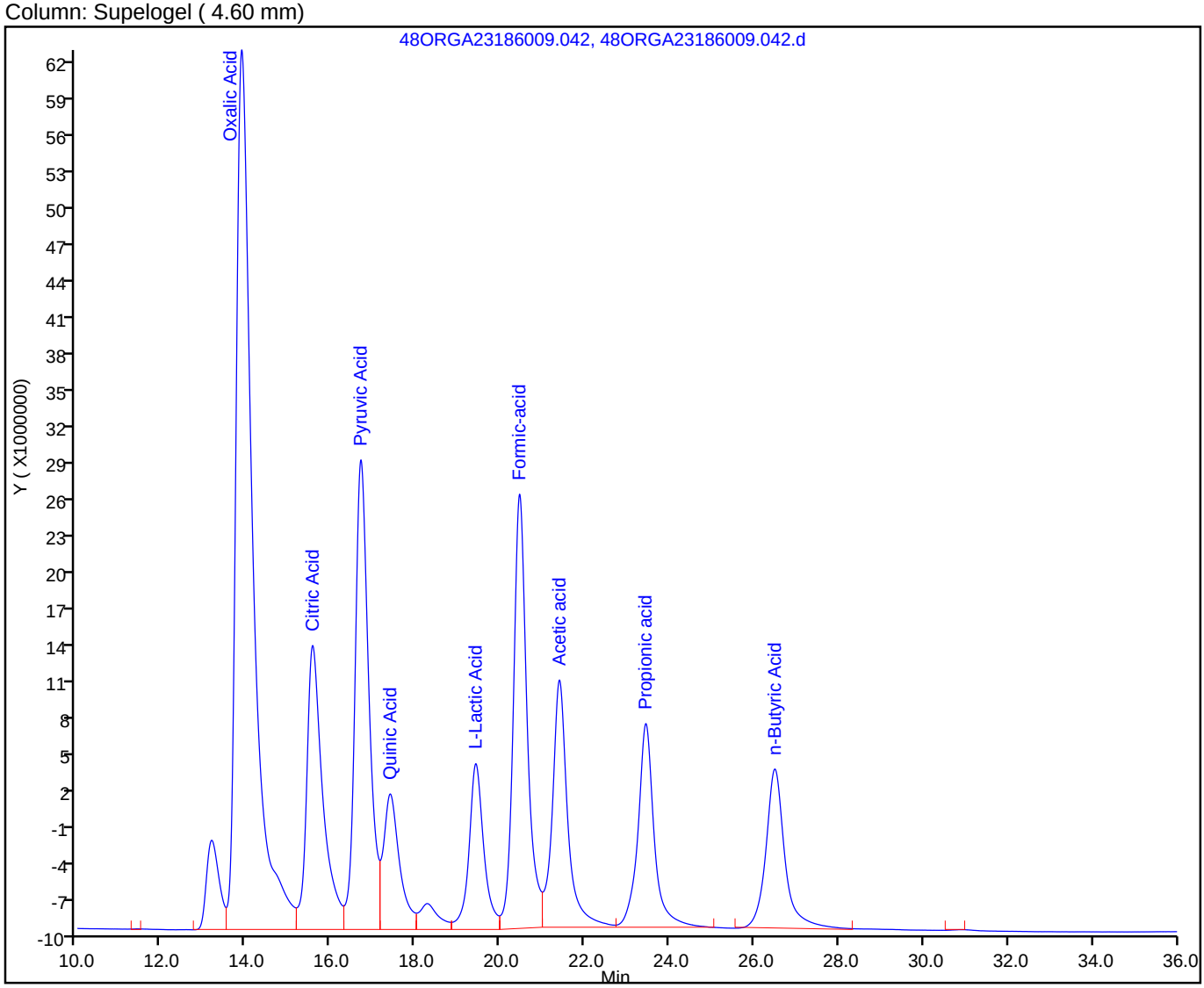
GCS_ORGA3_00028 Amount Added: 1.00 Units: mL

Report Date: 07-Aug-2023 20:14:35 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.042.d				
Injection Date:	05-Aug-2023 19:13:00	Instrument ID:	6854A		
Lims ID:	CCV ORGA				
Client ID:					
Operator ID:	2027	ALS Bottle#:	0	Worklist Smp#:	42
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404646/43 Calibration Date: 08/05/2023 19:56

Instrument ID: 6854A Calib Start Date: 07/06/2023 02:14

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 05:06

Lab File ID: 48ORGA23186009.043.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tartaric Acid	Ave	633287	635635		50500	50300	0.4	20.0
Succinic Acid	Ave	225583	210742		47000	50300	-6.6	20.0
Isobutyric acid	Ave	206039	195664		95500	101000	-5.0	20.0
Isovaleric acid	Ave	123399	117013		94800	100000	-5.2	20.0
Valeric acid	Ave	86377	79667		92600	100000	-7.8	20.0

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Lab Sample ID: CCV 410-404646/43 Calibration Date: 08/05/2023 19:56

Instrument ID: 6854A Calib Start Date: 07/06/2023 02:14

GC Column: Supelcogel ID: 4.60(mm) Calib End Date: 07/06/2023 05:06

Lab File ID: 48ORGA23186009.043.d

Analyte	RT	RT WINDOW	
		FROM	TO
Tartaric Acid	16.14	15.99	16.19
Succinic Acid	19.30	19.20	19.30
Isobutyric acid	25.07	24.93	25.13
Isovaleric acid	29.00	28.72	29.16
Valeric acid	33.66	33.29	33.89

Report Date: 07-Aug-2023 20:14:36 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.043.d				
Lims ID:	CCV ORGB				
Client ID:					
Sample Type:	CCV				
Inject. Date:	05-Aug-2023 19:56:00	ALS Bottle#:	0	Worklist Smp#:	43
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCV ORGB				
Operator ID:	2027	Instrument ID:	6854A		
Sublist:	chrom-8015_6854AP*sub3				
Method:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:14:36	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1674				
First Level Reviewer: UHEW		Date:	07-Aug-2023 19:59:17		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid						
16.144	16.088	0.056	31959709H	50.3	50.5	
6 Succinic Acid						a
19.302	19.250	0.052	10596098H	50.3	47.0	a
12 Isobutyric acid						
25.074	25.026	0.048	19683771H	100.6	95.5	
14 Isovaleric acid						
29.003	28.943	0.060	11701304H	100.0	94.8	
15 Valeric acid						
33.659	33.587	0.072	7998567H	100.4	92.6	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Review Flags

a - User Assigned ID

Reagents:

GCS_ORGB3_00022 Amount Added: 1.00 Units: mL

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 07-Aug-2023 20:14:36 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.043.d

Injection Date: 05-Aug-2023 19:56:00 Instrument ID: 6854A

Lims ID: CCV ORGB

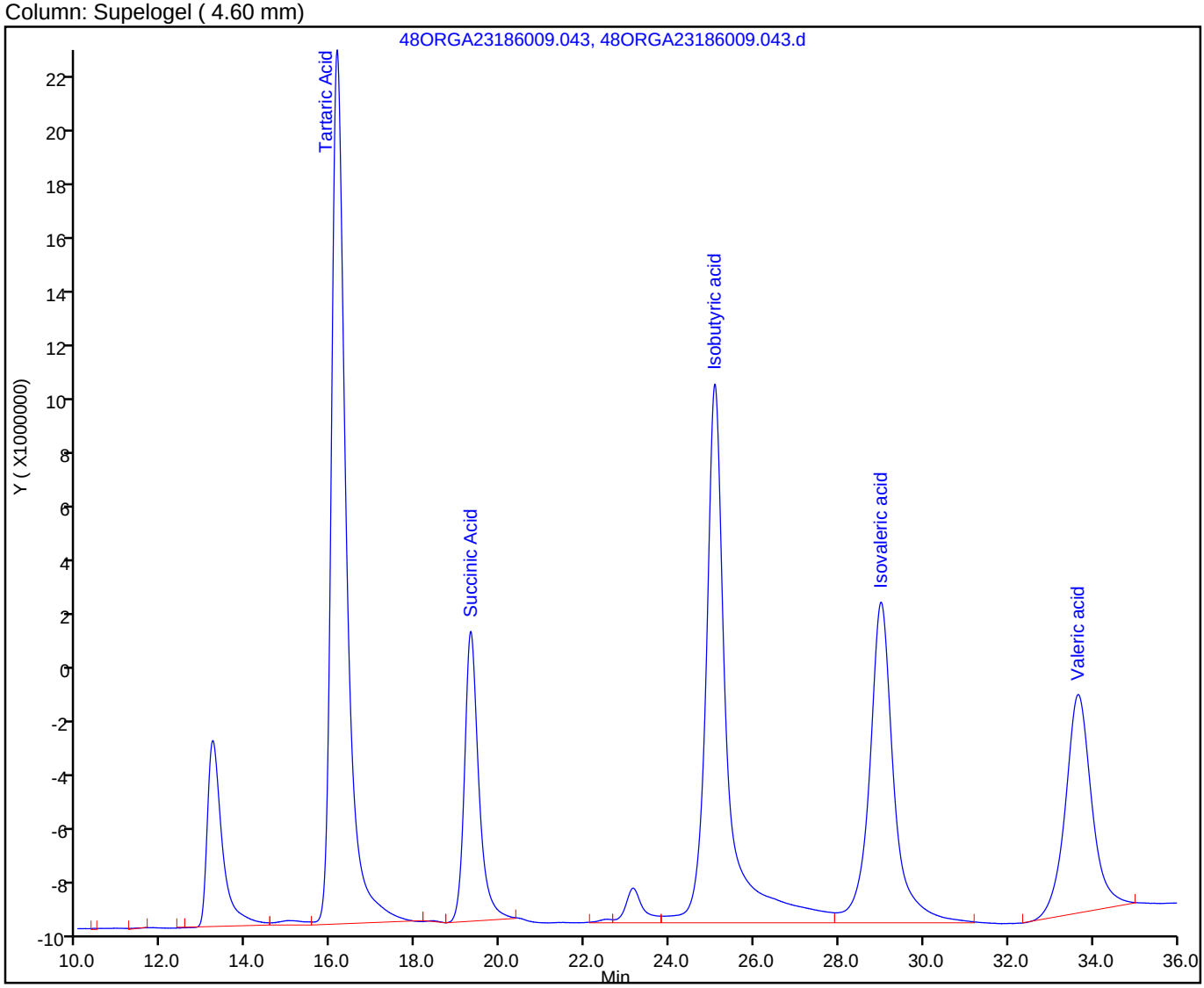
Client ID:

Operator ID: 2027 ALS Bottle#: 0 Worklist Smp#: 43

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Report Date: 07-Aug-2023 20:14:36 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

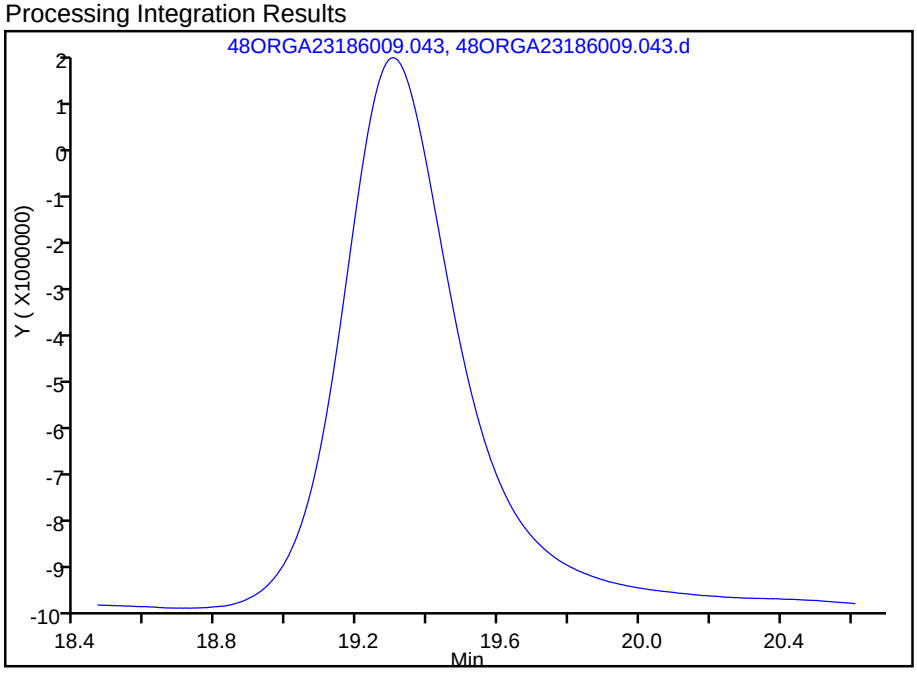
Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.043.d				
Injection Date:	05-Aug-2023 19:56:00	Instrument ID:	6854A		
Lims ID:	CCV ORGB				
Client ID:					
Operator ID:	2027	ALS Bottle#:	0	Worklist Smp#:	43
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		
Column:	Supelogel (4.60 mm)	Detector	SupelcogelH		

6 Succinic Acid, CAS: 110-15-6

Signal: 1

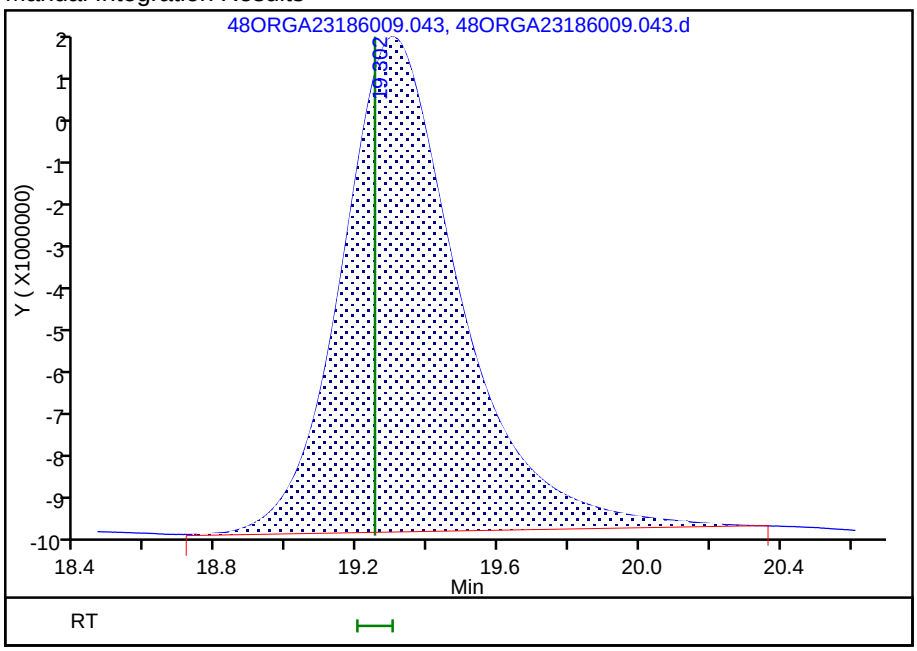
Not Detected
Expected RT: 19.25

Processing Integration Results



Manual Integration Results

RT: 19.30
Height: 10596098
Amount: 46.972033
Amount Units: ug/ml



Reviewer: UHEW, 07-Aug-2023 19:59:14 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136647-1

SDG No.:

Client Sample ID:
Lab Sample ID: MB 410-404256/1-A

Matrix: Water
Lab File ID: 11ORGC23193008.007.d

Analysis Method: 8015D VFA
Date Collected:

Extraction Method: 8015 VFA
Date Extracted: 08/03/2023 17:57

Sample wt/vol: 1(mL)
Date Analyzed: 08/04/2023 16:55

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 50(uL)
GC Column: Supelcosil PAH ID: 4.6(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 404643
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-09-4	Propionic acid	ND		10000	2000

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-17-8	Fumaric Acid	100		68-139

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.007.d				
Lims ID:	MB 410-404256/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	04-Aug-2023 16:55:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	MB 410-404256/1-A				
Operator ID:	24470	Instrument ID:	10136		
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:08:28	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid	3.704	3.725	-0.021	1079808H		-0.5303	
$ 10 Fumaric Acid	10.629	10.600	0.029	6239061H	0.4920	0.4942	
11 Propionic acid	12.946	12.913	0.034	179141H		1.57	
13 Isobutyric acid	14.650	14.600	0.050	979123H		0.7114	
14 Isovaleric acid	15.788	15.813	-0.024	3132891H		14.4	
15 Valeric acid	16.054	15.983	0.071	34488H		0.3375	

Report Date: 07-Aug-2023 20:08:29 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.007.d

Injection Date: 04-Aug-2023 16:55:00 Instrument ID: 10136

Lims ID: MB 410-404256/1-A

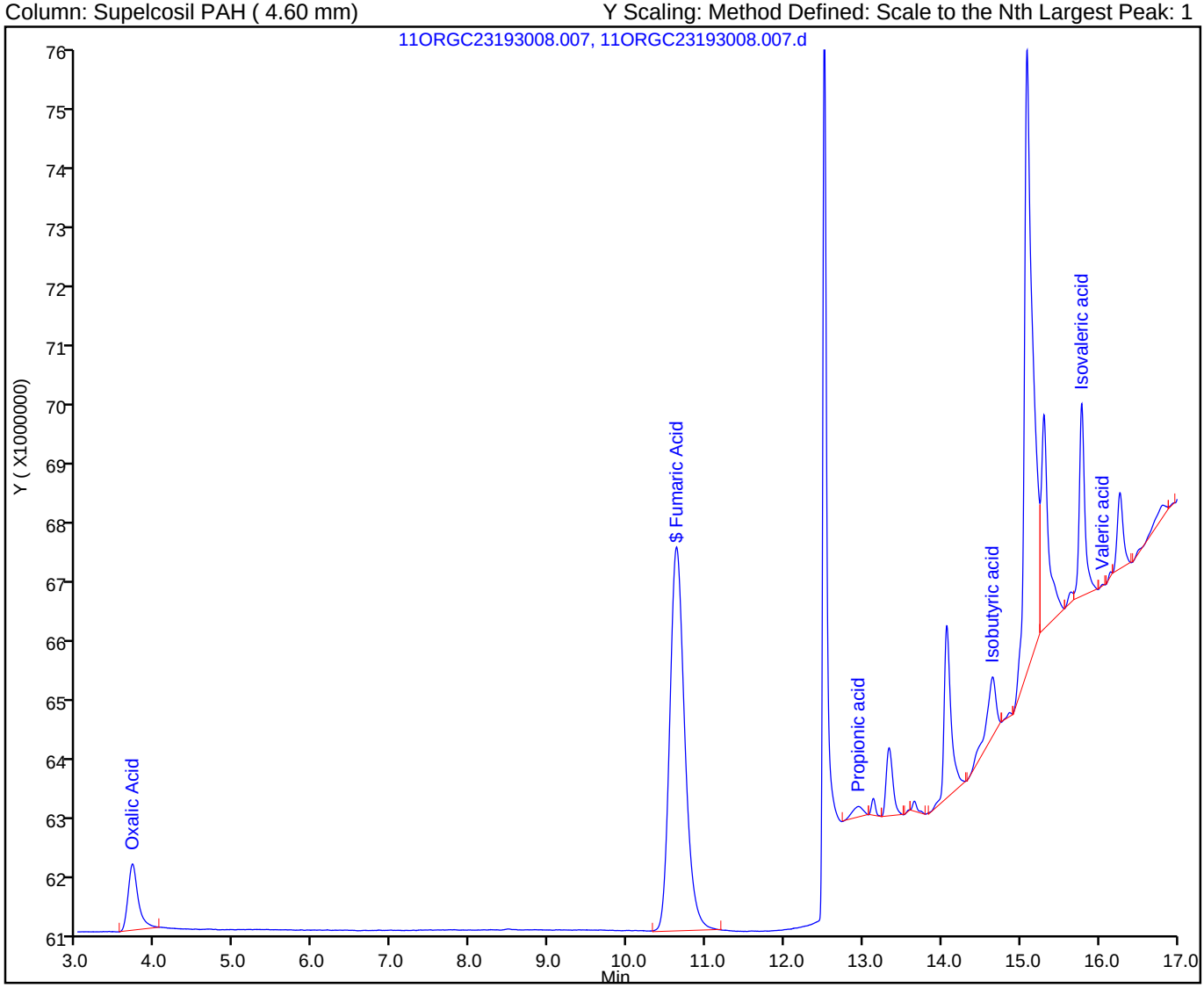
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 7

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 07-Aug-2023 20:08:29 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.007.d				
Lims ID:	MB 410-404256/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	04-Aug-2023 16:55:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	MB 410-404256/1-A				
Operator ID:	24470	Instrument ID:	10136		
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:08:28	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 Fumaric Acid	0.4920	0.4942	100.45

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136647-1

SDG No.:

Client Sample ID:
Lab Sample ID: MB 410-404256/1-A

Matrix: Water
Lab File ID: 48ORGA23186009.007.d

Analysis Method: 8015D VFA
Date Collected:

Extraction Method: 8015 VFA
Date Extracted: 08/03/2023 17:57

Sample wt/vol: 1(mL)
Date Analyzed: 08/04/2023 18:09

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 40(uL)
GC Column: Supelcogel ID: 4.6(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 404646
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
64-19-7	Acetic acid	ND		10000	3200
107-92-6	Butyric acid	ND		10000	2000
77-92-9	Citric Acid	ND		5000	1000
64-18-6	Formic-acid	ND		10000	2000
503-74-2	Isovaleric acid	ND		7100	3500
79-33-4	L-Lactic Acid	ND		5000	1000
144-62-7	Oxalic Acid	ND		1300	250
127-17-3	Pyruvic Acid	ND		1300	250
77-95-2	Quinic Acid	ND		5000	2400
110-15-6	Succinic Acid	ND		2500	1000
87-69-4	Tartaric Acid	ND		2500	1000
109-52-4	Valeric acid	ND		5000	2000

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-17-8	Fumaric Acid	102		68-139

Report Date: 07-Aug-2023 20:06:37 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.007.d				
Lims ID:	MB 410-404256/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	04-Aug-2023 18:09:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	MB 410-404256/1-A				
Operator ID:	2027	Instrument ID:	6854A		
Method:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:06:37	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1674				

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	7 L-Lactic Acid						
	19.358	19.390	-0.032	15888H		0.0559	
$	10 Fumaric Acid						
	22.440	22.436	0.004	19777195H	0.4920	0.5015	
	14 Isovaleric acid						
	28.727	28.943	-0.216	21971H		0.1780	
	15 Valeric acid						
	33.623	33.587	0.036	9503H		0.1100	

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 07-Aug-2023 20:06:37 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.007.d

Injection Date: 04-Aug-2023 18:09:00 Instrument ID: 6854A

Lims ID: MB 410-404256/1-A

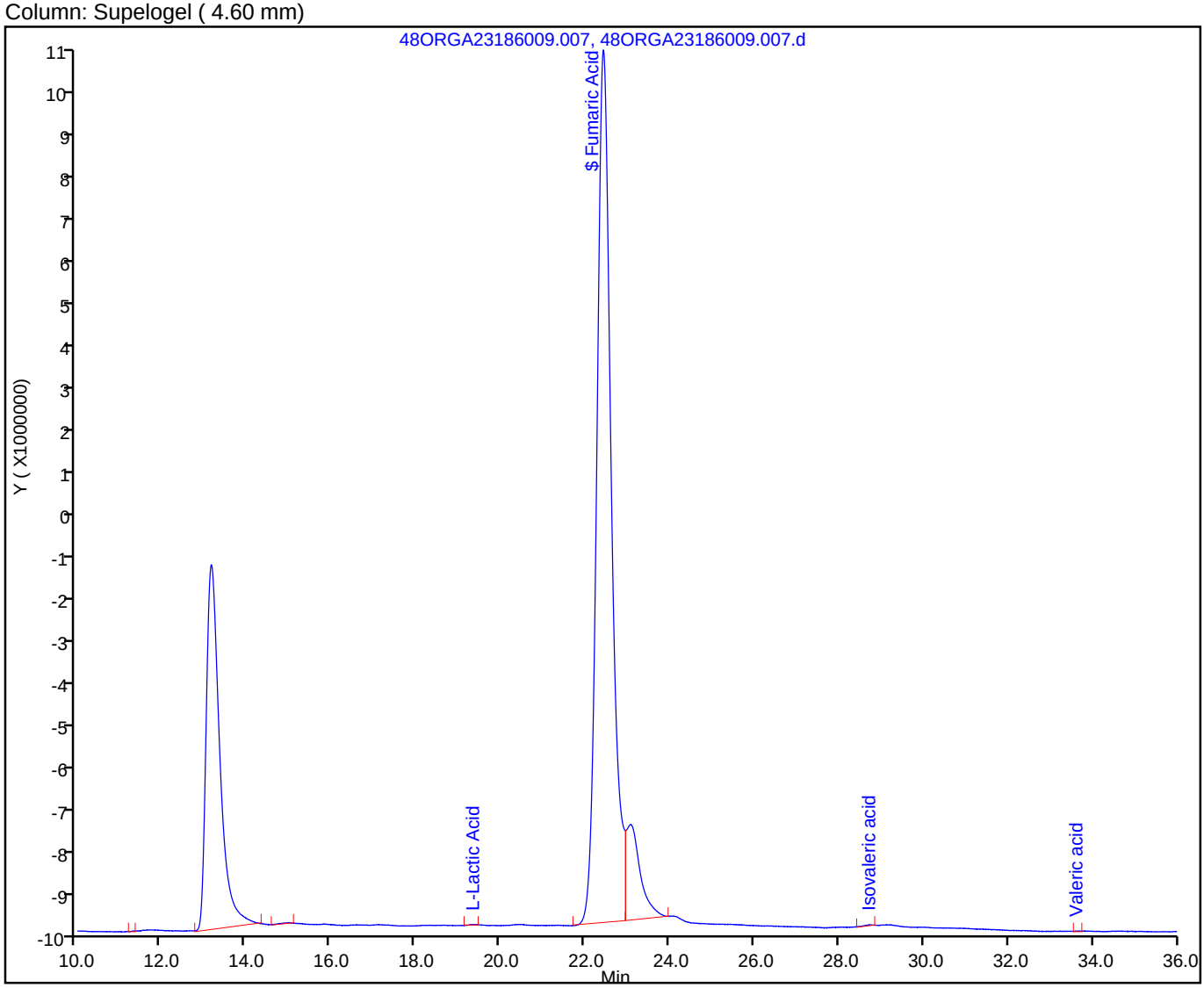
Client ID:

Operator ID: 2027 ALS Bottle#: 0 Worklist Smp#: 7

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Report Date: 07-Aug-2023 20:06:37 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.007.d				
Lims ID:	MB 410-404256/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	04-Aug-2023 18:09:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	MB 410-404256/1-A				
Operator ID:	2027	Instrument ID:	6854A		
Method:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:06:37	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1674				

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 Fumaric Acid	0.4920	0.5015	101.93

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136647-1

SDG No.:

Client Sample ID:
Lab Sample ID: LCS 410-404256/2-A

Matrix: Water
Lab File ID: 11ORGC23193008.008.d

Analysis Method: 8015D VFA
Date Collected:

Extraction Method: 8015 VFA
Date Extracted: 08/03/2023 17:57

Sample wt/vol: 1(mL)
Date Analyzed: 08/04/2023 17:26

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 50(uL)
GC Column: Supelcosil PAH ID: 4.6(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 404643
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
503-74-2	Isovaleric acid	107000		7100	3500
110-15-6	Succinic Acid	49900		2500	1000
87-69-4	Tartaric Acid	51100		2500	1000
109-52-4	Valeric acid	110000		5000	2000

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-17-8	Fumaric Acid	97		68-139

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.008.d
Lims ID: LCS 410-404256/2-A
Client ID:
Sample Type: LCS
Inject. Date: 04-Aug-2023 17:26:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 50.0 ul Dil. Factor: 1.0000
Sample Info: LCS 410-404256/2-A
Operator ID: 24470 Instrument ID: 10136

Method: \\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m
Limit Group: LC - 8015D VFA
Last Update: 07-Aug-2023 20:08:28 Calib Date: 13-Jul-2023 06:13:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d

Column 1 : Supelcosil PAH (4.60 mm) Det: UV0
Process Host: CTX1674

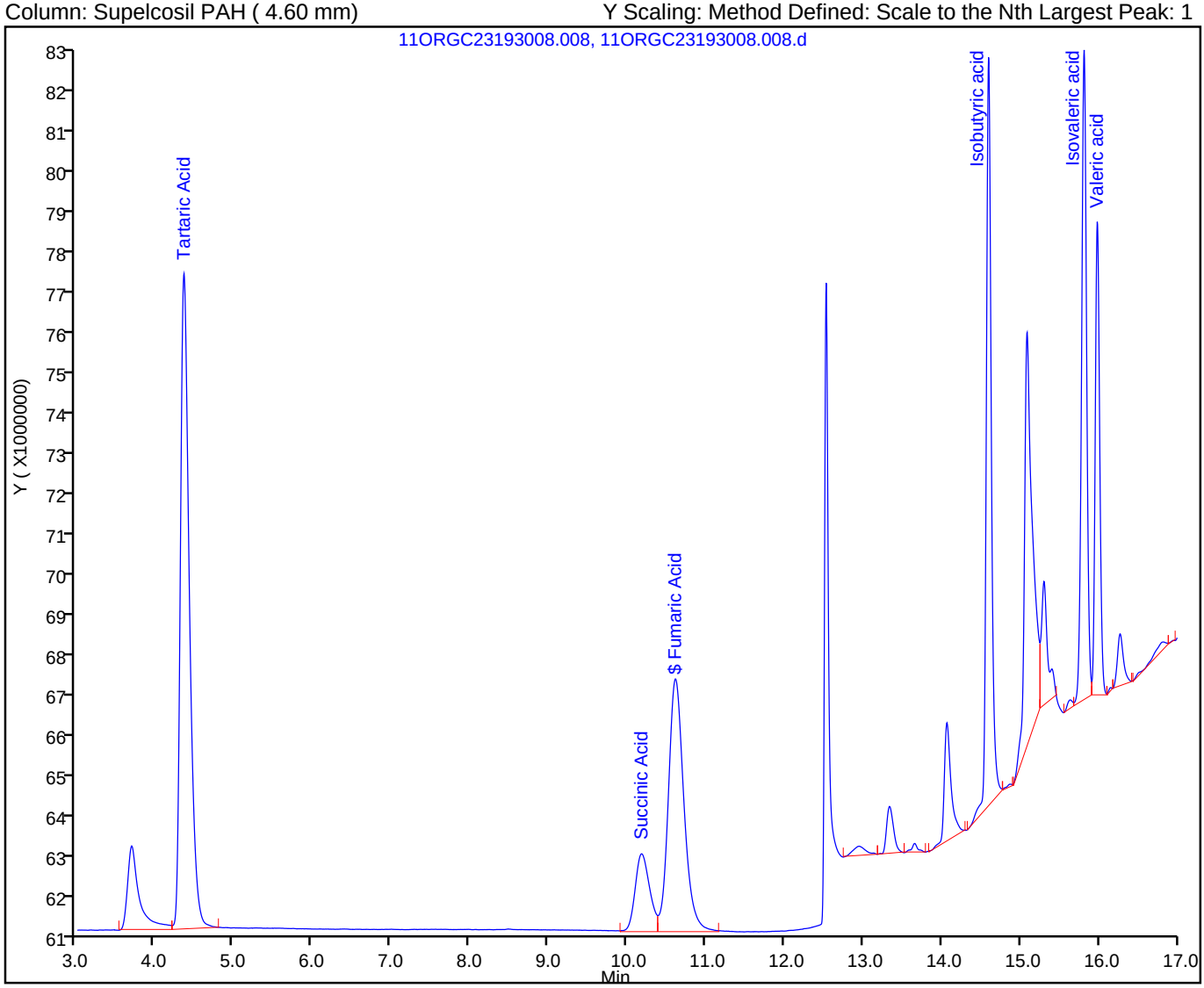
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 Tartaric Acid	4.358	4.354	0.004	15612314H	50.0	51.1	
9 Succinic Acid	10.183	10.179	0.004	1835669H	50.0	49.9	
$ 10 Fumaric Acid	10.613	10.600	0.012	6005164H	0.4920	0.4757	
13 Isobutyric acid	14.600	14.600	0.000	17833258H	101.0	100.5	
14 Isovaleric acid	15.817	15.813	0.005	15485887H	100.4	107.0	
15 Valeric acid	15.983	15.983	0.000	11266977H	100.4	110.2	

Report Date: 07-Aug-2023 20:08:29 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.008.d				
Injection Date:	04-Aug-2023 17:26:00	Instrument ID:	10136		
Lims ID:	LCS 410-404256/2-A				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 07-Aug-2023 20:08:29 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.008.d				
Lims ID:	LCS 410-404256/2-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	04-Aug-2023 17:26:00	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCS 410-404256/2-A				
Operator ID:	24470	Instrument ID:	10136		
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:08:28	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 Fumaric Acid	0.4920	0.4757	96.68

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136647-1

SDG No.:

Client Sample ID:
Lab Sample ID: LCS 410-404256/2-A

Matrix: Water
Lab File ID: 48ORGA23186009.008.d

Analysis Method: 8015D VFA
Date Collected:

Extraction Method: 8015 VFA
Date Extracted: 08/03/2023 17:57

Sample wt/vol: 1(mL)
Date Analyzed: 08/04/2023 18:52

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 40(uL)
GC Column: Supelcogel ID: 4.6(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 404646
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
503-74-2	Isovaleric acid	98300		7100	3500
110-15-6	Succinic Acid	48100		2500	1000
87-69-4	Tartaric Acid	51400		2500	1000
109-52-4	Valeric acid	101000		5000	2000

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-17-8	Fumaric Acid	103		68-139

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.008.d
Lims ID: LCS 410-404256/2-A
Client ID:
Sample Type: LCS
Inject. Date: 04-Aug-2023 18:52:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: LCS 410-404256/2-A
Operator ID: 2027 Instrument ID: 6854A

Method: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 07-Aug-2023 20:06:37 Calib Date: 27-Jul-2023 22:51:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1674

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	3 Tartaric Acid						
	16.096	16.088	0.008	32560801H	50.0	51.4	
	6 Succinic Acid						
	19.262	19.250	0.012	10847442H	50.0	48.1	
$	10 Fumaric Acid						
	22.440	22.436	0.004	20016203H	0.4920	0.5076	
	12 Isobutyric acid						
	25.034	25.026	0.008	20487543H	101.0	99.4	
	14 Isovaleric acid						
	28.955	28.943	0.012	12134247H	100.4	98.3	
	15 Valeric acid						
	33.595	33.587	0.008	8751239H	100.4	101.3	

Report Date: 07-Aug-2023 20:06:38 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.008.d

Injection Date: 04-Aug-2023 18:52:00 Instrument ID: 6854A

Lims ID: LCS 410-404256/2-A

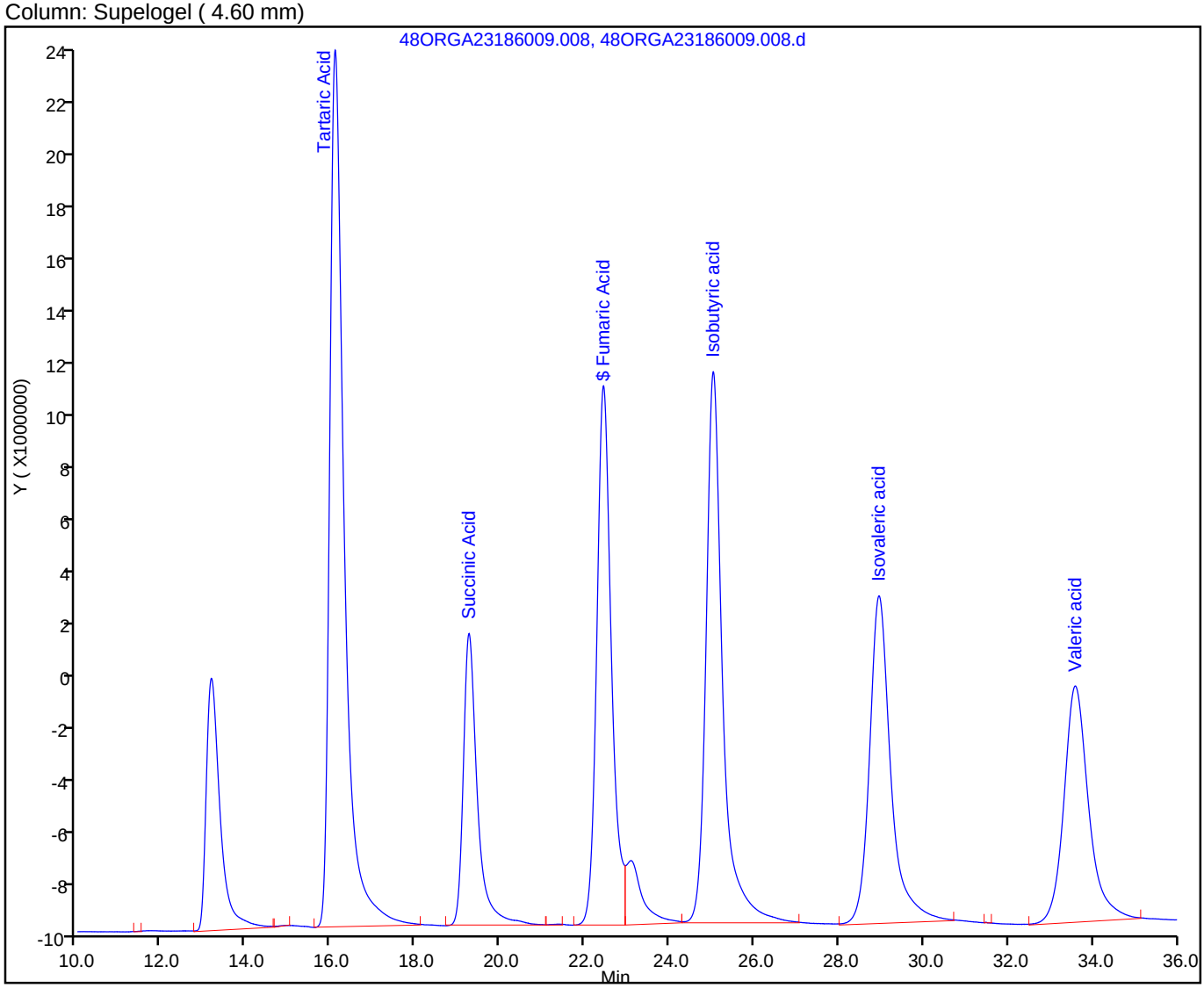
Client ID:

Operator ID: 2027 ALS Bottle#: 0 Worklist Smp#: 8

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Report Date: 07-Aug-2023 20:06:38 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.008.d				
Lims ID:	LCS 410-404256/2-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	04-Aug-2023 18:52:00	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCS 410-404256/2-A				
Operator ID:	2027	Instrument ID:	6854A		
Method:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:06:37	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1674				

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 Fumaric Acid	0.4920	0.5076	103.16

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136647-1

SDG No.:

Client Sample ID:
Lab Sample ID: LCS 410-404256/4-A

Matrix: Water
Lab File ID: 11ORGC23193008.010.d

Analysis Method: 8015D VFA
Date Collected:

Extraction Method: 8015 VFA
Date Extracted: 08/03/2023 17:57

Sample wt/vol: 1(mL)
Date Analyzed: 08/04/2023 18:28

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 50(uL)
GC Column: Supelcosil PAH ID: 4.6(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 404643
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-09-4	Propionic acid	108000		10000	2000

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-17-8	Fumaric Acid	100		68-139

Report Date: 07-Aug-2023 20:08:30 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.010.d				
Lims ID:	LCS 410-404256/4-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	04-Aug-2023 18:28:00	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCS 410-404256/4-A				
Operator ID:	24470	Instrument ID:	10136		
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:08:28	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				
First Level Reviewer: UHEW		Date:	07-Aug-2023 14:28:57		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Oxalic Acid	3.725	3.725	0.000	10508863H	12.6	7.22	
2 Quinic Acid	4.396	4.392	0.004	6492917H	50.3	48.5	
4 Formic-acid	4.671	4.671	0.000	18640754H	100.8	98.6	
5 Pyruvic Acid	5.279	5.279	0.000	7179871H	12.4	12.0	
6 L-Lactic Acid	6.358	6.354	0.004	3058971H	50.2	36.3	M
7 Acetic acid	6.958	6.954	0.004	5307725H	100.8	102.1	
8 Citric Acid	9.425	9.417	0.008	6181447H	50.0	53.4	
$ 10 Fumaric Acid	10.617	10.600	0.017	6231651H	0.4920	0.4936	
11 Propionic acid	12.904	12.913	-0.008	12376542H	101.0	108.3	
12 n-Butyric Acid	14.575	14.579	-0.004	12791325H	101.0	98.7	

QC Flag Legend

Processing Flags

H - Response Measured by Height

Review Flags

M - Manually Integrated

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 07-Aug-2023 20:08:30 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.010.d

Injection Date: 04-Aug-2023 18:28:00 Instrument ID: 10136

Lims ID: LCS 410-404256/4-A

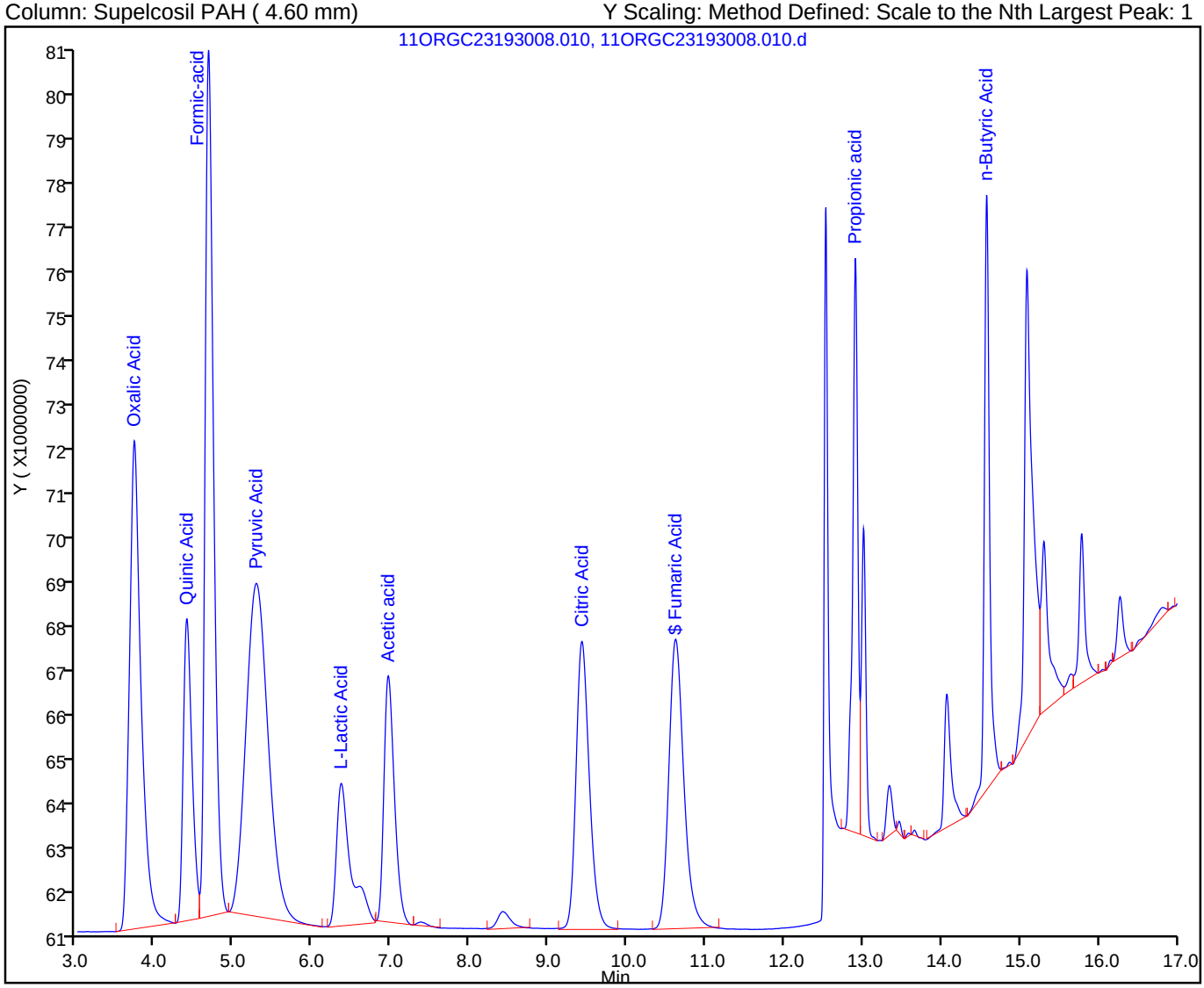
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 10

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Report Date: 07-Aug-2023 20:08:30 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.010.d				
Lims ID:	LCS 410-404256/4-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	04-Aug-2023 18:28:00	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCS 410-404256/4-A				
Operator ID:	24470	Instrument ID:	10136		
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:08:28	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				

First Level Reviewer: UHEW Date: 07-Aug-2023 14:28:57

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 Fumaric Acid	0.4920	0.4936	100.33

Eurofins Lancaster Laboratories Environment Testing, LLC

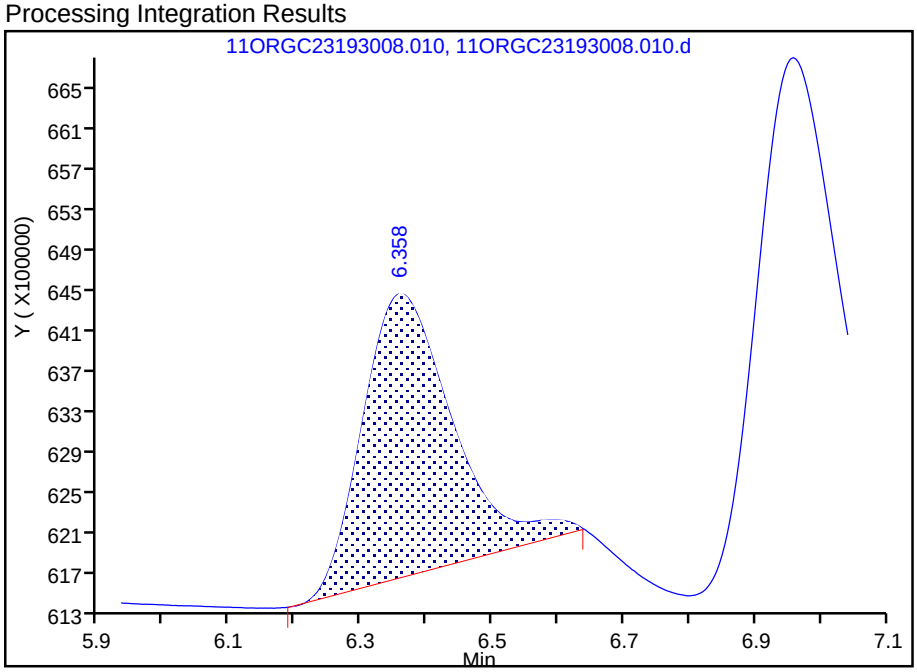
Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.010.d				
Injection Date:	04-Aug-2023 18:28:00	Instrument ID:	10136		
Lims ID:	LCS 410-404256/4-A				
Client ID:					
Operator ID:	24470	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	8015_10136	Limit Group:	LC - 8015D VFA		
Column:	Supelcosil PAH (4.60 mm)	Detector	UV0		

6 L-Lactic Acid, CAS: 79-33-4

Signal: 1

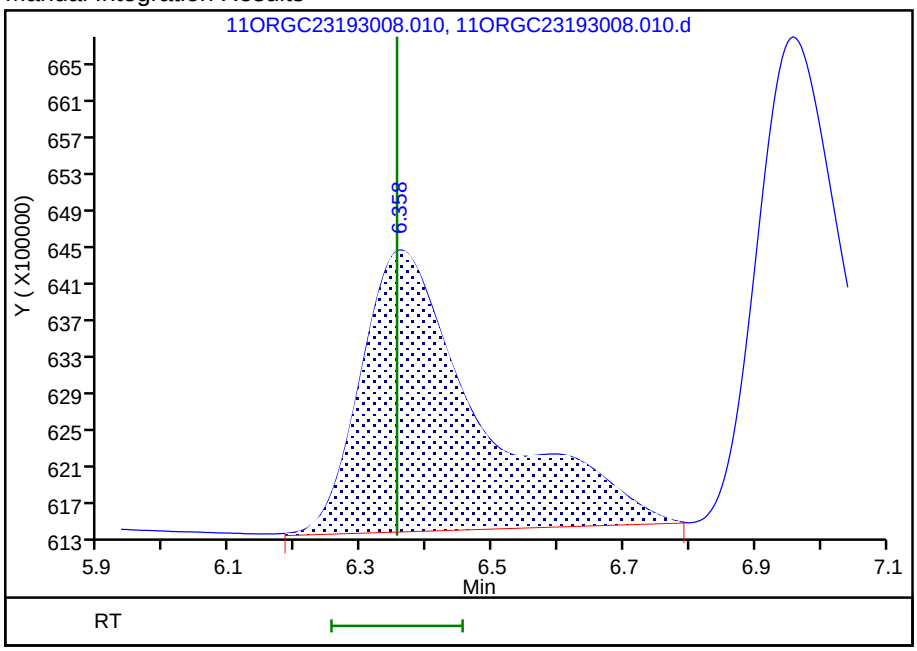
Processing Integration Results

RT: 6.36
Height: 2788990
Amount: 33.069694
Amount Units: ug/ml



Manual Integration Results

RT: 6.36
Height: 3058971
Amount: 36.270920
Amount Units: ug/ml



Reviewer: UHEW, 07-Aug-2023 14:28:55 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Assign Peak

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136647-1

SDG No.:

Client Sample ID:
Lab Sample ID: LCS 410-404256/4-A

Matrix: Water
Lab File ID: 48ORGA23186009.010.d

Analysis Method: 8015D VFA
Date Collected:

Extraction Method: 8015 VFA
Date Extracted: 08/03/2023 17:57

Sample wt/vol: 1(mL)
Date Analyzed: 08/04/2023 20:18

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 40(uL)
GC Column: Supelcogel ID: 4.6(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 404646
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
64-19-7	Acetic acid	104000		10000	3200
107-92-6	Butyric acid	103000		10000	2000
77-92-9	Citric Acid	50200		5000	1000
64-18-6	Formic-acid	105000		10000	2000
79-33-4	L-Lactic Acid	39700		5000	1000
144-62-7	Oxalic Acid	11300		1300	250
127-17-3	Pyruvic Acid	13000		1300	250
77-95-2	Quinic Acid	46800		5000	2400

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-17-8	Fumaric Acid	107		68-139

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.010.d
Lims ID: LCS 410-404256/4-A
Client ID:
Sample Type: LCS
Inject. Date: 04-Aug-2023 20:18:00 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: LCS 410-404256/4-A
Operator ID: 2027 Instrument ID: 6854A

Method: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 07-Aug-2023 20:06:37 Calib Date: 27-Jul-2023 22:51:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1674

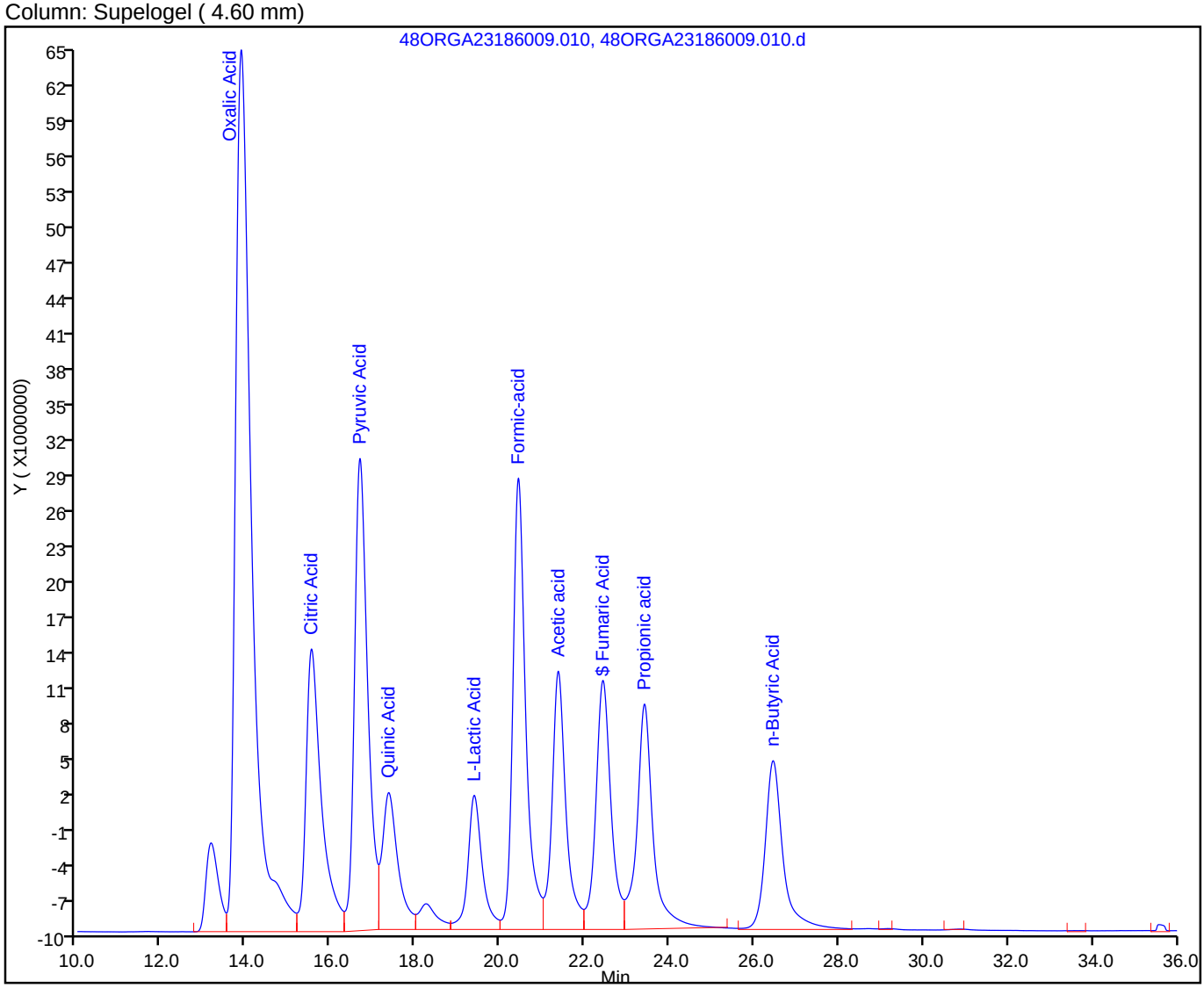
	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1	Oxalic Acid						
	13.874	13.862	0.012	73915038H	12.6	11.3	
2	Citric Acid						
	15.537	15.541	-0.004	23639569H	50.0	50.2	
4	Pyruvic Acid						
	16.684	16.684	0.000	39579467H	12.4	13.0	
5	Quinic Acid						
	17.363	17.367	-0.004	11555044H	50.3	46.8	
7	L-Lactic Acid						
	19.386	19.390	-0.004	11271512H	50.2	39.7	
8	Formic-acid						
	20.429	20.433	-0.004	37836443H	100.8	104.7	
9	Acetic acid						
	21.372	21.372	0.000	21627799H	100.8	104.4	
$	10 Fumaric Acid						
	22.428	22.436	-0.008	20831560H	0.4920	0.5283	
11	Propionic acid						
	23.411	23.415	-0.004	18819774H	101.0	115.6	
13	n-Butyric Acid						
	26.449	26.453	-0.004	14066442H	101.0	103.5	

Report Date: 07-Aug-2023 20:06:39 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.010.d				
Injection Date:	04-Aug-2023 20:18:00	Instrument ID:	6854A		
Lims ID:	LCS 410-404256/4-A				
Client ID:					
Operator ID:	2027	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Method:	8015_6854AP	Limit Group:	LC - 8015D VFA		

Column: Supelogel (4.60 mm)



Report Date: 07-Aug-2023 20:06:39 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.010.d				
Lims ID:	LCS 410-404256/4-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	04-Aug-2023 20:18:00	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCS 410-404256/4-A				
Operator ID:	2027	Instrument ID:	6854A		
Method:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:06:37	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1674				

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 Fumaric Acid	0.4920	0.5283	107.36

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136647-1

SDG No.:

Client Sample ID:
Lab Sample ID: LCSD 410-404256/3-A

Matrix: Water
Lab File ID: 11ORGC23193008.009.d

Analysis Method: 8015D VFA
Date Collected:

Extraction Method: 8015 VFA
Date Extracted: 08/03/2023 17:57

Sample wt/vol: 1(mL)
Date Analyzed: 08/04/2023 17:57

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 50(uL)
GC Column: Supelcosil PAH ID: 4.6(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 404643
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
503-74-2	Isovaleric acid	108000		7100	3500
110-15-6	Succinic Acid	50900		2500	1000
87-69-4	Tartaric Acid	51800		2500	1000
109-52-4	Valeric acid	112000		5000	2000

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-17-8	Fumaric Acid	100		68-139

Report Date: 07-Aug-2023 20:08:30 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.009.d				
Lims ID:	LCSD 410-404256/3-A				
Client ID:					
Sample Type:	LCSD				
Inject. Date:	04-Aug-2023 17:57:00	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCSD 410-404256/3-A				
Operator ID:	24470	Instrument ID:	10136		
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:08:28	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				

	Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	3 Tartaric Acid	4.358	4.354	0.004	15819281H	50.0	51.8	
	9 Succinic Acid	10.183	10.179	0.004	1870380H	50.0	50.9	
$	10 Fumaric Acid	10.613	10.600	0.012	6201710H	0.4920	0.4913	
	13 Isobutyric acid	14.600	14.600	0.000	18121720H	101.0	102.2	
	14 Isovaleric acid	15.817	15.813	0.005	15584225H	100.4	107.7	
	15 Valeric acid	15.983	15.983	0.000	11419524H	100.4	111.7	

Report Date: 07-Aug-2023 20:08:30 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.009.d

Injection Date: 04-Aug-2023 17:57:00 Instrument ID: 10136

Lims ID: LCSD 410-404256/3-A

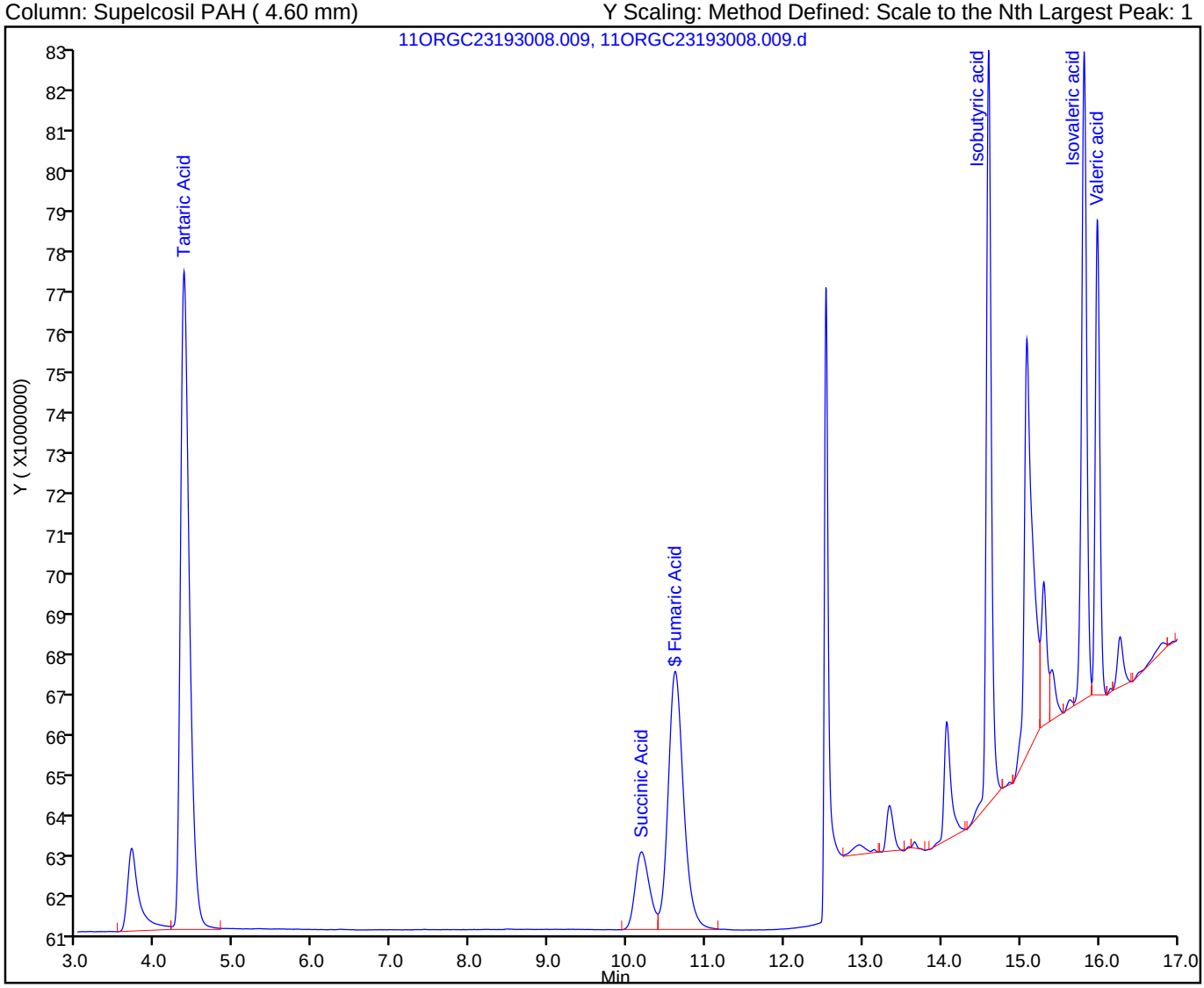
Client ID:

Operator ID: 24470 ALS Bottle#: 0 Worklist Smp#: 9

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: 8015_10136 Limit Group: LC - 8015D VFA

Column: Supelcosil PAH (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Lancaster Laboratories Environment Testing, LLC
Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\11ORGC23193008.009.d				
Lims ID:	LCSD 410-404256/3-A				
Client ID:					
Sample Type:	LCSD				
Inject. Date:	04-Aug-2023 17:57:00	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCSD 410-404256/3-A				
Operator ID:	24470	Instrument ID:	10136		
Method:	\\chromfs\Lancaster\ChromData\10136\20230804-90656.b\8015_10136.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:08:28	Calib Date:	13-Jul-2023 06:13:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10136\20230712-88814.b\11ORGC23193001.026.d				
Column 1 :	Supelcosil PAH (4.60 mm)		Det: UV0		
Process Host:	CTX1674				

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 Fumaric Acid	0.4920	0.4913	99.84

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136647-1

SDG No.:

Client Sample ID:
Lab Sample ID: LCSD 410-404256/3-A

Matrix: Water
Lab File ID: 48ORGA23186009.009.d

Analysis Method: 8015D VFA
Date Collected:

Extraction Method: 8015 VFA
Date Extracted: 08/03/2023 17:57

Sample wt/vol: 1(mL)
Date Analyzed: 08/04/2023 19:35

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 40(uL)
GC Column: Supelcogel ID: 4.6(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 404646
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
503-74-2	Isovaleric acid	99800		7100	3500
110-15-6	Succinic Acid	48500		2500	1000
87-69-4	Tartaric Acid	52000		2500	1000
109-52-4	Valeric acid	103000		5000	2000

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-17-8	Fumaric Acid	106		68-139

Report Date: 07-Aug-2023 20:06:38 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.009.d
Lims ID: LCSD 410-404256/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 04-Aug-2023 19:35:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 40.0 ul Dil. Factor: 1.0000
Sample Info: LCSD 410-404256/3-A
Operator ID: 2027 Instrument ID: 6854A

Method: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m
Limit Group: LC - 8015D VFA
Last Update: 07-Aug-2023 20:06:37 Calib Date: 27-Jul-2023 22:51:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d

Column 1 : Supelogel (4.60 mm) Det: SupelcogelH
Process Host: CTX1674

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	3 Tartaric Acid						
	16.088	16.088	0.000	32938708H	50.0	52.0	
	6 Succinic Acid						
	19.250	19.250	0.000	10937613H	50.0	48.5	
$	10 Fumaric Acid						
	22.428	22.436	-0.008	20574265H	0.4920	0.5217	
	12 Isobutyric acid						
	25.026	25.026	0.000	20715528H	101.0	100.5	
	14 Isovaleric acid						
	28.939	28.943	-0.004	12313195H	100.4	99.8	
	15 Valeric acid						
	33.579	33.587	-0.008	8863114H	100.4	102.6	

INTEGRATED ANALYTICAL LABORATORIES, LLC

Report Date: 07-Aug-2023 20:06:38 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.009.d

Injection Date: 04-Aug-2023 19:35:00 Instrument ID: 6854A

Lims ID: LCSD 410-404256/3-A

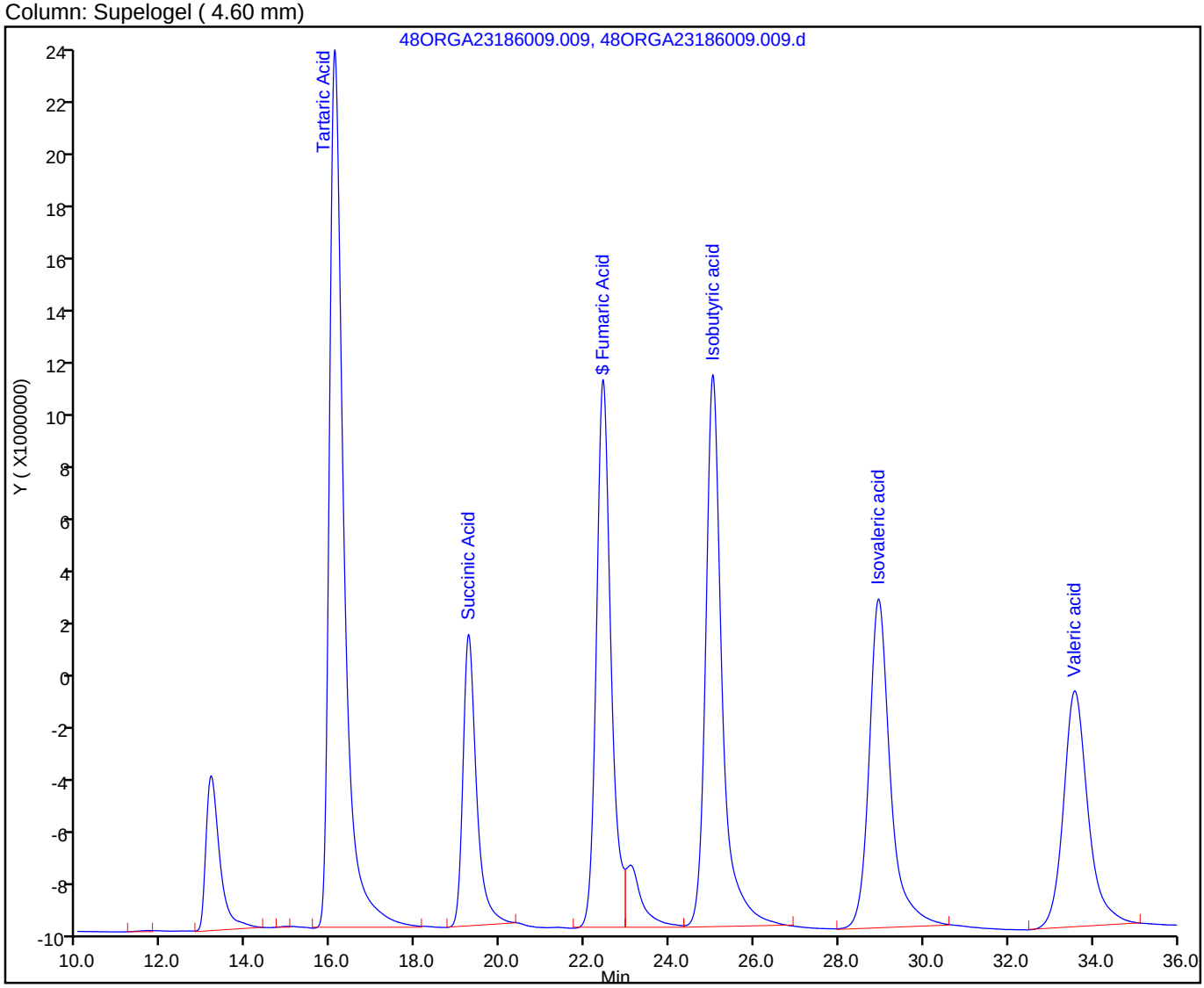
Client ID:

Operator ID: 2027 ALS Bottle#: 0 Worklist Smp#: 9

Injection Vol: 40.0 ul Dil. Factor: 1.0000

Method: 8015_6854AP Limit Group: LC - 8015D VFA

Column: Supelogel (4.60 mm)



Report Date: 07-Aug-2023 20:06:38 Chrom Revision: 2.3 01-Aug-2023 10:44:40

Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\48ORGA23186009.009.d				
Lims ID:	LCSD 410-404256/3-A				
Client ID:					
Sample Type:	LCSD				
Inject. Date:	04-Aug-2023 19:35:00	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	40.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCSD 410-404256/3-A				
Operator ID:	2027	Instrument ID:	6854A		
Method:	\\chromfs\Lancaster\ChromData\6854A\20230804-90660.b\8015_6854AP.m				
Limit Group:	LC - 8015D VFA				
Last Update:	07-Aug-2023 20:06:37	Calib Date:	27-Jul-2023 22:51:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\6854A\20230727-90027.b\48ORGA23186006.008.d				
Column 1 :	Supelogel (4.60 mm)		Det: SupelcogelH		
Process Host:	CTX1674				

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 Fumaric Acid	0.4920	0.5217	106.04

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Instrument ID: 10136 Start Date: 07/12/2023 19:50

Analysis Batch Number: 396213 End Date: 07/13/2023 22:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 410-396213/6		07/12/2023 19:50	1	11ORGC23193001.006.d	Supelcosil PAH 4.6(mm)
IC 410-396213/7		07/12/2023 20:21	1	11ORGC23193001.007.d	Supelcosil PAH 4.6(mm)
IC 410-396213/8		07/12/2023 20:53	1	11ORGC23193001.008.d	Supelcosil PAH 4.6(mm)
IC 410-396213/9		07/12/2023 21:24	1	11ORGC23193001.009.d	Supelcosil PAH 4.6(mm)
IC 410-396213/10		07/12/2023 21:55	1	11ORGC23193001.010.d	Supelcosil PAH 4.6(mm)
IC 410-396213/11		07/12/2023 22:26	1	11ORGC23193001.011.d	Supelcosil PAH 4.6(mm)
IC 410-396213/12		07/12/2023 22:57	1	11ORGC23193001.012.d	Supelcosil PAH 4.6(mm)
ICVL 410-396213/13		07/12/2023 23:28	1		Supelcosil PAH 4.6(mm)
ICV 410-396213/14		07/12/2023 23:59	1	11ORGC23193001.014.d	Supelcosil PAH 4.6(mm)
IC 410-396213/15		07/13/2023 00:31	1	11ORGC23193001.015.d	Supelcosil PAH 4.6(mm)
IC 410-396213/16		07/13/2023 01:02	1	11ORGC23193001.016.d	Supelcosil PAH 4.6(mm)
IC 410-396213/17		07/13/2023 01:33	1	11ORGC23193001.017.d	Supelcosil PAH 4.6(mm)
IC 410-396213/18		07/13/2023 02:04	1	11ORGC23193001.018.d	Supelcosil PAH 4.6(mm)
IC 410-396213/19		07/13/2023 02:35	1	11ORGC23193001.019.d	Supelcosil PAH 4.6(mm)
IC 410-396213/20		07/13/2023 03:06	1	11ORGC23193001.020.d	Supelcosil PAH 4.6(mm)
ICV 410-396213/21		07/13/2023 03:38	1	11ORGC23193001.021.d	Supelcosil PAH 4.6(mm)
IC 410-396213/22		07/13/2023 04:09	1	11ORGC23193001.022.d	Supelcosil PAH 4.6(mm)
IC 410-396213/23		07/13/2023 04:40	1	11ORGC23193001.023.d	Supelcosil PAH 4.6(mm)
ICRT 410-396213/24		07/13/2023 05:11	1	11ORGC23193001.024.d	Supelcosil PAH 4.6(mm)
IC 410-396213/25		07/13/2023 05:42	1	11ORGC23193001.025.d	Supelcosil PAH 4.6(mm)
IC 410-396213/26		07/13/2023 06:13	1	11ORGC23193001.026.d	Supelcosil PAH 4.6(mm)
ICVL 410-396213/27		07/13/2023 06:44	1		Supelcosil PAH 4.6(mm)
ZZZZZ		07/13/2023 12:27	1		Supelcosil PAH 4.6(mm)
ZZZZZ		07/13/2023 12:58	1		Supelcosil PAH 4.6(mm)
ZZZZZ		07/13/2023 13:29	1		Supelcosil PAH 4.6(mm)
ZZZZZ		07/13/2023 14:00	1		Supelcosil PAH 4.6(mm)
ZZZZZ		07/13/2023 14:31	1		Supelcosil PAH 4.6(mm)
ZZZZZ		07/13/2023 15:03	1		Supelcosil PAH 4.6(mm)
ZZZZZ		07/13/2023 15:34	1		Supelcosil PAH 4.6(mm)
ZZZZZ		07/13/2023 16:05	1		Supelcosil PAH 4.6(mm)
ZZZZZ		07/13/2023 16:36	1		Supelcosil PAH 4.6(mm)
CCV 410-396213/48		07/13/2023 17:38	1		Supelcosil PAH 4.6(mm)
CCV 410-396213/49		07/13/2023 18:09	1		Supelcosil PAH 4.6(mm)
CCV 410-396213/50		07/13/2023 18:41	1		Supelcosil PAH 4.6(mm)
ZZZZZ		07/13/2023 19:12	1		Supelcosil PAH 4.6(mm)
ZZZZZ		07/13/2023 19:43	1		Supelcosil PAH 4.6(mm)

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Instrument ID: 10136 Start Date: 07/12/2023 19:50

Analysis Batch Number: 396213 End Date: 07/13/2023 22:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		07/13/2023 20:14	1		Supelcosil PAH 4.6(mm)
ZZZZZ		07/13/2023 20:45	1		Supelcosil PAH 4.6(mm)
CCV 410-396213/56		07/13/2023 21:47	1		Supelcosil PAH 4.6(mm)
CCV 410-396213/57		07/13/2023 22:19	1		Supelcosil PAH 4.6(mm)
CCV 410-396213/58		07/13/2023 22:50	1		Supelcosil PAH 4.6(mm)

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Instrument ID: 10136 Start Date: 08/04/2023 15:21

Analysis Batch Number: 404643 End Date: 08/05/2023 05:22

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 410-404643/4		08/04/2023 15:21	1	11ORGC23193008.004.d	Supelcosil PAH 4.6(mm)
CCV 410-404643/5		08/04/2023 15:52	1	11ORGC23193008.005.d	Supelcosil PAH 4.6(mm)
CCV 410-404643/6		08/04/2023 16:23	1		Supelcosil PAH 4.6(mm)
MB 410-404256/1-A		08/04/2023 16:55	1	11ORGC23193008.007.d	Supelcosil PAH 4.6(mm)
LCS 410-404256/2-A		08/04/2023 17:26	1	11ORGC23193008.008.d	Supelcosil PAH 4.6(mm)
LCSD 410-404256/3-A		08/04/2023 17:57	1	11ORGC23193008.009.d	Supelcosil PAH 4.6(mm)
LCS 410-404256/4-A		08/04/2023 18:28	1	11ORGC23193008.010.d	Supelcosil PAH 4.6(mm)
ZZZZZ		08/04/2023 18:59	1		Supelcosil PAH 4.6(mm)
ZZZZZ		08/04/2023 19:30	1		Supelcosil PAH 4.6(mm)
ZZZZZ		08/04/2023 20:01	1		Supelcosil PAH 4.6(mm)
ZZZZZ		08/04/2023 20:32	1		Supelcosil PAH 4.6(mm)
ZZZZZ		08/04/2023 21:04	1		Supelcosil PAH 4.6(mm)
CCV 410-404643/17		08/04/2023 22:06	1	11ORGC23193008.017.d	Supelcosil PAH 4.6(mm)
CCV 410-404643/18		08/04/2023 22:37	1	11ORGC23193008.018.d	Supelcosil PAH 4.6(mm)
CCV 410-404643/19		08/04/2023 23:08	1		Supelcosil PAH 4.6(mm)
ZZZZZ		08/04/2023 23:39	1		Supelcosil PAH 4.6(mm)
ZZZZZ		08/05/2023 00:10	1		Supelcosil PAH 4.6(mm)
ZZZZZ		08/05/2023 00:42	1		Supelcosil PAH 4.6(mm)
ZZZZZ		08/05/2023 01:13	1		Supelcosil PAH 4.6(mm)
ZZZZZ		08/05/2023 01:44	1		Supelcosil PAH 4.6(mm)
410-136647-1	E23-03408-001_MW-13D-072723	08/05/2023 02:15	1	11ORGC23193008.025.d	Supelcosil PAH 4.6(mm)
ZZZZZ		08/05/2023 03:17	1		Supelcosil PAH 4.6(mm)
CCV 410-404643/29		08/05/2023 04:19	1	11ORGC23193008.029.d	Supelcosil PAH 4.6(mm)
CCV 410-404643/30		08/05/2023 04:51	1	11ORGC23193008.030.d	Supelcosil PAH 4.6(mm)
CCV 410-404643/31		08/05/2023 05:22	1		Supelcosil PAH 4.6(mm)

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Instrument ID: 6854A Start Date: 07/05/2023 19:48

Analysis Batch Number: 394255 End Date: 07/06/2023 10:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 410-394255/7		07/05/2023 19:48	1	48ORGA23186001.007.d	Supelcogel 4.6(mm)
IC 410-394255/8		07/05/2023 20:31	1	48ORGA23186001.008.d	Supelcogel 4.6(mm)
IC 410-394255/9		07/05/2023 21:14	1	48ORGA23186001.009.d	Supelcogel 4.6(mm)
IC 410-394255/10		07/05/2023 21:57	1	48ORGA23186001.010.d	Supelcogel 4.6(mm)
IC 410-394255/11		07/05/2023 22:40	1	48ORGA23186001.011.d	Supelcogel 4.6(mm)
IC 410-394255/12		07/05/2023 23:23	1	48ORGA23186001.012.d	Supelcogel 4.6(mm)
IC 410-394255/13		07/06/2023 00:06	1	48ORGA23186001.013.d	Supelcogel 4.6(mm)
ICVL 410-394255/14		07/06/2023 00:49	1		Supelcogel 4.6(mm)
ICV 410-394255/15		07/06/2023 01:32	1	48ORGA23186001.015.d	Supelcogel 4.6(mm)
IC 410-394255/16		07/06/2023 02:14	1	48ORGA23186001.016.d	Supelcogel 4.6(mm)
IC 410-394255/17		07/06/2023 02:57	1	48ORGA23186001.017.d	Supelcogel 4.6(mm)
IC 410-394255/18		07/06/2023 03:40	1	48ORGA23186001.018.d	Supelcogel 4.6(mm)
IC 410-394255/19		07/06/2023 04:23	1	48ORGA23186001.019.d	Supelcogel 4.6(mm)
IC 410-394255/20		07/06/2023 05:06	1	48ORGA23186001.020.d	Supelcogel 4.6(mm)
ICVL 410-394255/21		07/06/2023 05:49	1		Supelcogel 4.6(mm)
ICV 410-394255/22		07/06/2023 06:32	1	48ORGA23186001.022.d	Supelcogel 4.6(mm)
IC 410-394255/23		07/06/2023 07:15	1		Supelcogel 4.6(mm)
IC 410-394255/24		07/06/2023 07:58	1		Supelcogel 4.6(mm)
ICRT 410-394255/25		07/06/2023 08:41	1		Supelcogel 4.6(mm)
IC 410-394255/26		07/06/2023 09:24	1		Supelcogel 4.6(mm)
IC 410-394255/27		07/06/2023 10:07	1		Supelcogel 4.6(mm)
ICVL 410-394255/28		07/06/2023 10:50	1		Supelcogel 4.6(mm)

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Instrument ID: 6854A Start Date: 07/27/2023 19:59

Analysis Batch Number: 401648 End Date: 07/29/2023 03:29

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 410-401648/4		07/27/2023 19:59	1	48ORGA23186006.004.d	Supelcogel 4.6(mm)
IC 410-401648/5		07/27/2023 20:42	1	48ORGA23186006.005.d	Supelcogel 4.6(mm)
ICRT 410-401648/6		07/27/2023 21:25	1	48ORGA23186006.006.d	Supelcogel 4.6(mm)
IC 410-401648/7		07/27/2023 22:08	1	48ORGA23186006.007.d	Supelcogel 4.6(mm)
IC 410-401648/8		07/27/2023 22:51	1	48ORGA23186006.008.d	Supelcogel 4.6(mm)
ICVL 410-401648/9		07/27/2023 23:34	1		Supelcogel 4.6(mm)
CCV 410-401648/10		07/28/2023 00:17	1		Supelcogel 4.6(mm)
CCV 410-401648/11		07/28/2023 00:59	1		Supelcogel 4.6(mm)
CCV 410-401648/12		07/28/2023 01:42	1		Supelcogel 4.6(mm)
ZZZZZ		07/28/2023 02:25	1		Supelcogel 4.6(mm)
ZZZZZ		07/28/2023 03:08	1		Supelcogel 4.6(mm)
ZZZZZ		07/28/2023 03:51	1		Supelcogel 4.6(mm)
ZZZZZ		07/28/2023 04:34	1		Supelcogel 4.6(mm)
ZZZZZ		07/28/2023 05:17	10		Supelcogel 4.6(mm)
ZZZZZ		07/28/2023 06:00	10		Supelcogel 4.6(mm)
ZZZZZ		07/28/2023 06:43	10		Supelcogel 4.6(mm)
CCV 410-401648/22		07/28/2023 08:52	1		Supelcogel 4.6(mm)
CCV 410-401648/23		07/28/2023 09:35	1		Supelcogel 4.6(mm)
CCV 410-401648/24		07/28/2023 10:18	1		Supelcogel 4.6(mm)
ZZZZZ		07/28/2023 15:19	1		Supelcogel 4.6(mm)
ZZZZZ		07/28/2023 16:45	1		Supelcogel 4.6(mm)
CCV 410-401648/35		07/28/2023 18:11	1		Supelcogel 4.6(mm)
CCV 410-401648/36		07/28/2023 18:54	1		Supelcogel 4.6(mm)
CCV 410-401648/37		07/28/2023 19:37	1		Supelcogel 4.6(mm)
ZZZZZ		07/28/2023 20:20	1		Supelcogel 4.6(mm)
CCV 410-401648/46		07/29/2023 02:04	1		Supelcogel 4.6(mm)
CCV 410-401648/47		07/29/2023 02:46	1		Supelcogel 4.6(mm)
CCV 410-401648/48		07/29/2023 03:29	1		Supelcogel 4.6(mm)

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136647-1

SDG No.:

Instrument ID: 6854A Start Date: 08/04/2023 16:00

Analysis Batch Number: 404646 End Date: 08/05/2023 19:56

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 410-404646/4		08/04/2023 16:00	1	48ORGA23186009.004.d	Supelcogel 4.6(mm)
CCV 410-404646/5		08/04/2023 16:43	1	48ORGA23186009.005.d	Supelcogel 4.6(mm)
CCV 410-404646/6		08/04/2023 17:26	1	48ORGA23186009.006.d	Supelcogel 4.6(mm)
MB 410-404256/1-A		08/04/2023 18:09	1	48ORGA23186009.007.d	Supelcogel 4.6(mm)
LCS 410-404256/2-A		08/04/2023 18:52	1	48ORGA23186009.008.d	Supelcogel 4.6(mm)
LCSD 410-404256/3-A		08/04/2023 19:35	1	48ORGA23186009.009.d	Supelcogel 4.6(mm)
LCS 410-404256/4-A		08/04/2023 20:18	1	48ORGA23186009.010.d	Supelcogel 4.6(mm)
ZZZZZ		08/04/2023 21:01	1		Supelcogel 4.6(mm)
ZZZZZ		08/04/2023 21:44	1		Supelcogel 4.6(mm)
ZZZZZ		08/04/2023 22:27	1		Supelcogel 4.6(mm)
ZZZZZ		08/04/2023 23:53	1		Supelcogel 4.6(mm)
CCV 410-404646/17		08/05/2023 01:18	1	48ORGA23186009.017.d	Supelcogel 4.6(mm)
CCV 410-404646/18		08/05/2023 02:01	1	48ORGA23186009.018.d	Supelcogel 4.6(mm)
CCV 410-404646/19		08/05/2023 02:44	1		Supelcogel 4.6(mm)
ZZZZZ		08/05/2023 03:27	1		Supelcogel 4.6(mm)
ZZZZZ		08/05/2023 04:53	1		Supelcogel 4.6(mm)
ZZZZZ		08/05/2023 06:19	1		Supelcogel 4.6(mm)
ZZZZZ		08/05/2023 07:45	1		Supelcogel 4.6(mm)
ZZZZZ		08/05/2023 09:11	1		Supelcogel 4.6(mm)
CCV 410-404646/30		08/05/2023 10:37	1	48ORGA23186009.030.d	Supelcogel 4.6(mm)
CCV 410-404646/31		08/05/2023 11:20	1	48ORGA23186009.031.d	Supelcogel 4.6(mm)
CCV 410-404646/32		08/05/2023 12:03	1	48ORGA23186009.032.d	Supelcogel 4.6(mm)
ZZZZZ		08/05/2023 12:46	1		Supelcogel 4.6(mm)
410-136647-1	E23-03408-001_MW-13D-072723	08/05/2023 14:12	1	48ORGA23186009.035.d	Supelcogel 4.6(mm)
ZZZZZ		08/05/2023 17:04	1		Supelcogel 4.6(mm)
CCV 410-404646/41		08/05/2023 18:30	1	48ORGA23186009.041.d	Supelcogel 4.6(mm)
CCV 410-404646/42		08/05/2023 19:13	1	48ORGA23186009.042.d	Supelcogel 4.6(mm)
CCV 410-404646/43		08/05/2023 19:56	1	48ORGA23186009.043.d	Supelcogel 4.6(mm)

INTEGRATED ANALYTICAL LABORATORIES, LLC

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136647-1

SDG No.:

Batch Number: 394255 Batch Start Date: 07/05/23 19:48 Batch Analyst: Williams, Heather E

Batch Method: 8015D VFA Batch End Date: 07/12/23 18:48

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	GCS_ORGA1 00011	GCS_ORGA2 00010	GCS_ORGA3 00026	GCS_ORGA4 00009	GCS_ORGA5 00007
IC 410-394255/7		8015D VFA		1 mL	1 mL				
IC 410-394255/8		8015D VFA		1 mL		1 mL			
IC 410-394255/9		8015D VFA		1 mL			1 mL		
IC 410-394255/10		8015D VFA		1 mL				1 mL	
IC 410-394255/11		8015D VFA		1 mL					
IC 410-394255/12		8015D VFA		1 mL					
IC 410-394255/13		8015D VFA		1 mL					1 mL
ICV 410-394255/15		8015D VFA		1 mL					
IC 410-394255/16		8015D VFA		1 mL					
IC 410-394255/17		8015D VFA		1 mL					
IC 410-394255/18		8015D VFA		1 mL					
IC 410-394255/19		8015D VFA		1 mL					
IC 410-394255/20		8015D VFA		1 mL					
ICV 410-394255/22		8015D VFA		1 mL					

Lab Sample ID	Client Sample ID	Method Chain	Basis	GCS_ORGAICV 00008	GCS_ORGAox5 00002	GCS_ORGAox5@8 00004	GCS_ORGB1 00009	GCS_ORGB2 00009	GCS_ORGB3 00021
IC 410-394255/7		8015D VFA							
IC 410-394255/8		8015D VFA							
IC 410-394255/9		8015D VFA							
IC 410-394255/10		8015D VFA							
IC 410-394255/11		8015D VFA				1 mL			
IC 410-394255/12		8015D VFA			1 mL				
IC 410-394255/13		8015D VFA							

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.

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136647-1

SDG No.:

Batch Number: 394255 Batch Start Date: 07/05/23 19:48 Batch Analyst: Williams, Heather E

Batch Method: 8015D VFA Batch End Date: 07/12/23 18:48

Lab Sample ID	Client Sample ID	Method Chain	Basis	GCS_ORGAICV 00008	GCS_ORGAox5 00002	GCS_ORGAox5@8 00004	GCS_ORGB1 00009	GCS_ORGB2 00009	GCS_ORGB3 00021
ICV 410-394255/15		8015D VFA		1 mL					
IC 410-394255/16		8015D VFA					1 mL		
IC 410-394255/17		8015D VFA						1 mL	
IC 410-394255/18		8015D VFA							1 mL
IC 410-394255/19		8015D VFA							
IC 410-394255/20		8015D VFA							
ICV 410-394255/22		8015D VFA							

Lab Sample ID	Client Sample ID	Method Chain	Basis	GCS_ORGB4 00009	GCS_ORGB5 00008	GCS_ORGBICV 00007			
IC 410-394255/7		8015D VFA							
IC 410-394255/8		8015D VFA							
IC 410-394255/9		8015D VFA							
IC 410-394255/10		8015D VFA							
IC 410-394255/11		8015D VFA							
IC 410-394255/12		8015D VFA							
IC 410-394255/13		8015D VFA							
ICV 410-394255/15		8015D VFA							
IC 410-394255/16		8015D VFA							
IC 410-394255/17		8015D VFA							
IC 410-394255/18		8015D VFA							
IC 410-394255/19		8015D VFA		1 mL					
IC 410-394255/20		8015D VFA			1 mL				

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.

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136647-1

SDG No.:

Batch Number: 394255 Batch Start Date: 07/05/23 19:48 Batch Analyst: Williams, Heather E

Batch Method: 8015D VFA Batch End Date: 07/12/23 18:48

Lab Sample ID	Client Sample ID	Method Chain	Basis	GCS_ORGB4 00009	GCS_ORGB5 00008	GCS_ORGBICV 00007			
ICV 410-394255/22		8015D VFA				1 mL			

Batch Notes	
Phosphoric Acid ID	0.15% H3PO4: 345163-5-5
Vials	Agilent 2 mL clear vials
Vial Lot Number	21116173

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.

INTEGRATED ANALYTICAL LABORATORIES, LLC

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136647-1

SDG No.:

Batch Number: 396213 Batch Start Date: 07/12/23 19:50 Batch Analyst: Williams, Heather E

Batch Method: 8015D VFA Batch End Date: 07/17/23 16:09

Lab Sample ID	Client Sample ID	Method Chain	Basis	GCS_ORGA1 00012	GCS_ORGA2 00010	GCS_ORGA3 00026	GCS_ORGA4 00009	GCS_ORGA5 00008	GCS_ORGAICV 00008
IC 410-396213/6		8015D VFA		1 mL					
IC 410-396213/7		8015D VFA			1 mL				
IC 410-396213/8		8015D VFA				1 mL			
IC 410-396213/9		8015D VFA					1 mL		
IC 410-396213/10		8015D VFA							
IC 410-396213/11		8015D VFA							
IC 410-396213/12		8015D VFA						1 mL	
ICV 410-396213/14		8015D VFA							1 mL
IC 410-396213/15		8015D VFA							
IC 410-396213/16		8015D VFA							
IC 410-396213/17		8015D VFA							
IC 410-396213/18		8015D VFA							
IC 410-396213/19		8015D VFA							
IC 410-396213/20		8015D VFA							
ICV 410-396213/21		8015D VFA							
IC 410-396213/22		8015D VFA							
IC 410-396213/23		8015D VFA							
ICRT 410-396213/24		8015D VFA							
IC 410-396213/25		8015D VFA							
IC 410-396213/26		8015D VFA							

Lab Sample ID	Client Sample ID	Method Chain	Basis	GCS_ORGAox5 00002	GCS_ORGAox5@8 00004	GCS_ORGB1 00009	GCS_ORGB2 00009	GCS_ORGB3 00021	GCS_ORGB4 00009
IC 410-396213/6		8015D VFA							

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.

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136647-1

SDG No.:

Batch Number: 396213 | Batch Start Date: 07/12/23 19:50 | Batch Analyst: Williams, Heather E

Batch Method: 8015D VFA | Batch End Date: 07/17/23 16:09

Lab Sample ID	Client Sample ID	Method Chain	Basis	GCS_ORGAox5 00002	GCS_ORGAox5@8 00004	GCS_ORGB1 00009	GCS_ORGB2 00009	GCS_ORGB3 00021	GCS_ORGB4 00009
IC 410-396213/7		8015D VFA							
IC 410-396213/8		8015D VFA							
IC 410-396213/9		8015D VFA							
IC 410-396213/10		8015D VFA			1 mL				
IC 410-396213/11		8015D VFA		1 mL					
IC 410-396213/12		8015D VFA							
ICV 410-396213/14		8015D VFA							
IC 410-396213/15		8015D VFA				1 mL			
IC 410-396213/16		8015D VFA					1 mL		
IC 410-396213/17		8015D VFA						1 mL	
IC 410-396213/18		8015D VFA							1 mL
IC 410-396213/19		8015D VFA							
IC 410-396213/20		8015D VFA							
ICV 410-396213/21		8015D VFA							
IC 410-396213/22		8015D VFA							
IC 410-396213/23		8015D VFA							
ICRT 410-396213/24		8015D VFA							
IC 410-396213/25		8015D VFA							
IC 410-396213/26		8015D VFA							

Lab Sample ID	Client Sample ID	Method Chain	Basis	GCS_ORGB5 00008	GCS_ORGBICV 00007	GCS_ORGBMDL 00006	GCS_ORGS1 00017	GCS_ORGS2 00017	GCS_ORGS3 00047
IC 410-396213/6		8015D VFA							
IC 410-396213/7		8015D VFA							

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.

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136647-1

SDG No.:

Batch Number: 396213 Batch Start Date: 07/12/23 19:50 Batch Analyst: Williams, Heather E

Batch Method: 8015D VFA Batch End Date: 07/17/23 16:09

Lab Sample ID	Client Sample ID	Method Chain	Basis	GCS_ORGB5 00008	GCS_ORGBICV 00007	GCS_ORGBMDL 00006	GCS_ORGS1 00017	GCS_ORGS2 00017	GCS_ORGS3 00047
IC 410-396213/8		8015D VFA							
IC 410-396213/9		8015D VFA							
IC 410-396213/10		8015D VFA							
IC 410-396213/11		8015D VFA							
IC 410-396213/12		8015D VFA							
ICV 410-396213/14		8015D VFA							
IC 410-396213/15		8015D VFA							
IC 410-396213/16		8015D VFA							
IC 410-396213/17		8015D VFA							
IC 410-396213/18		8015D VFA							
IC 410-396213/19		8015D VFA		1 mL					
IC 410-396213/20		8015D VFA				1 mL			
ICV 410-396213/21		8015D VFA			1 mL				
IC 410-396213/22		8015D VFA					1 mL		
IC 410-396213/23		8015D VFA						1 mL	
ICRT 410-396213/24		8015D VFA							1 mL
IC 410-396213/25		8015D VFA							
IC 410-396213/26		8015D VFA							

Lab Sample ID	Client Sample ID	Method Chain	Basis	GCS_ORGS4 00019	GCS_ORGS5 00016				
IC 410-396213/6		8015D VFA							
IC 410-396213/7		8015D VFA							
IC 410-396213/8		8015D VFA							

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.

INTEGRATED ANALYTICAL LABORATORIES, LLC

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136647-1

SDG No.:

Batch Number: 396213 Batch Start Date: 07/12/23 19:50 Batch Analyst: Williams, Heather E

Batch Method: 8015D VFA Batch End Date: 07/17/23 16:09

Lab Sample ID	Client Sample ID	Method Chain	Basis	GCS_ORGS4 00019	GCS_ORGS5 00016				
IC 410-396213/9		8015D VFA							
IC 410-396213/10		8015D VFA							
IC 410-396213/11		8015D VFA							
IC 410-396213/12		8015D VFA							
ICV 410-396213/14		8015D VFA							
IC 410-396213/15		8015D VFA							
IC 410-396213/16		8015D VFA							
IC 410-396213/17		8015D VFA							
IC 410-396213/18		8015D VFA							
IC 410-396213/19		8015D VFA							
IC 410-396213/20		8015D VFA							
ICV 410-396213/21		8015D VFA							
IC 410-396213/22		8015D VFA							
IC 410-396213/23		8015D VFA							
ICRT 410-396213/24		8015D VFA							
IC 410-396213/25		8015D VFA		1 mL					
IC 410-396213/26		8015D VFA			1 mL				

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.

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136647-1

SDG No.:

Batch Number: 396213 Batch Start Date: 07/12/23 19:50 Batch Analyst: Williams, Heather E

Batch Method: 8015D VFA Batch End Date: 07/17/23 16:09

Batch Notes	
Acetonitrile ID	231484
Phosphoric Acid ID	0.15% H3PO3: 345163-5-5
Pipette/Syringe/Dispenser ID	24-1, 24-3
Pipette Tip Lot ID	K194306G, L203327J
Vials	Agilent 2mL clear GC
Vial Lot Number	21116173

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.

INTEGRATED ANALYTICAL LABORATORIES, LLC

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136647-1

SDG No.:

Batch Number: 401648 | Batch Start Date: 07/27/23 19:59 | Batch Analyst: Donovan, Elizabeth E

Batch Method: 8015D VFA | Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	GCS_ORGS1 00018	GCS_ORGS2 00018	GCS_ORGS3 00049	GCS_ORGS4 00020	GCS_ORGS5 00017
IC 410-401648/4		8015D VFA		1 mL	1 mL				
IC 410-401648/5		8015D VFA		1 mL		1 mL			
ICRT 410-401648/6		8015D VFA		1 mL			1 mL		
IC 410-401648/7		8015D VFA		1 mL				1 mL	
IC 410-401648/8		8015D VFA		1 mL					1 mL

Batch Notes	
Phosphoric Acid ID	0.15% H3PO4: 345163-7-9
Pipette/Syringe/Dispenser ID	24-3 and 24-1
Pipette Tip Lot ID	L204821L (Eppendorf 1000 uL) and J191446N (Eppendorf 100 uL)
Vials	Agilent 2 mL clear vials
Vial Lot Number	21116173
Vial Lot Number (2)	see prep batch
Vial Type used (2)	see prep batch
Diluent ID	0.15% H3PO4
Diluting Solvent ID	345163-7-1

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.

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136647-1

SDG No.:

Batch Number: 404256 Batch Start Date: 08/03/23 17:57 Batch Analyst: Williams, Heather E

Batch Method: 8015 VFA Batch End Date: 08/03/23 18:45

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	Final pH	InitialAmount	FinalAmount	Headspace	GCS_ORGAMS 00004
MB 410-404256/1		8015 VFA, 8015D VFA		2.08 SU	2.08 SU	1 mL	1 mL		
LCS 410-404256/2		8015 VFA, 8015D VFA		2.08 SU	2.08 SU	1 mL	1 mL		
LCSD 410-404256/3		8015 VFA, 8015D VFA		2.08 SU	2.08 SU	1 mL	1 mL		
LCS 410-404256/4		8015 VFA, 8015D VFA		2.08 SU	2.08 SU	1 mL	1 mL		0.1 mL
410-136647-C-1	E23-03408-001_MW -13D-072723	8015 VFA, 8015D VFA	T	7.36 SU	2.04 SU	1 mL	1 mL	no	

Lab Sample ID	Client Sample ID	Method Chain	Basis	GCS_ORGBMS 00003	GCS_ORGSS 00020	AnalysisComment			
MB 410-404256/1		8015 VFA, 8015D VFA			0.02 mL	0.15% H3PO4			
LCS 410-404256/2		8015 VFA, 8015D VFA		0.1 mL	0.02 mL	0.15% H3PO4			
LCSD 410-404256/3		8015 VFA, 8015D VFA		0.1 mL	0.02 mL	0.15% H3PO4			
LCS 410-404256/4		8015 VFA, 8015D VFA			0.02 mL	0.15% H3PO4			
410-136647-C-1	E23-03408-001_MW -13D-072723	8015 VFA, 8015D VFA	T		0.02 mL	clear			

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.

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136647-1

SDG No.:

Batch Number: 404256 Batch Start Date: 08/03/23 17:57 Batch Analyst: Williams, Heather E

Batch Method: 8015 VFA Batch End Date: 08/03/23 18:45

Batch Notes	
Workbench Area	A-150
Syringe ID	Agilent 10 mL disposable syringe: 20K07C8
Pipette/Syringe/Dispenser ID	Pipettes used to prep samples: 24-3 and 24-1
Filter ID	Agilent PTFE+GF 0.45 um syringe filter: 21095103
pH Meter ID	PH-001
Acid Used for pH Adjustment ID	Phosphoric Acid: 200566
Reagent ID	0.15% H3PO4: 345163-7-6
Pipette Tip Lot ID	L204821L (Eppendorf 1000 uL) and K194306G (Eppendorf 100 uL)
Vial Lot Number	425060
Vial Type Used	Agilent 12mL clear vials
Vial Lot Number (2)	21116173
Vial Type used (2)	Agilent 2 mL clear vials

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

D/03712

2425 New Hol ·, PA 17601-2425

CLIENT & PROJECT	REPORTING & BILLING
Name: Integrated Analytical Laboratories LLC	Contact: Kim James
	Fax #:
Address:	EMail to: msimmons@ialonline.com
273 Franklin Road	Report to: Melissa Simmons
Randolph, NJ 07869	Address:
Telephone #: 973-361-4252	
Project Name: E23-03408	Invoice to: Brenda Barone
Project Location (State): NY	Address:
Project Manager:	
Reference ID#: PO#	

Turnaround Time

Verbal/Fax: 24 hr* 48 hr* 72 hr* 1 wk* 2 wk Other: 2 WEEKS

Hard Copy: 72 hr* 1 wk* 2 wk* 3 wk Other:

*Prior to sample arrival, Lab notification is required.

Report Format

NY CATEGORY B DELIVERABLES

Special Requirements

EDD: EQuIS - EQEDD

Preservative
1 = HCL; 2 = NaOH; 3 = HNO_3
4 = H_2SO_4; 5 = MeOH; 6 = Other

SAMPLE INFORMATION

ANALYTICAL PARAMETERS / PRESERVATIVES

Sample ID	Sample Depth (in Feet)	Sampling Date	Sampling Time	Matrix	# of Containers	Dissolved Gasses (RSK-175) 1 2 3 4 5 6	Volatile Fatty Acid (EPA Method 8015D) 1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
E23-03408-001 MW-13D-072723		7/27/23	12:59	Aqueous	5	Run	Run												

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

COOLER TEMP. °C

Concentrations Expected: LOW MED HIGH

Known Hazard: yes no

Describe

Note

EMAIL CONFIRMATION REQUIRED

CUSTODY LOG

Signature/Company	Date	Time	Signature/Company
Relinquished by:			Received by:
Relinquished by:			Received by:
Relinquished by:	7/28/23	18:00	Received by: Shaun Wrye

TK1259 7/28/23

Lab Case #

PAGE: OF

COC (001-001)

REV Feb 2013

Eurofins Lancaster Laboratories
2425 New Holland Pike, P.O. Box 12425, Lancaster, PA 17601-2425

D/O3712

CLIENT & PROJECT

Name: Integrated Analytical Laboratories LLC	
Address:	
273 Franklin Road	
Randolph, NJ 07869	
Telephone #: 973-361-4252	
Project Name: E23-03408	
Project Location (State): NY	
Project Manager:	
Reference ID#: PO#	

REPORTING & BILLING

Contact:	Kim James
Fax #:	
EMail to:	msimmons@ialonline.com
Report to:	Melissa Simmons
Address:	
Invoice to:	Brenda Barone
Address:	

Turnaround Time						Report Format
Verbal/Fax						Reduced / Level III
24 hr*	48 hr*	72 hr*	1 wk*	2 wk	Other: 2 WEEKS	
Hard Copy						Special Requirements
72 hr*	1 wk*	2 wk*	3 wk		Other:	EDD: EQuIS - EQEDD
*Prior to sample arrival, Lab notification is required.						

Preservative
1 = HCL, 2 = NaOH, 3 = HNO_3
4 = H_2SO_4, 5 = MeOH, 6 = Other

ANALYTICAL PARAMETERS / PRESERVATIVES

SAMPLE INFORMATION

Sample ID	Sample Depth (in Feet)	Sampling Date	Sampling Time	Matrix	# of Containers	Dissolved Gasses (RSK-175)	Volatile Fatty Acid (EPA Method 8015D)	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
E23-03408-001_MW-13D-072723		7/27/23	12:59	Aqueous	5	Run	Run												

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

COOLER TEMP.
Raw 4.7
Cor 4.6 °C

Concentrations Expected
LOW MED HIGH

Known Hazard yes no
Describe

Note:

EMAIL CONFIRMATION REQUIRED

CUSTODY LOG

Signature/Company	Date	Time	Signature/Company
Relinquished by:	7/28/23	1130	Received by: RPM
Relinquished by: RPM	28/Jul/23	1800	Received by:
Relinquished by:	7/28/23	1800	Received by:

Lab Case #

PAGE: OF

COC (001-001)

REV Feb 2013

INTEGRATED ANALYTICAL LABORATORIES, LLC
Login Sample Receipt Checklist

Client: Integrated Analytical Laboratories LLC

Job Number: 410-136647-1

Login Number: 136647

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: Roth, Stephanie

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable (</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

SAMPLE TRACKING

FINALIZED 08/18/2023

IAL Integrated Analytical Laboratories LLC
Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

Chain of Custody Record

Contact Us: 973-361-4252
Web: www.ialonline.com

Customer Information

Company: EWMA
Address: 100 Misty Lane
Parsippany, NJ
Telephone #: (973)560-1400
Project Manager: Cathy Bryant
Email Address(es): Cathy.Bryant@ewma.com
Project Name: Swivel/Ter
Project Location (State): NY
Bottle Order #: BO 1527
☑ "Report to"/"Invoice To" same as above
Sampled by: Louis Meyer

COMPLETED BY IAL:
___ Field Sampling ___ Equipment Rental

Reporting Information

☑ Check here if same as "Customer Information"

REPORT TO:
Address: Same
Attn:

INVOICE TO:
Address: Same
Attn:
PO # L-12637
Quote # Proj #202530

Sample Matrix

DW - Drinking Water
WW - Waste Water
GW - Groundwater
SW - Surface Water
LIQ - Liquid (specify)
M - Multiphasic
OI - Oil
S - Soil
SED - Sediment
SOL - Solid (specify)
SL - Sludge
W - Wipe

Rush TAT Charge

24 hr - 100%...
48 hr - 75%....
72 hr - 50%....
96 hr - 35%....
5 day - 25%....
6-9 day - 10%

Deliverables

*Surchage may apply for regulatory

NJ, CT, PA
☐ Results Only (Level I)
☒ Reduced (Level II/III)
☐ Regulatory/ Full* (Level IV)

NY
☐ ASP Category A
☐ ASP Category B*

EDDs

☐ NJ SRP
☒ NYSDEC EQuIS
☐ lab approved custom EDD
☐ NO EDD REQ'D

Concentrations Expected:

Low Med High

Known Hazard:
☐ YES ☐ NO
Describe:

Turn-Around Time (TAT)

Standard (10 business days) Verbal
Rush/date needed (only if pre-approved)** STD
Hard Copy: Standard 3 week Other - call for price

Petroleum Hydrocarbons - Selection is REQUIRED

☐ NJ EPH-DRO - Category 1
☐ NJ EPH-C40 - Category 2
☐ NJ EPH-Fractionated - Cat 2
☐ CT ETPH
☐ DRO-8015

TAT for PHC, if other than 2 weeks:

Regulatory Requirement

New Jersey
☐ GWQS
☐ 2017 SRS/IGW
☐ 2021 SRS/MGW
☐ Ecological
☐ DW
☐ SPLP

New York
☒ AWQS (TOGS Table 1)
☐ GWEL (TOGS Table 5)
☐ Part 375-6.8(a) - Unrestricted
☐ Part 375-6.8(b) - Restricted
☐ CP-51 Table 2 or 3 (selection required)

Other States / Criteria
☐ Pennsylvania Act 2
☐ CT RCSA 22a-133k1-k3
☐ TSCA PCBs
OTHER Regulatory Requirements - specify in comments

SAMPLE INFORMATION

ANALYTICAL PARAMETERS (please note if contingent)

Client ID	Depth (ft only)	Sampling Date	Sampling Time	Matrix	# containers	IAL #	Dissolved gases	VFAs	TCL VOA 15	Sample Specific Notes:
MW-13D-072723		7/27/23	1259	GW	8	1	X	X	X	
FB-072723		7/27/23	1310	Blk.	2	2			X	

Samples previously analyzed by IAL? YES / NO

Preservative Code: 1 = None, 2 = HCl, 3 = HNO3, 4 = MeOH, 5 = NaOH, 6 = H2SO4, 7 = Other
Container Code: A = Amber Glass, B = Plastic, C = Vial, D = Glass, E = EnCore, T = Terracore
Preservative (use code)
Container Type (use code)

Special Instructions/QC Requirements & Comments: Please contact Cathy Bryant w/ any questions

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time (TAT) will not start until any ambiguities have been resolved. TAT starts the following day if samples rec'd at lab ≥ 5PM. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY IAL'S TERMS & CONDITIONS (found on rear of pink copy).

Carrier (check one):
☐ IAL Courier
☐ Client Courier
☐ FedEx/UPS***
***Tracking #:

Relinquished by (Signature and Company)	Date	Time	Received by (Signature and Company)	Date	Time
[signature]	7/27/23	1515	[signature]	7/27/23	1515
	7/27/23	1551		7/27/23	1551

FOR LAB USE ONLY
SDG #: 3408
Cooler Temp: 5 °C

IAL Rev 06/2021
LAB COPIES - WHITE & YELLOW; CLIENT COPY - PINK
Certification IDs: TNI (TNI01284); CT (PH-0699); NJ (14751); NY (11402); PA (68-00773).
PAGE: 1 of 1

INTEGRATED ANALYTICAL LABORATORIES, LLC

2425 New Hol ', PA 17601-2425

D/03712

CLIENT & PROJECT | *REPORTING & BILLING*

Name: Integrated Analytical Laboratories LLC	Contact:	Kim James	
	Fax #:		
Address:	EMail to:	mammonia@aionline.com	
273 Franklin Road	Report to:	Melissa Simmons	
Randolph, NJ 07869	Address:		
Telephone #: 973-361-4252			
Project Name: E23-03408	Invoice to:	Brenda Barone	
Project Location (State): NY	Address:		
Project Manager:			
Reference ID#: PO#			

Turnaround Time

Verbal/Fax: 24 hr* 48 hr* 72 hr* 1 wk* 2 wk Other: 2 WEEKS

Hard Copy: 72 hr* 1 wk* 2 wk* 3 wk Other:

*Prior to sample arrival, Lab notification is required.

Report Format: NY CATEGORY B DELIVERABLES

Special Requirements: EDD: UQuIS - UQEDD

Preservative: 1 HCl 2 NaOH 3 HNO3 4 H2SO4 5 MeOH 6 Other

ANALYTICAL PARAMETERS / PRESERVATIVES

SAMPLE INFORMATION

Sample ID	Sample Depth (In Feet)	Sampling Date	Sampling Time	Matrix	# of Containers	Dissolved Gases (RSK-175)	Volatile Fatty Acids (PA Modified 8015D)													
E23-03408-001 MW-13D-072723		7/27/23	12:59	Aqueous	5	Run	Run													

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

COOLER TEMP: C

Concentrations Expected: LOW MED HIGH

Known Hazard: yes no Describe:

EMAIL CONFIRMATION REQUIRED

CUSTODY LOG

Signature/Company	Date	Time	Signature/Company
Relinquished by:			Received by:
Relinquished by:			Received by:
Relinquished by:	7/28/23	18:00	Received by: Shaun Wrye

TK1259

Lab Case #

PAGE: OF

08/08/2023

Jul 31, 2023 @ 10:47

PROJECT INFORMATION

E23-03408: SWIVELIER - 202530

To: Cathy Bryant
EWMA - HQ
Fax:
EMail: Cathy.Bryant@ewma.com

Report To

EWMA - HQ
Lanidex Center
100 Misty Lane
Parsippany, NJ 07054
Attn: Cathy Bryant

Bill To

EWMA - HQ
Lanidex Center
100 Misty Lane
Parsippany, NJ 07054
Attn: Cathy Bryant

Report Format	P.O. #	Received At Lab	PHC Due	Verbal Due	Hardcopy Due
Category B	L-12637	Jul 27, 2023 @ 15:51	NA	Aug 10, 2023	Aug 17, 2023 *

* Any ***Conditional or Hold*** status will delay final hardcopy report sent date.

Diskette Req. EQ EDD

Criteria Requirement: NY TOGS Tbl1 (AWQS)

Lab ID	Client Sample ID	Depth	Sampling Time	Matrix	Unit	Field pH/Temp
03408-001	MW-13D-072723	NA	07/27/23@12:59	Aqueous	ug/L (ppb)	
03408-002	FB-072723	NA	07/27/23@13:10	Aqueous	ug/L (ppb)	

* No Cert = IAL does not hold certification for this test/method

Sample #	Test	Status	Analytical Method	TAT	Holding Time Expires
001	TCL VO + 15	Analyze	8260D	STD/2 WKS	8/10/2023
	Volatile Fatty Acid (EPA Method 8015D) by Eurofins Lancaster Laboratories, TNI certified	Analyze		STD/2 WKS	9/5/2023
	Dissolved Gasses (RSK-175) by Eurofins Lancaster Labs, TNI certified	Analyze		STD/2 WKS	7/27/2023
002	TCL VO + 15	Analyze	8260D	STD/2 WKS	8/10/2023

Project Notes:

NOTE 1 taken by kim on 07/27/2023 05:37
CLIENT WAS INFORMED VIA EMAIL THAT DISSOLVED GASSES AND VOLATILE FATTY ACIDS WILL BE SUBCONTRACTED TO EUROFINS LANCASTER.

NOTE 3 taken by kim on 07/27/2023 05:38
ALSO REQUIRES NYSDEC EQUIS FILES

NOTE 4 taken by Mark on 07/28/2023 10:58
PER CATHY BRYANT, DELIVERABLES = NY CATEGORY A

273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
www.ialonline.com

IAL is a NELAP accredited lab (TNI01284) and maintains certification in Connecticut (PH-0699), New Jersey (14751), New York (11402), and Pennsylvania (68-00773).

Jul 31, 2023 @ 10:47

PROJECT INFORMATION

E23-03408: SWIVELIER - 202530

REV 1 taken by kim on 07/28/2023 03:12
PER CATHY BRYANT, CHANGE TO NY CAT B DELIVERABLES.

273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
www.ialonline.com

IAL is a NELAP accredited lab (TNI01284) and maintains certification in Connecticut (PH-0699), New Jersey (14751), New York (11402), and Pennsylvania (68-00773).

SAMPLE RECEIPT VERIFICATION

CASE NO: **E 23** **03408** CLIENT: FUMA

COOLER TEMPERATURE: 2° - 6°C: ✓ (See Chain of Custody)

Comments

COC: (COMPLETE) / INCOMPLETE

KEY

✓ = YES/NA

✗ = NO

VOA received: ☐ Encore ☐ IGW - Methanol

(check one) ☐ Terra Core ☐ No Preservative

✓	Bottles Intact	
✓	no-Missing Bottles	
✓	no-Extra Bottles	
✓	Sufficient Sample Volume	
✓	no-headspace/bubbles in VOs	
✓	Labels intact/correct	
✗	pH Check[1] (refer to Receipt pH Log)	
✓	Correct bottles/preservative	
✓	Sufficient Holding/Prep Time[1]	
☐	Multiphasic Sample	
☐	Sample to be Subcontracted	
✓	**Chain of Custody is Clear**	

[1] All samples with "Analyze Immediately" holding times will be analyzed by this laboratory past the holding time. This includes but is not limited to the following tests: pH, Temperature, Free Residual Chlorine, Total Residual Chlorine, Dissolved Oxygen, Sulfite.

ADDITIONAL COMMENTS:

SAMPLE(S) VERIFIED BY: INITIAL [ ] DATE 7/27/23

CORRECTIVE ACTION REQUIRED: **YES** ☐ (SEE BELOW) **NO** ☐

If COC is **NOT** clear, ***STOP*** until you get client to authorize/clarify work.

CLIENT NOTIFIED: YES ☐ Date/ Time: NO ☐

PROJECT CONTACT:

SUBCONTRACTED LAB:

DATE SHIPPED:

ADDITIONAL COMMENTS:

VERIFIED/TAKEN BY: INITIAL [ ] DATE 7-28-23

Rev 2 2/11/2021

Laboratory Custody Chronicle

IAL Case No.
E23-03408

Client EWMA - HQ

Project SWIVELIER - 202530

Received On 7/27/2023@15:51

Department: Volatiles			***Prep. Date***	***Analyst***	***Analysis Date***	***Analyst***
TCL VO + 15	03408-001	Aqueous	n/a	n/a	7/31/23	Barbara
"	-002	"	n/a	n/a	7/31/23	Barbara

Department: Others			***Prep. Date***	***Analyst***	***Analysis Date***	***Analyst***
Dissolved Gasses (RSK-175) by Eurofins Lancaster Labs	-001	Aqueous	7/28/23	Rob	n/a	n/a
Volatile Fatty Acid (EPA Method 8015D) by Eurofins Lancaster Laboratories	-001	Aqueous	7/28/23	Rob	n/a	n/a

NOTE: All soil, sediment, sludge, and solid samples are reported on a dry-weight basis.

LAST PAGE OF DOCUMENT

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Melissa Simmons
Integrated Analytical Laboratories LLC
273 Franklin Road
Randolph, New Jersey 07869

Generated 8/8/2023 4:07:38 AM

JOB DESCRIPTION

E23-03407

JOB NUMBER

410-136645-1

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster PA 17601

See page two for job notes and contact information.

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.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Generated
8/8/2023 4:07:38 AM

Authorized for release by
Marrissa Williams, Project Manager
Marrissa.Williams@et.eurofinsus.com
(717)556-7246

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.
· QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
· Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
· Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

This report shall not be reproduced except in full, without the written approval of the laboratory.

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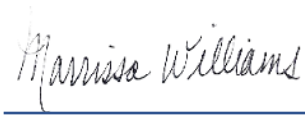

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Qualifiers

GC 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.

HPLC/IC

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.

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

Case Narrative

Client: Integrated Analytical Laboratories LLC
Project/Site: E23-03407

Job ID: 410-136645-1

Job ID: 410-136645-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Narrative

Job Narrative
410-136645-1

Receipt
The samples were received on 7/28/2023 6:00 PM. 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 time was 4.6°C

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

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

Detection Summary

Client: Integrated Analytical Laboratories LLC
Project/Site: E23-03407

Job ID: 410-136645-1

Client Sample ID: E23-03407-001_MW-11D-072623 — Lab Sample ID: 410-136645-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Butyric acid (1C)	6700	J	10000	2000	ug/L	1		8015D VFA	Total/NA

Client Sample ID: E23-03407-002_MW-10D-072623 — Lab Sample ID: 410-136645-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethane (1C)	2.5	J	5.0	1.0	ug/L	1		RSK-175	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Integrated Analytical Laboratories LLC
Project/Site: E23-03407

Job ID: 410-136645-1

Client Sample ID: E23-03407-001_MW-11D-072623
Date Collected: 07/26/23 12:53
Date Received: 07/28/23 18:00

Lab Sample ID: 410-136645-1
Matrix: Water

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane (1C)	ND		5.0	1.0	ug/L		08/03/23 10:40	08/03/23 17:23	1
Ethene (1C)	ND		5.0	1.0	ug/L		08/03/23 10:40	08/03/23 17:23	1
Methane (1C)	ND		5.0	3.0	ug/L		08/03/23 10:40	08/03/23 17:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Propene (1C)	*54*		*43 - 133*	*08/03/23 10:40*	*08/03/23 17:23*	*1*

Method: SW846 8015D VFA - Volatile Fatty Acids - Direct Aqueous Injection (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid (1C)	ND		10000	3200	ug/L		08/03/23 17:58	08/05/23 01:13	1
Butyric acid (1C)	**6700**	**J**	10000	2000	ug/L		08/03/23 17:58	08/05/23 09:11	1
Citric Acid (1C)	ND		5000	1000	ug/L		08/03/23 17:58	08/05/23 09:11	1
Formic-acid (1C)	ND		10000	2000	ug/L		08/03/23 17:58	08/05/23 01:13	1
Isovaleric acid (1C)	ND		7100	3500	ug/L		08/03/23 17:58	08/05/23 09:11	1
L-Lactic Acid (1C)	ND		5000	1000	ug/L		08/03/23 17:58	08/05/23 09:11	1
Oxalic Acid (1C)	ND		1300	250	ug/L		08/03/23 17:58	08/05/23 09:11	1
Propionic acid (1C)	ND		10000	2000	ug/L		08/03/23 17:58	08/05/23 01:13	1
Pyruvic Acid (1C)	ND		1300	250	ug/L		08/03/23 17:58	08/05/23 09:11	1
Quinic Acid (1C)	ND		5000	2400	ug/L		08/03/23 17:58	08/05/23 09:11	1
Succinic Acid (1C)	ND		2500	1000	ug/L		08/03/23 17:58	08/05/23 09:11	1
Tartaric Acid (1C)	ND		2500	1000	ug/L		08/03/23 17:58	08/05/23 09:11	1
Valeric acid (1C)	ND		5000	2000	ug/L		08/03/23 17:58	08/05/23 09:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fumaric Acid (1C)	*101*		*68 - 139*	*08/03/23 17:58*	*08/05/23 01:13*	*1*
Fumaric Acid (1C)	*106*		*68 - 139*	*08/03/23 17:58*	*08/05/23 09:11*	*1*

Client: Integrated Analytical Laboratories LLC
Project/Site: E23-03407

Job ID: 410-136645-1

Client Sample ID: E23-03407-002_MW-10D-072623
Date Collected: 07/26/23 14:15
Date Received: 07/28/23 18:00

Lab Sample ID: 410-136645-2
Matrix: Water

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane (1C)	**2.5**	**J**	5.0	1.0	ug/L		08/03/23 10:40	08/03/23 17:38	1
Ethene (1C)	ND		5.0	1.0	ug/L		08/03/23 10:40	08/03/23 17:38	1
Methane (1C)	ND		5.0	3.0	ug/L		08/03/23 10:40	08/03/23 17:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Propene (1C)	*51*		*43 - 133*	*08/03/23 10:40*	*08/03/23 17:38*	*1*

Method: SW846 8015D VFA - Volatile Fatty Acids - Direct Aqueous Injection (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid (1C)	ND		10000	3200	ug/L		08/03/23 17:58	08/05/23 12:46	1
Butyric acid (1C)	ND		10000	2000	ug/L		08/03/23 17:58	08/05/23 12:46	1
Citric Acid (1C)	ND		5000	1000	ug/L		08/03/23 17:58	08/05/23 12:46	1
Formic-acid (1C)	ND		10000	2000	ug/L		08/03/23 17:58	08/05/23 01:44	1
Isovaleric acid (1C)	ND		7100	3500	ug/L		08/03/23 17:58	08/05/23 12:46	1
L-Lactic Acid (1C)	ND		5000	1000	ug/L		08/03/23 17:58	08/05/23 12:46	1
Oxalic Acid (1C)	ND		1300	250	ug/L		08/03/23 17:58	08/05/23 12:46	1
Propionic acid (1C)	ND		10000	2000	ug/L		08/03/23 17:58	08/05/23 01:44	1
Pyruvic Acid (1C)	ND		1300	250	ug/L		08/03/23 17:58	08/05/23 12:46	1
Quinic Acid (1C)	ND		5000	2400	ug/L		08/03/23 17:58	08/05/23 12:46	1
Succinic Acid (1C)	ND		2500	1000	ug/L		08/03/23 17:58	08/05/23 12:46	1
Tartaric Acid (1C)	ND		2500	1000	ug/L		08/03/23 17:58	08/05/23 12:46	1
Valeric acid (1C)	ND		5000	2000	ug/L		08/03/23 17:58	08/05/23 12:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fumaric Acid (1C)	*101*		*68 - 139*	*08/03/23 17:58*	*08/05/23 01:44*	*1*
Fumaric Acid (1C)	*107*		*68 - 139*	*08/03/23 17:58*	*08/05/23 12:46*	*1*

Surrogate Summary

Client: Integrated Analytical Laboratories LLC
Project/Site: E23-03407

Job ID: 410-136645-1

Method: RSK-175 - Dissolved Gases (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	Propene1 (43-133)							
410-136645-1	E23-03407-001_MW-11D-072623	54							
410-136645-2	E23-03407-002_MW-10D-072623	51							
LCS 410-404151/2-A	Lab Control Sample	95							
LCSD 410-404151/3-A	Lab Control Sample Dup	95							
MB 410-404151/1-A	Method Blank	95							

Surrogate Legend

Propene = Propene

Method: 8015D VFA - Volatile Fatty Acids - Direct Aqueous Injection (HPLC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	FumAcd1 (68-139)							
410-136645-1	E23-03407-001_MW-11D-072623	101							
410-136645-1	E23-03407-001_MW-11D-072623	106							
410-136645-2	E23-03407-002_MW-10D-072623	101							
410-136645-2	E23-03407-002_MW-10D-072623	107							
LCS 410-404256/2-A	Lab Control Sample	97							
LCS 410-404256/2-A	Lab Control Sample	103							
LCS 410-404256/4-A	Lab Control Sample	100							
LCS 410-404256/4-A	Lab Control Sample	107							
LCSD 410-404256/3-A	Lab Control Sample Dup	100							
LCSD 410-404256/3-A	Lab Control Sample Dup	106							
MB 410-404256/1-A	Method Blank	100							
MB 410-404256/1-A	Method Blank	102							

Surrogate Legend

FumAcd = Fumaric Acid

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 410-404151/1-A
Matrix: Water
Analysis Batch: 403952

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 404151

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane (1C)	ND		5.0	1.0	ug/L		08/03/23 10:40	08/03/23 11:19	1
Ethene (1C)	ND		5.0	1.0	ug/L		08/03/23 10:40	08/03/23 11:19	1
Methane (1C)	ND		5.0	3.0	ug/L		08/03/23 10:40	08/03/23 11:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Propene (1C)	*95*		*43 - 133*	*08/03/23 10:40*	*08/03/23 11:19*	*1*

Lab Sample ID: LCS 410-404151/2-A
Matrix: Water
Analysis Batch: 403952

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 404151

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethane (1C)	61.7	56.9		ug/L		92	85 - 115
Ethene (1C)	58.3	54.0		ug/L		93	83 - 115
Methane (1C)	59.8	56.7		ug/L		95	85 - 115

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Propene (1C)	*95*		*43 - 133*

Lab Sample ID: LCSD 410-404151/3-A
Matrix: Water
Analysis Batch: 403952

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 404151

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethane (1C)	61.7	56.4		ug/L		91	85 - 115	1	20
Ethene (1C)	58.3	53.6		ug/L		92	83 - 115	1	20
Methane (1C)	59.8	56.0		ug/L		94	85 - 115	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Propene (1C)	*95*		*43 - 133*

Method: 8015D VFA - Volatile Fatty Acids - Direct Aqueous Injection (HPLC)

Lab Sample ID: MB 410-404256/1-A
Matrix: Water
Analysis Batch: 404643

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 404256

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid (1C)	ND		10000	3200	ug/L		08/03/23 17:57	08/04/23 16:55	1
Formic-acid (1C)	ND		10000	2000	ug/L		08/03/23 17:57	08/04/23 16:55	1
Propionic acid (1C)	ND		10000	2000	ug/L		08/03/23 17:57	08/04/23 16:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fumaric Acid (1C)	*100*		*68 - 139*	*08/03/23 17:57*	*08/04/23 16:55*	*1*

Method: 8015D VFA - Volatile Fatty Acids - Direct Aqueous Injection (HPLC) (Continued)

Lab Sample ID: MB 410-404256/1-A
Matrix: Water
Analysis Batch: 404646

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 404256

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid (1C)	ND		10000	3200	ug/L		08/03/23 17:57	08/04/23 18:09	1
Butyric acid (1C)	ND		10000	2000	ug/L		08/03/23 17:57	08/04/23 18:09	1
Citric Acid (1C)	ND		5000	1000	ug/L		08/03/23 17:57	08/04/23 18:09	1
Formic-acid (1C)	ND		10000	2000	ug/L		08/03/23 17:57	08/04/23 18:09	1
Isovaleric acid (1C)	ND		7100	3500	ug/L		08/03/23 17:57	08/04/23 18:09	1
L-Lactic Acid (1C)	ND		5000	1000	ug/L		08/03/23 17:57	08/04/23 18:09	1
Oxalic Acid (1C)	ND		1300	250	ug/L		08/03/23 17:57	08/04/23 18:09	1
Pyruvic Acid (1C)	ND		1300	250	ug/L		08/03/23 17:57	08/04/23 18:09	1
Quinic Acid (1C)	ND		5000	2400	ug/L		08/03/23 17:57	08/04/23 18:09	1
Succinic Acid (1C)	ND		2500	1000	ug/L		08/03/23 17:57	08/04/23 18:09	1
Tartaric Acid (1C)	ND		2500	1000	ug/L		08/03/23 17:57	08/04/23 18:09	1
Valeric acid (1C)	ND		5000	2000	ug/L		08/03/23 17:57	08/04/23 18:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fumaric Acid (1C)	*102*		*68 - 139*	*08/03/23 17:57*	*08/04/23 18:09*	*1*

Lab Sample ID: LCS 410-404256/2-A
Matrix: Water
Analysis Batch: 404643

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 404256

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Isovaleric acid (1C)	100000	107000		ug/L		107	70 - 115
Succinic Acid (1C)	50000	49900		ug/L		100	65 - 142
Tartaric Acid (1C)	50000	51100		ug/L		102	75 - 115
Valeric acid (1C)	100000	110000		ug/L		110	57 - 126

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Fumaric Acid (1C)	*97*		*68 - 139*

Lab Sample ID: LCS 410-404256/2-A
Matrix: Water
Analysis Batch: 404646

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 404256

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Isovaleric acid (1C)	100000	98300		ug/L		98	70 - 115
Succinic Acid (1C)	50000	48100		ug/L		96	65 - 142
Tartaric Acid (1C)	50000	51400		ug/L		103	75 - 115
Valeric acid (1C)	100000	101000		ug/L		101	57 - 126

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Fumaric Acid (1C)	*103*		*68 - 139*

Lab Sample ID: LCS 410-404256/4-A
Matrix: Water
Analysis Batch: 404643

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 404256

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetic acid (1C)	101000	102000		ug/L		101	77 - 123

Method: 8015D VFA - Volatile Fatty Acids - Direct Aqueous Injection (HPLC) (Continued)

Lab Sample ID: LCS 410-404256/4-A
Matrix: Water
Analysis Batch: 404643

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 404256

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Formic-acid (1C)			101000	98600		ug/L		98	73 - 129		
Propionic acid (1C)			101000	108000		ug/L		107	42 - 145		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Fumaric Acid (1C)	*100*		*68 - 139*

Lab Sample ID: LCS 410-404256/4-A
Matrix: Water
Analysis Batch: 404646

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 404256

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Acetic acid (1C)			101000	104000		ug/L		104	77 - 123		
Butyric acid (1C)			101000	103000		ug/L		102	73 - 134		
Citric Acid (1C)			50000	50200		ug/L		100	77 - 123		
Formic-acid (1C)			101000	105000		ug/L		104	73 - 129		
L-Lactic Acid (1C)			50200	39700		ug/L		79	71 - 115		
Oxalic Acid (1C)			12600	11300		ug/L		90	59 - 138		
Pyruvic Acid (1C)			12400	13000		ug/L		105	74 - 115		
Quinic Acid (1C)			50300	46800		ug/L		93	85 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Fumaric Acid (1C)	*107*		*68 - 139*

Lab Sample ID: LCSD 410-404256/3-A
Matrix: Water
Analysis Batch: 404643

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 404256

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Isovaleric acid (1C)			100000	108000		ug/L		107	70 - 115	1	30
Succinic Acid (1C)			50000	50900		ug/L		102	65 - 142	2	30
Tartaric Acid (1C)			50000	51800		ug/L		104	75 - 115	1	30
Valeric acid (1C)			100000	112000		ug/L		111	57 - 126	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Fumaric Acid (1C)	*100*		*68 - 139*

Lab Sample ID: LCSD 410-404256/3-A
Matrix: Water
Analysis Batch: 404646

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 404256

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Isovaleric acid (1C)			100000	99800		ug/L		99	70 - 115	1	30
Succinic Acid (1C)			50000	48500		ug/L		97	65 - 142	1	30
Tartaric Acid (1C)			50000	52000		ug/L		104	75 - 115	1	30
Valeric acid (1C)			100000	103000		ug/L		102	57 - 126	1	30

Method: 8015D VFA - Volatile Fatty Acids - Direct Aqueous Injection (HPLC) (Continued)

Lab Sample ID: LCSD 410-404256/3-A
Matrix: Water
Analysis Batch: 404646

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 404256

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Fumaric Acid (1C)	106		68 - 139

GC VOA

Analysis Batch: 403952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136645-1	E23-03407-001_MW-11D-072623	Total/NA	Water	RSK-175	404151
410-136645-2	E23-03407-002_MW-10D-072623	Total/NA	Water	RSK-175	404151
MB 410-404151/1-A	Method Blank	Total/NA	Water	RSK-175	404151
LCS 410-404151/2-A	Lab Control Sample	Total/NA	Water	RSK-175	404151
LCSD 410-404151/3-A	Lab Control Sample Dup	Total/NA	Water	RSK-175	404151

Prep Batch: 404151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136645-1	E23-03407-001_MW-11D-072623	Total/NA	Water	RSK-175	
410-136645-2	E23-03407-002_MW-10D-072623	Total/NA	Water	RSK-175	
MB 410-404151/1-A	Method Blank	Total/NA	Water	RSK-175	
LCS 410-404151/2-A	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 410-404151/3-A	Lab Control Sample Dup	Total/NA	Water	RSK-175	

HPLC/IC

Prep Batch: 404256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136645-1	E23-03407-001_MW-11D-072623	Total/NA	Water	8015 VFA	
410-136645-2	E23-03407-002_MW-10D-072623	Total/NA	Water	8015 VFA	
MB 410-404256/1-A	Method Blank	Total/NA	Water	8015 VFA	
LCS 410-404256/2-A	Lab Control Sample	Total/NA	Water	8015 VFA	
LCS 410-404256/4-A	Lab Control Sample	Total/NA	Water	8015 VFA	
LCSD 410-404256/3-A	Lab Control Sample Dup	Total/NA	Water	8015 VFA	

Analysis Batch: 404643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136645-1	E23-03407-001_MW-11D-072623	Total/NA	Water	8015D VFA	404256
410-136645-2	E23-03407-002_MW-10D-072623	Total/NA	Water	8015D VFA	404256
MB 410-404256/1-A	Method Blank	Total/NA	Water	8015D VFA	404256
LCS 410-404256/2-A	Lab Control Sample	Total/NA	Water	8015D VFA	404256
LCS 410-404256/4-A	Lab Control Sample	Total/NA	Water	8015D VFA	404256
LCSD 410-404256/3-A	Lab Control Sample Dup	Total/NA	Water	8015D VFA	404256

Analysis Batch: 404646

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136645-1	E23-03407-001_MW-11D-072623	Total/NA	Water	8015D VFA	404256
410-136645-2	E23-03407-002_MW-10D-072623	Total/NA	Water	8015D VFA	404256
MB 410-404256/1-A	Method Blank	Total/NA	Water	8015D VFA	404256
LCS 410-404256/2-A	Lab Control Sample	Total/NA	Water	8015D VFA	404256
LCS 410-404256/4-A	Lab Control Sample	Total/NA	Water	8015D VFA	404256
LCSD 410-404256/3-A	Lab Control Sample Dup	Total/NA	Water	8015D VFA	404256

Lab Chronicle

Client: Integrated Analytical Laboratories LLC
Job ID: 410-136645-1
Project/Site: E23-03407

Client Sample ID: E23-03407-001_MW-11D-072623
Lab Sample ID: 410-136645-1

Date Collected: 07/26/23 12:53
Matrix: Water
Date Received: 07/28/23 18:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	RSK-175			404151	HQR6	ELLE	08/03/23 10:40
Total/NA	Analysis	RSK-175		1	403952	LXF2	ELLE	08/03/23 17:23
Total/NA	Prep	8015 VFA			404256	UHEW	ELLE	08/03/23 17:58
Total/NA	Analysis	8015D VFA		1	404643	UHEW	ELLE	08/05/23 01:13
Total/NA	Prep	8015 VFA			404256	UHEW	ELLE	08/03/23 17:58
Total/NA	Analysis	8015D VFA		1	404646	UHEW	ELLE	08/05/23 09:11

Client Sample ID: E23-03407-002_MW-10D-072623
Lab Sample ID: 410-136645-2

Date Collected: 07/26/23 14:15
Matrix: Water
Date Received: 07/28/23 18:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	RSK-175			404151	HQR6	ELLE	08/03/23 10:40
Total/NA	Analysis	RSK-175		1	403952	LXF2	ELLE	08/03/23 17:38
Total/NA	Prep	8015 VFA			404256	UHEW	ELLE	08/03/23 17:58
Total/NA	Analysis	8015D VFA		1	404643	UHEW	ELLE	08/05/23 01:44
Total/NA	Prep	8015 VFA			404256	UHEW	ELLE	08/03/23 17:58
Total/NA	Analysis	8015D VFA		1	404646	UHEW	ELLE	08/05/23 12:46

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: Integrated Analytical Laboratories LLC
Job ID: 410-136645-1
Project/Site: E23-03407

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10670	04-01-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015D VFA	8015 VFA	Water	Acetic acid (1C)
8015D VFA	8015 VFA	Water	Butyric acid (1C)
8015D VFA	8015 VFA	Water	Citric Acid (1C)
8015D VFA	8015 VFA	Water	Formic-acid (1C)
8015D VFA	8015 VFA	Water	Isovaleric acid (1C)
8015D VFA	8015 VFA	Water	L-Lactic Acid (1C)
8015D VFA	8015 VFA	Water	Oxalic Acid (1C)
8015D VFA	8015 VFA	Water	Propionic acid (1C)
8015D VFA	8015 VFA	Water	Pyruvic Acid (1C)
8015D VFA	8015 VFA	Water	Quinic Acid (1C)
8015D VFA	8015 VFA	Water	Succinic Acid (1C)
8015D VFA	8015 VFA	Water	Tartaric Acid (1C)
8015D VFA	8015 VFA	Water	Valeric acid (1C)

Method Summary

Client: Integrated Analytical Laboratories LLC
Job ID: 410-136645-1
Project/Site: E23-03407

Method	Method Description	Protocol	Laboratory
RSK-175	Dissolved Gases (GC)	RSK	ELLE
8015D VFA	Volatile Fatty Acids - Direct Aqueous Injection (HPLC)	SW846	ELLE
8015 VFA	Volatile Fatty Acids - Water Prep	SW846	ELLE
RSK-175	Dissolved Gases Prep	RSK	ELLE

Protocol References:

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique , RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: Integrated Analytical Laboratories LLC
Project/Site: E23-03407

Job ID: 410-136645-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-136645-1	E23-03407-001_MW-11D-072623	Water	07/26/23 12:53	07/28/23 18:00
410-136645-2	E23-03407-002_MW-10D-072623	Water	07/26/23 14:15	07/28/23 18:00

410-136645 Chain of Custody

2425 New ries
aster, PA 17601-2425

D/03711

CLIENT & PROJECT / REPORTING & BIL

Name: Integrated Analytical Laboratories LLC		Contact:	Kim James
		Fax #:	
Address:		EMail to:	msimmons@ialonline.com
273 Franklin Road		Report to:	Melissa Simmons
Randolph, NJ 07869		Address:	
Telephone #:	973-361-4252		
Project Name:	E23-03407	Invoice to:	Brenda Barone
Project Location (State):	NY	Address:	
Project Manager:			
Reference ID#:	PO#		

Turnaround Time

Verbal/Fax: 24 hr* 48 hr* 72 hr* 1 wk* 2 wk Other: 2 WEEKS

Hard Copy: 72 hr* 1 wk* 2 wk* 3 wk Other:

*Prior to sample arrival, Lab notification is required.

Report Format

NY CATEGORY B DELIVERABLES

Special Requirements

EDD: EQuIS - EQEDD

Preservative
1 = HCL; 2 = NaOH; 3 = HNO_3
4 = H_2SO_4; 5 = MeOH; 6 = Other

ANALYTICAL PARAMETERS / PRESERVATIVES

SAMPLE INFORMATION

Sample ID	Sample Depth (in Feet)	Sampling Date	Sampling Time	Matrix	# of Containers	Dissolved Gasses (RSK-175)	Volatile Fatty Acid (EPA Method 8015D)												
						1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
E23-03407-001_MW-11D-072623		7/26/23	12:53	Aqueous	5	Run	Run												
E23-03407-002_MW-10D-072623		7/26/23	14:15	Aqueous	5	Run	Run												

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

COOLER TEMP. °C

Concentrations Expected: LOW MED HIGH

Known Hazard: yes no
Describe:

Note:

EMAIL CONFIRMATION REQUIRED

CUSTODY LOG

Signature/Company	Date	Time	Signature/Company
Relinquished by:			Received by:
Relinquished by:			Received by:
Relinquished by:	7/28/23	18:00	Received by: Shaun Wrye

~~14:25~~ Amended

Lab Case #

PAGE: OF

COC (001-002)

REV Feb 2013

8/8/2023

Eurofins Lancaster Laboratories
2425 New Holland Pike, P.O. Box 12425, Lancaster, PA 17601-2425

D/O3711

CLIENT & PROJECT

Name: Integrated Analytical Laboratories LLC	
Address:	
273 Franklin Road	
Randolph, NJ 07869	
Telephone #: 973-361-4252	
Project Name: E23-03407	
Project Location (State): NY	
Project Manager:	
Reference ID#: PO#	

REPORTING & BILLING

Contact: Kim James	
Fax #:	
EMail to: msimmons@ialonline.com	
Report to: Melissa Simmons	
Address:	
Invoice to: Brenda Barone	
Address:	

Turnaround Time							Report Format
Verbal/Fax							Reduced / Level III
24 hr*	48 hr*	72 hr*	1 wk*	2 wk	Other:	2 WEEKS	
Hard Copy							Special Requirements
72 hr*	1 wk*	2 wk*	3 wk		Other:		EDD: EQuIS - EQEDD
*Prior to sample arrival, Lab notification is required.							

Preservative
1 = HCL, 2 = NaOH, 3 = HNO_3
4 = H_2SO_4, 5= MeOH, 6 = Other

ANALYTICAL PARAMETERS / PRESERVATIVES

SAMPLE INFORMATION

Sample ID	Sample Depth (in Feet)	Sampling Date	Sampling Time	Matrix	# of Containers	Dissolved Gasses (RSK-175)	Volatile Fatty Acid (EPA Method 8015D)												
						1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
E23-03407-001_MW-11D-072623		7/26/23	12:53	Aqueous	5	Run	Run												
E23-03407-002_MW-10D-072623		7/26/23	14:15	Aqueous	5	Run	Run												

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

COOLER TEMP: raw 4.7 cor 4.6 °C

Concentrations Expected: LOW MED HIGH

Known Hazard: yes no
Describe:

Note:

EMAIL CONFIRMATION REQUIRED

CUSTODY LOG

Signature/Company	Date	Time	Signature/Company
Relinquished by:	7/28/23	1130	Received by:
Relinquished by:	28/7/23	1800	Received by:
Relinquished by:	7/28/23	1800	Received by:

Lab Case #

PAGE: OF

COC (001-002)

REV Feb 2013

8/8/2023

Eurofins Lancaster Laboratories Environme
2425 New Holland Pike
Lancaster, PA 17601
Phone: 717-656-2300 Fax: 717-656-2681

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: K. SCHUTTE	Lab PM: Gordon, Stephen J	Carrier Tracking No(s):	COC No: 410-93556-26435.13
Client Contact: Emma Romi	Phone:	E-Mail: Stephen.Gordon@et.eurofinsus.com	State of Origin:	Page: Page 13 of 13
Company: Burns & McDonnell	PWSID:			Job #:
Address: 9400 Ward Parkway	Due Date Requested:			
City: Kansas City	TAT Requested (days):			
State, Zip: MO, 64114	Compliance Project: Δ Yes Δ No			
Phone: 816-823-6257(Tel)	PO #: 207599			
Email: elromi@burnsmcd.com	WO #:			
Project Name: One Gas	Project #: 41002385			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270E_SIM - 16 PAHs	6020B, 7470A	8260D - BTEX	335.4 - Cyanide, Total	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D	A	HB		
MMW-1/GW (MMW-1/072523)	7-25	~~1345~~ 1130		Water	N		X	X	X	X		
RINSATE-1/072523	7-25	1200		Water	N		X	X	X	X		
MMW-193/GW (MMW-193/072523)	7-25	1405		Water	N		X	X	X	X		
MMW-195/GW (MMW-195/072523)	7-25	1500		Water	N		X	X	X	X		
TRIP BLANK/072523	7-25	1100		Water					X			
				Water								
				Water								
				Water								
				Water								
				Water								

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		7-27 / 1800	BMCD			
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 7-28-23 1000	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: Blank-7-1.8

Eurofins Lancaster Laboratories Environme
2425 New Holland Pike
Lancaster, PA 17601
Phone: 717-656-2300 Fax: 717-656-2681

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: K. SCHUTTE	Lab PM: Gordon, Stephen J	Carrier Tracking No(s):	COC No: 410-93556-26435.13
Client Contact: Emma Romi	Phone:	E-Mail: Stephen.Gordon@et.eurofinsus.com	State of Origin:	Page: Page 13 of 13
Company: Burns & McDonnell	PWSID:	Analysis Requested		Job #:
Address: 9400 Ward Parkway	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
City: Kansas City	TAT Requested (days):			
State, Zip: MO, 64114	Compliance Project: Δ Yes Δ No			
Phone: 816-823-6257(Tel)	PO #: 207599			
Email: elromi@burnsmcd.com	WO #:			Other:
Project Name: One Gas	Project #: 41002385			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270E_SIM - 16 PAHs	6020B, 7470A	8260D - BTEX	335.4 - Cyanide, Total	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D	A	HB		
MMW-16S/GW (MMW-16S/072623)	7-26-23	0750		Water	N		X	X	X	X		
MMW-16I/GW (MMW-16I/072623)	7-26-23	0840		Water	N		X	X	X	X		
MMW-15S/GW (MMW-15S/072623)	7-26-23	1045		Water	N		X	X	X	X		
MMW-15I/GW (MMW-15I/072623)	7-26-23	1145		Water	N		X	X	X	X		
MMW-18S/GW (MMW-18S/072623)	7-26-23	1600		Water	N		X	X	X	X		
MMW-18I/GW (MMW-18I/072623)	7-26-23	1650		Water	N		X	X	X	X		
MMW-17S/GW (MMW-17S/072623)	7-26-23	1800		Water	N		X	X	X	X		
MMW-17I/GW (MMW-17I/072623)	7-26-23	1850		Water	N		X	X	X	X		
TRIP BLANK/072623	7-26-23	0730		Water					X			
				Water								

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	7-27 / 1000	BMcD			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 7-28-23 1000	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: Raw 0-7-1.8 corr 0-7-1.8

Eurofins Lancaster Laboratories Environme
2425 New Holland Pike
Lancaster, PA 17601
Phone: 717-656-2300 Fax: 717-656-2681

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: K. SCHUTTE	Lab PM: Gordon, Stephen J	Carrier Tracking No(s):	COC No: 410-93556-26435.13
Client Contact: Emma Romi	Phone:	E-Mail: Stephen.Gordon@et.eurofinsus.com	State of Origin:	Page: Page 13 of 13
Company: Burns & McDonnell	PWSID:			Job #:
Address: 9400 Ward Parkway	Due Date Requested:			
City: Kansas City	TAT Requested (days):			
State, Zip: MO, 64114	Compliance Project: Δ Yes Δ No			
Phone: 816-823-6257(Tel)	PO #: 207599			
Email: elromi@burnsmcd.com	WO #:			
Project Name: One Gas	Project #: 41002385			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270E_SIM - 16 PAHs	6020B, 7470A	8260D - BTEX	335.4 - Cyanide, Total	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D	A	HB		
MMW-13S/GW (MMW-13S/072723)	7-27-23	0705		Water	N		X	X	X	X		
MMW-13I/GW (MMW-13I/072723)	7-27-23	0735		Water	N		X	X	X	X		
MMW-11S/GW (MMW-11S/072723)	7-27-23	0900		Water	N		X	X	X	X		
MMW-11I/GW (MMW-11I/072723)	7-27-23	0950		Water	N		X	X	X	X		
MMW-12I/GW (MMW-12I/072723)	7-27-23	1220		Water	N		X	X	X	X		
MMW-12I/072723 MS	7-27-23	1220		Water	N	X	X	X	X	X		MATRIX SPIKE
MMW-12I/072723 MSD	7-27-23	1220		Water	N	X	X	X	X	X		MATRIX SPIKE DUP.
MMW-12S/072723	7-27-23	1340		Water	N		X	X	X	X		
TRIP BLANK/072723	7-27-23	0630		Water				X	X			
				Water								

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	7-27/1800	BMcD			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 7-28-23 1000	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: RAW 0.7-1.8 COOL 0.7-1.8

Login Sample Receipt Checklist

Client: Integrated Analytical Laboratories LLC

Job Number: 410-136645-1

Login Number: 136645

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: Roth, Stephanie

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable (</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Melissa Simmons
Integrated Analytical Laboratories LLC
273 Franklin Road
Randolph, New Jersey 07869

Generated 8/8/2023 4:12:36 AM

JOB DESCRIPTION

E23-03408

JOB NUMBER

410-136647-1

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster PA 17601

See page two for job notes and contact information.

my EOL

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.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

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8/8/2023 4:12:36 AM

Authorized for release by
Marrissa Williams, Project Manager
Marrissa.Williams@et.eurofinsus.com
(717)556-7246

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.
· QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
· Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
· Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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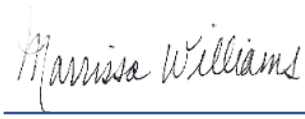

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Glossary

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

Case Narrative

Client: Integrated Analytical Laboratories LLC
Project/Site: E23-03408

Job ID: 410-136647-1

Job ID: 410-136647-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Narrative

Job Narrative
410-136647-1

Receipt
The sample was received on 7/28/2023 6:00 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.6°C

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

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

Detection Summary

Client: Integrated Analytical Laboratories LLC
Project/Site: E23-03408

Job ID: 410-136647-1

Client Sample ID: E23-03408-001_MW-13D-072723 **Lab Sample ID: 410-136647-1**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethane (1C)	18		5.0	1.0	ug/L	1		RSK-175	Total/NA
Methane (1C)	200		5.0	3.0	ug/L	1		RSK-175	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Integrated Analytical Laboratories LLC
Project/Site: E23-03408

Job ID: 410-136647-1

Client Sample ID: E23-03408-001_MW-13D-072723
Date Collected: 07/27/23 12:59
Date Received: 07/28/23 18:00

Lab Sample ID: 410-136647-1
Matrix: Water

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane (1C)	**18**		5.0	1.0	ug/L		08/03/23 10:40	08/03/23 17:54	1
Ethene (1C)	ND		5.0	1.0	ug/L		08/03/23 10:40	08/03/23 17:54	1
Methane (1C)	**200**		5.0	3.0	ug/L		08/03/23 10:40	08/03/23 17:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Propene (1C)	*50*		*43 - 133*	*08/03/23 10:40*	*08/03/23 17:54*	*1*

Method: SW846 8015D VFA - Volatile Fatty Acids - Direct Aqueous Injection (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid (1C)	ND		10000	3200	ug/L		08/03/23 17:58	08/05/23 14:12	1
Butyric acid (1C)	ND		10000	2000	ug/L		08/03/23 17:58	08/05/23 14:12	1
Citric Acid (1C)	ND		5000	1000	ug/L		08/03/23 17:58	08/05/23 14:12	1
Formic-acid (1C)	ND		10000	2000	ug/L		08/03/23 17:58	08/05/23 14:12	1
Isovaleric acid (1C)	ND		7100	3500	ug/L		08/03/23 17:58	08/05/23 14:12	1
L-Lactic Acid (1C)	ND		5000	1000	ug/L		08/03/23 17:58	08/05/23 14:12	1
Oxalic Acid (1C)	ND		1300	250	ug/L		08/03/23 17:58	08/05/23 14:12	1
Propionic acid (1C)	ND		10000	2000	ug/L		08/03/23 17:58	08/05/23 02:15	1
Pyruvic Acid (1C)	ND		1300	250	ug/L		08/03/23 17:58	08/05/23 14:12	1
Quinic Acid (1C)	ND		5000	2400	ug/L		08/03/23 17:58	08/05/23 14:12	1
Succinic Acid (1C)	ND		2500	1000	ug/L		08/03/23 17:58	08/05/23 14:12	1
Tartaric Acid (1C)	ND		2500	1000	ug/L		08/03/23 17:58	08/05/23 14:12	1
Valeric acid (1C)	ND		5000	2000	ug/L		08/03/23 17:58	08/05/23 14:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fumaric Acid (1C)	*102*		*68 - 139*	*08/03/23 17:58*	*08/05/23 02:15*	*1*
Fumaric Acid (1C)	*108*		*68 - 139*	*08/03/23 17:58*	*08/05/23 14:12*	*1*

Surrogate Summary

Client: Integrated Analytical Laboratories LLC
Project/Site: E23-03408

Job ID: 410-136647-1

Method: RSK-175 - Dissolved Gases (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	Propene1 (43-133)							
410-136647-1	E23-03408-001_MW-13D-072723	50							
LCS 410-404151/2-A	Lab Control Sample	95							
LCSD 410-404151/3-A	Lab Control Sample Dup	95							
MB 410-404151/1-A	Method Blank	95							

Surrogate Legend

Propene = Propene

Method: 8015D VFA - Volatile Fatty Acids - Direct Aqueous Injection (HPLC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	FumAcd1 (68-139)							
410-136647-1	E23-03408-001_MW-13D-072723	102							
410-136647-1	E23-03408-001_MW-13D-072723	108							
LCS 410-404256/2-A	Lab Control Sample	97							
LCS 410-404256/2-A	Lab Control Sample	103							
LCS 410-404256/4-A	Lab Control Sample	100							
LCS 410-404256/4-A	Lab Control Sample	107							
LCSD 410-404256/3-A	Lab Control Sample Dup	100							
LCSD 410-404256/3-A	Lab Control Sample Dup	106							
MB 410-404256/1-A	Method Blank	100							
MB 410-404256/1-A	Method Blank	102							

Surrogate Legend

FumAcd = Fumaric Acid

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 410-404151/1-A
Matrix: Water
Analysis Batch: 403952

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 404151

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane (1C)	ND		5.0	1.0	ug/L		08/03/23 10:40	08/03/23 11:19	1
Ethene (1C)	ND		5.0	1.0	ug/L		08/03/23 10:40	08/03/23 11:19	1
Methane (1C)	ND		5.0	3.0	ug/L		08/03/23 10:40	08/03/23 11:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Propene (1C)	*95*		*43 - 133*	*08/03/23 10:40*	*08/03/23 11:19*	*1*

Lab Sample ID: LCS 410-404151/2-A
Matrix: Water
Analysis Batch: 403952

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 404151

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Ethane (1C)			61.7	56.9		ug/L		92	85 - 115		
Ethene (1C)			58.3	54.0		ug/L		93	83 - 115		
Methane (1C)			59.8	56.7		ug/L		95	85 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Propene (1C)	*95*		*43 - 133*

Lab Sample ID: LCSD 410-404151/3-A
Matrix: Water
Analysis Batch: 403952

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 404151

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethane (1C)			61.7	56.4		ug/L		91	85 - 115	1	20
Ethene (1C)			58.3	53.6		ug/L		92	83 - 115	1	20
Methane (1C)			59.8	56.0		ug/L		94	85 - 115	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Propene (1C)	*95*		*43 - 133*

Method: 8015D VFA - Volatile Fatty Acids - Direct Aqueous Injection (HPLC)

Lab Sample ID: MB 410-404256/1-A
Matrix: Water
Analysis Batch: 404643

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 404256

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Propionic acid (1C)	ND		10000	2000	ug/L		08/03/23 17:57	08/04/23 16:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fumaric Acid (1C)	*100*		*68 - 139*	*08/03/23 17:57*	*08/04/23 16:55*	*1*

Method: 8015D VFA - Volatile Fatty Acids - Direct Aqueous Injection (HPLC) (Continued)

Lab Sample ID: MB 410-404256/1-A
Matrix: Water
Analysis Batch: 404646

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 404256

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid (1C)	ND		10000	3200	ug/L		08/03/23 17:57	08/04/23 18:09	1
Butyric acid (1C)	ND		10000	2000	ug/L		08/03/23 17:57	08/04/23 18:09	1
Citric Acid (1C)	ND		5000	1000	ug/L		08/03/23 17:57	08/04/23 18:09	1
Formic-acid (1C)	ND		10000	2000	ug/L		08/03/23 17:57	08/04/23 18:09	1
Isovaleric acid (1C)	ND		7100	3500	ug/L		08/03/23 17:57	08/04/23 18:09	1
L-Lactic Acid (1C)	ND		5000	1000	ug/L		08/03/23 17:57	08/04/23 18:09	1
Oxalic Acid (1C)	ND		1300	250	ug/L		08/03/23 17:57	08/04/23 18:09	1
Pyruvic Acid (1C)	ND		1300	250	ug/L		08/03/23 17:57	08/04/23 18:09	1
Quinic Acid (1C)	ND		5000	2400	ug/L		08/03/23 17:57	08/04/23 18:09	1
Succinic Acid (1C)	ND		2500	1000	ug/L		08/03/23 17:57	08/04/23 18:09	1
Tartaric Acid (1C)	ND		2500	1000	ug/L		08/03/23 17:57	08/04/23 18:09	1
Valeric acid (1C)	ND		5000	2000	ug/L		08/03/23 17:57	08/04/23 18:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fumaric Acid (1C)	*102*		*68 - 139*	*08/03/23 17:57*	*08/04/23 18:09*	*1*

Lab Sample ID: LCS 410-404256/2-A
Matrix: Water
Analysis Batch: 404643

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 404256

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Isovaleric acid (1C)	100000	107000		ug/L		107	70 - 115
Succinic Acid (1C)	50000	49900		ug/L		100	65 - 142
Tartaric Acid (1C)	50000	51100		ug/L		102	75 - 115
Valeric acid (1C)	100000	110000		ug/L		110	57 - 126

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Fumaric Acid (1C)	*97*		*68 - 139*

Lab Sample ID: LCS 410-404256/2-A
Matrix: Water
Analysis Batch: 404646

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 404256

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Isovaleric acid (1C)	100000	98300		ug/L		98	70 - 115
Succinic Acid (1C)	50000	48100		ug/L		96	65 - 142
Tartaric Acid (1C)	50000	51400		ug/L		103	75 - 115
Valeric acid (1C)	100000	101000		ug/L		101	57 - 126

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Fumaric Acid (1C)	*103*		*68 - 139*

Lab Sample ID: LCS 410-404256/4-A
Matrix: Water
Analysis Batch: 404643

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 404256

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Propionic acid (1C)	101000	108000		ug/L		107	42 - 145

Method: 8015D VFA - Volatile Fatty Acids - Direct Aqueous Injection (HPLC) (Continued)

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Fumaric Acid (1C)	100		68 - 139

Lab Sample ID: LCS 410-404256/4-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 404646 — **Prep Batch: 404256**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Acetic acid (1C)			101000	104000		ug/L		104	77 - 123		
Butyric acid (1C)			101000	103000		ug/L		102	73 - 134		
Citric Acid (1C)			50000	50200		ug/L		100	77 - 123		
Formic-acid (1C)			101000	105000		ug/L		104	73 - 129		
L-Lactic Acid (1C)			50200	39700		ug/L		79	71 - 115		
Oxalic Acid (1C)			12600	11300		ug/L		90	59 - 138		
Pyruvic Acid (1C)			12400	13000		ug/L		105	74 - 115		
Quinic Acid (1C)			50300	46800		ug/L		93	85 - 115		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Fumaric Acid (1C)	107		68 - 139

Lab Sample ID: LCSD 410-404256/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 404643 — **Prep Batch: 404256**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Isovaleric acid (1C)			100000	108000		ug/L		107	70 - 115	1	30
Succinic Acid (1C)			50000	50900		ug/L		102	65 - 142	2	30
Tartaric Acid (1C)			50000	51800		ug/L		104	75 - 115	1	30
Valeric acid (1C)			100000	112000		ug/L		111	57 - 126	1	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Fumaric Acid (1C)	100		68 - 139

Lab Sample ID: LCSD 410-404256/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 404646 — **Prep Batch: 404256**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Isovaleric acid (1C)			100000	99800		ug/L		99	70 - 115	1	30
Succinic Acid (1C)			50000	48500		ug/L		97	65 - 142	1	30
Tartaric Acid (1C)			50000	52000		ug/L		104	75 - 115	1	30
Valeric acid (1C)			100000	103000		ug/L		102	57 - 126	1	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Fumaric Acid (1C)	106		68 - 139

QC Association Summary

Client: Integrated Analytical Laboratories LLC
Project/Site: E23-03408

Job ID: 410-136647-1

GC VOA

Analysis Batch: 403952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136647-1	E23-03408-001_MW-13D-072723	Total/NA	Water	RSK-175	404151
MB 410-404151/1-A	Method Blank	Total/NA	Water	RSK-175	404151
LCS 410-404151/2-A	Lab Control Sample	Total/NA	Water	RSK-175	404151
LCSD 410-404151/3-A	Lab Control Sample Dup	Total/NA	Water	RSK-175	404151

Prep Batch: 404151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136647-1	E23-03408-001_MW-13D-072723	Total/NA	Water	RSK-175	
MB 410-404151/1-A	Method Blank	Total/NA	Water	RSK-175	
LCS 410-404151/2-A	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 410-404151/3-A	Lab Control Sample Dup	Total/NA	Water	RSK-175	

HPLC/IC

Prep Batch: 404256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136647-1	E23-03408-001_MW-13D-072723	Total/NA	Water	8015 VFA	
MB 410-404256/1-A	Method Blank	Total/NA	Water	8015 VFA	
LCS 410-404256/2-A	Lab Control Sample	Total/NA	Water	8015 VFA	
LCS 410-404256/4-A	Lab Control Sample	Total/NA	Water	8015 VFA	
LCSD 410-404256/3-A	Lab Control Sample Dup	Total/NA	Water	8015 VFA	

Analysis Batch: 404643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136647-1	E23-03408-001_MW-13D-072723	Total/NA	Water	8015D VFA	404256
MB 410-404256/1-A	Method Blank	Total/NA	Water	8015D VFA	404256
LCS 410-404256/2-A	Lab Control Sample	Total/NA	Water	8015D VFA	404256
LCS 410-404256/4-A	Lab Control Sample	Total/NA	Water	8015D VFA	404256
LCSD 410-404256/3-A	Lab Control Sample Dup	Total/NA	Water	8015D VFA	404256

Analysis Batch: 404646

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136647-1	E23-03408-001_MW-13D-072723	Total/NA	Water	8015D VFA	404256
MB 410-404256/1-A	Method Blank	Total/NA	Water	8015D VFA	404256
LCS 410-404256/2-A	Lab Control Sample	Total/NA	Water	8015D VFA	404256
LCS 410-404256/4-A	Lab Control Sample	Total/NA	Water	8015D VFA	404256
LCSD 410-404256/3-A	Lab Control Sample Dup	Total/NA	Water	8015D VFA	404256

Lab Chronicle

Client: Integrated Analytical Laboratories LLC
Project/Site: E23-03408

Job ID: 410-136647-1

Client Sample ID: E23-03408-001_MW-13D-072723
Date Collected: 07/27/23 12:59
Date Received: 07/28/23 18:00

Lab Sample ID: 410-136647-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	RSK-175			404151	HQR6	ELLE	08/03/23 10:40
Total/NA	Analysis	RSK-175		1	403952	LXF2	ELLE	08/03/23 17:54
Total/NA	Prep	8015 VFA			404256	UHEW	ELLE	08/03/23 17:58
Total/NA	Analysis	8015D VFA		1	404643	UHEW	ELLE	08/05/23 02:15
Total/NA	Prep	8015 VFA			404256	UHEW	ELLE	08/03/23 17:58
Total/NA	Analysis	8015D VFA		1	404646	UHEW	ELLE	08/05/23 14:12

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: Integrated Analytical Laboratories LLC
Job ID: 410-136647-1
Project/Site: E23-03408

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10670	04-01-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015D VFA	8015 VFA	Water	Acetic acid (1C)
8015D VFA	8015 VFA	Water	Butyric acid (1C)
8015D VFA	8015 VFA	Water	Citric Acid (1C)
8015D VFA	8015 VFA	Water	Formic-acid (1C)
8015D VFA	8015 VFA	Water	Isovaleric acid (1C)
8015D VFA	8015 VFA	Water	L-Lactic Acid (1C)
8015D VFA	8015 VFA	Water	Oxalic Acid (1C)
8015D VFA	8015 VFA	Water	Propionic acid (1C)
8015D VFA	8015 VFA	Water	Pyruvic Acid (1C)
8015D VFA	8015 VFA	Water	Quinic Acid (1C)
8015D VFA	8015 VFA	Water	Succinic Acid (1C)
8015D VFA	8015 VFA	Water	Tartaric Acid (1C)
8015D VFA	8015 VFA	Water	Valeric acid (1C)

Method Summary

Client: Integrated Analytical Laboratories LLC
Job ID: 410-136647-1
Project/Site: E23-03408

Method	Method Description	Protocol	Laboratory
RSK-175	Dissolved Gases (GC)	RSK	ELLE
8015D VFA	Volatile Fatty Acids - Direct Aqueous Injection (HPLC)	SW846	ELLE
8015 VFA	Volatile Fatty Acids - Water Prep	SW846	ELLE
RSK-175	Dissolved Gases Prep	RSK	ELLE

Protocol References:

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique , RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: Integrated Analytical Laboratories LLC
Project/Site: E23-03408

Job ID: 410-136647-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-136647-1	E23-03408-001_MW-13D-072723	Water	07/27/23 12:59	07/28/23 18:00

D/03712

2425 New Hol ·, PA 17601-2425

CLIENT & PROJECT

Name: Integrated Analytical Laboratories LLC	
Address:	
273 Franklin Road	
Randolph, NJ 07869	
Telephone #: 973-361-4252	
Project Name: E23-03408	
Project Location (State): NY	
Project Manager:	
Reference ID#: PO#	

REPORTING & BILLING

Contact:	Kim James
Fax #:	
EMail to:	msimmons@ialonline.com
Report to:	Melissa Simmons
Address:	
Invoice to:	Brenda Barone
Address:	

Turnaround Time

Verbal/Fax: 24 hr* 48 hr* 72 hr* 1 wk* 2 wk Other: 2 WEEKS

Hard Copy: 72 hr* 1 wk* 2 wk* 3 wk Other:

*Prior to sample arrival, Lab notification is required.

Report Format

NY CATEGORY B DELIVERABLES

Special Requirements

EDD: EQuIS - EQEDD

Preservative
1 = HCL; 2 = NaOH; 3 = HNO_3
4 = H_2SO_4; 5 = MeOH; 6 = Other

ANALYTICAL PARAMETERS / PRESERVATIVES

SAMPLE INFORMATION

Sample ID	Sample Depth (in Feet)	Sampling Date	Sampling Time	Matrix	# of Containers	Dissolved Gasses (RSK-175)	Volatile Fatty Acid (EPA Method 8015D)												
						1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
E23-03408-001_MW-13D-072723		7/27/23	12:59	Aqueous	5	Run	Run												

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

COOLER TEMP °C

Concentrations Expected: LOW MED HIGH

Known Hazard: yes no
Describe

Note

EMAIL CONFIRMATION REQUIRED

CUSTODY LOG

Signature/Company	Date	Time	Signature/Company
Relinquished by:			Received by:
Relinquished by:			Received by:
Relinquished by:	7/28/23	18:00	Received by: Shaun Wrye

TR1259 1.1 P1 2.3 (8) Amended

Lab Case #

PAGE: OF

COC (001-001)

REV Feb 2013

8/8/2023

Eurofins Lancaster Laboratories
2425 New Holland Pike, P.O. Box 12425, Lancaster, PA 17601-2425

D/O3712

CLIENT & PROJECT

Name: Integrated Analytical Laboratories LLC	
Address:	
273 Franklin Road	
Randolph, NJ 07869	
Telephone #: 973-361-4252	
Project Name: E23-03408	
Project Location (State): NY	
Project Manager:	
Reference ID#: PO#	

REPORTING & BILLING

Contact:	Kim James
Fax #:	
EMail to:	msimmons@ialonline.com
Report to:	Melissa Simmons
Address:	
Invoice to:	Brenda Barone
Address:	

Turnaround Time	Report Format
Verbal/Fax	Reduced / Level III
24 hr* 48 hr* 72 hr* 1 wk* 2 wk Other: 2 WEEKS	
Hard Copy	Special Requirements
72 hr* 1 wk* 2 wk* 3 wk Other:	EDD: EQuIS - EQEDD
*Prior to sample arrival, Lab notification is required.	

Preservative
1 = HCL, 2 = NaOH, 3 = HNO_3
4 = H_2SO_4, 5 = MeOH, 6 = Other

ANALYTICAL PARAMETERS / PRESERVATIVES

SAMPLE INFORMATION

Sample ID	Sample Depth (in Feet)	Sampling Date	Sampling Time	Matrix	# of Containers	Dissolved Gasses (RSK-175)	Volatile Fatty Acid (EPA Method 8015D)												
						1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
E23-03408-001_MW-13D-072723		7/27/23	12:59	Aqueous	5	Run	Run												

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

COOLER TEMP. Raw 4.7 Cor 4.6 °C

Concentrations Expected LOW MED HIGH

Known Hazard yes no Describe

Note:

EMAIL CONFIRMATION REQUIRED

CUSTODY LOG

Signature/Company	Date	Time	Signature/Company
Relinquished by:	7/28/23	1130	Received by: RPM
Relinquished by: RPM	28/07/23	1800	Received by:
Relinquished by:	7/28/23	1800	Received by:

COC (001-021)

Lab Case #

PAGE: OF

REV Feb 2013

Login Sample Receipt Checklist

Client: Integrated Analytical Laboratories LLC

Job Number: 410-136647-1

Login Number: 136647

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: Roth, Stephanie

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable (</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

Periodic Review Report – Review Period July 2022 to August 2023

Property Known As:

Swivelier Company
33 Route 304
Nanuet, Rockland County, New York 10954
NYSDEC Site Nos. 3-44-036 & V00520
EWMA Project No. 202530

Appendix 4 – Purge Guides

August 2023

100 Misty Lane
Parsippany, NJ
(973) 560-1400

Job Name: Swivelier
Job Number: 202530
Personnel: Louis M

Weather: 90s partly cloudy
Date: 7/26 to 7/27/2023

MW-10D stopped early - low water

WELL INFORMATION	MW-11D	MW-10D	MW-13D					
PID (ppm):	0.8	2027	0.0					
Depth to Product (feet):	NA	NA	NA					
Depth of Well (feet):	123.09	76.98	110					
Depth to Top of Screen (feet):								
Depth to Water (feet)	12.13	12.81	15.56					
Well Diameter (inches):	6	4	6					
Volume in Well (gal):	163.00	41.90	138.73	0.00	0.00	0.00	0.00	0.00
PRE - PURGE DATA								
Purge Start:	9:55	13:20	9:25					
Temperature (deg. C):	20.1	22.0	20.08					
pH:	8.64	7.30	8.79					
ORP (mV)	117	238	164					
Specific Conductivity:	0.398	0.781	0.620					
Turbidity (NTU)	75.6	14.0	114					
Dissolved Oxygen (mg/l):	0.00	1.93	0.00					
Purge End:	12:40	14:10	12:59					
Elapsed Time:	2:45	0:50	3:34	0:00	0:00	0:00	0:00	0:00
POST-PURGE DATA								
Depth to Water (feet):	50.22	67.98	21.68					
Temperature (deg. C):	16.6	20.09	14.85					
pH:	8.03	7.21	7.14					
ORP (mV)	11	230	109					
Specific Conductivity:	0.403	0.817	0.771					
Turbidity (NTU)	31.5	50.5	13.5					
Dissolved Oxygen (mg/l):	0.00	1.47	0.00					
Minimum Purge Vol. Req. (gal):	489.0	125.7	416.2	0.0	0.0	0.0	0.0	0.0
Rate of Purge: (gal/min)	3	2	2					
Actual Total Volume Purged (gal):	495	100	428	0.00	0.00	0.00	0.00	0.00
Purge Method:	Redi-Flow	Redi-Flow	Redi-Flow					
SAMPLE DATA								
Sample Time:	12:53	14:15	12:59					
Sample Method:	Redi-Flow	Redi-Flow	Redi-Flow					
Depth to Water (feet):	50.35	69.12	21.96					
Temperature (deg. C):	18.6	19.6	14.86					
pH:	7.87	7.22	7.13					
ORP (mV)	-38	233	92					
Specific Conductivity:	0.435	0.801	0.797					
Turbidity (NTU)	56.5	4.85	10.6					
Dissolved Oxygen (mg/l):	0.00	0.00	0.00					
Odor:	None	None	None					
Turbidity:	Slight	Moderate	Clear					
Drawdown: (ft)	38.09	55.17	6.12	0.00	0.00	0.00	0.00	0.00

NOTES:
ND = Non-Detect
Dry - No water/Not enough water to purge
NA - No data collected